SDMS DOCID 2181756

STATE OF DELAMARE OFFICE OF SECRETARY OF STATE

I, ELISHA C. DUKES, Secretary of State of the State of Delaware, DO HEREBY CERTIFY that the above and foregoing is a true and correct copy of Certificate of Incorporation of the "AMERICAN CRYCGENICS, INC.", as received and filed in this office the twenty-fourth day of February, A. D. 1964, at 10 o'clock A. M.

> IN TESTIMONY WHERECF, I have hereunto set my hand and official seal at Dover this twenty-fourth day of February in the year of our Lord one thousand nine hundred and sixtyfour.

> > ELISHA C. DUKES Secretary of State

G. F. DOWNS Ass't. Secretary of State

"Secretary's Office " " 1855 Delaware 1793 "

CERTIFICATE C. INCORPORATION

<u>...</u>

AMERICAN CRYCGENICS, INC.

---00000----

• FIRST: The name of the corporation __ AMERICAN ORICGENICS, INC.

SECOND: Its principal office in the State in Delaware is located at No. 100 West louth Street, it the City of Wilmington, County of New Castling line with and address of its resident agent is The Corporation Trust Company, No. 100 West Tenth Street, Wildington, Delaware.

THIRD: The nature of the business, or objects or purposes to be transacted, promoted or carried on are:

1. To manufacture, produce, sell and distribute liquid or compressed gases, including, but not limited to, oxygen, hitrogen, acctylene and argon.

2. To manufacture, produce, sell and distribute welding supplies and any and all types of equiment suitable for use in storing, handling or using the liquid or compressed gases dealt in.

3. To purchase or otherwise acquire the thole or any part of the property, assets, business, good will and rights, and to undertake or assume the whole or any part of the bonds, mortgages, franchises, leases, contracts, indebtedness, guaranties, liabilities and obligations of any person, firm, association, corporation or organization, and to pay for the same or any part or combination thereof in cash, shares of the capital stock, bonds, debentures, debenture stock, house and other obligations of this corporation or otherwise, or by undertaking and assuming the whole or any part of the liabilities or obligations of the transferor; and to hold or in any manner dispose of the whole or any part of the property and assets so acquired or purchased, and to conduct in any lawful manner the whole or any part of the business so acquired and to exercise all the powers necessary or convenient in and about the conduct, management and carrying on of such business.

4. To purchase, apply for, register, obtain or otherwise acquire, and to hold, own, use, operate, develop and introduce, and sell, lease, assign, pladge or in any manner dispose of and in any manner deal : ith and contract with reference to letters patent, patents, patent rights, patented processes, designs and similar rights, copyrights, trade-marks, trade-makes and similar rights granted by the United States or any other Government or country, or any interest therein, or any inventions, and to acquire, oun, use, or in any manner dispose of any and all inventions, improvements, and processes, labels, designs, marks, brands or other rights, and to work, operate or develop the same.

5. To acquire by purchase, subscription or otherwise, and to receive, hold, own, guarantee, sell, assign, exchange, transfer, mortgage, pledge or otherwise dispose of or deal in and with any of the shares of the capital stock, or any voting trust certificates in respect of the shares of capital stock, script, warrants, rights, bonds, debentures, notes, trust receipts, and other securities, obligations, choses in action and evidences of indebtedness or interest issued or created by any corporations, firms, trusts or persons, public or private, or by the government of the United States of America, or by any foreign government, or by any state, territory, province, municipality or other political subdivision or by any governmental agency, and as owner thereof to possess and elercise all the rights, powers and privileges of ownership, including the right to execute consents and vote thereon, and to do any and all acts and things necessary or advisable for the preservation, protection, improvement and enhancement in value thereof.

6. To promote or to aid in any manner, financially or otherwise, any corporation or association of which any stocks, bonds or other evidences of indebtedness or securities are held directly or indirectly by this corporation; and for this purpose to guarantee the contracts, dividends, stocks, bonds, notes and other obligations of such other corporations or associations; and to do any other acts or things designed to protect, preserve, improve or enhance the value of such stocks, bonds or other evidences of indebtedness or securities.

7. To organize or cause to be organized under the laws of the State of Delaware, or of any other state, district, territory, province or foreign government, a corporation or corporations for the purpose of accomplishing any or all of the ob-

jects for which this corporation is organized, and to dissolve, wind up, liquidate, merge or consolidate any such corporation or corporations or to cause the same to be dissolved, wound up, liquidated, merged or consolidated.

8. To enter into, make and perform contracts of every kind and description with any person, firm, association, corporation, municipality, county, state, body politic or government or colony or dependency thereof.

9. To borrow or raise moneys for any of the purposes of the corporation and, from time to time, without limit as to amount to draw, make, accept, endorse, execute and issue promissory notes, drafts, bills of exchange, warrants, bonds, debentures and other negotiable or non-negotiable instruments and evidences of indebtedness, and to secure the payment of any thereof and of the interest thereon by mortgage upon or pledge, conveyance or assignment in trust of the whole or any part of the property of the corporation, whether at the time owned or thereafter acquired, and to sell, pledge or otherwise dispose of such bonds or other obligations of the corporation for its corporate purposes. 10. To make loans to any person, firm or corporation, either with or without security.

11. To have one or more offices, to carry on all or any of its operations and business and without restriction or limit as to amount to purchase or otherwise acquire, hold, own, mortgage, sell, convey, or otherwise dispose of real and personal property of every class and description in any of the States, Districts, Territories or Colonies of the United States, and in any and all foreign countries, subject to the laws of such State, District, Territory, Colony or Country.

12. To do all and everything necessary, suitable and proper for the accomplishment of any of the purposes or the attainment of any of the objects or the furtherance of any of the powers hereinbefore set forth, either alone r in association with other corporations, firms or individuals, and to do every other act or acts, thing or things, incidental or appurtenant to or growing out of or connected with the aforesaid business or powers or any part or parts thereof; and to have all the rights, powers and privileges now or hereafter conferred by the laws of the State of Delaware upon a corporation organized under the General Corporation Law of the State of Delaware, or under any act amendatory thereof, supplemental thereto or in substitution therefor.

The foregoing clauses shall be construed both as objects and powers; and the foregoing enumeration of specific powers shall not be held to limit or restrict in any manner the powers of the corporation; and it is the intention that the purposes, objects and powers specified in each of the paragraphs of this Article Third of this Certificate of Incorporation shall, except as otherwise expressly provided, in no wise be limited or restricted by reference to or inference under the terms of any other clause or paragraph of this Article or of any other Article of this Certificate of Incorporation, but that each of the purposes, objects and powers specified in this Article and each of the Articles or paragraphs of this Certificate of Incorporation shall be regarded as independent purposes, objects and powers. Nothing herein contained shall be deemed to authorize the corporation to carry on any business or exercise any power or do any act which a corporation organized under the General Corporation Law of Delaware may not at the time law-

fully carry on, exercise or do.

FOURTH: The total number of shares of stock which the corporation shall have authority to issue is one thousand (1,000); all of such shares shall be without par value.

FIFTH: The minimum amount of capital with which the corporation will commence business is One Thousand Dollars (\$1,000).

SIXTH: The names and places of residence of the incorporators are as follows:

Names	Residences
S. H. Livesay	Wilmington, Delaware
F. J. Obara, Jr.	Wilmington, Delaware
A. D. Grier	Wilmington, Delaware

SEVENTH: The corporation is to have perpetual existence.

EIGHTH: The private property of the stockholders shall not be subject to the payment of corporate debts to any extent whatever.

NINTH: In furtherance and not in limitation of the powers conferred by statute, the board of directors is expressly authorized:

To make, alter or repeal the by-laws of the corporation.

To authorize and cause to be executed mortgages and liens upon the real and personal property of the corporation.

To set apart cut of any of the funds of the corporation available for dividends a reserve or reserves for any proper purposes and to abolish any such reserve in the manner in which it was created.

From time to time to determine whether and to what extent, and at what times and places, and under what conditions and regulations, the accounts and books of this corporation (other than the stock ledger), or any of them, shall be open to inspection of stockholders; and no stockholder shall have any right of inspecting any account, book or document of this corporation except as conferred by statute, unless authorized by a resolution of the stockholders or directors.

By resolution or resolutions passed by a majority of the whole board, to designate one or more committees, each committee to consist of two or more of the directors of the corporation, which, to the extent provided in said resolution or resolutions or in the by-laws of the corporation, shall have and may exercise the powers of the board of directors in the management of the business and affairs of the corporation, and may have power to authorize the seal of the corporation to be affixed to all papers which may require it. Such committee or committees shall have such name or names as may be stated in the by-laws of the corporation or as may be determined from time to time by resolution adopted by the board of directors.

When and as authorized by the affirmative vote of the holders of a majority of the stock issued and outstanding having voting power given at a stockholders' meeting duly called for that purpose, or when authorized by the written consent of the holders of a majority of the voting stock issued and outstanding, to sell, lease or exchange all of the property and assets of the corporation, including its good will and its corporate franchises, upon

such terms and conditions and for such consideration, which may be in whole or in part shares of stock in, and/or other securities of, any other corporation or corporations, as its board of directors shall deem expedient and for the best interests of the corporation.

This corporation may in its by-laws confer powers upon its directors in addition to the foregoing, and in addition to the powers and authorities expressly conferred upon them by the statute.

TENTH: Meetings of stockholders may be held without the State of Delaware, if the by-laws so provide. The books of the corporation may be kept (subject to any provision contained in the statutes) outside of the State of Delaware at such place or places as may be from time to time designated by the board of directors or in the by-laws of the corporation.

ELEVENTH: The corporation reserves the right to amend, alter, change or repeal any provision contained in this Certificate of Incorporation, in the manner now or hereafter prescribed by statute, and all rights conferred upon stockholders herein are granted subject to this reservation. WE, THE UNDERSIGNED, being each of the incorporators hereinbefore named for the purpose of forming a corporation in pursuance of the General Corporation Law of the State of Delaware, do make this certificate, hereby declaring and certifying that the facts herein stated are true, and accordingly have hereunto set our hands and seals this 24th day of February, A. D. 1964.

S. H. Livesay(SEAL)F. J. Obara, Jr.(SEAL)A. D. Grier(SEAL)

STATE OF DELAWARE COUNTY OF NEW CASTLE SS

BE IT REMEMBERED, That on this 24th day of February, A. D. 1964 personally came before me, a Notary Public for the State of Delaware, S. H. Livesay, F. J. Obara, Jr. and A. D. Grier, all of the parties to the foregoing Certificate of Incorporation, known to me personally to be such, and severally acknowledged the said certificate to be the act and deed of the signers respectively and that the facts therein stated are truly set forth.

GIVEN under my hand and seal of office the day and year aforesaid.

Howard K. Webb Notary Public

11 11 Howard K. Webb 11 11 Notary Public Ħ 11 Appointed June 26, 1962 n 11 State of Delaware Ħ 11 " Tera 2 Years "

Received for Record

February 24th, A. D. 1964.

Leo J. Dugan, Jr., Recorder.

STATE OF DELAWARE : : SS.: NEW CASTLE COUNTY :

> Recorded in the Recorder's Office at Wilmington, in Incorporation Record , Vol. Page &c., the 24th day of February, A. D. 1964.

> > Witness my hand and official seal.

Leo J. Dugan, Jr.

Recorder.

" Recorder of Deeds Office " " New Castle Co. Del. " " Mercy - Justice " " New Castle Co. Del. " (

STATE OF DELAWARE

Office of Secretary of State

I, EUGENE BUNTING, Secretary of State of the State of Delaware, do hereby certify that the above and foregoing pages numbered from 1 to 6, both numbers inclusive, is a true and correct copy of Certificate of Incorporation of the "AMERICAN CRYOGENICS, INC.", as received and filed in this office the twentyfourth day of February, A.D. 1964, at 10 o'clock A.M.;

And I do hereby further certify that the above and foregoing pages numbered from 1 to 3, both numbers inclusive, is a true and correct copy of Certificate of Amendment of the "AMERICAN CRYOGENICS, INC.", as received and filed in this office the thirteenth day of December, A.D. 1968, at 10 o'clock A.M.;

And I do hereby further certify that the above and foregoing pages numbered from 1 to 3, both numbers inclusive, is a true and correct copy of Certificate of Amendment of the "AMERICAN CRYOGENICS, INC.", as received and filed in this office the twenty-fourth day of November, A.D. 1970, at 9 o'clock A.M.

> IN TESTIMONY WHEREOF, I have hereunto set my hand and official seal at Dover this twelfth day of April in the year of our Lord one thousand nine hundred and seventy-one.



Secretary of State



CERTIFICATE OF AMENDMENT

OF

CERTIFICATE OF INCORPORATION

AMERICAN CRYOGENICS, INC., a corporation organized and existing under and by virtue of the General Corporation Law of the State of Delaware, DOES HEREBY CERTIFY.

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FIRST: That the Board of Directors of said corporation by the unanimous written consent of its members, filed with the minutes of the board, adopted a resolution proposing and declaring advisable the following amendment to the Certificate of Incorporation of said corporation:

> RESOLVED, that the Certificate of Incorporation of AMERICAN CRYOGENICS, INC. be amended by changing the Article thereof numbered "FIRST" so that, as amended, said Article shall be and read as follows:

"The name of the corporation is LIQUID AIR INC." SECOND: That in lieu of a meeting and vote of stockholders have given unanimous written consent to said amendment in accordance with the provisions of section 228 of The General Corporation Law of the State of Delaware.

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THIRD: That the aforesaid amendment was duly adopted in accordance with the applicable provisions of Sections 242 and 228 of The General Corporation Law of the State of Delaware.

IN WITNESS WHEREOF, said AMERICAN CRYOGENICS, INC. has caused its corporate seal to be hereunto affixed and this certificate to be signed by Pierre Salbaing, its Chairman of the Board of Directors, and attested by M.F.N. Prendergast, its Assistant Secretary, this 6th day of November , 1970.

ATTEST:

ssistant Secretary

ORATE SEAL)

AMERICAN CRYOGENICS, INC.

and in

By_ Chairman the Board of of Directors

STATE OF CALI-FOINIA COUNTY OF SAN FRANCISCO

8s.:

BE IT REMEMBERED that on this 6th day of November, 1970, personally came before me a Notary Public,

Pierre Salbaing, Chairman of the Board of Directors of AMERICAN CRYOGENICS, INC., a corporation of the State of Delaware, and he duly executed said certificate before me and acknowledged the said certificate to be his act and deed and the act and deed of said corporation and the facts stated therein are true; and that the seal affixed to said certificate and attested by the Assistant Secretary of said corporation is the common or corporate seal of said corporation.

IN WITNESS WHEREOF, I have hereunto set my hand and seal of office the day and year aforesaid.

Tradoner

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SAN FRANCISCO, CALIFORNIA

OTRICIME. \."'AL IRGINIA E. MEADOWS Beich avenus July 22

(SEAL)



I, Glenn C. Kenton Secretary of State of the State of Delaware, do hereby certify that the above and foregoing is a true and correct copy of Certificate of Amendment of the "LIQUID AIR INC.", as received and filed in this office the sixteenth day of December, A.D. 1980, at 10 o'clock A.M.

In Testimony Whereof, I have hereunto set my hand and official seal at Dover this <u>fifteenth</u> day of <u>July</u> in the year of our Lord one thousand nine hundred and <u>eighty-one</u>. <u>Manual C. Kenton</u>, Secretary of State

FORM 121

CERTIFICATE OF AMENDMENT

 \mathbf{OF}

CERTIFICATE OF INCORPORATION

OF

LIQUID AIR INC.

LIQUID AIR INC., a corporation organized and existing under and by virtue of the General Corporation Law of the State of Delaware, DOES HEREBY CERTIFY:

FIRST: That the Board of Directors of said Corporation, by the unanimous written consent of its members, filed with the minutes of the Board, adopted resolutions proposing and declaring advisable the following amendment to the Certificate of Incorporation of said Corporation:

> RESOLVED, that, subject to the approval of the sole stockholder of the Corporation, the name of the Corporation be changed to "LAI HOLDINGS INC." and that Article "FIRST" of the Certificate of Incorporation of the Corporation, as heretofore amended, be amended to read as follows:

"FIRST: The name of the Corporation is LAI HOLDINGS INC."

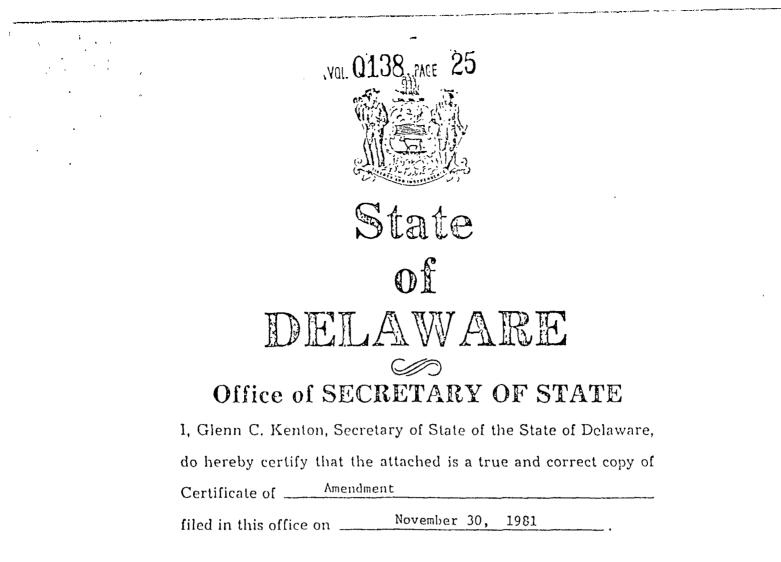
SECOND: That in lieu of a meeting and vote of stockholders, the sole stockholder has given its written consent to said amendment in accordance with the provisions of Section 228 of the General Corporation Law of the State of Delaware.

THIRD: That said amendment was duly adopted in accordance with the provisions of Section 242 of the General Corporation Law of the State of Delaware.

FOURTH: That the capital of said Corporation shall not be reduced under or by reason of said amendment.

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IN WITNESS WHEREOF, Liquid Air Inc. has caused its corporate seal to be hereunto affixed and this Certificate to be signed by Pierre Salbaing , its Chairman , and attested by John N. Baird, its Secretary, this 4th day of December 1980. LIQUID AIR INC. 1.5, By Pierre Salbaing, Chairman [Corporate Seal] Attest: John N. Baird Secretary -2-





Gienn C. Kenton, Secretary of State

S BY:

DATE: _____November 30, 1981.

Form 130

CERTIFICATE OF AMENDMENT OF FILED RESTATED NOV 30 1981 /DAM CERTIFICATE OF INCORPORATION

LAI HOLDINGS INC., a corporation organized and existing under and by virtue of the General Corporation Law of the State of Delaware, DOES HEREBY CERTIFY:

FIRST: That the Board of Directors of said corporation, by the unanimous written consent of its members, filed with the minutes of the board, adopted a resolution proposing and declaring advisable the following amendment to the Restated Certificate of Incorporation of said corporation:

> RESOLVED, that the Restated Certificate of Incorporation of LAI HOLDINGS INC. be amended by changing the First Article thereof so that, as amended, said Article shall be and read as follows:

"FIRST: The name of the corporation is LAI Properties, Inc."

SECOND: That in lieu of a meeting and vote of stockholders, the stockholders have given unanimous written consent to said amendment in accordance with the provisions of section 228 of the General Corporation Law of the State of Delaware.

THIRD: That the aforesaid amendment was duly adopted in accordance with the applicable provisions of sections 242 and 228 of the General Corporation Law of the State of Delaware.

IN WITNESS WHEREOF, said LAI HOLDINGS INC. has caused this certificate to be signed by Thomas E. Slattery its President, and attested by John N. Baird, its Secretary, this 18th day of November, 1981.

LAI HOLDINGS INC.

By ident Thomas Slat

RECEIVED FOR RECORD

NOV 3 0 1981

LEO J. DUGAN, Jr., Recorder

ATTEST: Secretary

State of Delaware Office of the Secretary of State

I, EDWARD J. FREEL, SECRETARY OF STATE OF THE STATE OF DELAWARE, DO HEREBY CERTIFY THE ATTACHED IS A TRUE AND CORRECT COPY OF THE CERTIFICATE OF AMENDMENT OF "LAI PROPERTIES, INC.", CHANGING ITS NAME FROM "LAI PROPERTIES, INC." TO "AIR LIQUIDE AMERICA CORPORATION", FILED IN THIS OFFICE ON THE EIGHTH DAY OF DECEMBER, A.D. 1993, AT 9:01 O'CLOCK A.M.



Edward J. Freel, Secretary of State

DATE:

AUTHENTICATION:

DICE 00025

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PAGE 1

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CERTIFICATE OF AMENDMENT OF CERTIFICATE OF INCORPORATION OF LAI PROPERTIES, INC.

LAI PROPERTIES, INC., a corporation organized and existing under and by virtue of the General Corporation Law of the State of Delaware, DOES HEREBY CERTIFY:

FIRST: That the Board of Directors of said corporation, by the unanimous written consent of its members, filed with the minutes of the board, adopted a resolution proposing and declaring advisable the following amendment to the Certificate of Incorporation of said corporation:

RESOLVED, that the Certificate of Incorporation of LAI Properties, Inc. be amended by changing the first Article thereof so that, as amended, said Article shall be and read as follows:

"FIRST: The name of the corporation is Air Liquide America Corporation."

SECOND: That in lieu of a meeting and vote of stockholders, the stockholders have given unanimous consent to said amendment in accordance with the provisions of section 228 of the General Corporation Law of the State of Delaware.

THIRD: That the aforesaid amendment was duly adopted in accordance with the applicable provisions of Sections 242 and 228 of the General Corporation Law of the State of Delaware.

IN WITNESS WHEREOF, said LAI Properties, Inc. has caused this certificate to be signed by Robert Cadieux, its President, and attested by John N. Baird, its Secretary, this 1st day of December, 1993.

LAI PROPERTIES, INC.

G. B. Alexander, Vice President

Secretary

Delaware Dage 1

The First State

I, HARRIET SMITH WINDSOR, SECRETARY OF STATE OF THE STATE OF DELAWARE, DO HEREBY CERTIFY THE ATTACHED IS A TRUE AND CORRECT COPY OF THE CERTIFICATE OF CONVERSION OF "AIR LIQUIDE AMERICA CORPORATION", CHANGING ITS NAME FROM "AIR LIQUIDE AMERICA CORPORATION" TO "AIR LIQUIDE AMERICA L.P.", FILED IN THIS OFFICE ON THE TWENTY-FIFTH DAY OF SEPTEMBER, A.D. 2002, AT 2 O'CLOCK P.M.

AND I DO HEREBY FURTHER CERTIFY THAT THE EFFECTIVE DATE OF THE AFORESAID CERTIFICATE OF CONVERSION IS THE FIRST DAY OF OCTOBER, A.D. 2002.



0608019 8100 020597850 Warriet Smith Windson Harriet Smith Windsor, Secretary of State

AUTHENTICATION: 2003085

DATE: 09-25-02

STATE OF DELAWARE SECRETARY OF STATE DIVISION OF CORPORATIONS FILED 02:00 PM 09/25/2002 020596873 - 0608019

STATE OF DELAWARE CERTIFICATE OF CONVERSION FROM A CORPORATION TO A LIMITED PARTNERSHIP PURSUANT TO SECTION 266 OF THE DELAWARE GENERAL CORPORATION LAW AND SECTION 17-217 OF THE DELAWARE REVISED UNIFORM LIMITED PARTNERSHIP ACT

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- 1) The name of the corporation immediately prior to filing this Certificate is <u>Air Liquide</u> <u>America Corporation</u>.
- The date the Certificate of Incorporation was filed with the Secretary of State of Delaware is <u>February 24, 1964</u>.
- 3) The original name of the corporation as set forth in the Certificate of Incorporation is American Cryogenics. Inc.
- 4) The name of the limited partnership as set forth in its certificate of limited partnership is <u>Air Liquide America L.P.</u>
- 5) The conversion has been approved in accordance with the provisions of Section 266 of the Delaware General Corporation Law and Section 17-217 of the Delaware Revised Uniform Limited Partnership Act.
- 6) The effective date of this Certificate of Conversion shall be October 1, 2002.

AIR LIQUIDE AMERICA CORPORATION

perform By:

Name: Pierre Dufour

Title: President and Chief Executive Officer

ALUSA GP, INC. (Sole General Partner of Air Liquide America L.P.)

aufour By:

Name: Pierre Dufour

Title: President and Chief Executive Officer

STATE OF DELAWARE SECRETARY OF STATE DIVISION OF CORPORATIONS FILED 02:00 PM 09/25/2002 020596873 - 0608019

STATE OF DELAWARE CERTIFICATE OF LIMITED PARTNERSHIP

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- The Undersigned, for purposes of the conversion of Air Liquide America Corporation, a Delaware corporation, to a limited partnership pursuant to the Delaware Revised Uniform Limited Partnership Act, 6 Delaware Code, Chapter 17, does hereby certify as follows:
- Second: The address of its registered office in the State of Delaware is <u>615 South</u>

 <u>Dupont Highway</u> in the city of <u>Dover</u>

 The name of the Registered Agent at such address is <u>Capitol Services, Inc.</u>
- Third: The name and mailing address of each general partner is as follows:

ALUSA GP. Inc.
o/o Air Liquide America L.P.
2700 Post Oak Blvd,
Houston, TX 77056

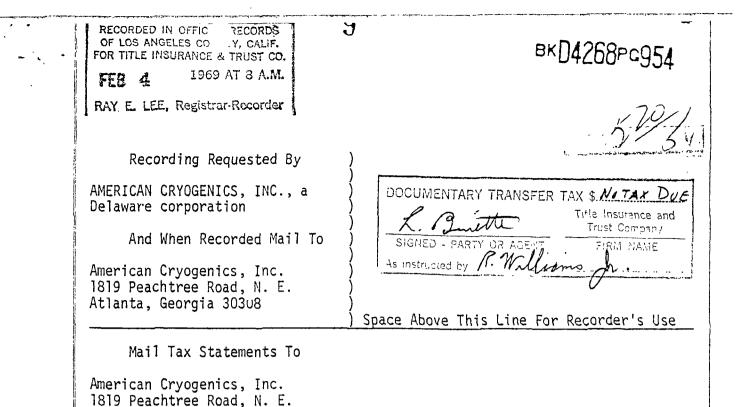
- Fourth: The effective date of this Certificate of Limited Partnership shall be October 1, 2002.
- In Witness Whereof, the undersigned has executed this Certificate of Limited Partnership of <u>Air Liquide America L.P.</u> as of <u>IS September</u>, 2002.

ALUSA GP, INC. Sole General Partner

eulour By:

Name: Pierre Dufour

Title: President and Chief Executive Officer



D.T.T. \$ No Tax Due

CORPORATION GRANT DEED

FOR VALUABLE CONSIDERATION, receipt of which is hereby acknowledged, CALIFORNIA OXYGEN COMPANY, a dissolved corporation of the State of California, acting by and through the undersigned who are a majority of the Board of Directors as constituted on the date of dissolution, hereby grants to AMERICAN CRYOGENICS, INC., a corporation organized and existing under the laws of the State of Delaware, the following described real property in the County of Los Angeles, State of California:

PARCEL NO. 1:

Atlanta, Georgia 30308

That portion of the Colima Tract, in the Rancho Santa Gertrudes, in the city of Santa Fe Springs,county of Los Angeles, state of California, described as follows:

Commencing at a point in the center line of Dice Road, 40.00 feet northerly thereon from the center line of the right of way of the Pacific Electric Railway (as said right of way and Dice Road are shown on a map recorded in Book 3465 Page 135 of Deeds, Records of said county); thence along said center line of Dice Road, North 11° 54' 10" East 120.90 feet; thence South 83° 26' East 261.70 feet to the true point of beginning; thence North 1° 21' East 68.8 feet; thence North 83° 21' West 249.00 feet to the center line of said Dice Road; thence North 11° 54' 10" East along said center line 196.65 feet; thence South 83° 07' 50" East 340.15 feet; thence North 08° 26' 10" East 145.34 feet to the northerly line of the land described in Certificate of Title No. X-10800 on file in the office of the Registrar of Titles of said county; thence along said northerly line South 73° 50' 40" East 823.79 feet to the northwesterly line of the Southern Pacific Railroad right of way as said right of way was known on August 24, 1920;

MAIL IAX STATEMENTS AS DIRECTED ABOVE

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thence thereon South 60° 48' 40" West 762.07 feet to the northerly line of said Pacific Electric Railway right of way; thence along said last mentioned northerly line North 78° 02' West 294.60 feet to a point distant South 78° 02' East 282.70 feet thereon from said center line of Dice Road; thence North 3° 15' East 147.25 feet to the true point of beginning.

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EXCEPT therefrom the land described in the deed from Burdett Oxygen Company of Cleveland, Inc., a corporation, to C. W. Roberts, a married man, recorded April 21, 1954 in Book 44382 Page 402, Official Records.

ALSO EXCEPT therefrom that portion within said Dice Road conveyed to county of Los Angeles in fee simple for road purposes by deed recorded October 10, 1908 in Book 3465 Page 133 of Deeds.

PARCEL NO. 2:

That portion of the Colima Tract, Rancho Santa Gertrudes in the city of Santa Fe Springs, county of Los Angeles, state of California, described as follows:

Beginning at a point in the northerly line of the right of way of the Pacific Electric Railway, said line being the southerly line of the land described in certificate of title Y-11053 in the office of the Registrar of Titles of said county, distant thereon South 78°02' East, 163.50 feet from the intersection of said line with the center of Dice Road as same is shown on map of right of way of said Pacific Electric Railway, recorded in Book 3465 Page 135 of Deeds, records of said county; thence continuing along said northerly line of said right of way South 78° 02' East 119.20 feet; thence North 03° 15' East 147.25 feet to an angle point in the northerly line of said land described in said certificate Y-11053; thence along said northerly line of said land North 83° 26' West 118.02 feet; thence South 03° 15' West 136.02 feet to the point of beginning.

PARCEL NO. 3:

That portion of the Colima Tract, in the Rancho Santa Gertrudes, in the city of Santa Fe Springs, county of Los Angeles, state of California, described as follows:

Beginning at a point in the center line of Dice Road, distant 40 feet northerly thereon from its intersection with the center line of the right of way of the Pacific Electric Railway, as shown on a map of said right of way recorded in Book 3465 Page 135 of Deeds, records of said county; thence continuing along said center line of said Dice Road, North 11° 54' 10" East, 120.90 feet; thence South 83° 26' East 143.59 feet; thence South 3° 15' West, 136.02 feet to a point in the northerly line of the aforesaid right of way of the Pacific Electric Railway, said line being the southerly line of the land described in Certificate Y-11053 of the Registrar of Titles of said county; thence North 78° 02' West along said northerly line of said right of way and the southerly line of said registered parcel, 163.50 feet to the point of beginning.

EXCEPT therefrom that portion within, said Dice Road, conveyed to county of Los Angeles in fee simple for road pur-

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poses, by deed recorded October 10, 1908 in Book 3465 Page 133 of Deeds.

PARCEL NO. 4:

That portion of the 236 acre parcel in the Colima Tract, Rancho Santa Gertrudes, in the city of Santa Fe Springs, county of Los Angeles, state of California, included within the following described boundaries:

Beginning at a point in the center line of Dice Road, 40 feet northerly thereon from the center line of the right of way of the Pacific Electric Railway (as said right of way and Dice Road are shown on map attached to and recorded with a deed recorded in Book 3465, Page 133 of Deeds); thence along the center line of said Dice Road, North 11° 54' 10" East 120.90 feet to the true point of beginning; thence South 83° 26' East 261.70 feet; thence North 1° 21' East 68.8 feet thence North 83° 21' West 249. feet to said center line of Dice Road; thence along said center line, South 11° 54' 10" West 69.18 feet to the true point of beginning.

EXCEPT therefrom that portion within said Dice Road, conveyed to County of Los Angeles, in fee simple for road purposes, by deed recorded October 10, 1908 in Book 3465 Page 133 of Deeds.

IN WITNESS WHEREOF, said corporation has caused its corporate name to be affixed hereto and this instrument to be executed by PIERCE E. MARKS, SR., PIERCE E. MARKS, JR., and JOHN P. COYNE, a majority of the Directors of said corporation on the date of dissolution.

Вy

DATED: January 24, 1969

CALIFORNIA OXYGEN COMPANY

STATE OF GEORGIA)) ss.

On <u>Danual la 1969</u> before me, the undersigned, a Notary Public in and for said State, personally appeared PIERCE E. MARKS, SE, known to me to be a Director of CALIFORNIA OXYGEN COMPANY, the corporation

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executed the within Instrument, known to me to be the persons who executed the within Instrument on behalf of the Corporation therein named, and acknowledged to me that such Corporation executed the within Instrument pursuant to its Bylaws or a resolution of its Board of Directors.

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(NOTARIAL SEAL)

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WITNESS my hand and official seal.

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Signature - Eleveted Ford W.NIFROD Find Name (Typed or Printed)

that executed the within Instrument, known to me to be the persons who executed the within Instrument on behalf of the Corporation therein named, and acknowledged to me that such Corporation executed the within Instrument pursuant to its Bylaws or a resolution of its Board of Directors.

WITNESS my hand and official seal. Signature Maximum by MM

> Marney D. Malley Name (Typed or Printed)

WITNESS my hand and official seal. Signature <u>Source</u> <u>Source</u> <u>Mac Source</u> <u>Conscience</u> Name (Typed or Printed)

STATE OF CALIFORNIA) COUNTY OF $\frac{1}{2}$ ss. (NOTARIAL SEAL)

вк]]4268рс957

On <u>jamming</u> 24, 146**9** before me, the undersigned, a Notary Public in and for said State, personally appeared JOHN P. COYNE known to me to be a Director of CALIFORNIA OXYGEN COMPANY, the corporation that

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2202.18

CODE 94

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RECORDING REQUESTED BY AND WHEN RECORDED MAIL TO

AIR LIQUIDE AMERICA CORP., 8832 Dice Road Santa Fe Springs, CA 90970

RECORDED/FILED IN OFFICIAL RECORDS **RECORDER'S OFFICE** LOS ANGELES COUNTY CALIFORNIA

2:41 PM DEC 23 1998

A.F.N.F.

SURVEY MONUMENT FEE \$10. CODE 9

SPACE ABOVE THIS LINE FOR RECORDER'S USE

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GRANT DEED

The undersigned grantor declares: Documentary transfer tax is \$71 50 computed on the full value of the property conveyed less the value of liens and encumbrances remaining at the time of sale

FOR VALUABLE CONSIDERATION, receipt of which is hereby acknowledged, DICE ROAD LLC, a Delaware limited liability company, hereby grants to AIR LIQUIDE AMERICA CORPORATION, a Delaware corporation, the real property located in the City of Santa Fe Springs, County of Los Angeles of California, consisting of that portion of the real property described on Exhibit 1 attached hereto (Existing Dice Road Property) which is included within the real property described on Exhibit 2 attached hereto (Proposed Air Liquide Parcel)

SUBJECT TO

- 1. Current taxes and assessments
- 2. All other matters of record or apparent.

8th IN WITNESS WHEREOF, grantor has executed this instrument as of the day of December, 1998

DICE ROAD LLC

By RCW Properties, LLC a Delaware limited liability company Managing Member

alst & Westerd By.

Ralph C. Wintrode, Managing Member

STATE OF CALIFORNIA

COUNTY OF <u>Opange</u>

On <u>lecender</u> 8, 1998 before me, <u>Geraldine G. Lenahar</u> a Notary Public in and for said State, personally appeared <u>Ratph C. Wintrade</u>, personally known to me (or proved to me on the basis of satisfactory evidence) to be the person whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his authorized capacity, and that by his signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

SS

WITNESS my hand and official seal.



Public in and for Notary said State

98 2327779

(Seal)

PARCEL "A" (TWO PARCELS) PARCEL 1:

THAT PORTION OF THE COLIMA TRACT, IN THE RANCHO SANTA GERTRUDES, IN THE CITY OF SANTA FE SPRINGS, AS SHOWN ON MAP FILED IN SUPERIOR COURT CASE NO 4367, COUNTY SURVEYOR'S MAP NO. CF-157, IN THE OFFICE OF THE SURVEYOR OF SAID COUNTY, WITHIN THE FOLLOWING DESCRIBED BOUNDARIES:

COMMENCING AT A POINT IN THE CENTER LINE OF DICE ROAD, 40.00 FEET NORTHERLY THEREON FROM THE CENTER LINE OF THE RIGHT OF WAY OF THE PACIFIC ELECTRIC RAILWAY, AS SAID RIGHT OF WAY AND DICE ROAD ARE SHOWN ON MAP RECORDED IN BOOK 3465 PAGE 135 OF DEEDS; THENCE NORTH 11°54'10" EAST ALONG THE CENTER LINE OF SAID DICE ROAD 120 90 FEET; THENCE SOUTH 83°26" EAST 261.70 FEET; THENCE NORTH 01°21" EAST 68 8 FEET, THENCE NORTH 83°21' WEST 249.00 FEET; THENCE NORTH 11°54'10" EAST ALONG THE CENTER LINE OF SAID DICE ROAD, 196.65 FEET TO THE TRUE POINT OF BEGINNING; THENCE SOUTH 83°07'50" EAST 340 15 FEET, THENCE NORTH 08°26'10" EAST 145.34 FEET TO THE NORTHERLY LINE OF THE LAND DESCRIBED IN CERTIFICATE OF TITLES NO X-10800 ON FILE IN THE OFFICE OF THE REGISTRAR OF TITLES OF SAID COUNTY, THENCE ALONG THE NORTHERLY BOUNDARY OF SAID LAND, NORTH 73°50'40" WEST 333.57 FEET TO THE CENTER LINE OF SAID DICE ROAD; THENCE ALONG LAST MENTIONED CENTER LINE, SOUTH 09°37'40" EAST 7.10 FEET TO AN ANGLE POINT IN SAID CENTER LINE; THENCE SOUTH 11°54'10" WEST 193 05 FEET TO THE TRUE POINT OF BEGINNING

PARCEL 2.

THAT PORTION OF THE RANCHO SANTA GERTRUDES, BEING ALSO PART OF THE TRACT FINALLY CONFIRMED TO TOMAS SANCHEZ COLIMA AND KNOWN AS THE COLIMA TRACT, IN THE CITY OF SANTA FE SPRINGS, DESCRIBED AS FOLLOWS:

BEGINNING AT THE FIRST ANGLE POINT IN THE CENTER LINE OF DICE ROAD, 40 FEET WIDE, SOUTHERLY OF SORENSON LANE, (NOW BURKE STREET) SAID ANGLE POINT BEING MARKED BY A COUNTY SURVEYOR'S CONCRETE MONUMENT AS SHOWN IN FIELD BOOK FT33-366, ON FILE IN THE OFFICE OF THE COUNTY SURVEYOR OF SAID LOS ANGELES COUNTY,

THENCE ALONG SAID CENTER LINE OF DICE ROAD, NORTH 09°51'22" WEST 7.10 FEET; THENCE SOUTH 74°03'33" EAST 22.21 FEET TO A POINT IN THE EAST LINE OF SAID DICE ROAD, SAID POINT BEING MARKED BY A 2 INCH IRON PIPE AND BEING DISTANT NORTH 09°51'22" WEST 1.23 FEET FROM AN ANGLE POINT IN SAID EAST LINE OF DICE ROAD; THENCE ALONG A LINE WHICH PASSES THROUGH A 2 INCH IRON PIPE SET IN THE NORTHWESTERLY LINE OF THE RIGHT OF WAY 50 FEET WIDE, OF THE PACIFIC ELECTRIC RAILROAD, AS DESCRIBED IN DEED TO THE LONG BEACH, WHITTIER AND LOS ANGELES COUNTY RAILROAD COMPANY, RECORDED IN BOOK 378 PAGE 284 OF DEEDS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY, SOUTH 74°03'33" EAST 480.68 FEET TO THE TRUE POINT OF BEGINNING

THENCE AT RIGHT ANGLES NORTH 15°56'27" EAST 612 06 FEET TO A POINT IN THAT CERTAIN COURSE HAVING A LENGTH OF 1175.91 FEET IN THE SOUTHERLY BOUNDARY OF PARCEL 1. AS SHOWN ON THE MAP FILED IN BOOK 65 PAGE 38 OF RECORD OF SURVEYS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY, THENCE NORTH 86°27'15" WEST ALONG SAID CERTAIN COURSE 677.58 FEET TO A 2 INCH IRON PIPE IN THE EASTERLY LINE OF DICE ROAD, 40 FEET WIDE, AS SAID PIPE AND ROAD ARE SHOWN ON SAID LAST MENTIONED MAP, THENCE ALONG SAID DICE ROAD, SOUTH 09°50'44" EAST 15 28 FEET TO AN ANGLE POINT THEREIN AND SOUTH 79°52'16" WEST 40 00 FEET TO AN ANGLE POINT THEREIN, THENCE ALONG SAID DICE ROAD, SOUTH 09°51"22" EAST 483.46 FEET TO SAID 2 INCH IRON PIPE IN THE EAST LINE OF DICE ROAD, THAT IS DISTANT NORTH 09°51'22" WEST 1 23 FEET FROM AN ANGLE POINT IN SAID EAST LINE OF DICE ROAD: THENCE ALONG SAID LINE WHICH PASSES THROUGH A 2 INCH IRON PIPE SET IN THE NORTHWESTERLY LINE OF SAID RIGHT OF WAY, 50 FEET WIDE, SOUTH 74°03'33" EAST 480 68 FEET TO THE TRUE POINT OF BEGINNING.

EXHIBIT 2

[Proposed Air Liquide Parcel]

PARCEL "B"

THAT PORTION OF THE COLIMA TRACT, IN THE RANCHO SANTA GERTRUDES, IN THE CITY OF SANTA FE SPRINGS, COUNTY OF LOS ANGELES, STATE OF CALIFORNIA, DESCRIBED AS FOLLOWS.

COMMENCING AT A POINT IN THE CENTER LINE OF DICE ROAD. 40 00 FEET NORTHERLY THEREON FROM THE CENTER LINE OF THE RIGHT OF WAY OF THE PACIFIC ELECTRIC RAILWAY (AS SAID RIGHT OF WAY AND DICE ROAD ARE SHOWN ON MAP RECORDED IN BOOK 3465 PAGE 135 OF DEEDS, RECORDS OF SAID COUNTY), THENCE ALONG SAID CENTER LINE OF DICE ROAD, NORTH 11°54'10" EAST 120 90 FEET, THENCE SOUTH 83°26' EAST 261 70 FEET TO THE TRUE POINT OF BEGINNING, THENCE NORTH 01°21' EAST 68.8 FEET; THENCE NORTH 83°21' WEST 249.00 FEET TO THE CENTER LINE OF SAID DICE ROAD; THENCE NORTH 11°54'10" EAST ALONG SAID CENTER LINE TO A POINT BEING 136.46 FEET SOUTHERLY, MEASURED ALONG SAID CENTERLINE FROM THE FIRST ANGLE POINT IN THE CENTERLINE OF SAID DICE ROAD, SAID POINT BEING SHOWN AS MARKED BY A COUNTY SURVEYOR'S CONCRETE MONUMENT AS SHOWN IN FIELD BOOK FT 33-0366 ON FILE IN THE OFFICE OF THE COUNTY SURVEYOR OF SAID COUNTY. THENCE THENCE SOUTH 86D 16' 45" EAST 497 17 FEET TO THE WESTERLY LINE OF THE LAND DESCRIBED IN INSTRUMENT NUMBER 891, RECORDED APRIL 21, 1954 IN BOOK 44382 PAGE 402, OF OFFICIAL RECORDS, RECORDS OF SAID COUNTY, THENCE ALONG THE WESTERLY LINE OF LAST SAID INSTRUMENT NORTH 16D 06' 40" EAST 35 42 FEET TO THE NORTHERLY LINE OF THE LAND DESCRIBED IN CERTIFICATE OF TITLE NO. X-10800 ON FILE IN THE OFFICE OF THE REGISTRAR OF SAID COUNTY: THENCE ALONG THE NORTHERLY LINE SOUTH 73D 50' 40" EAST 823 79 FEET TO THE NORTHWESTERLY LINE OF THE SOUTHERN PACIFIC RAILROAD RIGHT OF WAY AS SAID RIGHT OF WAY WAS KNOWN ON AUGUST 24, 1920: THENCE SOUTH 60°48'40" WEST 762 07 FEET TO THE NORTHERLY LINE OF SAID PACIFIC RAILWAY RIGHT OF WAY; THENCE ALONG SAID LAST MENTIONED NORTHERLY LINE NORTH 78°02' WEST 294.60 FEET TO A POINT DISTANT SOUTH 78°02' EAST 282 70 FEET THEREON FROM SAID CENTER LINE OF DICE ROAD; THENCE NORTH 03°15' EAST 147.25 FEET TO THE TRUE POINT OF BEGINNING.

EXCEPT THEREFROM THE LAND DESCRIBED IN THE DEED FROM BURDETT OXYGEN COMPANY OF CLEVELAND, INC., A CORPORATION, TO C W ROBERTS, A MARRIED MAN, RECORDED APRIL 21, 1954 IN BOOK 44382 PAGE 402, OFFICIAL RECORDS.



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ALSO EXCEPT THEREFROM THAT PORTION WITHIN SAID DICE ROAD CONVEYED TO COUNTY OF LOS ANGELES IN FEE SIMPLE FOR ROAD PURPOSES BY DEED RECORDED OCTOBER 10, 1908 IN BOOK 3465 PAGE 133 OF DEEDS.

ALSO EXCEPT THEREFROM THE LAND CONVEYED TO JOHN G LOCKE AND JANYCE E LOCKE, HUSBAND AND WIFE AS COMMUNITY PROPERTY, AS TO AN UNDIVIDED ONE-THIRD (1/3) INTEREST, ROBERT O. BERG AND DONNA M. BERG, HUSBAND AND WIFE AS COMMUNITY PROPERTY, AS TO AN UNDIVIDED ONE-THIRD (1/3) INTEREST, AND ARNOLD ROSENTHAL AND PEARL ROSENTHAL, HUSBAND AND WIFE AS JOINT TENANTS BY DEED RECORDED DECEMBER 12, 1975 AS INSTRUMENT NO. 4550, OFFICIAL RECORDS, DESCRIBED AS FOLLOWS:

BEGINNING AT THE MOST SOUTHERLY CORNER OF THE LAND SHOWN ON SAID MAP NO. CF-157, THENCE NORTH 60°48'40" EAST ALONG THE SOUTHEASTERLY BOUNDARY OF SAID LAND, 85 52 FEET TO A POINT OF CUSP WITH A TANGENT CURVE CONCAVE NORTHWESTERLY AND HAVING A RADIUS OF 372.24 FEET; THENCE SOUTHWESTERLY ALONG SAID CURVE, THROUGH A CENTRAL ANGLE OF 15°15'39", AN ARC DISTANCE OF 103.05 FEET TO ITS INTERSECTION WITH THE SOUTHERLY BOUNDARY OF SAID LAND; THENCE SOUTH 78° 02' 00" EAST, ALONG SAID SOUTHERLY BOUNDARY, 21.53 FEET TO THE POINT OF BEGINNING, CONTAINING AN AREA OF 362 SQUARE FEET MORE OR LESS.

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NAMER CHINS STATES (10)

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COUNTY OF HARRIS

TEVAS STATE OF CALIFORNIA

On <u>Deputer</u> 10^{+4} , 1998 before me, <u>Depute</u> <u>C</u>. <u>Depute</u> <u>a</u> Notary Public in and for said State, personally appeared <u>Tertu</u> <u>Bern</u>, personally known to me (or proved to me on the basis of satisfactory evidence) to be the person whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his authorized capacity, and that by his signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument

SS.

WITNESS my hand and official seal.

Notary Public in and for said State



EXHIBIT 1 [EXISTING AIR LIQUIDE PROPERTY]

PARCEL "B"

THAT PORTION OF THE COLIMA TRACT, IN THE RANCHO SANTA GETRUDES, IN THE CITY OF SANTA FE SPRINGS, COUNTY OF LOS ANGELES, STATE OF CALIFORNIA, DESCRIBED AS FOLLOWS

COMMENCING AT A POINT IN THE CENTER LINE OF DICE ROAD, 40 00 FEET NORTHERLY THEREON FROM THE CENTER LINE OF THE RIGHT OF WAY OF THE PACIFIC ELECTRIC RAILWAY (AS SAID RIGHT OF WAY AND DICE ROAD ARE SHOWN ON MAP RECORDED IN BOOK 3465 PAGE 135 OF DEEDS, RECORDS OF SAID COUNTY), THENCE ALONG SAID CENTER LINE OF DICE ROAD, NORTH 11°54'10" EAST 120.90 FEET; THENCE SOUTH 83°26" EAST 261 70 FEET TO THE TRUE POINT OF BEGINNING, THENCE NORTH 01°21' EAST 68 8 FEET, THENCE NORTH 83°21" WEST 249 00 FEET TO THE CENTER LINE OF SAID DICE ROAD, THENCE NORTH 11°54'10" EAST ALONG SAID CENTER LINE 196 65 FEET, THENCE SOUTH 83°07'50" EAST 340 15 FEET, THENCE NORTH 08°26'10" EAST 145 34 FEET TO THE NORTHERLY LINE OF THE LAND DESCRIBED IN CERTIFICATE OF TITLE NO. X-10800 ON FILE IN THE OFFICE OF THE REGISTRAR OF SAID COUNTY, THENCE ALONG THE NORTHERLY LINE SOUTH 73°50'40" EAST 823 79 FEET TO THE NORTHWESTERLY LINE OF THE SOUTHERN PACIFIC RAILROAD RIGHT OF WAY AS SAID RIGHT OF WAY WAS KNOWN ON AUGUST 24, 1920; THENCE SOUTH 60°48'40" WEST 762 07 FEET TO THE NORTHERLY LINE OF SAID PACIFIC RAILWAY RIGHT OF WAY, THENCE ALONG SAID LAST MENTIONED NORTHERLY LINE NORTH 78°02' WEST 294.60 FEET TO A POINT DISTANT SOUTH 78°02' EAST 282 70 FEET THEREON FROM SAID CENTER LINE OF DICE ROAD, THENCE NORTH 03°15' EAST 147 25 FEET TO THE TRUE POINT OF BEGINNING

EXCEPT THEREFROM THE LAND DESCRIBED IN THE DEED FROM BURDETT OXYGEN COMPANY OF CLEVELAND, INC., A CORPORATION, TO C.W. ROBERTS, A MARRIED MAN, RECORDED APRIL 21, 1954 IN BOOK 44382 PAGE 402, OFFICIAL RECORDS

ALSO EXCEPT THEREFROM THAT PORTION WITHIN SAID DICE ROAD CONVEYED TO COUNTY OF LOS ANGELES IN FEE SIMPLE FOR ROAD PURPOSES BY DEED RECORDED OCTOBER 10, 1908 IN BOOK 3465 PAGE 133 OF DEEDS.

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ALSO EXCEPT THEREFROM THE LAND CONVEYED TO JOHN G LOCKE AND JANYCE E. LOCKE, HUSBAND AND WIFE AS COMMUNITY PROPERTY, AS TO AN UNDIVIDED ONE-THIRD (1/3) INTEREST, ROBERT O. BERG AND DONNA M. BERG, HUSBAND AND WIFE AS COMMUNITY PROPERTY, AS TO AN UNDIVIDED ONE-THIRD (1/3) INTEREST, AND ARNOLD ROSENTHAL AND PEARL ROSENTHAL, HUSBAND AND WIFE AS JOINT TENANTS BY DEED RECORDED DECEMBER 12, 1975 AS INSTRUMENT NO. 4550, OFFICIAL RECORDS, DESCRIBED AS FOLLOWS

BEGINNING AT THE MOST SOUTHERLY CORNER OF THE LAND SHOWN ON SAID MAP NO. CF-157; THENCE NORTH 60°48'40" EAST ALONG THE SOUTHEASTERLY BOUNDARY OF SAID LAND 85.52 FEET TO A POINT OF CUSP WITH A TANGENT CURVE CONCAVE NORTHWESTERLY AND HAVING A RADIUS OF 372,24 FEET, THENCE SOUTHWESTERLY ALONG SAID CURVE, THROUGH A CENTRAL ANGLE OF 15°15'39", AN ARC DISTANCE OF 103.05 FEET TO ITS INTERSECTION WITH THE SOUTHERLY BOUNDARY OF SAID LAND, THENCE SOUTH 78°02'00" EAST, ALONG SAID SOUTHERLY BOUNDARY, 21.53 FEET TO THE POINT OF BEGINNING, CONTAINING AN AREA OF 362 SQUARE FEET MORE OR LESS.

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EXHIBIT 2 [PROPOSED DICE ROAD PARCEL]

PARCEL "A"

THAT PORTION OF THE RANCHO SANTA GERTRUDES, BEING ALSO PART OF THE TRACT FINALLY CONFIRMED TO TOMAS SANCHEZ COLIMA AND KNOWN AS THE COLIMA TRACT, IN THE CITY OF SANTA FE SPRINGS, DESCRIBED AS FOLLOWS

BEGINNING AT THE FIRST ANGLE POINT IN THE CENTER LINE OF DICE ROAD, 40 FEET WIDE, SOUTHERLY OF SORENSON LANE, (NOW BURKE STREET) SAID ANGLE POINT BEING MARKED BY A COUNTY SURVEYOR'S CONCRETE MONUMENT AS SHOWN IN FIELD BOOK FT33-366, ON FILE IN THE OFFICE OF THE COUNTY SURVEYOR OF SAID LOS ANGELES COUNTY, THENCE ALONG SAID CENTER LINE OF DICE ROAD, NORTH 09°37'40" WEST 7 10 FEET, THENCE SOUTH 73°50'40" EAST 22 21 FEET TO A POINT IN THE EAST LINE OF SAID DICE ROAD, SAID POINT BEING MARKED BY A 2 INCH IRON PIPE AND BEING DISTANT NORTH 09°37'40" WEST 1.23 FEET FROM AN ANGLE POINT IN SAID EAST LINE OF DICE ROAD, THENCE ALONG A LINE WHICH PASSES THROUGH A 2 INCH IRON PIPE SET IN THE NORTHWESTERLY LINE OF THE RIGHT OF WAY, 50 FEET WIDE, OF THE PACIFIC ELECTRIC RAILROAD, AS DESCRIBED IN DEED TO THE LONG BEACH, WHITTIER AND LOS ANGELES COUNTY RAILROAD COMPANY, RECORDED IN BOOK 378 PAGE 284 OF DEEDS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY, SOUTH 73°50'40" EAST 480 68 FEET TO THE TRUE POINT OF BEGINNING

THENCE AT RIGHT ANGLES NORTH 16°09'20" EAST 612 06 FEET TO A POINT IN THAT CERTAIN COURSE HAVING A LENGTH OF 1175.91 FEET IN THE SOUTHERLY BOUNDARY OF PARCEL 1, AS SHOWN ON THE MAP FILED IN BOOK 65 PAGE 38 OF RECORD OF SURVEYS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY, THENCE NORTH 86°14'22" WEST ALONG SAID CERTAIN COURSE 677 58 FEET TO A 2 INCH IRON PIPE IN THE EASTERLY LINE OF DICE ROAD, 40 FEET WIDE, AS SAID PIPE AND ROAD ARE SHOWN ON SAID LAST MENTIONED MAP; THENCE ALONG SAID DICE ROAD, SOUTH 09°37'51" EAST 15 28 FEET TO AN ANGLE POINT THEREIN AND SOUTH 80°05'09" WEST 40 00 FEET TO AN ANGLE POINT THEREIN, THENCE ALONG SAID DICE ROAD, SOUTH 09°38'29" EAST 483 46 FEET TO SAID 2 INCH IRON PIPE IN THE EAST LINE OF DICE ROAD, THAT IS DISTANT NORTH 09°37'40" WEST 1,23 FEET FROM AN ANGLE POINT IN SAID EAST LINE OF DICE ROAD, THENCE ALONG SAID LINE WHICH PASSES THROUGH A 2 INCH IRON - PIPE SET IN THE NORTHWESTERLY LINE OF SAID RIGHT OF WAY, 50 FEET WIDE, NORTH 73D 50' 40" WEST 22 21 FEET TO THE CENTERLINE OF SAID DICE ROAD; THENCE SOUTH 9D 51' 22" EAST ALONG THE CENTERLINE OF SAID DICE ROAD 7 10 FEET TO SAID ANGLE POINT IN SAID DICE ROAD, THENCE SOUTH 11D 54' 10" WEST ALONG THE CENTERLINE OF SAID DICE ROAD 136 46 FEET, THENCE SOUTH 86D 16' 45" EAST 497 17 FEET TO THE WESTERLY LINE OF THE LAND DESCRIBED

DICE 00046

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IN INSTRUMENT NUMBER 891, RECORDED APRIL 21, 1954 IN BOOK 44382 PAGE 402, OF OFFICIAL RECORDS, RECORDS OF SAID COUNTY; THENCE ALONG THE WESTERLY LINE OF LAST SAID INSTRUMENT NORTH 16D 06' 40" EAST 35.42 FEET TO THE SAID LINE WHICH PASSES THRU A 2 INCH IRON PIPE, SAID LINE ALSO BEING THE NORTHERLY LINE OF THE LAND DESCRIBED IN CERTIFICATE OF TITLE NO. X-10800 ON FILE IN THE OFFICE OF THE REGISTRAR OF SAID COUNTY; THENCE ALONG LAST SAID LINE SOUTH 73D50'40" EAST 4.21 TO THE TRUE POINT OF BEGINNING.

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DOCUMENT 05/0+

RHK---V :----43080/311-2---12/12/6

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MAIL TO: · MERICAN CYROGENICS, INC. 3832 DICE ROAD SANTA FE SPRINGS, CALIFORNIA 90670 ATTN: MR. R. A. ZEEDIK

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RECORDED 1.1 OFFICIAL RECORDS OF LO3 ANGELES COUNTY, CALIF. FOR TITLE INSURANCE & TRUST CO. FEB 26 1970 AT 8 A.M.

RNY E. LEE, Registrar-Recorder

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NK D4642 PG 2

SOUTHERN PACIFIC TRANSPORTATION COMPANY, a Delaware corporation, herein termed "Grantor", hereby grants to AMERICAN CRYOGENICS, INC., a corporation, herein termed "Grantee", the following described real property in the <u>City of Santa Fe Springs</u>, County of Los Angeles, State of California, to-wit:

PARCEL 1:

That portion of the 236 acre tract of land known as the Colima Tract, in the Rancho Santa Gertrudes, in the City of Santa Fe Springs, County of Los Angeles, State of California, allotted to Jose Sanchez Colima and Nicholas S. Colima, by decree of partition entered in Case No. 2542 of the District Court of the 17th Judicial District of said county, described as follows:

Beginning at a point in the southeasterly line of the land described in the deed from Nicholas S. Colima to Jose S. Colima, recorded in Book 15, Page 414 of Deeds, in the office of the county recorder of said county, distant 198 feet, more or less, southerly from the northeast corner thereof, said point being also the northeast corner of the land conveyed in the deed from Jose Sanchez Colima and wife, to Leander Sleeper and Sarah Sleeper, his wife, recorded in Book 15, Page 420 of said Deeds; thence along the northerly line of the land so conveyed to said Sleeper and his wife, North 73°30' West to its intersection with the southeasterly line of the 50-foot wide strip of land described in the deed to the Long Beach, Whittier and Los Angeles County Railroad Company, recorded in Book 391, Page 53 of said Deeds; thence southwesterly along said southeasterly line to its intersection with the northerly boundary of the 100-foot wide strip described in the Deed to H. E. Huntington, Trustee, recorded in Book 2927, Page 14 of said Deeds; thence easterly along said northerly boundary to its intersection with said southeasterly line of the land described in said Deed recorded in Book 15, Page 414 of Deeds; thence North 39°30' East along said southeasterly line to the point of beginning.

EXCEPTING therefrom that portion thereof lying southerly of a line that is parallel with and distant southerly 30 feet, measured at right angles, from that certain course, and its easterly prolongation, having a length of 441.12 feet, in the southerly boundary of the real property, described in the deed to C. W. Roberts, recorded on April 21, 1954, as Document No. 891, in Book 44382, page 402, of Official Records, in the office of said county recorder.

Mail tax statements to:

SAME AS ABOVE

(Name)

(Address)

(Zip Code)

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BK D4642 PF 232

ALSO EXCEPTING therefrom that portion thereof lying easterly of the centerline of that certain strip of land, 80 feet wide, described in the deed of easement to the City of Santa Fe Springs, recorded on May 21, 1965, as Document No. 3632, in Book D-2913, page 716, of said Official Records, said centerline being more particularly described therein as follows:

Beginning at the southerly terminus of that certain course having a bearing and length of South 3°19'35" West 515.92 feet in the center line of Sorensen Avenue, as shown on County Surveyors Map No. B-2263, on file in the office of the Engineer of said county; thence South 3°42'47" West, along the southerly prolongation of said certain course, 232.15 feet to the beginning of a tangent curve, concave westerly and having a radius of 800.00 feet; thence southerly and southwesterly along said curve, through a central angle of 36°54'06", an arc distance of 515.25 feet; thence tangent to said curve South 40°36'53" West, 188.97 feet to the beginning of a tangent curve concave easterly and having a radius of 800.00 feet; thence southerly along said curve, through a central angle of 35°00'00", an arc distance of 488.69 feet; thence tangent to said curve South 5°36'53" West, 865.74 feet to a point of tangency in the northwesterly and northerly continuation of that certain curve having a radius of 1000 feet and an arc length of 201.69 feet in the center line of Sorensen Avenue, 80 feet wide, as shown on the map of Tract No. 27623, recorded in Book 706, pages 55, 56 and 57 of Maps, in the office of said county recorder; thence southerly and southeasterly along said continuation and along said certain curve, through a central angle of 55°54'59", an arc distance of 975.93 feet to the southeasterly terminus of said certain curve.

ALSO EXCEPT an undivided one-half interest in and to all oil, gas, and other hydrocarbon substances and the minerals, in, under, and that may be produced from said land for a period of 10 years from the date hereof, or for so long thereafter as any oil, gas, minerals, or other hydrocarbon substances are being produced from said land or from any Community Oil and Gas Lease of which said land is a part, but without right of entry, however, to a depth of 500 feet, as reserved by Russell E. Harrison and Hilda H. Harrison, husband and wife, in Deed recorded July 1, 1955.

RESERVING therefrom the remaining undivided one-half interest of all oil, gas, and other hydrocarbon substances in and under said land that may be produced below a plane 500 feet below the surface thereof but without the right of entry upon such surface above said 500 foot plane, as reserved in the Deed from John B. Rauen and Agnes E. Rauen, husband and wife, recorded March 10, 1958.

ALSO RESERVING all rights of reversion of the reservation of Russell E. Harrison and Hilda H. Harrison, husband and wife, by Deed recorded July 1, 1955 as provided in the Deed last above mentioned.

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ALSO EXCEPT all right, title and interest in and to oil, gas, and other hydrocarbon substances in or under said land, as conveyed to John B. Rauen, a married man, by deed recorded September 15, 1959 in Book D-602, Page 521, Official Records, but without the right of entry upon the surface or subsurface of said land except below a depth of 500 feet below the surface thereof.

The hereinabove described Parcel 1 contains an area of 4,456 square feet.

PARCEL 2:

That certain strip or parcel of land, lying, being and situate in the City of Santa Fe Springs, County of Los Angeles, State of California, described in deed to the Long Beach, Whittier, and Los Angeles County Railroad Company, recorded on February 15, 1888, in Book 391, page 53, of Deeds, in the office of the County Recorder of said county, said land being described in said deed as follows:

"A strip or tract of land fifty feet wide, lying equally on each side of the located line of the Long Beach, Whittier and Los Angeles County Railroad Company's Railroad where the same is located through the land of the said party of the first part situated between the town of 'Fulton Wells' or 'Santa Fe Springs' and the town of 'Whittier' and adjoining the lands of John H. Martin, Sanchez, Hall and others, being more particularly described as follows, to wit:

Commencing for the same at a point on the center line of said Railroad where said center line intersects the westerly boundary line of said land of said party of the first part at or near Engineer's Station number One Hundred and Seventy Nine plus Forty One (179+41) and running thence in a northeasterly direction along said center line of said Railroad, embracing a strip of land twenty five feet wide on each side of said center line to the northerly boundary line of said land at or near Engineers' Station number One Hundred and Ninety-Five plus Thirty Six (195+36) a distance of One Thousand five hundred and ninety five (1595) feet, more or less.

EXCEPTING therefrom that portion thereof lying southerly of a line that is parallel with and distant southerly 30 feet, measured at right angles, from that certain course, and its easterly prolongation, having a length of 441.12 feet, in the southerly boundary of the real property, described in the deed to C. W. Roberts, recorderd on April 21, 1954, as Document No. 891, in Book 44382, page 402, of Official Records, in the office of said county recorder.

ALSO EXCEPTING therefrom that portion thereof lying easterly of the centerline of that certain strip of land, 80 feet wide, described in the deed of easement to the City of Santa Fe Springs, recorded on May 21, 1965,

as Document No. 3632, in Book D-2913, page 716, of said Official Records, said centerline being more particularly described therein as follows:

Beginning at the southerly terminus of that certain course having a bearing and length of South 3°19'35" West 515.92 feet in the center line of Sorensen Avenue, as shown on County Surveyors Map No. B-2263, on file in the office of the Engineer of said county; thence South 3°42'47" West, along the southerly prolongation of said certain course, 232.15 feet to the beginning of a tangent curve, concave westerly and having a radius of 800.00 feet; thence southerly and southwesterly along said curve, through a central angle of 36°54'06", an arc distance of 515.25 feet; thence tangent to said curve South 40°36'53" West, 188.97 feet to the beginning of a tangent curve concave easterly and having a radius of 800.00 feet; thence southerly along said curve, through a central angle of 35°00'00", an arc distance of 488.69 feet; thence tangent to said curve South 5°36'53" West, 865.74 feet to a point of tangency in the northwesterly and northerly continuation of that certain curve having a radius of 1000 feet and an arc length of 201.69 feet in the center line of Sorensen Avenue, 80 feet wide, as shown on the map of Tract No. 27623, recorded in Book 706, pages 55, 56 and 57 of Maps, in the office of said county recorder; thence southerly and southeasterly along said continuation and along said certain curve, through a central angle of 55°54'59", an arc distance of 975.93 feet to the southeasterly terminus of said certain curve.

The hereinabove described Parcel 2 contains an area of 8,847 square feet.

Parcels 1 and 2 Excepting therefrom that portion of said/xxxxxxx lying belo depth of five hundred (500) feet measured vertically from the contour of the surface thereof.

Subject to easements, covenants, conditions, reservations and restrictions of record.

Grantee hereby covenants as follows:

- That the exterior walls of all buildings erected on (1)the above-described property shall be of concrete, masonry, brick or equally substantial construction.
- (2)All buildings to be located as required by local codes and ordinances. In any case, the building set-back lines shall be not less than Thirty-five (35ft.) from the street lines. This area may be used for landscaping and/or parking purposes.
- (3) Outside storage will be permitted only if adequately screened by location of building and/or construction of a masonry type block wall.

The preceding covenants may be enforced by any and all of the

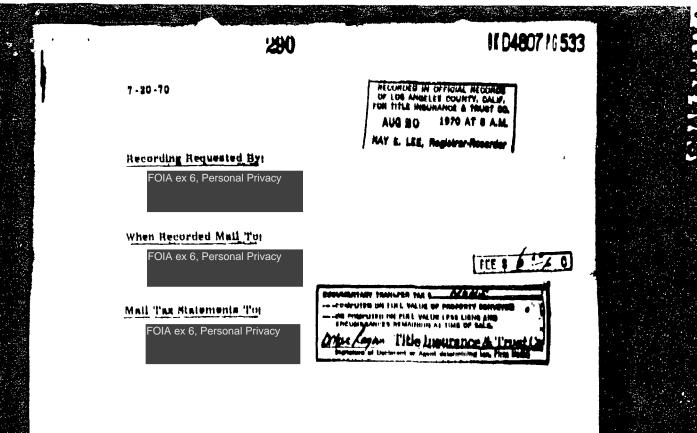
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available legal and equitable remedies, including, but not limited to, injunction, declaratory relief, specific performance and action to abate a nuisance by the Grantor, or its successors or assigns, who shall have the right to recover Grantor's reasonable attorney's fees from Grantee, or its successors in title, in connection with any such action to enforce these covenants. Grantee, by its acceptance hereof, waives any right it might otherwise have to claim that any of such remedies are unavailable. These covenants are for the benefit of the land conveyed hereby and shall be binding upon the successors in title of Grantee.

SOUTHERN PACIFIC TRANSPORTATION COMPANY Aug. Juci VICE PRESIDENT Attest POSLATIANKY R Secretary Assistant 27.70

STATE OF CALIFORNIA, City and County of San Francisco 5^{st.} 265 Kinz On this her day of_ before me, John E. Jurgens, a Notary Public in and for the City an County of San Francisco, State of California, personally appeared (65 Market St.) in the year One Thousand Nine Hundred and Sixty Kuru JOHN E JURGENS O NOTARY PUBLIC-CALIFORNIA PRINCIPAL PLACE OF RUSINESS IN GITY AND COUNTY OF SAN TRAUCISCO known to me to be the line literial. + + of the corporation_ described in and that executed the within instrument, and also known to me to be the person_____who executed it on behalf of the corporation_____ therin named and______he____acknowledged to me that such corporation_____ My Commission Expires June 13, 1973 _acknowledged to me that such corporation executed the same. IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official scal at my office in the City and County of San Francisco, the day and year in this scal at my office in certificate first above written. Notary Public in and for the City and County of San Francisco, State of California. Corporation

My Commission Expires June 13, 1973



CHAN'L DEED

FOR A VALUABLE CONSIDERATION, receipt of which is hereby acknowledged, AMERICAN CRYCOENICS, INC., a corporation, hereby grants to FOIA ex 6, Personal Privacy the following described real property in the County of Los Angeles, State of California;

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That portion of the 236 acre tract of land known as the Colima Tract, In the Hancho Santa Gertrudes, in the City of Santa Fe Springs, County of Los Angeles, State of California, allotted to Jose Sanches Colima and Nicholas S. Colima, by decree of partition entered in Case No. 2942, of the District Court of the 17th Judicial District of said county, described as follows:

Beginning at a point in the southeasterly line of the land described in the deed from Nicholas S. Colima to Jose S. Colima, recorded in Book 10, Page 414 of Deeds, in the office of the County Recorder of said county, distant 106 feet, more or less, southerly from the northeast corner thereof, said point being also the northeast corner of the

Mail Tax Statements as directed above

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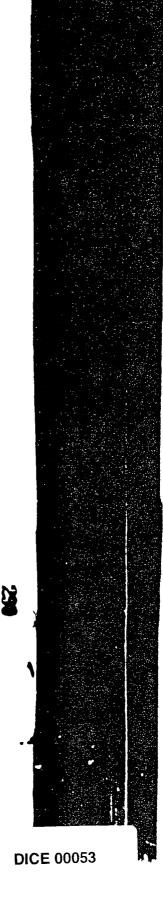
Inni conveyed in the deed from Jose Banches Colima and wife, to Leander Niceper and Barah Siceper, his wife, recorded in Book 18, Page 420 of said Deeds; thence along the northerly line of the land an conveyed to said Siceper and his wife, North 73° 30' West to its intersection with the nouthensterly line of the 50 foot wide strip of land described in the doed to the Long Beach, Whitter and Los Angeles County Hallroad Company, recorded in Book 381, Page 53 of said Deeds; thence southwesterly along said southeasterly line to its intersection with the northerly boundary of the 100 foot wide strip described in the deed to H. E. Huntington, Trustee, recorded in Hook 2927, Page 14 of said Deeds; thence easterly along said northerly boundary to its intersection with east southeasterly line of the land described in said deed recorded in Book 18, Page 414 of Deeds; thence North 38° 30' East along said southeasterly line to the point of beginning.

EXCEPTING therefrom that portion thereof lying southerly of that certain conces, and its easterly prolongation, having a length of 441,12 feet, in the southerly boundary of the real property, deacribed in the deed to C. W. Roberts, recorded on April 21, 1984, as Document No. 801, in Book 44382, Page 402, Official Records, in the office of said County Recorder,

ALSO EXCEPTING therefrom that portion thereof lying easterly of the contactine of that contain attrip of land, 80 feet wide, described in the deed of easement to the City of Muita Fe Mprings, recorded on May 21, 1000, as Document No, 3632, in Hook D 2013, Page 718, of whit Official Records, whit centerline being more particularly desorthod therein as follows:

Heginning at the southerly terminus of that certain course having a boncing and length of South 3" 19' 30" West 515, 92 feet in the centerline of Soromen Avenue, as shown on County Nurveyor's Map No. 11-2203, on file in the office of the Engineer of said county; thence South 3" 42' 47" West, along the southerly prolongation of said certain course, 232, to feet to the beginning of a tangent curve, concave westerly and having a radius of 800,00 feet; thence southerly and southwesterly along said curve, through a central angle of 36" 54' 00", an are distance of 515, 35 feet; thence tangent to said curve Nouth 40" 36' 53" West, 180, 97 feet to the beginning of a tangent curve concave easterly and having a radius of 800,00 feet; thence southerly along said curve, through a central angle of 35" 00" 00", an are distance of 486,00 feet; thence tangent to said curve Nouth 40" 367 53" West, 180,97 feet to the beginning of a tangent curve concave easterly and having a radius of 800,00 feet; thence southerly along said curve, through a central angle of 35" 00" 00", an are distance of 486,00 feet; thence tangent to said curve Nouth 6" 36' 53" West, 560,74 feet to a point of tangency in the northwesterly and northerly continuation of that certain curve having a radius of 1000 feet and an are length of 201,09 feet in the centerline of Morensen Avenue, 80 feet wide, as shown on the map of Tradt No, 27623, recorded in Book 708, Pages 50, 55 and 57 of Maps, in the office of said County Recorder; thence southerly and southeasterly along said continuation and along and certain curve, through a central angle of 50° 04' 08', an are distance of 970, 93 feet to the acutileasterly terminus of action ertain curve.

ALNO EXCEPT an individed one-half interest in and to all oli, gas and other hydrocarino aubstances and the minerals, in, under, and that may be produced from said land for a period of 10 years from



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date hereof, or for so long thereafter as any oil, gas, minerais, or other hydrocarbon substances are being produced from said land or from any Community Oil and Gas Lease of which said land is a part, but without right of entry, however, to a depth of 500 feet, as reserved by Russell E. Rarrison and Hilds R. Harrison, husband and wife, in deed recorded July 1, 1955, in Book 48438, Page 424, Official Records, Instrument No. 1328.

RESERVING therefrom the remaining undivided one-half interest of all oil, gas and other hydrocarbon substances in and under said land that may be produced below a plane 500 feet below the surface thereof, but without the right of entry upon such surface above said 500 foot plane, as reserved in the deed from John H. Hauen and Agnes H. Hauen, instant and wife, recorded March 17, 1058, in Hook D 35, Page 315, Official Henords, Instrument No. 1064.

ALSO RESERVING all rights of reversion of the reservation of Hussell E. Harrison and Hilds II. Harrison, husband and wife, by deed recorded July 1, 1900, as provided in the deed last above mentioned.

ALSO EXCEPT all right, title and interest in and to oil, gas, and other hydrocarbon substances in or under said land, as conveyed to John H. Hauen, a married man, by deed recorded September 18, 1909, in Book D 602, Page 521, Official Records, but without the right of entry upon the surface or subsurface of said land except below a depth of 500 feet below the surface thereof.

PARCED

That certain strip of parcel of land, lying, being and situate in the City of Santa Fe Springs, County of Los Angeles, State of California, deactibed in deed to the Long Beach, Whittler and Los Angeles County Railroad Company, recorded on February 10, 1868 in Book 301, Page D3 of Deeds, in the office of the County Recorder of said county, said land being described in said deed as follows:

"A strip or tract of land fifty feet wide, lying equally on each side of the located line of the Long Beach, Whittler and Los Angeles County Italiroad Company's Italiroad where the same is located through the land of the said party of the first part situated between the town of "Fulton Wells" or "Santa if Springs" and the town of "Whittler" and adjoining the lands of John B. Martin, Sanches, Hall and others, being more particularly described as follows, to with

Commencing for the same at a point on the centerline of said Hairoad where said centerline intersects the westerly boundary line of said land of said party of the first part at or near Engineer's Mation Number One Hundred and Reventy Nine plus Forty One (178 + 41) and running thence in a northeasterly direction along said centerline of said Hairoad, embracing a strip of land twenty five feet wide on each alde of said centerline to the northerly boundary line of said land at or mear Engineers' Mation Number One Hundred and Ninety Five plus 'Thirty Min (186 + 160), a distance of One Thousand Five Hundred and Ninety Five (1868) fast, mure or land, "

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EXCEPTING therefrom that portion thereof lying southerly of that certain course, and its easterly prolongation, having a length of 441, 12 feet in the southerly boundary of the real property, described in the deed to C. W. Roberts, recorded on April 31, 1984, as Document No. 881, in Book 44382, Page 402, Official Records, in the office of said County Recorder.

ALSO EXCEPTING therefrom that portion thereof lying easterly of the venterline of that certain strip of land 80 feet wide, described in the deet of easement to the City of Manta Fe Springs, recorded on May 31, 1080, as Document No. 3433, in Book D 3818, Page 718, of said Official Henords, said centerline being more particularly desorthed therein as follows:

Beginning at the montherly terminum of that certain course having a bearing and length of Houlh 3" 19' 36" West 815, 99 feet in the centerline of Norensen Avenue, as shown on County Surveyor's Map No. B-2203, on file in the office of the Engineer of said county; thence Houth 3" 42' 47" West, along the moutherly prolongation of said certain course, 232, 15 feet to the beginning of a tangent curve, concave westerly and having a radius of 800, 00 feet; thence southerly and mothwesterly along said curve, through a central angle of 36° 54' 06", an are distance of 515, 25 feet; thence tangent curve South 40° 36' 53" West; 188, 57 feet to the beginning of a tangent curve concave centerly and having a radius of 800, 00 feet; thence montherly along said curve, through a central angle of 35° 00", an are distance of 618, 25 feet; thence tangent to said curve South 40° 36' 53" West; 188, 57 feet to the beginning of a tangent curve concave centerly and having a radius of 800, 00 feet; thence montherly along said curve, through a central angle of 35° 00" 00", an are distance of 6400, 50 feet; therces tangent to said curve Hould and the southerly continuation of the central angle of 35° 00" 00", an are distance of 400, 50 feet; therces tangent to saving a radius of 1000 feet and an are length of 201, 60 feet in the centerline of Morensen Avenue, 60 feet wide, as shown on the map of Tradi No, 37633, recorded in Book 700, Pages 55, 56 and 57 of Maps, in the office of said County Recorder; therce southerly and southefasterly along said continuation and along said certain curve, through a central angle of said County Recorder; therce southerly and southefasterly along said continuation and along said certain curve, through a central angle of 55' 54' 69", an are distance of 97,84 feet to the autheasterly terminue of said certain curve.

ALSO EXCEPTING therefrom that portion of said Parcels 1 and 2 lying below a depth of five hundred (800) feet measured vertically from the contour of the surface thereof, as excepted in the deed from Southern Parific Transportation Company, a Delaware corporation, recorded February 20, 1970, in Book D 4842, Page 231, Official Hecords, as Instrument No, 322.

Dated: July 14 , 1970,

AMBRICAN CRYCOLENICS, INC.

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STATE OF (de numeros) BB,

On <u>Luclus 23</u>, 1970, before me, the undersigned, a Notary Public in and for said State, personally appeared <u>13. W. Turk</u>, known to me to be the Assistant Secretary of the corporation that executed the within instrument, known to me to be the person who executed the within instrument, known to me to be the person who executed the within instrument on behalf of the corporation therein named, and acknowtedged to me that such corporation executed the within instrument pursuant to its by-laws or a resolution of its Board of Directors, withiss my hand and official seal,

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AGREFMENT, dated as of June 30, 1972, by end between L'AIR LTOUIDE, SOCIETE ANOLYME POUR L'ETUDE ET L'EXPLOITATION DES PROCEDES GEORGES CLAUDE. ("Air Liquide"), a French corporation; <u>CANADIAN LIQUID AIR LTD.</u> ("CLA"), a Canadian corporation; <u>JERSEY ENGERPRISES INC.</u> ("Jersey"), a Delaware corporation; <u>INTERNATIONAL LIQUID AIR INC.</u> ("LA Inter"), a Delaware corporation; <u>AMERICAN AIR LIQUIDE, INC.</u> ("AAL"), a Delaware corporation; <u>LIQUID AIR INC.</u> ("LAI"), a Delaware corporation; <u>U.S. DIVERS CO.</u> ("USD"), a California corporation; <u>LA SPIROTECHNIQUE</u> ("Spiro"), a French corporation: and JACQUES COUSTEAU ("Cousteau"), Scientist, of the Principality of Monaco,

FECTIALS

WHEREAS Air Liquide is the owner of all the outstanding common shares of CLA and is desirous of trapsforring; the same to LA Inter, in eachange for Common Stock of LA Inter:

WHEREAS CLA, AAL, and certain individuals are the awners of all the outstanding common shares of LAI and are desirous of transferring the same to LA Inter;

WHEREAS Spiro, AAL and Cousteau are the owners of all the outstanding common shares of USD and are desirous of transferring the same to LA Inter;

WHEREAS the foregoing is part of a re-organization plan pursuant to which LA Inter (a majority of the Common Stock of which will be owned by Air Liquide) will be the parent company 17.

ROYALTIES AND OTHER AGREEMENTS

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Air Liquide agrees that :-

(a) Air Liquide has entered into a Technical Agreement with CLA dated August 1, 1969 a copy of which has been delivered to Jersey. The royalty provided in said agreement payable by CLA to Air Liquide shall not be increased during the term of said agreement and such royalties shall only apply to sales by CLA and its Canadian Subsidiaries (excluding sales in the U.S. by Canadian Subsidiaries, branches or divisions operating in the U.S.) and said royalties shall include all sales to companies within the Air Liquide Group;

(b) Spiro has entered into a Technical Agreement with USD dated October 1, 1966, a copy of which has been delivered to Jersey. The royalty provided in said agreement payable by USD to Spiro shall not be increased during the term of said agreement. The Agreements described in this Section 17 (a) and (b) may be renewed upon their expiry dates on terms and conditions based upon consideration of facts and circumstances existing at the time of such renewal;

(c) Any work or services performed by Air Liquide or any of its Affiliates for LA Inter and its Subsidiaries (except as provided in the aforesaid Technical Agreements) shall be performed at cost (including a reasonable allowance for administrative and other overheads) plus 5%;

(d) Any LA Inter indebtedness to Air Liquide or any of its Affiliates shall be at not more than the then current bank charge for prime loans in New York City plus 1% except as referred to or contemplated by the provisions of this Agreement, or as consented to by Jersey pursuant to a letter dated March 24, 1972 addressed to CLA;

(e) LA Inter will be the sole vehicle for Air Liquide's future difect or indirect operations in the industrial gas field (exclusive of engineering and constructing low temperature separation plants) and in those lines of business in which USD is engaged at the time of the Closing in the United States and Canada;

(f) Air Liquide's other relations with LA Inter will be conducted with due regard to the interests of LA Inter minority stochholders;



LAI Properties, Inc. 2121 North California Boulevard Walnut Creek, California 94596

Gentlemen:

This is to advise you that Liquid Air Corporation ("LAC") hereby elects to contribute to the capital of LAI Properties, Inc., ("LAI"), a Delaware corporation, all of: (1) its Assets, whether owned or leased and which are used in the industrial gas business in the United States, which is conducted through the INDUSTRIAL GASES DIVISION, a joint venture pursuant to the agreement of January 1, 1980, as amended, between LAC and LAI, except for those assets specifically described in Appendix "A," attached hereto, forming part hereof; (2) that portion of the indebtedness owed by LAC to third party creditors that is attributable to the industrial gas business conducted through the INDUSTRIAL GASES DIVISION, and as more specifically described on Appendix "B," attached hereto, forming part hereof; and (3) that portion of the indebtedness, including principal and accrued interest owed by LAI to LAC, as at September 30, 1990, and as more specifically described on Appendix "C," attached hereto, forming part hereof, such capital contribution to be effective at the close of business on September 30, 1990, without any additional shares of capital stock of LAI being issued in respect thereof. No transfer or assignment of any leasehold interest in any asset which requires the consent of a third party is, or shall be made, if without such consent, the assignment or transfer would constitute a breach or violation thereof.

Very truly yours,

LIQUID AIR CORPORATION

Gregory B. Alexander

Vice President and Treasurer

Bv John N. Baird

Vice President, Legal and Corporate Affairs

APPENDIX "A"

The following assets are excluded from the capital contribution from LAC to LAI:

- 1. Capital Stock of VitalAire Corporation
- 2. Capital Stock of Canadian Liquid Air Ltd.
- 3. Capital Stock of LACONA Holdings, Inc.
- 4. Capital Stock of LAI Properties, Inc.
- 5. Capital Stock of U.S.D. Corp

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- 6. Those assets accounted for by LAC as the division entitled "LAC Unconsolidated," as shown in Attachment 1.
- 7. Any and all patents of which LAC is the owner or current holder.

APPENDIX "B"

THIRD PARTY INDEBTEDNESS

Accounts Payable to Vendors	\$33,187,667
Taxes Other Than Income	\$ 1,134,689
Oklahoma Revenue Bond	\$ 1,120,000
Deferred Income	\$ 714,304
Deferred Income Taxes	\$ 6,289,788

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APPENDIX "C"

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INDEBTEDNESS

PAYABLE BY LAI TO LAC

In the amount of \$62,255,567



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SEPARATION AGREEMENT

SANTA FE SPRINGS, CALIFORNIA

AGREEMENT, made this (6 and of June, 1980 by and between MG BURDETT GAS PRODUCTS COMPANY, a Delaware corporation having an office at One Schuylkill Avenue, Norristown, Pennsylvania 19401 ("Burdett"), and LIQUID AIR INC., a Delaware corporation having offices at One Embarcadero Center, San Francisco, California 94111 ("Liquid Air").

$\underline{W} \underline{I} \underline{T} \underline{N} \underline{E} \underline{S} \underline{S} \underline{E} \underline{T} \underline{H}$:

WHEREAS, Burdett and Liquid Air are parties to an agreement dated February 8, 1980 (the "Acquisition Agreement") whereby Liquid Air and Liquid Air Corporation of North America, a Delaware corporation, have agreed to sell to Burdett and Burdett has agreed to purchase from Liquid Air and said Liquid Air Corporation of North America certain assets and business of manufacturing, marketing and distributing industrial and medical gases and marketing and distributing welding equipment, as defined in the Acquisition Agreement;

WHEREAS, §4.2.1 of the Acquisition Agreement and Schedule 4.2A attached thereto provide that Liquid Air shall retain a certain portion (the "Liquid Air Parcel") and transfer to Burdett a certain portion (the "Burdett Parcel") of the real property of Liquid Air at Sante Fe Springs, California; and

WHEREAS, §4.2.1 of the Acquisition Agreement provides that the parties thereto will execute and deliver an agreement governing the separation of said property;

NOW THEREFORE, in consideration of the premises and the mutual covenants and conditions contained herein, the parties hereto hereby agree as follows:

1. Subdivision

Liquid Air shall at its expense prepare and file any and all documents that may be necessary, under the California Subdivision Map Act or the subdivision ordinances of the City of Santa Fe Springs, California or otherwise, in order to subdivide said property into the Liquid Air Parcel and the Burdett Parcel. Liquid Air shall pay any and all costs for work or improvements (collectively, the "Improvements") on the Liquid Air Parcel or the Burdett Parcel specifically required by any governmental agency in order to effect the subdivision, including, but not limited to, the costs of streets, street alignments, pavements, sidewalks, curbs, gutters, drainage facilities and the like. Liquid Air shall,

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at its own cost and expense, cause to be posted any bond or bonds required by any governmental agency to secure the completion of the improvements.

2. Escrow

On the date hereof, Liquid Air has delivered to Lawyers Title Insurance Corporation or such other person as may from time to time be designated by written agreement of Liquid Air and Burdett (the "Escrow Holder") an executed deed to Burdett of the Burdett Parcel, to be held in accordance with the terms of escrow instructions from Burdett and Liquid Air to the Escrow Holder in the form attached hereto and by this reference made a part hereof (the "Escrow Instructions"). In the event the Escrow Holder is unable to record said deed and issue or cause to be issued a title insurance policy as described therein and by the date (as may be extended by mutual agreement) set forth therein (the "Release Date") in accordance with the Acquisition Agreement, Liquid Air shall be deemed to have exercised its option pursuant to §4.2.1 of the Acquisition Agreement notwithstanding the fact that Burdett has not removed the air separation plant. In such event, the payment of the option price to Burdett against redelivery of the deed to the Burdett Parcel to Liquid Air (the "Option Closing") shall take place upon removal of the

-3-

air separation plant from the Burdett Parcel by Burdett or on June 6, 1990, which ever shall first occur. The appraisals for purposes of determining the option price which are contemplated by §4.2.1 of the Aquisition Agreement shall be made as of the date of the Option Closing. In the event the option is deemed to have been exercised under this paragraph 2, Burdett shall not be required to remove said plant prior to June 6, 1990, and Burdett shall have the custody and care of said plant and all property of Burdett from time to time stored on the Burdett Parcel by Burdett during such period. Liquid Air shall not permit third parties to have access to such plant and property without the prior written approval of Burdett. Nothing herein shall be deemed to relieve Liquid Air of its obligations or its obligation to use its best efforts up to and including the Release Date to convey the Burdett Parcel to Burdett in accordance with the Escrow Instructions. In the case of any conflict between this Separation Agreement and the Escrow Instructions, the provisions of this Separation Agreement shall control.

3. Possession and License

(a) Prior to the recordation of the deed and issuance of title insurance in accordance with the Escrow Instructions, Liquid Air shall retain possession of the Burdett Parcel.

-4-

(b) Liquid Air hereby grants to Burdett a license (the "License") over the Burdett Parcel for ingress, egress, operation and maintenance of all equipment and machinery located on the Burdett Parcel, storage of supplies and inventory, and for such other purposes as may reasonably be necessary for Burdett to conduct the business being transferred to it from Liquid Air pursuant to the Acquisition Agreement and to fulfill its obligations under this Separation Agreement and the Acquisition Agreement. The License shall commence on the date of this Separation Agreement and shall terminate upon the recordation of the deed in accordance with the Escrow Instructions or upon the Option Closing, whichever occurs first. Burdett shall not be obligated to pay any additional consideration to Liquid Air for the License.

(c) It is the intent of the parties that the License not constitute a "lease" and to this end, Burdett and Liquid Air each agree that the license shall not constitute an estate in the Burdett Parcel. Burdett and Liquid Air further intend and agree that the License be a personal contractual right of Burdett and that the License shall not be capable of assignment by Burdett. Any attempt to assign the License by Burdett shall result in the immediate and automatic termination thereof.

-5-

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4. Easements

On and after the date that the Burdett Parcel is conveyed to Burdett, each party, upon the request of the other party, shall from time to time grant without charge such easements, which shall be in recordable form, as are reasonably necessary to the normal operation and use of the requesting party's portion of said real property, including without limitation utility easements and rights of way, provided that neither party shall be required to grant any particular easement if such easement, taken together with the easements theretofore granted pursuant hereto, would unreasonably interfere with the normal operation and use, or materially reduce the fair market value, of its respective parcel or render its title to the same unmarketable.

5. Utilities.

Whereas Burdett has been informed by Southern California Edison Company (through Connie Callenor, Customer Service Representative) that as a new owner of the Burdett Parcel Burdett will have the right to cancel the existing power contract and enter into a new such contract with reduced residual demand charges based on its actual power requirements. Burdett will make available to Liquid Air electric power at

-6-

Burdett's cost for actual kilowatt hours as used by Liquid Air and as determined by the power contract then in effect, excluding any residual demand charges to Burdett, and water service at Burdett's cost to the extent such utilities have customarily heretofore been supplied to the Liquid Air Parcel from the Burdett Parcel until Liquid Air shall find alternate sources for the same available on a reasonable basis. Liquid Air will use its best efforts promptly to find such alternate sources, and Burdett will, subject to paragraph 4 hereof, grant any reasonable easements required for the installation and maintenance of any such alternate sources.

6. Sewer Lines.

Liquid Air shall at no charge to Liquid Air have the right to use for the Liquid Air Parcel sanitary and storm sewer lines located on the Burdett Parcel to the extent such lines have customarily heretofore been used for the Liquid Air Parcel. Liquid Air will pay to Burdett its pro rata share of all expenses, including without limitation taxes, rents, charges and maintenance, associated with such lines, based upon Liquid Air's estimated usage of the same.

7. Compressed Air.

As long as Burdett shall operate the air separation · plant Burdett will supply Liquid Air with compressed air

-7-

for use on the Liquid Air Parcel to the extent customarily heretofore supplied from the Burdett Parcel, and shall be paid, based upon metered volume, at rates then generally charged for similar supply in Santa Fe Springs, California, or if such rates are not determinable, at a reasonable rate.

8. Spur Track.

Liquid Air shall use its best efforts to maintain in effect an agreement providing for use of the existing spur track of Southern Pacific Company adjacent to the Liquid Air Parcel and to make such track available for use by Burdett without charge to Burdett in the normal operation and use of the Burdett Parcel to the extent that any such use by Burdett does not unreasonably interfere with the normal operation and use of the Liquid Air Parcel.

9. <u>Scales</u>.

Burdett shall at no charge to Burdett have access to and the right to use the scales located on the Liquid Air Parcel to the extent that any such use by Burdett does not unreasonably interfere with the normal operation and use of the Liquid Air Parcel.

-8-

10. Responsibility.

Each party hereto assumes full responsibility for its employees, agents and independent contractors for the purpose of this Agreement, and shall indemnify and hold the other party harmless from and against any and all loss, cost, damage, expense (including reasonable attorneys fees) and liability arising out of any injury to or death of persons and damage to or destruction of property (including, without limitation, the employees of Liquid Air and Burdett and the property of Liquid Air, Burdett or others), resulting from or attributable to any negligent act or omission of any such employee, agent or independent contractor or arising out of or in connection with any claim, suit or demand by any such employee, agent or independent contractor against the other party resulting from the use of or access to the facilities of such other party by any such employee, agent or independent contractor. Neither party shall be responsible to the other for special, indirect or consequential damages, however occurring.

11. Notices.

All notices, requests, demands and other communications required or permitted to be given hereunder shall be in writing and shall be deemed to have been duly given if

-9-

delivered personally or if given by pre-paid telegram or mailed first-class, postage pre-paid, registered or certified mail, to the party to receive the same at the address shown below, or to such other address as either party may designate by notice hereunder to the other:

If to Burdett:

> MG Burdett Gas Products Company One Schuylkill Avenue Norristown, Pennsylvania 19401

Attention: Vice President-Operations

If to Liquid Air:

Liquid Air Inc. One Embarcadero Center San Francisco, California 94111 Attention: John Baird, Secretary

12. Miscellaneous.

(a) This Agreement may be amended, modified, superseded, cancelled or assigned, and any of the terms, covenants, representations or conditions hereof may be waived, only by written instrument executed on behalf of both of the parties hereto, or in the case of a waiver, by the party waiving compliance.

(b) Burdett and Liquid Air agree that this Agreement shall be governed by the laws of the State of California.

-10-

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(c) Prior to segregation of the Burdett Parcel and the Liquid Air Parcel by the appropriate governmental authorities for real property tax purposes, Liquid Air will pay all taxes and Burdett will reimburse Liquid Air a pro rata share of real property taxes shall be based on the relative sizes in square feet of the Burdett Parcel and the Liquid Air Parcel.

IN WITNESS WHEREOF, the parties have caused this agreement to be executed as of the day and year first above written.

MG BURDETT GAS PRODUCTS COMPANY

AIR INC. LIQUID AIR INC

Recording requested by and when recorded mail to: MG Burdett Gas Products Company One Schuylkill Avenue Norristown Pennsylvania 19401

GRANT DEED

LIQUID AIR INC. (formerly AMERICAN CRYOGENICS, INC.), a Delaware corporation, of One Embarcadero Center, San Francisco, California, for value received, hereby grants to MG BURDETT GAS PRODUCTS COMPANY, a Delaware corporation, of One Schuylkill Avenue, Norristown, Pennsylvania, all that real property situated in the City of Santa Fe Springs, County of Los Angeles, State of California, described as follows:

Parcel 2 of Parcel Map Number 13513 filed in Book Page of Parcel Maps, in the office of the County Recorder of said County.

Subject to covenants, conditions, restrictions and easements of record.

Dated this 6th day of June, 1980.

LIQUID AIR INC.

Vice President-Fi

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and a stranger of the second second second second second second

200 Park Av

Note: never recorded w/ L.A. County recorder.

ATTEST:

DICE 00075

MEMORANDUM

TO _____ I. Slattery _____ DATE ____October 13, 1983 ____

FROM <u>J. Baird</u> SUBJECT <u>SANIA FE SPRINGS</u> BURDETT PLANT

> I have been advised by Burdett that, on or about November 30, 1983, they intend to remove their air separation plant from the Santa Fe, California plant site.

> In accordance with the agreement between Liquid Air and Burdett dated February 8, 1980, it was resolved that Liquid Air would have an option to repurchase this property once the air separation plant had been removed. While Liquid Air has approximately five acres of vacant land across the street, the repurchase of the site in question has always been deemed necessary by Production because the current operations (cylinder filling, acetylene plant, hydrogen fill plant, specialty gas production, etc.) are rather cramped. The site is approximately one acre, and contains a dock and compressor building.

> Technically, the land was never sold to Burdett because the City of Santa Fe insisted that, before they would allow a subdivision, we pay for the installation of street lights, curbs, sewers, etc.; and since we intended to repurchase the property once the air separation plant was removed, it seemed easier to leave everything in Liquid Air's name and to give Burdett an absolute license to use the property, which satisfied the F.T.C. requirement of disposing of the plant.

> A very preliminary and rough estimate of the price of the land in question would be approximately \$350,000.

We must respond to Burdett within 180 days of their notice. Since Burdett can probably use the income, we might be able to use this factor in negotiating a more favorable price if we agree to purchase the property on or about November 30.

Please give me your comments.

JNB:bb cc: M. Bignolas A. Potter 🚗



LIQUID AIR CORPORATION

10 pm FILED

DEC 30 1982

CERTIFICATE OF OWNERSHIP AND MERGER MERGING NG BURDETT GAS PRODUCTS COMPANY INTO MESSER GRIESHEIM INDUSTRIES, INC.

Messer Griesheim Industries, Inc., a corporation organized and existing under the laws of Delaware.

DOES HEREBY CERTIFY:

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FIRST: That this corporation was incorporated on the nineteenth day of August, 1975, pursuant to the General Corporation Law of the State of Delaware.

SECOND: That this corporation owns all of the outstanding shares of the stock of NG Burdett Gas Products Company (formerly Burdett Oxygen Company), a corporation incorporated on the eighth day of September 1975, pursuant to the General Corporation Law of the State of Delaware.

THIRD: That this corporation, by the following resolutions of "ts Board of Directors, duly adopted at a meeting properly called, at which a quorum was present and acting throughout, on the 29th day of December, 1982, determined to and did merge into it said MG Burdett Gas Products Company:

> RESOLVED. That Messer Gripsheim Industries. Inc. merge, and it hereby does merge into (tself MG Rurdett Gas Products Company and assumes all of its obligations; and

> FURTHER RESOLVED. That the merger shall become effective upon the close of business on December 31, 1982; and

FURTHER QESOLVED. That the proper officers of this corporation be and they hereby are directed to make and execute a Certificate of Ownership and Merger setting forth a copy of the resolutions to merge said NG Burdett Gas Products Company and assume its liabilities and obligations, and the date of adoption thereof, and to cause the same to be filed with the Secretary of State and a certified copy recorded in the office of the Recorder of Deeds of New Castle County and to do all acts and things whatsoever, whether within or without the State of Pelaware, which may be in anywise necessary or proper to effect said merger.

IN WITNESS WHERE'DE, Said Mosson Griekheim Inlustries, Loc. has council this certificate to be signed by D. zur Loye, its President, and CINSINS attested by Dr. Herbert H. Fricke, its Secretary, this 23^{-74} hay of December, 1982.

MESSER GRIESHEIM INDUSTPIES, INC. CORPORATE SEAL 1975 DELAWARE

MESSER GRIESHEIM INDUSTRIES, INC.

D. zur Loye, President 8Y :

ATTEST : BY Secretary ć STATE OF NEW JERSEY

\$5.: COUNTY OF SOMERSET

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; ; ;

D. zur Loye, being the President and Dr. Herbert H. Fricke, being the Secretary of the above named corporation, each being duly sworn, deposes and says that they each executed the above Certificate of Ownership and Merger as the act and deed of the above named corporation and that the facts stated therein are true and correct.

Ľ D. zur Loye

Herbert H. Fricke

Sworn to and subscribed before me this 24 day of December, 1982.

01. Notarial Seal)0009

in ask here + Notary Public

10.16.00 Mit no 1

Certificate of Ownership of the "MESSEE CALEMPER CALE (MAIDS, INC." merging "MG BURDETT CAS PRODUCTS COMPANY",

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pursuant to Section 253 of the General Corporation law of the State of Delaware. as received and filed in this office the transform day of December, A.D. 1982, at 10 o'clock A. M.

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STATE OF DELAWARE

STATEMENT OF FRANCHISE TAX DUE

NOTICE

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1981 PAID .04 BALANCE TOF STATE	CORPOR	AGENT	PANY			PAIr	
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The First State

I, HARRIET SMITH WINDSOR, SECRETARY OF STATE OF THE STATE OF DELAWARE DO HEREBY CERTIFY THAT THE ATTACHED IS A TRUE AND CORRECT COPY OF THE CERTIFICATE OF CONVERSION OF A DELAWARE CORPORATION UNDER THE NAME OF "MESSER GRIESHEIM INDUSTRIES, INC." TO A DELAWARE LIMITED LIABILITY COMPANY, CHANGING ITS NAME FROM "MESSER GRIESHEIM INDUSTRIES, INC." TO "MESSER GRIESHEIM INDUSTRIES LLC", FILED IN THIS OFFICE ON THE THIRTEENTH DAY OF MAY, A.D. 2004, AT 8:09 O'CLOCK A.M.

AND I DO HEREBY FURTHER CERTIFY THAT THE EFFECTIVE DATE OF THE AFORESAID CERTIFICATE OF CONVERSION IS THE THIRTEENTH DAY OF MAY, A.D. 2004, AT 10 O'CLOCK A.M.

A FILED COPY OF THIS CERTIFICATE HAS BEEN FORWARDED TO THE KENT COUNTY RECORDER OF DEEDS.



0815454 8100V 040349309

AUTHENTICATION: 3108064

Darriet Smith Windson

Harriet Smith Windsor, Secretary of State

DATE: 05-13-04

DICE 00081

State of Delaware Secretary of State Division of Corporations Delivered 08:09 AM 05/13/2004 FILED 08:09 AM 05/13/2004 SRV 040349309 - 0815454 FILE

STATE OF DELAWARE

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CERTIFICATE OF CONVERSION

FROM

MESSER GRIESHEIM INDUSTRIES, INC.

INTO

MESSER GRIESHEIM INDUSTRIES LLC

(Pursuant to Section 266 of the General Corporation Law of the State of Delaware and Section 18-214 of the Limited Liability Company Act of the State of Delaware)

Messer Griesheim Industries, Inc., a business corporation of the State of Delaware duly organized and existing under the laws of the State of Delaware ("MGI"), in order to convert itself into a limited liability company of the State of Delaware, does hereby certify as follows:

FIRST: MGI was formed as a corporation of the State of Delaware pursuant to a Certificate of Incorporation filed on August 19, 1975 with the Secretary of State of the State of Delaware.

SECOND: The name of the limited liability company into which MGI shall be converted, and as set forth in such limited liability company's certificate of formation (the "Certificate of Formation"), is Messer Griesheim Industries LLC ("MGI LLC").

THIRD: In accordance with Section 266 of the General Corporation Law of the State of Delaware, the conversion of MGI into MGI LLC has been approved by a resolution duly adopted by the Board of Directors of MGI, dated May 13, 2004, and by a written consent of the sole stockholder of MGI, dated May 13, 2004.

FOURTH: The conversion shall be effective as of 10:00 A.M. (Eastern Time) on May 13, 2004.

[Signature Page Follows]

IN WITNESS WHEREOF, the undersigned has executed this Certificate of Conversion as of May 13, 2004.

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MESSER GRIESHEIM INDUSTRIES, INC.

- - - -

<u>/s/ Gregory B. Alexander</u> Name: Gregory B. Alexander Title: Treasurer

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Delaware

PAGE 1

The First State

I, HARRIET SMITH WINDSOR, SECRETARY OF STATE OF THE STATE OF DELAWARE, DO HEREBY CERTIFY THE ATTACHED IS A TRUE AND CORRECT COPY OF THE CERTIFICATE OF AMENDMENT OF "MESSER GRIESHEIM INDUSTRIES LLC", CHANGING ITS NAME FROM "MESSER GRIESHEIM INDUSTRIES LLC" TO "ALIG LLC", FILED IN THIS OFFICE ON THE FIFTH DAY OF AUGUST, A.D. 2004, AT 9:17 O'CLOCK A.M.

DICE 00084

Darriet Smith Windson

Harriet Smith Windsor, Secretary of State

AUTHENTICATION: 3276932

0815454 8100 040572809

a

DATE: 08-05-04

State of Delaware Secretary of State Division of Corporations Delivered 09:17 AM 08/05/2004 FILED 09:17 AM 08/05/2004 SRV 040572809 - 0815454 FILE

CERTIFICATE OF AMENDMENT OF CERTIFICATE FORMATION OF MESSER GRIESHEIM INDUSTRIES LLC

FIRST: The name of the limited liability company is Messer Griesheim Industries LLC (the "Company").

SECOND: Article FIRST of the Certificate of Formation of the Company is hereby amended to read in its entirety as follows:

"FIRST: The name of the limited liability company (hereinafter called the "Company") is ALIG LLC."

THIRD: This Certificate of Amendment shall be effective upon the date of filing.

IN WITNESS WHEREOF, the undersigned has executed this Certificate of Amendment of the Company this 5th day of August, 2004.

/s/ Kevin M. Feeney Name: Kevin M. Feeney Title: Authorized Person

NEWYORK 4345640v2

DICE 00085

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RECEIPT A	ND CERTIFICATE Nº 667
	FLY THE BURDETT UXIGEN COMPANY OF CLEVELAND
• • • •	
•	0296
	NOMBER
DOMESTIC CORPORATIONS	MISCELLANEOUS FILINGS
ARTICLES OF INCORPORATION	ANNEXATION/INCORPORATION-CITY OR VILLAGE
MERGER/CONSOLIDATION	RESERVATION OF CORPORATE NAMES
DISSOLUTION	REGISTRATION OF NAME
AGENT	REGISTRATION OF NAME RENEWALS
RE-INSTATEMENT	REGISTRATION OF NAME-CHANGE
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	SERVICE MARK
FOREIGN CORPORATIONS	SERVICE MARK RENEWAL
LICENSE	MARK OF OWNERSHIP
AMENDMENT	MARK OF OWNERSHIP RENEWAL
SURRENDER OF LICENSE	EQUIPMENT CONTRACT/CHATTEL
APPOINTMENT OF AGENT	MORTGAGE
CHANGE OF ADDRESS OF AGENT	POWER OF ATTORNEY
CHANGE OF ADDRESS OF AGENT CHANGE OF PRINCIPAL OFFICE	SERVICE OF PROCESS
RE-INSTATEMENT	MISCELLANEOUS
FORM 7	ASSIGNMENT-TRADE MARK, MARK
PÉNALTY	OF OWNERSHIP, SERVICE MARK, REGISTRATION OF NAME
	REGISTRATION OF NAME
I certify that the attached document was rec	ceived and filed in the office of TED W. BROWN, Secre-
tary of State, at Columbus, Ohio, on the 13t	a day of 12. 19. 64, and
recorded on Roll 3357 at Frame 869	of the RECORDS OF INCORPORATION and MIS-
CELLANEOUS FILINGS	
a	TIMP
	chedette Brown
	TED W. BROWN,
• • • •	Secretary of State
Filed by and Returned To: Ulser, mite	, Low, e, Alchan & Curtis
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BURDET	T OFFICER CARENER, OF CLANE AND INCOMPANIES

K357 CERTIFICATE OF ADOPTION Œ MENDED ARTICLES OF INCORPORATION OF THE BURDETT OFFICEN COMPANY OF CLEVELAND, INCORPORATED S. M. LOVEMAN, President, and J. M. BERNE, Secretary, of THE BURDETT OXYGEN COMPANY OF CLEVELAND, INCORPORATED, an Ohio corporation, with its principal office located in Cleveland, Ohio, hereby certify that a meeting of the holders of the share's of said corporation entitling them to vote on the proposal to adopt Amended Articles of Incorporation thereof, as contained in the following resolution, was duly called and held on the 11th day of May, 1964, at which meeting a quorum of such shareholders was present in person or by proxy, and that by the affirmative vote. of the holders of shares entitling them to exercise two-thirds of the voting power of the corporation on such proposal the following resolution was duly adopted: RESOLVED, that in order to provide for certain amend-ments to the Articles of Incorporation of this Corporation, the shareholders of this Corporation hereby adopt, in their entirety, the following Amended Articles of Incorporation, being the same as the copy thereof attached to the shareholders' notice of this meeting:

AMENDED ARTICLES OF INCORPORATION BURDETT OXYGEN CO. OF CLEVELAND, INC. FIRST: The name of the Corporation is BURDETT OXYGEN CO. OF CLEVELAND, INC. SECOND: The place in the State of Ohio where its principal office is located is the City of Cleveland in Cuyahoga County. THIRD: The purposes of the Corporation are as follows: . (a) To manufacture, fabricate, process, produce, service, buy, purchase or otherwise acquire, invest in, own, mortgage, pledge, exchange, sell, assign and transfer or otherwise dispose of, trade, deal in and deal with, import and export. in every manner, gases, chemicals, goods, wares, merchandise, personal property, products, metals, materials and articles of every class, kind and description, for any industrial, commercial, military, scientific or other purpose. (b). To carry on and perform research, development, evaluation, investigation, planning, design, testing, technical studies, invention or consulting or other service, for any commercial, industrial, military, scientific or other purpose and in any field or fields. (c) To maintain and operate manufacturing, testing and related equipment, chemical, physical and other laboratories, and

such other facilities as may be appropriate for the foregoing purposes and to carry on such activities. (d) To acquire by purchase, or otherwise and to own, hold, improve.'develop, maintain, use, lease, sell, convey, transfer mortgage, guarantee, pledge, exchange, or otherwise deal in and deal with or dispose of, real and personal property, tangible or intangible, of any description or character whatsoever, to the extent that the same may be permitted by law. ... (e) To acquire by purchase or otherwise and to own, hold, invest in, sell, negotiate, exchange, transfer. pledge, mortgage, guarantee, deal in and lend or borrow money upon, all forms and kinds of securities, shares of stock, scrip, bonds, debentures, mortgages, notes, commercial paper, trust certificates, certificates of interest, certificates of deposit or indebtedness; bills receivable, accounts receivable, contract obligations, investments and warrants; issued or created by any person, firm, corporation, joint stock company, trust or association, public or private, wherever or however organized or created, or any nation, state, municipality or political subdivision thereof, and to issue and exchange therefor in any manner permitted by law, shares of the capital stock, bonds or other obligations of this Corporation: and while the holder or owner of any of such securities or property, to possess and exercise in respect thereof any and all rights. powers and privileges of ownership, including all voting, consenting or other rights in or in respect thereof. (f) To enter into, make and perform contracts of every kind -2-

Page 4

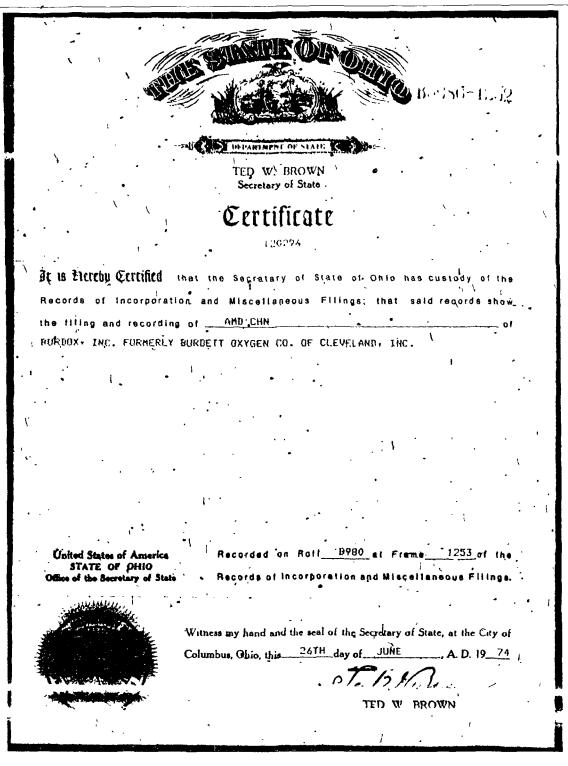
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•	and description. including contracts of joint venture, with any
	firm, association, corporation, government or person, public or
	prívate.
.•	(g) To do all things necessary or incidental to any of the
;	foregoing and, in general, to carry on any other lawful activity
	or business whatsoever which is calculated directly or indirectly
I.	to promote the interests of the Corporation and to enhance the value of its properties.
•	The foregoing clauses of this Article THIRD shall be con-
	strued as purposes, objectives and powers, and nothing herein
	shall be deemed to limit or exclude in any manner any power, right
	or privilege now or hereafter given to the Corporation by law or
•	any authority which it now or hereafter is permitted to exercise
-	under the statutes of Ohio.
	FOURTH: The maximum number of shares which the Corporation
•	is authorized to have outstanding is 600,000 shares, all of which
·	shall be common shares with a par value of \$1.00 per share.
	FIFTH: No holder of shares of the Corporation shall be
	entitled as such, as a matter of right, to subscribe for or pur-
•	chase shares of the Corporation, now or hereafter authorized, or
	to purchase or subscribe for securities convertible into or ex-
	changeable for shares of the Corporation or to which shall be
	attached or apportained any warrants or rights entitling the
•	holder thereof to subscribe for or purchase shares, except such
	-3

rights of subscription or purchase, if any, at such price or prices and upon such terms and conditions as the Board of Direc- . tors, in its discretion, from time to time may determine. 1 SIXTH: Notwithstanding any provision of any of the laws of Obio, now or hereafter in force; requiring for any purpose the vote or consent of holders of shares entitling them to exercise two-thirds of the voting power of the Corporation or of any class or classes of shares thereof. such action, unless otherwise expressly required by statute, may be taken by the vote or consent of the holders of shares entitling them to exercise a majority of the voting power of the Corporation or of such class of shares thereof: SEVENTH: The Corporation may purchase. from time to time, any of its outstanding shares. Such purchases may be made either in the open market, or at private or public sale, in such manner and amounts, from such holder or holders of outstanding shares of the Corporation, and at such prices and upon, such terms as the Board of Directors shall, from time to time, determine, and the Board of Directors is hereby empowered to authorize such purchase, from time to time, without any vote of the holders of any class of shares now or thereafter authorized and outstanding at the time of any such purchase. EIGHTH: A director or officer of this Corporation shall not

Page 6

be disqualified by his office from dealing or contracting t the Corporation as a vendor, purchaser, employee, agent or otherwise, nor shall any transaction or contract or act of this Corporation be void or woidable or in any way affected or invalidated by reason of the fact that any director or officer or any firm of which any director or officer is a member, or any. corporation of which any director or officer is a shareholder or director or officer. is in any way interested in such transaction or contract or act; provided the fact that such director or officer or such firm or such corporation is so interested shall be disclosed or shall be known to the Board of Directors or such members thereof as shall be present at any meeting of the Board of Directors at which action upon any such contract or transaction or act shall be taken, nor shall any such director or officer be accountable or responsible to the Corporation for or in respect to any such transaction or contract or act of this Corporation or for any gains or profits realized by reason of the fact that he or any firm of which he is a member or any corporation of which he is a shareholder or director or officer is interested in such transaction or contract or act, and any such director may be counted in determining the existence of a guarum at any meeting of the Board of Directors of the Comporation which shall authorize or take action in respect to any - 5-

B357 876 such contract or transaction or act, and may vote thereat to authorize, ratify or approve any such contract or act, with like force and effect as, if he or any firm of which he is a member or any corporation of which he is a shareholder or director or officer were not interested in such transaction or contract. or act. NINTH: The within Amended Articles of Incorporation shall supersede and take the place if the heretofore existing Articles of Incorporation and all amendments therete. IN WITNESS WHEREOF, said S. M. LOVEMAN, President, and J. M. 1 BEANE, Secretary, of said corporation acting on behalf of said corporation, have hereunto subscribed their names this ルゼ day of May, 1964.

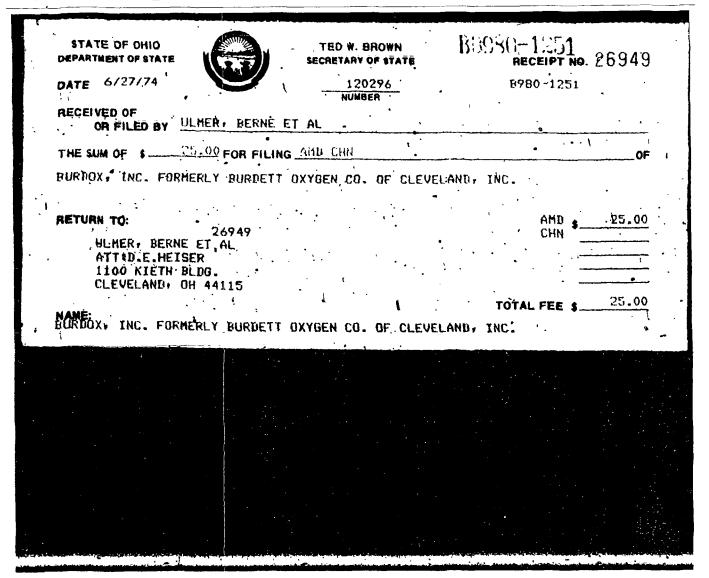


4.050-1.53 1.20.216 CERTIFICATE OF ANUIDUENT PPROV 30 ۱ TO AUDIND ARTICLES OF INCOMPORATION OF 69 BURDETTI OXYGEN OF CLEVELAND The undersigned, MAROLD E. SCHERL and JORDAN C. BAND, being President and Socretary, respectively, of Burdott Oxygen Co. of Cloveland, Inc., an Ohio corporation, do hereby certify that at the Annual Meeting of Shareholders of the Corporation duly held on June 10, 1974, at which meeting a quorum was present in person or by proxy, the following resolution was adopted and approved by the affirmative vote of the holders of shares entitling them to exercise a majority of the voting power of the Corporation, and is in full force and effect. RESOLVED, that the Amended Articles of Intorporation of Burdett Oxygen Co. of Cleve-land, Inc. are hereby further amended by det leting Article FIRST thereof and substituting therefor the following amended Article FIRST: "FIRST: The name of the Cor-poration is Burdox, Inc." IN WITNESS' WHEREOF, said HAROLD E. SCHERL and JORDAN C. BAND, President and Secretary, respectively, of Burdett_Daygen Co. of Cleveland, Inc., acting for and on behalf of said Corpora tion, have hereunto subscribed their names this 18th day of June, 1974. secretary đ

Doc ID --> B980_1253

R0080-1253 - A SURDON LAND CO COHSIN BURDOX LAND CO. (formerly Burdox, Inc.),. an Ohio corporation, hereby consents to the use of the name "Burdox" by paralete oxygen (Co. of Cleveland, Inc. with respect to the change by Burdett Oxygen Co. of Cleveland, Inc. of its corporate name to Burdon, Inc. BURDOX LAND CO. Harold E. Scher Vice President

Doc ID --> B980_1253



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At is increby Certified that the Secretary of State of Ohio has custody of the Records of Incorporation and Miscellaneous Filings, that said records show the filing and recording of. <u>AMD_CHN</u>_____OF AGA BURDOX, INC. FORMERLY BURDOX, INC.

United States of America STATE OF OHIO Office of the Secretary of State

Recorded on Roll<u>E416</u> at Frame<u>0720</u> of the _ Records of Incorporation and Miscellaneous Filings

Witness my hand and the seal of the Secretary of State, at the City of

Columbus, Ohio, this <u>5TH</u> day of <u>MAY</u>, A D 19 78

clu TED W BROWN Secretary of State

11416-1720

CERTIFICATE OF AMENDMENT OF ARTICLES OF INCORPORATION OF BURDOX, INC.

120296	-
- PROYED	
RE Sur	
5-5-18	
1. 111 ES.00	

The undersigned; being President and Secretary, respectively, of Burdox, Inc., an Ohio corporation, do hereby certify that the following resolution was duly adopted and approved on ____ April 28 , 1978 by the written consent of the sole shareholder of the corporation, acting without a meeting pursuant to the provisions of Section 1701.54 of the Ohio Revised Code, and is in full force and effect:

> RESOLVED, that the Articles of Incorpo-ration of Burdox, Inc. now in effect are hereby amended by deleting Article FIRST thereof and substituting therefor the following amended Article FIRST:

"FIRST: The name of the corpo-ration is AGA Burdox, Inc."

IN WITNESS WHEREOF, the aforesaid President and Secretary, respectively, of Burdox, Inc., acting for and on behalf of said corporation, have hereunto subscribed their names this 28th day of April ..., 1978.

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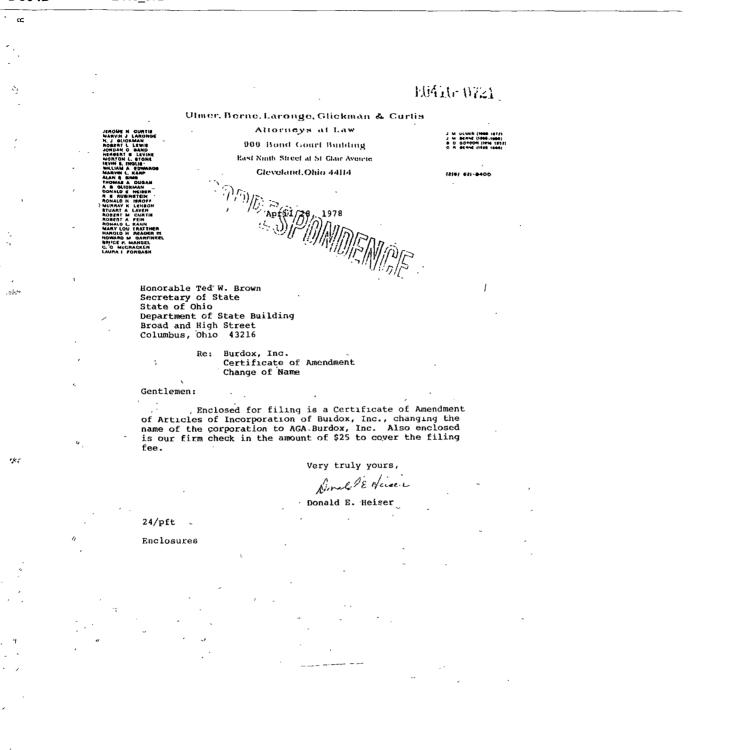
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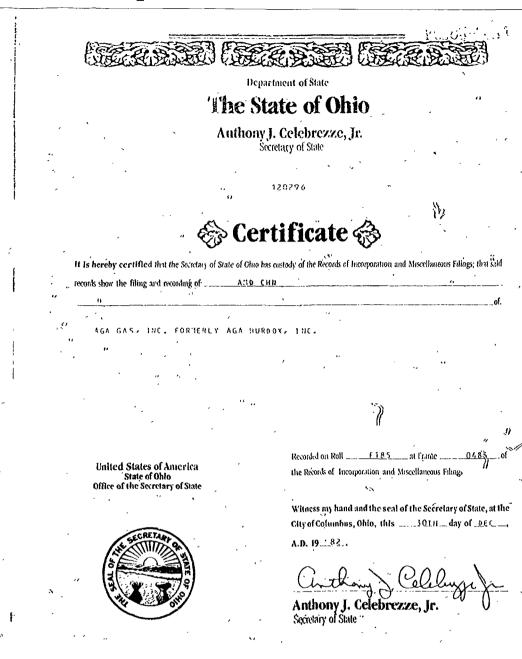
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- 2 . 	STATE OF OHIO DEPARTMENT OF STATE	TED W. BROWN SECRETARY OF STATE	RECEIPT NO. 79860
	DATE 5/09/78 RECEIVED OF OR FILED BY ULMER, BERNE, LA	120296 NUMBER ARONGE,GLICKMAN ET AL	E6416-0718 233 EC416-0718
	THE SUM OF \$25.00 FOR FILING AGA BURDOX, INC. FORMERLY BURD	AMD_CHN	<u></u> OF
	RETURNED TO: ULMER,BERNE/LARONGE,GLICH ATT:0.E.HEISER 900 BOND COURT BLDG. CLEVELAND, OH 44114 NAME: AGA BURDOX, INC. FORMERLY BUR	4. (AMD \$ TOTAL FEE \$25.00
1	· · · · · · · · · · · · · · · · · · ·	, v d	, , , , ,

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ļ	C. W. CORRECORD STATISTICS CONTRACT	È.
В	associated autorities and autorities and autorities and formation of the second formation of the second of the sec	- ·
Ì	December 10, 1982	
	 Secretary of State Corporation Department State Office lower - 14th Floor 30 East Broad Street, Columbus, Ohio - 43215 	• •
	" RE: AGA Burdox, Inc. Change of Name to: AGA Gas, Inc.	
ļ	Gentlemen: "	
	. We enclose Certificate of Amendment for filin the State of Ohio changing the name AGA Burdox, Inc. to AGA Gas, Inc.	•
}	Please note enclosed also is our Reservation of Name form indicating that C T Corporation System reserved the name on November 24, 1982.	-
Ì	Please note the counsel of record desires that the enclosed amendment be filed with the Secretary of State of Ohio on <u>December 31, 1982.</u> The office of the Secretary of State is closed on that day. Would you kindly file the amendment on December 30, 1982.	
	Findly, enclosed is our check in payment of the filing fees.	
	If for any reason the filing cannot be made, please contact this office by collect telephone.	,
	Your kind attention to the above request will be greatly appreciated.	
	Yours very truly,	
	C T CORPORATION SYSTEM	
	- Anthony J Poli Service Representative	
	AJP:ds	
ŀ	Encls.	
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120096 SP mG 12/30/82 ß CERTIFICATE OF AMENDMENT OF ARTICLES OF INCORPORATION OF AGA BURDON, INC. , 35 (10 The undersigned, Ake Nyborg and Peter Wirstrom, being President and Secretary, respectively, of AGA Burdox, Inc., an Ohio corporation, do hereby certify that the following resolution was duly adopted and approved on frances 1982 by the written consent of the sole shareholder of the corporation, acting without a meeting pursuant to the provisions of Section 1701.54 of the Ohio Revised Codé, and is in full force and effect: RESOLVED, that the Articles of Incorporation, as amended, of AGA Burdox, Inc. now in ef-fect are hereby amended by deleting Article FIRST thereof and substituting therefore the following amended Article FIRST: "FIRST: The name of the corporation js AGA Gas, Inc." IN WITNESS WHEREOF, the aforesaid President and .. Secretary, respectively, of AGA Burgex, Inc., acting for and, on behalf of said corporation', have hereunto subscribed their 3th day of Alcenter , . 1982. names this esident. Peler Wirstrom, Secretary

Page 3

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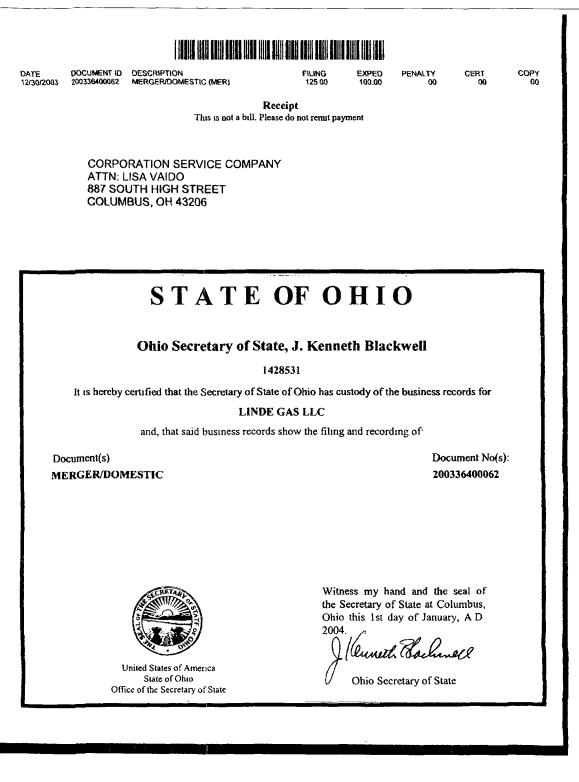
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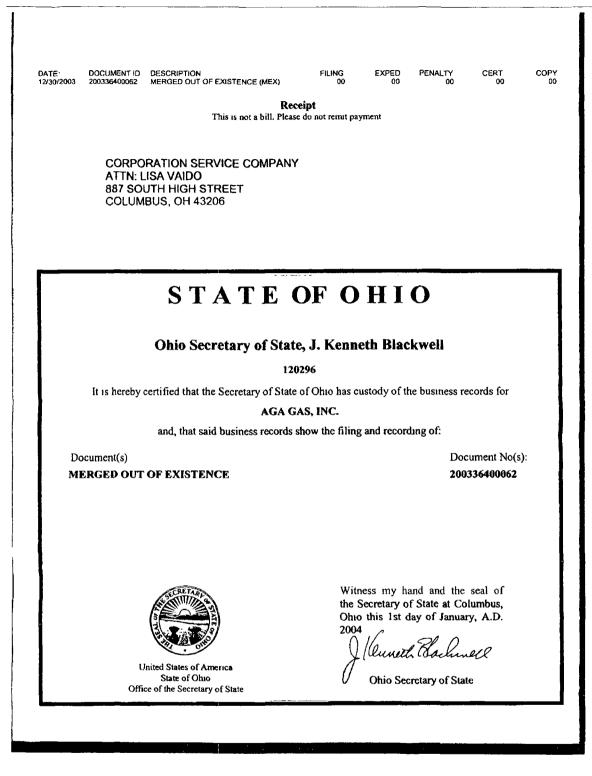
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Date 1/05/8	13	Number	150569		Receipt No	35047
			 	· ·	F185-0483	081
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The sum of \$	35.00 for filing	1A MD C	HN	.,		of
AGA GAS, INC. FORME	PLY AGA BURDOX	(, thc.	, " ,)	APD .	35.00
Returned to: C T CORPORATIO ATT:A.J.POLT UMOR COMMERCE " QLEVELAND, OH	N SYSTEM	35047		•	4110 \$	





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-	Prescribed by J. Kenneth Blackwell Ohio Secretary of State Control Ohio: (614) 466-3910 Toll Prec 1-877-SOS-PILE (1-877-767-3453) <u>www.state.oh.ub/sos</u> c-mail busserv@sos.state.oh.us CERTIFICATE OF MERGER (For Domestic or Foreign, Profit or Non-Prr Filing Fee \$125.00 (154-are)	Expedite this Form: # ath Form to provide the second sec
	In accordance with the requirements of Ohio law, the undersigned corporations, bank immed lability companies, inniked partnerships and/or partnerships with limited liabilit set forth the following facts I. SURVIVING ENTITY A The name of the entity surviving the merger is Linde Gas LLC	s. savings banks, savings and loan,), desinng to effect a merger,
	B Name Change As a result of this merger the name of the surviving entity in Not Applicable (Conductable) (Conduct on the set withing and/or the surger) C. The surviving entity is an of withing and/or the surger) C. The surviving entity is a " (Please check the appropriate box and fill in the Domestic (Ohio) For-Profit Corporation, charter number Domestic (Ohio) Non-Profit Corporation, charter number Foreign (Non-Ohio) Corporation incorporated under the laws of the state and locensed to transact business in the State of Ohio under locense num Foreign (Non-Ohio) Corporation incorporated under the laws of the state and NOT licensed to transact business in the state of Ohio, Domestic (Ohio) Limited Liability Company, with registration number Foreign (Non-Ohio) Limited Liability Company organized under the laws of the and registered to do business in the State of Ohio. Domestic (Ohio) Limited Liability Company organized under the laws of the and NOT registered to do business in the State of Ohio. Domestic (Ohio) Limited Partnership, with registration number Foreign (Non-Ohio) Limited Partnership, with registration number Foreign (Non-Ohio) Limited Partnership, with registration number Foreign (Non-Ohio) Limited Partnership organized under the laws of the state and registered to do business in the state of Ohio.	e appropriate blanks
561	Page 1 of 7	Last Revision May 2002

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1 For (if th	alifying entity elso states as follows (C eign Notice Under Section 1703 031 he quainying entity is a foreign bank, s st be completed.}			wang information	
(a.)	The name of the Foreign Nationally/F association is	ederally chartered bank, s	savings bank, or savi	ngs and loan	
	Not Applicable				
(b)	The name(s) of any Trade Name(s) u	under which the corporatio	n will conduct busine	SS .	
	Not Applicable				
(G.)) The location of the main office (non-(Ohio) shall be			
	Not Applicable				
	(street addrass)	NOTE: PO.E	los Addresses are NOT	cceptable.	
	(city, township or vitinge)	(county)	(state)	(ap code)	
(d)) The principal office location in the sta			··· •	
	(street address)	NOTE: P.O. 1	Bax Addresses are NOT	ecceptable.	
			Ottio		
(e)	(Chy township, or village) (Please note, if there will not be an) The corporation will exercise the folk (Please provide a brief summary of t	owing purpose(s) in the sta	ate of Ohio		
(e)	(Plezse note, if there will not be an	n office in the state of Oh owing purpose(s) in the sta	nio, please list none ate of Otho)	
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	(d)	The address to which interested p operating agreement bylaws or o			es of organization	
		(street address)	NOTE P.O	, Box Addresses are NOT a	accopieble	
		(city, township, or village)	~	(state)	(zp code)	
		wign Qualifying Limited Partners he qualifying entity is a foreign limit		g information must be a	completed)	
) The name of the limited partnersi		-		
		Not Applicable				
	(b)) The limited partnership was form	ed on			
	(c)) The address of the office of the it	mited partnership in its state	country of organizatio	n is	
		Not Applicable	<u> </u>			
		(street address)	NOTE P.O	Box Addresses are NOT a	acceptable.	
		(crty, lownship or village)	(county)	(state)	(zip code)	
	(d)) The limited partnership's principa	l office address is			
		Not Applicable	<u> </u>			
		(steel address)	NOTE PO	Box Addresses are NOT	ectoptable	
		(city lownship or village)	(county)	(stale)	(zip ande)	
	(c) The names and business or resident follows	lanca addresses of the Gen	eral partners of the par	thership are as	
		Name	Address			
		Not Applicable				
					<u> </u>	
	(If insuffs	clent space to cover this item please stact	a separate sheet lating the gener	al partners and their respect	tve addresses)	
) The address of the office where a limited partners and their respect	a list of the names and busi	ness or residence addr		
		Not Applicable				
		(street activess)	NOTE: P.C). Box Addresses are NOT	ecceptable.	
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551			Page 5 of 7		Last Revision, May 2002	
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	EForeign (Non-Ohio) Linuled Partnership organized and NOT registered to do business in the state of		autorcountry of	
	Domestic (Ohio) Partnership having limited ia	ibility, with the regist	ration number	
	— Foreign (Non-Ohio) Partnership having limited	d liability organized u	under the laws of th	e state/country of
	and registered to do	business in the stat	e of Ohlo under reg	istration number
	Foreign (Non-Ohio) Partnership having limbed liak	bility organized under I and NOT registered		
	Foreign (Non-Ohio) Non-Profit Incorporation under and licensed to transact business in the state of C			
	Foreign (Non-Ohio) Non-Profit incorporation unde and not lecensed to transact business in the state		iccountiny of	
	General partnership not registered with the st	tate of Ohio		
	MERGING ENTITY The name charter/license/registration number, type or respectively, of which is the entitles merging out of ex- il merging entities please stack expension exception (Please list the Ohlo charter, license/register(P))	datance are as follow the the marging sati	With this is to softic to	
	Name / charter license or registration number		y of Organization	Type of Entity
	AGA Gas, Inc 120296	Ohio	, er ergunaanen	close corporation
л 1	MERGER AGREEMENT ON FILE			
	MERGER AGREEMENT ON FILE The name and mailing address of the person or entity agreement of merger upon written request Mark D Weller, Sr. V P and General Counsel		aligible persons ma	
	The name and mailing address of the person or entity agreement of merger upon written request:	c/o Linde Gas Li		e Woods Btvd
	The name and mailing address of the person or entity agreement of merger upon written request Mark D. Weller, Sr. V.P. and General Counset (name) Independence	c/o Linde Gas Li (street) word Ohio	LC. 6055 Rocksid	e Woods Blvd
	The name and mailing address of the person or entity agreement of merger upon written request Mark D. Weller, Sr. V.P. and General Counset (name)	c/o Linde Gas Li (street) wo re	LC. 6055 Rocksid	e Woods Blvd
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īV	The name and mailing address of the person or entity agreement of merger upon written request Mark D. Weller, Sr. V.P. and General Counset (name) Independence (city vilage or township) EFFECTIVE DATE OF MERGER This merger is to be effective on 1/1/04 after the date of filing, the effective date of the merge	c/o Linde Gas Li (steet) word Ohio (steet) (f a date is speci (if a date is speci (if a date is speci (if a date is speci (if the merger) (if the merger)	LC. 6055 Rocksid 4131-2329 (zip co fied, the date must han the date of film 5, permits this men rduent entries in co	e Woods Blvd ere HOT eccepted be a date on or g, if no date is ger mpliance with the laws
v	The name and mailing address of the person or entity agreement of merger upon writen request: Mark D Weller, Sr. V P and General Counsel (name) Independence (ety vilage or tomshp) EFFECTIVE DATE OF MERGER This merger is to be effective on <u>1/1/04</u> after the date of filing, the effective date of the merge specified, the date of filing will be the effective date o MERGER AUTHORIZED The laws of the state or country under which each co This merger was adopted, approved and authorized; of the state under which it is organized, and the pers	c/o Linde Gas Li (steet) word Ohio (steet) (f a date is speci (if a date is speci (if a date is speci (if a date is speci (if the merger) (if the merger)	LC. 6055 Rocksid 4131-2329 (zip co fied, the date must han the date of film 5, permits this men rduent entries in co	e Woods Blvd ere HOT eccepted be a date on or g, if no date is ger mpliance with the laws

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	VI. STATUTORY AGENT The name and address of the surviving ent served is	ny's statutory egent upon whom any process	notice or demend may be	
	(neme)	(street) NOTE P O Box Addresse	s are NOT acceptable.	
		, Ohio		
	(city village or township)	(zp code)	-	
	(This item MUST be completed if the surviving nuthorized to conduct business in the state of C		registered or otherwise	1
	VII ACCEPTANCE OF AGENT The undersigned, named herem as the sta acknowledges and accepts the appointmer	tutory agent for the above referenced survivi nt of statutory agent for said entity	ng entity, hereby	
		Signature of Agent		
	(The acceptance of agent must be completed b changed, or the named agent differs in any way			
	VIII STATEMENT OF MERGER Upon filling: or upon such later date as spe listed surviving entity	cliled herein, the merging entity/enubes listed	I herein shall marge into the	
		ganization, certificate of limited partnership or mm) of the surviving domestic entity have be No Changes		
	partnership, or partnership having limit bank, savings bank, savings and loan, Ilmited Ilability, and hereby appoints th	REIGN SURVIVING ENTITY n, bank, sawings bank, sawings and loan time ted Rability desires to transact business in OH limited Rability company, limited partnership te following as its statutory egent upon whon a state of Ohio. The name and complete add	no as a foreign corporation, , or partnership having) process, notice or demand	
	(name)	(streat) NOTE PO Bax Adv	Irezzes are NOT acceptable.	
	(city village or lownship)	. Ohio (zip code)		
	The subject surviving foreign corporat limited partnership, or partnership hav statutory agent listed above as long a Secretary of State of Ohio if the agent limited lability company limited pertu- agent when required to do so, or if the	son bank, savings bank, savings and loan, lik ing imitted liability interocebiy conservis to se s the authority of the agent continues, and to t cannot be found, if the corporation, bank su ership, or partmership having ilmited liability f foreign corporation's, bank's, savings bank' 's or partmenship having limited liability's licet	rvice of process on the service of process upon the ivings bank, savings and loan, alls to designate another s, savings and loan's, limited	

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	e limited partnership hereby certifies that it shall i ted partnership in Ohlo is canceled or withdrawn	naintain said records until the registration	n of the
4 For	reign Qualifying Partnership Having Limited L	lability	
(a)	The name of the partnership shall be Not Applicable		
(b)) Please complete the following appropriate section	on (either item b(l) or b(2))	
	(1) The address of the partnership's principal (affice in Ohio is:	
	Not Applicable (street address)	NOTE PO Box Addresses are NOT acce	pleble
		, Ohio	
(11)	(city village of lownship) Ihe pertnevship does not have a principal offic	(zip code) as in Ohio, then items b2 must be con	npleted)
	(2) The address of the partnership's principal		
	Not Applicable		
	(street eddress)	NOTE: P.O. Box Addresses are NOT ecce	péchée.
	(cay, sownship, or village)	(siste)	(tip code)
(c.) The name and address of a statutory agent for	service of process in Ohio is as follows	
	Not Applicable		<u> </u>
	(street address)	NOTE: PO Box Addresses are NOT acce	ptuble
		, Ohio	
(d.	(city, where or township) .) Please indicate the state or jurisdiction in which	(zpcode) 1 fme Foneicon Lamited Liability Partmershi	p has been
(-	formed		
	Not Applicable		
(a) The business which the pertnership engages in Not Applicable	15	
551	Page 6	of 7	Last Revision May 2002

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AGA Gas, Inc	Linde Gas LLC
(Exact name of entity)	(Exact name of entity)
By	By
tts-President	tts: President
Date 12-23-03	Date. 12-23-02,
(Exact name of energy)	(Extect name of entity)
Ву	
lts	
Date:	Date
(Exact neme of entity)	(Exact name of entity)
Ву	Ву
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GRANT DEED

FOR A VALUABLE CONSIDERATION, receipt of which is hereby acknowledged, THE BURDETT OXYGEN COMPANY OF CLEVELAND, INCORPORATED, an Ohio corporation, hereby grants to AMERICAN CRYOGENICS, INC., a Georgia corporation, the following described real property in the County of Los Angeles, State of California:

PARCEL NO. 1

That portion of the Colima Tract, in the Rancho Santa Gertrudes, in the city of Santa Fe Springs, county of Los Angeles, state of California, described as follows:

Commencing at a point in the center line of Dice Road, 40.00 feet northerly thereon from the center line of the right of way of the Pacific Electric Railway (as said right of way and Dice Road are shown on a map recorded in book 3465 page 135 of Deeds, Records of said County); thence along said center line of Dice Road, North 11° 54' 10" East 120.90 feet; thence South 83° 26' East 261.70 feet to the true point of beginning; thence North 1° 21' East 68.8 feet; thence North 83° 21' West 249.00 feet to the center line of said Dice Road; thence North 11° 54' 10" East along said center line 196.65 feet; thence South 83° 07' 50" East 340.15 feet; thence North 08° 26' 10" East 145.34 feet to the northerly line of the land described in Certificate of Title No. X-10800 on file in the office of the Registrar of Titles of said County; thence along said northerly line South 73° 50' 40" East 823.79 feet to the northwesterly line of the Southern Pacific Railroad right of way as said right of way was known on August 24, 1920; thence thereon South 60° 48' 40" West 762.07 feet to the northerly line of said Pacific Electric Railway right of way; thence along said last mentioned northerly line North 78° 02' West 294.60 feet to a point distant South 78° 02' East





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282.70 feet thereon from said center line of Dice Road; thence North 3° 15' East 147.25 feet to the true point of beginning.

"EXCEPT therefrom the hand described in the deed from Burdett Oxygen Company of Cleveland, Inc., a corporation, to C. W. Roberts, a married man, recorded April 21, 1954 in book 44382 page 402, Official Records.

ALSO EXCEPT therefrom that portion within said Dice Road conveyed to County of Los Angeles in fee simple for road purposes by deed recorded October 10, 1908 in book 3465 page 133 of Deeds.

PARCEL NO. 2

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That portion of the Colima Tract, Rancho Santa Gertrudes, in the city of Santa Fe Springs, county of Los Angeles, state of California, described as follows:

Beginning at a point in the northerly line of the right of way of the Pacific Electric Railway, said line being the southerly line of the land described in certificate of title Y-11053 in the office of the registrar of titles of said county, distant thereon South 78° 02' East, 163.50 feet from the intersection of said line with the center of Dice Road as same is shown on map of right of way of said Pacific Electric Railway, recorded in book 3465 page 135 of Deeds, records of said county; thence continuing along said northerly line of said right of way South 78° 02' East 119.20 feet; thence North 03° 15' East 147.25 feet to an angle point in the northerly line of said land described in said certificate Y-11053; thence along said northerly line of said land North 83° 26' West 118.02 feet; thence South 03° 15' West 136.02 feet to the point of beginning.

PARCEL NO. 3

That portion of the Colima Tract, in the Rancho Santa Gertrudes, in the city of Santa Fe Springs, county of Los Angeles, state of California, described as follows:

Beginning at a point in the center line of Dice Road, distant 40 feet northerly thereon from its intersection with the center line of the right of way of the Pacific Electric Railway, as shown on a map of said right of way recorded in book 3465 page 135 of Deeds, records of said county; thence continuing along said center line of said Dice Road, North 11° 54' 10" East, 120.90 feet; thence South 83° 26' East 143.59 feet; thence South 3° 15' West, 136.02 feet to a point in the northerly line of the aforesaid right of way of the Pacific Electric Railway, said line being the southerly line of the land described in certificate Y-11053 of the registrar of titles of said county; thence North 78° 02' West along said northerly line of said right of way and the southerly line of said registered parcel, 163.50 feet to the point of beginning.

EXCEPT therefrom that portion within said Dice Road, conveyed to County of Los Angeles in fee simple for

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BKD1136pg377

road purposes, by deed recorded October 10, 1908 in book 3465 page 133 of Deeds.

PARCEL NO. 4

That portion of the 236 acre parcel in the Colima Tract, Rancho Santa Gertrudes, in the city of Santa Fe Springs, county of Los Angeles, state of California, included within the following described boundaries:

Beginning at a point in the center line of Dice Road, 40 feet northerly thereon from the center line of the right of way of the Pacific Electric Railway (as said right of way and Dice Road are shown on map attached to and recorded with a deed recorded in book 3465 page 133 of Deeds); thence along the center line of said Dice Road, North 11° 54' 10" East 120.90 feet to the true point of beginning; thence South 83° 26' East 261.70 feet; thence North 1° 21' East 68.8 feet; thence North 83° 21' West 249 feet to said center kine of Dice Road; thence along said center line, South 11° 54' 10" West 69.18 feet to the true point of beginning.

EXCEPT therefrom that portion within said Dice Road, conveyed to County of Los Angeles, in fee simple for road purposes, by deed recorded October 10, 1908 in book 3465 page 133 of Deeds.

Including all buildings and improvements thereon and all appurtenances to said property; including all boilers, dynamos, motors, all heating, plumbing, ventilating, gas and electric light fixtures, and safety devices, equipment, machinery, fittings and fixtures of every kind in, and all other property attached to, any building or buildings now standing on said premises or any part thereof; including all of the industrial gas manufacturing plants, including a liquid oxygen nitrogen plant with supplementary equipment to make argon and an acetylene plant and a hydrogen plant, and a liquefied petroleum gas filling station; and all parts thereof.

Subject to all general and special taxes for the fiscal year 1960-61 which are a lien but are not yet due and payable, and conditions, restrictions, reservations, covenants, easements, rights of way, requests and agreements of record, AMERICAN CRYOGENICS, INC. assuming all of the obligations of THE BURDETT OXYGEN COMPANY OF CLEVELAND, INCORPORATED, thereunder.

IN WITNESS WHEREOF, the grantor has executed these presents this 23 and day of Falmenny, 1961.

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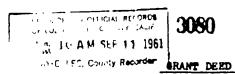
STATE OF CALIFORNIA) SS: COUNTY OF LOS ANGELES)

ARAWAY KENTON Bight Expires August 24, 1964

On February 23' $\frac{d}{d}$, 1961, before me, the undersigned, a Notary Public in and for said County and State, personally appeared W fr. H. Locanon, known to me to be the President, and $\sqrt{.}$ M. BERNE, known to me to be the Secretary of the corporation that executed the within instrument, and known to me to be the persons who executed the within instrument on behalf of the corporation therein named, and acknowledged to me that such corporation executed the within instrument pursuant to its by-laws or a resolution of its board of directors.

WITNESS my hand and official seal.

Publ/1c otary



BK (11 350PC467



DICE 00119

AMERICAN CRYOGENICS, INC., a Georgia corporation,

grants to CALIFORNIA OXYGEN COMPANY, a California corporation, that certain real property located in the County of Los Angeles, State of California, described as follows:

PARCEL NO. 1

That portion of the Colima Tract, in the Rancho Santa Gertrudes, in the City of Santa Fe Springs, County of Los Angoles, State of California, deseribed as follows:

Commencing at a point in the center line of Dice Road, 40.00 feet northerly thereon from the center line of the right of way of the Pacific Electric Railway (as said right of way and Dice Road are shown on a map recorded in Book 3465, page 135, of Dec 43, Records of said County); thence along said cent:r line of Dice Road, North 11 54' 10" East 100.0 feet; thence South 83° 26' East 261.7C feet 1.0.,0 reet; thence houth 03 20 Last 201.70 reet to the true point of beginning; thence North 1° 21' Last 68.8 feet; thence North 83° 21' West 243.00 feet to the center line of said Dice Road; thence North 11° 54' 10" East along said center line 196.65 feet; thence South 83° 07' 50" rast 340.15 feet; thence North 08° 261 10" Fast 145 24 feet; thence North 08° 26' 10" East 145.34 fect to the northerly line of the land described in Certificate of Title No. X-10800 on file in the office of the Registrar of Titles of said County; thence along said northerly line South 73° 50' 40" East 823.79 feet to the northwesterly line of the Southern Pacific Railroad right of way as said right of way was known on August 24, 1920; thence thereon South 60° 48' 40" West 762.07 feet to the northerly line of said Pacific Electric Railway right of way; thence along said last mentioned northerly line North 78° 021 West 294.60 feet to a point distant South 78° 02' East 282.70 feet thereon from said center line of Dice Road; thence North 3° 15' East 147.25 feet to the true point of beginning.

EXCEPT therefrom the land described in the deed from Burdett Oxygen Company of Cleveland, Inc., a corporation, to C. W. Roburts, a married man, recorded April 21, 1954, in Book 443d2, page 402, Official Records.

ALGO XXCEPT therefrom that portion within baid Dice Road conveyed to County of Los Angeles in fee simple for road purposes by deed recorded (atover 10, 1904, in Roak Bhlis, page 133, of Deeds,

PAHOEL NO. 2

That portion of the Colima Tract, Rancho Santa Contrudes, in the City of Santa Me Springs, County of Los Argeles, State of California, described as follows:

Beginning at a point in the northerly line of the right of way of the Pacific Electric Railway, said line being the southerly line of the land described in certificate of title Y-11053 in the office of the registrar of titles of said county, distant thereon South 78° 02' East, 163.50 feet from the intersection of said line with the center of Dice Road as same is shown on map of right of way of said Pacific Electric Railway, recorded in Book 3465 page 135 of Deeds, Records of said County; thence continuing along said northerly line of said right of way South 78° 02' East 119.20 feet; thence North 03° 15' East 147.25 feet to an angle point in the northerly line of said land described in said certificate Y-11053; thence along said northerly line of said land North 83° 26' West 118.02 feet; thence South 03° 15' West 136.02 feut to the point of beginning.

PARCEL NO. 3

That portion of the Colima Tract, in the Rancho Santa Gertrudes, in the City of Santa Fe Springs, County of Les Angeles, State of California, described as follows:

Beginning at a point in the center line of Dice Road distant 40 feet northerly thereon from its intersection, with the center line of the right of way of the Pacifie Electric Railway, ar shown on a map of said right of way recorded in Book 3465 page 135 of Deeds, Records of anid County; thence continuing along said center line of said Dice RJad, North 11 544 10" East, 120.90 foet; thence South 33° 264 East 143.59 feet; thence South 3° 154 West, 136.02 feet to a point in the northerly line of the aforesaid right of way of the Pacific Electric Railway, said line being the southerly line of the land described in certificate 7-11053 of the registrar of titles of said County; thence North 78° 02' West along said northerly line of said right of way and the southerly line of said registered parcel, 163.50 feet to the point of beginning.

EXCEPT therefrom that portion within said Dice Road conveyed to County of Los Angeles in fee simple for road purposes, by deed recorded October 10, 1908, in Book 3465, page 133 of Deeds.

PARCEL NO. 4

That portion of the 236 acre parcel in the Colima Tract, Rancho Santa Gertrudes, in the City of Santa Fe Springs, County of Los Angeles, State of California, included within the following described boundaries:

Beginning at a point in the center line of Dice Road, 40 feet northerly thereon from the center line of the right of way of the Pacific Electric Railway (as said right of way and Dice Hoad are shown on map attached to and recorded with a ducd recorded in Book 3409, page 133 of Desda); thence along the center line of said Dice Road, North 11° 54+ 10° East 120,90 feet to the true point of beginning; thence South 83°

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1 1 - Carl BK 26' East 261.70 feet; thence North 1° 21' East 68.8 feet; thence North 83° 21' West 249 feet to said center line of Dice Road; thence along said denter line, South 11° 54' 10" West 69.18 feet to the true point of beginning. EXCEPT therefrom that portion within said Dice Road conveyed to County of Los Angeles, in fee simple for road purposes, by jeed lecorded October 10, 1908, in Book 3465, page 133 of Deeds. SUBJECT TO easements, restrictions, and encumbrances of record, including a Deed of Trust from American Cryogenics, Inc., to Title Insurance and Trust Company, a California corporation, Tru tee for the benefit of The Burdett Oxygen Company of Cleveland, Inc. porated, an Ohio corporation, which Deed of Trust was recorded in of Official Records at page in the office of the Book Recorder of Los Angeles County, California, and which Deed of Trust is assumed by California Oxygen Company. Dated: March 21, 1961. AMERICAN CRYOGENICS, INC., a Georgia corporation By Vice President Bv Executive Vice President STATE OF CALIFORNIA County of A an, On this ties day of Was On this tive day of Kista, in the year one thousand nine hundred and sixty-one, before me, Horece Superior a Notary Public in and for the County of Law make a Notary Public in and for the County of the malle State of Californic, residing therein, duly commissioned and sworn, personally appeared u Pre known to me to be the Vie ا دعمتا / of the corporation described in and that executed the within instru ment, and also known to me to be the persons who executed the with-in instrument on behalf of the corporation therein named, and acknowledged to me that such corporation executed the same pursuant to its by-laws or a resolution of its board of directors, IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal inden. Approventy of Cadada the de and year in this certificate lives Aber Morence B, Large PULLIO F.B. Larson in and for the County of State of California, San Mateo My Commission Expires . . . ion Brutes May 28, 1968 -3-END OF RECORDED DOCUMENT

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1996 PHASE I AND II ENVIRONMENTAL ASSESSMENTS

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EXCHANGE OF PROPERTY

BETWEEN

BARNARD/WITCO AND AIR LIQUIDE

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DICE 00122



ENVIRONMENTAL STRATEGIES CORPORATION

11911 Freedom Drive • Reston, Virginia 20190 • (703) 709-6500 • Fax (703) 709-8505

PHASE I ENVIRONMENTAL ASSESSMENT AND PHASE II ENVIRONMENTAL INVESTIGATION

WITCO CORPORATION NORTH PLANT – EAST SANTA FE SPRINGS, CALIFORNIA

PREPARED

BY

ENVIRONMENTAL STRATEGIES CORPORATION

SEPTEMBER 6, 1996

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Appendix C	- Hazard Chemical List
Appendix D	- Tank Information
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Executive Summary

ESC conducted a Phase I environmental assessment and a Phase II investigation of the Witco North Plant-East facility in Santa Fe Springs, California. Witco manufactures fatty acids, glycerine, and fatty acid derivatives for use in various types of consumer products. The facility is in the process of closing.

Manufacturing operations have been conducted at the facility since the 1950s; however, Witco has only been operating at the site since 1988.

Historic aerial photographs of the site taken in 1953, 1970, 1986, 1990 and 1993 were reviewed by ESC. In the photograph taken in 1953, the site shows what appear to be residential buildings. The remaining photographs generally show the site as it exists today. No issues posing potential environmental concern were observed in the aerial photographs.

The primary raw materials used during manufacturing are zinc stearate, fatty acids, coconut oil, and glycerine. The raw materials are stored in aboveground bulk storage tanks.

Hazardous wastes generated at the facility include solids cleaned from the wastewater sumps and wastewater sludges. Hazardous wastes have been sent offsite for disposal since Witco acquired the property in 1988.

There are two empty and clean 10,000-gallon underground tanks that formerly contained methanol and there is a main underground sump for collection of wastewater and storm water. The wastewater/storm water go to a clarifier and microfiltration pretreatment system with sodium hypochlorite addition before permitted discharge to the Los Angeles County Sanitation District.

There are numerous aboveground tanks used to store raw materials, finished products, and other chemicals at the facility. There are currently 1400-1500 drums containing off-specification raw materials and products that are being stored pending proper disposal.

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A formal asbestos survey has not been performed. Witco personnel indicated that there may be insulation on the esterification tower that contains asbestos materials.

Currently, there are no electrical transformers that contain polychlorinated bipheynls (PCBs) at the facility.

Witco is listed on federal and state environmental databases including Toxic Release Inventory System (TRIS), Emergency Response Notification System (ERNS), and Underground and Aboveground storage tanks (UST/AST). These listings do not indicate that Witco has adversely affected environmental conditions at the site in the area.

ESC also reviewed federal state and databases to determine the potential for the facility to be affected by releases from neighboring properties. Several sites north of Witco (upgradient) pose an environmental concern due to documented releases of chlorinated volatile organic compounds. These sites include Parker Hannifin Corporation, Western Screw Products, Cal Western Paint, Corp., and Pilot Chemical Company. The presence of the regional groundwater contamination was verified by ESC's Phase I investigation, which is discussed below.

ESC performed a Phase II investigation to assess potential environmental liabilities associated with six areas of concern (AOCs) identified during the Phase I investigation of the Witco North Plant-East, Santa Fe Springs, California, facility. ESC installed five soil borings and one temporary monitoring well, and collected a total of five soil samples and one groundwater sample within the AOCs identified.

The results of the Phase II investigation indicated that Witco's operations have not adversely affected soil quality. The temporary groundwater monitoring well (downgradient of facility operations) that was installed contained chlorinated volatile organic compounds (VOCs) above California Action Levels and federal maximum contaminant levels; however, there is considerable documented evidence of areawide groundwater contamination from upgradient sources and there is no evidence to suggest that Witco is a source of the VOC contamination.

DICE 00127

The results of both the Phase I and II investigation of the Areas of Concern indicate that no further investigative or remedial actions are necessary or warranted at the North Plant-East.

DICE 00128

ESC

Introduction

General

A Phase I environmental assessment was conducted by Environmental Strategies Corporation (ESC) to identify existing and potential environmental liabilities at the Witco Corporation (Witco) facility, North Plant-East located in Santa Fe Springs, California. This Phase I investigation includes:

- a site inspection conducted on July 25, 1996 by Richard E. Freudenberger and Ashley W.
 Faddis of ESC with Jason C. Chai of Witco
- a review of available facility records
- a review of federal and state databases for sites within a one-mile radius of the facility
- a review of previously-conducted environmental work at the facility
- site photographs (Appendix A)

The Phase I results were used to identify areas of concern and recommend locations at the facility for a subsequent Phase II investigation.

Portions of this report are based on documents reviewed at the facility and on oral information provided by Mr. Al Nesheiwat, Corporate Environmental Manager, and Mr. Jason C. Chai, Health, Safety & Environmental Engineer of the Witco facility. This report is accurate to the best of ESC's knowledge and belief, and ESC has based the conclusions on the information supplied by Witco and the other sources described in this report.

DICE 00129

Assessment of Environmental Risks at the Witco Corporation Facility, North Plant - East, Located in Santa Fe Springs, California

Site Description and History

The Witco facility is located at 8724 Dice Road in Santa Fe Springs, California (Figure 1). The North Plant-East occupies approximately ten acres in an industrial/commercial area of Santa Fe Springs. The facility is bordered to the north by Pilot Chemical Co., Flight Trucking, Inc., West Bent Bolt Co., Parker Fluid Power, and Williams Machine Co.; to the west by Talco Plastics Co. and T-Chem Products. To the south is Phibro-Tech, Inc., Liquid Air, Inc., Diversey Corp., Schnee-Morehead Chemicals, and Consolidated Disposal Services, Inc. To the northeast is Nicsan Engineering Co. and Earl Manufacturing Co. The nearest residences are approximately 0.5 mile northwest of the facility. There are large tracts of undeveloped land also owned by Witco located north and south of the manufacturing facility.

The property and surrounding area are relatively flat and the nearest surface water body, the San Gabriel River, is located approximately 1.25 miles west of the facility.

The facility was constructed by Process Chemicals in the 1950s. Emery Chemical purchased Process Chemicals in 1963 and Witco acquired the North Plant in 1988. Similar products to Witco's were manufactured by previous owners. This assessment was conducted on the North Plant-East property owned by Witco.

Currently, the facility consists of a warehouse; maintenance building and boiler room; about 20 aboveground storage and process vessels; a 50,000-gallon propane tank; a wastewater treatment system; and two underground storage tanks that formerly contained methanol. The site is entirely paved with undeveloped areas along the southern boundary near a railroad spur, and north of the property (Figure 2).

The facility is currently undergoing closure; it recently employed about 50 people and operated three shifts per day. The North Plant-East manufactures surfactants through oxidation and esterfication. Finished intermediate products are exchanged with neighboring Witco operations (North Plant-West and

the South Plant) in Santa Fe Springs. The primary customers for Witco's intermediate product surfactants are cosmetic and cleaning agent companies.

Aerial Photographs and Sanborn Map Survey

Aerial photographs showing the facility in 1950, 1970, 1986, 1990, and 1993 were obtained. No Sanborn maps were available. The 1953 photograph shows what appear to be residential buildings on the site and currently undeveloped areas of the site. The 1970, 1986, 1990, and 1993 photographs show the facility and the undeveloped areas as they are today with little discernible changes from year-to-year. There is no visible evidence in the aerial photographs that suggests any environmental impacts from the site.

Materials Handling and Storage

A list of hazardous chemicals used at the North Plant-East is included as Appendix C and a list of chemical storage tanks is in Appendix D. The majority of the chemicals arrive in 55-gallon drums, tote bins (300 gallons), and tank trucks or railcars for storage in aboveground tanks. The primary raw materials (zinc stearate, fatty acids, coconut oil, glycerine) are mixed in low temperature and high temperature reaction vessels.

Three trucks including a tank trailer transport raw materials and products among the two neighboring Witco operations.

Non-RCRA hazardous wastes generated at North Plant-East include sludge from the wastewater treatment system. Witco's EPA ID No. is CAD008371627. Other non-hazardous wastes include normal refuse.

There are 1,400-1,500 drums containing off-specification raw materials and products currently stored at the North Plan-East. Witco is in the process of properly disposing of these drums in accordance with applicable regulations.

Underground and Aboveground Tanks

There are about 20 aboveground storage tanks and two empty and clean underground storage tanks that formerly contained methanol, each with capacities of 10,000 gallons (Appendix D). The 12 largest aboveground chemical storage tanks each has a capacity of 16,000-gallons and contain various materials. The remaining aboveground tanks have capacities less than 6,000 gallons.

Water, Wastewater and Storm Water

Potable water is supplied by the city of Santa Fe Springs. Process wastewater is generated from the washdown of various process areas and rinsing of tanks. All storm water falling within the plant process areas is collected within berms that surround these areas. Wastewater and storm water are then collected within the North Plant-East through a system of trenches that convey the water to the main sump at the wastewater treatment system.

Wastewater and storm water are stored in a 160,000-gallon tank in an unpaved area at the northern boundary of the plant. The underground sewer line from the North Plant-West rises above the ground surface after it enters the North Plant-East and conveys wastewater and storm water to the wastewater pretreatment system on the North Plant-East facility. The primary constituents present in the wastewater from the North Plant-East include surfactants (methylene blue active substances {MBAS}), fatty acids, and zinc. Pretreatment consists of screening, settling, and adding sodium hypochlorite and is permitted by the Los Angeles County Sanitation District (LACSD). The wastewater from the treatment plant on the North Plant-East facility is discharged to the LACSD.

Storm water that falls within the western edge of the plant and outside the process areas is conveyed to the municipal storm sewer system along Dice Road.

DICE 00132

Asbestos

A formal asbestos survey has not been performed and Witco personnel indicated that insulation on the esterfication tower within North Plant-East may contain asbestos-containing material (ACM). No pipe or spray-on insulation was observed during ESC's site visit. According to Witco personnel, any ACM on the existing boiler at the facility was removed during renovation. No report on this activity was available.

Polychlorinated Biphenyls (PCBs)

According to Witco personnel, there is no electrical equipment or transformers within the North Plant-East that contain PCBs, with the possible exception of fluorescent light ballasts. Any transformers that may have contained PCBs were replaced by Southern California Edison in 1985-86.

Regulatory Database Review

Federal and state databases, including the National Priorities List (NPL), Comprehensive Environmental Response, Compensation, and Liability Information system (CERCLIS), state equivalent CERCLIS list (SCL), RCRA Corrective Action Sites List (CORRACTS), Calsites Database (SPL), RCRA permitted treatment, storage, and disposal facilities (TSD), permitted solid waste landfills, incinerators, or transfer stations (SWLF), Toxic Release Inventory System (TRIS), sites which have violated RCRA regulations (RCRA Viol), Underground Storage Tank Registrations (UST), Aboveground Storage Tank Registrations (AST), Toxic Pits, Emergency Response Notification System (ERNS), Leaking Underground Storage Tanks (LUST), and Deed Restrictions were reviewed for the subject property and properties within a 1-mile radius of the site. The database information is included as Appendix E.

The Witco facility is listed under TRIS for reporting diethanolamine, ethylene glycol, ethylene oxide, and hydrochloric acid. Under the ERNS database, the facility is listed for a release of methanol to the land. The facility is also listed in the UST/AST databases for registered tanks. No releases of hazardous substances or petroleum were reported for the site in the LUST databases.

There are over 30 sites listed under the various databases located within one mile of the site. One NPL site (Waste Disposal, Inc.) is located 0.53 mile west of the facility. Of the remaining sites, those that are north and, therefore, upgradient of the facility with respect to groundwater flow (see Site Geology and Hydrogeology), are discussed below.

Pilot Chemical Company is adjacent to the Witco site to the north and is listed on the CERCLIS, LUST, CORTESE, ERNS, TRIS, and UST/AST databases. Under CERCLIS, the site is listed as no further remedial action planned. Under LUST, Pilot Chemical has had leaks of diesel to the groundwater. In addition, ESC reviewed other files that indicate that Pilot Chemical is investigating groundwater contamination from chlorinated volatile organic compounds. Flight Trucking, located 0.03 mile north of the Witco property, is listed on the LUST database for a release of diesel fuel to soil. West Bent Bolt is 0.09 mile north of the subject site and is listed on CERCLIS as no further action planned, and on SCL and CORTESE for releases of pollutants including cyanides, household wastes, and unspecified sludge waste. Parker Hannifin Corporation, located 0.16 mile northeast of the subject site, is listed on TRIS for a release of 1,1,1 trichloroethane. Techni-Braze Inc., located 0.17 mile northeast of the Witco facility, is listed on SCL for a release of pollutants including gas scrubber waste, paint sludge, and phosphate sludge. Aerospace Rivet Manufacturing Corporation, located 0.18 mile north of the Witco property, is listed under TRIS for a release of sulfuric acid. Western Screw Products and Cal Western Paint Corp., located 0.24 mile north of the facility, are listed on CERCLIS as no further action planned and SCL. Western Screw appears to have had a release of halogenated solvents, and Cal Western Paint Corp. is listed for a release of latex waste and unspecified solvent mixtures.

It is possible that releases from the Pilot Chemical Company, Parker Hannifin Corporation, Western Screw Products, or Cal Western Paint Corp. may have adversely affected the condition of groundwater beneath the Witco site and have contributed to an areawide groundwater problem.

ESC

Summary of Previous Subsurface Investigation Results

In December 1987, Woodward-Clyde Consultants conducted a soil and groundwater investigation at the Witco North Plant-East facility. A summary of Woodward-Clyde Consultant's investigation is provided below.

Soil Sampling

Woodward-Clyde Consultants collected 13 soil samples to assess whether historic operations have adversely affected soil quality at the site. Eleven of the samples were collected by hand augering to a depth of approximately one foot. Following this, a modified California sampler containing four brass tubes was placed in the hole and hammered to a depth of 15 to 20 inches, thus, collecting the soil samples beneath the augured hole. Two subsurface soil samples were collected near the site of a reported drum of chlorosulfonic acid and the underground methanol storage tanks, respectively. Drilling was accomplished using an 8-inch hollow stem auger. The boring near the underground drum extended to about 10 feet below ground surface (bgs), and the boring near the methanol tanks extended to abut 20 feet bgs. Soil samples were collected as noted above.

Samples from each location were analyzed for pH and oil and grease using modified EPA Method 413.2. Two selected soil samples were also analyzed for total phenols using EPA Method 420.1 and one sample was analyzed for benzene, toluene, and xylenes (BTX) using EPA Method 8020.

The soil pH values ranged from 7.10 to 9.58 and oil and grease concentrations ranged from not detected to 540 mg/kg. The presence of oil and grease is likely due to releases of relatively non-toxic constituents, such as stearates, fatty acids, coconut oil, and glycerine as opposed to more toxic petroleum hydrocarbon compounds which are not used in large quantities at the facility. Concentrations of phenols and BTX were not detected.

Groundwater Sampling

One groundwater monitoring well was installed by Woodward-Clyde Consultants at the North Plant-East, upgradient of the chemical manufacturing and storage areas. The borehole for the monitoring well was drilled using a ten-inch outside diameter hollow stem auger. Organic concentrations of soil gas were measured for selected depths in the boring using an organic vapor analyzer (OVA). The boring was completed as a four-inch diameter monitoring well. Groundwater samples were collected and analyzed for pH, oil and grease, total phenols, BTX, and volatile organic compounds. Later, a second groundwater sample was collected and analyzed for semi-volatile organic compounds and total CAM metals (metals listed in the California Administrative Code, Title 22, Chapter 30, Section 66699).

The pH of the groundwater sample was 7.43 and the oil and grease concentration was 12.1 mg/l. There is no groundwater quality standard for oil and grease. Trichloroethene was detected at 28 ug/l, above the California Action Level (AL) and federal maximum contaminant level (MCL) of 5 μ g/l. Tetrachloroethene was detected at 2 μ g/l, below the California AL and MCL of 5 μ g/l. The concentrations of CAM metals and semi-volatile organic compounds were all below applicable California Action Levels and federal MCLs.

The monitoring well installed by Woodward-Clyde was subsequently abandoned No record of this activity was available.

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Areas of Concern (AOCs)

It is important to recognize that fatty acids are used in various types of consumer products, including foods for human consumption. According to the **document Dangerous Properties of Industrial Materials** (January 1979), no lethal concentration, carcinogen, toxic dose, or threshold limit values have been identified for fatty acids. In addition, fatty acids are not regulated as hazardous substances, hazardous wastes, or priority chemicals by the U.S. Environmental Protection Agency (EPA). The absence of data and regulations is likely due to the innocuous characteristics of fatty acid substances. Due to the absence of toxicity for fatty acids, one of the primary intermediates or products manufactured at the facility, ESC did not identify potential releases of fatty acids at the facility to be an area of environmental concern warranting investigation.

The Phase I environmental assessment conducted by ESC identified the areas of concern (AOCs) described below and shown on Figure 3.

AOC 1 - Plant Sump

Witco has a number of wastewater trenches which collect and distribute wastewater to a main sump. The main sump on the east side of the north plant is located adjacent to the wastewater treatment system. Since the sump is below ground and accepts all wastewater flow from both the North Plant-East and North Plant-West, the integrity of the sump must be considered.

AOC 2 - Fatty Acid Area on East Side of Plant

There is a trench and storage tanks containing fatty acids located on the south portion of the North Plant-East. During the site visit, the concrete pavement in this area was stained and pitted.

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AOC 3 - Unpaved Surface Surrounding Wastewater Storage Tank

The wastewater storage tank is situated above an unpaved surface, thus, it is possible that leakage may have adversely affected soil in this area.

AOC 4 - Zinc Stearate Area

The concrete surface of the zinc stearate production and storage area was pitted and stained during ESC's site visit.

AOC 5 - Stained Area East of Maintenance Building

The concrete surface of the maintenance area where drums are stored was stained at the time of the site visit.

AOC 6 - Groundwater

The historic operations at the plant may have adversely affected groundwater quality south or southwest of the plant. As discussed in the Site Geology and Hydrogeology section of this report, this is the regional groundwater flow direction. In addition, the groundwater quality may have been adversely affected by offsite groundwater contamination.

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ESC performed a Phase II investigation on August 14, 15, 22, and 23, 1996 to assess the potential environmental liabilities associated with six AOCs identified during the Phase I assessment of the Witco facility.

The Phase II investigation consisted of hand auger investigations in five areas and installation and sampling of a temporary groundwater monitoring well. A summary of the soil and groundwater sampling activities performed during the Phase II investigation is provided in Table 1. The field methodologies and results of each task of work are described below.

Investigation Methodology

Activities performed for the ESC Phase II field investigation included: locating underground utilities near proposed drilling and hand auger locations; hand augering five soil borings and collecting undisturbed soil samples; and installing a temporary groundwater monitoring well and collecting a groundwater sample from the well.

Utility Location

The location of all buried utilities and underground objects near the proposed soil sampling and monitoring well locations was verified before drilling activities commenced. The proposed locations were marked by ESC with white spray paint and were initially cleared by Witco facility personnel.

Utilities near the proposed drilling locations were located by Spectrum ESI Urban Geophysics (Spectrum) of San Fernando, California. Spectrum used a variety of portable geophysical and line locating instruments to precisely locate and trace the path of buried utilities near the proposed drilling locations. Some sample locations were moved due to the close proximity of buried utilities near the originally proposed sampling locations. No underground objects were detected by Spectrum near the proposed drilling locations.

Before the soil borings could be hand augured, several locations required a concrete corer to access the underlying soils. A concrete coring machine was used to core a 4.5-inch diameter hole at all of the sample locations covered by concrete.

On August 14, 1996, five shallow soil borings were hand augured, sampled, and backfilled with the soil cuttings in the areas of concern at the facility (Figure 4). All borings were hand augured to onefoot bgs to six feet bgs and undisturbed soil samples were collected

The soil cuttings were also screened for volatile organic compound (VOC) content with a Thermo 580 B photo ionization detector (PID) equipped with a 10.6 electron volt lamp calibrated to benzene and isobutylene standards. The PID screening results indicated that no evidence of VOCs was present in any of the cuttings and bore holes.

The sampling equipment was decontaminated by scrubbing with a nonphosphate detergent followed by a double rinse of deionized, organic-free water. All decontamination water and drill cuttings generated during the soil boring activities were collected in clean 55-gallon steel drums and placed in a secure area at the facility.

Soil samples were collected immediately beneath the concrete or soil surface at a depth of one-foot below the ground surface (bgs). A two-inch split-spoon sampler fitted with a clean six-inch brass liner was used to collect the samples. After opening the sampler, the sample sleeve was removed and screened for organic vapors using the PID. Following PID screening, the ends of the brass liner containing the soil sample were immediately covered with teflon tape and capped with plastic endcaps. The sample sleeve was then labeled and placed in a cooler for later shipment to the analytical laboratory. Samples were shipped with chain-of-custody documentation, included in Appendix F.

After the hand augering and sampling were complete, each borehole was backfilled with the original soil cuttings. Each borehole was subsequently capped with concrete or native soil and finished to original grade.

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One soil sample per boring was collected and submitted to the laboratory for chemical analysis. The five samples were analyzed for polycyclic hydrocarbons (PAHs) and VOCs by EPA Methods 8270 and 8260, respectively. Additionally, the sample from the zinc stearate production area was analyzed for total zinc. The soil samples were analyzed by IEA Laboratories of Cary, North Carolina, a California State certified laboratory.

Groundwater Investigation

On August 15, 1996, a hydraulically-driven sampling probe device was used to attempt to collect groundwater samples. Refusal was encountered at a very dense sand at approximately 6 to 18 feet bgs. Due to the dense sand formation beneath the site, the hydraulic sampling method was unable to reach saturated soils. Witco then requested that ESC drill and set a temporary well to collect groundwater samples. On August 22, 1996, ESC installed temporary well TW-3 to a depth of 55 feet bgs. West Hazmat Drilling of Anaheim, California drilled and installed the temporary well using a CME 75 drill rig equipped with seven-inch diameter hollow stem augers.

Cuttings were logged continuously for lithology during drilling using the U.S. Soil Conservation Service Unified Soil Classification System. Cuttings and the breathing zone around the well were also monitored for organic vapors using the PID. No VOCs were detected during the monitoring. Groundwater was first encountered between 40 and 50 feet bgs, and drilling continued approximately five feet beyond that point, to a medium coarse saturated sand zone.

TW-3 was completed as a one-inch diameter well using Schedule 40 PVC casing and screen. The screened section was five feet in length with 0.010-inch factory milled slots to help minimize siltation and turbidity. The well screen and blank casing were decontaminated using a steam cleaner before emplacement down the well borehole. A sand pack made up of #3 RMC Lonestar washed sand was placed in the annular space around the well screen to a height of five feet above the top of the well screen. The boring log and well construction details are provided in Appendix G. The downhole equipment was decontaminated by steam cleaning before and after the well construction activities. Soil cuttings and

rinsate water from the drilling operations were placed into clean 55-gallon steel drums. The drums were labeled and moved to a secure area. The well was abandoned once sufficient sample volume was recovered.

A tremie pipe was inserted into the open borehole adjacent to the temporary well casing. The well casing was pulled out of the borehole, and a bentonite slurry mix was pumped into the borehole through the tremie pipe.

Groundwater samples were collected from temporary well TW-3 on August 22, 1996. A copy of the field sampling form is provided in Appendix H.

The well was sampled with a clean disposable teflon bailer. Groundwater was transferred from the bailer into sample containers provided by the laboratory. The sample containers were labeled and placed in chilled coolers for transport to the analytical laboratory. The groundwater sample was collected for VOC analysis by EPA Method 8260 and for PAH analysis by EPA Method 8270. The sample was submitted to IEA Laboratories in Cary, North Carolina, for analysis.

Site Geology and Hydrogeology

The Witco site is located on upper Pleistocene alluvium of the Lakewood formation. The Lakewood formation overlies the lower Pleistocene San Pedro Formation, the Pliocene Pico and Repetto Formations, and the Miocene Puente Formation.

The surface of the site is located on the Bellflower Aquiclude, which is approximately 10 to 15 feet thick and consists of clays, silt, silty clays, and sandy clays. The Gage aquifer underlies the Bellflower aquiclude to a depth of 30 to 35 feet. Below the Gage, a second aquiclude exists to a depth of 50 feet. This aquiclude separates the Gage from the Hollydale aquifer. The Hollydale aquifer contains the first water beneath the site. This portion of the aquifer beneath the site, consisted of a dark brownish red medium to coarse grained sand. The sands were saturated, well sorted, and contained traces of gravels.

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Sample Evaluation Criteria

The Phase II investigation was performed by ESC, on behalf of Witco, as a voluntary investigation. ESC evaluated the analytical data by comparing the data to relevant and appropriate California and federal standards and guidelines.

The soil analytical data for VOCs and PAHs are compared to the EPA Region IX Preliminary Remediation Goals (PRGs) 1996. Groundwater analytical results are compared to the California Action ALs and the MCLs.

Soil Sample Results

The analytical results for VOCs and PAHs' are summarized in Table 2. The laboratory analytical report and quality assurance review are included as Appendix I.

No PAHs were detected in any of the soil samples collected in the North Plant-East facility. Trace levels of acetone that are considered negligible (all less than 15 ug/kg) were detected in two of the five samples. No other VOCs were detected in any of the soil samples. Zinc was detected at 67.3 μ g/kg in the sample from the zinc stearate production area. All detected levels of PAHs, VOCs, and zinc are below the PRGs.

Groundwater Sample Results

The groundwater analytical results are summarized in Table 3. No PAHs were detected in the groundwater samples collected from temporary well TW-3. Three VOCs, 1,1-dichloroethene (1,1-DCE), tetrachloroethene (PCE), and trichloroethene (TCE), were detected at concentrations of 5 μ g/l, 31 μ g/l, and 7 μ g/l. The PCE and TCE concentrations were above the California ALs and MCLs of 5 μ g/l for both compounds in the sample from TW-3. TW-3 is considered a downgradient well. Previous sampling in

1987 by Woodward-Clyde of a monitoring well upgradient of Witco's facility operations (see page 9 of this report) also revealed significant concentrations of TCE. Although VOCs exceed California ALs and MCLs, there are sources upgradient of Witco that were identified in the database search which are known to have contributed to an areawide groundwater contamination problem with VOCs. Witco has not used chlorinated solvents in manufacturing and there is no evidence that Witco's operations are a source of the VOCs detected in the samples collected from beneath the facility.

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Conclusions

The Phase I environmental assessment and Phase II environmental investigation conducted by ESC , identified the following areas of concern at the Witco North Plant-East facility in Santa Fe Springs, California.

Areas of Concern 1 - Plant Sump

Witco has a number of wastewater trenches which collect and distribute wastewater to a main sump. The one sump on the east side of the north plan is located adjacent to the wastewater treatment system. Since the sump is below ground and accepts all wastewater flow from both the North Plant-East and North Plant-West, the integrity of the sump must be considered.

ESC collected a soil sample from this area and found no detectable levels of VOCs or PAHs. Thus, this area does not pose a concern and no remediation is warranted.

Areas of Concern 2 - Fatty Acid Area on East Side of Plant

There is an area which has a trench and storage tanks containing fatty acids. During the site visit, the concrete pavement in this area was stained and pitted.

ESC collected a soil sample from this area and found no detectable VOCs (except a trace of acetone) or PAHs. Thus, this area does not pose a concern and no remediation is warranted.

Areas of Concern 3 - Unpaved Surface Surrounding Wastewater Storage Tank

Because the wastewater storage tank is situated above an unpaved surface, it is possible that leakage may have adversely affected soil in this area.

ESC collected a soil sample adjacent to the wastewater storage tank and found no detectable VOCs and PAHs. Thus, this area does not pose a concern and no remediation is warranted.

Areas of Concern 4 - Zinc Stearate Area

During the site visit, the zinc stearate production and storage area with pitted and stained concrete was observed.

ESC collected a soil sample in this area and found no detectable VOCs (except a trace of acetone) or PAHs and an extremely low zinc concentration. Thus, this area does not pose a concern and no remediation is warranted.

Areas of Concern 5 - Stained Area East of Maintenance Building

The concrete surface of the maintenance area where drums are stored was stained at the time of the site visit.

ESC collected a soil sample in this area and found no detectable VOCs or PAHs. Thus, this area does not pose a concern and no remediation is warranted.

Areas of Concern 6 - Groundwater

The historic operations at the plant may adversely affected groundwater quality south or southwest of the plant. As discussed in the Site Geology and Hydrogeology section of this report, this it the regional groundwater flow direction.

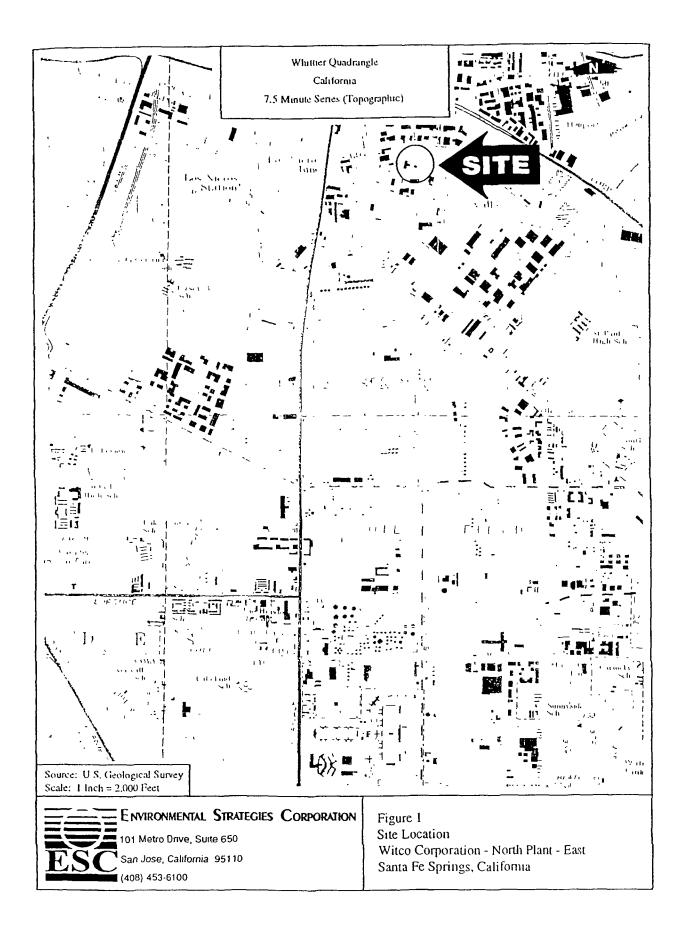
ESC installed a temporary groundwater monitoring well and found no detectable PAHs. Several chlorinated VOCs were detected above California ALs and MCLs, but there is documented evidence of areawide groundwater contamination from upgradient sources and no evidence to suggest that Witco is a source of these contaminants.

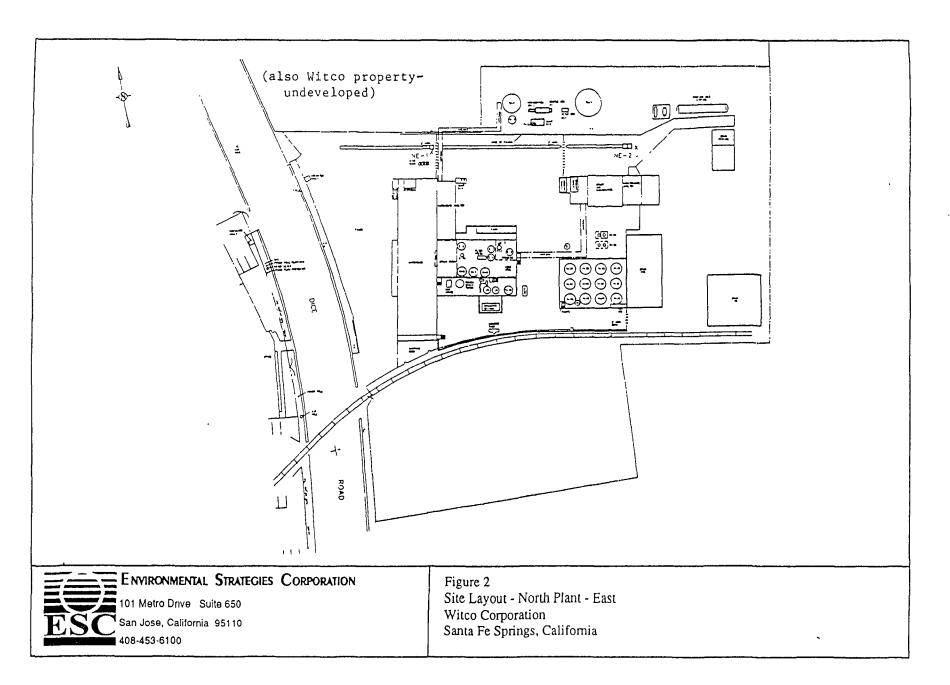
The results of the Phase II investigation of the AOCs indicate that no further investigation or remedial activities are necessary or warranted at the North Plant-East.

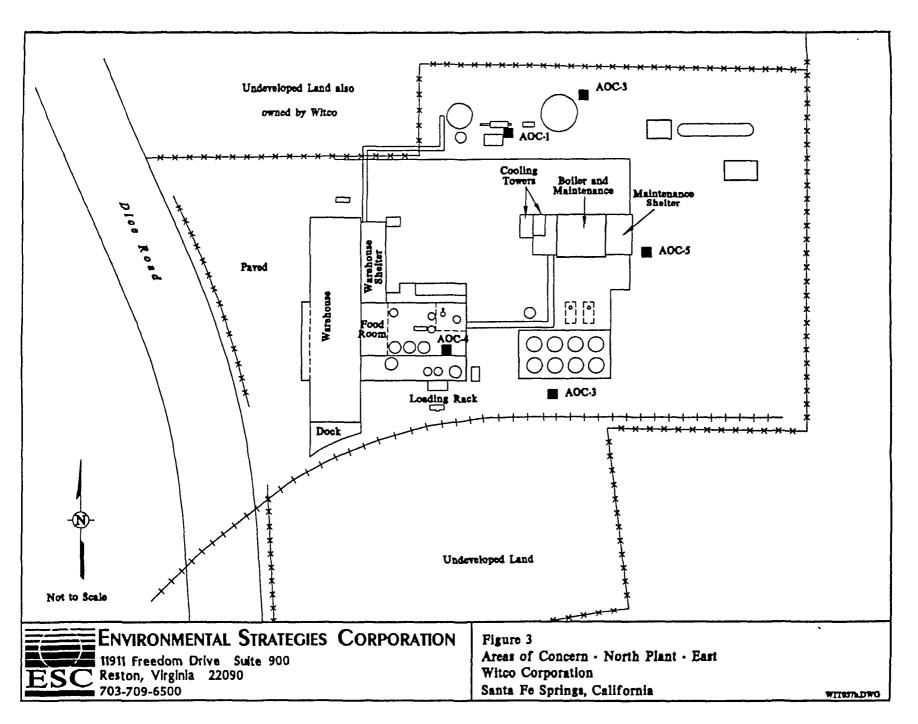
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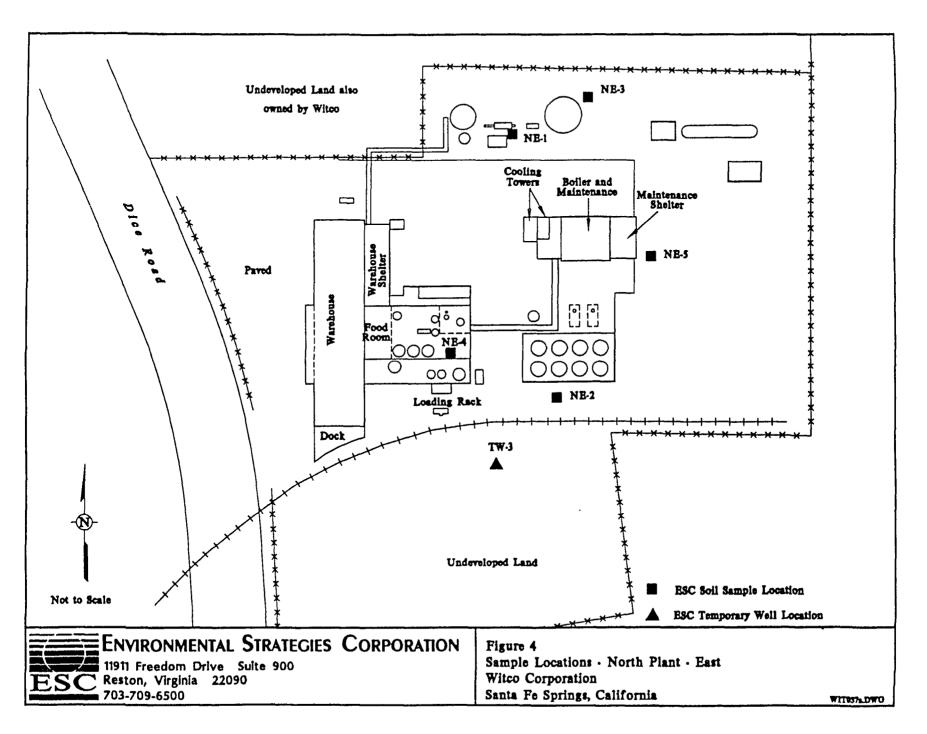
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Tables

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Table 1

Summary of Soil and Groundwater Sampling Activities Witco Corporation Facility Santa Fe Springs, California

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Location	AOC	Media <u>Sampled</u>	Sample <u>Number</u>	Sample <u>Depth (ft)</u>	Sampling <u>Method</u>	Analytical [·] Parameters
NE-1	North Plant-East	Soil	NE-1-6	6'	Hand Auger	VOCs, PAHs
NE-2	North Plant-East	Soil	NE-2-6	6	Hand Auger	VOCs, PAHs
NE-3	North Plant-East	Soil	NE-3-1	1'	Hand Auger	VOCs, PAHs
NE-4	North Plant-East	Soil	NE-4-2	2'	Hand Auger	VOCs, PAHs, Zinc
NE-5	North Plant-East	Soil	NE-5-1	1'	Hand Auger	VOCs, PAHs
TW-3	North Plant-East	Groundwater	TW-3		Bailer	VOCs, PAHs

Table 2

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Soil Analytical Results Semi-Volatile Organic Compounds Witco Corporation - North Plant-East Santa Fe Springs, California August 1996

Sample Location	NE-1	NE-2	NE-3	NE-4	NE-5
Depth	(6')	(1')	(1')	(2')	(1')
Compound					
Semi-Volatile Organics (ug/kg)					
Naphthalene	ND	ND	ND	ND	ND
2-Methylnaphthalene	ND	ND	ND	ND	ND
2-Chloronaphthalene	ND	ND	ND	ND	ND
Acenaphthylene	ND	ND	ND	ND	ND
Acenaphthene	ND	ND	ND	ND	ND
Flouorene	ND	ND	ND	ND	ND
Phenanthrene	ND	ND	ND	ND	ND
Anthracene	ND	ND	ND	ND	ND
Fluoranthene	ND	ND	ND	ND	ND
Pyrene	ND	ND	ND	ND	ND
Benzo(a) anthracene	ND	ND	ND	ND	ND
Chrysene	ND	ND	ND	ND	ND
Benzo (b) fluoranthene	ND	ND	ND	ND	ND
Benzo (k) fluoranthene	ND	ND	ND	ND	ND
Benzo (a) pyrene	ND	ND	ND	ND	ND
Indeno (1,2,3-cd) pyrenee	ND	ND	ND	ND	ND
Dinbenz (a,h) anthracene	ND	ND	ND	ND	ND
Benzo (g,h,i) perylene	ND	ND	ND	ND	ND

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Table 2
(continued)Soil Analytical ResultsVolatile Organic CompoundsWitco Corporation - North Plant-East
Santa Fe Springs, California
August 1996

Sample Location Depth (ft)	NE-1 (6')	NE-2 (1')	NE-3 (1')	NE-4 (2')	NE-5 (1')
Compound	<u></u>				
Volatile Organics (ug/kg)					
Acetone	ND	15 JB	ND	13 JB	ND
1,1-Dichloroethene	ND	ND	ND	ND	ND
Tetrachloroethene	ND	ND	ND	ND	ND
Toluene	ND	ND	ND	ND	ND
Trichloroethene	ND	ND	ND	ND	ND

Table 2 (continued) Soil Analytical Results Zinc Witco Corporation - North Plant-East Santa Fe Springs, California August 1996

	Sample Location Depth (ft)	
Compound		
Zinc (ug/kg)		
Zinc		67.3

Table 3

Groundwater Analytical Results Volatile Organic Compounds Witco Corporation - North Plant-East Santa Fe Springs, California August 1996

Sa	mple Location	TW-3
Compound		
Volatile Organics (u	g/kg)	
Acetone		ND
1,1-Dichloroethene		5
Tetrachloroethene		30
Toluene		ND
Trichloroethene		7

NOTE: NO SEMI-VOLATILE ORGANIC COMPOUNDS WERE DETECTED.

Appendix A - Site Photographs

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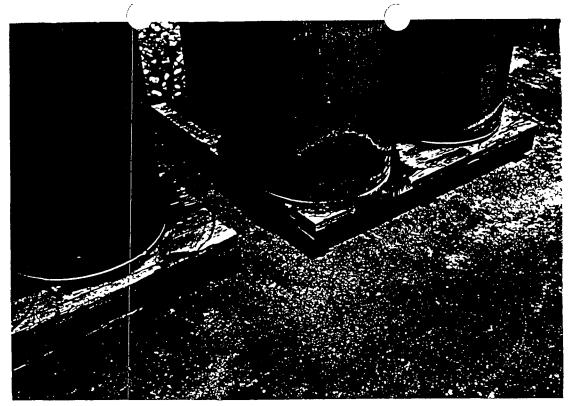


Photo 1: Stained area east of maintenance building. Witco Corporation, North Plant-East, Santa Fe Springs, California

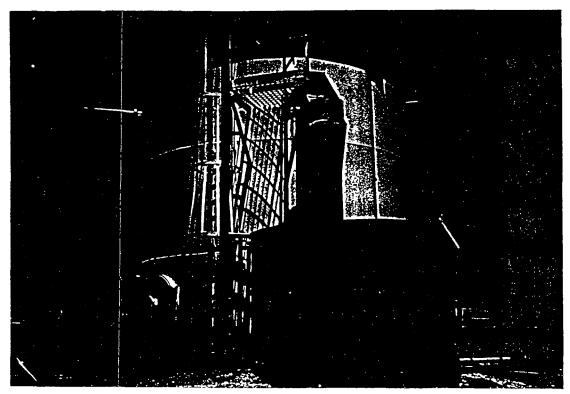


Photo 2: Aboveground wastewater storage tank. Witco Corporation, North Plant-East, Santa Fe Springs, California

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Photo 3: Drums with off-specification materials pending disposal. Witco Corporation, North Plant-East, Santa Fe Springs, California

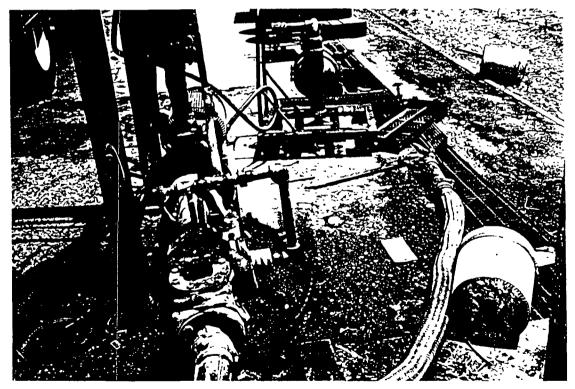


Photo 4: Sump and trenches near fatty acid area. Witco Corporation, North Plant-East, Santa Fe Springs, California

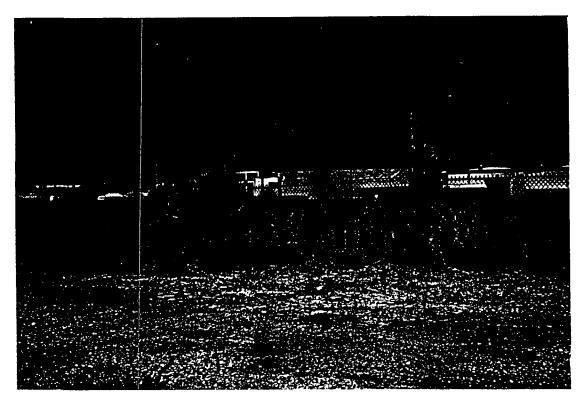
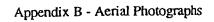
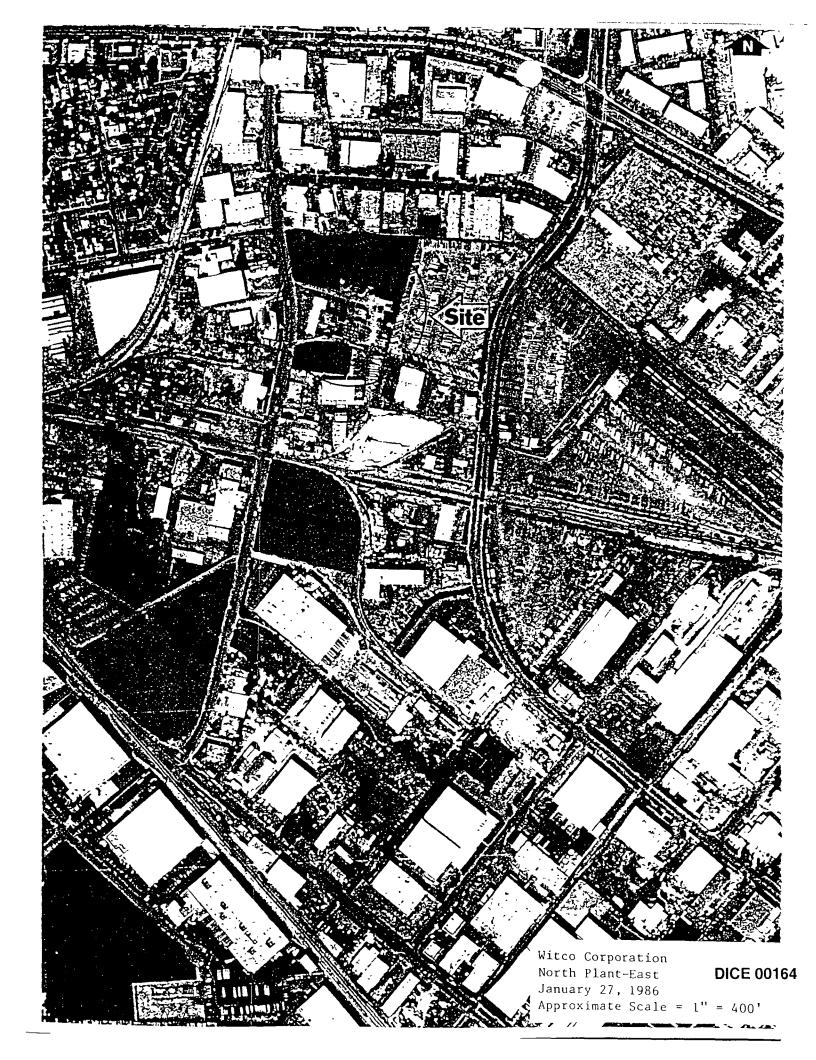


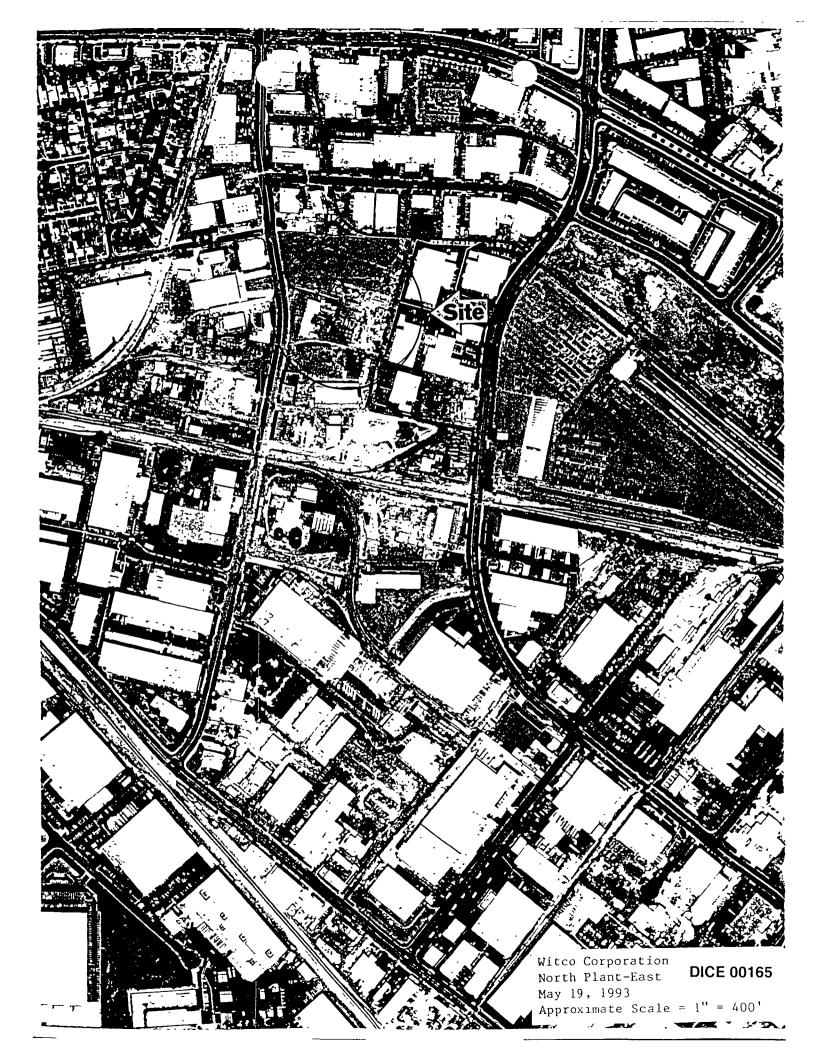
Photo 5: View of undeveloped parcel owned by Witco, north of plant area. Witco Corporation, North Plant-East, Santa Fe Springs, California



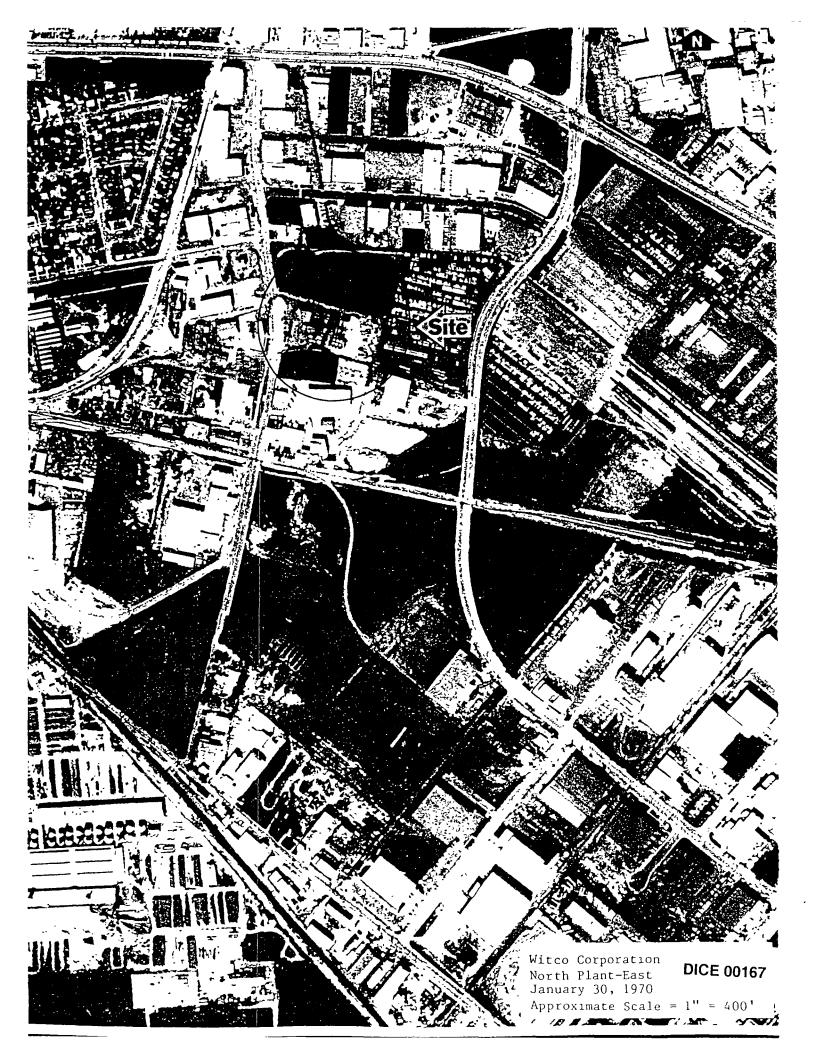
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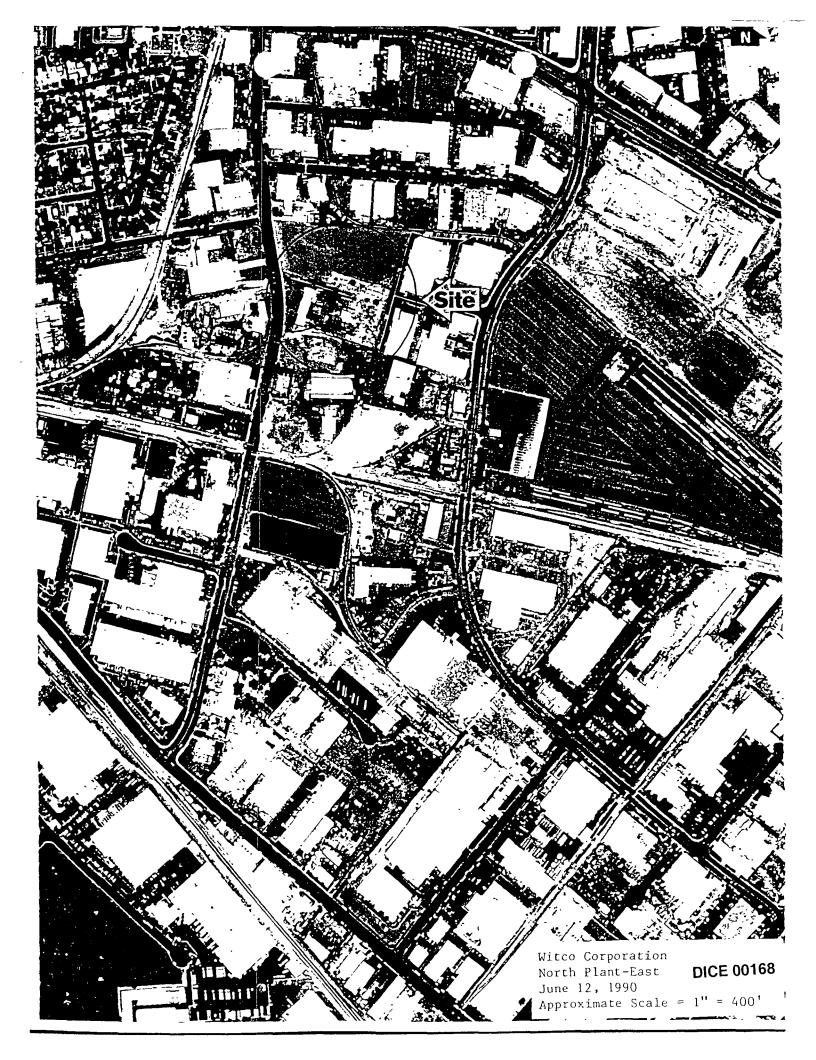
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Appendix C - Hazard Chemical List

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HAZARDOUS CHEMICAL LIST NORTH/EAST PLANT

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	RQ Lbs.	Hazards
Air, Compressed		SRP*
Alkyl Benzene		Acute, Chronic
Alkyl Phenol Ethoxylate		Acute
Ammonium Hydroxide	1000	Acute, Chronic
Butanol	5000	
Calcium Hydroxide		Acute
Carbon Dioxide,	-	Acute
Coconut Oil, Fatty Acid	-	Acute
Decanol	-	Acute
Diethanolamine		Acute
Diethyl Amine	100	Acute, Fire
Ethylene Glycol	-	Acute, Chronic
Fuel Oil	-	Acute, Fire
Heat Transfer Oil	-	Acute, Chronic
Hexylene Glycol	-	
Hydrogen Peroxide (30%)	~	Acute, Reactive
Isopropyl Alcohol	-	Acute, Fire
Methanol	5000	Acute, Chronic, Fire
Nitrogen	-	Acute, SRP
Oxygen	-	Fire, SRP
Phosphoric Acid	5000	
Potassium Hydroxide	1000	Acute
Propane		

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Sodium Chloride		
Sod. Dodecyl Benz. Sulf.	1000	Acute
Sodium Hydroxide,	1000	Acute
Sodium Methylate	1000	Acute, Chronic, Fire

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*SRP - Sudden Release of Pressure

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Appendix D - Tank Information

WITCO TANKS INFORMATION

<u></u>			8724	Dicd F	Road, SFS		
Tonk	میں اور	TD.S	Hight	Tank	Permit	Capacity	(a) A set of the spin structure of the sp
NO	Material	(ft.)	(fr.)	Mat'l	Status	Gal	Type
	ZINC STEARATE	8.0	8.0	SS	D01059	3000	(°) — The adalent size seed dates, dates a fraction the set of the middenic in a di-
	DETERGENT BLEND	8.0	8.0	SS	D01058	3000	
Y-35	DETERGENT BLEND	10.0	16.0	SS	D01060	10000	,
Y-37	COCONUTOIL	12.5	17.5	A		16000	
L	DEA	12.5	17.5	S	M63039	16000	
L	FATTY ACID	12.5	17.5	SS		16000	· · · · · · · · · · · · · · · · · · ·
Y-40	TRUCK WASH	12.5	17.5	SS		16000	
Y-41	FATTY ACID	12.5	17.5	A		16000	
Y-42	GLYCERINE	12.5	17.5	A	M63038	16000	
Y-43	OLEIC ACID	12.5	17.5	S		16000	
Y-44	FATTY ACID BLEND	12.5	17.5	SS	1	16000	
Y-45	SORBITOL 70% (4508)	12.5	17.5	SS		16000	
Y-46	COCONUT FATTY ACID	12.5	17.5	A		16000	
Y-47	FATTY ACID 502	12.5	17.5	SS		16000	
Y-48	STEARIC ACID E-132	12.5	17.5	A		16000	
U-49	METHANOL	10.0	17.5	S	D01057	10000	Underground
U-50	M.T.	10.0	17.5	S	D01056	10000	Underground
Y-52	ETHYLENE GLYCOL	7.5	10.5	ss		3000	· · ·
M-6	DETERGENT BLEND	10.0	10.5	SS	<u>+</u>	6000	-
M-7	FATTY ACID BLEND	10.0	10.5	SS		6000	
M-8	FATTY ACID BLEND	10.0	10.5	SS		6000	
TK-1	WASTEWATER TANK	20.0	20.0	S		50000	
TK-7	WASTEWATER TANK	30.0	30.0	S		160000	· · · · · · · · · · · · · · · · · · ·
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Appendix E - Regulatory Database Search

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SITE ASSESSMENT PLUS REPORT

CLIENT INFORMATION
LLEN MCDERMOTT NV STRATEGIES(ESC)-SAN JOSE 01 METRO DR STE 650 SAN JOSE, CA 95110
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	Site Dist	tribution Summary	within 1/8 mile	1/8 to 1/4 mile	1/4 to 1/2 mile	1/2 to 1 mile
Agency / Da	tabase - Type	e of Records			}	
A) Database	s searched t	o 1 mile:				
US EPA	NPL	National Priority List	0	0	0	1
US EPA		RCRA Corrective Actions	2	0	2	0
USEPA	TSD	RCRA permitted treatment, storage,	-			
002.00		disposal facilities	2	0	1	0
STATE	SPL	State equivalent priority list	1	1	1	1
]	
B) Database	es searched t	o 1/2 mile:	1			
US EPA	CERCLIS	Sites under review by US EPA	6	2	6	
STATE	SCL	State equivalent CERCLIS list	4	3	4	
STATE REG		Leaking Underground Storage Tanks	3	8	12	
STATE/	SWLF	Permitted as solid waste landfills,	-			1
REG/CO	· · · ·		0	0	2	-
STATE	DEED Sites with deed restrictions RSTR		0	0	0	
STATE	CORTESE	State index of properties with	- [[[
	00000000	hazardous waste	4	7	6	-
STATE	TOXIC PITS	Toxic Pits cleanup facilities	0	0	0	·]
C) Database	es searched f	to 1/4 mile:				
US EPA	RCRA Viol	RCRA violations/enforcement actions	2	0		
US EPA	TRIS	Toxic Release Inventory database	4	3		
STATE	UST/AST	Registered underground or	-	-		·
OMAL	0011101	aboveground storage tanks	8	10	-	1.
COUNTY	UNIQUE CO) Unique county databases	-1	2		·[
			- ·	_	-	-
D) Database	es searched	to 1/8 mile:	1			+
US EPA	ERNS	Emergency Response Notification System of spills	14	-	-	_
US EPA	GNRTR	RCRA registered small or large generators of hazardous waste	6			
		generations of nazardous waste	-	·		·



This geographic database search meets the American Society for Testing Materials (ASTM) standards for a government records review. A (-) indicates the search distance exceeds ASTM search parameters.

LIMITATION OF LIABILITY

Customer proceeds at its own risk in choosing to rely on VISTA services, in whole or in part, prior to proceeding with any transaction. VISTA cannot be an insurer of the accuracy of the information, errors occurring in conversion of data, or for customer's use of data. VISTA and its affiliated companies, officers, agents, employees and independent contractors cannot be held liable for accuracy, storage, delivery, loss or expense suffered by customer resulting directly or indirectly from any information provided by VISTA.

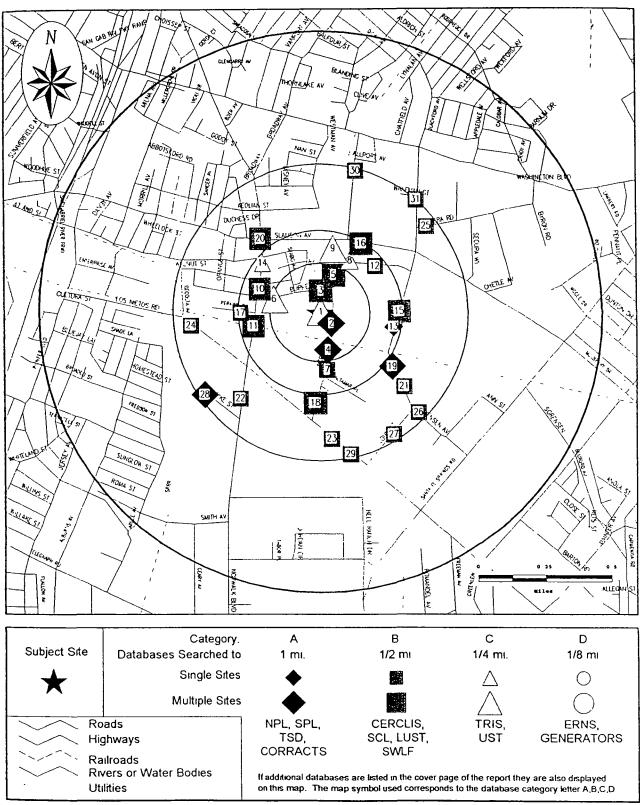
NOTES





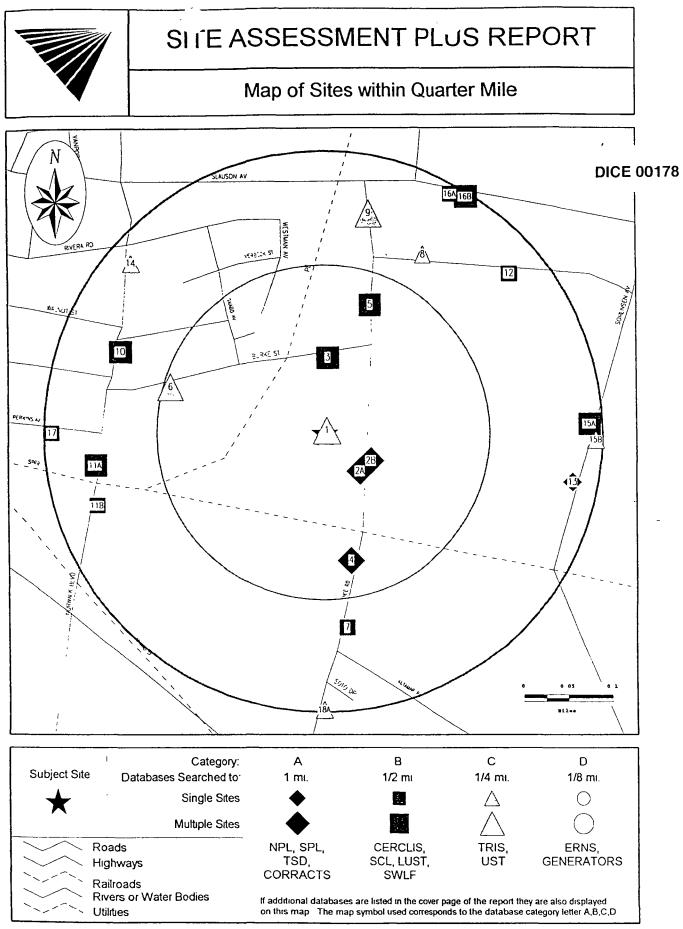
SITE ASSESSMENT PLUS REPORT

Map of Sites within One Mile



For More Information Call VISTA Information Solutions, Inc. at 1 - 800 - 767 - 0403 Report ID. 113596-001 Date of R

Date of Report. September 3, 1996 Page #3

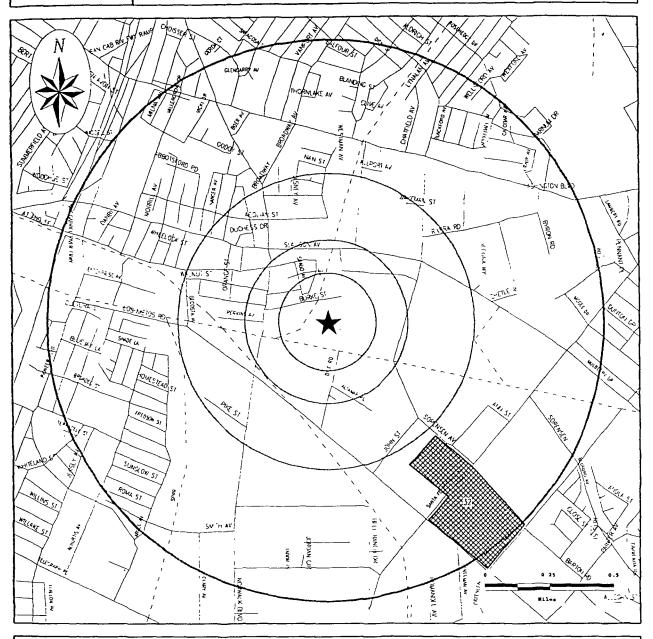


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SITE ASSESSMENT PLUS REPORT

Sites Represented as Polygons



These boundaries are approximated from agency records or other sources such as published maps. They may represent property boundaries, impact zones, or study areas. For more information contact the agency referenced by source number in the site listing.

 Roads

 Highways

 DICE 00179

 Railroads

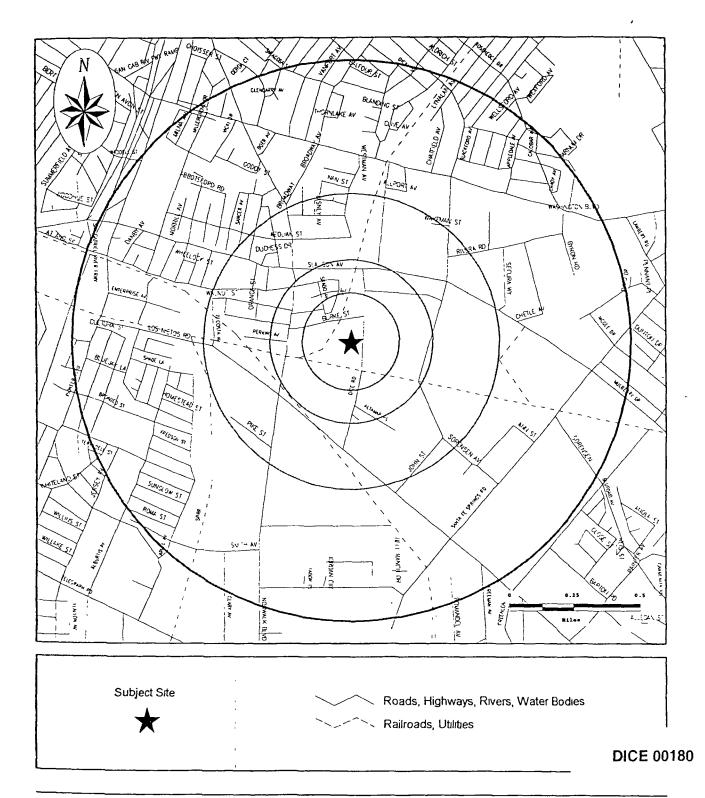
 Rivers or Water Bodies

 Utilities



SITE ASSESSMENT PLJS REPORT

Street Map



SITE ASSESSMENT PLUS REPORT

SITE INVENTORY

			<u> </u>	ļ	4					В				C	;	Τ	D	ń.
MAP ID	PROPERTY AND THE ADJACENT ARE (within 1/8 mile)	A VISTA ID DISTANCE DIRECTION	NPL	CORRACTS	TSD	SPL	CERCLIS	SCL	LUST	SWLF	DEED RSTR	TOXIC PITS	RCRA VIOL	TRIS	UST/AST	UNIQUE CO	ERNS	GNRTR
1	WITCO PRODUCTS 8733 D. DICE RD SANTA FE SPRINGS, CA 90670 WITCO CORP	200080899 0 00 MI ADJACENT 4024126															x	
1	8733 S DICE RD SANTA FE SPRINGS, CA 90670	0 00 MI ADJACENT													x			x
1	WITCO CORP. OLEO/SURFACTANTS GROUP 8733 S DICE RD. SANTA FE SPRINGS, CA 90670	5296501 0.00 MI ADJACENT												x				
2A	SCHNEE MOREHEAD INC 8835 S DICE RD SANTA FE SPRINGS, CA 90670	1158980 0 00 MI ADJACENT	1															x
2A	SOUTHERN CALIFORNIA CHEM 8851 DICE RD SANTA FE SPRINGS, CA 90670	200212792 0.00 MI ADJACENT															x	
2A	SOUTHERN CALIFORNIA CHEM 8851 DICE RD SANTA FE SPRINGS, CA 90670	200236859 0 00 MI ADJACENT															x	
2A	SOUTHERN CALIFORNIA CHEM 8851 DICE RD SANTA FE SPRINGS, CA 90670	200211263 0 00 M ADJACENT	1														x	
2A	SOUTHERN CALIFORNIA CHEM 8851 DICE RD SANTA FE SPRINGS, CA 90670	200235330 0 00 M ADJACENT	1														x	
2A	SO CAL CHEMICAL 8851 DICE RD SANTA FE SPRINGS, CA 90670	200060550 0 00 M ADJACENT	1														x	
2A	SOUTHERN CALIFORNIA CHEMICAL COMPA 8851 DICE ROAD SANTA FE SPRINGS, CA 90670	VY 389782 0 00 M ADJACEN1	1					x						x	x			
2A	SOUTHERN CAL CHEMICAL 8851 DICE RD SANTA FE SPRINGS, CA 90670	200036256 0 00 M ADJACEN1	1														x	
2A	SO CAL CHEM CO 8851 DICE RD SANTA FE SPRINGS, CA 90670	200056759 0.00 M ADJACEN1	1														x	
2A	SO. CAL CHEMICALS 8851 DICE RD SANTA FE SPRINGS, CA 90670	200037055 0.00 M ADJACENT	1														x	
2A	SO CAL_CHEMICALS 8851 DICE RD SANTA FE SPRINGS, CA 90670	200037056 0.00 M ADJACENT	v [x	





			[4	1					в			7		C	;		D	
MAP ID	PROPERTY AND THE ADJACENT ARE (within 1/8 mile)	VISTA ID DISTANCE DIRECTION	NPL	CORRACTS	TSD	SPL	CERCLIS	SCL	LUST	SWLF	DEED RSTR	CORTESE	TOXIC PITS	RCRA VIOL	TRIS	UST/AST	UNIQUE CO	ERNS	GNRTR
2A	SOUTHERN CALIFORNIA CHEMICAL 8851 DICE RD SANTA FE SPRINGS, CA 90670	200339400 0.00 MI ADJACENT 1183441																x	•
2A	SO CA CHEM CO INC 8851 DICE RD SANTA FE SPRINGS, CA 90670	0.00 MI ADJACENT					x												
2A	PHIBRO TECH INC 8851 DICE RD SANTA FE SPRINGS, CA 90670	5241067 0 00 MI ADJACENT	1	x	x									x					x
2B	AIR LIQUIDE AMERICA CORP COMPRESSED 8832 DICE RD SANTA FE SPRINGS, CA 90670	0.00 MI ADJACENT													x				
28	LIQUID AIR CORP 8832 DICE RD SANTA FE SPRINGS, CA 90670	245933 0 00 MI ADJACENT					x	x	x			x				x			
28	BURDETT OXYGEN COMPANY OF CALIFORNI 8832-8838 SOUTH DICE ROAD SANTA FE SPRINGS, CA 90670	<0.01 MI SE				x	x												
3	PILOT CHEMICAL 11756 BURKE AVE SANTA FE SPRINGS, CA 90670	200066074 0 02 MI N										1						x	
3	PILOT CHEMICAL 11756 BURKE ST SANTA FE SPRINGS, CA 90670	200242066 0 02 Mi N																x	
3	PILOT CHEMICAL COMPANY 11756 BURKE ST SANTA FE SPRINGS, CA 90670	5352338 0 02 Mi N										x							
3	PILOT CHEMICAL 11756 BURKE ST SANTA FE SPRINGS, CA 90670	200218007 0 02 Mi N	1															x	
3	PILOT CHEM CO 11756 BURKE ST SANTA FE SPRINGS, CA 90670	330653 0 02 M N	1				x		x						x	x	x		x
3	PILOT CHEMICAL COMPANY 11770 BURKE SANTA FE SPRINGS, CA 90670	4020570 0 03 M N	4													x			
3	FLIGHT TRUCKING 11770 BURKE STREET SANTA FE SPRINGS, CA 90670	1194162 0 03 M N	1						x										
4	DIVERSEY WYANDOTTE CORPORATION 8921 DICE RD SANTA FE SPRINGS, CA 90670	5354007 0 08 M S	7				T					x							
4	DIVERSEY CORP 8921 DICE RD SANTA FE SPRINGS, CA 90670	123068 0 08 M S	7	×	×		T							x					x
4	DIVERSEY WYANDOTTE CORP 8921 DICE RD SANTA FE SPRINGS, CA 90670	517328 0 08 M S	1				x	x								x			
5	CITY OF SANTA FE SPRINGS FIRE 8634 S DICE SANTE FE SPRINGS, CA	4824475 0 09 M NE	1													x			



[F	1					В					C	;		D	1
MAP ID	PROPERTY AND THE ADJACENT ARE (within 1/8 mile)	NISTA ID DISTANCE DIRECTION		CORRACTS	TSD	SPL	CERCLIS	SCL	LUST	SWLF	DEED RSTR	CORTESE	TOXIC PITS	RCRA VIOL	TRIS	UST/AST	UNIQUE CO	ERNS	GNRTR
5	WEST BENT BOLT 8623 DICE RD SANTA FE SPRINGS, CA 90670	5354006 0 09 MI N	1									x							•
5	MID WEST FABR CO 8623 DICE RD SANTA FE SPRINGS, CA 90670	274221 0 09 MI N																	x
5	WEST BENT BOLT 8623 S DICE RD SANTA FE SPRINGS, CA 90670	1183438 0 09 MI NE					x	x											
6	TALCO PLASTICS INC 11650 BURKE WHITTIER, CA 90606	1237544 0.11 MI W														x			

			[ļ		·	 	-		в				[C			D	٦
MAP ID	SITES IN THE SURROUNDING ARE (within 1/8 - 1/4 mile)	A VISTA ID DISTANCE DIRECTION	NPL	CORRACTS	TSD	SPL	CERCLIS	SCL	LUST	SWLF	DEED RSTR	CORTESE	TOXIC PITS	RCRA VIOL	TRIS	UST/AST	UNIQUE CO	ERNS	GINHIN
6	PALLEY PROPERTY 11630 BURKE ST , CA 90606	5404254 0 13 Mi W															x		
7	T CHEM PRODUCTS INC 9028 DICE RD SANTA FE SPRINGS, CA 90670	418301 0.16 Mi S							x						x	x			•
8	PARKER HANNIFIN CORP 11808 BURKE ST SPRINGS SANTA FE SPRINGS, CA 90670	319868 0 16 Mi NE													x				•
9	AEROSPACE RIVET MFG_CORP_MANUFAC 8535 DICE RD SANTA FE SPRINGS, CA 90670	0 18 MI N													x				
9	A-W ENGINEERING CO 8518 DICE SANTA FE SPRINGS, CA 90670	34957 0 19 Mi N														x			
10	BARRETT SERVICE STATION 8728 NORWALK BLVD WHITTIER, CA 90606	1203224 0 18 MI W							x			x				x			
10	BARRETT SERVICE STATION 8728 NORWALK BLVD WHITTIER, CA 90606	6478853 0 18 Mi W							x										
11A	C F PENG SERVICE STATION 8905 NORWALK BLVD SANTA FE SPRINGS, CA 90670	2748870 0.19 Mi W							x			x							
	NACHO'S BATTERIES 8917 NORWALK , CA 90606	4825493 0 19 MI W															x		
11B	ACI GLASS PRODUCTS INC 9010 S NORWALK BLVD SANTA FE SPRINGS, CA 90670	4497 0 20 MI W							x			x				x			



DICE 00183

				4	4		·			в					С	;	-	D	7
MAP ID	SITES IN THE SURROUNDING AREA (within 1/8 - 1/4 mile)	VISTA ID DISTANCE DIRECTION	NPL	CORRACTS	TSD	SPL	CERCLIS	SCL	LUST	SWLF	DEED RSTR	CORTESE	TOXIC PITS	RCRA VIOL	TRIS	UST/AST	UNIQUE CO	ERNS	GNRIK
	TECHNI-BRAZE INC 11845 BURKE STREET SANTA FE SPRINGS, CA 90670	418570 0.21 Mi NE						x											•
13	ANGELES CHEMICAL COMPANY INC 8915 SORENSEN AVENUE SANTA FE SPRINGS, CA 90670	22476 0 22 MI E				x			x			x				x			•
	H H MACHINE CO 8612 NORWALK BLVD WHITTIER, CA 90606	1160309 0.22 Mi NW														x			•
15A	VANDENBERG AFB 8815 SORENSEN S. SANTA FE SPRINGS, CA 90670	5356622 0 23 Mi E										x							
15A	PLAS-TAL MFG CO 8815 S SORENSEN AVE SANTA FE SPRINGS, CA 90670	5718420 0 23 MI E							x										
15B	SO PACIFIC TRANS CO 8834 SORENSON SANTA FE SPRINGS, CA 90670	4043436 0 24 MI E						ļ								x			
16A	CAL WESTERN PAINT CORP 11748 SLAUSON AVE SANTA FE SPRINGS, CA 90670	15315 0 24 MI NE					x	x								x			•
16B	WESTERN SCREW PRODUCTS #1 11770 SLAUSON AVE E SANTA FE SPRINGS, CA 90670	5357834 0 24 MI NE										x							
16B	WESTERN SCREW PRODUCTS 11770 - 11780 SLAUSON BLVD SANTA FE SPRINGS, CA 90670	465500 0 24 MI NE	1				x	x											•
17	E.A MENDOZA INC. 11574 PERKINS AVE WHITTIER, CA 90606	3768036 0 24 Mi W	1						x			x				x			
18A	MOBILE INSP SERVICE INC 9110 DICE SANTA FE SPRINGS, CA 90670	1161989 025 M S	r I													x			
MAP ID	SITES IN THE SURROUNDING AREA (within 1/4 - 1/2 mile)	VISTA ID DISTANCE DIRECTION	IdN		A DIST	IdS	CERCLIS	scL	LUST	SWLF B	R	CORTESE	TOXIC PITS	RCRA VIOL	-	UST/AST (UNIQUE CO	ERNS	_
18	DICE ROAD 9165 DICE ROAD SANTA FE SPRINGS, CA	5435856 0 29 M S					Ì			x									
18	DICE ROAD 9165 DICE ROAD SANTA FE SPRINGS, CA 90670	4824476 0 29 M S	1							x									
18	DICE RD_LOS NIETOS RD DUMP 9165 DICE RD SANTA FE SPRINGS, CA 90670	121556 0 29 M S	4				x	x											



			—	-	4					B					C	;	1	D	Л
	SITES IN THE SURROUNDING AREA			S				Τ		Ţ	К		S	L			0 C		٦
MAP	' (within 1/4 - 1/2 mile)	VISTA ID DISTANCE DIRECTION		5			S				S	뷨	늰	9		F	S		
ID				RA			5			աՄ		븨	ົບ	$\overline{\mathbf{A}}$		AS	UNIQUE	S	ЦЦ
			2	R	Q	بر	Ř	H	Ñ	ᅱ		녹	X	Ř	ŝ	ST/	S	ž	Ř
		DIRECTION	Ľ	ŭ	L S	S	U	S	コ	S	ŏ	5	R	Ř	비	ŝ	5	ш	ତ
	MCKESSON CHEMICAL COMPANY	1188537	1																7
19	9005 SORENSEN AVENUE	0.26 MI SE				X			X		- }:	X							1
1	SANTA FE SPRINGS, CA 90670	36																	
	FOREMOST MCKESSON INC	156385			1	ļ													
19	9005 SORENSEN AVE	0.26 MI SE		X	X		X		1					•					•
	SANTA FE SPRINGS, CA 90670			_															_
	PETERSON/PURITAN INC	327119 0.31 MI		[[(Í							, Í	
19	9101 S SORENSEN AVE	U.37 MI SE	1						Х							•			•
	SANTA FE SPRINGS, CA 90670			ļ	L	 												\vdash	
	SHELL STATION NO 204-8458-1600	377479 0 27 MI		1			1				1							1	
20	11515 E SLAUSON	NW				ļ	Ł		X			X				•			•
L	WHITTIER, CA 90604	07/0550	_	<u> </u>			 						_						
		2749552 0 32 MI									1							11	
20	11462 SLAUSON AVENUE E.	NW		ſ		1			X	[]	- 1			[
ļ	SANTA FE SPRINGS, CA 90670	65745		+		+			-										
	CALAVAR CORP	0 36 MI			Ł	1			х			v	{		1				
21	9200 SORENSEN AVE	SE						1	^			Х			1	•			
<u> </u>	SANTA FE SPRINGS, CA 90670	1237432	+	+		\vdash								⊢					
22	TUBE SERVICE COMPANY 9351 SO NORWALK BLVD.	0 38 MI		ļ					x						ļ				i
22	SANTA FE SPRINGS, CA 90670	SW	1	1			1	ļ	^				Į						
	FINE LINE PAINT CORP	151703	-	+-	┼╌	┼	┨──	╂		$\left - \right $				⊢	├	╞			
23	12200 LOS NIETOS RD	0 42 MI				ł	1x	x	x			х	ł						
20	SANTA FE SPRINGS, CA 90670	S	1	1		l		$\left \right $				~	ł	1	[
<u> </u>	CALIFORNIA CORRUGATED	4032431	+	1		┢	1-	1					<u> </u>		-	1			
24	11600 LOS NIETOS	0 43 MI		1		1	1		X			х	1	1	}				•
	SANTA FE SPRINGS, CA 90670	W											1						i
	CAL-TRON PLATING, INC	66594		\top		1			1				1						
25	11919 EAST RIVERA ROAD	0 46 MI NE	1		ł			X	1						•				•
	SANTA FE SPRINGS, CA 90670			1 -									<u> </u>						
1	U S GYPSUM COMPANY	1158976		1	1		1	{	ļ	{			1	1	1	1	ł	[]	()
26	9306 SORENSEN	0 47 M SE							X						1	•	1		1
	SANTA FE SPRINGS, CA 90670					1.	1	1					1	 			1		
	VALVOLINE OIL CO	450897 0 47 M		1														1	
27	9520 JOHN ST	SE			1				X	}				1	•	•			•
	SANTA FE SPRINGS, CA 90670	15 20 4 5		+	4-	-	₋	+							_	4		_	<u> </u>
28	WHITTIER PLATTING CO INC	468915 0 47 M		X			1.												
20	SANTA FE SPRINGS, CA 90670	SN	1	1^	-		X	[{	ſ	1	[1	•
	MCKESSON CHEM CO	264990	, -	+	+-	+		+	-	+	\vdash			╂─╴	<u> </u>	+	╀	╂─	
28	11600 PIKE ST	0 48 M		1		Ì	x		İ.				ł.	1	1		1	1	
	SANTA FE SPRINGS, CA 90670	SN	4				l^	1							1	1			
	ALLPURE CHEMICAL COMPANY	493950		+-	1-	+	+	+	┢	+				1-			+		
28	11600 PIKE STREET	0 48 M	1					x						ł		ł	1	1	
1.	SANTA FE SPRINGS, CA 90670	SN	1	1					1						1		}		
	SOUTHERN STEEL SUPPLY CO.	1245694		1	1-	\uparrow	t	\top	\square	1			1	1	1	\uparrow	1	1-	-
29	12350 LOS NIETOS ROAD	0 48 M							X	1		х		1		•	-		
	SANTA FE SPRINGS, CA 90670	S	`	1		1		ļ			1				1		1	1	
	SUR-LITE CORPORATION	413978		1-	1	1	\uparrow	1	\uparrow	T			ϯ	1	1	\uparrow	1-	-	
30	8124 ALLPORT AVE	0 49 M	1			1	X							1		1	1	1	
	SANTA FE SPRINGS, CA 90670	٨	1	1				1	1		1			1	1		1	1	

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MAP ID	SITES IN THE SURROUNDING AREA (within 1/4 - 1/2 mile)	VISTA ID DISTANCE DIRECTION	NPL	CORRACTS	TSD		CERCLIS	SCL	LUST	DEFD RSTR	CORTESE	TOXIC PITS	RCRA VIOL	TRIS	UST/AST	UNIQUE CO	ERNS
31	THIEM INDUSTRIES 8311 SORENSEN SANTA FE SPRINGS, CA 90670	4043434 0.50 MI NE							x						•		
	r			-	4		Γ		1	В				С	;		D
MAP ID	SITES IN THE SURROUNDING AREA (within 1/2 - 1 mile)	VISTA ID DISTANCE DIRECTION	NPL	RACTS		SPL	CERCLIS	SCL		RSTR	CORTESE	TOXIC PITS	RCRA VIOL		AST	UNIQUE CO	ERNS

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		7	١				В					С	;	Τ	D	
UNMAPPED SITES	1D	 CORRACTS	TSD	CERCLIS	SCL	LUST	SWLF	DEED RSTR	CORTESE	TOXIC PITS	RCRA VIOL	TRIS	UST/AST		ERNS	GNRTR
ROSE HILLS 57390	042						v						T			7
WHITTIER, CA							X									1
CHEVRON 53495	556															
P O BOX 3608									X							
SANTA FE SPRINGS, CA 90670															- [
WITCO CORP 48240	253															
12143 ALTAMAR PL		(X			X
SANTA FE SPRINGS, CA 90670																



SITE ASSESSMENT PLUS REPORT

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DETAILS

	PROPERI	TY AND THE AD.		(within 1/8 mile)		
VISTA V	VITCO PRODUCT	<u></u>		VISTA ID#;	200080899	Map
		5		Distance/Direction:	0 00 MI /	11 ·
14	733 D. DICE RD			DiotaneerDirection	ADJACENT	1
S	ANTA FE SPRING	S, CA 90670		Plotted as:	Point	
RNS - Emerg	ency Response Noti	fication System	/ SRC# 3006	Agency ID	90-6870	1
Agency Addr		SAME AS		1¥		1
Spill Date Tir		MAY 14, 1	990 01 20 00 PM			1
Case Number		90-6870				1
Spill Location	1:	8733 D D	ICE RD			
Source Agen		E				
Discharger O		WITCO PI	RODUCTS			
Material Spill		METHAN	DL, 14000 00 (GAL)	1		
Material Spill		WATER, S	3000 00 (GAL)			1
Waterway Aff		NONE				1
Fields Not Re		Discharge	r Name, Discharge	r Phone		
Air Release:	Land Release:	Water Release	e: Ground	Facility	Other Release:	ī l
			Release:	Release:		
NO	YES	NO	NO	NO	NO]
VISTA IN	VITCO CORP			VISTA ID#	4024126	Map
	733 S DICE RD			Distance/Direction:	0 00 MI /	
C					ADJACENT	1
	SANTA FE SPRING	S, CA 90670		Plotted as	Point	•
RCRA-SmGen	- RCRA-Small Gene	rator / SRC# 305	57	EPA ID	CAD008371627	
Agency Addr	ess:	SAME AS	ABOVE			1
Generator Cl		KG.MON	TH OF NON-ACUT	RATE 100 KG./MONTH BU ELY HAZARDOUS WASTE		
	State Underground S			EPA/Agency ID	N/A	
Agency Addr	ess:		ORPORATION			
		8733 S D. SANTE F.	E SPRINGS, CA 90	670		
Underground	I Tanks:	6				
Aboveground	d Tanks:	NOT REP	ORTED			
Tanks Remo		NOT REP	PORTED			1
Tank ID:	10		Tank Statu		ERVICE	7
Tank Conten	ts: NOT REPORTED	D	Leak Moni	toring: UNKNOWN		
Tank Age:	NOT REPORTED	ס	Tank Pipin		S	1
Tank Size (U	······································	'S)	Tank Mate			
Tank ID:	2U		Tank Statu		SERVICE	7
Tank Conten			Leak Moni			
Tank Age:	NOT REPORTED		Tank Pipin	g: OTHER DES	SCRIPTIONS	
Tank Size (U		S)	Tank Mate			1
Tank ID:	3 <i>U</i>		Tank Statu		SERVICE	-
Tank Conten			Leak Moni			İ
Tank Age:	NOT REPORTED		Tank Pipin	g: UNKNOWN		1
	nits): 20000 (GALLON		-	rial: BARE STEE		1



* VISTA address includes enhanced city and ZIP. For more information call VISTA Information Solutions, Inc. at 1 - 800 - 767 - 0403. Report ID 113596-001 Date of Report September 3, 1996 Version 2 4 1 Page #14

Tank ID:	40	Tank Status:	CLOSED	
Tank Contents:	NOT REPORTED	Leak Monitoring:	UNKNOWN	
Tank Age:	NOT REPORTED	Tank Piping:	UNKNOWN	
Tank Size (Units):	10000 (GALLONS)	Tank Material:	BARE STEEL	
Tank ID:	5U	Tank Status:	CLOSED	,
Tank Contents:	NOT REPORTED	Leak Monitoring:	UNKNOWN	
Tank Age:	NOT REPORTED	Tank Piping:	UNKNOWN	
Tank Size (Units):	10000 (GALLONS)	Tank Material:	BARE STEEL	
Tank ID:	6U	Tank Status:	ACTIVEAN SERVICE	
Tank Contents:	REPORTED AS "UNKNOWN" BY	Leak Monitoring:	UNKNOWN	
	AGENCY	Tank Piping:	UNKNOWN	
Tank Age:	NOT REPORTED	Tank Material:	UNKNOWN	
Tank Size (Units):	NOT REPORTED (GALLONS)			

VISTA	WITCO CORP, OLEO/SURFACTANTS	VISTA ID#.	5296501	Map ID
Address*	GROUP	Distance/Direction	0.00 MI /	-
			ADJACENT	1 1
	8733 S. DICE RD. SANTA FE SPRINGS, CA 90670	Plotted as	Point	-
RIS - Toxie	c Release Inventory System / SRC# 2587	EPA ID	CAD008371627	1
Agency Ac	ddress: WITCO CORP. OLEO/S 8733 S DICE RD SANTA FE SPRINGS, (SURFACTANTS GROUP		
Chemical	Abstract Service Registry:	Qua	ntity Released:	
DIETHANOLA	MINE	255 0	0 (POUNDS)	
ETHYLENE G	LYCOL	255 0	0 (POUNDS)	-
<u>ETHYLENE O</u>	XIDE	250 0	0 (POUNDS)	
NOT REPORT			0 (POUNDS)	
HYDROCHLO	DRICACID	500 0	0 (POUNDS)	

VISTA Address*	SCHNEE MOREHEAD INC 8835 S DICE RD SANTA FE SPRINGS, CA 9		VISTA ID#. Distance/Direction. Plotted as:	1158980 0 00 MI / ADJACENT Point	Map ID
RCRA-SmG	en - RCRA-Small Generator / SF	RC# 3057	EPA ID	CAD983577024	- [L
Agency Ad	dress:	SAME AS ABOVE			1
Generator	Class:	GENERATORS WHO G	ENERATE 100 KG MONTH BUT	LESS THAN 1000	

GENERATORS WHO GENERATE 100 KG MONTH BUT LESS THAN 1000 KG MONTH OF NON-ACUTELY HAZARDOUS WASTE

VISTA	SOUTHERN CALIF	ORNIA CHEM		VISTA ID#.	200212792	Ma	
Addrosot	8851 DICE RD			Distance/Direction	0 00 MI /		
	SANTA FE SPRING	S CA 00670			ADJACENT	2	
	SANTATE SPRING	13, CA 50070		Plotted as.	Point		
ERNS - Emer	gency Response Noti	fication System / S	RC# 3006	Agency ID	93-1417	L	
Agency Add	dress:	SAME AS AB	OVE				
Spill Date T	lime:	JANUARY 11	, 1993 07 00 00	AM			
Case Numb	er:	93-1417					
Spill Location		8851 DICE RI	8851 DICE RD				
Source Age	ncy.	Ε	Ε				
Discharger		VIGIL, EDWA	RD				
Discharger	Org:	SOUTHERN	SOUTHERN CALIFORNIA CHEM				
Material Spi	illed:	COPPER CH	COPPER CHLORIDE (IC), 0 00 (UNK)				
Fields Not F	Reported:	Discharger Pl	hone, Waterway	Affected			
Air Release:	: Land Release:	Water Release:	Ground	Facility	Other Release:		
			Release:	Release:			
NO	YES	NO	NO	NO	NO		



* VISTA address includes enhanced city and ZIP. For more information call VISTA Information Solutions, Inc. at 1 - 800 - 767 - 0403. Report ID 113596-001 Version 2 4 1 Date of Report September 3, 1996 Page #15

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	PROPERTY A	ND THE ADJAC	ENT AREA (wi	thin 1/8 mile) CONT.		1
VISTA			_ · · <u>_</u> · · · · · · ·	VISTA ID#.	200236859	Map IC
Address*:	SOUTHERN CALIF			Distance/Direction:	0.00 MI /	
Address .	8851 DICE RD			Distance/Direction.	ADJACENT	2A
	SANTA FE SPRING	S, CA 90670		Plotted as:	Point	4M
RNS - Eme	rgency Response Noti	fication System	/ SRC# 3006	Agency ID.	93-1417 '	L
Agency Add		SAME AS		<u>, y</u>		
Spill Date		JANUAR	y 11, 1993 07 00 00	АМ		
Case Numb		93-1417				
Spill Locati	on:	8851 DIC	E RD			
Source Age	ency:	E				
Discharger	Org:	SOUTHE	RN CALIFORNIA CH	łЕМ		
Material Sp			CHLORIDE (IC), 0 0	• •		
Fields Not I	Reported:	Discharg	er Name, Discharger	Phone, Waterway Affected		
Air Release	: Land Release:	Water Releas	e: Ground	Facility	Other Release:	
			Release:	Release:		
NO	YES	NO	NO	NO	NO	!
VISTA	SOUTHERN CALIF			VISTA ID#	200211263	Map II
Address*.	8851 DICE RD		I	Distance/Direction.	0 00 MI /	
					ADJACENT	2A
	SANTA FE SPRING	is, ca 90670		Plotted as	Point	
RNS - Eme	rgency Response Noti	fication Systen	1/SRC# 3006	Agency ID	152717	<u>ا</u> لـــــ
Agency Ad			SABOVE	······································	·	1
Spill Date		JANUAR	Y 11. 1993 07 00 00	АМ		
Case Numb	per:	152717				1
Spill Locati	ion:	8851 DIC	E RD			
Source Age		N				
Discharger		VIGIL, EI				
Discharger			RN CALIFORNIA CI			ł
Material Sp			R CHLORIDE (IC), 0			
Waterway A				DERLAID WITH PLASTI		
Fields Not			er Phone			
Air Release	e: Land Release:	Water Releas		Facility	Other Release:	
NO	YES	NO	Release:	Release:	NO	4
	120	<u></u>		140		
VISTA	SOUTHERN CALIF	ORNIA CHEN		VISTA ID#	200235330	Map I
Address*	8851 DICE RD			Distance/Direction.	0.00 MI /	
	SANTA FE SPRING	S CA 90670			ADJACENT	2A
	1			Plotted as	Point	
	ergency Response Not		n / SRC# 3006 S ABOVE	Agency ID	152717	4
Agency Ad Spill Date			S ABUVE (Y 11, 1993 07.00 0	0.044		1
Case Numl		152717				
Spill Locat		8851 DI	CERD			
Source Age		N				
Discharger			ERN CALIFORNIA C	НЕМ		
Material Sp			R CHLORIDE (IC), 0			
Waterway /				DERLAID WITH PLASTI		
Fields Not			er Name, Discharge			
Air Release		Water Release		Facility	Other Release:	1
			Release:	Release:		
NO	YES	NO	NO	NO	NO	1

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* VISTA address includes enhanced city and ZIP. For more information call VISTA Information Solutions, Inc. at 1 - 800 - 767 - 0403. Report ID 113596-001 Date of Report September 3, 1996 Version 2 4 1 Page #16

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	PROPERTY AN	ID THE ADJ	ACENT AREA (1	within 1/8 mi	e) CONT.]
VISTA SO CA	L CHEMICAL			VISTA ID#		200060550	Map
	ICE RD			Distance/		0.00 MI /	-
00510			10			ADJACENT	2/
SANTA	FE SPRINGS	5, CA 9067	0	Plotted as		Point	
RNS - Emergency R	lesponse Notifi			i Agency ID		91-6386 '	
Agency Address:			AS ABOVE				
Spill Date Time:			EMBER 27, 1991 01	30.00 AM			
Case Number:		91-63					
Spill Location:			DICE RD				1
Source Agency:		E					
Discharger Org:			AL CHEMICAL				
Material Spilled:		HYDR	OCHLORIC ACID, 0	00 (UNK)			
Waterway Affected:		NONE					
Fields Not Reported			arger Name, Dischar	-			_
Air Release: La	and Release:	Water Rele			cility	Other Release:	1
VE0			Release		lease:	NO	-1
Y <u>ES</u> YE	.5	NO	NO	NO		<u>NO</u>	
VISTA SOUTI	HERN CALIFO		MICAL	VISTA ID#	ŧ	389782	Map
Address*: COMP				Distance/I		0 00 MI /	-
COMP						ADJACENT	2
	ICE ROAD			Plotted as		Point	
	A FE SPRING						
CL - State Equivale	nt CERCLIS Lis			Agency ID)	19280516	_
Agency Address:			ASABOVE				
Facility Type:			AVAILABLE				
Lead Agency:			AVAILABLE			000	
State Status:			IER ANNUAL WORK	PLAN SHE REFL	ERREDIUR	ICRA	
Pollutant 1:		NICKI					
Pollutant 2:			OMIUM (VI) PECIFIED SLUDGE V	MASTE			
Pollutant 3:				VASIE			
Fields Not Reported	1: mdataset of Ct	Statu:				N/A	
Agency Address:	nuerground St	Sout	THERN CALIFORNIA	EPA/Ager			4
Agency Address.			S DICE	OT ILLING OT L			
		SANT	E FE SPRINGS, CA	90670			
Underground Tanks		4					
Aboveground Tanks	S:		REPORTED				
Tanks Removed:	10	NOT	REPORTED				
Tank ID: Tank Contontor	1U DIESEL		Tank Sta		CLOSED RE	INUVED	
Tank Contents: Tank Age:	NOTREPORTED		Leak Mo		UNKNOWN UNKNOWN		
Tank Age: Tank Size (Units):	10000 (GALLONS	1	Tank Pip	ing.	UNKNOWN		
Tank Size (Units):	2U	·	Tank Ma		CLOSED RE	MOVED	-
Tank Contents:	DIESEL		Tank Sta		UNKNOWN		
Tank Age:	NOT REPORTED		Tank Pip		UNKNOWN		
Tank Age. Tank Size (Units):	10000 (GALLONS	,	Tank Pip Tank Ma	•	UNKNOWN		
Tank ID:	3U		Tank Ma		ACTIVEAN S	ERVICE	
Tank Contents:	REPORTED AS "U				UNKNOWN		
	AGENCY		Leak Mo Tank Pip	intering.	UNKNOWN		
Tank Age:	NOT REPORTED		Tank Pip	ing.	UNKNOWN		
Tank Size (Units):	NOT REPORTED	(GALLONS)	тапк ма	cindi.			1



	1	PROPERTY AN	ID THE	ADJACEN	IT AREA (wi	thin 1/8 r	nile) CONT.]
Tank ID: Tank Conte Tank Age: Tank Size (I		4U REPORTED AS "U AGENCY NOT REPORTED NOT REPORTED (Tank Statu Leak Monit Tank Pipin Tank Mater	oring: g:	ACTIVEAN SE UNKNOWN UNKNOWN UNKNOWN	RVICE	
		Inventory Syst	em / Sl	RC# 2587		EPA ID		CAD008488025	
Agency Add				SOUTHERN 0 8851 DICE RI	CALIFORNIA CH D PRINGS, CA 906	EMICAL CF	CHEMICA	.	
Chemical A	bstract S	ervice Registr	y:		ii		Quar	ntity Released:	1
CHLORINE								(POUNDS)	1
NOT REPORTE					<u></u>			2 00 (POUNDS)) (POUNDS)	-
SULFURIC ACI							NOTE	REPORTED (POUNDS)	-
AMMONIA								0 00 (POUNDS)]
VISTA	SOUTU			A1		VISTAI	D#	200036256	Map ID
Address*	8851 DI						e/Direction [.]	0.00 MI / ADJACENT	2A
	SANTA	FE SPRING	S, CA S	90670		Plotted :	as:	Point	27
ERNS - Eme	rgency Re	esponse Notifi	cation	System / S	RC# 3006	Agency	ID	61248	┤└
Agency Add Spill Date T Case Numb Spill Locati Source Age Discharger Discharger Material Sp Waterway A Fields Not I	Time: oer: ion: ency: Name: Org: oilled: Affected: Reported:			8851 DICE RI SANTA FE SF FEBRUARY 2 61248 8851 DICE RI N VIGIL, ED	PRINGS, CA 26, 1991 09:00 (D CAL CHEMICAL 10 00 (LBS)	00 AM			
Air Release	e: La	nd Release:	Water	Release:	Ground		Facility	Other Release:	-
YES					Release:		Release:		-
123	NO		NÖ		NO		<u>vo</u>	NO	J
VISTA	SO CAL	CHEM CO.				VISTAI	D#	200056759	Map ID
Address*.	8851 DI					Distance	e/Direction:	0 00 MI /	
		FE SPRING	S CA	90670				ADJACENT	2 A
<u> </u>	1					Plotted		Point	
		esponse Notif	cation			Agency	טו	91-5831	
Spill Date				SAME AS AB		лM			
Case Numb				91-5831	1991 08 52 00				
Spill Locati				8851 DICE RI	n				
Source Age				E	-				
Discharger				SO CAL CHE	мсо				
Material Sp					DRIC ACID, 0 00	(UNK)			
Waterway A				NONE		,y			1
Fields Not I					ame, Dischargei	Phone			
Air Release		nd Release:	Water	Release:	Ground		Facility	Other Release:	-1
					Release:		Release:		
YES	NO		NO		NO		VO	ÑO	1



	PROPERTY A	ND THE ADJACE	NT AREA (wit	hin 1/8 mile) CONT.		
VISTA Address*:	SO. CAL CHEMICA 8851 DICE RD SANTA FE SPRING			VISTA ID#, Distance/Direction: Plotted as;	200037055 0 00 MI / ADJACENT Point	^{Мар ID} 2А
FRNS - Emer	rgency Response Notif	ication System /	SRC# 3006	Agency ID:	91-2667 '	
Agency Add		SAME AS AL			-Li	1
Spill Date 1		FEBRUARY	26, 1991 09 00:0	0 A M		
Case Numb		91-2667				
Spill Locati		8851 DICE F	RD			
Source Age		Ε				
Discharger		SO. CAL CH	EMICALS			
Material Spi		CHLORINE,	10.00 (LBS)			
Waterway A		NONE				
Fields Not F		Discharger N	lame, Discharger	Phone		
Air Release		Water Release:	Ground Release:	Facility Release:	Other Release:	
YES	NO	NO	NO	NO	NO]
VISTA				VISTA ID#:	200037056	Map ID
Address*	SO CAL. CHEMICA	Lð		Distance/Direction	0 00 MI /	
Address	8851 DICE RD			DistancerDirection	ADJACENT	2A
1	SANTA FE SPRING	S, CA 90670		Plotted as.	Point	
ERNS - Eme	rgency Response Noti	fication System /	SRC# 3006	Agency ID	91-2668	<u>المعمد المعمد u>
Agency Add Spill Date Case Numb Spill Locati	Time: ber: on:	FEBRUARY 91-2668 8851 DICE F	RD SPRINGS, CA 907 26, 1991 08 15 (
Source Age		E				2
Discharger		SO CAL CH				
Material Sp			GAS, 0 00 (UNK)			-
Waterway A		NONE	Name, Dischargei	Phone		
Fields Not I Air Release		Water Release:		Facility	Other Release:	1
All Release	. Land Release.	water Release.	Release:	Release:	Other Release;	
YES	NO	NO	NO	NO NO	NO	-
<u> </u>						۔
VISTA	SOUTHERN CALIF	ORNIA CHEMIC	AL	VISTA ID#.	200339400	Map ID
Address*.	8851 DICE RD			Distance/Direction		24
	SANTA FE SPRING	S, CA 90670		Plotted as	ADJACENT Point	2A
ERNS - Eme	rgency Response Noti	fication System /	SRC# 3006	Agency ID	94-4665	┥╘
Agency Ade		SAME AS A		1.30.09.10		1
Spill Date		MAY 31, 19	94 10 39 00 PM			
Case Numb		94-4665				
Spill Locati	ion:	8851 DICE	RD			
Source Age		Ε				
Discharger		UNKNOWN				
Discharger		SOUTHERM	I CALIFORNIA CI	HEMICAL		1
Material Sp		HYDROCH	ORIC ACID, 4 00) (GAL)		ł
Fields Not I	Reported:	-	Phone, Waterway	Affected		
Air Release	e: Land Release:	Water Release:	Ground Release:	Facility Release:	Other Release:	
LNO	YES	NO	NO	NO	NO	7

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PROPERTY AND THE ADJACENT AREA (within 1/8 mile) CONT. Map ID VISTA ID#. 1183441 VISTA SO CA CHEM CO INC Address*: Distance/Direction: 0 00 MI 7 8851 DICE RD 2A ADJACENT SANTA FE SPRINGS, CA 90670 Plotted as: Point CERCLIS / SRC# 2977 EPA ID: CAD008488025 Agency Address: SAME AS ABOVE NOT A PROPOSED, CURRENT, OR DELETED NPL SITE NPL Status: UNKNOWN Site Ownership: NOT AVAILABLE Lead Agency: NOT REPORTED Site Description: Lead Agency: Start Date: Completion Date: Event Type: **Event Status:** FEBRUARY 1, 1986 NOT REPORTED DISCOVERY STATE, FUND FINANCED UNKNOWN UNKNOWN EPA FUND-FINANCED UNKNOWN NOT REPORTED JULY 15, 1987 NOT REPORTED SEPTEMBER 30, 1987 UNKNOWN EPA FUND-FINANCED UNKNOWN DEFERRED TO RCRA DECEMBER 1, 1985 DECEMBER 1, 1987 PRELIMINARY STATE, FUND FINANCED ASSESSMENT (SUBTITLE C) OR NRC SCREENING SITE STATE, FUND FINANCED DEFERRED TO RCRA NOT REPORTED SEPTEMBER 8, 1989 (SUBTITLE C) OR NRC INSPECTION CAD008488025 Regional CERCLIS / SRC# 2462 EPA ID SO CA CHEM CO INC Agency Address: 8851 DICE RD SANTA FE SPRINGS, CA 906700118 **Regional Utility Description:** NEW CERCLIS SITE EPA ID Regional CERCLIS / SRC# 2462 CAD008488025 SO CA CHEM CO INC Agency Address: 8851 DICE RD SANTA FE SPRINGS, CA 906700118 **Regional Utility Description:** CALIFORNIA 3012 SITE CAD008488025 Regional CERCLIS / SRC# 2462 EPA ID SO CA CHEM CO INC Agency Address: 8851 DICE RD SANTA FE SPRINGS, CA 906700118 **Regional Utility Description:** RCRA REGULATED GENERATOR SEE NOTIFICATION FILE Regional CERCLIS / SRC# 2462 EPA ID CAD008488025 SO CA CHEM CO INC Agency Address: 8851 DICE RD SANTA FE SPRINGS, CA 906700118 **Regional Utility Description:** IMPOUNDMENTS (SURFACE) CAD008488025 Regional CERCLIS / SRC# 2462 EPA ID SO CA CHEM CO INC Agency Address: 8851 DICE RD SANTA FE SPRINGS CA 906700118 **Regional Utility Description:** ABOVE GROUND TANK(RAINWATER, WASTE WATER TREATMENT HOLDING)- HA Regional CERCLIS / SRC# 2462 CAD008488025 EPA ID Agency Address: SO CA CHEM CO INC 8851 DICE RD SANTA FE SPRINGS, CA 906700118 **Regional Utility Description:** Z WASTE



PROPERTY AND TI	HE ADJACENT AREA (withi	an 1/8 mile) (
Regional CERCLIS / SRC# 2462		PA ID	CAD008488025
Agency Address:	SO CA CHEM CO INC 8851 DICE RD SANTA FE SPRINGS, CA 90670	0118	
Regional Utility Description:			
OTHER COPPER SLUDGE CEMENT PONDS, COLL			
Regional CERCLIS / SRC# 2462	SO CA CHEM CO INC	PA ID.	CAD008488025
Agency Address:	SO CA CHEM CO INC 8851 DICE RD SANTA FE SPRINGS, CA 90670	0118	
Regional Utility Description:			
UNDERGROUND TANKS- GASOLINE DIESEL			
Regional CERCLIS / SRC# 2462		PA ID.	CAD008488025
Agency Address:	SO CA CHEM CO INC 8851 DICE RD SANTA FE SPRINGS, CA 90670	0118	
Regional Utility Description:			
UNDERGROUND TANKS- HAZ WASTES ACID SOLI		PAID	CAD008488025
Regional CERCLIS / SRC# 2462 Agency Address:	SO CA CHEM CO INC 8851 DICE RD SANTA FE SPRINGS, CA 90670		
Regional Utility Description:			
DRUMS, ABOVE GROUND			
Regional CERCLIS / SRC# 2462		PAID	CAD008488025
Agency Address:	SO CA CHEM CO INC 8851 DICE RD SANTA FE SPRINGS, CA 90670	0118	
Regional Utility Description:			
HEABY METALS IRON, COPPER, CHROMIUM, ZING			
Regional CERCLIS / SRC# 2462		PAID	CAD008488025
Agency Address:	SO CA CHEM CO INC 8851 DICE RD SANTA FE SPRINGS, CA 90670	0118	
Regional Utility Description:			
OXIDE			
Regional CERCLIS / SRC# 2462	SO CA CHEM CO INC	EPA ID	CAD008488025
Agency Address:	SO CA CHEM COINC 8851 DICE RD SANTA FE SPRINGS, CA 90670	0118	
Regional Utility Description:	······································		
ACIDS CHROMIC, SULFURIC HYDROCHLORIC			
Regional CERCLIS / SRC# 2462		EPA ID	CAD008488025
Agency Address:	SO CA CHEM CO INC 8851 DICE RD SANTA FE SPRINGS, CA 90670	0118	
Regional Utility Description:			
BASES ALKALINE WASTE WATER			·····
Regional CERCLIS / SRC# 2462	· · _ · · · · · · · · · · · · · ·	EPA ID	CAD008488025
Agency Address:	SO CA CHEM CO INC 8851 DICE RD SANTA FE SPRINGS, CA 90670	0118	
Regional Utility Description:	· · · · · · · · · · · · · · · · · · ·		
OTHER WASTE WATER SURFACE RUNOFF, SLU	DGE FROM TREATMENT POND		
Regional CERCLIS / SRC# 2462		EPA ID	CAD008488025
Agency Address:	SO CA CHEM CO INC 8851 DICE RD SANTA FE SPRINGS, CA 90670	0118	
Regional Utility Description:			
INORGANICS CHLORIDE, CHLORINE			



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	PROPERTY AND THE	ADJACENT AREA (N	within 1/8 mile) CONT	•	
Regional CE	RCLIS / SRC# 2462		EPA ID	CAD008488025	
Agency Add		SO CA CHEM CO INC 8851 DICE RD SANTA FE SPRINGS, CA S	· · · · · · · · · · · · · · · · · · ·	<u> </u>	
Regional UI	tility Description:				-
	RCLIS / SRC# 2462		EPA ID	CAD008488025	
Agency Add		SO CA CHEM CO INC 8851 DICE RD SANTA FE SPRINGS, CA S	· · · · · · · · · · · · · · · · · · ·	_ .	
	tility Description: TAMMONICAL ETCHANT, SODIUM, AM				
	RCLIS / SRC# 2462		EPA ID	CAD008488025	
Agency Add		SO CA CHEM CO INC 8851 DICE RD SANTA FE SPRINGS, CA S			
	tility Description: Y REFERRAL TO RCRA				
				6044007	
VISTA	PHIBRO TECH INC		VISTA ID#:	5241067	Map
Address*	8851 DICE RD		Distance/Direction.		2
	SANTA FE SPRINGS, CA	90670	Diattad ani	- ADJACENT Point	_ 2/
		· · · · · · · · · · · · · · · · · · ·	EPA ID	CAD008488025	
CORRACTS Agency Ade		PHIBRO TECH INC		[CAD008488023	
	lity Assessment Completed:	8851 DICE RD SANTA FE SPRINGS, CA HIGH YES	906700118		
Notice of C	ontamination:	NO			
Determinat	ion of need For a RFI (RCRA	NO			
Facility Invo					
RFI Impose	ed:	YES			
RFI Workpi Issued:	an Notice of Deficiency	NO			
RFI Workpl	an Approved:	YES			
RFI Report		NO			
RFI Approv		NO			
	Corrective Action at this	NO			
Time:					
	n Mesaures Evaluation:	YES			
CMS (Corre	ective Measure Study)	YES			
	olan Approved:	YES			
	rt Received:	NO			
CMS Appro		YES			
	emedy Selection (CM	NO			
	Measures Design Approved:	NO			
	Measures Investigation	NO			
	n of Remedy Completion:	NO			
	n Measures Implementation:	YES			
	n Measures Completed:	NO			1
	Action Process Termination:	NO			



RCRA-TSD / SRC# 3057		EPA ID.	CAD008488025
Agency Address:	SAME AS ABOVE		
Off-Site Waste Received:	NO		
Land Disposal:	YES		
Incinerator:	NO		
Storage/Treatment:	YES		
CRA-LgGen - RCRA-Large Generato	or / SRC# 3057	EPAID:	CAD008488025
Agency Address:	SAME AS ABOVE		
Generator Class:			0 KG./MONTH OF NON-ACUTEL ITELY HAZARDOUS WASTE.
RCRA-Violations / SRC# 3057		EPA ID:	CAD008488025
Agency Address: Violation Type:	PHIBRO TECH INC 8851 DICE RD SANTA FE SPRINGS TSDGROUNDWATI	, CA 906700118 ER MONITORING REQ.	
Violation Date:	JUNE 23, 1993		
Violation Class:	1		
• • • • • • • • • • • • • • • • • • • •	NOT REPORTED		
Actual Compliance Date:	NOT REPORTED		
Scheduled Compliance Date:		SPONSIBILITY DED	. <u> </u>
Violation Type:	TSDFINANCIAL RE		
Violation Date:	FEBRUARY 24, 1987		
Violation Class:	1		
Actual Compliance Date:	OCTOBER 14, 1988		
Scheduled Compliance Date:	NOT REPORTED		
Violation Type:	TSDFINANCIAL RE	SPONSIBILITYREQ	
Violation Date:	JANUARY 23, 1991		
Violation Class:	1		
Actual Compliance Date:	NOT REPORTED		
Scheduled Compliance Date:	NOT REPORTED		
Violation Type:		REMENTS (OVERSITE LEV	EL)
Violation Date:	MAY 17, 1989		
Violation Class:	1		
Actual Compliance Date:	FEBRUARY 8, 1991		
Scheduled Compliance Date:	NOT REPORTED		_
Violation Type:	TSDGROUNDWAT	ER MONITORING REQ	
Violation Date:	JUNE 15, 1988		
Violation Class:	1		
Actual Compliance Date:	NOT REPORTED		
Scheduled Compliance Date:	NOT REPORTED		
Violation Type:	TSDFINANCIAL RE	SPONSIBILITY REQ.	
Violation Date:	FEBRUARY 8, 1988		
Violation Class:	1		
Actual Compliance Date:	OCTOBER 4, 1988		
Scheduled Compliance Date:	APRIL 10, 1988		
Violation Type:	TSD-OTHER REQU	REMENTS (OVERSITE LEV	EL)
Violation Date:	MARCH 14, 1990		
Violation Class:	1		
Actual Compliance Date:	FEBRUARY 8, 1991		
Scheduled Compliance Date:	AUGUST 5, 1990		
Violation Type:	TSDFINANCIAL RE	SPONSIBILITY REO	
Violation Date:	MARCH 14, 1990		
Violation Class:	1		
Actual Compliance Date:	FEBRUARY 8, 1991		
Scheduled Compliance Date:	AUGUST 5, 1990		

DICE 00197

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* VISTA address includes enhanced city and ZIP. For more information call VISTA Information Solutions, Inc. at 1 - 800 - 767 - 0403. Report ID 113596-001 Date of Report September 3, 1996 Version 2 4 1 Page #23

Enforcement Number:	870326
Enforcement Agency:	State
Action Date:	MARCH 26, 1987
Action Type:	WRITTEN INFORMAL
Penalty Assessed:	NOT REPORTED
Penalty Settlement:	NOT REPORTED
Enforcement Number:	870828
Enforcement Agency:	State
Action Date:	AUGUST 28, 1987
Action Type:	3008(A) COMPLIANCE ORDER
Penalty Assessed:	138800
Penalty Settlement:	NOT REPORTED
Enforcement Number:	880310002
Enforcement Agency:	State
Action Date:	MARCH 10, 1988
Action Type:	WRITTEN INFORMAL
Penalty Assessed:	NOT REPORTED
Penalty Settlement:	NOT REPORTED
Enforcement Number:	880615
Enforcement Agency:	State
Action Date:	JUNE 15, 1988
Action Type:	STATE TO EPA REFFERAL
Penalty Assessed:	NOT REPORTED
Penalty Settlement:	NOT REPORTED
Enforcement Number:	881208003
Enforcement Agency:	EPA
Action Date:	DECEMBER 8, 1988
Action Type:	3008(H)INTERIM STATUS CORRECTIVE ORDER
Penalty Assessed:	NOTREPORTED
Penalty Settlement:	NOT REPORTED
Enforcement Number:	890706005
Enforcement Agency:	State
Action Date:	JULY 6, 1989
Action Type:	WRITTEN INFORMAL
Penalty Assessed:	NOT REPORTED
Penalty Settlement:	NOT REPORTED
Enforcement Number:	891006004
Enforcement Agency:	State
Action Date:	OCTOBER 6, 1989
Action Type:	3008(A) COMPLIANCE ORDER
Penalty Assessed:	12000
Penalty Settlement:	12000
Enforcement Number:	900705006
Enforcement Agency:	EPA
Action Date:	JULY 5, 1990
Action Type:	WRITTEN INFORMAL
Penalty Assessed:	NOTREPORTED
Penalty Settlement:	NOT REPORTED



Enforcement Number:	910228007	
Enforcement Agency:	State	
Action Date:	FEBRUARY 28, 1991	
Action Type:	WRITTEN INFORMAL	
Penalty Assessed:	NOT REPORTED	'
Penalty Settlement:	NOT REPORTED	
Enforcement Number:	940110	
Enforcement Agency:	State	
Action Date:	JANUARY 10, 1994	
Action Type:	WRITTEN INFORMAL	
Penalty Assessed:	NOT REPORTED	
Penalty Settlement:	NOT REPORTED	

VISTA Address*. COMPRESSED 8832 DICE RD. SANTA FE SPR		VISTA ID#: Distance/Direction: Plotted as	5520500 0.00 MI / ADJACENT Point	- Map ID 2B
TRIS - Toxic Release Inventory	System / SRC# 2587	EPA ID	CAD000021160	
Agency Address:	SAME AS ABOVE			
Chemical Abstract Service Re	aistry.	Qua	ntity Released:	

micai Abstract Service Registry: ACETONE

651 00 (POUNDS)

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VISTA	LIQUID	AIR CORP		VISTA ID#:	245933	Map ID
Address*:	8832 D	ICE RD		Distance/Direction	0 00 MI /	
		FE SPRINGS, CA	00670		ADJACENT	2B
	⊥	· · ·	30070	Plotted as.	Point	
CERCLIS / S	SRC# 297	7		EPA ID	CAD003312600	
Agency Ad	dress:		SAME AS ABOVE			
NPL Status	51		NOT A PROPOSED, CURR	ENT, OR DELETED NPL SIT	E	
Site Owner	ship:		UNKNOWN			
Lead Agen	cy:		NO DETERMINATION			-
Site Descri	ption:		NOT REPORTED			
Event Type		Lead Agency:	Event Status:	Start Date:	Completion Date:	-
DISCOVERY		STATE, FUND FINANCED	UNKNOWN	NOT REPORTED	NOVEMBER 1, 1986	7
PRELIMINARY ASSESSMENT		STATE, FUND FINANCED	UNKNOWN	NOVEMBER 1, 1986	JUNE 1, 1987	-
HOOLOOMLIN						
PRELIMINARY		EPA FUND-FINANCED	UNKNOWN	NOT REPORTED	AUGUST 1, 1988	-
ASSESSMENT	F					
SCREENING S	SITE	EPA FUND-FINANCED	NO FURTER REMEDIAL ACTION PLANNED	NOT REPORTED	MARCH 23, 1990	
SCREENING S	SITE	EPA FUND-FINANCED	NO FURTER REMEDIAL ACTION PLANNED	NOT REPORTED	JUNE 8, 1993	
Regional CE		SRC# 2462		EPAID	CAD003312600	-
Agency Ad	dress:		SAME AS ABOVE			7
Regional U	tility Des	cription:				7
		YLENE, CARON DIOXIDE, N	ITROUS OXIDE, ARGON,			
Regional CE		SRC# 2462	···	EPA ID	CAD003312600	
Agency Ad			SAME AS ABOVE		· · · · ·	
Regional U	Itility Des	cription:				
OXYGEN, NIT	ROGEN, HE	LIUM				



* VISTA address includes enhanced city and ZIP. For more information call VISTA Information Solutions, Inc. at 1 - 800 - 767 - 0403. Date of Report September 3, 1996 Page #25

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Regional CERCLIS / SRC# 2462		EPA ID	CAD003312600
Agency Address:	SAME AS ABOVE		
Regional Utility Description:			
ABV GR TANKS - HELIUM, HYDROGEN, PROPA	NE, FULE GAS, LIME AND ACE		
Regional CERCLIS / SRC# 2462		EPA ID.	CAD003312600
Agency Address:	SAME AS ABOVE		
Regional Utility Description:			
TYLENE SLUDGE (LIQUID AIR CORP)			
Regional CERCLIS / SRC# 2462		EPA ID	CAD003312600
Agency Address:	SAME AS ABOVE		
Regional Utility Description:			
OTHER - SPRAY COOLING WATER, ACETYLEN	E PROCESS WSTWATER, PAIL		
Regional CERCLIS / SRC# 2462		EPA ID	CAD003312600
Agency Address:	SAME AS ABOVE		· <u> </u>
Regional Utility Description:			
KIMMING (LIQUID AIR CORP)			0.00000000000
Regional CERCLIS / SRC# 2462		EPA ID.	CAD003312600
Agency Address:	SAME AS ABOVE		
Regional Utility Description:			
CA 3012 SITE		EPA ID	040002312600
Regional CERCLIS / SRC# 2462	SAME AS ABOVE		CAD003312600
Agency Address:	SAME AS ABOVE		
Regional Utility Description:			
NEW CERCLIS SITE Regional CERCLIS / SRC# 2462		EPA ID	CAD003312600
Agency Address:	SAME AS ABOVE		10AD0000012000
Regional Utility Description:			
PIT- ACETYLENE SLUDGE DISPOSED INTO UN	INED PIT SINCE 1949		
Regional CERCLIS / SRC# 2462		IEPA ID	CAD003312600
Agency Address:	SAME AS ABOVE		
Regional Utility Description:	· · · · · · · · · · · · · · · · · · ·		
SOIL CONTAM - 1964 CAUSTIC WASTES DISCH	ARGED ONTO PROPERTY		
Regional CERCLIS / SRC# 2462		EPA ID	CAD003312600
Agency Address:	SAME AS ABOVE		
Regional Utility Description:	······································		
OTHER- 1977 SPRAY COOLING WATER ACET	YLENE SLUDGEDISCHARGED	INT	
Regional CERCLIS / SRC# 2462		EPA ID	CAD003312600
Agency Address:	SAME AS ABOVE		
Regional Utility Description:			
O COYOTE CREEK	······································	· · · · · · · · · · · · · · · · · · ·	
Regional CERCLIS / SRC# 2462		EPA ID	CAD003312600
Agency Address:	SAME AS ABOVE		
Regional Utility Description: OTHER - PRODUCT WASTES- CARBIDE SLUDG			
OTHER - PRODUCT WASTES- CARBIDE SLUDO	GE, COOLING WATER BLEED O		
Regional CERCLIS / SRC# 2462		EPA ID	CAD003312600
Agency Address:	SAME AS ABOVE	·	
Regional Utility Description:			
CAUSTICS, BRINE, LUB OIL LIME			



	PROPERTY AND THE	ADJACENT AREA (wi	thin 1/8 mile) CONT.	
SCL - State Equivalen	t CERCLIS List / SR	C# 2825	Agency ID:	19280766
Agency Address:		LIQUID AIR 8832 DICE ROAD SANTA FE SPRINGS, CA 906		±
Facility Type:		NOT AVAILABLE		
Lead Agency:		NOT AVAILABLE		· · · · · · · · · · · · · · · · · · ·
State Status:		NO FURTHER ACTION FOR	DTSC	
Pollutant 1:		LIME SLUDGE		
Pollutant 2:		WASTE OIL MIXED OIL		
Pollutant 3:		OXYGENATED SOLVENTS		
Fields Not Reported:		Status		
		Storage Tank / SRC#	Agency ID:	1-00225
3056	caning officerground	colorage rainer orres	, igono y ibi	
Agency Address:		LIQUID AIR CORP 8832 DICE RD SANTA FE SPRI, CA 90670	d <u>-</u>	
Tank Status:		NOT AVAILABLE		
Media Affected:		SOIL/SAND/LAND		
Substance:		DIESEL		
Leak Cause:		UNAVAILABLE		
Remedial Action:		NOT AVAILABLE		
Remedial Status 1:		PRELIMINARY ASSESSMEN	T	
Remedial Status 2:		NOT AVAILABLE		
Fields Not Reported		Discovery Date, Quantity (Un	its), Leak Source	
Regional LUST - Regi SRC# 3104	onal Leaking Underg	ground Storage Tank /	Agency ID.	1-00225
Agency Address: Tank Status:		LIQUID AIR CORP 8832 DICE RD S SANTA FE SPRINGS, CA 90 NOT AVAILABLE	670	
Discovery Date:		APRIL 20, 1990		
Media Affected:		SOIL/SAND/LAND		
Substance:		DIESEL		
Leak Cause:		UNAVAILABLE		
Remedial Action:		NOT AVAILABLE		
Remedial Status 1:		PRELIMINARY ASSESSMEN	IT	
Remedial Status 1:		NOT AVAILABLE		
Fields Not Reported		Quantity (Units), Leak Source		
STATE UST - State Ur			EPA/Agency ID	N/A
Agency Address:	luerground Storage	LIQUID AIR INC 8832 S DICE SANTE FE SPRINGS, CA 90		
Underground Tanks	:	1		
Aboveground Tanks	:	NOT REPORTED		
Tanks Removed:		NOT REPORTED		
Tank ID:	1U	Tank Statu	IS: CLOSED	
Tank Contents:	OIL(NOT SPECIFIED)	Leak Moni	toring: UNKNOWN	
Tank Age:	NOT REPORTED	Tank Pipin		<u>_</u>
Tank Size (Units):	2000 (GALLONS)	Tank Mate		
CORTESE / SRC# 229	8		EPA/Agency ID	N/A
Agency Address: List Name:		LIQUID AIR 8832 DICE RD S SANTA FE SPRINGS, CA 90 CALSITE		
Site ID:		INV-ID19-002529		
Site ID.				

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ORTESE / SRC# 22	98		EPA/Agency ID.	N/A	ר
Agency Address:		LIQUID AIR CORP. 8832 DICE RD S. SANTA FE SPRINGS, CA 9			
List Name: Site ID:		LEAKING TANK INV-ID19-002529		,	
	ETT OXYGEN COM	PANY OF	VISTA ID#	62680	Map
Address*. CALIF	ORNIA		Distance/Direction:	<0 01 MI / SE	
	838 SOUTH DICE F		Plotted as:	Point	 2
1					
	FE SPRINGS, CA			40000004	-
	nt Priority List / SRC#	2826 SAME AS ABOVE	Agency ID	19280224	4
Agency Address:					1
Status:		NON-NPL SITE			
Facility Type:		NOT AVAILABLE			
Lead Agency:		EPA FUND-FINANCED			
State Status:		ANNUAL WORK PLAN			
Pollutant 1:		HALOGENATED ORGANIC	COMPOUNDS		
Pollutant 2:		UNSPECIFIED SLUDGE W	ASTE		
Pollutant 3:		PAINT SLUDGE			
CERCLIS / SRC# 297	7		EPA ID	CAD982359747	1
Agency Address: NPL Status:		BURDETT OXYGEN CO 0. 8838 S DICE RD SANTA FE SPRINGS, CA S NOT A PROPOSED, CURF		Ē	
Site Ownership:		PRIVATE/NON-GOVERNM	ENTAL		
Lead Agency:		NO DETERMINATION			
Site Description:		NOT REPORTED			
Event Type:	Lead Agency:	Event Status:	Start Date:	Completion Date:	1
DISCOVERY	STATE, FUND FINANCED	UNKNOWN	NOT REPORTED	JANUARY 1, 1988	
PRELIMINARY ASSESSMENT	STATE, FUND FINANCED	NO FURTER REMEDIAL ACTION PLANNED	NOT REPORTED	AUGUST 1, 1988	
SCREENING SITE INSPECTION	EPA FUND-FINANCED	NO FURTER REMEDIAL ACTION PLANNED	NOT REPORTED	OCTOBER 4, 1989	
Regional CERCLIS /	SRC# 2462		EPA ID	CAD982359747	1
Agency Address:		BURDETT OXYGEN CO O 8838 S DICE RD SANTA FE SPRINGS CA S		<u></u>	
Regional Utility Des NEW CERCLIS SITE					4
Regional CERCLIS /	SRC# 2462		EPA ID	CAD982359747	1
Agency Address:		BURDETT OXYGEN CO O 8838 S DICE RD SANTA FE SPRINGS, CA	F CA #1		

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		thin 1/8 mile) CONT.	T AREA (wi	ADJACEN		PROPERTY A		
Map IC	200066074	VISTA ID#.				OT CHEMICAL	PIL	VISTA
	0.02 MI / N	Distance/Direction		dress*: 11756 BURKE AVE				
3	Point	Plotted as:	SANTA FE SPRINGS, CA 90670					
	92-0997	Agency ID	RC# 3006			y Response Notif		RNS - Eme
	······································		OVE	SAME AS ABO				Agency Ad
	·	00 AM	1, 1991 04 00	NOVEMBER 1				Spill Date
				92-0997			mber:	Case Numi
			AVE	11756 BURKE			ation:	Spill Locat
				E				Source Ag
			CAL	PILOT CHEMI			er Org:	Discharge
		BS)	(IDE, 400 00 (LI	SULFUR DIO			Spilled:	Material Sp
		Phone, Waterway Affected	me, Discharger	Discharger Na		rted:	ot Repo	Fields Not
	Other Release:	Facility	Ground	Release:	Water	Land Release:	ise:	Air Releas
		Release:	Release:					
	NO	YES	NO		NO	YES		NO
Map IC	200242066	VISTA ID#.			• • • • • • •	OT CHEMICAL	PIL	VISTA
	0.02 MI / N	Distance/Direction				56 BURKE ST		Address*
3	Point	Plotted as:		90670	S CA	ITA FE SPRING	1 -	
L	93-2313	Agency ID	RC# 3006			y Response Notif		RNS - Eme
		00 AM	CAL ST	PILOT CHEMI 11756 BURKE SANTA FE, C.		:	Address	Agency Ac Spill Date
1			-,	93-2313				Case Num
			E ST	11756 BURKE				Spill Locat
				E				Source Ag
			CAL	PILOT CHEMI				Discharge
		VIC ACID, 1500 00 (GAL)	NZENESULFOI	DODECYLBE				Material S
-		Phone, Waterway Affected	ame, Dischargei	Discharger Na		rted:	ot Repo	Fields Not
	Other Release:	Facility Release:	Ground Release:	Release:	Water	Land Release:	ase:	Air Releas
J	NO	NO	NO		NO	YES		NO
Map II	5352338	VISTA ID#		A A I \/	20110		Di	VISTA
inap IL	0 02 MI / N	Distance/Direction:		HIN T	JOWP	OT CHEMICAL	. ſ	Address*.
3	Point	Plotted as				56 BURKE ST	· 117	
J			<u> </u>	90670	S, CA	VTA FE SPRING		
L	N/A	EPA/Agency ID		0.00				ORTESE /
			UVE	SAME AS AB		52	Address	Agency Ac
				LEAKING TAI				List Name

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Map	200218007	VISTA ID#.	······································		HEMICAL	PILOTO	VISTA
	0.02 MI / N	Distance/Direction:					Address*:
<u> </u>	Point	Plotted as:	۲ ೧	S CA 9	FE SPRING		10000
	93-2313	Agency ID:	em / SRC# 3006				
			CHEMICAL		sponse Notiti		Agency Ad
			5 BURKE ST A FE, CA 90670				
		10 A M	PUARY 12, 1993 05 00:0 113				Spill Date
1			SBURKE ST				Case Numb
			BUINE				Spill Locati
			T CHEMICAL				Source Age
{		IIC ACID, 1500 00 (GAL)					Discharger
ļ		Phone, Waterway Affected					Material Sp
	Other Release:	Facility		Water	nd Release:		Fields Not I Air Release
··	oner Release;	Release:	Release: Ground	water	iu Release:	e. Lar	All Release
	NO	NO	NO	NO	<u> </u>	YES	NO
Мар	330653	VISTA ID#			CHEM CO	PILOT	VISTA
	0 02 MI / N	Distance/Direction.			BURKE ST	1	Address*.
- 3	Point	Plotted as:	70	S, CA S	FE SPRING		
	CAD008287823	EPA ID.	······································			SRC# 2977	EDCI IS / S
							ENCLISIS
	0110000201020	<u>,</u>	EAS ABOVE				
	•	NT, OR DELETED NPL SITE				Idress:	Agency Ad
	•	· · · · · · · · · · · · · · · · · · ·				ldress: s:	Agency Ad NPL Status
	•	· · · · · · · · · · · · · · · · · · ·	A PROPOSED, CURRE			ldress: s: rship:	Agency Ad NPL Status Site Owner
	•	· · · · · · · · · · · · · · · · · · ·	A PROPOSED, CURRE			idress: s: rship: ncy:	Agency Ad NPL Status Site Owner Lead Agen
	•	· · · · · · · · · · · · · · · · · · ·	A PROPOSED, CURRE NOWN DETERMINATION REPORTED nt Status:	/:	Lead Agency	ldress: s: rship: ncy: iption:	Agency Ad NPL Status Site Owner
		NT, OR DELETED NPL SITE	A PROPOSED, CURRE NOWN DETERMINATION REPORTED nt Status:	/:	Lead Agency STATE, FUND FIN	ldress: s: rship: ncy: iption:	Agency Ad NPL Status Site Owner Lead Agen Site Descri
	Completion Date:	NT, OR DELETED NPL SITE Start Date:	A PROPOSED, CURRE NOWN DETERMINATION REPORTED nt Status: NOWN	V: NANCED	Lead Agency STATE, FUND FIN STATE, FUND FIN	Idress: s: rship: ncy: iption: e: Y	Agency Ad NPL Status Site Owner Lead Agen Site Descri Event Type
	Completion Date: APRIL 1, 1985	NT, OR DELETED NPL SITE Start Date: NOT REPORTED	A PROPOSED, CURRE NOWN DETERMINATION REPORTED nt Status: NOWN	Y: NANCED NANCED	STATE, FUND FIN	idress: s: rship: ncy: iption: e:	Agency Ad NPL Status Site Owner Lead Agen Site Descri Event Type DISCOVERY
	Completion Date: APRIL 1, 1985 JULY 1, 1985	NT, OR DELETED NPL SITE Start Date: NOT REPORTED APRIL 1, 1985	A PROPOSED, CURRE NOWN DETERMINATION REPORTED Int Status: NOWN NOWN FURTER REMEDIAL ON PLANNED	NANCED NANCED NCED	STATE, FUND FIN STATE, FUND FIN	Idress: s: rship: ncy: iption: e: v r sire	Agency Ad NPL Status Site Owner Lead Agen Site Descri Event Type DISCOVERY PRELIMINARY ASSESSMENT SCREENING S
	Completion Date: APRIL 1, 1985 JULY 1, 1985 APRIL 1, 1986	NT, OR DELETED NPL SITE Start Date: NOT REPORTED APRIL 1, 1985 NOT REPORTED	A PROPOSED, CURRE NOWN DETERMINATION REPORTED Int Status: NOWN URTER REMEDIAL ON PLANNED URTER REMEDIAL ON PLANNED	NANCED NANCED NCED	STATE, FUND FIN STATE, FUND FIN EPA FUND-FINAN EPA FUND-FINAN	Idress: s: rship: ncy: iption: e: Y T SITE Y T ERCLIS / S	Agency Ad NPL Status Site Owner Lead Agen Site Descri Event Type DISCOVERY PRELIMINARY ASSESSMENT SCREENING S INSPECTION PRELIMINARY ASSESSMENT Regional CE
	Completion Date: APRIL 1, 1985 JULY 1, 1985 APRIL 1, 1986 MARCH 15, 1989	NT, OR DELETED NPL SITE Start Date: NOT REPORTED APRIL 1, 1985 NOT REPORTED	A PROPOSED, CURRE NOWN REPORTED nt Status: NOWN URTER REMEDIAL ON PLANNED	NANCED NANCED NCED	STATE, FUND FIN STATE, FUND FIN EPA FUND-FINAN EPA FUND-FINAN SRC # 24 62	Idress: s: rship: ncy: iption: e: r sire Y T ERCLIS / S Idress:	Agency Ad NPL Status Site Owner Lead Agen Site Descri Event Type DISCOVERY PRELIMINARY ASSESSMENT SCREENING S INSPECTION PRELIMINARY ASSESSMENT Regional CE Agency Ad
	Completion Date: APRIL 1, 1985 JULY 1, 1985 APRIL 1, 1986 MARCH 15, 1989	NT, OR DELETED NPL SITE Start Date: NOT REPORTED APRIL 1, 1985 NOT REPORTED NOT REPORTED EPA ID	A PROPOSED, CURRE NOWN DETERMINATION REPORTED INT Status: NOWN URTER REMEDIAL ON PLANNED URTER REMEDIAL ON PLANNED E AS ABOVE	NANCED NANCED NCED NCED	STATE, FUND FIN STATE, FUND FIN EPA FUND-FINAN EPA FUND-FINAN SRC # 24 62 cription:	Idress: s: rship: ncy: iption: e: r sire y T ERCLIS / S Idress: Jtility Desc	Agency Ad NPL Status Site Owner Lead Agen Site Descri Event Type DISCOVERY PRELIMINARY ASSESSMENT SCREENING S INSPECTION PRELIMINARY ASSESSMENT Regional CE Agency Ad Regional U
	Completion Date: APRIL 1, 1985 JULY 1, 1985 APRIL 1, 1986 MARCH 15, 1989 CAD008287823	NT, OR DELETED NPL SITE Start Date: NOT REPORTED APRIL 1, 1985 NOT REPORTED NOT REPORTED	A PROPOSED, CURRE NOWN DETERMINATION REPORTED Int Status: NOWN URTER REMEDIAL ON PLANNED URTER REMEDIAL ON PLANNED	NANCED NANCED NCED NCED	STATE, FUND FIN STATE, FUND FIN EPA FUND-FINAN EPA FUND-FINAN SRC # 24 62 Cription: SLUDGE, SULPHO	Idress: s: rship: ncy: iption: e: e: y r SITE SITE Y T ERCLIS / S Idress: Jtility Desc HURIC ACID	Agency Ad NPL Status Site Owner Lead Agen Site Descri Event Type DISCOVERY PRELIMINARY ASSESSMENT SCREENING S INSPECTION PRELIMINARY ASSESSMENT Regional CE Agency Ad Regional U OTHER SULPI
	Completion Date: APRIL 1, 1985 JULY 1, 1985 APRIL 1, 1986 MARCH 15, 1989	NT, OR DELETED NPL SITE Start Date: NOT REPORTED APRIL 1, 1985 NOT REPORTED NOT REPORTED EPA ID	A PROPOSED, CURRE NOWN DETERMINATION REPORTED nt Status: NOWN URTER REMEDIAL ON PLANNED URTER REMEDIAL ON PLANNED E AS ABOVE	NANCED NANCED NCED NCED	STATE, FUND FIN STATE, FUND FIN EPA FUND-FINAN EPA FUND-FINAN SRC # 24 62 Cription: SLUDGE, SULPHO	Idress: s: rship: ncy: iption: e: e: y r siTE SITE Y T ERCLIS / S Idress: Jtility Desc HURIC ACID ERCLIS / S	Agency Ad NPL Status Site Owner Lead Agen Site Descri Event Type DISCOVERY PRELIMINARY ASSESSMENT SCREENING S INSPECTION PRELIMINARY ASSESSMENT Regional CE Agency Ad Regional CE
	Completion Date: APRIL 1, 1985 JULY 1, 1985 APRIL 1, 1986 MARCH 15, 1989 CAD008287823	NT, OR DELETED NPL SITE Start Date: NOT REPORTED APRIL 1, 1985 NOT REPORTED NOT REPORTED	A PROPOSED, CURRE NOWN DETERMINATION REPORTED INT Status: NOWN URTER REMEDIAL ON PLANNED URTER REMEDIAL ON PLANNED E AS ABOVE	NANCED NANCED NCED NCED	STATE, FUND FIN STATE, FUND FIN EPA FUND-FINAN EPA FUND-FINAN SRC# 2462 STIPLION: SLUDGE, SULPHO SRC# 2462	Idress: s: rship: ncy: iption: e: e: y r site y T ERCLIS / S Idress: Julity Desc HURIC ACID S ERCLIS / S Idress:	Agency Ad NPL Status Site Owner Lead Agen Site Descri Event Type DISCOVERY PRELIMINARY ASSESSMENT SCREENING S INSPECTION PRELIMINARY ASSESSMENT Regional CE Agency Ad Regional CE Agency Ad
	Completion Date: APRIL 1, 1985 JULY 1, 1985 APRIL 1, 1986 MARCH 15, 1989 CAD008287823	NT, OR DELETED NPL SITE Start Date: NOT REPORTED APRIL 1, 1985 NOT REPORTED NOT REPORTED	A PROPOSED, CURRE NOWN DETERMINATION REPORTED nt Status: NOWN URTER REMEDIAL ON PLANNED URTER REMEDIAL ON PLANNED E AS ABOVE	NANCED NANCED NCED NCED	STATE, FUND FIN STATE, FUND FIN EPA FUND-FINAN EPA FUND-FINAN SRC # 24 62 STIPTION: SLUDGE, SULPHO RC # 24 62 Cription:	Idress: s: rship: ncy: iption: e: e: y r SITE y SITE Y T ERCLIS / S Idress: Jtility Desc HURIC ACID S ERCLIS / S Idress: Jtility Desc	Agency Ad NPL Status Site Owner Lead Agen Site Descri Event Type DISCOVERY PRELIMINARY ASSESSMENT SCREENING S INSPECTION PRELIMINARY ASSESSMENT Regional CE Agency Ad Regional CE Agency Ad Regional U
	Completion Date: APRIL 1, 1985 JULY 1, 1985 APRIL 1, 1986 MARCH 15, 1989 CAD008287823 CAD008287823	NT, OR DELETED NPL SITE Start Date: NOT REPORTED APRIL 1, 1985 NOT REPORTED NOT REPORTED EPA ID EPA ID	A PROPOSED, CURRE NOWN DETERMINATION REPORTED nt Status: NOWN URTER REMEDIAL ON PLANNED URTER REMEDIAL ON PLANNED E AS ABOVE	NANCED NANCED NCED NCED	STATE, FUND FIN STATE, FUND FIN EPA FUND-FINAN EPA FUND-FINAN SRC # 24 62 STIPTION: SLUDGE, SULPHO SRC # 2462 Cription: YLENEJ	Idress: s: rship: ncy: iption: e: e: y T SITE Y T ERCLIS / S Idress: Jtility Desc HURIC ACID S ERCLIS / S Idress: Jtility Desc UNG SOME X	Agency Ad NPL Status Site Owner Lead Agen Site Descri Event Type DISCOVERY PRELIMINARY ASSESSMENT SCREENING S INSPECTION PRELIMINARY ASSESSMENT Regional CE Agency Ad Regional CE Agency Ad Regional U OTHER SULPI Regional U GE (CONTAIN
	Completion Date: APRIL 1, 1985 JULY 1, 1985 APRIL 1, 1986 MARCH 15, 1989 CAD008287823	NT, OR DELETED NPL SITE Start Date: NOT REPORTED APRIL 1, 1985 NOT REPORTED NOT REPORTED	A PROPOSED, CURRE NOWN DETERMINATION REPORTED nt Status: NOWN URTER REMEDIAL ON PLANNED URTER REMEDIAL ON PLANNED E AS ABOVE	NANCED NANCED NCED NCED	STATE, FUND FIN STATE, FUND FIN EPA FUND-FINAN EPA FUND-FINAN SRC # 24 62 STIPTION: SLUDGE, SULPHO SRC # 2462 Cription: YLENEJ	Idress: s: rship: ncy: iption: e: e: y r SITE y T ERCLIS / S Idress: Jtility Desc HURIC ACID S ERCLIS / S Idress: Jtility Desc MING SOME X ERCLIS / S	Agency Ad NPL Status Site Owner Lead Agen Site Descri Event Type DISCOVERY PRELIMINARY ASSESSMENT SCREENING S INSPECTION PRELIMINARY ASSESSMENT Regional CE Agency Ad Regional CE Agency Ad Regional CE
	Completion Date: APRIL 1, 1985 JULY 1, 1985 APRIL 1, 1986 MARCH 15, 1989 CAD008287823 CAD008287823	NT, OR DELETED NPL SITE Start Date: NOT REPORTED APRIL 1, 1985 NOT REPORTED NOT REPORTED EPA ID EPA ID	A PROPOSED, CURRE NOWN DETERMINATION REPORTED INT Status: NOWN URTER REMEDIAL ON PLANNED URTER REMEDIAL ON PLANNED E AS ABOVE IDGE, SULGONE SLUD E AS ABOVE	NANCED NANCED NCED NCED	STATE, FUND FIN STATE, FUND FIN EPA FUND-FINAN EPA FUND-FINAN SRC# 2462 Studge, SULPHO SRC# 2462 Studge, SULPHO SRC# 2462 STIPLION: SRC# 2462	Idress: s: rship: ncy: iption: e: e: y r siTE SITE Y T ERCLIS / S Idress: Jtility Desc HURIC ACID ERCLIS / S Idress: Jtility Desc HURIC SOME X ERCLIS / S Idress:	Agency Ad NPL Status Site Owner Lead Agen Site Descri Event Type DISCOVERY PRELIMINARY ASSESSMENT SCREENING S INSPECTION PRELIMINARY ASSESSMENT Regional CE Agency Ad Regional CE Agency Ad Regional CE Agency Ad
	Completion Date: APRIL 1, 1985 JULY 1, 1985 APRIL 1, 1986 MARCH 15, 1989 CAD008287823 CAD008287823	NT, OR DELETED NPL SITE Start Date: NOT REPORTED APRIL 1, 1985 NOT REPORTED NOT REPORTED EPA ID EPA ID	A PROPOSED, CURRE NOWN DETERMINATION REPORTED INT Status: NOWN URTER REMEDIAL ON PLANNED URTER REMEDIAL ON PLANNED E AS ABOVE IDGE, SULGONE SLUD E AS ABOVE	NANCED NANCED NCED NCED	STATE, FUND FIN STATE, FUND FIN EPA FUND-FINAN EPA FUND-FINAN EPA FUND-FINAN SRC# 2462 Cription: SLUDGE, SULPHC SRC# 2462 Cription: YLENE SRC# 2462 Cription:	Idress: s: rship: ncy: iption: e: e: y T SITE SITE Y T ERCLIS / S Idress: Jtility Desc HURIC ACID S ERCLIS / S Idress: Jtility Desc UNG SOME X ERCLIS / S Idress: Jtility Desc UNG SOME X ERCLIS / S	Agency Ad NPL Status Site Owner Lead Agen Site Descri Event Type DISCOVERY PRELIMINARY ASSESSMENT SCREENING S INSPECTION PRELIMINARY ASSESSMENT Regional CE Agency Ad Regional CE Agency Ad Regional CE Agency Ad Regional CE Agency Ad Regional CE
	Completion Date: APRIL 1, 1985 JULY 1, 1985 APRIL 1, 1986 MARCH 15, 1989 CAD008287823 CAD008287823	NT, OR DELETED NPL SITE Start Date: NOT REPORTED APRIL 1, 1985 NOT REPORTED NOT REPORTED EPA ID EPA ID	A PROPOSED, CURRE NOWN DETERMINATION REPORTED INT Status: NOWN URTER REMEDIAL ON PLANNED URTER REMEDIAL ON PLANNED E AS ABOVE IDGE, SULGONE SLUD E AS ABOVE	NANCED NANCED NCED NCED	STATE, FUND FIN STATE, FUND FIN EPA FUND-FINAN EPA FUND-FINAN EPA FUND-FINAN SRC# 2462 Cription: SLUDGE, SULPHO SRC# 2462 Cription: SRC# 2462 Cription: PTOR SLUDGE	Idress: s: rship: ncy: iption: e: e: y T SITE SITE Y T SITE SITE SITE SITE SITE SITE SITE SI	Agency Ad NPL Status Site Owner Lead Agen Site Descri Event Type DISCOVERY PRELIMINARY ASSESSMENT SCREENING S INSPECTION PRELIMINARY ASSESSMENT Regional CE Agency Ad Regional CE Agency Ad Regional CE Agency Ad Regional CE Agency Ad Regional CE
	Completion Date: APRIL 1, 1985 JULY 1, 1985 APRIL 1, 1986 MARCH 15, 1989 CAD008287823 CAD008287823 CAD008287823	NT, OR DELETED NPL SITE Start Date: NOT REPORTED APRIL 1, 1985 NOT REPORTED NOT REPORTED EPA ID EPA ID	A PROPOSED, CURRE NOWN DETERMINATION REPORTED INT Status: NOWN URTER REMEDIAL ON PLANNED URTER REMEDIAL ON PLANNED E AS ABOVE IDGE, SULGONE SLUD E AS ABOVE	NANCED NANCED NCED NCED	STATE, FUND FIN STATE, FUND FIN EPA FUND-FINAN EPA FUND-FINAN EPA FUND-FINAN SRC# 2462 Cription: SLUDGE, SULPHO SRC# 2462 Cription: SRC# 2462 Cription: PTOR SLUDGE	Idress: s: rship: ncy: iption: e: e: y r site y r ERCLIS / S Idress: Jtility Desc HURIC ACID S ERCLIS / S Idress: Jtility Desc ERCLIS / S Idress: Jtility Desc ERCLIS / S	Agency Ad NPL Status Site Owner Lead Agen Site Descri Event Type DISCOVERY PRELIMINARY ASSESSMENT SCREENING S INSPECTION PRELIMINARY ASSESSMENT Regional CE Agency Ad Regional CE Agency Ad Regional CE Agency Ad Regional CE Agency Ad Regional CE Agency Ad Regional CE

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DICE 00204

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Regional CERCLIS / SRC# 2462		EPA ID:	CAD008287823
Agency Address:	SAME AS ABOVE .		
Regional Utility Description:			
DRUMS, ABOVE GROUND			
Regional CERCLIS / SRC# 2462		EPA ID	CAD008287823
Agency Address:	SAME AS ABOVE		
Regional Utility Description:			
SOIL CONTAMINATION			
Regional CERCLIS / SRC# 2462	SAME AS ABOVE	EPA ID:	CAD008287823
Agency Address:	SAME AS ABOVE		
Regional Utility Description: CALIFORNIA 3012 SITE			
Regional CERCLIS / SRC# 2462		EPA ID.	CAD008287823
Agency Address:	SAME AS ABOVE		10/10000201020
Regional Utility Description:		<u> </u>	
NEW ERRIS SITE			
Regional CERCLIS / SRC# 2462	······································	EPA ID	CAD008287823
Agency Address:	SAME AS ABOVE	- k	
Regional Utility Description:			
SITEINSPECTION			
Regional CERCLIS / SRC# 2462		EPA ID.	CAD008287823
Agency Address:	SAME AS ABOVE		
Regional Utility Description:			
RPM BLEVINS SHOULD CALL JOHN HUNTER AT SAI	NTA FE SPRINGS PUBLIC W	1004.00	100000000000
Regional CERCLIS / SRC# 2462		EPA ID	CAD008287823
Agency Address:	SAME AS ABOVE	·· <u>_</u> ·····	
Regional Utility Description: ORKS DEPT FOR FOLLOW UP IN SEPT 87			
RCRA-LgGen - RCRA-Large Generator / S	PC# 3057	IEPA ID.	CAD008287823
Agency Address:	PILOT CHEM CO OF CA		CAD000207023
Agency Address.	11756 BURKE ST		
	SANTA FE SPRINGS, CA 90		
Generator Class:	GENERATORS WHO GENER HAZARDOUS WASTE OR 1		
STATE LUST - State Leaking Undergroun			906700107
3056			
Agency Address:	CALIFORNIA PILOT CHEMIC	CAL CO	
	11756 BURKE ST		
Tank Status:	SANTA FE SPRI, CA 90670 NOT AVAILABLE		
	GROUNDWATER		
Media Affected:	DIESEL		
Substance: Leak Cause:	UNAVAILABLE		
	NOT AVAILABLE		
Remedial Action:		ACAIT	
Remedial Status 1:	CONTAMINATION ASSESS		
Remedial Status 2:	NOT AVAILABLE	tal Last Davana	
Fields Not Reported:	Discovery Date, Quantity (Un	its), Leak Source	



DICE 00205

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	PROPERTY AND THE AD	JACENT AREA (wit	hin 1/8 mile) CON	т.
Regional LUST - Regi SRC# 3104	onal Leaking Undergrou	nd Storage Tank /	Agency ID.	1-02254
Agency Address:		OT CHEMICAL COMPANY		
		56 BURKE ST	70	
Tank Status:		ITA FE SPRINGS, ĈA 906 TAVAILABLE	70	,
• • •		PTEMBER 21, 1988		
Discovery Date:		OUNDWATER		
Media Affected:	DIE			
Substance:				
Leak Cause:		AVAILABLE		
Remedial Action:		TAVAILABLE	54/ T	
Remedial Status 1:		NTAMINATION ASSESSMI	ENT	
Remedial Status 2:		TAVAILABLE		
Fields Not Reported		antity (Units), Leak Source		
	nderground Storage Tanl		EPA/Agency ID	N/A
Agency Address:		OT CHEMICAL COMPANY		
		56 BURKE NTE FE SPRINGS, CA 906	70	
Underground Tanks				
Aboveground Tanks		T REPORTED		
Tanks Removed:		T REPORTED		
Tank ID:	10	Tank Status	CLOSED F	REMOVED
Tank Contents:	MISC CHEMICAL	Leak Monit		
Tank Age:	NOT REPORTED	Tank Piping	oning.	
Tank Age.	12000 (GALLONS)	Tank Piping	j.	
Tank Size (Units):	20	Tank Mater		
	MISC CHEMICAL	• • • • • • •		
Tank Contents:	NOT REPORTED	Leak Monit	oung.	
Tank Age:		Tank Piping		
Tank Size (Units):	12000 (GALLONS) 3U	Tank Mater	<u> </u>	
Tank ID:		Tank Status	5.	
Tank Contents:	MISC CHEMICAL	Leak Monit	-	
Tank Age:	NOT REPORTED	Tank Piping	-	
Tank Size (Units):	10000 (GALLONS)	Tank Mater	·····	
Tank ID:	4U	Tank Statu		
Tank Contents:	MISC CHEMICAL	Leak Monit	U	
Tank Age:	NOT RÉPORTED	Tank Piping		
Tank Size (Units):	12000 (GALLONS)	Tank Mater		
Tank ID:	5U	Tank Statu		
Tank Contents:	MISC CHEMICAL	Leak Monit	oring: UNKNOW	V
Tank Age:	NOTREPORTED	Tank Piping	g: UNKNOWI	V
Tank Size (Units):	12000 (GALLONS)	Tank Mater		
Tank ID:	6U	Tank Statu	S: ACTIVEAN	SERVICE
Tank Contents:	REPORTED AS "UNKNOWN" B	Y Leak Monit	oring: UNKNOW	v
Tonk Arres	AGENCY NOT REPORTED	Tank Pipin	g: UNKNOWI	V
Tank Age:	NOT REPORTED (GALLONS)	Tank Mater	-	V
Tank Size (Units):	7U	T		SERVICE
Tank ID: Tank Contontor		Tank Statu		
Tank Contents:	REPORTED AS "UNKNOWN" B AGENCY	Ecal month	-	
Tank Age:	NOT REPORTED	Tank Pipin	-	
Tank Size (Units):	NOT REPORTED (GALLONS)	Tank Mater	ial: UNKNOW	V
Tank ID:	8U	Tank Statu	S: ACTIVEAN	SERVICE
Tank Contents:	REPORTED AS "UNKNOWN" B		σ.	
	AGENCY	Leukinonn		
Tank Age:	NOT REPORTED	Tank Pipin	9.	
Tank Size (Units):	NOT REPORTED (GALLONS)	Tank Mater	ial: UNKNOW	v
I ank Size (Units):	NOT REPORTED (GALLONS)			

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		PROPERTY AND THE	ADJACE	NT AREA (wit	hin 1/8 r	nile) CONT.		
Tank ID: Tank Conte	nts:	9U REPORTED AS "UNKNOW AGENCY	N" BY	Tank Status Leak Monito Tank Piping	oring:	ACTIVEAN SE UNKNOWN UNKNOWN	RVICE	
Tank Age: Tank Size (l	Units):	NOT REPORTED NOT REPORTED (GALLON	'S)	Tank Materi		UNKNOWN		
		County Site Mitigatio	n / SRC# :	2683	Agency	ID:	90S212	
Agency Add	dress: e:	<u> </u>		MICAL COMPANY				
Media Affec	ted:		SOIL					
Log Numbe			903734					
Discovery D			OCTOBER 2	25, 1990				
Abate Date:			JUNE 1, 199	2				
State Status	5:		ABATED					
Description				R FOLLOW-UP R				
IRIS - Toxic Agency Add		Inventory System / S	PILOT CHEI 11756 BURI	MICAL CO OF CA KE ST SPRINGS, CA 906		·	CAD008287823	
Chemical A	hstract !	Service Registry:	UNIVIATE C	5/ T(1/63, CA 300	/0	Quar	tity Released:	
DIETHANOLAM	IINE	bernieentegiony.					(POUNDS)	
NOT REPORTE							POUNDS)	
SULFURIC ACI						NOTR	EPORTED (POUNDS) EPORTED (POUNDS)	
VISTA	PILOT	CHEMICAL COMP	ANY		VISTA I		4020570	Map ID
Address*:	11770	BURKE				e/Direction:	0 03 MI / N	
	SANTA	A FE SPRINGS, CA	90670		Plotted	as:	Point	3
STATE UST		nderground Storage		C# 1612	EPA/Ag	ency ID	N/A	i [
Agency Add	dress:		PILOT CHE 11770 BUR SANTE FE	MICAL COMPANY KE SPRINGS, CA			1	
Undergrour			NOT REPO					-
Abovegrou		5:	NOT REPO					
Tanks Rem	oved:	10	NOT REPO			NOT AVAILAL		
Tank ID:		NOT REPORTED		Tank Statu		UNKNOWN		ļ
Tank Conte	ents:	NOT REPORTED		Leak Monit		NOT AVAILAL		
Tank Age: Tank Size ([1=i+=\-	NOT REPORTED (NOT AV		Tank Piping Tank Mater	-	NOT AVAILAL		
Talik Size [onnsj.			Tallk mater				i
VISTA	FLIGH	T TRUCKING		······································	VISTAI	D#	1194162	Map ID
Address*.	1	BURKE STREET				e/Direction	0 03 MI / N	
1	1	A FE SPRINGS, CA	00670		Plotted	as	Point	3
STATE LUST 3056		Leaking Underground		Tank / SRC#	Agency	ID	014457	
Agency Add	dress:			UCKING KE STREET SPRI, CA 90670	1			
Tank Status			NOT AVAIL					
Media Affec	-		SOIL/SAND	AAND				
Substance:			DIESEL.					1
Leak Cause			UNAVAILAE					
Remedial A			NOT AVAIL					
Remedial S				SED/CLEANUP C	OMPLETE			
Remedial S			NOT AVAIL					:
Fields Not I	Reported	l:	Discovery D	ate, Quantity (Uni	ts), Leak So	burce		
	•						DICE	00207

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Regional LL SRC# 3104	IST - Regional Leaking U	nderground Storage Tank	/ Agency ID	014457			
Agency Ad		FLIGHT TRUCKING 11770 BURKE ST SANTA FE SPRINGS, CA S NOT AVAILABLE	90670	<u> </u>			
Discovery		FEBRUARY 14, 1990					
Media Affe		SOIL/SANDALAND					
Substance		DIESEL					
Leak Caus	e:	UNAVAILABLE	UNAVAILABLE				
Remedial A	Action:	NOT AVAILABLE	NOT AVAILABLE				
Remedial S	Status 1:	CASE CLOSED/CLEANUP	CASE CLOSED/CLEANUP COMPLETE				
Remedial S	Status 2:	NOT AVAILABLE					
Fields Not	Reported:	Quantity (Units), Leak Sour	re				
VISTA		TTE CORRORATION	VISTA ID#	5354007	M		
Address*	DIVERSEY WYANDO	TTE CORPORATION	Distance/Direction	0.08 MI / S			
Address	8921 DICE RD		Plotted as	Point	-11 .		
	SANTA FE SPRINGS	<u>, CA 90670</u>		Foun			
ORTESE /	SRC# 2298		EPA/Agency ID.	N/A			
Agency Ad		DIVERSEY WYANDOTTE 8921 DICE RD SANTA FE SPRINGS, CA S					
List Name:		CALSITE					
Site ID:		INV-ID19-029260			1		

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DICE 00208

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PROPERTY AND THE	ADJACENT AREA	(within 1/8 mile) CON	т
	·····	VISTA ID#.	123068
		Distance/Direction	
		Plotted as:	Point
SANTA FE SPRINGS, CA	90670		
CORRACTS / SRC# 3057		EPA ID:	CAD046455747
Agency Address:	SAME AS ABOVE		
Prioritization Status:	MEDIUM		
RCRA Facility Assessment Completed:	NO		
Notice of Contamination:	NO		
Determination of need For a RFI (RCRA	NO		
Facility Investigation):			•
RFI Imposed:	NO		
RFI Workplan Notice of Deficiency	NO		
Issued:			
RFI Workplan Approved:	NO		
RFI Report Received:	NO		
RFI Approved:	NO		
••	NO		
No Further Corrective Action at this			
Time:	YES		
Stabilization Mesaures Evaluation:	NO		
CMS (Corrective Measure Study)	NO		
mposition:			
CMS Workplan Approved:	NO		
CMS Report Received:	NO		
CMS Approved:	NO		
Date for Remedy Selection (CM	NO		
mposed):			
Corrective Measures Design Approved:	NO		
Corrective Measures Investigation	NO		
Workplan Approved:			
Certification of Remedy Completion:	NO		
Stabilization Measures Implementation:	NO		
Stabilization Measures Completed:	NO		
Corrective Action Process Termination:	NO		
CRA-TSD / SRC# 3057		EPA ID	CAD046455747
Agency Address:	SAME AS ABOVE		·····
Off-Site Waste Received:	NO		
Land Disposal:	NO		
Incinerator:	NO		
Storage/Treatment:	NO		
CRA-LgGen - RCRA-Large Generator / S		EPA ID	CAD046455747
Agency Address:	SAME AS ABOVE		
Generator Class:		ENERATE AT LEAST 1000 K	G MONTH OF NON-ACUTEL
	HAZARDOUS WASTE	R 1 KG MONTH OF ACUTE	
CRA-Violations / SRC# 3057		EPA ID	CAD046455747
Agency Address:	SAME AS ABOVE		
Violation Type:	TSDFINANCIAL RESP	ONSIBILITY REQ	
Violation Date:	MARCH 1, 1988		
Violation Class:	1		
Actual Compliance Date:	JULY 13, 1992		
Scheduled Compliance Date:	NOT REPORTED		

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Violation Type:	TSD-OTHER REQUIREMENTS (OVERSITE LEVEL)
Violation Date:	MARCH 9, 1988
Violation Class:	1
Actual Compliance Date:	JANUARY 21, 1992
Scheduled Compliance Date:	MAY 18, 1988
Violation Type:	TSDCLOSURE/POST-CLOSURE REQ.
Violation Date:	MARCH 9, 1988
Violation Class:	1
Actual Compliance Date:	JANUARY 21, 1992
Scheduled Compliance Date:	MAY 18, 1988
Enforcement Number:	861010
Enforcement Agency:	State
Action Date:	OCTOBER 10, 1986
Action Type:	WRITTEN INFORMAL
Penalty Assessed:	NOT REPORTED
Penalty Settlement:	NOT REPORTED
Enforcement Number:	880418001
Enforcement Agency:	State
Action Date:	APRIL 18. 1988
Action Type:	WRITTEN INFORMAL
Penalty Assessed:	NOTREPORTED
Penalty Settlement:	NOT REPORTED

VISTA		SEY WYANDOTTE	COPP	VISTA ID#	517328	Map
Address*.]	ICE RD		Distance/Direction	0 08 MI / S	- .
	1			Plotted as	Point	4
L	~	A FE SPRINGS, CA	90670			╡╽╶╹
CERCLIS / S		7		EPA ID	CAD046455747	
Agency Ad			SAME AS ABOVE		_	
NPL Status	•		•	RENT, OR DELETED NPL SIT	E	1 -
Site Owner	ship:		UNKNOWN			
Lead Agen			NO DETERMINATION			
Site Descri	ption:		NOT REPORTED			
Event Type	:	Lead Agency:	Event Status:	Start Date:	Completion Date:	
DISCOVERY		EPA FUND-FINANCED	UNKNOWN	NOT REPORTED	AUGUST 1, 1980	
1						
PRELIMINARY	·	STATE, FUND FINANCED	UNKNOWN	JUNE 1, 1984	SEPTEMBER 1, 1984	-
ASSESSMENT	r	.,				}
PRELIMINARY	,	EPA FUND-FINANCED	NO FURTER REMEDIAL	NOT REPORTED	SEPTEMBER 10, 1990	-
ASSESSMENT		EPA FUND-FINANCED	ACTION PLANNED	NUTREPORTED	SEFTEMBER ID, 1990	
L						_
Regional CE		SRC# 2462		EPA ID	CAD046455747	
Agency Ad	dress:		SAME AS ABOVE			_]
Regional U	Itility Des	scription:				
ACIDS			·····			_
Regional CE		SRC# 2462		EPA ID	CAD046455747	_
Agency Ad			SAME AS ABOVE			_
Regional U	tility Des	scription:				
BASES		000 1 0 100			0.000000000000	
Regional CE		SRC# 2462		EPA ID	CAD046455747	_
Agency Ad			SAME AS ABOVE	<u> </u>		
Regional U	tility Des	scription:				_
INORGANICS					······································	



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Regional CERCLIS / SRC# 2462		EPA ID:	CAD046455747
Agency Address:	SAME AS ABOVE		
Regional Utility Description:			
ORGANICS			
Regional CERCLIS / SRC# 2462		EPA ID:	CAD046455747
Agency Address:	SAME AS ABOVE		
Regional Utility Description:			,
OTHER- SODIUM HYDROXIDE, SODIUM CARBONATE	, PHOSPHORIC ACIDVARIOU		
Regional CERCLIS / SRC# 2462		EPA ID:	CAD046455747
Agency Address:	SAME AS ABOVE		
Regional Utility Description:			
S VESSEL WASINGS			
Regional CERCLIS / SRC# 2462	SAME AS ABOVE	EPA ID.	CAD046455747
Agency Address:	SANIE AS ADOVE		
Regional Utility Description:			
Regional CERCLIS / SRC# 2462		EPA ID	CAD046455747
Agency Address:	SAME AS ABOVE		
Regional Utility Description:			
TANKS			
Regional CERCLIS / SRC# 2462		EPA ID.	CAD046455747
Agency Address:	SAME AS ABOVE		
Regional Utility Description:			
Regional CERCLIS / SRC# 2462		EPA ID	CAD046455747
	SAME AS ABOVE		CAD048433747
Agency Address:			
Regional Utility Description: RCRAREGULATED GENERATOR TREAT STORE DIS	SPOSE FACIL (NON HANDI		
Regional CERCLIS / SRC# 2462	DI OGLI ACIL INON TIANDE	EPA ID.	CAD046455747
Agency Address:	SAME AS ABOVE		
Regional Utility Description:			
ER) SEENOTIFICATION PART A FILE	· · · · · · · · · · · · · · · · · · ·		
Regional CERCLIS / SRC# 2462		EPA ID	CAD046455747
Agency Address:	SAME AS ABOVE		
Regional Utility Description:			
NOTIS 103(C) SITE			
SCL - State Equivalent CERCLIS List / SR	C# 2825	Agency ID	19280834
Agency Address:	DIVERSEY WYANDOTTE C 8921 SOUTH DICE ROAD	ORPORATION	
	SANTA FE SPRINGS, CA 90	0670	
Facility Type:	NOT AVAILABLE		
Lead Agency:	NOT AVAILABLE		
State Status:	VOLUNTARY CLEANUP		
Pollutant 1:	HALOGENATED ORGANIC	COMPOUNDS	
Pollutant 2:	CONTAMINATED SOIL		
Pollutant 3:	UNSPECIFIED ORGANIC LI	QUID MIXTURE	
Fields Not Reported:	Status		
STATE UST - State Underground Storage		EPA/Agency ID	N/A
Agency Address:	DIVERSEY WYANDOTTE	ILI MAGENCY ID	
- geney Address,	8921 DICE		
	SANTE FE SPRINGS, CA		
Underground Tanks:	NOT REPORTED		
Aboveground Tanks:	NOT REPORTED		
Tanks Removed:	NOT REPORTED		



		PROPERTY AND THE	ADJACEN	IT AREA (wit	hin 1/8 1	nile) CONT.		
		10				NOT AVAILAB		
			Tank Status		UNKNOWN			
Tank Conte	nts:	NOT REPORTED		Leak Monito Tank Piping	Ŷ	NOT AVAILAB	N E	
Tank Age: Tank Size (1	Inite).	NOT REPORTED (NOT AVA	ABLE)	Tank Piping		NOT AVAILAB	(
Talik Size (Tank materi	<u> </u>		,	
VISTA	CITY C	OF SANTA FE SPRIM	NGS FIRE	-	VISTA I		4824475	Map ID
Address*:	8634 S					e/Direction.	0.09 MI / NE	_
	ł	FE SPRINGS, CA			Plotted	as:	Point	5
TATE UST		nderground Storage T	ank / SRC	# 1612	EPA/Ag	ency ID	N/A	L
Agency Ado		<u></u>	SAME AS AE				4	
Undergrour		:	2					
Abovegrou			NOT REPOR	RTED				
Tanks Rem			NOT REPOR	TED				
Tank ID:		10		Tank Status		ACTIVE/IN SE	RVICE	
Tank Conte	ents:	REPORTED AS *UNKNOW AGENCY	N⁼BY	Leak Monite	-	UNKNOWN		
Tank Age:		NOT REPORTED		Tank Piping		UNKNOWN		
Tank Size (Units):	NOT REPORTED (GALLON	'S)	Tank Materi	ai:	UNKNOWN		
Tank ID:		2U	<u>.</u>	Tank Status	 5:	ACTIVEAN SE	RVICE	
Tank Conte	nts:	REPORTED AS "UNKNOW	N" BY	Leak Monite		UNKNOWN		
		AGENCY NOT REPORTED		Tank Piping		UNKNOWN		
Tank Age:		NOT REPORTED	(0)	Tank Mater	al:	UNKNOWN		
Tank Size (Unitsj:	NOT REPORTED (GALLON		. <u> </u>				
VISTA	WEST	BENT BOLT			VISTA	D#:	5354006	Map ID
Address*:	-	ICE RD			Distanc	e/Direction	0 09 MI / N	
		A FE SPRINGS, CA	90670		Plotted	as.	Point	5
ORTESE /			30010		EPA/Ac	ency ID	N/A	
Agency Ad		<u> </u>	SAME AS AL	BOVE				
List Name:			CALSITE					-
Site ID:			INV-ID19-00	0008				-
VISTA	MID W	EST FABR CO			VISTA		274221	Map ID
Address*:	8623 E	NCE RD				e/Direction	0 09 MI / N	-
	SANT	A FE SPRINGS, CA	90670		Plotted	as [.]	Point	5
CRA-LgGe		A-Large Generator / Si			EPA ID		CAD004295572	L
Agency Ad			SAME AS A					
Generator	Class:		GENERATO HAZARDOU	RS WHO GENER IS WASTE OR 1 F	ATE AT LE G_MONTI	EAST 1000 KG Л H OF ACUTELY I	MONTH OF NON-ACUTELY HAZARDOUS WASTE	
VISTA	WEST	BENT BOLT			VISTA	D#	1183438	Map ID
Address*:	1	DICE RD				e/Direction:	0 09 MI / NE	
	1	A FE SPRINGS, CA	90670		Plotted	as.	Point	5
ERCLIS / S					EPA ID		CAD004295572	
Agency Ad		·	SAME AS A	BOVE		·	10,0007200012	
NPL Status			NOT A PRO	POSED, CURREI	NT, OR DE	LETED NPL SITE	E	
Site Owner			UNKNOWN					
Lead Agen			NO DETERI	MINATION				
	ption:		NOT REPOR	7760				

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Event Type:	Lead Agency:	Event Status:	Start Date:	Completion Date:
DISCOVERY	STATE, FUND FINANCED	UNKNOWN	NOTREPORTED	APRIL 1, 1985
PRELIMINARY ASSESSMENT	STATE, FUND FINANCED	UNKNOWN	APRIL 9, 1985	JULY 1. 1985
	EPA FUND-FINANCED	UNKNOWN	NOTREPORTED	OCTOBER 1, 1986
SCREENING SITE	EPA FUND-FINANCED	UNKNOWN	NOTREFORTED	0010BER 1, 1900
SCREENING SITE	EPA FUND-FINANCED	NO FURTER REMEDIAL ACTION PLANNED	NOTREPORTED	SEPTEMBER 19, 1990
egional CERCLIS	/ SRC# 2462	<u> </u>	EPA ID	CAD004295572
Agency Address:		SAME AS ABOVE		
Regional Utility De	escription:			
OTHER SLUDGES, WH				1040004005570
Regional CERCLIS	/ SRC# 2462		EPA ID	CAD004295572
Agency Address:		SAME AS ABOVE		
Regional Utility De	escription:	ATING NEUTONUSED OU		
OTHER CYANIDE, OVE Regional CERCLIS	RFLOW RINSE FROM ZINC PL	ATING NEUTRALIZED SUL	EPA ID	CAD004295572
Agency Address:	1 0110# 2402	SAME AS ABOVE		
Regional Utility De	ascription:			
FURIC ACID, SODIUM H	IYDROXIDE		······	
Regional CERCLIS			EPA ID	CAD004295572
Agency Address:		SAME AS ABOVE	······	1
Regional Utility De	escription:			
ABOVE GROUND TANK	S (HOLDING TANKS)-HAZ WA	STES		
Regional CERCLIS	/ SRC# 2462		EPA ID	CAD004295572
Agency Address:		SAME AS ABOVE		
Regional Utility D	escription:	······ · · · · · · · · · · · · · · · ·		
DRUMS, ABOVE GROU				
Regional CERCLIS	7 SRC# 2462	SAME AS ABOVE	EPA ID	CAD004295572
Agency Address:		SAME AS ABOVE		
Regional Utility D				
Regional CERCLIS			EPA ID	CAD004295572
Agency Address:	, UILOW 2402	SAME AS ABOVE		10/1000-200012
Regional Utility De	escription'			
OTHER SUMP, DISCHA	ARGE TO SEWER	···· ·_··=	······································	
Regional CERCLIS		·	EPA ID	CAD004295572
Agency Address:	······································	SAME AS ABOVE	·····	
Regional Utility D	escription:			
SOIL CONTAMINATION		·····	· · · · · · · · · · · · · · · · · · ·	
Regional CERCLIS	/ SRC# 2462	<u></u>	EPA ID	CAD004295572
Agency Address:		SAME AS ABOVE		····
Regional Utility D	escription:			
CALIFORNIA 3012 SITE Regional CERCLIS	1900# 2462			CAD004295572
Agency Address:		SAME AS ABOVE	EPA ID	ICAD004295572
Regional Utility D				
NEW ERRIS SITE	escription.			
Regional CERCLIS	/ SRC# 2462		EPA ID	CAD004295572
Agency Address:		SAME AS ABOVE		
Regional Utility D				
Regional Lituity D	escrintion.			



PROPERTY AND TH	E ADJACENT AREA (wi	ithin 1/8 mile) CONT.	
Regional CERCLIS / SRC# 2462		EPA ID:	CAD004295572
Agency Address:	SAME AS ABOVE		······································
Regional Utility Description:			
OILYLIQUIDS			
Regional CERCLIS / SRC# 2462		EPA ID	CAD004295572
Agency Address:	SAME AS ABOVE		
Regional Utility Description:			
SITE INSPECTION, CHECK STATUS OF STATE ACTIC	DN		
Regional CERCLIS / SRC# 2462		EPA ID	CAD004295572
Agency Address:	SAME AS ABOVE		
Regional Utility Description:			
OTHER. MFG OF METAL BOLTS, SCREWS, MACHINE	RY, ETC ZINC PLATING		
Regional CERCLIS / SRC# 2462		EPA ID.	CAD004295572
Agency Address:	SAME AS ABOVE		
Regional Utility Description:			
UNDERGROUND TANK (CLARIFIERS)			
Regional CERCLIS / SRC# 2462		EPA ID	CAD004295572
Agency Address:	SAME AS ABOVE		
Regional Utility Description:			
OIL SOAKED SOIL REMOVED		······	
Regional CERCLIS / SRC# 2462		EPA ID	CAD004295572
Agency Address:	SAME AS ABOVE		
Regional Utility Description:			
30-GAL CYANIDE SPILL CLEANED UP			
Regional CERCLIS / SRC# 2462		EPA ID	CAD004295572
Agency Address:	SAME AS ABOVE		
Regional Utility Description:			
CLARIFIER (3)			
Regional CERCLIS / SRC# 2462		EPA ID.	CAD004295572
Agency Address:	SAME AS ABOVE		
Regional Utility Description:			
30-40 GAL CYANIDE SPILLED, NEUTRALIZED AND P			
SCL - State Equivalent CERCLIS List / SR	C# 2825	Agency ID	19340439
Agency Address:	WEST BENT BOLT 8623 SOUTH DICE ROAD		
	SANTA FE SPRINGS, CA 90	670	
Facility Type:	NOTAVAILABLE		
Lead Agency:	NOTAVAILABLE		
State Status:	REFERRED TO ANOTHER A	AGENCY	
Pollutant 1:	CYANIDES		
Pollutant 2:	HOUSEHOLD WASTES		
Pollutant 3:	UNSPECIFIED SLUDGE WA	STE	
Fields Not Reported:	Status		
VISTA TALCO PLASTICS INC		VISTA ID#	1237544
TALOOT LASTICS INC		Distance/Direction:	0 11 MI / W
11050 BURKE		Plotted as	Point
WHITTIER, CA 90606		I IUREU as	prom

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Address".	11650 BURKE WHITTIER, CA 90	0606	Plotted as		- 6
STATE UST		Storage Tank / SRC# 1612	EPA/Agency ID	N/A	
Agency Ad		TALCO PLASTICS INC 11650 BURKE WHITTIER, CA			
Undergrou	nd Tanks:	2			1
Abovegrou	nd Tanks:	NOT REPORTED			1
Tanks Rem	oved:	NOT REPORTED			



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Map ID

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Tank ID:	1U	Tank Status:	ACTIVEAN SERVICE	
Tank Contents:	REPORTED AS "UNKNOWN" BY	Leak Monitoring:	UNKNOWN	
	AGENCY	Tank Piping:	UNKNOWN	
Tank Age:	NOT REPORTED	Tank Material:	UNKNOWN	
Tank Size (Units):	NOT REPORTED (GALLONS)			
Tank ID:	20	Tank Status:	ACTIVEAN SERVICE	
Tank Contents:	REPORTED AS "UNKNOWN" BY	Leak Monitoring:	UNKNOWN	
•	AGENCY	Tank Piping:	UNKNOWN	
Tank Age:	NOTREPORTED	Tank Material:	UNKNOWN	
Tank Size (Units):	NOT REPORTED (GALLONS)	Tank material.		

SITES IN THE SURROUNDING AREA (within 1/8 - 1/4 mile)

VISTA	PALLEY PROPERTY		VISTA ID#.	5404254	Map ID
Address*	11630 BURKE ST		Distance/Direction:	0 13 MI / W	
	CA 90606		Plotted as:	Point	6
A Co Site	Mtgn - LA County Site Mitig	ation / SRC# 2683	Agency ID.	95S369	──_└────
Agency A	ddress:	SAME AS ABOVE			
Waste Nar	ne:	ТРН			
Media Affe	ected.	SOIL			
Log Numb	per:	950293			
Discovery	Date:	JANUARY 30, 1995			j
Abate Dat	e:	NOT REPORTED			
State State	us:	PI	·····	_	
Descriptio	on:	2 DBA ON-SITE, ONE AC	TIVE GENERATOR		

VISTA	T CHE	M PRODUCTS INC		VISTA	ID#.	418301	Map ID
Address*.	9028 D	ICE RD		Distanc	ce/Direction	0 16 MI / S	
		FE SPRINGS, CA	90670	Plotted	as	Point	7
Regional LU SRC# 3104		ional Leaking Underg		ank / Agency	y ID	R-04511	
Agency Add	dress:		T-CHEM PRODUCTS 9028 DICE RD S SANTA FE SPRINGS				
Tank Status	s:		NOT AVAILABLE				
Discovery [Date:		FEBRUARY 26, 1996				
Media Affec	cted:		SOIL/SAND/LAND				
Leak Cause	e:		UNAVAILABLE				
Remedial A	ction:		NOT AVAILABLE				
Remedial S	status 1:		CASE CLOSED/CLE	ANUP COMPLETE			
Remedial S	status 2:		NOT AVAILABLE				1
Fields Not I	Reported	1:	Substance, Quantity (Units), Leak Sourc	e		
		nderground Storage	Tank / SRC# 1612	2 EPA/A	gency ID	N/A	
Agency Add			T-CHEM PRODUCTS 9028 S DICE SANTE FE SPRINGS	5	• • • • • • • • • • • • • • • • • • •		
Undergrour	nd Tanks		JANIE FE SPRINGS	, CA			
Abovegrou			NOT REPORTED				
Tanks Rem			NOT REPORTED				
Tank ID:		10	Tank	Status:	ACTIVEAN S	ERVICE	
Tank Conte	ents:	REPORTED AS "UNKNOW AGENCY	W [*] BY Leak	Monitoring:	UNKNOWN UNKNOWN		
Tank Age: Tank Size (I	Units):	NOT REPORTED NOT REPORTED (GALLON	Tank	Piping: Material:	UNKNOWN		1



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	SITES IN THE SURRO	JNDING AREA (withir	n 1/8 - 1/4 mile) CONT		7
L	······································	· · · · · · · · · · · · · · · · · · ·	·		
	Release Inventory System / SF	RC# 2587 T-CHEM PRODS	EPA ID	CAD051482784	4
Agency Add	aress:	9028 DICE RD SANTA FE SPRINGS, CA 90			
	bstract Service Registry:			ntity Released:	.]
CHLORINE			5 00 (/	POUNDS)	4
AMMONIA			1622 0	00 (POUNDS)	_]
VISTA	PARKER HANNIFIN CORP		VISTA ID#.	319868	Map ID
Address*:	11808 BURKE ST SPRING		Distance/Direction:	0 16 MI / NE	
			Plotted as:	Point	8
	SANTA FE SPRINGS, CA		EPA ID [.]	040004070057	
IRIS - Ioxic	Release Inventory System / SI	C# 2587 PARKER HANNIFIN CORP	IEPA ID	CAD981973357	
Agency Ado	aress:	11808 BURKE ST. SANTA FE SPRINGS, CA 90	0670		
Chemical A	bstract Service Registry:			ntity Released:	
1,1,1-TRICHLO	ROETHANE		6750 (00 (POUNDS)	
VISTA	AEDOODAOE DIVIET MEO		VISTA ID#:	1268062	Map ID
Address*	AEROSPACE RIVET MFG.	CURP.	Distance/Direction	0 18 MI / N	
/ duicas	MANUFACTURER		Plotted as:	Point	9
	8535 DICE RD.		r lotted us.		3
	SANTA FE SPRINGS, CA				
TRIS - Toxic	Release Inventory System / SI	RC# 2587	EPA ID	CAD981417751	
Agency Ad		SAME AS ABOVE			7
Chemical A	bstract Service Registry:		Qua	ntity Released:	
SULFURIC ACI	D		5 00 (POUNDS)	
VISTA	A-W ENGINEERING CO		VISTA ID#	34957	Map ID
Address*			Distance/Direction	- 0.19 MI / N	-
	8518 DICE		Plotted as	Point	9
<u> </u>	SANTA FE SPRINGS, CA				
STATE UST	- State Underground Storage T	ank / SRC# 1612	EPA/Agency ID	N/A	L
Agency Ad	dress:	A-W ENGINEERING CO 8518 DICE			1
		SANTE FE SPRINGS, CA			
Undergroui		NOT REPORTED			
Abovegrou		NOT REPORTED			
Tanks Rem	oved:	NOT REPORTED			
Tank ID:	10	Tank Stat	US: NOT AVAILA	BLE	_
Tank Conte	ents: NOT REPORTED	Leak Mon	itoring: UNKNOWN		
Tank Age:	NOT REPORTED	Tank Pipi	ng: NOTAVAILA	BLE	
Tank Size (Units): NOT REPORTED (NOT AVA	AILABLE) Tank Mate	erial: NOT AVAILA	BLE	1

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	SITES IN THE SURI	ROUNDING AREA (within	1/8 - 1/4 m	ile) CONT	•	
				4	11002004	Mag
	RETT SERVICE ST	ATION	VISTA ID		1203224	
Address*: 872	B NORWALK BLVD		Distance/		0.18 MI / W	1
WHI	TTIER, CA 90606		Plotted as	E .	Point	1
Regional LUST - F	Regional Leaking Und	erground Storage Tank /	Agency ID).	I-04174	·] [
SRC# 3104	• •					
Agency Address Tank Status:	:	BARRETT SERVICE STATION 8728 NORWALK BLVD LOS NIETOS, CA 90606 NOT AVAILABLE	V			
Discovery Date:		AUGUST 15, 1990				
Media Affected:		GROUNDWATER				
Substance:		GASOLINE (UNSPECIFIED)				
Leak Cause:		UNAVAILABLE				
Remedial Action	:	NOT AVAILABLE				
Remedial Status		PRELIMINARY ASSESSMEN	т			
Remedial Status	••	NOT AVAILABLE				
Fields Not Repo		Quantity (Units), Leak Source				
	e Underground Storag	e Tank / SRC# 1612	EPA/Age	ncy ID	N/A	
Agency Address		BARRETT SERVICE STATIO 8728 NORWALK LOS NIETOS, CA 90606	N			
Underground Ta		4				
Aboveground Ta		NOT REPORTED				
Tanks Removed		NOT REPORTED				
Tank ID:	10	Tank Statu	J.	ACTIVE/IN S	ERVICE	
Tank Contents:	LEADED GAS	Leak Moni		UNKNOWN		
Tank Age:	NOT REPORTED	Tank Pipin	-	BARE STEEL		
Tank Size (Units		Tank Mate		BARE STEEL		
Tank ID:	2U	Tank Statu		ACTIVEAN S	ERVICE	
Tank Contents:	LEADED GAS	Leak Moni	-	UNKNOWN		-
Tank Age:	NOT REPORTED	Tank Pipin	-	BARE STEEL		
Tank Size (Units		Tank Mate		BARE STEEL		
Tank ID:	3U	Tank Statu		ACTIVEAN S.	ERVICE	
Tank Contents:	LEADED GAS	Leak Moni		UNKNOWN		
Tank Age:	NOT REPORTED	Tank Pipin		BARE STEEL		
Tank Size (Units		Tank Mate		BARE STEEL		
Tank ID:		Tank Statu		ACTIVEAN S	ERVICE	
Tank Contents:	UNLEADED GAS	Leak Moni		UNKNOWN		
Tank Age:	NOT REPORTED	Tank Pipin		BARE STEEL		
Tank Size (Units		Tank Mate		BARE STEEL		
CORTESE / SRC#		BARRET STATION	EPA/Age		N/A	
Agency Address		8728 NORWALK BLVD WHITTIER, CA 90606 LEAKING TANK				
Site ID:		INV-ID19-001765				-



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	SITES IN THE SU	RROUNDING AREA (within	1/8 - 1/4 mile) CONT]
VISTA	BARRETT SERVICE S		VISTA ID#.	6478853	Map ID
Address*.	1		Distance/Direction:	0.18 MI / W	
Address .	8728 NORWALK BLVI)	Plotted as:	Point	- 10
	WHITTIER, CA 90606		1	1.04474	~
TATE LUST 056	F - State Leaking Undergro	ound Storage Tank / SRC#	Agency ID:	1-04174 ·	/ L
Agency Ad	dress:	BARRETT SERVICE STATIO	v	_1,	
Agenoj Ad		8728 NORWALK BLVD			ĺ
		LOS NIETOS, CA 90606 NOT AVAILABLE			
Tank Statu		GROUNDWATER			
Media Affe		GASOLINE (UNSPECIFIED)			
Substance:		UNAVAILABLE			
Leak Cause Remedial A		NOT AVAILABLE			
Remedial A		PRELIMINARY ASSESSMEN	т		
Remedial S		NOT AVAILABLE			
Remedial s Fields Not		Discovery Date Quantity (Uni	ts), Leak Source		
rielus ivol					
VISTA	C.F. PENG SERVICE	STATION	VISTA ID#:	2748870	Map IC
Address*.	8905 NORWALK BLV		Distance/Direction.	0.19 MI / W	
			Plotted as	Point	<u> </u>
TATELUC	SANTA FE SPRINGS,			1-02290	
056	I - State Leaking Undergro	ound Storage Tank / SRC#	Agency ID	1-02290	L
Agency Ad	Idross:	SAME AS ABOVE	<u> </u>		
Tank Statu		NOT AVAILABLE			
Media Affe		SOIL/SAND/LAND			
Substance		GASOLINE (UNSPECIFIED)			
Leak Caus	-	UNAVAILABLE			
Remedial A		NOT AVAILABLE			
Remedial S		PRELIMINARY ASSESSMEN	IT		-
Remedial S		NOT AVAILABLE			
Fields Not		Discovery Date, Quantity (Un	its), Leak Source		
Regional LL		derground Storage Tank /	Agency ID ⁻	1-02290	
SRC# 3104			<u> </u>		
Agency Ad	ldress:	C F PENG SERVICE STATIO 8905 NORWALK BLVD	JN .		
		SANTA FE SPRINGS, CA 90	670		
Tank Statu	IS:	NOT AVAILABLE			
Discovery	Date:	NOVEMBER 26, 1991			
Media Affe	ected:	SOIL/SAND/LAND			
Substance		GASOLINE (UNSPECIFIED)			
Leak Caus		UNAVAILABLE			
Remedial /		NOT AVAILABLE			
Remedial S		PRELIMINARYASSESSMEN	V I		
Remedial S	· · · · · · · · ·	NOT AVAILABLE			1
	Reported:	Quantity (Units), Leak Source			
	SRC# 2298	C F PENG SERVICE STATIO	EPA/Agency ID.	N/A	{
Agency Ad	laress:	8905 NORWALK BLVD			
		SANTA FE SPRINGS CA 90	670		
List Name:	:	LEAKING TANK			
Site ID:		INV-ID19-003372			



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	SITES IN THE SUR	ROUNDING AREA (within	1/8 - 1/4 mile) CONT	- •	
VISTA	NACHO'S BATTERIES		VISTA ID#.	4825493	Map ID
Address*:			Distance/Direction:	0.19 MI / W	
	8917 NORWALK CA 90606		Plotted as:	Point	_ 11A
	Atgn - LA County Site Mitig		Agency ID [.]	885003 -	
Agency Ad	dress:	SAME AS ABOVE			
Waste Nam	ie:	LEAD			1
Media Affe		SOIL			
Waste Nam		ACID			1
Media Affe		SOIL			
Log Numbe		882781			
Discovery l		JANUARY 14, 1988			{
Abate Date	:	SEPTEMBER 25, 1989			
State Statu		ABATED			
Description	n:	NO FOLLOW-UP REQUIRED)]
VISTA		C INC	VISTA ID#.	4497	Map ID
Address*.	ACI GLASS PRODUCT		Distance/Direction	0 20 MI / W	
Address .	9010 S NORWALK BLV		Plotted as	Point	11E
	SANTA FE SPRINGS, C				
	T - State Leaking Undergro	und Storage Tank / SRC#	Agency ID:	061390-02	
3056					
Agency Ad	dress:	ACI GLASS PRODUCTS INC 9010 S NORWALK BLVD			
		SANTA FE SPRI, CA 90670			
Tank Statu	s:	NOT AVAILABLE			
Media Affe	cted:	UNKNOWN			
Substance	:	GASOLINE (UNSPECIFIED)			
Leak Cause	e:	UNAVAILABLE			[
Remedial A	Action:	NOT AVAILABLE			
Remedial S	Status 1:	NO ACTION TAKEN BY RES	PONSIBLE PARTY		-
Remedial S		NOT AVAILABLE			-
Fields Not		Discovery Date, Quantity (Un	· · · · · · · · · · · · · · · · · · ·		
Regional LL SRC# 3104	JST - Regional Leaking Unc	lerground Storage Tank /	Agency ID	061390-02	
Agency Ad	dress:	ACI GLASS PRODUCTS INC	;		
		9010 S NORWALK BLVD SANTA FE SPRI, CA 90670			
Tank Statu	s:	NOT AVAILABLE			
Discovery	Date:	APRIL 19, 1990			
Media Affe		UNKNOWN			
Substance	:	GASOLINE (UNSPECIFIED)			
Leak Caus	e:	UNAVAILABLE			
Remedial A	Action:	NOT AVAILABLE			
Remedial S	Status 1:	NO ACTION TAKEN BY RES	PONSIBLE PARTY		
Remedial S		NOT AVAILABLE			
Fields Not		Quantity (Units), Leak Source			}
	- State Underground Stora		EPA/Agency ID	N/A	
Agency Ad	dress:	ACI GLASS 9010 S NORWALK SANTE FE SPRINGS, CA			
Undergrou	nd Tanks:	1			
Abovegrou		NOT REPORTED			
	noved:	NOT REPORTED			



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and a particular constraint of the Annales and a final constraint from the second state of the second state of the

		SITES IN THE SURROUNDIN	G AREA (within	1/8 - 1/4 m	ile) CONT			
		10	Tank Status		ACTIVEAN SE	RVICE	1	
Tank ID: Tank Conte	nter	REPORTED AS "UNKNOWN" BY	Leak Monito	•	UNKNOWN			
Tank Conte	1115.	AGENCY	Tank Piping	anng.	UNKNOWN			
Tank Age:		NOT REPORTED	Tank Materi		UNKNOWN			
Tank Size (NOT REPORTED (GALLONS)						
CORTESE /				EPA/Ager	ncy ID:	N/A]	
Agency Ade	dress:	9010 NG SANTA CALSITI	ASS PRODUCTS DRWALK BLVD S FE SPRINGS, CA 906 E 9-002528	70				
Site ID:]	
VISTA	TECH	NI-BRAZE INC		VISTA ID	¥:	418570		Map ID
Address*.		BURKE STREET		Distance/	Direction:	0.21 MI / NE		
	1	FE SPRINGS, CA 90670		Plotted as	5.	Point		12
SCI State		nt CERCLIS List / SRC# 2825		Agency ID	<u>.</u>	19340742		
Agency Ad			S ABOVE	Ingency IL		10040742	{	
Facility Typ		NOTAV	AILABLE					
Lead Agen		NOTAV	AILABLE					
State Statu		FORME	R ANNUAL WORKPL	AN SITE REF	ERRED TO R	WQCB		
Pollutant 1		GAS SC	RUBBER WASTE)	
Pollutant 2		PAINTS	SLUDGE					
Pollutant 3		PHOSP	HATE SLUDGE					
Fields Not		1: Status					{	
VISTA	ANGE	LES CHEMICAL COMPAN	IY INC	VISTA ID		22476		Map ID
Address*.	8915 S	ORENSEN AVENUE		Distance/		0 22 MI / E		40
	SANT	A FE SPRINGS, CA 90670)	Plotted as	S:	Point		13
SPL - State		nt Priority List / SRC# 2826		Agency I)	19290306		·
Agency Ad			AS ABOVE	L_V/	· <u> </u>	- •		•
Status:		NON-N	PL SITE					
Facility Typ	be:	NOTAL	/AILABLE					
Lead Agen	су:	DEPT	F TOXIC SUBSTANC	ES CONTROI	1			
State Statu	s:	ANNUA	L WORK PLAN					
Pollutant 1		UNKNC	WN					
Pollutant 2		UNKNC						
Pollutant 3		UNKNC		<u>, </u>				
	Γ - State	Leaking Underground Stora	ge Tank / SRC#	Agency I	D.	032091-02		
3056	<u> </u>			!				
Agency Ad Tank Statu		8915 S SANTA	ES CHEM CO INC DRENSEN AVE FE SPRI, CA 90670 /AILABLE					
Media Affe			IDWATER					
Leak Caus		UNAVA						
Remedial A			AILABLE					
Remedial S			NINARY ASSESSMEN	т				
Remedial S		NOTAL	AILABLE					
Fields Not		d: Discove	ery Date, Substance, Q	uantity (Units), Leak Sourc	e		

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	onal Leaking Undergroun	d Storage Tank /	Agency ID	032091-02
RC# 3104			l	
Agency Address:		LES CHEM CO INC SORENSEN AVE		
		A FE SPRI, CA 90670		-
Tank Status:	NOTA	VAILABLE		
Discovery Date:	MARC	CH 12, 1991		
Media Affected:	GROL	INDWATER		
Substance:	SOLV	ENTS		
Leak Cause:	UNAV	AILABLE		
Remedial Action:	NOTA	VAILABLE		
Remedial Status 1:	PREL	IMINARY ASSESSMEN	r	
Remedial Status 2:	NOT	AVAILABLE		
Fields Not Reported:	Quant	hty (Units), Leak Source		
	derground Storage Tank	/ SRC# 1612	EPA/Agency ID	N/A
Agency Address:	ANGE	LES CHEMICAL CO IN		
		SORENSEN		
Underground Tanks:		E FE SPRINGS, CA		
Aboveground Tanks		REPORTED		
Tanks Removed:		REPORTED		
Tank ID:	10	Tank Statu	S. ACTIVEAI	V SERVICE
Tank Contents:	REPORTED AS "UNKNOWN" BY	Leak Monit		
Tank Contents.	AGENCY	Tank Piping	onng.	
Tank Age:	NOT REPORTED	Tank Piping	J.	
Tank Size (Units):	NOT REPORTED (GALLONS)			
Tank ID:	20	Tank Statu	S: ACTIVEA	N SERVICE
Tank Contents:	REPORTED AS "UNKNOWN" BY	Leak Monit		VN
Tank Ago:	AGENCY NOT REPORTED	Tank Pipin	g: UNKNOW	VN
Tank Age: Tank Size (Unite):	NOT REPORTED (GALLONS)	Tank Mater	ial: UNKNOW	VN
Tank Size (Units): Tank ID:	3U	Tank Statu	CTIVE ACTIVE	N SERVICE
Tank Contents:	REPORTED AS "UNKNOWN" BY	Leak Monit		
	AGENCY	Tank Pipin		
Tank Age:	NOT REPORTED	Tank Piping	-	
Tank Size (Units):	NOT REPORTED (GALLONS)	rank water	Idi. 0111100	*/*
Tank ID:	4U	Tank Statu	S: ACTIVEA	NSERVICE
Tank Contents:	REPORTED AS "UNKNOWN" BY	Leak Monit	oring: UNKNOV	VN
Took Age	AGENCY	Tank Pipin		VN
Tank Age:	NOT REPORTED	Tank Mater	-	VN
Tank Size (Units): Tank ID:	NOT REPORTED (GALLONS)	Taul Of 1		N SERVICE
	REPORTED AS "UNKNOWN" BY	Tank Statu		
Tank Contents:	AGENCY	Leak Monit	ioning.	
Tank Age:	NOT REPORTED	Tank Pipin	9.	
Tank Size (Units):	NOT REPORTED (GALLONS)	Tank Mater		***
Tank ID:	6U	Tank Statu	S: ACTIVEA	NSERVICE
Tank Contents:	REPORTED AS "UNKNOWN" BY	Leak Monif	toring: UNKNOV	VN
Tonk Acres	AGENCY	Tank Pipin	-	VN
Tank Age:		Tank Mater	•	VN
Tank Size (Units):	NOT REPORTED (GALLONS)		A ~ TH //* -	
Tank ID:		Tank Statu	J .	N SERVICE
Tank Contents:	REPORTED AS "UNKNOWN" BY AGENCY	Ecal mont	-	
Tank Age:	NOT REPORTED	Tank Pipin		
Tank Size (Units):	NOT REPORTED (GALLONS)	Tank Mater	rial: UNKNOV	WN Contraction





* VISTA address includes enhanced city and ZIP. For more information call VISTA Information Solutions, Inc. at 1 - 800 - 767 - 0403. Report ID 113596-001 Date of Report September 3, 1996 Version 2 4 1 Page #47

	SITES IN THE SURROUNDING	AREA (within 1/8 - 1/4	mile) CONT.
Tank ID:	80	Tank Status:	ACTIVE/IN SERVICE
Tank Contents:	REPORTED AS "UNKNOWN" BY	Leak Monitoring:	UNKNOWN
	AGENCY	Tank Piping:	UNKNOWN
Tank Age:	NOT REPORTED	Tank Material:	UNKNOWN
Tank Size (Units):	NOT REPORTED (GALLONS)		
Tank ID:		Tank Status:	ACTIVEAN SERVICE
Tank Contents:	REPORTED AS "UNKNOWN" BY AGENCY	Leak Monitoring:	
Tank Age:	NOT REPORTED	Tank Piping:	
Tank Size (Units):	NOT REPORTED (GALLONS)	Tank Material:	UNKNOWN
Tank ID:	10U	Tank Status:	ACTIVEAN SERVICE
Tank Contents:	REPORTED AS "UNKNOWN" BY	Leak Monitoring:	UNKNOWN
	AGENCY	Tank Piping:	UNKNOWN
Tank Age:	NOT REPORTED	Tank Material:	UNKNOWN
Tank Size (Units):	NOT REPORTED (GALLONS)		
Tank ID:	110	Tank Status:	ACTIVEAN SERVICE
Tank Contents:	REPORTED AS "UNKNOWN" BY AGENCY	Leak Monitoring:	UNKNOWN
Tank Age:	NOT REPORTED	Tank Piping:	UNKNOWN
Tank Size (Units):	NOT REPORTED (GALLONS)	Tank Material:	UNKNOWN
Tank ID:	12U	Tank Status:	ACTIVE/IN SERVICE
Tank Contents:	REPORTED AS "UNKNOWN" BY	Leak Monitoring:	UNKNOWN
	AGENCY	Tank Piping:	UNKNOWN
Tank Age:	NOT REPORTED	Tank Material:	UNKNOWN
Tank Size (Units):	NOT REPORTED (GALLONS)		
Tank ID:	13U	Tank Status:	ACTIVEAN SERVICE
Tank Contents:	REPORTED AS "UNKNOWN" BY AGENCY	Leak Monitoring:	UNKNOWN
Tank Age:	NOT REPORTED	Tank Piping:	UNKNOWN
Tank Size (Units):	NOT REPORTED (GALLONS)	Tank Material:	UNKNOWN
Tank ID:	14U	Tank Status:	ACTIVEAN SERVICE
Tank Contents:	REPORTED AS "UNKNOWN" BY	Leak Monitoring:	UNKNOWN
	AGENCY	Tank Piping:	UNKNOWN
Tank Age:	NOTREPORTED	Tank Material:	UNKNOWN
Tank Size (Units):	NOT REPORTED (GALLONS)		
Tank ID:	150	Tank Status:	ACTIVEAN SERVICE
Tank Contents:	REPORTED AS "UNKNOWN" BY AGENCY	Leak Monitoring:	UNKNOWN
Tank Age:	NOT REPORTED	Tank Piping:	UNKNOWN
Tank Size (Units):	NOT REPORTED (GALLONS)	Tank Material:	UNKNOWN
Tank ID:	16Ü	Tank Status:	ACTIVEAN SERVICE
Tank Contents:	REPORTED AS "UNKNOWN" BY	Leak Monitoring:	UNKNOWN
	AGENCY	Tank Piping:	UNKNOWN
Tank Age:	NOT REPORTED	Tank Material:	UNKNOWN
Tank Size (Units):	NOT REPORTED (GALLONS)		
Tank ID:	17U	Tank Status:	ACTIVE/IN SERVICE
Tank Contents:	REPORTED AS "UNKNOWN" BY AGENCY	Leak Monitoring:	
Tank Age:	NOT REPORTED	Tank Piping:	
Tank Size (Units):	NOT REPORTED (GALLONS)	Tank Material:	UNKNOWN
Tank ID:	18U	Tank Status:	ACTIVEAN SERVICE
Tank Contents:	REPORTED AS "UNKNOWN" BY	Leak Monitoring:	UNKNOWN
Tank An	AGENCY	Tank Piping:	UNKNOWN
Tank Age:	NOT REPORTED	Tank Material:	UNKNOWN
Tank Size (Units):	NOT REPORTED (GALLONS)		



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SITES IN THE SURROUNDING AREA (within 1/8 - 1/4 mile) CONT.

Tank ID:	19U	Tank Status:	ACTIVEAN SERVICE
Tank Contents:	REPORTED AS "UNKNOWN" BY	Leak Monitoring:	UNKNOWN
T	AGENCY NOT REPORTED	Tank Piping:	UNKNOWN
Tank Age:	NOT REPORTED (GALLONS)	Tank Material:	UNKNOWN
Tank Size (Units):	20U	Tauli Chahuan	ACTIVEAN SERVICE
Tank ID:	REPORTED AS "UNKNOWN" BY	Tank Status:	UNKNOWN
Tank Contents:	AGENCY	Leak Monitoring:	UNKNOWN
Tank Age:	NOT REPORIED	Tank Piping: Tank Material:	UNKNOWN
Tank Size (Units):	NOT REPORTED (GALLONS)	Tank Material:	ONKNOWN
Tank ID:	210	Tank Status:	ACTIVEAN SERVICE
Tank Contents:	REPORTED AS "UNKNOWN" BY	Leak Monitoring:	UNKNOWN
	AGENCY	Tank Piping:	UNKNOWN
Tank Age:	NOT REPORTED	Tank Material:	UNKNOWN
Tank Size (Units):	NOT REPORTED (GALLONS)	Taralı Chahuar	ACTIVEAN SERVICE
Tank ID:		Tank Status:	
Tank Contents:	REPORTED AS "UNKNOWN" BY AGENCY	Leak Monitoring:	
Tank Age:	NOT REPORTED	Tank Piping:	UNKNOWN UNKNOWN
Tank Size (Units):	NOT REPORTED (GALLONS)	Tank Material:	UNKNOVIN
Tank ID:	230	Tank Status:	ACTIVEAN SERVICE
Tank Contents:	REPORTED AS "UNKNOWN" BY	Leak Monitoring:	UNKNOWN
1		Tank Piping:	UNKNOWN
Tank Age:		Tank Material:	UNKNOWN
Tank Size (Units):	NOT REPORTED (GALLONS)		ACTIVE AN SERVICE
Tank ID:		Tank Status:	ACTIVEAN SERVICE
Tank Contents:	REPORTED AS "UNKNOWN" BY AGENCY	Leak Monitoring:	
Tank Age:	NOT REPORTED	Tank Piping:	UNKNOWN UNKNOWN
Tank Size (Units):	NOT REPORTED (GALLONS)	Tank Material:	UNKNOWN
Tank ID:	250	Tank Status:	ACTIVEAN SERVICE
Tank Contents:	REPORTED AS "UNKNOWN" BY	Leak Monitoring:	UNKNOWN
Table A	AGENCY	Tank Piping:	UNKNOWN
Tank Age:		Tank Material:	UNKNOWN
Tank Size (Units):	NOT REPORTED (GALLONS)		ACTIVE AN SERVICE
Tank ID:		Tank Status:	ACTIVEAN SERVICE
Tank Contents:	REPORTED AS "UNKNOWN" BY AGENCY	Leak Monitoring:	UNKNOWN UNKNOWN
Tank Age:	NOT REPORTED	Tank Piping:	UNKNOWN
Tank Size (Units):	NOT REPORTED (GALLONS)	Tank Material:	CIALLACANIA
Tank ID:	270	Tank Status:	ACTIVEAN SERVICE
Tank Contents:	REPORTED AS "UNKNOWN" BY	Leak Monitoring:	UNKNOWN
Tank Amer	AGENCY	Tank Piping:	UNKNOWN
Tank Age:	NOT REPORTED NOT REPORTED (GALLONS)	Tank Material.	UNKNOWN
Tank Size (Units): Tank ID:	28U	Tank Statua	ACTIVEAN SERVICE
Tank Contents:	REPORTED AS "UNKNOWN" BY	Tank Status:	UNKNOWN
rank contents.	AGENCY	Leak Monitoring: Tank Piping:	UNKNOWN
Tank Age:	NOT REPORTED		UNKNOWN
Tank Size (Units):	NOT REPORTED (GALLONS)	Tank Material:	
Tank ID:	29U	Tank Status:	ACTIVEAN SERVICE
Tank Contents:	REPORTED AS "UNKNOWN" BY	Leak Monitoring:	UNKNOWN
Tonk Ann	AGENCY	Tank Piping:	UNKNOWN
Tank Age:	NOT REPORTED	Tank Material:	UNKNOWN
Tank Size (Units):	NOT REPORTED (GALLONS)		



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:	SITES IN THE SURROUNDING	GAREA (within 1/	8 - 1/4	mile) CONT.	
ank ID:	30U	Tank Status:	· · · · · · · · · · · · · · · · · · ·	ACTIVEAN SER	RVICE
ank Contents:	REPORTED AS "UNKNOWN" BY	Leak Monitori	ina:	UNKNOWN	
	AGENCY	Tank Piping:		UNKNOWN	
ank Age:	NOT REPORTED	Tank Material	:	UNKNOWN	
ank Size (Units):	NOT REPORTED (GALLONS)		·		-
ank ID:	310	Tank Status:		ACTIVEAN SEP	RVICE
ank Contents:	REPORTED AS "UNKNOWN" BY AGENCY	Leak Monitor	ing:	UNKNOWN	
ank Age:	NOT REPORTED	Tank Piping:		UNKNOWN	
ank Size (Units):	NOT REPORTED (GALLONS)	Tank Material	:	UNKNOWN	
ank ID:	320	Tank Status:		ACTIVEAN SEP	RVICE
ank Contents:	REPORTED AS "UNKNOWN" BY	Leak Monitor	ing:	UNKNOWN	
	AGENCY	Tank Piping:		UNKNOWN	
ank Age:		Tank Material	:	UNKNOWN	
ank Size (Units):	NOT REPORTED (GALLONS)			ACTIVE AL COS	21/105
ank ID:		Tank Status:	•	ACTIVEAN SEP	RVILE
ank Contents:	REPORTED AS "UNKNOWN" BY AGENCY	Leak Monitor	ing:	UNKNOWN	
ank Age:	NOT REPORTED	Tank Piping:	i	UNKNOWN	
ank Size (Units):	NOT REPORTED (GALLONS)	Tank Material	:	UNKNOWN	
ank ID:	340	Tank Status:		ACTIVEAN SEP	RVICE
ank Contents:	REPORTED AS "UNKNOWN" BY	Leak Monitor	ing:	UNKNOWN	
	AGENCY	Tank Piping:	0	UNKNOWN	
ank Age:	NOT REPORTED	Tank Materia	ł:	UNKNOWN	
ank Size (Units):	NOT REPORTED (GALLONS)		DA (A	10	
DRTESE / SRC# 22		S CHEMICAL COMPAN		ency ID	N/A
gency Address:		RENSEN AVE	IT NVC		
		E SPRINGS, CA 90670	1		
ist Name:	CALSITE				
ite ID:	INV-ID19-				
DRTESE / SRC# 22			PA/Ag	ency ID	N/A
gency Address:	-	S CHEMICAL CO RENSEN AVE			
		E SPRINGS, CA 90670)		
.ist Name:	LEAKING				
Site ID:	INV-ID -			·	
ISTA HHM			/ISTA I	D#	1160200
	ACHINE CO			e/Direction	1160309 0 22 MI / NW
00121	IORWALK BLVD	i-	Plotted		Point
	TER, CA 90606				
	nderground Storage Tank / S		PA/Ag	ency ID	N/A
Agency Address:		HINE CO			_
	8612 NO WHITTIE				
Inderground Tanks					
boveground Tanks		PORTED			
anks Removed:	NOT REF	PORTED			
ank ID:	10	Tank Status:		ACTIVEAN SE	RVICE
ank Contents:	REPORTED AS "UNKNOWN" BY	Leak Monitor		UNKNOWN	
	AGENCY	Tank Piping:	-	UNKNOWN	
ank Age:	NOT REPORTED	rank i ping.			

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		SITES IN THE SURR	DUNDING A	REA (within 1	/8 - 1/4 n	nile) CONT	•	
ISTA		NBERG AFB			VISTA ID	#.	5356622	Ma
ddress*:	4	ORENSEN S.				Direction'	0.23 MI/E	
	1		00070		Plotted a	S'	Point	1!
DIFOF		FE SPRINGS, CA	90070				N/A -	
ORTESE /			VANDENBER		EPA/Age			
gency Add	aress:		8815 SOREN	ISEN S. PRINGS, CA 9067	00000			
ite ID:			INV-ID19-007	/195				
ISTA	PI AS-1	TAL MFG CO			VISTA ID	#:	5718420	Ma
ddress*:	•			(Direction:	023 MI/E	[]
	1	SORENSEN AVE	00070	1	Plotted a		Point	1!
		FE SPRINGS, CA						
FATE LUST 156	- State I	_eaking Undergroun	d Storage T	ank / SRC#	Agency I	υ	R-22676	<u> </u>
gency Ad				ENSEN AVE TY, CA 90670			- 1	
Aedia Affe	cted:		SOIL/SANDA	LAND				
Substance	:		GASOLINE (UNSPECIFIED)				
eak Caus	e:		UNAVAILAB	LE				
Remedial A	Action:		EXCAVATE	DISPOSE				
Remedial S	Status 1:		CASE CLOS	ED/CLEANUP CO	MPLETE			
Remedial S			NOT AVAILA	BLE				
ields Not		l:	Discovery Da	ate, Quantity (Unit:	s), Leak Sou	nce		
		ional Leaking Under	rground Sto	rage Tank /	Agency I	D	R-22676	
Agency Ad Fank Statu				VSEN AVE S SPRINGS, CA 906	70			-
Discovery	Date:		AUGUST 8,	1995				
Media Affe			SOIL/SAND/	LAND				
Substance	:		GASOLINE	(UNSPECIFIED)				
_eak Caus	e:		UNAVAILAB	LE				
Remedial A	Action:		NOT AVAILA	ABLE				1
Remedial S	Status 1:		CASE CLOS	ED/CLEANUP CO	OMPLETE			
Remedial S	Status 2:		NOT AVAILA	ABLE				
Fields Not	Reported	1:	Quantity (Ur	nts), Leak Source				
VISTA	SO PA	CIFIC TRANS CO	,,			 D#:	4043436	M
Address*	1	ORENSON				Direction	0 24 MI/E	
	1		00670		Plotted a		Point	1
TATELIOT		A FE SPRINGS, CA			CDAVA			
		nderground Storage		TRANS CO	EPA/Age		N/A	L
Agency Ad	uress:		8834 SORE					
Undergrou	nd Tanks	5:	NOT REPOR					
Abovegrou	ind Tank		NOT REPOI	RTED				
Tanks Ren			NOT REPOI	RTED				1
Tank ID:		1U		Tank Status	5:	NOT AVAILA	BLE	
	ents:	NOT REPORTED		Leak Monit		UNKNOWN		
lank Conte								1
Fank Conte Fank Age:		NOT REPORTED		Tank Piping	1:	NOT AVAILA	BLE	

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				in 1/8 - 1/4 mile) CON	· · · · · · · · · · · · · · · · · · ·]
VISTA	CAL M	ESTERN PAINT CO		VISTA ID#.	15315	Map ID
Address*:		SLAUSON AVE		Distance/Direction	0.24 MI / NE	-11
Address .	1	A FE SPRINGS, CA	90670	Plotted as:	Point	- 16A
CERCLIS / S				EPA ID	CAD008300717 ·	
Agency Ad			SAME AS ABOVE			-
NPL Status			NOT A PROPOSED, CUR	RENT, OR DELETED NPL SIT	E	
Site Owner			UNKNOWN			
Lead Agen	•		NOT AVAILABLE			
Site Descri			NOT REPORTED			
Event Type		Lead Agency:	Event Status:	Start Date:	Completion Date:	
DISCOVERY		EPA FUND-FINANCED	UNKNOWN	NOT REPORTED	AUGUST 1, 1980	
PRELIMINAR) ASSESSMEN		STATE, FUND FINANCED	NO FURTER REMEDIAL ACTION PLANNED	MAY 1, 1984	OCTOBER 1, 1986	
Regional Cl	ERCLIS /	SRC# 2462	<u> </u>	EPA ID	CAD008300717	
Agency Ac			SAME AS ABOVE			7
Regional U		scription:				_
Regional Cl		SRC# 2462		EPA ID:	CAD008300717	<u> </u>
Agency Ac			SAME AS ABOVE	<u> </u>		
Regional L						
		SRC# 2462		EPA ID	CAD008300717	
Agency Ac			SAME AS ABOVE			
Regional L	Jtility Des	scription:	· <u> </u>			
Regional C	ERCLIS /	SRC# 2462		EPA ID	CAD008300717	
Agency Ac	dress:		SAME AS ABOVE			
Regional L	Jtility Des	scription:				_] -
INORGANICS		000//0400			10400000747	
		SRC# 2462	SAME AS ABOVE	EPA ID	CAD008300717	
Agency Ac			SAME AS ABOVE			_
Regional U	Juilty Des					_
		SRC# 2462		EPA ID	CAD008300717	-1
Agency Ad			SAME AS ABOVE			
Regional l		scription:		<u> </u>		
RCRA REGUL	LATED GEN	IERATOR- SEE NOTIFICATIO	N FILE			
Regional C	ERCLIS /	SRC# 2462		EPA ID	CAD008300717	
Agency Ad			SAME AS ABOVE			
Regional l	Utility De	scription:				
NOTIS 103(C)		0000				
		SRC# 2462	0446 46 400VG	EPA ID	CAD008300717	
Agency Ad		• • •	SAME AS ABOVE			_
Regional I		scription:				_
		SRC# 2462		EPA ID.	CAD008300717	
Agency A			SAME AS ABOVE			
Regional U		scription.			<u></u>	
UNDERGROU	UND TANK-4	TANKS 2000-8000 GAL EA	CONTAINGPAINT THINNEF	?		
Regional C	ERCLIS /	SRC# 2462		EPA ID	CAD008300717	-1
Agency Ad			SAME AS ABOVE			1
		scription:			·····	\neg

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DICE 00226

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egional CERCLIS			EPA ID:		CAD008300717	
Agency Address:		AS ABOVE				
Regional Utility De	scription: STES, PAINT SLUDGE, LATEX SLUDG	E SOLVENTS CLEAN			<u> </u>	
egional CERCLIS		ESULVENTS CLEAN	EPA ID.		CAD008300717	
Agency Address:		AS ABOVE				
Regional Utility De	scription:					
NG SLUDGE			· <u> </u>		,	
	ent CERCLIS List / SRC# 282		Agency I	D	19280375	
Agency Address:	11748 SANTA	VESTERN PAINTS SLAUSON AVENUE A FE SPRINGS, CA 906 WAILABLE	70			-
_ead Agency:		VAILABLE				{
State Status:		IRTHER ACTION FOR L	orsc			[
Pollutant 1:		WASTE				
Pollutant 2:	UNSP	ECIFIED SOLVENT MIX	TURES			
Pollutant 3:	UNKN	IOWN				
Fields Not Report	ed: Status					
	Underground Storage Tank /	SRC# 1612	EPA/Age	ency ID	N/A	
Agency Address:	11748	VESTERN PAINTS INC I E SLAUSON E FE SPRINGS, CA				
Jnderground Tan	<s: 4<="" td=""><td></td><td></td><td></td><td></td><td></td></s:>					
Aboveground Tan	ks: NOTF	REPORTED				
Tanks Removed:		REPORTED				
Tank ID:	1U	Tank Status		ACTIVE/IN SE	RVICE	
Tank Contents:	REPORTED AS "UNKNOWN" BY AGENCY	Leak Monite	-	UNKNOWN		1
Tank Age:	NOT REPORTED	Tank Piping		UNKNOWN		}
Tank Size (Units):	NOT REPORTED (GALLONS)	Tank Materi	ial:	UNKNOWN		Į
Tank ID:	2U	Tank Status	s:	ACTIVEAN SE	RVICE	
Tank Contents:	REPORTED AS "UNKNOWN" BY	Leak Monite	oring:	UNKNOWN		}
	AGENCY NOT REPORTED	Tank Piping		UNKNOWN		
Tank Age:		Tank Mater	ial:	UNKNOWN		
Tank Size (Units): Tank ID:	NOT REPORTED (GALLONS)	Tank Status		ACTIVEAN SE	RVICE	
Tank Contents:	REPORTED AS "UNKNOWN" BY	Leak Monit		UNKNOWN		
Gin Concins.	AGENCY	Tank Piping	•	UNKNOWN		
Tank Age:	NOTREPORTED	Tank Fiping	-	UNKNOWN		
Tank Size (Units):	NOT REPORTED (GALLONS)				·· <u>·</u> ·································	
Tank ID:		Tank Status		ACTIVEAN SE	ERVICE	
Tank Contents:	REPORTED AS "UNKNOWN" BY AGENCY	Leak Monit		UNKNOWN		1
Tank Age:	NOT REPORTED	Tank Piping		UNKNOWN		
Tank Size (Units):	NOT REPORTED (GALLONS)	Tank Mater	ial:	UNKNOWN		
			· · · · · · · · · · · · · · · · · · ·			
VISTA WES	TERN SCREW PRODUCT	`S #1	VISTA I		5357834	
Address*: 1177) SLAUSON AVE E.			e/Direction	0 24 MI / NE]
SAN	TA FE SPRINGS, CA 9067	0	Plotted a	as	Point	
ORTESE / SRC# 2			EPAVAg	ency ID	N/A	$\neg \neg$
Agency Address:	WEST	TERN SCREW PRODUC			······································	
) SLAUSON AVE E. 'A FE SPRINGS, CA 906	700000			1
List Name:	CALS					
Site ID:	INV-IC	019-020538				ł

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DICE 00227

UCTA	NUCOTO			VISTA ID#.	465500	Map
VISTA Address*	1	RN SCREW PROD		Distance/Direction:	0.24 MI / NE	
Address		11780 SLAUSON I		Plotted as:	Point	⁻ 16E
	SANTA I	FE SPRINGS, CA	90670	Flotted as.		
ERCLIS / S	RC# 2977			EPA ID.	CAD981401706 ·	
Agency Add	dress:		SAME AS ABOVE			
NPL Status:	:		NOT A PROPOSED, CUR	RENT, OR DELETED NPL SIT	E	
Site Owners	ship:		UNKNOWN			
Lead Agenc	•		NOT AVAILABLE			
Site Descrip			NOT REPORTED			
Event Type:		ead Agency:	Event Status:	Start Date:	Completion Date:	
DISCOVERY		STATE, FUND FINANCED	UNKNOWN	NOT REPORTED	SEPTEMBER 1, 1986	7
PRELIMINARY ASSESSMENT		STATE, FUND FINANCED	UNKNOWN	SEPTEMBER 1, 1986	JANUARY 1, 1987	
PRELIMINARY ASSESSMENT		EPA FUND-FINANCED	NO FURTER REMEDIAL ACTION PLANNED	NOT REPORTED	JANUARY 18, 1989	
Regional CE	RCLIS / SI	RC# 2462		EPA ID	CAD981401706	-
Agency Ado			SAME AS ABOVE			-1
Regional U		ription:		<u></u>	<u> </u>	-1
DRUMS, ABOV	E GROUND				······································	
Regional CE		RC# 2462		EPA ID	CAD981401706	
Agency Add	dress:		SAME AS ABOVE			
Regional UI	OFF BIN					
Regional CE		RC# 2462	04454045045	EPA ID	CAD981401706	
Agency Ado			SAME AS ABOVE			_
Regional U	tility Desc	ription:				_
OILY WASTE - Regional CE				EPA ID	CAD981401706	
Agency Add		110# 2402	SAME AS ABOVE			
Regional U		rintion:			·····	
OTHER - TRIM.	SOL DUPON	IT FREON 1, RECON 11				
Regional CE				EPA ID	CAD981401706	-1
Agency Ade			SAME AS ABOVE			-1
Regional U		ription:				-1
RCRA REG GE						
Regional CE	RCLIS / S	RC# 2462		EPA ID	CAD981401706	
Agency Ade	dress:		SAME AS ABOVE			7
Regional U	tility Desc	ription:				-1
CALIFORNIA 3						_
Regional CE		RC# 2462	04454045575	EPA ID	CAD981401706	
Agency Add		· · · · · · · · · · · · · · · · · · ·	SAME AS ABOVE			
Regional U	tility Desc	ription:				
		t CERCLIS List / SR	°# 2825	Agency ID	19340377	
Agency Ade			WESTERN SCREW PROL 11770 EAST SLAUSON A SANTA FE SPRINGS, CA	DUCTS#1 VENUE	10040077	
Facility Typ	be:		NOT AVAILABLE			
Lead Agend			NOT AVAILABLE			}
State Statu			REFERRED TO ANOTHE	RAGENCY		1
Pollutant 1:			UNSPECIFIED OIL CONT			
Pollutant 2:			HALOGENATED SOLVEN			
Pollutant 3:			UNSPECIFIED AQUEOUS			ł
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	SITES IN THE SURR		EA (within	1/8 - 1/4 r	nile) CONT	ſ.	
VISTA E.A			····-	VISTA ID	H.	3768036	Map
	. MENDOZA INC.				Direction:	0.24 MI / W	
110	74 PERKINS AVE.			Plotted a		Point	1'
	ITTIER, CA 90606] •
	ate Leaking Undergroun	d Storage Ta	nk / SRC#	Agency I	D:	1-16500 -	· [L
056		<u></u>		· —			
Agency Address	5:	E.A MENDOZA 11574 PERKIN					
		WHITTIER, CA]
Tank Status:		NOT AVAILABL	E				
Media Affected:		UNKNOWN					
Substance:		GASOLINE (UN	ISPECIFIED)				
Leak Cause:		UNAVAILABLE					ł
Remedial Action		NOT AVAILABL					
Remedial Statu		LEAK BEING C					
Remedial Status		NOT AVAILABL					
Fields Not Repo		Discovery Date					
	Regional Leaking Under	rground Stora	ige Tank /	Agency I	D.	1-16500	}
SRC# 3104				L		_ <u>_</u>	
Agency Addres	5:	E A MENDOZA 11574 PERKIN					
		WHITTIER, CA					
Tank Status:		NOT AVAILABL	E				
Discovery Date		MAY 5, 1992					
Media Affected		SOIL/SAND/LA	ND				1
Substance:		WASTE OIL					1
Leak Cause:		UNAVAILABLE					1
Remedial Actio		NOT AVAILABL					
Remedial Statu		PRELIMINARY		r			
Remedial Statu		NOT AVAILABI					
Fields Not Repo		Quantity (Units)					
	te Underground Storage			EPA/Age	ency ID	N/A	
Agency Addres	S:	E A MENDOZA 11574 PERKIN					
'		WHITTIER, CA					
Underground T	anks:	3					
Aboveground T		NOT REPORT					
Tanks Removed		NOT REPORT	ED			····	
Tank ID:	10		Tank Status	5;	CLOSED RE	EMOVED	
Tank Contents:	REPORTED AS "UNKNO		Leak Monit		UNKNOWN		
Tank Age:	AGENCY NOT REPORTED		Tank Piping		UNKNOWN		[
Tank Size (Unit		-	Tank Mater	ial:	UNKNOWN		
Tank ID:	20		Tank Status		CLOSED RE	MOVED	
Tank Contents:	REPORTED AS "UNKNO		Leak Monit		UNKNOWN		
	AGENCY		Tank Piping	•	BARE STEE	L	
Tank Age:	NOT REPORTED		Tank Mater	-	BARE STEE		1
Tank Size (Unit	······································						
Tank ID:	3U		Tank Statu		CLOSED RI	EMOVED	1
Tank Contents:	REPORTED AS "UNKNO AGENCY	•	Leak Monit	-	UNKNOWN		
Tank Age:	NOT REPORTED		Tank Piping	-	BARE STEE		
Tank Size (Unit		•	Tank Mater	ial:	BARE STEE	L	

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DICE 00229

SIT	ES IN THE SURROUNDING	G AREA (within	1/8 - 1/4 n	nile) CONT	· · · · · · · · · · · · · · · · · · ·	
CORTESE / SRC# 2298	····.		EPA/Age	ncy ID	N/A	j
Agency Address:	11574 P	NDOZA INC ERKINS AVE ER, CA 90601				
List Name: Site ID:		-003612			-	
Site ib.						l
VISTA MOBILE I	NSP SERVICE INC		VISTA ID		1161989	Map ID
Address*: 9110 DICE			· · · · · · · · · · · · · · · · · · ·	Direction:	0 25 MI / S	
SANTA FI	E SPRINGS, CA 90670		Plotted a	5:	Point	18A
	erground Storage Tank / S		EPA/Age	ncy ID	N/A	
Agency Address:	9110 Di	INSP SERVICE INC CÉ FE SPRINGS, CA				
Underground Tanks:	2					
Aboveground Tanks:		PORTED				
Tanks Removed:		PORTED				
Tank ID: 10		Tank Statu		ACTIVEAN SE	ERVICE	
Tank Contents.	EPORTED AS "UNKNOWN" BY GENCY	Leak Monit	0	UNKNOWN		
	DT REPORTED	Tank Piping	-	UNKNOWN		
	DT REPORTED (GALLONS)	Tank Mater	ial:	UNKNOWN		
Tank ID: 20	,	Tank Statu	5:	ACTIVEAN SE	RVICE	
rank oonenis.	EPORTED AS "UNKNOWN" BY	Leak Monit	oring:	UNKNOWN		
	GENCY DT REPORTED	Tank Piping	g:	UNKNOWN		1
Tank Age.	DT REPORTED (GALLONS)	Tank Mater	ial:	UNKNOWN		

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DICE 00230



SITES IN THE SURROUNDING AREA (within 1/4 - 1/2 mile)

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VISTA	DICE ROAD		VISTA ID#;	5435856	Map ID
Address*:	9165 DICE ROAD		Distance/Direction:	0.29 MI / S	
	SANTA FE SPRINGS, CA		Plotted as:	Point	7 18
MUDS / SI		<u> </u>	Agency ID.	4 190281NUR	
Agency Ad		SAME AS ABOVE		<u> </u>	-
	te Inventory System ID:	NOT REPORTED			
Facility Ty		Not reported			
	State Board Waste Discharger	NO			
System:					
Chapter 15	5 Facility:	NO			1
Solid Wast	te Assessment Test Facility:	YES			
Toxic Pits	Cleanup Act Facility:	NO			
RCRA Fac	•	NO			
	nt of Defense Facility:	NO			
Open To P		NO			
•	f Waste Management Units:	1			
Threat To	-	Not reported			
Complexit	v:	Not reported			
Facilty Sta		Not reported			
•	lature/Type):	NOT REPORTED			
•	lature/Type):	NOT REPORTED			
Rank:		11			
Enforcem	ents At Facility:	NO			
1	At Facility:	NO			

VISTA	DICE ROAD		VISTA ID#	4824476	Map ID
Address*	9165 DICE ROAD	n	Distance/Direction	0.29 MI/S	
	SANTA FE SPRI		Plotted as	Point	18
ounty SWL	F - County Solid Wa	iste Landfill / SRC# 2783	Agency ID	19-AI-5011	L
Agency Ad Facility Cla		DICE ROAD 9165 DICE ROAD SANTA FE SPRINGS, CA REGULAR LANDFILL	A .		
Facility Typ		SANITARY LANDFILL/LA	NDFILL		
Public Stat		CLOSED			
Solid Wast	e Status:	INACTIVE/CLOSED			ţ.
	nit Status:	INACTIVE			

VISTA Address*	DICE RD LOS NIE 9165 DICE RD SANTA FE SPRING		VISTA ID# Distance/Direction. Plotted as	121556 0 29 MI / S Point	Map ID 18
CERCLIS / S			EPA ID	CAD980884860	
Agency Ad	dress:	SAME AS ABOVE			
NPL Status	5:	NOT A PROPOSED, C	CURRENT, OR DELETED NPL SIT	E	
Site Owner	rship:	UNKNOWN			ł
Lead Agen	cy:	NOT AVAILABLE			
Site Descri	ption:	NOT REPORTED			



* VISTA address includes enhanced city and ZIP. For more information call VISTA Information Solutions, Inc. at 1 - 800 - 767 - 0403. Report ID 113596-001 Date of Report September 3, 1996 Version 2 4 1 Page #57

Event Type:	Lead Agency:	Event Status:	Start Date:	Completion Date:
DISCOVERY	STATE, FUND FINANCED	UNKNOWN	NOT REPORTED	JULY 1, 1985
PRELIMINARY	STATE. FUND FINANCED		JULY 1, 1985	JULY 1, 1986
ASSESSMENT				
PRELIMINARY ASSESSMENT	EPA FUND-FINANCED	NO FURTER REMEDIAL ACTION PLANNED	NOT REPORTED	FEBRUARY 22, 1989
Regional CERCLI	S / SRC# 2462		EPA ID	CAD980884860
Agency Address		SAME AS ABOVE		
Regional Utility	Description:			
OTHER RUBBISH, TH				
Regional CERCLI		SAME AS ABOVE	EPA ID	CAD980884860
Agency Address		JAME AS ABUVE		
Regional Utility	Description:			
Regional CERCLI	S/SRC# 2462		EPA ID	CAD980884860
Agency Address		SAME AS ABOVE		10//00000000000
Regional Utility				
CALIFORNIA 3012 SIT				····
Regional CERCLI	S / SRC# 2462		EPA ID	CAD980884860
Agency Address		SAME AS ABOVE		
Regional Utility	Description:			
NEW ERRIS SITE	0.400.000			
Regional CERCLI		SAME AS ABOVE	EPA ID	CAD980884860
Agency Address		SAME AS ABOVE	··	
Regional Utility	Description: DURING SUMMER '87 TO CHEC	CH ON CAMOLE RESULTS		
Regional CERCL	SI SRC# 2462	K UN SAMPLE RESULTS	EPA ID	CAD980884860
Agency Address		SAME AS ABOVE		
Regional Utility CLOSE OUT WHEN F	POSSIBLE (G101A)			
SCL - State Equiv	alent CERCLIS List / SR	C# 2825	Agency ID.	19490148
Agency Address	5:	DICE ROADLOS NIETOS 9165 DICE ROAD SANTA FE SPRINGS, CA		
Facility Type:		NOTAVAILABLE		
Lead Agency:		NOT AVAILABLE		
State Status:		NO FURTHER ACTION F		
Pollutant 1:		DRILLING MUD/CHEMIC		
Pollutant 2:		OTHER ORGANIC SOLID		
Pollutant 3:		UNSPECIFIED OIL CONT	AINING WASTE	
Fields Not Repo	rted:	Status		
VISTA MC	KESSON CHEMICAL			1188537

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VISTA	MCKESSON CHEMICAL	COMPANY	VISTA ID#	1188537	Map ID
Address*	9005 SORENSEN AVENU	E	Distance/Direction	0 26 MI / SE	
	SANTA FE SPRINGS, CA		Plotted as	Point	19
SPL - State F	Equivalent Priority List / SRC	¥ 2826	Agency ID	19280440	
Agency Add	dress:	SAME AS ABOVE			
Status:		NON-NPL SITE			
Facility Typ	e:	NOT AVAILABLE			
Lead Agend	cy:	DEPT OF TOXIC SUBSTAN	CES CONTROL		
State Statu	s:	ANNUAL WORK PLAN			
Pollutant 1:		TETRAETHYL LEAD SLUDO	GE		
Pollutant 2:		UNSPECIFIED SOLVENT M	IXTURES		
Pollutant 3:	:	HYDROCARBON SOLVENT	rs		



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SHESIN THE SUR		ithin 1/4 - 1/2 mile) CON1	·	ļ		
TATE LUST - State Leaking Undergro	und Storage Tank / Sl	RC# Agency ID:	R-02130			
056						
Agency Address:	MCKESSON CHEMICA					
	9005 SORENSEN AVE SANTA FE SPRI, CA 90		- /			
Tank Status:	NOT AVAILABLE					
Media Affected:	UNKNOWN			1		
Leak Cause:	UNAVAILABLE					
Remedial Action:	NOT AVAILABLE					
Remedial Status 1:	LEAK BEING CONFIRM	MED				
Remedial Status 1.	NOT AVAILABLE			ł		
• • • • • • • • • • • • • • • • • • • •		nce, Quantity (Units), Leak Sourc	o 3			
Fields Not Reported: Regional LUST - Regional Leaking Und			 IR-02130	ł		
•	lerground Storage Ta	INK / Agency ID	R-02150			
RC# 3104	MCKESSON CHEMICA		.l	ł		
Agency Address:	9005 SORENSON AVE					
	SANTA FE SPRINGS, (CA 90670				
Tank Status:	NOTAVAILABLE			Ì		
Discovery Date:	DECEMBER 11, 1995					
Media Affected:	UNKNOWN					
Leak Cause:		UNAVAILABLE				
Remedial Action:	NOT AVAILABLE					
Remedial Status 1:	LEAK BEING CONFIRI	LEAK BEING CONFIRMED				
Remedial Status 2:	NOT AVAILABLE					
Fields Not Reported:	Substance, Quantity (U	Inits), Leak Source				
CORTESE / SRC# 2298		EPA/Agency ID	N/A			
Agency Address:	MCKESSON CHEMICA					
	9005 SORENSEN AVE SANTA FE SPRINGS					
List Name:	CALSITE			1		
Site ID:	INV-ID19-029592					
		· · · · · · · · · · · · · · · · · · ·		J		
VISTA FOREMOST MCKESS	ON INC	VISTA ID#	156385			
Address*. 9005 SORENSEN AVE		Distance/Direction	0 26 MI / SE			
SANTA FE SPRINGS,		Plotted as	Point			
CERCLIS / SRC# 2977		EPA ID	CAD060395753	$\left\{ \right\}$		
	SAME AS ABOVE			+		
Agency Address: NPL Status:		URRENT, OR DELETED NPL SI	TE			
	UNKNOWN	STACHT, ON DELETED NEL SH				
Site Ownership:	NO DETERMINATION			1		
Lead Agency:						
Site Description:	NOT REPORTED	Start Detai	Completion Date	-		
Event Type: Lead Agency: DISCOVERY EPA FUND-FINANCE	Event Status:	Start Date: NOT REPORTED	Completion Date: AUGUST 1, 1980	4		
		NUTREFURIED	AUGUST 1, 1900			
PRELIMINARY STATE, FUND FINAN	CED UNKNOWN	MAY 1, 1984	AUGUST 1, 1984	-		
ASSESSMENT						
SCREENING SITE EPA FUND-FINANCEI INSPECTION	D UNKNOWN	NOT REPORTED	SEPTEMBER 1, 1986			
SCREENING SITE EPA FUND-FINANCE	D UNKNOWN	NOT REPORTED	SEPTEMBER 10, 1990	1		

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DICE 00233

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Agency Address: Regional CERCLIS / SRC Agency Address: Regional Utility Descrip OTHER CORROSIVE AND IGNI Regional CERCLIS / SRC Agency Address: Regional CERCLIS / SRC Agency Address: Regional Utility Descrip ACIDS Regional CERCLIS / SRC Agency Address: Regional CERCLIS / SRC Agency Address: Regional CERCLIS / SRC Agency Address: Regional CERCLIS / SRC	otion: ITABLE WASTES C# 2462 otion:	NO FURTER REMEDIAL ACTION PLANNED SAME AS ABOVE SAME AS ABOVE	IEPA ID:	OCTOBER 11, 1991 CAD060395753 CAD060395753
Agency Address: Regional Utility Descrip OTHER CORROSIVE AND IGNI egional CERCLIS / SRC Agency Address: Regional Utility Descrip FANKS egional CERCLIS / SRC Agency Address: Regional Utility Descrip ACIDS egional CERCLIS / SRC Agency Address: Regional Utility Descrip SOLVENTS egional CERCLIS / SRC	otion: ITABLE WASTES C# 2462 otion:			L
Agency Address: Regional Utility Descrip OTHER CORROSIVE AND IGNI egional CERCLIS / SRC Agency Address: Regional Utility Descrip FANKS egional CERCLIS / SRC Agency Address: Regional Utility Descrip ACIDS egional CERCLIS / SRC Agency Address: Regional Utility Descrip SOLVENTS egional CERCLIS / SRC	otion: ITABLE WASTES C# 2462 otion:		EPA ID:	CAD060395753
OTHER CORROSIVE AND IGNI egional CERCLIS / SRC Agency Address: Regional Utility Descrip TANKS egional CERCLIS / SRC Agency Address: Regional Utility Descrip ACIDS egional CERCLIS / SRC Agency Address: Regional Utility Descrip SOLVENTS egional CERCLIS / SRC	ITABLE WASTES C# 2462 Dtion:	SAME AS ABOVE	EPA ID:	CAD060395753
egional CERCLIS / SRC Agency Address: Regional Utility Descrip ANKS egional CERCLIS / SRC Agency Address: Regional Utility Descrip ACIDS egional CERCLIS / SRC Agency Address: Regional Utility Descrip SOLVENTS egional CERCLIS / SRC	C# 2462	SAME AS ABOVE	EPA ID:	CAD060395753
Agency Address: Regional Utility Descrip FANKS egional CERCLIS / SRC Agency Address: Regional Utility Descrip ACIDS egional CERCLIS / SRC Agency Address: Regional Utility Descrip SOLVENTS egional CERCLIS / SRC	otion:	SAME AS ABOVE	IEPA ID:	[CAD060395753
Regional Utility Descrip TANKS egional CERCLIS / SRC Agency Address: Regional Utility Descrip ACIDS egional CERCLIS / SRC Agency Address: Regional Utility Descrip SOLVENTS Regional CERCLIS / SRC	······	SAME AS ABOVE		
raNks egional CERCLIS / SRC Agency Address: Regional Utility Descrip ACIDS egional CERCLIS / SRC Agency Address: Regional Utility Descrip SOLVENTS egional CERCLIS / SRC	······	·····		
egional CERCLIS / SRC Agency Address: Regional Utility Descrip ACIDS egional CERCLIS / SRC Agency Address: Regional Utility Descrip SOLVENTS egional CERCLIS / SRC	C# 2462			
Agency Address: Regional Utility Descrip ACIDS egional CERCLIS / SRC Agency Address: Regional Utility Descrip SOLVENTS Regional CERCLIS / SRC	J# 2402		EPA ID:	CAD060395753
Regional Utility Descrip ACIDS egional CERCLIS / SRC Agency Address: Regional Utility Descrip SOLVENTS egional CERCLIS / SRC		SAME AS ABOVE		ICAD000393753
ACIDS egional CERCLIS / SRC Agency Address: Regional Utility Descrip SOLVENTS egional CERCLIS / SRC				- <u></u>
egional CERCLIS / SRC Agency Address: Regional Utility Descrip SOLVENTS Regional CERCLIS / SRC				
Agency Address: Regional Utility Descrip SOLVENTS Regional CERCLIS / SRO	C# 2462		EPA ID.	CAD060395753
Regional Utility Descrip solvents egional CERCLIS / SRO		SAME AS ABOVE		
SOLVENTS Regional CERCLIS / SRO	otion:			
				·····
	C# 2462		EPA ID	CAD060395753
Agency Address:		SAME AS ABOVE		
Regional Utility Descrip	ption:			
HAZARD TARGET GROUNDW				
egional CERCLIS / SRC	C# 2462		EPA ID	CAD060395753
Agency Address:	·····	SAME AS ABOVE		<u></u>
Regional Utility Descrip	ption:			
DRUMS, ABOVE GROUND Regional CERCLIS / SRO	C# 2462	· · · · · · · · · · · · · · · · · · ·	IEPA ID	CAD060395753
Agency Address:	G# 2402	SAME AS ABOVE		ICAD000393733
Regional Utility Descrip				
RCRAREGULATED GENERA	TOR TRANSPORTER	(NON HANDLER) SEE NOTI		
Regional CERCLIS / SR		1	EPA ID	CAD060395753
Agency Address:		SAME AS ABOVE		
Regional Utility Descrip	ption:			
ATIONFILE				
Regional CERCLIS / SRO	C# 2462		EPA ID	CAD060395753
Agency Address:		SAME AS ABOVE		
Regional Utility Descrip	ption:	······································		

SITES IN THE SURROUNDING AREA (within 1/4 - 1/2 mile) CONT.

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SITES IN THE SURROUNDING AREA (within 1/4 - 1/2 mile) CONT.

CORRACTS / SRC# 3057	EPA		CAD060395753
Agency Address:	FOREMOST MCKESSON INC CHEM 9005 SORENSON AVE SANTA FE SPRINGS, CA 90670	M DIV	
Prioritization Status:	MEDIUM		-
RCRA Facility Assessment Completed:	YES	,	
Notice of Contamination:	NO		
Determination of need For a RFI (RCRA	NO		
Facility Investigation):			
RFI Imposed:	YES		
RFI Workplan Notice of Deficiency Issued:	NO		
RFI Workplan Approved:	NO		
RFI Report Received:	NO		
RFI Approved:	YES		
No Further Corrective Action at this	NO		
Time:			
Stabilization Mesaures Evaluation:	YES		
CMS (Corrective Measure Study)	YES		
Imposition:			
CMS Workplan Approved:	NO		
CMS Report Received:	NO		
CMS Approved:	YES		
Date for Remedy Selection (CM Imposed):	YES		
Corrective Measures Design Approved:	YES		
Corrective Measures Investigation	YES		
Workplan Approved:			
Certification of Remedy Completion:	NO		
Stabilization Measures Implementation:	YES		
Stabilization Measures Completed:	YES		
Corrective Action Process Termination:	NO		
RCRA-TSD / SRC# 3057		A 1D	CAD060395753
Agency Address:	FOREMOST MCKESSON INC CHE 9005 SORENSON AVE SANTA FE SPRINGS, CA 90670	MDIV	
Off-Site Waste Received:	NO		
Land Disposal:	NO		
Incinerator:	NO		
Storage/Treatment:	NO		



DICE 00235

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	SITES IN THE SURRO	UNDING AREA (within	1/4 - 1/2 mile) CONT	•	
VISTA	PETERSON/PURITAN INC	•	VISTA ID#:	327119	Map 10
Address*.		•	Distance/Direction:	0.31 MI / SE	-11 '
	9101 S SORENSEN AVE	~~~~~	Plotted as:	Point	19
<u></u>	SANTA FE SPRINGS, CA				
	- State Leaking Underground	Storage Tank / SRC#	Agency ID:	906700016C	, [
3056 Agency Ad	drocc:	PETERSON/PURITAN INC	}	<u>}</u>	
Agency Au	uless.	9101 S SORENSEN AVE			
		SANTA FE SPRI, CA 90670			
Tank Statu		NOT AVAILABLE			
Media Affe	cted:	SOIL/SAND/LAND			
Substance:		SOLVENTS			
Leak Cause		UNAVAILABLE			
Remedial A	ction:	NOT AVAILABLE			
Remedial S	itatus 1:	CASE CLOSED/CLEANUP C	OMPLETE		
Remedial S	itatus 2:	NOT AVAILABLE			
Fields Not		Discovery Date, Quantity (Uni			
	ST - Regional Leaking Underg	round Storage Tank /	Agency ID	906700016	
SRC# 3104			<u> </u>		
Agency Ad	dress:	PETERSON/PURITAN INC 9101 SORENSEN AVE S			
		SANTA FE SPRINGS, CA 900	570		
Tank Statu	5:	NOT AVAILABLE			
Discovery	Date:	FEBRUARY 20, 1985			
Media Affe		SOIL/SAND/LAND			
Substance		SOLVENTS			
Leak Cause	е:	UNAVAILABLE			
Remedial A	Action:	NOT AVAILABLE			1
Remedial S	Status 1:	CASE CLOSED/CLEANUP C	OMPLETE		
Remedial S	Status 2:	NOT AVAILABLE			
Fields Not	Reported:	Quantity (Units), Leak Source	•		
VISTA	SHELL STATION NO 204	9459 4000	VISTA ID#	377479	Map IC
Address*		-0400-1000	Distance/Direction	0 27 MI / NW	
	11515 E SLAUSON		Plotted as	Point	20
1	WHITTIER, CA 90604				
3056	T - State Leaking Underground	d Storage Tank / SRC#	Agency ID	1-05612	
Agency Ad	dress:	SAME AS ABOVE			
Tank Statu	s:	NOT AVAILABLE			
Media Affe	cted:	GROUNDWATER			
Substance		GASOLINE (UNSPECIFIED)			
Leak Caus		UNAVAILABLE			ļ
Remedial A		EXCAVATE DISPOSE			
Remedial S		MONITORING			
Remedial S		NOT AVAILABLE			
Fields Not	Reported:	Discovery Date, Quantity (Un	its), Leak Source		



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	SITES	N THE SURROUNDING AREA (within 1/4 - 1/2 mile) CONT.	
egional LUS RC# 3104	ST - Regional L	eaking Underground Storage Tank / Agency ID. I-05612]
Agency Add	lress:	SHELL #204-8454-1600 11515 SLAUSON AVE E WHITTIER, CA 90606	
Tank Status	:	NOT AVAILABLE	1
Discovery D	-	APRIL 1, 1993	
Aedia Affec		GROUNDWATER	
Substance:		GASOLINE (UNSPECIFIED)	
eak Cause	:	UNAVAILABLE	
Remedial A		NOTAVAILABLE	
Remedial St		MONITORING	
Remedial St		NOT AVAILABLE	}
Fields Not F		Quantity (Units), Leak Source	
ORTESE / S		EPA/Agency ID N/A	-1
Agency Add	·······	SHELL # 11515 SLAUSON WHITTIER, CA 90604	
List Name:		LEAKING TANK	
Site ID:		INV-ID 19-002048	
VISTA	CIRCLE K C	ORPORATION VISTA ID#. 2749552	Ma
Address*	11462 SLAU	SON AVENUE E. Distance/Direction 0.32 MI / NW	
		PRINGS, CA 90670 Plotted as Point	2
TATELUST		g Underground Storage Tank / SRC# Agency ID 000312	
056	- Duite Leanin		
Agency Add	tress:	SAME AS ABOVE	-
Tank Status		NOT AVAILABLE	
Media Affec	•	UNKNOWN	
Substance:		GASOLINE (UNSPECIFIED)	
Leak Cause		UNAVAILABLE	
Remedial A		NOTAVAILABLE	
Remedial S		NO ACTION TAKEN BY RESPONSIBLE PARTY	
Remedial S		NOT AVAILABLE	
Fields Not F		Discovery Date, Quantity (Units), Leak Source	
		eaking Underground Storage Tank / Agency ID. 000312	
RC# 3104			
Agency Add	dress:	CIRCLE K	1
		11462 SLAUSON AVE E	}
Tank Status		SANTA FE SPRINGS, CA 90670 NOT AVAILABLE	1
Discovery [JUNE 24, 1986	
Media Affec		UNKNOWN	
Substance:		GASOLINE (UNSPECIFIED)	
Leak Cause		UNAVAILABLE	1
Lean Cause	-	NOT AVAILABLE	
Ramadial A			1
Remedial A	tatue 1:	NO ACTION TAKEN BY RESPONSIBLE PARTY	t
Remedial A Remedial S Remedial S		NO ACTION TAKEN BY RESPONSIBLE PARTY NOT AVAILABLE	i i



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	SITES IN THE	SURROUNDING AREA (within	1/4 - 1/2 mile) CONT	: 	
VISTA	CALAVAR CORP	·	VISTA ID#.	65745	Map ID
Address*:	9200 SORENSEN	۵VE	Distance/Direction	0.36 MI / SE	
	SANTA FE SPRING		Plotted as:	Point	21
		erground Storage Tank / SRC#	Agency ID:	1-06744 -	
)56		CALAVAR CORP	l	<u> </u>	
Agency Ad		9200 SORENSEN AVE SANTA FE SPRI, CA 90670 NOT AVAILABLE			
Media Affe	cted:	SOIL/SAND/LAND			ł
Substance		GASOLINE (UNSPECIFIED)			
Leak Cause		UNAVAILABLE			
Remedial A		NOT AVAILABLE			1
Remedial S		PRELIMINARY ASSESSMEN	т		
Remedial S		NOT AVAILABLE			
Fields Not		Discovery Date, Quantity (Uni	ts), Leak Source		
		g Underground Storage Tank /	Agency ID	1-06744	_
Agency Ad	dress:	CALAVAR CORP. 9200 SORENSEN AVE S SANTA FE SPRINGS, CA 900	570	1	
Tank Statu		NOT AVAILABLE			
Discovery		APRIL 29, 1992			
Media Affe	cted:	SOIL/SAND/LAND			
Substance: GASOLINE (UNSPECIFIED)					
Leak Caus		UNAVAILABLE			
Remedial A	Remedial Action: NOT AVAILABLE				
Remedial S		PRELIMINARY ASSESSMEN	IT		1
Remedial S	Status 2:	NOT AVAILABLE			
Fields Not	Reported:	Quantity (Units), Leak Source			
ORTESE /			EPA/Agency ID	N/A	
Agency Ad		CALAVAR CORP. 9200 SORENSEN AVE S SANTA FE SPRINGS, CA 900 LEAKING TANK	670		
Site ID:		INV-ID19-003566			
one ib.					
VISTA	TUBE SERVICE C	OMPANY	VISTA ID#	1237432	Map IC
Address*.	9351 SO, NORWA		Distance/Direction	0 38 MI / SW	
	SANTA FE SPRIN		Plotted as	Point	22
STATE LUST - State Leaking Underground Storage Tank / SRC#		Agency ID	I-10296		
Agency Ad	dress:	TUBE SERVICE COMPANY			
		9351 SO NORWALK BLVD SANTA FE SPRI, CA 90670			
Tank Statu		NOT AVAILABLE			
Media Affe		SOIL/SAND/LAND			
Substance		GASOLINE (UNSPECIFIED)			
Leak Caus		UNAVAILABLE			
Remedial A		NO ACTION TAKEN			
Remedial S		NO ACTION TAKEN BY RES	PONSIBLE PARTY		
Remedial S		NOT AVAILABLE			1
Fields Not	Reported:	Discovery Date, Quantity (Un	its), Leak Source		

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SITES IN THE SURRO	UNDING AREA (within	n 1/4 - 1/2 mile) CON	Г.
egional LUST - Regional Leaking Underg RC# 3104	round Storage Tank /	Agency ID	I-10296
Agency Address:	TUBE SERVICE COMPANY 9351 NORWALK BLVD S	, 1	
	SANTA FE SPRINGS, CA 90	0670	- ,
fank Status:	NOT AVAILABLE		
Discovery Date:	FEBRUARY 2, 1995		
Media Affected:	SOIL/SAND/LAND		
Substance:	GASOLINE (UNSPECIFIED)		
_eak Cause:	UNAVAILABLE NOT AVAILABLE		
Remedial Action:	CASE CLOSED/CLEANUP		
Remedial Status 1: Remedial Status 2:	NOT AVAILABLE		
Fields Not Reported:	Quantity (Units), Leak Source	e	
Telus Not Reported.			
VISTA FINE LINE PAINT CORP	· · · · · · · · · · · · · · · · · · ·	VISTA ID#:	151703
Address* 12200 LOS NIETOS RD		Distance/Direction	0 42 MI / S
SANTA FE SPRINGS, CA	90670	Plotted as:	Point
ERCLIS / SRC# 2977		EPA ID	CAD008263048
Agency Address:	SAME AS ABOVE	<u></u>	
NPL Status:	NOT A PROPOSED, CURR	ENT, OR DELETED NPL SI	ſE
Site Ownership:	UNKNOWN		
Lead Agency:	NO DETERMINATION		
Site Description:	NOT REPORTED		
Event Type: Lead Agency:	Event Status:	Start Date:	Completion Date:
DISCOVERY STATE, FUND FINANCED		NOTREPORTED	JULY 1, 1986
RELIMINARY STATE, FUND FINANCED	UNKNOWN	JULY 1, 1986	JANUARY 1, 1987
ASSESSMENT			
SCREENING SITE EPA FUND-FINANCED NSPECTION	NO FURTER REMEDIAL ACTION PLANNED	NOT REPORTED	JULY 1, 1988
egional CERCLIS / SRC# 2462		EPA ID	CAD008263048
Agency Address:	SAME AS ABOVE		
Regional Utility Description:			
CALIFORNIA 3012 SITE			
Regional CERCLIS / SRC# 2462	SAME AS ABOVE	EPA ID	CAD008263048
Agency Address: Regional Utility Description:			
Regional Utility Description: RCRA REGULATED GEN			
Regional CERCLIS / SRC# 2462		EPA ID	CAD008263048
Agency Address:	SAME AS ABOVE		
Regional Utility Description:			
DRUMS, ABOVE GROUND			
Regional CERCLIS / SRC# 2462	SAME AS ABOVE	EPA ID	CAD008263048
Agency Address:			
Regional Utility Description: UNDERGROUND TANK- SOLVENTS 3 EA			
egional CERCLIS / SRC# 2462		EPA ID	CAD008263048
Agency Address:	SAME AS ABOVE		
Regional Utility Description:		······	······································
UNDERGROUND TANKS- OTHER 2 EA, RAW MATER	IALS STORAGE		
Regional Utility Description: UNDERGROUND TANKS- OTHER 2 EA, RAW MATER Regional CERCLIS / SRC# 2462		EPA ID	CAD008263048
UNDERGROUND TANKS- OTHER 2 EA, RAW MATER	SAME AS ABOVE	EPA ID	CAD008263048

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SITES IN THE SURROUNDING AREA (within 1/4 - 1/2 mile) CONT.

			······································
Regional CERCLIS / SRC# 2462		EPA ID	CAD008263048
Agency Address:	SAME AS ABOVE		
Regional Utility Description:			
SOLVENTS			
Regional CERCLIS / SRC# 2462		EPA ID.	CAD008263048
Agency Address:	SAME AS ABOVE		
Regional Utility Description:			
ORGANICS WASH THINNER PAINT SLUDGE			
Regional CERCLIS / SRC# 2462	2445 40 4001/5	EPA ID	CAD008263048
Agency Address:	SAME AS ABOVE		
Regional Utility Description:			
NEW CERCLIS SITE Regional CERCLIS / SRC# 2462		EPA ID	CAD008263048
	SAME AS ABOVE		ICAD008283048
Agency Address:			·····
Regional Utility Description: SOIL CONTAMINATION WASTEWATER DISCHAI	CE NONC PAU POAD TRACKS		
Regional CERCLIS / SRC# 2462	RGE ALONG RAILROAD TRACKS-	EPA ID	CAD008263048
Agency Address:	SAME AS ABOVE		10/1000200040
Regional Utility Description:		·······	
CONTAINING THANIUM			
Regional CERCLIS / SRC# 2462		EPA ID	CAD008263048
Agency Address:	SAME AS ABOVE	· · · · · · · · · · · · · · · · · · ·	
Regional Utility Description:			
SOIL CONTAMINATION (CONTINUED) WASTEW	ATER CONTAIN-ING CHROMIUM,		
Regional CERCLIS / SRC# 2462		EPA ID	CAD008263048
Agency Address:	SAME AS ABOVE		
Regional Utility Description:			
CADMIUM, LEAD MERCURY			
SCL - State Equivalent CERCLIS List /		Agency ID.	19280908
Agency Address:	FINE LINE PAINT CORPOR 12200 LOS NIETOS ROAD	ATION	
	SANTA FE SPRINGS, CA 9	0670	
Facility Type:	NOT AVAILABLE		
Lead Agency:	NOTAVAILABLE		
State Status:	REFERRED TO ANOTHER	AGENCY	
Pollutant 1:	LEAD		
Pollutant 2:	CHROMIUM (VI)		
Pollutant 3:	CONTAMINATED SOIL		
Fields Not Reported:	Status		
STATE LUST - State Leaking Undergro	ound Storage Tank / SRC	# Agency ID	1-07632
3056	sund otorage runn ortor		1 07 002
Agency Address:	SAME AS ABOVE	_1	
Tank Status:	NOT AVAILABLE		
Media Affected:	GROUNDWATER		
Substance:	GASOLINE (UNSPECIFIED))	
Leak Cause:	UNAVAILABLE		
Remedial Action:	NOT AVAILABLE		
Remedial Status 1:	CASE CLOSED/CLEANUP	COMPLETE	
Remedial Status 2:	NOT AVAILABLE		
		nitel Leek Source	
Fields Not Reported:	Discovery Date, Quantily (U	IIIISI, LEAK SOUICE	



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	SITES IN THE S	URROUNDING AREA (within	1/4 - 1/2 mile) CON1	ſ.	
RC# 3104	ST - Regional Leaking I	Inderground Storage Tank /	Agency ID [.]	1-07632	
Agency Ad	dress:	FINELINE PAINT CORP. 12200 LOS NIETOS RD E SANTA FE SPRINGS, CA 906	570	· · · ·	
Tank Statu:	5:	NOT AVAILABLE			
Discovery I		FEBRUARY 25, 1992			
Media Affe		GROUNDWATER			
Substance		GASOLINE (UNSPECIFIED)			
Leak Cause		UNAVAILABLE			
Remedial A		NOT AVAILABLE			
Remedial S		CASE CLOSED/CLEANUP C	OMPLETE		{
Remedial S		NOT AVAILABLE			1
Fields Not		Quantity (Units), Leak Source			
ORTESE /		FINELINE PAINT CORP.	EPA/Agency ID.	N/A	
Agency Ad		FINELINE PAINT CORP. 12200 LOS NIETOS RD E. SANTA FE SPRINGS, CA 900 LEAKING TANK	570		
Site ID:		INV-ID19-003468			
	~·				
VISTA	CALIFORNIA CORR	UGATED	VISTA ID#.	4032431	Maj
Address*:	11600 LOS NIETOS		Distance/Direction	0 43 MI / W	- 0
	SANTA FE SPRING	S, CA 90670	Plotted as	Point	<u> </u>
	T - State Leaking Under	ground Storage Tank / SRC#	Agency ID	1-03283	
056					
Agency Ad Tank Statu		CALIFORNIA CORRUGATED 11600 E LOS NIETOS SANTE FE SPRINGS, CA 900 NOT AVAILABLE			
Media Affe		SOIL/SANDALAND			1
Substance		HYDROCARBONS			-
Leak Caus		UNAVAILABLE			ł
Remedial A		OTHER			
Remedial S		LEAK BEING CONFIRMED			
Remedial S		NOT AVAILABLE			
Fields Not		Discovery Date, Quantity (Uni	its), Leak Source		ļ
		Underground Storage Tank /	Agency ID	1-03283	
Agency Ad		CALIFORNIA CORRUGATEL 11600 LOS NIETOS RD E SANTA FE SPRINGS, CA 900			
Tank Statu		NOT AVAILABLE			i
Discovery		JUNE 17, 1993			
Media Affe		SOIL/SAND/LAND			
Substance	-	HYDROCARBONS			
Leak Caus		UNAVAILABLE			
Remedial A		NOT AVAILABLE			
Remedial S		LEAK BEING CONFIRMED			
Remedial S		NOT AVAILABLE			
Fields Not		Quantity (Units), Leak Source			
	SRC# 2298		EPA/Agency ID	N/A	
Agency Ad		CALIFORNIA CORRUGATEL 11600 LOS NIETOS RD E SANTA FE SPRINGS, CA 900			1
List Name: Site ID:		LEAKING TANK			
		INV-ID19-003907			

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Tank / SRC#	VISTA ID#: Distance/Direc Plotted as:	Point 19340340 1158976	, 2:
BLE BLE TO ANOTHER A To ANOTHER A Tank / SRC# M COMPANY ISEN PRI, CA 90670 BLE	Distance/Direc Plotted as: Agency ID: GENCY VISTA ID#: Distance/Direc Plotted as:	tion: 0 46 MI / N Point 19340340 tion 1158976 0 47 MI / S Point	E 2
BLE BLE TO ANOTHER A To ANOTHER A Tank / SRC# M COMPANY ISEN PRI, CA 90670 BLE	Plotted as: Agency ID: GENCY VISTA ID#: Distance/Direc Plotted as:	Point 19340340 19340340 19340340 19340340 19340340 19340340 19340340 19340340 19340340 19340340 19340340	, 2:
BLE BLE TO ANOTHER A To ANOTHER A Tank / SRC# M COMPANY ISEN PRI, CA 90670 BLE	GENCY VISTA ID#: Distance/Direc Plotted as:	1158976 tion 0 47 Mi / S Point	,
BLE BLE TO ANOTHER A To ANOTHER A Tank / SRC# M COMPANY ISEN PRI, CA 90670 BLE	GENCY VISTA ID#: Distance/Direc Plotted as:	1158976 tion 0 47 Mi / S Point	
BLE BLE TO ANOTHER A To ANOTHER A Tank / SRC# M COMPANY ISEN PRI, CA 90670 BLE	VISTA ID#: Distance/Direc Plotted as:	tion 0 47 MI / S Point	E .
BLE TO ANOTHER A ank / SRC# M COMPANY ISEN PRI, CA 90670 BLE	VISTA ID#: Distance/Direc Plotted as:	tion 0 47 MI / S Point	E .
TO ANOTHER A	VISTA ID#: Distance/Direc Plotted as:	tion 0 47 MI / S Point	E .
ank / SRC# M COMPANY ISEN PRI, CA 90670 BLE	VISTA ID#: Distance/Direc Plotted as:	tion 0 47 MI / S Point	E .
M COMPANY ISEN PRI, CA 90670 BLE	Distance/Direc Plotted as:	tion 0 47 MI / S Point	E .
M COMPANY ISEN PRI, CA 90670 BLE	Distance/Direc Plotted as:	tion 0 47 MI / S Point	E .
M COMPANY ISEN PRI, CA 90670 BLE	Distance/Direc Plotted as:	tion 0 47 MI / S Point	E .
M COMPANY ISEN PRI, CA 90670 BLE	Distance/Direc Plotted as:	tion 0 47 MI / S Point	E .
M COMPANY ISEN PRI, CA 90670 BLE	Distance/Direc Plotted as:	tion 0 47 MI / S Point	E .
M COMPANY ISEN PRI, CA 90670 BLE	Distance/Direc Plotted as:	tion 0 47 MI / S Point	E .
M COMPANY ISEN PRI, CA 90670 BLE	Plotted as:	Point	2
M COMPANY ISEN PRI, CA 90670 BLE			
M COMPANY ISEN PRI, CA 90670 BLE	Agency ID	1-006134-	
NSEN PRI, CA 90670 BLE			
-			
LE			
BLE			
ED/CLEANUP C	OMPLETE		
BLE			
	its), Leak Source		
orage Tank /		1-06134	
	670		
3, 1330			
10			
BLE			
EDICI EANUIO C	UNIFLEIE		
ED/CLEANUP C			1
S A I B	SPRINGS, CA 90 ABLE 7 9, 1990 1 BLE ABLE	SPRINGS, CA 90670 ABLE (9, 1990 I BLE	SPRINGS, CA 90670 ABLE 7 9, 1990 1 BLE ABLE SED/CLEANUP COMPLETE

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		SITES IN THE SURRO	OUNDING AREA (within	1/4 - 1/2 mile) CONT	·]
VISTA		LINE OIL CO		VISTA ID#.	450897	Map IC
Address*:		DHN ST		Distance/Direction	0.47 MI / SE	·]]
		FE SPRINGS, CA	90670	Plotted as	Point	27
TATE LUS			d Storage Tank / SRC#	Agency ID.	1-03240 - •	┨└────
056						
Agency Ad	dress:		VALVOLINE OIL COMPANY 9520 JOHN ST			
			SANTA FE SPRI, CA 90670			
Tank Statu	s:		NOTAVAILABLE			
Media Affe			GROUNDWATER			
Substance			DIESEL			
Leak Cause			UNAVAILABLE			
Remedial A			EXCAVATE DISPOSE			1
Remedial S			REMACTION TAKEN			
Remedial S	Status 2:		NOTAVAILABLE			
Fields Not		•	Discovery Date, Quantity (Un	Discovery Date, Quantity (Units), Leak Source		
•	IST - Reg	ional Leaking Under	ground Storage Tank /	Agency ID	1-03240	
Agency Ad	drace.		VALVOLINE OIL COMPANY			-
Agency Ad	uicss.		9520 JOHN ST S			
			SANTA FE SPRINGS, CA 90	670		
Tank Statu			NOT AVAILABLE			
Discovery			FEBRUARY 1, 1988			
Media Affe			GROUNDWATER DIESEL			
Substance	-		UNAVAILABLE]
Leak Cause			NOTAVAILABLE			
Remedial A Remedial S			REMACTION PLAN			
Remedial S			NOTAVAILABLE			
		•	Quantity (Units), Leak Source	•		
Fields Not	керопео		Quantity (Omis), Leak Source			·
VISTA	WHITT	IER PLATTING CO	DINC	VISTA ID#	468915	Map I
Address*.		E PIKE ST		Distance/Direction	0 47 MI / SW	
	1	FE SPRINGS, CA	90670	Plotted as:	Point	28
CERCLIS / S	SRC# 297			EPA ID	CAD008495129	jL
Agency Ad			SAME AS ABOVE			1
NPL Status			NOT A PROPOSED, CURRE		Ē	
Site Owner			PRIVATE/NON-GOVERNME	INTAL		ł
Lead Agen			NOTAVAILABLE			
Site Descri		·····	NOT REPORTED			
Event Type	e:	Lead Agency:	Event Status:	Start Date:	Completion Date:	
DISCOVERY		EPA FUND-FINANCED	UNKNOWN	NOT REPORTED	JANUARY 1, 1991	
PRELIMINARY		EPA FUND-FINANCED	DEFERRED TO RCRA	NOT REPORTED	AUGUST 9, 1991	-
ASSESSMENT	Г		(SUBTITLE C) OR NRC			1

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	UNDING AREA (within 1/	4 - 1/2 (iiie) (
CORRACTS / SRC# 3057		PAID	CAD008495129
Agency Address:	WHITTIER PLATING CO ,INC		
	11642 E PIKE ST SANTA FE SPRINGS, CA 90670)	
Prioritization Status:	LOW		
RCRA Facility Assessment Completed:	NO		
Notice of Contamination:	NO		
Determination of need For a RFI (RCRA	NO		
Facility Investigation):			
RFI Imposed:	NO		
RFI Workplan Notice of Deficiency	NO		
Issued:			
RFI Workplan Approved:	NO		
RFI Report Received:	NO		
RFI Approved:	NO		
No Further Corrective Action at this	NO		
Time:			
Stabilization Mesaures Evaluation:	NO		
CMS (Corrective Measure Study)	NO		
Imposition:			
CMS Workplan Approved:	NO		
CMS Report Received:	NO		
CMS Approved:	NO		
Date for Remedy Selection (CM	NO		
Imposed):			
Corrective Measures Design Approved:	NO		
Corrective Measures Investigation	NO		
Workplan Approved:			
Certification of Remedy Completion:	NO		
Stabilization Measures Implementation:	NO		
Stabilization Measures Completed:	NO		
Corrective Action Process Termination:	NO		

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VISTA	MCKESSON CHEM CO		VISTA ID#:	264990	Map ID
Address* 1	1600 PIKE ST		Distance/Direction	0 48 MI / SW	
1 1	SANTA FE SPRINGS, CA	90670	Plotted as	Point	28
CERCLIS / SR	C# 2977		EPA ID	CAD000633313	L
Agency Addr	ess:	SAME AS ABOVE			
NPL Status:		NOT A PROPOSED, CURP	RENT, OR DELETED NPL SIT	E	
Site Ownersh	nip:	UNKNOWN			
Lead Agency	r:	NOT AVAILABLE			j
Site Descript	tion:	NOT REPORTED			
Event Type:	Lead Agency:	Event Status:	Start Date:	Completion Date:	1
DISCOVERY	EPA FUND-FINANCED	UNKNOWN	NOT REPORTED	AUGUST 1, 1980	
PRELIMINARY ASSESSMENT	STATE, FUND FINANCED	NO FURTER REMEDIAL ACTION PLANNED	MARCH 1, 1984	MAY 1, 1985]
Regional CER	CLIS / SRC# 2462	···_	EPA ID	CAD000633313	
Agency Addr	ess:	SAME AS ABOVE			1
Regional Util	lity Description:				
NOTIS SITE					1



SITES IN THE SURROUNDING AREA (within 1/4 - 1/2 mile) CONT.

Regional CE	RCLIS / SRC# 2462		EPA ID:	CAD000633313	7
Agency Add		SAME AS ABOVE			7
Regional Ut	tility Description:				7
RCRA REGULA	TED GENERATOR SEE NOTIFICATIO	DN FILE			
Regional CE	RCLIS / SRC# 2462		EPA ID:	CAD000633313	•
Agency Add	dress:	SAME AS ABOVE			
Regional Ut	tility Description:				
OTHER NON-L	ISTED CORROSIVE TOXIC WASTE, S	SODIUM HYDROCHLORIDE		1	_
	RCLIS / SRC# 2462		EPA ID:	CAD000633313	_
Agency Add		SAME AS ABOVE			
Regional Ut	tility Description:				
	S, DRUMS (ABOVE OR BELOW GROU	ND UNKNOWNJ			
	RCLIS / SRC# 2462		EPA ID:	CAD000633313	
Agency Add		SAME AS ABOVE			
Regional U	tility Description:				
OTHER MEG L	DISTRIBUTE ORGANIC INORGANIC N	IA IERIALS			l
VISTA	ALLPURE CHEMICAL CO		IVISTA ID#	493950	Map IC
Address*.			Distance/Direction	0 48 MI / SW	-
riddiedd .	11600 PIKE STREET		Plotted as:	Point	28
	SANTA FE SPRINGS, CA				20
	Equivalent CERCLIS List / SF		Agency ID	19281186	
Agency Add	dress:	SAME AS ABOVE			
Facility Typ	e:	NOT AVAILABLE			
Lead Agence	cy:	NOT AVAILABLE			1
State Status	5:	REFERRED TO ANOTHER A	AGENCY		
Pollutant 1:		UNKNOWN			
Pollutant 2:		UNKNOWN			
Pollutant 3:		UNKNOWN			
Fields Not F	Reported:	Status			
(,,,,,,,	·····		L
VISTA	SOUTHERN STEEL SU	PPLY CO.	VISTA ID#	1245694	Map IC
Address*.	12350 LOS NIETOS ROA		Distance/Direction	0 48 MI / S	-11
[Plotted as	Point	- 29
OTATELLIST	SANTA FE SPRINGS, CA			· · · · · · · · · · · · · · · · · · ·	_ 23
STATE LUST 3056	- State Leaking Undergrour	nd Storage Tank / SRC#	Agency ID	012789-02	L
Agency Add	dress:	SOUTHERN STEEL SUPPL	YCO		
- geney Au		12350 LOS NIETOS ROAD			
		SANTA FE SPRI, CA 90670			1
Tank Status		NOTAVAILABLE			
Media Affec		SOIL/SAND/LAND			
Substance:		GASOLINE (UNSPECIFIED)			
Leak Cause	2:	UNAVAILABLE			
Remedial A	ction:	EXCAVATE DISPOSE			1
Remedial S	tatus 1:	MONITORING			}
Remedial S	tatus 2:	NOT AVAILABLE			l
Fields Not I	Reported:	Discovery Date, Quantity (Ur	nits), Leak Source		



SITES IN TH	E SURROUNDING AREA (within 1	1/4 - 1/2 mile) CON	NT.
Regional LUST - Regional Leakin RC# 3104	g Underground Storage Tank /	Agency ID	012789-02
Agency Address:	SOUTHERN STEEL SUPPLY 12350 LOS NIETOS RO SANTA FE SPRINGS, CA 9067		- ,
Tank Status:	NOT AVAILABLE		
Discovery Date:	JANUARY 17, 1989		
Media Affected:	SOIL/SAND/LAND		
Substance:	GASOLINE (UNSPECIFIED)		
Leak Cause:	UNAVAILABLE		
Remedial Action:	NOT AVAILABLE		
Remedial Status 1:	MONITORING		
Remedial Status 2:	NOT AVAILABLE		
Fields Not Reported:	Quantity (Units), Leak Source		
CORTESE / SRC# 2298		EPA/Agency ID	N/A
Agency Address:	SOUTHERN STEEL SUPPLY 12350 LOS NIETOS RD SANTA FE SPRINGS, CA 9063		
List Name:	LEAKING TANK		
Site ID:	INV-ID19-001885		

VISTA	SUR-LITE CORPORATION		A SUR-LITE CORPORATION	VISTA ID#	413978	Map ID
Address*				Distance/Direction	0 49 MI / N	
			90670	Plotted as	Point	30
CERCLIS /	SRC# 2977			EPA ID	CAD981687114	1 L
Agency Ad	ddress:		SAME AS ABOVE			1
NPL Statu	s:		NOT VALID SITE			ĺ
Site Owne	ership:		PRIVATE/NON-GOVER	NMENTAL		
Lead Ager	ncy:		NO DETERMINATION			
Site Desci	ription:		NOT REPORTED			1
Event Typ	e:	Lead Agency:	Event Status:	Start Date:	Completion Date:	1
DISCOVERY		EPA FUND-FINANCED	UNKNOWN	NOT REPORTED	JULY 9, 1991	1

VISTA	THIEM INDUSTRIES		VISTA ID#	4043434	Map IC
Address*.	8311 SORENSEN		Distance/Direction	0 50 MI / NE	
l	SANTA FE SPRINGS, CA 9	0670	Plotted as	Point	31
STATE LUS 8056	T - State Leaking Underground	Storage Tank / SRC#	Agency ID	R-13299	
Agency Ac		THIEM INDUSTRIES 3311 SORENSEN SANTE FE SPRINGS, CA		<u> </u>	
Tank Statu	is: /	VOT AVAILABLE			
Media Affe	ected:	SOIL/SAND/LAND			
Substance	2:	GASOLINE (UNSPECIFIED)			
Leak Caus	ie:	UNAVAILABLE			
Remedial /	Action:	VOT AVAILABLE			
Remedial S	Status 1:	LEAK BEING CONFIRMED			
Remedial 3	Status 2:	NOT AVAILABLE			
Fields Not	Reported:	Discovery Date, Quantity (Uni	ls), Leak Source		



SITES IN TH	IE SURROUNDING AREA (within	1/4 - 1/2 mile) C	ONT.
Regional LUST - Regional Leaki SRC# 3104	ng Underground Storage Tank /	Agency ID	R-13299
Agency Address: Tank Status:	THIEM INDUSTRIES (FORM 8311 SORENSON AVE SANTA FE SPRINGS, CA 90 NOT AVAILABLE	•	
Discovery Date:	FEBRUARY 28, 1995		
Media Affected:	SOIL/SAND/LAND		
Substance:	GASOLINE (UNSPECIFIED)		
Leak Cause:	UNAVAILABLE		
Remedial Action:	NOT AVAILABLE		
Remedial Status 1:	LEAK BEING CONFIRMED		
Remedial Status 2:	NOT AVAILABLE		
Fields Not Reported:	Quantity (Units), Leak Source	1	

SITES IN THE SURROUNDING AREA (within 1/2 - 1 mile)

	NTA FE SPRINGS Priority List / SRC# 30		EPA ID	CAD980884357	32
NPL - National F Agency Addres		WASTE DISPOSAL IN 12731 E LOS NIETOS	NC S RD	CAD980884357	L
NPL Status:		SANTA FE SPRI, CA CURRENTLY ON FIN			
Site Ownership) .	PRIVATE/NON-GOVE			1
Lead Agency:	••	NOT AVAILABLE			
Site Descriptio	n:	THE SITE WAS USEL 1920'S UNTIL THE M	DAS AN INDUSTRIAL WASTE	LANDFILLFROM THE LATE	
Event Type:	Lead Agency:	Event Status:	Start Date:	Completion Date:]
TECHNICAL ASSIS IN RVFS	ANCE EPA FUND-FINANC	ED UNKNOWN	NOT REPORTED	NOT REPORTED	
MANAGEMENT ASSISTANCE (FED. RENUMERATION)	EPA FUND-FINANC ERAL	ED UNKNOWN	NOT REPORTED	NOT REPORTED	
COMMUNITY RELA PLAN	TIONS FEDERAL ENFORCEMENT	UNKNOWN	MARCH 30, 1987	NOT REPORTED	
ADMINISTRATIVE RECORD	EPA FUND-FINANC	ED ADMIN RECORD COMPILATION / REMOVAL EVENT	AUGUST 12, 1993	NOT REPORTED	
DISCOVERY	EPA FUND-FINANC	ED UNKNOWN	NOT REPORTED	JANUARY 1, 1985	1
PRELIMINARY ASSESSMENT	STATE, FUND FINA	NCED HIGHER PRIORITY	JANUARY 1, 1985	FEBRUARY 1, 1985	-
SCREENING SITE	EPA FUND-FINANC	ED HIGHER PRIORITY	NOT REPORTED	JULY 1, 1985	
HAZARD RANKING SYSTEM SCORE	EPA FUND-FINANC	ED UNKNOWN	NOTREPORTED	JULY 1, 1985	-



SITES IN THE SURROUNDING AREA (within 1/2 - 1 mile) CONT.

Event Type:	Lead Agency:	Event Status:	Start Date:	Completion Date:	
PROPOSED FOR NPL	EPA FUND-FINANCED	UNKNOWN	NOT REPORTED	JUNE 10, 1986	
FINAL LISTING ON NPL	EPA FUND-FINANCED	UNKNOWN	NOT REPORTED	JULY 22, 1987	
REMOVAL ACTION	EPA FUND-FINANCED	STABILIZATION	MARCH 28, 1988	APRIL 27, 1988	
REMOVAL INVESTIGATION AT NPL SITES	EPA FUND-FINANCED	UNKNOWN	JULY 2, 1990	JULY 2, 1990	
REMOVAL INVESTIGATION AT NPL SITES	EPA FUND-FINANCED	UNKNOWN	AUGUST 13, 1991	AUGUST 13, 1991	
RECORD OF DECISION	EPA FUND-FINANCED	UNKNOWN	NOT REPORTED	DECEMBER 27, 1993	
COMBINED RVFS	EPA FUND-FINANCED	UNKNOWN	DECEMBER 22, 1987	DECEMBER 27, 1993	
SPL - State Equivale	nt Priority List / SRC#	2826	Agency ID	19490194	
Agency Address: Status:		WASTE DISPOSAL, IN 12731 EAST LOS NIET SANTA FE SPRINGS, (CURRENTLY ON FINA	TOS ROAD CA 90670		
Facility Type:		NOT AVAILABLE			
Lead Agency:		EPA FUND-FINANCED			
State Status:		ANNUAL WORK PLAN			
Pollutant 1:		HALOGENATED ORGANIC COMPOUNDS			
Pollutant 2:		CONTAMINATED SOIL			
Pollutant 3:		DRILLING MUD/CHEMICALS			

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UNMAPPED SITES

VISTA Address*:	ROSE HILLS		VISTA ID#	5739042	
	WHITTIER, CA	andfill / SRC# 2783	Agency ID.	19-AH-5001	
County SWLF - County Solid Waste Landfill / 3 Agency Address: SAI		SAME AS ABOVE			
Facility Cla		unknown			
Facility Type:		SANITARY LANDFILLAANDFILL			
Public Status:		CLOSED			
Solid Waste Status:		INACTIVE/CLOSED			
SWIS Permit Status:		INACTIVE	INACTIVE		



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SITE ASSESSMENT PLUS REPORT

DESCRIPTION OF DATABASES SEARCHED

A) DATABASES SEARCHED TO 1 MILE

NPL SRC#: 3064	VISTA conducts a database search to identify all sites within 1 mile of your property. The agency release date for NPL was June, 1996.
	The National Priorities List (NPL) is the EPA's database of uncontrolled or abandoned hazardous waste sites identified for priority remedial actions under the Superfund program. A site must meet or surpass a predetermined hazard ranking system score, be chosen as a state's top priority site, or meet three specific criteria set jointly by the US Dept of Health and Human Services and the US EPA in order to become an NPL site
SPL SRC#: 2826	VISTA conducts a database search to identify all sites within 1 mile of your property The agency release date for Calsites Database: Annual Workplan Sites was January, 1996.

This database is provided by the Cal Environmental Protection Agency, Dept of Toxic Substances Control

CORRACTSVISTA conducts a database search to identify all sites within 1 mile of your propertySRC#: 3057The agency release date for RCRA Corrective Action Sites List was May, 1996.

The EPA maintains this database of RCRA facilities which are undergoing "corrective action". A "corrective action order" is issued pursuant to RCRA Section 3008 (h) when there has been a release of hazardous waste or constituents into the environment from a RCRA facility Corrective actions may be required beyond the facility's boundary and can be required regardless of when the release occurred, even if it predates RCRA

RCRA-TSDVISTA conducts a database search to identify all sites within 1 mile of your propertySRC#: 3057The agency release date for RCRIS was May, 1996.

The EPA's Resource Conservation and Recovery Act (RCRA) Program identifies and tracks hazardous waste from the point of generation to the point of disposal. The RCRA Facilities database is a compilation by the EPA of facilities which report generation, storage, transportation, treatment or disposal of hazardous waste. RCRA TSDs are facilities which treat, store and/or dispose of hazardous waste.

B) DATABASES SEARCHED TO 1/2 MILE

CERCLISVISTA conducts a database search to identify all sites within 1/2 mile of your propertySRC#: 2976The agency release date for CERCLIS was March, 1996.

The CERCLIS List contains sites which are either proposed to or on the National Priorities List(NPL) and sites which are in the screening and assessment phase for possible inclusion on the NPL. The information on each site includes a history of all pre-remedial, remedial, removal and community relations activities or events at the site, financial funding information for the events, and unrestricted enforcement activities.

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as June, 1995. gion 9. These are r property
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CORTESE SRC#: 2298	VISTA conducts a database search to identify all sites within 1/2 mile of your property The agency release date for Cortese List-Hazardous Waste Substance Site List was February, 1995.
	This database is provided by the Office of Environmental Protection, Office of Hazardous Materials
Deed Restrictions SRC#: 1703	VISTA conducts a database search to identify all sites within 1/2 mile of your property The agency release date for Deed Restriction Properties Report was April, 1994.
	This database is provided by the Department of Health Services-Land Use and Air Assessment These are voluntary deed restriction agreements with owners of property who propose building residences, schools, hospitals, or day care centers on property that is "on or within 2,000 feet of a significant disposal of hazardous waste"
Toxic Pits SRC#: 2229	VISTA conducts a database search to identify all sites within 1/2 mile of your property The agency release date for Summary of Toxic Pits Cleanup Facilities was February, 1995.

This database is provided by the Water Quality Control Board, Division of Loans Grants

C) DATABASES SEARCHED TO 1/4 MILE

RCRA-Viols/En VISTA conducts a database search to identify all sites within 1/4 mile of your property SRC#: 3057 The agency release date for RCRIS was May, 1996.

The EPA's Resource Conservation and Recovery Act (RCRA) Program identifies and tracks hazardous waste from the point of generation to the point of disposal. The RCRA Facilities database is a compilation by the EPA of facilities which report generation, storage, transportation, treatment or disposal of hazardous waste. RCRA Violators are facilities which have been cited for RCRA Violations at least once since 1980. RCRA Enforcements are enforcement actions taken against RCRA violators.

UST'sVISTA conducts a database search to identify all sites within 1/4 mile of your propertySRC#: 1612The agency release date for Underground Storage Tank Registrations Database was
January, 1994.

This database is provided by the State Water Resources Control Board, Office of Underground Storage Tanks, Caution-Many states do not require registration of heating oil tanks, especially those used for residential purposes

AST'sVISTA conducts a database search to identify all sites within 1/4 mile of your propertySRC#: 2824The agency release date for Aboveground Storage Tank Database was February, 1996.

This database is provided by the State Water Resources Control Board

LAC-Site Miti, VISTA conducts a database search to identify all sites within 1/4 mile of your property SRC#: 2683 The agency release date for LA County-Site Mitigation Complaint Control Log was October, 1995.

This database is provided by the Department of Health Services, LA County Public Health Investigations



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Appendix F - Chain-of-Custody

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. Appendix G - Boring Logs, Well Construction Details, and Permits

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BORING	GLOG				1		1:	PROJECT Boi .0 TW-3		Approved by:			
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Appendix H - Field Sampling Forms

DICE 00261

ESC

				ntal Strategies	-)N	
ample Desig.			Job / task #	213414		Sampled By	Bob Bealkowski
Sample Type	Temp Well	······································	Site Name	Witco Santa Fe Springs	5	Date	8/22/96
ample Method	(monstoring well, treat Bailer	imeni sysi, cic.)					
ield Conditions	100° F						,
			W	ater Level Inform	ation		
Acasuring Point	N/A		Instrument Used	i	N/A	W.L for 80% recovery	·
V.L. Before Purge	(mp. TOC, port	h pomi TOC, eic.)	WL After purg	;c		W L. Time of Sample	
Time		······	Time			Date	Time
Purge Start				Purge Information	on	Purge Device	<u></u>
Vell Depth		Screened Interval					
Well Dia.		Purge Calculation				Actual Amt. Removed	
	Purge Volume !	Multipliers	(well depth-depth to	water) X # of casing Vol = Purj	gc Vol	QA/QC Informatio	
		- T		ר ר	· · · · · · · · · · · · · · · · · · ·	X uf Present	Designation
Casing Dia	1 Casing Vol 0.04	3 Casing Vol 0 12	5 Casing Vol 0 20	-			Designation
20	016	0 49	0.82		Trip blank		
30	0.37	1.10	1.84	4	Duplicate		
40	065	1 96	3 26	-			
4.5	0 83	2.48	4 13	1	Field blank		
6.0	1.47	4.41	7.34				
80	2 61	7 83	13.06	4	Q.C Spike Other		
Time	Amt. remv'd	Temp.	Cond.	arameter Reading pH	s/Notes Turb.	Observation	ns/Notes
						Turbid/no odors	
				- <u> </u>			
				+			
Sample Time	1720	_1 1	Sa	ample / Lab Inforr	nation	Sample Device	1/2 mch
Laboratory name as	nd Location :	IEA Cary N.C	1				disposable bailer
Analysi	is Cont	ainer(s)	No	Volume		Preservative	Filtration
<u> </u>	1 3	<u>,.</u>	1L. 40 ml				
8200		· · · · · · · · · · · · · · · · · · ·	40 mi				
						DI	CE 00262
1/2 - inch disposabl	Purge Device(s)	/ Equipment	[Decon. Informat (brefly describe)	ion	Sampling Device(s)	'Equipment
		····		-		Matuchart	ovh20tw-3 xls
						j volus/witco	11201W-3 KIS

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Appendix I - Laboratory Data

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ESC

DICE 00263

IEA, Inc. IEA Project NO.: 978_065RP SDG: 08311 Client Project ID: Wico Santa Fe Springs Data Summary Package IEA

PROJECT:978-065

BATCH:08311

METHOD:SW-846 (8260)

Samples: Nineteen (19) Soil Samples

The samples were received at Industrial and Environmental Analysts, Inc. (IEA) on August 16, 1996. Each sample was assigned a 9-character "IEA" lab identification number (lab ID) and a truncated client ID (for forms generation). This package makes reference to these ID's as listed on the IEA Assigned Number Index. All analyses were performed according to approved methodologies and meet the requirements of the IEA Quality Assurance Program. Please see the enclosed data package for your results and Chain of Custody (COC) documentation.

There is an air peak that is common to all of the volatile analyses and a solvent peak common to some volatile analyses. These peaks are present at the beginning of the Reconstructed Ion Chromatograms (RIC) and are labeled. These peaks are not searched as Tentatively Identified Compounds (TIC's).

The SW-846 8260 methodology states if all % RSD's (relative standard deviation) of the relative response factors for each compound is less than 15% then the curve average may be used. However, if the %RSD's are above 15% then linear regression is preferred. In order to simplify the quantitation, linear regression forced origin is the quantitation mode for all compounds. The curve is plotted using response factors, not RRF's, versus the concentration level. The slope of the response factors is provided on a Form 6D following the relative response factor Initial Calibration Form 6A. The calculation is in the form y = mx + b where, b = 0; m = slope; y = response factor of the target compound in the sampleand <math>x = concentration to be determined from the curve. When calculating a final concentration the "x" value must be multiplied by the concentration of the internal standard and consequently, multiplied by the dilution factor.

The "N" flag used on the Form I VOA-TIC indicates that there is the presumptive evidence of a compound based on the mass spectral library search and the interpretation of the mass spectral interpretation specialist.

The "Y" flag is used as a qualifier on the Form I VOA-TIC to indicate a siloxane contaminant attributed to trap breakdown. This also indicates non target compounds introduced by the laboratory.

The "M" flag used on the data system report form designates that a manual integration was required to provide an accurate quantification of that analyte. Manual integrations have been initialled and dated by the analyst.

DEA, Ino Dood RPHODODI.NC

IEA SDG NARRATIVE VOLATILE FRACTION

I certify that this data package is in compliance with the procedures and methods defined for this project, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data (if applicable) as submitted has been authorized by the laboratory manager or his designee, as verified by the following signature.

Bion D. Nesture 08/26/96

Brian D. Neptune Lead Analyst, GC/MS Final Review IEA, Inc.

IBA, Ino Door RPF0000LNC

DICE 00266

IEA SDG NARRATIVE SEMIVOLATILE FRACTION

PROJECT: 978-065 BATCH: 08311

METHOD: SW-846 8270

Samples: Nineteen (19) Soil Samples

The samples were received at Industrial and Environmental Analysts, Inc. (IEA) on 08/16/96. Each sample was assigned a 9-character "IEA" lab identification number (lab ID) and an abbreviated client ID which is referenced on the IEA Assigned Number Index. All analyses are performed in accordance with EPA approved methodologies and meet the requirements of the IEA Quality Assurance Program. Please see the enclosed data package for your results and Chain of Custody documentation.

The chromatographic separation of the analytes was performed using a Restek 30 X 0.32 XTI-5 fused silica capillary column with a 0.5 μ m bonded phase film thickness.

Instrument data printouts identify the compound 2,2'-oxybls(1-Chloropropane) with CAS number 108-60-1. Alternative nomenclature for this compound is bis(2-Chloroisopropyl)ether which is included on report forms submitted.

The "J" flag used on the Form I SV indicates an estimated concentration between the CRQL and the Method Detection Limit (MDL).

The "M" flag used on the data system report form designates that a manual integration was required to provide an accurate quantification of that analyte. Manual integrations have been initialed and dated by the analyst.

Sample NW28 (9608311-19) was reported at a ten-fold dilution due to the high concentration of nontarget compounds present.

Any nonconformances associated with the analysis of the samples in this case are noted as follows:

The Laboratory Control Sample (LCS521) percent recovery for Acenaphthene exceeded the limits specified for this method due to better than expected extraction efficiency.

I certify that this data package is in compliance with the procedures and methods defined for this project, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data (if applicable) as submitted has been authorized by the laboratory manager or his designee, as verified by the following signature.

DE DE mane 08/23/96

David F. Morse GC/MS SV Lead Analyst IEA, Inc.

IEA, Int Dood RPP00701,NC

IEA SDG NARRATIVE INORGANIC/METALS FRACTION

CASE:978-065 SDG NO.:08311

Sample Numbers: 960831115 (NE42). A total of one (1) soil sample was received for Zinc analysis by Method 6010.

This case was closed on July 16, 1996. The temperature of the samples upon receipt by the Industrial and Environmental Analysts, Inc. (IEA) was 6^oC. All samples were received intact.

Each sample has been assigned a 9-character IEA lab identification number. Client identifiers have been truncated to a maximum of 6-characters to accommodate the software constraints, and are cross referenced in the IEA Assigned Number Index (enclosed).

The "*" flag is used to identify the sample duplicate analysis exceeds the 20% RPD criteria. The following sample(s) are flagged with a "*" for the metal(s) listed:

Sample ID	Metal
960831115 (NE42)	Zinc :

Any nonconformances associated with the analysis of samples in this case are noted as follows:

There are no nonconformances associated with this case.

. : .

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the laboratory manager or his designee, as verified by the following signature.

08/23/96

Veson D. Jortian Inorganic Data Reviewer IEA, Inc.

IEA, Ino Dood RPF00900.NC

1A SW-846 VOLATILE ORGANICS ANALYSIS DATA SHEFT

Lab Name: IEA-NC	Method:	8260	S-2-1'A
	Case No.: 978-	065	SDG No.: 08311
Matrix: (soil/water) SOIL		Lab Sample	ID: 960831102
Sample wt/vol: 5 (g/mL). g		Lab File ID	: 0819710.D
Level: (low/med) LOW	•	Date Receiv	ed: 08/16/96
* Moisture: not dec. 15 .		Date Analyz	ed:. 08/19/96
GC Column: DB-624 ID: 0).53 (mm)	Dilution Fa	ctor: 1.0
Soil Extract Volume: (uL)	· ·	Soil Aliquo	t Volume: (uL)

CAS NO. COMPOUND

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg

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67-64-1	Acetone		-	- 44	JB
107-13-1	Acrylonitrile			6	σ
107-05-1	Allyl Chloride			6	υ
71-43-2	Benzene		•	6	U
108-86-1	Bromobenzene			6	U
74-97-5	Bromochloromethane		•	6	U
75-27-4	Bromodichloromethane			6	Ŭ
75-25-2	Bromoform			6	U
74-83-9	Bromomethane			12	U
78-93-3	2-Butanone			12	U
104-51-8	N-Butylbenzene			6	Ŭ
135-98-8	Sec-Butylbenzene	1	a l	6	U
98-06-6	Tert-Butylbenzene			6	U
75-15-0	Carbon Disulfide	•		6	ប
56-23-5	Carbon Tetrachioride			6	U
108-90-7	Chlorobenzene	· · · · · · · · · · · · · · · · · · ·		6	Ū
124-48-1	Chlorodibromomethane	. 1		6	U
75-00-3	Chloroethane			12	0
110-75-8	2-Chloroethyl Vinyl Ether			12	υ
67-66-3	Chloroform			6	U
74-87-3	Chloromethane			12	υ
95-49-8	2-Chlorotoluene			6	U
106-43-4	4-Chlorotoluene			· 6	υ
96-12-8	1,2-Dibromo-3-Chloropropane		• •	. 6	Ū
106-93-4	1,2-Dibromoethane			6	U
74-95-3	Dibromomethane			6	U
95-50-1	1,2-Dichlorobenzene			6	Ŭ
541-73-1	1,3-Dichlorobenzene			. 6	U
106-46-7	1,4-Dichlorobenzene			6	U
75-71-8	Dichlorodifluoromethane			12	U
75-34-3	1,1-Dichloroethane			. 6	U
107-06-2	1,2-Dichloroethane	<u> </u>	<u>.</u>	6	U
75-35-4	1,1-Dichloroethene			6	U
156-59-2	Cis-1,2-Dichloroethene			6	U

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SW-846 VOLATILE ORGANICS ANALYSIS DATA SHEET

1A

S-2-1'A Lab Name: IEA-NC Method: 8260 Lab Code: IEA Case No.: 978-065 SDG No.: 08311 SOIL ... Matrix: (soil/water) Lab Sample ID: 960831102 · Sample wt/vol: 5 (g/mL) g Lab File ID: 0819710.D Level: (low/med) LOW Date Received: 08/16/96 * Moisture: not dec. 15 · · Date Analyzed: 08/19/96 GC Column: DB-624 ID: 0.53(mm) Dilution Factor: 1.0 Soil Extract Volume: Soil Aliquot Volume: (uL) (uL) ·

CAS NO. COM

COMPOUND

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg

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156-60-5	Trans-1,2-Dichloroethene		'· 6	υ
78-87-5	1,2-Dichloropropane		- 6	0
142-28-9	1,3-Dichloropropane		6	0
594-20-7	2,2-Dichloroprobane		6	Ū
563-58-6	1,1-Dichloropropene		6	U
10061-01-5	Cis-1,3-Dichloropropene	·····	. 6	U
10061-02-6	Trans-1,3-Dichloropropene		6	U
110-57-6	Cis-1,4-Dichloro-2-Butene		6	U
110-57-6	Trans-1, 4-Dichloro-2-Butene		6	U
100-41-4	Ethylbenzene .		6	0
97-63-2	Ethyl Methacrylate		6	0
87-68-3	Hexachlorobutadiene	14.45	. 6	U
591-78-6	2-Hexanone		12	U
74-88-4	Iodometnane	· · · · · · · · · · · · · · · · · · ·	6	0
98-82-8	Isopropylbenzene		6	U
99-87-6	P-Isopropyltoluene	·····	6	U
126-98-7	Methacrylonitrile		6	U
75-09-2	Methylene Chloride		12	U
80-62-6	Methyl Methacrylate		6	0
108-10-1	4-Methyl-2-Pentanone		12	U
1634-04-4	Methyl-tert-Butyl ether		6	Ū
91-20-3	Naphthalene		- 6	U
76-01-7	Pentachloroethane		: 6	U
103-65-1	N-Propylbenzene		. 6	Ū
100-42-5	Styrene		6	U
630-20-6	1,1,1,2-Tetrachloroethane		. 6	U
79-34-5	1,1,2,2-Tetrachloroethane		6	υ
127-18-4	Tetrachloroethene		6	U
108-88-3	Toluene ;; '!.		. 6	υ
87-61-6	1,2,3-Trichlorobenzene		6	U
120-82-1	1,2,4-Trichlorobenzene		. 6	U
71-55-6	1,1,1-Trichloroethane		6	Ū
79-00-5	1,1,2-Trichloroethane		6	Ū
79-01-6	Trichloroethene		6	Ŭ

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IA SW-846 VOLATILE ORGANICS ANALYSIS DATA SHEET

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			S-2-1'A
Lab Name: IEA-NC	Met	hod: 8260	
Lab Code: IEA	Case No.:	978-065	SDG No.: 08311
Matrix: (soil/water)	SOIL	Lab Samp	ole ID: 960831102
Sample wt/vol: 5 (g	/mL) g	Lab File	ID: 0819710.D
Level: (low/med) LO	Ā	Date Rec	eived: 08/16/96
<pre>% Moisture: not dec.</pre>	15	Date Ana	alyzed: 08/19/96
GC Column: DB-624	. ID	Dilution	a Factor: 1.0
Soil Extract Volume:	(uL)	Soil Ali	quot Volume: (uL)
		•	•
	1.		
		CONCERTS ATTON	

CAS NO.	COMPOUND	(ug/L or ug/Kg)	ug/kg	Q
75-69-4 96-18-4 95-63-6 108-67-8 108-05-4	Trichlorofluoromethane 1,2,3-Trichloropropane 1,2,4-Trimethylbenzene 1,3,5-Trimethylbenzene Vinyl Acetate	· · · · · · · · · · · · · · · · · · ·	: 6 6 6 12	. a . a
75-01-4 1330-20-7	Vinyl Chloride Xylene (Total)			<u><u></u><u></u><u></u><u></u><u></u><u></u><u></u></u>

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FORM I VOA

DICE 00271

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1E SW-846 VOLATILE ORGANICS ANAL	CLIENT SAMPLE NO.
TENTATIVELY IDENTIFIED	
Lab Name: IEA-NC Method:	
Lab Code: IEA Case No.: 978	-065 SDG No.: 08311
Matrix: (soil/water) SOIL	Lab Sample ID: 960831102
Sample wt/vol: 5 (g/mL) g	Lab File ID: 0819710.D
Level: (low/med) LOW	Date Received: 08/16/96
<pre>% Moisture: not dec. 15</pre>	Date Analyzed: 08/19/96
GC Column: DB-624 ID: 0.53(mm)	Dilution Factor: 1.0
Soil Extract Volume: (uL)	Soil Aliquot Volume: (uL)

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Number TICs Found: 0

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg

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CAS NUMBER RT EST. CONC. COMPOUND NAME Q _____ <u>____</u> •... •• -• • --- · , ٠ . ~

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SW-846 VOLATILE ORGANICS ANALYSIS DATA SHEET

1A

S-2-1'D Method: 8260 Lab Name: IEA-NC SDG No.: 08311 Lab Code: IEA Case No.: 978-065 Lab Sample ID: 960831103 Matrix: (soil/water) SOIL Lab File ID: 0819711.D Sample wt/vol: 5 (g/mL) g Date Received: 08/16/96 Level: (low/med) LOW Date Analyzed: 08/19/96 **%** Moisture: not dec. 15 GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0 Soil Aliquot Volume: (uL) Soil Extract Volume: (uL) . .

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CAS NO. COMPOUND

CONCENTRATION UNITS:

(ug/L or ug/Kg) ug/kg Q i.

67-64-1	Acetone	. 16	JB
107-13-1	Acrylonitrile	6	U
107-05-1	Allyl Chloride	6	<u> </u>
71-43-2	Benzene	Ğ	
108-86-1	Bromobenzene	6	Ū
74-97-5	Bromochloromethane	6	0
75-27-4	Bromodichloromethane	6	U
75-25-2	Bromoform	6	U
74-83-9	Bromomethane	12	U ·
78-93-3	2-Butanone	12	U
104-51-8	N-Butylbenzene	6	U
135-98-8	Sec-Butylbenzene	. 6	U
98-06-6	Tert-Butylbenzene	6	U
75-15-0	Carbon Disulfide	6	U
56-23-5	Carbon Tetrachloride	6	U
108-90-7	Chlorobenzene	6	U
124-48-1	Chlorodibromomethane	6	U
75-00-3	Chloroethane	12	U
110-75-8	2-Chloroethyl Vinyl Ether	12	U
67-66-3	Chloroform	6	U
74-87-3	Chloromethane	12	U
95-49-8	2-Chlorotoluene	- 6	U
106-43-4	4-Chlorotoluene	6	Ū
96-12-8	1,2-Dibromo-3-Chloropropane	<u>~1</u> 6	Ŭ
106-93-4	1,2-Dibromoethane	6	U
74-95-3	Dibromomethane	6	U
95-50-1	1,2-Dichlorobenzene	6	0
541-73-1	1,3-Dichlorobenzene	6	U
106-46-7	1,4-Dichlorobenzene	6	U
75-71'-8	Dichlorodifluoromethane	12	U
75-34-3	1,1-Dichloroethane	6	υ
107-06-2	1,2-Dichloroethane	6	U
75-35-4	1,1-Dichloroethene	6	U
156-59-2	Cis-1.2-Dichloroethene	6	U

FORM I VOA

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CLIENT SAMPLE NO. SW-846 VOLATILE ORGANICS ANALYSIS DATA SHEET

Method: 8260 Lab Name: IEA-NC Case No.: 978-065 Lab Code: IEA SOIL Matrix: (soil/water) Sample wt/vol: 5 (g/mL) g Level: (low/med) LOW & Moisture: not dec. 15 GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0 Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

S-2-1'D

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SDG No.: 08311 Lab Sample ID: 960831103 Lab File ID: 0819711.D Date Received: 08/16/96 Date Analyzed: 08/19/96

CONCENTRATION UNITS:

(ug/L or ug/Kg) __ ug/kg CAS NO. COMPOUND Q 156-60-5 6 U Trans-1,2-Dichloroethene 78-87-5 1,2-Dichloropropane 6 U 142-28-9 1,3-Dichloropropane 6 U 2,2-Dichloropropane 594-20-7 6 U 1,1-Dichloropropene 563-58-6 6 Ū 10061-01-5 Cis-1,3-Dichloropropene 10061-02-6 Trans-1,3-Dichloropropene 110-57-6 Cis-1,4-Dichloro-2-Butene 6 υ 6 U 6 U 110-57-6 Trans-1, 4-Dichloro-2-Butene 6 υ 100-41-4 Ethylbenzene 6 U Ethyl Methacrylate Hexachlorobutadiene 97-63-2 6 U · Fat . 87-68-3 6 U 591-78-6 12^{-1} U 2-Hexanone 1. . . . 74-88-4 Iodomethane 6 U 98-82-8 υ Isopropylbenzene 6 99-87-6 P-Isopropyltoluene Methacrylonitrile 6 υ 126-98-7 6 U 75-09-2 Methylene Chloride Methyl Methacrylate 12 υ 80-62-6 6 υ 108-10-1 4-Methyl-2-Pentanone 12 U 1634-04-4 Methyl-tert-Butyl ether 6 υ 91-20-3 Naphthalene 6 U 76-01-7 Pentachloroethane : 6 U 103-65-1 N-Propylbenzene •6 U •_ 100-42-5 Styrene 6 U 1,1,1,2-Tetrachloroethane 1,1,2,2-Tetrachloroethane Tetrachloroethene 630-20-6 6 U 79-34-5 6 U 127-18-4 13 Ϋ́ 108-88-3 Toluene 6 1,2,3-Trichlorobenzene 1,2,4-Trichlorobenzene 87-61-6 6 Ũ 120-82-1 6 Ū 1,1,1-Trichloroethane 1,1,2-Trichloroethane Trichloroethene 71-55-6 6 U 79-00-5 τī 6 79-01-6 U 6

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IA SW-846 JLATILE ORGANICS ANAL	CLIENT SAMPLE NO. YSIS L_TA SHEET
Lab Name: IEA-NC Method:	S-2-1'D
Lab Code: IEA Case No.: 978	-065 SDG No.: 08311
Matrix: (soil/water) 'SOIL	Lab.Sample ID: 960831103
Sample wt/vol: 5 (g/mL) g	Lab File ID: 0819711.D
Level: (low/med) LOW	Date Received: 08/16/96
* Moisture: not dec. 15	Date Analyzed: 08/19/96
GC Column: DB-624 ID: 0.53(mm)	Dilution Factor: 1.0
Soil Extract Volume: (uL)	Soil Aliquot Volume: (uL)

CAS NO. COMPOUND

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CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg

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CAS NO.	COMPOUND	(ug/L or ug/Kg)	ug/kg	Q
75-69-4	Trichlorofluoromethane		6	U
96-18-4	1,2,3-Trichloropropane		. 6	Ŭ
95-63-6	1,2,4-Trimethylbenzene		6	U
108-67-8	1,3,5-Trimethylbenzene		. 6	U
108-05-4	Vinyl Acetate		12	U
75-01-4	Vinyl Chloride		12	Ū
1330-20-7	Xylene (Total)		6	U



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FORM I VOA

1E SW-846 VOLATILE ORGANICS ANAL TENTATIVELY IDENTIFIED	COMPOUNDS
Lab Name: IEA-NC Method:	8260 S-2-1'D
Lab Code: IEA Case No.: 978	-065 SDG No.: 08311
Matrix: (soil/water) SOIL	Lab Sample ID: 960831103
Sample wt/vol: 5 (g/mL) g	Lab File ID: _0819711.D
Level: (low/med) LOW	Date Received: 08/16/96
& Moisture: not dec. 15	Date Analyzed: 08/19/96
GC Column: DB-624 ID: 0.53 (mm)	Dilution Factor: 1.0
Soil Extract Volume: (uL)	Soil Aliquot Volume: (uL)
Соис	CENTRATION UNITS:

Number TICs Found: 0

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg

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CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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DICE 00276

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1A	CLIENT SAMPLE NO
SW-846 VOLATILE ORGANICS ANAL	S-2-1'C
Lab Name: IEA-NC Method:	
Lab Code: IEA Case No.: 978	-065 SDG No.: 08311
Matrix: (soil/water) SOIL	Lab Sample ID: 960831104
Sample wt/vol: 5 (g/mL) g	Lab File ID: 0819712.D
Level: (low/med) LOW	Date Received: 08/16/96
* Moisture: not dec. 15	Date Analyzed: 08/19/96
GC Column: DB-624 ID: 0.53(mm)	Dilution Factor: 1.0
Soil Extract Volume: (uL)	Soil Aliquot Volume: (uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg

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67-64-1	Acetone		· i2	JB
107-13-1	Acrylonitrile		6	55
107-05-1	Allyl Chloride		<u>6</u>	Ŭ U
71-43-2	Benzene		č	- 0 -
108-86-1	Bromobenzene		<u>6</u>	<u> </u>
74-97-5	Bromochloromethane		6	T
75-27-4	Bromodichloromethane		<u>6</u>	1- <u>Ŭ</u>
75-25-2	Bromoform		· 6	+ ŭ
74-83-9	Bromomethane		12	
78-93-3	2-Butanone		· 12	+ ŭ
104-51-8	N-Butylbenzene		6	- Ŭ
135-98-8	Sec-Butylbenzene		<u> </u>	+ 0
98-06-6	Tert-Butylbenzene		6	
75-15-0	Carbon Disulfide	~	<u>6</u>	- ŭ
56-23-5	Carbon Tetrachloride		ĕ	
108-90-7	Chlorobenzene		č	
124-48-1	Chlorodibromomethane		6	
75-00-3	Chloroethane		12	- 0 -
110-75-8	2-Chloroethyl Vinyl Ether		12	
67-66-3	Chloroform		6	
74-87-3	Chloromethane		12	- 0
95-49-8	2-Chlorotoluene		. 6	
106-43-4	4-Chlorotoluene		6	
96-12-8	1,2-Dibromo-3-Chloropropane			+- v -
106-93-4	1,2-Dibromoethane		0 6	- Ŭ
74-95-3	Dibromomethane		<u>6</u>	+- <u>Ŭ</u> -
95-50-1	1,2-Dichlorobenzene			-
541-73-1	1,3-Dichlorobenzene		<u> </u>	+- <u></u> <u></u> <u></u> <u></u> <u></u> <u></u> <u></u> <u></u>
106-46-7	1,4-Dichlorobenzene		6	
75-71-8	Dichlorodifluoromethane		12	
75-34-3	1,1-Dichloroethane		<u> </u>	the second second second second second second second second second second second second second second second s
107-06-2	1,2-Dichloroethane		6	
75-35-4				
	1,1-Dichloroethene		6	
156-59-2	Cis-1,2-Dichloroethene		6	1 <u> </u>

CAS NO. COMPOUND

FORM I VOA .

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	CLIENT SAMPLE NO.
SW-846 VOLATILE ORGANICS ANAI	
Lab Name: IEA-NC Method:	S-2-1'C
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Lab Code: IEA Case No.: 976	3-065 SDG No.: 08311
Matrix: (soil/water) SOIL	Lab Sample ID: 960831104
Sample wt/vol: 5 (g/mL) g.	Lab File ID: 0819712.D
Level: (low/med) LOW :	Date Received: 08/16/96
* Moisture: not dec. 15	Date Analyzed: 08/19/96
GC Column: DB-624 ID: 0.53(mm)	Dilution Factor: 1.0
Soil Extract Volume: (uL)	Soil Aliquot Volume: (uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg

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156-60-5	Trans-1,2-Dichloroethene	• . 6	U
78-87-5	1,2-Dichloropropane	6	Ū
142-28-9	1,3-Dichloropropane	6	
594-20-7	2,2-Dichloropropane	č	<u> </u>
563-58-6	1,1-Dichloropropene	Ğ	<u> </u>
10061-01-5	Cis-1, 3-Dichloropropene		Ū
10061-02-6	Trans-1, 3-Dichloropropene		Ū
110-57-6	Cis-1,4-Dichloro-2-Butene	6	Ū
110-57-6	Trans-1,4-Dichloro-2-Butene	6	Ŭ
100-41-4	Ethylbenzene	6	Ū
97-63-2	Ethyl Methacrylate	6	0
87-68-3	Hexachlorobutadiene	6	U
591-78-6	2-Hexanone	12	U
74-88-4	Iodomethane	. 6	0
98-82-8	Isopropylbenzene	6	U
99-87-6	P-Isopropyltoluene	. 6	U
126-98-7	Methacrylonitrile	6	Ŭ
75-09-2	Methylene Chloride	12	U
80-62-6	Methyl Methacrylate	6	U
108-10-1	4-Methyl-2-Pentanone	12	0
1634-04-4	Methyl-tert-Butyl ether	6	U
91-20-3	Naphthalene	•• 6	Ŭ
76-01-7	Pentachloroethane	. 6	U
103-65-1	N-Propylbenzene	. : 6	U
100-42-5	Styrene	6	U
630-20-6	1,1,1,2-Tetrachloroethane	6	U
79-34-5	1,1,2,2-Tetrachloroethane	. 6	Ŭ
127-18-4	Tetrachloroethene	. 6	U
108-88-3	Toluene	. 6	U
87-61-6	1,2,3-Trichlorobenzene	6	U
120-82-1	1,2,4-Trichlorobenzene	6	U
71-55-6	1,1,1-Trichloroethane	6	U
79-00-5	1,1,2-Trichloroethane	6	U
79-01-6	Trichloroethene	6	Ų

CAS NO. COMPOUND

FORM I VOA

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SW-846 VOLATILE OF	1A RGANICS ANALYSIS	CLIE DATA SH <u>FET</u>	ENT SAMPLE NO.
Lab Name: IEA-NC	Method: 826	S-2-1'C	
Lab Code: IEA Ca	ase No.: 978-065	SDG 1	No.: 08311
Matrix: (soil/water) SOIL	Lab	Sample ID: 9608	31104
Sample wt/vol: 5 (g/mL) g	Lab	File ID: 081971	.2.D
Level: (low/med) LOW	Dat	e Received: 08/	'16/96
& Moisture: not dec. 15	Dat	e Analyzed: 08/1	.9/96
GC Column: DB-624 ID: 30.	53 (mm) Dil	ution Factor: 1.	. 0
Soil Extract Volume: (uL)	Soi	1 Aliquot Volume:	(uL)
CAS NO. COMPOUND		ATION UNITS: ug/Kg) ug/kg	Q

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75-69-4	Trichlorofluoromethane		6	U
96-18-4	1,2,3-Trichloropropane		6	U
95-63-6	1,2,4-Trimethylbenzene		6	U
108-67-8	1,3,5-Trimethylbenzene		6	0
108-05-4	Vinyl Acetate		12	U
75-01-4	Vinyl Chloride	-	12	U
1330-20-7	Xylene (Total)		6	<u> </u>

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SW-846 VOLATILE	1E CORGANICS ANALY	SIS DATA SH <u>EET</u>	CLIENT SAMPLE NO	•
TENTATIVE	LY IDENTIFIED C		2-1'C	-
Lab Name: IEA-NC	Method:	8260		-
Lab Code: IEA	Case No.: 978-	065	SDG No.: 08311	
Matrix: (soil/water) SOIL		Lab Sample ID:	960831104	
Sample wt/vol: 5 (g/mL) g	r ·	Lab File ID:	0819712.D	
Level: (low/med) LOW		Date Received:	08/16/96	
* Moisture: not dec. 15		Date Analyzed:	[.] 08/19/96	
GC Column: DB-624 ID:	0.53 (mm)	Dilution Facto	r: 1.0	
Soil Extract Volume: (uL)		Soil Aliquot V	Volume: (uL)	
	-	• •		
	CONCE	NTRATION INTER	•	

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Number TICs Found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg

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	NUMBER			FET CONC	ł
CAB	NUMBER	COMPOUND NAME	R1	EST. CONC.	Q
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1A SW-846 VOLATILE ORGANICS ANALYSIS DATA SHEET

			S-1-8'
Lab Name: IEA-NC	Method:	8260	
Lab Code: IEA	Case No.: 978-	065	SDG No.: 08311
Matrix: (soil/water) SOIL		Lab Sample	ID: 960831105
Sample wt/vol: 5 (g/mL) g	3	Lab File ID	: 0819713.D
Level: (low/med) LOW		Date Receiv	ed: 08/16/96
& Moisture: not dec. 15		Date Analyz	ed: 08/19/96
GC Column: DB-624 ID:	0.53 (mm)	Dilution Fa	ctor: 1.0
Soil Extract Volume: (uL)		Soil Aliquo	t Volume: (uL)

CAS NO. COMPOUND

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CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg

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		 	-	-
67-64-1	Acetone	• ,	15	JB'
107-13-1	Acrylonitrile	 		<u> </u>
107-05-1	Allyl Chloride	 	<u> </u>	<u>Ŭ</u>
71-43-2	Benzene	 	-61	<u> </u>
108-86-1	Bromobenzeng	 	-ĕ	
74-97-5	Bromochloromethane	 		
75-27-4	Bromodichloromethane	 	-5	— <u> </u>
75-25-2	Bromoform	 		
74-83-9	Bromomethane	 	12	<u> </u>
78-93-3	2-Butanone	 	$-\frac{12}{12}$	-
104-51-8	N-Butylbenzene	 	-6	<u>Ŭ</u>
135-98-8	Sec-Butylbenzene	 		<u> </u>
98-06-6	Tert-Butylbenzene	 	-61	— <u>ŭ</u>
75-15-0	Carbon Disulfide	 	6	<u> </u>
56-23-5	Carbon Tetrachloride	 	6	U
108-90-7		 		- Ū
124-48-1	Chlorobenzene Chlorodibromomethane	 	6	<u> </u>
75-00-3		 	- 1	<u> </u>
110-75-8	Chloroethane	 	$\frac{12}{12}$	<u> </u>
67-66-3	2-Chloroethyl Vinyl Ether	 	-12	
74-87-3	Chloroform	 	12	<u> </u>
95-49-8	Chloromethane	 		<u>U</u>
106-43-4	2-Chlorotoluene	 ·	6	
96-12-8	4-Chlorotoluene	 ·	_	0
106-93-4	1,2-Dibromo-3-Chloropropane	 ,,	6	
74-95-3	1,2-Dibromoethane	 		U
<u>95-50-1</u>	Dibromomethane	 	*6	
	1,2-Dichlorobenzene	 <u> </u>	6	U
541-73-1	1,3-Dichlorobenzene	 <u>_</u>	6	U
106-46-7	1,4-Dichlorobenzene	 	6	<u> </u>
75-71-8	Dichlorodifluoromethane	 	12	υ
75-34-3	1,1-Dichloroethane	 	6	U
107-06-2	1,2-Dichloroethane		6	U
75-35-4	1,1-Dichloroethene		6	U
156-59-2	Cis-1,2-Dichlcroethene		6	0

FORM I VOA

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1A SW-846 VOLATILE ORGANICS ANALYSIS DATA SHEET

S-1-8' Method: 8260 Lab Name: IEA-NC . Lab Code: IEA Case No.: 978-065 SDG No.: 08311 .. SOIL Lab Sample ID: 960831105 Matrix: (soil/water) and the state Lab File ID: 0819713.D Sample wt/vol: 5 (g/mL) · .g Level: (low/med) Date Received: 08/16/96 LOW . . . Date Analyzed: 08/19/96 * Moisture: not dec. 15 Dilution Factor: 1.0 GC Column: DB-624 ID: 0.53 (mm) Soil Extract Volume: Soil Aliquot Volume: (uL) (uL) · ĩ

CAS NO. COMPOUND

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg

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156-60-5	Trans-1,2-Dichloroethene	6	υ
78-87-5	1,2-Dichloropropane	. 6	U
142-28-9	1,3-Dichloropropane	6	U
594-20-7	2,2-Dichloropropane	. 6	U
563-58-6	1,1-Dichloropropene	6	0
10061-01-5	Cis-1,3-Dichloropropene	6	U
10061-02-6	Trans-1,3-Dichloropropene	6	U
110-57-6	Cis-1,4-Dichloro-2-Butene	6	U
110-57-6	Trans-1,4-Dichloro-2-Butene	6	U
100-41-4	Ethylbenzene	. 6	U
97-63-2	Ethyl Methacrylate	6	U
87-68-3	Hexachlorobutadiene	6	U
591-78-6	2-Hexanone	12	U
74-88-4	Iodomethane	6	U
98-82-8	Isopropylbenzene	6	U
99-87-6	P-Isopropyltoluene	6	U
126-98-7	Methacrylonitrile	6	U
75-09-2	Methylene Chloride	12	0
80-62-6	Methyl Methacrylate	6	U
108-10-1	4-Methyl-2-Pentanone	12	U
1634-04-4	Methyl-tert-Butyl ether	6	0
91-20-3	Naphthalene	. 6	U
76-01-7	Pentachloroethane	6	0
103-65-1	N-Propylbenzene	2 6	0
100-42-5	Styrene	6	U
630-20-6	1,1,1,2-Tetrachloroethane	6	U
79-34-5	1,1,2,2-Tetrachloroethane	. 6	U
127-18-4	Tetrachloroethene	2	J
108-88-3	Toluene	. 6	U
87-61-6	1,2,3-Trichkorobenzene	6	0
120-82-1	1,2,4-Trichkorobenzene	6	U
71-55-6	1,1,1-Trichloroethane		U
79-00-5	1,1,2-Trichloroethane	. 6	U
79-01-6	Trichloroethene	6	U

FORM I VOA

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	1A		CLIENT SAMPLE NO.
SW-846 VULATILE	ORGANICS ANALY	ISIS DAIA SH	EE'I
			S-1-8'
Lab Name: IEA-NC	Method:	8260	
Lab Code: IEA	Case No.: 978-	-065	SDG.NO.: 08311
Matrix: (soil/water) SOIL		Lab Sample	ID: 960831105
Sample wt/vol: 5 (g/mL) g		Lab File ID	: 0919713.D
Level: (low/med) LOW		Date Receiv	ed: 08/16/96
* Moisture: not dec. 15		Date Analyz	ed: 08/19/96
GC Column: DB-624 ID:).53 (mm)	Dilution Fa	ctor: 1.0
Soil Extract Volume: (uL)		Soil Aliquo	t Volume: (uL)
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CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg

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3)	ug/kg	Q
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75- <u>6</u> 9-4	Trichlorofluoromethane	⁴ 6	U
96-18-4	1,2,3-Trichloropropane	6	U
95-63-6	1,2,4-Trimethylbenzene	6	0
108-67-8	1,3,5-Trimethylbenzene	6	0
108-05-4	Vinyl Acetate	12	U
75-01-4	Vinyl Chloride	12	U
1330-20-7	Xylene (Total)	6	U

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COMPOUND

CAS NO.

FORM I VOA

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SW-846	VOLATILE	ORGANICS	ANALYSIS	DATA	SHEET
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TENTATIVELY I	DENTIFIED COMPOUNDS	S-1-8'
Lab Name: IEA-NC	Method: 8260	
Lab Code: IEA Cas	e No.: 978-065	SDG No.: 08311
Matrix: (soil/water) SOIL	Lab Sample	ID: 960831105
Sample wt/vol: 5 (g/mL) g	Lab File II): 0819713.D
Level: (low/med) LOW	Date Receiv	red: 08/16/96
<pre>% Moisture: not dec. 15</pre>	Date Analyz	red: 08/19/96
GC Column: DB-624 ID: 0.53	(mm) Dilution Fa	actor: 1.0
Soil Extract Volume: (uL)	Soil Alique	ot Volume: (uL)

Number TICs Found: 0

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CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg

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DICE 00284

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	SW-846 JLATILE ORG	1A	CLIENT	SAMPLE NO
Lab Name: IEA		Method: 8260	S-4-1'A	
Lab Code: IEA		e No.: 978-065	SDG No.	: 08311
Matrix: (soil	/water) SOIL	Lab S	Sample ID: 960831	106
Sample wt/vol	: 5 (g/mL) g	Lab E	File ID: 0819714.	D
Level: (low/	med) LOW	Date	Received: 08/16	/96
* Moisture: n	ot dec. 15	Date	Analyzed: 08/19/	96
GC Column: D	B-624 ID: 0.53	(mm) Dilut	tion Factor: 1.0	
Soil Extract	Volume: (uL)	Soil	Aliquot Volume:	(uL) .

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CAS NO. COMPOUND

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CONCENTRATION UNITS: (ug/L or ug/Kg) / ug/kg

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C7 C4 1			
67-64-1	Acetone	<u> </u>	JB
107-13-1	Acrylonitrile		U
107-05-1	Allyl Chloride	6	U
71-43-2	Benzene	6	U
108-86-1	Bromobenzene	6	U
74-97-5	Bromochloromethane	. 6	Ŭ
75-27-4	Bromodichloromethane	6	U
75-25-2	Bromoform -	6	Ŭ
74-83-9	Bromomethane	. 12	Ŭ
78-93-3	2-Butanone	12	U
104-51-8	N-Butylbenzene	6	U
135-98-8	Sec-Butylbenzene	• 6	U
98-06-6	Tert-Butylbenzene	6	Ŭ
75-15-0	Carbon Disulfide	6	U
56-23-5	Carbon Tetrachloride	6	0
108-90-7	Chlorobenzene	6	Ŭ
124-48-1	Chlorodibromomethane	. 6	Ū
75-00-3	Chloroethane	12	Ū
110-75-8	2-Chloroethyl Vinyl Ether	12	0
67-66-3	Chloroform	6	U
74-87-3	Chloromethane	12	U
95-49-8	2-Chlorotoluene	6	0
106-43-4	4-Chlorotoluene	6	0
96-12-8	1,2-Dibromo-3-Chloropropane	6	Ū
106-93-4	1,2-Dibromoethane	6	Ū
74-95-3	Dibromomethane	6	Ū
95-50-1	1,2-Dichlorobenzene	6	Ŭ
541-73-1	1,3-Dichlorobenzene		Ŭ
106-46-7	1,4-Dichlorobenzene	· · · · · · · · · · · · · · · · · · ·	Ŭ
75-71-8	Dichlorodifluoromethane	12	- Ŭ
75-34-3	1,1-Dichloroethane		Ŭ
107-06-2	1,2-Dichloroethane		- Ŭ
75-35-4	1.1-Dichloroethene	6	Ŭ
156-59-2	Cis-1,2-Dichloroethene	. 6	- ŭ

CLIENT SAMPLE NO. 1A SW-846 VOLATILE ORGANICS ANALYSIS DATA SHEET S-4-1'A Lab Name: IEA-NC Method: 8260 ... Case No.: 978-065 SDG No.: 08311 Lab Code: IEA Lab Sample ID: 960831106 Matrix: (soil/water) SOIL Lab File ID: 0819714.D Sample wt/vol: 5 (g/mL) ġ Date Received: 08/16/96 Level: (low/med) LOW Date Analyzed: 08/19/96 * Moisture: not dec. 15 GC Column: DB-624 ID: 0.53(mm) Dilution Factor: 1.0 Soil Aliquot Volume: (uL) Soil Extract Volume: (uL)

CONCENTRATION UNITS: CAS NO. COMPOUND (ug/L or ug/Kg)0 ug/kg 156-60-5 Trans-1,2-Dichloroethene 6 U 78-87-5 1,2-Dichloropropane U 6 . ,3-Dichloropropane 142-28-9 π 6 2,2-Dichloropropane 594-20-7 U 6 563-58-6 1,1-Dichloropropene 6 Ű Cis-1, 3-Dichloropropene 10061-01-5 U 6 10061-02-6 Trans-1, 3-Dichloropropene Ū 6

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110-57-6	Cis-1,4-Dichloro-2-Butene	1 4.	6	U
110-57-6	Trans-1,4-Dichloro-2-Butene		6	ซ
100-41-4	Ethylbenzene		6	U
97-63-2	Ethyl Methacrylate		6	U
87-68-3	Hexachlorobutadiene		6	<u> </u>
591-78-6	2-Hexanone		12	0
74-88-4	Iodomethane		• • 6	U
98-82-8	Isopropylbenzene		6	υ
99-87-6	P-Isopropyltoluene	_	6	U
126-98-7	Methacrylonitrile		6	υ
75-09-2	Methylene Chloride		12	U
80-62-6	Methyl Methacrylate		6	U
108-10-1	4-Methyl-2-Pentanone		12	U
1634-04-4	Methyl-tert-Butyl ether		6	U
91-20-3	Naphthalene		6	U
76-01-7	Pentachloroethane		• 6	U
103-65-1	N-Propylbenzene	• .	• • 6	<u> </u>
100-42-5	Styrene -		6	U
630-20-6	1,1,1,2-Tetrachloroethane		6	0
79-34-5	1,1,2,2-Tetrachloroethane		. 6	U
127-18-4	Tetrachloroethene		6	0
108-88-3	Toluene'	•	6	U
87-61-6	1,2,3-Trichlorobenzene		6	U
120-82-1	1,2,4-Trichlorobenzene		6	U
71-55-6	1,1,1-Trichloroethane		6	U
79-00-5	1,1,2-Trichloroethane		6	U
79-01-6	Trichloroethene		6	V

FORM I VOA

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CLIENT SAMPLE NO. 1A SW-846 VOLATILE ORGANICS ANALYSIS DATA SHEET S-4-1'A Method: 8260 Lab Name: IEA-NC SDG No.: 08311 Lab Code: IEA Case No.: 978-065 Lab Sample ID: 960831106 Matrix: (soil/water) SOIL Lab File ID: 0819714.D Sample wt/vol: 5 (g/mL) g Date Received: 08/16/96 Level: (low/med) LOW * Moisture: not dec. 15 Date Analyzed: 08/19/96 : ID; 0.53 (mm) GC Column: DB-624 Dilution Factor: 1.0 Soil Extract Volume: Soil Aliquot Volume: (uL) (uL) ____

CAS NO.	COMPOUND	CONCENTRATION UN (ug/L or ug/Kg)	ITS: ug/kg	Q .
75-69-4	Trichlorofluoromethane		6	U
96-18-4	1,2,3-Trichloropropane		6	-0
95-63-6	1,2,4-Trimethylbenzene		- 6	U
108-67-8	1,3,5-Trimethylbenzene		6	0
108-05-4	Vinyl Acetate		12	0
75-01-4	Vinyl Chloride		12	U
1330-20-7	Xylene (Total)		6	U

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FORM I VOA

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Number TICs Found: 0

CLIENT SAMPLE NO.

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SW-846 .JLATILE ORGANICS ANALYSIS LATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

IENIALVE	GI IDENITETED (OMPOUNDS	S-4-1'A
Lab Name: IEA-NC	Method:	8260	
Lab Code: IEA	Case No.: 978-	065	SDG No.: 08311
Matrix: (soil/water) SOIL		Lab Sample	ID: 960831106
Sample wt/vol: 5 (g/mL) g		Lab File ID	: 0819714.D
Level: (low/med) LOW		Date Receive	ed: 08/16/96
& Moisture: not dec. 15		Date Analyz	ed: 08/19/96
GC Column: DB-624 ID: (0.53 (mm)	Dilution Fac	ctor: 1.0
Soil Extract Volume: (uL)		Soil Aliquo	t Volume: (uL)
			•

CONCENTRATION UNITS: (ug/L or ug/Kg) úg/kg

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-----CAS NUMBER COMPOUND NAME RT EST. CONC. Q • -• • <u>.</u>.... • 7. . .

FORM I VOA-TIC

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1A CLIENT SAMPLE NO. SW-846 VOLATILE ORGANICS ANALYSIS DATA SHEET

		\$-2-1'B
Lab Name: IEA-NC Method:	8260	
Lab Code: IEA Case No.: 978	-065	SDG No.: 08311
Matrix: (soil/water) SOIL	Lab Sample :	ID: 960831107
Sample wt/vol: 5 (g/mL) g	Lab File ID	: 0819715.D
Level: (low/med) LOW	Date Receive	ed: 08/16/96
& Moisture: not dec. 15	Date Analyze	ed: 08/19/96
GC Column: DB-624 ID: 0.53(mm)	Dilution Fac	ctor: 1.0
Soil Extract Volume: (uL)	Soil Aliquo	t Volume: (uL)

CAS NO. COMPOUND

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg

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67-64-1	Acetone		. 8	JB
107-13-1	Acrylonitrile		6	
107-05-1	Allyl Chloride		6	
71-43-2	Benzene		6	<u> </u>
108-86-1	Bromobenzene		6	<u> </u>
74-97-5	Bromochloromethane			Ū I
75-27-4	Bromodichlorcmethane		6	
75-25-2	Bromoform.		Ğ	
74-83-9	Bromomethane		12	<u> </u>
78-93-3	2-Butanone		12	<u> </u>
104-51-8	N-Butylbenzene			<u> </u>
135-98-8	Sec-Butylbenzene	** 525.	6	<u> </u>
98-06-6	Tert-Butylbenzene		é	
75-15-0	Carbon Disulfide		6	<u>v</u>
56-23-5			6	0
108-90-7	Carbon Tetrachloride		. 6	
124-48-1	Chlorobenzene		6	<u><u></u><u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u></u></u>
75-00-3	Chlorodibromomethane		12	0
110-75-8	Chloroethane		12	
67-66-3	2-Chloroethyl Vinyl Ether		<u>12</u> 6	
74-87-3	Chloroform		12	<u> </u>
95-49-8	Chloromethane			
106-43-4	2-Chlorotoluene		6	
96-12-8	4-Chlorotoluene			0
30-12-8	1,2-Dibromo-3-Chloropropane			0
106-93-4	1,2-Dibromoethane		. 6	0
74-95-3	Dibromomethane		6	
95-50-1	1,2-Dichlorobenzene			
541-73-1	1,3-Dichlorobenzene		. 6	U
106-46-7	1,4-Dichlorobenzene		6	U
75-71-8	Dichlorodifluoromethane			U.
75-34-3	1,1-Dichloroethane		6	U
107-06-2	1,2-Dichloroschane		6	U
75-35-4	1,1-Dichloroethene	`	6	U
156-59-2	Cis-1,2-Dichloroethene		6	Ų

FORM I VOA

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IA SW-846 VULATILE ORGANICS ANAL	CLIENT SAMPLE NO. YSIS D.A SHEET
Lab Name: IEA-NC Method:	S-2-1'B
Lab Code: IEA Case No.: 978	-065 SDG No.: 08311
Matrix: (soil/water) SOIL	Lab Sample ID: 960831107
Sample wt/vol: 5 (g/mL) g	Lab File ID: 0819715.D
Level: (low/med) LOW	Date Received: 08/16/96
* Moisture: not dec. 15	Date Analyzed: 08/19/96
GC Column: DB-624 ID: 0.53(mm)	Dilution Factor: 1.0
Soil Extract Volume: (uL)	Soil Aliquot Volume: (uL)

CAS NO. COMPOUND

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg

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156-60-5	Trans-1,2-Dichloroethene		6	υ
78-87-5	1,2-Dichloropropane			<u> </u>
142-28-9	1,3-Dichloropropane		6	U
594-20-7	2,2-Dichloropropane		. 6	0
563-58-6	1,1-Dichloropropene		6	<u> </u>
10061-01-5	Cis-1, 3-Dichloropropene		6	0
10061-02-6	Trans-1,3-Dichloropropene		6	U
110-57-6	Cis-1,4-Dichloro-2-Butene		. 6	υ.
110-57-6	Trans-1,4-Dichloro-2-Butene		6	U
100-41-4	Ethylbenzene	- 1 -	6	U
97-63-2	Ethyl Methacrylate		6	U
87-68-3	Hexachlorobutadiene	`••`	6	U
591-78-6	2-Hexanone		12	U
74-88-4	Iodomethane	•	. 6	U
98-82-8	Isopropylbenzene	1	. 6	Ū.
99-87-6	P-Isopropyltoluene		- 6	U
126-98-7	Methacrylonitrile		6	U
75-09-2	Methylene Chloride		12	U
80-62-6	Methyl Methacrylate		6	Ū
108-10-1	4-Methyl-2-Pentanone		12	Ŭ
1634-04-4	Methyl-tert-Butyl ether		6	U
91-20-3	Naphthalene		6	U
76-01-7	Pentachloroethane		6	U
103-65-1	N-Propylbenzene		••• 6	U
100-42-5	Styrene		6	U
630-20-6	1,1,1,2-Tetrachloroethane		. 6	U
79-34-5	1,1,2,2-Tetrachloroethane		. 6	U .
127-18-4	Tetrachloroechane		. 2	J
108-88-3	Toluene		6	U
87-61-6	1,2,3-Trichlarobenzene		- 6	U
120-82-1	1,2,4-Trichlorobenzene		6	Ŭ
71-55-6	1,1,1-Trichloroethane		6	U
79-00-5	1,1,2-Trichleroethane		6	U
79-01-6	Trichloroethene		6	U

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CLIENT SAMPLE NO. **1**A SW-846 VOLATILE ORGANICS ANALYSIS DATA SHEET S-2-1'B Method: 8260 Lab Name: IEA-NC SDG No.: 08311 " Case No.: 978-065 Lab Code: IEA Lab Sample ID: 960831107 Matrix: (soil/water) SOIL Lab File ID: 0819715.D Sample wt/vol: 5 (g/mL) g Date Received: 08/16/96 Level: (low/med) LOW _**15** Date Analyzed: 08/19/96 * Moisture: not dec. Dilution Factor: 1.0 GC Column: DB-624 1D:230453 (mm) Soil Aliquot Volume: (uL) Soil Extract Volume: '(úL)∷ 1 CONCENTRATION UNITS: CAS NO. COMPOUND (ug/L or ug/Kg)ug/kg Q

75-69-4	Trichlorofluoromethane		- 6	U	1
96-18-4	1,2,3-Trichloropropane		6	U	
95-63-6	1,2,4-Trimethylbenzene	 	6	υ	
108-67-8	1,3,5-Trimethylbenzene		6	U	!
108-05-4	Vinyl Acetate		12	U	
75-01-4	Vinyl Chloride	• .	· 12	U	
1330-20-7	Xylene (Total)		6	U	

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FORM I VOA

	1E		CLIENT SAMPLE
SW-846 VO	LATILE ORGANICS A	NALYSIS DATA SH	EET
	TATIVELY IDENTIFI		S-2-1'B
Lab Name: IEA-NC	Meth	od: 8260	
Lab Code: IEA	Case No.:	978-065	SDG No.: 08311
Matrix: (soil/water)	SOIL	Lab Sample	ID: 960831107
Sample wt/vol: 5 (g/m	mī) g	Lab File ID	: 0819715.D
Level: (low/med) LOW		Date Receiv	ed: 08/16/96
* Moisture: not dec.	15	Date Analyz	ed: 08/19/96
GC Column: DB-624	ID: 0.53 (mm)	Dilution Fa	ctor: 1.0
Soil Extract Volume:	(uL)	Soil Aliquo	t Volume: (uL)
Mumber MTG - Deve I - 6	• • • • • •	ONCENTRATION UN	
Number TICs Found: 0	• • • • • (ug/L or ug/Kg)	uy/ry

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CAS	NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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FORM I VOA-TIC

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1A SW-846 VOLATILE ORGANICS ANALYSIS DATA SHEET

S-3-1' Method: 8260 Lab Name: IEA-NC SDG No.: 08311 Case No.: 978-065 Lab Code: IEA Lab Sample ID: 960831108 Matrix: (soil/water) SOIL Lab File ID: 0820703.D Sample wt/vol: 5 (g/mL) g Date Received: 08/16/96 Level: (low/med) LOW Date Analyzed: 08/20/96 % Moisture: not dec. 14 GC Column: DB-624 ID: .53(mm) Dilution Factor: 1.0 Soil Aliquot Volume: (uL) Soil Extract Volume: (uL)

CAS NO.

COMPOUND

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg

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				-
67-64-1	Acetone		12	JB
107-13-1	Acrylonitrile		6	0
107-05-1	Allyl Chloride		6	U
71-43-2	Benzene		6	U
108-86-1	Bromobenzene		6	U
74-97-5	Bromochloromethane		. 6	Ŭ
75-27-4	Bromodichloromethane		6	U
75-25-2	Bromoform		6	U
74-83-9	Bromomethane		12	U
78-93-3	2-Butanone		12	U
104-51-8	N-Butylbenzene		6	U
135-98-8	Sec-Butylbenzene		• 6	υ
98-06-6	Tert-Butylbenzene		6	U
75-15-0	Carbon Disulfide		6	U
56-23-5	Carbon Tetrachloride		6	U
108-90-7	Chlorobenzene		6	U
124-48-1	Chlorodibromomethane		6	0
75-00-3	Chloroethane		12	U
110-75-8	2-Chloroethyl Vinyl Ether		12	U
67-66-3	Chloroform		6	U
74-87-3	Chloromethane		12	U
95-49-8	2-Chlorotoluene		. 6	U
106-43-4	4-Chlorotoluene		6	U
96-12-8	1,2-Dibromo-3-Chloropropane	* .	6	U
106-93-4	1,2-Dibromoethane		6	U
74-95-3	Dibromomethane		6	U
95-50-1	1,2-Dichlorobenzene		6	U
541-73-1	1,3-Dichlorobenzene		6	U
106-46-7	1,4-Dichlorobenzene		6	U
75-71-8	Dichlorodifluoromethane		12	U
75-34-3	1,1-Dichloroethane		6	Ū
107-06-2	1,2-Dichloroethane		6	U
75-35-4	1,1-Dichloroethene		6	U
156-59-2	Cis-1.2-Dichloroethene		- 6	Ų

1A SW-846 VOLATILE ORGANICS ANALYSIS DATA SHEET

S-3-1' Method: 8260 Lab Name: IEA-NC Case No.: 978-065 SDG No.: 08311 Lab Code: IEA Lab Sample ID: 960831108 Matrix: (soil/water) SOIL Lab File ID: 0820703.D Sample wt/vol: 5 (g/mL) g Date Received: 08/16/96 Level: (low/med) LOW Date Analyzed: 08/20/96 * Moisture: not dec. 14 GC Column: DB-624 ID: .53 (mm) Dilution Factor: 1.0 Soil Aliquot Volume: (uL) Soil Extract Volume: (uL)

CAS NO. COMPOUND

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg

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156-60-5	Trans-1,2-Dichloroethene	· 6	¥
78-87-5	1,2-Dichloropropane	6	
142-28-9	1,3-Dichloropropane	6	
594-20-7	2,2-Dichloropropane	6	U
563-58-6	1,1-Dichloropropene	6	U
10061-01-5	Cis-1,3-Dichloropropene	6	U
10061-02-6	Trans-1, 3-Dichloropropene	6	U
110-57-6	Cis-1,4-Dichloro-2-Butene	6	0
110-57-6	Trans-1,4-Dichloro-2-Butene	6	U
100-41-4	Ethylbenzene	6	U
97-63-2	Ethyl Methacrylate	6	U
87-68-3	Hexachlorobutadiene	6	U
591-78-6	2-Hexanone	12	Ū
74-88-4	Iodomethane	6	Ū
98-82-8	Isopropylbenzene	6	<u> </u>
99-87-6	P-Isopropyltoluene	6	U
126-98-7	Methacrylonitrile	6	U
75-09-2	Methylene Chloride	12	U
80-62-6	Methyl Methacrylate	6	U
108-10-1	4-Methyl-2-Pentanone	12	ប
1634-04-4	Methyl-tert-Butyl ether	6	0
91-20-3	Naphthalene	6	U
76-01-7	Pentachloroethane	. 6	0
103-65-1	N-Propylbenzene	6	U
100-42-5	Styrene	6	U
630-20-6	1,1,1,2-Tetrachloroethane	6	U
79-34-5	1,1,2,2-Tetrachloroethane	6	U
127-18-4	Tetrachloroethene	6	U
108-88-3	Toluene	6	U
87-61-6	1,2,3-Trichlorobenzene	6	U.
120-82-1	1,2,4-Trichlorobenzene	6	U
71-55-6	1,1,1-Trichloroethane	6	U
79-00-5	1,1,2-Trichloroethane	6	U
79-01-6	Trichloroethene	6	Ų

FORM I VOA

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			1A			CLIENT SAMPLE	NO
	SW-846	VOLATILE	ORGANICS	ANALYSIS D	ATA SHEET_		
Lab Name: IE	A-NC		Met	hod: 8260	S-3	-1'	
Lab Code: IE	A		Case No.:	978-065	5	SDG No.: 08311	
Matrix: (soi	l/water)	SOIL		Lab S	ample ID:	960831108	
Sample wt/vo	1: 5	(g/mL) g		Lab F	ile ID: 0	820703.D	
Level: (low	/med) I	WOL		Date	Received:	08/16/96	
<pre>% Moisture: :</pre>	not dec.	14		Date	Analyzed:	08/20/96	
GC Column:	DB-624	ID:	. 53 (mm)	Dilut	ion Factor	: 1.0	
Soil Extract	ນດາມຫອ	(nL)		Soil	Alimot Vo	lume: (uL)	

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CAS NO.	COMPOUND	CONCENTRATION UN (ug/L or ug/Kg)	ITS: ug/kg	Q
75-69-4 96-18-4 95-61-6	Trichlorofluoromethane 1,2,3-Trichloropropane		· 6	<u>U</u> .
108-67-8	1,2,4-Trimethylbenzene 1,3,5-Trimethylbenzene Vinyl Acetate		6 12	
75-01-4 1330-20-7	Vinyl Chloride Xylene (Total)		· 12 6	U U

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1E	CLIENT SAMPLE NO
SW-846 VOLATILE ORGANICS AN TENTATIVELY IDENTIFIE	
	S-3-1'
Lab Code: IEA Case No.: 9	•
Matrix: (soil/water) SOIL	Lab Sample ID: 960831108
Sample wt/vol: 5 (g/mL) g	Lab File ID: 0820703.D
Level: (low/med) LOW	Date Received: 08/16/96
* Moisture: not dec. 14	Date Analyzed: 08/20/96
GC Column: DB-624 ID: .53 (mm)	Dilution Factor: 1.0
Soil Extract Volume: (uL)	Soil Aliquot Volume: (uL)
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Number TICs Found: 0

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CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg

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CAS	NUMBER	COMPOUND NAME	RT'	EST. CONC.	Q
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FORM I VOA-TIC

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IA SW-846 VOLATILE ORGANICS ANALYSIS DATA SHEET

CAS NO. COMPOUND

			S-4-1B'
Lab Name: IEA-NC	Method:	8260	
Lab Code: IEA	Case No.: 978	-065	SDG No.: 08311
Matrix: (soil/water) SOIL		Lab Sample	ID: 960831110
Sample wt/vol: 5 (g/mL) g	•	Lab File ID	: 0820708.D
Level: (low/med) LOW		Date Receiv	ed: 08/16/96
& Moisture: not dec. 12		Date Analyz	ed: 08/20/96
GC Column: DB-624 ID: (0. . 53 (mm)	Dilution Fa	ctor: 1.0
Soil Extract Volume: (uL)	· · · · · · · · · · · · · · · · · · ·	Soil Aliquo	t Volume: (uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg

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67-64-1	Acetone	·57	U
107-13-1	Acrylonitrile	6	U
107-05-1	Allyl Chloride	6	U
71-43-2	Benzene	6	-0-1
108-86-1	Bromobenzene	6	0
74-97-5	Bromochloromethane	6	U
75-27-4	Bromodichloromethane	6	U
75-25-2	Bromoform	6	0
74-83-9	Bromomethane	11	U
78-93-3	2-Butanone	11	0
104-51-8	N-Butylbenzene	6	U
135-98-8	Sec-Butylbenzene	6	U
98-06-6	Tert-Butylbenzene	6	U
75-15-0	Carbon Disulfide	6	U
56-23-5	Carbon Tetrachloride	6	U · U
108-90-7	Chlorobenzene	6	U
124-48-1	Chlorodibromomethane	6	U
75-00-3	Chloroethane	11	U
110-75-8	2-Chloroethyl Vinyl Ether	11	U
67-66-3	Chloroform	6	U
74-87-3	Chloromethane	11	U
95-49-8	2-Chlorotoluene	6	Ŭ
106-43-4	4-Chlorotoluene	. 6	<u> </u>
96-12-8	1,2-Dibromo-3-Chloropropane	** .** .:6	U
106-93-4	1,2-Dibromoethane	6	U
74-95-3	Dibromomethane	. 6	U
95-50-1	1,2-Dichlorobenzene	. 6	U
541-73-1	1,3-Dichlorobenzene	6	U
106-46-7	1,4-Dichlorobenzene	6	U
75-71-8	Dichlorodifluoromethane		U
75-34-3	1,1-Dichloroethane	. 6	U
107-06-2	1,2-Dichloroethane	6	U
75-35-4	1,1-Dichloroethene	6	U
156-59-2	Cis-1,2:Dichloroethene	6	U U

FORM I VOA

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CLIENT SAMPLE NO. 1A SW-846 VOLATILE ORGANICS ANALYSIS DATA SHEET C. S-4-1B' 5.5 مجنوع بالمدينة المريكة م Lab Name: IEA-NC Method: 8260 Саве No.: 978-065 _ SDG No.: 08311 Lab Code: IEA Lab Sample ID: 960831110 Matrix: (soil/water) SOIL: `* Lab File ID: 0820708.D Sample wt/vol: 5 (g/mL) -g Date Received: 08/16/96 Level: (low/med) ; : LOW Date Analyzed: 08/20/96 * Moisture: not dec. 12 ID: 0.53 (mm) Dilution Factor: 1.0 GC Column: DB-624 Soil Extract Volume: (uL) · Soil Aliquot Volume: (uL)

CAS NO. COMPOUND

CONCENTRATION UNITS: (ug/L or ug/Kg) __ ug/kg

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356 60 5		. 6	υ
156-60-5	Trans-1,2-Dichloroethene		0
78-87-5	1,2-Dichloropropane	6	0
142-28-9	1,3-Dichloropropane	6	
594-20-7	2,2-Dichioropropane		0
563-58-6	1,1-Dichloropropene	6	
10061-01-5	Cis-1,3-Dickloropropene	6	
10061-02-6	Trans-1, 3-Dichloropropene	6	
110-57-6	Cig-1,4-Dichloro-2-Butene	6	
110-57-6	Trans-1,4-Dichloro-2-Butene	6	U
100-41-4	Ethylbenzene	6	<u> </u>
97-63-2	Ethyl Methacrylate	6	0
87-68-3	Hexachlorobutadiene	. 6	U
591-78-6	2-Hexanone	11	υ
74-88-4	Iodomethane	6	U
98-82-8	Isopropylbenzene	6	U
99-87-6	P-Isopropyltoluene	•. 6	U
126-98-7	Methacrylonitrile	6	U
75-09-2	Methylene Chloride	11	U
80-62-6	Methyl Methacrylate	6	U
108-10-1	4-Methyl-2-Pentanone	11	U
1634-04-4	Methyl-tert-Butyl ether	6	U
91-20-3	Naphthalene	- 6	U
76-01-7	Pentachloroethane	6	U
103-65-1	N-Propylbengene	6	U
100-42-5	Styrene	6	U
630-20-6	1,1,1,2-Tetrachloroethane	. 6	U
79-34-5	1,1,2,2-Tetrachloroethane	6	U
127-18-4	Tetrachloroethene	. 6	U
108-88-3	Toluene	6	U
87-61-6	1,2,3-Trichlorobenzene	6	0-0
120-82-1	1,2,4-Trichforobenzene	6	U
71-55-6	1,1,1-Trichlorcethane	6	U
79-00-5	1,1,2-Trichloroethane	8	Ū
79-01-6	Trichloroethene	- č	

FORM I VOA

1A SW-846 VOLATILE ORGANICS	CLIENT SAMPLE NO.
· · · · ·	s-4-1B'
•	: 978-065 SDG No.: 08311
Matrix: (soil/water) SOIL	Lab Sample ID: 960831110
Sample wt/vol: 5 (g/mL) g	Lab File ID: 0820708.D
Level: (low/med) LOW	Date Received: 08/16/96
* Moisture: not dec. 12	Date Analyzed: 08/20/96
GC Column: DB-624 . ID	Dilution Factor: 1.0
Soil Extract Volume: (uL)	Soil Aliquot Volume: (uL)
CAS NO. COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg Q

75-69-4	Trichlorofluoromethane	• •	·6	U
96-18-4	1,2,3-Trichloropropane		- 6	U
95-63-6	1,2,4-Trimethylbenzene		6	U
108-67-8	1,3,5-Trimethylbenzene		· - 6	U
108-05-4	Vinyl Acetate		11	U
75-01-4	Vinyl Chloride		11	U
1330-20-7	Xylene (Total)		6	U

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FORM I VOA

DICE 00299

1E SW-846 VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

S-4-1B! Lab Name: IEA-NC Method: 8260 SDG No.: 08311 Case No.: 978-065 Lab Code: IEA Lab Sample ID: 960831110 Matrix: (soil/water) SOIL Lab File ID: 0820708.D Sample wt/vol: 5 (g/mL) g Date Received: 08/16/96 Level: (low/med) LOW Date Analyzed: 08/20/96 * Moisture: not dec. 12 GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0 Soil Extract Volume: (uL) Soil Aliquot Volume: (uL) · · · ·

Number TICs Found: 0

CONCENTRATION UNITS: (ug/L or ug/Kg) 'ug/kg

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CLIENT SAMPLE NO.

CAS NUMBER COMPOUND NAME RT EST. CONC. Q

FORM I VOA-TIC

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1B SW-846 SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

206-44-0----Fluoranthene

50-32-8-----Benzo(a) pyrene

56-55-3----Benzo(a) anthracene

218-01-9-----Chrysene 205-99-2----Benzo(b)fluoranthene

207-08-9-----Benzo(k) fluoranthene

193-39-5-----Indeno(1,2,3-cd)pyrene

53-70-3-----Dibenz(a,h)anthracene

191-24-2----Benzo(g,h,i)perylene_

129-00-0----Pyrene

Lab Name: INDUSTRIAL & ENVIRONMENTA	SIB
	ethod: 8270 SDG No.: 08311
Matrix: (soil/water) SOIL	Lab Sample ID: 960831105
Sample wt/vol: 30.1 (g/mL) G	Lab File ID: 0820402.D
Level: (low/med) LOW	Date Received: 08/16/96
<pre>% Moisture: 9 decanted: (Y/N) N</pre>	Date Extracted:08/16/96
Concentrated Extract Volume: 1000(uL)	Date Analyzed: 08/20/96
Injection Volume: 2.0(uL)	Dilution Factor: 1.0
	NCENTRATION UNITS: g/L or ug/Kg) UG/KG Q
91-20-3Naphthalene 91-57-62-Methylnaphthalene 91-58-72-Chloronaphthalene 208-96-8Acenaphthylene 83-32-9Acenaphthene 86-73-7Fluorene 85-01-8Phenanthrene 120-12-7Anthracene	

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1B SW-846 SEMIVOLAILE ORGANICS ANALYSIS DATA LHEET CLIENT SAMPLE NO.

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SH-R40 SEMIAOUNITUR OKOMUTOS MUM	
Lab Name: INDUSTRIAL & ENVIRONMENTA	521A
Lab Code: IEA Case No.: 978-065	Method: 8270 SDG No.: 08311
Matrix: (soil/water) SOIL	Lab Sample ID: 960831102
Sample wt/vol: 30.2 (g/mL) G	Lab File ID: 0819405.D
Level: (low/med) LOW	Date Received: 08/16/96
<pre>% Moisture: 17 decanted: (Y/N) N</pre>	Date Extracted:08/16/96
Concentrated Extract Volume: 1000(uL)	Date Analyzed: 08/19/96
Injection Volume: 2.0(uL)	Dilution Factor: 1.0
GPC Cleanup: (Y/N) N CAS NO. COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG Q
91-20-3Naphthalene	390 U

91-20-3Naphthalene	390	ប
91-57-62-Methylnaphthalene	390	ט ו
91-58-72-Chloronaphthalene	390	U
208-96-8Acenaphthylene	390	ប
83-32-9Acenaphthene	390	ט
86-73-7Fluorene	390	U
85-01-8Phenanthrene	390	U
120-12-7Anthracene	390	Ū
206-44-0Fluoranthene	390	U
129-00-0Pyrene	390	ប
56-55-3Benzo(a)anthracene	390	U
218-01-9Chrysene	390	ע ד
205-99-2Benzo(b) fluoranthene	390	Ū
207-08-9Benzo(k)fluoranthene	390) ប
50-32-8Benzo(a)pyrene	390	U
193-39-5Indeno(1,2,3-cd)pyrene	390	ט ו
53-70-3Dibenz (a, h) anthracene	390	ט ו
191-24-2Benzo(g,h,i)perylene	390	ี บี

1B SW-846 SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

218-01-9-----Chrysene

205-99-2----Benzo(b)fluoranthene

207-08-9-----Benzo (k) fluoranthene

193-39-5-----Indeno (1,2,3-cd) pyrene

53-70-3----Dibenz(a,h)anthracene

191-24-2-----Benzo(g,h,i)perylene

50-32-8----Benzo(a) pyrene

Lab Name: INDUSTRIAL	& ENVIRONMENTA	S21B		
Lab Code: IEA	Case No.: 978-065 Met	hod: 8270 SDG No.:	08311	
Matrix: (soil/water)	SOIL	Lab Sample ID: 9608	31107	
Sample wt/vol:	30.0 (g/mL) G	Lab File ID: 0819	410.D	
Level: (low/med)	LOW	Date Received: 08/1	6/96	
<pre>% Moisture: 16</pre>	decanted: (Y/N) N	Date Extracted:08/1	6/96	
Concentrated Extract	Volume: 1000(uL)	Date Analyzed: 08/1	9/96	
Injection Volume:	2.0(uL)	Dilution Factor: 1.	0	
GPC Cleanup: (Y/N) CAS NO.		ENTRATION UNITS: L or ug/Kg) UG/KG	Q	
91-20-3Naphthalene 390 U 91-57-62-Methylnaphthalene 390 U 91-58-72-Chloronaphthalene 390 U 208-96-82-Chloronaphthalene 390 U 83-32-9Acenaphthylene 390 U 85-01-8Fluorene 390 U 85-01-8Fluorene 390 U 120-12-7Anthracene 390 U 206-44-0Fluoranthene 390 U 129-00-0				

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1B SW-846 SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

83-32-9----Acenaphthene

85-01-8-----Phenanthrene

206-44-0----Fluoranthene

50-32-8----Benzo(a)pyrene

56-55-3----Benzo(a)anthracene

205-99-2-----Benzo(b)fluoranthene 207-08-9----Benzo(k)fluoranthene

193-39-5-----Indeno(1,2,3-cd)pyrene_

53-70-3-----Dibenz(a,h)anthracene

191-24-2----Benzo(g,h,i)perylene_

120-12-7----Anthracene

86-73-7----Fluorene

129-00-0----Pyrene

218-01-9----Chrysene

Lab Name: INDUSTRIAL & ENVIRONMENTA	S21C
Lab Code: IEA Case No.: 978-065 Met	chod: 8270 SDG No.: 08311
Matrix: (soil/water) SOIL	Lab Sample ID: 960831104
Sample wt/vol: 30.0 (g/mL) G	Lab File ID: 0819407.D
Level: (low/mad) LOW	Date Received: 08/16/96
<pre>% Moisture: 15 decanted: (Y/N) N</pre>	Date Extracted:08/16/96
Concentrated Extract Volume: 1000(uL)	Date Analyzed: 08/19/96
Injection Volume: 2.0(uL)	Dilution Factor: 1.0
	CENTRATION UNITS: (L or ug/Kg) UG/KG Q
91-20-3Naphthalene 91-57-62-Methylnaphthalene 91-58-72-Chloronaphthalene 208-96-8Acenaphthylene	390 U 390 U 390 U 390 U 390 U

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1B SW-846 SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

206-44-0----Fluoranthene

50-32-8-----Benzo (a) pyrene

56-55-3-----Benzo(a) anthracene

205-99-2----Benzo(b) fluoranthene

207-08-9-----Benzo(k)fluoranthene

193-39-5-----Indeno(1,2,3-cd)pyrene_

53-70-3-----Dibenz(a,h)anthracene_

191-24-2----Benzo(g,h,1)perylene_

129-00-0----Pyrene

218-01-9-----Chrysene

Lab Name: INDUSTRIAL & ENVIRONMENTA	S21D			
	Method: 8270 SDG No.: 08311			
Matrix: (soil/water) SOIL	Lab Sample ID: 960831103			
Sample wt/vol: 30.1 (g/mL) G	Lab File ID: 0819406.D			
Level: (low/med) LOW	Date Received: 08/16/96			
<pre>% Moisture: 16 decanted: (Y/N) N</pre>	Date Extracted:08/16/96			
Concentrated Extract Volume: 1000(uL) Date Analyzed: 08/19/96				
Injection Volume: 2.0 (uL)	Dilution Factor: 1.0			
	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG Q			
91-20-3Naphthalene 91-57-62-Methylnaphthalen 91-58-72-Chloronaphthalen 208-96-8Acenaphthylene 83-32-9Acenaphthene 86-73-7Fluorene 85-01-8Phenanthrene 120-12-7Anthracene	390 U 1e 390 U 1e 390 U 390 U 390 390 U 390			

1B SW-846 SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

56-55-3-----Benzo(a)anthracene

56-55-3-----Benzo (a) antin accine 218-01-9-----Chrysene 205-99-2-----Benzo (b) fluoranthene 207-08-9-----Benzo (k) fluoranthene 50-32-8-----Benzo (a) pyrene 193-39-5-----Indeno (1,2,3-cd) pyrene 53-70-3-----Dibenz (a,h) anthracene 191-24-2----Benzo (g,h,1) perylene

CLIENT SAMPLE NO.

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	531			
Lab Name: INDUSTRIAL & ENVIRONMENTA	1			
Lab Code: IEA Case No.: 978-065 Meth	od: 8270 SDG No.: 08311			
Matrix: (soil/water) SOIL	Lab Sample ID: 960831108			
Sample wt/vol: 30.2 (g/mL) G	Lab File ID: 0819411.D			
Level: (low/med) LOW	Date Received: 08/16/96			
<pre>% Moisture: 14 decanted: (Y/N) N Date Extracted:08/16/96</pre>				
Concentrated Extract Volume: 1000(uL)	Date Analyzed: 08/19/96			
Injection Volume: 2.0(uL) Dilution Factor: 1.0				
	NTRATION UNITS: or ug/Kg) UG/KG Q			
91-20-3Naphthalene 91-57-62-Methylnaphthalene 91-58-72-Chloronaphthalene 208-96-8Acenaphthylene 83-32-9Acenaphthene 86-73-7Fluorene 85-01-8Fluorene 120-12-7Phenanthrene 206-44-0Fluoranthene 129-00-0Pyrene	380 U 380 U 380 U 380 U 380 U 380 U 380 U 380 U 380 U 380 U 380 U 380 U 380 U 380 U 380 U 380 U 380 U			
56-65-7Porce (2) onthracono				

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1B SW-846 SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: INDUSTRIAL & ENVIRONMENTA	S41A			
	od: 8270 SDG No.: 08311			
Matrix: (soil/water) SOIL	Lab Sample ID: 960831106			
Sample wt/vol: 30.0 (g/mL) G	Lab File ID: 0819409.D			
Level: (low/med) LOW	Date Received: 08/16/98			
<pre>% Moisture: 11 decanted: (Y/N) N</pre>	Date Extracted:08/16/96			
Concentrated Extract Volume: 1000(uL) Date Analyzed: 08/19/96				
Injection Volume: 2.0(uL) Dilution Factor: 1.0				
	NTRATION UNITS: or ug/Kg) UG/KG Q			
91-20-3Naphthalene 91-57-62-Methylnaphthalene 91-58-72-Chloronaphthalene	370 U 370 U 370 U 370 U 370 U			

91-58-72-Chloronaphthalene	370	ע ד
208-96-8Acenaphthylene	370	U
83-32-9Acenaphthene	370	U
86-73-7Fluorene	370	U
85-01-8Phenanthrene	370	U
120-12-7Anthracene	370	U U
206-44-0Fluoranthene	370	U
129-00-0Pyrene	370	U
56-55-3Benzo(a)anthracene	370	U
218-01-9Chrysene	370	U
205-99-2Benzo(b) fluoranthene	370	U
207-08-9Benzo(k)fluoranthene	370	U
50-32-8Benzo (a) pyrene	370	U
193-39-5Indeno (1,2,3-cd) pyrene	370	U
53-70-3Dibenz (a, h) anthracene	370	U
191-24-2Benzo(g,h,i)perylene	370	U

FORM I SV-1

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SW-846 SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

129-00-0----Pyrene

218-01-9-----Chrysene

85-01-8-----Phenanthrene

50-32-8----Benzo(a) pyrene

.

56-55-3----Benzo(a) anthracene

205-99-2----Benzo(b) fluoranthene

207-08-9-----Benzo(k)fluoranthene

193-39-5-----Indeno(1,2,3-cd)pyrene_

53-70-3-----Dibenz(a,h)anthracene

191-24-2----Benzo(q,h,i) perylene

120-12-7----Anthracene 206-44-0----Fluoranthene CLIENT SAMPLE NO.

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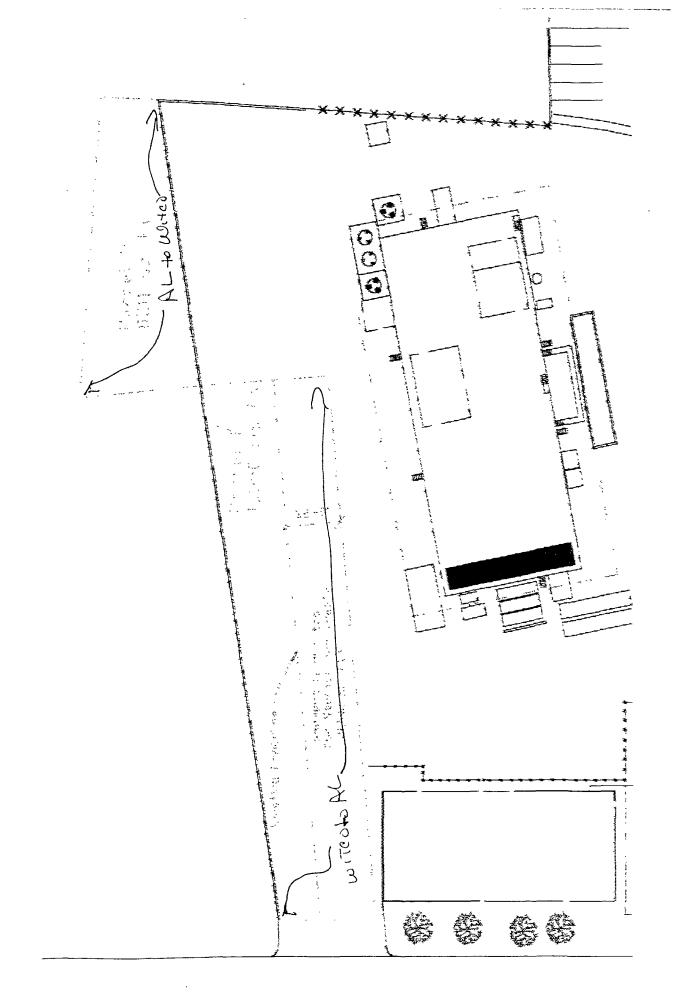
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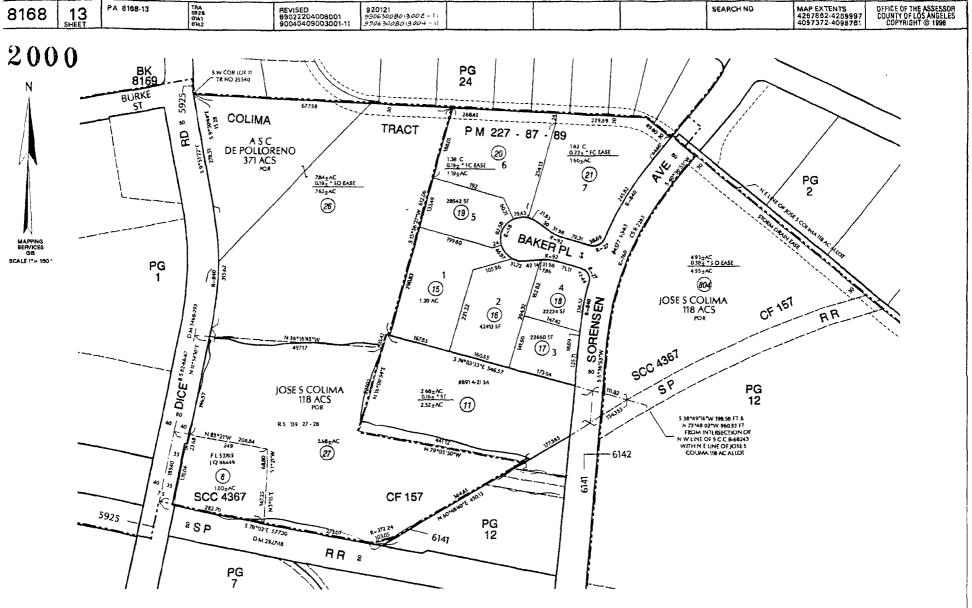
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Lab Name: INDUSTRIAL & ENVIRONMENTA	541B				
	nod: 8270 SDG No.: 08311				
Matrix: (Boil/water) SOIL Lab Sample ID: 960831110					
Sample wt/vol: 30.0 (g/mL) G Lab File ID: 0819413.D					
Level: (low/med) LOW	Date Received: 08/16/96				
<pre>% Moisture: 12 decanted: (Y/N) N</pre>	Date Extracted:08/16/96				
Concentrated Extract Volume: 1000(uL) Date Analyzed: 08/19/96					
Injection Volume: 2.0(uL) Dilution Factor: 1.0					
GPC Cleanup: (Y/N) N CONCENTRATION UNITS: CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG Q					
91-20-3Naphthalene 91-57-62-Methylnaphthalene 91-58-72-Chloronaphthalene 208-96-8Acenaphthylene 83-32-9Acenaphthene 86-73-7Fluorene	380 U 380 U 380 U 380 U 380 U 380 U 380 U 380 U 380 U				

FORM I SV-1







HEADQUARTERS, 9150 E FLAIR DR., EL MONTE, CA 91731

AUGUST 51, 1988

LIQUID AIR CORP, INDUSTRIAL GASES DIV ID - 055590 2121 N CALIFORNIA BLVD WALNUT CREEK CA 94596

OFFICIAL DOCUMENT

ANNUAL VALIDATION OF PERMIT TO OPERATE

DEAR PERMIT HOLDER:

THIS LETTER IS THE OFFICIAL NOTICE OF RENEWAL AND ACKNOWLEDGEMENT OF PAYMENT FOR THE ATTACHED LIST OF PERMIT(S) TO OPERATE. OPERATION UNDER THIS LETTER AND THE PERMIT(S) WHICH IT RENEWS MUST BE CONDUCTED IN COMPLIANCE WITH ALL INFORMATION INCLUDED WITH THE INITIAL APPLICATION AS WELL AS THE INITIAL PERMIT CONDITIONS. THE EQUIPMENT MUST BE MAINTAINED AND KEPT IN GOOD CONDITION AT ALL TIMES. UNLESS OTHERWISE SPECIFICALLY STATED, THE ORIGINAL PERMIT TO OPERATE REMAINS IN FULL FORCE AND EFFECT. AND MUST BE RETAINED IN ACCORDANCE WITH THE RULES AND REGULATIONS OF THE SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT.

FOR FURTHER INFORMATION, OR IF YOU HAVE ANY QUESTIONS REGARDING THIS LETTER, PLEASE CALL CUSTOMER SERVICE AT (816) 572-6326.

SINCERELY,

JAMES M. LENTS, PH.D. EXECUTIVE OFFICER

NEW CONDITIONS (NONE) RENEWAL(S) ATTACHED

LAT RES SESDIM StSprings (8832)

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HEADQUARTERS, 9150 E FLAIR DR. EL MONTE, CA 91731

AUGUST 01, 1988

LIQUID AIR CORP, INDUSTRIAL GASES DIV ID - 355690 8832 DICE RD SANTA FE SPRINGS CA 996700000

PERMIT RENEWALS

PERMIT NUMBER DESCRIPTION			NUMBER	EXPIRATION DATE	
M55385	ACETONE,	STORAGE-OTHEP	152309	07/16/89	

	98 2327780
RECORDING REC	DUESTED BY) RECORDED/FILED IN OFFICIAL RECORDS RECORDER'S OFFICE) LOS ANGELES COUNTY
AND WHEN REC	ORDED MAIL TO) CALIFORNIA) 2:41 PM DEC 23 1998
DICE ROAD LLC 4675 MacArthur Co	ourt, Suite 430)
Newport Beach, CA	TY MONUMENT FEE \$10. CODE D FEE \$42 P
SP	ACE ABOVE THIS LINE FOR RECORDER'S USE
C (<i>i i</i>	H. F. N. F. CODE 94
	GRANT DEED
	The undersigned grantor declares: Documentary transfer tax is \$71.50 computed on the full value of the property conveyed less the value of tiens and encumbrances remaining at the time of sale.
DICE ROAD LLC, City of Santa Fe Sp of the real property	
1.	Current taxes and assessments.
2	All other matters of record or apparent.
	SS WHEREOF, grantor has executed this instrument as of the cember, 1998.
	AIRLIGUIDE AMERICA CORPATION By Name: Toto By T Title: User President Title: Name: Name: Toto Toto Toto Toto Toto Toto Toto Tot

ç,

Kenneth P. Hahn Los Angeles County Assessor 500 West Temple Street, Los Angeles, CA 90012-2770

For Public Service call (213) 974-3211

How the Property Tax System Works

Citics and Countics Provides copies of all building permits issued **Recorder** Provides copies of all deeds and other recorded documents



Assesses all real estate and personal property (businesses, boats, and airplanes) located throughout the entire county

Auditor-Controller

Receives the assessments from the Assessor and applies the appropriate tax rate to determine the actual amount of property taxes owed

Treasurer-Tax Collector

Mails out the property tax bills, collects the money, and deposits it in the County Freasury

Auditor-Controller

Allocates the money to over 900 local taxing agencies, including the County, cities, schools, and special districts

(fold hine)



AIR LIQUIDE AMERICA CORP

P O BOX 8038 WALNUT CREEK CA 94596

PLEASE READ YELLOW SHEET FIRST

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DICE 00314

EXHIBIT I [EXISTING AIR LIQUIDE PROPERTY]

PARCEL "B"

THAT PORTION OF THE COLIMA TRACT, IN THE RANCHO SANTA GETRUDES, IN THE CITY OF SANTA FE SPRINGS, COUNTY OF LOS ANGELES, STATE OF CALIFORNIA, DESCRIBED AS FOLLOWS.

COMMENCING AT A POINT IN THE CENTER LINE OF DICE ROAD, 40 00 FEET NORTHERLY THEREON FROM THE CENTER LINE OF THE RIGHT OF WAY OF THE PACIFIC ELECTRIC RAILWAY (AS SAID RIGHT OF WAY AND DICE ROAD ARE SHOWN ON MAP RECORDED IN BOOK 3465 PAGE 135 OF DEEDS, RECORDS OF SAID COUNTY), THENCE ALONG SAID CENTER LINE OF DICE ROAD, NORTH 11°54'10" EAST 120.90 FEET, THENCE SOUTH 83°26" EAST 261 70 FEET TO THE TRUE POINT OF BEGINNING; THENCE NORTH 01°21' EAST 68 8 FEET, THENCE NORTH 83°21" WEST 249.00 FEET TO THE CENTER LINE OF SAID DICE ROAD, THENCE NORTH 11°54'10" EAST ALONG SAID CENTER LINE 196 65 FEET, THENCE SOUTH \$3°07'50" EAST 340 15 FEET, THENCE NORTH 08°26'10" EAST 145 34 FEET TO THE NORTHERLY LINE OF THE LAND DESCRIBED IN CERTIFICATE OF TITLE NO X-10800 ON FILE IN THE OFFICE OF THE REGISTRAR OF SAID COUNTY, THENCE ALONG THE NORTHERLY LINE SOUTH 73°50'40" EAST 823 79 FEET TO THE NORTHWESTERLY LINE OF THE SOUTHERN PACIFIC RAILROAD RIGHT OF WAY AS SAID RIGHT OF WAY WAS KNOWN ON AUGUST 24, 1920; THENCE SOUTH 60°48'40" WEST 762 07 FEET TO THE NORTHERLY LINE OF SAID PACIFIC RAILWAY RIGHT OF WAY, THENCE ALONG SAID LAST MENTIONED NORTHERLY LINE NORTH 78°02' WEST 294 60 FEET TO A POINT DISTANT SOUTH 78°02' EAST 282 70 FEET THEREON FROM SAJD CENTER LINE OF DICE ROAD, THENCE NORTH 03°15' EAST 147.25 FEET TO THE TRUE POINT OF BEGINNING

EXCEPT THEREFROM THE LAND DESCRIBED IN THE DEED FROM BURDETT OXYGEN COMPANY OF CLEVELAND, INC., A CORPORATION, TO C.W. ROBERTS, A MARRIED MAN, RECORDED APRIL 21, 1954 IN BOOK 44382 PAGE 402, OFFICIAL RECORDS

ALSO EXCEPT THEREFROM THAT PORTION WITHIN SAID DICE ROAD CONVEYED TO COUNTY OF LOS ANGELES IN FEE SIMPLE FOR ROAD PURPOSES BY DEED RECORDED OCTOBER 10, 1908 IN BOOK 3465 PAGE 133 OF DEEDS.

DICE 00315

DICE 00316

COUNTY OF HARRIS

TEXAS STATE OF CALIFORNIA

On <u>Decoder</u> 10th 1998 before me, <u>Dover</u>, <u>Arcer</u>, a Notary Public in and for said State, personally appeared <u>Jerry Barna</u>, personally known to me (or proved to me on the basis of satisfactory evidence) to be the person whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his authorized capacity, and that by his signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument

SS.

WITNESS my hand and official seal.

Notary Public in and for said State



DICE 00317

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ALSO EXCEPT THEREFROM THE LAND CONVEYED TO JOHN G. LOCKE AND JANYCE E. LOCKE, HUSBAND AND WIFE AS COMMUNITY PROPERTY, AS TO AN UNDIVIDED ONE-THIRD (1/3) INTEREST, ROBERT O. BERG AND DONNA M. BERG, HUSBAND AND WIFE AS COMMUNITY PROPERTY, AS TO AN UNDIVIDED ONE-THIRD (1/3) INTEREST, AND ARNOLD ROSENTHAL AND PEARL ROSENTHAL, HUSBAND AND WIFE AS JOINT TENANTS BY DEED RECORDED DECEMBER 12, 1975 AS INSTRUMENT NO. 4550, OFFICIAL RECORDS, DESCRIBED AS FOLLOWS

BEGINNING AT THE MOST SOUTHERLY CORNER OF THE LAND SHOWN ON SAID MAP NO. CF-157; THENCE NORTH 60°48'40" EAST ALONG THE SOUTHEASTERLY BOUNDARY OF SAID LAND 85.52 FEET TO A POINT OF CUSP WITH A TANGENT CURVE CONCAVE NORTHWESTERLY AND HAVING A RADIUS OF 372,24 FEET, THENCE SOUTHWESTERLY ALONG SAID CURVE, THROUGH A CENTRAL ANGLE OF 15°15'39", AN ARC DISTANCE OF 103.05 FEET TO ITS INTERSECTION WITH THE SOUTHERLY BOUNDARY OF SAID LAND, THENCE SOUTH 78°02'00" EAST, ALONG SAID SOUTHERLY BOUNDARY, 21.53 FEET TO THE POINT OF BEGINNING, CONTAINING AN AREA OF 362 SQUARE FEET MORE OR LESS

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EXHIBIT 2 [PROPOSED DICE ROAD PARCEL]

PARCEL "A"

THAT PORTION OF THE RANCHO SANTA GERTRUDES, BEING ALSO PART OF THE TRACT FINALLY CONFIRMED TO TOMAS SANCHEZ COLIMA AND KNOWN AS THE COLIMA TRACT, IN THE CITY OF SANTA FE SPRINGS, DESCRIBED AS FOLLOWS

BEGINNING AT THE FIRST ANGLE POINT IN THE CENTER LINE OF DICE ROAD, 40 FEET WIDE, SOUTHERLY OF SORENSON LANE, (NOW BURKE STREET) SAID ANGLE POINT BEING MARKED BY A COUNTY SURVEYOR'S CONCRETE MONUMENT AS SHOWN IN FIELD BOOK FT33-366, ON FILE IN THE OFFICE OF THE COUNTY SURVEYOR OF SAID LOS ANGELES COUNTY, THENCE ALONG SAID CENTER LINE OF DICE ROAD, NORTH 69°37'40" WEST 7 10 FEET, THENCE SOUTH 73°50'40" EAST 22 21 FEET TO A POINT IN THE EAST LINE OF SAID DICE ROAD, SAID POINT BEING MARKED BY A 2 INCH IRON PIPE AND BEING DISTANT NORTH 09°37'40" WEST I 23 FEET FROM AN ANGLE POINT IN SAID EAST LINE OF DICE ROAD: THENCE ALONG A LINE WHICH PASSES THROUGH A 2 INCH IRON PIPE SET IN THE NORTHWESTERLY LINE OF THE RIGHT OF WAY, 50 FEET WIDE, OF THE PACIFIC ELECTRIC RAILROAD, AS DESCRIBED IN DEED TO THE LONG BEACH, WHITTIER AND LOS ANGELES COUNTY RAILROAD COMPANY, RECORDED IN BOOK 378 PAGE 284 OF DEEDS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY, SOUTH 73°50'40" EAST 480 68 FEET TO THE TRUE POINT OF BEGINNING

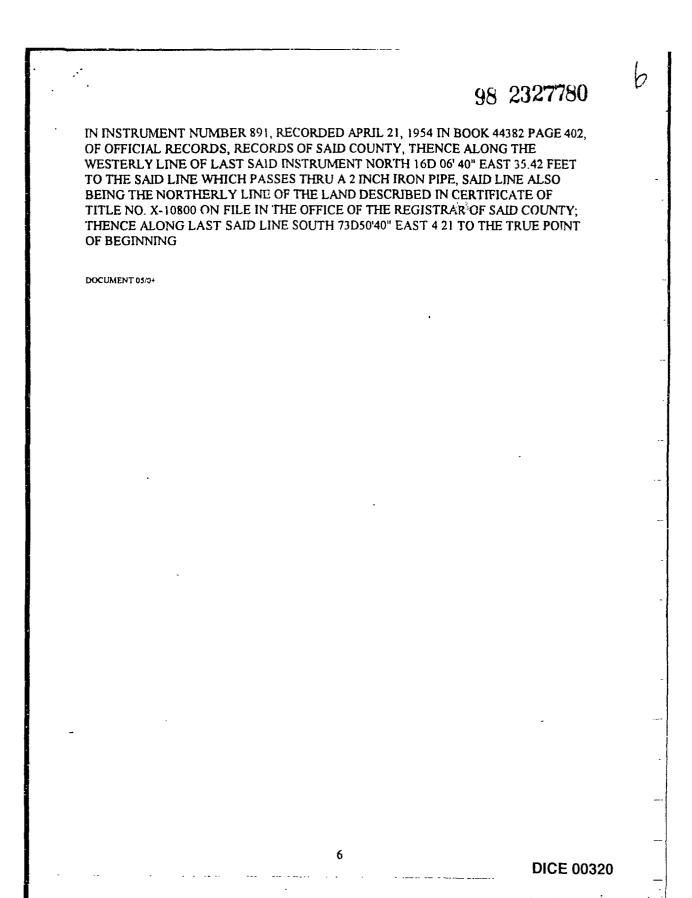
THENCE AT RIGHT ANGLES NORTH 16°09'20" EAST 612 06 FEET TO A POINT IN THAT CERTAIN COURSE HAVING A LENGTH OF 1175.91 FEET IN THE SOUTHERLY BOUNDARY OF PARCEL 1, AS SHOWN ON THE MAP FILED IN BOOK 65 PAGE 38 OF RECORD OF SURVEYS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY: THENCE NORTH 86°14'22" WEST ALONG SAID CERTAIN COURSE 677 58 FEET TO A 2 INCH IRON PIPE IN THE EASTERLY LINE OF DICE ROAD, 40 FEET WIDE, AS SAID PIPE AND ROAD ARE SHOWN ON SAID LAST MENTIONED MAP; THENCE ALONG SAID DICE ROAD, SOUTH 09°37'51" EAST 15.28 FEET TO AN ANGLE POINT THEREIN AND SOUTH 80°05'09" WEST 40 00 FEET TO AN ANGLE POINT THEREIN, THENCE ALONG SAID DICE ROAD, SOUTH 09°38'29" EAST 483 46 FEET TO SAID 2 INCH IRON PIPE IN THE EAST LINE OF DICE ROAD, THAT IS DISTANT NORTH 09°37'40" WEST 1 23 FEET FROM AN ANGLE POINT IN SAID EAST LINE OF DICE ROAD, THENCE ALONG SAID LINE WHICH PASSES THROUGH A 2 INCH IRON - PIPE SET IN THE NORTHWESTERLY LINE OF SAID RIGHT OF WAY, 50 FEET WIDE, NORTH 73D 50' 40" WEST 22.21 FEET TO THE CENTERLINE OF SAID DICE ROAD; THENCE SOUTH 9D 51' 22" EAST ALONG THE CENTERLINE OF SAID DICE ROAD 7 10 FEET TO SAID ANGLE POINT IN SAID DICE ROAD, THENCE SOUTH 11D 54' 10" WEST ALONG THE CENTERLINE OF SAID DICE ROAD 136.46 FEET, THENCE SOUTH 86D 16' 45" EAST 497 17 FEET TO THE WESTERLY LINE OF THE LAND DESCRIBED

DICE 00318

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PARCEL "A"	1. 1		L NO/ID I /INC LL	1	
THAT PORTIO	LY CONFIRMI	D TO TOMAS		MA ANE	SO PART OF THE O KNOWN AS THE O AS FOLLOWS:
FEET WIDE, SE ANGLE POINT MONUMENT A COUNTY SUR CENTER LINE 73°50'40" EAST SAID POINT B 09°37'40" WES ROAD; THENO IN THE NORTH PACIFIC ELEC WHITTIER AN BOOK 378 PAC	DUTHERLY OF BEING MARK AS SHOWN IN VEYOR OF SA OF DICE ROA 22 21 FEET T EING MARKE F I 23 FEET FF E ALONG A L HWESTERLY I TRIC RAILRO D LOS ANGEL GE 284 OF DEE	F SORENSON ED BY A COU FIELD BOOK ID LOS ANGE D, NORTH 69° O A POINT IN D BY A 2 INCH OM AN ANGI INE WHICH P. LINE OF THE I AD, AS DESCI LES COUNTY IDS, IN THE O	LANE, (NOW BUP JNTY SURVEYOR FT33-366, ON FILI LES COUNTY; TH '37'40" WEST 7.10 THE EAST LINE (HIRON PIPE AND LE POINT IN SAID	KE STF S CON E IN TH IENCE A FEET; 7 OF SAIE BEING EAST I A 2 IN O FEET O THE I PANY, R	CRETE E OFFICE OF THE ALONG SAID THENCE SOUTH D DICE ROAD, DISTANT NORTH LINE OF DICE CH IRON PIPE SET WIDE, OF THE LONG BEACH, ECORDED IN RECORDER OF
THAT CERTAL BOUNDARY C RECORD OF S COUNTY; THE FEET TO A 2 I WIDE, AS SAII THENCE ALO POINT THERE THEREIN, THI SAID 2 INCH I NORTH 09°37' DICE ROAD; T NORTH 73D 50 THENCE SOU 7 10 FEET TO WEST ALONG	N COURSE HA F PARCEL 1, A URVEYS, IN T ENCE NORTH NCH IRON PIP O PIPE AND R NG SAID DICE IN AND SOUT ENCE ALONG RON PIPE IN T 40" WEST 1 23 HENCE ALON HE NORTHWE O' 40" WEST 22 FH 9D 51' 22" E SAID ANGLE F THE CENTER	VING A LENG AS SHOWN OF HE OFFICE OF 86°14'22" WES E IN THE EAS OAD ARE SHO ROAD, SOUT H 80°05'09" W SAID DICE RO THE EAST LIN FEET FROM A G SAID LINE STERLY LINE STERLY LINE 21 FEET TO T AST ALONG POINT IN SAID LINE OF SAID	N THE MAP FILED F THE COUNTY R T ALONG SAID CI STERLY LINE OF I OWN ON SAID LAS OWN ON SAID LAS OWN ON SAID LAS OWN ON SAID LAS E ST 40 00 FEET TO OAD, SOUTH 09°35 E OF DICE ROAD AN ANGLE POINT WHICH PASSES T E OF SAID RIGHT THE CENTERLINE THE CENTERLINE D DICE ROAD; TH O DICE ROAD 136.	EET IN IN BOO ECORD ERTAIN DICE RO ST MEN 15 28 FI O AN A 8'29" EA , THAT IN SAID THROUC OF WA OF SAI E OF SAI ENCE S 46 FEET	THE SOUTHERLY DK 65 PAGE 38 OF ER OF SAID I COURSE 677 58 DAD, 40 FEET ITIONED MAP; EET TO AN ANGLE NGLE POINT SST 483 46 FEET TO IS DISTANT D EAST LINE OF GH A 2 INCH IRON Y, 50 FEET WIDE, ID DICE ROAD;

DICE 00319

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CODE 94

J8 2327779

RECORDING REQUESTED BY AND WHEN RECORDED MAIL TO

AIR LIQUIDE AMERICA CORP., 8832 Dice Road Santa Fe Springs, CA 90970) RECORDED/FILED IN OFFICIAL RECORDS RECORDER'S OFFICE LOS ANGELES COUNTY CALIFORNIA) 2:41 PM DEC 23 1998

A. F. N.

SURVEY MONUMENT FEE \$10. CODE 9

SPACE ABOVE THIS LINE FOR RECORDER'S USE

GRANT DEED

The undersigned grantor declares: Documentary transfer tax is \$71 50 computed on the full value of the property conveyed less the value of liens and encumbrances remaining at the time of sale

FOR VALUABLE CONSIDERATION, receipt of which is hereby acknowledged, DICE ROAD LLC, a Delaware limited liability company, hereby grants to AIR LIQUIDE AMERICA CORPORATION, a Delaware corporation, the real property located in the City of Santa Fe Springs, County of Los Angeles of California, consisting of that portion of the real property described on Exhibit 1 attached hereto (Existing Dice Road Property) which is included within the real property described on Exhibit 2 attached hereto (Proposed Air Liquide Parcel).

SUBJECT TO-

- 1 Current taxes and assessments.
- 2 All other matters of record or apparent.

8 th IN WITNESS WHEREOF, grantor has executed this instrument as of the day of December, 1998

DICE ROAD LLC

By RCW Properties, LLC a Delaware limited liability company Managing Member

alst T Wullo Bv:

Ralph C. Wintrode, Managing Member

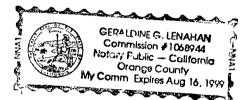
STATE OF CALIFORNIA

SS

COUNTY OF <u>Drange</u>) On <u>December</u> 8, 1998 before me, <u>Geraldine G. Lenahan</u> a Notary Public in and for said State, personally appeared <u>Ruph C. Wintrade</u>, personally known to me (or proved to me on the basis of satisfactory evidence) to be the person whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his authorized capacity, and that by his signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument

))

WITNESS my hand and official seal.



Public in and for said State Notary

98 2327779

(Seal)

EXHIBIT 1 [EXISTING DICE ROAD PROPERTY]

PARCEL "A" (TWO PARCELS)⁻ PARCEL 1

THAT PORTION OF THE COLIMA TRACT, IN THE RANCHO SANTA GERTRUDES, IN THE CITY OF SANTA FE SPRINGS, AS SHOWN ON MAP FILED IN SUPERIOR COURT CASE NO 4367, COUNTY SURVEYOR'S MAP NO. CF-157, IN THE OFFICE OF THE SURVEYOR OF SAID COUNTY, WITHIN THE FOLLOWING DESCRIBED BOUNDARIES.

COMMENCING AT A POINT IN THE CENTER LINE OF DICE ROAD, 40.00 FEET NORTHERLY THEREON FROM THE CENTER LINE OF THE RIGHT OF WAY OF THE PACIFIC ELECTRIC RAILWAY, AS SAID RIGHT OF WAY AND DICE ROAD ARE SHOWN ON MAP RECORDED IN BOOK 3465 PAGE 135 OF DEEDS; THENCE NORTH 11°54'10" EAST ALONG THE CENTER LINE OF SAID DICE ROAD 120 90 FEET; THENCE SOUTH 83°26" EAST 261.70 FEET; THENCE NORTH 01°21" EAST 68 8 FEET; THENCE NORTH 83°21' WEST 249 00 FEET, THENCE NORTH 11°54'10" EAST ALONG THE CENTER LINE OF SAID DICE ROAD, 196.65 FEET TO THE TRUE POINT OF BEGINNING, THENCE SOUTH 83°07'50" EAST 340.15 FEET, THENCE NORTH 08°26'10" EAST 145.34 FEET TO THE NORTHERLY LINE OF THE LAND DESCRIBED IN CERTIFICATE OF TITLES NO. X-10800 ON FILE IN THE OFFICE OF THE REGISTRAR OF TITLES OF SAID COUNTY, THENCE ALONG THE NORTHERLY BOUNDARY OF SAID LAND, NORTH 73°50'40" WEST 333 57 FEET TO THE CENTER LINE OF SAID DICE ROAD. THENCE ALONG LAST MENTIONED CENTER LINE, SOUTH 09°37'40" EAST 7 10 FEET TO AN ANGLE POINT IN SAID CENTER LINE: THENCE SOUTH 11°54'10" WEST 193 05 FEET TO THE TRUE POINT OF BEGINNING

PARCEL 2

THAT PORTION OF THE RANCHO SANTA GERTRUDES, BEING ALSO PART OF THE TRACT FINALLY CONFIRMED TO TOMAS SANCHEZ COLIMA AND KNOWN AS THE COLIMA TRACT, IN THE CITY OF SANTA FE SPRINGS, DESCRIBED AS FOLLOWS¹

BEGINNING AT THE FIRST ANGLE POINT IN THE CENTER LINE OF DICE ROAD, 40 FEET WIDE, SOUTHERLY OF SORENSON LANE, (NOW BURKE STREET) SAID ANGLE POINT BEING MARKED BY A COUNTY SURVEYOR'S CONCRETE MONUMENT AS SHOWN IN FIELD BOOK FT33-366, ON FILE IN THE OFFICE OF THE COUNTY SURVEYOR OF SAID LOS ANGELES COUNTY;

THENCE ALONG SAID CENTER LINE OF DICE ROAD, NORTH 09°51'22" WEST 7 10 FEET; THENCE SOUTH 74°03'33" EAST 22.21 FEET TO A POINT IN THE EAST LINE OF SAID DICE ROAD, SAID POINT BEING MARKED BY A 2 INCH IRON PIPE AND BEING DISTANT NORTH 09°51'22" WEST 1 23 FEET FROM AN ANGLE POINT IN SAID EAST LINE OF DICE ROAD, THENCE ALONG A LINE WHICH PASSES THROUGH A 2 INCH IRON PIPE SET IN THE NORTHWESTERLY LINE OF THE RIGHT OF WAY 50 FEET WIDE, OF THE PACIFIC ELECTRIC RAILROAD, AS DESCRIBED IN DEED TO THE LONG BEACH, WHITTIER AND LOS ANGELES COUNTY RAILROAD COMPANY, RECORDED IN BOOK 378 PAGE 284 OF DEEDS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY, SOUTH 74°03'33" EAST 480 68 FEET TO THE TRUE POINT OF BEGINNING.

THENCE AT RIGHT ANGLES NORTH 15°56'27" EAST 612.06 FEET TO A POINT IN THAT CERTAIN COURSE HAVING A LENGTH OF 1175.91 FEET IN THE SOUTHERLY BOUNDARY OF PARCEL 1, AS SHOWN ON THE MAP FILED IN BOOK 65 PAGE 38 OF RECORD OF SURVEYS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY, THENCE NORTH 86°27'15" WEST ALONG SAID CERTAIN COURSE 677 58 FEET TO A 2 INCH IRON PIPE IN THE EASTERLY LINE OF DICE ROAD, 40 FEET WIDE, AS SAID PIPE AND ROAD ARE SHOWN ON SAID LAST MENTIONED MAP, THENCE ALONG SAID DICE ROAD, SOUTH 09°50'44" EAST 15.28 FEET TO AN ANGLE POINT THEREIN AND SOUTH 79°52'16" WEST 40.00 FEET TO AN ANGLE POINT THEREIN; THENCE ALONG SAID DICE ROAD, SOUTH 09°51"22" EAST 483.46 FEET TO SAID 2 INCH IRON PIPE IN THE EAST LINE OF DICE ROAD, THAT IS DISTANT NORTH 09°51'22" WEST 1 23 FEET FROM AN ANGLE POINT IN SAID EAST LINE OF DICE ROAD; THENCE ALONG SAID LINE WHICH PASSES THROUGH A 2 INCH IRON PIPE SET IN THE NORTHWESTERLY LINE OF SAID RIGHT OF WAY, 50 FEET WIDE. SOUTH 74°03'33" EAST 480 68 FEET TO THE TRUE POINT OF BEGINNING

EXHIBIT 2

[Proposed Air Liquide Parcel]

PARCEL "B"

THAT PORTION OF THE COLIMA TRACT, IN THE RANCHO SANTA GERTRUDES, IN THE CITY OF SANTA FE SPRINGS, COUNTY OF LOS ANGELES, STATE OF CALIFORNIA, DESCRIBED AS FOLLOWS.

COMMENCING AT A POINT IN THE CENTER LINE OF DICE ROAD, 40 00 FEET NORTHERLY THEREON FROM THE CENTER LINE OF THE RIGHT OF WAY OF THE PACIFIC ELECTRIC RAILWAY (AS SAID RIGHT OF WAY AND DICE ROAD ARE SHOWN ON MAP RECORDED IN BOOK 3465 PAGE 135 OF DEEDS, RECORDS OF SAID COUNTY); THENCE ALONG SAID CENTER LINE OF DICE ROAD, NORTH 11°54'10" EAST 120 90 FEET, THENCE SOUTH 83°26' EAST 261.70 FEET TO THE TRUE POINT OF BEGINNING; THENCE NORTH 01°21' EAST 68 8 FEET; THENCE NORTH 83°21' WEST 249 00 FEET TO THE CENTER LINE OF SAID DICE ROAD, THENCE NORTH 11°54'10" EAST ALONG SAID CENTER LINE TO A POINT BEING 136 46 FEET SOUTHERLY. MEASURED ALONG SAID CENTERLINE FROM THE FIRST ANGLE POINT IN THE CENTERLINE OF SAID DICE ROAD, SAID POINT BEING SHOWN AS MARKED BY A COUNTY SURVEYOR'S CONCRETE MONUMENT AS SHOWN IN FIELD BOOK FT 33-0366 ON FILE IN THE OFFICE OF THE COUNTY SURVEYOR OF SAID COUNTY; THENCETHENCE SOUTH 86D 16' 45" EAST 497.17 FEET TO THE WESTERLY LINE OF THE LAND DESCRIBED IN INSTRUMENT NUMBER 891, RECORDED APRIL 21, 1954 IN BOOK 44382 PAGE 402, OF OFFICIAL RECORDS, RECORDS OF SAID COUNTY, THENCE ALONG THE WESTERLY LINE OF LAST SAID INSTRUMENT NORTH 16D 06' 40" EAST 35 42 FEET TO THE NORTHERLY LINE OF THE LAND DESCRIBED IN CERTIFICATE OF TITLE NO X-10800 ON FILE IN THE OFFICE OF THE REGISTRAR OF SAID COUNTY, THENCE ALONG THE NORTHERLY LINE SOUTH 73D 50' 40" EAST 823 79 FEET TO THE NORTHWESTERLY LINE OF THE SOUTHERN PACIFIC RAILROAD RIGHT OF WAY AS SAID RIGHT OF WAY WAS KNOWN ON AUGUST 24, 1920: THENCE SOUTH 60°48'40" WEST 762 07 FEET TO THE NORTHERLY LINE OF SAID PACIFIC RAILWAY RIGHT OF WAY; THENCE ALONG SAID LAST MENTIONED NORTHERLY LINE NORTH 78°02' WEST 294 60 FEET TO A POINT DISTANT SOUTH 78°02' EAST 282 70 FEET THEREON FROM SAID CENTER LINE OF DICE ROAD; THENCE NORTH 03°15' EAST 147 25 FEET TO THE TRUE POINT OF BEGINNING.

EXCEPT THEREFROM THE LAND DESCRIBED IN THE DEED FROM BURDETT OXYGEN COMPANY OF CLEVELAND, INC, A CORPORATION, TO C W ROBERTS, A MARRIED MAN, RECORDED APRIL 21, 1954 IN BOOK 44382 PAGE 402, OFFICIAL RECORDS



ALSO EXCEPT THEREFROM THAT PORTION WITHIN SAID DICE ROAD CONVEYED TO COUNTY OF LOS ANGELES IN FEE SIMPLE FOR ROAD PURPOSES BY DEED RECORDED OCTOBER 10, 1908 IN BOOK 3465 PAGE 133 OF DEEDS

ALSO EXCEPT THEREFROM THE LAND CONVEYED TO JOHN G LOCKE AND JANYCE E LOCKE, HUSBAND AND WIFE AS COMMUNITY PROPERTY, AS TO AN UNDIVIDED ONE-THIRD (1/3) INTEREST, ROBERT O. BERG AND DONNA M BERG, HUSBAND AND WIFE AS COMMUNITY PROPERTY, AS TO AN UNDIVIDED ONE-THIRD (1/3) INTEREST, AND ARNOLD ROSENTHAL AND PEARL ROSENTHAL, HUSBAND AND WIFE AS JOINT TENAINTS BY DEED RECORDED DECEMBER 12, 1975 AS INSTRUMENT NO 4550, OFFICIAL RECORDS, DESCRIBED AS FOLLOWS:

BEGINNING AT THE MOST SOUTHERLY CORNER OF THE LAND SHOWN ON SAID MAP NO. CF-157, THENCE NORTH 60°48'40" EAST ALONG THE SOUTHEASTERLY BOUNDARY OF SAID LAND, 85 52 FEET TO A POINT OF CUSP WITH A TANGENT CURVE CONCAVE NORTHWESTERLY AND HAVING A RADIUS OF 372 24 FEET, THENCE SOUTHWESTERLY ALONG SAID CURVE, THROUGH A CENTRAL ANGLE OF 15°15'39", AN ARC DISTANCE OF 103 05 FEET TO ITS INTERSECTION WITH THE SOUTHERLY BOUNDARY OF SAID LAND, THENCE SOUTH 78° 02' 00" EAST, ALONG SAID SOUTHERLY BOUNDARY, 21.53 FEET TO THE POINT OF BEGINNING, CONTAINING AN AREA OF 362 SQUARE FEET MORE OR LESS.

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9 RECORDED IN OFFIC **ECORDS** Y, CALIF. вк]]4268рс954 OF LOS ANGELES CO FOR TITLE INSURANCE & TRUST CO. 1969 AT 3 A.M. FE8 4 RAY E. LEE, Registrar-Recorder Recording Requested By AMERICAN CRYOGENICS, INC., a DOCUMENTARY TRANSFER TAX \$ No TAX DUE Delaware corporation Title Insurance and the Trust Company And When Recorded Mail To SIGNED - PARTY OR AGES FIRM NAME As instructed by American Cryogenics, Inc. 1819 Peachtree Road, N. E. Atlanta, Georgia 303u8 Space Above This Line For Recorder's Use Mail Tax Statements To American Cryogenics, Inc. 1819 Peachtree Road, N. E. Atlanta, Georgia 30308 D.T.T. \$ No Tax Due

CORPORATION GRANT DEED

FOR VALUABLE CONSIDERATION, receipt of which is hereby acknowledged, CALIFORNIA OXYGEN COMPANY, a dissolved corporation of the State of California, acting by and through the undersigned who are a majority of the Board of Directors as constituted on the date of dissolution, hereby grants to AMERICAN CRYOGENICS, INC., a corporation organized and existing under the laws of the State of Delaware, the following described real property in the County of Los Angeles, State of California:

PARCEL NO. 1:

That portion of the Colima Tract, in the Rancho Santa Gertrudes, in the city of Santa Fe Springs, county of Los Angeles, state of California, described as follows:

Commencing at a point in the center line of Dice Road, 40.00 feet northerly thereon from the center line of the right of way of the Pacific Electric Railway (as said right of way and Dice Road are shown on a map recorded in Book 3465 Page 135 of Deeds, Records of said county); thence along said center line of Dice Road, North 11° 54' 10" East 120.90 feet; thence South 83° 26' East 261.70 feet to the true point of beginning; thence North 1° 21' East 68.8 feet; thence North 83° 21' West 249.00 feet to the center line of said Dice Road; thence North 11° 54' 10" East along said center line 196.65 feet; thence South 83° 07' 50" East 340.15 feet; thence North 08° 26' 10" East 145.34 feet to the northerly line of the land described in Certificate of Title No. X-10800 on file in the office of the Registrar of Titles of said county; thence along said northerly line Sputh 73° 50' 40" East 823.79 feet to the northwesterly line of the Southern Pacific Railroad right of way as said right of way was known on August 24, 1920;

MAIL TAX STATEMENTS AS DIRECTED ABOVE

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thence thereon South 60° 48' 40" West 762.07 feet to the northerly line of said Pacific Electric Railway right of way; thence along said last mentioned northerly line North 78° 02' West 294.60 feet to a point distant South 78° 02' East 282.70 feet thereon from said center line of Dice Road; thence North 3° 15' East 147.25 feet to the true point of beginning.

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EXCEPT therefrom the land described in the deed from Burdett Oxygen Company of Cleveland, Inc., a corporation, to C. W. Roberts, a married man, recorded April 21, 1954 in Book 44382 Page 402, Official Records.

ALSO EXCEPT therefrom that portion within said Dice Road conveyed to county of Los Angeles in fee simple for road purposes by deed recorded October 10, 1908 in Book 3465 Page 133 of Deeds.

PARCEL NO. 2:

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That portion of the Colima Tract, Rancho Santa Gertrudes in the city of Santa Fe Springs, county of Los Angeles, state of California, described as follows:

Beginning at a point in the northerly line of the right of way of the Pacific Electric Railway, said line being the southerly line of the land described in certificate of title Y-11053 in the office of the Registrar of Titles of said county, distant thereon South 78°02' East, 163.50 feet from the intersection of said line with the center of Dice Road as same is shown on map of right of way of said Pacific Electric Railway, recorded in Book 3465 Page 135 of Deeds, records of said county; thence continuing along said northerly line of said right of way South 78° 02' East 119.20 feet; thence North 03° 15' East 147.25 feet to an angle point in the northerly line of said land described in said certificate Y-11053; thence along said northerly line of said land North 83° 26' West 118.02 feet; thence South 03° 15' West 136.02 feet to the point of beginning.

PARCEL NO. 3:

That portion of the Colima Tract, in the Rancho Santa Gertrudes, in the city of Santa Fe Springs, county of Los Angeles, state of California, described as follows:

Beginning at a point in the center line of Dice Road, distant 40 feet northerly thereon from its intersection with the center line of the right of way of the Pacific Electric Railway, as shown on a map of said right of way recorded in Book 3465 Page 135 of Deeds, records of said county; thence continuing along said center line of said Dice Road, North 11° 54' 10" East, 120.90 feet; thence South 83° 26' East 143.59 feet; thence South 3° 15' West, 136.02 feet to a point in the northerly line of the aforesaid right of way of the Pacific Electric Railway, said line being the southerly line of the land described in Certificate Y-11053 of the Registrar of Titles of said county; thence North 78° 02' West along said northerly line of said right of way and the southerly line of said registered parcel, 163.50 feet to the point of beginning.

EXCEPT therefrom that portion within, said Dice Road, conveyed to county of Los Angeles in fee simple for road pur-

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poses, by deed recorded October 10, 1908 in Book 3465 Page 133 of Deeds.

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PARCEL NO. 4:

That portion of the 236 acre parcel in the Colima Tract, Rancho Santa Gertrudes, in the city of Santa Fe Springs, county of Los Angeles, state of California, included within the following described boundaries:

Beginning at a point in the center line of Dice Road, 40 feet northerly thereon from the center line of the right of way of the Pacific Electric Railway (as said right of way and Dice Road are shown on map attached to and recorded with a deed recorded in Book 3465, Page 133 of Deeds); thence along the center line of said Dice Road, North 11° 54' 10" East 120.90 feet to the true point of beginning; thence South 83° 26' East 261.70 feet; thence North 1° 21' East 68.8 feet thence North 83° 21' West 249. feet to said center line of Dice Road; thence along said center line, South 11° 54' 10" West 69.18 feet to the true point of beginning.

EXCEPT therefrom that portion within said Dice Road, conveyed to County of Los Angeles, in fee simple for road purposes, by deed recorded October 10, 1908 in Book 3465 Page 133 of Deeds.

IN WITNESS WHEREOF, said corporation has caused its corporate name to be affixed hereto and this instrument to be executed by PIERCE E. MARKS, SR., PIERCE E. MARKS, JR., and JOHN P. COYNE, a majority of the Directors of said corporation on the date of dissolution.

Βv

By

By

DATED: January 24, 1969

CALIFORNIA OXYGEN COMPANY

STATE OF GEORGIA ss. COUNTY OF RICHMOND

On <u>Natural (a 1969</u> before me, the undersigned, a Notary Public in and for said State, personally appeared PIERCE E. MARKS, SE, known to me to be a Director of CALIFORNIA OXYGEN COMPANY, the corporation

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executed the within Instrument, known to me to be the persons who executed the within Instrument on behalf of the Corporation therein named, and acknowledged to me that such Corporation executed the within Instrument pursuant to its Bylaws or a resolution of its Board of Directors.

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SEAL)

WITNESS my hand and official seal.

Signature - is could Fond

WNIFROD FUND Name (Typed or Printed)

My Commission _____ is December 27, 1969

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that executed the within Instrument, known to me to be the persons who executed the within Instrument on behalf of the Corporation therein named, and acknowledged to me that such Corporation executed the within Instrument pursuant to its Bylaws or a resolution of its Board of Directors.

вк]]4268рс957

WITNESS my hand and official seal. Signature <u>Marney D. Malley</u> <u>Marney D. Malley</u> Name (Typed or Printed)

STATE OF GEORGIA)) ss. COUNTY OF FULTON)

On <u>fammer</u> $15 \frac{1613}{5}$ before me, the undersigned, a Notary Public in and for said State, personally appeared PIERCE E. MARKS, **Sec.** known to me to be a Director of CALIFORNIA OXYGEN COMPANY, the corporation that executed the within Instrument, known to me to be the persons who executed the within Instrument on behalf of the Corporation therein named, and acknowledged to me that such Corporation executed the within Instrument pursuant to its Bylaws or a resolution of its Board of Directors.

WITNESS my hand and official seal. Signature <u>Sayon</u> <u>Canada</u>

Sayen Carrier Name (Typed or Printed)

STATE OF CALIFORNIA) COUNTY OF A State) ss.

On <u>incomp</u> 20, 146**9** before me, the undersigned, a Notary Public in and for said State, personally appeared JOHN P. COYNE known to me to be a Director of CALIFORNIA OXYGEN COMPANY, the corporation that

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LIQUID AIR CORPORATION

FINAL REPORT PHASE I ENVIRONMENTAL ASSESSMENT

8832 Dice Road Parcel 0160 007 027 Santa Fe Springs, California 13 February 1992

K/J 920006.00

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DICE 00333

Engineers and Scientists

Marathon Plaza. Tenth Floor 303 Second Street San Francisco California 94107 415-243-2150 FAX 415-896-0999

13 February 1992

Mr. David N. Simon Manager, Regulatory Affairs Liquid Air Corporation 2121 North California Boulevard Walnut Creek, California 94596

Subject: Final Report Phase I Environmental Site Assessment 8832 Dice Road-Parcel 0160 007 027 Santa Fe Springs, California K/J 920006.00

Dear Mr. Simon:

Kennedy/Jenks Consultants (K/J) is pleased to submit this Final Report, a Phase I Environmental Site Assessment of a property located at 8832 Dice Road-Parcel 0160 007 027 in Santa Fe Springs, California.

This report presents a review of potential environmental issues which may represent potential risks. This report was completed in accordance with the activities authorized in our Agreement dated 23 January 1992. This report is furnished for the sole benefit of Liquid Air Corporation and its subsidiaries. Responsibilities of any kind to any third parties are specifically denied.

We would like to express our appreciation for your cooperation and assistance rendered in the preparation of this report. Please do not hesitate to contact us should you have any questions or comments or if we may be of further service.

Very truly yours,

KENNEDY/JENKS CONSULTANTS

Roburghonda

Robert G. Kuyenndall Manager, Regulatory Affairs

ISB-71 cc: Kathleen Brown - Liquid Air Claude Salma - Liquid Air Bruno Fraeyman - Liquid Air

DICE 00334

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PHASE I - ENVIRONMENTAL SITE ASSESSMENT

1.0 EXECUTIVE SUMMARY

1.1 Introduction

A Phase I Environmental Site Assessment was conducted by Kennedy/Jenks Consultants (K/J) for an undeveloped property (Parcel 0160 007 027) located south of Liquid Air Corporation Facility at 8832 Dice Road in Santa Fe Springs, California.

The objectives of the Phase I Environmental Site Assessment were to (1) compile and evaluate available environmental information on the subject property, (2) compile and evaluate available information on properties located within a 2000 foot-radius of the subject property which may potentially impact the property, and (3) identify and assess specific areas or issues that may represent potential environmental risks. This assessment is based on information gathered from Federal, State, and local regulatory agencies; personal interviews with individuals knowledgeable with the subject property; a soil gas survey for methane;, and a site visit conducted by K/J personnel.

1.2 Approach

A systematic approach was used to conduct the Phase I Environmental Site Assessment and consisted of the following elements:

- Review of reasonably available property information such as title history and aerial photographs to identify past and present uses of the property and those of adjacent properties of interest.
- Conducting an on-site review of the subject property and off-site reconnaissance to observe and assess visible evidence of the generation, use, storage or disposal of hazardous materials.
- Interviews with individuals knowledgeable of potential environmental issues at the properties.
- Review of environmental lists and/or files maintained by local, State or Federal regulatory agencies having jurisdiction over the property by K/J or a subconsultant.
- Kennedy/Jenks utilized Tracer Research Corporation, a subconsultant to K/J, to conduct a soil gas survey to verify the presence or absence of natural gas (methane) at the subject property as requested by the City of Santa Fe Springs.
- Review of Santa Fe Springs City Planning and Development and California State Fire Marshall Pipeline Safety Division records regarding

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the potential presence of abandoned oil wells or pipelines on the property.

1.3 Site Description

The site is located immediately south of the existing Liquid Air Corporation Facility located at 8832 Dice Road in Santa Fe Springs, California. Presently the land is uncultivated except a small patch of mint located in the south west corner. The site is roughly rectangular in shape with the dimensions being approximately 400 by 500 feet. The total area of the site is approximately 5 acres.

Industrial facilities surround the subject property. Dice Road is located to the west of the property. A vacant Industrial facility is located to the east. Improvements to the site include the Southern Pacific Railroad lines and railroad spurs are located along the northern and eastern boundaries, respectively. Other improvements include a roadside produce stand adjacent to Dice Road. Also, numerous plows and discs are located in the southwest corner of the property.

1.5 Site History

Based on the aerial photographs and interviews with Mr. Frank Marquez, Jr., current leasee of the subject property, the land has been undeveloped. According to Mr. Marquez, produce has been grown on the property for the approximately six years. Prior to agriculture production, the property was used as grazing land for dairy cattle. The site was used also for horse grazing. Approximately 15 to 20 years ago, the south section of the site was mechanically graded. Apparently the grading was for right-of-way development for the Southern Pacific Railroad. On the 1953 aerial photograph, the subject property was undeveloped land with no structures on the site.

1.6 Aerial Photographs

Information regarding past land use and configuration was obtained by reviewing available aerial photographs from the collection maintained by Continental Aerial Photo, Inc. located in Los Alamitos, California. The aerials were reviewed by NATEC Environmental Information, Inc., a subconsultant to K/J. The photographs often provide useful information regarding the site at the time of the photograph; however, they do not provide information about the intervening period between photographs. The most recent and oldest aerial photographs of the area are attached as Exhibit 1. The location of the property is indicated by the red arrow.

Aerial photographs of the site and vicinity were reviewed for the following years: 1953, 1970, 1988, 1990, and 1992

<u>1953 Photograph</u> -The property is located at the southeast corner of the intersection of Dice Road and the Southern Pacific Railroad line. The subject property is an undeveloped field. North of the subject property is a commercial property; however, west of the site is agriculture land. Bordering

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properties appear to be single-family homes and agriculture crops. Approximately three-tenths of a mile to the north of the property the area is manufacturing and industrial facilities. The immediate land use adjacent to the subject property is undeveloped land.

<u>1970 Photograph</u> -The site continues to be undeveloped open field. The land use adjacent to the property has become more industrialized and the agricultural fields are fewer in number. The properties located north and east of the property have buildings located onsite with parking lots.

<u>1988 Photograph</u> -The site continues to be an undeveloped open field. Development continues in the area with increased commercial development. The property continues to be undeveloped land.

<u>1990 Photograph</u> - The 1990 photograph is similar to the 1988 photograph. The site continues to be an undeveloped open field. Commercial and residential development in the surrounding areas continues.

<u>1992 Photograph</u> -The site continues to be undeveloped land. The surrounding land use is industrial; however, single-family residential properties are located three-tenths of a mile northwest of the property.

2.0 SITE INVESTIGATION and AREA RECONNAISSANCE

K/J investigated the subject property and the area located within a radius of 2000 feet of the subject property. K/J walked the subject property and conducted a reconnaissance of the area surrounding the subject property by vehicle.

2.1 Site Visit

K/J conducted a site review for this Phase I Environmental Site Assessment on 29 January 1992. During the site investigation, K/J personnel did not find evidence of the following:

- surface impoundments
- aboveground storage tanks
- treatment or disposal operations involving hazardous materials or wastes
- stressed vegetation
- underground storage tanks
- abandon oil wells or pipelines
- chemical storage areas

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2.1.1 Physiography and Topography

The City of Santa Fe Springs is located approximately 12 miles southwest of downtown Los Angeles, along a northeast margin of the seaward dipping Los Angeles basin coastal plain. The site lies about 4 miles south of the Puente Hills on the Santa Fe Springs Plain. The property is relatively flat and drains by sheetflow to the north and northeast. The site elevation is approximately 150 feet above mean sea level (MSL). Surface soils consists of brown silty fine sand (SM) with locally clay rich soils in the south half of the property. Vegetation consists of short grasses, small shrubs, and some small trees.

2.1.2 Regional Geology/Hydrogeology

The site is located on the Santa Fe Springs Plain, within the boundaries of the Coastal Plain of Los Angeles County as defined by the California State Department of Water Resources (DWR). The coastal plain is bounded by the Santa Monica Mountains on the north, the arc-shaped Elysian-Repetto-Merced-Puente Hills (Elysian-Puente Hills) complex on the northeast, the Los Angeles-Orange County line on the southeast, and the Pacific Ocean on the south and west. The coastal plain is underlain by four groundwater basins:

- Santa Monica Basin
- West Coast Basin
- Hollywood Basin
- Central Basin

The Santa Fe Springs Plain is underlain by the Central Basin, which is the largest of the four basins. The Central Basin is bounded on the north by the Hollywood Basin, on the northwest and southeast by the Elysian-Puente Hills complex, on the west and south by the Newport-Inglewood Fault uplift, and on the southeast by the Los-Angeles-Orange County line. Generally, the water-bearing sediments that underlie the vicinity of the site have been vertically divided into the Lakewood and San Padero formations with a combined thickness of approximately 800 feet. these formations are underlain by the Pico formation which is of unknown total thickness and contains groundwater of poor quality.

From top to bottom, the Lakewood Formation consists of Recent Alluvium, the Gage Aquifer, and the Gaspur Aquifer, with a combined thickness of approximately 50 feet. The Recent Alluvium is primarily made up of stream deposited gravel, sand, silt, and clay. Portions of the Recent Alluvium contain the Bellflower Aquitard, which consists of fine-grained sediments that reportedly resist downward migration of percolating surface water to the underlying aquifers. In some areas, the Bellflower Aquitard is laterally replaced by the Gaspur Aquifer, which is comprised of cobble-size and pebble-size gravel, allowing significant vertical migrations of surface waters to underlying aquifers. The Gage Aquifer, which

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forms the basal member of the Lakewood Formation, is comprised primarily of fine yellow sand and gravel.

The San Pedro formation is comprised of several aquifers that are hydraulically separated by several unnamed aquitards, with a combined thickness of approximately 750 feet in the vicinity of the site. From top to bottom, the aquifers and their typical thickness are:

- Hollydale Aquifer 50 feet
- Jefferson Aquifer 50 feet
- Lynwood Aquifer 75 feet
- Silverado Aquifer 200 feet
- Sunnyside Aquifer 300 feet

With the exception of the Jefferson Aquifer, these aquifers are generally comprised of fine to coarse-grained sands and gravel, with the Silverado and Sunnyside Aquifers containing minor interbedded silt and clay units. The Jefferson Aquifer is comprised of fine-grained sands (with minor beds of silts) and gravel in the vicinity of the Whittier Narrows. In the vicinity of the Santa Fe Springs Plain, the Central Basin is very complex, being hydrogeologically trisected into the following areas based on the presence or absence of the aquifers discussed above and the following aquitards:

Montebello Forebay Area

- Whittier Area
- Basin Pressure Area.

The Montebello Forebay area, located northwest of the site, extends to the Whittier Narrows, and is distinguished by the absence of the Bellflower Aquitard throughout most of its area, thus allowing artificial recharge of the Central Basin. The Whittier area is located to the northeast of the site and is characterized by the presence of the Bellflower Aquitard and the absence of the Gaspur Aquifer. the Central Basin Pressure is located to the south of the site and is characterized by the presence of the Bellflower Aquitard and, unlike the Whittier area, is characterized by confined groundwater conditions (i.e., conditions under which the groundwater piezometric surface is above the base of the aquitard). The site is situated in the general location where the three areas converge, thus it is unclear over which of these areas the site overlies or if, more likely, gradational conditions are present.

Structurally, the Santa Fe Springs Plain consists of the northern end of the northwest-trending Santa Fe Springs-Coyote Hills structural uplift. The uplift is a

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surface expression of the Santa Fe Springs anticline, which is symmetrical, has gently dipping flanks, and contains the Santa Fe Springs oil field, among others.

Regional groundwater movement in the vicinity is generally towards the southwest. The majority of groundwater recharge occurs in the Montebello Forebay area where surface waters from the San Gabriel and Rio Hondo Rivers percolated into the underlying aquifers. Although the water-bearing San Pedro and Lakewood Formations are folded by the Santa Fe Springs anticline and some of the shallow aquifers thin out over the anticlinal crest, groundwater movement is not significantly affected (DWR Bulletin No. 104, June 1961).

The uppermost stratigraphy (i.e., to a depth of approximately 60 feet below ground surface (bgs) of the subject property is comprised of two relatively permeable finegrained units. The approximate depth intervals and descriptions of the lithologic units, are as follows: from ground surface to 14 feet bgs, fine-grained sediments consisting of silts and clays with minor amounts of sand; from 14 to 29 feet bgs, fine to coarse-grained sediments consisting of clayey silt or clayey silty fine-grained sediments consisting of clayey silt or clayey silty fine-grained sand; and from 34 to 59 feet bgs, medium to coarse-grained, moderately graded sand which is underlain by a sandy silt-silty sand unit of unknown thickness. Groundwater reportedly occurs at a depth of approximately 65 to 70 feet bgs.

2.1.3 Climate

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The City of Santa Fe Springs has a Mediterranean-like climate with warm, dry summers and mild, wet winters. Temperatures (in degrees Fahrenheit) typically range from the mid 30s to low 80s in the winter and the 50s up to approximately 110 during summer months. Precipitation falls primarily from early November to late March. Average precipitation is 12 to 15 inches per year, but cumulative rainfalls of 40 inches per year have been recorded. The 24-hour maximum rainfall for a 50-year storm is the City of Santa Fe Springs is estimated to be 8 inches. Prevailing winds are primarily form the south/southwest. Periodically, high pressures accumulate over the Southern California deserts east of the site causing a "Santa Ana" condition which is characterized by strong, dry winds from the east/northeast. Typical evaporations rates range from highs of 100-150 millimeters per month in the summer to lows of 15-50 millimeters per month in the winter.

2.1.4. Chemical Handling and Management

A forty-eight inch concrete culvert is located under Dice Road at the northwest corner of the subject property. It drains to the east and had standing water with a petroleum sheen on the surface and was dark in appearance. The stain appears to be isolated at the end of the culvert. There was no odor detected during the site visit.

According to Mr. Frank Marquez, Jr., current lessee, he uses diazion and malathion insecticides for insect control. He stated that the Los Angeles County Agriculture

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Commission requires a permit for the application of these insecticides on vegetable crops. He also indicated that pesticide application occurred only during the spring and summer months. He stated that no petroleum products were stored onsite and the agriculture tractors were serviced offsite.

2.2 Area Reconnaissance

A visual reconnaissance of the adjacent area was conducted by vehicle. The subject property Parcel 0160 007 027 is located south of 8832 Dice Road in Santa Fe Springs, California. The Southern Pacific railroad lines and the Liquid Air Corporation facility are located to the north of the property. The closed Mckesson Chemical facility is located to the east of the property. The surrounding land use is industrial. Single-family residential properties are located three-tenths of a mile northwest of the property.

3.0 REVIEW OF REGULATORY AGENCY LISTS AND RECORDS

The discussion presented in this section is based on available information provided by regulatory agencies.

3.1 Review of Published Regulatory Agency Lists

A review of available environmental agency lists from the Regional Water Quality Control Board, the California Environmental Protection Agency, and the Federal Environmental Protection Agency was conducted by NATEC Environmental Reporting Service, Ltd., a sub-consultant to K/J, to identify potential regulatory issues at the subject property and the area within a radius of 2000 feet of the property. The records search included the review of the following regulatory records and lists.

Records Searched	<u>Date</u>	Source Lists
CERCLIS	2/92	EPA - Superfund Sites
NPL	9/90	EPA - National Priority List
LIENS	1/91	Federal Superfund Liens
SWIS	1/91	California Solid Waste Information System List
SWAT	10/91	California Solid Waste Assessment Test Program
LUST	1/91	California Leaking Underground Storage Tanks List

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CORTESE	11/90	California Hazardous Waste Substances Sites
RCRA	8/90	Resource Conservation Recovery Act
BEP	1/90	California Bond Expenditure Plan
ASPIS	2/91	California Abandoned Site Program Information System

The Liquid Air Corporation facility at 8832 Dice Road was listed on several of the lists; however, the subject property Parcel 0160 007 027 located to the south of the Liquid Air address was not listed on the above environmental lists and records.

The records review conducted by NATEC Environmental Reporting Services, Ltd. indicated that no listed sites were found within a 2000 foot radius of the subject property on the NPL, LIEN, SWIS, and TANNER lists.

Sites located within a 2000 feet radius of the subject property are listed on the CERCLIS, LUST, RCRA, ASPIS, BEP, SARA, and CORTESE lists. Listed sites are shown on Figure 1. Summaries of the file review are presented in Appendix A.

3.1.1 CERCLIS

The CERCLIS list represents sites of environmental concern for the discharge of hazardous waste generators, treatment and storage facilities, and hazardous waste disposal sites. The U.S. Environmental Protection Agency has complied list of sites for potential designation under the Federal Superfund Program pursuant to the Comprehensive Environmental Response Compensation and Liability Act. Two sites are located in the vicinity of the subject property. The Liquid Air site is located at 8832 Dice Road and Mckesson Chemical facility at 9005 Sorensen Avenue. The Liquid Air facility has the current status of "No Further Action", which indicates that no additional action is necessary at the site. The Mckesson site is also listed on the BEP list and will be discussed in the following section. The remaining sites are not located adjacent to the subject property.

3.1.2 LUST

The Los Angeles Regional Water Quality Control Board (RWQCB) provides a list of site names and addresses of reported leaks from underground storage tanks.

Six sites within a 2000 feet radius of the property where leaks from underground storage tanks have occurred were identified in the commercial area surrounding the property. The subject property was not listed on this LUST list. The closest site is, Liquid Air, located at 8832 Dice Road. On 21 September 1988, four underground storage tanks were removed by Liquid Air. The tanks included the following: one 1,000 gallon waste oil tank, one 6,200 gallon acetone tank, and two 7,500 gallon

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diesel fuel tanks. Also, eleven cubic yards of soil of soil were excavated from the diesel fuel dispensing island during the removal. The groundwater was not impacted and the site was determined closed by the RWQCB. It does not appear that a release has occurred to impact the subject property. These tanks were not located on the subject property.

The acetone tank was replaced with a 6500 gallon double-walled underground storage tank. The tank is constructed of steel with a fiberglass outer shell. The underground storage tank is equipped with a leak detection system.

The remaining sites on the LUST list are not in the immediate vicinity of the subject property.

3.1.3 RCRA

The RCRA database represents a compilation of hazardous waste generators under the Resource Conservation and Recovery Act. There are forty-eight generators located within 0.5 miles of the subject property. The closest facility is the Mckesson Chemical facility located at 9005 Sorensen Avenue. The chemical manufacturing facility is closed; therefore, the site listed on the RCRA list refers to the hazardous wastes manifested offsite during the cleanup process. The remaining sites on the list are not in the immediate vicinity of the subject property.

3.1.4 ASPIS

The ASPIS or Abandoned Sites Program Information System contains information on potential hazardous waste sites that have been identified by the Historical Site Survey Program conducted by the California Department of Health Services. Names may remain on the list even though a determination has been made that no leaks have occurred. Forty-three sites are listed within 0.5 miles radius of the site. The closest site is the Mckesson Chemical facility located at 9005 Sorensen Avenue. The subject property is not listed on this list. The remaining sites are in the vicinity of the property.

3.1.5 BEP

The BEP or Bond Expenditure Plan lists those hazardous waste sites subject to cleanup using State funds. One site is listed in the vicinity of the property. The site is Mckesson Chemical located at 9005 Sorensen Avenue. The Mckesson facility operated from 1976 to November 1, 1986. It operated principally for the manufacturing, reformulation, repackaging and distribution of inorganic and organic chemicals. There were twenty one underground storage tanks used to store organic solvents. Seventeen above ground storage tanks were used to store other organic chemicals and solvents. Twenty eight above ground tanks were identified for storing corrosive and oxidizer materials.

According to California Department of Health Services Preliminary Assessment completed in March 1984, 10,000 gallons of sulfuric acid spill occurred and was

subsequently cleaned up. The spill was neutralized with soda ash, pumped out and the top soil was replaced. A second spill occurred in 1982 and was also cleaned up.

A RCRA site closure report for the Mckesson Chemical facility was completed by Harding Lawson Associates (HLA) in February 1990. Concrete pads were steam cleaned and the rinsate was manifested for off-site disposal. Five soil samples were collected with trace levels of PCA and TCA being reported. Also during this time, HLA prepared and submitted a revised RI/FS workplan to DHS. Tera Tech, a subconsultant to DHS, reviewed the RI/FS which proposed a two phase investigation: Phase 1 - initial soil and groundwater sampling in areas of known or suspected contamination, and Phase 2 - characterization of the extent of underground contamination. Samples were analyzed by the following EPA Methods: 8240/624; 418.1 (as diesel); 8270/625; and Ph.

The BEP refers to leaks of inorganic and organic chemicals to the ground at the site. 1,2-dichlorethane has been detected in the groundwater. At the solvent tank farm, area soil and standing pond liquid samples were analyzed. Acetone at 100 mg/l was detected in the soil. Acetone (6800 mg/l), butyl cellosolve (32,000 mg/l) and isopropyl alcohol (3,100 mg/l) were detected in the liquid sample.

The initial HLA RI/FS Workplan (2/87) showed that three soil borings and four separate groundwater monitoring wells to a maximum depth of thirty five feet were installed by Mckesson Environmental Services. HLA also proposed three additional deep wells to the lower aquifer of 50-70 feet. DHS gave verbal approval to the Workplan in March 1990. The RI/FS investigation is still underway and should be completed by March 1992.

3.1.6 SARA

SARA TITLE III sites are regulated under Section 313 of the Emergency Planning and Community Right to Know Act (Title III of the Superfund Amendments and Reauthorization Act of 1986). The Act requires certain facilities to file an annual toxic chemical release inventory form with the EPA, on the releases to air, water, and land. The closest site is Diversey Wyandotte Corporation located at 8921 Dice Road. The site is not located adjacent to the subject property and is not expected to impact the subject property.

3.1.7 CORTESE

The CORTESE List is compiled by the California State Office of Planning and Research and provides listing of hazardous waste/substance sites with the State. Seven sites were identified in the vicinity of the property and were included on the CERCLIS and LUST list.

The locations of the sites in the vicinity of the subject property are shown on Figure 1.

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3.2 Other Agencies Contacted

In addition to reviewing published regulatory lists and records, K/J also contacted other agencies regarding their knowledge of potential or known environmental concerns at the subject property or in the immediate vicinity of the subject property. Records of Communication are presented in Appendix B.

4.0 FINDINGS AND CONCLUSIONS

On the basis of information gathered during the Phase I Environmental Site Assessment, the following conclusions can be drawn:

• In the best professional judgement of K/J, the scope of the Phase I Environmental Site Assessment was sufficient to identify potential environmental issues on the subject property given the nature and specific circumstances of the site.

• No indication of past or present hazardous wastes sites or activities were found on the property during interviews or review of available environmental records.

• No NPL, SWIS, TANNER, or SWIS sites are located within a one mile radius of the subject property.

• K/J reviewed records with Santa Fe Springs City Planning and Development and the California State Fire Marshall Pipeline Safety Division (CSFMPSD) regarding the potential presence of abandoned oil wells or pipelines on the property. No wells were identified on the Santa Fe Springs Planning and Development Maps within 1,000 feet of the property. Mr. Robert Gorham, inspector at CSFMPSD, had records of an Unocal pipeline located under Dice Road. He provided a contact at Unocal, Mr. Paul Bower, for the exact location of the pipeline. According to Mr. Paul Bower, Supervisor, Unocal-Pipeline Division, a four inch pipeline is located under the eastern section of Dice Road. The pipeline is an idle pipeline, that was drained, flushed with water and abandon in the late 1950s. His records showed no lateral pipelines on the subject property

• There have been documented releases of hazardous substances to the soil and groundwater at the Mckesson Chemical facility. These have included at least two spills of hazardous materials. Both were reportedly remediated. Chemicals were detected in perched groundwater at a depth of twenty-two feet; however, the perched water may be seasonal. DHS personnel indicated that groundwater flow is likely to the southwest not towards the subject property. An active RI/FS is underway and is scheduled to be completed in March 1992. The RI/FS will include information on the first groundwater aquifer that is currently available. The RI/FS report should provide the first available indication of potential environmental impacts from the Mckesson Chemical facility to offsite locations.

• The current land user at the subject property uses EPA registered insecticides for application on agriculture produce. The farmer has obtained a permit with the Los

Angeles County Agriculture Commission to apply the insecticides in accordance with agency requirements and label directions.

• Triad Geotechnical Consultants, Inc. completed a Preliminary Soil Investigation Report on 3 January 1992. They collected and analyzed six soil samples for hydrocarbons and volatile organic chemicals at the subject property, during Preliminary Foundation Investigation. According to Mr. Javed S. Chark, Registered Professional Engineer, the results showed very low to non-detectable chemical contents in these samples. He also states in that report that based on the type of test performed and the soil samples obtained at designated locations, soil at the site is not considered to be contaminated with hydrocarbons or other volatile organic compounds.

• Kennedy/Jenks utilized Tracer Research Corporation, a subconsultant to K/J, to conduct a soil gas survey to verify the presence or absence of natural gas (methane) at the subject property as requested by the City of Santa Fe Springs. The results detected concentrations of methane at or below ambient concentrations (0.4 ug/l-3 ug/l) at all sample locations except SG-17-4.5 (20 ug/l) which is below the Lower Explosion Limit. The potential source of the methane concentration at SG-17-4.5 is most likely the natural decomposition of plant materials.

5.0 RECOMMENDATIONS

- 1. To assure that the environmental integrity of the property is maintained, tenant activities and activities at surrounding properties which may potentially impact the property should be monitored.
- 2. Liquid Air should review the RI/FS report as soon as it becomes available, from the Regional Water Quality Control Board in March 1992 to assess potential impacts to its property by the Mckesson Chemical facility.

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6.0 LIMITATIONS

This preliminary environmental assessment is based on review of available environmental records and available aerial photographs by a subconsultant, results of interviews, and visual observations of recent site conditions. K/J activities were conducted in accordance with practices and procedures generally accepted in the consulting engineering field. No environmental sampling or analysis was undertaken for the Phase I Environmental Site Assessment report.

This report represents K/J's professional opinion and judgement, which are dependent upon information obtained during performance of consulting services. Environmental conditions may exist at each site that cannot be identified by only visual observations. Any conclusions or recommendations will be necessarily based in part on information supplied by others, the accuracy or sufficiency of which may not be independently reviewed by K/J. No investigation can be thorough enough to exclude the presence of hazardous materials at a given site; therefore, if no hazardous materials are identified during an assessment, such a finding should not be construed as a guarantee of the absence of such materials on the property, but rather the results of services performed within project scope, cost, and other limitations.

Any opinions and recommendations presented apply to site conditions existing at the time of performance of services. K/J is unable to report on, or accurately predict events which may impact the site following performance of the described services, whether occurring naturally or caused by external forces. K/J/ assumes no responsibility for conditions it is not authorized to investigate or conditions not generally recognized as environmentally unacceptable at the time services are performed. K/J is not responsible for change in applicable environmental standards, practices, or regulations following performance of services.

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7.0 REFERENCES

DWR Bulletin No. 104, California Department of Water Resources, June 1961

ENVIRO-SCAN Report, August 1991, NATEC Environmental Reporting Services, Ltd.

Preliminary Foundation Investigation Report, 11 December 1991, TRIAD Geotechnical Consultants Inc.

Preliminary Soil Investigation Report, 3 January 1992, TRIAD Geotechnical Consultants, Inc.

Soil Gas Survey Report-8832 Dice Road, Santa Fe Springs, CA Report, Tracer Research Corporation

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EXHIBIT 1 - AERIAL PHOTOGRAPHS

APPENDIX A - ENVIRONMENTAL RECORDS REVIEW

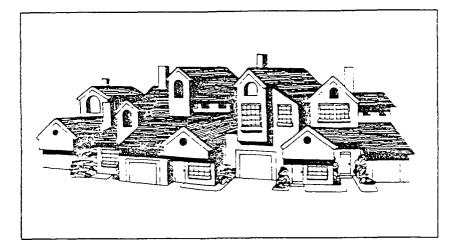
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ENVIRONMENTAL DISCLOSURE REPORT





Environmental Reporting Service, Ltd. 11552 Knott Street, Suite 8 Garden Grove, CA 92641

800-969-3228

714-894-7577

The information contained in this report will assist in the requirement that a purchaser of real property make all appropriate inquiry into uses of the property in order to qualify for the "Innocent Landowner" defense.

NATEC		NATEC ENVIRONMENTAL REPORTING SERVICE, LTD. 11552 KNOTT STREET, SUITE 8 GARDEN GROVE, CA 92641 714-894-7577		
^e Environmental: Reporting Service	UBSCRIBER I	NFORMATIO	ON:	
Contact Person <u>MIKE_CAMPBEL</u>	L	<u></u>	Phone <u>(415) 243</u>	-2150
Name of Subscriber <u>KENNEDY/JE</u>	ENKS CONSULTA	ANTS	Account No. <u>MCK</u>	ESSON CHEMICA
Address <u>MARATHON_PLAZA, 30</u>	<u> 3-2ND ST -10TH</u>	FL		
City <u>SAN_FRANCISCO</u>	State	<u>CA</u>	Zip <u>94107</u>	
	SUBJECT P	ROPERTY:		
Address 9005 SORENSEN		- <u></u>		
City <u>SANTA FE SPRINGS</u>	State	<u>California</u>	Zip	
Legal Description <u>NONE</u>			Inquiry No. <u>AU91</u>	33
	SEARCH RE	EQUESTED	1	
Government Records Search?	Yes 🗆 No	Radius: 🗌	2,000 feet 🗴 .5	õmile 🔲 1 mile
Title Custody Search?	Yes X No	No. of Years:	30	□ 40 □ 50
Historical Profile?	Yes X No			
· · · · · · · · · · · · · · · · · · ·				

Government Records Report:

• This report is limited in scope and accuracy to the available government records searched as listed in the table of contents. This report represents only a search of those records as of the date specified herein. The specific government records searched do not include all sites of environmental contamination or risk. The subscriber acknowledges that NATEC assumes no responsibility for the completeness and accuracy of the recorded lists as compiled by the various governmental agencies. The purpose of this report is for a records search only and is not a substitute for a Phase I Environmental Audit.

Title Custody Report:

The tule custody report represents a search of the recorded chain of title documents regarding a specific real property. The title reports will show a summary of those deeds, easements, right-of-ways, and ground leases of record as compiled by the respective County Recorder's Office.

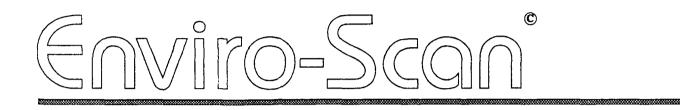
The subscriber acknowledges that other documents that may record pertinent information to the subject property will not be provided in the title report. All services performed shall include only the subject property and shall not include any easements, reversions or other interests in abutting properties. This report is for information only and shall not be deemed to constitute title insurance and will not determine status of ownership or liens on the subject property.

Historical Profile Report:

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The historical profile report will include a government records search and a written review of pertinent historical aerial photographs of the site on each available decade including one aerial photograph.

NATEC services do not include an evaluation of the information contained in the recorded documents. Subscriber acknowledges that government records and title records may not include certain information and accepts the limitations of the service provided herein.



NATEC Environmental Reporting Services, Ltd. Garden Grove, California

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ENVIRO-SCAN

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STATISTICAL SUMMARY

		l	Distance		
List Type	0.5 Mile	<u>1 Mile</u>	<u>Over 1 Mile</u>	Unknown	<u>Total</u>
CERCLIS	11	N/A	N/A	1	12
NPL	0	N/A	N/A	0	0
LIENS	0	N/A	N/A	0	0
SWIS	0	N/A	N/A	0	0
SWAT	2	N/A	N/A	0	2
RCRA	48	N/A	N/A	2	50
LUST	12	N/A	N/A	0	12
CORTESE	14	N/A	N/A	0	14
BEP	2	N/A	N/A	0	2
ASPIS	43	N/A	N/A	3	46
WDS	0	N/A	N/A	0	0
SARA	34	N/A	N/A	0	34
TOTALS	166	N/A	N/A	6	172

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<u>CERCLIS</u>

The information contained in this report is the current database provided by the E.P.A. list as of February 1991.

The U.S. Environmental Protection Agency (E.P.A.) has compiled this list of contaminated properties for designation under the Federal Superfund Program pursuant to the *Comprehensive Environmental Response Compensation and Liability Act (CERCLA)*. These sites represent environmental concern for the discharge of hazardous materials by hazardous waste generators, treatment and storage facilities, and hazardous waste disposal sites.

* Distance coordinates are provided as a convenience only Estimated distance is based on the mapping information provided by the U.S. Government Tiger files and may vary from local street guide maps. Sites that are not provided with distance coordinates are generally the result of inaccurate or incomplete information provided by Federal and State government record lists.

FACILITY DATA

Distance: 0.0 North East Facility ID: CAD060395753 Facility Name: FOREMOST MCKESSON INC Address: 9005 SORENSON AVE City and zip: SANTA FE SPRINGS 90670 OPRBLE UNIT 00 Events: Discovery 1 Preliminary Assessment 1 Site Inspection 1

Distance: 0.2 North West Facility ID: CAD046455747 Facility Name:DIVERSEY WYANDOTTE CORP Address: 8921 DICE RD City and zip: SANTA FE SPRINGS 90670 OPRBLE UNIT 00 Events: Discovery 1 Preliminary Assessment 1

Distance: 0.3 North West Facility ID: CAD003312600 Facility Name:LIQUID AIR CORP Address: 8832 DICE RD City and zip: SANTA FE SPRINGS 90670 OPRBLE UNIT 00 Events: Discovery 1 Preliminary Assessment 1 Preliminary Assessment 2 Site Inspection 1 No Further Action.

CERCLIS FACILITY DATA CONTINUED

Distance: 0.3 North West Facility ID: CAD982359747 Facility Name:BURDETT OXYGEN CO OF CA #1 Address: 8838 DICE RD City and zip: SANTA FE SPRINGS 90670 OPRBLE UNIT 00 Events: Discovery 1 Preliminary Assessment 1 Site Inspection 1 No Further Action.

Distance: 0.3 North West Facility ID: CAD008488025 Facility Name:SO CA CHEM CO INC Address: 8851 DICE RD City and zip: SANTA FE SPRINGS 90670 OPRBLE UNIT 00 Events: Discovery 1 Preliminary Assessment 1 Site Inspection 1 No Further Action.

Distance: 0.3 South West Facility ID: CAD980884860 Facility Name:DICE RD & LOS NIETOS RD DUMP Address: 9165 DICE RD City and zip: SANTA FE SPRINGS 90670 OPRBLE UNIT 00 Events: Discovery I Preliminary Assessment 1 Preliminary Assessment 2 No Further Action.

Distance: 0.4 North West Facility ID: CAD004295572 Facility Name: WEST BENT BOLT Address: 8623 DICE RD City and zip: SANTA FE SPRINGS 90670 OPRBLE UNIT 00 Events: Discovery 1 Preliminary Assessment 1 Site Inspection 1

CERCLIS FACILITY DATA CONTINUED

Distance: 0.4 South West Facility ID: CAD008263048 Facility Name: FINE LINE PAINT CORP Address: 12200 LOS NIETOS RD City and zip: SANTA FE SPRINGS 90670 OPRBLE UNIT 00 Events: Discovery 1 Preliminary Assessment 1 Site Inspection I No Further Action.

Distance: 0.4 North West Facility ID: CAD008287823 Facility Name:PILOT CHEM CO Address: 11756 BURKE ST City and zip: SANTA FE SPRINGS 90670 OPRBLE UNIT 00 Events: Discovery 1 Preliminary Assessment 1 Preliminary Assessment 2 Site Inspection 1 No Further Action.

Distance: 0.5 North West Facility ID: CAD981401706 Facility Name: WESTERN SCREW PRODUCTS Address: 11770-11780 SLAUSON BLVD City and zip: SANTA FE SPRINGS 90670 OPRBLE UNIT 00 Events: Discovery 1 Preliminary Assessment 1 Preliminary Assessment 2 No Further Action.

Distance: 0.5 North West Facility ID: CAD008300717 Facility Name:CAL WESTERN PAINT CORP Address: 11748 SLAUSON AVE City and zip: SANTA FE SPRINGS 90670 OPRBLE UNIT 00 Events: Discovery 1 Preliminary Assessment 1 No Further Action.

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CERCLIS FACILITY DATA CONTINUED

Facility ID: CAD982400459 Facility Name:LARWIL CONSULTANTS/PLATING OPERATIONS Address: SANTA FE SPRINGS City and zip: SANTA FE SPRINGS 90670 OPRBLE UNIT 00 Events: Discovery 1 Preliminary Assessment 1 No Further Action. ì

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<u>NPL</u>

NATIONAL PRIORITY LIST

The information contained in this report is the current database provided by the E.P.A. list as of September 1990.

The Environmental Protection Agency has compiled this list from the designated CERCLIS list. The NPL sites are prioritized to their significant risk to human health and the environment. The list targets those sites to receive remedial funding under the *Comprehensive Environmental Response Conservation and Liability Act (CERCLA)*. The NPL lists the nation's highest priority sites for remedial action. Only NPL sites can receive CERCLA funding.

* Distance coordinates are provided as a convenience only Estimated distance is based on the mapping information provided by the U.S. Government Tiger files and may vary from local street guide maps. Sites that are not provided with distance coordinates are generally the result of inaccurate or incomplete information provided by Federal and State government record lists.

The NATEC database listing as of this date indicates no locations within a one half mile radius of the subject property.

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SUPERFUND (LIENS)

FEDERAL SUPERFUND LIENS

The information contained in this report is the current database provided by the E.P.A. list as of January 1991.

Under the authority granted the E.P.A. by the *Comprehensive Environmental Response* Conservation and Liability Act (CERCLA), E.P.A. is authorized to place a Superfund Lien on property that the agency has spent money on for remedial action or notified the owner of the potential of liability for remedial action.

• Distance coordinates are provided as a convenience only Estimated distance is based on the mapping information provided by the U.S. Government Tiger files and may vary from local street guide maps. Sites that are not provided with distance coordinates are generally the result of inaccurate or incomplete information provided by Federal and State government record lists.

The NATEC database listing as of this date indicates no locations within a one half mile radius of the subject property.

<u>SWIS</u>

SOLID WASTE INFORMATION SYSTEMS

The information in this report is the current list prepared by the California Waste Management Board as of January 1991.

The California Waste Management Board maintains this list pursuant to the Solid Waste Management and Resource Recovery Act of 1972. The list contains an inventory of active, inactive, and closed solid waste disposal and transfer facilities.

* Distance coordinates are provided as a convenience only Estimated distance is based on the mapping information provided by the U.S. Government Tiger files and may vary from local street guide maps. Sites that are not provided with distance coordinates are generally the result of inaccurate or incomplete information provided by Federal and State government record lists.

The NATEC database listing as of this date indicates no locations within a one half mile radius of the subject property.

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<u>SWAT</u>

SOLID WASTE ASSESSMENT TEST PROGRAM

The information in this report is the current database by the State Water Resource Control Board as of October 1990.

The State Water Resource Control Board under Section 13273 of the Water Code requires the (state board) to rank all solid waste disposal sites throughout the state on the basis of the potential threat they may pose to water quality. Sites are tested to see whether there is hazardous waste leakage from the site.

* Distance coordinates are provided as a convenience only Estimated distance is based on the mapping information provided by the U.S. Government Tiger files and may vary from local street guide maps. Sites that are not provided with distance coordinates are generally the result of inaccurate or incomplete information provided by Federal and State government record lists.

FACILITY DATA

Distance: 0.3 South West FACILITY DATA

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SWIS ID: ID: NAME: DICE ROAD FACILITY: LOCATION: 9165 DICE ROAD PLACE: SANTA FE SPRINGS SITE CLASS: II ACTIVITY: CLOSED

CHARACTER: Unknown SIZE: Unknown

SWAT FACILITY DATA CONTINUED

Distance: 0.5 South East FACILITY DATA

SWIS ID: ID: NAME: PEOPLES DISPOSAL COMPANY FACILITY: LOCATION: 9525 SANTA FE SPRINGS ROAD PLACE: SANTA FE SPRINGS SITE CLASS: UNKNOWN ACTIVITY: UNKNOWN

CHARACTER: Unknown SIZE: Unknown

OPERATOR DATA

NONE AVAILABLE

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NATEC Environmental Reporting Service, Lid.

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<u>RCRA</u>

RESOURCE CONSERVATION AND RECOVERY ACT

The information in this report is the current database provided by the E.P.A. as of August 1990.

Under the Resource Conservation and Recovery Act, the Environmental Protection Agency compiles this list classification of generators of hazardous waste materials. Generators in this classification are required to have U.S. E.P.A. I.D. numbers on all waste manifest disposal records.

* Distance coordinates are provided as a convenience only Estimated distance is based on the mapping information provided by the U.S. Government Tiger files and may vary from local street guide maps. Sites that are not provided with distance coordinates are generally the result of inaccurate or incomplete information provided by Federal and State government record lists.

FACILITY DATA

Distance: 0.0 North East Facility ID: CAD060395753 Facility Name:FOREMOST MCKESSON INC CHEM DIV Address: 9005 SORENSON AVE City and zip: SANTA FE SPRINGS 90670

Distance: 0.1 South East Facility ID: CAD000629733 Facility Name:PETERSON/PURITAN INC Address: 9101 SORENSON AVE City and zip: SANTA FE SPRINGS 90670

Distance: 0.1 North East Facility ID: CAD063837520 Facility Name:ANGELES CHEM CO INC Address: 8915 SORENSEN AVE City and zip: SANTA FE SPRINGS 90670

Distance: 0.2 South West Facility ID: CAD051499739 Facility Name:DESOTO INC Address: 12143 ALTAMAR PLACE City and zip: SANTA FE SPRINGS 90670

Distance: 0.2 North West Facility ID: CAD046455747 Facility Name:DIVERSEY CORP Address: 8921 DICE RD City and zip: SANTA FE SPRINGS 90670

Distance: 0.3 South East Facility ID: CAD043079110 Facility Name:ASSOCIATED PLATING CO Address: 9636 ANN ST City and zip: SANTA FE SPRINGS 90670

Distance: 0.3 South East Facility ID: CAD094019734 Facility Name:VALVOLINE OIL CO Address: 9520 JOHN ST City and zip: SANTA FE SPRINGS 90670

Distance: 0.3 North West Facility ID: CAD008371627 Facility Name:EMERY INDUSTRIES INC Address: 8733 DICE RD City and zip: SANTA FE SPRINGS 90670

Distance: 0.3 North West Facility ID: CAD008488025 Facility Name:ENCERA INC Address: 8851 S DICE RD City and zip: SANTA FE SPRINGS 90670

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Distance: 0.3 North West Facility ID: CAD981691074 Facility Name:BOB ROBINSON Address: 8851 DICE RD City and zip: SANTA FE SPRINGS 90670

Distance: 0.3 South West Facility ID: CAD008391427 Facility Name:ELECTRONIC CHROME CO INC Address: 9132 DICE RD City and zip: SANTA FE SPRINGS 90670

Distance: 0.3 Facility ID: CAD982429391 Facility Name:BARSOTTIS INC Address: 11936 ALTAMAR PL City and zip: SANTA FE SPRINGS 90670

Distance: 0.4 South East Facility ID: CAD008274375 Facility Name: TROJAN BATTERY CO Address: 9440 S ANN ST City and zip: SANTA FE SPRINGS 90670

Distance: 0.4 South East Facility ID: CAD981367303 Facility Name:BARON BLAKESLEE INC Address: 9445 ANN ST City and zip: SANTA FE SPRINGS 90670

Distance: 0.4 South East Facility ID: CAD042239467 Facility Name:ESB INC IND BATTERY DIV Address: 9536 ANN ST City and zip: SANTA FE SPRINGS 90670

Distance: 0.4 North East Facility ID: CAD054857016 Facility Name:NU CAR PREP INC Address: 12140 SLAUSON AVENUE City and zip: SANTA FE SPRINGS 90670

Distance: 0.4 North East Facility ID: CAD982502528 Facility Name: R P M CENTERLESS GRINDING CO Address: 12105 E SLAUSON #A City and zip: SANTA FE SPRINGS 90670

Distance: 0.4 North East Facility ID: CAD009677808 Facility Name:BASE OIL SERVICE Address: 12015 SLAUSON AVE SUITE B City and zip: SANTA FE SPRINGS 90670

Distance: 0.4 North East Facility ID: CAD099448318 Facility Name:SAFE PLATING INC Address: 12015 SLAUSON AVENUE UNIT L City and zip: SANTA FE SPRINGS 90670

Distance: 0.4 North East Facility ID: CAD981419344 Facility Name:STEVE LABEL CORP Address: 11926 BURKE ST City and zip: SANTA FE SPRINGS 90670

Distance: 0.4 North East Facility ID: CAD981669732 Facility Name:AERO WHEEL AND BRAKE SERVICE Address: 11927 BURKE ST City and zip: SANTA FE SPRINGS 90670

Distance: 0.4 North East Facility ID: CAD981446339 Facility Name:STOCK CAR PROD Address: 11904 BURKE ST City and zip: SANTA FE SPRINGS 90670

Distance: 0.4 North East Facility ID: CAD093366151 Facility Name:RAPIDSYN COMPANY Address: 11901 BURKE ST City and zip: SANTA FE SPRINGS 90670

Distance: 0.4 North West Facility ID: CAD008246845 Facility Name:EARL MANUFACTURING CO INC Address: 11862 BURKE ST City and zip: SANTA FE SPRINGS 90670

Distance: 0.4 North West Facility ID: CAD981373822 Facility Name: TECHNI BRAZE Address: 11845 BURKE ST City and zip: SANTA FE SPRINGS 90670

Distance: 0.4 North West Facility ID: CAD981973357 Facility Name:PARKER HANNIFIN CORP Address: 11808 BURKE ST City and zip: SANTA FE SPRINGS 90670

Distance: 0.4 South West Facility ID: CAD008350993 Facility Name:ACE METALLIZZING CO Address: 1223 LOS NIETOS RD City and zip: SANTA FE SPRINGS 90670

Distance: 0.4 South West Facility ID: CAD063830988 Facility Name:CONSOLIDATED DSPL SERV Address: 12235 LOS NIETOS RD City and zip: SANTA FE SPRINGS 90670

Distance: 0.4 South West Facility ID: CAD000628024 Facility Name:RIOS CHEMICAL DISPOSAL INC Address: 12234 LOS NIETOS RD City and zip: SANTA FE SPRINGS 90670

Distance: 0.4 North West Facility ID: CAD004295572 Facility Name: MID WEST FABR CO Address: 8623 DICE RD City and zip: SANTA FE SPRINGS 90670

Distance: 0.4 South West Facility ID: CAD008263048 Facility Name: FINE LINE PAINT CORP Address: 12200 LOS NIETOS RD City and zip: SANTA FE SPRINGS 90670

Distance: 0.4 North West Facility ID: CAD008287823 Facility Name: PILOT CHEM CO OF CA Address: 11756 BURKE ST City and zip: SANTA FE SPRINGS 90670

Distance: 0.5 South East Facility ID: CAT080013030 Facility Name: TROJAN BATTERY CO Address: 9339 S ANN ST City and zip: SANTA FE SPRINGS 90670

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Distance: 0.5 South East Facility ID: CAD982011421 Facility Name:GREGS AUTO BODY Address: 9347 SANTA FE SPRINGS RD City and zip: SANTA FE SPRINGS 90670

Distance: 0.5 South East Facility ID: CAD982503138 Facility Name: FEDCO INC Address: 9400 SANTA FE SPRINGS RD City and zip: SANTA FE SPRINGS 90670

Distance: 0.5 South East Facility ID: CAD009688045 Facility Name:MATT ENTERPRISES INC Address: 9441 SANTA FE SPRINGS City and zip: SANTA FE SPRINGS 90603

Distance: 0.5 South East Facility ID: CAD020154076 Facility Name:SPACE AGE CHEMICALS INC Address: 9441 SANTE FE SPRINGS RD City and zip: SANTA FE SPRINGS 90670 ł

RCRA FACILITY DATA CONTINUED

Distance: 0.5 South East Facility ID: CAD981653207 Facility Name: TAURUS CHEM & CLEANING Address: 9441 SANTA FE SPRINGS RD City and zip: SANTA FE SPRINGS 90670

Distance: 0.5 North East Facility ID: CAD981988645 Facility Name: BROWNELL TRUCK BODIES INC Address: 12201 SLAUSON AVE City and zip: SANTA FE SPRINGS 90670

Distance: 0.5 North East Facility ID: CAD982416448 Facility Name: POLES BY LAMPLIGHTER INC Address: 8400 SECURA WAY City and zip: SANTA FE SPRINGS 90670

Distance: 0.5 North East Facility ID: CAD981999329 Facility Name:IMTECH INC OF CALIFORNIA Address: 8424 SECURA WY City and zip: SANTA FE SPRINGS 90670

Distance: 0.5 North East Facility ID: CAD009653171 Facility Name:SANTA FE ENAMELING MET FNSHG# Address: 8427 SECURA WAY City and zip: SANTA FE SPRINGS 90670

Distance: 0.5 North West Facility ID: CAD982505646 Facility Name: HANNIGAN PRINTING Address: 11823 E SLAUSON #3 City and zip: SANTA FE SPRINGS 90670

Distance: 0.5 North West Facility ID: CAD982322539 Facility Name: H B FULLER COMPANY Address: 11815 SLAUSON AVE City and zip: SANTA FE SPRINGS 90670

Distance: 0.5 North West Facility ID: CAD982501280 Facility Name:QUALITY POLISHING Address: 11809 E SLAUSON #3 City and zip: SANTA FE SPRINGS 90670

Distance: 0.5 North West Facility ID: CAD982436040 Facility Name:QUICK CHANGE EXCHANGE Address: 11769 SLAUSON City and zip: SANTA FE SPRINGS 90670

Distance: 0.5 North West Facility ID: CAD981401706 Facility Name: WESTERN SCREW PRODUCTS INC Address: 11770 E SLAUSON AVE City and zip: SANTA FE SPRINGS 90670

Distance: 0.5 North West Facility ID: CAD008300717 Facility Name:CAL WESTERN PAINT Address: 11748 SLAUSON AROVE City and zip: SANTA FE SPRINGS 90670

Facility ID: CAD981449507 Facility Name:EAGLE TRUCK PAINTING Address: City and zip: SANTA FE SPRINGS 90670

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Facility ID: CAD981642713 Facility Name:LONG BAR GRINDING Address: BOX 3128 City and zip: SANTA FE SPRINGS 90670

<u>LUST</u>

LEAKING UNDERGROUND STORAGE TANKS

The information in this report is the current list prepared by the California Waste Resources Control Board as of January 1991.

The State of California Water Resources Control Board (WRCB) in Sacramento provides a list of all leaks of hazardous substances from underground tanks. This database provides information on contamination case types. Additional sources of information are provided by the nine local offices of the WRCB in California.

* Distance coordinates are provided as a convenience only Estimated distance is based on the mapping information provided by the U.S. Government Tiger files and may vary from local street guide maps. Sites that are not provided with distance coordinates are generally the result of inaccurate or incomplete information provided by Federal and State government record lists.

FACILITY DATA

Distance: 0.1 South East Site:PETERSON/PURITAN INC Address:9101 SORENSEN AVE S City and zip:SANTA FE SPRINGS Substance: SOLVENTS Case Type: Only Soil has been affected Status: Signed off, remedial action completed or deemed unnecessary.

Distance: 0.3 South East Site:DAYTON SUPERIOR Address:9415 SORENSEN AVENUE S. City and zip:SANTA FE SPRINGS 90670 Substance: NOT REPORTED Case Type: Ground water has been affected. Status: Pollution characterization.

Distance: 0.3 South East Site:VALVOLINE OIL COMPANY Address:9520 JOHN STREET City and zip:SANTA FE SPRINGS 90670 Substance: DIESEL Case Type: Ground water has been affected. Status: Remediation plan developed. Remedial Action: Excavate and Dispose -- remove contaminated soil and dispose in approved site.

LUST FACILITY DATA CONTINUED

Distance: 0.3 North West Site:LIQUID AIR CORP. Address:8832 DICE RD., S. City and zip:SANTA FE SPRINGS 90670 Substance: NOT REPORTED

Distance: 0.3 Site: PF1 INC Address: 9215 SANTA FE SPRINGS RD City and zip: SANTA FE SPRINGS 90670 Substance: Case Type: The type of resources affected or extent of the resources affected are not known Status: Signed off, remedial action completed or deemed unnecessary.

Distance: 0.3 Site:US GYPSUM CO Address:9306 SORESEN AVE City and zip:SANTA FE SPRINGS 90670 Substance: Case Type: The type of resources affected or extent of the resources affected are not known Status: Signed off, remedial action completed or deemed unnecessary.

Distance: 0.3 Site: WESTERN GALVANIZATING CORP Address: 9719 SANTA FE SPRINGS RD City and zip: SANTA FE SPRINGS 90670 Substance: WASTE WATER Case Type: The type of resources affected or extent of the resources affected are not known Status: No action taken by responsible party after initial report of leak.

Distance: 0.4 South West Site:SOUTHERN STEEL & SUPPLY CO,INC Address:12350 LOS NIETOS ROAD City and zip:SANTA FE SPRINGS 90670 Substance: GASOLINE Case Type: Only Soil has been affected Status: Pollution characterization. Remedial Action: Excavate and Dispose -- remove contaminated soil and dispose in approved site.

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LUST FACILITY DATA CONTINUED

Distance: 0.4 North West Site:FLIGHT TRUCKING Address:11770 BURKE STREET City and zip:SANTA FE SPRINGS 90670 Substance: NOT REPORTED

Distance: 0.4 North West Site: PILOT CHEMICAL COMPANY Address: 11756 BURKE STREET City and zip: SANTA FE SPRINGS 90607 Substance: XYLENE Case Type: Ground water has been affected.

Distance: 0.5 South East Site: UNION OIL OF CALIFORNIA Address: 9645 SANTA FE SPRINGS ROAD City and zip: SANTA FE SPRINGS 90670 Substance: GASOLINE Case Type: Only Soil has been affected Status: No action taken by responsible party after initial report of leak.

Distance: 0.5 Site: CIRCLE K CORPORATION Address: 11462 SLAUSON AVENUE E. City and zip: SANTA FE SPRINGS 90670 Substance: NOT REPORTED Case Type: The type of resources affected or extent of the resources affected are not known Status: No action taken by responsible party after initial report of leak.

NATEC Environmental Reporting Service, Ltd.

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<u>CORTESE</u>

STATE OF CALIFORNIA OFFICE OF PLANNING AND RESEARCH

The information contained in this report is compiled by the State of California's Governors Office and is current as of November 1990.

This is a listing of potential and confirmed hazardous waste and substance sites throughout California. The information in this list was consolidated within the State Office of Planning and Research. The data for the list was received from the State Water Resources Control Board (WRCB), The California Waste Management Board (CWMB), and the Department of Health Services (DHS).

<u>DHS</u>: Records that have been compiled by the Toxic Substances Control Division of the Department of Health Services. This code indicates an abandoned hazardous waste site

<u>DHS2</u>: Records that have been compiled by the Environmental Health Division of the Department of Health Services. This code indicates public water drinking wells that serve less than 200 connections ("small wells").

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<u>DHS3</u>. Records that have been compiled by the Environmental Health Division of the Department of Health Services and consist of public water drinking wells that serve more than 200 connections ("large wells").

<u>DHS5</u>: Sites pursuant to Section 25356 of the Health and Safety Codes (sites included under the Hazardous Substance Cleanup Bond Act).

<u>WRCB</u>: Records compiled by the Water Resources Control Board These are sites of reported leaks that have been investigated by the WRCB Leak sites do not necessarily lie within incorporated boundaries of listed cities.

<u>CWMB</u> Records compiled by the California Waste Management Board. These are solid waste disposal facilities from which there is a known migration of hazardous waste.

* Distance coordinates are provided as a convenience only Estimated distance is based on the mapping information provided by the U.S. Government Tiger files and may vary from local street guide maps. Sites that are not provided with distance coordinates are generally the result of inaccurate or incomplete information provided by Federal and State government record lists.

FACILITY DATA

Distance: 0.0 North East Source:DHS1 Site Name: MCKESSON CHEMICAL COMPANY Location: 9005 SORENSEN AVENUE City and zip:SANTA FE SPRINGS 90670

NATEC Environmental Reporting Service, Ltd.

CORTESE FACILITY DATA CONTINUED

Distance: 0.0 North East Source:DHS5 Site Name: MCKESSON CHEMICAL COMPANY Location: 9005 SORENSEN AVENUE City and zip:SANTA FE SPRINGS 90670

Distance: 0.2 North West Source:DHS1 Site Name: DIVERSEY WYANDOTTE CORPORATION Location: 8921 SOUTH DICE ROAD City and zip:SANTA FE SPRINGS 90670

Distance: 0.3 South East Source:WRCB Problem:TANK LEAK Site Name: DAYTON SUPERIOR Location: 9415 SORENSEN AVENUE S. City and zip:SANTA FE SPRINGS 90670

Distance: 0.3 South East Source:WRCB Problem:TANK LEAK Site Name: VALVOLINE OIL COMPANY Location: 9520 JOHN STREET City and zip:SANTA FE SPRINGS 90670

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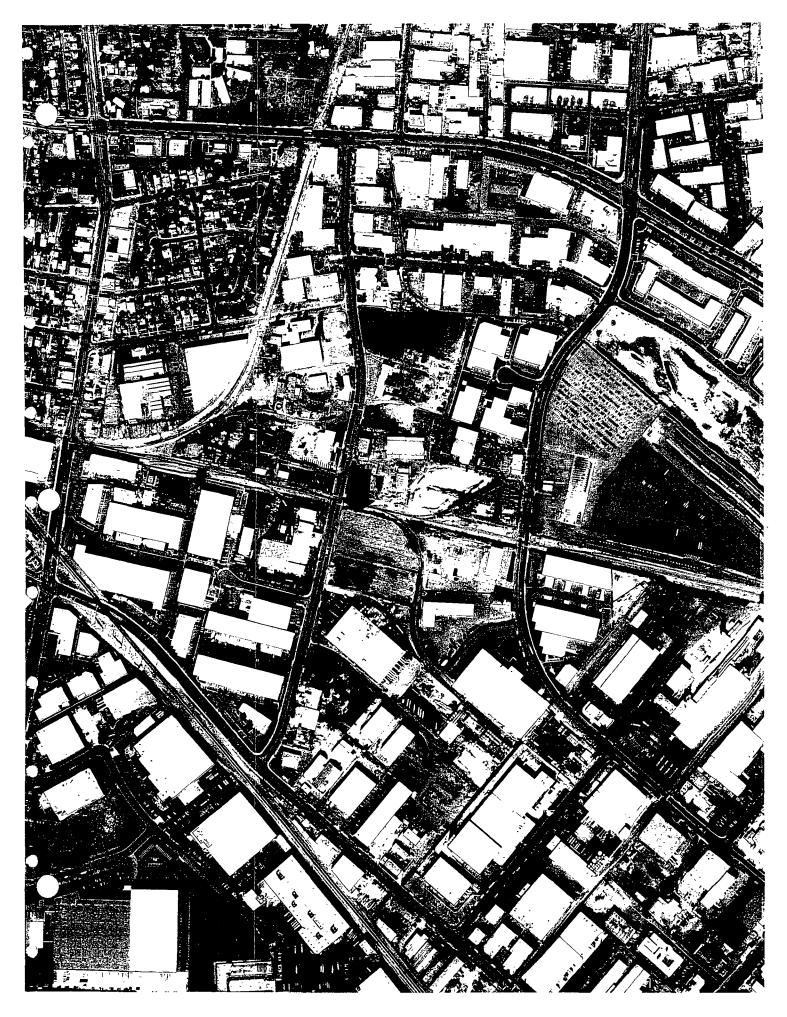
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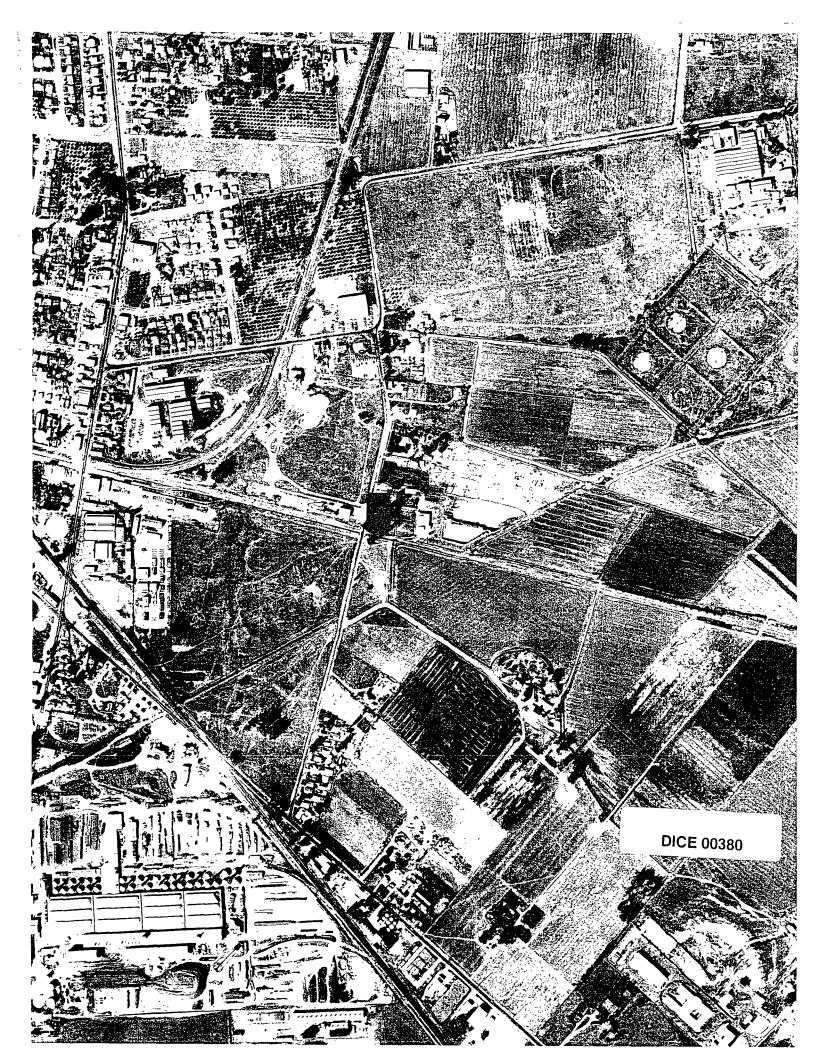
Distance: 0.3 North West Source:DHS1 Site Name: LIQUID AIR Location: 8832 DICE ROAD City and zip:SANTA FE SPRINGS 90670

Distance: 0.3 North West Source:WRCB Problem:TANK LEAK Site Name: LIQUID AIR CORP. Location: 8832 DICE RD., S. City and zip:SANTA FE SPRINGS 90670

Distance: 0.4 South West Source:WRCB Problem:TANK LEAK Site Name: SOUTHERN STEEL & SUPPLY CO,INC Location: 12350 LOS NIETOS ROAD City and zip:SANTA FE SPRINGS 90670

Distance: 0.4 North West Source:DHS1 Site Name: WEST BENT BOLT Location: 8623 SOUTH DICE ROAD City and zip:SANTA FE SPRINGS 90670





SUBJECT PROPERTY.

9005 SORENSEN SANTA FE SPRINGS AU9133

CORTESE FACILITY DATA CONTINUED

Distance: 0.4 North West Source:WRCB Problem:TANK LEAK Site Name: FLIGHT TRUCKING Location: 11770 BURKE STREET City and zip:SANTA FE SPRINGS 90670

Distance: 0.4 North West Source:WRCB Problem:TANK LEAK Site Name: PILOT CHEMICAL COMPANY Location: 11756 BURKE STREET City and zip:SANTA FE SPRINGS 90607

Distance: 0.5 South East Source:WRCB Problem:TANK LEAK Site Name: UNION OIL OF CALIFORNIA Location: 9645 SANTA FE SPRINGS ROAD City and zip:SANTA FE SPRINGS 90670

Distance: 0.5 North West Source:DHS1 Site Name: WESTERN SCREW PRODUCTS #1 Location: 11770 EAST SLAUSON AVENUE City and zip:SANTA FE SPRINGS 90670

Distance: 0.5 Source: WRCB Problem: TANK LEAK Site Name: CIRCLE K CORPORATION Location: 11462 SLAUSON AVENUE E. City and zip: SANTA FE SPRINGS 90670

SUBJECT PROPERTY:

<u>BEP</u>

BOND EXPENDITURE PLAN

The information in this report is the current list prepared by the California Department of Health Services as of January 1990.

Under the California Hazardous Substance Bond Act of 1984, the California Department of Health Services has developed a listing of those hazardous waste sites subject to develop a site specific expenditure plan for an appropriation of funds for cleanup under the Bond Expenditure Plan.

* Distance coordinates are provided as a convenience only. Estimated distance is based on the mapping information provided by the U.S. Government Tiger files and may vary from local street guide maps. Sites that are not provided with distance coordinates are generally the result of inaccurate or incomplete information provided by Federal and State government record lists.

FACILITY DATA

Distance: 0.0 North East

RESPONSIBLE PARTY-LEAD SITE CLEANUP WORKPLAN

MCKESSON CHEMICAL COMPANY 9005 Sorensen Avenue Santa Fe Springs, CA 90670 Los Angeles

McKesson Chemical Company operated a chemical bulk repacking facility from 1976 until November 1, 1986 when it ceased operations. The facility is located on a 3-acre site on Sorensen Road in Santa Fe Springs. There are 21 underground tanks which were used to store organic solvents, an above-ground tank farm and a corrosive/oxidizer tank area located at the site.

Description of Hazardous Wastes

Some inorganic and organic chemicals may have leaked or spilled to the ground. 1-2-dichloroethane has been detected in the ground water. The solvent tank farm area was analyzed for soil and standing pond liquid contamination. Acetone at 100 milligrams per liter (mg/l) was found in the soil. Acetone (6,800 mg/l) butyl cellusolve (32,000 mg/l) and isopropyl alcohol (3,100 mg/l) were found in the liquid sample.

Threat to Public Health and Environment

The primary route of public exposure would be through the ground water from leaks and spills or organic compounds from the storage tanks.

BEP FACILITY DATA CONTINUED

Status of Site Activity

The facility ceased operations in November, 1986. The underground storage tanks are currently empty. These are RCRA Units and are currently being remediated under the oversight of the Region's Facility Permitting Unit. The RP has submitted an RI/FS workplan to characterize the extent

The RP has submitted an RI/FS workplan to characterize the extent of contamination. An enforceable agreement which requires the RP to conduct the RI/FS, RAP and implement the final action has been completed.

Projected Revenue Sources

The RP has entered into an enforceable agreement to pay DHS oversight costs in accordance with Chapter 269, Statutes of 1989. The RP will pay all associated costs of cleanup.

Project Completion Estimates

The estimates shown below reflect completion of major site cleanup phases based on current information regarding this site and responsible party cleanup plans and completed actions.

Site Characterization Remedial Action Order Completed Remedial Investigation/Feasibility Study April 1991

Remedial Action Plan July 1991 Remedial Action Design Oct. 1991 Implementation April 1992 Certification June 1992

Cost Recovery June 1993 Operation and Maintenance 5-15 years

Distance: 0.0 North East

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MCKESSON CHEMICAL COMPANY 9005 Sorensen Avenue Santa Fe Springs, CA 90670 Los Angeles

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SUBJECT PROPERTY:

BEP FACILITY DATA CONTINUED

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Remedial Action Plan July 1991 Remedial Action Design Oct. 1991 Implementation April 1992 Certification June 1992

Cost Recovery June 1993 Operation and Maintenance 5-15 years)

<u>ASPIS</u>

ABANDONED SITES PROGRAM INFORMATION SYSTEM

The information contained in this report is the current database provided by the California Department of Health Services (CDHS) as of February 1991.

The CDHS compiled this database pursuant to Section 253596 of the California Health and Safety Code. The list contains information on potential hazardous waste sites that have been identified by the Historical Abandoned Site Survey Program. The CDHS researched a major portion of the various state environmental agencies that could possibly help identify potential hazardous waste sites. Once sites are confirmed as hazardous sites they may be merged into the database of the Cortese List and/or the Bond Expenditure Program (BEP) List. Names may remain on this list even though a determination has been made that no leak had occurred and the DHS is requiring no further action to protect the environment or public health.

* Distance coordinates are provided as a convenience only Estimated distance is based on the mapping information provided by the U.S. Government Tiger files and may vary from local street guide maps. Sites that are not provided with distance coordinates are generally the result of inaccurate or incomplete information provided by Federal and State government record lists.

FACILITY DATA

Distance: 0.0 North East Facility No.: 19-28-0440 Facility Name: MCKESSON CHEMICAL CO Address: 9005 SORENSON AVE City and zip: SANTA FE SPRINGS 90670 STATUS: Pending Status

Distance: 0.2 South East Facility No.: 19-28-0421 Facility Name: U.S. GYPSUM COMPANY Address: 9306 SORENSEN AVENUE City and zip: SANTA FE SPRINGS 90670 STATUS: No Further Action

Distance: 0.2 South West Facility No.: 19-28-0400 Facility Name: DETERGENTS INC Address: 12143 ALTAMAR PLACE City and zip: SANTA FE SPRINGS 90670 STATUS: No Further Action ì

9005 SORENSEN SANTA FE SPRINGS AU9133

ASPIS FACILITY DATA CONTINUED

Distance: 0.2 North West Facility No.: 19-28-0834 Facility Name: DIVERSEY WYANDOTTE CORP Address: 8921 S DICE RD City and zip: SANTA FE SPRINGS 90670 STATUS: Site Inspection Req'd - High Priority

Distance: 0.2 Facility No.: 19-28-0473 Facility Name: ANGELES CHEMICAL CO, INC Address: 8915 S SORENSEN City and zip: SANTA FE SPRINGS 90670 STATUS: No Further Action

Distance: 0.2 Facility No.: 19-13-0015 Facility Name: E G M CORP Address: 9211 SORENSON AVE City and zip: SANTA FE SPRINGS 90670 STATUS: No Further Action

Distance: 0.3 South East Facility No.: 19-34-0397 Facility Name: ASSOCIATED PLATING CO Address: 9636 S ANN ST City and zip: SANTA FE SPRINGS 90670 STATUS: No Further Action

Distance: 0.3 North West Facility No.: 19-28-0766 Facility Name: LIQUID AIR Address: 8832 DICE RD City and zip: SANTA FE SPRINGS 90670 STATUS: Site Inspection Req'd - Medium Priority

Distance: 0.3 North West Facility No.: 19-28-0224 Facility Name: BURDETT OXYGEN CO. OF CALIFORNIA Address: 8832-8838 S DICE RD City and zip: SANTA FE SPRINGS 90670 STATUS: Pending Status

Distance: 0.3 North West Facility No.: 19-28-0426 Facility Name: SCHNER MOREHEAD CHEMICAL Address: 8835 DICE RD City and zip: SANTA FE SPRINGS 90670 STATUS: No Further Action

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ASPIS FACILITY DATA CONTINUED

Distance: 0.3 North West Facility No.: 19-28-0516 Facility Name: SOU CAL CHEMICAL CO Address: 8851 DICE RD City and zip: SANTA FE SPRINGS 90670 STATUS: Pending Status

Distance: 0.3 South West Facility No.: 19-28-0415 Facility Name: T-CHEM PRODUCTS Address: 9028 SOUTH DICE ROAD City and zip: SANTA FE SPRINGS 90670 STATUS: No Further Action

Distance: 0.3 South West Facility No.: 19-73-0053 Facility Name: MOBILE INSPECTION SERVICE INC Address: 9110 S DICE RD City and zip: SANTA FE SPRINGS 90670 STATUS: No Further Action

Distance: 0.3 South West Facility No.: 19-34-0333 Facility Name: ELECTRO CHROME CO, INC Address: 9132 S DICE RD City and zip: SANTA FE SPRINGS 90670 STATUS: No Further Action

Distance: 0.3 South West Facility No.: 19-49-0148 Facility Name: DICE ROAD & LOS NIETOS ROAD DUMP Address: 9165 DICE RD City and zip: SANTA FE SPRINGS 90670 STATUS: No Further Action

Distance: 0.3 Facility No.: 19-42-0006 Facility Name: ALCAN ALUMINUM CORP Address: 9315 SANTA FE SPRINGS RD City and zip: SANTA FE SPRINGS 90670 STATUS: No Further Action

Distance: 0.4 South East Facility No.: 19-32-0036 Facility Name: ARMOUR WORLD WIDE GLASS CO Address: 9401 ANN ST City and zip: SANTA FE SPRINGS 90670 STATUS: No Further Action

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9005 SORENSEN SANTA FE SPRINGS AU9133

ASPIS FACILITY DATA CONTINUED

Distance: 0.4 South East Facility No.: 19-36-0018 Facility Name: TROJAN BATTERY COMPANY, #2 Address: 9440 ANN STREET City and zip: SANTA FE SPRINGS 90670 STATUS: No Further Action

Distance: 0.4 South East Facility No.: 19-28-0397 Facility Name: EXIDE BATTERY Address: 9536 S ANN ST City and zip: SANTA FE SPRINGS 90670 STATUS: No Further Action

Distance: 0.4 North East Facility No.: 19-34-0374 Facility Name: SAFE PLATING INC Address: 12015 E SLAUSON City and zip: SANTA FE SPRINGS 90670 STATUS: No Further Action

Distance: 0.4 North East Facility No.: 19-73-0073 Facility Name: SPRINT PRINT INC Address: 12015A SLAUSON City and zip: SANTA FE SPRINGS 90670 STATUS: No Further Action

Distance: 0.4 North East Facility No.: 19-51-0017 Facility Name: CARBONIC PRODUCTS INC Address: 11950 BURKE ST City and zip: SANTA FE SPRINGS 90670 STATUS: No Further Action

Distance: 0.4 North East Facility No.: 19-45-0003 Facility Name: AERO WHEEL & BRAKE SERVICE Address: 11927 BURKE ST City and zip: SANTA FE SPRINGS 90670 STATUS: No Further Action

Distance: 0.4 North East Facility No.: 19-34-0432 Facility Name: TWIN COUNTIES ELECTROPLATING Address: 11971 EAST SLAUSON AVENUE City and zip: SANTA FE SPRINGS 90670 STATUS: No Further Action

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ASPIS FACILITY DATA CONTINUED

Distance: 0.4 South West Facility No.: 19-13-0014 Facility Name: CHEMACON INC Address: 12405 E LOS NIETOS RD City and zip: SANTA FE SPRINGS 90670 STATUS: No Further Action

Distance: 0.4 North West Facility No.: 19-34-0364 Facility Name: PARKER HANNIFIN Address: 11808 BURKE ST City and zip: SANTA FE SPRINGS 90670 STATUS: No Further Action

Distance: 0.4 North West Facility No.: 19-34-0439 Facility Name: WEST BENT BOLT Address: 8623 SOUTH DICE ROAD City and zip: SANTA FE SPRINGS 90670 STATUS: Site Inspection Req'd - Low Priority

Distance: 0.4 South West Facility No.: 19-28-0908 Facility Name: FINE LINE PAINT CORP Address: 12200 LOS NIETOS RD City and zip: SANTA FE SPRINGS 90670 STATUS: No Further Action

Distance: 0.4 South West Facility No.: 19-42-0013 Facility Name: GEORGE P CASEY CO Address: 12121 LOS VICTORS RD City and zip: SANTA FE SPRINGS 90670 STATUS: No Further Action

Distance: 0.4 South West Facility No.: 19-28-0235 Facility Name: BUTLER CHEMICAL INC Address: 12132 E LOS NIETOS RD City and zip: SANTA FE SPRINGS 90670 STATUS: No Further Action

Distance: 0.4 North West Facility No.: 19-28-0768 Facility Name: PILOT CHEMICAL CO Address: 11756 E BURKE ST City and zip: SANTA FE SPRINGS 90670 STATUS: Site Inspection Req'd - High Priority

ASPIS FACILITY DATA CONTINUED

Distance: 0.5 South East Facility No.: 19-28-0240 Facility Name: MATT ENTERPRISES Address: 9441 S SANTA FE SPRINGS RD City and zip: SANTA FE SPRINGS 90670 STATUS: No Further Action

Distance: 0.5 North East Facility No.: 19-72-0024 Facility Name: CHRYSLER CORP Address: 12206 E SLAUSON AVE City and zip: SANTA FE SPRINGS 90670 STATUS: No Further Action

Distance: 0.5 South East Facility No.: 19-49-0112 Facility Name: PEOPLES DISPOSAL CO Address: 9525 SANTA FE SPRINGS RD City and zip: SANTA FE SPRINGS 90670 STATUS: No Further Action

Distance: 0.5 South East Facility No.: 19-33-0075 Facility Name: SANTA FE CASTING CO Address: 9531 S SANTA FE SPRINGS RD City and zip: SANTA FE SPRINGS 90670 STATUS: No Further Action

Distance: 0.5 North East Facility No.: 19-34-0372 Facility Name: SANTA FE ENAMELING & METAL FINISHING Address: 8427 SECURA WAY City and zip: SANTA FE SPRINGS 90670 STATUS: No Further Action

Distance: 0.5 South East Facility No.: 19-29-0115 Facility Name: UNION OIL COMPANY OF CALIFORNIA Address: 9645 SOUTH SANTA FE SPRINGS ROAD City and zip: SANTA FE SPRINGS 90670 STATUS: No Further Action

Distance: 0.5 South East Facility No.: 19-34-0025 Facility Name: KEENE CORP Address: 12521 E LOS NIETOS RD City and zip: SANTA FE SPRINGS 90670 STATUS: No Further Action

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9005 SORENSEN SANTA FE SPRINGS AU9133

ASPIS FACILITY DATA CONTINUED

Distance: 0.5 North West Facility No.: 19-73-0079 Facility Name: STUDIO GRAPHICS Address: 11823 EAST SLAUSON City and zip: SANTA FE SPRINGS 90670 STATUS: No Further Action

Distance: 0.5 North West Facility No.: 19-34-0377 Facility Name: WESTERN SCREW PRODUCTS #1 Address: 11770 EAST SLAUSON AVENUE City and zip: SANTA FE SPRINGS 90670 STATUS: Pending Status

Distance: 0.5 North West Facility No.: 19-28-0375 Facility Name: CAL WESTERN PAINTS Address: 11748 SLAUSON AVE City and zip: SANTA FE SPRINGS 90670 STATUS: No Further Action

Distance: 0.5 Facility No.: 19-73-0056 Facility Name: PACIFIC LOG EXCHANGE INC Address: 8544 DICE RD City and zip: SANTA FE SPRINGS 90670 STATUS: No Further Action

Distance: 0.5 Facility No.: 19-34-0373 Facility Name: SAME DAY PLATING Address: 8520 S SORENSON City and zip: SANTA FE SPRINGS 90670 STATUS: No Further Action

Facility No.: 19-29-0085 Facility Name: BARNHART-MORROW CONSTRUCTION Address: SANTA FE SPRINGS City and zip: SANTA FE SPRINGS 90670 STATUS: No Further Action

Facility No.: 19-29-0086 Facility Name: BISHOP OIL CO Address: SANTA FE SPRINGS City and zip: SANTA FE SPRINGS 90670 STATUS: No Further Action SUBJECT PROPERTY.

9005 SORENSEN SANTA FE SPRINGS AU9133

ASPIS FACILITY DATA CONTINUED

Facility No.: 19-29-0072 Facility Name: OIL LINES INC Address: SANTA FE SPRINGS City and zip: SANTA FE SPRINGS 90670 STATUS: No Further Action

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WASTE DISCHARGE SYSTEMS

The information in this report is produced by the state of California Environmental Affairs Agency Office of Hazardous Material Data Management.

This data base contains information on sites which have been issued waste discharge requirements. Under State and Federal requlations, generators are allowed to discharge to publicly owned treatment works (POTW's) specified levels of waste water toxics. (Some of these industries have categorical pretreatment standards for their discharges; other companies may fall under locally developed limits.) The current information was compiled from the agency published list as of February 1990.

* Distance coordinates are provided as a convenience only Estimated distance is based on the mapping information provided by the U.S. Government Tiger files and may vary from local street guide maps. Sites that are not provided with distance coordinates are generally the result of inaccurate or incomplete information provided by Federal and State government record lists.

The NATEC database listing as of this date indicates no locations within a one half mile radius of the subject property.

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SARA TITLE III

TOXIC CHEMICAL RELEASE INVENTORY

Section 313 of the Emergency Planning and Community Right to Know Act (Title III of the Superfund Amendments and Reauthorization Act of 1986) requires certain facilities to file an annual toxic chemical release inventory form with the United States Environmental Protection Agency and the California Environmental Affairs Agency. Facilities are required to report releases to air, water and land. The current information was compiled from the agency published list as of December 1990.

* Distance coordinates are provided as a convenience only Estimated distance is based on the mapping information provided by the U.S. Government Tiger files and may vary from local street guide maps. Sites that are not provided with distance coordinates are generally the result of inaccurate or incomplete information provided by Federal and State government record lists.

FACILITY DATA

9005 SORENSEN SANTA FE SPRINGS AU9133

SARA FACILITY DATA CONTINUED

Distance: 0.2 North West Facility ID: 190869 Facility Name: DIVERSEY WYANDOTTE CORPORATION Address: 8921 DICE ROAD City and zip: SANTA FE SPRINGS 90670 SIC code: 2842 CAS code: 139-13-9 Inventory Code (Pounds by Range): 1,000 - 9,999 Air Total: 500 Water Total: 0 Underground Total: 0 Land Total: 0 POTW Total: 250 Off Site Total: 0 CAS code: 7664-38-2 Inventory Code (Pounds by Range): 10,000 - 99,999 Air Total: 0 Water Total: 0 Underground Total: 0 Land Total: 0 POTW Total: 750 **Off Site Total: 0** CAS code: 7664-93-9 Inventory Code (Pounds by Range): 10,000 - 99,999 Air Total: 0 Water Total: 0 Underground Total: 0 Land Total: 0 POTW Total: 250 Off Site Total: 0 CAS code: 7697-37-2 Inventory Code (Pounds by Range): 10,000 - 99,999 Air Total: 500 Water Total: 0 Underground Total: 0 Land Total: 0 POTW Total: 250 Off Site Total: 0 CAS code: 7782-50-5 Inventory Code (Pounds by Range): 1,000 - 9,999 Air Total: 1000 Water Total: 0 Underground Total: 0 Land Total: 0 POTW Total: 250 **Off Site Total:** 0

SUBJECT PROPERTY:

9005 SORENSEN SANTA FE SPRINGS AU9133

SARA FACILITY DATA CONTINUED

Distance: 0.3 South East Facility ID: 191038 Facility Name: ASSOCIATED PLATING CO. Address: 9636 ANN ST. City and zip: SANTA FE SPRINGS 90670 SIC code: 3471 CAS code: 7664-93-9 Inventory Code (Pounds by Range): 1,000 - 9,999 Air Total: 0 Water Total: 0 Underground Total: 0 Land Total: 0 POTW Total: 0 **Off Site Total:** 0 CAS code: 7647-01-0 Inventory Code (Pounds by Range): 10,000 - 99,999 Air Total: 500 Water Total: 0 Underground Total: 0 Land Total: 0 POTW Total: 0 Off Site Total: 0 CAS code: 7697-37-2 Inventory Code (Pounds by Range): 1,000 - 9,999 Air Total: 0 Water Total: 0 Underground Total: 0 Land Total: 0 POTW Total: 0 Off Site Total: 0 CAS code: 7664-38-2 Inventory Code (Pounds by Range): 100 - 999 Air Total: 0 Water Total: 0 Underground Total: 0 Land Total: 0 POTW Total: 0 Off Site Total: 0 CAS code: 127-18-4 Inventory Code (Pounds by Range): 1,000 - 9,999 Air Total: 500 Water Total: 0 Underground Total: 0 Land Total: 0 POTW Total: 0 Off Site Total: 0

SUBJECT PROPERTY

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9005 SORENSEN SANTA FE SPRINGS AU9133

SARA FACILITY DATA CONTINUED

Distance: 0.3 South East Facility ID: 192610 Facility Name: VALUOLINE Address: 9520 JOHN STREET City and zip: SANTA FE SPRINGS 90670

SIC code: 2992 CAS code: 20-19-9 Inventory Code (Pounds by Range): 10,000 - 99,999 Air Total: 500 Water Total: 0 Underground Total: 0 Land Total: 0 POTW Total: 0 Off Site Total: 0

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> 9005 SORENSEN SANTA FE SPRINGS AU9133

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SARA FACILITY DATA CONTINUED

Distance: 0.3 North West Facility ID: 191253 Facility Name: WITCO CORPORATION ORGANICS DIVISION 8733 SOUTH DICE ROAD Address: City and zip: SANTA FE SPRINGS 90670 SIC code: 2869 CAS code: 107-21-1 Inventory Code (Pounds by Range): 100,000 - 999,999 Air Total: 125 Water Total: 0 Underground Total: 0 Land Total: 0 POTW Total: 0 Off Site Total: 0 CAS code: 20-10-0 Inventory Code (Pounds by Range): 100,000 - 999,999 Air Total: 500 Water Total: 0 Underground Total: 0 Land Total: 0 POTW Total: 0 **Off Site Total:** 0 CAS code: 7664-93-9 Inventory Code (Pounds by Range): 100,000 - 999,999 Air Total: 382 Water Total: 0 Underground Total: 0 Land Total: 0 POTW Total: 0 Off Site Total: 0 CAS code: 7647-01-0 Inventory Code (Pounds by Range): 10,000 - 99,999 Air Total: 1247 Water Total: 0 Underground Total: 0 Land Total: 0 POTW Total: 0 Off Site Total: 0 CAS code: 111-42-2 Inventory Code (Pounds by Range): 10,000 - 99,999 Air Total: 22 Water Total: 0 Underground Total: 0 Land Total: 0 POTW Total: 0 Off Site Total: 0 CAS code: 75-21-8 Inventory Code (Pounds by Range): 100,000 - 999,999

9005 SORENSEN SANTA FE SPRINGS AU9133

SARA FACILITY DATA CONTINUED

Air Total: 12 Water Total: 0 Underground Total: 0 Land Total: 0 POTW Total: 0 Off Site Total: 0 CAS code: 67-56-1 Inventory Code (Pounds by Range): 10,000 - 99,999 Air Total: 192 Water Total: 192 Water Total: 0 Underground Total: 0 Land Total: 0 POTW Total: 0 Off Site Total: 0

SUBJECT PROPERTY.

9005 SORENSEN SANTA FE SPRINGS AU9133

SARA FACILITY DATA CONTINUED

Distance: 0.3 North West Facility ID: 190808 Facility Name: CP CHEMICALS INC./SOUTHERN CALIFORNIA CHEMICAL Address: 8851 DICE ROAD City and zip: SANTA FE SPRINGS 90670 SIC code: 2819 CAS code: 7782-50-5 Inventory Code (Pounds by Range): 100,000 - 999,999 Air Total: 698 Water Total: 0 **Underground Total:** 0 Land Total: 0 POTW Total: 0 **Off Site Total: 0** CAS code: 7664-41-7 Inventory Code (Pounds by Range): 10,000 - 99,999 Air Total: 18787 Water Total: 0 Underground Total: 0 Land Total: 0 POTW Total: 497279 Off Site Total: 50 CAS code: 7647-01-0 Inventory Code (Pounds by Range): 100,000 - 999,999 Air Total: 538 Water Total: 0 Underground Total: 0 Land Total: 0 POTW Total: 0 **Off Site Total: 0** CAS code: 20-08-6 Inventory Code (Pounds by Range): 100,000 - 999,999 Air Total: 500 Water Total: 0 Underground Total: 0 Land Total: 0 POTW Total: 138 Off Site Total: 491 CAS code: 7664-93-9 Inventory Code (Pounds by Range): 100,000 - 999,999 Air Total: 16 Water Total: 0 Underground Total: 0 Land Total: 0 POTW Total: 0 Off Site Total: 0

SUBJECT PROPERTY:

9005 SORENSEN SANTA FE SPRINGS AU9133

SARA FACILITY DATA CONTINUED

Distance: 0.4 South East Facility ID: 191081 Facility Name: TROJAN BATTERY CO. 9440 ANN STREET Address: City and zip: SANTA FE SPRINGS 90670 SIC code: 3691 CAS code: 20-00-8 Inventory Code (Pounds by Range): 1,000 - 9,999 Air Total: 3 Water Total: 0 Underground Total: 0 Land Total: 0 POTW Total: 0 Off Site Total: 0 CAS code: 7664-93-9 Inventory Code (Pounds by Range): 10,000 - 99,999 Air Total: 0 Water Total: 0 Underground Total: 0 Land Total: 0 POTW Total: 0 Off Site Total: 0 CAS code: 20-11-1 Inventory Code (Pounds by Range): 100,000 - 999,999 Air Total: 173 Water Total: 0 Underground Total: 0 Land Total: 0 POTW Total: 0 Off Site Total: 0 CAS code: 7440-38-2 Inventory Code (Pounds by Range): 100 - 999 Air Total: 0 Water Total: 0 Underground Total: 0 Land Total: 0 POTW Total: 0 **Off Site Total: 0**

SUBJECT PROPERTY

9005 SORENSEN SANTA FE SPRINGS AU9133

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SARA FACILITY DATA CONTINUED

Distance: 0.4 North West Facility ID: 191697 Facility Name:PARKER HANNIFIN CORP. Address: 11808 BURKE ST. City and zip: SANTA FE SPRINGS 90670

SIC code: 3499 CAS code: 71-55-6 Inventory Code (Pounds by Range): 1,000 - 9,999 Air Total: 7679 Water Total: 0 Underground Total: 0 Land Total: 0 POTW Total: 0 Off Site Total: 0

Distance: 0.4 South West Facility ID: 190154 Facility Name: FINE LINE PAINT CORP. Address: 12234 LOS NIETOS ROAD City and zip: SANTA FE SPRINGS 90670

SIC code: 2851 CAS code: 1330-20-7 Inventory Code (Pounds by Range): 1,000 - 9,999 Air Total: 250 Water Total: 0 Underground Total: 0 Land Total: 0 POTW Total: 0 Off Site Total: 0

SUBJECT PROPERTY

9005 SORENSEN SANTA FE SPRINGS AU9133

SARA FACILITY DATA CONTINUED

Distance: 0.4 North West Facility ID: 190128 Facility Name: PILOT CHEMICAL COMPANY OF CALIFORNIA Address: 11756 BURKE STREET City and zip: SANTA FE SPRINGS 90670 SIC code: 2843 CAS code: 7664-93-9 Inventory Code (Pounds by Range): 10,000 - 99,999 Air Total: 0 Water Total: 0 Underground Total: 0 Land Total: 0 POTW Total: 0 **Off Site Total:** 0 CAS code: 20-10-0 Inventory Code (Pounds by Range): 10,000 - 99,999 Air Total: 0 Water Total: 0 Underground Total: 0 Land Total: 0 POTW Total: 3419 Off Site Total: 0 CAS code: 108-31-6 Inventory Code (Pounds by Range): 1,000 - 9,999 Air Total: 0 Water Total: 0 Underground Total: 0 Land Total: 0 POTW Total: 50 Off Site Total: 0 CAS code: 111-42-2 Inventory Code (Pounds by Range): 10,000 - 99,999 Air Total: 0 Water Total: 0 Underground Total: 0 Land Total: 0 POTW Total: 6066 Off Site Total: 0

SARA FACILITY DATA CONTINUED

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Distance: 0.5 North East Facility ID: 190816 Facility Name: SANTA FE ENAMELING & METAL FINISHING CO. Address: 8427 SECURA WAY City and zip: SANTA FE SPRINGS 90670

SIC code: 3479 CAS code: 71-55-6 Inventory Code (Pounds by Range): 1,000 - 9,999 Air Total: 82367 Water Total: 0 Underground Total: 0 Land Total: 0 POTW Total: 0 Off Site Total: 0

Kennedy/Jenks Consultants

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APPENDIX B - RECORDS OF COMMUNICATIONS

Telephone Conversation Memorandum No.

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00 Sheet _____ of _____ Date. Time Ś 2 ٨ . To/From. Project____ etr ive Mave Company_ Phone (SIS) 3 2 K/J/C Job No 8 3 Subject_ a 1 a 9 U àa 0 10 6 **DICE 00406** Distribution Inspection File (orig) By Mike appe Field File F-8 Rev 1/86

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2- \mathcal{L} 4 30 Date_ Time Sheet_____ of_____ Sι ZU 000 To/From. Project___ Carto aster æ 2 Company_ Phone (818) 6 5 K/J/C Job No.___ \mathcal{S} 3 OCLE Subject_ ΛD 1101 200 Q ト 0 0r 2 PM 3 88 1 C 0 5 \sim 0 $\mathbf{\mathcal{O}}$ ٩ 0 01 \mathcal{C} 0 MO 0 Q 2 $_{O}$ α V φ 0 V \frown $^{\prime}$ **DICE 00408** Distribution Inspection File (orig) Field File Ву____ F-8 Rev 1/86

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' <u>)</u> Sheet _____ of ____ Time Date_ MURZ va 30. To/From Project_____ Marguez avino Company___ 946 -3060 Phone (2(3))K/J/C Job No._____ 883 3 0 oue Subject_ hours USt iaza 1a \sim SVAI Samo A. S Poum SUNTY 0 Stova an C Ø \frown (0 par aun aw 61 llar 2 RND \mathcal{V}_{l} was Ú kar 2 21 ά Par r $o \sigma$ 0 **DICE 00410** Distribution. Inspection File (orig) Field File By____

Daily Inspection Report No. _____

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Kennedy/Jenks Consultants

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APPENDIX C - TRIAD GEOTECHNICAL REPORTS



TRIAD GEOTECHNICAL CONSULTANTS INC.

Soils Engineering • Engineering Geology • Environmental Engineering

17231 EAST RAILROAD STREET, SUITE 100, CITY OF INDUSTRY, CA 91748 TELEPHONE (818) 964-2313 FAX (818) 810-0915

PRELIMINARY FOUNDATION INVESTIGATION

PROPOSED GAS PROCESSING PLANT

8832 DICE ROAD

SANTA FE SPRINGS, CALIFORNIA

JOB NUMBER 91-374 DECEMBER 11, 1991

REQUESTED BY:

Liquid Air Engineering 2121 N. California Boulevard Walnut Creek, CA 94596

Attention: Mr. G. Claude Loyonnet



TRIAD GEOTECHNICAL CONSULTANTS INC.

Soils Engineering • Engineering Geology • Environmental Engineering

17231 EAST RAILROAD STREET, SUITE 100, CITY OF INDUSTRY, CA 91748 TELEPHONE (818) 964-2313 FAX (818) 810-0915

> December 11, 1991 Job #91-374

Liquid Air Engineering 2121 N. California Boulevard Walnut Creek, CA 94596

Attention: Mr. G. Claude Loyonnet

Subject: Preliminary Foundation Investigation Proposed Gas Processing Plant 8832 Dice Road Santa Fe Springs, California

Gentlemen:

This report presents the findings and conclusions of a soils investigation performed at the subject site. The purpose of this investigation was to obtain information on subsurface soils for evaluation on which to base recommendations for the development of the property. Our recommendations given in this report are intended for use in grading and preparation of construction plans for the foundation of the proposed project.

The field exploration consisted of a visual reconnaissance of the site and the drilling of 6 borings to a maximum depth of 41.0 feet from the existing surface. A description of the methods used for the exploration and approximate locations of the borings are presented in the Appendix of this report.

INTRODUCTION

<u>Proposed Development:</u> It is understood a gases treatment plant which converts gases to liquid is planned. At this time the site will be developed for several facilities consisting of a lin tank, compressor building, and liquefier unit. The proposed structures are expected to be constructed on shallow foundations and to have heavy loads. Maximum load for the lin tank is estimated to be 10,000 kips.

Grading plans are not available at this time; however, it is understood that the site will require moderate grading for the development, and no cut or fill slopes are planned.

<u>Site Description:</u> The property investigated is located on the east side of Dice Road in the City of Santa Fe Springs, California (Thomas Guide p.61, B-2). The property is irregularly shaped with a street frontage of 452 feet and depths along its north and south property lines of 329 feet and 539 feet, respectively. In addition, there is an existing railroad running along the north and east property lines.

Geographically, the site is situated on alluvial soils of the Los Angeles Plain southwest of the Puente Hills. Locally, the lot is relatively flat; however, there is a 2:1 or less fill slope of 3 feet to 5 feet traversing the lot near its center from east to west. Drainage apprears to be good by sheet flow towards the

street and towards the drainage ditch along the lot's north property line.

At the time of our investigation there was an existing light wood framed, open sided structure near the lot's center along the street and the remainder of the site was in use for agricultural purposes.

<u>Subsurface Conditions:</u> Fill soils were encountered in two borings and were up to 3.5 feet in depth. These soils were classified as light grayish brown silty sands in a slightly moist and medium dense condition.

Natural soils are primarily sands with silts and silty sands. These soils are grayish brown to dark brown sands in a moist and medium dense to dense condition.

A five foot thick layer of silts was encountered in Boring #4 at 13 feet below the ground surface. Natural soils are slightly porous and non-expansive with changes in moisture content. Caving of the soils and ground water were not encountered in any of the borings.

Detailed descriptions of the soils encountered at each boring and the soil tests conducted, with their results, are presented in the Appendix.

CONCLUSIONS AND RECOMMENDATIONS

<u>General</u>: The information obtained during our investigation indicates that the subject site is suited for the proposed development, provided the recommendations contained in this report are incorporated into the design considerations, project plans, and job specifications.

<u>Grading:</u> All grading should conform to the requirements of the City of Santa Fe Springs and the standard grading specifications presented in this report.

Prior to grading, all structures, vegetation, and debris should be removed from the site. Uncertified fills and loose soils should be excavated to firm natural soils. A minimum of 3 feet of natural soil removal and recompaction may be required at the site.

Areas to receive fills should be scarified 6 to 8 inches to adjust the moisture content to near optimum conditions and then compacted to minimum requirements. Fills should be placed in 6 to 8 inch loose lifts at near optimum moisture conditions and compacted to not less than 90 percent of the maximum dry density. Maximum densities for the typical soils should be established in accordance with the standard ASTM D1557-78 method of test.

On-site soils may be used for compacted fills, provided they are free from organic and deleterious material. If imported soils are required, they should be approved by the Soils Engineer prior to acceptance at the site, to insure a similar quality to that required by design.

Grading operations should be conducted under the observation of the Soils Engineer to provide assurance of compliance with job specifications and a Certification of Compacted Fill upon completion of grading.

<u>Shrinkage:</u> Shrinkage as a result of recompaction of existing fill and natural soils is expected to be approximately 5 to 10 percent. The recompaction zone includes materials which are overexcavated and replaced as compacted fill, as well as materials below the overexcavation which are scarified and compacted in place.

Foundation Design: For the building, continuous of spread footings should be placed 18 inches into compacted or firm natural soils. For tanks, a mat footing having a minimum embedment of 24 inches into compacted or firm natural soils may be designed for an allowable bearing pressure of 2000 pounds per square foot. All footings should have a minimum width of 12 inches. Alternatively, the mat footing may be designed for a modulus of subgrade reaction equal to 500 kips per cubic foot.

Total settlements with the assumed loads should not exceed 3/4 inch and differential settlements under similar loads should not exceed 1/4 inch.

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A 1/3 increase in bearing pressure may be used in design when considering wind or seismic loads of short duration.

Mat footings should have minimum reinforcement of Number 4 bar at 18 inches on centers.

Lateral Resistance: Resistance to horizontal forces on foundations may be provided by the combined effect of passive soil pressures and frictional resistance between concrete and firm soils. Lateral soil pressures of 300 pounds per square foot per foot of depth may be used up to 2000 pounds per square foot. A coefficient of friction of 0.35 is recommended for the on-site soils.

<u>Retaining Walls:</u> Small unrestrained retaining walls with a level backfill should be designed to resist active soil pressures equivalent to a fluid pressure of 30 pounds per cubic foot, plus any additional surcharge expected from the surface.

Weep holes consisting of open joints in block walls or 1-inch diameter holes at 2 foot intervals should be placed at the base of the wall 6 to 12 inches above finished grade, or an adequate

drainage system at the base of the wall should be provided to prevent hydrostatic pressures.

All walls should have a granular backfill compacted as fill soil. Jetting should not be permitted.

SUMMARY

This report was prepared to aid the project designers, reviewing agencies, grading contractors, owners, and other concerned parties in completing their responsibilities for the successful completion of this project. The findings and recommendations were prepared in accordance with generally accepted professional engineering principles and practices. We make no other warranty, neither expressed nor implied.

The findings and recommendations are based on results of the field and laboratory investigation, combined with interpolation of soil conditions between boring locations. If conditions are encountered during grading or construction that appear to be different than those reported, this office should be notified.

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All footing excavations should be inspected and approved by the Soils Engineer prior to placing forms or reinforcement, to insure minimum depths into the recommended supporting material.

We appreciate the opportunity to work with you on this project. Please contact us at your convenience if you have any questions regarding this report.

Respectfully submitted,

TRIAD GEOTECHNICAL CONSULTANTS, INC.

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APPENDIX

The following Appendix contains a description of methods and laboratory test results which were used in the engineering evaluations and recommendations contained in the report. Included are the following Map and Plates:

<u>Map</u>

Plot Plan

<u>Plates</u>

Plates A-1 through A-7 ---- Boring Logs Plates B-1 through B-8 ---- Consolidation Curves Plate C ---- Direct Shear Summary

<u>Site Exploration</u>

On November 25, 1991, field explorations were made by drilling 6 borings at the approximate locations indicated on the accompanying Plot Plan. A truck-mounted, rotary-type drilling rig equipped with an 8-inch diameter hollow stem auger was used to advance the borings to depths of 15 to 41 feet below the existing grade.

Relatively undisturbed samples of soils were obtained in the field using a barrel drive sampler with a tapered cutting shoe. The soil samples were retained in 2.5-inch diameter by 1.0-inch rings within the sampler and secured in moisture resistant bags as soon as taken to minimize the loss of field moisture while being transferred to our laboratory for testing.

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Continuous observations of the materials encountered in the borings were recorded in the field. The soils were classified in the field by visual and textural examination, and these classifications were supplemented by obtaining bulk soil samples for future examination or testing in the laboratory to assure classifications in accordance with the Unified Soil Classification System.

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Descriptions of the visual observations of color and soil condition, depth of undisturbed cores or bag samples, field density, and field moisture content are presented on the Boring Logs, Plates A.

Laboratory Tests and Results

Maximum Density: Tests for maximum density and optimum moisture content were conducted in accordance with the ASTM Test Method D1557-78. The tests were made using a 4-inch diameter mold having a 1/30 cubic foot volume, with 25 blows of a 10-pound hammer falling 18 inches on each of 5 layers. The following results were obtained:

Test Hole	Depth	Soil Classification	Maximum	Optimum
<u>No.</u>	(feet)		Dry Density	<u>Moisture</u>
2	2.5	Silty Fine SAND with some Clay - Red-brown to brown	126.0 pcf	12.0 %

<u>Consolidation:</u> Compressibility of the soils was determined by consolidation tests, which were conducted on selected undisturbed

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samples to represent the typical foundation supporting soils. The specimens were loaded initially at field moisture and later, at a specified load, water was added and allowed to remain until primary consolidation had been completed. The amount of settlement was recorded for each increment before applying additional loads and after completion of the loading, loads were removed and the rebound recorded. Consolidation curves obtained from test results are presented on Plates B.

Direct Shear Tests: Direct shear tests were conducted on undisturbed samples of the investigated soils to determine the angle of internal friction and cohesion. Samples were inundated for a minimum of 24 hours under normal load before testing and shear loads were applied quickly in accordance with the standard procedure for consolidated undrained shear tests. Horizontal forces were applied to pass the peak shear and determine the residual shear strength of the soil specimen. The results and residual shear strengths under increased moisture conditions are shown on Plate C.

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Projec	t_ <u>883</u>	2 Dice	RdSanta Fe Springs					
Boring	No.	1	LocationJob	No. <u>9</u>				
Surfa	ce Ele	۷	Logged by JSF		Driv	ing We	ight <u>1</u>	40#
WATER	O DEPTH (FEET)	- GRAPHIC LOG	UNIT (soil, fill, alluvium, siltstone, etc.) MATERIAL DESCRIPTION (% sand, silt, clay; color, ATTITUDE MEASUREMENTS: B-Bedding F-Fault J-Joint RS-Rupture Surface C-Contact	GROUP SYMBOL U.S.C.S.		C-CORE B- BAG	DRY DENSITY Pc1	MOISTURE CONTENT (%)
	- 5 -		NATURAL: Silty Fine SAND with a trace of Clay ~ dark gray-brown to brown, moist, moderately dense	SM - -	5/6" 5/6" 6/6"	B C	112.0	
	- 10 -		Fine SAND with some Silt - brown to gray- brown, moist, dense 	SP	10/6" 15/6" 20/6"	С	96.2	- - 3.2- -
	- 15 -				12/6" 23/6" 38/6"	ļ	98.6	- 4.5_ -
	- 20 -				14/6" 35/6" 42/6"		100.5	4.4
	- 25 -		END OF BORING 21.0 FEET No Ground Water or Caving			DICE	00426	
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Project 8832 Dice Rd.-Santa Fe Springs

Boring No 2 Location see plot plan

Logged by JSF Surface Elev _ Driving Weight 140# SYMBOL S.C.S. RESIST ๛๛ Log (FEET) DENSITY UNIT (soil, fill, alluvium, siltstone, atc.) MOISTURE CONTENT (MATERIAL DESCRIPTION (% sand, silt, clay; color, WATER C-CORE GRAPHIC DEPTH consolidation, etc.) GROUP PENE. BLOWS B-BAG ATTITUDE MEASUREMENTS: 5 B-Bedding **F-Fault** DRY J-Joint **RS-Rupture Surface** C- Contact 0 NATURAL: Silty Fine SAND - light gray-brown, SM slightly moist, moderately dense - upper 18" disturbed Silty Fine SAND with some Clay - red-brown 6/6" C/B 117.0 11.9 to brown, moist, moderately dense to 13/6" dense, slightly porous 16/6" 5 Silty Fine SAND - light gray-brown, slight-5/6" C 108.2 14.2 ly moist, moderately dense 5/6" 7/6" C/B 11/6" 101.9 15.7 10 14/6" Sandy SILT - light gray-brown, moist, ML 14/6" dense Fine to Coarse SAND with some Silt & Gravel-SP light gray-brown, moist, dense to very 11/6" С 101.5 3.1 dense 15 20/6" 82/6" END OF BORING 15.5 FEET 20 No Ground Water or Caving 25

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Proje	ct88	332 Dic	e RdSanta Fe Springs					
Borin	g No	3	Location <u>see plot plan</u> Job	No				
Surfo	ce Ele	.v	Logged by	·		ing We	ight	
WATER	O DEPTH (FEET)	GRAPHIC LOG	UNIT (soil, fill, alluvium, siltstone, etc.) MATERIAL DESCRIPTION (% sand, silt, clay; color, ATTITUDE MEASUREMENTS: B-Bedding J-Boint C-Contact	GROUP SYMBOL U.S.C.S.		C-CORE B- BAG	- w	MOISTURE CONTENT (%
			$\frac{\text{NATURAL:}}{\text{Clay}}$ Silty Fine SAND with a trace of Clay - dark gray-brown to brown, moist,	SM				
			silty Fine SAND with some Clay - dark gray- brown to dark brown, moist, dense	SM	9/6"	С	120.1	- - 11.4_
	- 5 -		Less Clay - gray-brown to light gray-brown		13/6" 15/6			4
	- 10 -		Less Silt		5/6" 6/6" 7/6"	С	116.1	11.1_
			Fine SAND with some Silt - gray-brown, moist moderately dense	- SP	-			
	- 15 -			-	5/6" 6/6" 9/6"	С	114.2	12.6_
			Less Silt - light gray-brown					
	- 20 -		· · · · · · · · · · · · · · · · · · ·	<u> -</u>	11/6" 24/6" -36/6"	'	98.6	4.4_
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	- 25 -		END OF BORING 21.0 FEET No ground Water or Caving					
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Borin	g No	4	_Locationsee plot planJob	No				
Surfo	ce El	ev	Logged by JSF		Driv	ing We	ight	40#
WATER	O DEPTH (FEET)	GRAPHIC LOG	UNIT (soil, fill, alluvium, siltstone, etc.) MATERIAL DESCRIPTION (% sand, silt, clay; color, ATTITUDE MEASUREMENTS: B-Bedding J-Joint C-Contact	GROUP SYMBOL U.S.C.S.	i~ ∩ i	C-CORE B-BAG	DRY DENSITY Pcf	MOISTURE CONTENT (%)
			NATURAL: Silty Fine SAND with a trace of Clay - light gray-brown to dark gray- brown, slightly moist, moderately dense - upper 18" disturbed Slightly porous	SM	5/6" 9/6"	С	124.2	9.2
	- 5 -		Tess Clay		4/6" 5/6" 6/6"	С	101.5	17.1_ - -
	- 10 -		Silty Fine SAND - red-brown to brown, moist, moderately dense to dense	SM	5/6" 5/6" 7/6"	С	109.3	- 13.1 - -
	- 15 -		SILT with Fine Sand - brown to gray-brown, moist, very firm More Fine Sand	ML	5/6" 7/6" 11/6"	С	103.1	22.9_
	- 20 -		Fine to Coarse SAND with Gravel & some Silt- light gray-brown, moist, dense More Silt Silty Fine to Coarse SAND with Gravel -	SP SM	16/6" 22/6" 24/6"	с	114.1	- - 4.9 -
	- 25 -		gray-brown, very moist, dense SILT with Fine Sand - light gray-brown, very moist, very firm to stiff	ML	9/6" 20/6" 32/6"	С	105.1	19.5
			Trace of Clay	- -	2/11	l	00429	- - -
	- 30-				13/6" 15/6" 20/6"	С	98.7	26.4_

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Project 8832 Dice Rd.-Santa Fe Springs

Borin	ng No.	4-cont	Location see plot plan Job	No. <u>9</u>				
Surfe	oce El	ev	Logged by JSF		Driv	ing We	ight <u>14</u>	
WATER	т 30 - ОЕРТН (FEET) - 30	GRAPHIC LOG	UNIT (soil, fill, alluvium, siltstone, etc.) MATERIAL DESCRIPTION (% sand, silt, clay; color, ATTITUDE MEASUREMENTS: B-Bedding F-Fault J-Joint RS-Rupture Surface C-Contact	GROUP SYMBOL U.S.C.S.	1 - 01	C-CORE B-BAG	DRY DENSITY pef	MOISTURE CONTENT (%)
			SILT with Fine Sand	ML				
			SILT with some Clay & Fine Sand - gray-brown to brown, very moist, very firm to stiff	ML				-
	_ 35 _			-	10/6" 20/6" 27/6"	í	115.1	16.4
	- 40 -			-	9/6" 13/6"		102.8	20.0
			· · · · · · · · · · · · · · · · · · ·	 	23/6"			
				-		ļ		-
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	- 45 -		END OF BORING 41.0 FEET No Ground Water or Caving					-
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	- 50 -							-
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Project 8832 Dice Rd.-Santa Fe Springs

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Boring No. 5 Location see plot plan Job No. 91-374 Drill Date 11-25-91

Surf	ace El	ev	Logged by		Driv	ing We	ight1	40#
WATER	O DEPTH (FEET)	GRAPHIC LOG	UNIT (soil, fill, alluvium, siltstone, stc.) MATERIAL DESCRIPTION (% sond, silt, clay; color, ATTITUDE MEASUREMENTS: B-Bedding J-Joint C- Contact	GROUP SYMBOL U.S.C.S.	· /A	C-CORE B-BAG	DRY DENSITY Pc1	MOISTURE CONTENT (%)
			FILL: Silty Fine SAND - light gray-brown to brown, slightly moist, medium firm Upper 2' disturbedSilty Fine SAND with some Clay - red-brown, moist, moderately dense, slightly porous	SM SM				
	- 5		Gray-brown Slightly porous Fine to Coarse SAND with some Silt & Gravel	- SP	2/6" 3/6" 2/6"	С		1
	- 10 -		and a trace of Clay	-	5/6" 12/6" 23/6"	с		-
	- 15 -		Less Clay	- - -	12/6" 25/6"	с		
	- 20 -		END OF BORING 16.0 FEET	-				
			No Ground Water or Caving					-
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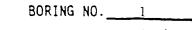
Boring No. 6 Location see plot plan Job No. 91-374 Drill Date 11-25-91

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WATER	O DEPTH (FEET)	GRAPHIC LOG	UNIT (soil, fill, alluvium, siltstone, etc.) MATERIAL DESCRIPTION (% sond, silt, clay; color, ATTITUDE MEASUREMENTS: B-Bedding J-Joint Contact	GROUP SYMBOL U.S.C.S.	1~0	C-CORE B- BAG	DRY DENSITY Pct	MOISTURE
		4	FILL: Silty Fine SAND - light gray-brown, slightly moist, moderately dense	SM				
				-	12/6" 25/6"			
	5 -		<u>NATURAL</u> : Silty Fine SAND with a trace of Clay - light gray-brown to brown, moist, moderately dense	SM				
			Slightly to moderately porous	-	4/6" 6/6"			
	10 -		Silty Fine to Medium SAND with Gravel - dark gray-brown, moist, moderately dense to dense	- - -			,	
F			Fine to Coarse SAND with Gravel & Silt	SP	11/6" 12/6"			
	15 -			-				
					14/6" 16/6"			
-			Coarse SAND with Gravel - gray-brown, moist, dense		1070			
	20 -		SILT with Fine Sand & Clay - light gray to light gray-brown, moist, very firm	ML	-			
-				F	7/6" 15/6"			
	25 -		END OF BORING 23.0 FEET No Ground Water or Caving					
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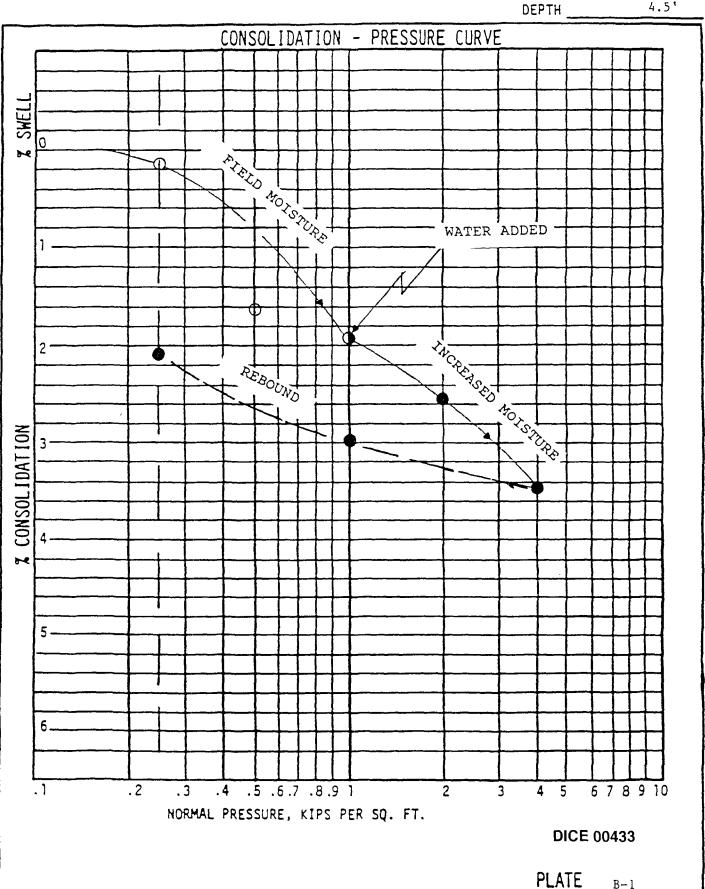
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JOB NO. 91-374

JOB 8832 Dice Road - Santa Fe Springs



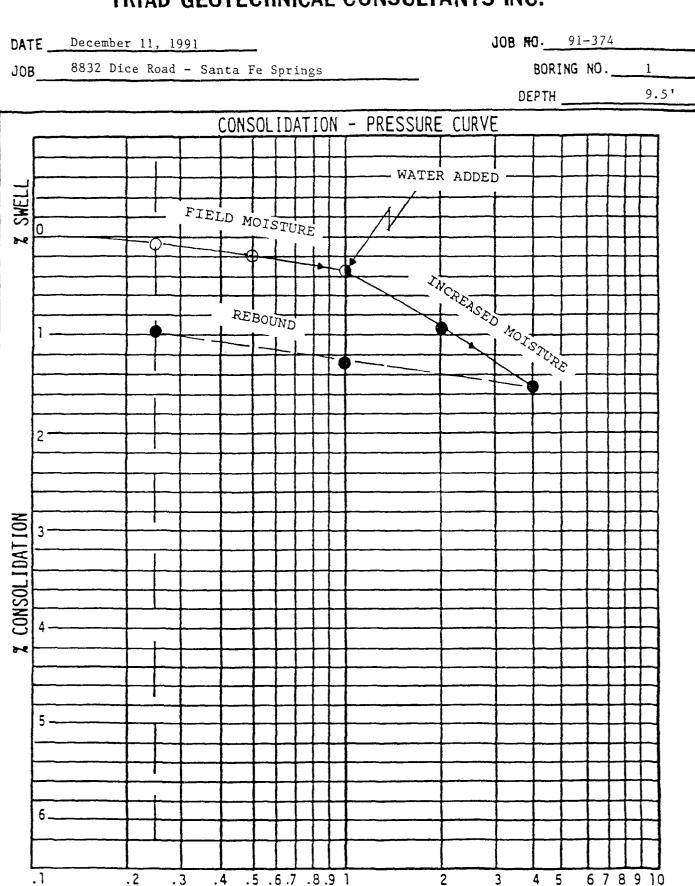
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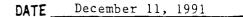


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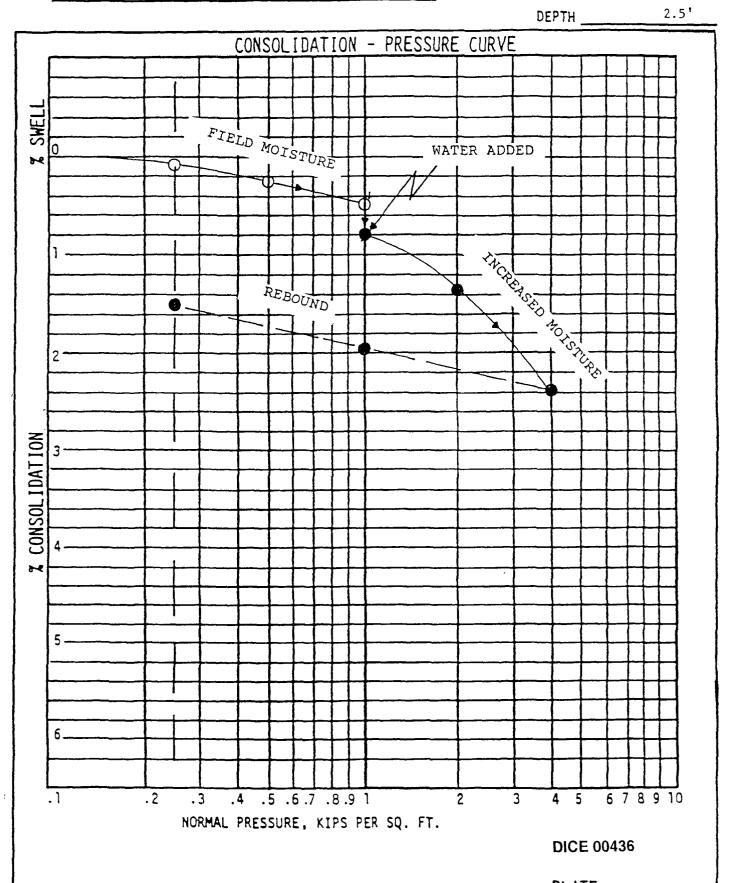


JOB NO. 91-374

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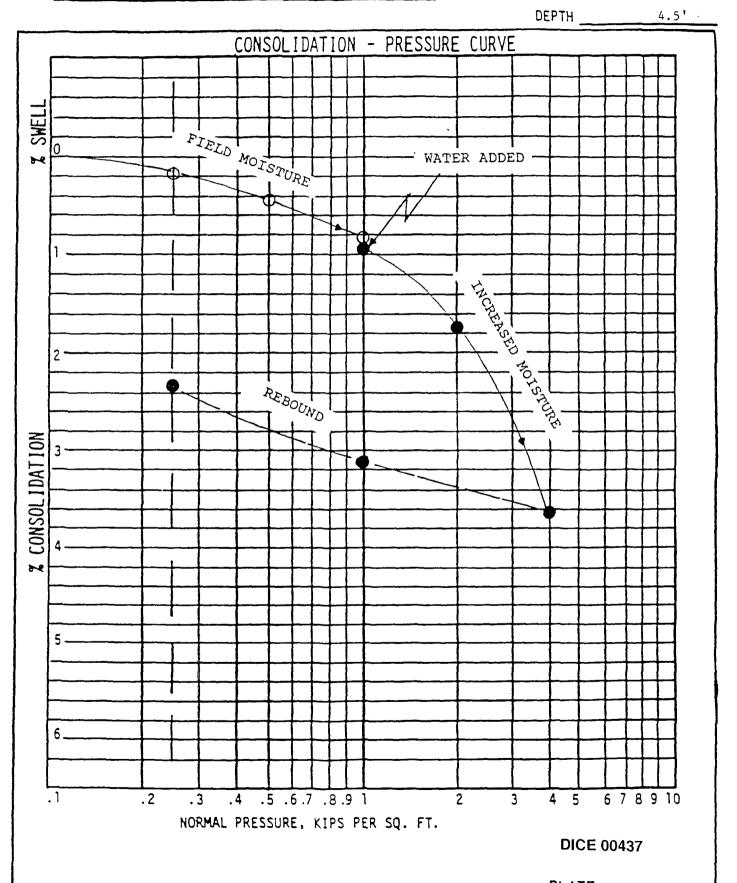
JOB 8832 Dice Road - Santa Fe Springs



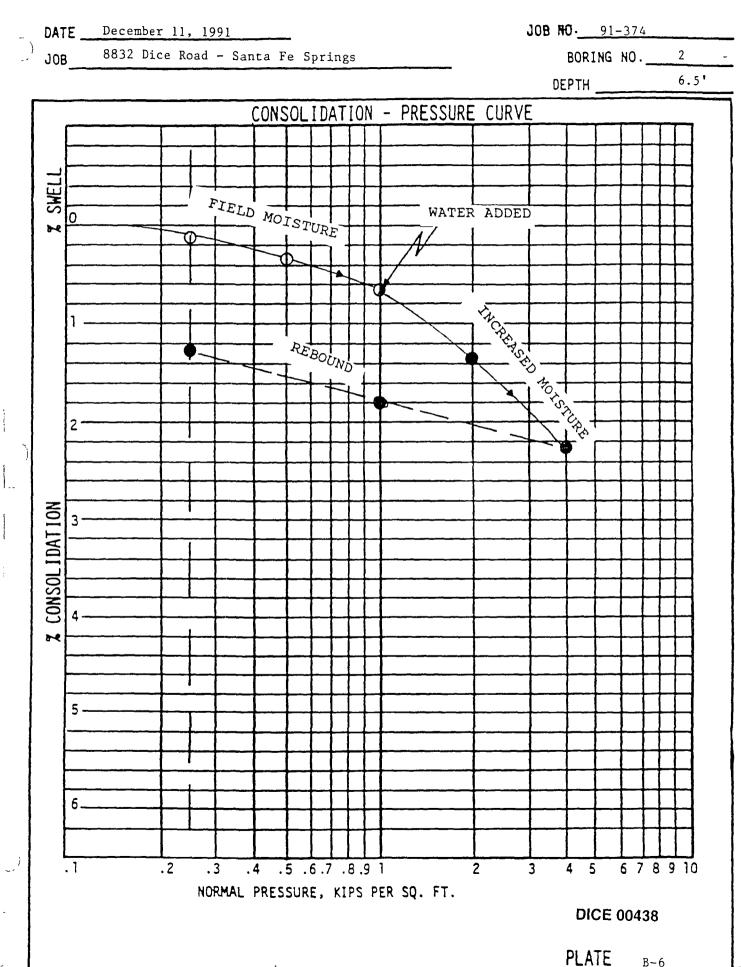
DATE December 11, 1991

JOB NO. 91-374 BORING NO. 4

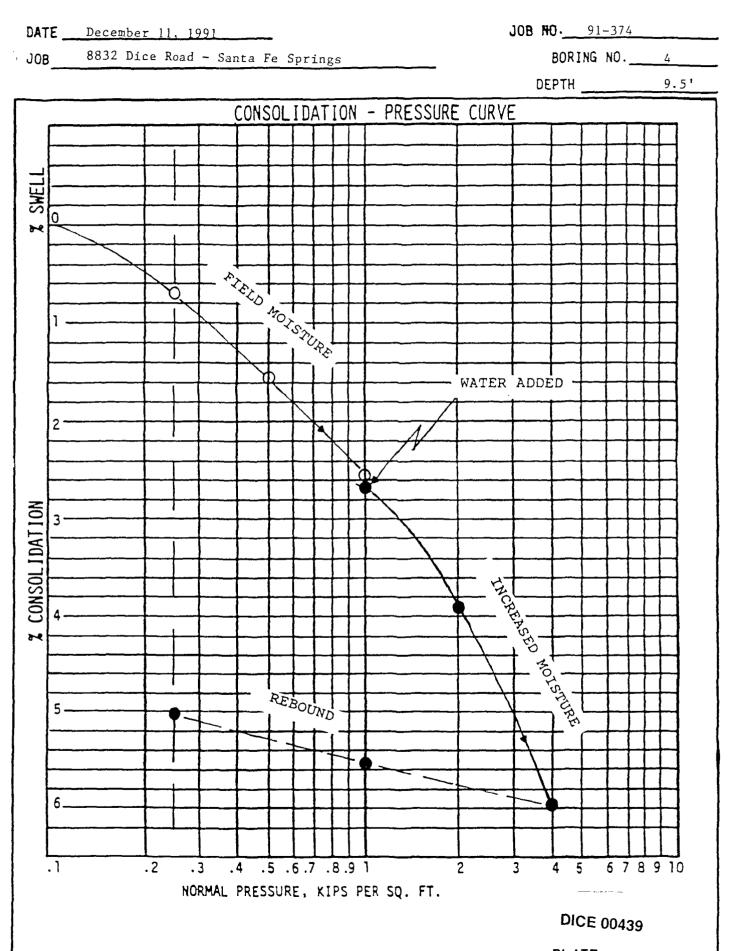
JOB 8832 Dice Road - Santa Fe Springs



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JOB NO. 91-374 DATE December 11, 1991 $\left< \right>$ BORING NO. ____4 ---JOB 8832 Dice Road - Santa Fe Springs DEPTH _____14.5' -CONSOLIDATION - PRESSURE CURVE SWELL 0 R + TELDI WATER ADDED L + + + 2 Ð REBOUND CONSOL I DATION 3-4 2 5 -6_ 2 .1 .2 .4 .5 .6.7 .8.9 1 3 4 5 678910 .3 NORMAL PRESSURE, KIPS PER SQ. FT. **DICE 00440**

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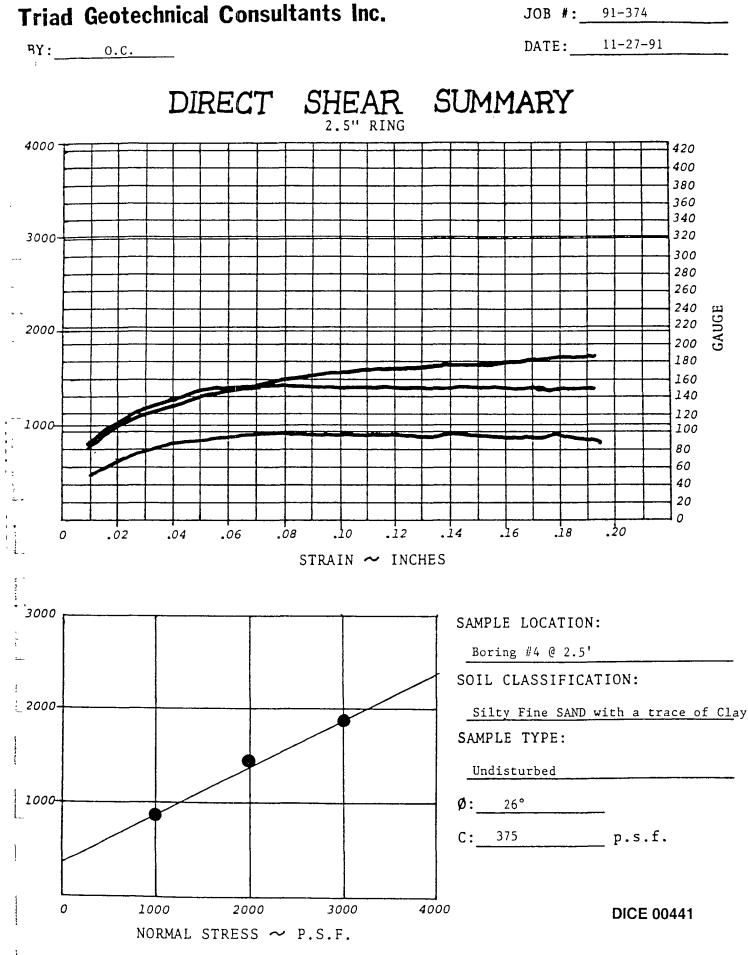


PLATE C



Soils Engineering • Engineering Geology • Environmental Engineering

17231 EAST RAILROAD STREET, SUITE 100, CITY OF INDUSTRY, CA 91748 TELEPHONE (818) 964-2313 FAX (818) 810-0915

> January 3, 1992 Job #91-374

Liquid Air Engineering 2121 N. California Boulevard Walnut Creek, CA 94596

Attention: Mr. G. Claude Loyonnet

- Subject: Preliminary Soil Contamination Investigation Proposed Gas Processing Plant 8832 Dice Road Santa Fe Springs, California
- Reference: Preliminary Foundation Investigation By Triad Geotechnical Consultants, Inc. Dated December 11, 1991

Gentlemen:

This report presents a limited soil contamination investigation conducted for the site. The number of borings and the locations of the borings for soil sampling were specified by your office.

Two borings specified by you, Borings 5 and 6, are shown on the enclosed map. These borings were drilled to 16 and 23 feet below the ground surface, respectively. This field investigation was carried out along with the preliminary foundation investigation referenced above.

The subsurface materials at the locations of drilling were silty sands and sands. These materials are described in the above referenced report and further details of the subsurface material are provided in the Boring Logs on Plates A-6 & A-7.

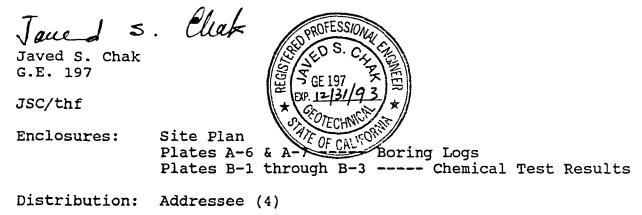
The scope of soil testing was limited to hydrocarbons and volatile organics chemical tests. Six soil samples from the area were tested. These tests consisted of two hydrocarbon and four volatile organic tests. The test results are presented on Plates B. The results show very low to non-detectable chemical contents in these samples.

Based on the type of test performed and the soil samples obtained at designated locations, soil at the site is not considered to be contaminated with hydrocarbons or other volatile organic compounds.

We appreciate the opportunity to be of continued service. Please call, if you have any questions.

Respectfully submitted,

TRIAD GEOTECHNICAL CONSULTANTS, INC.



BORING LOG

Project 8832 Dice Rd.-Santa Fe Springs

Job No. 91-374 Drill Date 11-25-91 Boring No 5 Locotion see plot plan Driving Weight 140# JSF Logged by____ rfoce Elev ____ SYMBOL S.C.S. ๛๛ RESIST IS/FOOT DENSITY pcf (FEET) L06 UNIT (soil, fill, alluvium, siltstone, etc.) MOISTURE CONTENT (MATERIAL DESCRIPTION (% sand, silt, clay; color, WATER C-CORE GRAPHIC consolidation, etc.) PENE. DEPTH GROUP SU B-BAG ATTITUDE MEASUREMENTS: DRY F-Foult B-Bedding **RS-Rupture Surface** J-Joint C-Contact 0 FILL: Silty Fine SAND - light gray-brown to SM brown, slightly moist, medium firm Upper 2' disturbed_ Silty Fine SAND with some Clay - red-brown, SM moist, moderately dense, slightly porous 2/6" С 5 3/6" 2/6" Gray-brown Slightly porous Fine to Coarse SAND with some Silt & Gravel SP and a trace of Clay 5/6" С 10 2/6" 23/6" Less Clay 12/6" С 15 25/6" END OF BORING 16.0 FEET 20 No Ground Water or Caving 25 30 **DICE 00444**

Triad Geotechnical Consultants Inc.

BORING LOG

Project ________ SS32 Dice Rd.-Santa Fe Springs

Borin	g No_	6	Locotion see plot plan Job	No. <u>9</u>	1-374	Drill D	ate <u>11-</u>	25-91
rfo	oce Elev	×	Logged by JSF		Driv	ing We	ight	
WATER	О DEPTH (FEET)	GRAPHIC LOG	UNIT (soil, fill, alluvium, sillstone, stc.) MATERIAL DESCRIPTION (% sond, silt, clay; color, ATTITUDE MEASUREMENTS: B-Bedding J-Joint Contact	GROUP SYMBOL U.S.C.S.	1 - 0	C-CORE B-BAG	DRY DENSITY Pcl	MOISTURE CONTENT (%)
			FILL: Silty Fine SAND - light gray-brown, slightly moist, moderately dense	SM 	12/6" 25/6"	с		-
	- 5 -		<u>NATURAL:</u> Silty Fine SAND with a trace of Clay - light gray-brown to brown, moist, moderately dense	SM -				
			Slightly to moderately porous	-	4/6" 6/6"			-
	- 10 -		Silty Fine to Medium SAND with Gravel - dark gray-brown, moist, moderately dense to dense	-				-
			Fine to Coarse SAND with Gravel & Silt	SP	1/6" 12/6"			
	- 15 -				L4/6" L6/6"			-
	- 20 -		Coarse SAND with Gravel - gray-brown, moist, dense	<u> </u>				-
			SILT with Fine Sand & Clay - light gray to light gray-brown, moist, very firm	- ML	7/6"			
	- 25 -		END OF BORING 23.0 FEET No Ground Water or Caving	-	-4376			-
-	- 30-		-	╞	l Di	 CE 00	445	
				t		1	}	1

Triad Geotechnical Consultants Inc.



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ASSOCIATED LABORATORIES

FAX 714/538-1209

CLIENT				
	Triad Geotechnical Consultants	(1596)	LAB NO	G20403-01
	Attn: Javed Chak			
	17231 E. Railroad Street		REPORTED	12/02/91
	Suite 100			
	City of Industry, CA 91748			

SAMPLE	Soil	RECEIVED	11/25/91
IDENTIFICATION	Dice 91-374		
BASED ON SAMPLE	As Submitted		

	Total Hydrocarbons <u>(TPH_DHS) (mg/kg)</u>
B5 @ 15'	ND< 5
B6 @ 12'	ND< 5

Date Analyzed: 11/27/91

ASSOCIATED LABORATORIES, by: Ph.D. Edward S. Behare, Vice President

PLATE B-1

ESB/ql

NOTE: Unless notified in writing, all samples will be discarded by appropriate disposal protocol 30 days from date reported.

TESTING & CONSULTING

Chemical •

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DICE 00446

Microbiological ·



AND STRANDS

ASSOCIATED LABORATORIES

806 North	806 North Batavia - Orange, California 92668 - 714/771-6900					
CLIENT	Triad Geotechnical Consultants Attn: Javed Chak 17231 E. Railroad Street Suite 100 City of Industry, CA 91748	(1596)	LAB NO REPORTED	G20403-02 12/02/91		
SAMPLE	Soil		RECEIVED	11/25/91		

IDENTIFICATION	Dice
	91-374
BASED ON SAMPLE	As Submitted

Purgeable Organics EPA 8240	<u>B5 @ 5'</u>	<u>B5 @ 10′</u>	B6 @ 2.5'	<u>B6 @ 12'</u>
1,1-Dichloroethene	15 µg/kg	* ND	* ND	* ND
1,1,1-Trichloroethane	10 µg/kg	* ND	* ND	* ND
Tetrachloroethene	17 µg/kg	* ND	* ND	5 µg/kg

* None Detected. All other compounds were None Detected. See attached list.

ASSOCIATED LABORATORIES, by:

PLATE B-2

Edward S. Behare, Ph.D. Vice President

ESB/ql

NOTE: Unless notified in writing, all samples will be discarded by appropriate disposal protocol 30 days from date reported.

DICE 00447

TESTING & CONSULTING

Chemical •

Microbiological • Environmental •

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Client: Triad Foundation Consultants Lab No.: G20403 Date: December 02, 1991

VOLATILE ORGANICS - EPA METHOD 8240 Dilution Factor = 1

CAS_NO.	COMPOUND	LOW SOIL/SEDIMENT DETECTION LIMIT <u>(micrograms/kg)</u> *
74-87-3 74-83-9 75-01-4	Chloromethane Bromomethane	ND< 10 ND< 10
75-01-4	Vinyl Chloride	ND< 10
75-00-3	Chloroethane	ND< 10
75-09-2	Methylene Chloride	ND< 5
67-64-1	Acetone	ND<100
75-15-0	Carbon Disulfide	ND< 5
75-35-4	1,1-Dichloroethene	ND< 5
75-34-3	1,1-Dichloroethane	ND< 5
540-59-0	trans-1,2-Dichloroethene	ND< 5
67-66-3	Chloroform	ND< 5
107-06-2	1,2-Dichloroethane	ND< 5
78-93-3	2-Butanone	ND<100
71-55-6	1,1,1-Trichloroethane	ND< 5
56-23-5	Carbon Tetrachloride	ND< 5
108-05-4 75-27-4 79-34-5 78-87-5 10061-02-6	Vinyl Acetate Bromodichloromethane 1,1,2,2-Tetrachloroethane 1,2-Dichloropropane trans-1,3-Dichloropropene	ND< 50 ND< 5 ND< 5 ND< 5 ND< 5 ND< 5
79-01-6 124-48-1 79-00-5 71-43-2 10061-01-5	Trichloroethene Dibromochloromethane 1,1,2-Trichloroethane Benzene cis-1,3-Dichloropropene	ND< 5 ND< 5 ND< 5 ND< 5 ND< 5 ND< 5
110-75-8	2-Chloroethyl Vinyl Ether	ND< 10
75-25-2	Bromoform	ND< 5
591-78-6	2-Hexanone	ND< 50
108-10-1	4-Methyl-2-Pentanone	ND< 50
127-18-4	Tetrachloroethene	ND< 5
108-88-3 108-90-7 100-41-4 100-42-5 1330-20-7	Toluene Chlorobenzene Ethylbenzene Styrene Xylene (total)	ND< 5 ND< 5 ND< 5 ND< 5 ND< 5 ND< 5

 The detection limits listed above are based on wet weight and are provided for guidance. The detection limits actually achieved in a given analysis will vary depending on matrix effects and the dilution factor.

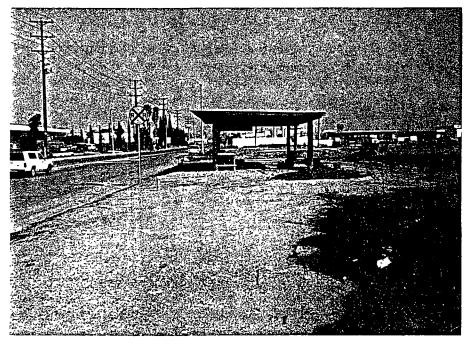
B-3

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DICE 00448

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APPENDIX D - PHOTOGRAPHIC RECORD _____



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1. South-west corner looking North along Dice Road



2. South-west corner looking North-east. Farm equipment located on property.

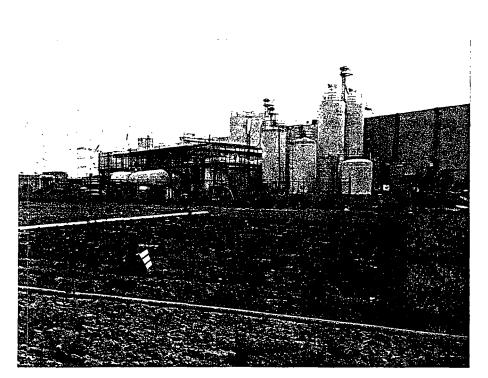


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3. View East of agriculture property.



4. View South from subject property.

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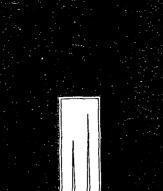
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APPENDIX E - SOIL GAS SURVEY REPORT



ucson, Arizona

SHALLOW SOIL GAS INVESTIGATION

LIQUID AIR 8832 DICE ROAD SANTA FE SPRINGS, CALIFORNIA

JANUARY 28, 1992

Tracer Research Corporation

DICE 00453

Emeryville, California izona Emeryville, Franklin Park, New Jersey

San Antonio, Texas Brussels, Belgium

.

PREPARED FOR:

Kennedy Jenks Consultants 17310 Redhill Road Suite 220 Irvine, CA 92714 (714)261-1577

SHALLOW SOIL GAS INVESTIGATION

LIQUID AIR 8832 DICE ROAD SANTA FE SPRINGS, CALIFORNIA

JANUARY 28, 1992

SUBMITTED BY:

Suass_ Phy W. Com

Tracer Research Corporation

055KJC.MSG 1-92-055-S

DICE 00454

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INTRODUCTION	1
SUMMARY OF RESULTS	1
SHALLOW SOIL GAS INVESTIGATION - METHODOLOGY	2
EQUIPMENT	3
SOIL GAS SAMPLING PROCEDURES	3
ANALYTICAL PROCEDURES	4
QUALITY ASSURANCE/QUALITY CONTROL PROCEDURES	5
APPENDIX A: ANALYTICAL DATAi	7

DICE 00455

INTRODUCTION

> Tracer Research Corporation (Tracer Research) performed a shallow soil gas investigation at the Liquid Air site in Santa Fe Springs, California. The investigation was conducted on January 28, 1992, under contract to Kennedy Jenks Consultants. The purpose of the investigation was to fulfill city mandated requirements for a methane survey.

During this survey, 28 soil gas samples were collected and analyzed. Samples were analyzed for total volatile light hydrocarbons C_1 - C_3 . Methane is included in this suite.

Methane was chosen as a target compound because of its suspected presence in the subsurface and amenability to soil gas technology. Soil gas samples were screened on a gas chromatograph (GC) equipped with a flame ionization detector (FID).

SUMMARY OF RESULTS

Twenty-eight soil gas samples were collected and analyzed in the field for methane at the Liquid Air site in Santa Fe Springs, California. Concentrations of methane detected were at or below ambient air concentrations (0.4 ug/l to 3 ug/l) at all sample locations except SG-17-4.5 (20 ug/l).

SHALLOW SOIL GAS INVESTIGATION - METHODOLOGY

Tracer Research has developed a special method for investigating underground contamination from Volatile Organic Compounds (VOCs), such as industrial solvents, cleaning fluids and petroleum products. This method looks for VOC vapors in the shallow soil gas. A hollow probe is driven into the ground and a small amount of soil gas is pulled by vacuum into the probe. This soil gas is injected into a gas chromatograph (GC) and analyzed for the presence of volatile contaminants. If VOCs are detected in the shallow soil gas, the observed compounds may be either in the vadose zone near the probe or in the soil gas below the probe.

Soil gas technology is most effective in mapping low molecular weight, halogenated solvent chemicals and petroleum hydrocarbons that possess high vapor pressures and low aqueous solubilities. These compounds readily partition out of the groundwater and into the soil gas as a result of their high gas/liquid partitioning coefficients.

Once in the soil gas, VOCs diffuse vertically and horizontally through the soil to the ground surface where they dissipate into the atmosphere. With the contamination acting as a source and the above-ground atmosphere acting as a sink, a concentration gradient develops between the two. This concentration gradient is sometimes distorted locally by hydrologic and geologic anomalies such as clays or perched water. Soil gas mapping generally remains effective, however, because the distribution of the contamination is usually broader in areal extent than the local geologic barriers and is defined using a large database. In other words, small geologic obstructions may create anomalies in the soil/gas groundwater correlation, but the broader areal picture of the distribution of the contaminant can still be observed.

A soil gas investigation outlines the general areal extent of contamination. Conventional bore holes or observation wells then verify both the presence and the

extent of the subsurface contamination. The soil gas mapping is used to determine the optimum placement of the monitoring wells and to reduce the likelihood of drilling unnecessary wells. The soil gas survey is not a substitute for conventional methodology; however, it enables conventional methods to be used more effectively and efficiently.

EOUIPMENT

Tracer Research utilized a one-ton Ford analytical van equipped with one GC and two Hewlett Packard computing integrators. Two built-in gasoline powered generators provided the electrical power (110 volts of alternating current) to operate the gas chromatographic instruments and field equipment. A specialized hydraulic mechanism consisting of two cylinders and a set of jaws was used to drive and withdraw the sampling probes. A hydraulic hammer was used to drive probes past cobbles and through unusually hard soil.

SOIL GAS SAMPLING PROCEDURES

Sampling probes consisted of 7 foot lengths of 3/4 inch diameter hollow steel pipe that were fitted with detachable drive tips. Soil gas probes were advanced 4 to 6 feet below grade. Once inserted into the ground, the above-ground end of each sampling probe was fitted with a steel reducer and a length of polyethylene tubing leading to a vacuum pump. Gas flow was monitored by a vacuum gauge to insure that an adequate flow was obtained.

To adequately purge the volume of air within the probe, 2 to 5 liters of gas was evacuated with a vacuum pump. During the soil gas evacuation, samples were collected in a glass syringe by inserting a syringe needle through a silicone rubber segment in the evacuation line and down into the steel probe. Ten milliliters of gas were collected for immediate analysis in the Tracer Research analytical field van. Soil gas was subsampled

(duplicate injections) in volumes ranging from 1 uL to 2 mL, depending on the VOC concentration at any particular location.

Sample probe vacuums ranged from 2-23 inches Hg. The maximum pump vacuum was measured at 27 inches Hg.

ANALYTICAL PROCEDURES

A Hewlett Packard 5890 Series II GC was used for the soil gas analyses. It was equipped with a flame ionization detector (FID). Compounds were separated on a 6' by 1/8" OD packed column with SP-1000 as the stationary phase in a temperature controlled oven. Nitrogen was used as the carrier gas.

Hydrocarbons detected in the samples were identified by chromatographic retention time. Ouantification of the compounds were achieved by comparison of the detector response of the sample with the response measured for calibration standards (external standardization). Instrument calibration checks were run periodically throughout the day and system blanks were run at the beginning of the day to check for contamination in the soil gas sampling equipment. Air samples were also routinely analyzed to check for background levels in the atmosphere.

Detection limits for the compounds of interest were a function of the injection volume as well as the detector sensitivity for individual compounds. Thus the detection limit varied with the sample size. Generally, the larger the injection size the greater the sensitivity. However, peaks for compounds of interest were kept within the linear range of the analytical equipment. If any compound had a high concentration, it was necessary to use small injections, and in some cases to dilute the sample to keep it within linear range. This may have caused decreased detection limits for other compounds in the analyses.

The detection limits for the hydrocarbon compounds were approximately 0.05 ug/L. Detection limits were dependant upon the conditions of the measurement, in particular, the sample size. If any component being analyzed was not detected, the detection limit for that compound in that analysis is given as a "less than" value (e. g. < 0.1 ug/L). Detection limits obtained from GC analyses were calculated from the current response factor, the sample size, and the estimated minimum peak size (area) that would have been visible under the conditions of the measurement.

QUALITY ASSURANCE/QUALITY CONTROL PROCEDURES

Tracer Research Corporation's normal quality assurance procedures were followed in order to prevent any cross-contamination of soil gas samples. These procedures are described below;

. Steel probes are used only once during the day and then washed with high pressure soap and hot water spray or steam-cleaned to eliminate the possibility of cross-contamination. Enough probes are carried on each van to avoid the need to reuse any during the day.

Probe adaptors (Tracer Research's patented design) are used to connect the sample probe to the vacuum pump. The adaptor is designed to eliminate the possibility of exposing the sample stream to any part of the adaptor. Associated tubing connecting the adaptor to the vacuum pump is replaced periodically as needed during the job to insure cleanliness and good fit. At the end of each day the adaptor is cleaned with soap and water and baked in the GC oven.

. Silicone tubing (which acts as a septum for the syringe needle) is replaced as needed to insure proper sealing around the syringe needle. This tubing does not directly contact soil gas samples.

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Glass syringes are usually used for only one sample per day and are washed and baked out at night. If they must be used twice, they are purged with carrier gas (nitrogen) and baked out between probe samplings.

Injector port septa through which soil gas samples are injected into the chromatograph are replaced on a daily basis to prevent possible gas leaks from the chromatographic column.

Analytical instruments are calibrated each day by analytical standards from Chem Service, Inc. Calibration checks are also run after approximately every five soil gas sampling locations.

Subsampling syringes are checked for contamination prior to sampling each day by injecting nitrogen carrier gas into the gas chromatograph.

Prior to sampling each day, system blanks are run to check the sampling apparatus (probe, adaptor, 10 cc syringe) for contamination by drawing ambient air from above ground through the system and comparing the analysis to concurrently sampled ambient air analysis.

All sampling and subsampling syringes are decontaminated each day and no such equipment is reused before being decontaminated each day. Microliter size subsampling syringes are reused only after a nitrogen carrier gas blank is run to insure it is not contaminated by the previous sample.

Soil gas pumping is monitored by a vacuum gauge to insure that an adequate gas flow from the vadose zone is maintained. A reliable gas sample can be obtained if the sample vacuum gauge reading is at least 2 inches Hg less than the maximum pump vacuum.

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APPENDIX A: ANALYTICAL DATA

KENNEDY JENKS/LJQUID AIR/SANTA FE, CALIFORNIA/. 1-92-055-S 01/28/92 CONDENSED DATA

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SAMPLE	Ci-C3 ug/1	SAMPLE	C1 - C3
3/10/1 10		dentifi Las	ug/l
AIR	3	SQ-15-4.5	<0.05
SG-1-6'	<0.05	\$6-16-5	< 0.05
SG-2-6'	<0.05	\$G-17-4.5'	20
SG-3-6'	< 0.05	SG-18-6'	< 0.05
\$G-4-6'	<0.05	SG-19-6	3
\$G-5-6"	3	\$G-20-6'	<0.05
SC-6-6'	<0.05	SG-21-6'	<0.05
SG-7-5'	< 0.05	SO-22-6	< 0.05
\$G-8-5.5°	< 0.05	SG-23-5	<0.05
SG-9-6'	2	SG-24-4'	< 0.05
SG-10-5'	1	\$0-25-4 .5 '	<0.05
SG-11-6'	<0.05	SG-26-5'	< 0.05
AIR	3	SG-27-5	< 0.05
SG-12-6'	<0.05	\$Q-28-5.5"	<0.05
SG-13-6'	<0.05	AIR	0.4
SG-14-5'	2		

Analyzed by: P. Burkey Proofed by: <u>Reference</u>

RESEARCH CORP. TEL No.602-293-1306 Feb

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Tracer Research Corporation



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TECHNICAL REPORT ASSESSMENT OF IMPACT TO GROUNDWATER QUALITY FROM LIME STORAGE PITS

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LIQUID AIR CORPORATION SANTA FE SPRINGS, CA

Prepared for:

Liquid Air Corporation 8832 Dice Road Santa Fe Springs, CA



Prepared by:

Kennedy/Jenks Consultants 17310 Red Hill Avenue, Suite 220 Irvine, CA 92714

April 1993

K/J 924004.06

APR 0 2 2003

DICE 00466

Engineers and Scientists

9 August 1993

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Mr. Bryan Leger Project Manager Liquid Air Corporation 8832 Dice Road Santa Fe Springs, CA 90670

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Guidele and equilities
17310 Red Hill Avenue, Suite 220
Irvine, California 92714
714-261-1577
FAX 714-26*-2134
_ -

memo 7671 # of pages > 4
Brixe Thomas
Correneda Denks
Phone #
Fax #

Subject: Lime Pit Closure Regulatory Support Proposal for Additional Services LAC Purchase Order #0449659 K/J 924004.06

Dear Mr. Leger:

1

As requested by David Simon of Liquid Air Corporation on 30 July 1993 and in response to the verbal directions received from Rodney Nelson with the Los Angeles Regional Water Quality Control Board (RWQCB), we are submitting this proposal for additional services and fees. In general the additional services are those regulatory support services required to take the next step in resolving the RWQCB's groundwater quality concerns beneath the lime pit area.

SCOPE OF SERVICES

Task 1Conduct record search and records review to obtain most current information on
groundwater quality of adjacent sites.

Task 2 Meet with the RWQCB in an attempt to resolve the Board's groundwater quality concerns using the most current information from adjacent sites and without further investigations on the part of Liquid Air.

- Task 3 Preparation of a Work Plan scoping the site activities required to sample and analyze soils beneath the lime pit bottoms and above the groundwater level.
- Task 4 Conduct field sampling by boring six holes onsite to approximately 35 feet below ground surface (bgs) and taking two soil samples from each boring at approximately 30 and 35 feet bgs. Five borings will be taken in the lime pit area through the compacted backfill, concretion layer in the bottom of the pit and into the native material for sampling. The sixth boring will be placed in an unpaved portion of the site due west of the acetylene building to sample for background pH levels in the native material at 35 feet bgs. Field analysis for pH of the solls will be made to evaluate the need for additional sampling. The lab analysis for each sample will be for pH only.

Mr. Bryan Leger Liquid Air Corporation 9 August 1993 Page 2

SCHEDULE

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Workplan - The Workplan can be prepared and submitted within five working days. The RWQCB has requested that the Workplan be submitted by 30 August 1993.

Field Work - Upon approval of the Workplan by the RWQCB, the field work can be completed within two weeks pending scheduling of the drilling equipment. Actual drilling is estimated to take two working days.

Summary Report - Laboratory results will be available within seven days and the summary report completed within seven days after receipt of the lab reports.

COMPENSATION

Fees to accomplish the described scope of services are broken down as follows:

Task 1	Records Search - Review of current agency documents	
	Supervising Engineer (2 hrs @ \$122.00) =	\$244
	Scientist Grade 2 (4 hrs @ \$85.00) =	340
	Scientist Grade 3 (1 hr @ \$67.00) =	<u> </u>
	Subtotal	651
	- Vista Area Records Report	
	\$330 + 10%	<u> 363</u>
	Task 1 Subtotal	\$1,014
Task 2	RWQCB Meeting and Preparation	
	Supervising Engineer (6 hrs @ \$122.00) =	\$732
	Senior Engineer-Scientist (4 hrs @ \$113.00) =	452
	Task 2 Subtotal	\$1,184
Task 3	Preparation of Workplan & Submittal	
	Supervising Engineer (4 hrs @ \$122.00) =	\$488

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		Kennedy/Jenks Consultants
Mr. Bryan Lei Liquid Air Co 9 August 199 Page 3	rporation	
Task 4	Field Borings, Sampling and Analysis Supervising Engineer (4 hrs @ \$122.00) = Scientist Grade 3 (20 hrs @ \$67.00) =	488 <u>1340</u> 1,828
	Drilling Contractor \$3,030 + 10% Laboratory Analysis \$240 + 10%	3,333 264
Task 5	Miscellaneous Equipment/Shipping Task 4 Subtotal Preparation of Report and Submittal Supervising Engineer (4 hrs @ \$122.00) = Senior Scientist (2 hrs @ \$113.00) =	_200 \$5,625 488 226
	Scientist Grade 3 (12 hrs @ \$67.00) = Drafting/Graphics (10 hrs @ \$54.00) = Word Processing (2 hrs @ \$46.00) =	804 540 _92
	Task 5 Subtotal	\$2,150
	TOTAL	<u>\$10,461</u>
	proposal is based on the following assumptions reg the RWQCB.	arding the field work and the

- No hezardous material will be encountered, therefore the borings will be backfilled with drill cuttings and decontamination between borings will not be required.
- Placement of borings will not require geophysical location of underground utilities.
- The proposed Workplan including the sampling and analysis plan will be accepted by the RWQCB.

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Kennedy/Jenks Consultants

Mr. Bryan Leger Liquid Air Corporation 9 August 1993 Page 4

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If you have any questions, please call. We have completed the records search and meeting with the RWOCB but will wait before proceeding with the Workplan until we've received your authorization.

Very truly yours,

KENNEDY/JENKS CONSULTANTS

R. Bruce Thomas, P.E. Project Manager

William R. Ball

William R. Bazlen / Vice President

RBT:WRB/ca

cc: David Simon Robert Kuykendall AUG-31-93 TUE 16:28

P.1

Kennedy/Jenks Consultants

27 August 1993

MEMORANDUM

Bob Kuykendali / File 924004.02 TO:

FROM: Bruce Thomas

SUBJECT: Lime Takeoff Quantities, Liquid Air Ponda

I called Bryan Lager to see how he came up with the 13,000 cubic yard number for the amount of lime in the pits. The number sounded high since the total volume of the original pits, before the buried lime was exposed or the lime pulled down from the pit walls, had only been calculated to be approximately 22,500 cubic yards. Bryan does not have an accurate count of the lime quantity. He obtained that figure, (actually the figure he has is 12,500 cubic yards) by adding the 5,000 cycle shown on the original bid package drawings to the 7,500 cyds shown on the revised bid package drawings. The two numbers are not additive.

The 5,000 cyds was determined by using a planimeter on the original topographic plan to measure the areas occupied by the stockpilled waste lime material around the sides of the two pits. The stockplies were estimated to contain approximately 2,500 cyds. This figure should be fairly accurate. An additional estimate was made of the material hanging from the aldes of the pits. This estimate was made by observing the location and approximate length of the fissures outside the pits and estimating the angle at which these fissures projected into the bottoms of the pits. At the time we were estimating the amount of lime on the walls of the pits the stockpiles of lime covered the west and of the large pit and the seat and of the amail pit. As a result the thickness of the lime slabs on the walls or any sign on the surface of buried lime were not visible. Where found, the slabs were about 10 feet thick at the top and the fissures were assumed to slope to the toe of the pit wall in the bottom of the pit. Based on these assumptions it was calculated that approximately 2,500 cyds were hanging from the pit walls. From these two estimates the total lime yet to be removed was estimated to be 5,000 cyds. The geotechnical report by Geomatrix did not indicate significant depths of lime in the bettom of the pite. Based on information from Bob Predmora and Bryan Leger we believed that except for the material hanging on the walls, the lime had essentially been removed from the plts. We did not therefore assume that the plts were actually bigger than they appeared due to unseen buried deposits of lime. We were aware however that it was only an estimate because no one really knew what the original pit limits were. Because of this uncertainty, the bid documents were structured so that if additional deposits of lime were uncovered during the excavation of the visible lime beyond 5,000 oyds, any additional yardage beyond the 5,000 cyds would be paid for as an extra on a predetermined unit cost that was included in the contractor's bid.

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In October 1992, while clearing a path for the geotechnical drill rig the, stockpiled waste lime was pushed into the pits leaving the surface around the pits basically level. When construction resumed after the water was removed from the pits in the late winter, approximately 3,800 cyds of time were hauled from the pits. Inorder to make room for the construction of a buttress against the relificed tracks on the east, the contractor pulled down all the lime from the walls of the large pit, cut down the wall between the two pits and piled all the remaining lime in and over what was previously the small pit. After completion of the construction of the buttress and removal of the 3,800 cyds of lime the contractor was put on hold and LAC decided to rebid the job.

The topography had changed drastically from the original plans, so inorder to give potential bidders something on which to base their bids, the site was resurveyed to establish a new topographic plan. We again estimated the amount of lime piled on the site. This estimate was based on the dimensions of the new piles, on the previously calculated volume of the amali pit (3,000 cyde) and again on an estimated guess as to the amount of lime on the walls of the small pond which we could now not see due to the piles of lime on top. It was estimated that the lime piles and lime on the pil walls totaled approximately 4,500 cyde. This amount added to the 3,000 cyde in the small pit resulted in a total estimate of 7,500 cyde. This amount was shown on the drawings of the rebid package. Again, the bid documents required the contractor to provide a unit cost for removal of the lime if additional quantities were uncovered.

If the 7,500 cyds was an accurate number after 3,800 cyds had been removed from the site under the first contract, then the total quantity of line on site in the first place was 11,300 cyds, not 5,000 cyds. Advance has estimated that based on their count, they mixed and placed approximately 6500 cyds of line into the pits. Adding this amount to the 3800 cyds of line removed from the site results in a total of 10,300 cyds of line being handled. This total compares within 10% of our estimate of 7,500 + 3,800 = 11,300 cyds. This makes sense since it was only at that time did we have a much batter understanding of the amount of lime still left in the large pit prior to commencing work back in January. Even at this time however we were still at risk as to the amount of lime in the small pit because it was completely covered by the lime which had been removed from the large pit.

In summary, for us to have been able accurately determined an exact figure before actually beginning excavation, we would have had to drill approximately 150 to 250 holes around the outside of the pits. No one from Liquid Air had any idee how big the original pits might have been. According to Bob Predmore and Bryan Leger there were no drawings or records available which could help us determine their original size. The bid documents were set up to account for the uncertainty concerning the actual amount of lime by establishing a predetermined unit cost to handle quantities beyond what had been estimated since it did not seem effective to spend a considerable effort conducting a detailed subgrade investigation.

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1.0 INTRODUCTION

This Work Plan is being submitted to the California Regional Water Quality Control Board, Los Angeles Region (Board) for review and approval. The Work Plan describes a program to sample and analyze subsurface soils beneath the bottoms of two closed lime storage ponds. The two ponds, which have been backfilled with a mix of imported soll and lime at an approximate 30 percent lime to soll ratio, are located on Liquid Air Corporation's property at 8832 Dice Road In Santa Pe Springs, California.

2.0 SITE INFORMATION

2.1 Address: Liquid Air Corporation 8832 Dice Road Santa Fe Springs, CA. 90870

Contact:

Bryan Leger, Liquid Air Corporation Project Manager OIA ex 6, Personal

2.2 SITE HISTORY:

For the past 30 years the production of acetylene at this facility has resulted in the coproduction of calcium hydroxide (lime). For many years the lime was pumped as a slurry to two ponds on the east side of the property and stored. The two lime storage ponds differed In size and depth with the larger pond being approximately 250 feet long by 150 feet wide by 25 feet deep and the smaller pond being approximately 100 feet long by 80 feet wide by 12 feet deep. The lime slurry was allowed to evaporate in these ponds where it become a solid. Until 1992 the lime was commercially removed from the ponds and sold as a soil stabilizer.

In 1992 a Conceptual Closure Plan was developed to remove all lime from the ponds so that the holes could be properly backfilled and used for a truck parking area. The lime slurry resulting from the ongoing production of acatylene is now pumped into alurry holding tanks on site until subsequent removal under contract. On 17 August 1993, backfilling and compaction of two parts imported soils mixed with one part lime was completed to the subgrade elevation of the proposed concrete pavement.

The Los Angeles Regional Water Quality Control Board, (Board) has become concerned that as a result of the lime being stored in these two ponds, the pH of the ground water beneath $^{
m odde}$ these ponds may have been impacted. Consequently the Board has required Liquid Air to conduct soil sampling beneath the two ponds down to the water bearing zone to determine if there has been any increase in the pH of these soils above background levels in the area.

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Previous investigations of the site have been reported to the Board which expand on the history of the site. Those documents are:

 CONCEPTUAL CLOSURE PLAN, Liquid Air Corporation, 8832 Dice Road, Santa Fe Springs, California 90670; 4 September 1992; K/J 924004.00

• TECHNICAL REPORT ASSESSMENT OF IMPACT TO GROUNDWATER OUALITY FROM LIME STORAGE PITS; Liquid Air Corporation, Santa Fe Springs, Ca; April 1993; K/J 924004.06

3.0 OBJECTIVE

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The objective of this sampling and analysis program is to evaluate the pH level of the soils beneath the bottoms of the previous lime storage ponds. The pH levels of these samples will be compared with pH background levels obtained from samples taken on site, at similar depths at a location cross gradient to the lime storage ponds. Refer to Figure 1 for the location of the site and to Figure 2 for locations of the proposed borings.

4.0 GEOLOGY

Subsurface exploration beneath and outside the lime storage ponds was conducted in the fall of 1992. Results of that exploration are reported in GEOTECHNICAL STUDY, PROPOSED OFFICE AND TRUCK MAINTENANCE BUILDING AND TANK FARM, LIQUID AIR WASTE PONDS, SANTA FE SPRINGS, CALIFORNIA; prepared by Geomatrix Consultants, dated 31 December 1992. This study identified the soils beneath the bottom of the ponds as native material 7 to 16 feet thick comprised of dense to very dense, slity, fine sends and fine sandy slits over stiff to very stiff clayey slits and slity clays. Borings outside the ponds encountered the same native material at similar depth except for the color and cementation. The soils baneath the ponds was dark gray to black in color and cemented while the sandy soils outside the gonds were brown and eppeared not to be cemented.

Since the above described exploration was conducted the ponds have been completely backfilled with a mixture of imported fill and lime at a ratio of two parts imported fill to one part lime. The mixture was thoroughly mixed and placed in approximately nine inch layers and compacted to 90 percent relative density. The depth of fill in the large pond at its deepest point is approximately 25 feet and in the small pond, approximately 12 feet.

5.0 GROUNDWATER

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In 1989 the United States Environmental Protection Agency (EPA) conducted a CERCLA Site Inspection of the Liquid Air facility. The subsequent report to that inspection indicated that the site is located over a confined aquifer which exists from 42 to 45 feet below ground surface. Borings conducted by Geomatrix during the exploration described in Section 4.0. above did not encounter groundwater at depths of 16.5 feet below the ceepest area of the large pond or approximately 41.5 feet below ground surface.

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6.0 INVESTIGATION METHODS AND PROCEDURES

The following sections are intended to provide a basic understanding of the techniques for borehole drilling and methods of subsurface soil sampling proposed by this Work Plan. Specific details of field procedures are included in Appendix A. All field activities will be conducted using proper health and safety procedures as described in the Site Safety and Health Plan, Appendix B.

8.1 Hollow Stem Auger Drilling and Sample Collection

Six borings will be drilled and sampled on site. Three borings in the large pond area, two borings in the small pond area and one boring west of the ponds in an area unrelated to any previous lime storage operations. Borings in the pond areas will be advanced through the backfill material, through the cemented material which formed the bottoms of the ponds and into native material above the water beering zone. The sixth boring will be advanced to the same depth as the deepest pond area boring in order to establish background pH for the solis in this area. The boreholes will be made using a hollow stem auger. Boreholes are expected to be drilled to approximately 40 feet below ground surface (bgs).

Samples will be taken with a split spoon sampler lined with brass sample sleeves. The sampler will be advanced with a 140-pound free-falling drop hammer suspended through the hollow stem of the auger. Samples will be collected from each borehole at approximately 30, 35 and 40 feet bgs. The intent will be to take a sample immediately baneath the comented pond bottom and at consecutive five-foot intervals to the total depth of the boring. Similar samples will be taken from the borehole used to determine background. The background boring, sampling and field screening sampling will be conducted before the pond area borings.

Upon retrieval, samples for laboratory analysis will be sealed in the brass sampler sleeves with teffon sheating and plastic cap covers. Samples will be immediately labelled, logged into custody, and placed in a secured, chilled container for storage and transport to the laboratory. Procedures for boring, sampling, and hollow stem auger techniques are included in Appendix A.

6.2 Soil Sample Field Screening

Boring soll samples, collected by hollow stem auger techniques will be screened in the field for pH using field test kits. The field testing will be used to evaluate the need for sampling at greater depth should pH levels be found to be decreasing with depth from relatively elevated levels detected immediately beneath the pond bottom. Field testing methods for pH in soils are included in Appendix A.

6.3 Soil Borehole Abandonment

It is not expected that any hazardous materials will be encountered in these boreholes. The bottom of each borehole in the pond areas will be backfilled with benton to pellets up to the top of the camented layer which formed the bottom of the previous ponds. The boring above the camented layer will be backfilled with drill cuttings and imported material used to backfill the ponds. Procedures for abandonment are detailed in Appendix A.

6.4 Equipment Cleaning

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The cleaning of equipment in the field to prevent cross contamination will be limited to the cleaning of the split spoon sampler between each use. Cleaning of the hollow stem auger itself will not be necessary as hezardous materials should not be encountered.

7.0 SAMPLE ANALYTICAL PROCEDURES

Semples will be transported to a California certified laboratory for analysis. The samples will be analyzed using EPA Method 150.1. The samples will be collected in brass sleeves as described in Section 6.1.

8.0 SUMMARY REPORT

Following receipt of the analytical results, a Summary Report will be prepared for submittal to the Board. The report will document all field activities, borehole logs, chain-of-custody and analytical results.

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Engineers and Scientists

17310 Red Hill Avenue Suite 220 Irvine California 92714 714 261 1577 FAX 714-261 2134

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9 August 1993

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Mr. Bryan Leger Project Manager Liquid Air Corporation 8832 Dice Road Santa Fe Springs, CA 90670

Subject: Lime Pit Closure Regulatory Support Proposal for Additional Services LAC Purchase Order #0449659 K/J 924004.06

Dear Mr. Leger:

As requested by David Simon of Liquid Air Corporation on 30 July 1993 and in response to the verbal directions received from Rodney Nelson with the Los Angeles Regional Water Quality Control Board (RWQCB), we are submitting this proposal for additional services and fees. In general the additional services are those regulatory support services required to take the next step in resolving the RWQCB's groundwater quality concerns beneath the lime pit area.

SCOPE OF SERVICES

Task 1 Conduct record search and records review to obtain most current information on groundwater quality of adjacent sites.

Task 2 Meet with the RWQCB in an attempt to resolve the Board's groundwater quality concerns using the most current information from adjacent sites and without further investigations on the part of Liquid Air.

- Task 3 Preparation of a Work Plan scoping the site activities required to sample and analyze soils beneath the lime pit bottoms and above the groundwater level.
- Task 4 Conduct field sampling by boring six holes onsite to approximately 35 feet below ground surface (bgs) and taking two soil samples from each boring at approximately 30 and 35 feet bgs. Five borings will be taken in the lime pit area through the compacted backfill, concretion layer in the bottom of the pit and into the native material for sampling. The sixth boring will be placed in an unpaved portion of the site due west of the acetylene building to sample for background pH levels in the native material at 35 feet bgs. Field analysis for pH of the soils will be made to evaluate the need for additional sampling. The lab analysis for each sample will be for pH only.

Mr. Bryan Leger Liquid Air Corporation 9 August 1993 Page 2

SCHEDULE

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Workplan - The Workplan can be prepared and submitted within five working days. The RWQCB has requested that the Workplan be submitted by 30 August 1993.

Field Work - Upon approval of the Workplan by the RWQCB, the field work can be completed within two weeks pending scheduling of the drilling equipment. Actual drilling is estimated to take two working days.

Summary Report - Laboratory results will be available within seven days and the summary report completed within seven days after receipt of the lab reports.

COMPENSATION

Fees to accomplish the described scope of services are broken down as follows:

Task 1	Records Search - Review of current agency documents Supervising Engineer (2 hrs @ \$122.00) = Scientist Grade 2 (4 hrs @ \$85.00) = Scientist Grade 3 (1 hr @ \$67.00) = Subtotal	\$244 340 <u>67</u> 651
	 Vista Area Records Report \$330 + 10% 	_363
	Task 1 Subtotal	\$1,014
Task 2	RWQCB Meeting and Preparation Supervising Engineer (6 hrs @ \$122.00) = Senior Engineer-Scientist (4 hrs @ \$113.00) =	\$732 452
	Task 2 Subtotal	\$1,184
Task 3	Preparation of Workplan & Submittal Supervising Engineer (4 hrs @ \$122.00) =	\$488

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Mr. Bryan Liquid Air 9 August Page 3	Corporation	
Task 4	Field Borings, Sampling and Analysis Supervising Engineer (4 hrs @ \$122.00) = Scientist Grade 3 (20 hrs @ \$67.00) =	488 <u>1340</u> 1,828
	Drilling Contractor \$3,030 + 10% Laboratory Analysis	3,333
	\$240 + 10%	264
Task 5	Miscellaneous Equipment/Shipping Task 4 Subtotal Preparation of Report and Submittal	_ <u>_200</u> \$5,625
TOSK 5	Supervising Engineer (4 hrs @ \$122.00) = Senior Scientist (2 hrs @ \$113.00) = Scientist Grade 3 (12 hrs @ \$67.00) = Drafting/Graphics (10 hrs @ \$54.00) =	488 226 804 540
	Word Processing (2 hrs @ \$46.00) = Task 5 Subtotal	<u>92</u> \$2,150
	TOTAL	<u>\$10,461</u>

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This budget proposal is based on the following assumptions regarding the field work and the response of the RWQCB.

- No hazardous material will be encountered, therefore the borings will be backfilled with drill cuttings and decontamination between borings will not be required.
- Placement of borings will not require geophysical location of underground utilities.
- The proposed Workplan including the sampling and analysis plan will be accepted by the RWQCB.

Mr. Bryan Leger Liquid Air Corporation 9 August 1993 Page 4

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If you have any questions, please call. We have completed the records search and meeting with the RWQCB but will wait before proceeding with the Workplan until we've received your authorization.

Very truly yours,

KENNEDY/JENKS CONSULTANTS

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R. Bruce Thomas, P.E. Project Manager

William R. Bal

William R. Bazlen Vice President

RBT:WRB/ca

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cc: David Simon Robert Kuykendall

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Kennedy/Jenks Consultants

Engineers and Scientists

17310 Red Hill Avenue Suite 220 Irvine California 92714 714-261 1577 FAX 714 261-2134

31 March 1993

Ms. Blythe Penek-Bacharowski California Regional Water Quality Control Board Los Angeles Region 101 Centre Plaza Drive Monterey Park, CA

Subject: Site Investigation Liquid Air Corporation, Santa Fe Springs (File No. 92-03) K/J 924004.02

Dear Ms. Penek-Bacharowski:

On behalf of Liquid Air Corporation, Kennedy/Jenks Consultants respectfully requests a two weeks extension for submission of the technical report required in the Board's 23 February 1993 letter from Rodney H. Nelson to Robert Predmore of Liquid Air. With this extension, the technical report will be due on 14 April 1993.

Thank you for your cooperation in this matter. Should you have any questions, please do not hesitate to call.

Very truly yours,

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KENNEDY/JENKS CONSULTANTS

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R. Bruce Thomas, P.E. Project Manager

RBT/ca 92400402 038

cc: Robert Predmore David Simon Robert Kuykendall

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Appendix B	Underground Fuel Storage Tank Closure, 1990, by Aqua Science Engineers, Inc.
Appendix C	Lime and Its Uses, Specifications, various publications.
Appendix D	Excerpts from Handbook of Chemistry, Lange
Appendix E	Federal Register/Vol 44, No. 220, 65400, 13 November 1979
Appendix F	Excerpts and Boring Logs from Stability Analysis For Open Pits, 1991, Triad Geotechnical Associates.
Appendix G	Excerpts, Figure and Boring Logs from "Geotechnical Study Proposed Office And Truck Maintenance Building And Tank Farm" 1992 by Geomatrix Consultants, Inc.
Appendix H	California EPA Sampling and Analytical Data, 1991
Appendix I	CERCLA Site Screening Studies 1989 & 1990
Appendix J	Excerpts, Boring Log and Groundwater Data from Diversey Wyandotte Corp., Amended Closure Plan, 1989 by Kleinfelder
Appendix K	Excerpts, Boring Logs, Site Plan and Groundwater Data from Baseline Risk Assessment McKesson, 1992 by Harding Lawson Associates

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I. SUMMARY

This report responds to the 23 February 1993 letter from the Regional Water Quality Control Board requesting information to confirm the environmental integrity of two impoundment areas ("pits") for lime storage at the Liquid Air Corporation Santa Fe Springs facility. After reviewing all available data, there is no evidence that the lime pits pose a threat to the waters of the State.

II. SITE HISTORY

A. <u>Historical Operations</u>.

Various corporate entities have operated an industrial gas facility at the Liquid Air Santa Fe Springs site. Reference Figure 1. In the mid-1940s, California Oxygen Company ("CalOx") built and operated an air separation facility.

In the early 1950s, CalOx installed an acetylene manufacturing plant. The acetylene manufacturing plant was re-built after a fire in the late 1950's and again after a second fire in 1971, and is still in operation. Acetone is used as an absorbent in the acetylene cylinders. Acetone had been historically stored in a 6,000 gallon underground storage tank ("UST"). That tank was removed in 1988 and replaced by a new double lined 6,000 gallon UST with cathodic protection that met the updated compliance requirements.

A gas cylinder repackaging plant was built in the early 1960s. This plant is still in operation.

An electrolytic hydrogen plant was built in the 1960s and was operated until 1975. The plant was removed in 1989.

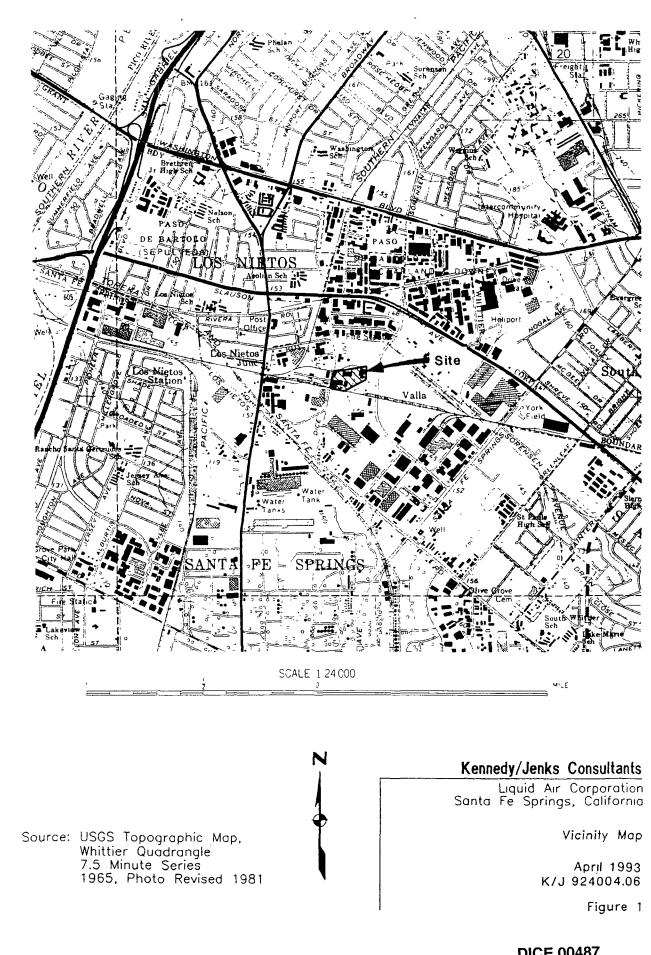
Liquid Air acquired the site in 1968. The air separation plant was shut down and the processing equipment sold in 1980. Caustic, used to remove carbon dioxide from processed air in the air separation process, was removed from the site after the air separation plant was sold in 1980.

In the early 1980s, Liquid Air used a portion of the facility for its Alphagaz operations to repackage specialty gases. The Alphagaz operations were moved off site in 1989. Sulfuric acid had been used for gas scrubbing operations for the specialty gases repackaging. After Alphagaz moved from the Santa Fe Springs facility, all remaining drums of sulfuric acid were properly removed from the site.

A vehicle maintenance garage was operated on site until 1989. As discussed in Section III, two diesel USTs and one waste oil UST were removed in 1988.

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B. <u>Current Operations</u>.

At present, in addition to the acetylene plant and gas repackaging plant, Liquid Air operates a cylinder paint removal booth and a cylinder paint booth. Reference Figure 2.

1. <u>Acetylene Production</u>. Acetylene is produced by reacting calcium carbide with water. The acetylene is packaged into cylinders for sale to customers.

Calcium hydroxide ("lime") is produced as a by-product of this reaction. Because of the water used in the process, the lime is present as a slurry. Since July 1992, the lime slurry has been pumped into slurry tanks for temporary storage. It is then pumped into tanker trucks and sold to customers for use as a soil amendment and pH control at publicly owned wastewater treatment works. Between the late 1950s and July 1992, the lime slurry was stored in two pits. The small pit is approximately 100' long, 80' wide and 15' deep; the large pit is approximately 250' long, 100' wide, and 25' deep. As the water evaporates from the pits, the lime solidifies and dries within the pits. As discussed in greater detail below, the pits were originally unlined, however the lime has reacted with the native soils to form a relatively insoluble cemented layer in the pit bottom and walls. As a consequence, the permeability of the native soil has been sufficiently reduced so that storm water is retained in the pits. In the thirty some years of their use, there has been no evidence of a release of lime to groundwater from the pits.

2. <u>Repackaging of Industrial and Medical Gases</u>. Liquid Air repackages hydrogen, helium, nitrogen, nitrous oxide, propylene, oxygen, and carbon dioxide into cylinders which are sold to customers. Except for the cylinder refurbishing operations, which consists of the paint removal and paint spray facilities, there are no wastes from these operations.

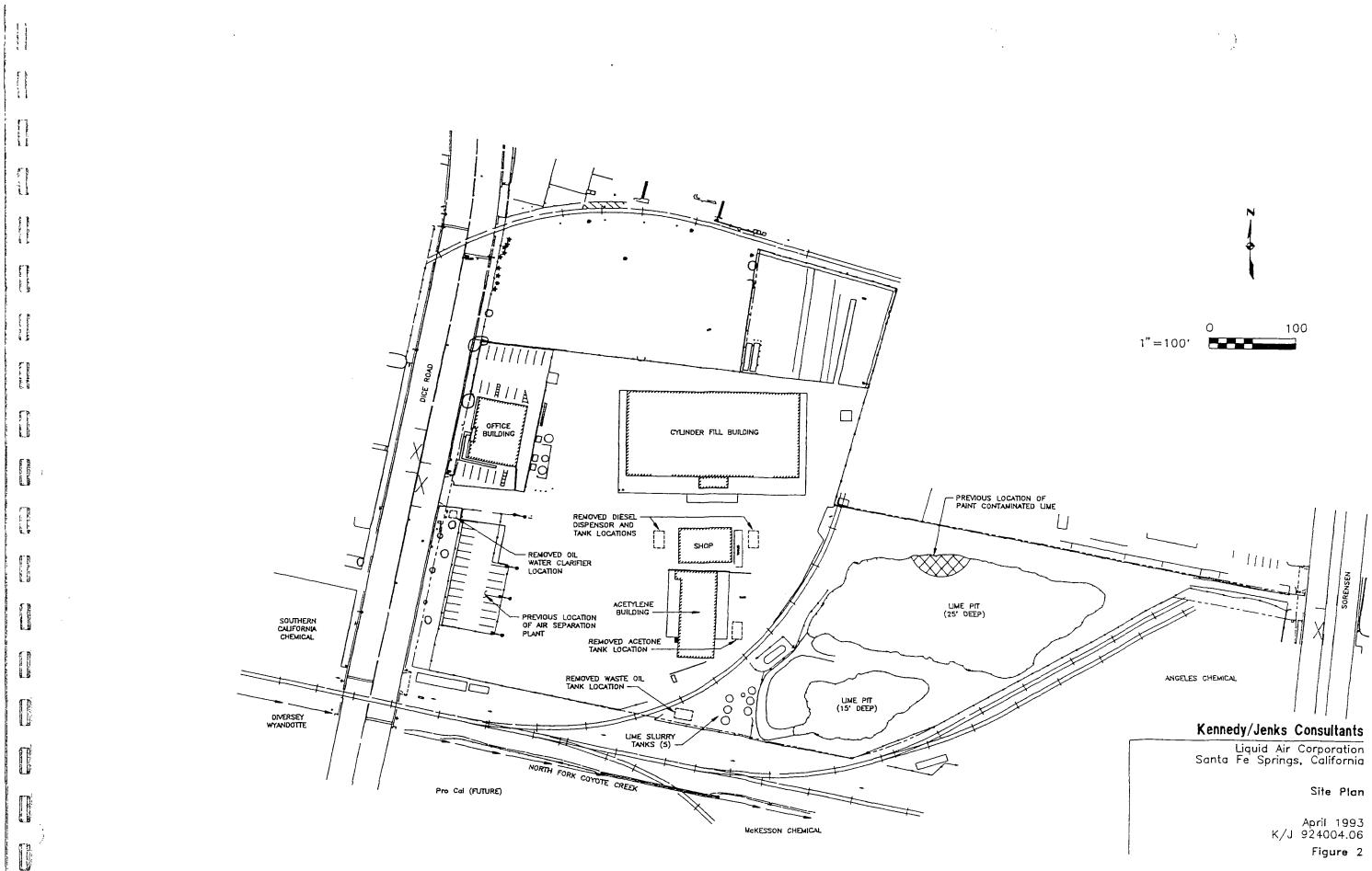
3. <u>Cylinder Refurbishing</u>. If necessary, paint from the cylinders is sometimes removed using steel shot and the cylinder is then repainted. The steel shot and rinse water waste from the paint removal process are removed off-site by Van Waters & Rogers ("VWR") in accordance with applicable regulations.

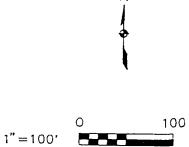
C. Other Materials Used At The Site.

Small amounts of chlorinated solvents such as 1,1,1-trichloroethane ("TCA"), methylene chloride and freon were historically used in a closed system to internally clean process equipment and piping. On occasion, bulk TCA or methylene chloride would be brought on site for major cleaning efforts. The solvents would be pumped from the bulk carrier through the process equipment and recirculated back into the bulk carrier for removal off-site. TCA is still used for this purpose on a reduced scale. Only 22 gallons were removed from the site in 1992. Generally, the solvents were stored in drums on a concrete surface until they were properly removed from the site. Except for the pits, the area immediately adjacent to the pits, and an area along the south central portion of the site; the entire facility surface is covered by building slabs or pavement. There are no indications or records of an unauthorized release of any solvent.

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III. SITE INVESTIGATIONS AND REMEDIATIONS

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Liquid Air has undertaken several site investigations and has addressed the few issues of concern that were identified. In each instance, Liquid Air hired environmental consultants, proceeded under the direction of local government regulatory agencies, and received approval from the agency on all remedial activities.

A. <u>UST Removal</u>.

In 1988, two 7,500 gallon diesel USTs and two fuel dispensers were removed along with one 1,000 gallon waste oil UST, and a 6,000 gallon acetone UST. Los Angeles County, Public Works, Waste Management Division ("County") approved the workplan and the closure activities. Appendix A includes the "Final Report for Remediation of Hydrocarbon Contaminated Lime and Soil," prepared by Aqua Science Engineers, Inc. in 1990 (ASE). Appendix A also includes a follow up from ASE to Los Angeles County dated 21 September 1990; a 1988 Site Investigation for Acetone Contamination by ASE and Los Angeles County's letter dated 24 December 1992 approving the closure.

Soil samples taken beneath the diesel and waste oil USTs did not contain any detectable petroleum hydrocarbons except one soil sample taken two feet below one diesel UST which was reported to contain 95 parts per million (ppm) total petroleum hydrocarbon ("TPH"). Soil samples beneath the fuel dispenser, however had reported levels of 805 to 6,930 ppm TPH. Because the soil samples to 40 feet below ground surface at the fuel dispenser location were reported to contain 13 ppm or less TPH, the environmental consultants concluded that the presence of diesel under the fuel dispensers was very localized. Approximately 25 cubic yards of soil were excavated from under the fuel dispensers. Samples from the walls and the bottom of the extraction pit were reported to contain less than 55 ppm of TPH. The excavated soil was bio-degraded on-site to below 100 ppm TPH. After approval by the County, the remediated soil was used as backfill.

Soil samples taken around the perimeter of the acetone tank had no detectable acetone (limit of detection was 2 ppb) except for a composite sample taken at 30 and 40 feet below ground surface which had a reported value of 6.8 parts per billion.

By letter dated 24 December 1992, the County formally approved the UST remediation. (Appendix A). More detailed descriptions of the UST site investigations and remediations are contained in the reports in Appendix A.

B. <u>Paint Pigment in Lime</u>.

In approximately 1985, a container of green pigment paint residue poured onto approximately 85-90 cubic yards of lime. With the approval of the County, the lime mixed with paint was excavated. The excavated lime was processed with above-ground vapor extraction. After treatment, samples from the lime treatment pile indicated that purgeable organic hydrocarbons were below the drinking water action levels. Upon approval by the County, the remediated lime was put back into the lime pit. (Appendix A). By letter dated 24 December 1992, the County formally approved the lime remediation. (Appendix A).

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C. <u>Clarifier Removal.</u>

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In late 1989, a 2,000 gallon concrete oil/water clarifier was removed from the site. Because only trace levels of total petroleum hydrocarbons and no detectable volatile organic compounds were detected, no remediation was required. The site investigation and removal of the clarifier are discussed in Appendix B.

The observations by Geomatrix are consistent with the known properties of lime to form relatively insoluble calcium carbonate as described in the references in Appendix A. The Geomatrix observations are also consistent with Liquid Air experience with lime pits at several other sites in the United States. Even in areas where there is shallow groundwater, there is no evidence that lime has migrated from any pit, or otherwise adversely impacted groundwater.

IV. LIME PITS

A. <u>Properties of Lime</u>.

The many beneficial uses of lime have long been recognized. Lime is used as a stabilizer for sewage sludge prior to landfilling the sludge as well as a stabilizer for soils. Appendix C contains excerpts from three articles discussing the uses of lime and a copy of the Caltrans specifications for the use of lime as a soil stabilizer. Reference Appendix C for the following: 1) "Carbide Lime, Its Value and Uses," by Compressed Gas Associates, Inc.; 2) excerpts from the "Foundation Engineering Handbook", 1975 by Winterkorn and Fang; 3) "State-of-the-Art Report", 1981 by James K. Mitchell; and 4) a copy of the 1992 Lime Stabilization Standard Specification by Caltrans.

Lime has a limited solubility in water of 1.85 grams per liter in cold water. (Lange's Handbook of Chemistry, see Appendix D). Significantly, lime reacts readily with minerals in the soil to form cemented layers. (Appendix C: Foundation Engineering Handbook, 1975 Winterkorn and Fang).

In 1979, the EPA decided to remove lime from the list of substances determined as hazardous within the meaning of Section 311 of the Clean Water Act. (44 Fed.Reg. 65400; 13 November 1979, see Appendix E). It reasoned that the unique chemistry of lime is such that lime would not present an imminent and substantial danger to the public health or the environment if discharged to surface water.

B. Soil Borings In and Around the Lime Pits.

Triad Geotechnical Consultants Inc. ("Triad") took four soil borings within the large pit and one adjacent to the large pit. Based on the subsurface conditions as described in the boring logs, it would appear that lime was not observed beyond a depth of five feet below the bottom of the pit. (see excerpts from Triad 13 May 1991 report entitled "Stability Analysis for Open Pit" in Appendix F).

More recently, Geomatrix Consultants ("Geomatrix") drilled three soil borings in the large pit, two in the small pit, and several others at different locations on the site. (see excerpts from

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Geomatrix "Geotechnical Study," 31 December 1992 in Appendix G). Geomatrix observed that the sandy soils underlying the bottom of the pits were cemented to depths of four to seven feet. The cemented nature of the sands are indicated on the logs of Borings B1 through B5 by the very high driving resistance of the soil sampler. Borings drilled outside of the pits did not encounter cemented sands and the penetration resistance of the soil sampler was lower than that encountered in the two pits. Geomatrix observed that the pits, while underlain by pervious sands, retain water. They concluded that the cementation decreased the permeability of the native soils and severely restricted the percolation of water from the pits.

C. <u>RWOCB, DHS and EPA Investigations</u>.

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 The 23 February 1993 letter states that the RWQCB staff noted that the pits contained water as a result of the rainstorms. Because the lime has formed a relatively impermeable barrier at the sides and bottom of the pit, stormwater which enters the pits is contained. As discussed below, Liquid Air proposes to backfill the pits and cover the backfilled area with concrete; this will prevent any future collection of stormwater into the pits.

The 23 February 1993 letter also refers to analyses of water from the pit and from lime adjacent to the pits which indicated that the samples had high pH. These samples were taken in August 1991 by California EPA. The analytical data for these samples are found in Appendix H. First, as previously discussed, water in the pits does not leach from the pits because of the cementatious seal created by the lime and soil mixture. Consequently, the water or remaining lime will not pose a threat to groundwater. Second, even though calcium hydroxide is a basic material, as discussed below, based on analyses of pH of groundwater from nearby down-gradient wells, there is no evidence that the lime has migrated past the cementatious layer or that the groundwater has been affected. Finally, the referenced water subsequently has been pumped from the pits and has been properly disposed of off-site.

The U.S. Environmental Protection Agency (EPA) and the California Department of Health Services (DHS) have independently conducted two CERCLA site screenings to investigate the site for its potential to be placed on the National Priority List. These investigations were conducted in 1989 and in 1990 and are included in Appendix I. Both agencies concluded that no further remedial action was warranted.

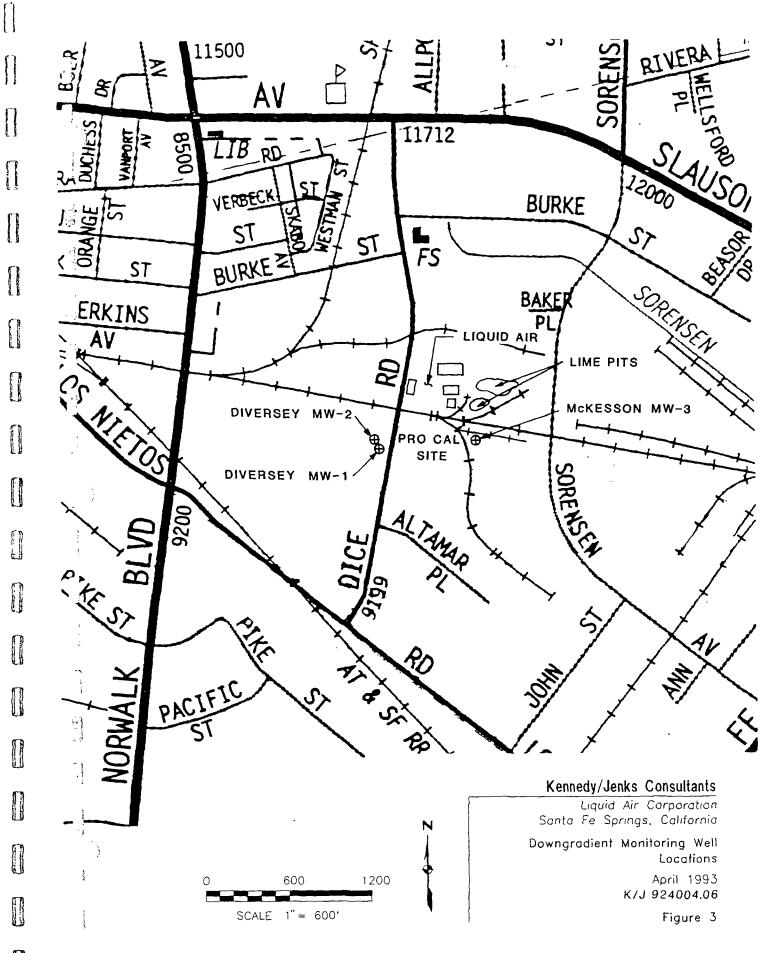
D. <u>Groundwater Data From Down-Gradient Wells.</u>

The general regional groundwater flow in the area is south to southwest. (see Appendix I, CERCLA Site Inspection 1989 and Appendix J, Diversey Wyandotte Closure Plan). Depth to groundwater at the site is reported to be between 42 to 50 feet below ground surface. This places the depth to groundwater at 17 to 25 feet beneath the bottom of the deeper pit.

Two investigations which have been conducted on neighboring facilities are relevant to this Liquid Air site. The McKesson facility is located south to southeast and Diversey Wyandotte is located southwest of the Liquid Air facility. Groundwater monitoring well MW-3 on the McKesson facility is located immediately south of the lime pits on the Liquid Air facility, and groundwater monitoring wells MW-1 and MW-2 on the Diversey Wyandotte facility are located southwest of the lime pit area. Reference Figure 3 for the locations of these monitoring wells.

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The typical groundwater pH of samples taken from these monitoring wells ranges from 6.5 to 8.0. These data suggest there has been no impact of the underlying groundwater from the lime materials stored in the ponds on the Liquid Air facility. Appendix J contains excerpts from the investigation on the Diversey Wyandotte property in 1989. Appendix K contains excerpts from the McKesson property investigation which was conducted in 1992.

E. <u>Proposed Closure</u>.

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Approximately 20,000 cubic yards of lime have been removed from the pits and approximately 5,000 cubic yards of lime remain. It is proposed that this remaining lime be mixed with clean imported, clay-containing soils to comprise the 25,000 cubic yards of material required to completely fill the pits. The mixture would result in a backfill material containing approximately 25 to 30 percent lime.

The conceptual closure of the pits is summarized below:

- Imported, clay containing soils will be brought on site, spread in the bottom of the pits in eight inch layers and mixed with lime.
- Mixed backfill material will be compacted to a minimum of 90% maximum density in eight inch thick layers.
- The pits and adjacent area will be covered with an eight inch thick concrete pavement.
- A storm water drainage system will be installed to collect and convey surface drainage from the area of the pits.

V. CONCLUSIONS

There is no evidence that the lime pits at the Liquid Air Santa Fe Springs facility pose a threat to public health, the environment, or waters of the State. In addition, the site itself has been inspected and issues of concern have been addressed to the satisfaction of various regulatory agencies. Consequently, there is no reasoned basis to require any further site characterization or to not approve the proposed method for backfilling and capping these pits.

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APPENDIX A

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- Closure Certification Letter, 24 December 1992 from Los Angeles
 County
- Final Report for Remediation of Hydrocarbon Contaminated Lime and Soil, 1990; by Aqua Science Engineers, Inc.
- Aqua Science Engineers follow up submittal to Los Angeles County dated 21 September 1990.
- Site Investigation for Acetone Contamination in Soil, 1988; by Aqua Science Engineers, Inc.



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DEPARTMENT OF PUBLIC WORKS

900 SOUTH FREMONT AVENUE ALHAMBRA, CALIFORNIA 91803-1331 Telephone: (818) 458-5100

ADDRESS ALL CORRESPONDENCE TO P.O BOX 1460 ALHAMBRA, CALIFORNIA 91802-1460

December 24, 1992

THOMAS & TIDEMANSON, Director

RECEIVED

DEC 3 1 1992

IN REPLY PLEASE 1-225

Mr. David Simon Liquid Air Corporation P. O. Box 8038 Walnut Creek, CA 94596

Dear Mr. Simon:

HAZARDOUS MATERIALS UNDERGROUND STORAGE CLOSURE CERTIFICATION CLOSURE PERMIT NOS. 4784B AND 6555B LOCATION: 8832 DICE ROAD, SANTA FE SPRINGS

This office has reviewed the final closure report submitted on September 24, 1990. Based on the Information submitted, this letter confirms the completion of site investigation and remedial action of contamination resulting from leaking underground storage tanks at the above site. With the provision that the information provided to this agency was accurate and representative of existing conditions, it is our position that no further action is required at this time.

Please be advised that this letter does not relieve you of any liability under the California Health and Safety Code or Water Code for past, present or future operations at this site. Nor does it relieve you of the responsibility to clean up existing, additional or previously unidentified conditions at the site which cause or threaten to cause pollution or nulsance or otherwise pose a threat to water quality or public health.

Additionally, be advised that changes in the present or proposed use of the site may require further site characterization and mitigation activity. It is the property owner's responsibility to notify this agency of any changes in report content, future contamination findings or site usage.

If you have any questions regarding this matter, please contact Nicole Long at FOIA ex 6,

Very truly yours,

T. A. TIDEMANSON Director of Public Works

roand Pat A. Proano

Supervising Civil Engineer II Waste Management Division

NL:rm WP/225

cc: California Regional Water Quality Control Board Ms. Jaqui Sikoryak, State Water Resources Control Board



17895 Sky Park Circle, Suite E, Irvine, CA 92714 Tel 714/833-3667 • Fax 714/833-3468

April 30, 1990

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Mr. David Esfundi Los Angeles County Department of Public Works Waste Management Division UST Pilot Program - Annex Building P.O. Box 1460 Alhambra, CA 91802-1460

Re: Final Report for Remediation of Hydrocarbon Contaminated Lime and Soil

Site: Liquid Air Corporation 8832 Dice Road Santa Fe Springs, CA 90670 Contact: David Simon (415) 977-6500

CLADPW File No: I-225-1H

Dear Mr. Esfundi:

Enclosed are three copies of the final project report prepared for Liquid Air Corp. titled "Remediation of Hydrocarbon Contaminated Soil and Hydrated Lime for: Liquid Air Corporation." The report has been provided to your department at the request of Liquid Air Corporation.

Please contact me at (714) 833-3667 if you have any questions regarding this project.

Sincerely,

Aqua Science Engineers, Inc.

Michael Marello Geological Operations

cc: Mr. David Simon, Liquid Air Corp., Walnut Creek, Ca. Mr. Rick Bang, Liquid Air Corp., Santa Fe Springs Ca.

Aqua Science Engineers Inc., P.O. Box 535, San Ramon, CA 94583 • 415-820-9391



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17895 Sky Park Circle, Suite E, Irvine, CA 92714 Tel 714/833-3667 • Fax 714/833-3468

APRIL 23, 1990

PROJECT REPORT

REMEDIATION OF HYDROCARBON CONTAMINATED SOIL AND HYDRATED LIME FOR:

> LIQUID AIR CORPORATION 8832 DICE ROAD SANTA FE SRPINGS, CALIFORNIA

CLADPW FILE NUMBER 1-225-1H

PREPARED FOR:

Liquid Air Corporation 2121 North California Boulevard Walnut Creek, CA 94596

PREPARED BY:

Aqua Science Engineers, Inc. 17895 Sky Park Circle, Suite E Irvine, CA 92714

Aquo Science Engineers Inc., P.O. Box 535, San Ramon, CA 94583 • 415-820-9391

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17895 Sky Park Circle, Suite E, Irvine, CA 92714 Tel 714/833-3667 • Fax 714/833-3468

APRIL 23, 1990

PROJECT REPORT

REMEDIATION OF HYDROCARBON CONTAMINATED SOIL AND HYDRATED LIME FOR:

> LIQUID AIR CORPORATION 8832 DICE ROAD SANTA FE SRPINGS, CALIFORNIA

CLADPW FILE NUMBER I-225-1H

For Aqua Science Engineers, Inc:



David M. Schultz Vice President Senior Engineer

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Michael Marello Project Geologist

Aqua Science Engineers Inc., P.O. Box 535, San Ramon, CA 94583 • 415-820-9391

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3.0 REMEDIATION OF CONTAMINATION
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1.0 INTRODUCTION AND PROJECT SUMMARY

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1.1 Background

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This report has been prepared for Liquid Air Corporation by Aqua Science Engineers and describes the methods and results of a remediation project involving hydrocarbon contamination in soil and hydrated lime (calcium hydroxide) at the Liquid Air industrial gases manufacturing plant, 8832 South Dice Road, Santa Fe Springs, California (Figure 1). The hydrocarbon contamination in soil is the result of leaking diesel product dispensers at two separate locations on site. The contamination in the hydrated lime is believed to be isolated surface spillage of paint residue within a lime settling pit at the east end of the site.

The subject site is occupied by AL/Liquid Air Corporation which operates a manufacturing plant for industrial gases. Acetylene is one of the main products manufactured at this site. The product is produced by mixing calcium carbide and water. The process by-product, hydrated lime, is dewatered in two lime settling pits located on the east boundary of the site. The material is harvested and shipped as "dry lime" for use in industrial water treatment and agriculture. The County of Los Angeles Department of Hydrologic Records indicates the depth to groundwater in the area is located generally between 60 and 70 feet below the ground surface. Soil types in the area are primarily composed of alluvial silt and sand with some clay and gravel associated with basin fill deposition.

On September 21, 1988, two 7,500 gallon underground diesel storage tanks, and product dispensers, were removed from the subject site by Whitaker Concrete Corporation. Soil samples collected beneath the product dispensers indicated elevated total hydrocarbon concentrations ranging to 805 ppm and 6,930 ppm. The tank closure report provided by George DeVries, Consulting Geologist, is provided in Appendix I.

On November 18, 1988, ASE drilled soil borings directly adjacent to the locations of each product dispenser in order to define the magnitude of diesel contamination. Soil sample analysis indicated very low (13 ppm) to non-detectable TPH concentrations by EPA method 418.1 in each boring to 40 feet below the surface. ASE concluded that the diesel contamination appeared vertically and laterally restricted to a relatively small volume of soil directly beneath the product dispensers. The ASE site assessment report is provided in Appendix II.

According to Mr. Tom Barber, Plant Manager of Liquid Air site, a container of green pigment paintresidue was spilled on the north edge of the lime settling pit approximately five years ago. The paint residue seeped into fractures in the dried lime and contaminated an estimated 85 cubic yards of material at the edge of the pit (Figure 2). On March 29, 1988, IT Corporation collected samples of the contaminated lime for chemical analysis using EPA method 8240. Concentrations of contaminates ranges to 90 ppb acetone, 55 ppb carbon disulfide, 46 ppb Methyl-ethyl Ketone (MEK), 49 ppb

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1,1,1-Trichloroethane, 86 ppb Toluene, and 30 ppb total Xylene. The IT chemical analysis report is provided in Appendix III.

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1.2 <u>Summary of ASE Remediation</u>

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Aqua Science Engineers was contracted by Liquid Air Corporation to mitigate the diesel contaminated soil and paint residue contaminated lime. A work plan for the remediation program was designed and submitted to Mr. David Esfundi of the Los Angeles County Department of Public Works, Waste Management Division (Appendix IV). The program called for excavation and enhanced bio-remediation of contaminated soil and lime.

On August 18, 1989, ASE excavated approximately 90 cubic yards of paint residue contaminated lime from the wall of northwest corner of the lime settling pit. On August 28, 1989, ASE excavated approximately 20 cubic yards, and on November 3, 1989 another five cubic yards, of diesel contaminated soil from beneath the locations of two former diesel product dispensers, as explained further in section 2.1. The excavated material was placed on treatment pads constructed of bermed, 20 mil. PCV liners.

Following excavation of contaminated material, samples were collected from the walls and bottoms of the two diesel dispenser excavations, and from the lime settling pit excavation. Chemical analysis of samples collected from the two dispenser excavations using EPA method 418.1 indicate diesel concentrations have been removed to below 100 ppm TPH. Chemical analysis of samples collected from the lime pit using EPA method 8240 indicate all purgeable organic concentrations have been removed to below California State DOHS Drinking Water Action Levels.

The diesel contaminated soil was treated using above-ground enhanced bio-degradation of hydrocarbons. The contaminated lime was treated using above-ground vapor extraction of volatile organic hydrocarbons. Chemical analysis of soil samples collected from the diesel treatment pile on April 4, 1990, indicate diesel concentrations have been reduced to below 100 ppm by EPA method 418.1. Chemical analysis of samples collected from the lime treatment pile on November 6, 1989 indicate purgeable organic hydrocarbon concentrations have been reduced to below California State DOHS Drinking Water Action Levels by EPA method 8240. Verbal approval was received by ASE on December 11, 1989 from Mr. Esfundi of CLADPW to close the lime remediation project. The treated lime was moved back into the settling pit on December 12, 1989. The treated soil was used to backfill the dispenser excavations on April 10, 1990.

2.0 EXCAVATION AND ASSESSMENT OF CONTAMINATION

2.1 Excavation of Diesel Contaminated Soil

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On August 28, 1989, approximately 20 cubic yards of diesel contaminated soil was excavated from directly beneath two separate diesel dispenser locations using a Case 580-E backhoe (Figure 2). Approximately five cubic yards was excavated from dispenser-1 location generating a pit having dimensions of five feet by five feet by five feet deep. Approximately 15 cubic yards was excavated from dispenser-2 location generating a pit having dimensions of seven feet by seven feet by eight feet deep. The contaminated soil was placed on a prepared treatment pad constructed of 20 mil. PVC liner (Figure 3). The perimeter of the treatment pad was bermed to prevent surface run-off.

On August 29, 1989, soil samples were collected from the bottom and sides of the two diesel dispenser excavations. Two soil samples were collected from the bottoms, and one sample was collected from each wall of the excavation. The wall samples were collected at approximately two feet from the bottom of dispenser-1 excavation, and approximately three feet from the bottom of dispenser-2 excavation. The samples were collected by driving two inch diameter by six inch length pre-cleaned brass tubes into the bottoms and walls of each excavation. The sample tubes were capped with aluminum foil, plastic end caps and tape. The samples were placed on ice and shipped to West Coast Analytical Services, located in Santa Fe Springs, California, for chemical analysis using EPA method 418.1.

The chemical analysis of soil samples collected from dispenser-1 excavation indicates all diesel contaminated soil was removed to below 100 ppm TPH during the initial excavation on August 28, 1989. Of the samples collected from this location, the highest residual TPH concentration level was 53 ppm indicated in soil sample LA-1-BA collected from the west half of the pit bottom. A summary of the laboratory data is provided in Table 1. The certified laboratory report is given in Appendix V.

Chemical analysis of soil samples from dispenser-2 excavation indicated residual TPH concentration values ranging to 920 ppm in the north half of the pit bottom (sample LA-2-BB), 3,200 ppm on the east wall (sample LA-2-E), 170 ppm on the north wall (sample LA-2-N), and 2,300 ppm on the south wall (sample LA-2-S). These concentrations are above the acceptable level of 100 ppm TPH. TPH was non-detectable in soil samples from the south half of the pit bottom (sample LA-2-BA), and from the west wall (sample LA-2-W). A summary of the laboratory data is provided in Table 1. The certified laboratory reports are provided in Appendix V.

On November 3, 1989, approximately five additional cubic yards of soil was removed from the bottom, north, south and east sides of the dispenser-2 excavation. The soil was placed on the diesel treatment pad. The final depth of the dispenser-2 excavation was approximately ten feet. The final volume of soil removed from this excavation was approximately 20 cubic yards.

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Additional soil samples were collected on November 6, 1989 from the bottom, north, south and east sides of dispenser-2 excavation. The samples were collected in the same manner as described in section above. The samples were shipped to Enseco-CRL Laboratories located in Garden Grove, California, for chemical analysis using EPA method 418.1.

Chemical analysis of the second set of soil samples collected from diesel dispenser-2 excavation indicates all diesel contaminated soil has been removed to below 100 ppm TPH. The highest residual TPH concentration was indicated in the sample collected from the south wall which ranged to 10 ppm TPH (sample LA-2-S2). A summary of the chemical analysis data in provided in Table 2. The certified laboratory report is provided in Appendix V.

2.2 Excavation of Paint Contaminated Lime

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 On August 18, 1989, approximately 90 cubic yards of suspected paint residue contaminated lime was excavated from the northwest corner of the north wall of the lime settling pit using a Kawasaki 650 loader (Figure 2). The excavated lime was placed on a bermed, 20 mil. treatment pad adjacent to the diesel soil treatment pad (Figure 3). The lime was piled in three, three foot lifts. Between the first and second and second and third lifts, three foot spaced rows of two inch diameter slotted PVC pipe was installed for use in vapor extraction. Volatile organic carbon (VOC) concentrations in the atmosphere were monitored during excavation using a Gastech model 1314 "Gastechtor Hydrocarbon Super Surveyor" according to ASE remediation workplan. At no time during excavation were VOC concentrations above 20 ppm encountered.

On November 6, 1989, a total of six samples were collected from the wall of northeast corner of the lime settling pit after excavation to determine if all contaminated lime had been removed. The samples were collected from approximately six inches beneath the surface of the excavation using an Arts Manufacturing hand boring and sampling tool. The samples were collected by driving the sampling tool into three-inch diameter bore-holes drilled to approximately six-inches into the hydrated lime. The samples were secured in two-inch diameter by six-inch length brass tubes and sealed with Teflon tape and plastic end-caps. The samples were immediately placed on ice and subsequently submitted to Enseco/CRL Laboratory for chemical analysis using EPA method 8240 for purgeable organics.

Chemical analysis of the samples using EPA method 8240 indicate all purgeable organics have been removed from the northwest corner of the lime settling pit to below California State DOHS Drinking Water Action Levels (Appendix VI).

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3.0 REMEDIATION OF CONTAMINATION

3.1 Remediation of Diesel Contaminated Soil

The 25 cubic yard of diesel contaminated soil excavated from beneath the two diesel dispenser locations was decontaminated using above-ground enhanced bio-degradation techniques. The contaminated soil was piled approximately 1.5 foot high on a 20 foot by 20 foot treatment pad constructed of 20 mil. PVC liner. The treatment pad was enclosed by one foot high berms to prevent surface run-off from the pile (Figures 3 and 4).

Limiting bacterial nutrients were added to the soil pile which consisted of ammonium nitrate and humic material. Ammonium nitrate was initially added to the soil at a concentration of approximately 0.4%. Humic material was added to the soil at a concentration of approximately 5%. Moisture was added to the soil at a rate of approximately 500 gallons per week, or approximately 10% of soil volume per week. The soil was turned at two week intervals between the dates of November 6, 1989 and January 2, 1990.

Initial concentrations of total petroleum hydrocarbons in soil samples collected during excavation ranged to greater than 3,000 ppm total petroleum hydrocarbons (Table 1). A total of four soil samples were collected from the treatment pile on January 11, 1990; one sample for every five cubic yards of soil. The samples were collected between six inches and one foot below the pile surface and placed in 250 ml glass sample jars. The samples were immediately placed on ice and sent with a chain of custody form to West Coast Analytical Services for chemical analysis using EPA method 418.1. The chemical analysis indicated total petroleum hydrocarbon concentrations in the treated soil ranged to 2,000 ppm with an average concentration of 1,062 ppm. A summary of the laboratory data is provided in Table 3. The certified laboratory report is given in Appendix VII.

On January 23, 1990, additional amounts of ammonium nitrate and humic material were added to the soil at concentrations of 0.2% and 2% respectively. The soil was again completely turned to increase oxygen content. Moisture was again applied to the soil pile at a rate of approximately 500 gallons of water per week.

Chemical analysis of soil samples collected from the treatment pile on Feburary 27, 1990 by Enseco/CRL Laboratory by EPA method 418.1 indicated total petroleum hydrocarbon concentration at this time ranged to 960 ppm, with an average concentration of approximately 788 ppm. The soil was was again turned at this time to increase oxygen content. A summary of the laboratory data is provided in Table 3. The certified laboratory report is given in Appendix VII.

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Chemical analysis of soil samples collected from the treatment pile on April 3, 1990 by Pace Laboratories indicated total petroleum hydrocarbon concentrations at this time ranged to 60.8 ppm, with an average concentration of approximately 53 ppm. A summary of the laboratory data is provided in Table 3. The certified laboratory report is given in Appendix VII.

Diesel fuel concentrations had been effectively reduced in the soil to below the CLADPW action level of 100 ppm TPH. On April 10, 1990 the treated soil was used to backfill the dispenser excavations.

3.2 Remediation of Paint Contaminated Lime

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The ASE remediation workplan dated July 20, 1989 called for neutralization of the contaminated lime using sulfuric acid followed by enhanced bio-degradation of hydrocarbons. However, it was determined by ASE chemical engineers and safety personnel that the volume and concentration of sulfuric acid required to neutralize the lime posed a very high safety risk during high-wind conditions. Concentrated acid vapors could travel beyond the designated work zone and contact humans not wearing adequate safety equipment. Therefore, an alternate remediation plan using above-ground vapor extraction was adopted to reduce the risk of human contact with potentially hazardous materials.

The 90 cubic yard of paint residue contaminated lime excavated from the northwest corner of the settling pit was placed on a level 30 foot by 30 treatment pad constructed of 20 mil. PVC liner adjacent to the diesel soil treatment pad (Figures 3 and 4). The treatment pad was enclosed with one foot high berms to prevent surface run-off from the pad area. The lime was piled in three, three foot lifts. Between the first and second and second and third lifts, three foot spaced rows of two inch diameter slotted PVC pipe was installed for use in vapor extraction. The two inch diameter PVC pipe was manifolded at the south side of the pad into one four-inch diameter PVC pipe connected to a 0.5 HP electric blower. Vacuum pressure was applied to the lime pile on a 24 hour per day rate from September 1, 1989 to December 12, 1989. A described in the ASE remediation workplan dated July 20, 1989, the total beginning concentration of volatile organic carbon (VOC) in the contaminated lime was less than 10 ppm. Therefore, implementation of South Coast Air Quality Management rule 1166 for VOC contaminated soil handling was not required.

A total of ten treated lime samples were collected at depths between two and four feet beneath the surface of lime pile on November 6, 1989. The samples were collected using an Arts Manufacturing hand boring and sampling tool. The samples were collected by boring a three inch hole into the side of the pile followed by driving the sampling tool into the lime. The samples were secured in two-inch diameter by six-inch length brass tubes and sealed with Teflon tape and plastic caps. The samples were immediately placed on ice and subsequently submitted to Enseco/CRL Laboratory located in Garden Grove, California for analysis using EPA method 8240 (purgeable organics).

Chemical analysis of the treated lime by Enseco/CRL indicated all purgeable organics have been effectively removed to below California State DOHS Drinking Water Action Levels (Appendix VIII). The treated lime was moved back into the lime settling pit on December 12, 1989.

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4.0 CONCLUSIONS

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All diesel contaminated soil which was located beneath the two diesel product dispensers at the liquid air site has been removed and treated to acceptable levels. The final concentration of total petroleum hydrocarbons in the 25 cubic yard of treated soil ranges to 60.8 ppm with an overall average concentration of approximately 50 ppm. The "action level" for total petroleum hydrocarbons concentration in soil established by the County of Los Angeles Department of Public Works, Waste Management Division is 100 ppm. Soil having concentrations below this value are not considered significantly contaminated and can be used as clean land fill.

All paint residue contaminated lime which was located on the wall of the northwest corner of the lime settling pit has been removed and treated to California State DOHS Drinking Water Action Levels for volatile organic hydrocarbons. The treated lime can be combined with other lime onsite and processed for recycling.

It is the opinion of Aqua Science Engineers, Inc., that no further contamination mitigation work is required for soil in the area of the two diesel product dispensers, and for lime located at the northwest corner of the lime settling pit as described in this report.

The results of this investigation represent conditions at the time and location at which samples were collected and for the parameters analyzed in the laboratory. It does not characterize the site for contamination resulting from other sources or parameters not analyzed. This report is considered "proprietary and confidential." Information regarding this project will not be released by Agua Science without permission from the client.

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TABLE 1

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SUMMARY OF CHEMICAL ANALYSIS OF SOIL SAMPLES COLLECTED ON AUGUST 29, 1989 FROM BELOW DISPENSERS 1 AND 2 AFTER EXCAVATION OF SOIL

Sample Location	Sample Number	TPH by EPA 418.1 (ppm)
Disp. 1 Bottom-West	LA-1-BA (W)	53
Disp. 1 Bottom-East		33
Disp. 1 Wall-East	LA-1-E	ND
Disp. 1 Wall-North	LA-1-N	34
Disp. 1 Wall South	LA-1-S	ND
Disp. 1 Wall-West	LA-1-W	ND
Disp. 2 Bottom-South	LA-2-BA (S)	ND
Disp. 2 Bottom-North	LA-2-BB (N)	920
Disp. 2 Wall-East	LA-2-E	3200
Disp. 2 Wall-North	LA-2-N	170
Disp. 2 Wall-South		2300
Disp. 2 Wall-West	LA-2-W	ND
Detection Limit		10

TABLE 2

SUMMARY OF CHEMICAL ANALYSIS OF SOIL SAMPLES COLLECTED ON NOVEMBER 6, 1989 FROM BELOW DISPENSER 2 AFTER ADDITIONAL EXCAVATION OF SOIL

Sample Location	Sample Number	TPH by EPA 418.1 (ppm)
Disp. 2 Bottom-North Disp. 2 Wall-East Disp. 2 Wall-North Disp. 2 Wall-South	LA-2-BB (N-2) LA-2-E2 LA-2-N2 LA-2-S2	8 7 8 10
Detection Limit		1

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TABLE 3

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SUMMARY OF CHEMICAL ANALYSIS DATA FOR SOIL SAMPLES COLLECTED FROM TREATED DIESEL CONTAMINATED SOIL

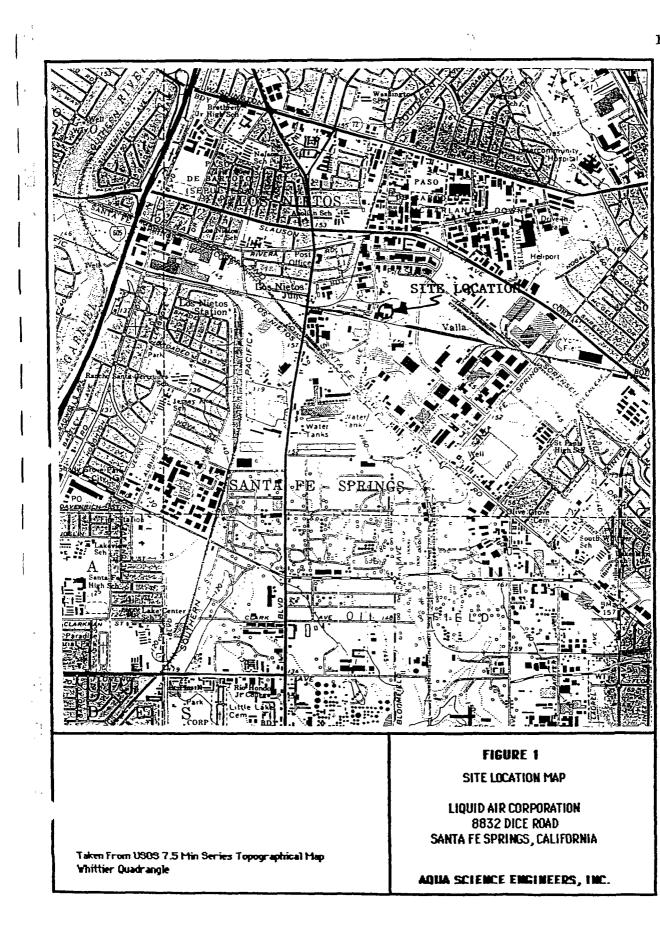
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Sample Designation	Sample Collection Date	TPH by EPA 418.1 (ppm)
	01-11-90	2000	-
TD-28	01-11-90	170	
TD-3B	01-11 90	1500	
TD-4B	01-11-90	580	
Detection Lim	hit	1	
TD-1B	02-27-90	500	
TD-2B	02-27-90	960	
TD-3B	02-27-90	940	
TD-4B	02-27-90	750	
Detection Lim	lit	1	
TD-1	04-03-90	59.6	
T D-2	04-03-90	46.6	
TD-3	04-03-90	60.8	
TD-4	04-03-90	46.0	
Detection Lim	nit	10	

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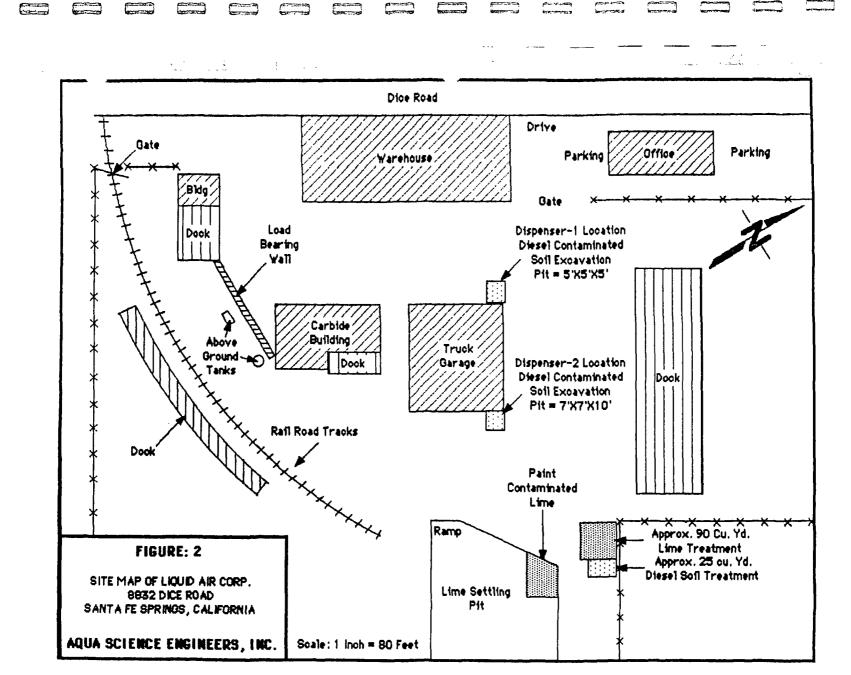
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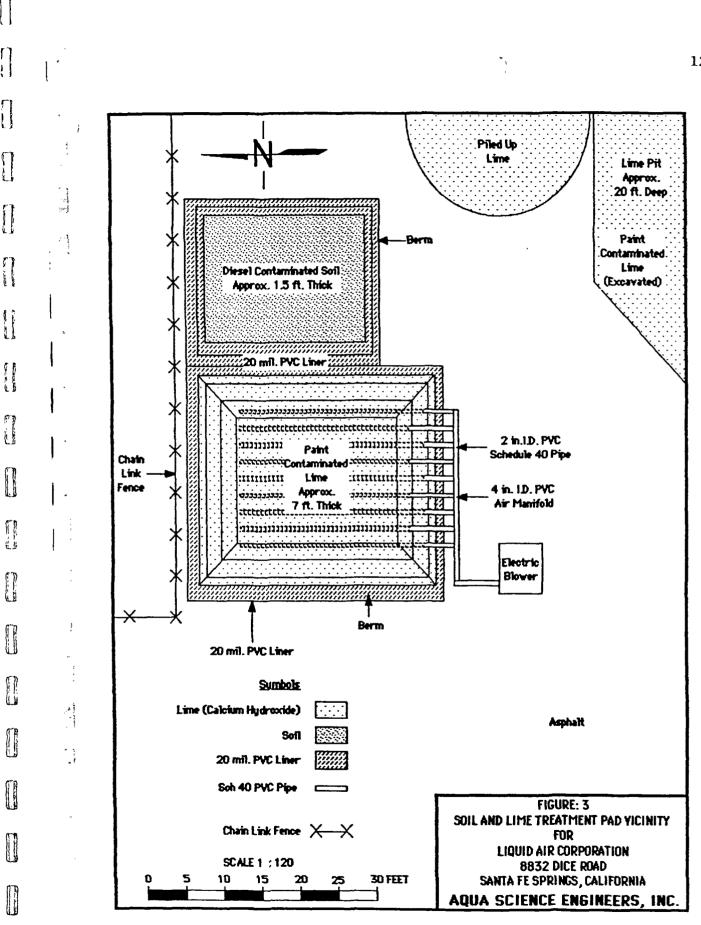


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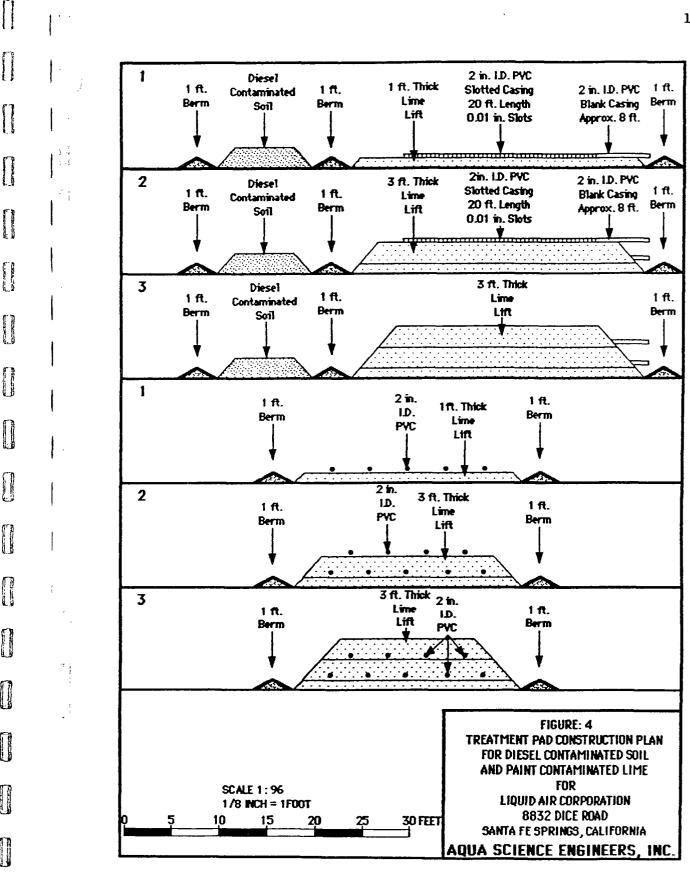
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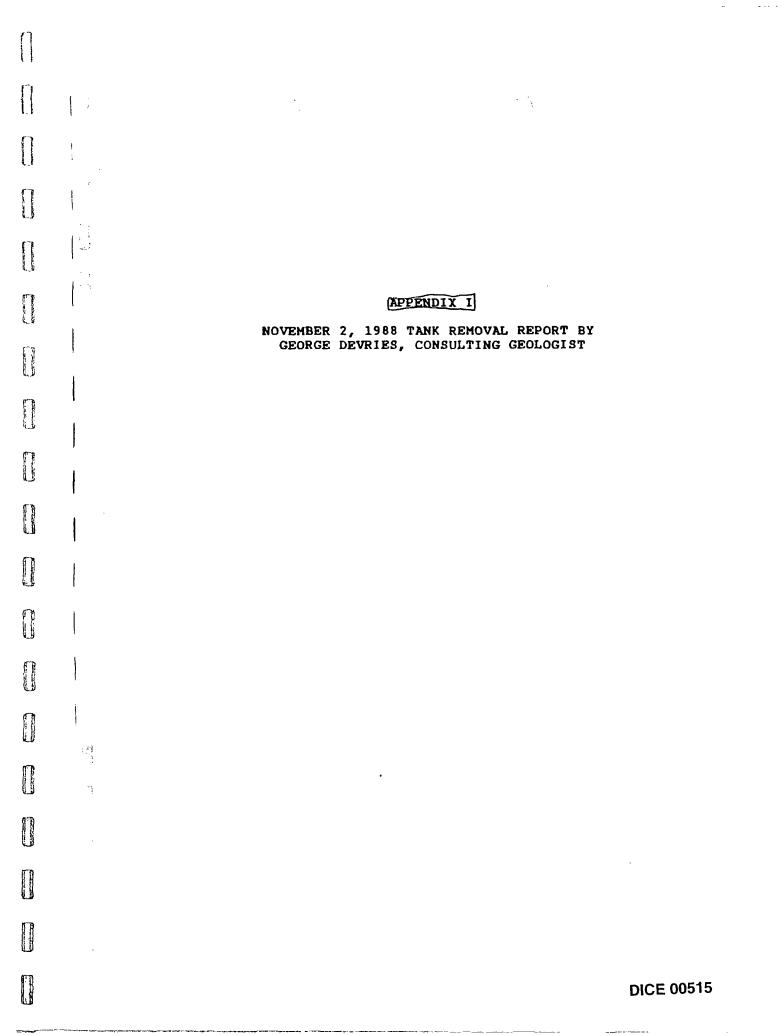
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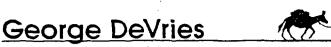
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Consulting Geologist

4520 E Slauson Ave., Maywood, California 90270 - (213) 771-3046 / (213) 596-0467

November 2. 1988

Project No. 231-108 Closure Permit No. 4784 L.A. County File No. 225-1H

County of Los Angeles Department of Public Works Waste Management Division 900 S. Freemont Ave. Alhambra. CA 91803-1331

Subject: Geotechnical Evaluation and Review Subsurface Tank Removal Liquid Air Corp. 8832 Dice Rd., Santa Fe Springs. CA for Whitaker Concrete Co.

Gentlemen,

This report presents the results of a geotechnical evaluation of the subsurface storage tank removal at the referenced site and a review of the work performed, and summary data presented by Whitaker Concrete Co. (WCC). A total of four (4) tanks were removed from the site on September 21, 1988 by WCC and transported for disposal. The tanks consisted of two (2) 7500-gallon diesel fuel tanks. one (1) 6200-gallon acetone tank, and one (1) 1000-gallon waste-oil tank. A summary of the work performed is presented in the appendix. Vicinity and site maps are presented in Plates 1 & 2. Upon removal of the tanks, selected soil samples were taken from below the tanks to assess the soil and determine if any potential contamination exists. The results of laboratory testing are presented in Plate 4, while the Chain of Custody Record is presented in Plate 5. Plate 6 presents copies of the tank and waste manifests. No subsurface logging was performed.

Prior to removal of the tanks, two borings were excavated in the vicinity of the acetone tank by Combustion Engineering. The borings were sampled and laoratory testing was performed. It is

Registered Geologist

Certified Engineering Geologist

231-108/ Liquid Air/ Santa Fe Springs/ 11-2-88

Page 2

understood the results of the earlier investigation was submitted to the regulatory agency and no additional analysis of that data is presented in this report. As a result of the initial borings, soil samples from below the removed acetone tank were not required in the county permit.

SITE LOCATION AND GEOLOGY

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The subject site is located on the east side of Dice Rd. south of the junction with Slauson Ave. in the City of Sant Fe Springs. Los Angeles County. The present elevation is approximately 150 feet above sea level. The site consists of predominantly alluvial basin fill deposits associated with ephemeral stream deposition within the L.A. basin. The present course of the San Gabriel River is located approximately 1.3 miles to the west. The alluvial materials are generally sandy and silty in nature. though some areas contain some clay and gravel.

Analysis of subsurface ground-water contour data on file with the County of Los Angeles indicate the ground-water level in the vicinity of the site to be on the order of 70 feet below the ground surface. No water was encountered in the excavation.

SOIL SAMPLING AND EVALUATION

Selected soil samples were obtained from the earth materials below the tanks. Sample location was chosen in a manner so as to provide the most complete coverage of the subsurface materials and to provide for a more complete evaluation of potential soil contamination. Special attention was given to geological conditions which may provide for accelerated downward movement of ground water. Sample locations are depicted in Plate 2. As mentioned earlier, samples were not required from below the acetone tank due the results of earlier borings excavaated at the site by Combustion Engineering.

A total of seven (7) samples were taken from the earth materials in the vicinity of the removed tanks. Two samples each were taken from below the diesel fuel tanks, one sample was taken from below the waste-oil tank, and one sample each was taken from below each one of the pumps (Plate 2). The samples from below the tanks were taken approximately two feet below the tank bottom and the samples from below the pumps were taken approximately four feet below the pumps. The samples were placed in glass jars, sealed with tape, placed in ice to chill, and transported to Certified Testing Laboratories, Inc. for laboratory analysis. The samples were tested for Total Petroleum Hydrocarbons (TPH) using EPA method 418.1. The laboratory test results and the Chain of Custody Record are presented in the appendix (Plates 4 & 5).

231-108/ Liquid Air/ Santa Fe Springs/ 11-2-88

CONCLUSIONS

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Review of the summary data presented by Whitaker Concrete Corp., Chain of Custody Record, and laboratory test results, indicate the amount of hydrocarbon contamination in some of the earth materials in the vicinity of the removed tanks to be in excess of the "action limit". The County of Los Angeles considers 100 mg/Kg to be an "action limit" where concentrations in excess of this limit may be considered contaminated. Specifically, test results from below both of the pumps indicate excess hydrocarbon contamination of the soil.

It is recommended that remedial action be taken to reduce the amount of hydrocarbon contamination in the earth materials in the vicinity of the pumps. A combination of: 1) removal and transport. and/or 2) aeration. and/or 3) biodegradation. is recommended. subject to approval by the County of Los Angeles. Sufficient data are not presently available to determine the total extent of contamination in the vicinity of the pumps and it is recommended that a site assessment be performed to determine the extent of any contamination and provide recommendations for possible remedial action at the site. Any furture work is subject to approval by the Los Angeles County Department of Public Works. This work should be conducted in accordance with Federal. State, and Local regulations.

Laboratory test results from the soil below the removed tanks indicate the amount of TPH to be within the guidelines of the County of of Los Angeles. No additional removal or treatment of the earth material below the removed tanks is deemed necessary.

REMARKS

This investigation was made in accordance with generally accepted geologic procedures and within the limits prescribed by the client. No other warranty, expressed or implied, is made as to the professional evaluation included in this report.

Although no significant variations in bedrock or soil conditions are anticipated, if conditions are encountered during future restoration work, and these conditions appear to be different from those disclosed by this preliminary report, this office shall be notified to consider the need for modification.

The backfill at the site was compacted using on-site equipment. While a relative degree of compaction can be obtained in this manner, the fill was not tested and does not qualify as a certified fill. Should this area be used in the future to support structural loads, steps should be taken to test and insure the competence of the fill.

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Page 4

It should be realized that subsurface excavations are subject to caving and may present a hazard. In this regard, all shoring and bracing, if necessary, shall conform to current standards of the Industrial Accident Commission of the State of California and other public agencies having jurisdiction.

This report is subject to review by controlling public agencies having jurisdiction.

If you have any questions, please contact this office.

Respectfully submitted,

George DeVries Registered Geologist 3721

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Distr: Addressee (1) Whitaker Concrete Co. (1) Liquid Air Corp. (1)

Attachments: Appendix A - Plates 1 thru 6

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Appendix A

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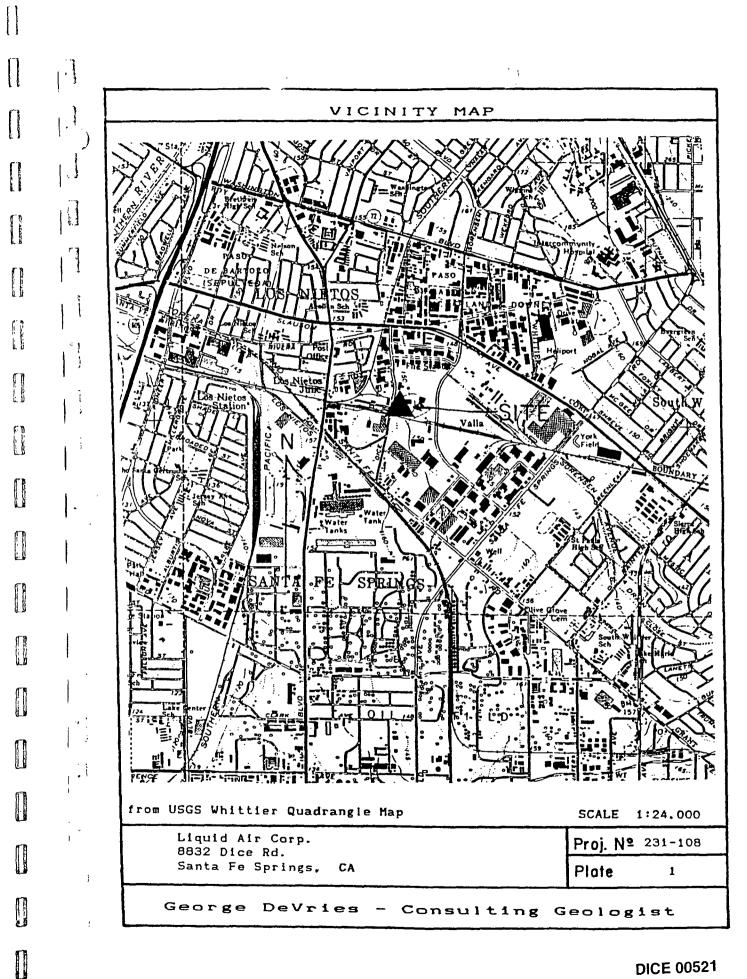
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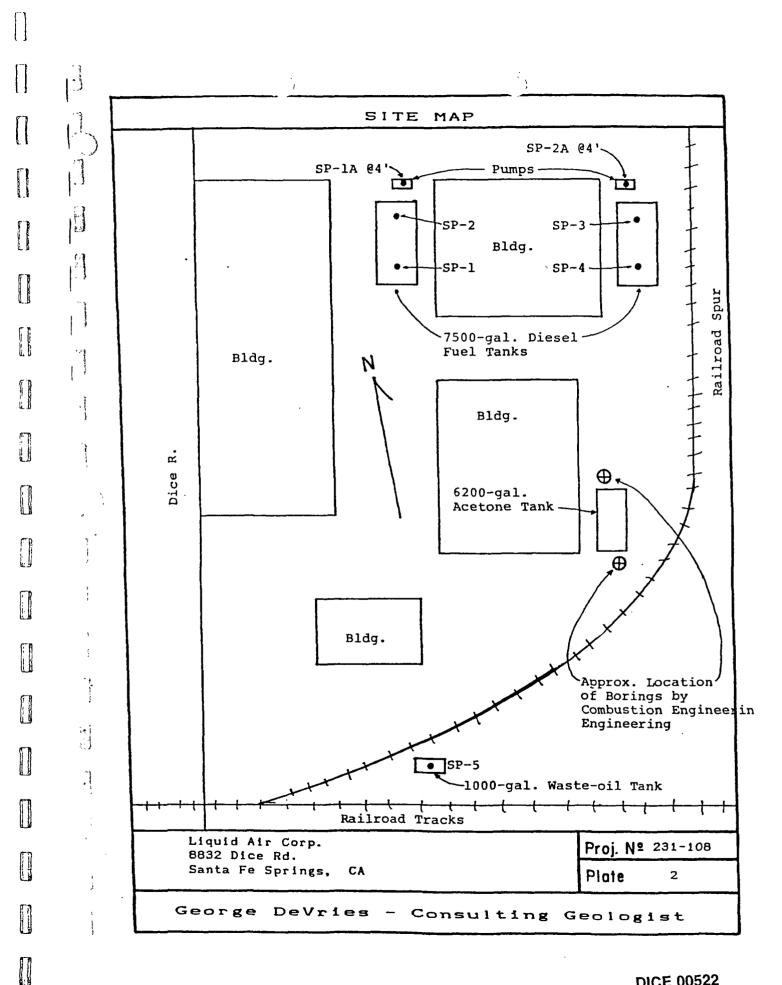
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Vicinity Map Site Map Closure Summary Laboratory Test Results Chain of Custody Record Tank/Waste Manifests





	$\overset{1}{}$ Whitaker Concrete Corp.
 	P.O. BOX 275, LYNWOOD, CA 90262 • (213) 639-1904
	Dctober 13,1988
and the second sec	George DeVries 4520 E. Slauson Ave. Re: Liquid Air Maywood, Ca. 90270 8832 Dice Rd. Santa Fe Springs
And the second sec	Dear Mr. DeVries: Liquid Air has requested the permanent closure of 2-7,500 diesel, 1-6,200 gallon acetone, and 1-1000 wasteoil steel tanks.
Manger " main .	The decision was based on the possibility of future tank leakage that could cause a contamination of the soil.
	The necessary tank removal permits were obtained by an agent of Whitaker Concrete Corp. and signed by the proper regulatory agency. The tanks were rendered inert and removed from the site on September 21, 1988. The tanks were flushed three times and cooled with dry ice. Excavation and removal was performed by agents of WCC and observed by inspectors from the applicable regulatory agencies.
) 	Upon removal of the tank, seven soil samples were taken from approximately two feet below the removed tanks. The samples were stored in ice and transported to Certified Testing Lab. Inc. for analysis. Chain-of Custody records were maintained to insure its traceability.
77 1 8 7 7	The soil samples were tested for Total Petroleum Hydrocarbons (TPH) using EPA method 418.1. Laboratory test results are attached.
	The test results (see laboratory results) indicate the soil to be clear of contaminates.

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The test results (see laboratory results) indicate the soil to be clear of contaminates.

Respectfully Symitted, 'U ŰÜ **{**-,

Sid Whitaker Project Manager

Plate 3

"WE SAW YOU FIRST"

certified testing laboratories, inc. ST CENTURY BLVD. . SOUTH GATE, CAL. 280 . (213) 564-2041 29. 4023 REPORTED 10-09-88 LABORATORY NO. Whitaker Concrete Corp. SAMPLED CLIENT P.O. Box 275 Lynwood, CA 90262 RECEIVED 09-29-88 Attn: Syd Whitaker SAMPLE Soil. Projecti name: Liquid Air - Santa Fe Springs 9/29/88 MARKS BASED ON SAMPLE As received RESULTS Sample ID Total Recoverable Petroleum Hydrocarbons Method 418.1, mg/Kg SP-IA SP-1: West 4 feet 805 SP-2- East 4 feet 6.930 P-2A 1 Attachment: Chain of Custody. Note: Samples relabeled to correspond to Plate 2 مزد Respectfully submitted, CERTIFIED TESTING LABORATORIES, INC. Stuart E. Salot, Ph.D. Laboratory Director Plate 4 (2 of 2) This report applies only to the sample, or samples, investigated and is not necessarily indicative of the quality or condition of apparently Identical or similar products. As a mutual protection to clients, the public and these Laboratories, this report is submitted and accepted for the exclusive use of the client to whom it is addressed and upon the condition that it is not to be used, in whole of in part, in any advertising or publicity matter without prior written authorization from these Laboratories.

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certified testing laboratories, inc. ST CENTURY BLVD. . SOUTH GATE, CAL -60 • (213) 564-2641 REPORTED 09-29-88 LABORATORY NO 3922 SAMPLED CLIENT Whitaker Concrete Corporation P.O. Box 275 Lynwood, CA 90262 Attn: Sid Whitaker REPORTED 09-21-88 R ÷ • ÷., Soil SAMPLE Ξ. Liquid Air Corp. 9/21/88 MARKS Location Description: 2 ft under tank BASED ON SAMPLE As received Total Recoverable Petroleum Hydrocarbons Detection RESULTS EPA 418.1, mg/Kg Limit, mg/Kg SP-1 2:30 ND 5 5 SP-2 · 2:30 ND 5 SP-3 3:00 95 SP-4 3:00 5 ND 5 SP-5 1:00 : ND I. Attachment: Chain of custody Respectfully submitted, CERTIFIED TESTING LABORATORIES, INC. uart E. Salot, Ph.D.G aboratory Director Plate 4 (1 of 2) - 21 This report applies only to the sample, or samples, investigated and is not necessarily indicative of the quality or condition of apparently identical or similar products. As a mutual protection to clients, the public and these Laboratories, this report is submitted and accepted for the exclusive use of the citent to whom it is addressed and upon the condition that it is not to be used, in whole or in part, in any advertising or publicity matter without prior written authorization from these Laboratories." . **1**. . . • †

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DIEG -. ERIED TING LABORATOHIES, INC. JOR CITY 2905 E. CENTURY BLVD + SOUTH GATE, CA 90280 + 213/564-2641 Date • STATERSFIELD SOUTH GATE MOBILE LAB CLIENT PROJECT MANAGER ADDRESS is WHitskER PHONE NUMBER 1904 PROJECT NAME SAMPLERS: (Signature) Sem ŀ. a. \sim SAMPLE TYPE DATE TIME SOLID TESTS NO OF SAMPLE LOCATION DESCRIPTION WATER AIR REQUIRED NUMBER CONTAINERS Comp. Grab. 418,1 9-28-81 418. 9-29-5 GOCNE te Relinguished by: (Signature) Received by: (Signature) Date/Time CTL will store sample for 30 days at no charge. Storage after 30 days is charged at \$10 per month per sample. Disposal requires special arrangement, indicate the Relinguished by: (Signature) Received by: (Signature) disposition of your sample. Date/Time . . . 1. Client retrieved b₩ 2. Lab Disposal bv Relinguished by: (Signature) Received by Mobile Laboratory for field analysis: ۰. Date/Time 3. Store for days. by (Signature) 4. Other _ by . Dispatched by:(Signature) Date/Time Received for Laboratory by: Date/Time 5:01 pm 9-28 hereby authorize the performance of the above indicated work. FOR clast NU Special Instructions:

SOURCE: Adapted from U.S. EPA, 1985

DISTRIBUTION: White with report, Yellow to CTL, Pink to Courier, Gold to Sample Control

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AMERICAN F 28384 Na METAL RECYCLING, INC TANK DISPOSAL FORM 2202 South Milliken Avenue Date: 9. ,19 88 -Ontario, CA 91761 Job # (714) 947-2888 P. O. # CONTRACTOR: CONCRETE NAKER 717 ADDRESS: GC2CC · LULDER \sim C JOB SITE: CURP ADDRESS: RD SALTA FE SPISIN DESTINATION: A.M.R. 2202 S. Milliken Ave., Ontario, CA 91761 ROJECTED TANKS DATE ROERED BY LIC. NO. 22.7500 $l = \alpha \infty$ Inco TIME IN: i0() SPECIAL INSTRUCTIONS: M. . **†** . TRUCK ι TANKS RECEIVED GALLONS TY TYPE TOTAL OTY. NET TONS 280 0 0 .14 500 550 1000 - 12 ft. .21 .24 .44 .51 .87 .97 1000 - 6 fL .87 1500 2000 2500 3000 4000 1.14 ede 1.32 1.64 2.42 П 5000 6000 7500 2.42 2.84 3.26 3.44 5000 9000 10000 3.82 All fees incurred are per load unless specified. Terms are net 30 days from date of involce. 4.33 12000 ō 4.93 Contractor's signature represents acceptance of terms for payment, and confirms that tank removal complies with State laws. NET TONS NO. OF TANKS TOTAL 3.29 ſ, p.-hen Alina *F - FIBERGLASS (•s STEEL 105 CONTRACTOR'S SIGNATURE CERTIFICATE OF TANK DISPOSAL / DESTRUCTION THIS IS TO CERTIFY THE RECEIPT AND ACCEPTANCE OF THE TANKIS) AS SPECIFIED ABOVE. ALL MATERIALS SPECIFIED ADD ACCEPTANCE OF THE TANKIS) AS SPECIFIED ABOVE. ALL MATERIALS SPECIFIED ADD ACCEPTANCE OF THE TANKIS) AS SPECIFIED ABOVE. ALL MATERIALS SPECIFIED ADD ACCEPTANCE OF THE TANKIS) AS SPECIFIED ABOVE. ALL MATERIALS SPECIFIED ADD ACCEPTANCE OF THE TANKIS) AS SPECIFIED ABOVE. ALL MATERIALS SPECIFIED ADD ACCEPTANCE OF THE TANKIS) AS SPECIFIED ABOVE. ALL MATERIALS SPECIFIED ADD ACCEPTANCE OF THE TANKIS) AS SPECIFIED ABOVE. ALL MATERIALS SPECIFIED ADD ACCEPTANCE OF THE TANKIS) AS SPECIFIED ABOVE. ALL MATERIALS SPECIFIED ADD ACCEPTANCE OF THE TANKIS) AS SPECIFIED ABOVE. ALL MATERIALS SPECIFIED ADD ACCEPTANCE OF THE TANKIS) AS SPECIFIED ABOVE. ALL MATERIALS SPECIFIED ADD ACCEPTANCE OF THE TANKIS) AS SPECIFIED ABOVE. ALL MATERIALS SPECIFIED ADD ACCEPTANCE OF THE TANKIS) AS SPECIFIED ABOVE. ALL MATERIALS SPECIFIED ADD ACCEPTANCE OF THE TANKIS) AS SPECIFIED ABOVE. ALL MATERIALS SPECIFIED ADD ACCEPTANCE OF THE TANKIS) AS SPECIFIED ABOVE. ALL MATERIALS SPECIFIED ADD ACCEPTANCE OF THE TANKIS) AS SPECIFIED ABOVE. ALL MATERIALS SPECIFIED ADD ACCEPTANCE OF THE TANKIS AS A SPECIFIED ABOVE. ALL MATERIALS SPECIFIED ADD ACCEPTANCE OF THE TANKIS AS A SPECIFIED ABOVE. ALL MATERIALS SPECIFIED ABOVE. ALL MATERIALS SPECIFIED ABOVE. ADD ACCEPTANCE OF THE TANKIS AS A SPECIFIED ABOVE. ALL MATERIALS SPECIFIED ABOVE 0 / 11676 AUTHORIZED REP. DATE GENERATOR COPY Plate 6 (2 of 3)

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Toxic Substances Control Divisi Sacramento, California 2-pitch typewriter) IOF USE OR OH 5 2 Page 1 Generator's US EPA ID No. м. Information in the shaded areas UNIFORM HAZARDOUS is not required by Federal law. WASTE MANIFEST nlnlnl <u>alcioioioioioi/171017</u> 87848662 Generator's Name and Mailing Ado. Liquid Air Corporation - 98s. Santa Fe SPrings, Ca. 90670 8832 Dice Rd. 8, State Generator's D < **u 新新行**行了。 4. Generator's Phone (213) 945-1383 ő 5. Transporter 1 Company Name 6. US EPA ID Number Calibrate Transporter's Duppon98 D. J. Transporter's Phone #21. 7603 088 Roadwest 011 & Vacuum Co. ICIAITIO 181010121917 17 10 Inc Transporter 2 Company Name US EPA ID Number ExState Transporter's ID 1.800.85 1.1.1 Transporter a Phone 9. Designated Facility Name and Site Address 10. US EPA ID Number DeMenno/Kerdoon ž 2000 N. Alameda Street 1 1CIAITI 018101011 13 13 1512 Compton, Ca. 90222 ORN Weste No 13. Total . 14. Unit 12. Containera 11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number) No. 7 Type 1.0 Wt/Vo State to State HLIM G E N EPA/Other 24 NONE 1810in Waste Flammable Liquid, N.O.S. UN 1993 n TI T <u>ol</u> E R State 14 A 8813 DOT-E EPA/Other 30 424-1 **NOR**NAL ò c State of Contract R ----e. 131 -14 Jul 1 1 1 1 1 đ A STATISTICS FPA/Ott a bir Materiala 7 is No GUS HO No GUS HO - - rd Set Soecial Ha Gloves + GOSGIES 2 - X II GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are tully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations. If I am a large quantify generator, I certify that I have a program in place to reduce the volume and toxicity of weste generated to the degree I have the second determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good Jaith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford rinted/Typed Name Month Day Year 2 STEPHEN KING KIPIANBB in Transporter 1 Acknowledgement of Receipt of Materials inted/Typed Name Month Day Yes Sionature REFS DAMI BB TIM low Transporter 2 Ackno nt of Receipt of Materials 18. ledae ted/Typed Name Month Day - ¥ _ ila . IN. Discrepancy Indication Space ĵ ÷ .: ÷. _ ٠, 20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in item 19. 1/Typed Name Signature Month Day Year 11 0. Blue: GENERATOR SENDS THIS COPY TO DOHS WITHIN 30 DAYS INSTRUCTIONS ON THE BACK 12 ous editions are obsolete. To: P.O. Box 400, Socramento, CA 95802 DICE 00531



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DECEMBER 5, 1988 SITE ASSESSMENT REPORT BY AQUA SCIENCE ENGINEERS, INC.



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So. California Field Office, 1666 Newport Blvd., #116, Costa Mesa, CA 92626 Toi 714-675-5754 • Fax 714-675-5943

December 5, 1988

PROJECT REPORT

SITE ASSESSMENT FOR DIESEL CONTAMINATION OF SOIL AT:

LIQUID AIR CORPORATION 8832 DICE ROAD SANTA FE SPRINGS, CA

Prepared For:

Liquid Air Corporation 8832 Dice Road Santa Fe Springs, Ca

Submitted By:

Aqua Science Engineers 1666 Newport Blvd. #166 Costa Mesa, CA 92926

Aquia Science Engineers Inc., 20 Box 55, Sori Ramon, CA 94583 · · 415-820-9391

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Michael Marello

Geological Operations

So. California Field Office, 1665 Newport Blvd., #116, Costa Mesa, CA 92626 Tel 714-075-5754 • Fax 714-675-5943

December 5, 1988

PROJECT REPORT

SITE ASSESSMENT FOR DIESEL CONTAMINATION OF SOIL AT:

LIQUID AIR CORPORATION 8832 DICE ROAD SANTA FE SPRINGS, CA

For Aqua Science Engineers, Inc.:



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David M. Schultz Vice President Field Operations

Aqua Science Engineers Inc., PO. Box 525, San Ramon, CA 94583 - 415-820-9394

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EXECUTIVE SUMMARY

The following is a report on the methods and findings of a site contamination assessment project conducted by Aqua Science Engineers at Liquid Air Corporation, Santa Fe Springs, California. This project is in response to hydrocarbon contamination discovered during the tank closure project conducted on September 21, 1987.

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Chemical analysis of soil samples from the tank removal project indicated 805 ppm and 6,930 ppm total petroleum hydrocarbons (TPH) in soil samples collected from beneath two diesel fuel product dispensers (see George DeVrees tank closure report dated November 2, 1988). The soil samples were collected at approximately four feet below the dispensers. Soil samples collected from beneath the diesel fuel tanks indicated non-detectable levels of TPH.

On November 18, 1988 Aqua Science collected soil samples at 5, 10, 15, 20, 30 and 40 feet from each of two soils borings drilled directly adjacent to the locations of two product dispensers (Figure 1). The purpose of the bore holes were to collect soil samples to determine the extent of the hydrocarbon contamination discovered during the tank closure project. Groundwater was not encountered during drilling.

Logs of the well cuttings show that the native soils are primarily composed of silt, clayey-sandy silt, and well graded sand. The nearest LACFCD test well to the site is well #1623L which is located approximately 0.75-miles northeast of the site. The depth to groundwater from the surface, as measured in November 1987, was 58.2 feet below the ground surface. Local groundwater movement in the area is most probably southwest.

Chemical analyses of the soil samples conducted by West Coast Analytical Services, Santa Fe Springs, California, indicate 13 ppm TPH in the five-foot sample from boring #2. The laboratory analysis of the remaining samples from this boring, and from boring #1, indicate non-detectable levels of TPH by EPA method 418.1.

INVESTIGATIVE METHODS

DRILLING

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The soils borings were drilled with a CME-75 truck mounted hydraulic rotary drill. Eight-inch O.D. hollow-stem continuous flight auger was used for all of the borings. A total of two borings were drilled to 40 feet below the ground surface. Locations of the borings are shown in Figure 1.

Soil samples were collected in each boring at 5, 10, 15, 20, 30 and 40 feet below the ground surface. The borings were backfilled with clean native soil after soil sample collection. Logs of the drill cuttings are shown on Figures 2 and 3.

SOIL SAMPLING

Soil samples were taken in the borings using a California split spoon sampler on November 18, 1988. The California split spoon sampler was steam cleaned before sampling and all drilling equipment was decontaminated by steam cleaning prior to drilling. The sampler was washed with a TSP and water solution between samplings.

The soil samples were collected in pre-cleaned, 2-inch by 4-inch aluminum liner tubes. The tube ends were secured with double-thickness aluminum foil and plastic end caps. The samples were placed in an ice chest with ice, and transported to West Coast Analytical Services (WCAS) in Santa Fe Springs, Ca for chemical analysis. A Chain-of-Custody form accompanied the samples to the laboratory (Appendix I).

CHEMICAL ANALYSIS

WCAS conducted the chemical analysis of the soils samples using the EPA methods shown in Table I. The soil samples were analyzed for total petroleum hydrocarbons (diesel) using modified EPA method 418.1. Values are given in ug/g (parts per million). Laboratory data sheets provided by WCAS are given in Appendix II.

RESULTS OF THE INVESTIGATION

GEOLOGY AND HYDROGEOLOGY

The bore hole locations are shown on Figure 1. An examination of the bore hole logs show that the soils to 40 feet beneath the site consist of the following: silt, clayey-sandy silt and well graded sand. The soil types encountered were classified using the Unified Soil Classification System (Appendix III).

The nearest LACFCD test well to the site is well number 1623L. The well is located approximately 0.75 miles to the northeast of the site.

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The last groundwater measurement was conducted in November 1987. The depth to groundwater on that date was 58.2 feet below the ground surface.

An accurate determination of groundwater flow direction is beyond the scope of this project. However, the estimated direction of flow is southeast.

CHEMICAL ANALYSIS

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The chemical analyses provided by WCAS of the soil samples from bore hole #2 indicate total petroleum hydrocarbon contamination ranging to 13 ppm in the five-foot sample. The analyses of the remaining samples from this boring were below detectable levels for EPA method 418.1; below 10 ppm. The chemical analyses of the soil samples from boring #1 indicated non-detectable levels of TPH for all samples. A summary of the laboratory data is given in Table I. The laboratory report provided by WCAS appears in Appendix II.

CONCLUSIONS

Elevated hydrocarbon concentrations were discovered in soil samples collected from beneath the two diesel product dispensers at this site. These samples were collected during the tank removal project conducted on September 21, 1988. The locations of the soil borings conducted for this project are located within five feet of the diesel product dispensers. If a significant amount of product leaked into soil at the dispensers, significant levels of soil contamination should have been indicated in the soils boring samples. However, only trace levels of TPH (13 ppm) were discovered in the five-foot sample from boring #2 (sample B2-5').

Bases on these results, significant levels of diesel contamination (if present) appear to be vertically and laterally restricted to small volumes of soil directly beneath the product dispensers. The total amount of effected soil is unknown. However, the total volume of soil containing TPH contamination above the 100 ppm action level established by Los Angeles County is expected to be small.

The suspect soil is presently located under a six-inch concrete pad which covers the entire site. Since the source of diesel contamination has been removed (product dispensers), potential vertical migration of the long-chain diesel hydrocarbons present in the soil is expected to be very limited. The potential impact of the contamination on land or groundwater use if expected to be insignificant. It is the opinion of Aqua Science Engineers that no further assessment or remediation work be required along these lines.

The results of this investigation represent conditions at the time and location at which samples were collected and for the parameters analyzed in the laboratory. It does not fully characterize the site for contamination resulting from other sources or parameters not analyzed. This report is subject to review by governing regulatory agencies.

TABLE	Ι

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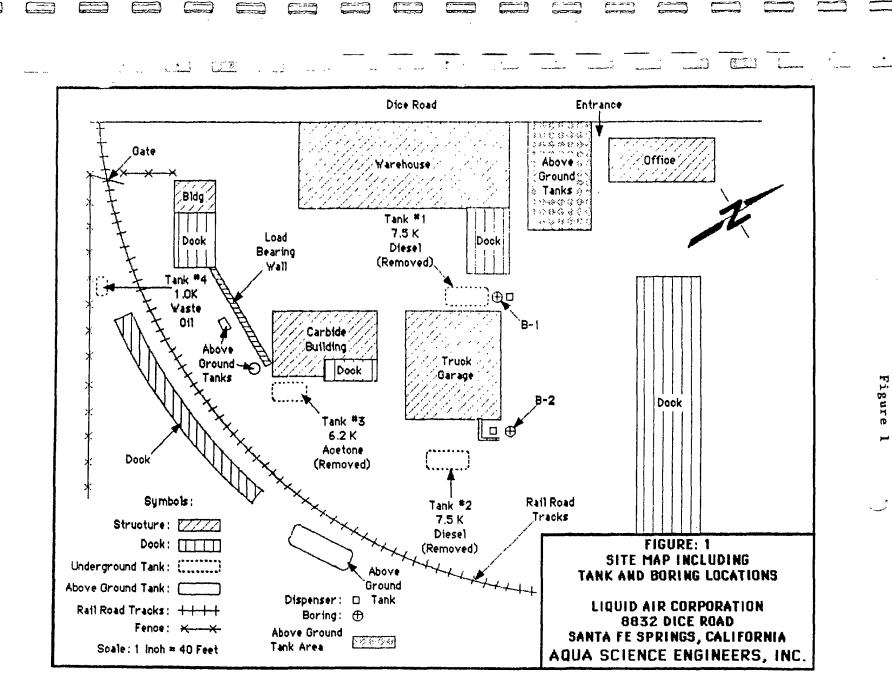
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Chemical	EPA Method Used
Constituents	in Analysis
Total Petroleum Hydrocarbons	418.1

Boring Number	Sample Designation	TPH Conc.
B-1	B1-5' B1-10' B1-15' B1-20' B1-30' B1-40'	ND ND ND ND ND
B-2	B2-5' B2-10' B2-15' B2-20' B2-30' B2-40'	13 ND ND ND ND ND

* Detection level for EPA method 481.1 is l0 ug/g (ppm)
(LUFT manual, May 1988)

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DICE 00540

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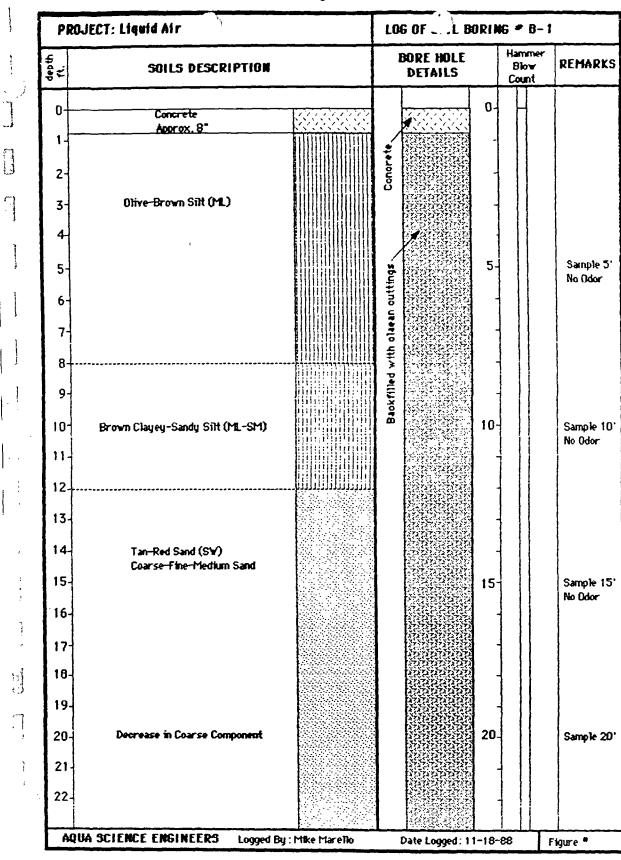


Figure 2

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DICE 00541

PROJ	ECT: Liquid Air		LOG OF SOIL BOR	NG # B-	- 1
đeoth 72.	SOILS DESCRIF	PTION	BORE HOLE DETAILS	Hamme Blow Count	REMARKS
23-	Tan-Red Sand (SW) Coarse-Fine-Medium Sand		23		
24	•••••••••••••••••••••••••••••••••••••••				
25-				1	
26	Pale-Olive Silt (ML)			4	
27-					
28-			28		
29-					
30-					Sample 30' No Odor
31-				-	
32-				-	
33-			33	5-	
34				4	
35-				-	
36-					
37-				-	
38-			38	F	
39-					
40	EDH			$\left\{ \left \right \right\}$	Sample 40' No Odor
41-				-	
42-				$\left\{ \left \right \right\}$	
43-			43		
44-				4 11	
45-					
AQU	A SCIENCE ENGINEERS	Logged By : Mike Marello	Date Logged: 11–1	8-88	 Figure *

Figure 2

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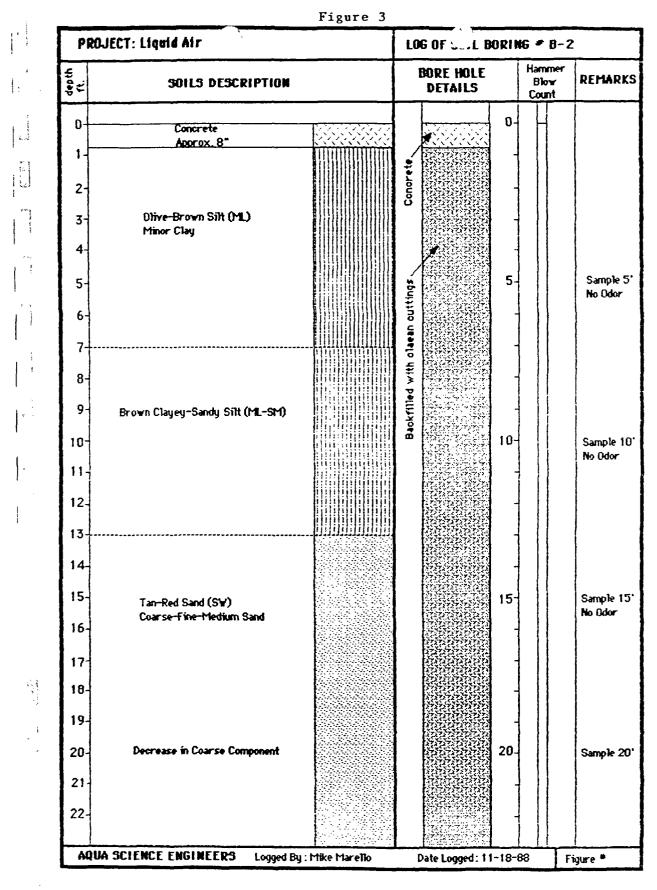
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DICE 00542



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 $\prod_{i=1}^{n}$

DICE 00543

± 400 1	ECT: Liquid Air SOILS DESCRIPTION	· · · · · · · · · · · · · · · · · · ·	LOG OF _1 BORE HO DETAIL	LE	Hammer Blow	REM
23-	Tan-Red Sand (SW)			23-	Count	
24	Coarse-Fine-Medium Sand					
25-						
26	Pale-Olive Silt (ML)					
27						
28-				28-		
29-						
30-						Samp No Od
31-				-		
32-				-		
33-				33-		
34				-		
35-				-		
36				-		
37-				-		
38-	Pale-Olive-Tan Silt (ML)			38-		
39-						
40	Е.О.Н					Samp No Or
41-					$\left\{ \left \right \right\}$	
42-						
43-				43.		-
44-						
45-				} .		
	A SCIENCE ENGINEERS Logge	d By : Mike Marello	Date Log			Figure "

Figure 3

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 $\sum_{i=1}^{n}$

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DICE 00544

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					LAOI4A	-
• P.O. Box \$35.	San Ramon, CA 94583-0535		Gas	aqua science Engineers inc.	(415) 820-9391	
roject Hame: Ĺ	iquic Air	site: Santa	Fe Springs	Date: 11-18-89	Laboratory: WCAS	
ample lU	Sample/Container Type	Analyze/ Hold	Analyze For:	Hethod - Octection Limit	Notes/Remarks	
31-51	coil / AL tube	A	418.1			
<u>' - 0'</u>						!
<u>'' - 15'</u>)
<u>''0'-1''</u>		·				
"1-30"						
1-40					·····	🎝
32-5'				<u></u>		Appendix
1 2-10						dix
12-15						— н
יסג-ג יי					······································	
· J - 70'				-		
12-40			- 5	_		
• 5011 W • H			Chain	of Custody	- Collate all samples for single analy	313.
	Press Tube P - Plastic 1 Michael Morella				 Collate and analyze two top samples clean, do not analyze other sample 	
Courler:	,		: <u>11-13-88</u>	Time: 1250	 clean, do not analyze other sample Call ASE for instructions. 	^{r.}
			fice: Date:		See attached protocol.	1



Appendix II

November 28, 1988

AQUA SCIENCE ENGINEERS 414 31st Street, #A Newport Beach, CA 92663

Attn: Mike Marello

JOB NO. 11357

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LABORATORY REPORT

Samples Received: Twelve (12) soils Date Received: 11-18-88 Purchase Order No: LA 0148/Liquid Air

The samples were analyzed as follows:

<u>Analysis</u>

Samples Analyzed

Twelve (12) soils

Total Petroleum Hydrocarbons by EPA 418.1

Page 1 of 2

Kinke Shelley Rinker Senior Chemist

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D.J. Northington, Ph.D. Technical Director

9840 Alburtis Avenue • Santa Fe Springs, California 90670 • 213/948-2225

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DICE 00546

12

WEST COAST ANALYTICAL

SERVICE, INC.

ARALY NCAL CHEMISTS

Α

<u>Results</u>

Table I

WEST COAST ANALYTICAL SERVICE, INC.

AQUA SCIENCE ENGINEERS Mr. Mike Marello Job # 11357 November 28, 1988

LABORATORY REPORT

TABLE I

Parts Per Million (uq/q)

Total Petroleum Hydrocarbons

ND

ND

ND

ND

ND

ND

13

ND

ND

ND

ND

ND

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Sample No.

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B1-5' B1-10' B1-15' B1-20' B1-30' B1-40' B2-5' B2-10' B2-15' B2-20' B2-30' B2-40' Detection Limit

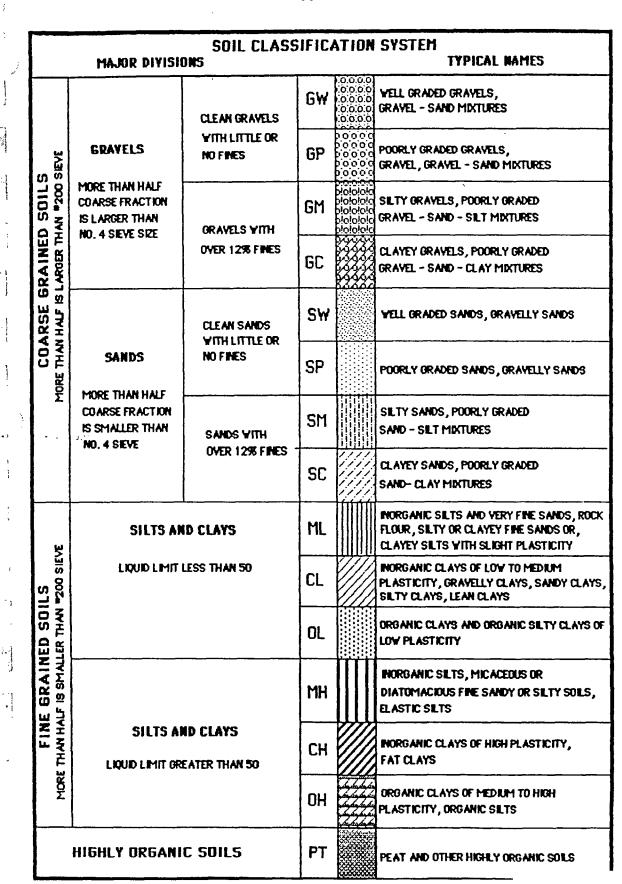
ND-Not Detected

Date Analyzed: 11-23-88

Page 2 of 2

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DICE 00547



Appendix III

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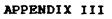
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DICE 00548

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25.

CHEMICAL ANALYSIS REPORT FOR CONTAMINATED LIME INVESTIGATION PROVIDED BY IT CORPORATION

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DICE 00549

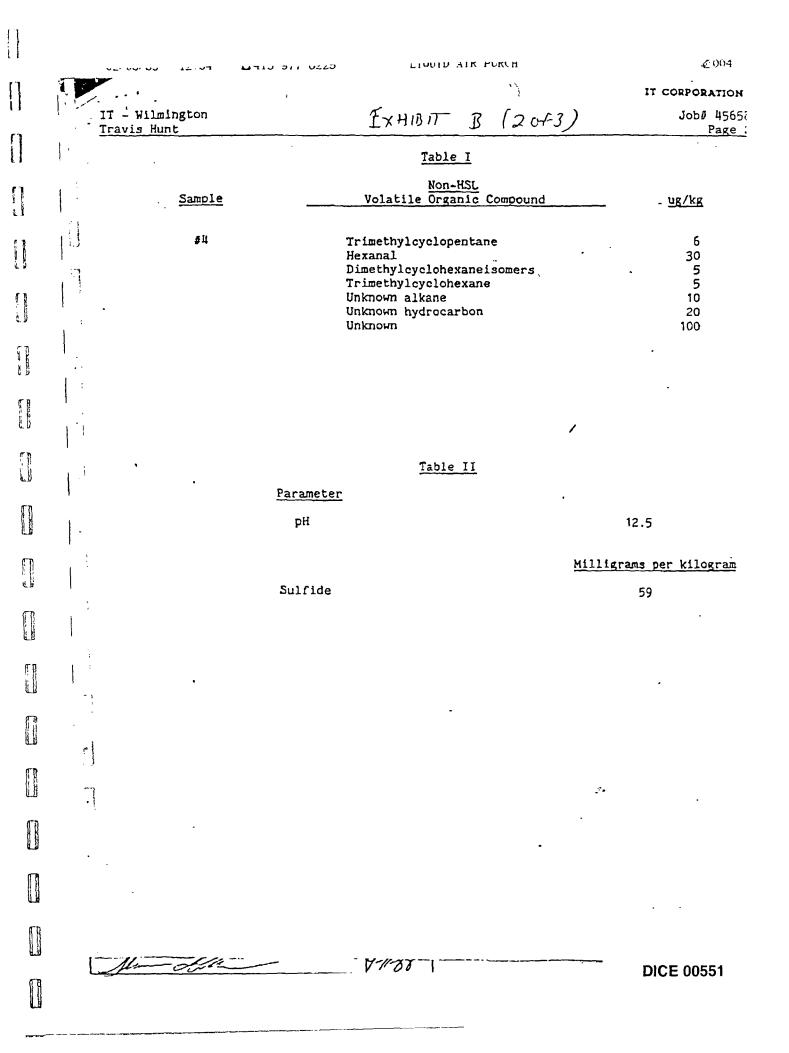
		Ext	TICAL ICES 190701 • 213-921-9831/7 11BIT B(1043) OF ANALYSIS	114-523-9200
Prepared for:	IT Corporation 336 West Anaheim Str Wilmington, CA 9074		Date: March 31,	1988
	Attn: Travis Hunt			
Date Received:	March 29, 1988	P.O. Number	202596 Liquid Air Corp.	Job Number 45658, Pag
	One (1) soil sample	labeled: "	<u>34</u> "	
chroma purge a '(HSL) a organic The sau	mple was analyzed for tography-mass spectro and trap. Results fo are given on the encl c compounds found are mple was also analyze thed 9030. The result	metry accord r compounds o osed summary listed in Ta d for pH usin	ing to a modified EP on the EPA Hazardous sheet. Additional able I. ng EPA method 9045 a	A Method 8240, Substances List ron-HSL volatile
chroma purge a '(HSL) a organic The sau	tography-mass spectro and trap. Results fo are given on the encl c compounds found are	metry accord r compounds o osed summary listed in Ta d for pH usin	ing to a modified EP on the EPA Hazardous sheet. Additional able I. ng EPA method 9045 a	A Method 8240, Substances List ron-HSL volatile
chroma purge a '(HSL) a organic The sau	tography-mass spectro and trap. Results fo are given on the encl c compounds found are mple was also analyzed	metry accord r compounds o osed summary listed in Ta d for pH usin	ing to a modified EP on the EPA Hazardous sheet. Additional able I. ng EPA method 9045 a	A Method 8240, Substances List ron-HSL volatile
chroma purge a '(HSL) a organic The sau	tography-mass spectro and trap. Results fo are given on the encl c compounds found are mple was also analyzed	metry accord r compounds o osed summary listed in Ta d for pH usin	ing to a modified EP on the EPA Hazardous sheet. Additional able I. ng EPA method 9045 a	A Method 8240, Substances List ron-HSL volatile
chroma purge a '(HSL) a organic The sau	tography-mass spectro and trap. Results fo are given on the encl c compounds found are mple was also analyzed	metry accord r compounds o osed summary listed in Ta d for pH usin	ing to a modified EP on the EPA Hazardous sheet. Additional able I. ng EPA method 9045 a	A Method 8240, Substances List ron-HSL volatile
chroma purge a '(HSL) a organic The sau	tography-mass spectro and trap. Results fo are given on the encl c compounds found are mple was also analyzed	metry accord r compounds o osed summary listed in Ta d for pH usin	ing to a modified EP on the EPA Hazardous sheet. Additional able I. ng EPA method 9045 a	A Method 8240, Substances List ron-HSL volatile
chroma purge a '(HSL) a organic The sau	tography-mass spectro and trap. Results fo are given on the encl c compounds found are mple was also analyzed	metry accord r compounds o osed summary listed in Ta d for pH usin	ing to a modified EP on the EPA Hazardous sheet. Additional able I. ng EPA method 9045 a	A Method 8240, Substances List ron-HSL volatile
chroma purge a '(HSL) a organic The sau	tography-mass spectro and trap. Results fo are given on the encl c compounds found are mple was also analyzed	metry accord r compounds o osed summary listed in Ta d for pH usin	ing to a modified EP on the EPA Hazardous sheet. Additional able I. ng EPA method 9045 a	A Method 8240, Substances List ron-HSL volatile
chroma purge (' (HSL) ; organic The sar EPA met	tography-mass spectro and trap. Results fo are given on the encl c compounds found are mple was also analyzed	metry accord r compounds o osed summary listed in Ta d for pH usin ts are listed	ing to a modified EP on the EPA Hazardous sheet. Additional able I. ng EPA method 9045 a	A Method 8240, Substances List ron-HSL volatile

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02700700 12:00 00:410 0720	EINOID VIK KOKOH	005 IT CORPORATION
T - Wilmington	Fxнвл В (3 5+3)	Job# 45658 Page 3
· · · · · · · · · · · · · · · · · · ·		· •···· •
	cile Organic Compounds rograms Per Kilogram)	
		•
Compound	Detection Limit	
Chloromethane	10 -	ND
Bromomethane	. 10	ND
Vinyl chloride	10	ND
Chloroethane	10	ND
Dichloromethane (methylene chlor	-	ND
	10	90
A Thromachine in Cid?	5	
1,1-Dichloroethylene	5	ND
1,1-Dichloroethane	5	ND
trans-1,2-Dichloroethene	5	ND
Chloroform	5	ND
1,2-Dichloroethane	5	ND
Methyl_othyl_Katope_(2-Butapope) <u> </u>	46
1.1.1.Trichloroethans	<u> </u>	
Carbon tetrachloride	5	ND

FO

Vinyl acetate

Trichloroethene

Benzene

2-Hexanone

Toluone.

Styrene

Acrolein

Bromodichloromethane

1,2-Dichloropropane

Chlorodibromomethane

1,1,2-Trichloroethane

4-Methyl-2-pentanone

Tetrachloroethene

Chlorobenzene

Ethyl benzene

Ay Lente (TOTET)

Acrylonitrile

Dichlorobenzenes

amount stated in the table above.

cis-1,3-Dichloropropene

2-Chloroethyl vinyl ether

1,1,2,2-Tetrachloroethane

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ND - This compound was not detected; the limit of detection for this analysis is less whan h

4-11-38

Tribromomethane, (Bromoform)

trans-1,3-Dichloropropene .

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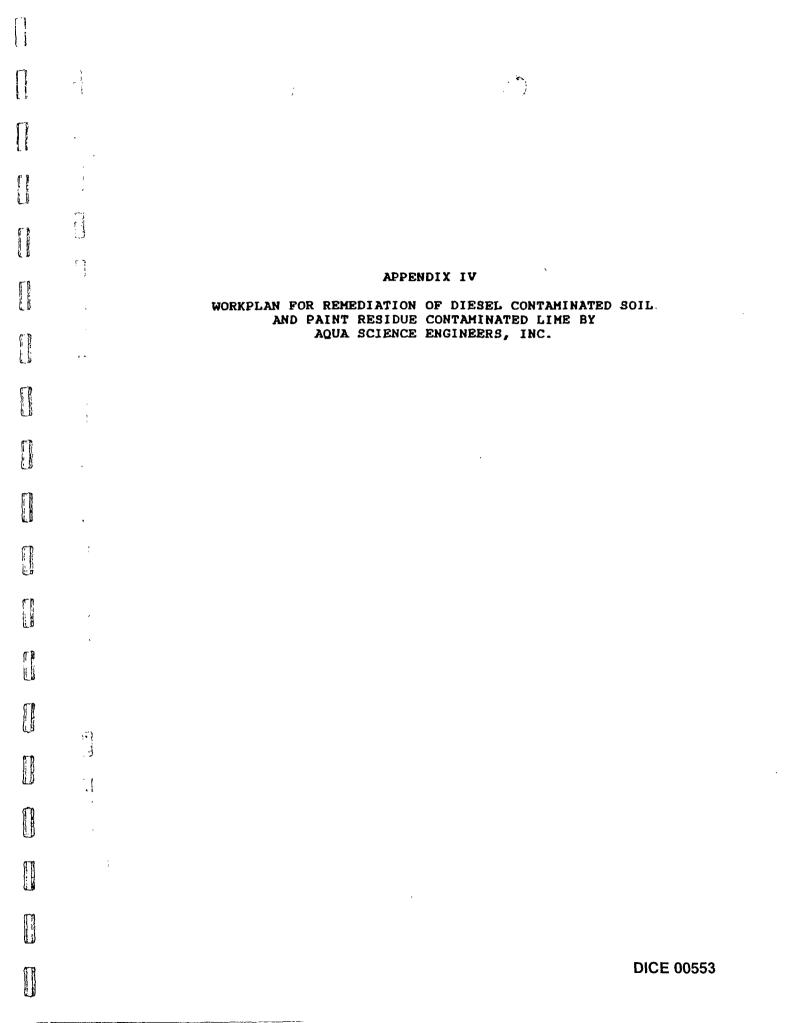
ND

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So. California Field Office, 414 - 31st Street, Unit A, Newport Beach, CA 92661 Tel 714-675-5754 • Fax 714-675-5943

July 20, 1989

Mr. David Esfundi County of Los Angeles Department of Public Works Waste Management Division 900 South Fremont Avenue Alhambra, Ca 91803-5100

I.

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RE: Excavation and Remediation of Contaminated Soil at:

Liquid Air Corporation 8832 South Dice Road Santa Fe Springs, Ca

CLADPW File No. WM-1, I-255-1H

Dear Mr. Esfundi:

The following workplan has been prepared for excavation and remediation of contaminated soil at Liquid Air Corp., Santa Fe Springs California. The workplan is required in your letter to Mr. David Simon of Liquid Air Corp., dated March 13, 1989 (Appendix I). Item 15 checked on you letter requests information regarding future uses of the area related to the contamination. Liquid Air has indicated the effected area will not change from current usage as a hydrated lime settling pit. The entire area occupied by Liquid Air will continue to be used as a manufacturing plant for industrial gases.

Item 16 checked in your letter indicates a health and saftey plan prepared by a Certified Industrial Hyginist is required. A health and saftey plan has been prepared by Mr. Brian P. Daily, CIH, of Envirohealth Inc., for this project and is included in Appendix II. Item 16 of your letter has also indicated a permit may be required prior to excavation of contaminated soil from the South Coast Air Quality Management Distict (SCAQMD) under Rule 1166. As indicated in our letter to Mr. Bill Thompson of SCAQMD (Appendix III), diesel fuel is exempt from Rule 1166 and does not require a permit for excavation. In addition to this, the total concentration levels of volatile organic carbon (VOC) in the contamiated hydrated lime is less than 10 ppm. Therefore, VOC levels in the atmosphere directly above the excavation will not reach 50 ppm, which is the level requiring implimentation of SCAQMD Rule 1166. Excavation of this material is also exempt. However, as indicated in our letter to the SCAQMD, the soil will be monitored during excavation by GC/PID. If VOC levels reach or exceed 50 ppm, the excavation will cease and requirements of Rule 1166 will be applied.

DICE 00554

Aqua Science Engineers Inc. PO. Box 535 Son Romon CA 94583 • 445-820-9394

Liquid Air Corporation would like to begin this project as soon as possible. Space has been made available for on-site treatment to begin immediately. The planned date to begin soil excavation is July 28, 1989.

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Scope of Work

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The scope of work will include excavation and remediation of approximately 10 cubic yards of diesel contaminated soil having total petroleum hydrocarbon concentrations ranging to 6,930 parts per million (ppm) (Figure 1). And, excavation, neutralization and remediation of approximately 100 cubic yards of a soil and calcium hydroxide (hydrated lime) mixture which is contaminated with various solvents (Appendix IV). The solvents are:

- 1) Hexanol
- 2) Acetone
- 3) Carbon disulfide
- 4) Methyl ethyl Keytone (MEK)
- 5) 1,1,1-Trichloroethane
- 6) Toluene
- 7) Xylene

The total concentrations of these chemicals in the soil and calcium hydroxide mixture is very low; less than 10 ppm total voalatile organics (solvents) (Appendix IV).

Soil samples will be collected a the bottoms and sides of the excavations during and after soil removal to confirm complete removal of significant contamination. The soil samples in the area of diesel contamination will be analyzed for total petroleum hydrocarbons using modified EPA method 8015 (for diesel fuel). The soil samples in the area of solvent contamination will be analyzed for those chemicals described above.

The excavated soil and calcium hydroxide mixture will be neutralized prior to remediation. The present pH of the soil mixture is 12.5. The soil mixture will be neutralized by application of a sulfuric acid and water solution having an pH of 3. The sulfuric acid solution will be applied by low-mist coarse spray after excavation. The resultant product will be a neutral mixture of solvent contaminated soil and CaSO (an inert mineral). This soil mixture will then be combined with the diesel contaminated soil and placed in treatment area note in Figure 1. The treatment area is approximatley 1,000 square feet in area. The treatment area will be covered with a bermed 20ml PVC liner prior to placement of soil.

The hydrocarbon contaminated soil will be treated using enhanced bio-remediation. Limiting bacterial nutrients (nitrogen, phosphorous and potassium) will be mixed into a water solution and continuously sprayed onto the contaminated soil to generate a bacterial sludge which will digest hydrocarbons in the soil. Once treated, the soil will be used as fill material onsite. Samples of the treated soil will be collected and analyzed by a California DOHS Certified Laboratory to confirm the remedaition process is complete. Target levels for contamination in the treated soil is less than 100 ppm diesel fuel, and non-detectable solvent concentrations. A complete report will be provided to your department upon completion of the project.

Names, Addresses and Telephone No's of Key Personnel

Aqua Science Engineers:

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Project Supervisor: David M. Schultz (P.E., Vice President) 251 Lugonia Newport Beach, CA 92663

Project Manager: Henry Nakayama (Chemical Engineer) 10601 Frances Avenue Garden Grove, Ca 92643

Work Team Members: Alex Martinez 2534 W. Occidnetal Santa Ana, CA 92701

> Brad Mann 8792 DeVille Huntington Beach, CA 92627

If you have any questions, please contact Mr. David Schultz at (714) 675-5754.

Sincerely,

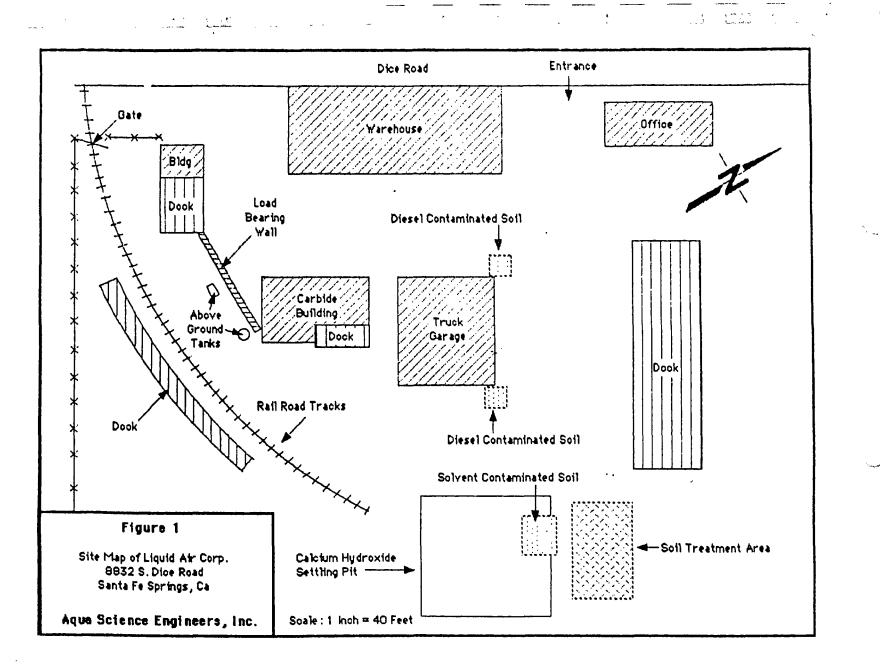
Aqua Science Engineers, Inc.

all fully

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Michael Marello Geological Operations

cc: Mr. David Simon, Liquid Air Corporation



DICE 00557

APPENDIX V

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CHEMICAL ANALYSIS REPORTS FOR SOIL SAMPLES COLLECTED FROM BELOW DIESEL DISPENSER LOCATIONS AFTER EXCAVATION AND REMOVAL OF CONTAMINATED MATERIAL

DICE 00558

. 4	August 31, 1989		WACAYS
	AQUA SCIENCE ENGINEE 414 31st Street, #A Newport Beach, CA Attn: Henry Naka	92661	WEST COAST ANALYTICAL SERVICE, INC ANALYTICAL CHEMISTS
	JOB. NO. 13569		
-	· · · · · · · · · · · · · · · · · · ·	LABORATORY REPORT	
	Samples Received: Date Received: 8-29- Purchase Order No:	Twelve (12) soils 89 LA 0249/Liquid Air	
	The samples were ana	lyzed as follows:	
	Samples Analyzed	<u>Analysis</u>	<u>Results</u>
	Twelve (12) soils	Total Petroleum Hydrocarbons by EPA 418.1	Table I
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		Page 1 of	
	B. Nichael H	vance Mit	(
	B. Michael Hova Senior Staff Che		

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WEST COAST ANALYTICAL SERVICE, INC.

LABORATORY REPORT

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AQUA SCIENCE ENGINEERS Mr. Henry Nakayama

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Contract Action

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Job # 13569 August 31, 1989

TABLE I

Parts Per Million (mg/Kg)

Total Petroleum Hydrocarbons

53

Sample No. LA-1-BA (W) LA-1-BB (E) LA-1-E LA-1-N LA-1-S LA-1-W LA-2-BA (S) LA-2-BB (N) LA-2-E LA-2-N LA-2-S LA-2-W Detection Limit ND-Not Detected

Date Analyzed: 8-30-89

Page 2 of 2

i - marine internet		19-60A1
•• • • •		
• P.O. Box 535. San Ramon, CA 94583-0535	aqua science aqua science agineers inc.	(415) 820-9391
Project Hame: Liquid Air site: Si	anita Fe Springsmin Aug. 29 .	boratory: WCAS
Sample (U Sample/Container Analyze/ Type Hold LA-I-N- BOE Jais A	Analyze For: Method - Detection Limit TPH dicsel EPA 418.1	Notes/Remarks
LA-1-5		
LA-1-W.		
LA-1-BA (m)		
и <u>а-1-вв</u> (Е)V		,
LA-Z-N. Z"rings		
<u>LA-Z-S.</u>		····
LA-Z-W V.		······································
1A-2-84(5) 808 - Javs		
		- ·
S + Soil W + Water O + Other" G + Glass BT + Brass Tube P = Plastic Y + Yial O + 1. Sampled by: Him Malagool Received		 Collate all samples for single analysis. Collate and analyze two top samples and if clean, do not analyze other sample.
2. Courter:	690ate) \$ 29 89 Time: 3:15 pm	 Call ASE for instructions.

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7440 Lincoln Way (714) 898-6370 - (213	CRL / South Coast • Garden Grove, CA 92641 3) 598-0455 • (800) LAB-1-CRL • (711) 801 5813		
r.A.	: (714) 891-5917	Laboratory Report	
	E ENGINEERS, INC. RK CIRCLE, SUITE E 92714 IKE MARELLO	Analysis No.: G-893112 Date Sampled: 6-NOV-1 Date Sample Rec'd: 7- Date Analyzed: 13-NOV Sample Type: SOLID	.989 NOV-1989
Project:	LIQUID AIR - SANTA FE	SPRINGS	
Sample ID	TPH Recoverable mg/kg EPA 418.1		
LA-2-N2 LA-2-S2 LA-2-E2 LA-2-BB (N-1 TD-1,2 COMP TD-3,4 COMP	OSITE 280.	-	
Blank	ND(1)		

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				Ei
Enseco - CRL / South Coast				
7440 Lincoln Way • Garden Grove, CA 92641 (714) 898-6370 • (213) 598-0458 • (800) LAB-1-CRL FAX: (714) 891-5917				
La	aboratory Report	t		
AQUA SCIENCE ENGINEERS, INC. 17895 SKYPARK CIRCLE, SUITE E IRVINE, CA 92714	Analysis No Date Sample Date Sample	ed: 6-NOV-	1989	
ATTN: MR. MIKE MARELLO	Date Analy:	zed: 14-NC		
Project: LIQUID AIR - SANTA FE SP Sample ID: LE-1				
	ole Organics, El			
Parameter	Result	Blank	Detection Límít	
Chloromethane	ND	ND	10	
Bromomethane Vinyl Chloride	ND ND	ND ND	10 10	
Chloroethane	ND	ND	10	
Methylene Chloride	ND	ND	5	
Acetone Combon Disulfida	380.	ND	10	
Carbon Disulfide 1,1-Dichloroethene	ND ND	ND ND	5 5	
1,1-Dichloroethane	ND	ND	5	
trans-1,2-Dichloroethene	ND	ND	5	
Chloroform 1,2-Dichloroethane	ND ND	ND ND	5 5	
2-Butanone	25.	ND	10	
1,1,1-Trichloroethane	ND	ND	5	
Carbon Tetrachloride Vinyl Acetate	ND ND	ND ND	5 10	
Bromodichloromethane	ND	ND	5	
1,2-Dichloropropane	ND	ND	5	
trans-1,3-Dichloropropene Trichloroethene	ND ND	ND ND	5 5	
Dibromochloromethane	ND	ND	5	
1,1,2-Trichloroethane	ND	ND	5	
Benzene cis-1,3-Dichloropropene	ND ND	ND ND	5 5	
2-Chloroethylvinyl ether	ND	ND	10	
Bromoform	ND	ND	5	
4-Methyl-2-pentanone 2-Hexanone	ND ND	ND ND	10 10	
· Tetrachloroethene	ND	ND	5	
1,1,2,2-Tetrachloroethane	ND	ND	5	
Toluene Chlorobenzene	7. ND	ND ND	5 5	
Ethylbenzene	ND	ND	5	
Styrene	ND	ND	5	
Xylenes, Total	ND	ND	5	

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DICE 00563

Irvine	ky Park Circle CA 92626			aqua science engineers inc. ampled <u>tit (</u>	(714) 833-3667 Laboratory: <u>Friedrich (C.C.R.</u>
Sample IU <u>1 1 - 14</u> <u>1 1 - 14</u>	Sample/Container Type	Analyze/ liold 	Analyze For:	Hethod - Detection Limit	Hotes/Remarks
				/	<u></u>
$\frac{1}{1} + \frac{1}{1} + \frac{1}$	Soil Frees				
S + Soll W + Ma G + Glass Bl + Ar	iter 0 · Other ass Tube P · Plastic]: Received by La	Chain o b: <u>44.46</u> , -7 e: <u>11-7-89</u>	1 Custody MULANJE Time: (435	 Collate all samples for single analysi Collate and analyze two top samples are clean, do not analyze other sample. Call ASE for instructions. See attached protocol.
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Enseco - CRL / South Coast 7440 Lincoln Way • Garden Grove, CA 92641 (714) 898-6370 • (213) 598-0458 • (800) LAB-1-CRL FAN: (714) 891-5917

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November 17, 1989

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AQUA SCIENCE ENGINEERS 17895 SKYPARK CIRCLE, SUITE E IRVINE, CA 92714 ATTN: MR. MIKE MARELLO Analysis No.: G-8931123-001/016 Date Sampled: 6-NOV-1989 Date Sample Rec'd: 7-NOV-1989 Project: LIQUID AIR-SANTA FE SPRINGS

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Enseco -

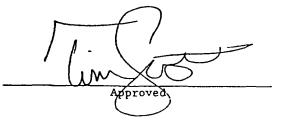
Enclosed with this letter is the report on the chemical and physical analyses on the samples from ANALYSIS NO: G-8931123-001/016 shown above.

The samples were received by CRL in a chilled state, intact and with the chain-of-custody record attached.

Please note that ND() means not detected at the detection limit expressed within the parentheses.

Solid samples are reported on "as received" basis.

Lynda Deschambault



The Report Cover Letter is an integral part of this report.

APPENDIX VI

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CHEMICAL ANALYSIS REPORT FOR LIME SAMPLES COLLECTED FROM THE NORTHWEST CORNER OF THE LIME PIT AFTER EXCAVATION AND REMOVAL OF CONTAMINATED MATERIAL

DICE 00566

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Enseco -Enseco - CRL / South Coast 7440 Lincoln Way . Garden Grove, CA 92641 (714) 898-6370 • (213) 598-0458 • (800) LAB-1-CRL FAX: (714) 891-5917 Laboratory Report ------Analysis No.: G-8931123-002 Date Sampled: 6-NOV-1989 AQUA SCIENCE ENGINEERS, INC. 17895 SKYPARK CIRCLE, SUITE E Date Sample Rec'd: 7-NOV-1989 Date Analyzed: 14-NOV-1989 IRVINE, CA 92714 ATTN: MR. MIKE MARELLO Sample Type: SOLID Project: LIQUID AIR - SANTA FE SPRINGS Sample ID: LE-2 -----`-----Purgeable Organics, EPA 8240 Units: ug/kg Detection Result Blank Limit Parameter - - - - - - -- - - - - - . ND ND 10 Chloromethane Bromomethane ND 10 ND 10 Vinyl Chloride ND ND 10 Chloroethane ND ND 5 Methylene Chloride ND ND 10 Acetone 130. ND Carbon Disulfide ND ND 5 5 1,1-Dichloroethene ND ND 5 1,1-Dichloroethane ND ND 5 trans-1,2-Dichloroethene ND ND Chloroform ND 5 ND 1.2-Dichloroethane 5 ND ND 10 2-Butanone 11. ND 1,1,1-Trichloroethane 5 ND ND Carbon Tetrachloride ND ND 5 10 Vinyl Acetate ND ND Bromodichloromethane ND ND 5 5 1,2-Dichloropropane ND ND trans-1,3-Dichloropropene ND 5 ND Trichloroethene 5 ND ND 5 Dibromochloromethane ND ND 1,1,2-Trichloroethane ND 5 ND Benzene ND ND 5 cis-1,3-Dichloropropene 5 ND ND 2-Chloroethylvinyl ether ND ND 10 $\mathbb{P}^{n}_{\mathcal{A}}$ Bromoform ND ND 5 4-Methyl-2-pentanone ND ND 10 2-Hexanone ND 10 ND Tetrachloroethene ND ND 5 1,1,2,2-Tetrachloroethane 5 ND ND Toluene 5. 5 ND Chlorobenzene S ND ND Ethylbenzene 5 ND ND Styrene ND ND 5 Xylenes, Total S ND ND

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The Report Cover Letter is an integral part of this report.

Enseco – Enseco - CRL / South Coast 7440 Lincoln Way • Garden Grove, CA 92641 (714) 898-6370 • (213) 598-0458 • (800) LAB-1-CRL FAX: (714) 891-5917 Laboratory Report Analysis No.: G-8931123-003 Date Sampled: 6-NOV-1989 AQUA SCIENCE ENGINEERS, INC. 17895 SKYPARK CIRCLE, SUITE E Date Sample Rec'd: 7-NOV-1989 IRVINE, CA 92714 Date Analyzed: 14-NOV-1989 ATTN: MR. MIKE MARELLO Sample Type: SOLID Project: LIQUID AIR - SANTA FE SPRINGS Sample ID: LE-3 _____ Purgeable Organics, EPA 8240 Units: ug/kg Detection Parameter Result Blank Limit - - - - - - - -. - - - - - -10 ND ND Chloromethane ND Bromomethane ND 10 Vinyl Chloride ND ND 10 ND ND 10 Chloroethane Methylene Chloride 25.* ND 5 10 Acetone 76. ND Carbon Disulfide ND ND 5 1,1-Dichloroethene 5 ND ND 5 1,1-Dichloroethane ND ND trans-1,2-Dichloroethene ND ND 5 5 Chloroform ND ND 1,2-Dichloroethane ND ND 5 2-Butanone 24. ND 10 1,1,1-Trichloroethane ND ND 5 Carbon Tetrachloride ND ND 5 Vinyl Acetate ND ND 10 Bromodichloromethane ND ND 5 1,2-Dichloropropane ND ND 5 trans-1,3-Dichloropropene ND ND 5 Trichloroethene 5 ND ND Dibromochloromethane ND ND 5 1,1,2-Trichloroethane 5 ND ND Benzene ND 5 ND cis-1,3-Dichloropropene ND ND 5 2-Chloroethylvinyl ether ND 10 ND Bromoform ND 5 ND 4-Methyl-2-pentanone 10 ND ND 2-Hexanone ND ND 10 Tetrachloroethene ND ND 5 5 1,1,2,2-Tetrachloroethane ND ND Toluene 5 15. ND Chlorobenzene 5 ND ND Ethylbenzene ND 5 ND Styrene 5 ND ND Xylenes, Total ND ND 5 *The analytical results for Methylene Chloride should not be considered reliable unless the concentration in the sample exceeds five times the detection limit.

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 $\dot{}$ 3 Enseco -Enseco - CRL / South Coast 7440 Lincoln Way . Garden Grove, CA 92641 (714) 598-6370 • (213) 598-0455 • (S00) LAB-1-CRL FAX: (714) 891-5917 Laboratory Report -----AQUA SCIENCE ENGINEERS, INC. Analysis No.: G-8931123-005 5 17895 SKYPARK CIRCLE, SUITE E Date Sampled: 6-NOV-1989 Date Sample Rec'd: 7-NOV-1989 IRVINE, CA 92714 Date Analyzed: 16-NOV-1989 ATTN: MR. MIKE MARELLO Sample Type: SOLID Project: LIQUID AIR - SANTA FE SPRINGS Sample ID: LE-5 _____ Purgeable Organics, EPA 8240 Units: ug/kg Detection Parameter Result Blank Limit** - - - - - -. Chloromethane ND ND 50 Bromomethane ND ND 50 Vinyl Chloride ND 50 ND 50 Chloroethane ND ND Methylene Chloride 20 ND ND Acetone 100.* ND 50 ND Carbon Disulfide ND 20 1.1-Dichloroethene ND ND 20 1,1-Dichloroethane ND ND 20 trans-1,2-Dichloroethene ND ND 20 Chloroform ND ND 20 1,2-Dichloroethane ND 20 ND 2-Butanone 53. ND 50 1,1,1-Trichloroethane ND 20 ND Carbon Tetrachloride ND ND 20 Vinyl Acetate ND ND 50 Bromodichloromethane ND ND 20 1,2-Dichloropropane ND ND 20 trans-1,3-Dichloropropene ND ND 20 Trichloroethene ND ND 20 Dibromochloromethane ND ND 20 1,1,2-Trichloroethane ND 20 ND Benzene 20 ND ND cis-1,3-Dichloropropene ND ND 20 2-Chloroethylvinyl ether ND ND 50 Bromoform ND 20 ND 4-Methyl-2-pentanone ND 50 ND 2-Hexanone ND NÐ 50 Tetrachloroethene ND ND 20 1,1,2,2-Tetrachloroethane ND ND 20 Toluene ND ND 20 Chlorobenzene ND ND 20 Ethylbenzene ND 20 ND Styrene ND ND 20 Xylenes, Total ND ND 20 *The analytical results for Acetone should not be considered reliable unless the concentration in the sample exceeds five times the detection limit. **Higher detection limits due to sample matrix.

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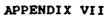
The Report Cover Letter is an integral part of this report.

Enseco -<u>,</u> (Enseco - CRL / South Coast 7440 Lincoln Way . Garden Grove, CA 92641 (714) 898-6370 • (213) 598-0458 • (800) LAB-I-CRL FAX: (714) 891-5917 Laboratory Report _____ AQUA SCIENCE ENGINEERS, INC. Analysis No.: G-8931123-006 17895 SKYPARK CIRCLE, SUITE E Date Sampled: 6-NOV-1989 Date Sample Rec'd: 7-NOV-1989 IRVINE, CA 92714 ATTN: MR. MIKE MARELLO Date Analyzed: 14-NOV-1989 Sample Type: SOLID Project: LIQUID AIR - SANTA FE SPRINGS Sample ID: LE-6 ------Purgeable Organics, EPA 8240 Units: ug/kg Detection Parameter Result Blank Limit ----------. Chloromethane ND ND 10 Bromomethane ND ND 10 Vinyl Chloride ND ND 10 Chloroethane ND ND 10 Methylene Chloride ND ND 5 Acetone 100. 10 ND Carbon Disulfide ND ND 5 1,1-Dichloroethene 5 ND ND 1.1-Dichloroethane ND ND 5 trans-1,2-Dichloroethene 5 ND ND Chloroform ND ND 5 1.2-Dichloroethane ND 5 ND 2-Butanone 24. 10 ND 1,1,1-Trichloroethane ND ND 5 5 Carbon Tetrachloride ND ND Vinyl Acetate ND ND 10 Bromodichloromethane ND ND 5 5 1,2-Dichloropropane ND ND trans-1.3-Dichloropropene 5 ND ND 5 5 Trichloroethene ND ND Dibromochloromethane ND ND 1,1,2-Trichloroethane 5 ND ND 5 Benzene ND ND cis-1,3-Dichloropropene 5 ND ND 2-Chloroethylvinyl ether ND ND 10 Bromoform ND ND 5 4-Methyl-2-pentanone ND ND 10 2-Hexanone ND 10 ND Tetrachloroethene ND ND 5 1,1,2,2-Tetrachloroethane 5 ND ND Toluene 7. 5 ND Chlorobenzene ND ND 5 Ethylbenzene 5 ND ND Styrene ND ï ND 5 Xylenes, Total ND ND 5

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17895 Sky Park Circle	Suite E	aqua science [] engineers inc.	(714) 833-3667
oject Hame: 1 199911 A.C.A.	Site:Da	te Sampled <u>11-(, 29</u>	Laboratory: EnsciolCR1
inple 10 Sample/Container Type	Analyze/ Analyze For: Nold	Hethod - Detection Linit 62.4 (19), TCMO	ch ^D Hotes/Remarks
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$\frac{1}{1} \cdot \frac{3}{2}$		->	CONCOSILE TIMERALY
S + Soll H + Water U + Other G + Glass DI + Arass Tube P + Plastic	A A	rin/ol Custody	 Collate all samples for single analysis.
1. Sampled by: <u>7: 1. Sound Char</u> 2. Courter: VULDC 500	3: Received by Lab: $\underline{11.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1$		 Collate and analyze two top samples and clean, do not analyze other sample. Call ASE for instructions. See attached protocol.
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CHEMICAL ANALYSIS REPORTS FOR TREATED DIESEL CONTAMINATED SOIL

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*) Enseco Enseco - CRL 7440 Lincoln Way . Garden Grove, CA 92641 (714) 898-6370 - (213) 598-0458 - (800) LAB-1-CRL FAX: (714) 891-5917 January 19, 1990 1 AQUASCIENCE ENGINEERS, INC. 17895 SKYPARK CIRCLE, SUITE E Analysis No.: G-9001203-001/004 Date Sampled: 11-JAN-1990 IRVINE, CA 92626 Date Sample Rec'd: 12-JAN-1990 ATTN: MR. MIKE MARELLO Project: (LA0298) LIQUID AIR-SFS Enclosed with this letter is the report on the chemical and physical analyses on the samples from ANALYSIS NO: G-9001203-001/004 shown above. The samples were received by CRL in a chilled state, intact and with the chain-of-custody record attached. Sample seals were intact. Please note that ND() means not detected at the detection limit expressed within the ٩ parentheses. Solid sample is reported on "as received" basis. Preliminary data were provided on January 18, 1990 at 4:55 P.M. Jaul C Inda J exambaut **DICE 00574**

The Report Cover Letter is an integral part of this report.

This report pertains only to the samples investigated and does not necessarily apply to other apparently identical or similar materials. This report is submitted for the exclusive use of the client to whom it is addressed. Any report children of this report or use of the variable of a name for exclusive publicity duraces without authorization is prohibited.

7440 Lincoln Way (714) 898-6370 • (213)	eco - CRL • Garden Grove, CA 9264! 598-0458 • (800) LAB-1-CRL		
FAX: (714) 891-5917 AQUA SCIENCE ENGINEERS, INC. 17895 SKYPARK CIRCLE, SUITE E IRVINE, CA 92626 ATTN: MR. MIKE MARELLO Project: (LA0298) LIQUID AIR - SFS		Analysis No.: G-9001203-001/004 Date Sampled: 11-JAN-1990 Date Sample Rec'd: 12-JAN-1990 Date Analyzed: 18-JAN-1990 Sample Type: SOLID	
Sample ID	TPH Recoverable mg/kg EPA 418.1		
TD-1B TD-2B TD-3B TD-4B Blank	2,000 170 1,500 580 ND(1.0)		
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This report pertains only to the samples investigated and cces not necessarily apply to other apparently identical or similar materials. This report is submitted for the exclusive use of the client to whom it is addressed. Any reproduction of this report as use of this Laboratory's name for adverse no er publicity ournoses without authorization is prohibined.

5 -5 ; Enseco Enseco - CRL 7440 Lincoln Way • Garden Grove, CA 92641 (714) 898-6370 • (213) 598-0458 • (800) LAB-1-CRL FAX: (714) 891-5917 Laboratory Report ı Analysis No.: G-9001203-001/004 Date Sampled: 11-JAN-1990 AQUA SCIENCE ENGINEERS, INC. 17895 SKYPARK CIRCLE, SUITE E IRVINE, CA 92626 Date Sample Rec'd: 12-JAN-1990 ÷ ATTN: MR. MIKE MARELLO Sample Type: SOLID Project: (LA0298) LIQUID AIR - SFS -----------QA/QC Summary Average Relative QC Spike Acceptable Percent Acceptable Parameter (Method) Type Recovery Range Difference Range Date ---------- -----18-JAN-1990 TPH RECOVERABLE (EPA L 70-117 97 6. 15 418.1) M - Matrix Spike L - Laboratory Control Sample Spike **DICE 00576** The Report Cover Letter is an integral part of this report.

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17895 S Irvine	ky Park Circle	Suite E		aqua science engineers inc.	(714) 833-3667
nject Hame:		Sille: SES	Oate Sa	ampled 1 - 11 - 90 1	Laboratory: Enscent
unple 10	Sample/Container Type	Analyze/ liald	Analyze Fort	Hethad - Detection Limit	Hotes/Remarks
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	Mass Tube P. Plastic 1	7 - Yial 0 - Other 3: Received by Lab: Date: 4. Received in Offic	MJ1 / Carry 1-12/90	11ine: 142,714	 Collate all samples for single analysis Collate and analyze two top samples and clean, do not analyze other sample. Call ASE for instructions. See attached protocol.
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Enseco **Enseco - CRL** 7440 Lincoln Way • Garden Grove, CA 92641 (714) 898-6370 • (213) 598-0458 • (800) LAB-1-CRL FAX: (714) 891-5917 March 12, 1990 Analysis No.: G-9005904-001/004 AQUA SCIENCE ENGINEERS, INC Date Sampled: 27-FEB-1990 17895 SKYPARK CIRCLE, SUITE E IRVINE, CA 92714 Date Sample Rec'd: 28-FEB-1990 ATTN: MR. MIKE MARELLO Project: (LA0308) LIQUID AIR Enclosed with this letter is the report on the chemical and physical analyses on the samples from ANALYSIS NO: G-9005904-001/004 shown above. The samples were received by CRL in a chilled state, intact and with the chain-of-custody record attached. Please note that ND() means not detected at the detection limit expressed within the parentheses. Solid samples are reported on "as received" basis. reliminary data were provided on March 8, 1990 at 4:15 P.M. Paul ochambruit Approved Reviewed The Report Cover Letter is an integral part of this report.

This report pertains only to the samples investigated and does not necessarily apply to other apparently identical or similar materials. This report is submitted for the exclusive use of the client to whom it is addressed. Any reproduction of this report or use of this Laboratory's name for advertising or publicity purposes without authorization is prohibited.

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:	Enseco	- CRL					
	7440 Lincoln Way • G	arden Grove, CA 92641 8-0458 • (800) LAB-1-CRL					
•		4) 891-5917					
		Lat	poratory Report				
- A	QUA SCIENCE ENGI	NEERS, INC.	Analysis No.: G-9005904-001/004	•			
´ 1	7895 SKYPARK CIR RVINE, CA 92714	CLE, SUITE E	Date Sampled: 27-FEB-1990 Date Sample Rec'd: 28-FEB-1990				
Â	TTN: MR. MIKE MA	RELLO	Date Sample Rec'd: 28-FEB-1990 Date Analyzed: 8-MAR-1990				
;	Project: (LA0308) LIQUID AIR		Sample Type: SOLID				
-							
S	ample ID	TPH Recoverable					
		mg/kg					
-		EPA 418.1					
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(714) 898-6370	Enseco - CRL 1 Way • Garden Grove, CA 92641 • (213) 598-0458 • (800) LAB-1-CR FAX: (714) 891-5917	 L				
	FAA. (/14) 891-3917					
		Laborato	ry Report			
17895 SKYPA IRVINE, CA ATTN: MR. M	E ENGINEERS, INC. RK CIRCLE, SUITE E 92714 IIKE MARELLO (LA0308) LIQUID AIR	Da Da	te Sample	: G-900590 d: 27-FEB-1 Rec'd: 28- : SOLID	990	
		QA/QC	Summary			
Date	Parameter (Method		Average Spike Recovery	Acceptable Range	Relative Percent Difference	Acceptab Range
8-MAR-1990) TPH RECOVERABLE (EPA 418.1)	L	86	70-117	6.	15
	tory Control Sample Sp					

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This report pertains only to the samples investigated and does not necessarily apply to other apparently identical or similar materials. This report is submitted for the exclusive use of the client to whom it is addressed. Any reproduction of this report or use of this Laboratory's name for advertising or publicity purposes without authorization is prohibited.

Project Have: 24 guid Arc Site: Santar Te Springs Date Sampled 21 21 90 Laboratory: Euceco Sample 10 Sample/Container Analyze For: Method Moter/Amarta TD-1b Soail Tubbe A Dirocel (TPH) 418.1 Noter/Amarta TD-2b Image: Single 10 Single 10 Held Noter/Amarta Noter/Amarta TD-2b Image: Single 10 Hill Held Noter/Amarta Noter/Amarta TD-2b Image: Single 10 Image: Single 10 Held Image: Single 10 Noter/Amarta TD-2b Image: Single 10 Image: Single 10 Held Image: Single 10 Noter/Amarta TD-4b Image: Single 10 Single 10 Image: Single 10 Image: Single 10 Image: Single 10 Image: Single 10 Image: Single 10 Single 10 Image: Single 10 Image: Single 10 Image: Single 10 Image: Single 10 Single 10 Image: Single 10 Image: Single 10 Image: Single 10 Image: Single 10 Single 10 Image: Single 10	17895 S	Sky Park Circle	Suite E		jua science gineers inc.		(714) 833-3667
Tppe Hold TD-1b Soil Tube A TD-3b A D=3b A D=4b A D=5b A			sile: Santa	E Springs Date Samp	00 1 5 4 2 1 9 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Laboratory	: Euseco
G · Glass BI · Arass Tube P · Plastic Y · Yial O · Other / Chain of Custody I · Collate and analyze two top samples and clean, do not analyze other sample. 1. Sampled by: I · France P / Plastic Y · Yial O · Other / J: Received by Lab: III · Collate and analyze two top samples and clean, do not analyze other sample. 2. Courter: IIIIII · France P / Plastic Y · Yial O · Other / Date: IIIIII · France P / Plastic Y · Yial O · Other / 1. Sampled by: I · France P / Plastic Y · Yial O · Other / J: Received by Lab: IIIIIIIIII · France P / Plastic V · Yial O · Other / 2. Courter: IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	TD-2b TD-2b 2-3b	Type	1614		Detection Limit		
<pre>4. Received in Office: Date:</pre> See atlached protocol.	G + Glass BT + 1. Sampled by:	Arass Tube P · Plastic	J: Received by L Da	10: 100 (10aun 10: 0/25/00 11+			 Collate and analyze two top samples a clean, do not analyze other sample



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	DACE.	EPORT (OF LABOF	atory ana	Tan Cor Nov Lea	es: ineapolis, Minnesota npa, Florida ralville, Iowa vato, California iwood, Kansas ne, California
		TOTAL	PETROLE 418.1	UM HYDROCAR METHOD	BONS	
	PACE PROJECT # : 7 DATE SAMPLE RECEIVED: 4 MATRIX : S	/05/19 00403. /03/19 Soil .iquid	500 A 90 1	DDRESS : ELEPHONE :	Aquascience 17895 Sky C Irvine, CA (714)833-366 Mike Marello	ircle # E 92626 57
	PARAMETER NAME		# 66104 # TD-1	SAMPLE NU # 66105 # TD-2		MDL/mg/Kg
1 1	Total Petroleum Hydroca	arbons	59.6	46.6	60.8	10

			# 6610	SAMPLE NU	MBER #	
L	PARAMETER NAME		# TD-4	# 	#	MDL/mg/Kg
r I	Total Petroleum Hydroca	arbons	46.0	3		10
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:	MDL: Method Detection	Limit				
;		this	report	were obtain	ed using EPA	A or other
	MDL: Method Detection MDL: Method Detection MDL: The data contained in approved methodolodies direct supervision.	this	report	were obtain	ed using EPA	A or other
	MDL: Method Detection The data contained in approved methodolodies	this . All a	report	were obtain	ed using EPA	A or other

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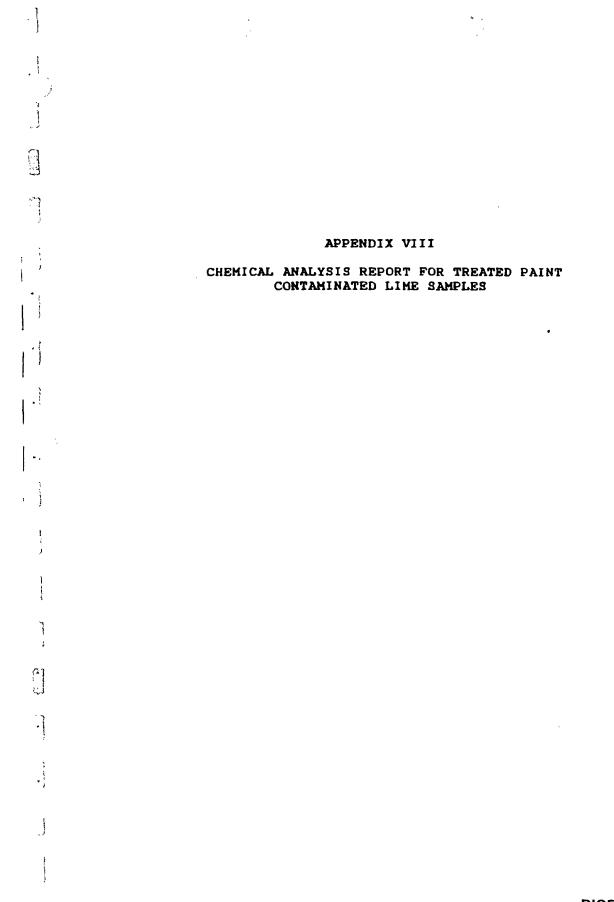
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30 Hughes, Suite 206 🗇 Irvine, CA 92718 🗁 Phone (714) 380-9559 an equal opportunity employer

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			·····	LA0323
17895 Sky Park Circle S	uite E		aqua science e ngineers inc.	(714) 833-3667
alece Home: Liquid Air	sile: Santa	Fe Spr Date Si	ampled 4-3-90 1	aboratory: Pace.
uple IU - Sample/Container Type	Analyze/ Ilold	Analyze Fors	Helhod - Detection Limit	liotes/Remarks
D-1 Spil-Glass	A	TPH	418.1	Normal Analysis Time
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• Soll H • Nater U • Other • Gláss Ol • Arass Tube P • Plastic V	• Yisi 0 • Other	Chain d	I Custody	 Collate all samples for single analysis.
Sampled by: Mile Monully	Je Received by L	20: Madelein E	Addles	 Collate and analyze two top samples and 1/ clean, do not analyze other sample.

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- 1 3 1 ١ Enseco -Enseco - CRL / South Coast 7440 Lincoln Way . Garden Grove, CA 92641 (714) 898-6370 • (213) 598-0458 • (800) LAB-I-CRL FAX: (714) 891-5917 ŧ. November 17, 1989 Analysis No.: G-8931123-001/016 AQUA SCIENCE ENGINEERS 17895 SKYPARK CIRCLE, SUITE E Date Sampled: 6-NOV-1989 Date Sample Rec'd: 7-NOV-1989 IRVINE, CA 92714 ATTN: MR. MIKE MARELLO Project: LIQUID AIR-SANTA FE SPRINGS Enclosed with this letter is the report on the chemical and physical analyses on the samples from ANALYSIS NO: G-8931123-001/016 shown above. The samples were received by CRL in a chilled state, intact and with the chain-of-custody record attached. Please note that ND() means not detected at the detection limit expressed within the parentheses. Solid samples are reported on "as received" basis. Lynda Doschambault prove **DICE 00586**

The Report Cover Letter is an integral part of this report.

This report pertains only to the samples investigated and does not necessarily apply to the scoper apparently identical or similar materials. This report is submitted for the exclusive

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Enseco - CRL / South Coast				
7440 Lincoln Way • Garden Grove, CA 92641 (714) 898-6370 • (213) 598-0458 • (800) LAB-1-CRL FAX: (714) 891-5917				
La	boratory Report	t		
A ON A COTONOF ENOTHER THE	Analyzic N	b.: G-893112		
AQUA SCIENCE ENGINEERS, INC. 17895 SKYPARK CIRCLE, SUITE E		ed: 6-NOV-1		
IRVINE, CA 92714		e Rec'd: 7-		
ATTN: MR. MIKE MARELLO		zed: 14-NOV		
	Sample Type			
Project: LIQUID AIR - SANTA FE SPR Sample ID: TL-1,2,3 COMPOSITE	INGS			
	le Organics, E	PA 8240		
Units: ug/kg			Detection	
Parameter	Result	Blank	Limit	
Chloromethane	ND	ND	10	
Bromomethane	ND	ND	10	
Vinyl Chloride	ND	ND	10	
Chloroethane	ND	ND	10	
Methylene Chloride	ND	ND	5	
Acetone	ND	ND	10	
Carbon Disulfide	26. ND	ND	5 5	
l,l-Dichloroethene l,l-Dichloroethane	ND ND	ND ND	5	
trans-1,2-Dichloroethene	ND	ND	5	
Chloroform	ND	ND	5	
1,2-Dichloroethane	ND	ND	5	
2-Butanone	24.	ND	10	
1,1,1-Trichloroethane	ND	ND	5	
Carbon Tetrachloride	ND	ND	5	
Vinyl Acetate Bromodichloromethane	ND ND	ND ND	10 5	
1,2-Dichloropropane	ND	ND	5	
trans-1,3-Dichloropropene	ND	ND	5	
Trichloroethene	ND	ND	5	
Dibromochloromethane	ND	ND	5	
1,1,2-Trichloroethane	ND	ND	5	
Benzene	ND	ND	5	
cis-1,3-Dichloropropene	ND	ND	5	
2-Chloroethylvinyl ether Bromoform	ND	ND	10	
4-Methyl-2-pentanone	ND ND	ND ND	5 10	
2-Hexanone	ND	ND	10	
Tetrachloroethene	ND	ND	5	
1,1,2,2-Tetrachloroethane	ND	ND	5	
Toluene	7.	ND	5	
Chlorobenzene	ND	ND	5	
Ethylbenzene	ND	ND	5	
Styrene Xylenes, Total	ND ND	ND ND	5 5	
Machico, Iviai		MD	J	

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To a support page in a

The Report Cover Letter is an integral part of this report.

Enseco -1.1 Enseco - CRL / South Coast 7440 Lincoln Way . Garden Grove, CA 92641 (714) \$98-6370 • (213) 598-0458 • (800) LAB-I-CRL FAX: (714) 891-5917 ŗ. Laboratory Report ŝ Analysis No.: G-8931123-014 AQUA SCIENCE ENGINEERS, INC. ç. Date Sampled: 6-NOV-1989 17895 SKYPARK CIRCLE, SUITE E Date Sample Rec'd: 7-NOV-1989 IRVINE, CA 92714 Date Analyzed: 14-NOV-1989 ATTN: MR. MIKE MARELLO Sample Type: SOLID Project: LIQUID AIR - SANTA FE SPRINGS Sample ID: TL-4,5,6 COMPOSITE Purgeable Organics, EPA 8240 Units: ug/kg Detection Limit Parameter Result Blank -----. -----ND ND 10 Chloromethane ND 10 ND Bromomethane Vinyl Chloride ND ND 10 ND 10 Chloroethane ND ND ND 5 Methylene Chloride 10 29.* ND Acetone ND ND 5 Carbon Disulfide 5 1,1-Dichloroethene ND ND 1,1-Dichloroethane ND ND 5 ND trans-1,2-Dichloroethene ND 5 Chloroform ND ND 5 5 1,2-Dichloroethane ND ND 16. ND 10 2-Butanone ND ND 5 1,1,1-Trichloroethane 5 ND ND Carbon Tetrachloride Vinyl Acetate ND ND 10 Bromodichloromethane ND ND 5 ND 5 ND 1,2-Dichloropropane 5 trans-1,3-Dichloropropene ND ND 5 Trichloroethene ND ND ND 5 Dibromochloromethane ND 1,1,2-Trichloroethane ND ND 5 5 ND Benzene ND cis-1,3-Dichloropropene ND ND 5 2-Chloroethylvinyl ether ND ND 10 ND 5 Bromoform ND 4-Methyl-2-pentanone ND ND 10 ND 10 2-Hexanone ND Tetrachloroethene ND ND 5 1,1,2,2-Tetrachloroethane 5 ND ND Toluene 6. ND 5 5 Chlorobenzene ND ND Ethylbenzene ND ND 5 Styrene 5 ND ND Xylenes, Total ND ND 5 *The analytical results for Acetone should not be considered reliable unless the concentration in the sample exceeds five times the detection limit **DICE 00588**

The Report Cover Letter is an integral part of this report. ----- the constant is estimated the const is submitted for the exclusive

j Enseco -Enseco - CRL / South Coast 7440 Lincoln Way . Garden Grove, CA 92641 (714) 898-6370 • (213) 598-0458 • (800) LAB-1-CRL FAX: (714) 891-5917 Laboratory Report AQUA SCIENCE ENGINEERS, INC. Analysis No.: G-8931123-015 Date Sampled: 6-NOV-1989 17895 SKYPARK CIRCLE, SUITE E Date Sample Rec'd: 7-NOV-1989 IRVINE, CA 92714 Date Analyzed: 14-NOV-1989 ATTN: MR. MIKE MARELLO Sample Type: SOLID Project: LIQUID AIR - SANTA FE SPRINGS Sample ID: TL-7,8 COMPOSITE ____ Purgeable Organics, EPA 8240 Units: ug/kg Detection Limit Result Blank Parameter ND ND 10 Chloromethane ND ND 10 Bromomethane Vinyl Chloride ND ND 10 ND ND 10 Chloroethane Methylene Chloride 6.* ND -5 54. ND 10 Acetone Carbon Disulfide ND ND 5 5 1,1-Dichloroethene ND ND 5 1,1-Dichloroethane ND ND 5 trans-1,2-Dichloroethene ND ND Chloroform ND ND 5 1.2-Dichloroethane ND ND 5 32. ND 10 2-Butanone 1,1,1-Trichloroethane ND ND 5 5 Carbon Tetrachloride ND ND Vinyl Acetate ND ND 10 Bromodichloromethane ND ND 5 5 ND ND 1,2-Dichloropropane trans-1.3-Dichloropropene ND ND 5 Trichloroethene ND ND 5 Dibromochloromethane ND 5 ND 1,1,2-Trichloroethane ND 5 ND 5 Benzene ND ND cis-1,3-Dichloropropene 5 ND ND 2-Chloroethylvinyl ether ND ND 10 Bromoform ND ND 5 4-Methyl-2-pentanone 10 ND ND 2-Hexanone 10 ND ND Tetrachloroethene ND ND 5 1,1,2,2-Tetrachloroethane 5 ND ND Toluene 18. 5 ND Chlorobenzene ND ND 5 Ethylbenzene 5 ND ND Styrene ND ND 5 Xylenes, Total ND ND 5 *The analytical results for Methylene Chloride should not be considered reliable unless the concentration in the sample exceeds five times the detection limit. **DICE 00589**

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Enseco - CRL / South Coast				
7440 Lincoln Way • Garden Grove, CA 92641				
(714) 898-6370 • (213) 598-0458 • (800) LAB-1-CRL FAN: (714) 891-5917				
L	aboratory Report	E		
AQUA SCIENCE ENGINEERS, INC.	Analysis No	⊳.: G-89311	23-016	
17895 SKYPARK CIRCLE, SUITE E	Date Sample			
IRVINE, CA 92714	Date Sample			
ATTN: MR. MIKE MARELLO	Date Analyz		V-1989	
Project: LIQUID AIR - SANTA FE SP Sample ID: TL-9,10 COMPOSITE	Sample Type RINGS	e. Solib		
	ble Organics, El	PA 8240		
Units: ug/kg			Detection	
Parameter	Result	Blank	Limit	
Chloromethane	ND	ND	10	
Bromomethane	ND	ND	10	
Vinyl Chloride	ND	ND	10	
Chloroethane	ND	ND	10	
Methylene Chloride	ND	ND	5	
Acetone	27.*	ND	10	
Carbon Disulfide	ND	ND	5	
1,1-Dichloroethene	ND	ND	5	
1,1-Dichloroethane	ND	ND	5	
trans-1,2-Dichloroethene Chloroform	ND ND	ND ND	5 5	
1.2-Dichloroethane	ND	ND	5	
2-Butanone	15.	ND	10	
1,1,1-Trichloroethane	ND	ND	5	
Carbon Tetrachloride	ND	ND	5	
Vinyl Acetate	ND	ND	10	
Bromodichloromethane	ND	ND	5	
1,2-Dichloropropane	ND	ND	5	
trans-1,3-Dichloropropene	ND	ND	5	
Trichloroethene	ND	ND	5	
Dibromochloromethane 1,1,2-Trichloroethane	ND	ND	5	
Benzene	ND ND	ND ND	5 5	
cis-1,3-Dichloropropene	ND	ND	5	
2-Chloroethylvinyl ether	ND	ND	10	
Bromoform	ND	ND	5	
4-Methyl-2-pentanone	ND	ND	10	
2-Hexanone	ND	ND	10	
Tetrachloroethene	ND	ND	5	
1,1,2,2-Tetrachloroethane	ND	ND	5	
Toluene	ND	ND	5	
Chlorobenzene	ND	ND	5	
Ethylbenzene Styrene	. ND	ND	5	
Xylenes, Total	ND ND	ND ND	5 5	
AJIONO, ICLAI	ND	ND	J	
*The analytical results for Ac	etone should not	- be consid	arad raliable	

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Enseco -Enseco - CRL / South Coast 7440 Lincoln Way . Garden Grove, CA 92641 (714) 898-6370 • (213) 598-0458 • (800) LAB-1-CRL FAX: (714) 891-5917 Laboratory Report -----------AQUA SCIENCE ENGINEERS, INC. Analysis No.: G-8931123-001/016 17895 SKYPARK CIRCLE, SUITE E Date Sampled: 6-NOV-1989 IRVINE, CA 92714 Date Sample Rec'd: 7-NOV-1989 ATTN: MR. MIKE MARELLO Sample Type: SOLID Project: LIQUID AIR - SANTA FE SPRINGS QA/QC Summary Average Relative QC Spike Acceptable Percent Acceptable Date Parameter (Method) Type Recovery Range Difference Range -----------13-NOV-1989 TPH RECOVERABLE (EPA L 108 70-117 0. 15 418.1) 14-NOV-1989 1,1-DICHLOROETHENE (EPA L 87 54-134 4. 25 8240) 13-NOV-1989 1,1-DICHLOROETHENE (EPA L 97 54-134 6. 25 8240) 14-NOV-1989 TRICHLOROETHENE (EPA L 97 67-124 2. 21 8240) 13-NOV-1989 TRICHLOROETHENE (EPA L 101 67-124 2. 21 8240) 14-NOV-1989 BENZENE (EPA 8240) 13-NOV-1989 BENZENE (EPA 8240) 14-NOV-1989 TOLUENE (EPA 8240) 4. I. 95 62-126 24 101 2. L 62-126 24 95 1. L 66-126 22 13-NOV-1989 TOLUENE (EPA 8240) 100 66-126 4. L 22 14-NOV-1989 CHLOROBENZENE (EPA 8240) L 104 67-124 2. 22 13-NOV-1989 CHLOROBENZENE (EPA 8240) L 104 67-124 4. 22 M - Matrix Spike L = Laboratory Control Sample Spike **DICE 00591** The Report Cover Letter is an integral part of this report. والمراجعة فالمعاملة فالمتعامل والمراجع والمراجع **.** .

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17895 S Irvine	ky Park Circle	Suite E	LEE	aqua science engineers inc.	(714) 833-3667
	instit the	Site: Site:	Date Si	ampled <u>11-(, 59</u>	Laboratory: Euscie 10 Bl
Sample IV	Sample/Container Type	Analyze/ Hold	Analyze For:	Detection Limit	UN Hotes/Remarks A
<u>L-1</u>	Lair Tube				, , , , , , , , , , , , , , , , , , ,
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1. 5-1					
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$\frac{1}{1}$			·) 6024	
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S + Soll W + W G + Gláss DI + B	ater 0 • Other rass Tube P • Plastic	Y • Yial 0 • Other	Chain/p	I Custody	Collate all samples for single analy
1. Sampled by:	1 Monella	J. Received by L	10: Mile fa	unaus	 Collate and analyze two top samples clean, do not analyze other sampl
2. Courier:	Ulle S	Da	re: 11- 4-01	Time: 435	 Call ASE for instructions.

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Lana Actual Company			人2)		LAO275
17895 S	ky Park Circle CA 92626	Suite E	LEE	aqua science engineers inc.	(714) 833-3667
Project Hame:	Sauid A: -	Site: Son Y	Fr. S. Date S	ampled <u>Ivelas Sec</u>	Laboratory: Ensein (RR
Sample IU	Sample/Container Type	Analyze/ itold	Analyze For:	Hethod - Detection Limit	Notes/Remarks
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LA . 2 M	Soil / Tube			<u> </u>	
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LA-2- BE ! N	-si de		<u></u>		
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	ter 0 = Other ass Tube P = Plastic	· · · · · · · · · · · · · · · · · · ·	Chain o	1) Custody	 Collate all samples for single analysis.
	Mary Chi-	J: Received by		manise	 Collate and analyze two top samples and clean, do not analyze other sample.
2. Courter:	JUL 3"		ate: 11-7-89	Time: (435	Call ASE for instructions.
	• •	4. Received in (Office: Date:		See attached protocol,

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DICE 00593

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17895 Sky Park Circle, Suite E. Irvine, CA 92714 Tet 714/833-3667 • Fax 714-833-3468

September 21, 1990

Ms. Nicole Long County of Los Angeles Department of Public Works . Waste Management Division UST Pilot Program - Annex Building P.O. Box 1460 Alhambra, CA 91802-1460

RE: ONSITE REMEDIATION OF SOIL IMPACTED WITH DIESEL FUEL

SITE: Liquid Air Corporation 8832 Dice Road Santa Fe Springs, CA

PROPERTY OWNERS: Liquid Air Corporation 2121 North California Boulevard Walnut Creek, CA 94596

Dear Ms. Long:

Enclosed with this letter is the information you requested regarding the remediation of hydrocarbon contaminated soil at the Liquid Air facility located at 8832 Dice Road in Santa Fe Springs. Attached to this letter is the hazardous waste manifest for the removed tanks, a plot plan showing final sample locations for the diesel fuel contaminated soils remediation project, and laboratory reports for the final samples.

The information enclosed with this letter is a supplement to the Aqua Science Engineers, Inc. report for the remediation of hydrocarbon contaminated soil and hydrated lime for Liquid Air Corporation dated April 23, 1990. Please contact me at (714) 833-3667 if you have any questions or comments regarding this project.

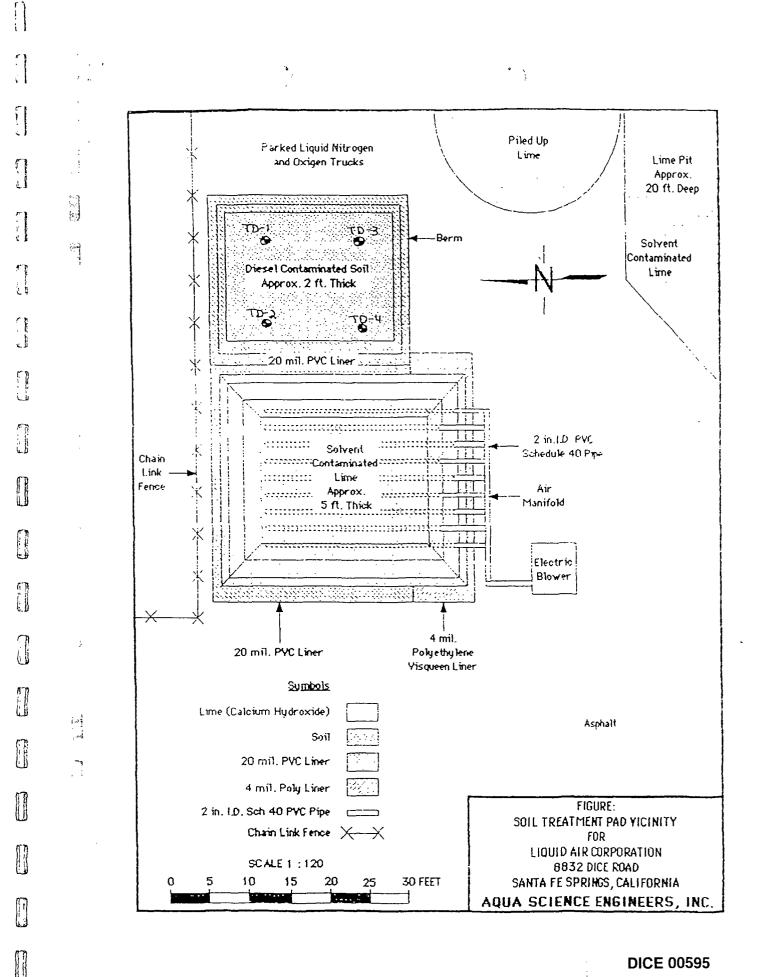
Sincerely,

Aqua Science Engineers, Inc.

J.S. Rowlands Geological Operations

Aqua Science Engineers Inc., P.O. Box 535, San Ramon, CA 94583 • 415-820-9391

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	PAGESSIONAL ANALYTICAL CHEMISTRY & ENGINEERING		Offices: Minneapolis, Minneso Tampa, Florida Coratville, Iowa Novato, Cahlornia Leawood, Kansas Irvine, California
(30 Hughes, Suite 206 🛛 Irvine, CA 92718 🗁 Pho	one (714) 380-9559 🗍 FA)	((714) 380-9832
Apr	il 5, 1990		
. Aqu 178	Mike Marello Mascience Engineers, Inc. 195 Sky Circle # E Fine, CA 92626		
. RE:	Liquid Air		
Dea	ur Mr. Marello:		
Enc	closed is the report of laboratory il 3, 1990.	analyses for s	amples received
	e remaining samples will be retu alyses completion date.	rned to you wi	thin 30 days of
If cor	you have any questions concerning antact us.	this report, ple	ase feel free to
Sin	ncerely,		
Was Rec	sfi Y. Attalla, Ph.D. gional Director		
Ene	closures		
	an equal opportun	in employer	

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aboratories, inc	REPORT OF LA	BORATORY	ANALYSIS	Tamp Coral Nova Lezw	eapolis, Minnesola a, Florida ville, Iowa to, California ood, Kansas e, California
;	TOTAL PETE 418	ROLEUM HY 3.1 METH			
PACE PROJECT # DATE SAMPLE RECEIVED MATRIX		ADDRES	ONE : (71-	95 Sky Ci ine, CA 93	cle # E 2626
PARAMETER NAME	= 6; ÷ Ţ[6104 #	PLE NUMBER 66105 TD-2		MDL/mg/Kc
Total Petroleum Hydr	ocarbons	59.6	46.5	60.8	10
Total Petroleum Hydr		45.0	م		10
	n Limit				
MDL: Method Detectio The data contained approved methodolodi direct supervision. DATA REVIEWED BY	es. All analy	ort were vses were	obtained u performed	sing EPA by me or	or other under my

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17895	Sky Park Circle	Suite E		aqua sclence engineers Inc.	(714) 833-3667
	=iquidAir	slu: Santa	Fe Spr Date 5	ampled 4-3-90	Laboratory: Pace
Sample 10	Sample/Container Type	knalyze/ liołd	Analyic for.	Nethod - Detection that	llotes/Remarks
TD-1	SDil-61.55	Δ	TPH	418.1	Normal Analysis Time
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Ø	······			EXXAL IV	
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TD-4			<u>\</u>	418.1	· · · · · · · · · · · · · · · · · · ·
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G + G 4+ 01 +	Water U + Othér Arass Tube P + Plastic	Y - Ylal 0 - Other		l Custody	Collate all samples for single analysis
Sampled by: -	mil mouth	J: Received by Lab		1	 Collate and analyze two top samples and 11 clean, do not analyze other sample.
•	· - ALCALITY MERCAL	4. Received in Ofr	•	11mn: 4.30	 Call ASE for Instructions. See attached protocol.

DICE 00598

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m Approv	ionia—Health and Weltare Agency) red OMB No. 2050—0039 (Expires 9:30 c.,/) or type. <i>(Form designed for u<u>se on ellis (12</u>:plich type#riter).</i>	60	2				rtment of Health Se bstances Control D Secremento, Ce
	UNIFORM HAZARDOUS II. Generator's US EI WASTE MANIFEST CIAICIOIDIT	J. 100	Manilast cumani No	A BI	ol is not i	ation in equired	the shaded area by Federal law
	Liguid Air Corporation 8832 Dice Rd. – Santa Fe Springs	, Ca, 90670			Nacional Docu 8784	186	<u>62</u>
	Generator's Phone (21.3.) 945-1383 (reneporter 1 Company Name 6	US EPA ID Number		C. 51	ate Transporter's II	8	8000
	Dachurchst Oll & Vacuum Co., Inc. IC	11 10 18 10 10 12 19 US EPA 10 Number	<u>977</u> 0	L	insporter's Phone ite Transporter's II		693-9881
	Designated Facility Name and Site Address 10	US EPA ID Number	<u> </u>		neporter's Phone ite Facility's ID		
20	Menno/Kerdoon 200 N. Alameda Street Myton, Ca. 90222			H. Fac	A [T 10 18 10 clitty's Phone		3 13 15 12 1
1	US DOT Description (including Proper Shipping Name, Hazard (1 1 0 8 0 0 1 3	12 Conte	Inere	13/537-710 13 Total Quantity	14. Unit	l. Weste No
G			No	Туре		W1/Vo	Biate 213
Е <u></u> Wa E b.	aste Flammable Liquid, N.O.S. UN	1993	0 0 1	TIT	1800	G	EPA/Other NONE State
	л-е 8822.			_1			EPA/Other
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d.			╁╼┖╶┸╼		┝┈┸╌┸╌┸╌		Biete
	Additional Descriptions for Meterials Listed Above		╎╷	K. Hai	ndling Codes for W		EPA/Other
	Additional Boacriptions for Materials Liaped Above 5 /0 GHS I Unit US 2/0 File			<u> </u>	01	b. d.	
		• •		с.		0.	
15	Special Handling Instructions and Additional Information						
	LOVOB & GOGGLES		— <u>_··</u>				
1 1	GENERATOR'S CERTIFICATION: 1 hereby declare that the name and are classified, packed, marked, and labeled, ar international and national government regulations						
	If I am a large quantity generator, I certify that I have a pro determined to be economically practicable and that I have me which minimizes the present and tuture threat to huma faith effort to minimize my waste generation and select the	selected the practicable me n health and the environment	ethod of tree , OR, if Iam	alment, a smal	storage, or dispo Il quantily genera	sal cur tor, I ha	rently available I ive made 6 good
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So. California Field Ottice, 1666 Newport Blvd., #116. Costa Mesa, CA 92026 Tel 714-675-5754 • Fax 714-675-5943

JECEIVED

September 2, 1988

MAR 19 1990 SAFETY DEPARTMENT

PROJECT REPORT

SITE INVESTIGATION FOR ACETONE CONTAMINATION IN SOIL

AT:

LIQUID AIR CORPORATION 8832 DICE ROAD SANTA FE SPRINGS, CA

Prepared For:

Liquid Air Corporation 8832 Dice Road Santa Fe Springs, CA

Prepared By:

Aqua Science Engineers, Inc. So. California Field Office 1666 Newport Blvd. #116 Costa Mesa, CA 92626

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DICE 00600



So. California Field Office, 1666 Newport Blvd., #116, Costa Mesa, CA 92626 Tel 714-675-5754 • Fax 714-675-5943

September 2, 1988

PROJECT REPORT

SITE INVESTIGATION FOR ACETONE CONTAMINATION IN SOIL

AT:

LIQUID AIR CORPORATION 8832 DICE ROAD SANTA FE SPRINGS, CA

Prepared For:

Liquid Air Corporation 8832 Dice Road Sante Fe Springs, CA



David M. Schultz Vice President Field Operations

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Michael Monellie

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Michael Marello Geological Operations

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INTRODUCTION

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The following is a report on the methods and findings of the soil contamination investigation project conducted by Aqua Science Engineers at Liquid Air Corporation, 8832 Dice Road, Santa Fe Springs, CA. On August 16, 1988, Aqua Science Engineers drilled two soil borings around the perimeter of a 6,200-gallon underground acetone storage tank located at the above site (Figure 1). The borings were drilled to 40 feet below the ground surface.

Soil samples were collected during drilling and subsequently submitted to a California State Certified Laboratory for chemical analysis. The samples were analyzed for acetone using EPA method 8240 (GC/MS). The results of the analysis indicate acetone concentrations in the soil samples are insignificant. The acetone storage tank is scheduled for removal.

SOIL BORING METHODS

The drilling phase was done with a Mobil Drill B53 truck mounted hydraulic rotary drill. Hollow stem eight-inch O.D. auger was used for the test borings. Two borings were drilled to 40 feet below the ground surface on opposite sides of the major and minor axes of the tank (Figure 1). Groundwater was not encountered during drilling. The borings were backfilled with the drill cuttings after soil sample collection.

GEOLOGY AND HYDROGEOLOGY

An examination of the bore hole logs (Figures 2 and 3) shows that the soils beneath the site consist of silt, sandy-clayey silt, and well-graded sand. The soil types encountered were classified using the Unified Soil Classification System (Appendix I).

The nearest LACFD test well to the site is well no. 1623L. The depth to groundwater as measured in November 1987 was 58.2 feet below the ground surface. The estimated direction of groundwater flow is southwest.

SOIL SAMPLING

Soil samples were collected in the borings using a California split spoon sampler at 5, 10, 15, 20, 30 and 40 feet. The California split spoon sampler and all drilling equipment was steam cleaned before use. The split spoon sampler was washed with a TSP and water solution between samplings.

The soil samples were collected in pre-cleaned, aluminum liner tubes and secured with aluminum foil and plastic end caps. The samples were placed in an ice chest with ice, and transported to EMSI Laboratories in Camarillo, California for analysis. A Chain-of-Custody form

accompanied the samples to the laboratory (Appendix II).

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CHEMICAL ANALYSIS

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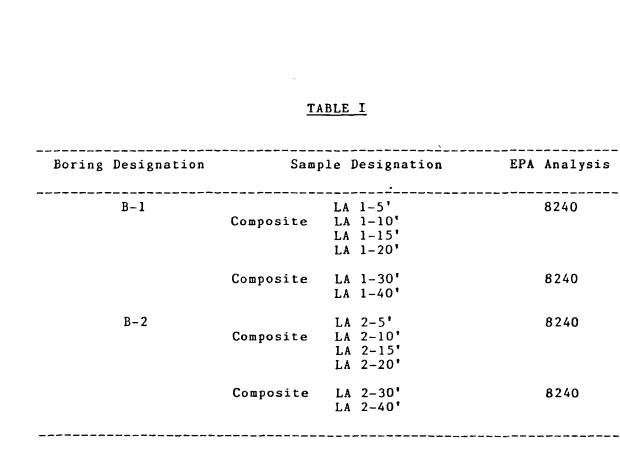
EMSI Laboratories conducted the chemical analysis using the methods indicated in Appendix III. The samples were composited as indicated in Table I. The composite samples were analyzed for acetone content using EPA method 8240 (GC/MS). Concentration values are given in ug/Kg (ppb).

Chemical analysis of soil samples indicate acetone concentrations are below detectable levels in all composite samples except for the 30 and 40-foot composite sample from boring B-2. Concentrations in this sample ranged to 6.8 parts per billion (ppb).

CONCLUSIONS

Based on the laboratory results of the soil samples collected during the soils boring project, it is the opinion of Aqua Science Engineers that no gross amounts of acetone contamination exist in the soil in the immediate area of the underground acetone storage tank at this site. However, there is no assurance that significant contamination will not be discovered during excavation and removal of the tank.

Acetone is listed on the California Hazardous Substance List (HSL), however, it is not listed as a Priority Polutant. There are no established maximum concentration values for acetone in soil or water. The 6.8 ppb acetone concentration discovered in the 30 and 40-foot composite sample from boring B-2 is considered insignificant.



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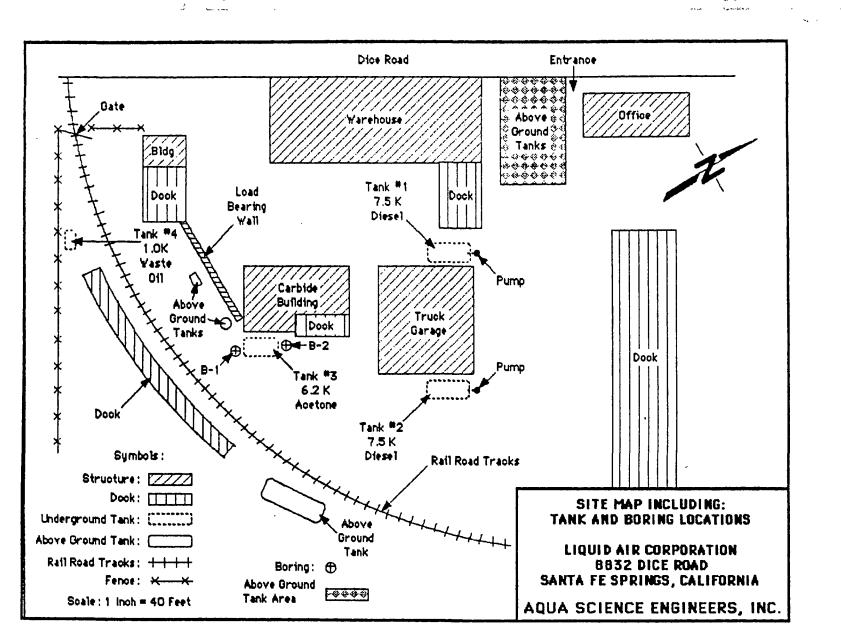
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** Detection limit for EPA method 8240 is 2 ppb



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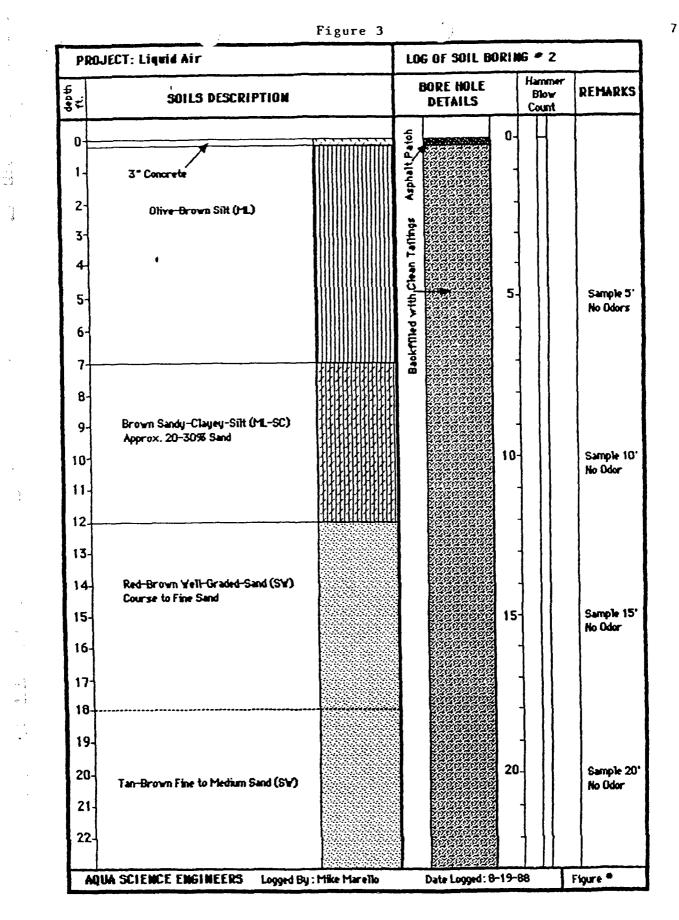
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P.O. Box 535.	San Ramon, CA 94583-0535		Cesse	aqua science Engineers inc.	(415) 820-9391
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September 6, 1988

In reply refer to 88-1423

Hike Morello Aqua Science 414 31st Street Newport Beach, CA 92661

Dear Mr. Morello:

Enclosed are the results for the analysis of four (4) soil samples (Project: Liquid Air LA 0128) that were submitted to our laboratory on August 22, 1988 for Acetone.

Aliquots of samples were composited and analyzed for Acetone by EPA Mathod 8240, Combined Gas Chromatography/Mass Spectrometry.

The analytical results are listed on the following page. If you have any questions, or if I may be of any further service, please do not hesitate to call.

Sincerely,

usephF Matt-

Joseph F. Matta Analytical Services Representative

JFH: tmh

Enclosures

File: 51501-0324

C-E Environmental, Inc. A Subsidiary of Combustion Engineering, Inc. (805) 386-5700

ENVIRONMENTAL MONITORING AND SERVICES, INC. Analytical Results Summary for AQUA SCIENCE G.O. # 51501-0342 Received on 22-AUG-88 Liquid Air LA 0128

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Date Analyzed: 25-AUG-88

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EPA HETHOD 8240

Sample ID	Customer ID	Acetone ug/kg (ppb)
CCD-880578	LA 1-5,10,15,20	ND<2
CCD-880579	LA 1-30640	ND<2
CCD-BB0580	LA 2-5,10,15,20	ND<2
CCD-880581	LA 2-30640	6.8

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Kennedy Jenks Consultants

APPENDIX B

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Underground Fuel Storage Tank Closure, 1990; by Aqua Science Engineers, Inc.



January 22, 1990

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PROJECT REPORT

UNDERGROUND FUEL STORAGE TANK CLOSURE AT:

8832 Dice Road Santa Fe Springs, CA 90670

Closure Permit No. 6555B

Prepared for:

Liquid Air Corporation 8832 Dice Road Santa Fe Springs, CA 90607

Submitted by:

AQUA SCIENCE ENGINEERS, INC. 1666 Newport Blvd #116 Costa Mesa, CA 92626

DICE 00616



January 22, 1990

PROJECT REPORT

UNDERGROUND FUEL STORAGE TANK CLOSURE AT:

8832 Dice Road Santa Fe Springs, CA 90670

.

For Aqua Science Engineers, Inc.:



David M. Schultz, P.E. Vice President Field Operations

Mark J. Fator

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Mark T. Fator Project Manager

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INTRODUCTION

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The following is a report on methods and findings of the concrete clarifier removal project conducted by Aqua Science Engineers at 8832 Dice Road, Santa Fe Springs, California. On December 27, 1989, a 2,000-gallon concrete clarifier used to store waste oil was cleaned and removed from the above location (removed on 1-3-90). The location of the clarifier, and plumbing is shown on the site plan (Figure 1). The type of product stored in the clarifier is also indicated on the site plan. A clarifier removal permit was secured with the Los Angeles County Department of Public Works and Santa Fe Springs Department Building and Safety prior to the clarifier removal (Appendix I & II).

The nearest Los Angeles County groundwater test well (#1623L) is located at the corner of Norwalk Blvd. and Perkins Ave.. It was last sampled on May 2, 1989. Depth to groundwater at this location was measured at 54.8 feet below grade.

CLARIFIER CLEANING AND REMOVAL

On December 27, 1989, a 2,000-gallon concrete clarifier was exposed for cleaning at this site. The tank was then cleaned using a high-pressure water jet. Approximately 1375 gallons of tank rinsate was removed by vacuum tanker truck, manifested and disposed of as hazardous waste by Roadwest Oil and Vacuum Co., Inc. (CAT080029770). The disposal site was DeMenno / Kerdoon, Compton, California (CAT080013352). The Uniform Hazardous Waste Manifest appears in Appendix III.

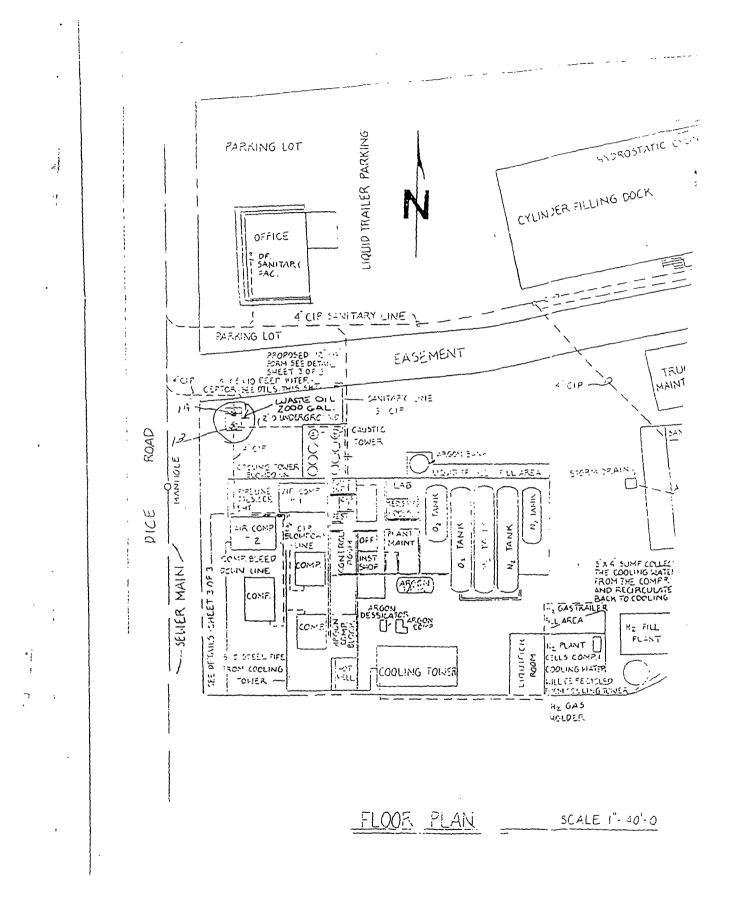
The concrete clarifier was then carefully broken up using a backhoe. The concrete was then subsequently transported to a concrete disposal site and was used for road base material.

No petroleum odors were noted during the course of the excavation. Backfill soils around the clarifier was observed to be clean and dry. No odors or discoloration were noted in the soil from beneath the concrete clarifier.

SOIL SAMPLE COLLECTION

Immediately following clarifier removal, two soil samples were collected from the native soil beneath the 2,000-gallon concrete clarifier. The sample from beneath the clarifier was collected with a backhoe, approximately two-foot below the ends of the clarifier, two feet in native soil and 12 feet below grade. The sample was then packed into a brass tube, tightly sealed and chilled immediately (1:00 PM, January 3, 1990).

The soil sample was immediately packed in ice and transported to Enseco-CRL, Garden Grove, California. A Chain-of-Custody document



accompanied the sample submitted and appears as Appendix iV.

Soil sample was taken by a representative of Aqua Science Engineers trained and experienced in soil sampling protocal under the direct supervision of a registered civil engineer.

SOIL CLASSIFICATION / BACKFILLING

Backfill soil was classified as a light brown silty sand with little cohesion. The excavation was backfilled and compacted to approximately 90% of the maximum density. The excavation was backfilled and compacted after the soil samples were collected.

Native material around the tank pit to a depth of 10 feet below grade was classified as a light brown silty sand with a moderate amount of coarse, medium and fine gravel. Permeability of the soil is gualitatively estimated to be relatively high. Groundwater was not encountered during the excavation.

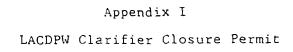
CHEMICAL ANALYSIS

The soil samples were analyzed using EPA test method 418.1 for detection of waste oil as total petroleum hydrocarbons (TPH) and EPA test 8020 for volatile aromatics.

The laboratory results indicate slightly detectable levels of petroleum hydrocarbons (Sample: 1A-6ppm, 1B-5ppm), and nondectectable levels of volatile aromatics in soil sample for modified EPA test method 8015 and 8020. The limit of detection for this test is 1ppm. Results of the test appear as Appendix V.

REMARKS / RECOMMENDATIONS

The total petroleum hydrocarbon and volatile aromatics concentrations discovered in all soil samples were basically nondetectable. This excavation was found to be clean of contamination by the standards set fourth by the Los Angeles County Department of Public Works.



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	RPPLICATION FOR CLOSUF HAZARDOUS MATÉRIALS UN.		STORACE		(Permit	
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	Mailing Address	3832 [TICE RD.	City Saw	A FE Speinstate (AZip 906
	FACILITY: Occupant Name Site Address Mailing Address Contact Person	IQUID 1	AR CORA	BRA-770N	Phone (Ziz) 9	43-1383
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	Hailing Address		"	City	State_	<u>"_Zip''</u>
	Contact Person	om_ise	ARBER_	11t10	MANAGER	
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Appendix II

Santa Fe Springs Building and Safety

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Appendix III Uniform Hazardous Waste Manifest

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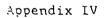
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Appendix V Laboratory Analysis Sheets

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Enseco - CRL 740 Lincoln Way . Garden Grove, CA 92641 (714) 698-6370 + (213) 598-0458 + (800) LAB-1-CRL FAX: (71+) \$91-5917 January 16, 1990 24 Analysis No.: G-9000403-001/002 AQUA SCIENCE ENGINEERS, INC. 17895 SKYPARK CIRCLE, SUITE E Date Sampled: 3-JAN-1990 IRVINE, CA 92626 Date Sample Rec'd: 4-JAN-1990 ATTN: MR. MARK FATOR Project: (LA0295) LIQUID AIR Enclosed with this letter is the report on the chemical and physical analyses on the samples from ANALYSIS NO: G-9000403-001/002 shown above. The samples were received by CRL in a chilled state, intact and with the chain-of-cuscody record attached Please note that ND() means not detected at the detection limit expressed within the parentheses. Solid samples are reported on "as received" basis. Preliminary data were provided on January 15, 1990 at 10:10 A.M. âul Cliniste Reviewed

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APPENDIX C

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- Carbide Lime, Its Value and Its Uses; 1970 by Compressed Gas Associates, Inc.
- Excerpts Foundation Engineering Handbook, edited by Hans Winterkorn and Hsai-Yang Fang, Van Nostrand Reinold Co., 1975.
- Excerpts State-of-the-Art Report, Session 12, Tenth International Conference on Soil Mechanics and Foundation Engineering, Stockholm, Sweden, June 15-19, 1981 by James K. Mitchell.
- Standard Specifications, Section 24, Lime Stabilization, 1992, Caltrans.

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CARBIDE LIME ITS VALUE AND ITS USES

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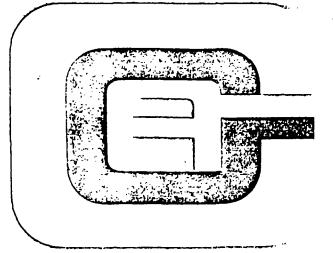
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By-Product Calcium Hydrate from Acetylene Generation a Source of High Calcium Lime

COMPRESSED GAS ASSOCIATION, INC. NEW YORK, NEW YORK



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Part Table of Potential Uses	
Part II – Carbide Lime Technical Data and Availability	
Part III - Uses in Chemical - Industrial Fields	
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Part VIII - Miscellaneous Uses	

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INTRODUCTION

Genesis of Carbide Lune - The Calcium Carbide-Acetylene Process

Carbide lime is a by-product obtained in the generation of acetylene from calcium carbide. It is variously referred to as carbide sludge, generator slurry, lime sludge, time hydrate, and other such designations. Carbide lime is better described as. by-product calcium hydrate from acetylene generation, or simply, carbide lime.

By-product calcium hydrate is found wherever acetylene is produced from calcium carbide. The calcium carbide employed for the generation of acetylene is manufactured by the reduction of high quality lime by the carbon of selected cokes in the high temperatures of the carbide electric furnacing process. Production of acetylene (C_2H_2) is accomplished by the reaction of calcium carbide with water (H_2O) in properly designed acetylene generating equipment. In this process acetylene of the

highest punty is produced from the carbon (C) of the carbide and the hydrogen (H) of the water. The process also produces the subject carbide lime or by-product calcium hydrate (Ca(OH)₂), the latter obtaining its calcium from the carbide and its hydroxide radical from the oxygen and hydrogen of the water. The chemical equation for this reaction is:

 $CaC_2 + 2H_2O \longrightarrow C_2H_2 + Ca(OH)_2$

Carbide lime is a potential top grade hydrated lime because of the high quality of the original raw materials of the process, and because of the very nature of the electric furnacing and acetylene generation steps through which the lime must pass.

By-product calcium hydrate from acetylene generation is a source of high calcium lime. Its economic and chemical usefulness is potentially comparable to that of commercial lime and hydrated lime in all fields of agriculture and farming, in building and construction, in industrial and chemical processes, and for numerous incidental purposes.

PART I TABLE OF POTENTIAL USES

Lime and hydrated lime find use in many processes. In many instances carbide lime, or by-product hydrated lime, may be employed. The following table is suggestive of potential use or application. More detailed treatment of these applications is given in the text that follows:

FIELDS OF USES	FIELDS OF USES	FIELDS OF USES	FIELDS OF USE
Farming	Paper	Textile	Meat
Soil-Conditioning	Waste Treatment	Wool Degreasing	Waste Treatment
Insecticide	Sulphite Process	Waste Treatment	i i
Fungicide	Sulphate Process	Bleaching	
Disinfectant	Soda Process	Rayon Acid Waste	Canning
	Rag Stock		Waste Treatment
	Strawboard	Soap Waste Treatment	Citric Acid Recovery
Chemical	De-inking	Calcium Stearate	
Waste Treatment	Bleaching	Glycerine	Sugar
Pharmaceuticals		Fatty Acids	Waste Treatment
Strychnine	Ferrous Metals	Fally Acids	Cane Relinery
Quinine	Waste Treatment	Sewage	Beet Relinery
Organic Processes Lactic Acid	Manganese Concentration	Waste Treatment	-
Citrie Acid	Wire Mill Cleaner	Water Softening	Distilling
Ethylene Oxide	Casting Mold Liner	Lime Soda Process	Waste Treatment
Ethylene Glycol	Ore Reduction	Lime Process	Tartrate Recovery
Inorganic Processes		Plastics	Yeast Production
Caustic Soda	Non-Ferrous Metals	Waste Treatment	1
Calcium Salts	Waste Treatment		Tanning
Chlorinated-Hydrocarbons	Magnesium Production	Coal & Coke	Waste Treatment
Trichloroethylene	Aluminum Production	Mine Waste	Hide Soaking
Perchloroethylene	Cadmium Production	Treatment	Glue
Bleaches	Flotation Process	Ammonia Recovery	Gelatine
	Coating Cinder Pots	Gas Purification	
Building		Ammonia Still	
Road Stabilization	Petroleum	Paints	Glass
Sand-Lime Bricks	Waste Treatment	Water Paints	Sand Washing
Refractory Bricks	Emulsion Breaking	Whitewash	Lime Glass
Lime Mortar	Heavy Greases	Varnish	
Lime Coment	Catalytic Cracking	Casein Paints	Dairy
Concrete Waterproofing	Washing Gases	Linseed Oil	Waste Treatment

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PART II CARBIDE LIME TECHNICAL DATA AND AVAILABILITY

Utility of Carbide Lime. One of the highest author ities on the subject of lime and its uses set forth the foltowing observations on the subject, all of which has equal applicability to the utility of carbide lime:

"The great utility of lime has not been generally known, and the general impression prevails that lime is merely a cheap building material that may be used in a few technical processes. It would lead to important economic betterments if the scientific, industrial, and business world realized that of all the nation's raw materials and manufactured products, none is more richly endowed than is lime with intrinsic merits and capacities for broad application to our industrial and farm life.

"Line is much more than a building material. It is a chemical and a most versatile one. It is distinguished first of all by the large number of different functions that it will perform. In its construction uses, it performs at least nineteen different functions. In its chemical uses, the number is much larger, and there remain many others that may reasonably be expected to result from the systematic research and experimental work now being carried on in the matter of lime and its properties."

Solids Content and Drying. The generation of acetviene from calcium carbide, reacted with water in a "wet" generator, produces a slurry of calcium hydroxide (calcium hydrate). The usual solids concentration of the slurry from "wet generation" is from 10 to 12 per cent. It is possible to concentrate this slurry to about 30 or 40 per cent solids by decanting or by the use of a mechanical thickener and to between 45 to 55 per cent solids by prolonged pond settling. Commercial operations have demonstrated that the slurry can be concentrated satisfactorily through a range up to 60 per cent solids in a centrifuge. Experimental tests have indicated that drying of the 60 per cent solids material to a moisture content of from 1 to 3 per cent can be accomplished in a flash drier without excessive carbonate formation, Commercial operation has further demonstrated that 60 per cent solids hydrate can be calcined in a rotary kiln to produce a high quality calcium oxide of unusual reactivity; the product is inherently of extreme fine particle size and may be produced in either applomerated or briquetted form.

The generation of acetylene from calcium carbide, reacted with limited quantities of water, in a "dry" generator produces a commercially dry calcium hydroxide of extreme fineness, high chemical quality, and essentially free of foreign coarse impurities. Commercially, "dry" generator product is limited as to availability because the production of acetylene and carbide lime is predominately via the "wet" generation process.

Dilute or concentrated sturry can be dried effecrively by mixing it with quicklime. The surplus water in the carbide lime slurry slakes the quicklime such that the per cent solids of the resultant mixture is appreciably increased even to the extent of achieving a commercially dry hydrate. This is accomplished in a process consisting essentially of a slurry tank with manually controlled discharge, a quicklime feeder, and a mixing tank or hydrator. The quicklime hydration develops considerable heat which acts to vaporize some of the water and the volatile impurities of the carbide lime. The resultant hydrated lime product is completely free from sulphide and objectionable odors and is amenable to further processing as to improvement or physical sizing, and hence is suitable for various end uses in the chemical, industrial, building, or agricultural fields.

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Typical Chemical Composition. The following is a typical chemical analysis of carbide lime as compared to commercial hydrate:

CALCIUM HYDRATE ANALYSES (Dry Basis)

	Acetylene Generator By-Product Hydrate		Commercial Hydrate		
Fr	om	From	Sample	Sample	
Gene	rator	Pond	1	2	
CalOH)2	6.50	92.22	96.44	92.40	
Available CaO	1.00)	(69.80)	(72.50)	(69.90)	
CaCO3 1	.25	2.82	1.76	3.80	
SiO ₂ 1	1.10	1.46	0.81	1.30	
R203(A1203, Fe203) (0.50	2.66	0.38	0.90	
Mg (OH)2 (0.25	0.16	0.57	1.40	
s (0.15	0.17	0.0 3	0.10	
Ρ	-	0.01	0.01	0.01	
Free Carbon	0.25	0.50	-	-	

Color, Odor, and Foreign Materials. It is to be recognized that carbide lime is a "by-product" as produced by the carbide-acetylene process; slight variations in chemical analysis and presence of alien matter will exist depending on local conditions at the point of production.

The by-product hydrate has a gravish color and a characteristic acetylene odor as it comes from the generator; this odor passes away with time, but the gravish color results largely from the very small percentage of combined sulphur contained in the slurry. Also contained in the slurry are small amounts of ferrosilicon and carbon.

Particle Size and Magnesium Content. Carbide lime is extremely fine in particle size, comparable to and usually finer than most commercial hydrated limes. It has a number of advantages, such as:

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1st: Complete Hydration: That is, freedom from unstaked time, because it is made in many times its own weight of water, while ordinary hydrated time is made with only a fraction of its own weight of water in order to avoid subsequent drying, which is inconvenient and expensive

2nd: Fine State of Sub-division or Fineness: In a published test of dried carbide lime, 99.9 per cent passed through a 300 mesh sieve; in another series of tests 92 to 98 per cent passed through a 325 mesh screen, while ordinary commercial hydrated lime does not show as good a percentage through a 200 mesh sieve. This extreme fineness is caused by the nature of its formation from calcium carbide. The acetylene on liberation has a tendency to crack or break open ordinary fine grains of lime into still finer particles. The heat and excess water in the generator also present ideal conditions for the production of very fine particles of hydrated lime. Conspicuous advantages of this fine state of sub-division are quicker and more efficient reactivity and the need for a smaller amount of carbide lime than is the case with ordinary hydrated lime. This finer sub-division is particularly valuable when carbide lime is used in the chemical, industrial, and construction fields of usage,

3rd: Low Magnesium Content: There is only a trace of magnesium present, because the lime originally used in making calcium carbide must be extremely low in magnesium. Low magnesium and high calcium are especially necessary in most chemical uses of lime, because the resulting magnesium products dissolve very readily in water, while calcium products are insoluble and can easily be removed by precipitation.

4th: Price: Users of hydrated lime can in many instances effect a saving of one-third to one-half of their present expenditure for lime, by arranging to secure carbide lime from a nearby acetylene generating plant. A very high grade of by-product hydrated lime can be purchased at attractively lower prices.

Bulk Density vs. Per Cent Solids. Following are typical weight ratio and density data of carbide lime at various per cents of solids content based on a specific gravity of solids of 2.14.

Solids	Weight Ratio	
Content	Lb. Carbide Lime per	Density
%	lb. available CaO	Lb. per gai.
10		8.8
20	···· 7. 3	9.3
30		9.9
40	3.6	10.6
50	2.9	11.4
60	2.4	12.3

Per Cent Solids vs. Available CaO. The available calcium oxide content of carbide time is often the gage by which its value or usefulness is measured. By-product calcium hydrate has a higher available calcium oxide content than many high grade commercial hydrated limes. Following are typical data relating per cent solids of carbide lime per ton of available CaO:

Solids							ĥ										G	ial. Car	bide
Content																۱	_i	me per	Ton
%																A	۱v	ailable	C۵O
10																		3,300	
20																		1,560	
30																		960	
40																		670	
50 .	 																	510	
60 .	 •	•	•	•					•				•					400	

Handling and Pumping. Pumping of carbide time has been demonstrated to be feasible in solids concentrations as high as 40 per cent. Carbide time with a solids content in the range of 50 to 60 per cent is amenable to digging and truck hauling. Tank truck or car haulage of the lesser solids content slurnes has been demonstrated satisfactorily.

Handling and Transportation. Water slurries of carbide lime, containing up to 40 per cent solids by weight, are fluid enough to be pumped satisfactorily with standard type centrifugal pumps. At about 50 per cent or more solids content, the concentration reached by prolonged storage in pits or ponds, the consistency of the carbide lime is that of a fairly firm putty which can be handled effectively by digging with power shovels. Carbide time in the intermediate 40 to 50 per cent solids content semi-fluid state can either be fluidized for pumping by adding water or be further concentrated to a putty firm enough for shovelling by continued settling and decanting of supernatant clear water.

The consistency of carbide time can be readily altered to permit efficient handling. If the dilute slurry containing 10 to 12 per cent solids (which is obtained from wet type generators) is too dilute for economical shipment, or for intended end use, it can be thickened by settling and decanting or draining off the surplus water. Generator installations in industrial plants are commonly provided with subsurface settling pits or elevated tanks equipped with clear water decanting facilities to accomplish this thickening. In the case of settled carbide lime, addition of water and positive agitation is required to develop a slurry of uniform density. This ap itation can be accomplished with a submerged jet of com pressed air, steam or high pressure water applied through pipes or nozzles in fixed position, or by menual appl tion of portable equipment. Mechanical means

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manually operated hoes and power driven rotating paddies can also be used effectively.

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Carbide lime, of the plastic putty-like consistency developed after prolonged settling in storage pits or ponds, is firm enough for clean handling by power operated shovels of the clam shell or dipper type, or by scrapers or scoops operated from drag lines. This material can be transported in hopper body trucks which are sufficiently water tight to prevent leakage to the roadway, by river barge, and by rait in hopper cars of the type used for transporting cement in bulk. Rail shipment in open hopper or gondola cars is also feasible if a temporary cover is provided to prevent loss by leakage of slurry which might be developed by exposure to rain or snow in transit.

Fresh generated slurry is most economically utifized closest to the point of production; reduction of moisture content by one of several methods is progressively more essential economically, prior to hauling to points of usage, to reduce the gross volume per unit of solids.

Fineness vs. Settling. In spite of the fineness of carbide lime particle size, the solids of a slurry are generally many times faster settling than the solids of a water-lime mixture made directly from burned lime. This difficulty may be overcome in most cases by utilizing a surge tank with agitator. If this latter method should prove inadequate under certain process conditions the difficulty may be overcome by grinding the wet slurry in a colloid mill. When so treated, it is known that the slurry can be held in tank storage for a week or more without appreciable settling, and in addition is less apt to clog valves or lines of a pumping system.

Processing of Carbide Lime for the Manufacture of Brick and Hydrated Lime. A prominent producer of gas products in Hawaii has reported successful utilization of the by-product carbide lime of his carbide acetylene generation operations. This enterprising producer has equipped his operations with process equipment which enables him to recover approximately one ton of hydrated lime for each ton of calcium carbide consumed by the acetylene generator. With this equipment full utilization of the available by-product carbide lime is accomplished in two different ways; first and oldest, to supply lime for the manufacture of sand-lime brick; second in the manufacture of hydrated lime.

Sludge from the drain pit of the acetylene generator is pumped over a 1/8 in, mesh screen to remove coarse particles and thence runs by gravity to the feed ring of a 15 ft, diameter by 8 ft, deep Dorr thickener. Here it is thickened from an original concentration of about 10 per cent solids to one of 40 per cent solids, the clear overflow going to waste.

For the manufacture of brick, the thickened slurry

is pumped to a 3 ft by 4 ft. Oliver vacuum filter. The resulting cake contains about 55 per cent solids. The filtrate is returned to the Dorr thickener. It is usually clear, but sometimes an old cloth will develop holes and give a cloudy filtrate. A 1 1/2 in: Oliver diaphragm slurry pump is used to feed the filter. The thickened cake falls near the brick mixing pan and is shoveled into the pan as required.

For the manufacture of hydrated lime, thickened sludge not required for brick manufacture is pumped into a 232 cu. It. trailer tank and hauled to the lime plant. Here it is pumped into a 9 ft diameter by 8 ft, deep agitated storage tank. A Carter Humdinger plunger pump is used to empty the trailer and also to pump the sludge from storage to the hydrator slurry feed tank. Here it is mixed with water from the hydrator Schneible wet dust collecting system and fed to a Kuntz continuous hydrator. Here it is mixed in proper proportions with crushed quicklime from the lime kilns. The hydration or slaking reaction develops quite a lot of heat, so that it is necessary to supply about twice as much water as is theoretically required. The excess boils off and thus removes the extra heat and the vapor carries with it odorous impuriites in the sludge. Hydration temperature should be between 215 and 250 deg. F. for best results, Quicklime is fed by a star feeder and slurry feed is adjusted annually to get the proper operating temperature.

The dry crude hydrate discharged from the hydrator is elevated and dumped into a surge bin. From here it is fed by an automatic load controller to a No. 1 Raymond swing hammer mill with double whizzer separator. The coarse impurities are discharged and conveyed by a vacuum pneumatic conveyor to a storage bin. This product is sold for agricultural lime. The purified hydrate, 99+ per cent through 200 mesh and about 70 per cent CaO, is separated from the mill air stream by a cyclone collector and a set of filter bags. These discharge into the finished lime storage bin. The product is bagged in 50 lb. bags as chemical hydrate lime by a 2-spout Bates packer, or is loaded into bulk shipping tanks for local customers.

While the sludge is rather low in sugar soluble lime, total CaO is quite high. Its use in quantities up to 10 per cent of the product, dry basis, does not seem to impair product quality. No sulphide can be detected in the finished lime, and it does not have any sludge odor, even when it is acidified and boiled.

Availability of Carbide Lime. Carbide lime, a top grade by-product calcium hydrate equivalent in many characteristics to top grade commercial hydrated lime, is available throughout industrial and farming areas – wherever calcium carbide is generated for production of acetylene. Classified sections of local telephone directories generally list producers or sales agents of "Acetylene" who would normally be in a position to advise where carbide lime would be available. **SPECIAL ANALYSIS**

A Supplement to BNA's Air & Water Pollution Control

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May 12, 1993

Judging How Best To Budge The Sludge

by Beth L. Starr

Option one — Incineration. Option two — Surface disposal. Option three — Land application. Confusion abounds as thousands of wastewater treatment facilities and sludge handling companies prepare to comply with the extensive requirements of the Environmental Protection Agency's new rule on the use or disposal of sewage sludge via these three alternatives. The 267-page rule (with preamble) is one of the most comprehensive multi-media packages of national standards, contaminant limits, and monitoring, recordkeeping, and management practices ever to be promulgated under the federal Clean Water Act, according to EPA.

The rule, issued on Feb. 19 under 40 CFR Part 503 of the Water Act, regulates by permit the use and disposal of sewage sludge by some 7,500 publicly owned treatment works, 1,700 privately and federally owned treatment works, nearly 6,000 septage haulers, and 200 incinerators.

Although the agency intends to include the requirements of the regulations in sewage sludge permits issued under the Water Act's National Pollutant Discharge Elimination System permitting program, the rule is self-implementing. This means that the regulations can be enforced by EPA or through citizen's lawsuits before sludge use and disposal permits are issued.

Affected parties may either obtain a separate sludge use and disposal permit or have the sludge requirements incorporated into their overall NPDES permit. Sludge contaminant limits are set in the rule, but certain facilities, such as incinerators or some types of surface disposal facilities, may be required to have site-specific limits developed by the permitting authority. For now, permits will be issued in phases by EPA through its regional offices, but the ultimate goal is to have states develop and operate their own federally approved sludge permitting authority. For more informa-

Ms. Starr is senior editor of BNA's Water Pollution Control. tion on the sludge rule, see Water Pollution Control, Tab Section 901.

The rule does not apply to the use or disposal of sludge generated at industrial facilities during the treatment of industrial wastewater. Sewage sludge and other wastewater solids disposed of in bulk in municipal solid waste landfills or used as landfill cover material is regulated separately by solid waste landfill regulations (40 CFR Part 258) that were issued jointly under the Water Act and the Resource Conservation and Recovery Act.

Robert Bastian, an official in EPA's Office of Wastewater Enforcement and Compliance, told BNA that the sludge regulations will affect generators, processors, users, transporters, and disposers of sewage sludge or products derived from sewage sludge. It's a common-sense regulation, Bastian said: if you generate sludge or change the nature of the sludge in any way, you need a permit. However, formal permit application forms do not exist yet. EPA currently is developing a generic federal application form.

The new rule is generating a lot of questions from the regulated community, according to several state sludge program coordinators and EPA regional officials interviewed by BNA. "A lot of the questions have to do with pathogen reduction and [compliance] deadlines," Michael Stevens of the Georgia Department of Natural Resources told BNA. The regulations are quite complex, Stevens continued, and at first glance, it is not clear to the regulated community that there are a number of sludge use and disposal options available. (See Box on p. 3 for a summary of pathogen treatment processes required under the rule).

Al Keller, state sludge program coordinator for the Illinois Environmental Protection Agency, added that the regulated community "must fully understand the definition of who is a preparer/applier [of sludge]," to be able to comply with the regulations. In addition, applicants "need a better understanding of pathogen and vector control [to deter-

Copyright © 1993 by The Bureau of National Affairs, Inc 0690-0396/93/\$0+\$1.00 mine] whether they are in compliance with the requirements of those sections of the rule," he continued. (See Box on p. 4 for a summary of the rule's vector attraction reduction requirements).

What Permittees Need To Know

The first sludge rule provision to become effective is the monitoring and recordkeeping requirement, Rod Geisler of the Kansas Department of Health and Environment told BNA. Affected parties must begin monitoring and recording pathogen and pollutant levels in sludge under the new rule by July 20. Geisler said this "may be the hardest thing to do because some people may be used to just hauling the sludge and spreading it out" without having to keep any records or monitoring information.

Bastian concurred, "The first thing that's enforceable [under the sludge rule] is the recordkeeping and monitoring requirement." The regulated community must get ready to comply with the immediate deadline at hand and should be aware of subsequent deadlines falling over the next year or so, he continued. The rule says that compliance with all Part 503 standards is required within 12 months of its publication. This means that by Feb. 20, 1994, compliance must be achieved for all other activities involving land application, surface disposal, or incineration of sewage sludge. However, Bastian added, if construction of new pollution control facilities is needed to achieve compliance, then compliance is not required until Feb. 19, 1995.

All treatment works treating domestic sewage, including non-dischargers and sludge-only facilities, must apply for a permit, he continued. The definition of "TWTDS" includes facilities that generate, process, or otherwise control the quality of sewage sludge or the manner in which it is used or disposed, Bastian explained. However, commercial handlers that only distribute or land-apply the sewage sludge without changing its quality are not automatically considered TWTDSs. They are not required to submit permit applications unless specifically requested to do so by the permitting authority, which for the time being is EPA.

TWTDSs include disposal facilities such as sewage sludge incinerators, monofills, and other surface disposal sites, Bastian said. Land where sewage sludge is beneficially used, such as farmland and home gardens, generally is not considered a TWTDS, he noted.

EPA Region 8's Bob Brobst told BNA that he is telling facilities not to wait until July 20 to begin monitoring. "Analyze all the [designated] metals before that date," he said. "The ultimate loss [to someone who did not comply with the recordkeeping and monitoring requirements for a particular site] is that EPA could eliminate that site so that sludge could no longer be applied," Brobst said.

Pathogen reduction seems to be the hardest part of the regulation to get across to people, Brobst continued. The requirement is simple: "Thou shalt not be above a certain limit," he said, but it's the concept of pathogen destruction that seems to be a big issue.

Brobst said he also anticipates some problems regarding the public's perception of septage haulers. "Septage haulers are chronic complaint-getters," he noted. EPA is going to see citizens' groups try to use the sludge regulations "to [take care of] things not addressed in the rule, such as odors and land-use issues," he predicted. To be better prepared for such actions, Brobst suggested that septage haulers "do a three-part bill" for recordkeeping purposes. One part should be filed in the hauler's environmental records, the second part should be sent to the hauler's accountant, and the third part should be sent to the customer, he said.

Need-To-Know Deadlines

The following deadlines become effective under the sewage sludge use and disposal regulations:

► July 20 — Begin monitoring for pollutants (except total hydrocarbon emissions) and keep records that include how various requirements were met.

► August 18 — For facilities seeking site-specific permit limitations and all sewage sludge incinerators, submit a sludge use and disposal permit application to EPA. Owners of surface disposal facilities also may request site-specific permit limitations at this time. In the future, proposed new facilities affected by the rule must apply for a permit 180 days before beginning operation.

▶ Feb. 19, 1994 — Comply with all land surface disposal, incineration, and land application requirements. Sludge-only TWTDSs that do not have NPDES permits (and that are not required to have site-specific limits) must submit with their sludge use and disposal permit application certain limited data. Required information includes the activities conducted by the applicant; the name, mailing address, and location of the TWTDS; the operator's name, address, telephone number, ownership status, and status as federal, state, private, public, or other entity; and any sludge monitoring data the applicant may have, including available groundwater monitoring data.

► At least 180 days before an NPDES permit expires – Submit permit applications according to NPDES permit renewal procedures and including provisions addressing sludge rule requirements.

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TABLE 1: PATHOGEN TREATMENT PROCESSES

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PROCESSES TO SIGNIFICANTLY REDUCE PATHOGENS (PSRP)

For the purposes of pathogen control, sewage sludge is classified into two categories, Class A and Class B. All sewage sludges that are to be sold or given away in a bag or other container, or applied to lawns or home gardens must meet Class A pathogen requirements. All sewage sludge intended for land application must meet at least the Class B pathogen requirements.

The following processes may be used to significantly reduce pathogens in sludge (these help meet Class B requirements):

► Aerobic Digestion — Sewage sludge is agitated with air or oxygen to maintain aerobic conditions for a mean cell residence time and temperature of between 40 days at 20 degrees Celsius and 60 days at 15° C.

• Air Drying — Sewage sludge is dried on sand beds or on paved or unpaved basins for a minimum of three months. During two of the three months, the ambient average daily temperature is above 0° C.

► Anaerobic Digestion — Sewage sludge is treated in the absence of air for a mean cell residence time and temperature of between 15 days at 35° C to 55° C and 60 days at 20° C.

• Composting — Using either the within-vessel, static aerated pile, or windrow composting methods, the temperature of the sewage sludge is raised to 40° C or higher for five days. For four hours during the five days, the temperature in the compost pile exceeds 55° C.

• Lime Stabilization — Sufficient lime is added to the sewage sludge to raise the pH of the sewage sludge to 12 after two hours of contact.

PROCESSES TO FURTHER REDUCE PATHOGENS

The following methods may be used to further reduce pathogen content in sludge (these help meet Class A requirements):

► Composting — Using either within-vessel or static aerated pile composting, the temperature of the sewage sludge is maintained at 55° C or higher for three days. Using windrow composting, the temperature of the sewage sludge is maintained at 55° C or higher for 15 days or longer. During this period, a minimum of five windrow turnings are required.

• Heat Drying — Sewage sludge is dried by direct or indirect contact with hot gases to reduce the moisture content of the sewage sludge to 10 percent or lower. Either the temperature of the gas in contact with the sewage sludge exceeds 80° C or the wet bulb temperature of the gas in contact with the sewage sludge leaves the dryer exceeds 80° C.

Heat Treatment — Liquid sewage sludge is heated to a temperature of 180° C or higher for 30 minutes.
 Thermophilic Aerobic Digestion — Liquid dewatered sewage sludge is agitated with air or oxygen to maintain

aerobic conditions and the mean cell residence time for the sewage sludge is agrated with air of oxygen to maintain aerobic conditions and the mean cell residence time for the sewage sludge is 10 days at 55° C to 60° C.

▶ Beta Ray Irradiation — Sewage sludge is irradiated with beta rays from an accelerator at dosages of at least 1.0 megarad at room temperature.

► Gamma Ray Irradiation — Sewage sludge is irradiated with gamma rays from certain isotopes such as ⁶⁰Co and ¹³⁷Ce, at dosages of least 1.0 megarad at room temperature.

▶ Pasteurization — The temperature of the sewage sludge is maintained at 70° C or higher for at least 30 minutes.

Applicants may be required to submit permit applications earlier than the times noted above. In this case, permit applications are due within 180 days of the request.

Annual reporting of monitoring data is required of all Class I sewage sludge management facilities (i.e., the 1,600 pretreatment POTWs and 400 other "designated" TWTDSs). Annual reporting also is required of other "major" POTWs — those with a design flow of 1 million gallons per day or more, or serving a population of 10,000 people or more.

Suggestions From The Pros

As for enforcement of the sludge rule, EPA's Bastian said, "A lot of what is going to be considered noncompliance is still unknown." He advised affected parties to keep asking themselves what they have to do to stay out of trouble.

Several of those interviewed by BNA had other

suggestions that they said could help permittees maintain compliance.

Brobst of EPA Region 8 said, "Don't be afraid to ask questions." Claiming not to know the regulation will not be a defense, he said.

Kansas' Geisler advised owners and operators of affected facilities and businesses to attend seminars and workshops, and to hire consultants if needed. "When you get to a certain point, or when it comes down to the nitty gritty," get outside help, he said. Also, Geisler suggested that affected parties get into the routine of keeping records — immediately.

Prepare for extra expenses associated with compliance, Illinois EPA's Keller noted.

Finally, John Dunn of EPA Region 7 urged permittees to remember that nitrogen is a pollutant of concern and is likely to draw a lot of attention in the sludge rule permitting program. Use good farming methods to "keep sludge where you put it."

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TABLE 2: VECTOR ATTRACTION REDUCTION REQUIREMENTS

Vector attraction reduction decreases the potential for spreading of infectious disease agents by insects, rodents, and birds. The following methods can be used to meet the sludge rule vector reduction requirement:

(1) Aerobic or Anaerobic Digestion — The mass of volatile solids (VS) is reduced by 38 percent or more. VS reduction is measured by comparing the raw sewage sludge mass prior to stabilization with the sewage sludge mass ready for use or disposal. This criterion should be readily met using properly designed and operated anaerobic digesters, but not as readily with typical aerobic digesters. POTWs with aerobic digesters may have to use alternatives three or four below to meet vector attraction reduction requirements.

(2) Anaerobic Digestion — If 38 percent VS cannot be achieved, vector attraction reduction can be demonstrated by further digesting a portion of the digested sewage sludge in a bench scale unit for an additional 40 days at 30° C to 37° C or higher and achieving a further VS reduction of less than 17 percent. If the volatiles in the extracted portion cannot be further reduced by 17 percent or less, a stable material has been shown to exist in the digester.

(3) Aerobic Digestion — If 38 percent VS cannot be achieved, vector attraction reduction can be demonstrated by further digesting a portion of the digested sewage sludge with a solids content of 2 percent or less in a bench scale unit for an additional 30 days at 20° C. and achieving a further VS reduction of less than 15 percent. If the volatiles in the extracted portion cannot be further reduced by 15 percent or less, a stable material has been shown to exist in the digester.

(4) Aerobic Digestion — Specific oxygen uptake rate (SOUR) is less than or equal to 1.5 milligrams O₂/hrgram of total solids at 20° C. If unable to meet the SOUR criteria, POTWs may be able to meet the vector reduction requirements using alternative three.

(5) Aerobic Processes — (e.g., composting) Temperature is kept at greater than 40° C for at least 14 days and the average temperature during this period is greater than 45° C.

(6) Alkaline Stabilization — pH is raised to at least 12 by alkali addition and, without the addition of more alkali, remains at 12 or higher for two hours and then at 11.5 or higher for an additional 22 hours.

(7/8) Drying — Total solids is at least 75 percent when the sewage sludge does not contain unstabilized primary solids and at least 90 percent when unstabilized primary solids are included. Blending with other materials is not allowed to achieve the total solids percent.

(9) Injection — Liquid sewage sludge (or domestic septage) is injected beneath the land surface with no significant amount of sewage sludge present on the surface after one hour. Sewage sludges that are considered Class A for pathogen reduction must be injected within eight hours of discharge from the pathogen reduction process. This alternative may be used for bulk sewage sludge that is land applied to agricultural land, forest, public contact sites, or reclamation sites; domestic septage that is land applied to agricultural land, forest, or reclamation sites; and sewage sludge or domestic septage placed in a surface disposal site.

(10) Incorporation — Sewage sludge (or domestic septage) that is land applied or placed in a surface disposal site is incorporated into the soil within six hours of application. Sewage sludge that is Class A for pathogen reduction which is land applied must be incorporated within eight hours of discharge from the pathogen reduction process. This alternative is applicable to bulk sewage sludge land applied to agricultural land, forest, public contact sites, or reclamation sites; domestic septage that is applied to agricultural land, forest, or reclamation sites; and sewage sludge or domestic septage placed in a surface disposal site.

(11) Surface Disposal Daily Cover — Sewage sludge or domestic septage placed in a surface disposal site is covered with soil or other material at the end of each operating day.

(12) Domestic Septage Treatment — The pH of domestic septage is raised to 12 or higher by alkali addition, and without the addition of more alkali, remains at 12 or higher for 30 minutes. This alternative is applicable to domestic septage applied to agricultural land, forest, or reclamation sites, or placed in a surface disposal site.

One of the vector attraction reduction alternatives 1-10 must be used when bulk sewage sludge is applied to agricultural land, forest, public contact areas, or reclamation sites. One of the alternatives 1-8 must be used when bulk sewage sludge is applied to lawns or home gardens or sewage sludge is sold or given away in a bag or other container for land application. One of the alternatives 1-11 must be met when sewage sludge is placed in a surface disposal site. Although domestic septage also can be treated the same as sewage sludge, when it is handled as "domestic septage" rather than sewage sludge, one of alternatives 9, 10, or 12 must be met when it is placed in a surface disposal site.

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trated by liquid water. They can, however, be penetrated by water vapor. This takes place slowly in actual field installations and, more rapidly, in the thawing phase of the seze-thaw test when water vapor from the surrounding Armer atmosphere will move into and condense in the cold core of the test specimen. With soil materials of the indicated character, freeze-thaw tests should be conducted even for construction in areas where freezing does not normally occur. In these cases, the real function of the test is to "pump" water vapor into the specimen in a similar manner as would occur over a longer time period under natural conditions beneath a pavement. Without such consideration of the dimensions and rates of transportation and reactions involved in the standard testing of normal materials and of the need for changes in testing necessitated by abnormal system properties that are produced by chemical additives, it is impossible to judge the beneficial or adverse effect of an additive. The scientific basis for accurate judgment in such cases has been laid in the fundamental investigation by Winterkorn, Gibbs, and Fehrman (1942). Much

of the published work on the alleged "beneficial" effect of alkaline admixtures on the quality of soil-cement is irrelevant or misleading (Winterkorn, 1964).

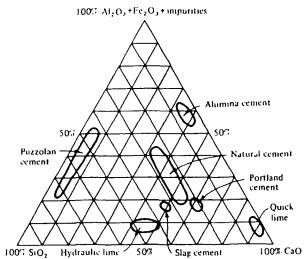
Equipment Requirements Depending on the size, importance, and circumstances of the job, soil stabilization with portland cement, or any other stabilizer, may be achieved with means that range from the most primitive handtools for comminution, mixing, and densification, to very sophisticated "single pass" machines. Best usage of the various types of currently available construction equipment is described and illustrated in the Soil-Cement Construction Handbook (PCA, 1956).

wing and Protective Surface As soon as possible after compaction, the soil-cement should be protected against loss of moisture which is needed for the hydration and hardening of the portland cement. In recent years most soil-cement has been cured with bituminous material, but other materials, such as waterproof paper, or moist straw or dirt, are entirely satisfactory. The types of bituminous materials most commonly used are RC-2, MC-3, RT-5, and asphaltic emulsions. Rate of application varies from 0.15 to 0.30 gallons per square yard. When the surface is to be used immediately, the bituminous material should be blotted with sand (NLA, 1972).

2. Soil Stabilization with Lime

Introduction. The Place of Portland Cement Among other Hydraulic Bonding Agents Hydraulic cements are mineral powders of such composition that they react with water to form strongly cemented systems. The common hydraulic cements are mixtures of calcium silicates and aluminates and include the portland-, natural-, slag-, and alumina cements. The ranges in primary chemical composition (SiO2; CaO: $Al_2O_3 + Fe_2O_3$) of these cements is shown in Fig 8.11. which also shows the compositional ranges of quick lime, hydraulic lime, and puzzolan cement. From the location of their respective compositional ranges one could conclude that it is possible to make a portland cement out of a mixture of hydraulic lime and puzzolan. Here it must be remembered that portland cement is legally defined, not only by its elementary composition, but also by the formation of cefinite Ca-silicate and aluminate compounds at intering temperatures, and by pulverization of the hard dinker in a certain particle size range. Within this compostional definition of portland cement fall several types of

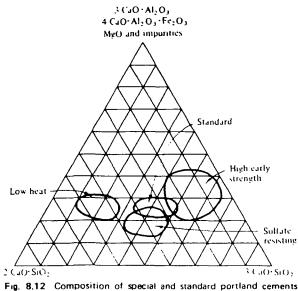
Reference: Foundation Engineering Handbook, van Nostrand Reinhold Co., 1975

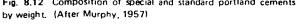




cement that are used for particular purposes. These are shown in Fig. 8.12 (Murphy, 1957). We may now stipulate that:

- The portland cement compositional range gives the most desirable end product in reaction with water;
- (2) The legally defined portland cement, containing the right chemical components and the standardized particle size range, will attain the desired strength and durability properties within a few days, or at most weeks;
- (3) According to thermodynamics, the ultimate equilibrium products depend only on the composition, including the respective concentrations, and the temperature and pressure conditions of the system, but the times required for reaching equilibrium may vary tremendously depending upon the particular components that make up the initial system.





, edited by Hans Winterborn and Hsai-Yang Fang,

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Therefore, given sufficient time, the hydration products of portland cement may be duplicated by combining, at normal environmental temperature, two or more of the primary components, i.e., calcium oxides (CaO), SiO₂, and $Al_2O_3(Fe_2O_3)$ in the right proportions in an aqueous system. Since most soils contain silica and aluminosilicates, simple addition of quick or hydrated lime and water may suffice to establish the desired composition. The critical question is, will the rate of reaction be large enough that the final cementing compounds will be formed within a reasonable period of time? Experience has answered this question in the affirmative for mixtures of certain clay soils with quick or hydrated lime in the presence of water, and has thus laid the foundation for lime stabilization of clay soils with or without admixture of reactive siliceous compounds such as puzzolans, infusorial earth and certain fly ashes.

Types and Grades of Lime The construction trade recognizes the following types of lime materials:

Туре	Formula
Calcia (high-calcium quicklime)	CaO
Hydrated high-calcium lime	Ca(OH)2
Dolomitic lime	CaO + MgO
Normal hydrated or	
monohydrated dofornitic lime	$C_{a}(OH)_{2} + M_{9}O$
Pressure hydrated or	
dihydrated dolomitic lime	$Ca(OH)_2 + Mg(OH)_2$

The higher the magnesium content of the quick or hydrated lime, the less is the water affinity and the heat developed in mixing with water. The quick as well as the hydrated limes eagerly absorb and react with carbon dioxide from the air and form $CaCO_3$. This is no longer useful either for the making of common mortar or for alkaline reaction with finely divided silica to produce hydraulic cements.

The importance of Particle Size and Surface-to-Volume Ratio Atoms, ions, and molecules can react with each other if they can touch, i.e., if they are accessible. For this reason, solid particles can react only on their surfaces and their respective reaction rates are proportional to their surface/volume ratios. This ratio is inversely proportional to the linear particle size. Under corresponding conditions, the rate of reaction, e.g., the amount of CaSiO₃ formed per unit of time and volume, will be proportional to the soil, i.e., the clay content or clay-size SiO₂ particles. Also, the higher the proportion of silica and the smaller that of aluminum and iron sesquioxides in the smallest size fractions, the greater is their reactivity with Ca(OH)₂.

Solubility of Calcium Hydroxide Because the rate of reactions is a function of the concentration of the components and since the reaction under consideration occurs in an aqueous medium, the solubility of $Ca(OH)_2$ in water is important. This solubility is relatively small: about 1.65 grams of $Ca(OH)_2$ per liter at normal temperature. In a normal clay soil this amount of $Ca(OH)_2$ in solution would be very soon exhausted for the satisfaction of the cation exchange capacity of the clay fraction if there were not some excess solid $Ca(OH)_2$ stored in the system which continuously makes up for that taken out of the solution by the siliceous surfaces. To assure the greatest possible rate of solution of the solid $Ca(OH)_2$, it should be in a colloidally dispersed state.

With regard to the amount of hydrated lime required for the stabilization of clay soils, there seem to exist specific threshold or minimum amounts below which there is little, if any, real stabilization, and also high amounts above which increase in amount of stabilizer does not produce a significant increase in the quality of the system. The threshold values usually lie between 1 percent and 2 percent of Ca(OH)₂ based on the weight of the dry clay soil. Several authors have attempted to connect the threshold values with the base exchange capacities of the particular soils or with their "lime retention points." For an excellent review regarding this question, as well as others related to the physicochemical mechanisms involved in lime stabilization, see the paper by Diamond and Kinter (1965). There exists another valid consideration regarding this threshold value in the case of stabilization involving mixing. It is very difficult to admix uniformly less than 2 percent of a powder to a material like soil. The occurrence of similar threshold values of about 2 percent for portland cement and other types of stabilization suggests that the mixing factor is indeed significant. At any rate, it is hardly ever justified to add less than 2 percent of an inorganic cementing agent to a soil and expect from it a uniform and enduring effect.

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The Effect of Temperature on the Reaction The rate of a reaction depends not only on the effective concentration of the reactants, but also on the temperature of the system. The solubility of Ca(OH)₂ decreases with increasing temperature while that of silicon dioxide increases. The overall rate of reaction is more influenced by the effective concentration of the silica than by that of the Ca(OH). This is exemplified in the related field of the manufacture of sandlime bricks in which 4 percent to 10 percent of Ca(OH)₂ are mixed with quartz sand and reacted at a steam pressure of 150 psi, which denotes a temperature of about 366°F or 185.5°C. Only a few hours of such treatment at elevated temperature are required to produce bricks of strength on the order of 4000 psi. Even higher strengths were obtained by Pollet (1970) by autoclaving a moist compacted mixture of 15 percent clay, 30 percent silt, 20 percent fine sand, and 26 percent hydrated lime a few hours at 200°C with subsequent heat treatment at 350°C. Especially important in this connection is the work of Mateos (1964b), who studied the effect of temperature on the rate of hardening and final compressive strength of specimens made of 6 percent lime, 17.5 percent fly ash, and 76.5 percent sandy soil, employing curing temperatures of 10, 22, 40, 60 and 120°C and times of 3, 7, and 28 days, respectively. While specimens made with high calcium lime and a competent fly ash failed upon immersion in water if cured at 10°C (50°F), if cured at 120°C (248°F) they showed compressive strengths of about 2400, 2300, and 1900 psi, respectively, for curing times of 28, 7, and 3 days. These results show the feasibility of developing accelerated autoclave curing methods, and also the desirability of performing lime stabilization as early as possible in the season to ensure sufficient strength development before the start of cold weather.

Providing Reactants for Proper Balance If a soil does not possess finely subdivided, highly siliceous minerals that are capable of reacting with lime, then such material can be added in the form of volcanic ashes (puzzolan, santorin), defatted diatomaceous earth, highly siliceous fly ashes, etc. Assuming that the end product of the reaction is tobermorite, $3 Ca(OH)_2 \cdot 2 SiO_2$, the ratio of $Ca(OH)_2$ /reactive silica is 1.82:1. In practice ratios of fly ashes to lime run from 3:1 to 5:1, indicating that the major part of the fly ash acts

as an inert filler. Taking into account the great differences h composition of locally available fly ashes and limes it is byious that optimum ratios as well as absolute quantities 't be determined by test with the soil to be treated.

iffectiveness of Lime Treatment Treatment with quickme or hydrated lime is especially effective in improving the engineering properties of heavy clay soils or of granular soils which, because of high water affinity in their silt-clay faction, fall short of having a dependable granular skeleton. h accordance with U.S. experience treatment with lime is most effective for:

- (1) Stabilization of clay-gravel materials to serve as bases for pavements. Two to four percent of Ca(OH)₂, by weight of soil, is used for this purpose.
- (2) Stabilization of heavy clay soils to serve as bases (5-10 percent of lime) or as subbases (1-3 percent) for pavements.

Lime treatment has been found less effective for silt-loam soils and is not recommended for sandy soils except in comination with added clay, fly ashes, or other puzzolanic onstituents, which serve as both hydraulically reactive ingredients and filler to improve the gradation and reactivity of the soil. Lime treatment (especially with quicklime) hay serve as an important construction aid for treatment if access roads to construction sites and of construction sites themselves if they have become impassable due to excess precipitation.

hysical Changes Summarized According to the ARBA (1959) Construction Manual on Lime Stabilization the physical changes effected by lime treatment of clay soils be summarized as follows:

- (,) The plasticity index drops sharply by a factor of 3 or more in some instances.
- (2) The plastic limit generally increases, and the liquid limit decreases.
- (3) The soil binder content decreases substantially.
- (4) The lineal shrinkage and swell decrease markedly.
- (5) Lime and water accelerate disintegration of clay clods during pulverization. Soils become friable and can be worked easily.
- (6) Unconfined compressive strength increases considerably (in varying amounts but as much as 60 times).
- (7) Load-bearing values increase substantially.
- (8) In swampy areas, or soils with over-optimum moisture content, the application of lime facilitates drying of the soil.
- (9) Lime stabilized bases or subbases form a water-resistant barrier by stopping penetration of gravity water and by rapid evaporation of existing moisture. The stabilized clay sheds water readily during rain, thereby minimizing construction delays.

Areas of Application The pertinent subcommittee of the Highway Research Board of the German Federal Republic Jefines soil stabilization with lime as:

The incorporation of lime into soil material and densification at optimum moisture content for the construction of bases and subbases, or as pretreatment for subsequent stabilization with portland cement or bituminous materials.

.oil stabilization with lime should be considered:

) As a preparative measure for subsequent stabilization of clay soils with cement or bituminous binders and

waterproofing agents. After pretreatment with lime, normally highly water-affine and plastic soils can often be stabilized with inorganic or organic cementing and waterproofing materials. Also, such pretreatment makes it possible more easily to comminute and mix the heavy soils with the respective stabilizing agents.

- (2) As an additional improving measure in granular soil stabilization by controlling the plasticity of the binder material and increasing its cementing power.
- (3) For improvement of subbases. In addition to the increase in bearing capacity, lime stabilized subsoil will interrupt the capillary water movement and thereby prevent the furnishing of capillary water into the soil layers lying immediately' beneath the pavement. Lime-stabilized soil layers may also serve as a working surface in connection with road construction, making it less weather dependent and accelerating its progress.
- (4) As stabilized bases underneath all types of pavements.(5) As independent pavements for secondary and tertiary
- roads. However, because of the relatively small resistance to abrasion, surface treatment with bituminous materials is recommended in all such cases. Especially important is the use of lime for transport roads to construction jobs, particularly in moist areas, and also the improvement of silt-clay soils in dam construction. For this purpose often small amounts (i.e., 1-3 percent by weight of dry soil) are necessary. In the case of construction transport roads, the limestabilized layer can be used immediately and no surface treatment with bitumen is necessary.

Table 8.6 shows the general stabilizing effect of lime on different soil types and Fig. 8.13 gives recommended amounts of lime for the stabilization of subgrades and bases (NLA, 1972).

Recommendations Because of the complexity of soil-lime systems and the almost completely empirical nature of our present knowledge, trial mixes must be made before an actual field job is undertaken in areas where no field experience is available. However, even before making a trial mix, it is important that the engineer in charge acquaint himself with pertinent field experience even if this has been obtained in different regions with different soils and climate conditions. The largest amount of field experience in soil-lime proper has been developed by the State Highway Department of Texas, under the leadership of Mr. McDowell. A considerable amount of experience with lime stabilization in combination with fly ashes and other puzzolanic admixtures has been developed by the workers at Iowa State College. Recommended approaches to the making and testing of trial mixes are described in the respective section of the Highway Engineering Handbook (Woods, 1960).

In the lime stabilization of sandy soils, admixtures of relatively large amounts of puzzolanic constituents (15-20 percent) are normally used. Obviously, their effect on the granulometry of the system and on the granulometrydependent engineering properties of the system should be taken into account.

In addition to the areas in which lime stabilization has already proven itself of major importance, significant further developments are possible in the case of combination of lime with other types of stabilizing treatment for base construction and also in the use of lime for the stabilization of deeper foundation layers by "lime piles" or injection of

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TABLE 8.6 APPROXIMATE COMPARISON OF STABILITY TEST DATA, WITH AND WITHOUT LIME.

(With kind	permission of	f the National	Lime .	Association.)

			Untre	eated		Lime Treated •							
Type of Soil	Tri- axial	CBR	R.Value	k-Value	Cohesiom- eter	Tri- axial	CBR	R-Value	k-Value	Cohesiom- eter			
Heavy Clay	5.5	2	20	100	_	3.2 - 3.5	15-30	55-69	250-350	350-850			
Light Clay	4.5	5	35	150	-	2.9-3.4	20-40	60-75	300-400	450-700			
Sandy Clay Granular	3.7	12	50	200	-	2.4-3.0	35-60	65-80	400-500	550-850			
Soil PI-8+ Clay Gravel	3.2	30	65	250	-	1.5-2.7	50-75	70-80+	450+	650+			
PI-6 to 10	2.6	50	75	400	-	1.0-1.6	70-100+	80+	500+	800+			

*Based on use of 4-6 percent lime for clay soils and 2-4 percent for granular and clay-gravel types. Triaxial and Cohesiometer values are based on approximately 18 days of laboratory curing, CBR on 4 days curing (soaked), and R-Value on about 2 days curing. The stability values of lime-treated specimens increase markedly with longer or accelerated curing, e.g., curing CBR specimens for 2 days at 120°F prior to soaking will nearly double the CBR values. This accelerated curing would correspond approximately to 30 to 45 days of summer field curing.

lime suspensions. The time also seems to have come for a thorough theoretical analysis of the physicochemical and chemical aspects involved in all construction uses of lime. Combined lime and portland cement stabilization has been studied especially by the Vicksburg Waterways Experiment Station. A considerable amount of work on combined limetar stabilization has been performed in the U.S. and Germany; combined lime-asphalt stabilization has yielded excellent results in the U.S. and abroad (Hollon and Marks, 1952; Brand, 1962, 1963; Kozan and Fenwick, 1965; Wes, 1965; Shoemaker, 1966; Wang and Handy, 1966; Ruff and Ho, 1966; Thompson, 1967).

Significance of Laboratory Tests on Lime- and Portland Cement-Stabilized Soils that also Contain Alkaline, Saline and other Additives For economic reasons it is customary to test ideas regarding new stabilizers or improvement of old ones first on small specimens in the laboratory before proceeding to intermediary and large-scale field testing. In doing so one commonly employs testing procedures that

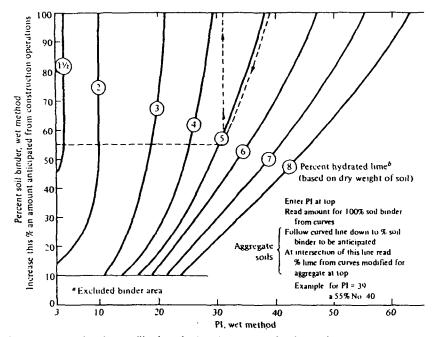


Fig. 8,13 Recommended amounts of lime for stabilization of subgrades and bases (NLA, 1972); these percentages should be substantiated by approved testing methods on any particular soil material. (With permission of the National Lime Association.) Notes: "Exclude use of chart for materials with less than 10% No. 40 and cohesionless materials (P.I. less than 3). "Percent of relatively pure lime usually 90% or more Ca and/or Mg hydroxides and 85% or more passing the No. 200 sieve. Percentages shown are for stabilizing subgrades and base courses where lasting effects are desired. Satisfactory temporary results are sometimes obtained by the use of as little as ½ above percentages. Reference to cementing strength is implied when such terms as "lasting effects" and "temporary results" are used.

have previously been developed and correlated with field behavior for the same general type of stabilizer. This may be a dangerous practice if the new stabilizer, or the additive

the case of saline and alkaline additives in soil-cement and soil-lime stabilization (Winterkorn, 1964).

It can be stipulated that the primary role of saline and exclusion additives to soil-lime and soil-cement is as catalysts to increase the rates of the various cementing reactions involved. This is quite worthwhile if the final quality of the system is not unduly decreased. The danger of this exists in ill systems that contain alkali ions and reactive silica in an alkaline medium. This is well known from concrete technology as is also the fact that, at normal temperature conlitions, it may take years before the damage becomes evijent. It is also well known from concrete technology that vanous types of additives have their place in construction practice. For this reason, the use of additives is not genercally condemned here; neither can it be advocated without nore convincing job evidence than available at the present time.

Laboratory Testing of Lime-Stabilized Soil Specimens Recommended percentages of lime for laboratory testing and for construction vary from 2 percent to 10 percent. They are 2, 3, and 5 percent for coarse soils (clay-gravels, aliche, sandy soils) having less than 50 percent silt-clay raction, and 5, 7, and 10 percent for soils with more than 50 percent silt-clay. For intermediate soils 3, 5, and 7 percent of lime are indicated. Where severe freezing and thawconditions prevail, lime percentages of 8 to 12 percent recommended. In combination with fly ashes, 3, 5, and

⁷ 7 percent of lime are used with fly ash contents that normally range from 10 to 20 percent.

While there exists no fundamental reason why the test ind evaluation methods developed for soil-cement should not be applicable to soil-lime (perhaps with accelerated autoclave curing at a standardized elevated temperature), other methods have come into practical use, e.g., the triixial compression method (Texas Highway Department, 1952), the CBR, and the Hycem stabilometer method. Their advantages are their direct correlation with pavement thickness design. For the present purpose it suffices to give the essentials of the Texas method, which is probably the most widely used.

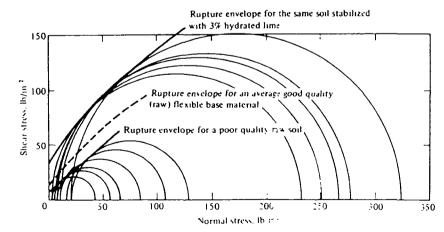
After determination of the optimum moisture content and maximum density of soil-lime mixtures at lime contents indicated by previous experience, six cylindrical specimens 6" in diameter and 8" high are molded at optimum moisture content to maximum density. The specimens are stored in a moist room for 7 days. Subsequently, they are air dried for 8 hours at a temperature of 140°F, then they are cooled for at least 8 hours and submitted to a capillary absorption test lasting 10 days. After this, the specimens are subjected to triaxial testing. All the steps to and including the triaxial testing are thoroughly standardized and carefully controlled. The results of the latter are plotted as shown in Fig. 8.14. The resulting plot permits the classification of the treated soil with regard to its quality as a subgrade or base material (NLA, 1954). No triaxial testing is considered necessary if the specimen has a compressive strength above 100 psi (NLA, 1954, 1972).

3. Bituminous Soil Stabilization

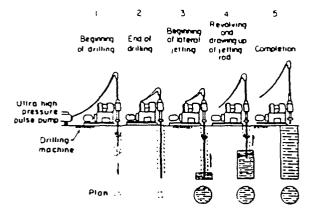
Introduction According to the Highway Research Board (HRB, 1946) bituminous soil stabilization is the name given to those methods of construction in which bituminous materials are incorporated into a soil or soil-aggregate mixture to provide base courses—and occasionally surface courses—which can carry the applied traffic loads under all normal conditions of moisture and traffic.

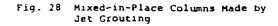
Cohesive soils usually have satisfactory bearing capacity at low moisture contents. The purpose of incorporating bitumen into such soils is to waterproof them as a means to maintain them at low moisture contents and high bearing capacities. In the case of noncohesive granular soil materials, bitumen serves as a bonding or cementing agent. Depending upon the granulometric composition and physical properties of the available soil materials and the function of the bitumen incorporated, there are four types of soilbitumen in common use in highway engineering.

(1) Soil-bitumen (proper). A waterproofed cohesive soil system. Best results have been obtained with soils falling



719. 8.14 A Mohr's diagram of stress plotted for a poor-quality raw soil and the same soil treated with 3% hydrated line. The dashed line resents the rupture envelope for a good flexible base material. The criterion of a satisfactory soil-line mixture is whether its rupture envelope is above the dashed line as indicated in the example. Test specimen: sand-clay soil, L.L. = 30; P.I. = 9; compactive effort-13.26 ft-lb/in³ of specimen volume.





recovered samples. Among the tests that have been used to evaluate grouting done for ground strengthening purposes are the cone penetration test, the standard penetration test, the pressuremeter test, plate load tests, and compression and shear wave velocity tests. Acoustic emission monitoring during grouting has been used recently as a means for detection of hydraulic fracturing and location of grout flow.

From the test program at Locks and Dam No. 26 reported by Perez et al. (1981), the maximum levels of property improvement obtained using the most effective grouting procedure (multiple stage sleeve pipe) and a high strength silicate grout are listed in Table 5. The ungrouted sand was fine-to-medium-grained with less than 5 percent fines. It was medium dense and cohesionless with a coefficient of permeability of 5×10^{-1} to 3×10^{-2} cm/sec. These levels of improvement are probably the maximum that can be expected using current materials and technology.



Maximum Property Values for Silicate Grouted Sand (Data from Perez et al., 1981; see text for details)

Property	Ungrouted Sand	Grouted Sand
SPT-N value (blows/0.3 m)	20	100+
$CPT - q_c (kg/cm^2)$	125	500+
Shear wave velocity (m/sec)	200	10 00
Coeff. of Earth Pres- sure at Rest, K _O	0.45	3.3
Unc. Comp. Strength (kPa)		1500
Cohesion (kPa)	0	580
Friction angle (*)	39.5	39.5
Plate Load Test Modulus (MPa)	14	1000
Pressuremeter Modulus (MPa)	13	150
Ultimate Stress, Plate Load Test (kPa)	50 0	>1800
Pressuremeter Limit Pressure (MPa)	2.5	10+
Coefficient of Perme- ability (cm/sec)	2.0 x 10 ⁻	8.0 x 10 ⁻⁵

ADMIXTURE STABILIZATION

Introduction

Of the many methods of ground improvement, the use of admixtures of various types is the oldest and most widespread. Chemical admixtures, most commonly lime and cement, have been used to improve the properties of soils, by ion exchange

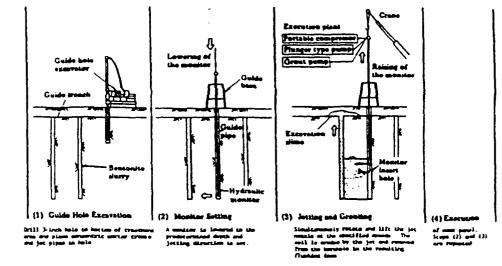


Fig. 29 Cut-off Wall Construction by Jet Grouting

Reference: State-of-the-Art Report, Session 12, Tenth International Conference on Soil Mechanics and Foundation Engineering, Stockholm, Sweden, June 15-19, 1981 by James K. Mitchell.

and cementation reactions, for use in pavement structures for centuries. There is a vast body of literature concerned with classical "soil stabilization:" i.e., the improvement of subgrade and base course materials. Because of the ready availability of this information, it will not be summarized in this review. Among the comprehensive recent references are ingles and Metcalf (1973), Yamanouchi (1975), Winterkorn (1975), Transportation Research Board (1975, 1976, 1977), Mitchell (1976), Terrel et al. (1979).

During the 1960's soil-cement became widely used in hydraulic structures, especially for the upstream slope protection of earth dams (Nussbaum and Colley, 1971; Holtz and Hansen, 1976). Soilcement has been used for pond linings and dikes, and studies have been made concerning the construction of complete dams of soil-cement (Raphael, 1976, Robertson and Blight, 1978). Advances in the 1970's in soil improvement using admixtures have included both the development of new materials and extended applications of conventional materials, most notably the utilization of lime and cement in structural fills and with deep mixing methods.

Principles of Admixture Stabilization

The general objectives of mixing chemical additives with soil are to improve or control volume stability, strength and stress-strain properties, permeability, and durability. Volume stability (control of swelling and shrinkage) can be improved by replacement of high hydration cations such as sodium by low hydration cations such as calcium, magnesium, aluminum, or iron; by cementation; and by waterproofing chemicals. The development and maintenance of high strength and stiffness is achieved by elimination of large pores, by bonding particles and aggregates together, by maintenance of flocculent particle arrangements, and by prevention of swelling. The permeability is altered by modification of pore size and pore size distribution.

The actions of organic and inorganic stabilizers are generally quite different. The organics are characterized by a rapid strength gain, then constant properties with time. Of the many organic materials that have been proposed for use as admixtures; e.g., acrylamides, resins, polyurethanes, polyesters, only asphalt has had consistent use in large quantities. Except for special applications such as grouting, cost has limited the use of the others.

The stabilization mechanisms of lime and portland cement, the two most commonly used inorganic admixture stabilizers, are similar. End products are a series of calcium silicate hydrates (CSH). Lime acquires silica from clays or other pozzolans in the soil to form CSH gel. Cement contains silica initially. Short term reactions with cement and lime include replacement of monovalent adsorbed cations by Ca++, adsorption of Ca(OH) 2 by particles, cementation at interparticle contacts, and establishment of a high pH (12.4) environment. In the long term the pH causes a breakdown of the crystal lattice of clay and formation of cementitious products. These reactions can continue for years.

Lime and cement are effective in a wide range of soil types. Some organic compounds, however, can retard or inhibit reactions. In addition, it is useful to keep in mind that the presence of free sulfates in clay soils can be detrimental. As first demonstrated by Sherwood (1962) and reiterated by Ingles and Metcalf (1973). Initial stabilization may be satisfactory, but subsequent wetting can lead to expansion and breakdown of the cemented structure.

Attainment of good mixing of stabilizers with soil is the most important factor affecting the quality of results. Both subdivision of the soil and distribution of the additive are important. Much of the success of the new deep mixing methods discussed later must be attributed to the development of equipment capable of mixing admixtures with soft, heavy clays to a reasonable degree of uniformity.

Properties of Lime-and Cement-Treated Soils

The specific values of any property of an admixture-stabilized soil can fall within a wide range depending on soil type, stabilizer type and amount, curing conditions, and other factors The unconfined compressive strength is an easilymeasured property that can often be used as a basis for estimates of other properties. Lime treatment levels of 3 percent to 8 percent by weight of dry soil are typical for improvement of plastic and expansive fine-grained soils. Approximate values for mechanical properties of well-mixed lime-treated soil are given in Table Portland cement at treatment levels of 3 VI. to 10 percent by dry weight is particularly wellsuited for low plasticity soils and sandy soils. Ranges of properties for granular and finegrained cement-treated soils are listed in Table VII. The values in Tables VI and VII are for well-mixed treatments and compaction at water contents near optimum. They may be representative for admixture-stabilized soils used as structural fills. They will be substantially in excess of what can be expected for in-place treatments by deep mixing, because (1) the water contents in this case will be much higher and (2) the mixing will not be as good.

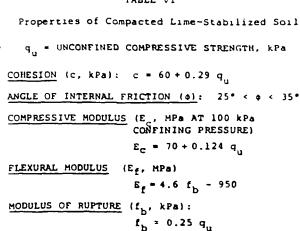
New Stabilizer Materials

Among the recently developed admixtures for soil improvement two deserve particular comment because of their uniqueness and potential. Ingles and Lim (1980) describe a new approach to clay stabilization involving the use of iron oxide. The process involves heating a finegrained soil to a temperature high enough to destroy its water sensitivity, adding finely divided iron oxide, and introducing a sodium silicate solution. After compaction the mixture sets into a hard, durable material.

Research in Japan (Ariizumi et al.) has led to development of a material suitable for strengthening and detoxification of high water content wastes such as dredged material and sludge. A product termed cement bacillus ($3CAO - Al_2O_3 - 3CaSO_4 - 32H_2O$) is formed by adding alumina, lime, and gypsum. These additions may themselves be wastes from a variety of sources. For example, the materials used in one case were 40 kg paper slag, 30 kg slaked lime, and 30 kg flue gas desulfurization per 1 m³ dredged "ooze." Compressive strengths of the order of 100 kPa developed after 28 days. The fixation of a large amount of water as water of crystallization 15

TABLE VI

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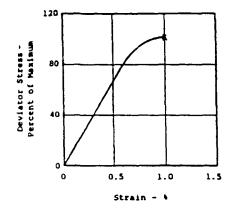
SPLIT TENSILE STRENGTH (ST, kPa): S. = 0.13 g.

POISSON'S RATIO (u): u = 0.1

FOR LIME MODIFIED SOILS (qu < 70 kPa):

 $CBR = (0.2 \text{ to } 0.25) \text{ g}_{11}$

GENERALIZED STRESS-STRAIN CURVE:



an important feature. Leaching tests have established that heavy metals become tied up by the cement bacillus, thus making possible safe disposal of potentially toxic wastes as fill materials. The results of similar studies are reported by Kuroda et al.

Structural Fills

Virtually any inorganic soil can be processed and treated to form an acceptable structural fill material. Increasing use is being made of such materials for embankments and support of structures. Several cases are described by the Committee on Placement and Improvement of Soils (1978). Blight et al. (1977) describe the use of cemented tailings for the backfilling of mine excavations.

At the Canton, Illinois Power Plant in the U.S.A. a loess soil was stabilized using 3 percent hvdrated lime and 2-5 percent fly ash to form stabilized layers up to 7.6 m in thickness. Conventional stabilization equipment was used, and careful pulverization, mixing, and compaction controls were implemented. Unconfined compres-sive strengths of 1.0 to 1.4 MPa were developed after 4 days curing at 38°C. A soil-cement mat 3.66 m thick was used to support a 38-story office building in Tampa, Florida in lieu of pile foundations, the more usual foundation type for that area. Sand and clay were excavated to expose a layer of cavernous limestone which was filled with lean cement and covered by the soilcement.

A remove and replace option was used to eliminate a liquefaction danger in the sands underlying the Koeberg Nuclear Power Plant in South Africa. An 8 m thick layer of potentially liquefiable sand was removed and treated with 5 percent sulfate resistant cement in a central mixing plant and recompacted in lifts using conventional equipment. The total volume of treated material was 200,000 m³. A great deal of dynamic testing was undertaken in connection with this project, and a summary of the dynamic properties of sand-cement has been presented by Dupas and Pecker (1979).

Soil-cement cushions are widely used in Bulgaria for the support of structures on collapsible loss deposits. The loss is treated with about 5 percent cement and compacted in layers to form mats up to several meters thick. It has been found that the seismic stability of structures founded on these cushions is greatly improved (Minkov et al., 1980). Loess-cement cushions have been used also in conjunction with heavy tamping. The system adopted for a 180 m high TV tower foundation exerting a bearing pressure of 230 kPa is shown in Fig. 30.

Deep Mixing Methods

The in-situ mixing of admixtures, usually lime or portland cement, with soft, fine-grained soils to form columns, piers, and walls has been studied and applied extensively in engineering practice in the last several years (Broms and Bowman, 1976, 1979a, 1979b; Sokolovic et al., 1976; Okumura and Terashi, 1975; Pilot, 1977; Terashi et al., 1979). Although different names are used by different organizations: e.g., DCM, DCCH, Demic, POCOM in Japan and line columns in Sweden, the concepts, procedures and applications are generally similar.

Columns are produced by feeding a metered quantity of stabilizer into a soft clay mass through a rotary drill equipped with a special auger bit to both advance to the desired depth and to mix the soil and admixture thoroughly during withdrawal. Fig. 31 is a schematic diagram of the process as used for construction of a lime column. The mixing bits used in Japan are usually somewhat larger and more complex, as shown by the photograph in Pig. 32, in comparison to the " "eqq beater" mixing tool used in Sweden, Fig. 31. The ability of the equipment to distribute the admixture thoroughly for the full required depth and to mix it uniformly across the column is crucial to success.

TABLE VII

Properties of Compacted Cement-Stabilized Soil

PROPERTY	GRANULAR SOILS	FINE-GRAINED SOILS	NOTES
Density	1.6 - 2.2 t/m ³	1.4 - 2.0 t/m ³	May be higher or lower than untreated soll. Delay between mixing and compactio causes density and strength reductions.
Unconfined Compressive Strength	υς = (500 to 1000) C (υς) _d = (υς)d _o κ = 500 C		C = cement content, %; UC in kPa (UC)d ₀ = UC strength at age of d ₀ days d = age (days) (d > d ₀)
Cohesion	To a few thousand kPa	To a few thousand kPa	Depends on C, d
	c = 50 + 0.22	25 (UC) kN/m ²	
Friction Angle	40-45*	30~40*	May decrease at high con- fining pressures
Flexural and Tensile Strength	Flexural Strength =	$(\frac{1}{5} \text{ to } \frac{1}{3})$ compressive strength	Need 1-3% cement to develop
CBR	CBR = 0.00	038 (UC) ^{1.45}	UC in kPa
Modulus Compression		$\frac{7 \times 10^{3} - 7 \times 10^{4} \text{ Mps}}{\frac{-51 \text{ m}\phi}{50 + 2\sigma_{3} \sin \phi}} \Big] \text{E} \Big]$	Depends on stress level E = initial tangent modulu E = tangent modulus 03 = confining pressure p = atmospheric pressure n = 0.1 - 0.5 K = 1000 - 10,000
Modulus-Tension and Flexure	Same order as in comp	of magnitude ression	E_ ≠ E_ (usually)
Poisson's Ratio	0.1 - 0.2	0.15 - 0.35	
Shrinkage	λ few tenths of one percent	up to 1%	Shrinkage cracks generally inevitable in thin slab construction.
Permeability	k < 1 x 10 ⁻⁶ cm/sec	k < 1 x 10 ⁻⁴ cm/sec	k parallel to compaction planes may be up to 20 tim greater than normal to the

A lime column diameter of 0.5 m is standard in Sweden for columns up to 10 m long installed using light, mobile equipment. Diameters up to 1.75 m and depths to 60 m have been used in Japan. In addition to lime and cement, special chemicals are used in Japan to fix pollutants within treated sludges on harbor bottoms. Swedish practice appears thus far to have been limited to inland projects in soft, sensitive clays. Much of the work in Japan has been in waterfront and harbor areas and done using large, barge-mounted plants. Small diameter lime columns (80 to 500 mm) spaced at 0.5 m to 3 m have been used in Austria for slope stabilization as shown in Fig. 33 (Brandtl, 1973).

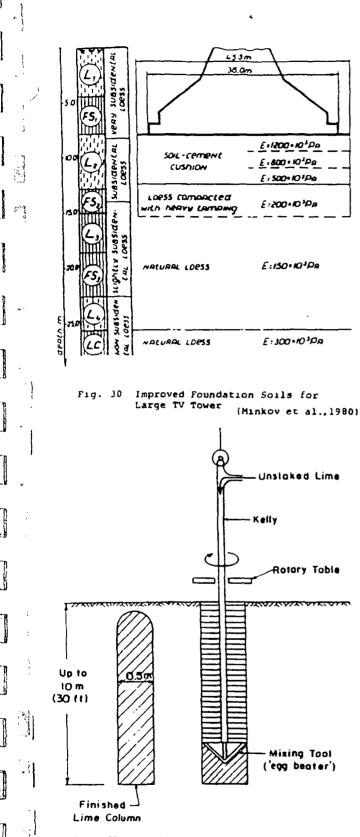
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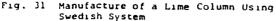
1

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When quicklime (CaO) is used as the stabilizer the heat of hydration can be substantial, and the drying of the surrounding ground due to this and to the consumption of water by hydration can be significant. Admixture contents are of the same order (5 to 15 percent by dry soil weight) as for more conventional lime and cement stabilization. Because the soils being treated have such high water contents, the final strengths after treatment will be much less than those for lime and cement-treated soils listed in Tables VI and VII. They will, nonetheless, be many times greater than that of the untreated soil. Relationships between unconfined compressive strength and water content for four Japanese

.





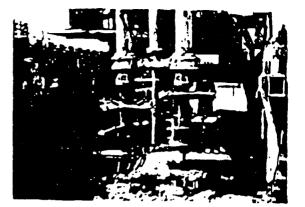


Fig. 32 Example of a Deep Mixing Bit used in Japan

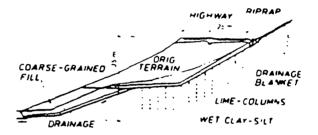


Fig. 33 Slope Stabilization Using Lime Columns and Drainage

soils treated with 10 percent cement are shown in Fig. 34. For a normally consolidated clay from Sweden the strength increased from 2 to 7 times immediately after mixing with 6 and 12 percent quicklime and increased to 13 to 82 times the initial strength of about 10 kPa after 1.3 years. The initial water content was about 60 percent. Strength increases of 10 to 20 times the untreated value are perhaps typical. Compressibility decreases accompany the stabilization. The rate of hardening will be influenced by ground temperature. Broms and Bowman (1979a) note that typically the clay in lime columns is 100 to 1000 times more permeable than in the untreated state. As a consequence the columns can act as vertical drains, thus accelerating settlements.

Methods for design using lime columns have been proposed (Broms and Bowman, 1979a, b) for settlement analysis and bearing capacity of foundations and for the design of deep trenches in improved ground.

THERMAL STABILIZATION

Introduction

Both heating and freezing can be used for soil improvement. Heating fine-grained soils to moderate temperatures; c.g., higher than 100°C,

Standard Specifications

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STATE OF CALIFORNIA

BUSINESS, TRANSPORTATION AND HOUSING AGENCY

DEPARTMENT OF TRANSPORTATION

JULY, 1992

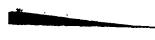
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SECTION 24

IML UINBILIUM ION

LIME STABILIZATION

24-1.01 Description—This work shall consist of mixing lime and water with soil and compacting the mixture to the lines, grades and dimensions shown on the plans and as specified in these specifications and the special provisions.

24-1.02 Materials—Material to be stabilized shall be the native soil or embankment, containing no rocks or solids, other than soil clods, larger than 21/2 inches in any dimension. Removing and disposing of said rocks and solids larger than 21/2 inches, from native soil or embankment other than imported borrow, will be paid for as extra work as provided in Section 4-1.03D. Removing and disposing of said rocks and solids larger than 21/2 inches from imported borrow shall be at the expense of the Contractor.

Lime shall conform to the requirements in ASTM Designation: C 977 > > with the exception that when a 250 gram test sample of quicklime is dry sieved in a mechanical sieve shaker for 10 minutes ±30 seconds it shall conform to the following grading requirements:

Sieve Sizes	Percentage Passing
3/8"	
No. 100	0-25
No. 200	

A Certificate of Compliance in accordance with the provisions in Section 6-1.07, "Certificates of Compliance," shall be furnished with each delivery of lime and shall be submitted to the Engineer with a certified copy of the weight of each delivery.

Water for mixing with soil and lime shall be free from oil and shall contain not more than 650 parts per million of chlorides as Cl, nor more than 1,300 parts per million of sulfates as SO4. The water shall not contain an amount of impurities that will cause a reduction in the strength of the stabilized material.

24-1.03 General—The amount of lime to be added to the material to be stabilized shall be as specified in the special provisions.

All handling, spreading and mixing operations shall be conducted in such a manner that a hazard is not presented to construction personnel or the public. Lime shall be prevented from blowing by suitable means selected by the Contractor.

If lime of more than one type or from more than one source are used on the project, separate application rates will be determined for lime of each source or type. Lime from more than one source or of more than one type shall not be mixed.

The lime shall be protected from exposure to moisture until used and shall be sufficiently dry to flow freely when handled.

Lime shall not be spread while the ambient temperature is below 35° F., nor when the ambient temperature is expected to drop below 35° F. before mixing and compacting are be completed. **TIO**

LIME STABILIZATION

The in-place moisture of the material to be stabilized shall be maintained above the optimum moisture, as determined by California Test 373, during the mixing operation. During compaction, finish rolling and grading, sufficient water shall be added to the surface of the material to prevent the surface from drying until curing seal is applied.

No traffic other than the equipment performing the work will be allowed to pass over the spread lime, the mixed material or the compacted surface of the lime stabilized material. After application of the curing seal, no traffic will be permitted on the lime stabilized material for a period of 3 days. Damage to curing seal or lime stabilized material shall be repaired promptly by the Contractor at his expense, as directed by the Engineer.

24-1.04 Preparing Material—Unless otherwise ordered or approved by the Engineer, the material to be stabilized shall be placed to the lines, grades and dimensions shown on the plans and compacted to a relative compaction of not less than 90 percent, before lime is added. The surface of the material to be stabilized shall not vary more than 0.08-foot above or below the grade established by the Engineer, before lime is added.

24-1.05 Spreading—Lime shall be spread using equipment which will uniformly distribute the lime over the area to be stabilized.

Tailgate spreading of lime will not be permitted.

Lime shall be spread uniformly on the roadbed, and the rate of spread per square foot shall not vary by more than 10 percent of the rate designated by the Engineer.

Lime may be spread on the prepared material in either a slurry or dry form at the option of the Contractor. Hydrated lime shall not be spread in dry form. Either hydrated lime or quicklime may be used to prepare the slurry.

The distance which lime may be spread ahead of the mixing operation will be determined by the Engineer. In no case shall spread lime be allowed to remain exposed at the end of the work day.

Lime applied in slurry form shall be prepared and distributed using equipment and procedures capable of keeping the slurried lime in suspension and spreading the slurry uniformly over the area to be stabilized. The lime content of the slurry shall be as approved by the Engineer.

24-1.06 Mixing—Mixing lime and the material to be stabilized shall be conducted using equipment capable of mixing the materials uniformly to the depth specified.

Lime and the material to be stabilized may be mixed off site.

Mixing or remixing operations, regardless of the equipment used, shall continue until the material is uniformly mixed and free of streaks or pockets of lime. Prior to compaction, all mixed material other than rock or aggregate previously treated with asphalt, lime, or cement shall comply with the following grading requirements: LIME STABILIZATION

,	
Percentage	Passing

TION

Sieve Sizes Per	centage rus
1"	98 min. 60 min.
No. 4	

444

When granular lime in dry form is used, the material shall be mixed at least twice. The first and final mixings shall not be performed on the same day.

When the stabilized material, exclusive of one-inch or larger clods, is sprayed with a phenolphthalein alcohol indicator solution, areas showing no color reaction will be considered evidence of inadequate mixing.

The depth of mixing of the lime stabilized material shall not vary more than 0.1-foot from the planned depth at any point. Mixing to a depth that exceeds the planned depth by 10 percent or more shall be considered evidence of an inadequate amount of lime and additional lime shall be added at the Contractor's expense.

The entire mixing operation shall be completed within 7 days of the initial spreading of lime, unless otherwise permitted by the Engineer.

24-1.07 Compaction—Compaction shall begin as soon as possible, but not more than 24 hours after final mixing.

Prior to initial compaction, maximum density will be determined on a composite of material from 5 random locations within the test area by California Test 216. The composite sample will be obtained after all mixing has been completed. The moisture content of the composite sample will be determined by California Test 226.

Initial compaction shall be by means of sheepsfoot or segmented wheel rollers. This shall be immediately followed with final compaction by rolling with steel drum or pneumatic-tired rollers. Vibratory rollers will not be allowed.

Where the required thickness is 0.50-foot or less, the mixture shall be compacted in one layer. Where the required thickness is more than 0.50foot, the mixture shall be compacted in 2 or more layers of approximately equal thickness, and the maximum compacted thickness of any one layer shall not exceed 0.50-foot, except that the maximum compacted thick ness of a single layer may be increased provided the Contractor candemonstrate to the Engineer that the equipment and method of operation will provide uniform distribution of the lime and the required compacted density throughout the layer.

Areas inaccessible to rollers shall be compacted to the required relative compaction by other means satisfactory to the Engineer.

The lime stabilized soil shall be compacted to a relative compaction of not less than 95 percent, except that the minimum relative compaction may be reduced to 92 percent provided the Contractor increases the lime content 0.5 percent at his expense.

The relative compaction will be calculated on the dry weight basis.

In-place density of the compacted lime stabilized material will be determined by California Test 231. A composite of material from a minimum of 5 random selected sites, taken at the time in-place density is determined, will be used to determine the in-place moisture content, by California Test 226. LIME START (ZATION

If the compacted material is above the grade tolerances specified in this section, the excess material shall be trimmed, removed, and disposed of. No loose material shall be left on the finished plane. Trimming of excess material shall not be conducted unless finish rolling can be completed within 2 hours after trimming.

All trimmed surfaces shall receive finish rolling consisting of at least one complete coverage with steel drum or pneumatic-tired rollers. Vibratory rollers will not be allowed. Minor indentations may remain in the surface of the finished material after final trimming and rolling. Under no circumstances will it be permissible to add new or trimmed lime stabilized material to fill low areas or to raise the grade of compacted lime stabilized material.

24-1.09 Curing—A curing seal, consisting of SS or CSS grade asphaltic emulsion, shall be furnished and applied to the surface of the top layer of lime stabilized material in accordance with the provisions in Section 94, "Asphaltic Emulsions."

Curing seal shall be applied at a rate of between 0.10- and 0.20-gallon per square yard of surface. The exact rate will be determined by the Engineer.

Curing seal shall be applied within 48 hours of completion of initial compaction and on the same day as trimming and finish rolling are completed. The curing seal shall be applied as soon after finish rolling as is practicable. The lime stabilized material shall be at optimum moisture when the curing seal is applied.

Curing seal shall not be placed when the atmospheric temperature is below 40° F.

Curing by water will not be allowed, unless authorized by the Engineer.

Damage to the curing seal shall be promptly repaired by the Contractor at his expense, as directed by the Engineer.

24-1.10 Measurement—Lime stabilization will be measured by the square yard, determined from horizontal measurements of the planned surface of the lime stabilized material.

Lime will be measured by the ton in accordance with the provisions in Section 9-1.01, "Measurement of Quantities," except that if the minimum relative compaction is reduced to 92 percent, the quantity of lime to be paid for will be the weight of lime multiplied by the factor L/(L+0.5)where L equals the percent of lime ordered by the Engineer.

Bituminous curing seal will be measured as provided in Section 94, "Asphaltic Emulsions."

____1ON_____

24-1.11 Payment—Items of work, measured as provided in Section 24-1.10, "Measurement," will be paid for at the contract prices per square yard for lime stabilization, per ton for lime, and per ton for asphaltic emulsion (curing seal).

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The above contract prices and payments shall include full compensation for furnishing all labor, materials, tool, equipment, and incidentals, and for doing all the work involved in constructing the lime stabilization complete in place, as shown on the plans, and as specified in the specifications and the special provisions, and as directed by the Engineer.

Full compensation for preparing material, spreading lime and mixing and compacting the lime stabilized material shall be considered as included in the contract price paid per square yard for lime stabilization and no additional compensation will be allowed therefor.

No adjustment of compensation will be made for any increase or decrease in the quantity of lime required, regardless of the reason for increase or decrease. The provisions in Section 4-1.03B, "Increase Decreased Quantities," shall not apply to the item of lime.

Kennedy Jenks Consultants

APPENDIX D

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Handbook of Chemistry, 10th Edition by Norbert Adolph Lange, Ph.D.

DICE 00659

Dedication

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To those workers in science who through their labors determined the values recorded herein, this compilation is dedicated. Their devotion to the search for the constants of nature and the dissemination of this knowledge are the foundations upon which rest the achievements of applied science.

HANDBOOK OF CHEMISTRY

A reference volume for all requiring ready access to chemical and physical data used in laboratory work and manufacturing

Compiled and Edited by NORBERT ADOLPH LANGE, PH. D.

Registered Professional Engineer; Member of the American Chemical Society; Fellow of the American Institute of Chemists

Assisted by

GORDON M. FORKER, B. S. (CHEM. ENG.) General Electric Company, Cleveland, Ohio

REVISED TENTH EDITION

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250

PHYSICAL CONSTANTS OF

INORGANIC COMPOUNDS

251

No	Name	Formula	Formula Weight	Color, Crystalline For and Refractive Inde
	Calcium			
441	formate	Ca(HCO ₂) ₂	130 12	col., rhb.
442	hydride	CaHz	42 10	wh. cr. or pd.
443	hydroxide	Ca(OH)	74 09	col., hex., 1.574
444	hypochlorite	Ca(CIO)2'4H2O	215 05	wh., feathery cr.
445	hypophosphate	Carba Ot 2H2O	274 13	granular
446	hypophosphite	Ca(H1PO1)	170 06	col., mn.
447	iodate (lautarite)	Ca(IO ₁)2	389 89	tri,
448	iodide	Calz	293 89	wh., deig. pl.
449	fodida	Call 6H2O	401 98	wh., delq.
450	lactate	Ca(C3H3O3)2·6H2O	308 30	col., eff.
451	magneelum carbonate (dolomite)	CaO-MgO-2CO2	184 41	trig., 1.68174
452	magnesium silicate (diopside)	CaO·MgO·2SIO2	216 56	wh., mn.
453	molybdate	GaMoO4	200 02	wh., tet., 1.974
454	nitrate (nitrocalcite)	Ca(NO ₃) ₂	164 09	col., cb.
455	nitrate	Ca(NO3)2-4H2O+	236 15	col., mn., 1.498
456	nitride		148 25	brn. or.
457	nitrite	Ca(NO ₂) ₂ ·H ₂ O	150,11	delg., hex.
458 458.1	oxalate oxalate		128 10	col., cb.
458.1	oxide	CaCzO4·HzO CaO	146 12 55,08	col. col., cb., 1.837
459.1	perchlorate	Ga(CIO4)2	238.98	col.
460	peroxide	CaO2-8H2O	216 20	pearly, tet.
461	permanganate	Ca(MnO ₄) ₂ ·4H ₂ O	350 01	purple pr.
162	phosphate, monobasic	CaH4(PO4)2-H2O	252 07	wh., tri.
163	phosphate, dibasic	CaHPO4-2H2O	172 09	wh., mn. pl.
464	phosphate, tribasic	Ca ₃ (PO ₄) ₂	310 18	wh., amor.
465	phosphate, meta-	Ca(PO ₁) ₂	198 02	wh., tet., 1.588
166	phosphate, pyro-	Ca2P2O7	254.10	col., blaxial, 1.60
167	phosphate, pyro- (brushite)	Ca2P207-5H20	344 18	wh., mn.
168	phoaphide	Ca ₃ P ₂	182.19	red cr.
169	phosphite, ortho-	2CaHPOj+3H2O	294 17	•••••••
70	plumbate	Ca2PbO4	351.35	yel. pd.
71	plumbite	CaPbOz	279.27	cr.
72	potassium sulfate (syngenite)		328 42	mn.
73	saircylate	$Ca(C_7H_5O_3)_2 \cdot 2H_2O$	350 34	wh., oct.
74	selenate silicate (a) (pseudowolisstonite)	CaSeO4·2H2O CaSiO3	219 07 116 16	mn. col., pseudo hex.,
76	(pseudowolrastonite) silicate (β) (woltastonite)	0-810		1.6150 or mn.(?)
77	silicida	CaSIO,	116 16 96 25	col., mn., 1.610
78	silcofluoride	CaSiz CaSiFe	96 25	•••••
79	silicofluoride	CaSIF6'2H2O	218 19	col.
80	sodium sulfate	CaSO4-2Na2SO4-2H2O	456 25	wh., tet. col.
81	auliate (anhydrite)	CaSO4-2Na2SO4-2H2O CaSO4	136 14	col. col., rhb., 1.576, or mn, 1.50
auat c	ommercial form Calci hydrosulfide 484 Catcl	um metaborate 421 um oxide hydrated 443		phosphate, primary 462

	Specific	Molting Point *C.	Boiling Point *C.			in 100 Parts
No.	Gravity	Point *Č.	Point C.	Cold Water	Hot Water	Other Reagents
				16.100	18.41900	i, al., et.
141	2.015	d.	· • • • · · · • • • •		10.4.	d. a.; i. bz.
42	1.7	d. <675	····	d.	0.0771000	a. NH4CI
143	2.24	– H₂O, 580		0.1850*		
44		d.		dela.; d.	d.	d. a.
145		–2H₂O, 200	• • • • • • • • •	1.		B. HCI, H ₄ P ₂ O ₆
146		d.	•••••	17	4 .	i. al.
147	4.591130	d	· · · · · · · · · · ·	0.12**	0.67**	a, HNO
148	3.956	575	718	182**	426100*	s. s., abs. al., ant.
149		42	160 .	75400	V. 8.	v. s. al.
150		-3H ₄ O, 100		10.5	•	∞h, al.; l. et.
51	2.872	d. 730-760	••••	0.032180	·· ··· •	
152	3.3	1391		i.	i.	•••••••
153	4.35			l i.		a, a.; i, al.
154	2.36	561	•••••	102°°	376151*	14 ^{13*} al.; s. amyl al., NH3
155	1.82	42.7		2669*	V. 8.	
156	2.6317*	900		d.	d.	a, dil. a.; i. aba. al.
157	2.23***			7 70°	41790*	s. 90% al.
58	2.24*	d.		0.0006713*	0.0014950	s. a.; š. ac.
58.1	2.2	- H ₂ O, 200		1.	1.	s. a.; i. ac.
59	2.62	2570	2850	torme		a, a.; i, al.
••				Ca(OH)2		
159.1				188.625*	v. s.	166.2 ^{25°} al.; 237.4 ^{23°} m. sl.; v. sl. a. et.
60	1.70	-8H2O, 100	expl. 275	sF a.	d.	a.a.d.;i.al., et.
61	2.4	d		331140	388230	d. al.
62	2.22014°	– H ₂ O, 100	d. 200		d.	
63	2,306 ^{1,4°}	d		0.0224 80	0.0751000	
64	3.14	1670		0.0025	d.	a. a.; i. al., ac.
65	2.82	975		1.	i.	i. s.
68	3.09	1230		ł.		a. A.
67	2.25			sl. s.		s. s.; I. NH4CI
68	2.51	>1600		d.		s. dil. s.; i. sl., et.
69		–3H₂O,		al. a.	d.	a, NH ₄ CI
70	5.71(97%)	200-300 d.		.		8. 8.
71	0.7 (07 78)			al. a.		
72	2.60			0.25	d.	8. 8.
73		-H ₂ O, 120		s.		i. al.
74	2.676			9,490	6,170*	
76	2.905	1540		0.009517*		a. HCI
78	2.915	tr. 1190 to a				
77	2.5			1.	d.	
18	2.66217 5*			al. a. d.		s. HCI, HF, al.
79	2.25			d.		a. H ₂ SiFe
80		-21,0.80			d	
81	2.96	1450(mn.)	tr. 1193 to rhb.	0.298200	0.1619100*	e. a , Na2S2O3, NH4 salt

Calcium phosphate, tertiary 464 Calcium sulfocyanido 489 Calcium phosphite, hypo- 446 Calomel 1344 Calcium sulfocyanate 489 Caix 459 Canton's phosphorus 485 Caput mortum 824

APPENDIX E

Federal Register/Vol. 44, No. 220, 65400, 13 November 1979

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65400 Federal Register Vol. 44. No. 220 / Tuesday November 17 179 / Rules and Regulations

substantive burdens are imposed on the parties affected. The delegation became effective September 11, 1979. Therefore, it serves no purpose to delay the technical change of this addition of an address to the Code of Federal Regulations. This rulemaking is effective immediately and is issued under authority of Section 112 of the Clean Air Act. (42 U S C. 7412)

Section 61 04 of Part 61 of Chapter L. Title 40 of the Code of Federal Regulations is amended by adding a new paragraph (b)(kk) as follows:

Subpart A-General Provisions

§ 61.04 is amended as follows:

§ 61.04 Address.

•

(b) • • •

(kk) Ohio

Montgomery County: Regional Air Pollution Control Agency, Montgomery County Combined General Health District, 451 West Third Street, Dayton, Ohio 45402.

Clarke, Darke, Greene. Miami and Preble Counties [except for all information required under § 81.22 (d) and (e)]: Montgomery County Combined General Health District, 451 West Third Street, Dayton, Obio 45402.

Dated: November 2, 1978.

john McGuire,

Regional Administrator. (TR Dec. 78-5688 Plint 15-6-78 848 em) BRAINS GODE 6868-61-8

40 CFR Parts 118 and 117

(FRL 1338-7)

Removal of Calcium Oxide and Calcium Hydroxide From Hazardoue Substance List

AGENCY: Environmental Protection Agency.

ACTION: Amendments to Pinal rule.

summary: On August 28, 1978, (46 FR 50783) EPA tentatively concluded that calcium oxide and calcium hydroxide (lime) are not hazardous within the meaning of section 313 of the Clean Water Act and proposed to remove these chemicals from its hazardous substances list. Twenty-eight comments were received in response to the proposal. All commenters concurred with the proposed action. In consideration of comments received and of the factors discussed in the August 29 proposed amendment to rule. EPA today

is removing calcium oxide and calcium

hydroxide from the hazardous substances list.

EFFECTIVE DATE: November 13, 1979.

FOR FURTHER INFORMATION CONTACT: Kenneth M. Mackenthun, Director, Criteria and Standards Division (WH-585), Office of Water Planning and Standards, U.S. Environmental Protection Agency, 401 M Street, S.W., Washington, D.C. 20460, (202) 755-0100.

SUPPLEMENTAL INFORMATION: Section 311(b)(2)(A) of the Clean Water Act (the Act) requires the Administrator to promulgate regulations designating as hazardous substances those elements and compounds which, when discharged in any quantity to surface waters or adjoining shorelines, present an imminent and substantial danger to the public health or weifare. Section 311(b)(4) of the Act requires the Administrator to assign to each assigned designated hazardous substance a quantity which, if discharged, gives rise to reporting requirements and civil penalty and clean-up cost liability.

Calcium oxide and calcium hydroxide ("lime") were among the substances designated as hazardous substances in an action taken on March 13, 1978 (43 FR 10474). On April 3, 1979, the <u>Mississippi</u> Lime Company petitioned EPA for reconstderation of the regulation designating lime as a hazardous substance. On August 29, 1979, [46 FR 50783] EPA proposed an amendment to rule that would remove these chemicals from the hazardous substances list.

As a result of the proposed amendment, EPA received 28 comments from industrial groups and other interested parties. All comments supported the EPA proposed action to remove calcium oxide and calcium hydroxide from the hazardous substances list. Thus, EPA today is amending Part 116 and Part 117 to delete calcium hydroxide and calcium oxide.

It should be emphasized that this action does not affect the validity of EPA's criteria for designating bazardous substances. Rather, based on the documents provided by petitioner, it appears that the unique chemistry of lime is such that lime would not exceed the section 311 acate toxicity criterion when discharged into the environment.

Dated: November 5, 1978. Dougies M. Costie, Administrator

PART 116-DESIGNATION OF HAZARDOUS SUBSTANCES

Part 116 is amended as follows:

§ 118.4 [Amended]

1. Delete from § 118.4, Table 118.4, Ke term Calcium hydroxide. CAS No. 1305820, Lume, hydrated, slaked lime Calcium hydrate.

§ 116.4A [Amended]

2. Delete from § 118 4A. Table 118 4A. the term Calcium bydroxide. CAS No 1305788. Lime. quicklime.

§ 116.4 [Amended]

3. Delete from § 116.4. Table 116.4B. CAS No. 1305620. Calcium hydroxide.

§ 116.4 [Amended]

4. Delete from § 116.4. Table 116.4B. CAS No. 1305768. Calcium oxide.

PART 117-DETERMINATION OF REPORTABLE QUANTITIES

Part 117 is amended as follows:

§ 117.3 (Amonded)

1. Delete from § 117.3. Table 117 3 the term Calcium hydroxide. Category D. RQ in pounds (kilograms), 5.000 (2270).

§ 117.3 [Amended]

2. Delete from § 117.3, Table 117.3, the term Calcium oxide, Category D. RQ in pounds (kilograms), 5,000 (2270).

(Sec. 311 of the Clean Water Act. 33 U.S.C. 1251 and E.O. 11738)

[72 Dec. 70-34891 Filed 11-0-72 (946 a.m.) 86.1.895 70038 (8889-81-46

INTERSTATE CONNERCE

48 CFR Part 1033

[8.0. 1407]

Chicago & North Western Transportation Co. Authorized To Operate Over Tracks of Chicago, Rock Island & Pacific Railroed Co. at Worthington, Minn.

Address interstate Commerce Commission

ACTION: Service Order No. 1407.

SUMMARY: Authorizes the Chicago and North Western Transportation Company to operate over tracks of the Chicago. Rock Island and Pacific Railroad Company (RI) in Worthington. Minnesota, in order to serve shippers which would otherwise be deprived if essential railroad service due to track embargoes on the RL

arrective sate: 12:01 s.m., November 5, 1978, and continuing in effect units (1.53 p.m., December 3, 1979.

FOR FURTHER INFORMATION CONTACT [. Kenneth Carter, (202) 275-7840.

	Kennedy/Jenks Consultants
- 1	
:	APPENDIX F
	Stability Analysis For Open Pits, 1991, Triad Geotechnical Associates
· 1	Excerpts and Boring Logs
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TRIAD GEOTECHNICAL CONSULTANTS INC.

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Soils Engineering • Engineering Geology • Environmental Engineering

17231 EAST RAILROAD STREET, SUITE 100. CITY OF INDUSTRY, CA 91748 TELEPHONE (818) 964-2313 FAX (818) 810-0915

STABILITY ANALYSIS FOR OPEN PIT

8832 DICE ROAD

SANTA FE SPRINGS, CALIFORNIA

JOB NUMBER 90-395 MAY 13, 1991

REQUESTED BY:

Liquid Air 2121 N. California Boulevard P.O. Box 8038 Walnut Creek, CA 94596

Attention: Mr. Robert D. Predmore, Director

INTRODUCTION

This report presents the results of a geotechnical investigation performed to assess the stability of an open pit and to provide mitigating measures if the pit is found to be unstable. This investigation was initiated upon the client's concerns regarding the stability of the pit and its impact on the site. The stability of the area was a special concern due to the presence of railroad tracks within 7 feet of the pit.

1.1 Purpose & Authorization

This phase of stability analysis is the result of the earlier investigation, see reference 1. The earlier work consisted of field reconnaissance and visual observations and as a result of this investigation a more detailed investigation was recommended. The scope of this work was detailed in our proposal dated August 31, 1990 and is summarized below. This work was authorized by Mr. Robert Pedmore, director of technical services of Liquid Air.

1.2 <u>Scope of Services</u>

The scope of work consisted of field investigation, laboratory testing and engineering analysis. Specifically, the scope of services included the following:

- (a) Drill 5 borings to the maximum depth of 20 feet.
- (b) Perform the site survey and produce topographic map with details of pit at the site.
- (c) Perform laboratory tests to determine the engineering properties of soils (strength, etc.) in the pit and its vicinity.

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- (d) Perform stability analysis to evaluate the stability of the pit.
- (e) Prepare a report with findings and recommendations for the stabilization of the pit area.

SITE INVESTIGATION

2.1 <u>Site Description</u>

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The site is located north of Los Nietos Road and west of Norwalk Boulevard on Dice Road in the City of Santa Fe Springs. The property is an industrial site with administrative offices. The entire site is fenced with chain link type fence. The pit is located on the northern end of the property. The east, west and south ends of the pit are being used by the plant facilities, and on the north end there are railroad tracks. On the northeast corner of the pit the railroad tracks fall within 6 to 7 feet of the pit. Several parked rail cars were noted in that area.

For the location of the pit in relation to the railroad tracks and the property fence, see the enclosed Plate A.

2.2 Proposed Project

This area under investigation consists of a large open pit. The attached Site Plan, Plate A, shows the limit of the pit. The pit is approximately 100 feet wide and 250 feet long and its sides are about 25 feet high and essentially vertical. This pit is being used as a lime processing area. Because of its use the inside walls of the pit are mostly coated with lime.

On the north end of the pit, approximately 7 feet from the top of the pit railroad tracks are located. These tracks are being used to transport heavy goods. Railroad cars are expected to impose heavy surcharge and possible vibrations in the pit area. In communications with the railroad industry it was established that maximum load per axle of the railroad car is 80 kips. Therefore, 80 kips of load were distributed to two wheels as surcharge to the pit area.

On the southern end of the property a ramp leads down from the property to the bottom of the pit.

2.3 Field Investigation

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Field investigation consisted of drilling five exploratory borings at the locations indicated on the Site Plan presented in the Appendix. These borings ranged from 11 to 21 feet in depth. A description of the methods used for the exploration is presented in the Appendix of this report.

2.4 Laboratory Tests

To evaluate engineering properties of the on-site soils, several laboratory tests were performed on the soil samples obtained from the site. The type of tests and test results are provided in the Appendix of this report.

2.5 <u>Subsurface Conditions</u>

The subsurface material at the bottom of the pit, in the upper strata, is fill which ranges 5 feet to 13 feet in depth. Fills are gray to grayish brown silty sands and sands. These soils are in a moist and medium dense to dense condition. An ammonia odor was noted in the fills. Underlying the fills are natural soils which consist of silty sands, sandy silts and clayey silts. More commonly fine and cohesive material was encountered in the lower strata. Natural soils are light gray and grayish brown sands and silts. These soils are slightly moist to moist, slightly porous, and are medium dense to dense.

*)

At the ground surface level, the top of pit area, the natural soils were encountered at the ground surface. The soils in the upper 13 feet of stratum were classified as sandy silts. These soils are soft and porous in the upper 2 to 3 feet and below that they increasingly become firm to very firm. The lower strata are grayish brown sands which are dense. Ground water was not encountered in any of the borings to the depths of exploration.

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ANALYSIS

3.1 Fill Material

Fill material will be required at the site to buttress the existing open pit. As will be noted in the section of Stability Analysis, two types of fill may be required at the site. High quality of fill will be necessary in the eastern portion and

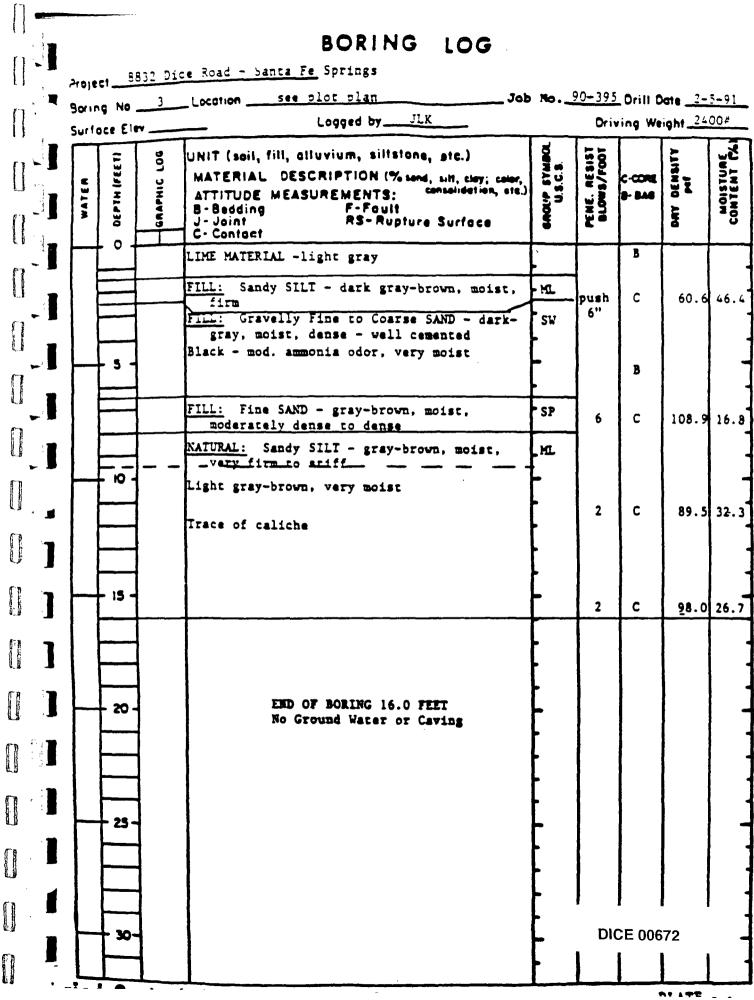
			BORING LOG					
Prote	ct	<u>8832 D</u>	pice Road - Santa Fe Springs					
Borin	g No .	1	Location see plot plan Job	No.90				
Surfe	oce Ele	*	Logged by JLK		Driv	ing We	ight_ <u>24(</u>	20
WATER	0 DEPTH (FEET)	GNAPHIC LOG	UNIT (soil, fill, alluvium, siltstone, stc.) MATERIAL DESCRIPTION (% send, silt, cloy; color, ATTITUDE MEASUREMENTS: consolidation, etc.) B-Bedding F-Foult J-Joint RS-Rupture Surface C-Contact	CAOLP SYMBOL	PENE. RESIST	C-CORE 8- 846	DAY DENBITY	MOISTURE CONTENT CX
			FILL: Gravelly Fine to Coarse SAND - gray- brown, moist, moderately dense, some asphalt debris No debris Black		l/4" ounce	C/B)	94.2	9.9
	- 5 -		FILL: Silty Fine SAND - gray, moist, moderately dense to dense - has strong ammonia odor	-5M	4	С/В	107.0	19.6
	10 -		Dark gray-brown, less Silt, strong odor, trace of porosity		7	с	110.2	11.1
	- 15 -		NATURAL: Sandy SILT with a trace of Clay - light gray-brown, moist to very moist, very firm to stiff - no contamination No Clay	M.	3	C/B	103.9 -	21.5
	20		SILT with Clay - red-brown, moist, very firm to stiff, slight trace of porosity	-	3	C 11	1.9	18.2
			END OF BORING 20.0 FEET No Ground Water or Caving					
	- 25							
	30				l Di	I CE 00	670	- - -

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FILL: LIME with Soil mix - light gray 6 brown Fill: SAND - gray-brown, moist, dense, well camaniad FILL: Sandy GRAVEL/Gravelly Fine to Coarse SAND - gray-brown, moist, dense, well camaniad FILL: Silty Fine SAND with Clay - gray- brown, moist, dense, mild ammonia odor Sandy GRAVEL/Gravelly Fine to Coarse Sandy Gravelly]									
Doring NB 2 Location See Size Judget by Judget by <thj< th=""><th></th><th>1</th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th></thj<>		1								
Surface Eler Logged by Driving Weight Surface Eler 0 UNIT (seli, fill, elluvium, silestone, ste.) 5 Surface Eler 0 MATERIAL DESCRIPTION (% seed, un, tary; carry) 5 Surface Eler 0 Electric Eler 0 Fill: Sandy GRAVEL/Gravelly Fine to Coarse 6%/Graveller Surface Eler Sandy GRAVEL/Gravelly Fine to Coarse 5 Surface Eler Sandy GRAVEL/Graveller 10 C Surface Eler Sandy Graveller 10 113.0 <th></th> <th>)e (م بر</th> <th>ct8</th> <th>832 Di</th> <th>ce Road - Santa Fe Springs</th> <th></th> <th></th> <th></th> <th>• -</th> <th></th>)e (م بر	ct8	832 Di	ce Road - Santa Fe Springs				• -	
UNITED UNIT (soil, fill, elluvium, sileitene, sic.) UNIT (soil, soilt, soilt, lit, ellutene, sic.) UNIT (soil, very fill, elluvium, soist to very SI (soilt, very fill, trace of poresity) UNIT (soilt, very fill, trace of poresity) UNIT (soilt, soist, interver, or Caving) UNIT (soilt, soilt, soist 11.0 FET No Ground Vater of Caving DICE 00671						No				
FIL: LINE with Soil mix - light gray 6 Jown Fili: Sandy GRAVEL/Gravelly Fine to Coarse SW/GL SAND or gray-brown, moist, dense, well III. 10 C 111:4 Signantad Fili: Silty Fine SAND with Clay - gray- SM 10 C 111:4 18.6 Fili: Silty Fine SAND with Silt - light gray- SM SN SN 10 C 111:4 18.6 Source NATURAL: SAND with Silt - light gray- SN SN SN 10 C 111:4 18.6 Source NATURAL: SAND with Silt - light gray- SN SN SN 10 C 113.0 16.8 Clayey STLT - gray-brown, moist to very moist, very firm, trace of porosity NL C 82.7 37.0 Source END OF BORING 11.0 FEET No Ground Water or Caving - - - - Source Source DICE 00671 - - - - -			0EPTH (FEET)	roe	UNIT (soil, fill, alluvium, siltstone, stc.) MATERIAL DESCRIPTION (% sond, silt, cley; calor, ATTITUDE MEASUREMENTS: consolidation, etc.) B-Bedding F-Foult J-Joint RS-Rupture Surface	λ. C		C-CORE	DEMBITY	
Mattradi: SAND with Silt - light gray- SP 5 C 113.C 16.a Image: Solution of the silt of the					brown FILL: Sandy GRAVEL/Gravelly Fine to Coarse SAND - gray-brown, moist, dense, well cemented FILL: Silty Fine SAND with Clay - gray-		1	с	111.4	18.6
10 1 C 82.7 37.0 1 1 C 82.7 37.0 1 1 C 82.7 37.0			- 5 -		brown, moist, moderately dense to dense		5	с	113.0	16.8
END OF BORING 11.0 FEET No Ground Water or Caving	, .		10 -				1	с	82.7	37.0
DICE 00671			- 15 -						-	
DICE 00671			20							
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					BORING LOG					
••	, I	Borin	g No	4	Location See plot plan Job	No. <u>90</u>	- 395	Drill D	ate <u></u>	-01
		Surle	oce Ele	W	Logged by JLK		Driv	ing We	ight_ <u>2=</u> (<u>+00</u>
the second second	J	WATER	(E 1)	06	UNIT (soil, fill, alluvium, silfstone, gtc.) MATERIAL DESCRIPTION (% sond, silt, cloy; calor, ATTITUDE MEASUREMENTS: B-Bedding J-Joint Consolidation, etc.) RS-Rupture Surface C-Contact	GROUP SYMBOL U.S.C.S.		C-CORE 8- 846	DAY DENSITY	MOISTURE CONTENT CAL
] J				LIME MATERIAL FILL: Fine to Coarse SAND - gray, moist, moderately dense to dense	SW				
			- 5 -		Some Gravel - dark gray, well cemented, dense, very moist to wet					4
	·]					r SP	12	C	118.3	12.6
			ю.		NATURAL: Clayey SILT with many calible nodules - gray-brown, moist, firm to very firm Some Sand	F ML	push 5 tap	с	102.5	20.8
			- 15 -		Some caliche nodules		2	с	99.2	25.8
					END OF BORING 16.0 FEET					
	9				No Ground Water or Caving					
			25							-
						r F F				
			30	1		Ē	Di	CE 006	573 	- -

BORING LO

	Location see plot plan Job Logged byJLK				ight <u>2</u>
WATEN O DEPTH (FEE1) GAAPHIC LOG	UNIT (soil, fill, alluvium, siltstone, stc.) MATERIAL DESCRIPTION (% sond, silt, clay; calor, ATTITUDE MEASUREMENTS: consolidation, etc.) B-Bedding F-Foult J-Joint RS-Rupture Surface C-Contact	EROUP SYMBOL U.S.C.S.		C-CORE 8- 844	DAY DENSITY
	SILT with Sand & Clay - brown, moist, firm, slightly porous	ML			ĺ
		t	1	с	97.
		ŀ		в	
5 -	Moist to very moist, firm, trace of porosity	F	push & hol	с	91.
		ŀ			
	Sandy SILT - brown, moist, very firm	}			
	Red-brown, stiff Some Clay, trace of porosity	Ţ	4	с	114.
	Fine to Coarse SAND with gravel - gray- brown to light red-brown, moist, dense	SW			
	Fine to Medium SAND with some Coarse Sand	ţ	5	c _	112.
	Gravelly Fine to Coarse SAND - light gray- brown	$\frac{1}{2}$			
	Strange odor - strong	ŀ			
20-		_	10	с	118.
		ţ			
	END OF BORING 21.0 FEET	Ł			
25-	No Ground Water or Caving	F			
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APPENDIX G

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Geotechnical Study, 1992, Geomatrix Consultants, Inc.

Excerpts, Figure and Boring Logs



GEOTECHNICAL STUDY PROPOSED OFFICE AND TRUCK MAINTENANCE BUILDING AND TANK FARM LIQUID AIR WASTE PONDS SANTA FE SPRINGS, CALIFORNIA

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Prepared for

Kennedy/Jenks Consultants 17310 Red Hill Avenue, Suite 220 Irvine, California 92714

Geomatrix Consultants



LABORATORY TESTING

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Selected samples from the borings were tested in the laboratory to evaluate the unconfined compressive strength, dry density, moisture content, grain size distribution, Atterberg Limits, and R-value of the subsurface materials. Results of these tests are given at the corresponding sample locations on the boring logs, Figures A-1 through A-13. Grain size distribution plots are presented on Figure A-14. More detailed descriptions of the field exploration and laboratory testing programs undertaken for this study are given in Appendix A.

SURFACE AND SUBSURFACE CONDITIONS

SURFACE CONDITIONS

The site is relatively level except for the two waste ponds. The surface of the site is at about elevation 148 feet as shown on Figure 1. The large pond bottom is shown to slope down to a minimum elevation of about 122 feet at the northeast corner of the pond. The small pond bottom is relatively level at an elevation of approximately 141 feet. During our first visit to the site on July 30, 1992, several stockpiles of calcite were located adjacent to the waste ponds. Specifically, the stockpiles occupied the ground surface northwest of the large pond, and to the east and west of the small pond. The stockpile adjacent to the large pond had been pushed into the large pond by the time of our field exploration program. Visual examination of samples of soils retrieved from the three stockpile areas during our exploration indicate that the stockpile adjacent to the large pond contained trace calcium deposits, while soil in the two remaining stockpile areas appear to contain 50 to 75 % calcium deposits.

Soils from at least two street repair projects have been stockpiled just south of the site for use as backfill material. It is our understanding the materials consist of pulverized asphaltic concrete, aggregate base, and subgrade soils. Four types of soils were observed in the stockpiles at the time of our field exploration. These soils appear to be primarily silt, gravel and sand.



The surface of the site is covered with soil in most areas, with some portland cement concrete pavement in the vicinity of the proposed storage tank farm. Several low rise buildings currently occupy the site north and west of the proposed tank farm as shown on Figure 1. Several steel storage tanks are also located immediately west of the small pond, and on the northwest portion of the facility. The site is bounded by railroad tracks on the east and south, with a spur entering the Liquid Air facility west of the tanks adjacent to the small pond.

SUBSURFACE CONDITIONS

Waste Ponds

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Subsurface conditions encountered in the borings drilled in the waste ponds indicate that the large pond is underlain by up to 1.5 to 4 feet of loose to very dense calcium deposits. The greatest thickness of calcium deposits is in the northeastern portion of the pond in the area of Boring B-3, and no calcium deposits were present in the southwest portion of the pond in Boring B-1. In the small pond, about 1.5 feet of calcium fill was encountered in Boring B-5, and no calcium was encountered in Boring B-4.

The native materials underlying the calcium fill in both ponds are comprised of about 7 to 16 feet of dense to very dense silty fine sands and fine sandy silts over stiff to very stiff clayey silts and silty clays. The base of the sandy soils underlying the large pond varied from elevation 121 feet, to elevation 108 feet. Sandy soils were encountered to a depth of about 15 feet at the small pond (approximately elevation 125 feet).

The upper 5 to 13 feet of granular soil underlying the large pond was identified as fill in the Triad borings. We have identified these soils as native materials. The soils differ from the native soils encountered at the same elevations in Borings B-11 and B-12 and T-5 outside of the ponds both in color and cementation. The sandy soils outside the ponds are brown, while the sand and sandy silt underlying the ponds is dark gray to black. In addition, the soils underlying the ponds are cemented, producing very large Standard



Penetration Test blow counts, while the soils outside the ponds do not appear to be cemented.

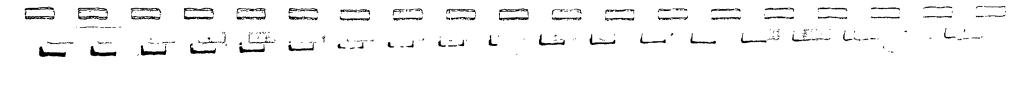
The causes of the dark coloration and cementation of soils beneath the ponds is not known. However, the cementation may be due to precipitation of calcium from the calcium hydroxide (lime) stored in the ponds. The calcium may have precipitated out of solution as the liquid passed through the once permeable native materials below the base of the ponds, eventually forming cementations in the sands and providing a barrier to additional infiltration. The native materials appear to be fairly permeable, but appear to have served as a pond liner once precipitation of calcium occurred. The change in color between the soils underlying the ponds and exterior native soils may be due to differences in moisture content.

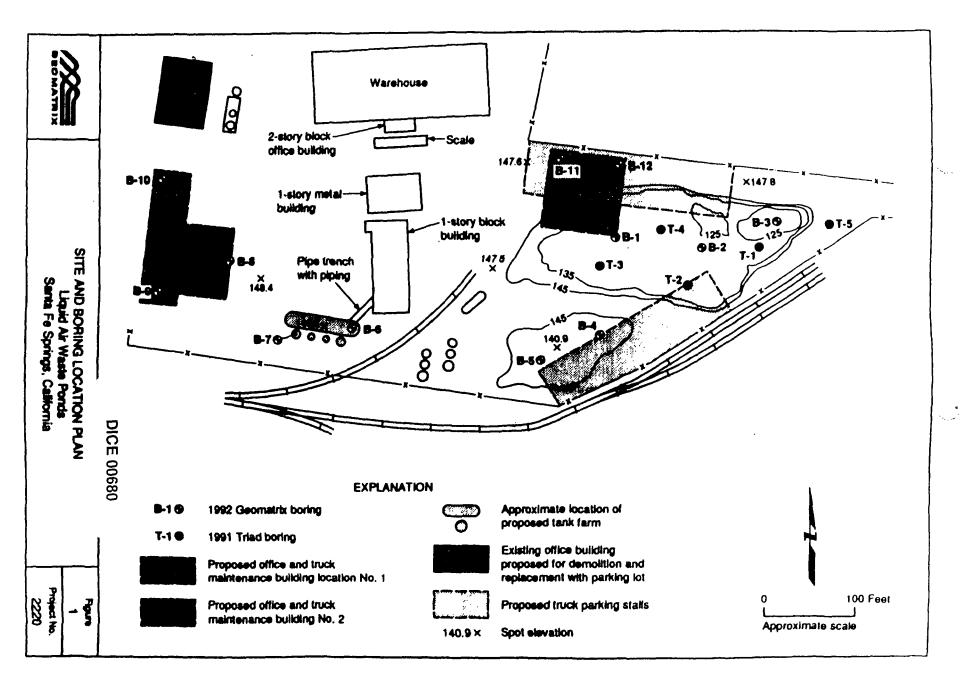
Proposed Office and Truck Maintenance Building and Tank Farm

The proposed building location No. 1 is underlain by approximately 6 to 8 feet of medium dense to very dense silt with sand and clay overlying 14 to 17 feet of medium dense to very dense sand with silt. The sand is underlain in turn by medium dense sandy silt. Approximately 1½ feet of gravel fill and topsoil with organics was encountered at the ground surface in Borings B-8 and B-10.

Subsurface conditions encountered in Borings B-11 and B-12 drilled at proposed building location No. 2 consist of 15 to 18 feet of loose to medium dense sandy silt and silt with clay over about 15 feet of medium dense to very dense sand and silty sand. The sand is underlain by medium dense silt. Loose calcium deposits were encountered in the upper 5 feet of soil encountered in Boring B-12.

The two exploratory borings drilled at the proposed tank farm site encountered 15 feet of stiff to very stiff sandy silty clay over medium dense to dense sand (Boring B-6) and 20 feet of loose to very dense micaceous silt with sand (Boring B-7).





F R R R A	il B-47
DATE STARTED: 10/29/92 DATE FINISHED: 10/29/92 NOTES: Logged by E. Bailiff DRILLING METHOD: 8" hollow stem auger Drilling Equipment: Mobil HAMMER WEIGHT: 140 lbs: DROP 30" DROP 30" SAMPLER: Standard penetrometer and 2" I.D. modified California LABORA Material Standard penetrometer and 2" I.D. modified California LABORA Material Samples LABORA Samples Surface Elevation: ~129'± (%)	Drilling Inc. ATORY TESTS Dry Other Density
DATE STARTED: 10/29/92 DATE FINISHED: 10/29/92 NOTES: Logged by E. Bailiff DRILLING METHOD: 8" hollow stem auger DROP 30" Drilling Contractor: H-F D HAMMER WEIGHT: 140 lbs: DROP 30" DROP 30" Drilling Contractor: H-F D SAMPLER: Standard penetrometer and 2" I.D. modified California LABORA Molecure Coment E Samples MATERIAL DESCRIPTION Molecure Coment (%)	Drilling Inc. ATORY TESTS Dry Other Density
DRILLING METHOD: 8" hollow stem auger Drilling Equipment: Mobil HAMMER WEIGHT: 140 lbs. DROP 30" SAMPLER: Standard penetrometer and 2" I.D. modified California Drilling Contractor: H-F D Image: Samples big big big big big big big big big big	Drilling Inc. ATORY TESTS Dry Other Density
HAMMER WEIGHT 140 lbs. DROP 30" SAMPLER. Standard penetrometer and 2" I.D. modified California LABORA Material Description Material Description Coment (%) Surface Elevation: ~129'± (%)	ATORY TESTS Dry Other Density
SAMPLER: Standard penetrometer and 2" I.D. modified California E SAMPLES LABORA Molecure Coment Molecure Surface Elevation: ~129'± (%)	Dry Other Density
H SAMPLES MATERIAL DESCRIPTION LABORA H H H H H H H H <td>Dry Other Density</td>	Dry Other Density
How Book Source Image: Source of the state Image: Source of the state	Dry Other Density
	(pc)
	DICE 0068
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	gt-1-88
Project No. 2220 Geometrix Consultants	Figure A-2

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	PRO.	JECT	LI Sa	QUID Inta F	AIR WASTE PONDS e Springs, California Log of Boring I	No.	B-1	(con	t'd.)			
	I.		MPL	ES				LABORATORY TESTS				
	DEPTH (Med)	and Service	Semple	Brown /	MATERIAL DESCRIPTION		Motsture Coment (%)	Dry Density (pcf)	Ogrer			
		Ţ			CLAYEY SILT (ML - CL) (Continued)							
	16	6		19	Becoming very stiff							
Ug	17],	$\left[\right]$	16								
		1	$ \rangle$	10								
0]	18	1	\vdash		Bottom of boring at 18 feet	-11						
	19											
	20											
		4				-						
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	- <u></u>			~~~~	Geomatrix Consultants	<u></u>			2 (contd)			

PROJECT LIQUIE Santa) AIR WASTE PUNDS Fe Springs, California	Log	of Boring	j No.	B-2	
BORING LOCATION	See Figure 1					
DATE STARTED 1	0/29/92 DATE FINISHED 10/29/92	NOTES	Logged by E. I			
DRILLING METHOD	8" hollow stem auger		Drilling Equipr Drilling Contra			Inc
HAMMER WEIGHT			y		3	
	modified California				RATORY	EETE
CEPTH CEPTH Concerning	MATERIAL DESCRI	PTION		Moisture	Dry	Othe
DEPT (boot) Ro. No. No. Blower Foot	Surface Elevation	-125'±	<u>`</u> ``	Content (%)	Density (pcf)	
	SILT (ML) [Fill]					
	Light gray calcium deposit, very dense, m	loist			}	
				29	71	
-1 $\frac{100}{1^{\circ}}$	SAND with GRAVEL (SP)					
2-	Yellow-brown, very dense, moist, fine to	coarse sand	-			
			-			
3-			-			
			-			
4-1	SANDY SILT (ML)					Unce
2 42	Olive yellow-brown, dense, moist, fine sa	nd, black staining	, -			Corr Stree
5-			[-	18	111	56
4 -4			-	1		
6-			[-	1		
			-			
	SAND with SILT (SP - SM)			1		
3 80	Yellow-brown, very dense, moist, fine to	nedium sand	-	Í		
8-			-		t 	
			-	11	119	
9-			-			
			-	1		
10-	SAND (SP)	·		1		
4 71	Yellow-brown, very dense, moist, mediur	n sand	-	1		
			-			
			-	1		
12-			-]	
			-	1		
13-5 85	Becoming gray		-			
			-		1	ı
14			-		DICE	0068
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15-			·	L	<u> </u>	gi-1-44

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PROJ		Sa	enta Fe	AIR WASTE HONDS Springs, California	Log of Boring No.			. B-2 (cont'd		
(jeet)	Bemple No. S		ES NOB J	MATERIAL DESCRIPTION		CABO Moisture Content (%)	Dry Density (pcf)	Othe		
		Т		SAND (SP) (Continued)						
16 -	6		27	Becoming medium dense, wet		4				
- 17 -				Bottom of boring at 16.5 feet	``	1				
_						4				
18 -										
- 19 -										
- 20 -										
-	ł					4				
21 -										
22 -						4				
- 23 -										
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Projec					matrix Consultants		Figure	97 		

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PROJEC	;т	LIC Sar	UID nta Fe	AIR WASTE LUNDS Springs, California	Loç	g of Boring	No.	B- 3	
BORING	LO		10N. 3	See Figure 1					
DATE ST					2 NOT	33 /			
	_	_	_	" hollow stem auger		Drilling Equipmed Drilling Contract			
HAMME	R W	EIG	нт 1	40 lbs. DROP 30"		Unling Contrac		Drining	ι κ.
SAMPLE	R	Sta	ndaro	penetrometer and 2" I.D. modified Cal	ifornia				
I . P	SAM							ATORY TI	_
DEPTH (feet)	Ŷ		88	MATERIAL DES			Moisture Content	Dry Density	Öv
<u> </u>		-+	<u> </u>	Surface Elevatio	n ~123'±		(%)	(pcf)	
				SANDY SILT (ML) [Fill] Light gray calcium deposit, loose, dan	n fine sand				
1 -	Ļ	\downarrow		Light gray calcium opposit, coso, dan		4			
	1		8					-	
2-									
1	ſ		1						
3-						1			
-			- 1			1			
4-	2	Н	100	SAND with GRAVEL (SP)	·····]	G
-	Ì		6*	Gray to dark gray, very dense, moist,	medium to coarse	e sand			Du
5-						-		ļ	
						-			
6-						-			
7-									
	3		100						
		\square	6*	SANDY SILT (ML)					ļ
		Į		Mottled yellow-brown and olive green sand	, very dense, moi:	st, fine			
9-						[]			
						11			
10-	1	Т				1			
1 1	4		49			-			
11 -				Becoming dense		-			
								1	
12-						-			
-						-			
13 -		-				-			
-						-		ł	ļ
14-	5		81	Becoming very dense with clay					000
		μ						DICE 0	1 1
15									
Project	• No			0	natrix Consultanti	<u></u>	<u> </u>	Figure A	gt-1

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	PROJECT L	IQUID Santa Fi	AIR WASTE PONDS e Springs, California	Log of E	Boring No.	B-3	(con	t'd.)
	_ SAMF	PLES				LABO	RATORY T	STS
	DEPTH (leet) Semple No.		MATER		·	Molsture Content (%)	Dry Density (pct)	Other
		TT	SANDY SILT (ML) (Continue	d)	_			
	6 \ 16	33	Becoming dense		-			
	17 -		Bottom of boring at 16.5 feet		` -			
					-			
	18 -				-			
	19-				-			
	20 -				-			
	21 -				-			
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	25 -					4		
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-	31 -					1	DICE)0686
	32		l				<u> </u>	g-2-80
r a	Project No.	2220		Geometrix Consultants			Figure A	4 (contd)
	·····		······································	<u></u>				

[] -				
	PROJECT LIQUID Santa F	AIR WASTE , JNDS e Springs, California	Log of Borin	g No. B-4
	BORING LOCATION	See Figure 1		
	DATE STARTED 10		92 NOTES Logged by E	
1	DRILLING METHOD	8" hollow stem auger	Drilling Equip	ment Mobil B-47 actor: H-F Drilling Inc.
	HAMMER WEIGHT	140 lbs. DROP 30"		
	SAMPLER. Standar	d penetrometer		
	I SAMPLES			LABORATORY TESTS Moisture Dry Other
6.0	DEPTH (feet) Sample No Sample Foot			Content Density
	<u> </u>	Surface Elevat	ition ~141'±	(%) (pcf)
	$ \begin{array}{c} - \\ 1 - \\ - \\ 2 - \\ - \\ 3 - \\ 4 - \\ - \\ 2 - \\ - \\ - \\ 5 - \\ - \\ 6 - \\ - \\ - \\ - \\ $	SAND (SP) Mottled olive and dark gray, very der with very strong cementations	nse, moist, fine to coarse,	Grain Size Distrib
		Becoming olive, slightly moist, with	h quartz gravel	
		Becoming dense		
	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	Becoming mottled olive and dark	gray, very dense	DICE 00687
1.U 1. T	15 Project No. 2220		Ametrix Canal Hanta	gt-1-88
	ZZ20		omatrix Consultants	Figure A-5

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	PROJ		Sa	nta Fe	IR WASTE HÜNDS Springs, California	Log of Bori	ng No.			
	DEPTH (1000)	SA of a city	HPL R	ES NOR		IPTION		LABO Moisture Coment (%)	Dry Density (pd)	Other
	- 16 -	6		86	SILT (ML) Olive and gray-brown, very dense, moi	st, micaceous				
	17 -				Bottom of boring at 16.5 feet		·			
	18 -						-			
	19 - 20 -						-			
	21 -						-			
	22						-			
	23 · 24 ·						-			
]	25 ·						-			
	26									
	28									
	1									
	30 31								 DICI	E 00688
	 32	1					·			
CB I	Proje					trix Consultants		. <u></u>		g1-2-86 A-5 (cont d)

PROJEC	r Lli Sa	QUID anta F	AIR WASTE ⊢ JNDS e Springs, California	Log of Bor	ing	, No.	B-5	
BORING	LOCA	TION	See Figure 1					
DATE ST				NOTES Logged by				
DRILLING	S MET	HOD	8" hollow stem auger	Drilling Ec				In
			140 lbs. DROP 30"		211120		Uning .	••
SAMPLE	R 2'	1.D.	modified California					
T -	AMPL		MATERIAL DESCRIPTIO	N	ł	Moisture	RATORY T	T
DEPTH (feet) sample [No Semple	Biows Fool				Content (%)	Density (pcf)	
	S I		Surface Elevation ~141'±	······	-+	(*)		t
4			SILT (ML) [Fill] Light gray calcium deposit, very dense, dry		-			
14,		50	,,,,,,,,		-			
	P	3.			_			
2-			SAND (SP) Olive and dark gray, very dense, slightly mois	t fine to medium				
			Olive and dark gray, very dense, signily mole					
3-								
							1	
							1	
4-	:	120 6*]			
						8	82	
5-								
-								
6-					-			
					-{			
7-	-	{			-			
	$\left \right $							
8-	' \	46	Becoming olive brown, dense					
						I		
9-							-	
10-	Ν]						
	• []	50 4*	Becoming very dense, with gravel					
11-	\	4*			1			
1		1				}		
12-								
	₅॑॑	<u>80</u> 6"	Becoming olive and dark gray		-			
13-	-	6-						
4							I	I
14 -						ļ)(
					1		1	1
15-		1					1	1

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PRO.	JECT	LI(Sa	QUID Inta F	AIR WASTE . JNDS e Springs, California	Log of	Boring No	. B- 5	(con	t'd.
Ŧ	SA	MPL	ES				LABO	RATORY T	ESTS
DEPTH (Meet)		ed Eas	100 B	MATERIA			Coment (%)	Density (pct)	
	6		95	SILT (ML) Olive brown, very dense, mois	 t				
16	1 1						1		
17 ·				Bottom of boring at 16.5 feet		,			
	$\left\{ \right\}$						{		
18							1		
19	$\left \right $						1		
20							1		
	$\left \right $						{		
21									
22	$\left \right $						4		
23							1		
	$\left \right $						4		
24							1		
25	4						4		
26							1		
	$\frac{1}{2}$						4		
27									
28	-						4		
28									
	1						4		
30]		ļ
31	-						4	DICE)069
32	1						1	<u> </u>	
Prov	ict No.		~		Geomatrix Consultan			FigureA	6 1-5-

PROJE	CT (LIQ Sar	UID nta F	AIR WASTE PO e Springs, Calif	ONDS omia	L	.og of	Boring	No.	B-11	I
				See Figure 1							
				0/30/92	DATE FINISHED 10/30/9	2	NOTES	ogged by E.	Bailiff		··
				8" hollow stem		<u> </u>]	Drilling Equip	ment. Mol	bil B-47	
	the second day of the second day of the second day of the second day of the second day of the second day of the	_		140 lbs.	DROP 30"		1 1	Drilling Contra	actor: H-F	Drilling	Inc.
				nodified Californ	and the second second second second second second second second second second second second second second secon		1				
T	SAM		_						LABO	RATORY	TESTS
(leel)					MATERIAL DES	CRIPTION			Moisture Content	Dry Density	Othe
E S			8 C		Surface Elevation	on -147±			(%)	(pcf)	
- 1 -				SILTY SAND Dark brown, I SILT with CL	loose, damp				- 22	98	Unc Con Strei 80
2			13		light olive brown						Unci
	2		8	•					27	92	Strei 17 ps
8-	3		14	SANDY SILT Brown, medi	^r (ML) um dense, moist, micace	ious, fine to i	medium sa	nd	12	119	
	:							l l]		
9-											
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10-		\square		{					7	1	1
	4	\backslash	16						1		
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Proie	ct No.	2	220		Can	matrix Consu	itante			Figure	gt-1-

	Santa F	AIR WASTE PUNDS e Springs, California	og of Boring No.	D-11	(CON	ſd.
SAMI	LES			LABOR	ATORY TE	STS
DEPTH (Mel)		MATERIAL DESCRIPTIO	NC CONTRACTOR OF	Molsture Content (%)	Dry Density (pcf)	Othe
	+	SANDY SILT (ML) (Continued)				
16 - 5	36	SAND (SP) Dark yellow-brown, dense, damp, fine to o	oarse -	7	111	
17 -	1		` -			
-			-			į
18 -			-			
19 -			-			
20 -	$\left \right $		-			G
- 6 21 - 6	23	Becoming medium dense, medium to coa	arse -	4		Di
	4	-				
22-				1		
23 -				4		
24 -			-	1		
				4		
25-		Becoming very dense, decreased mediu		8	105	
26 - 7	83	Boconning very usinse, usureased mound				
27 -				-		
28-						
28 -				1		
				-		1
30 -	Π	017.00		1	DICE	
31 -	25	SILT (ML) Mottled olive-brown and dark olive gray, r	medium dense, moist	18	118	
 ₃₂]		Bottom of boring at 31.5 feet		1		

	PROJ	ECT	Li Sa	QUID anta f	AIR WASTE - e Springs, Cali	lomia	Lo	og o	f Borin	g No). B-1	2
┢	BORI	NGL	OCA		See Figure 1							
					0/29/92	DATE FINISHED 10/29/92	N	IOTES	Logged by E			
			_	_	8" hollow stem				Drilling Equi Drilling Cont			
					140 lbs.	DROP 30"			g			J
	SAMP	-		_	rd penetrometer	2" I.D. modified California					BORATOR	VIECTO
l	I 🔒		MPL S			MATERIAL DESC	RIPTION			Moist	If Dry	
	(leet)	d z	đ	Blows/ Fool	 	Surface Elevation	~145'±				1	· ·
-			1		SILT (ML) [F	II)						
	~	1			Light gray ca	lcium deposit, very stiff				1		
	1~		ΙT							1		R-val
	-	1		16						1	ļ	-5
	2-									1		
	-	1	┢	1						1		
	3-	1								-	1	
	-	ł					<u> </u>			-		
	4 -	{]		with CLAY (ML)				-		
	-	\mathbf{I}			Olive brown,	loose, moist, fine sand				-		
	5-	ł	\mathbf{H}	4						- 3	2	
	-	2		9						4		
	6-									4	}	
	-	4	μ	4						-		
	7-	┨	$\left \right $	{						4	l	
	-				Becoming	medium dense				4		
	8-	3		12						1:	3	
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	9-	4								4		
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N.		_	Sa	inta Fe	IR WASTE PUNDS Springs, California Log of	Boring No.		RATORY T	
	DEPTH (Meet)	SA and a	Senta Senta	ES 108	MATERIAL DESCRIPTION		Maisture Content (%)	Dry Density (pcf)	Other
		-	$\overline{\left(\right) }$	-+	SANDY SILT with CLAY(ML) (Continued)				
	16 - - - 17 - - - 18 - - - - - - - - - - - - - - - - - - -	┥		36	Becoming light olive brown SILTY SAND (SP) Light olive brown, dense, moist, fine to coarse sand Bottom of boring at 21.5 feet		9		Gran Size Distri
: 1	31	1					1	DICE (0069
	32							L	g1-2-

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Kennedy Jenks Consultants

APPENDIX H

California EPA Sampling and Analytical Data, 1991

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ing. 26, 1921 Liquid air Corp. 8832 Dice Road Santa Fe Springs, CA CAB0000211.60 on dug. 26, 19.26 & samples were collected at hiquid an Conp. Four Dsample were given to Brian Leger on Aug. 26, 1991 (split Samples). Hernandez, CAL EPA Ale and a second Representati Je **DICE 00696**

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Southern California Laboratory - Hazardous Materials Unit 1449 Temple Street, Los Angeles Ca. 90026 Telephone 213-620-3376

Sampling No. :			No. : e of Report:	10389 to 10392. 9-9-91.
Sample Location: Analytical Proce	dures Used: Dig			ysis : EPA 6010.
	PH	EPA 9040 & 904	5.	

		Analysis	Results:	·	DICE 00697
SCL No.	10389	, 10390	10391-Liquid	10391-Solids	10392
Field No.	LA-SA-01	LA-SA-02	LA-S/	4-03	LA-SA-04
Units	mg/Kg	mg/L	mg/L	mg/Kg	mg/Kg
Silver	<4	٤4	<4	<50	< 50
Arsenic	<4	<4	<4	<50	< 50
Barium	6	6	6	< 50	< 50
Beryllium	.<0.4	<0.4	<0.4	< 5	< 5
Cadmium	<0.8	<0.8	<0.8	<10	<10
Cobalt	<4	<4	<4	<50	<50
Chromium	<4	<4	< 4	< 50	< 50
Copper	<4	٤4	< 4	< 50	< 50
Molybdenum	<4	<4	<4	<50	< 50
Nickel	<4	<4	<4	<50	<50
Lead	<4	<4	<4	<50	<50
Antimony	<4	<4	<4	< 50	< 50
Selenium	(0.8	<0.8	<0.8	<10	<10
Thallium	٤4	<4	<4	< 50	< 50
Vanadium	<4	<4	<4	< 50	< 50
Zinc	<4	<4	<4	<50	< 50
pH	12.3 at 22 deg C	12.3 at 21 deg C	12 at 21	.4 deg C	9.4 at 25 <u>d</u> eg (

Analyst's Signature

Jay Patel

10-91 Date

Supervisor's Signature

111-9 . Janile Wakakuwa

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Date

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DICE 00698

OC Simmary for Metal Analysis Southern California Laboratory - Hazardous Materials Unit 1449 Temple Street, Los Angeles, Ca. 90026 Telephone 213-620-3376

То	: Guillermo Hernandez.	Sample Set SCL Nos :	10389 to 10399
Matrix	: Liquids & Solids	Date of Analysis :	9-6-91.
Level of Spike	: 10 & 2 ppm.	Standard Lot Number:	SP0891DK100/20
Duplicate done	on: 10392.	Spike done on :	10392.
Sample Location	n: Liquid Air.		
Analytical Proc	edures Used: Digestion :	EPA 3055 Analys	is : EPA 6010.

	Reagent Blank	Method Std	Laboratory Expected		Sample	X R	% RPD	
	Brank	X Rec	Range	Dup A		Paf		- Matrix Spike
I.D. of the Labora		tory Control Sample: RMM 1088			Ref Material	SMPL	% Rec	
Units	mg/L	×	mg/kg	mg/kg	mg/kg	x	x	*
Silver	<1	109	380-505	474	454	5	*	86
Arsenic	<1	104	1550-1890	2219	1684	(27)	*	82
Barium	<1	107	2320-4480	4097	4062	0.9	*	90
Beryllium	(0.1	111	41-98	88	84	2	*	83
Cadmium	<0.2	108	406-490	476	441	8	*	75
Cobalt	< 1	105	3280-3990	3746	3566	5	*	76
Chromium	< 1	105	2110-2550	2412	2252	7	*	80
Copper	<1	109	1900-2760	2427	2260	7	*	93
Molybdenum	<1	**	2970-3600	3465	3134	10	*	**
Nickel	<1	107	1880-2010	1892	1783	6	*	78
Lead	<1	104	900-1150	968	949	2	*	78
Antimony	< 1	**	310-548	519	502	3	*	**
Selenium	0.23	104	380-500	485	432	12	*	91
Thallium	<1	95	580-1060	1687	805	(71)	*	72
Vanadium	<1	103	3060-3680	3486	3380	3	×	89
Zinc	<1	106	2570-3280	2894	2767	5	*	86
Acceptable	Range	80%-120	ox	·····	<u> </u>	< 20	x 7	5%-125%

*Element not found. **Element not present in std used. ()Refer narretive.

Analyst's Signature

Patel Lay

9-10-91 ale

Supervisor's Signature

Janice Wakakuwa

Date

Kennedy/Jenks Consultants

APPENDIX I

- CERCLA Site Inspection 1989 EPA ID# CAD 982359747
- Screening Site Inspection Summary Report 1990, EPA ID# CAD 003312600

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SITE: Burdett Oxygen Company of California (CKA Liquid Air Corporation) 8832-8838 South Dice Road Santa Fe Springs, CA 90670 EPA ID #: CAD 982359747 ASPIS #: 19-28-0224 **INVESTIGATORS:** Wendell Francisco Hazardous Materials Specialist Susan White Hazardous Materials Specialist Date of Inspection: February 17, 1989 Report Prepared By: Wendell Francisco Report Date: June, 1989

PURPOSE: CERCLA SITE INSPECTION

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1.0 INTRODUCTION:

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The Burdett Oxygen Company (AKA Liquid Air Corporation) currently produces acetylene and repackages gases including carbon dioxide, hydrogen, helium, nitrogen, dinitrogen oxide, oxygen, propane and fuel gas for medicinal and industrial use. The facility has been in operation in Santa Fe Springs since 1946. Historical investigations of the site have revealed releases of waste products to the environment by facility operators. On-site disposal of process wastes to unlined pits has occurred. Poor waste disposal and handling practices have also been noted. Waste parameters including pH as high as 12.4, possible high toxicity and persistence, and potential carcinogencity have been cited (1). The purpose of this is to summarize previous investigations report and make recommendations for further actions.

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2.0 <u>SITE CHARACTERIZATION:</u>

2.1 <u>SITE HISTORY AND DESCRIPTION</u>:

Burdett Oxygen Company (BOC) is owned and operated by Liquid Air Corporation, 2121 N. California Blvd., Walnut Creek, CA (2). In 1957, the facility was called Burdett Oxygen of California. In 1962, the facility operated as California Oxygen Company, and by 1964 was known as the California Oxygen Division of American Cryogenics, Inc. (3,4). In 1971, the facility was known as the American Cryogenics Division of Liquid Air Inc. In 1980, the air separation plant was acquired by M.G. Burdett Gas Products Company. The entire facility is currently owned by the operator, Liquid Air Corporation (LAC) (1,2,5,6).

BOC is located at 8832-8838 Dice Road, Santa Fe Springs, CA in northeastern Los Angeles County (7) (Figure 1, Site Location Map: T2S,R11W, Section 31). The site is situated on level terrain on a panel of 4 1/2 to 5 acres. The facility has been in operation for approximately 31 years in a primarily industrial area of Santa Fe Springs.

The site configuration has changed considerably over the 31 years of operation. The present facility configuration (Figure 2) shows the facility structures and two unlined quarry pits. Structures on-site include: an administrative office, an industrial gas-cylinder fill building, a garage, an acetylene plant, a hydrogen gas plant and an air separation (Alpha gas) plant. The air separation plant and the hydrogen plant are located at the southwest end of the site. The administrative office and the industrial gas-cylinder fill building are located on the north end of the facility. The garage and acetylene plant are centrally located. The two unlined quarry pits are located on the east end of the site between two southern Pacific

Railroad spurs (2).

The site is located approximately 1 mile east of the San Gabriel Freeway. The facility is now completely paved except for the area surrounding the quarry pits. The site is enclosed by a fence with a security guard at the front gate. The Southern Pacific Railroad extends along the southern boundary of the facility.

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From 1949 to 1955, periodic inspections by the Los Angeles County Department of the County Engineer (LACE), indicated that BOC was in compliance with the requirement of an industrial waste permit under Los Angeles County Ordinance 6130 (LAC Ord. 6130) (8). Waste sludge from acetylene production and coolant water were discharged under this permit to the unlined quarry pit or pits (8,9). In 1962, LACE inspectors observed an indirect waste trap that resulted in the deposit of caustic effluent into an earthen pit at the facility. The LACE inspectors ordered a direct connection of the effluent to the unlined quarry pit(s). A representative sample of the caustic effluent measured pH 12.4 (10). In 1963, it was discovered that liquid waste from cleaning and cooling tower basin was discharged into the unlined drainage channel, located south of the formerly standing cooling tower. No further actions were recommended by LACE. In 1949 and 1964, LACE inspectors discovered a violation of LAC Ordinance 6130, consisting of a caustic waste spill on the ground surface. A clean-up order was issued in 1964 (11). In 1964, LACE inspectors ordered company officials to discontinue unpermitted discharge of caustic wastes to the public sewer system (12).

In 1976, representatives of the California Regional Water Quality Control Board, Region 4 (RWQCB) reported illegal discharges of acetylene production wastes and cooling tower water to an unlined drainage channel known as North Fork Coyote Creek, for which clean-up orders were issued (13, 14, 15). Analysis of the process effluent revealed a measured pH of 12.2 and total dissolved solids concentrations (TDS) of 3,220 mg/l (1). As a result, in 1977, RWQCB ordered Liquid Air to comply with waste discharge requirements under Pollutant Discharge Elimination System (NPDES). the National Effluent limits under the NPDES permit included pH 6.0-9.0 and maximum TDS of 700 mg/l (1). Later in the same year, the RWQCB documented excessive quantities of acetylene process wastes deposited in the drainage channel in violation of permit requirements (16). The NPDES permit was allowed to expire by RWQCB with the understanding that no further discharge of indicated wastes to surface waters would be conducted (17,18). In 1981, a facility drive-by conducted by DHS representatives confirmed the presence of acetylene (quarry) sludge ponds containing liquid wastes on site (19). In 1982, the facility was referred to DHS for consideration by the enforcement unit (19,20).

In 1986, it was revealed that a 6200 gallon underground acetone storage tank was leaking at a rate of 0.1566 gal/hr from the facility (21,22,23). The allowable leak rate is 0.05 gal/hour (24,25). A letter of noncompliance regarding the leaking acetone tank was issued by the Department of Public Works Waste Management Division Los Angeles County (25).

In February, 1988, it was revealed that ten or more piles of white to gray waste material were sitting on the unpaved ground surface along the southern border of the waste pit area. In March, 1988, a Santa Fe Fire Department inspection revealed the storage of twenty to thirty 55 gallon drums containing oil, paint, and other wastes near the waste pits (26,27). These drums were relocated to a properly paved storage area and segregated according to compatibility (2). As of July 21, 1989, DHS received a letter from Liquid Air Corporation stating that the 55 gallon drums containing oil, paint and other waste have been properly disposed of or recycled (28).

The facility is currently under permit as Alpha Gas by the South Coast Air Quality Management District (SCAQMD). The SCAQMD has no record of any enforcement action taken at the facility (29).

2.2 <u>Process Description</u>:

The company manufactures acetylene and repackages gases including carbon dioxide, hydrogen, nitrogen, dinitrogen, oxygen, propane and fuel gas for medicinal and industrial uses. The acetylene manufacturing process uses the reaction of calcium carbide stock with water to produce acetylene and slaked lime as shown below:

 $CaC_2 + 2H_2O --- Ca(OH)_2 + C_{2H_2} (gas)...typically with a variety of trace impurities (30,31).$

The company excavated two pits, estimated at 500,000 cubic feet in volume, to accumulate sludge by-product, principally slaked lime (8,9). The gas repackaging process consists of vaporizing liquid gases, then repumping and compressing the gases into cylinders (2). Some liquid gases are repackaged and shipped as liquid product while others are vaporized and pumped into cylinders for transport as vaporized gas. There are no by-products produced from the vaporization process (2).

Cylinders containing the following gases are currently produced at the BOC site: oxygen, nitrogen, argon, helium, carbon dioxide, compressed air, acetylene, hydrogen, propane, and speciality gas-mixtures (2,32).

In 1946, the acetylene manufacturing plant was established. In 1957, an air separation plant for the production of oxygen was installed. In 1971, the acetylene plant was reconstructed due to its destruction

by fire in the previous year (33). In 1980, the air separation or liquid plant was closed and has remained inoperative to the present day (2,5).

In the Industrial Gas-Cylinder Fill building oxygen, nitrogen, argon, helium, carbon dioxide, compressed air and hydrogen are transferred from large (truck tankers) to smaller cylinders (2). In the Acetylene plant, acetylene, produced in a controlled reaction of calcium carbide and water, is stored under pressure in cylinders and the lime by-product is hauled away by sub contractors. One 55 gallon drum of sulfuric acid per year is used to clean the piping in the acetylene manufacturing plant. In the garage 200-400 gallons of oil per year is used for trucks and compressors. In the maintenance building, one 55 gallon drum of III trichloroethane per year is used for cleaning pipes on the oxygen tanks used by hospitals and also as a cleaning solvent for engine parts (2).

2.3. <u>Waste Management Practices</u>:

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No waste products are produced in the Industrial Gas-Cylinder Fill plant, since the process is principally transferring gas from one container to another. In the Acetylene plant, slaked lime (Ca(OH)₂) is produced as a liquid-sludge waste product. The lime is daily deposited in two large 500,000 cubic feet unlined slurry pits. Slaked lime is produced at BOC at a rate of 92 tons of dry lime per month. Approximately 55 gallons of spent liquid sulfuric acid is generated per year from the Acetylene plant. About 200-400 gallons of spent motor oil is generated per year from the company garage. Approximately 55 gallons of spent III Trichloroethane is generated per year from the maintenance building (2).

A tractor is used to transport lime sludge from the quarry pits to an adjacent milling machine. After the lime has been milled, it is hauled away by large trucks. Spent sulfuric acid, waste oil, and TCE are all stored in an enclosed, paved area in the former air separation plant located on the west side of the facility. Drums are grouped based on chemical characteristics. ENSCO Environmental Services of Irvine has been contracted to haul drummed waste products (2).

There are four above ground storage tanks located southeast of the plant office. Liquid argon, nitrogen and oxygen are separately stored in the three above ground storage tanks. All three tanks are sitting on the paved ground surface and have been in use since 1980. In the Industrial Gas Cylinder Filling area, water is constantly dripping over the valves of the cylinders being filled. This is a safety measure to assure that a spark that may produce a chain reaction of explosions does not occur (2).

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In 1976, the RWQCB, Region 4 issued clean up orders for the illegal discharges of acetylene production wastes and cooling water to the North Fork Coyote Creek, an unlined drainage channel (13,14,15). Analysis of the process waste effluent revealed a measured pH of 12.2 and total dissolved solids concentration of 3,320 mg/l (1). Later in the same year, RWQCB documented excessive quantities of acetylene process waste deposited in the drainage channel in violation of permit requirements (16). BOC eventually allowed the National Pollutant Discharge Elimination System (NPDES) permit to expire and begin discharging acetylene process and cooling waters into two large onsite unlined pits (17,18,19). The lime pits are located on the east portion of the BOC site. The acetylene waste water is pumped from the Acetylene plant through a rubber hose out to the lime pits. The pits appear to be greater than 50 feet deep and there is an opaque-green liquid standing on the bottom of the two pits. A floor drainage system collects acetylene process run-off and pumps it out to the lime pits (2).

2.4. <u>Permit</u>:

BOC is not listed in the RCRA data base. In 1977, the RWQCB ordered BOC to comply with waste discharge under the National Pollutant Discharge Elimination System (NPDES). Effluent limits under the NPDES permit included pH 6.0-9.0 and maximum TDS of 700 mg/l (1). In 1976, BOC was not in compliance with the NPDES permit. The NPDES permit was allowed to expire by the RWQCB with the understanding that there would be no further discharges of the indicated wastes to nearby surface waters (17,18). BOC no longer discharged to U.S. Waters, but instead directed effluent to the slurry pits at the east of the facility (19,20). Currently, BOC does not discharge process waste by-products to the sewer.

2.5. <u>Remedial Action</u>:

BOC was ordered by the RWQCB to clean-up the North Fork Coyote Creek, an unlined drainage channel. There is an ongoing removal of lime sludge from the the acetylene slurry pits on-site. This lime is milled and hauled away to be used on roads and agricultural fields.

- 3.0. Environmental Setting:
- 3.1. <u>Surrounding Area</u>:

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The BOC site is situated on the Santa Fe Springs Plain in the northeast portion of the Los Angeles Coastal Plain. The Santa Fe

Springs plain is a low, slightly rolling topographic feature that has been shaped by the Sarta Fe Springs Coyote Hills anticlinal system. The plain dips moderately to the northeast toward Whittier and to the southwest towards the Downey Plain. Total elevation difference ranges from 175 to 200 feet above sea level (34).

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The San Gabriel River Channel is located 1 mile west of the site and a percolation basin is located less than 3 miles northwest of the site. The Sorenson Avenue storm drain, located 1/4 mile northeast of the site, is tributary to Coyote Creek which is located approximately 3 miles southeast of the site (Figure 1).

The surrounding population of the City of Santa Fe Springs is 15,000. Distance to Southern California Chemical Company which has the nearest off site building is less than 500 feet west of the site. Witco Organics Company is less than 1,000 feet northwest of the site. An upaved lot is located less than 200 ft. southwest of the facility on the east side of the Dice Rd. (Figure 3). There are no sensitive environments within the site vicinity such as wetlands, nature preserves, or critical habitats.

One year, 24-hour rainfall for the area is 2 inches (Figure 4). Net seasonal precipitation is -.30 inches (35). Local streams are intermittent due to the seasonal nature of the climate.

3.2. <u>Geology</u>:

The site is located on Upper Pleistocene alluvium of the Lakewood Formation. The Lakewood Formation unconformably overlies the Lower Pleistocene San Pedro Formation, the Pleistocene Pico, the Repette, and Miocene Puente formations (34). Underlying the site are the Lakewood and San Pedro formations which are fresh water bearing units containing Hollydale, Jefferson, Silverado, and Sunnyside Aquifers at increasing cepth (1,34,36).

The site is located on the surface exposure of the Bellflower aquiclude, a low permeability layer of the Lakewood Formation. The aquitard, which is 15 - 20 feet thick, consists of gravelly clays, silts, silty clays, and sandy clays (34,37). The lower portion of the Lakewood Formation is the Gage Aquifer which is composed of fine to medium sands approximately 20 feet thick (Figure 5 and 6). Soil borings taken at a nearby facility (Southern California Chemical Company) indicate the base of the Gage Aquifer is located at a depth of 30 feet, however it is dry beneath the nearby site (34,37). The San Pedro Formation unconformably underlies the Lakewood Formation and its uppermost layer is an aquitard comprised of clayey silts and silty clays. It is 5 to 30 feet thick, according to nearby site boring logs, and separates the Gage from the Hollydale aquifer (38).

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The Hollydale Aquifer is encountered at a depth of 60 feet below the site surface to approximately 100 feet (34,37). Regional groundwater flow is towards the south to southwest (36,37).

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- 3.3. <u>Hydrology</u>:
- 3.3.1. <u>Surface Water</u>:

Drainage off of the site flows to the Sorenson Avenue storm drain, a concrete lined channel located 1/4 mile northeast of the facility. The storm drain is tributary to Coyote Creek which is located 3 miles to the southeast. The San Gabriel River is located 1 mile to the west and the San Gabriel percolation basin is located further upstream. The Rio Hondo River and percolation basin are located approximately 3 miles northwest of the site (see Figure 1).

3.3.2. <u>Groundwater</u>:

The site is located on a surface exposure of the Bellflower Aquiclude, a low permeability portion of the Lakewood, Formation, a late pleistocene alluvial formation approximately 20-25 feet thick in the vicinity location (34,37). Boring logs for monitoring wells in the vicinity of the site reveal 10-15 foot thickness of the Bellflower Aquiclude which is comprised mainly of clays (37,38). The unsaturated zone is comprised of gravelly clay, silty clay and clay with a permeability or hydraulic conductivity of 10-5 to 10-7cm/sec and less (37,38,39).

The Gage Aquifer is found 5-15 feet beneath the aquiclude and is 15-30 feet thick beneath the site and consists of sands and is comprised of clays and lies beneath the site surface at a depth of 30 to 60 feet (38). The Lynwood Aquifer lies beneath the San Pedro aquiclude and beneath the site at a depth of 200 feet and extends for 80 feet. The Silverado aquifer lies beneath the site at 300 feet and extends 200 feet in thickness. The Sunnyside aquifer is found at a depth of 560 feet below the surface at depth of approximately 850 feet. The Gage, Hollydale, Jefferson, and Lynwood aquifers are hydrologically interconnected within 3 miles of the site. The Silverado and Sunnyside aquifers are not hydrologically interconnected within a 3 mile radius of the site (Figure 6). General regional groundwater flow in the area is south to southwest (37).

Depth to groundwater in the Central Basin of the Los Angeles Plain occurs at 30 to 35 feet depth to the Gage Aquifer beneath the surface (37). Depth to groundwater beneath the site is approximately 42 feet (34).

A hydrogeologic assessment conducted in the vicinity of the site, indicated that a confined aquifer exists beneath the site at a depth from 42 to 45 feet. Low permeability soils were encountered 10 feet below the ground surface. A second low permeability zone was encountered approximately 25 feet below the surface (38,39,40).

The area is served by several water purveyors within a 1 mile radius of the site. The San Gabriel Valley Water Co., has 2 active wells at State well location 2S/11W-18Q, Plant 1. The wells reach depths of 530 to 552 feet and are perforated at several depths in several of the local aquifers. These two active wells serve The Community of Whittier, California at a population of 17,000 people (41). The City of Norwalk Public Works operates one well within a 3 mile radius of the site and the population served is 7734. It is state well no. 3 s/11W-18M02 and is 1002 feet in total depth. The well is perforated in the Jefferson and Lynwood aquifers (42). City of Santa Fe Springs Water Department operates State well no, 25/11W-30RS that is located at the Santa Fe Springs Fire Station, 1180 feet north of the site. It is the nearest well to the site and is used for municipal supply (43). The well is 900 feet in depth and is perforated in the Lynwood, Silverado, and Sunnyside aquifers (42,43). The population served by municipal wells within a 1-mile radius of the site is 15,067 (41,42). There are over 50 wells within a 3-mile radius of the site (Figure 7).

Depth to the aquifer of concern for the site is 200 feet to the Lynwood Aquifer which extends 80 feet (Figure 6). Wells used for municipal supply located within a 1 mile radius of the site indicate perforations within these depths (41,42,43). The Gage Aquifer is dry within the vicinity of the site, however a perched groundwater condition was discovered at 42 feet beneath the site (37). Depth to aquifer of concern is 42 feet due to aquifer in terconnec

4.0. <u>SUMMARY OF INVESTIGATIVE EFFORTS</u>:

4.1. <u>Previous Activities By Other Agencies/Responsible Party:</u>

Sampling by DHS was not conducted by BOC. Ralph Stone and Company (RSC) on June 24, 1987 obtained samples for the waste classification of waste produced by Liquid Air Corporation. The RSC report was submitted to the RWQCB and was also to satisfy all requirements of the TOXIC PITS Clean-up Act (TPCA) of 1984 (44).

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The objective of this sampling effort was to determine if the lime pits were hazardous or non hazardous. Based on the sampling protocol, leboratory test results, chain of custody documentation and sampling locations, the BOC site lime pits were found to be non hazardous (44).

4.1.1 Discussion and Evaluation of Previous Sampling/Testing Results:

Previous sampling has been performed at the facility by RSC, Inc. There are currently two pits used by Liquid Air Corp. Since each pit is filled with fresh, hot liquid lime, allowed to solidify, then excavated, a composite sample from one pit should represent both pits. There is no variation of raw material being fed into the acetylene generator, therefore there should be no variation of the chemical constituents in each of the lime pits. One lime pit contains liquid lime while the other pit contains solid lime. Eight samples were taken from the solid lime pit (S1 thru S8) and four samples were taken from the liquid lime pit (L1 thru L4) (Figure 8).

Figure 8: Dates and Locations of Collected Samples.

Type of Sample <u>Collected</u>	Sample Location	Date <u>Collected</u>	Field <u>Sample</u>
Grab samples	Solid lime pit	6/4/87	S1 thru S8
Grab samples	Liquid lime pit	6/4/87	L1 thru L4

In the solid pit, grab samples were taken using clean equipment and samples jars. The equipment was cleaned after each sample with distilled water. In the liquid pit, a glass jar was attached to twenty feet of PVC pipe. Samples were scooped into the jar and poured into a clean glass sample jar. The jar attached to the PVC pipe was cleaned after each sample was taken. Collected samples were stored in an ice chest. Each sample was properly labeled and the caps were secured with electrical tape. Upon completion of sampling, samples were promptly delivered to the testing laboratory in an ice chest sealed with chain of custody tape. The laboratory was instructed to place samples in a refrigerator (44).

Sample locations for each respective lime pit are available on figure 9 and 10. Results of analysis performed on samples are found in Table 1, 2, and 3.

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TABLE 1

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Report of Analytical Results for Solid Slurry Pit.

Log No.	<u>Sample Desc</u>	ription, Sc	<u>il Samples</u>	<u>Date Sa</u>	mpled
06-086-1 06-086-2 06-086-3 06-086-4 06-086-5	Comp. S(1–8 S1 S2 S3 S4)		04 Jun 04 Jun 04 Jun 04 Jun 04 Jun	87 87 87
Parameter	06-086-1	<u>06-086-2</u>	<u>06-086-3</u>	06-086-4	<u>06-086-5</u>
Selenium, mg/kg Silver, mg/kg Thallium, mg/kg Vantdium, mg/kg Zinc, mg/kg Nitric Acid Digestion Date	<0.4 3.4 <5 17 2.0 5/11/87				
Digetsion Dave	-,,				

TABLE 2

Report of Analytical Results for Solid Slurry Pit.

Log No.	<u>Samp</u>	<u>le Descript</u>	tion, Soil S	Samples	<u>Date Sampl</u>	ed
06-086-1 06-086-2 06-086-3 06-086-4 06-086-5	Comp S1 S2 S3 S4	osite S(1-8	3)		04 Jun 87 04 Jun 87 04 Jun 87 04 Jun 87 04 Jun 87	
Parameter		<u>06-086-1</u>	<u> 06-086-2</u>	<u>06-086-3</u>	<u>06-086-4</u>	<u>06-086-5</u>
RCRA Reactivity Requirements Cyanide Generat mg/kg		<10	_			
Reactivity with Acid/Base, mg/		NR				
Sulfide Generat		<1				

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Parameter	06-086-1	06-086-2	06-086-3	06-086-4	06-086-5
CN Amenable to			Ŷ		
chlorination					
Cyanide, Total,mg/kg	UTD				
CN amenable to	UTD				
chlorination,mg/kg	<5				<u> </u>
Hexavalent Chromium, mg/kg	< 3		<u></u>		
Sulfide, mg/kg	43				
pH, Units	11.9				
Sample Held, Not					
Analyzed					
Fluoride, mg/kg	<1	<u></u>			
Antimony, mg/kg	<8		<u> </u>		
Arsenid, mg/kg	0.6				
Barium, mg/kg	13				
Beryllium, mg/kg	0.09				
Cadmium, mg/kg	<0.5				
Chromium, mg/kg	1				
Cobalt, mg/kg	<1				
Copper, mg/kg	2.9				
Lead, mg/kg	<5				
Molybdenum, mg/kg	<5				
Nickel	11	·			

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TABLE 3

Report of Analytical Results for Liquid Slurry Pit.

Log No.	<u>Sample Desc</u>	ription, Soi	DATE	SAMPLED	
06-086-1 06-086-2 06-086-3 06-086-4 06-086-5	Composite L L1 L2 L3 L4	.(1-4)		04 J 04 J	un 87 un 87 un 87 un 87 un 87 un 87
Parameter	<u>06-086-1</u>	06-086-2	<u>06-086-3</u>	06-086-4	<u>06-086-5</u>
Hexavalent Chromium, mg/kg pH, Units Sample Held, Nor Analyzed	11.9		 		

Further results for analysis performed on samples are found in Appendix D. Generally, no hazardous constituents were found during the analytical analysis of the sample from the BOC lime pits (44).

Soil sampling was performed by Bruce Glasberg, R.E.A. of Ralph Stone and Company, Inc. The samples were taken to Brown & Caldwell Laboratories for analysis. Results of samples submitted to the laboratory indicite that the lime pits are non hazardous. No parameter was found to exceed state standards (44).

4.2. DHS Site Inspection:

4.2.1. DHS Activities:

A CERCLA site inspection was conducted on February 17, 1989 for the purpose of gaining the most recent information regarding the site processes, waste management practices, and site layout and condition of acetylene sludge pits. The site investigation does not include sampling as previous sampling of the acetylene sludge pits has indicated that the pits are non-hazardous. For purposes of this site investigation-only a site reconnaissance visit was performed.

5.0. <u>HRS_FACTORS</u>:

There is no documented evidence which supports an observed release to groundwater, surface water or air from Burdett Oxygen Corporation site.

Fire and Explosion:

It has been documented that in 1971, the acetylene plant was reconstructed due to its destruction by fire in the previous year (33).

Direct Contact:

There is no record of direct contact or exposure with the public. The facility is well secured, fenced and guarded.

Waste Type:

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Yearly wastes generated on-site consist of 55 gallons of spent sulfuric acid, 55 gallons of TCE, 200-400 gallons of spent motor oil and 1104 tons of dry lime (2). Waste sulfuric acid, oil, and TCE are all stored in an enclosed, paved area in the former air separation plant to the west of the Cacility. Drums are grouped based on chemical characteristics. ENSCO Environmental Services of Irvine has been contracted to haul away drums (2). The slaked lime (calcium hydroxide) is deposited in two lime pits (125 ft. x 80 ft. x 50 ft. deep and 125 ft. x 80 ft. x 50 ft. deep) (44).

Sulfuric acid is a colorless, oily liquid which is extremely irritating, corrosive and toxic to tissue. TCE is an organic solvent about that decomposes and emits toxic fumes of Cl- when heated. Slake lime or sodium hydroxide consists of colorless crystals can cause dermatitis and irritation to eyes and mucus membranes upon contact for sodium hyphoxide dust (45).

Waste Quantity: a product of the standard substances with Waste Quantity: a product of the standard score. Dryline does not count since it is non bazandows. TCE, sulfuric acid probably don't Yearly, 55 gallons of sulfuric acid and TCE are generated by the facility. 200-400 gallons of spent oil and 1104 tons of dry lime is generated by BOC on a yearly basis (2) generated by BOC on a yearly basis (2). count since they are stored in infact drums.

Groundwater:

Soil boring logs from monitoring wells drilled in the vicinity of BOC show a depth to water of about 42 to 45 feet and indicate that the Gage Aquifer is dry in the vicinity of the site (38). Screened intervals for other monitoring wells in the area are approximately 45 to 75 feet below the surface. The aquifer of concern for the site vicinity is the Lynwood Aquifer, found at a depth of 200 feet beneath the ground surface (38). Several municipal wells located within a 1 mile radius of the site are perforated in this aquifer (41,42,43).

The City of Santa Fe Springs Water Department operates State well no, 25/11W-30RS that is located at the Santa Fe Springs Fire Station, 1180 feet north of the site. It is the næarest well to the site and is used for municipal supply (43). The well is 900 feet in depth and is perforated in the Lynwood, Silverado, and Sunnyside aquifers (42,43). The population served by municipal wells within a 1-mile radius of the site is 15,067 (41,42). There are over 50 wells within a 3-mile radius of the site (Figure 9).

Surface Water:

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Surface water bodies located within a 3 mile radius of the site are not used for municipal, irrigation, or recreational uses. The San Gabriel River, located 1 mile west of the facility is a flood control channel. Drainage off site flows to the Sorenson Avenue Drain, located 1/4 mile northeast of the site. Facility slope is nearby level and it does not appear that surface runoff from the site would affect surface water bodies except via the Sorenson Avenue storm drain.

6.0. RECOMMENDATIONS AND CONCLUSIONS:

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Burdett Oxygen Company CKA Liquid Air Corporation located at 8838 Dice road, Santa Fe Springs, CA has operated an acetylene manufacturing plant, and a repackaging of industrial and medicinal gas operation using such gases as CO₂, H₂, He, N₂, N₂O, O₂, propane, and fuel gas. The BOC site has been in operation since 1957.

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Samples were taken from the two slurry pits at the site to determine whether hazardous substances were being stored in them. Ralph Stone and Company, Inc. conducted the sampling effort which revealed that the slurry pits at the BOC were non-hazardous.

It is therefore unlikely that this site will be eldgible to be listed on the NPL due to a lack of documented on-site hazardous waste.

- EPA: No further Remedial Action Planned Under CERCLA based on a low potential to quality for the NPL.
- DHS: No further Remedial Action recommended for the state since waste constituents in the facility sludge ponds are considered non-hazardous.

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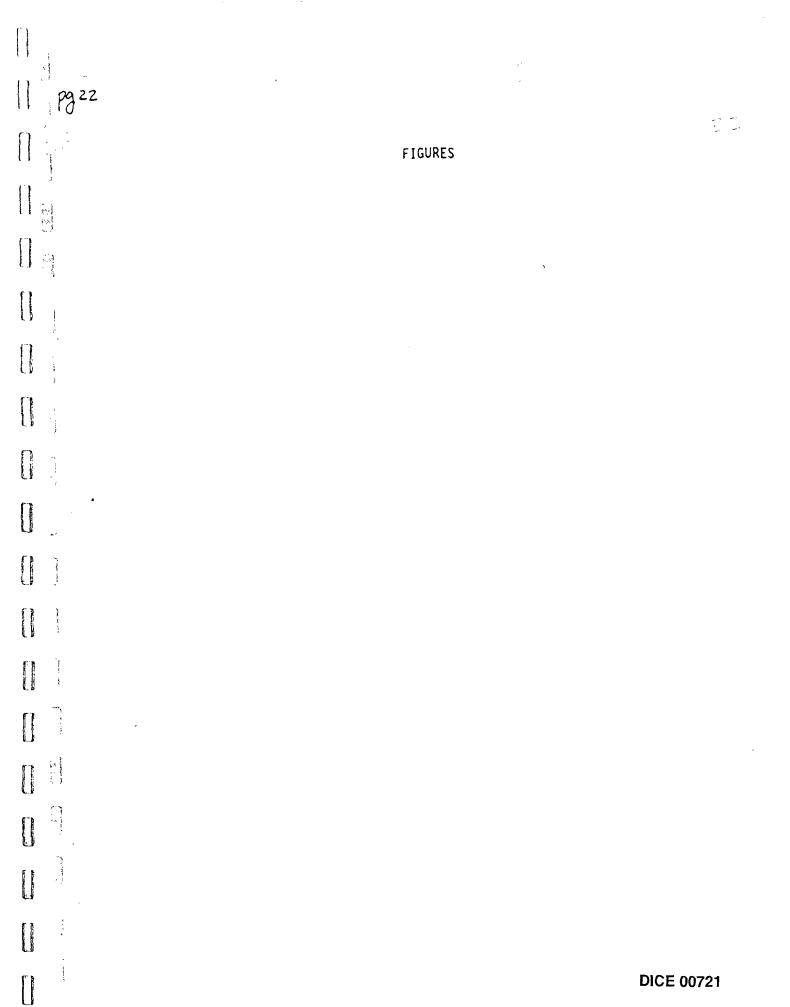
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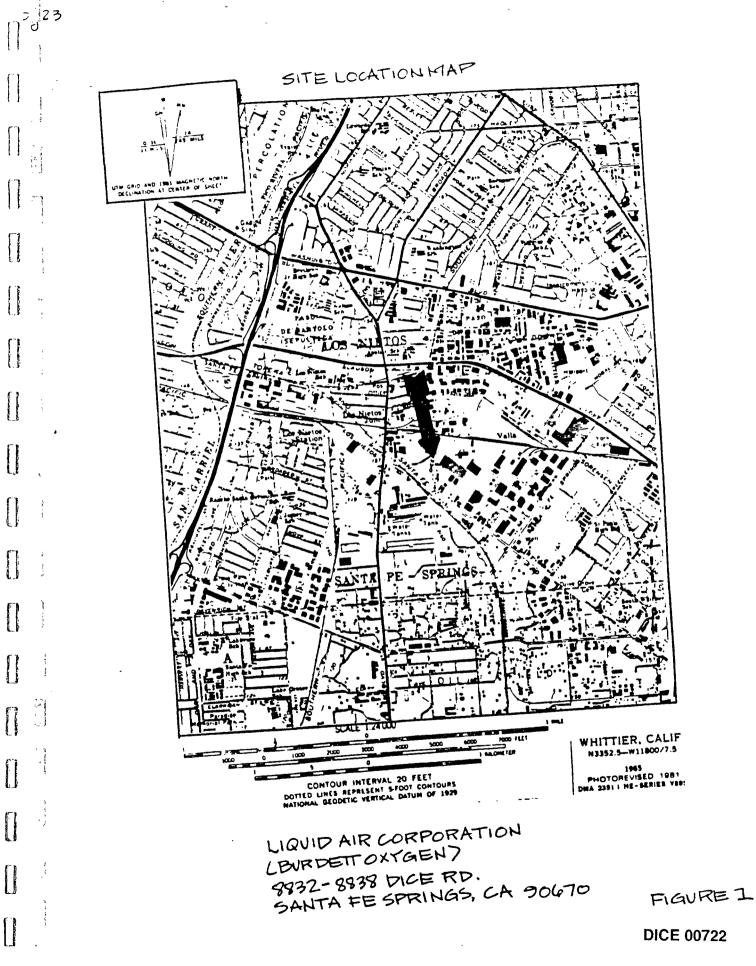
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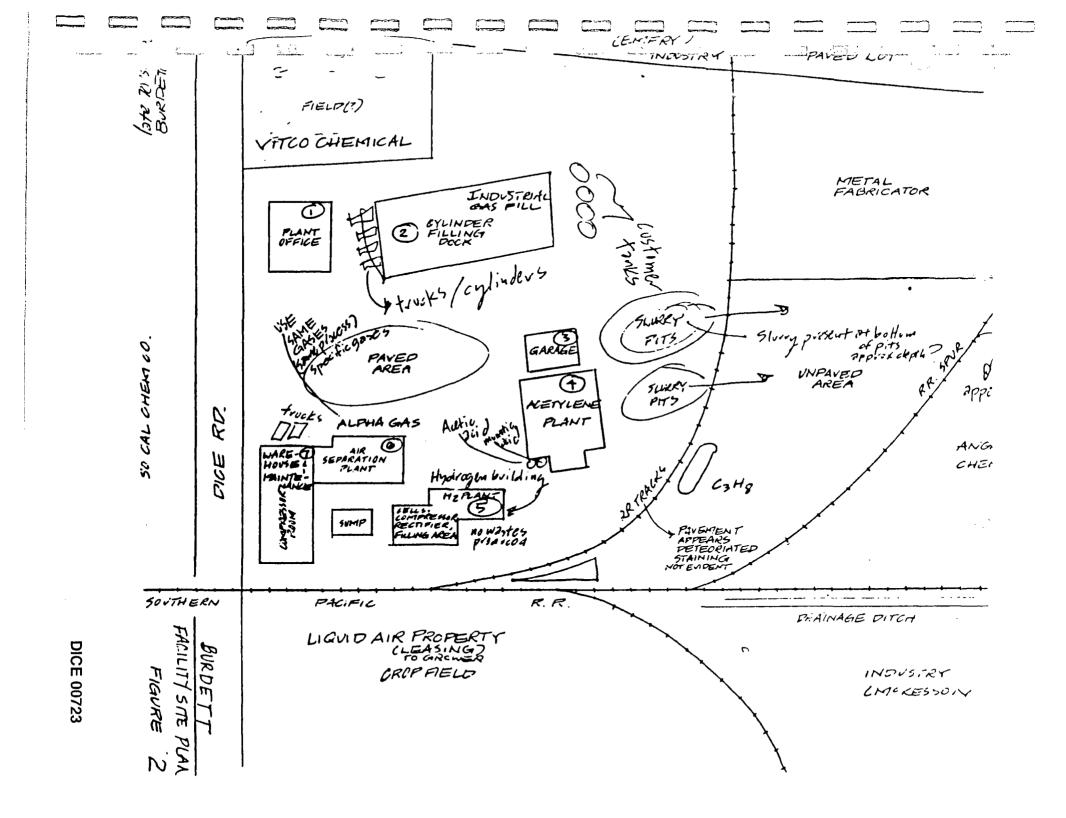
- 36. Preliminary Assessment, SCC, Inc., Prepared by Greg Ratiliff; November 30, 1987.
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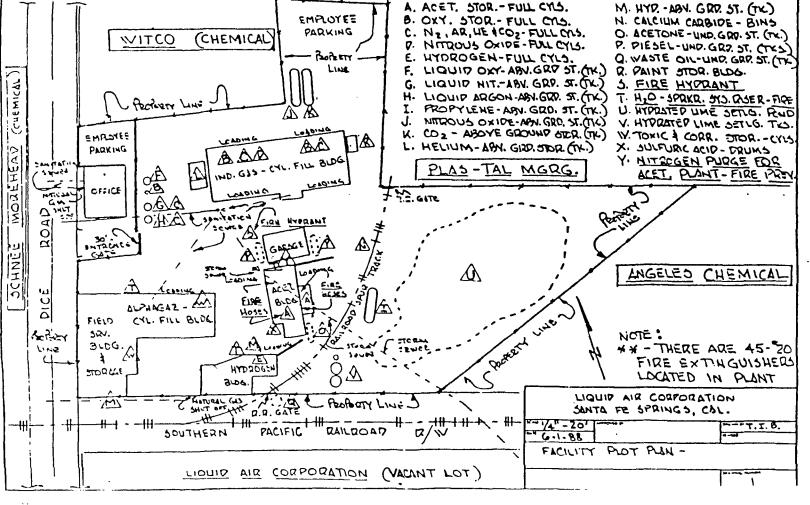
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M. HYP. - ABN. GRP. ST. (TK.) N. CALCIUM CARBIDE - BINS O. ACETONE - UND. GRP. ST. (TK.) P. PIESEL - UND. GRP. ST. (TK.) Q. WASTE OIL--UND. GRP. ST. (TK.) J. R. PAINT STOR. BLOG. J. S. FIRE HYPRANT

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FIGURE

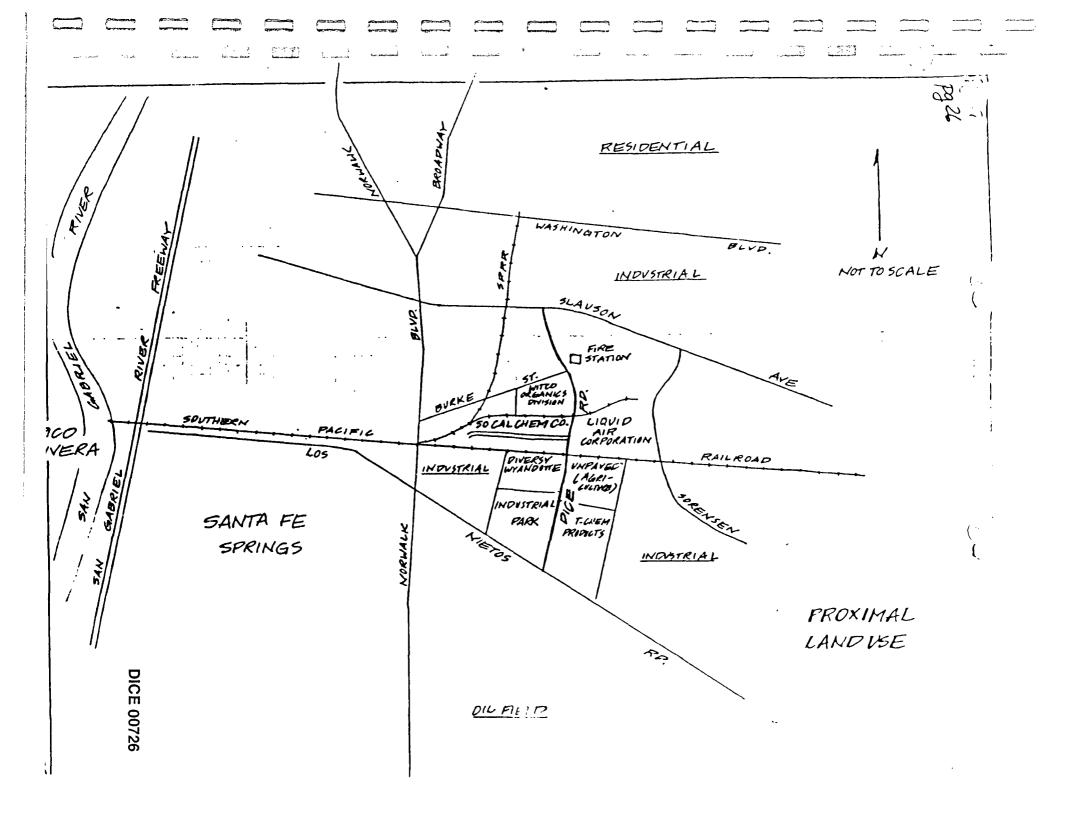
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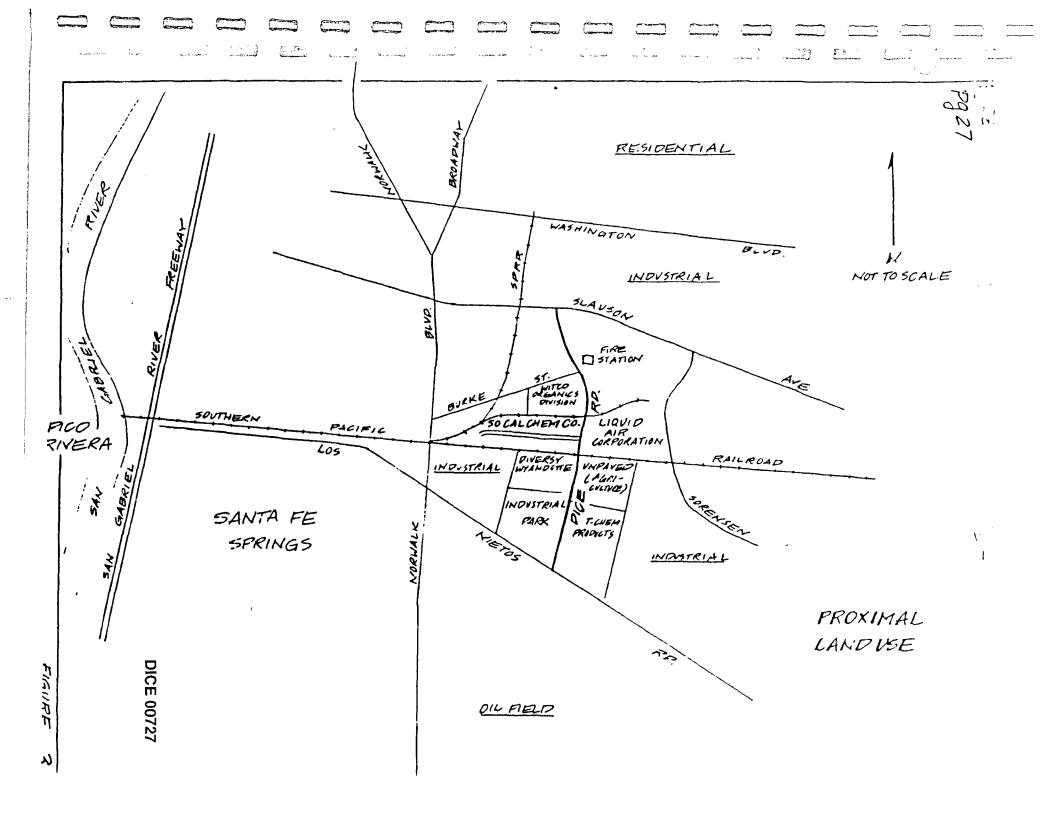
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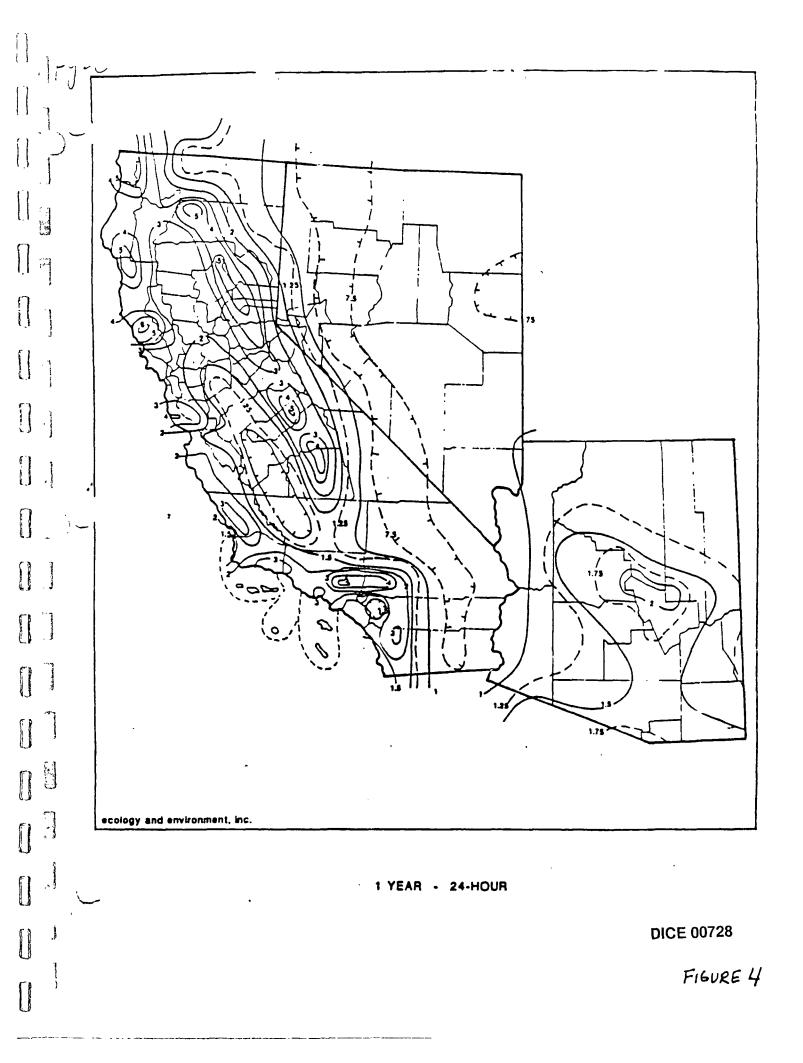
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	~	: TRACKING S Oxygen		Cliff	•
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site Location:					
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ASPIS Facility Fi	le Number: _			SI	
Site Screening	SEE S				
Site Summary:		SILE INV	ESILGE	t I ION_	
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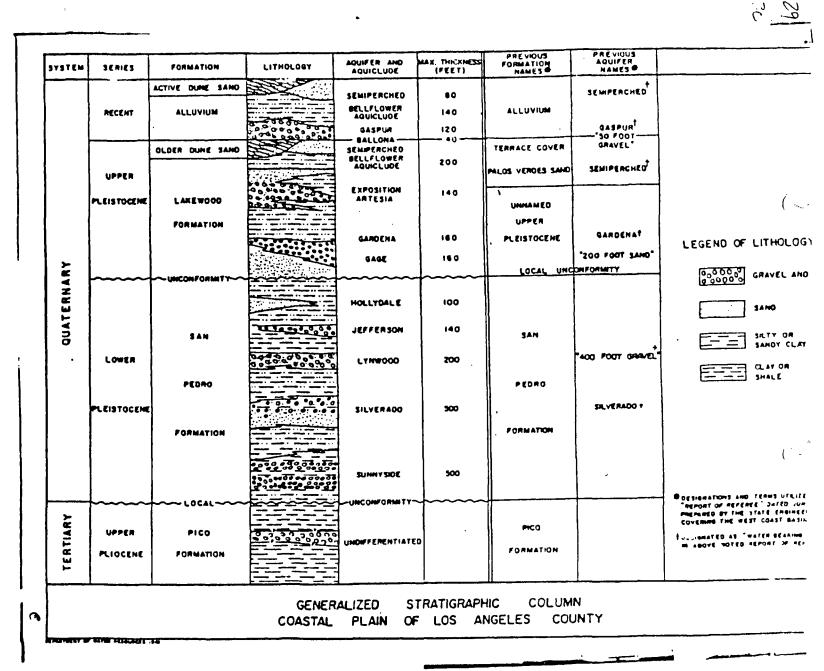




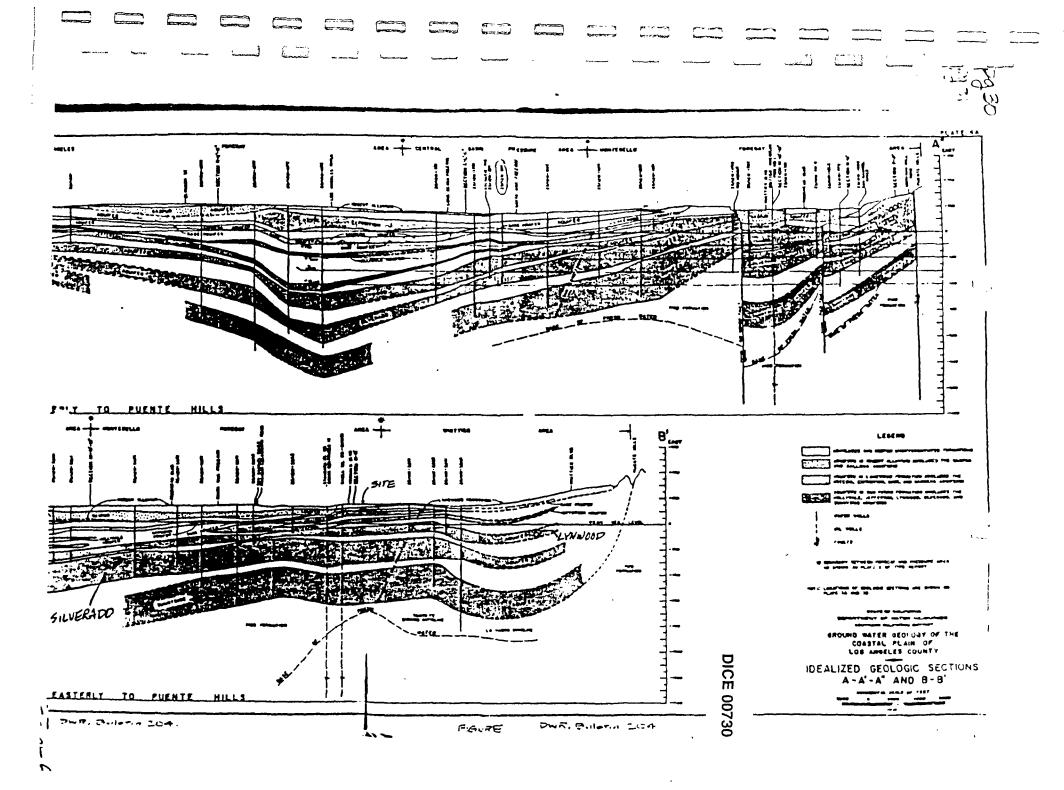
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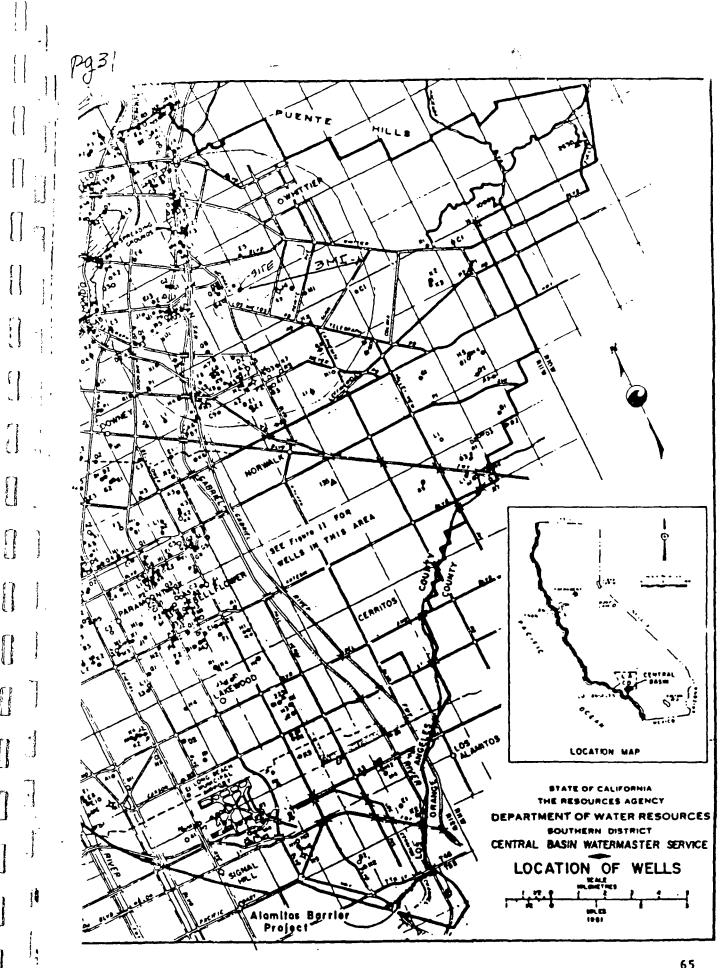
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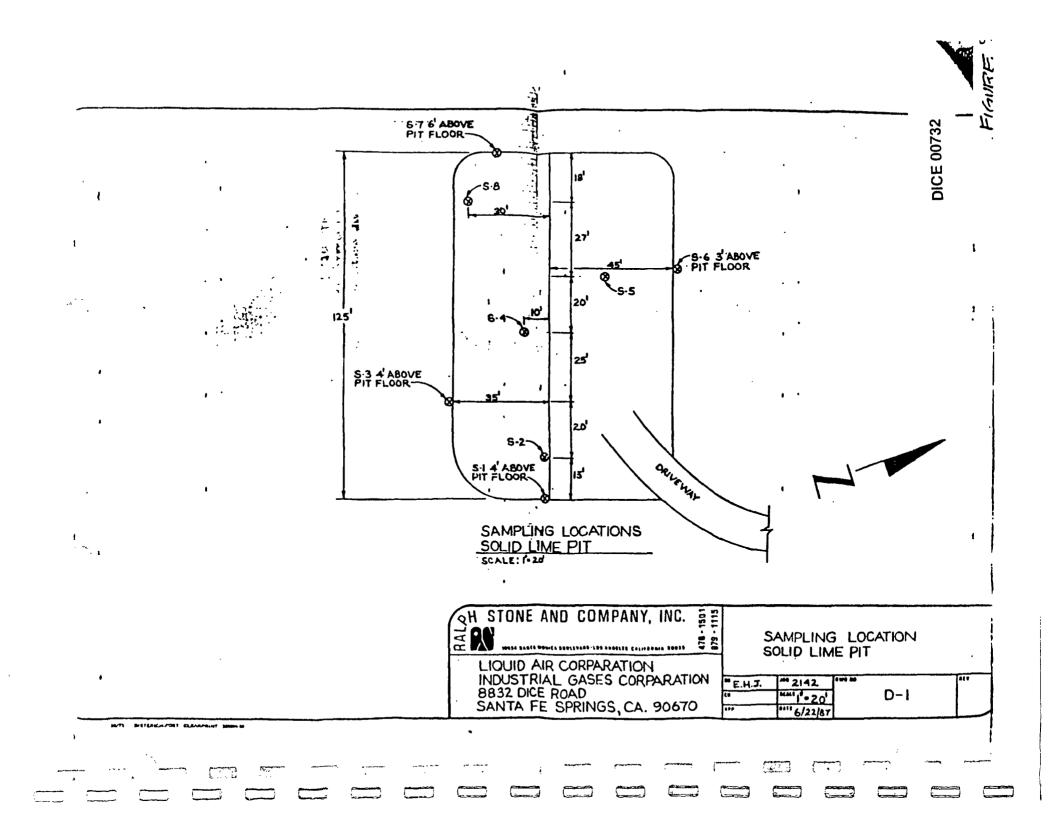


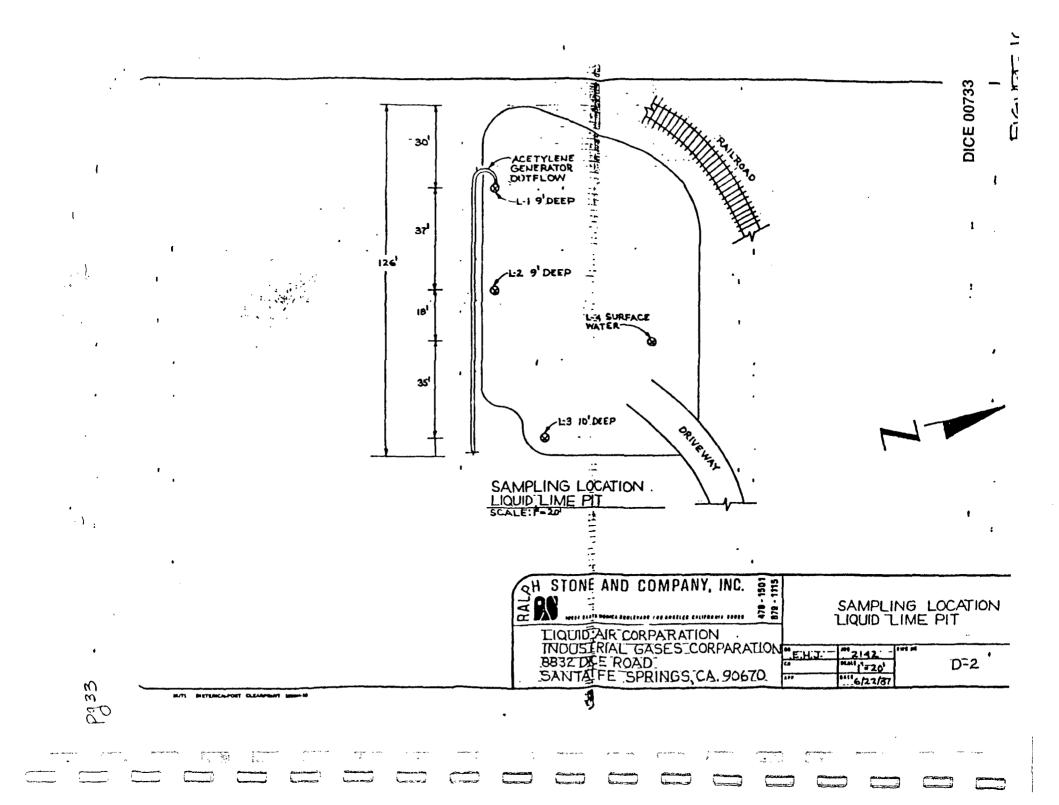
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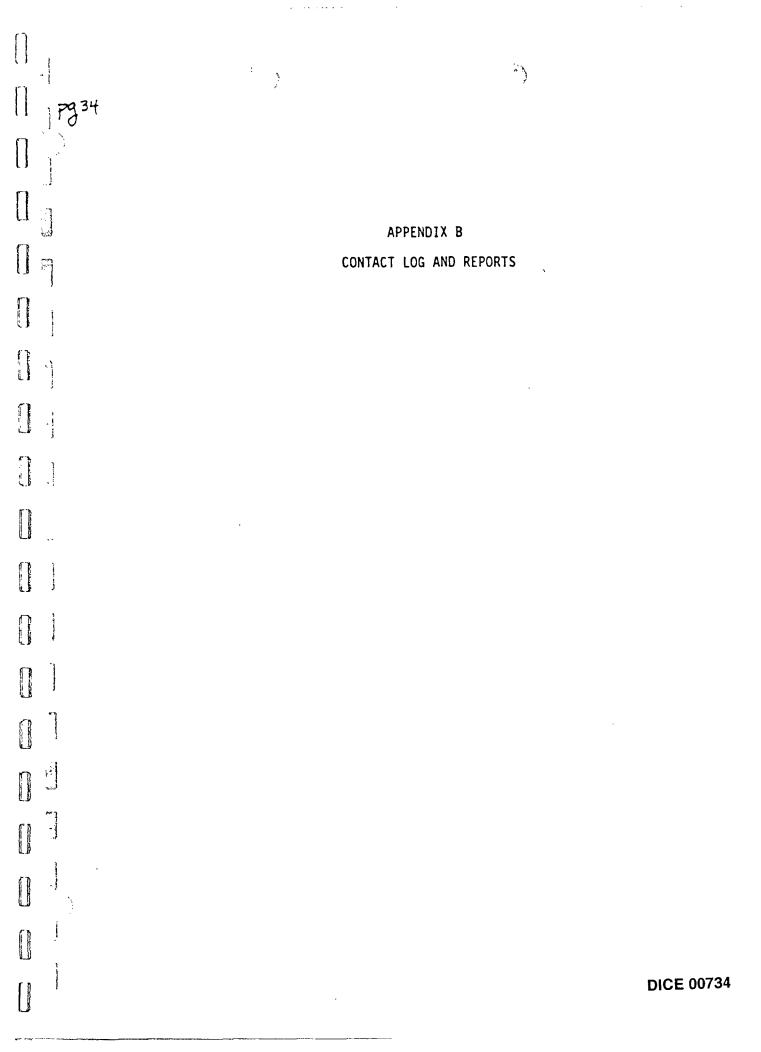
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AGENCY CONTACT RECORD

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Site Name: Burdett Oxygen Corporation Preparer Name: 19-28-0224

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Facility File Number:_____

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AGENCY	CONTACT	DATE	RESPONSE
California Regional Water Quality Control Board. 107 S. Broadway, #4027 LA, CA 90012-4596	Jennifer Schroll (213) 620-4461	3/21/89	Come review file on Burdett Oxygen Company AKA Liquid Air Corporation.
	 		-
	-		
	-		DICE 0073

RALPH STONE AND COMPANY

Ϋ́,

WASTE CLASSIFICATION FORM SUBMISSION FOR LIQUID AIR CORPORATION, SANTA FE SPRINGS, CALIFORNIA

Submitted to:

California Reginal Water Quality Control Board

June 24, 1987

Prepared by:

Ralph Stone and Company 10954 Santa Monica Blvd. Los Angeles, CA 90025 213-478-1501

DICE 00736

CONE AND COMPANY INCHI0954 SANTA MONICA BOULEVARD LOS ANGELES CALIFORNIA BOOZE-118 1501-519 1115



June 22, 1987 File No. 2142

California Regional Water Quality Control Board 107 South Broadway, Suite 4027 Los Angeles, California 90012-4596

ATTENTION: Ms. Mavis Kent

REFERENCE: Waste Classification Form Submission for Liquid Air Corporation Santa Fe Springs, CA.

Dear Ms. Kent:

Please find enclosed a completed Waste Classification Form for Liquid Air Corporation, located at 8832 Dice Road, Santa Fe Springs, CA, 90670. This submission should satisfy all requirements of the Toxic Pits Cleanup Act (TPCA) of 1984.

Results of samples submitted to the laboratory indicate that the lime pits are non hazardous. No parameter was found to exceed state standards. Please review the enclosed data. If you have any questions, please call the undersigned or Richard Kahle.

Sincerely,

RALPH STONE AND COMPANY, INC.

Bruce Glasberg

Environmental Engineer

BG:gw Enc. RALPH STONE AND COMPANY.

DETERMINATION OF WASTE CLASSIFICATION OF TWO LIME PITS AT LIQUID AIR CORPORATION SANTA FE SPRINGS, CA

Liquid Air Corporation obtains "carbide lime" as a by-product of the generation of acetylene from calcium carbide. Calcium carbide (CaC₂) reacts with water (2H₂O) to form acetylene (C₂H₂) and carbide lime or calcium hydroxide (Ca(OH)₂). The actual equation is:

 $C_aC_2 + 2H_2O \longrightarrow C_2H_2 + C_a(OH)_2$

Enclosed in Exhibit B is a pamphlet put out by the Compressed Gas Association describing carbide lime generation from acetylene generators.

There are currently two pits used by Liquid Air Corp. One pit receives hot, liquid carbide lime from the acetylene generator. Once this pit is full, it is allowed to cool and solidify. The second pit is then filled with the hot, liquid carbide lime from the acetylene generator. Figure 1 shows the effluent hose leading to the liquid pit (on the right). On the left side of Figure 1 is the dry pit. Figure 2 shows the dry pit being excavated. The excavated solid lime is re-liquified (Figure 3) and sold as construction material for road stabilization.

Since each pit is filled with fresh, hot, liquid lime, allowed to solidify, then excavated, a composite sample from one pit should represent both pits. There is no variation of the raw material being fed into the acetylene generator, therefore, there will be no variation of the chemical constituents in each of the lime pits.

Laboratory results indicate no hazardous constituents in the solid lime pit. All parameters tested for were below state standards. The pH was 11.9 in both the liquid and solid pits. While this value shows caustic corrosivity, it is below the 12.5 value deemed necessary for classification as a hazardous waste "corrosive".



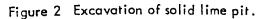
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Figure 1 Effluent hose from acetylene generator seen leading into liquid lime pit. On the right is the solid lime pit.







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Figure 3 Arrow indicates re-liquidified lime which will be loaded onto a tank truck and used for road stabilization.

JASTE CLASSIFICATION FOL 4

1. Name and Adatass of Wasta Facility.

2. Mailing address LIGVID AIR CORP. INDUSTRIAL GASES DIVISION 1832 DICE ROAD SANTA FE SPRINGS, CA 90670

b. Location at which waste is generated, if different from above.

c. Contact person and phone number. STEVE PEBLER, PLANT MGR. 213-945-1383

2. Description of Waste:

Physical description. HYDRATED LIME SENI- SOLID: г. Approximate = 50% UNTER composition = 46% Ca(OH), Calcuin Lydroxide L5% Ca(O), Calcuin Carbonate Bullince SiO, Mg(OH), Free Carbon. ь.

c. Process used to generate waste.

ACETYLENE GENERATION, CALCIUM CARBIDE TO WATER PROCESS.

CaC₂ + 2H₂O = C₁H₂ + Ca(OH)₂ Calcular intellet worth = actighter + Calcular hydroxide GAC₁ + 2H₂O = C₁H₂ + Ca(OH)₂ Calcular intellet worth = actighter + Calcular hydroxide gas GAC₁ + 2H₂O = C₁H₂ + Ca(OH)₂ GAC₁ + Calcular hydroxide gas GAC₁ + 2H₂O = C₁H₂ + Ca(OH)₂ GAC₁ + Calcular hydroxide gas GAC₁ + 2H₂O = C₁H₂ + Ca(OH)₂ GAC₁ + Calcular hydroxide GAC

3. Sampling Information:

a. Name and address of company that sampled the waste.

Ralp Stone and Company, Inc., 10954 Santa Monica Blvd., Los Angeles, CA 90025; 213–478–1501

(rev: FO3 9/83)

C. La C.

- 1 -

umpling performed by Bruce Glasbery, Staff Engineer

c. Dates are locations of collected samples:

Sampling performed on 6/4/87. Eight samples were taken from the solid pit, four samples taken from the liquid pit.

TYPE OF SAMPLE COLLECTED	LOCATION	DATE COLLECTED	FELD Sauple No.
Grab samples	solid lime pit	6/4/87	S1 thru S8
Grab samples	liquid lime pit	6/4/87	L1 thru L4
·			
Exhibit 4 contains drawings	of both pits and s	ample locations	· · ·
	5 5 5		L.

c. Description of sampling methodology:

- (1) Sampling technique at site or facility. In the solid pit, grab sampleswere taken with a clean spatula into clean glass jars. The spatula was cleaned after each sample with distilled water. In the liquid pit, a glass jar was attached to twenty feet of PVC pipe. Samples were scooped into the jar and poured into a cleaned glass jar. The jar attached to the PVC pipe was cleaned after each sample was collected. Collected samples were stored in an ice chest. Each sample was properly labelled. The caps were secured with electric tape.
 - (2)

Sample handling and preservation prior to laboratory analysis. Samples were stored in an ice chest prior to delivery to the laboratory. As soon as the sampling operation was completed, prompt delivery to the testing laboratory was made. The laboratory was instructed to place the samples in refridgerators. Appropriate chain-of-custody documentation was used. See Exhibit 3 for copies of chain-of-custody documents.

4. Tetting Leborate in Informet.	en: Calcium Carbio	,
a. Name and actress of la	baratar.es:	
	,	
b. Test methods and reier	20025:	, ,
SPECEFIC TEST	METHOD	REFERENCE
1. Organic Analysis CRGANIC PAR	AMETERS ABSENT FR	OM PROCESS REACTANTS
- Chlorinated Pesticides	W/A AND	PRODUCTS, SEE ITEM
- Polychlorinated Biphenyls	NA	
- Chloropheroxy Acid		
Pesticices	N/R .	·
- Nitroaromatics	N/A	
- Organophesphorus		
Pesticides	<u>.</u> N/A	• • • • • • • • • • • • • • • • • • •
- Phenols	NIA	•
- Polynuclear Aromatic		
Hydrocarbons	N/A	
- Priority Pollutants	NA	
- Volatile Organics	NA	
- Carbamates	<u>A</u>	
- Other (specify)	MA	- <u></u> .
2. Inorganic Analysis, Metallic		
- Antimony	<u>EPA 3050</u>	
- Arsenic	EPA 3050	
- Barium	EPA 3050	
- Beryllium	EPA 3050	
- Cadmium	EPA 3050	
- Chromium (VI)	EPA 3050	<u></u> <u></u>
- Chromium (total)	EPA 3050	*
- Cobalt	EPA 3050	

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SPECIFIC FILT	327HOD	REFERENC
mergale Aralysis. Mercille (c	entioved)	
- Costar	EPA 3050	·
- Lesd, inerganic	EPA 3050	
- Leed, organic	EPA 3050	
- Mercury	EPA' 3050	·
- Molybdanum	EPA 3050	
- Nickel	EPA 3050	
- Selenium	EPA 3050	
- Silver	EPA 3050	- ··
- The Luna -	-EPA3050	
- Yenedium	EPA 3050	
- Zirc	EPA 3050	
- Other (Specify)	EPA 3050	
3. Incrganic Analysis, Non-Mo	etallic	· -
- Total cyanice	EPA 335.5	• •••••••
- Cyanic s (chlorination)	EPA 335.1	
- Fluorice	EPA 340.1	
- Sulfid e	EPA 376.2	- <u>-</u>
- Asbestos	N/A ABJENT FRO	M PROCESS REACTAN
`- pH	. EPA 150.1	
- Free liquids	N/A - material dry	
- Other (specify)	·	
4. Special Tests	• •	
- California Waste Extraction Test - Tests for Hazardous	Sec. 66700	
Properties	N/A	Not near water
- Aquatic 96 hr LC ₅₀		
- Flashpoint	<u>N/A - no flammable co</u> N/A - testing for pH	
- Corresivity		
- Head Space	Sec. 66696(2)(10)	
- Other (specify)		

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* If this is not a standard method (APHA-AWWA-WPCF, ASTM, AOAC, EF please attach a copy of method with this report.

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c. Names and satilizations of servors testing site.

All laboratory analysis performed by Brown and Caldwell Laboratories, 373 South Fair Oaks Avenue, Pasadena, CA 91105. The Dept. of Health Services Laboratory Certification for Brown and Caldwell is enclosed in Exhibit 1.

d. Preparation of laboratory samples from field samples.

EPA approved methods were utilized. Specific digestion method followed was EPA 3050 for metals analysis. Other preparation procedures are included in Methods listed on pages 3 and 4.

e. Sample identification information:

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distance in

TYPE OF FELD LABORATORY DATE SAMPLE TESTED SAMPLE NC(S) SAMPLE NO. TESTED Grab Sample S1 through S8 6/5/87 - 6/19/87 Same Grab Sample L1 through L4 6/5/87 - 6/19/87 Same •

DICE 00745

	5.	; د رگ	lite Assurance and Control: (See Appendix 1)
,		a.	On file with the DOHS Hazardous Materials Laboratory;
			yes X no
		ь.	Enclosed: yes no _X_;
		c.	Will be forwarded to DOHS by;
	6.	Labo	pratory Results
		٤.	Waste Components and California Waste Extraction Test Summary (Form 1).
		ь.	Aquatic Bioassay. Use California Department of Fish Bioassay Data Sheet.
		с.	Submission of Data and Reports (See Appendix 1).
	7.	Acu	te taxicity calculations from published data: (Form 2)
	3.	Corr	rosivity, Flammability, Reactivity (Form 3)
	9.	Refe	erences (Attach complete citations)
	10.	Cert	tification by person(s) who is the responsible manager of the facility.
	•		"I certify under penalty of law that I have personally examined and am familiar with the information submitted in this notification and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, in- cluding the possibility of fine and imprisonment."
•	Signa	ture	Date
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FORM I *

WASTE COMPONENT AND WASTE EXTRACTION TEST SUMMARY

Laboratory Sample // Composite S1-S8 Date Analyzed 6/5/87 - 6/19/87

Type of Sample Tested Composite of arab samples from solids pit

1. Chemical Analyses and Establishes

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Marte 1	Total	Cilicrnia
Component	Concentration	Entraction Test
	(mz/4;g)	- <u>(</u>
i		(mall.)
Impresente Analysis:		
Antimony	8	•
Arsenic I	0.6	
Barrium I	13	l ·
Bervinum I	0.09	1
	0.5	l
ראינהס (ווו) ו	1.0	1
Chromium (VI)	<u> </u>	l
Cozalt	1	
Copper	2.9	1
Fluerice	<u> </u>	1
Leza	5	
Mercury	NA - not found i	n raw material
Molvosenum · I	5	
Nicke!	11	1
Seienium I	0.4	
Silver 1	NA - not in raw	material
דהטווויה ו	5	
Vanadium	17	
Zinc	2 ·	
Organic Analysis: CREANIL PAL	RATE TELL AWENT FROM 1	RUFESS REACTIONTS AND PRODUCT
Chlorinated Pesticides	v/A	
Polychlorinated Bishenvis I	NIA	1
Chlorophenoxy Acid		
Pesucides	א/א_	
Nitrogromatics	NIA NIA	
Organoprosprorus	i	
Pesticides	NÍA	
Phenols	! MA	
Polynuclear Aromatic		
Hydroczchons		
Priority Pollutants	1 <u>MA</u>	
Volatile Orzanics	I NIA	
<u>Carbainates</u>	I MA	
Other (Specify)	I MA	
pH	1 Not Applicate	
Sulfide	43	
Cyanide(Total)	Cyanide results unabl	e to determine due to
Cyanide(amenable to chlor,)	interferences.	

	<u></u>		Concentration	(7.7/1)
	55-hr LC ₃₀ for W	21:3		
			·	
	E. Head Space Vaga	r Concentration		
	Component	ਮਹੇਵਾਰ ਅਹੁੰਦਾਰ ਸ਼ਹਿਤ	Jeight of component in syringe (mg)	Head space vapor concentration
				· ·
			· · · · ·	
	(CA) =	OA) (R)		
	(CA) = -	۲. (G)		
	where	(QA) = quantity of ((MW) = molecular w	component in head spa eight (ms/mmole)	ce vapo: (mg)
		(R) = 24.5 ml/mmole (G) = 2 x 10^{-6} M ³		
			vapor-concentration (p	m)
1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1			<u>ause no organic (vola</u>	ntile)
	constituents are	present.		· · · · · ·
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FORM 2

ACUTE TOXICITY CALCULATIONS (1,)

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WASTE COMPONENT*	TOTAL CONCENTRATION PUM	AVERA LD ₅₀ ORA (mg/ig)	GE ^(a) AL RATE	Ax <u> </u>	۸۷۱:۱۷/ LC ₅₀ D (mj://g;)	ERMAL	
Arsenic	б. 6	150	NIOSH-ave of LDLo	4×10^{-7}			
. Barium	13	180	NIOSH for BaCl ₂	7.2×10^{-6}			
Beryllium	0.09	0.496	NIOSH-IVN LD50	1.8×10^{-5}			
Chromium(t)	1.0	1870	NIOSH for CrCl,	5.3×10^{-8}			
Copper	2.9	140	NIOSH for	2.0×10^{-6}			
Nickel	11	5	CuCl ₂ NIOSH-LDLa	2.2×10^{-4}			
Vanadium	17 . ,'	50 .	apa NIOSH-SCU LD50	3.4×10^{-5}			
Zinc	2	350	NIOSII-for ZnCl ₂	5.7×10^{-7}			
	:			·			
	nous , pig , aneous	SUM 2.8 CALCULAT TOXICITY		ng/kg		ATED	

CALCULATIONS SUMMARY

NOTE:

(a) Average or most reliable values listed for individual compounds.

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(b) Calculated $LD_{50} = \frac{100}{Sum N \Lambda x}$ where $LD_{50} \Lambda x = LD_{50's}$ of the pure toxic constituents $\Lambda_1, \Lambda_2, \Lambda_3$

% Ax = concentration by weight in the waste (total ppm/10,000)

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FORM 3

Parameter	Experimental data or @ continuation by chemist@	Reicenc
Corrosivity - pH* 0% dilution - corrosion rate* (mm/vr)	11.9 1 1	see item 45 see item 45 see item 45
Flammability - Flash point* (°C) - Causes fire - Flammable gas - Flammable solid - Oxidizer	N N N N N N N	see item 4b
Reactivity - Unstable - Reacts with HaO	 N	
 Forms potentially explosive mixture with H_O Generates toxic gases with H_O 	N N	
 Is a cyanide or sulfide between pH 2 and 12.5 which generates toxic gases 	∠10 mg/kg CN genera <1 mg/kg Sulfide gene ted	
 Detonates or reacts at standard temperature, pressure 	N	
 Detonates if heated under confinement or with initiating source 	N .	
- Forbidden or class B explosive	N	

CORROSPITY, FLAMMABILITY, REACTIVITY OF WASTE

NOTES:

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@ Fill in as follows:

Code Certification

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Y yes

N no

X not applicable

Ø Optional

Supply experimental data

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DICE 00751

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ecology and environment, inc.

717 W. TEMPLE ST., LOS ANGELES, CA 90012, TEL. 213-481-3870 International Specialists in the Environment

SCREENING SITE INSPECTION SUMMARY REPORT

SUBMITTED TO: Carolyn Douglas, Site Assessment Manager EPA Region IX Christopher R. Harner, Ecology and Environment, Inc. PREPARED BY: Christine Houston, Ecology and Environment, Inc. MA THROUGH: April 25, 1990 DATE: SITE: Liquid Air Corporation AKA Burdett Oxygen Company 8832-8838 Dice Road Santa Fe Springs, California 90607 Los Angeles County TDD#: F9-9004-024 EPA ID#: CAD003312600 (Liquid Air) CAD982359747 (Burdett Oxygen)

PROGRAM ACCOUNT#: FCA1295SBA

FIT REVIEW/CONCURRENCE:

Karen Ladd for James M. James 4/30/90

cc: FIT Master File Don Plain, California Department of Health Services

INTRODUCTION:

Pursuant to Technical Directive Document number F9-8909-047, Ecology and Environment, Inc.'s Field Investigation Team (FIT) conducted a Screening Site Inspection (SSI) of Liquid Air Corporation in Santa Fe Springs, Los Angeles County, California. During the investigation, FIT discovered that Liquid Air Corporation is the same facility as Burdett Oxygen Company, for which California Department of Health Services (DOHS) had completed an SSI in June 1989 (1) (see Appendix, CERCLA Site Inspection, California Department of Health Services). Both the state SSI and

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subsequent Site Inspection Report Review, completed by FIT in August 1989, used the Hazard Ranking System (HRS) to evaluate the site's potential to qualify for inclusion on the National Priorities List (NPL) (1, 2). This SSI Summary Report evaluates the site's potential to qualify for the NPL using factors outlined in the proposed revised Hazard Ranking System (rHRS).

The EPA ID numbers associated with the investigations of this site are:

EPA ID NUMBER	SITE NAME	REPORT TYPE/AGENCY	REPORT DATE
CAD003312600	Liquid Air	PA/DOHS PA Report Review/EPA PA Reassessment/EPA	May 1986 May 22, 1987 July 26, 1988
CAD982359747	Burdett Oxygen	PA/DOHS SSI/DOHS SSI Report Review/EPA	March, 1988 August 2, 1989 September 1989

As listed in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS), Liquid Air is located at 8832 Dice Road, and Burdett Oxygen is located at 8838 South Dice road. This is incorrect since both addresses constitute a single site.

Liquid Air Corporation, with headquarters at 2121 North California Boulevard, Walnut Creek, Contra Costa County, California, owns and operates Burdett Oxygen Company of California. Burdett Oxygen company is located at 8832-8838 Dice Road, Santa Fe Springs, Los Angeles County, California, (Township 2 South, Range 11 West, San Bernardino Base and Meridian). The site has operated since 1949 under several names and owners (1). Previous names associated with the site include American Cryogenics, MG Burnett Gas Products, Cal Oxygen Company and the Burnett Oxygen Company (1).

Activities at this facility include the production of acetylene gas and the repackaging of gas bottles with hydrogen, helium, oxygen, argon, nitrous oxide and carbon dioxide (3).

In 1986, the Los Angeles County Department of Public Works, Waste Management Division, issued a letter of noncompliance to Burdett Oxygen Company for a leak in the 6200-gallon underground acetone tank (4). While the acetone leak was not fully addressed in the DOHS Burdett Oxygen Company SSI, further inquiry by FIT revealed that the acetone tank was removed in September 1988, under the direction of the Los Angeles County Department of Public Works, Waste Management Division (4, 5).

A 1000-gallon underground waste oil storage tank was also removed at the same time as the acetone tank. Prior to May 1980, the waste oil storage tank contained blowdown from compressors located in the building which is now the repackaging plant (3, 6). Testing conducted after the removal of the tank failed to detect hydrocarbon contamination (7).

F482

DICE 00753

HRS INFORMATION

Approximately 1104 tons (dry weight) of liquid acetylene by-product is pumped into two 500,000 cubic foot unlined lime slurry pits on site annually. Once dry, the slaked lime is milled on-site and hauled away in large trucks as product (1). The liquid lime slurry, as deposited in the slurry pits, consists of calcium hydroxide (lime) with trace quantities of heavy metals (pH = 11.9). The analytical results of the sampling of these pits are contained in the Appendix of this report. Since no background samples where collected as part of the sampling, it is not known whether the concentrations of heavy metals in the slurry pits (ranging between 0.09 mg/kg to 17 mg/kg) represent levels substantially above local background levels (1). The heavy metal concentrations in the slurry pits are not substantially above mean background levels presented in a report of the Western United States by the U.S. Geological Survey (8). Other than the high pH of the lime slurry due to the calcium hydroxide, there appear to be no hazardous substances associated with the pits.

In addition to the acetylene waste process by-product in the slurry pits, approximately 15 gallons of 1,1,1-trichloroethane and 115 gallons of spent motor oil are currently stored on site. The waste oil is periodically hauled away by Cal-Oil. Arrangements have not been made for the disposal of the 1,1,1-trichlorethane (3). Liquid Air Corporation is not listed in the current RCRA database.

Analyses conducted by Liquid Air Corporation prior to removal of the 6200-gallon underground acetone storage tank found low levels of acetone in the soil immediately surrounding the tank. Soil samples contained up to 6.8 ppb of acetone (with a detection limit of 2 ppb.) No further investigation of the area was required by the Los Angeles County Department of Public Works (4, 9).

There have been no documented releases of hazardous substances to the air, nor does there appear to be potential for a release (1). Spent motor oil and 1,1,1-trichchloroethane are all stored in intact and sealed 55-gallon drums and kept in a paved and enclosed area prior to removal from the facility (1, 3). Although both lime slurry pits are uncovered and exposed to the atmosphere throughout the sludge-drying process, it does not appear that hazardous substances are contained within the pits (1). The area surrounding Liquid Air Corporation in Santa Fe Springs is highly industrialized and sparsely populated.

There have been no documented releases of hazardous substances to surface water. Drainage from the facility flows to the Sorenson Avenue storm drain which connects to North Fork Coyote Creek 3 miles southeast of the facility. Coyote Creek is tributary to the San Gabriel River, which empties into the Pacific Ocean approximately 15 miles from the site. The San Gabriel River is located about 1 mile west of the facility. Although there may be potential for a release of hazardous substances to surface water, none of these surface water bodies are used for drinking water, recreation, or irrigation within 4 miles of the Liquid Air site (1, 10).

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There have been no documented releases of hazardous substances to groundwater. The depth to groundwater in the Gardena aquifer below the site is approximately 70 feet below the ground surface (5, 10). While the Gardena aquifer is not utilized for municipal supply, it may be hydrologically connected with deeper aquifers within 2 miles of the site which do provide municipal water (11). The nearest well used for drinking water is 0.22 miles from the site (10, 12). The population served by municipal wells drawing groundwater from deeper aquifers within 4 miles of the site exceeds 50,000 people (10, 12, 13, 14, 15). There appears to be low potential for an observed release of hazardous substances to groundwater due to the depth to groundwater, low permeability of the unsaturated zone and low net annual precipitation.

There appears to be low potential for on-site exposure to hazardous substances to populations near Liquid Air Corporation in Santa Fe Springs. The surface extent of the lime slurry pits is approximately 20,000 square feet. The surrounding area is highly industrialized and sparsely populated. No sensitive environments are identified within 4 miles of the Liquid Air facility (1). The facility is completely fenced, and a security guard is posted at the entry gate (1).

CONCLUSIONS

Liquid Air Corporation (EPA ID# CAD003312600) and Burdett Oxygen Company (EPA ID# CAD982359747), occupy the same physical location at 8832-8838 Dice Road, in Santa Fe Springs, Los Angeles County, California. The Liquid Air Corporation name should be retained to identify this site because Liquid Air Corporation is the parent company of all operating facilities on the site (Burdett Oxygen Company and Alpha Gas).

The Site Inspection Report Review of the Burdett Oxygen Company concluded that the site appeared to be eligible for inclusion on the National Priorities List based on a preliminary Hazard Ranking System screening estimate (9). However, a proposed revised Hazard Ranking System screening estimate does not support the site's eligibility for inclusion on the National Priorities List based on the following factors:

- o No documented observed releases of hazardous materials from the site have occurred to groundwater, surface water or air.
- o Spent motor oil and 1,1,1-trichloroethane are stored in sealed drums in an enclosed, paved area prior to being hauled off site by the appropriate licensed contractor.
- The area surrounding the site is highly industrialized and sparsely populated.
- o The leaking underground acetone storage tank has been removed.
- Surface water is not used for drinking or recreational purposes, and no sensitive environments exist within 4 miles of the site.

EPA RECOMMENDATION

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Refer to Other Authority No Further Remedial Action Planned Listing Site Inspection Medium-Priority SSI Low-Priority SSI Notes:

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REFERENCES

- California Department of Health Services, Toxic Substances Control Division, "CERCLA Site Inspection of Burdett Oxygen Company," Burbank, California, February 17, 1989.
- Ecology and Environment, Inc., "Site Inspection Report Review of Burdett Oxygen Company," prepared by John Chester for EPA, Region IX, September 29, 1989.
- 3. Simon, David N., Liquid Air Corporation, to Thomas Mix, U.S. EPA, letter re: CERCLA 104 Request, March 14, 1990.
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- 5. DeVries, George, "Geotechnical Evaluation and Review of Subsurface Tank Removal at Liquid Air Corporation," November 2, 1988.
- 6. Simon, David N., Liquid Air Corporation, to Thomas Mix, U.S. EPA, letter re: Supplemental information regarding CERCLA 104 Request, March 19, 1990.
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- 8. Shacklette, H.T., and E.G. Boerngen, <u>Concentrations in Soils and</u> <u>Other Surficial Materials of the Conterminous United States</u>, U.S. <u>Geological Survey Professional Paper 1270</u>, 1984.
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- 10. U.S. Geological Survey, map of Whittier, California, 7.5 Minute Series Quadrangle, 1965, (photorevised 1981).
- 11. California Department of Water Resources, Southern District, <u>Planned</u> <u>Utilization of Ground Water Basins of the Coastal Plains of Los</u> <u>Angeles County</u>, Bulletin 104, Appendix A, Ground Water Geology, 1961.
- 12. Black, Jerry, San Gabriel Water Company, to Karen Johnson, Ecology and Environment, Inc., letter, June 7, 1987.
- 13. Padmuck, Sharon, City of Downey, Public Works Department, and Christopher R. Harner, Ecology and Environment, Inc., personal communication, March 1, 1990.

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14. Hughes, Ron, City of Santa Fe Springs, Department of Public Works, and Christopher R. Harner, Ecology and Environment, Inc., personal communication, March 1, 1990.

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15. Pearce, Gene, City of Norwalk, Department of Public Works, and Christopher R. Harner, Ecology and Environment, Inc., personal communication, March 1, 1990.

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**DICE 00758** 

AGENCY/AFFILIATION: Los Angeles County Department of Public Works DEPARTMENT: Waste Management Division ADDRESS/CITY: 900 S. Fremont Avenue, Alhambra COUNTY/STATE/ZIP: Los Angeles County, California 91803-1331 CONTACT(S) TITLE PHONE (213) 458-3509 David Esfandi Engineer 1. 2. E & E PERSON MAKING CONTACT: Christopher R. Harner DATE: 1/19/90 SUBJECT: Underground tank removal SITE NAME: Liquid Air Corporation (Burdett Oxygen) **BPA ID#:** CAD003312600

David Esfandi originally contacted Liquid Air Corporation when a file search revealed that the underground storage tanks at the facility were not permitted. The Department issued an order for the testing of the tanks for leaks.

Testing indicated violations of leak standards in the acetone tank for which the Department of Public Works issued an order of noncompliance. The acetone tank was removed, and a site inspection conducted. Based on the results of the inspection, the Department of Public Works issued a closure report approving the removal.

Mr. Esfandi does not know whether the 1,000-gallon waste oil tank was removed. If it was, a site inspection would have been required to be submitted to the Department of Public Works within 180 days. Mr. Esfandi suggested I contact David Simon at Liquid Air for more information.

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| AGENCY/APPILIATION: City of N | Vorwalk                      |                  |
|-------------------------------|------------------------------|------------------|
| DEPARTMENT: Department of Pul | olic Works                   |                  |
| ADDRESS/CITY: 12700 Norvalk 1 | Boulevard, Norwalk           |                  |
| COUNTY/STATE/ZIP: Los Angeles | s County, California 90650   |                  |
| CONTACT(S)                    | PHONE                        |                  |
| 1. Gene Pearce                |                              | (213) 929-2677   |
| 2.                            |                              |                  |
| E & E PERSON MAKING CONTACT:  | Christopher R. Harner        | DATE: 3/1/90     |
| SUBJECT: Norwalk municipal w  | ells                         |                  |
| SITE NAME: Liquid Air Corpor  | ation (Burdett Oxygen) BPA I | D#: CAD003312600 |

Mr. Pearce provided the following information in addition to the distances of each well to the site:

| State Well Number | Owner Designation | Perforated In                     | Distance to Site |
|-------------------|-------------------|-----------------------------------|------------------|
| 3S/12W-13L01S     | Leffingwell       | Jefferson                         | 3.75 miles       |
| 3s/11v-18l01      | San Antone #2     | abandoned                         | 3.25 miles       |
| 35/11W-18L02      | San Antone #8     | Lynwood<br>Jefferson<br>Hollydale | 3.25 miles       |

Combined, the San Antone #8 and the Leffingwell wells supply 2200 to 2300 people.

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AGENCY/AFFILIATION: City of Downey DEPARTMENT: Department of Public Works ADDRESS/CITY: 11111 Brookshire Avenue, Downey COUNTY/STATE/ZIP: Los Angeles County, California 90241 CONTACT(S) TITLE PHONE (213) 869-7331 1. Sharon Padmuck 2. **B & B PERSON MAKING CONTACT:** Christopher R. Harner DATE: 3/1/90 SUBJECT: Downey municipal wells **EPA ID#:** CAD003312600 SITE NAME: Liquid Air Corporation (Burdett Oxygen)

Ms. Padmuck informed me that the city wells serve a population of 23,000 people in Downey. It is blended with about 10% Municipal Water District water during the dry months.

The following wells within 3 miles of the site are all in operation. They probably are perforated in the Lynwood aquifer, although Ms. Padmuck could not provide perforation depths.

| State Vell # | Downey Well # | Distance to Site |
|--------------|---------------|------------------|
| 2S/12W-35K01 | <b>#06</b>    | 3 miles          |
| 2S/12W-35P01 | <b>#10</b>    | 3 miles          |
| 25/12V-02M04 | #12           | 3 miles          |

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AGENCY/AFFILIATION: City of Santa Fe Springs DEPARTMENT: Department of Public Works ADDRESS/CITY: 11714 East Telegraph Road, Santa Fe Springs COUNTY/STATE/ZIP: Los Angeles County, California 90670 PHONE CONTACT(S) TITLE (213) 868-0511 1. Ron Hughes 2. E & E PERSON MAKING CONTACT: Christopher R. Harner DATE: 3/1/90 SUBJECT: Santa Fe Springs municipal wells SITE NAME: Liquid Air Corporation (Burdett Oxygen) **BPA ID#:** CAD003312600

According to Mr. Hughes, the City of Santa Fe Springs currently operates Well #1 and Well #2.

| State Well #  | Owner Designation | Location                       |
|---------------|-------------------|--------------------------------|
| 35/11W-30R03S | Well #1           | Dice Road and Burke            |
| 3S/11W-20R09  | Well #2           | Over 4 miles from site         |
| 3S/11W-06D03  | Well #4           | Approximately 1 mile from site |

Well #1 supplies the northern portion of the city. Well #2 supplies the southern portion of the city. Well #4 is a standby well.

Overall, approximately 55% of the water delivered to the city is from the Municipal Water District, while 45% is groundwater. The system is not completely blended. Mr. Hughes could not provide perforation depths when we contacted him. He also could not speculate on the population served by the wells.

### APPENDIX J

Diversey Wyandotte Corporation, Amended Closure Plan, Kleinfelder, 1989.

Excerpts, Boring Log and Groundwater Analytical Data

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### KLEINFELDER

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### DIVERSEY WYANDOTTE CORPORATION AMENDED CLOSURE PLAN

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PROJECT 50-1601-02

### PREPARED FOR

### DEPARTMENT OF HEALTH SERVICES REGION 3 1405 NORTH SAN FERNANDO BOULEVARD, SUITE 3300 BURBANK, CALIFORNIA 91504

### PREPARED BY

### KLEINFELDER 17100 PIONEER BOULEVARD, SUITE 350 ARTESIA, CALIFORNIA 90701

November 1989

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**DICE 00764** 

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### KLEINFELDER

### <u>1984-1989</u>

All wastes stored and transported offsite for disposal.

DWC ceased production of products containing chromium early in 1989. These were the products requiring that DWC operate under a hazardous waste storage permit. Since manufacture of these products was discontinued at SFS, DWC has had no need for its permit and can operate as a small-quantity generator.

### GEOLOGIC AND HYDROGEOLOGIC CONDITIONS

The Diversey Wyandotte Corporation's Santa Fe Springs facility is located at 8921 Dice Road in section 31 of township 2 south, range 11 west, San Bernardino baseline and principal meridian, in the Santa Fe Springs Plain area of the coastal plain of Los Angeles County, California. The Santa Fe Springs Plain is a low, slightly rolling topographic feature that has been warped by the Santa Fe Springs - Coyote Hills anticlinal system. This plain dips gently both to the northeast, toward Whittier, and to the southwest, toward the Downey Plain, with elevations that ranges between 175 and 200 feet above sea level.

The site is located on upper Pleistocene alluvium of the Lakewood formation. The Lakewood formation unconformably overlies the lower Pleistocene San Pedro Formation, the Pliocene Pico and Repetto Formations, and the Miocene Puente Formation (refer to Figure 4). Based on literature, only the Lakewood and the San Pedro formations underlying the site contain fresh-water-bearing units (DWR Bulletin 104).

Three monitoring wells were installed on the property, then later destroyed, as part of an assessment study in January 1986. Locations of these wells are shown on Figure 2. Geologic boring logs are included in Appendix A. Based on the geologic logs from these wells, the following site specific information has been prepared.

The site is located on surface exposure of the Bellflower Aquiclude, a low permeability portion of the Lakewood Formation. This late Pleistocene aquiclude is approximately 10 to 15 feet thick and consists of clays, silt, silty clays, and sandy clays at the site's location. The Gage aquifer underlies the Bellflower aquiclude to a depth of 30 to 35 feet. Below the Gage, a second aquiclude exists to a depth of 50 feet. This aquiclude separates the Gage from the Hollydale aquifer. The Hollydale aquifer contains the first water beneath the site. Results from drilling by Kleinfelder near the site have indicated that the bottom of this aquifer is approximately 105 feet beneath the surface. The transmissivity of this aquifer is on the order of 40,000 gallons per day per foot beneath the site. Based on an assumed aquifer thickness of 50 feet and an error factor of one order of magnitude, a permeability range of 80 to 8,000 gal/day/ft<sup>2</sup> can be expected.

### The general regional flow of groundwater in the area is in a south to southwest direction. Depth to groundwater is approximately 50 feet beneath the site's surface.

As part of the January 1986 assessment study, 12 soil samples and five water samples were analyzed. The soils were analyzed for pH, phosphate, chloride, ammonia and EPA priority pollutant metals. The water samples were analyzed for general minerals pH, EPA priority pollutant metals, phosphate, chloride, ammonia and purgeable halocarbons (U.S. EPA method 601). The laboratory results for both the soil and groundwater are included in Appendix B.

### DESCRIPTION OF OPERATION PRODUCING HAZARDOUS WASTE

This facility manufactured a variety of cleaning and sanitizing products and only a few of these products contain chromic acid. When the manufacturing tanks were washed out, the water that was collected became a "Hazardous Waste". This "waste solution of chromic acid," a corrosive solution containing chromic acid, was collected and stored in 55-gallon drums. This facility accumulated about 5 drums (275 gallons) of this waste chromic acid solution per month.

|               |      | Blow<br>Count | Sample                | uscs                                  |                                                                                                        | Vell<br>Dost |  |  |  |  |  |  |
|---------------|------|---------------|-----------------------|---------------------------------------|--------------------------------------------------------------------------------------------------------|--------------|--|--|--|--|--|--|
|               | o —  |               |                       |                                       | Locking Well cap                                                                                       | 71:          |  |  |  |  |  |  |
|               | 5-   | 67            | 5                     | CL                                    | PID lppm<br>Clay: Strong brown, 2.5 YR/4/4, very stiff<br>dry-damp                                     |              |  |  |  |  |  |  |
|               | - 10 | 17            | 10                    | SP                                    | Sand: medium to fine, 5YR/5/6, yellow red,<br>medium dense, dry                                        |              |  |  |  |  |  |  |
| ļ             | -    | ļ             |                       |                                       | Cement grout                                                                                           |              |  |  |  |  |  |  |
| DEPTII (teet) | 15-  | 57            | - 15                  | SP                                    | PID lppm<br>Sand: fine to medium grained, yellow-red<br>SYR/5/8, very dense, moist<br>Blank PVC casing |              |  |  |  |  |  |  |
|               | 20-  | 52            | 20                    | ĊĹ                                    | Clay: with silt, strong brown, 7.5YR/4/6<br>very stiff, moist                                          |              |  |  |  |  |  |  |
|               | 25-  | 31            | 25                    | cr.                                   | Clay: dark yellowish-red, 10YR/4/4, very<br>stiff, moist                                               |              |  |  |  |  |  |  |
|               | 30-  |               |                       |                                       |                                                                                                        |              |  |  |  |  |  |  |
| <b></b>       |      | •             | ,                     | · · · · · · · · · · · · · · · · · · · | DIVERSEY-WYANDOTTE                                                                                     | PLATE        |  |  |  |  |  |  |
|               |      |               | )ER & A<br>.tants +'n |                                       | IESTING IN A                                                                                           | 4            |  |  |  |  |  |  |
| PREP          | ARED | BY: NA        |                       | TE: 11/8                              | LOG of BORING MW-1                                                                                     |              |  |  |  |  |  |  |
|               |      | IY: KD        |                       | TE: 11/8                              |                                                                                                        |              |  |  |  |  |  |  |

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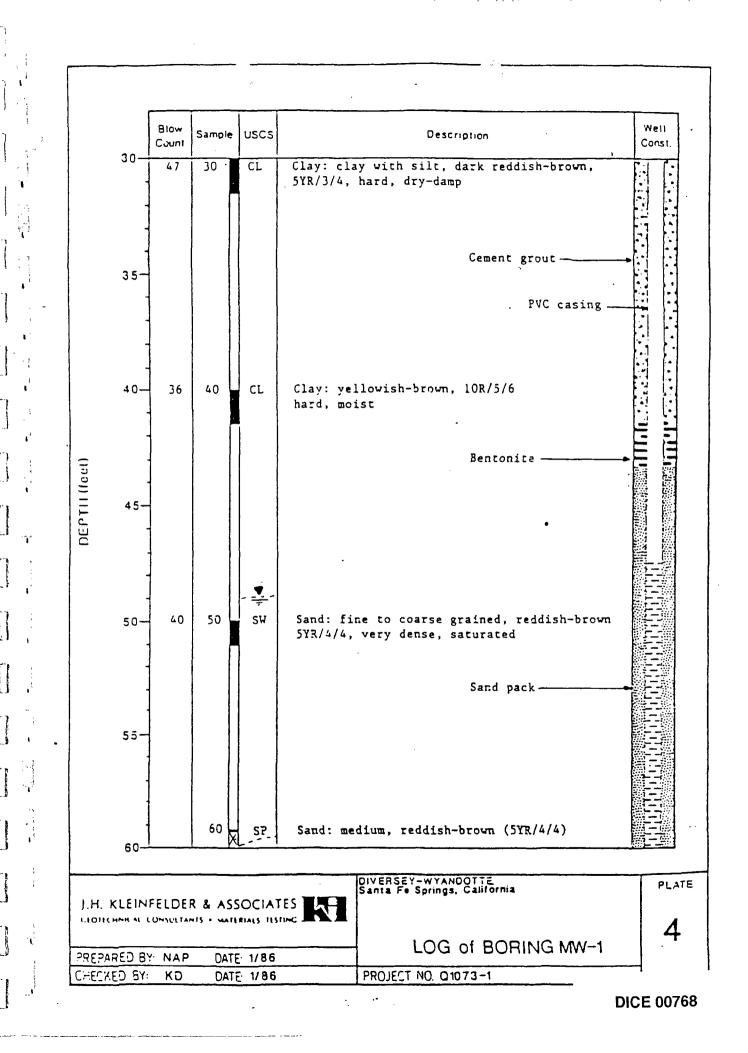
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|      |         | Blow<br>Count | Sample   | uscs        | Description                                              | Well<br>Const. |
|------|---------|---------------|----------|-------------|----------------------------------------------------------|----------------|
|      | 60—     |               |          |             |                                                          |                |
|      | -       |               |          |             |                                                          |                |
|      | -       |               |          |             | Sand pack ————                                           |                |
|      | -       |               | } {      |             |                                                          |                |
|      | 4       |               | } {      |             | Slotted PVC casing                                       |                |
|      | 65-     |               |          |             |                                                          | 1-1            |
|      | -       | ł             |          |             |                                                          | 1              |
|      |         |               |          |             |                                                          |                |
|      | -       |               |          | {           |                                                          |                |
|      | -       | 1             |          |             |                                                          |                |
|      | -       | 1             | 70       | XSP         | Sand: medium, reddish-brown (SYR/4/4)                    |                |
|      | 70—     | {             |          |             | Salut medium, reduish-blown (Six/4/4)                    | -              |
|      |         | 4             |          | · [         |                                                          |                |
|      |         | 4             |          |             |                                                          |                |
|      |         |               |          |             |                                                          |                |
|      |         | ]             |          |             |                                                          |                |
|      |         | 1             |          |             |                                                          |                |
|      | 75-     | - 50÷         | 75       | 전<br>전<br>전 | Silt: dark yellowish-brown (10YR/4/4)<br>very dense, wet |                |
|      |         | -             |          | Gri         | Tip of sample had fine gravelly silt.                    |                |
| 1    |         | 1             |          |             |                                                          |                |
|      |         | <b>_</b>      |          |             |                                                          | <u> </u>       |
|      |         |               |          |             |                                                          |                |
|      |         |               |          |             | Boring Terminated at 78'                                 |                |
|      | 80-     | 1             |          |             | Date of Drilling: 11/13/85                               |                |
|      |         | 1             | { {      |             | Drilling Done By: Ken Durand/ Jeff Friedman              |                |
|      |         | 1             |          |             |                                                          |                |
|      |         | -             |          |             |                                                          |                |
|      |         | 4             |          |             |                                                          |                |
|      | 85-     |               |          |             |                                                          |                |
|      | 05      | · [           |          |             |                                                          |                |
|      |         | ]             |          |             |                                                          |                |
|      |         | 1             |          |             |                                                          |                |
|      |         | 1             |          |             |                                                          |                |
|      |         | 1             |          |             |                                                          |                |
|      | 90-     | L             | <u> </u> | <u>   </u>  |                                                          | <u> </u>       |
|      |         |               |          |             |                                                          |                |
|      |         |               |          | ،           | ISanta Fe Sorings, California                            | PLA            |
| H, 1 | CLEIN   | VFELDE        | R & A    | SSOCIA      |                                                          |                |
|      | HAIL AL | CONSULT       |          | TERIALS TO  |                                                          | 4              |
|      |         |               |          | TF 4/80     | LOG of BORING MW-1                                       |                |
|      | ED BY   | BY: NAF       |          | TE 1/86     |                                                          | ·              |

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|              |                                     |      | (mg     | /1)      |      |       |                          |
|--------------|-------------------------------------|------|---------|----------|------|-------|--------------------------|
|              |                                     |      | General | Minerals |      |       | Secondary                |
| n E          | <u> </u>                            | QC 1 | MW 1    | MW 2     | QC 2 | MW 3  | Drink Water<br>Standards |
|              | Calcium                             | 1.2  | 145     | 130      | 1.4  | 130   |                          |
|              | Copper                              | ND.1 | ND.1    | ND.1     | ND.1 | ND.1  | 1.0                      |
|              | Iron                                | ND.2 | ND.2    | ND.2     | ND.2 | 0.3   | 0.3                      |
|              | Magnesium                           | ND.1 | 38      | 33       | ND.1 | 36    |                          |
|              | Manganese                           | ND.2 | 0.7     | 0.6      | ND.2 | 1.8   | 0.05                     |
|              | Sodium                              | 3.0  | 108     | 115      | 4.1  | 123   |                          |
|              | Zinc                                | ND.1 | 0.5     | 0.4      | ND.1 | 0.5   | 5.0                      |
|              | Total Alkalinity<br>to pH 4.6,      |      |         |          |      |       |                          |
| UĮ.          | mg CaCO <sub>3</sub> /L             | 2.5  | 405     | 375      | 2.5  | • 510 |                          |
| n            | Fluoride                            | ND.1 | 0.36    | 0.34     | ND.1 | 0.31  | 1.4                      |
|              | Nitrate Nitrogen                    | 2.0  | 27.0    | 25.2     | 2.3  | 4.1   | 45                       |
|              | Chloride                            | 240  | 120     | 120      | 30   | 150   | 500                      |
|              | Surfactants                         | 70   | 70      | 50       | ND10 | 55    |                          |
|              | pH (units)                          | 8.04 | 7.27    | 7.31     | 8.26 | 7.04  | - 4                      |
|              | Conductivity,<br>(mhos/cm)          | 10   | 1,300   | 1,200    | 10   | 1,300 | 1,600                    |
| <i>e</i> • 1 | Sulface                             | NT I | 412     | 458      | ND 1 | 386   | . 500                    |
|              | Total Dissolved<br>Solids           | 295  | 1,325   | 1,135    | 120  | 1,175 | 1,000                    |
|              | Hardness, (mg CaCO <sub>3</sub> /L) | 3    | 518     | 461      | 3.5  | 473   | . <b></b>                |
|              | Phosphate                           | 7.7  | 11.3    | 14.4     | ND 3 | 12.0  |                          |

### Table F

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# Tabulation of Water Data

DICE 00770

### Kennedy/Jenks Consultants

### APPENDIX K

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Baseline Risk Assessment, McKesson - Santa Fe Springs, CA by Harding Lawson Associates, October 1992

Excerpts; Boring Logs, Site Plan and Groundwater Analytical Data

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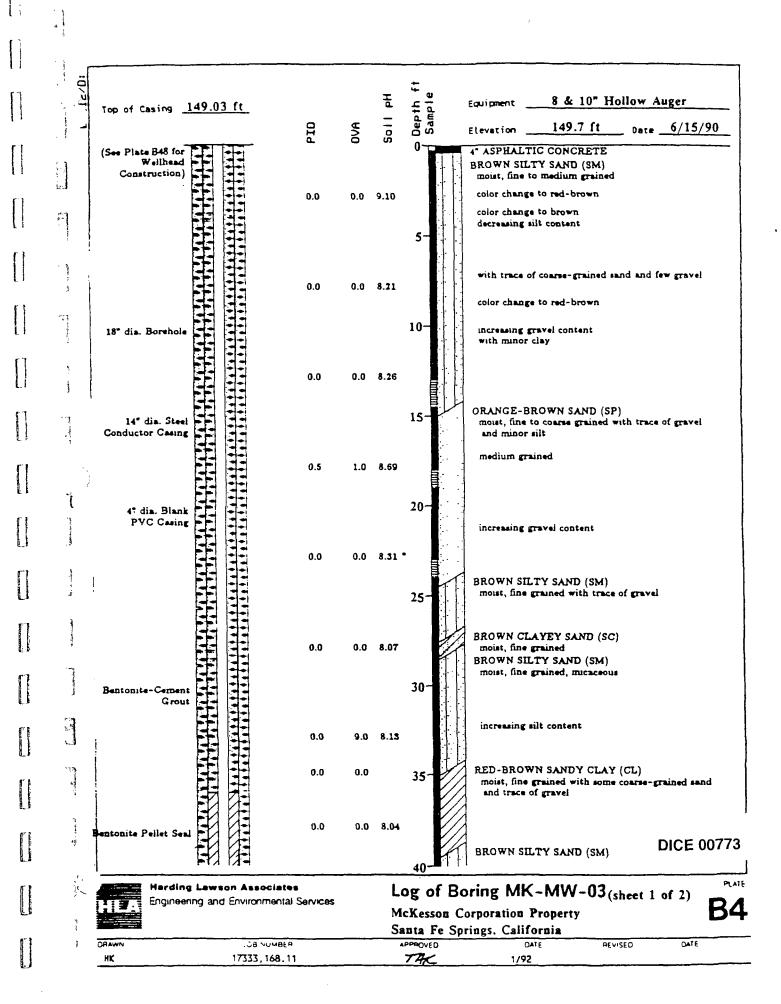
BASELINE RISK ASSESSMENT McKESSON-SANTA FE SPRINGS October 26, 1992 Page 2 - 4

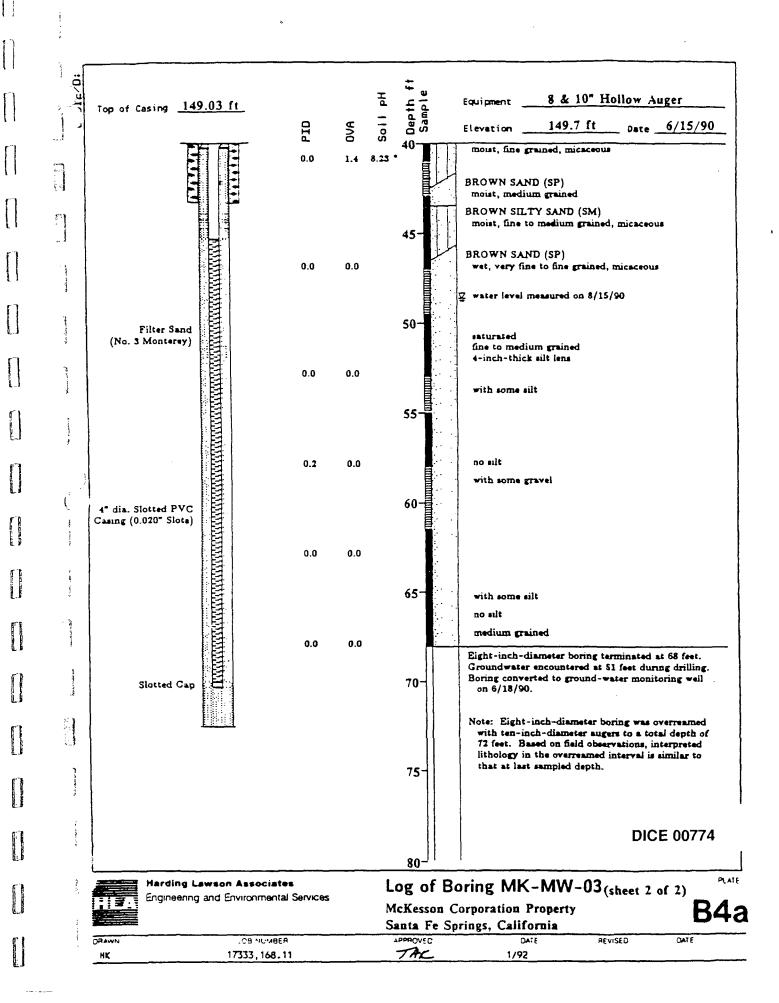
### 2.3 Soil and Groundwater Characterization

The McKesson site is located on the Santa Fe Springs Plain of the Los Angeles Coastal Plain. The Santa Fe Springs Plain generally dips to the northeast in this area. Prominent area features include the Puente and Coyote Hills to the northeast, east, and southeast and the San Gabriel River to the west of the plain. In the vicinity of the site, the Santa Fe Springs Plain consists of Pleistocene alluvium of the Lakewood Formation. The formation unconformably overlies the San Pedro Formation. Local geologic and hydrogeologic investigations have been conducted at the McKesson site and nearby sites. Shallow, nearsurface materials underlying the site consist predominantly of silty sand, with minor amounts of silt and clay. Poorly sorted, fine- to coarse-grained sand (locally with gravel) underlie the fine-grained surficial deposits from depths between 15 and 25 to 30 feet bgs. This upper sand zone is interpreted to be the Gage Aquifer which is stratigraphically positioned at the bottom of the Lakewood formation. Groundwater was not encountered in this unit except in the northeast corner of the site for a limited time in the aboveground solvent storage area. Below the upper sand unit a zone of discontinuous silt, clay, and silty sand units are encountered to depths of approximately 45 to 50 feet bgs. Beneath this zone of discontinuous units, a fine- to medium-grained sand is present. This sand unit, referred to as the aquifer sand, is continuous across the site and is approximately 75 feet thick. extending to depths of 126 feet bgs. This aquifer sand is water-bearing, (groundwater being encountered at depths between 48 and 50 feet bgs), and is interpreted as being the Hollydale aquifer, the upper-most aquifer of the San Pedro formation.

### 2.4 Preliminary Investigations

Preliminary investigations of site soil and groundwater in 1984, 1986, and 1989 were conducted at the request of Cal-EPA. Soil and groundwater sampling locations for these





| 5D S                    | WORE THAN HALF<br>COARSE FRACTION<br>IS LARGER THAN<br>NOL & SIEVE SIZE | GRAVELS WITH OVER                                                                                    | GM     |             | SILTY GRAVELS, POORLY GRADED GRAVEL-SAND-SILT WIXTUR                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|-------------------------|-------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|--------|-------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| RAINEL<br>Large R Han   |                                                                         | 12% FINES                                                                                            | GC     |             | CLAYEY GRAVELS, POORLY GRADED GRAVEL-SAND-CLAY<br>WIXTURES                                                                                                                                                                                                                                                                                                                                                                                                                            |
| E C                     |                                                                         | CLEAN SANDS WITH<br>UTTLE OR NO FINES                                                                | SW -   |             | WELL-GRADED SANOS, GRAVELLY SANOS                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| ARS                     | SANDS                                                                   |                                                                                                      | SP     |             | POORLY GRADED SANDS, GRAVELLY SANDS                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| CO<br>CO                | IS SMALLER THAN<br>Ng. 4 SIEVE SIZE                                     | SANDS WITH OVER<br>12% FINES                                                                         | SM     |             | SILTY SANDS, POORLY GRADED SAND-SILT MAXTURES                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|                         |                                                                         |                                                                                                      | ML     |             | WORGAME SILTS AND VERY FINE SANDS.<br>ROCK FLOUR, SILTY OR CLAYEY FINE SANDS, OR CLAYEY                                                                                                                                                                                                                                                                                                                                                                                               |
| SOILS                   | SILTS AI<br>۱۳۳۳ مان مان                                                | ND CLAYS                                                                                             | CL     |             | SILTS WITH SLIGHT PLASTICITY<br>INDRCANE CLAYS OF LOW TO HEDLIN PLASTICITY<br>GRAVELLY CLAYS, SANDY CLAYS, SLITY CLAYS, LEAN CLAYS                                                                                                                                                                                                                                                                                                                                                    |
| NED SO<br>In IS SUMIFIE |                                                                         |                                                                                                      |        |             | ORGANIC CLAYS AND ORGANIC SULTY CLAYS OF LOW PLASTIC                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| - GRAINED               |                                                                         |                                                                                                      | мн     |             | WORGANG SILTS, WAACEOUS OR DIATOMACEOUS FINE<br>Sway or silty scils, Elastic silts                                                                                                                                                                                                                                                                                                                                                                                                    |
| FINE -                  | 51615 4                                                                 | SILTS AND CLAYS<br>Guid unit greater than sor                                                        |        |             | NORGAINE CLAYS OF HEH PLASTICITY, FAT CLAYS                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|                         | <u> </u>                                                                | ······                                                                                               | он     |             | ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC :                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|                         | HIGHLY ORGAN                                                            | IC SOILS                                                                                             | Pt     | Н<br>К<br>К | PEAT AND OTHER HIGHLY DREANIC SOLLS                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| •                       | nommer failing 30 inches                                                | iste<br>sample<br>12. inches with a 14<br>L. Blow counts for Sath san<br>mate requiredent SPT N valu | npiera |             | <u>HC Odor - Hydrocarbon Odor</u><br>No No Odor<br>Lo Signi Odor<br>Ud Signi Odor<br>Nd No Odor<br>Nd Signi Odor<br>Sg Strong Odor<br>PO - Photownization Detector reading (10.2-electron-wolt k<br>calibrated using an asbutytene standard)<br>OVA - Organic Vapor Analyzer (flome invization detector) cas<br>using a methone standard<br>* - Sample submitted for chemical analysis<br>** - Based on HLA Temporary Bench Mark (TBM) shown or<br>Assumed elevation = 100.00°<br>DIC |

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A Report Prepared for

McResson Corporation One Pox Street San Francisco, California 94104

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REMEDIAL INVESTIGATION MODESSON CORPORATION PROPERTY 9004 SORENSEN AVENUE SANTA FE SPRINGS, CALIFORNIA

Citens No. 17333 HLA Project No. 11136-168

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Thomas Thomas Harder Staff Ocologist Hender

Ted A. Koalsch, JPh D., RG Principal Geologist

Herding Lawson Attoclais; 3 Hunos Centre, Sujte 200 Santa Ana, California 92707 714/558-7992

June 25, 1992 Revised October 30, 1992 . . . • • • • ·· : • . .

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**DICE 00776** 

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| D            |                  | Solim<br> | Like        | Sa Lanca          |      | ductivity                             | Sa]ids                                   |        |
| 제-신          | 8/02/50          | 115       | 0.24        |                   | 2.15 | юM                                    | 2530                                     | 540    |
| 10-01        | 30/36/50         | 117       | 9.54        | 0.54              | 1.9  | 2630                                  | 2003                                     | 6.H    |
| <b>36-01</b> | 2/11/51          |           | A           |                   | 7.11 | 14                                    |                                          | 14     |
| H-62         | 8/41/30          | 119       | \$,02       | 1.9               | 7.29 | 3460                                  | 1129                                     | 541    |
| 11-12        | 10/24/70         | 116       | 1.07        | 1.9               | 1.13 | 1520                                  | 1010                                     | 614    |
| B-12         | 2/11/91          | 116       | 1,01        | 1.73              | 1.42 | 1486                                  | 724                                      | 517    |
| <b>11-11</b> | 8/82/30          | 93.1      | 8.01        | 8.15              | 1.21 | 1179                                  | 764                                      | 330    |
| M-1)         | 10/24/90         | 19        |             |                   | 6.93 |                                       | <u>n</u>                                 | 20     |
| R-41         | 2/11/94          | 8.1       | 1.85        | 1.92              | 1.31 | 1159                                  | 540                                      | 370    |
| SI-64        | 4(13/9)          | 123       | 6.81        | 8.99              | 1.22 | 1540                                  | 1158                                     | 61     |
| 10.01        | 11/24/90         | R.        |             | 16                | 1.08 | - <b>N</b>                            | 14                                       | 19     |
| 8-H          | 2/11/91          | 12        | R.          | n.                | 1.19 | i i i i i i i i i i i i i i i i i i i | 15                                       | 145    |
| SH-17        | HA3/93           | 134       | 8.61        | 1.12              | 1.44 | 1250                                  | 912                                      | 441    |
| <b>10-67</b> | 11/21/99         | 11        |             | JA.               | 1.1  |                                       | in.                                      | , Etc. |
| -07          | 2/12/91          |           | Ē           | 14                | 1,21 | Ĩ                                     | n in in in in in in in in in in in in in |        |
| <b>W-10</b>  | 8/02/90          | 117       | d.0         | 1.36              | 1.26 | 1459                                  | 1878                                     | 580    |
| <b>D-10</b>  | 10/24/90         | 142       | <b>J.</b> B | 1.99              | 1.15 | 1450                                  | 1838                                     | 605    |
| -13          | 8/02/95          | 141       | G. G        | 1.99              | 1,12 | 1450                                  | 1988                                     | 689    |
| B-13         | 10/24/90         | 10        |             | 24                | 7.65 |                                       | 4                                        | 10     |
| <b>-</b> 13  | • 2/11/91        | 1         |             | 18.               | 1.1  |                                       | ii.                                      | NA I   |
| B-12         | 8/02/98          | 111       | 1.12        | 1.00              | 5.99 | 3479                                  | 1973                                     | 36     |
| <b>-</b> 17  | 10/25/90         | 112       | 1.12        | 4.91              | 6.52 | 1760                                  | 114                                      |        |
| 9-17         | 2/13/91          | 91.2      | 1.1B        | 4.95              | 1.11 | 549                                   | 100                                      | 619    |
| -171         | 2/12/91          | 244       | U, VS       | 4.83              | 5.95 | X40                                   | 1139                                     |        |
| -178         | 2/12/51          | 64.1      | <b>d.</b> M | 1.05              | 1.51 | 1199                                  | 564                                      | 516    |
| 8-20         | 6/92/98          | 121       | 8,82        | 0.99              | 7.8  | 1540                                  | 1368                                     | 59     |
| 3-25         | 10/25/98         | 24        |             | 24                | 1.4  | Ĩ.                                    | 16                                       | R      |
| 8-26         | 2/13/91          | 14        | n n         | 1                 | 1.17 |                                       | 4                                        | ñ      |
| -2           | \$/01/9 <b>1</b> | 121       | 1.8         | 4.96              | 1.12 | 100                                   | 1738                                     | - 14   |

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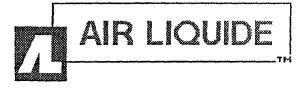
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February 6, 2002

Santa Fe Springs Fire Department Fire & Environmental Protection Bureau 11300 Greenstone Avenue Santa Fe Springs, CA. 90670

Dear Sir or Madam:

Attached is a revision to the hazardous material business plan for our business, located at 9756 Santa Fe Springs Road, Santa Fe Springs, CA. 90670

The primary change is; Air Liquide no longer operates or occupies the distribution center and garage located on the south side of the property.

Some of the emergency contact names and numbers have been changed as well as the elimination of some compressed gases, oil, and other related mechanical garage maintenance chemicals.

Should you have any questions or concerns regarding this revision, please contact me at 916-771-0344.

Sincerely,

William J. Cardoza Area Health, Safety and Environmental Specialist

AIR LIQUIDE AMERICA CORPORATION 7441 School House Lane, Roseville, California 95747
 Phone. 916-771-0344 Fax: 916-771-0344

CITY OF SANTA FE SPRINGS CERTIFIED UNIFIED PROGRAM AGENCY

## HAZARDOUS MATERIALS BUSINESS PLAN & HAZARDOUS WASTE GENERATOR APPLICATION PACKAGE



## CITY OF SANTA FE SPRINGS FIRE DEPARTMENT

11300 GREENSTONE AVE • SANTA FE SPRINGS • CA 90670 (562) 944-9713 FAX (562) 941-1817

**DICE 00779** 

### HAZARDOUS MATERIALS BUSINESS PLAN & HAZARDOUS WASTE GENERATORS

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To be completed by all businesses that handle Hazardous materials and/or generate hazardous waste

This package includes:

☑ Business Activities Form

Dusiness Owner/Operator Identification Form

Hazardous Materials Inventory-Chemical Description Form (complete for each material equal to or greater than 55 gallons, 500 pounds, or 200 cubic feet)

Hazardous Waste Generator Form

☑ Consolidated Contingency Plan

Site Plan

DICE 00780

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| UNIFIED PROGRAM CONSOLIDATED FORM<br>BUSINESS ACTIVITIES                                                                                                                                                                 |                 |                           |                       |                  |                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                   |                                                                                                                                                  |                                                                          |                                                            |                                                            |
|                                                                                                                                                                                                                          |                 |                           | BUSINES               | SS AC            | TIVITI                                              | ES                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | _                 |                                                                                                                                                  |                                                                          |                                                            |                                                            |
|                                                                                                                                                                                                                          |                 |                           |                       |                  |                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                   |                                                                                                                                                  |                                                                          | F                                                          | Page 1 of                                                  |
|                                                                                                                                                                                                                          |                 | ·].                       | FACILIT               | Y IDEN           | TIFICAT                                             | ION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                   |                                                                                                                                                  |                                                                          |                                                            |                                                            |
| FACILITY ID# 1 9                                                                                                                                                                                                         |                 | 49                        |                       |                  |                                                     | ··                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | L C,              | AL                                                                                                                                               | (Hazardous V<br>00129                                                    |                                                            | 2                                                          |
| BUSINESS NAME (Same as F                                                                                                                                                                                                 | acility Name of | of DBA-Doing              | Business As)          | ) 3              |                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                   |                                                                                                                                                  |                                                                          |                                                            | 103                                                        |
| AIRLIQUIDE                                                                                                                                                                                                               | EAME            |                           |                       |                  |                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | AN                | TAL                                                                                                                                              | FESPR                                                                    | INGS R                                                     | DAD                                                        |
|                                                                                                                                                                                                                          |                 |                           | ACTIVITI              |                  |                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                   |                                                                                                                                                  |                                                                          |                                                            |                                                            |
|                                                                                                                                                                                                                          | please si       | NOTE: If y<br>ubmit the   | /ou check<br>Business | YES to<br>Owner/ | o any pa<br>Operate                                 | ort of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state o | nis lis<br>tifica | t,<br>tion                                                                                                                                       | page.                                                                    |                                                            |                                                            |
| D                                                                                                                                                                                                                        | oes your fac    | ility                     |                       |                  | lf                                                  | Yes, ple                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | ase c             | omple                                                                                                                                            | ete these pa                                                             | ges of the p                                               | ackage                                                     |
| A. HAZARDOUS MATERIALS<br>Have on site (for any purpose) hazardous materials at or above 55 gallons for                                                                                                                  |                 |                           |                       |                  |                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                   | INV<br>(cor<br>the<br>✓ C<br>PLA                                                                                                                 | HAZARDOUS<br>VENTORY - C<br>mplete this for<br>exempt amou<br>CONSOLIDAT | MATERIALS                                                  | ESCRIPTION<br>naterial over<br>ne left)                    |
| B. UNDERGROUND STOR<br>1 Own or operate USTs?                                                                                                                                                                            | AGE TANKS       | S (USTs)<br>ete forms und | er 4 above.)          |                  | 🗆 YES                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | D 5               | 1                                                                                                                                                |                                                                          | r<br>NE PAGE PE                                            |                                                            |
| 2. Intend to upgrade existin                                                                                                                                                                                             | n or install ne | W HSTe?                   |                       |                  | D YES                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | ר ב               |                                                                                                                                                  |                                                                          |                                                            |                                                            |
| 3. Need to report closing a                                                                                                                                                                                              |                 |                           |                       |                  |                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                   | ✓ UST APPLICATION PACKAGE<br>✓ UST CLOSURE APPLICATION PKG                                                                                       |                                                                          |                                                            |                                                            |
|                                                                                                                                                                                                                          |                 |                           | NIC (ASTa             | <u></u>          |                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                   | +                                                                                                                                                |                                                                          | ······                                                     | me, however,                                               |
| C. ABOVE GROUND PETROLEUM STORAGE TANKS (ASTs)<br>Own or operate ASTs above these thresholds:<br>any tank capacity is greater than 660 gallons, or<br>the total capacity for the facility is greater than 1,320 gallons? |                 |                           |                       |                  |                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | D 8               | if yo<br>a<br>Cou<br>oil s                                                                                                                       | ou answered<br>Spill Pre<br>Intermeasure                                 | yes, prepare<br>vention Co<br>(SPCC) plar                  | and maintain<br>ontrol and<br>n to address<br>e APST(s) at |
| D. HAZARDOUS WASTE                                                                                                                                                                                                       |                 |                           |                       |                  |                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                   |                                                                                                                                                  |                                                                          |                                                            | ]                                                          |
| 1. Generate hazardous wa                                                                                                                                                                                                 | ste?            |                           |                       |                  | YES                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 9                 |                                                                                                                                                  | ONSOLIDAT                                                                | GENERATOR<br>ED CONTING                                    |                                                            |
| 2. Recycle onsite more that<br>recyclable materials (pe                                                                                                                                                                  |                 |                           | d or exempte          | d                | 🗆 YES                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 0 10              | ✓ RECYCLABLE MATERIALS REPORT                                                                                                                    |                                                                          |                                                            | REPORT                                                     |
| 3. Treat hazardous waste on site?                                                                                                                                                                                        |                 |                           |                       |                  | T YES                                               | ы<br>М                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | ) 11              | <ul> <li>✓ ONSITE HAZARDOUS WASTE<br/>TREATMENT – FACILITY</li> <li>✓ ONSITE HAZARDOUS WASTE<br/>TREATMENT – UNIT (one page per unit)</li> </ul> |                                                                          |                                                            | STE                                                        |
| 4. Treatment subject to financial assurance requirements (for Permit by Rule and Conditional Authorization)?                                                                                                             |                 |                           |                       |                  | □ YES Ø NO 12 ✓ CERTIFICATION OF FINAN<br>ASSURANCE |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                   |                                                                                                                                                  |                                                                          |                                                            |                                                            |
| 5. Consolidate hazardous waste generated at a remote site?                                                                                                                                                               |                 |                           |                       |                  |                                                     | YES NO 13 REMOTE WASTE / CONSOLID.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                   |                                                                                                                                                  | <u>ı                                    </u>                             |                                                            |                                                            |
| Need to report the closure/removal of a tank that was classified as<br>hazardous waste and cleaned onsite?     E1. REGULATED SUBSTANCES                                                                                  |                 |                           |                       |                  |                                                     | DA DO                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | ) 14              |                                                                                                                                                  | IAZARDOUS<br>RTIFICATION                                                 | WASTE TAN                                                  | K CLOSURE                                                  |
| Have Regulated Substances (RS) including Extremely Hazardous Substances (EHS) stored on site at greater than the threshold planning quantities established by the California Accidental Release Program (Cal ARP)?       |                 |                           |                       |                  |                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 15a<br>)          | requ<br>√ R                                                                                                                                      | uirements, cor<br>Regulated Sub                                          | ardous Mater<br>mplete:<br>ostance Regis<br>pent Plan (who | tration                                                    |
| E2 INDUSTRIAL WASTE/F                                                                                                                                                                                                    | RELEASE RI      | EPORT                     |                       |                  |                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | ~                 | , . <u>.</u>                                                                                                                                     |                                                                          |                                                            |                                                            |
| a. Discharge any liquid was other than domestic waste                                                                                                                                                                    |                 |                           | ystem or stor         | m drain          | <b>D</b> YES                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | ) 15b             | Dep                                                                                                                                              |                                                                          | Santa Fe 5<br>62) 944-9713<br>nts.                         |                                                            |
| b. Are you aware of any cont<br>facility?                                                                                                                                                                                | amination or I  | hazardous wa              | ste releases :        | at your          | □YES                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | ) 15c             | ✔<br>Dep                                                                                                                                         | Contact the artment at (5)                                               | Santa Fe S<br>62) 944-9713<br>Idiation Asses               | regarding a                                                |
| OFFICIAL USE ONLY                                                                                                                                                                                                        | UP Form         | HW                        | HM                    | ARP              | AS                                                  | r                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | UST               |                                                                                                                                                  | TP                                                                       | CUPA                                                       | PA                                                         |
|                                                                                                                                                                                                                          |                 |                           |                       |                  |                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                   |                                                                                                                                                  |                                                                          |                                                            |                                                            |

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### **Business Activities**

Please submit the Business Activities page, the Business Owner/Operator Identification page (OES Form 2730), and Hazardous Materials Inventory -Chemical Description pages (OES Form 2731) for all submissions. Please number all pages of your submittal. This helps your CUPA or PA identify whether the submittal is complete and if any pages are separated.

FACILITY ID NUMBER Leave this blank. This number is assigned by the Certified Unified Program Agency (CUPA) and identifies your facility.
 EPA ID NUMBER If you generate, recycle, or treat hazardous waste, enter your facility's 12-character U.S. Environmental Protection Agency (U.S. EPA) or California Identification number. For facilities in California, the number usually starts with the letters "CA". If you do not have a number, contact the Department of Toxic Substances Control (DTSC) at (916) 324-1781, (800) 61-TOXIC or (800) 61-86942, to obtain one.
 BUSINESS NAME Enter the full legal name of the business. This is the same as the terms "Facility Name" or "DBA - Doing Business As".

4. HAZARDOUS MATERIALS ONSITE Check the box to indicate whether you have hazardous materials onsite. You have a hazardous material if: - It is handled in quantities equal to or greater than 500 pounds, 55 gallons, or 200 cubic feet of gas (calculated at standard temperature and pressure).

- It is handled in quantities equal to or greater than the applicable federal threshold planning quantity for an extremely hazardous substance listed in 40 CFR Part 355, Appendix A,

- Radioactive materials are handled in quantities for which an emergency plan is required to be adopted pursuant to Part 30, Part 40, or Part 70 of Chapter 10 of 10 CFR, or pursuant to any regulations adopted by the state in accordance with these regulations.

If you have hazardous materials onsite, then you must complete the Business Owner/Operator Identification page (OES Form 2730) and the Hazardous Materials Inventory - Chemical Description page (OES Form 2731), as well as an Emergency Response Plan (i.e. Consolidated Contingency Plan) and Training Plan. Do not answer "YES" to this question if you exceed only a local threshold, but do not exceed the state threshold.

5. OWN OR OPERATE UNDERGROUND STORAGE TANK (UST) Check the appropriate box to indicate whether you own or operate USTs containing hazardous substances as defined in Health and Safety Code (HSC) §25316. If "YES", then you must complete one UST Facility page and UST Tank pages for each tank. You must also submit a plot plan and a monitoring program plan.

6. UPGRADE/INSTALL UST Check the appropriate box to indicate whether you intend to install or upgrade USTs containing hazardous substances as defined in HSC §25316. If "YES", then you must complete the UST Installation - Certificate of Compliance page in addition to UST Facility and Tank pages, plot plan and monitoring program plan.

7. UST CLOSURE Check the appropriate box if you are closing an UST and complete the closure portion of the UST Tank pages for each tank.
8. OWN OR OPERATE ABOVEGROUND PETROLEUM STORAGE TANK (APST) Check the appropriate box to indicate whether there are APSTs onsite which exceed the regulatory thresholds. (There is no UPCF page for APSTs.) This program applies to all facilities storing petroleum in aboveground tanks. Petroleum means crude oil, or any fraction thereof, which is liquid at 60 degrees Fahrenheit temperature and 14.7 pounds per square inch absolute pressure (HSC §25270.2 (g)). The facility must have a single tank greater than 660 gallons, or cumulative storage capacity greater than 1,320 gallons for all APSTs. An aboveground petroleum storage tank (APST) facility with one or more of the following (see HSC §25270.2 (k)) is not subject to this act and is exempt::

- A pressure vessel or boiler which is subject to Division 5 of the Labor Code,
- A storage tank containing hazardous waste if a hazardous waste facility permit has been issued for the storage tank by DTSC,
- An aboveground oil production tank which is regulated by the Division of Oil and Gas,
- Certain oil-filled electrical equipment including but not limited to transformers, circuit breakers, or capacitors.

9. HAZARDOUS WASTE GENERATOR Check the appropriate box to indicate whether your facility generates hazardous waste. A generator is the person or business whose acts or processes produce a hazardous waste or who causes a hazardous substance or waste to become subject to State hazardous waste law. If your facility generates hazardous waste, you must obtain and use an EPA Identification number (ID) in order to properly transport and dispose of it. Report your EPA ID number in #2. Hazardous waste means a waste that meets any of the criteria for the identification of a hazardous waste adopted by DTSC pursuant to HSC §25141. "Hazardous waste" includes, but is not limited to, federally regulated hazardous waste. Federal hazardous waste law is known as the Resource Conservation and Recovery Act (RCRA). Unless explicitly stated otherwise, "hazardous waste" also includes extremely hazardous waste and acutely hazardous waste.

10. RECYCLE Check the appropriate box to indicate whether your facility recycles more than 100 kilograms per month of recyclable material under a claim that the material is excluded or exempt per HSC §25143.2. Check "YES" and complete the Recyclable Materials Report pages, if you either recycled onsite or recycled excluded recyclable materials which were generated offsite. Check "NO" if you only send recyclable materials to an offsite recycler; you do not need to report.

11. ONSITE HAZARDOUS WASTE TREATMENT Check the appropriate box to indicate whether your facility treats hazardous waste onsite.

"Treatment" means any method, technique, or process which is designed to change the physical, chemical, or biological character or composition of any hazardous waste or any material contained therein, or removes or reduces its harmful properties or characteristics for any purpose. "Treatment" does not include the removal of residues from manufacturing process equipment for the purposes of cleaning that equipment. Amendments (effective 1/1/99) add exemptions from the definition of "treatment" for certain processes under specific, limited conditions. Refer to HSC §25123.5 (b) for these specific exemptions. Treatment of certain laboratory hazardous wastes do not require authorization. Refer to HSC §25200.3.1 for specific information. Please contact your CUPA to determine if any exemptions apply to your facility. If your facility treats hazardous waste onsite, complete the Onsite Hazardous Waste Treatment Notification - Facility page and one set of Onsite Hazardous Waste Treatment Notification - Unit pages for each unit.

12. FINANCIAL ASSURANCE Check the appropriate box to indicate whether your facility is subject to financial assurance requirements for closure of an onsite treatment unit. Unless they are exempt, Permit by Rule (PBR) and Conditionally Authorized (CA) operations are required to provide financial assurance for closure costs (per 22 CCR §67450.13 (b) and HSC §25245.4). If your facility is subject to financial assurance requirements or claiming an exemption, then complete the Certification of Financial Assurance page.

13. REMOTE WASTE CONSOLIDATION SITE Check the appropriate box to indicate whether your facility consolidates hazardous waste generated at a remote site. Answer "YES" if you are a hazardous waste generator that collects hazardous waste at remote sites and transports the hazardous waste to a consolidation site you also operate. You must be eligible pursuant to the conditions in HSC §25110.10. If your facility consolidates hazardous waste generated at a remote site, then complete the Remote Waste Consolidation Site Annual Notification page.

14. HAZARDOUS WASTE TANK CLOSURE Check the appropriate box to indicate whether the tank being closed would be classified as hazardous waste after its contents are removed. Classification could be based on your knowledge of the tank and its contents, the mixture rule, testing of the tank, the listed wastes in 40 CFR 261.31 or 40 CFR 261.32, or inability to remove hazardous materials stored in the tank.

If the closed tank would be classified as hazardous waste, then complete the Hazardous Waste Tank Closure Certification page.

15a. LOCAL REQUIRED INFORMATION: REGULATED SUBSTANCES (RS) Check the box to indicate whether Regulated Substances (RS) are stored onsite. An RS is any substance, listed in CCR, Title 19, Section 2770.5. See attached Regulated Substance list. If you handle an RS at greater than the threshold planning quantities then complete the Regulated Substance Registration in addition to forms required under item number 4.

15b. Indicate whether or not you discharge any liquid waste into the public sewer system or storm drain other than domestic waste water from restrooms.

15c. Indicate whether or not you are aware of any contamination or hazardous materials releases at your facility.

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### Unified Program (UP) Form CONSOLIDATED CONTINGENCY PLAN

### COVER PAGE

#### FACILITY IDENTIFICATION 3 FACILITY ID # 1 **BUSINESS NAME** AIRLIGUIDE AMERICA CORPORATION 19-049-103 **ZIP CODE** CITY 104 105 SITE ADDRESS SFS 90670 9756 SANTA FE SPRINGS ROAD

The Consolidated Contingency Plan provides businesses a format to comply with the emergency planning requirements of the following three written hazardous materials emergency response plans required in California:

- Hazardous Materials Business Plan (HSC Chapter 6.95 Section 25504 (b) and 19 CCR Sections 2729-2732),
- Hazardous Waste Generator Contingency Plan (22 CCR Section 66264.52), and
- Underground Storage Tank Emergency Response Plan and Monitoring Program (23 CCR Sections 2632 and 2641).

This format is designed to reduce duplication in the preparation and use of emergency response plans at the same facility, and to improve the coordination between facility response personnel and local, state and federal emergency responders during an emergency. Use the chart below to determine which sections of the Consolidated Contingency Plan need to be completed for your facility. If you are unsure as to which programs your facility is subject to, refer to the Business Activities Page.

| PROGRAMS                                 | SECTION(S) TO BE COMPLETED                       |
|------------------------------------------|--------------------------------------------------|
| Hazardous Materials Business Plan (HMBP) | Cover Page, Section I, II, and Site Map(s)       |
| Hazardous Waste Generator (HWG)          | Cover Page, Section I, II, and Site Map(s)       |
| Underground Storage Tank (UST)           | Cover Page, Sections I, II, III, and Site Map(s) |
| HMBP, HWG, UST                           | Cover Page, Sections I, II, III, and Site Map(s) |

A copy of the plan shall be submitted to the Santa Fe Springs Fire Department and at least one copy of the plan shall be maintained at the facility for use in the event of an emergency and for inspection by the local agency. Describe below where a copy of your Contingency Plan, including the hazardous material inventories and Site Map(s), is located at your business:

| Indicate where this plan is located: | MAIN ENTRANCE TO | OFFICE | RECEPTIONIST DESK |
|--------------------------------------|------------------|--------|-------------------|
|--------------------------------------|------------------|--------|-------------------|

| PLAN CERTIFICATION                                                                                                                                                                                              |                                               |  |  |  |  |  |  |  |  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|--|--|--|--|--|--|--|--|
| I certify under penalty of law that I have personally examined and I am familiar with the information provided by this plan<br>and to the best of my knowledge the information is accurate, complete, and true. |                                               |  |  |  |  |  |  |  |  |
| Printed Name of Owner/ Operator<br>WILLIAM J - CAIZDOZA                                                                                                                                                         | Title of Owner/Operator<br>AREA HSE SPECIAUST |  |  |  |  |  |  |  |  |
| Signature of Owner/ Operator                                                                                                                                                                                    | Date<br>FEB.06,2002                           |  |  |  |  |  |  |  |  |

We appreciate the effort of local businesses in completing these plans and will assist in every possible way. If you have any questions, please contact the Santa Fe Springs Fire Department at (562) 944-9713.

| OFFICIAL USE ONLY |    | DATE RECE | IVED  |          | REVIEWED BY |    |
|-------------------|----|-----------|-------|----------|-------------|----|
| DIV               | BN | STA       | OTHER | DISTRICT | CUPA        | PA |

SFSFD UP FORM (4/00 Version)

### Unified Program (UP) Form CONSOLIDATED CONTINGENCY PLAN

### SECTION I: EMERGENCY RESPONSE PLANS AND PROCEDURES

| EMERGENCY CONTACTS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                     |             |             |                 |                   |               |                       |      |  |  |  |
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| The name(s) and title(s) of the per                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                     | le for auth | orizing a   | any work ne     |                   |               |                       |      |  |  |  |
| PRIMAR                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Υ                   | 100         |             |                 | SE                | CONDAR        | <u>ζΥ</u>             | 128  |  |  |  |
| NAME JERRY BEESON                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 7                   | 123         | NAME        | DAVE            | JOI               | NES           |                       |      |  |  |  |
| TITLE EMERGENCY RE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | ESPONDER            | - 124<br>-  | TITLE       | FIELD           | SET               | RVICE         | MANAGER               | 129  |  |  |  |
| BUSINESS PHONE<br>562-244-41                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 82                  | 125         | BUSIN       | ESS PHON        |                   | 06 - 8-       | 738                   | 130  |  |  |  |
| FOIA ex 6, Personal Privacy                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                     |             | FOIA ex 6   | 6, Personal Pri |                   |               | /                     |      |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                     |             |             |                 |                   |               |                       |      |  |  |  |
| A. Notifications                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                     |             | !           |                 |                   |               |                       |      |  |  |  |
| Your business is required by State                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                     |             |             |                 |                   |               |                       | а    |  |  |  |
| hazardous material to local fire em<br>Office of Emergency Services. If y                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | ergency respons     | e personr   | nel, this l | Unified Proc    | gram A<br>Izardou | gency (CUP    | 'A or PA), and the    |      |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                     |             |             | E/SHERIFF       | 201000            | io materialo, | inine diatery cail.   |      |  |  |  |
| and the second second second                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                     |             | NE: 911     |                 |                   |               |                       |      |  |  |  |
| AFTER the local emergency responses<br>Services.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | onse personnel ar   | e notified  | , you sh    | all then noti   | ity this          | office and th | e Office of Emerge    | ency |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                     |             |             |                 |                   |               |                       |      |  |  |  |
| Santa Fe Springs Fire Department                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                     |             |             |                 |                   |               |                       |      |  |  |  |
| State Office of Emergency Service                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | • •                 | •           | ,           |                 |                   |               |                       |      |  |  |  |
| National Response Center:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                     |             | <u> </u>    | es greater tr   | han the           | ir reportable | e quantities)         |      |  |  |  |
| Information to be p                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | e and the telepho   |             |             | where you a     | are calli         |               |                       |      |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | ress of the releas  |             |             | •               |                   | ng.           |                       |      |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | , cause, and type   |             |             |                 | ase, sp           | ill etc.)     |                       |      |  |  |  |
| Material a                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | nd quantity of the  | release,    | to the ex   | ktent known     | ı                 | ·             |                       | ĺ    |  |  |  |
| 1. A state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of t    | ondition of the fac | ility.      |             |                 |                   |               |                       |      |  |  |  |
| 이 방법은 사람 공공 입국 이 가지 않는다.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | njuries, if any.    |             |             |                 |                   |               |                       |      |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | azards to public    | health and  | d/ or the   | environme       | nt outs           | ide of the fa | cility.               |      |  |  |  |
| B. Emergency Medical                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                     |             |             |                 |                   |               |                       |      |  |  |  |
| List the local emergency m<br>caused by a release or thr                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                     |             |             |                 | ss in th          | e event of a  | in accident or injury | /    |  |  |  |
| HOSPITAL/CLINIC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | H FIRST             | MEDI        | .CAL        |                 | PHO               | NE NO:        |                       |      |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | ET TELE             |             |             |                 |                   |               |                       |      |  |  |  |
| CITY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                     |             |             |                 | ZIP               | CODE:         |                       |      |  |  |  |
| SANTA FE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | E SPRINC            | 15          |             | <del>_</del>    |                   | CODE: 90      | 0670                  |      |  |  |  |
| a service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the service of the serv |                     |             |             |                 |                   |               |                       |      |  |  |  |
| te<br>Sanata ang ang ang ang ang ang ang ang ang an                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                     |             |             |                 |                   |               | DICE 00784            |      |  |  |  |
| OFFICIAL USE ONLY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | DATE RECE           |             |             |                 | REV               | EWED BY       |                       | ]    |  |  |  |
| the second second second second second second second second second second second second second second second s                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | STA                 | OTHER       |             | DISTRICT        |                   | CUPA          | PA                    |      |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                     |             | ·····       |                 |                   |               |                       |      |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                     |             |             |                 |                   |               |                       |      |  |  |  |
| SFSFD UP FORM (4/00 Version)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                     | ~           |             |                 |                   |               |                       |      |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                     | 3           |             |                 |                   |               | сср                   |      |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                     |             |             |                 |                   |               |                       |      |  |  |  |

|                                                                                                                                                                                                                                            |                                                                                                                                  | $\cap$                                                                                                    |                                                                                                        |                                                                                                                                                                |                                                                                                                                                                                      | (                                                                                                           |                                                                                     |                                   |                                                     |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-----------------------------------|-----------------------------------------------------|
|                                                                                                                                                                                                                                            |                                                                                                                                  | UNIFIED                                                                                                   | PROGRA                                                                                                 |                                                                                                                                                                | LIDATED F                                                                                                                                                                            | ORM                                                                                                         |                                                                                     |                                   |                                                     |
|                                                                                                                                                                                                                                            | BUSI                                                                                                                             | NESS O                                                                                                    | WNER/O                                                                                                 | PERATO                                                                                                                                                         | RIDENTI                                                                                                                                                                              | FICATION                                                                                                    |                                                                                     |                                   |                                                     |
|                                                                                                                                                                                                                                            | BUSINESS 🛛 REVISEA                                                                                                               | JPDATE (EFFEC                                                                                             |                                                                                                        | )                                                                                                                                                              |                                                                                                                                                                                      |                                                                                                             |                                                                                     |                                   | PAGE OF                                             |
|                                                                                                                                                                                                                                            |                                                                                                                                  |                                                                                                           | I. IDE!                                                                                                |                                                                                                                                                                | DN<br>BEGINNING                                                                                                                                                                      |                                                                                                             | 00 ENDING                                                                           |                                   | 101                                                 |
| FACILITY ID#                                                                                                                                                                                                                               | 190                                                                                                                              |                                                                                                           |                                                                                                        |                                                                                                                                                                | FEB.O                                                                                                                                                                                | 6-2002                                                                                                      | FED.                                                                                | .06.                              | -2003                                               |
|                                                                                                                                                                                                                                            | RLIQUIDE                                                                                                                         | -                                                                                                         |                                                                                                        |                                                                                                                                                                |                                                                                                                                                                                      | BUSINESS PI                                                                                                 | HONE 562                                                                            | 2-902                             | 5- <u>870002</u>                                    |
| BUSINESS SITE ADDRES                                                                                                                                                                                                                       | <sup>55</sup> 9756 S                                                                                                             | ANTA F                                                                                                    | E SPRI                                                                                                 | NGS RI                                                                                                                                                         |                                                                                                                                                                                      | r                                                                                                           |                                                                                     |                                   | 103                                                 |
| CITY SANTA FE                                                                                                                                                                                                                              |                                                                                                                                  |                                                                                                           |                                                                                                        |                                                                                                                                                                | 104 CA                                                                                                                                                                               | ZIP CODE C                                                                                                  |                                                                                     | . <u></u>                         | 105                                                 |
| DUN & BRADSTREET                                                                                                                                                                                                                           | 00-331-                                                                                                                          | 2600                                                                                                      |                                                                                                        |                                                                                                                                                                | 106                                                                                                                                                                                  | SIC CODE (4                                                                                                 | digit#) 5                                                                           | 169                               | 107                                                 |
| COUNTY LOS A                                                                                                                                                                                                                               | NGELES                                                                                                                           |                                                                                                           |                                                                                                        |                                                                                                                                                                | 108                                                                                                                                                                                  | UNINCORPO                                                                                                   |                                                                                     | es 🗌                              | No 133a                                             |
| BUSINESS OPERATOR N                                                                                                                                                                                                                        | IAME .                                                                                                                           |                                                                                                           |                                                                                                        |                                                                                                                                                                | 109                                                                                                                                                                                  | BUSINESS OF                                                                                                 | PERATOR PH                                                                          | IONE                              | 110                                                 |
|                                                                                                                                                                                                                                            |                                                                                                                                  |                                                                                                           | USINESS                                                                                                | OWNER                                                                                                                                                          |                                                                                                                                                                                      |                                                                                                             |                                                                                     |                                   |                                                     |
| OWNER NAME AIR L                                                                                                                                                                                                                           | LQUIDE AI                                                                                                                        | UERICA                                                                                                    | 4 111                                                                                                  | OWNER P                                                                                                                                                        | HONE BC                                                                                                                                                                              | <u> 0-324</u>                                                                                               | - 244                                                                               | 3                                 | 112                                                 |
| OWNER MAILING ADDRE                                                                                                                                                                                                                        | 00851 <sup>283</sup>                                                                                                             | WEST                                                                                                      | I UTTU                                                                                                 | E YORK                                                                                                                                                         | <u> </u>                                                                                                                                                                             | <u> </u>                                                                                                    |                                                                                     |                                   | 113                                                 |
| CITY HOUSTON                                                                                                                                                                                                                               |                                                                                                                                  | -                                                                                                         | 114                                                                                                    | STATE                                                                                                                                                          | TX                                                                                                                                                                                   | 115                                                                                                         | ZIP CODE                                                                            | 770                               | 116                                                 |
|                                                                                                                                                                                                                                            |                                                                                                                                  | III. E                                                                                                    | INVIRONN                                                                                               | NENTAL C                                                                                                                                                       | ONTACT                                                                                                                                                                               |                                                                                                             |                                                                                     |                                   |                                                     |
| CONTACT NAME WIL                                                                                                                                                                                                                           | LIAM J.C.                                                                                                                        | ARDOZ                                                                                                     | <b>A</b> 117                                                                                           | FOIA ex 6, F                                                                                                                                                   | ersonal Privac                                                                                                                                                                       | У                                                                                                           |                                                                                     |                                   |                                                     |
| FOIA ex 6, Personal Privad                                                                                                                                                                                                                 |                                                                                                                                  |                                                                                                           |                                                                                                        |                                                                                                                                                                |                                                                                                                                                                                      |                                                                                                             |                                                                                     |                                   |                                                     |
|                                                                                                                                                                                                                                            |                                                                                                                                  |                                                                                                           |                                                                                                        |                                                                                                                                                                |                                                                                                                                                                                      |                                                                                                             |                                                                                     |                                   |                                                     |
|                                                                                                                                                                                                                                            |                                                                                                                                  |                                                                                                           |                                                                                                        |                                                                                                                                                                |                                                                                                                                                                                      |                                                                                                             |                                                                                     |                                   |                                                     |
| -PRIM/                                                                                                                                                                                                                                     | ARY-                                                                                                                             | IV. I                                                                                                     | EMERGEN                                                                                                |                                                                                                                                                                | ACTS                                                                                                                                                                                 |                                                                                                             | -SEC                                                                                | ONDAF                             | RY-                                                 |
|                                                                                                                                                                                                                                            |                                                                                                                                  | IV. I                                                                                                     | EMERGEN                                                                                                |                                                                                                                                                                | acts<br>AVE JC                                                                                                                                                                       | INES                                                                                                        | -SEC                                                                                | ONDAF                             | <b>RY-</b><br>128                                   |
| NAME JERRY BI                                                                                                                                                                                                                              | EESON                                                                                                                            |                                                                                                           | 123                                                                                                    |                                                                                                                                                                | AVE JC                                                                                                                                                                               |                                                                                                             |                                                                                     | ONDAF                             |                                                     |
| NAME JERRY BI<br>TITLE EMERGEN<br>BUSINESS PHONE 50                                                                                                                                                                                        | EESON<br>NCI RESU                                                                                                                | PONDE                                                                                                     | 123                                                                                                    | NAME D<br>TITLE F                                                                                                                                              | AVE JC                                                                                                                                                                               | NES<br>ANAGE<br>52-906                                                                                      | R.                                                                                  |                                   | 128                                                 |
| NAME JERRY BU                                                                                                                                                                                                                              | EESON<br>NCI RESU                                                                                                                | PONDE                                                                                                     | 123<br>R 124                                                                                           | NAME D<br>TITLE F<br>BUSINESS                                                                                                                                  | AVE JC                                                                                                                                                                               | ANAGE                                                                                                       | R.                                                                                  |                                   | 128                                                 |
| NAME JERRY BI<br>TITLE EMERGEN<br>BUSINESS PHONE 50                                                                                                                                                                                        | EESON<br>NCI RESU                                                                                                                | PONDE                                                                                                     | 123<br>R 124                                                                                           | NAME D<br>TITLE F<br>BUSINESS                                                                                                                                  | AVE JC<br>ST MI<br>PHONE SC                                                                                                                                                          | ANAGE                                                                                                       | R.                                                                                  |                                   | 128                                                 |
| NAME JERRY BI<br>TITLE EMERGEN<br>BUSINESS PHONE 50                                                                                                                                                                                        | EESON<br>NCI RES<br>2-464-                                                                                                       | PONDE<br>1204                                                                                             | 123<br>R 124<br>125                                                                                    | NAME D<br>TITLE F<br>BUSINESS<br>FOIA ex 6, F                                                                                                                  | AVE JC<br>ST MI<br>PHONE SC                                                                                                                                                          | ANAGE<br>52-906                                                                                             | R.                                                                                  |                                   | 128                                                 |
| NAME JERRY BI<br>TITLE EMERGEN<br>BUSINESS PHONE 50                                                                                                                                                                                        | EESON<br>NCI RES<br>2-404-                                                                                                       | PONDE<br>1204<br>DDITIONA                                                                                 | 123<br>R 124<br>125<br>L LOCALL                                                                        | NAME D<br>TITLE F<br>BUSINESS<br>FOIA ex 6, F                                                                                                                  | AVE JO<br>ST MI<br>PHONE 5(<br>Personal Privace<br>CTED INFO                                                                                                                         | ANAGE<br>22-906                                                                                             | R.<br>- 873                                                                         | 8                                 | 128<br>129<br>130                                   |
| NAME JERRY BI                                                                                                                                                                                                                              | EESON<br>NCI RES<br>2-404-                                                                                                       | PONDE<br>1204<br>DDITIONA                                                                                 | 123<br>R 124<br>125<br>L LOCALL                                                                        | NAME D<br>TITLE F<br>BUSINESS<br>FOIA ex 6, F<br>Y COLLEC                                                                                                      | AVE JC<br>ST MI<br>PHONE 56<br>Personal Privace<br>CTED INFO                                                                                                                         | ANAGE<br>22-906                                                                                             | R.<br>- 873                                                                         | 8                                 | 128<br>129<br>130                                   |
| NAME JERRY BI                                                                                                                                                                                                                              | EESON<br>NCI RES<br>2 4.64 -<br>V. AI<br>JESS ADMIN                                                                              | PONDE<br>1204<br>DDITIONA<br>LSTRATI<br>MAI                                                               | 123<br><u>R</u> 124<br>125<br>L LOCALL<br><u>ON OF</u><br>LING/ BILL                                   | NAME D<br>TITLE F<br>BUSINESS<br>FOIA ex 6, F<br>Y COLLEC<br>F[CE/I<br>LING INFO                                                                               | AVE JC<br>ST MI<br>PHONE 56<br>Personal Privace<br>CTED INFO                                                                                                                         | ANAGE<br>52-906<br>MATION<br>SERVICE                                                                        | R.<br>- 873<br>WARE                                                                 | 38<br>HOLE                        | 128<br>129<br>130                                   |
| NAME JERRY BI<br>TITLE EMERGEN<br>BUSINESS PHONE 56<br>FOIA ex 6, Personal Privac<br>DESCRIPTION OF BUSIN<br>ADDRESS 9756 SP<br>Certification: Based on my                                                                                 | EESON<br>NCI RES<br>2- 4.64-                                                                                                     | PONDE<br>1204<br>DDITIONA<br>LSTRATI<br>MAI                                                               | 123<br>22<br>124<br>125<br>L LOCALL<br>ON OF<br>LING/ BILL<br>DON OF<br>LING/ BILL<br>DONSIBLE for ot  | NAME D<br>TITLE F<br>BUSINESS<br>FOIA ex 6, F<br>Y COLLEC<br>F[CE/I<br>LING INFO                                                                               | AVE JC<br>ST MI<br>PHONE 56<br>Personal Privace<br>CTED INFOR<br>FLELD S<br>RMATION<br>SPRINGS<br>formation, I cer                                                                   | ANAGE<br>2-906<br>RMATION<br>ERVICE                                                                         | R.<br>9-873<br>WARE<br>CA 1331 2                                                    | 38<br>HOUE<br>ZIP COD             | 128<br>129<br>130<br>5E 133b                        |
| NAME JERRY BI<br>TITLE EMERGEN<br>BUSINESS PHONE 50<br>FOIA ex 6, Personal Privac<br>DESCRIPTION OF BUSIN<br>ADDRESS 9756 SP                                                                                                               | EESON<br>NCI RES<br>2-404-<br>V. AI<br>V. AI<br>V. AI<br>V. AI<br>V. AI<br>V. AI<br>V. AI<br>V. AI                               | PONDE<br>1204<br>DDITIONA<br>LSTRAM<br>MAI<br>CINGS R<br>dividuals responses<br>submitted a               | 123<br>2 124<br>125<br>L LOCALL<br>ON OF<br>LING/ BILL<br>3 CITSA<br>consible for ot<br>nd believe the | NAME D<br>TITLE F<br>BUSINESS<br>FOIA ex 6, F<br>Y COLLEC<br>FICE /<br>LING INFO<br>NTA FE<br>Dataining the in<br>e information in<br>DATE                     | AVE JC<br>ST MI<br>PHONE 56<br>Personal Privad<br>CTED INFO<br>FLELD S<br>RMATION<br>SPRINGS<br>formation, I cert<br>s true, accurate<br>134                                         | ANAGE<br>DZ- 906<br>RMATION<br>SERVICE<br>333e STATE<br>tify under penalite,<br>and complete.<br>NAME OF DC | R<br>D - B73<br>WARE<br>CA 1331 2<br>Y OF LAW THAT I<br>DOCUMENT PR                 | 38<br>HOLE<br>ZIP COD<br>have per | 128<br>129<br>130<br>5€ 1335<br>€ 067€99<br>sonally |
| NAME JERRY BA<br>TITLE EMERGEN<br>BUSINESS PHONE 50<br>FOIA ex 6, Personal Privac<br>DESCRIPTION OF BUSIN<br>ADDRESS 9756 SP<br>Certification: Based on my<br>examined and am familiar<br>SIGNATURE OF OWNER/OPH                           | EESON<br>NCI RES<br>2-404-<br>V. AI<br>V. AI<br>V. AI<br>V. AI<br>V. AI<br>V. AI<br>V. AI<br>V. AI                               | PONDE<br>1204<br>DDITIONA<br>LSTRATI<br>MAI<br>CINGS RE<br>dividuals resp<br>n submitted a<br>VATED REPRE | 123<br>2 124<br>125<br>L LOCALL<br>ON OF<br>LING/ BILL<br>3 CITSA<br>consible for ot<br>nd believe the | NAME D<br>TITLE F<br>BUSINESS<br>FOIA ex 6, F<br>Y COLLEC<br>F[CE/I<br>LING INFO<br>NTA FE<br>otaining the im<br>e information I<br>DATE<br>OZ.                | AVE JC<br>ST MI<br>PHONE 56<br>Personal Privace<br>CTED INFOI<br>FLELD S<br>RMATION<br>SPRINGS<br>formation, I cert<br>s true, accurate<br>134<br>-06 -02                            | ANAGE<br>DZ-906<br>RMATION<br>SERVICE                                                                       | R<br>D - B73<br>WARE<br>CA 1331 2<br>Y OF LAW THAT I<br>DOCUMENT PR                 | 38<br>HOLE<br>ZIP COD<br>have per | 128<br>129<br>130<br>5E 133b<br>5OC709<br>sonally   |
| NAME JERRY BI<br>TITLE EMERGE<br>BUSINESS PHONE 50<br>FOIA ex 6, Personal Privac<br>DESCRIPTION OF BUSIN<br>ADDRESS 9756 50<br>Certification: Based on my<br>examined and am familiar                                                      | EESON<br>NCL RES<br>2-404-<br>V. AI<br>ESS ADMIN<br>ATA FESTR<br>Inquiry of those in<br>with the information<br>ERATOR OR DESIGN | PONDE<br>1204<br>DDITIONA<br>LSTRATI<br>MAI<br>CINGS RE<br>dividuals resp<br>n submitted a<br>VATED REPRE | 123<br>2 124<br>125<br>L LOCALL<br>ON OF<br>LING/ BILL<br>3 CITSA<br>consible for ot<br>nd believe the | NAME D<br>TITLE F<br>BUSINESS<br>FOIA ex 6, F<br>Y COLLEC<br>FICE / I<br>LING INFO<br>NTA FE<br>otaining the in<br>e information I<br>DATE<br>OZ-<br>136 TITLE | AVE JC<br>ST MI<br>PHONE 56<br>Personal Privace<br>CTED INFOL<br>CTED INFOL<br>CELD S<br>RMATION<br>SPRINGS<br>formation, I cerr<br>s true, accurate<br>134<br>-06 - 02<br>OF SIGNER | ANAGE<br>DZ- 906<br>RMATION<br>SERVICE<br>333e STATE<br>tify under penalite,<br>and complete.<br>NAME OF DC | R<br>B-B73<br>WARE<br>CA 1331 2<br>Y of law that I<br>DCUMENT PR<br>M CARI          | 38<br>HOLE<br>ZIP COD<br>have per | 128<br>129<br>130<br>5€ 1335<br>€ 067€99<br>sonally |
| NAME JERRY BI<br>TITLE EMERGEN<br>BUSINESS PHONE 50<br>FOIA ex 6, Personal Privac<br>DESCRIPTION OF BUSIN<br>ADDRESS 9756 SP<br>Certification: Based on my<br>examined and am familiar<br>SIGNATURE OF OWNER/OPT<br>NAME OF SIGNER (print) | EESON<br>NCL RES<br>2-404-<br>V. AI<br>ESS ADMIN<br>ATA FESTR<br>Inquiry of those in<br>with the information<br>ERATOR OR DESIGN | PONDE<br>1204<br>DDITIONA<br>LSTRATI<br>MAI<br>CINGS RE<br>dividuals resp<br>n submitted a<br>VATED REPRE | 123<br>2 124<br>125<br>L LOCALL<br>ON OF<br>LING/ BILL<br>3 CITSA<br>consible for ot<br>nd believe the | NAME D<br>TITLE F<br>BUSINESS<br>FOIA ex 6, F<br>Y COLLEC<br>FICE / I<br>LING INFO<br>NTA FE<br>otaining the in<br>e information I<br>DATE<br>OZ-<br>136 TITLE | AVE JC<br>ST MI<br>PHONE 56<br>Personal Privace<br>CTED INFOL<br>CTED INFOL<br>CELD S<br>RMATION<br>SPRINGS<br>formation, I cerr<br>s true, accurate<br>134<br>-06 - 02<br>OF SIGNER | ANAGE<br>52-906<br>RMATION<br>533e STATE<br>tify under penalite,<br>and complete.<br>NAME OF DC<br>WILLIA   | R<br>B - B73<br>WARE<br>CA 1331 2<br>y of law that I<br>DCUMENT PR<br>M CARI<br>IST | 38<br>HOLE<br>ZIP COD<br>have per | 128<br>129<br>130<br>5E 133b<br>5OC709<br>sonally   |

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### Business Owner/Operator Identification (formerly OES Form 2730)

Please submit the Business Activities page, the Business Owner/Operator Identification page (OES Form 2730), and Hazardous Materials - Chemical Description pages (OES Form 2731) for all hazardous materials inventory submissions. For the inventory to be considered complete, this page must be signed by the appropriate individual. Please number all pages of your submittal. This helps your CUPA or PA identify whether the submittal is complete and if any pages are separated.

- 1. FACILITY ID NUMBER This number is assigned by the CUPA. This is the unique number which identifies your facility.
- 3. BUSINESS NAME Enter the full legal name of the business.
- 100. BEGINNING DATE Enter the beginning year and date of the report. (YYYYMMDD, ex. 1999/07/01)
- 101. ENDING DATE Enter the ending year and date of the report. (YYYYMMDD, ex. 2000/06/30)
- 102. BUSINESS PHONE Enter the phone number, area code first, and any extension.
- 103. BUSINESS SITE ADDRESS Enter the street address where the facility is located. No post office box numbers are allowed.
- 104. CITY Enter the city or unincorporated area in which the business site is located.
- 105. ZIP CODE Enter the zip code of the business site. The extra 4 digits in the zip code may also be added.
- 106. DUN & BRADSTREET Enter the Dun and Bradstreet number for the facility. The Dun & Bradstreet number may be obtained by calling (610) 882-7748 or by visiting Dun and Bradstreet on the internet at www.dnb.com.
- 107. SIC CODE Enter the primary Standard Industrial Classification Code number for primary business activity. Report only the first four digits.
- 108. COUNTY Enter the county in which the business site is located.
- 109. BUSINESS OPERATOR NAME Enter the name of the business operator.
- 110. BUSINESS OPERATOR PHONE Enter business operator's phone number including any extension, if different from the business phone.
- 111. OWNER NAME Enter name of the business owner, if different from the business operator.
- 112. OWNER PHONE Enter the business owner's phone number if different from the business phone, area code first, and any extension.
- 113. OWNER MAILING ADDRESS Enter the owner's mailing address if different from the business site address.
- 114. OWNER CITY Enter the name of the city for the owner's mailing address.
- 115. OWNER STATE Enter the 2 character state abbreviation for the owner's mailing address.
- 116. OWNER ZIP CODE Enter the zip code for the owner's address. The extra 4 digits in the zip code may also be added.
- 117. ENVIRONMENTAL CONTACT NAME Enter the name of the person, if different from the Business Owner or Operator, who receives all environmental correspondence and will respond to enforcement activity.
- 118. CONTACT PHONE Enter the phone number at which the environmental contact can be contacted including any extension.
- 119. CONTACT MAILING ADDRESS Enter the mailing address where all environmental contact correspondence should be sent.
- 120. CITY Enter the name of the city for the environmental contact's mailing address.
- 121. STATE Enter the 2 character state abbreviation for the environmental contact's mailing address.
- 122. ZIP CODE Enter the zip code for the environmental contact's mailing address. The extra 4 digits in the zip code may also be added.
- 123. PRIMARY EMERGENCY CONTACT NAME Enter the name of a representative that can be contacted in case of an emergency involving hazardous materials at the business site. The contact shall have FULL facility access, site familiarity, and authority to make decisions for the business regarding incident mitigation.
- 124. TITLE Enter the title of the primary emergency contact.
- 125. BUSINESS PHONE Enter the business number for the primary emergency contact, area code first, and any extensions.
- 126. 24-HOUR PHONE Enter a 24-hour phone number for the primary emergency contact. The 24-hour phone number must be one answered 24 hours a day. If it is not the contact's home phone number, then the service answering the phone must be able to immediately contact the individual stated above.
- 127. PAGER NUMBER Enter the pager number for the primary emergency contact, if available.
- 128. SECONDARY EMERGENCY CONTACT NAME Enter the name of a secondary representative that can be contacted in the event that the primary emergency contact is not available. The contact shall have FULL facility access, site familiarity, and authority to make decisions for the business regarding incident mitigation.
- 129 TITLE Enter the title of the secondary emergency contact.
- 130. BUSINESS PHONE Enter the business telephone number for the secondary emergency contact, area code first, and any extension.
- 131. 24-HOUR PHONE Enter a 24-hour phone number for the secondary emergency contact. The 24 hour phone number must be one which is answered 24 hours a day. If it is not the contact's home phone number, then the service answering the phone must be able to immediately contact the individual stated above.
- 132. PAGER NUMBER Enter the pager number for the secondary emergency contact, if available.
- 133a. UNINCORPORATED AREA Check "Yes" if your facility is located in an unincorporated area of the County (ex. East LA, Marina Del Rey etc.).
- 133b DESCRIPTION OF BUSINESS Enter description of business (auto body shop, steel fabrication, welding shop, chemical storage, etc.)
- 133d. MAILING/BILLING ADDRESS Enter the address that all correspondence and bills should be sent.
- 133e. MAILING/BILLING CITY Enter the city for the mailing/billing address.
- 133f. MAILING/BILLING STATE Enter the 2 character state abbreviation for the mailing/billing address.

133g. MAILING/BILLING ZIP CODE Enter the zip code for the mailing/billing address. The extra 4 digit s in the zip code may also be added.

134 DATE Enter the date that the document was signed. (YYYYMMDD, ex. 1999/07/01)

135. NAME OF DOCUMENT PREPARER Enter the full name of the person who prepared the inventory submittal information.

- 136. NAME OF SIGNER Enter the full printed name of the person signing the page.
- SIGNATURE OF OWNER/ OPERATOR OR DESIGNATED REPRESENTATIVE The Business Owner/Operator, or officially designated representative of the Owner/Operator, shall sign in the space provided. This signature certifies the signer is familiar with the information submitted, and based on the signer's inquiry of those individuals responsible for obtaining the information, it is the signer's belief that the information is true, accurate and complete.
- 137. TITLE OF SIGNER Enter the title of the person signing the page.

| ``````````````````````````````````````         |                                                               |                                  |                                         |                  |                                 |                  |                                                   |                                           |            |
|------------------------------------------------|---------------------------------------------------------------|----------------------------------|-----------------------------------------|------------------|---------------------------------|------------------|---------------------------------------------------|-------------------------------------------|------------|
|                                                | HAZARD                                                        |                                  | FIED PROGR                              |                  |                                 |                  |                                                   | TION<br>e page per material per build     | 00.01.3193 |
|                                                | D                                                             | ELETE                            |                                         |                  | REPORT                          | ING YEAR         |                                                   | يستعدين فببونج بالتقاد الشائد الأ         | of         |
|                                                |                                                               |                                  |                                         | ITY INFORM       |                                 |                  |                                                   | 00.0000.00                                |            |
| BUSINESS NAME (                                | Same as FACILI                                                | TY NAME or D                     | BA – Doing Busir                        | ness As) AIR     | uw                              | IDE AM           | ERICA                                             | CORPORATIO                                | <b>У</b> 3 |
| CHEMICAL LOCAT                                 | <b>ON</b>                                                     |                                  |                                         |                  | 201                             | (EPCRA)          |                                                   | CONFIDENTIAL<br>ES DO NO                  | 202        |
| FACILITY ID #<br>Fire Dept use only            | 9 0                                                           | 4 9                              |                                         |                  | MAP#                            | (optional)       |                                                   | ID# (optional)<br>HOP BLDG                | 204        |
|                                                |                                                               |                                  | II. CHEM                                | ICAL INFOR       | MATION                          | N                |                                                   |                                           |            |
| CHEMICAL NAME                                  | ACET                                                          | ILENE                            |                                         |                  | 205                             | TRADE SEC        |                                                   | Yes X No                                  | 206        |
| COMMON NAME ACETYLENE                          |                                                               |                                  |                                         |                  | 207                             | EHS*             |                                                   | 🗋 Yes 🕅 No                                | 208        |
|                                                | -86-2                                                         |                                  |                                         |                  | 209                             | "If EHS is "Ye   | es", all amou                                     | nts below must be in I                    |            |
| FIRE CODE HAZAR                                |                                                               | mplete if required b             | y CUPA)                                 | 4-3              |                                 |                  |                                                   | <u> </u>                                  | 210        |
| HAZARDOUS MATERI<br>TYPE (Check one item       | AL<br>only) 🗗 a. PL                                           |                                  | TURE C C WAS                            | TE 211           | RADIOACI                        | TIVE 🛛 Yes 😡     | No 21                                             | 2 CURIES                                  |            |
| PHYSICAL STATE<br>(Check one item only)        |                                                               | OLID 🗇 LIQ                       |                                         | 5 214            | LARGEST                         | CONTAINER        | 200                                               |                                           | 215        |
| FED HAZARD CATEGO<br>(Check all that apply)    | ORIES                                                         | IRE D. b. RE                     |                                         | ESSURE RELEAS    | E 🗆 d                           | ACUTE HEALTH     | e CHR                                             | ONIC HEALTH                               | 216        |
|                                                | DUNT                                                          | _                                |                                         | r 218            |                                 | VASTE AMOUNT     | 219                                               | STATE WASTE CODE                          | 220        |
| UNITS*<br>(Check one item only)                | Da. GAI                                                       | LONS Db. C                       |                                         |                  | TONS                            |                  | 221 DA                                            | AYS ON SITE:<br>365                       | 222        |
| □ b.<br>□ c<br>□ d                             | ABOVE GROUND<br>UNDERGROUND<br>TANK INSIDE BUIL<br>STEEL DRUM | TANK [] f.<br>.DING [] g<br>[] h | PLASTIC/NONMET<br>CAN<br>CARBOY<br>SILO | ្រ<br>្ត្រ       | j BAG<br>] k. BOX<br>] I. CYLIN | DER _ p.         | GLASS BOTT<br>PLASTIC BO<br>TOTE BIN<br>TANK WAGO | TLE ] r. OTHER                            | 223        |
| STORAGE PRESSUR                                |                                                               | MBIENT                           | ■ b ABOVE AMB                           | IENT ∐ C.        | BELOW A                         |                  |                                                   |                                           | 224        |
| STORAGE TEMPERAT                               | URE 🗹 a A                                                     | MBIENT                           | D b ABOVE AMB                           | IENT D.c.        | BELOWA                          |                  | d. CRYOGEN                                        | IIC                                       | 225        |
| %WT                                            | HAZARDOU                                                      | S COMPON                         | ENT (For mixtur                         | e or waste onl   | /)                              | EHS              |                                                   | CAS #                                     | ··         |
| 1 226                                          |                                                               | <u> </u>                         |                                         |                  | 227                             | Yes 🗌 No         | 228                                               |                                           | 229        |
| 2 230                                          |                                                               |                                  |                                         | <u> </u>         | 231                             | res 🗌 No         | 232                                               |                                           | 233        |
| 3 234                                          |                                                               |                                  |                                         |                  | 235                             | Yes 🗌 No         | 236                                               |                                           | 237        |
| 4 238                                          |                                                               |                                  |                                         | <u></u> ,        | 239                             | res 🗌 No         | 240                                               |                                           | 241        |
| 5 242                                          |                                                               |                                  |                                         |                  | 243                             | _                | 244                                               | of paper capturing the requi              | 245        |
| information.                                   | 246                                                           |                                  | · · · · · · · · · · · · · · · · · · ·   | ······           |                                 |                  |                                                   |                                           |            |
|                                                |                                                               | Health                           | Fire                                    | Reactivity       | Spe                             | cific hazard     |                                                   | aterial used? (stored,<br>ubricant, etc.) | 247        |
|                                                | Identification                                                | 1                                | 4                                       | 3                |                                 | ····             | WELD                                              | NG                                        |            |
| If EPCRA, Please Si<br>(Facilities reporting ( | gn Here<br>Chemicals subjec                                   | t to EPCRA re                    | eporting threshold                      | s must sign each | Chemica                         | l Description pa | age for each                                      | EPCRA reported che                        | nical.)    |
| OFFICIAL USE ON                                | _Y                                                            |                                  |                                         |                  |                                 |                  |                                                   |                                           |            |
|                                                |                                                               |                                  | DATE RECEIVED                           | )                | 1                               |                  | WED BY                                            |                                           |            |
| DIV                                            | BN                                                            | STA                              | то                                      | HER              | DISTR                           | СТ               | CUPA                                              | PA                                        | ]          |
| SFSFD UP FORM (*                               | - 10-U1 Version)                                              |                                  |                                         | 6                |                                 |                  |                                                   | 04_cd                                     |            |

THE CUPAS OF LOS ANGELES COUNTY

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### Hazard Materials Inventory - Chemica escription

Complete a separate Hazardous Materials Inventory - Chemical Description page for each hazardous material (hazardous substances and hazardous waste) handled at your facility in aggregate quantities equal to or greater than 500 pounds, 55 gallons, 200 cubic feet of gas (calculated at standard temperature and pressure), or the federal threshold planning quantity for Extremely Hazardous Substances, whichever is less. Also, complete a page for each radioactive material handled over quantities for which an emergency plan is required by 10 CFR Parts 30, 40, or 70. Completed inventories should reflect all reportable quantities of hazardous materials at your facility, reported separately for each building or outside adjacent area, with separate pages for unique occurrences of physical state, storage temperature and storage pressure. Please, number all pages of your submittal. FACILITY ID NUMBER This number is assigned by the CUPA. This is the unique number which identifies your facility. 1

BUSINESS NAME Enter the full legal name of the business. 3

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200. ADD/DELETE/ REVISE Indicate if the material is being added to the inventory, deleted from the inventory, or if the information previously NOTE: You may choose to leave this blank if you resubmit your entire inventory annually. submitted is being revised.

201. CHEMICAL LOCATION Enter the building or outside/ adjacent area where the hazardous material is handled. A chemical that is stored at the same pressure and temperature, in multiple locations within a building, can be reported on a single page. NOTE: This information is not subject to public disclosure pursuant to HSC § 25506.

202. CHEMICAL LOCATION CONFIDENTIAL - EPCRA All businesses which are subject to the Emergency Planning and Community Right to Know Act (EPCRA) must check "Yes" to keep chemical location information confidential; otherwise, check "No".

203. MAP NUMBER. If a map is included, enter the number of the map on which the location of the hazardous material is shown.

204. GRID NUMBER If grid coordinates are used, enter the grid coordinates of the map that correspond to the location of the hazardous material.

205. CHEMICAL NAME Enter the proper chemical name associated with the Chemical Abstract Service (CAS) number of the hazardous material.

This should be the International Union of Pure and Applied Chemistry (IUPAC) name found on the Material Safety Data Sheet (MSDS). NOTE: If the chemical is a mixture, do not complete this field; instead, complete the "COMMON NAME" field.

206. TRADE SECRET - Check "Yes" if the information in this section is declared a trade secret, or "No" if it is not.

State requirement : If yes, and the business is not subject to EPCRA, disclosure of trade secret information is bound by HSC § 25511.

Federal requirement : If yes, and the business is subject to EPCRA, disclosure of the designated Trade Secret information is bound by 40 CFR, and the business must submit a "Substantiation to Accompany Claims of Trade Secrecy" form (40 CFR 350.27) to U.S. EPA.

207. COMMON NAME Enter the common name or trade name of the hazardous material or mixture containing a hazardous material.

208. EHS Check "Yes" if the hazardous material is an Extremely Hazardous Substance (EHS), as defined in 40 CFR, Part 355, Appendix A. If the material is a mixture containing an EHS, leave this section blank and complete the section on hazardous components below.

209. CAS # . Enter the Chemical Abstract Service number for the hazardous material. For mixtures, enter the CAS number of the mixture only if it has a number; otherwise, leave this blank and report CAS numbers of the individual hazardous components in the appropriate section below.

210. FIRE CODE HAZARD CLASSES This information shall be provided if the local fire chief deems it necessary and requests the CUPA or PA to collect it. A list of the hazard classes and instructions on how to determine which class a material falls under are found in the appendices of

Article 80 of the Uniform Fire Code. If a material has more than one hazard class, include all. Contact CUPA or PA for guidance 211. HAZARDOUS MATERIAL TYPE Check the one box that best describes the type of hazardous material: pure, mixture or waste. If the substance is a waste, check only that box. If the substance is a mixture or waste, complete the hazardous components section.

212 RADIOACTIVE Check "Yes" if the hazardous material is radioactive or "No" if it is not.

213. CURIES. If the material is radioactive, report the activity in curies; use up to nine digits with a floating decimal point to report activity in curies.

214. PHYSICAL STATE Check the one box that best describes the state in which the hazardous material is handled: solid, liquid or gas.

215. LARGEST CONTAINER Enter the total capacity of the largest container in which the material is stored.

.216. FEDERAL HAZARD CATEGORIES Check all categories that describe the physical and health hazards associated with the hazardous material. Fire: Flammable Liquids and Solids, Combustible Liquids, Pyrophorics, and Oxidizers.

Pressure Release: Explosives, Compressed Gases, and Blasting Agents.

Acute Health (Immediate): Highly Toxic, Toxic, Irritants, Sensitizers, Corrosives, and other chemicals with an adverse effect with short term exposure. Reactive: Unstable Reactive, Organic Peroxides, Water Reactive, and Radioactive.

Chronic Health (Delayed): Carcinogens, Teratogens, Mutagens, and other chemicals with an adverse effect with long term exposure.

217. AVERAGE DAILY AMOUNT Calculate the average daily amount of the hazardous material or mixture containing a hazardous material, in each building or adjacent/ outside area. Calculations shall be based on the previous year's inventory of the material reported on this page.

218. MAXIMUM DAILY AMOUNT Enter the maximum amount of each hazardous material or mixture containing a hazardous material, which is handled in a building or adjacent/outside area at any one time over the course of the year.

219. ANNUAL WASTE AMOUNT If the hazardous material being inventoried is a waste, provide an estimate of the annual amount handled.

220. STATE WASTE CODE If the material is a waste, enter the California 3-digit hazardous waste code from the Uniform Hazardous Waste Manifest. 221: UNITS "Check the unit of measure that is most appropriate for the material being reported on this page: gallons, pounds, cubic feet or tons.

NOTE. If the material is a federally defined Extremely Hazardous Substance (EHS), all amounts must be reported in pounds. If material is a mixture containing an EHS, report the units that the material is stored in (gallons, pounds, cubic feet, or tons).

222. DAYS ON SITE List the total number of days during the year that the material is on site.

223. STORAGE CONTAINER Check all boxes that describe the type of storage containers in which the hazardous material is stored. NOTE: If appropriate, you may choose more than one.

224. STORAGE PRESSURE Check the one box that best describes the pressure at which the hazardous material is stored.

225 STORAGE TEMPERATURE Check the one box that best describes the temperature at which the hazardous material is stored.

226. HAZARDOUS COMPONENTS 1-5 (% BY WEIGHT) Enter the percentage weight of the hazardous component in a mixture. If a range of percentages is available, report the highest percentage in that range. (Report components 2 - 5 in boxes 230, 234, 238, and 242.)

227. HAZARDOUS COMPONENTS 1-5 NAME When reporting a hazardous material mixture, list up to five chemical names of hazardous components

in that mixture by percent weight (refer to MSDS or, in the case of trade secrets, refer to manufacturer). All hazardous components in the mixture present at greater than 1% by weight if non-carcinogenic, or 0.1% by weight if carcinogenic, should be reported. If more than five hazardous components are present above these percentages, attach an additional sheet of paper to capture the required information. When reporting waste mixtures, list mineral and chemical composition. (Report components 2 - 5 in boxes 231, 235, 239, and 243.)

228. HAZARDOUS COMPONENTS 1-5 EHS Check "Yes" if the component of the mixture is considered an Extremely Hazardous Substance as ... defined in 40 CFR, Part 355, or "No" if it is not. (Report components 2 - 5 in boxes 232, 236, 240, and 244.)

229. HAZARDOUS COMPONENTS 1-5 CAS List Chemical Abstract Service numbers of the hazardous components in the mixture. (Repeat for 2-5.) 246. NFPA 704 Hazard Identification System numbers can be found on the MSDS for a particular material, from the supplier or from the NFPA 704 Standard This identification system specifies the hazards associated with materials. The blue, red, and yellow fields (health, flammability, and reactivity) all use a numbering scale ranging from 0 to 4. A value of zero means that the material poses essentially no hazard; a rating of four indicates extreme danger. The fourth value (associated with white) tends to be more variable, both in meaning and in what letters or numbers are written there. 247. Specify how this material is used in your facility.

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SFSED UP FORM (1-16-01 Version) THE CUPAS OF LOS ANGELES COUNTY

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|------------------------------------------|---------------------------------------|------------------|--------------------------------------------|----------------|------------------------|----------------|----------------|--------------|-------------|-----------------------------|--------------------|
|                                          | HAZARDOU                              |                  | FIED PROGRAM                               |                |                        |                |                | DESC         | RIPT        | 10N                         |                    |
|                                          |                                       | -                | REVISE                                     |                | REPOR                  |                |                |              |             | 200 Page 3                  |                    |
|                                          |                                       |                  | I. FACILIT                                 | Y INFOR        | MATIO                  | N              |                |              | ·           |                             |                    |
| BUSINESS NAME                            | (Same as FACILITY N                   | IAME or D        | BA – Doing Business                        | s As) AIF      | 2 LIQU                 | DER            | TMEF           | RICA (       | CORR        | PRATION                     | 3                  |
| CHEMICAL LOCAT<br>9756 SANTA             | TON<br>FE SPRINGS                     | RD. S            | ANTA FE SPRI                               | NGS, CF        | 20<br>}                |                | EMICA<br>PCRA) |              |             | NFIDENTIAL                  | 202                |
| ACILITY ID #                             |                                       |                  |                                            |                | 1 MAF                  | # (opi:or<br>2 | nal)           | 203          |             | # (optional) TI             | ARD <sup>204</sup> |
|                                          |                                       | - <u>L</u> -     | ·II. CHEMICA                               | AL INFOR       | RMATIC                 | N              |                |              |             |                             |                    |
|                                          | RESSED GAS                            | N.               | .0.5.                                      |                | 205                    | TRA            | ADE SE         |              | to EPCRA    | Yes No                      | 206                |
|                                          | COMPRESSED                            | . 1              |                                            | <u> </u>       | 207                    | EH             | S*             |              |             | Yes No                      | 208                |
| AS# BE                                   | LOW MUXTURI                           | =                | ·                                          |                | 209                    | *If E          | HS is "        | Yes", all    | amounts     | below must be in I          |                    |
| IRE CODE HAZAF                           | RD CLASSES (Complete                  | if required by   | CUPA) H-O, F-                              | 0, R-          | 0                      |                | ·              |              |             |                             | 210                |
| AZARDOUS MATER                           | · · · · · · · · · · · · · · · · · · · | 🖾ь. Міхт         | URE C. WASTE                               | 211            | RADIGA                 |                | []Yes          | <b>IS</b> No | 212         | CURIES                      | 213                |
| HYSICAL STATE<br>Check one item only)    | 🗆 a SOLID                             |                  | JID 🔯 c. GAS                               | 214            | LARGES                 | T CONT         | AINER          | 20           | 0           |                             | 215                |
| ED HAZARD CATEG<br>Check all that apply) | ORIES                                 | D. RE            | ACTIVE 18 c. PRESS                         | URE RELEA      | SE 🗋 d                 | . ACUT         | E HEAL         | тн □е.       | CHRON       | IC HEALTH                   | 216                |
| VERAGE DAILY AMO                         |                                       | - { · · · · ·    | IM DAILY AMOUNT                            | 215            | ANNUAL                 |                | AMOUN          | NT T         | 219 ST      | ATE WASTE CODE              | 220                |
| 45,000                                   | >                                     |                  | 45,000                                     |                | ا<br>ا                 | JA             |                | 22           |             | NA                          |                    |
| INITS"<br>Check one item only)           | 🗇 a. GALLON                           |                  | UBIC FEET 🛛 c. PC<br>HS, amount must be in |                | d. TONS                |                |                |              | UAY:        | SON SITE<br>365             | 222                |
|                                          | ABOVE GROUND TAN                      |                  | PLASTIC/NONMETALLI<br>CAN                  | Ľ              | j. BAG                 | DRUM           | 🗍 n.           | PLASTIC      | BOTTLE      | □ q. RAIL CAR<br>□ r. OTHER |                    |
|                                          | TANK INSIDE BUILDING<br>STEEL DRUM    | S []g.(<br>[]n.S |                                            |                | ] K. BOX<br>] I. CYLIN | DER            |                | TOTE BI      |             |                             |                    |
| TORAGE PRESSUR                           |                                       |                  | SI b. ABOVE AMBIEN                         |                | BELOW                  |                |                |              |             |                             | 223                |
| TORAGE TEMPERA                           |                                       |                  |                                            |                | BELOW                  |                |                |              | OGENIC      |                             | 225                |
| %WT                                      | HAZARDOUS C                           | OMPONE           | ENT (For mixture o                         | r waste or     | ly)                    |                | EHS            |              |             | CAS #                       |                    |
| 20-60 226                                | NITROGEN                              |                  |                                            |                | 227                    | Yes            | X No           | 228          | רצרד        | - 37-9                      | 229                |
| 40-80 230                                | CARBONDIO                             | XIDE             |                                            |                | 231                    | Yes [          | X No           | 232          | 124         | - 38 - 9                    | 233                |
| 234                                      |                                       |                  |                                            |                | 235                    | Yes [          | ] No           | 236          |             |                             | 237                |
| 238                                      |                                       |                  |                                            |                | 239                    | Yes [          | ] No           | 240          |             |                             | 241                |
| 242                                      |                                       |                  |                                            |                |                        |                | □No            | 244          |             |                             | 245                |
| formation.                               | onents are present at greate          |                  |                                            | ic, or 0.1% by | weight if car          | cinogeni       | c, atlach      | additional   | sheets of p | aper capturing the requi    |                    |
| IOW IS MATERIAL                          | USED (stored, weldin                  | ıg, lubricar     | nt, etc.)                                  |                |                        |                |                |              |             |                             | 246                |
| EPCRA, Please Si                         |                                       |                  |                                            | <u></u> .      |                        |                |                | .            | DICE        | 00789                       |                    |
|                                          | Chemicals subject to E                | PCRA re          | porting thresholds m                       | ust sign eac   | h Chemic               | al Desi        | cription       | page for     | each EF     | PCRA reported che           | nical.)            |
| OFFICIAL USE ON                          | LY                                    | 1                | DATE RECEIVED                              | <u></u>        | ·                      |                | REVI           | EWED 8       | ιY          |                             |                    |
| <br>VIC                                  | BN                                    | STA              | OTHEI                                      | R              | DIST                   | RICT           |                | CUPA         | <u> </u>    | PA                          |                    |
| SFSFD UP FORM (                          | 4                                     | <u></u>          | 6                                          |                |                        |                |                |              |             | 04_cd                       | A                  |
|                                          | S ANGELES COUNT                       | Y                | -                                          | -              | ŗ                      |                |                | · · · · · ·  |             |                             |                    |

| • •                                                                                                                                                            |                                                                             |                                                       |                           |                                                  | -مر<br>:                                                    | * .<br>                                                      |                                            |                                               |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-------------------------------------------------------|---------------------------|--------------------------------------------------|-------------------------------------------------------------|--------------------------------------------------------------|--------------------------------------------|-----------------------------------------------|
|                                                                                                                                                                | HAZARDOUS                                                                   |                                                       | OGRAM CONS                |                                                  |                                                             |                                                              | IPTION<br>(one page per material per buil  | ding or area                                  |
|                                                                                                                                                                |                                                                             | E 🛛 🕅 RE                                              | VISE                      | REPOR                                            | RTING YEAR                                                  |                                                              | 200   Page _                               |                                               |
|                                                                                                                                                                |                                                                             |                                                       | ACILITY INFOR             |                                                  |                                                             |                                                              |                                            |                                               |
| BUSINESS NAME                                                                                                                                                  | (Same as FACILITY N/                                                        | AME or DBA - Doing                                    | Business As) AIR          | เปล่าเป                                          | DEAMER                                                      | ica corf                                                     | oration                                    | 3                                             |
| CHEMICAL LOCAT                                                                                                                                                 |                                                                             |                                                       |                           | 20                                               | 1 011211101                                                 |                                                              | CONFIDENTIAL                               | 202                                           |
| 9756 SANTA                                                                                                                                                     | I FE SPRINGS RI                                                             | >. SANTA FE                                           | SPRINGS, CA.              |                                                  | (EPCRA)                                                     |                                                              | YES NO                                     |                                               |
| ACILITY ID #                                                                                                                                                   |                                                                             | protection<br>protection<br>protection<br>destination |                           | 1   MAF                                          | ** (optional)<br>2                                          |                                                              | GRID# (optional)<br>GHOP BLDGT.            | 204                                           |
|                                                                                                                                                                |                                                                             | II. CI                                                | HEMICAL INFO              | RMATIC                                           |                                                             |                                                              |                                            | _                                             |
| CHEMICAL NAME                                                                                                                                                  | VITROGEN, C                                                                 | ACENIS                                                |                           | 20:                                              | TRADE SE                                                    |                                                              | 🗋 Yes 🕅 No                                 | 206                                           |
|                                                                                                                                                                | NITROGE                                                                     |                                                       |                           | 20                                               | EHS                                                         | If Subject to EF                                             | CRA refer to instructions                  | 206                                           |
|                                                                                                                                                                | 27-37-9                                                                     |                                                       |                           | 209                                              |                                                             | 'Yes", all amo                                               | ounts below must be in                     | lbs.                                          |
|                                                                                                                                                                | RD CLASSES (Complete )                                                      | (required by CUPA) C                                  | 0-0-0-SA                  |                                                  |                                                             |                                                              |                                            | 210                                           |
| HAZARDOUS MATER                                                                                                                                                |                                                                             |                                                       | c WASTE 211               | RADIGA                                           | CTIVE Yes                                                   | 12 No                                                        | 212 CURIES                                 | 213                                           |
| PHYSICAL STATE<br>Check one item only)                                                                                                                         | a. SOLID                                                                    |                                                       | c. GAS 214                | LARGES                                           | T CONTAINER                                                 |                                                              |                                            | 215                                           |
| ED HAZARD CATEG<br>Check all that apply)                                                                                                                       | ORIES                                                                       | b. REACTIVE                                           | C. PRESSURE RELEA         | .SE 🗌 d                                          | . ACUTE HEAL                                                | тн 🗋 е. Сн                                                   | IRONIC HEALTH                              | 216                                           |
| AVERAGE DAILY AMO                                                                                                                                              | OUNT 217                                                                    | MAXIMUM DAILY AN                                      | MOUNT 218                 | ANNUAL                                           | WASTE AMOU                                                  | NT 219                                                       |                                            | 220                                           |
| 3,600                                                                                                                                                          |                                                                             | 4,200                                                 |                           | <br>                                             | N/A                                                         |                                                              | N/A                                        |                                               |
| JNITS*<br>Check one item only)                                                                                                                                 | 🗍 a. GALLONS                                                                |                                                       | C. POUNDS C               | d. TONS                                          |                                                             | 221                                                          | DAYS ON SITE:<br>365                       | 222                                           |
| ☐ b.<br>□ c                                                                                                                                                    | ABOVE GROUND TANK<br>UNDERGROUND TANK<br>TANK INSIDE BUILDING<br>STEEL DRUM | 🗍 f. CAN                                              | ٤                         | ] I FIBER<br>] J. BAG<br>] K. BOX<br>[] I. CYLIN | [] n.<br>[] o.                                              | GLASS BOTT<br>PLASTIC BOT<br>TOTE BIN<br>TANK WAGO           | ITLE 🗋 r. OTHER                            | 222                                           |
| TORAGE PRESSUR                                                                                                                                                 | E 🗍 a. AMBIEN                                                               |                                                       |                           | c BELOW                                          | AMBIENT                                                     |                                                              |                                            | 224                                           |
| TORAGE TEMPERA                                                                                                                                                 | TURE DE AMBIEI                                                              |                                                       |                           | c. RELOW                                         | AMBIENT                                                     | d. CRYOG                                                     | ENIC                                       | 225                                           |
| %WT                                                                                                                                                            | HAZARDOUS CO                                                                | MPONENT (For r                                        | mixture or waste or       | nly)                                             | EHS                                                         |                                                              | <br>CAS #                                  |                                               |
| 10441                                                                                                                                                          |                                                                             |                                                       |                           |                                                  |                                                             |                                                              |                                            |                                               |
| 226                                                                                                                                                            |                                                                             |                                                       |                           | 227                                              | Yes 🗌 No                                                    | 228                                                          |                                            | 223                                           |
| 226                                                                                                                                                            |                                                                             |                                                       |                           |                                                  |                                                             | 228<br>232                                                   |                                            | 229<br>233                                    |
| 226                                                                                                                                                            |                                                                             |                                                       |                           | 231                                              | Yes 🗋 No                                                    |                                                              |                                            |                                               |
| 226<br>2 230<br>3 234                                                                                                                                          |                                                                             |                                                       |                           | 231                                              | Yes 🗌 No                                                    | 232                                                          |                                            | 235                                           |
| 226<br>230<br>234<br>238<br>242                                                                                                                                |                                                                             |                                                       |                           | 231 [<br>235 [<br>239 [<br>243 [                 | Yes   No<br> Yes   No<br>  Yes   No<br> Yes   No            | 232<br>236<br>240<br>244                                     |                                            | 233<br>237<br>241<br>245                      |
| 226<br>230<br>234<br>238<br>242<br>more hazardous compo                                                                                                        | onents are present at greater                                               | than 1% by weight if non-                             | -carcinogenic, or 0.1% by | 231 [<br>235 [<br>239 [<br>243 [                 | Yes   No<br> Yes   No<br>  Yes   No<br> Yes   No            | 232<br>236<br>240<br>244                                     | s of paper capluring the requ              | 233<br>237<br>241<br>245                      |
| 226<br>230<br>234<br>238<br>242<br>more hazardous compo<br>formation.                                                                                          | onenta are present at preater<br>USED (stored, welding                      |                                                       | -carcinogenic, or 0.1% by | 231 [<br>235 [<br>239 [<br>243 [                 | Yes   No<br> Yes   No<br>  Yes   No<br> Yes   No            | 232<br>236<br>240<br>244                                     |                                            | 233<br>237<br>241<br>245                      |
| 226<br>230<br>234<br>238<br>242<br>more hazardous compo<br>formation.<br>OW IS MATERIAL                                                                        |                                                                             |                                                       | -carcinogenic, or 0.1% by | 231 [<br>235 [<br>239 [<br>243 [                 | Yes   No<br> Yes   No<br>  Yes   No<br> Yes   No            | 232<br>235<br>240<br>244<br>#ddiuonal sheet                  | s of paper capturing the requ              | 235<br>237<br>241<br>245<br>úr•d              |
| 226<br>230<br>3234<br>234<br>238<br>242<br>more hazardous compo-<br>formation.<br>40W IS MATERIAL<br>STORED                                                    | USED (stored, welding                                                       | g, lubricant, etc.)                                   |                           | 231 235 239 243 243 243                          | Yes No<br>Yes No<br>Yes No<br>Yes No<br>Cinogenic, attach   | 232<br>235<br>240<br>244<br>addiuonal sheet                  |                                            | 235<br>237<br>241<br>245<br>445<br>445<br>246 |
| 226<br>2230<br>3234<br>3234<br>3238<br>3238<br>3242<br>more hazardous componention<br>formation.<br>40W IS MATERIAL<br>STORED                                  | USED (stored, welding                                                       | g, lubricant, etc.)                                   | esholds must sign eac     | 231 235 239 243 243 243                          | Yes No<br>Yes No<br>Yes No<br>Yes No<br>Cinogenic, ettach   | 232<br>235<br>240<br>244<br>addiuonal sheet                  | s of paper capturing the requ<br>ICE 00790 | 233<br>237<br>241<br>245<br>445<br>445<br>245 |
| 226<br>220<br>3234<br>3234<br>3238<br>3238<br>3238<br>3242<br>more hazardous componion<br>formation.<br>40W IS MATERIAL<br>STORED<br>40W IS MATERIAL<br>STORED | USED (stored, welding                                                       | g, lubricant, etc.)<br>PCRA reporting thre            | esholds must sign eac     | 231 235 239 243 243 243                          | Yes No Yes No Yes No Yes No Yes No Yes No Cinogenic, ettach | 232<br>235<br>240<br>244<br>•dditional sheet<br>page for eac | s of paper capturing the requ<br>ICE 00790 | 235<br>237<br>241<br>245<br>445<br>445<br>246 |

|                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                     |                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                       |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | TED -                                             | 001                        |                                                                                                      | ~                              |                       |                |                                                            |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------|----------------------------|------------------------------------------------------------------------------------------------------|--------------------------------|-----------------------|----------------|------------------------------------------------------------|
|                                                                                                                                                                                                                                                                                                                                                      | HAZ                                                                                                                 | ZARDOUS                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | PROGRAM (<br>LS INVEN |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                   |                            | DESC                                                                                                 |                                |                       | nal per buildi | ng or area)                                                |
|                                                                                                                                                                                                                                                                                                                                                      | D                                                                                                                   | DELETE                                                                                                                                           | X                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | REVISE                |        | REPC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | ORTING                                            | YEAR                       |                                                                                                      |                                | 200                   | Page 2         | of 🥵                                                       |
|                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                     |                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | FACILITY              |        | MATIC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | ON                                                |                            |                                                                                                      | <b>.</b>                       |                       |                |                                                            |
|                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                     | IS FACILITY NAM                                                                                                                                  | IE or DBA - D                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | oing Business A       | s) AIR |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                   |                            |                                                                                                      |                                | PORAT                 |                | 3                                                          |
| CHEMICAL LOG                                                                                                                                                                                                                                                                                                                                         | SANTA 1                                                                                                             | FE SPRIN                                                                                                                                         | SS RD.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | SANTA FE              | SPRI   | vers,                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                   | PCRA )                     |                                                                                                      | YES                            |                       |                | 202                                                        |
| FACILITY ID #                                                                                                                                                                                                                                                                                                                                        |                                                                                                                     |                                                                                                                                                  | mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig Constant<br>mig C |                       |        | MA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 1 (opu<br>1                                       | onal)                      | 203                                                                                                  |                                | # (optional)<br>NTENA | NCEG           | 204<br>ARAGE                                               |
| <u> </u>                                                                                                                                                                                                                                                                                                                                             |                                                                                                                     | ┟╾──┤╾╍╼┟╻──┤╾                                                                                                                                   | <br> l.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | CHEMICAL              | INFO   | RMATI                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | ION                                               |                            |                                                                                                      |                                | ·····                 |                |                                                            |
| CHEMICAL NAI                                                                                                                                                                                                                                                                                                                                         | ME OXYO                                                                                                             | GEN, GA                                                                                                                                          | SEOUS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                       |        | 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 205 TF                                            | ADE SI                     |                                                                                                      | to EPCRA.                      | Yes                   |                | 206                                                        |
| COMMON NAM                                                                                                                                                                                                                                                                                                                                           | ME O                                                                                                                | XYGEN                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                       |        | 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 207 EF                                            | IS.                        |                                                                                                      |                                | □ Yes                 | [] No          | 208                                                        |
| CAS#                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                     | 182-44-                                                                                                                                          | ٦                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                       |        | 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 11* COS                                           | EHS is                     | "Yes", all                                                                                           | amounts                        | below m               | ust be in It   | DS.                                                        |
| FIRE CODE HA                                                                                                                                                                                                                                                                                                                                         | AZARD CLA                                                                                                           | SSES (Complete if re                                                                                                                             | quired by CUPA)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 0-0-0                 | - OX   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                   |                            |                                                                                                      |                                |                       |                | 210                                                        |
| HAZARDOUS MA<br>TYPE (Check one                                                                                                                                                                                                                                                                                                                      |                                                                                                                     | 🕅 a. PURE                                                                                                                                        | b. MIXTURE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | C WASTE               | 211    | RA.DIO                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | ACTIVE                                            | □Yes                       | No                                                                                                   | 212                            | CURIE                 | s              | 213                                                        |
| PHYSICAL STATE<br>(Check one item o                                                                                                                                                                                                                                                                                                                  | only)                                                                                                               | a solid [                                                                                                                                        | b. LIQUID                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 🗟 c. GAS              | 214    | LARGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | EST CON                                           | TAINER                     | 20                                                                                                   | ×O                             | <u> </u>              |                | 215                                                        |
| FED HAZARD CA<br>(Check all that app                                                                                                                                                                                                                                                                                                                 | р(у)                                                                                                                |                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                       |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                   |                            |                                                                                                      |                                | IC HEALT              |                | 216                                                        |
|                                                                                                                                                                                                                                                                                                                                                      | AMOUNT<br>OO                                                                                                        | 217                                                                                                                                              | DOS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                       | 219    | ANNUA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                   | е амои<br>а                | NT                                                                                                   | 219 ST                         |                       |                | 220<br>,                                                   |
|                                                                                                                                                                                                                                                                                                                                                      | cnly)                                                                                                               | a. GALLONS                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                       |        | d. TONS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | ;                                                 |                            | 221                                                                                                  | DAY                            | S ON SIT              | E:             | 222                                                        |
|                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                     |                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | ount must be in pou   | inds   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                   |                            |                                                                                                      |                                |                       | ~              |                                                            |
| STORAGE<br>CONTAINER [<br>[                                                                                                                                                                                                                                                                                                                          |                                                                                                                     | GROUND TANK<br>GROUND TANK<br>ISIDE BUILDING<br>DRUM                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | NONMETALLIC D         | DRUM [ | ] i . FIBE<br>] j. BAG<br>] k. BOX<br>] I. CYLI                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                   | □ n.<br>□ o                | GLASS BO<br>PLASTIC<br>TOTE BI<br>TANK WA                                                            | BOTTLE                         | □ q. RA<br>□ r. OT    |                | 220                                                        |
| STORAGE<br>CONTAINER [<br>[<br>[                                                                                                                                                                                                                                                                                                                     | ☐ a ABOVE<br>☐ b. UNDER(<br>☐ c TANK IN<br>☐ d STEEL                                                                | GROUND TANK<br>ISIDE BUILDING                                                                                                                    | ☐ e. PLASTIC<br>☐ f. CAN<br>☐ g. CARBOY<br>☐ h. SILO                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | NONMETALLIC D         |        | ] j. BAG<br>] k. BOX                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | INDER                                             | □ n.<br>□ o<br>□ p.        | PLASTIC<br>TOTE BII                                                                                  | BOTTLE                         | [] q. RA              |                | 225<br>224                                                 |
| STORAGE<br>CONTAINER [<br>[<br>[<br>[<br>STORAGE PRES                                                                                                                                                                                                                                                                                                | a ABOVE b. UNDER( c TANK IN d STEEL ssure                                                                           | GROUND TANK<br>ISIDE BUILDING<br>DRUM                                                                                                            | ☐ e. PLASTIC<br>☐ f. CAN<br>☐ g. CARBOY<br>☐ h. SILO<br>☑ b. AE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | NONMETALLIC D         |        | ] j. BAG<br>] k. BOX<br>1. CYLI                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | INDER<br>W AMBIE                                  | □ n.<br>□ o<br>□ p.<br>ENT | PLASTIC<br>TOTE BII                                                                                  | BOTTLE<br>N<br>NGON            | [] q. RA              |                |                                                            |
| STORAGE<br>CONTAINER [<br>[<br>[<br>[<br>STORAGE PRES                                                                                                                                                                                                                                                                                                |                                                                                                                     | GROUND TANK<br>ISIDE BUILDING<br>DRUM<br>A. AMBIENT                                                                                              | □ e. PLASTIC<br>□ f. CAN<br>□ g. CARBOY<br>□ h. SILO<br>☑ b. AE<br>□ b. AE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | NONMETALLIC F         |        | ) j. BAG<br>k. BOX<br>1. CYLI<br>BELOV<br>. BELOV                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | INDER<br>W AMBIE                                  | □ n.<br>□ o<br>□ p.<br>ENT | PLASTIC<br>TOTE BII<br>TANK WA                                                                       | BOTTLE<br>N<br>NGON            | [] q. RA              | HER            | 224                                                        |
| STORAGE<br>CONTAINER [<br>[<br>[<br>STORAGE PRES<br>STORAGE TEMPS<br>%WT                                                                                                                                                                                                                                                                             |                                                                                                                     | GROUND TANK<br>ISIDE BUILDING<br>DRUM<br>Q a. AMBIENT                                                                                            | □ e. PLASTIC<br>□ f. CAN<br>□ g. CARBOY<br>□ h. SILO<br>☑ b. AE<br>□ b. AE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | NONMETALLIC F         |        | ) j. BAG<br>k. BOX<br>1. CYLI<br>BELOV<br>2. BELOV                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | INDER<br>W AMBIE                                  |                            | PLASTIC<br>TOTE BII<br>TANK WA                                                                       | BOTTLE<br>N<br>NGON            | □ q. RA1<br>□ r. OT   | HER            | 224                                                        |
| STORAGE<br>CONTAINER [<br>STORAGE PRES<br>STORAGE TEMPS<br>%WT<br>1 2                                                                                                                                                                                                                                                                                | a ABOVE b. UNDER( c TANK IN d STEEL SSURE PERATURE HAZ                                                              | GROUND TANK<br>ISIDE BUILDING<br>DRUM<br>Q a. AMBIENT                                                                                            | □ e. PLASTIC<br>□ f. CAN<br>□ g. CARBOY<br>□ h. SILO<br>☑ b. AE<br>□ b. AE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | NONMETALLIC F         |        | ) j. BAG<br>k. BOX<br>1. CYLI<br>BELOV<br>2. BELOV<br>1. BELOV<br>1. BELOV                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | NDER<br>WAMBIE<br>WAMBIE                          |                            |                                                                                                      | BOTTLE<br>N<br>NGON            | □ q. RA<br>□ r. OT    | HER            | 224                                                        |
| STORAGE<br>CONTAINER [<br>STORAGE PRES<br>STORAGE TEMP!<br>%WT<br>1 2 2 2                                                                                                                                                                                                                                                                            | a ABOVE b. UNDER( c TANK IN d STEEL SSURE PERATURE HAZ 226                                                          | GROUND TANK<br>ISIDE BUILDING<br>DRUM<br>Q a. AMBIENT                                                                                            | □ e. PLASTIC<br>□ f. CAN<br>□ g. CARBOY<br>□ h. SILO<br>☑ b. AE<br>□ b. AE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | NONMETALLIC F         |        | ) j. BAG<br>k. BOX<br>l. CYLI<br>BELOV<br>2. BELOV<br>19)<br>227 (<br>231 (                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | NDER<br>WAMBIE<br>WAMBIE                          |                            | PLASTIC<br>TOTE BII<br>TANK WA                                                                       | BOTTLE<br>N<br>NGON            | □ q. RA<br>□ r. OT    | HER            | 224<br>225<br>223                                          |
| STORAGE<br>CONTAINER [<br>STORAGE PRES<br>STORAGE TEMPS<br>%WT<br>1 2<br>2 2<br>3 2                                                                                                                                                                                                                                                                  | a ABOVE b. UNDER( c TANK IN d STEEL SSURE PERATURE 442226 230                                                       | GROUND TANK<br>ISIDE BUILDING<br>DRUM<br>Q a. AMBIENT                                                                                            | ☐ e. PLASTIC<br>☐ f. CAN<br>☐ g. CARBOY<br>☐ h. SILO<br>☑ b. AE<br>☐ b. AE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | NONMETALLIC F         |        | ) j. BAG<br>k. BOX<br>l. CYLI<br>BELOV<br>S. BELOV<br>NIY)<br>227 (<br>231 (<br>235 (                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | NDER<br>WAMBIE<br>WAMBIE                          |                            | PLASTIC<br>TOTE BII<br>TANK WA                                                                       | BOTTLE<br>N<br>NGON            | □ q. RA<br>□ r. OT    | HER            | 224<br>225<br>229<br>233                                   |
| STORAGE<br>CONTAINER [<br>STORAGE PRES<br>STORAGE TEMP!<br>%WT<br>1 2<br>2 2<br>3 2<br>4 2<br>5 2                                                                                                                                                                                                                                                    | □ a ABOVE<br>□ b. UNDER(<br>□ c TANK IN<br>□ d STEEL<br>SSURE<br>PERATURE<br>HAZ<br>226<br>230<br>234<br>238<br>242 | GROUND TANK<br>ISIDE BUILDING<br>DRUM<br>2 a. AMBIENT<br>2 AMBIENT<br>CARDOUS CON                                                                | □ e, PLASTIC<br>□ f, CAN<br>□ g, CARBOY<br>□ h. SILO<br>☑ b. AE<br>□ b. AE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | NONMETALLIC F         | PRUM   | ) j. BAG<br>k. BOX<br>E. BELOV<br>E. BELOV<br>19)<br>227 (<br>231 (<br>235 (<br>239 (<br>243 (                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | INDER<br>WAMBIE<br>VAMBIE<br>VAMBIE<br>Ves<br>Ves |                            | PLASTIC<br>TOTE BII<br>TANK W/<br>C d. CRY<br>228<br>232<br>235<br>240<br>244                        | BOTTLE                         | CAS                   | S#             | 224<br>225<br>229<br>233<br>237<br>241<br>245              |
| STORAGE<br>CONTAINER [<br>STORAGE PRES<br>STORAGE TEMPS<br>%WT<br>1 2<br>2 2<br>3 2<br>3 2<br>3 2<br>3 2<br>3 2<br>3 2<br>3 2<br>3 2<br>3                                                                                                                                                                                                            | □ a ABOVE<br>□ b. UNDER(<br>□ c TANK IN<br>□ d STEEL<br>SSURE<br>PERATURE<br>HAZ<br>226<br>230<br>234<br>238<br>242 | GROUND TANK<br>ISIDE BUILDING<br>DRUM<br>Q a. AMBIENT                                                                                            | □ e, PLASTIC<br>□ f, CAN<br>□ g, CARBOY<br>□ h. SILO<br>☑ b. AE<br>□ b. AE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | NONMETALLIC F         | PRUM   | ) j. BAG<br>k. BOX<br>E. BELOV<br>E. BELOV<br>19)<br>227 (<br>231 (<br>235 (<br>239 (<br>243 (                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | INDER<br>WAMBIE<br>VAMBIE<br>VAMBIE<br>Ves<br>Ves |                            | PLASTIC<br>TOTE BII<br>TANK W/<br>C d. CRY<br>228<br>232<br>235<br>240<br>244                        | BOTTLE                         | CAS                   | S#             | 224<br>225<br>229<br>233<br>237<br>241<br>245              |
| STORAGE<br>CONTAINER [<br>[<br>STORAGE PRES<br>STORAGE TEMPS<br>%WT<br>1 2<br>2 2<br>3 2<br>3 2<br>5 2<br>5 2<br>6 2<br>6 1 more hazardous contornation.                                                                                                                                                                                             | a ABOVE b. UNDERG c TANK IN d STEEL SSURE PERATURE HAZ 226 230 234 238 242 Components are RIAL USED                 | GROUND TANK<br>ISIDE BUILDING<br>DRUM<br>2 a. AMBIENT<br>2 AMBIENT<br>CARDOUS CON                                                                | □ e. PLASTIC<br>□ f. CAN<br>□ g. CARBOY<br>□ h. SILO<br>☑ b. AE<br>□ b. AE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | NONMETALLIC F         | PRUM   | ) j. BAG<br>k. BOX<br>E. BELOV<br>E. BELOV<br>19)<br>227 (<br>231 (<br>235 (<br>239 (<br>243 (                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | INDER<br>WAMBIE<br>VAMBIE<br>VAMBIE<br>Ves<br>Ves |                            | PLASTIC<br>TOTE BII<br>TANK W/<br>C d. CRY<br>228<br>232<br>235<br>240<br>244                        | BOTTLE                         | CAS                   | S#             | 224<br>225<br>229<br>233<br>237<br>241<br>245              |
| STORAGE<br>CONTAINER [<br>STORAGE PRES<br>STORAGE TEMPS<br>%WT<br>1 2<br>2 2<br>3 2<br>3 2<br>4 2<br>5 2<br>5 2<br>8 more hazardous climformation.<br>HOW IS MATER                                                                                                                                                                                   | a ABOVE b. UNDERG c TANK IN d STEEL SSURE PERATURE HAZ 226 230 234 238 242 components are RIAL USED se Sign Here    | GROUND TANK<br>ISIDE BUILDING<br>DRUM<br>2 a. AMBIENT<br>2 AMBIENT<br>CARDOUS CON<br>CARDOUS CON<br>(stored, welding, 1                          | e. PLASTIC f. CAN g. CARBOY g. CARBOY h. SILO k. AE b. AE b. AE b. AE b. AE b. AE b. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c. AE c                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | NONMETALLIC F         | prum   | j. BAG         k. BOX         k. BOX         k. BOX         al. CYLL         c. BELOV         c. BELOV         227         1/y)         227         231         231         233         234         243         weight if c                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | INDER<br>WAMBIE<br>WAMBIE<br>Yes<br>Yes<br>Yes    |                            | PLASTIC<br>TOTE BII<br>TANK W/<br>C d. CRY<br>228<br>232<br>236<br>240<br>244<br>244<br>additional a | BOTTLE<br>N<br>NGON<br>TOGENIC | CAS                   | hER            | 224<br>225<br>229<br>233<br>237<br>241<br>245<br>ed<br>246 |
| STORAGE PRES<br>STORAGE TEMPS<br>%WT<br>1 2<br>2 2<br>3 2<br>4 2<br>5 2<br>11 2<br>5 2<br>11 2<br>5 2<br>11 2<br>5 2<br>11 2<br>5 2<br>11 2<br>5 2<br>11 2<br>5 2<br>11 2<br>5 2<br>11 2<br>5 2<br>11 2<br>5 2<br>11 2<br>5 2<br>11 2<br>5 2<br>11 2<br>5 2<br>11 2<br>5 2<br>11 2<br>5 2<br>11 2<br>5 2<br>11 2<br>5 2<br>11 2<br>5 2<br>11 2<br>11 | a ABOVE b. UNDERG c TANK IN d STEEL SSURE PERATURE HAZ 226 230 234 238 242 Components are ring Chemica              | GROUND TANK<br>ISIDE BUILDING<br>DRUM<br>Q a. AMBIENT<br>2 AMBIENT<br>CARDOUS CON<br>ARDOUS CON<br>Present at greater th.<br>(stored, welding, 1 | e. PLASTIC f. CAN g. CARBOY g. CARBOY h. SILO k. AE b. AE b. AE b. AE b. AF b. AF c. Component of the second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second seco                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | NONMETALLIC F         | prum   | j. BAG         k. BOX         k. BOX         k. BOX         al. CYLL         c. BELOV         c. BELOV         227         1/y)         227         231         231         233         234         243         weight if c                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | INDER<br>WAMBIE<br>WAMBIE<br>Yes<br>Yes<br>Yes    |                            | PLASTIC<br>TOTE BII<br>TANK W/<br>C d. CRY<br>228<br>232<br>236<br>240<br>244<br>244<br>additional a | BOTTLE<br>N<br>NGON<br>TOGENIC | CAS                   | hER            | 224<br>225<br>229<br>233<br>237<br>241<br>245<br>ed<br>246 |
| STORAGE<br>CONTAINER [<br>STORAGE PRES<br>STORAGE PRES<br>STORAGE TEMPS<br>%WT<br>1 2<br>2 2<br>3 2<br>3 2<br>4 2<br>5 2<br>6 2<br>6 2<br>6 2<br>6 2<br>6 2<br>7 1<br>7 2<br>7 2<br>7 2<br>7 2<br>7 2<br>7 2<br>7 2<br>7 2<br>7 2<br>7 2                                                                                                             | a ABOVE b. UNDERG c TANK IN d STEEL SSURE PERATURE HAZ 226 230 234 238 242 Components are ring Chemica              | GROUND TANK<br>ISIDE BUILDING<br>DRUM<br>A. AMBIENT<br>2 AMBIENT<br>CARDOUS CON                                                                  | e. PLASTIC f. CAN g. CARBOY g. CARBOY h. SILO k. AE b. AE b. AE b. AE b. AF b. AF c. Component of the second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second seco                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | INONMETALLIC F        | prum   | j. BAG         k. BOX         k. BOX         k. BOX         al. CYLL         below         c. BELOV         c. BE | INDER<br>WAMBIE<br>WAMBIE<br>Yes<br>Yes<br>Yes    |                            | PLASTIC<br>TOTE BII<br>TANK W/<br>C d. CRY<br>228<br>232<br>236<br>240<br>244<br>additional s        | BOTTLE<br>N<br>NGON<br>TOGENIC | CAS                   | ng the requir  | 224<br>225<br>229<br>233<br>237<br>241<br>245<br>ed<br>246 |

| •                                          | -                                                             |                                                            |                        |                                |               |              |                                            |               |                             |                   |
|--------------------------------------------|---------------------------------------------------------------|------------------------------------------------------------|------------------------|--------------------------------|---------------|--------------|--------------------------------------------|---------------|-----------------------------|-------------------|
| -                                          | HAZARDOUS                                                     |                                                            | OGRAM CON              |                                |               |              | DESC                                       | RIPTI         | ON                          |                   |
|                                            |                                                               |                                                            | ~                      |                                | -             |              |                                            |               | 200   Page                  | the second second |
|                                            |                                                               |                                                            | EVISE                  |                                |               | G YEAR       | <u> </u>                                   | · <u> </u>    | 100   1 age 3               | • 43              |
| BUSINESS NAME                              | Same as FACILITY N                                            |                                                            |                        |                                |               | AME          | RICA                                       | CORPO         | RETION                      | 3                 |
| CHEMICAL LOCAT                             |                                                               |                                                            |                        |                                |               |              |                                            |               | FIDENTIAL                   | 202               |
| 1                                          | A FE SPRINGS R                                                | D. SANTA FE                                                | SPRINGS, C             |                                | 0             | EPCRA)       |                                            | ] YES         | NO NO                       |                   |
| FACILITY ID #                              |                                                               | No.                                                        |                        |                                | 1AP# (op<br>] | l:onai)      |                                            | GRID#         | (opiional)<br>ENANCE GA     | 204<br>RAGE       |
|                                            |                                                               | II. C                                                      | HEMICAL INFO           | ORMAT                          | TION          |              |                                            |               |                             |                   |
| CHEMICAL NAME                              | ARGON GA                                                      | SEOUS                                                      |                        |                                | 205 T         | RADE SE      |                                            |               | Yes 🕅 No                    | 206               |
| COMMON NAME                                | ARGON                                                         |                                                            | <u> </u>               | - <u></u>                      | 207 E         | HS           | If Subject t                               |               | Yes X No                    | 205               |
| CAS#                                       | 7440 - 3                                                      |                                                            |                        |                                |               |              | Yes", all a                                |               | elow must be in             | lbs               |
| FIRE CODE HAZAF                            | RD CLASSES (Complete )                                        |                                                            | 0-0-0 s                | A                              | ······        | · · · ·      |                                            |               |                             | 210               |
| HAZARDOUS MATER<br>TYPE (Check one item    |                                                               |                                                            | c. WASTE 21            | I RADI                         | GACTIVE       | E 🗌 Yes      | <b>N</b> N0                                | 212           | CURIES                      | 213               |
| PHYSICAL STATE<br>(Check one item only)    | 🔲 a. SOLID                                                    |                                                            | Lc. GAS 2:             | 4 LARC                         | SEST CO       | NTAINER      | Z                                          | >0            |                             | 215               |
| FED HAZARD CATEG<br>(Check all that apply) | ORIES                                                         | D b. REACTIVE                                              | C. PRESSURE REL        | EASE [                         | ] d. AC       | UTE HEALT    | гн □е.                                     | CHRONIC       | HEALTH                      | 216               |
| AVERAGE DAILY AMO                          |                                                               | MAXIMUM DAILY A                                            | MOUNT 21               | e Annu                         | JAL WAS       |              | IT                                         | 219   STA     | TE WASTE CODE               | 220               |
| UNITS*<br>(Check one item only)            | 🗍 a. GALLONS                                                  | <ul> <li>Øb. CUBIC FEET</li> <li>If EHS, amount</li> </ul> | C. POUNDS              | 🗌 d. TON                       | IS            |              | 221                                        |               | ON SITE:                    | 222               |
| ☐ b.<br>□ c                                | ABOVE GROUND TANK<br>UNDERGROUND TANK<br>TANK INSIDE BUILDING | 🗋 f. CAN                                                   | DNMETALLIC DRUM        | ☐ i FIB<br>☐ j. BA(<br>☐ k. BO | G<br>X        | □ n.<br>□ o  | GLASS BO<br>PLASTIC<br>TOTE BIN<br>TANK WA | BOTTLE        | ] q. RAIL CAR<br>] r. OTHER |                   |
|                                            | STEEL DRUM                                                    |                                                            |                        | <br>] c BEL(                   |               |              |                                            |               |                             | 223               |
| STORAGE PRESSUR                            |                                                               |                                                            |                        |                                |               |              |                                            |               |                             | 224               |
| STORAGE TEMPERA                            | TURE 🔯 2. AMBIEI                                              | NT [] b. ABOV                                              | /E AMBIENT [           | ] c. BEL                       | OW AMB        |              |                                            |               |                             | 225               |
| %WT                                        | HAZARDOUS CO                                                  | DMPONENT (For                                              | mixture or waste       | only)                          | <b>-</b>      | EHS          |                                            |               | CAS #                       |                   |
| 1 226                                      | <br>                                                          |                                                            |                        | 227                            | Yes           | 5 🗍 No       | 228                                        |               |                             | 22 <del>3</del>   |
| 2 230                                      |                                                               | <u> </u>                                                   |                        | 231                            | □Yes          | □ No         | 232                                        |               |                             | 233               |
| 3 234                                      |                                                               |                                                            |                        | 235                            | C Yes         | 5 🗌 No       | 236                                        |               |                             | 237               |
| 4 238                                      |                                                               |                                                            |                        | 239                            | □Yes          | □ No         | 240                                        |               |                             | 241               |
| 5 242                                      | prenta are present at greater                                 | than 1% by weight if nor                                   | -carcinouenic, or 0.1% | 243                            | Yes           |              | 244                                        | neets of page | er chattunna the mou        | 245               |
| Information.                               | USED (stored, welding                                         |                                                            |                        |                                | - <u></u>     |              |                                            |               | er cabinning bie redu       | 246               |
| _                                          | DING                                                          | g, indireant, etc.)                                        |                        |                                |               |              |                                            |               |                             | 2.00              |
| If EPCRA, Please Si                        |                                                               | PCRA reporting thn                                         | esholds must sign e    | each Che                       | mical De      | escription ( | bage for e                                 | each EPC      | RA reported che             | mical.)           |
|                                            |                                                               |                                                            |                        |                                |               |              |                                            |               |                             |                   |
| OFFICIAL USE ON                            | LY                                                            | DATE REC                                                   | EIVED                  |                                |               | REVIE        | WED BY                                     | /             |                             |                   |
| DIV                                        | BN                                                            | STA                                                        | OTHER                  | DI                             | STRICT        |              | CUPA                                       |               | PA                          |                   |
| SFSFD UP FORM (4                           | 4/00 Version)                                                 |                                                            | 6                      |                                |               |              |                                            |               | 04_cd                       |                   |

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# Unified Program (UP) Form CONSOLIDATED CONTINGENCY PLAN

# SECTION I: EMERGENCY RESPONSE PLANS AND PROCEDURES

| EMERGENCY CONTACTS                                                                                                                                                                                                                                                                                                                                                                                    |                                                                          |  |  |  |  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------|--|--|--|--|
| The name(s) and title(s) of the person(s) responsible for aut                                                                                                                                                                                                                                                                                                                                         |                                                                          |  |  |  |  |
| PRIMARY                                                                                                                                                                                                                                                                                                                                                                                               | SECONDARY                                                                |  |  |  |  |
| NAME JERRY BEESON 123                                                                                                                                                                                                                                                                                                                                                                                 | NAME DAVEJONES 128                                                       |  |  |  |  |
| TITLE 124<br>EMERGENCY RESPONDER                                                                                                                                                                                                                                                                                                                                                                      | TITLE FIELDSERVICE MANAGER 129                                           |  |  |  |  |
| BUSINESS PHONE 125                                                                                                                                                                                                                                                                                                                                                                                    | BUSINESS PHONE 130<br>ちんて-906-8738                                       |  |  |  |  |
| FOIA ex 6, Personal Privacy                                                                                                                                                                                                                                                                                                                                                                           | FOIA ex 6, Personal Privacy                                              |  |  |  |  |
| A. Notifications                                                                                                                                                                                                                                                                                                                                                                                      |                                                                          |  |  |  |  |
| Your business is required by State Law to provide an immediate verbal report of any release or threatened release of a hazardous material to local fire emergency response personnel, this Unified Program Agency (CUPA or PA), and the Office of Emergency Services. If you have a release or threatened release of hazardous materials, immediately call: FIRE/PARAMEDICS/POLICE/SHERIFF PHONE: 911 |                                                                          |  |  |  |  |
| AFTER the local emergency response personnel are notified                                                                                                                                                                                                                                                                                                                                             | , you shall then notify this office and the Office of Emergency          |  |  |  |  |
| Services.                                                                                                                                                                                                                                                                                                                                                                                             |                                                                          |  |  |  |  |
| Santa Fe Springs Fire Department(562) 944-9715State Office of Emergency Service:(800) 852-7550 or (900)                                                                                                                                                                                                                                                                                               | ,                                                                        |  |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                       | quantities greater than their reportable quantities)                     |  |  |  |  |
| Information to be provided during Notification                                                                                                                                                                                                                                                                                                                                                        |                                                                          |  |  |  |  |
| <ul> <li>Four name and the telephone number</li> <li>Exact address of the release or threaders</li> </ul>                                                                                                                                                                                                                                                                                             |                                                                          |  |  |  |  |
| <ul> <li>Date, time, cause, and type of incide</li> </ul>                                                                                                                                                                                                                                                                                                                                             |                                                                          |  |  |  |  |
| <ul> <li>Material and quantity of the release,</li> </ul>                                                                                                                                                                                                                                                                                                                                             |                                                                          |  |  |  |  |
| <ul> <li>Current condition of the facility.</li> </ul>                                                                                                                                                                                                                                                                                                                                                |                                                                          |  |  |  |  |
| <ul> <li>Extent of injuries, if any.</li> </ul>                                                                                                                                                                                                                                                                                                                                                       |                                                                          |  |  |  |  |
| <ul> <li>Possible hazards to public health an</li> </ul>                                                                                                                                                                                                                                                                                                                                              | d/ or the environment outside of the facility.                           |  |  |  |  |
| B. Emergency Medical Facility                                                                                                                                                                                                                                                                                                                                                                         |                                                                          |  |  |  |  |
| List the local emergency medical facility that will be u<br>caused by a release or threatened release of hazard                                                                                                                                                                                                                                                                                       | used by your business in the event of an accident or injury ous material |  |  |  |  |
| HOSPITAL/CLINIC:                                                                                                                                                                                                                                                                                                                                                                                      | PHONE NO:                                                                |  |  |  |  |
| HEALTH FIRST MEDICAL                                                                                                                                                                                                                                                                                                                                                                                  |                                                                          |  |  |  |  |
| ADDRESS:<br>11817 EAST TELEGRAPH                                                                                                                                                                                                                                                                                                                                                                      |                                                                          |  |  |  |  |
| CITY: SANTA FE SPRING, CA                                                                                                                                                                                                                                                                                                                                                                             | ZIP CODE:<br>90607                                                       |  |  |  |  |

DICE 00793

| OFFICIAL USE O | NLY | DATE REC |       | R        | EVIEWED BY |    |
|----------------|-----|----------|-------|----------|------------|----|
| DIV            | BN  | STA      | OTHER | DISTRICT | CUPA       | PA |

# Unified Program (UP) Form CONSOLIDATED CONTINGENCY PLAN

# SECTION I: EMERGENCY RESPONSE PLANS AND PROCEDURES -

| C. Private Emerge                                                                                                  | ency Response                                                                                                            |                                                                    |                                                               |  |  |  |  |  |  |  |
|--------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------|---------------------------------------------------------------|--|--|--|--|--|--|--|
|                                                                                                                    | HAVE A PRIVATE ON-SITE EMI                                                                                               | ERGENCY RESPONSE TEAM                                              | ? 🛛 Yes 🗔 No                                                  |  |  |  |  |  |  |  |
| If yes, provide an attachment that describes what policies and procedures your business will follow to notify your |                                                                                                                          |                                                                    |                                                               |  |  |  |  |  |  |  |
|                                                                                                                    | on-site emergency response team in the event of a release or threatened release of hazardous materials.                  |                                                                    |                                                               |  |  |  |  |  |  |  |
|                                                                                                                    | HAVE A CLEANUP/DISPOSAL                                                                                                  |                                                                    | 🗌 Yes 😡 No                                                    |  |  |  |  |  |  |  |
| If yes, list the contr                                                                                             | actor(s) that will provide cleanup/                                                                                      | disposal services.                                                 |                                                               |  |  |  |  |  |  |  |
| Contractor                                                                                                         |                                                                                                                          | Contractor                                                         |                                                               |  |  |  |  |  |  |  |
| Address                                                                                                            | City                                                                                                                     | Address                                                            |                                                               |  |  |  |  |  |  |  |
| Phone ( )                                                                                                          | 24 Hr Phone ( )                                                                                                          | Phone ( )                                                          | 24 Hr Phone ( )                                               |  |  |  |  |  |  |  |
| D. Arrangements                                                                                                    | With Emergency Respond                                                                                                   | lers                                                               |                                                               |  |  |  |  |  |  |  |
| If you have made special (i<br>or State or local emergenc<br>below:                                                | .e. contractual) arrangements wit<br>y response team to coordinate en                                                    | h any police department, fire de<br>mergency services, describe th | partment, hospital, contractor, ose arrangements on the lines |  |  |  |  |  |  |  |
| ALTHOUGH WE HAN                                                                                                    | VE NO CONTRACTURE                                                                                                        | IL ARBANGEMENT U                                                   | JITH POLICE OR FIRE                                           |  |  |  |  |  |  |  |
| DEPARTMENT, WE                                                                                                     | HAVE ASSUMED THAT                                                                                                        | THESE AGENCIES L                                                   | VILL RESPOND IN                                               |  |  |  |  |  |  |  |
| THE EVENT OF AN                                                                                                    |                                                                                                                          |                                                                    |                                                               |  |  |  |  |  |  |  |
| E. Evacuation Pla                                                                                                  | າກ                                                                                                                       |                                                                    |                                                               |  |  |  |  |  |  |  |
|                                                                                                                    | nal(s) will be used to begin evacua<br>( <i>including cellular</i> ) [] Alarm Syste<br>adio [] Other ( <i>specify</i> ): | -                                                                  |                                                               |  |  |  |  |  |  |  |
| 2. Y Evacuation map is pro                                                                                         | ominently displayed throughout th                                                                                        | e facility.                                                        |                                                               |  |  |  |  |  |  |  |
| 3. 🗹 Individual(s) responsi                                                                                        | ble for coordinating evacuation in                                                                                       | cluding spreading the alarm an                                     | d confirming the business has                                 |  |  |  |  |  |  |  |
|                                                                                                                    | JONES, STEVE LON                                                                                                         |                                                                    |                                                               |  |  |  |  |  |  |  |
| F. Earthquake Vu                                                                                                   | Inerability                                                                                                              | •                                                                  |                                                               |  |  |  |  |  |  |  |
|                                                                                                                    | where releases could occur or we                                                                                         | · · ·                                                              | on or isolation because of the                                |  |  |  |  |  |  |  |
|                                                                                                                    | related ground motion. (check all                                                                                        |                                                                    |                                                               |  |  |  |  |  |  |  |
| Hazardous Waste/                                                                                                   | Hazardous Materials Storage Are Waste Treatment                                                                          | eas Production Floor                                               | Process Lines                                                 |  |  |  |  |  |  |  |
| Identify mechanical system                                                                                         | s where releases could occur or v                                                                                        | would require immediate inspec                                     | tion or isolation because of                                  |  |  |  |  |  |  |  |
|                                                                                                                    | ake related ground motion. (check                                                                                        |                                                                    |                                                               |  |  |  |  |  |  |  |
| Utilities                                                                                                          | Sprinkler Systems                                                                                                        | Cabinets                                                           | Shelves                                                       |  |  |  |  |  |  |  |
| Racks                                                                                                              | Pressure Vessels                                                                                                         | Gas Cylinders                                                      | Tanks                                                         |  |  |  |  |  |  |  |
| Process Piping                                                                                                     | Shutoff Valves                                                                                                           | - Other:                                                           |                                                               |  |  |  |  |  |  |  |

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# Unified Program (UP) Form

# SECTION I: EMERGENCY RESPONSE PLANS AND PROCEDURES

| G. Emergency Procedures                                                                                         |
|-----------------------------------------------------------------------------------------------------------------|
| Briefly describe your business standard operating procedures in the event of a release or threatened release of |
| <ul> <li>hazardous materials: </li></ul>                                                                        |

# Unified Program (UP) Form CONSOLIDATED CONTINGENCY PLAN

# SECTION I: EMERGENCY RESPONSE PLANS AND PROCEDURES

| Emergency Equipment                                                                                                                                                                                                        |                                             |                                       |                                       |  |  |  |  |  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|---------------------------------------|---------------------------------------|--|--|--|--|--|
| 22 CCR, Section 66265.52(e) [as referenced by Section 66262.34(a)(3)] requires that emergency equipment at the facility be listed. Completion of the following Emergency Equipment Inventory Table meets this requirement. |                                             |                                       |                                       |  |  |  |  |  |
| ······································                                                                                                                                                                                     | EMERGENCY EQUIPMENT INVENTORY TABLE         |                                       |                                       |  |  |  |  |  |
| 1.                                                                                                                                                                                                                         | 2.                                          | 3.                                    | 4.                                    |  |  |  |  |  |
| Equipment                                                                                                                                                                                                                  | Equipment                                   |                                       |                                       |  |  |  |  |  |
| Category                                                                                                                                                                                                                   | ,Туре                                       | Location *                            | Description**                         |  |  |  |  |  |
| Personal                                                                                                                                                                                                                   | Cartridge Respirators                       | <u>}</u>                              |                                       |  |  |  |  |  |
| Protective,                                                                                                                                                                                                                | Chemical Monitoring Equipment (describe)    | <u> </u>                              | ·                                     |  |  |  |  |  |
| Equipment,                                                                                                                                                                                                                 | Chemical Protective Aprons/Coats            | ļ                                     |                                       |  |  |  |  |  |
| Safety                                                                                                                                                                                                                     | Chemical Protective Boots                   |                                       |                                       |  |  |  |  |  |
| Equipment,                                                                                                                                                                                                                 | Chemical Protective Gloves                  | ļ                                     |                                       |  |  |  |  |  |
| and<br>First Aid                                                                                                                                                                                                           | Chemical Protective Suits (describe)        |                                       |                                       |  |  |  |  |  |
| First Aid                                                                                                                                                                                                                  | Face Shields                                |                                       |                                       |  |  |  |  |  |
| Equipment                                                                                                                                                                                                                  | First Aid Kits/Stations (describe)          | OFFICE                                | LOCATED WITHIN ADMIN. OFFICE          |  |  |  |  |  |
|                                                                                                                                                                                                                            | Hard Hats                                   | ļ                                     |                                       |  |  |  |  |  |
|                                                                                                                                                                                                                            | Plumbed Eye Wash Stations                   |                                       | ,                                     |  |  |  |  |  |
| i                                                                                                                                                                                                                          | Portable Eye Wash Kits (i.e. bottle type)   |                                       | · · · · · · · · · · · · · · · · · · · |  |  |  |  |  |
|                                                                                                                                                                                                                            | Respirator Cartridges (describe)            | · · · · · · · · · · · · · · · · · · · |                                       |  |  |  |  |  |
|                                                                                                                                                                                                                            | Safety Glasses/Splash Goggles               |                                       |                                       |  |  |  |  |  |
|                                                                                                                                                                                                                            | Safety Showers                              |                                       |                                       |  |  |  |  |  |
|                                                                                                                                                                                                                            | Self-Contained Breathing Apparatuses (SCBA) | ļ                                     |                                       |  |  |  |  |  |
|                                                                                                                                                                                                                            | Other (describe)                            |                                       |                                       |  |  |  |  |  |
| Fire                                                                                                                                                                                                                       | Automatic Fire Sprinkler Systems            |                                       |                                       |  |  |  |  |  |
| Extinguishing                                                                                                                                                                                                              | Fire Alarm Boxes/Stations                   | arrive                                |                                       |  |  |  |  |  |
| Systems                                                                                                                                                                                                                    | Fire Extinguisher Systems (describe)        | OFFICE                                | LOCATED THROUGHOUT FACILITY           |  |  |  |  |  |
| C                                                                                                                                                                                                                          | Other (describe)                            |                                       |                                       |  |  |  |  |  |
| Spill<br>Control                                                                                                                                                                                                           | Absorbents (describe)                       |                                       |                                       |  |  |  |  |  |
| Equipment                                                                                                                                                                                                                  |                                             |                                       |                                       |  |  |  |  |  |
| and                                                                                                                                                                                                                        | Decontamination Equipment (describe)        |                                       | · · · · · · · · · · · · · · · · · · · |  |  |  |  |  |
| Decontamination                                                                                                                                                                                                            | Emergency Tanks (describe)                  |                                       |                                       |  |  |  |  |  |
| Equipment                                                                                                                                                                                                                  | Gas Cylinders Leak Repair Kits (describe)   |                                       |                                       |  |  |  |  |  |
|                                                                                                                                                                                                                            | Neutralizers (describe)                     |                                       |                                       |  |  |  |  |  |
|                                                                                                                                                                                                                            |                                             |                                       |                                       |  |  |  |  |  |
|                                                                                                                                                                                                                            | Sumps (describe)                            |                                       |                                       |  |  |  |  |  |
|                                                                                                                                                                                                                            | Other (describe)                            |                                       |                                       |  |  |  |  |  |
| Communications                                                                                                                                                                                                             | Chemical Alarms (describe)                  |                                       |                                       |  |  |  |  |  |
| and                                                                                                                                                                                                                        | Intercoms/ PA Systems                       |                                       |                                       |  |  |  |  |  |
| Alarm                                                                                                                                                                                                                      | Portable Radios                             |                                       |                                       |  |  |  |  |  |
| Systems                                                                                                                                                                                                                    | Telephones                                  | OFFICE                                | THROUGHOUT OFFICES                    |  |  |  |  |  |
|                                                                                                                                                                                                                            | Underground Tank Leak Detection Monitors    |                                       |                                       |  |  |  |  |  |
|                                                                                                                                                                                                                            | Other (describe)                            |                                       |                                       |  |  |  |  |  |
| Additional                                                                                                                                                                                                                 |                                             |                                       |                                       |  |  |  |  |  |
| Equipment                                                                                                                                                                                                                  | NOTE: AIR LIQUIDE AMERICA                   | ENERGE                                | NCY RESPONSE EQUIPPED                 |  |  |  |  |  |
| (Use Additional                                                                                                                                                                                                            | TRAILER IS NOW LOC                          | ATED AT                               | : BB3Z DICE ROAD                      |  |  |  |  |  |
| Pages if                                                                                                                                                                                                                   |                                             |                                       | SANTA FE SPRINGS, CA.                 |  |  |  |  |  |
| Needed.)                                                                                                                                                                                                                   |                                             |                                       |                                       |  |  |  |  |  |
|                                                                                                                                                                                                                            |                                             |                                       |                                       |  |  |  |  |  |

Use the Location Codes (LC) from the Site Map(s) prepared for your Contingency Plan.

# DICE 00796

\*\* Describe the equipment and its capabilities. If applicable, specify any testing/maintenance procedures/intervals. Attach additional pages, numbered appropriately, if needed.

# Unified Program (UP) Form CONSOLIDATED CONTINGENCY PLAN

# SECTION II: TRAINING

# EMPLOYEE TRAINING

All facilities that handle hazardous materials must have a written employee training plan. A blank plan has been provided below for you to complete and submit. The items listed below are required per Health and Safety Code Section 25504 (c) and Title 19 Section 2732.

Facility personnel are trained as follows:

| * | Familiarity with all plans and procedures specified in the Contingency Plan.               |  |
|---|--------------------------------------------------------------------------------------------|--|
| * | Methods for Safe Handling of Hazardous Materials.                                          |  |
| * | Safety procedures in the event of a release or threatened release of a hazardous material. |  |
| * | Use of Emergency Response equipment and supplies under the control of the business.        |  |
| * | Procedures for Coordination with local Emergency Response Organizations.                   |  |

Training shall be provided:

- Initially for all new employees.
- Annually, including refresher courses, for all employees.

Note: These training programs may take into consideration the position of each employee.

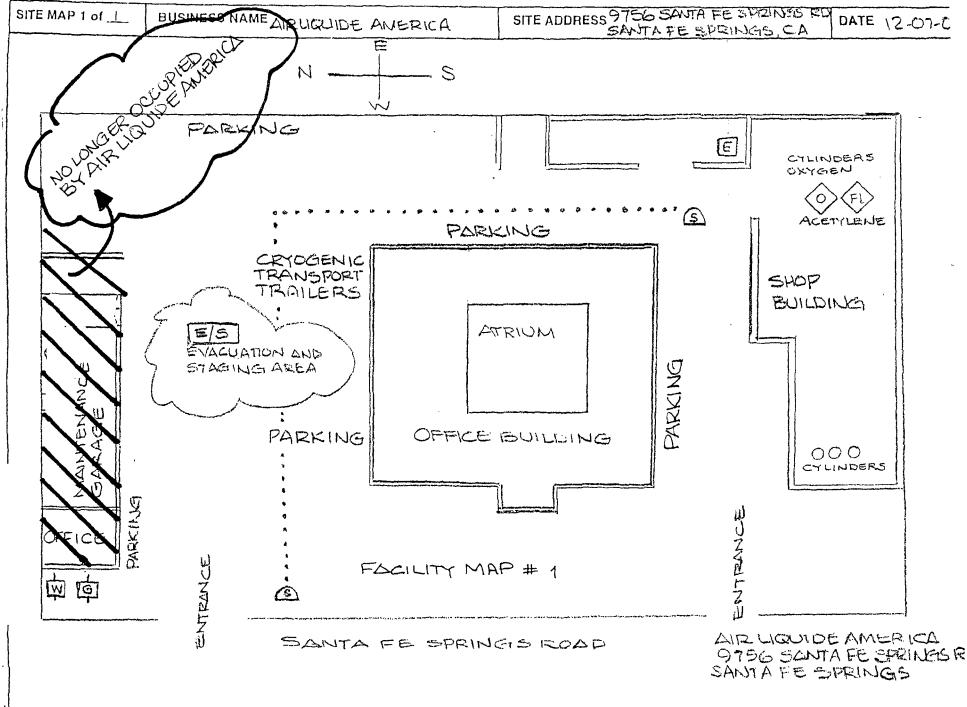
Additional training should include:

- Internal alarm/notification procedures.
- Evacuation/re-entry procedures and assembly point locations.
- Material Safety Data Sheet (MSDS) training including specific hazard(s) of each chemical to which employees may be exposed, including routes of exposure (i.e. inhalation, ingestion, absorption).

# HAZARDOUS WASTE GENERATOR TRAINING

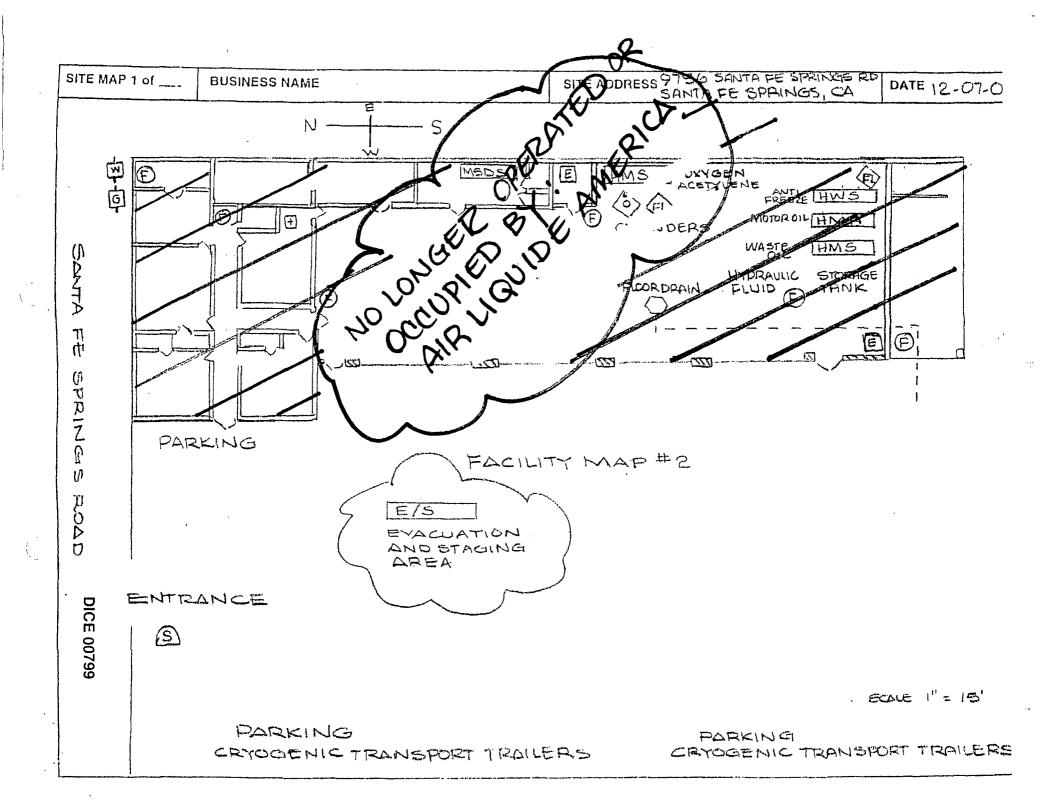
If your business is a hazardous waste generator, you are required to provide training in hazardous waste management for all workers who handle hazardous waste at your site (22 CCR §66265.16). You are also required to document training. The items below are required.

| EMPLOY   | EE TRAINING                                                                                                 |
|----------|-------------------------------------------------------------------------------------------------------------|
| *        | Facility personnel will successfully complete training within six months after the date of their employment |
|          | or assignment to a facility or to a new position at a facility.                                             |
| *        | Employees will not handle hazardous wastes without supervision until trained.                               |
| TRAINING | G DOCUMENTATION                                                                                             |
| The o    | wner or operator must maintain the following documents and records at the facility:                         |
| *        | Job title for each position at the facility that is related to hazardous waste management, and the names    |
|          | of the employee(s) filling the position(s).                                                                 |
| *        | Description for each position listed above (must include required skill, education, or other qualifications |
|          | as well as duties of employees assigned to the position.                                                    |
| *        | Description of type and amount of both introductory and continuing training given to each employee.         |
| *        | Records that document that the requirements for training or job experience have been met.                   |
| *        | Current employees' training records (to be retained until closure of the facility).                         |
| *        | Former employees' training records (to be retained at least three years after termination of employment).   |



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# AIR LIQUIDE AMERICA CORPORATION 9756 SANTA FE SPRINGS ROAD SANTA FE SPRINGS, CA. 90670

# **EMERGENCY EVACUATION/ CONTINGENCY PLAN**

Date: December 11, 2000

#### I. PURPOSE

The purpose of this plan is to provide employees, the community, and the environment with prompt and safe emergency procedures designed to reduce the risk of injury, property, and/or environmental loss due to natural phenomenon, and industrial incidents, such as a fire or an unplanned release of hazardous material. This plan ensures facility compliance with elements contained in the California's Hazardous Materials Business Plan and Cal-OSHA's Emergency Action Plan. Key elements of the Plan include proventative measures, the emergency response team and their responsibilities, emergency response procedures and other relevant information

At no time will an employee be expected to perform activities that put themselves or other's health and safety in jeopardy. At all times, personal safety will take precedence over the protection of company property.

# 2. FACILITY EMERGENCY ACTION PLAN

The Santa Fe Springs facility has prepared and implemented a written facility emergency response plan readily available for reference, with employees thoroughly trained in it's application. The plan defines all responsibilities and lines of authority with the most qualified individual on the site in ultimate control of all responders. The plan also provides for integration of outside emergency response and should the need arise, the handing over and subsequent control of the incident to outside sources (i.e. local fire chief).

Copies of the Plan shall be located and/or posted at the Reception Area, Plant Area, with the Emergency Coordinator and Plant Manager, and others as designated.

#### 3. EMERGENCY RESPONSE TEAM AND RESPONSIBILITIES

#### 3.1 Emergency Coordinator (EC)

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The EC has overall responsibility for coordinating all emergency control measures and shall receive reports of all pertinent events and/or circumstances from other emergency response members. The EC manages the incident command post and is in charge of directing specific, appropriate emergency actions, including evacuation, response, communication procedures, and shutdown of plant operations when necessary.

The EC shall have competency in the following areas:

1) Know how to implement the facility's Emergency Response Plan.

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2) Know and be able to implement the facility's incident command post.

6) Turn off electrical equipment if time permits, including shutting down ventilation system to prevent spread of fire and smoke to other areas.

# 3.4 Employee Responsibilities

- 1) Know how to identify emergency situations in your work area.
- 2) Know in-house emergency telephone numbers and how to report.
- 3) Know how to use alarms or warning systems.
- 4) Know your evacuation coordinator.
- 5) Know primary and alternate evacuation routes.
- 6) Know location of evacuation assembly area.
- 7) Know locations of fire extinguishers and how to use them.

In the event of an emergency, all employees not designated as having responsibility for the facility's Emergency Response Plan shall immediately stop what they are doing and evacuate to the assembly area and remain there until told otherwise by authorized personnel.

#### 3.5 First Aid/CPR trained Personnel

- 1) All medically trained personnel shall have received and completed training from medically qualified and certified institutions within the last year.
- Prior to an emergency, CPR/First Aid trained personnel should be familiar with the location and types of first aid supplies present at the facility.
- In the event of an emergency, CPR/First Aid responders will be expected to attend injured personnel.

#### 3.6 Fire Suppression Personnel

- 1) Personnel shall have received and completed training on the proper use of fire suppression equipment, such as fire extinguishers.
- Personnel shall be thoroughly familiar with location of fire suppression equipment at the facility.
- 3) Personnel shall be aware of the types of fires that can be "safely" controlled and those that cannot.

#### 3.7 Production Personnel to Shutdown Equipment/Processes

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- 3) Determining whether or not an emergency requiring activation of emergency action procedures exists.
- 4) Know the locations, quantities, and hazards of hazardous materials/wastes at the facility.
- 5) Know how to assess the possible hazards to human health or the environment that may result from a chemical release, fire, or explosion.
- 6) Know of the facility's fire suppression systems capabilities and limitations.

In the event off-site assistance is required, the EC shall order that assistance and be prepared to facilitate its completion. The emergency coordinator shall also be prepared to hand over emergency response activities to local, state, and federal agencies, as the situation dictates.

# 3.2 Communication Coordinator/Dispatch (CC)

The role of the CC is essentially to ensure effective communication between emergency response personnel and incident command post, EC and outside emergency personnel.

- The CC shall maintain a phone number listing of all emergency response agencies and company emergency response team members and place calls as instructed by the EC.
- 2) The CC shall be stationed at the incident command post and will interface with all external parties in an emergency, including the fire department, paramedics, police department, and others.
- 3) The CC must be reliable, constantly available, and have immediate access to outside phone lines.

# 3.3 Evacuation Coordinator (EvC)

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The EvC will have responsibilities as follows:

- Maintain roster of all personnel in their designated area of responsibility (i.e. Office Area or Plant Area).
- 2) Be familiar with facility's Emergency Response Plan.
- 3) Ensure safe and proper evacuation of personnel in designated area.
- 4) Verify headcount against roster at assembly area and account for any missing personnel. Report missing personnel to emergency coordinator.
- 5) Maintain personnel at assembly area, until instructed otherwise by incident command post.

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- Any employee operating equipment when an emergency occurs shall cease work and shut down equipment or process if necessary and safe to do so, and then evacuate to the designated assembly area.
- 2) Employees shall be familiar with location of emergency disconnects and alarm/ shutdown systems.
- 3) Employees shall be familiar with the Emergency Response Plan.

# 4.0 EMERGENCY RESPONSE PROCEDURES

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As soon as an emergency situation arises which could compromise the health and safety of personnel or cause significant environmental or property damage, the individual who first identifies the problem should notify their shift supervisor. The shift supervisor will then notify the emergency coordinator and the communication coordinator whom will then initiate the Emergency Response Plan.

**Note:** All employees are authorized to activate the emergency shutdown alarm if they deem it necessary to protect employees, in the event of an earthquake, explosion, fire in acetylene plant, or toxic gas release.

The Emergency Coordinator will direct specific, appropriate emergency actions.

The Communication Coordinator will contact necessary outside emergency personnel as instructed by the Emergency Coordinator. The CC will then proceed to the location entrance to control access and direct emergency response personnel (i.e. fire department, etc.).

The CC will maintain the visitors' log, which will be used by the Office Area Evacuation Coordinator to take headcount.

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# 4.1.1 Evacuation Plan

In the event the alarm sound, all employees whom are not part of the emergency response team are to evacuate the facility via the safest, pre-designated exit routes to the assembly area, located at the front entrance. Contractors and visitors will also evacuate to the assembly area.

Employees shall wait at the assembly area until a headcount is taken by the evacuation coordinator. Any employee not accounted for will immediately be reported to the emergency coordinator and outside emergency personnel who will attempt to locate missing personnel.

Employees may not leave assembly area until they have been accounted for and are authorized to leave by the emergency coordinator and/or outside emergency personnel.

**Note:** Any employee who leaves the assembly area without being accounted for may be responsible for emergency personnel attempting a dangerous search and rescue on their behalf.

#### 4.1.2 Shelter-In-Place Evacuation

Shelter-in-place evacuation will be used when emergencies, such as a toxic chemical release, prevent a safe evacuation to exterior areas. This will be determined by the Emergency Coordinator who will direct location personnel to report to the Front Office. Personnel already in a safe refuge, such as in the Production Office, may remain there to avoid additional exposure.

During shelter-in-place evacuation, exterior doors to the Office Areas should remain closed. Ventilation equipment is to be shutdown by the Evacuation Coordinator.

#### 4.2 Fire Suppression/Explosions

Should a fire occur, the emergency coordinator shall be notified and the emergency response plan implemented.

Only trained personnel will attempt to control or extinguish fires using location's fire fighting equipment (i.e. fire extinguishers).

Trained personnel shall not attempt to control any fire that cannot be safely fought. This includes the following:

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Int or structural lires.

A rire which demands use of personal prote ve and respiratory equipment.

- Any fire where there is no clear path of egress from the affected area.
- \* Chemical fires.
- Fire that may result in explosion.
  - Any other fire that cannot be safety fought.

Again, the Evacuation Plan would be carried out if the alarm sounds or if directed by the EC.

In the event of a fire, designated personnel shall shut off gas, electricity, and any product pumps if required.

Endangered vehicles and equipment should be moved to a safe area if this can be done without endangering personnel.

# 4.3 Medical Emergency

The EC and the CC will be contacted should a medical emergency occur.

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Note: Any employee may use their discretion to contact 911 in a medical emergency if they deem necessary.

Numerous personnel at the facility have been trained and certified in CPR and First Aid procedures to effectively respond to the needs of injured personnel or medical emergencies. A list of trained personnel is posted with the Emergency Response Plan.

Trained personnel will administer CPR or first aid as necessary using first aid supplies provided.

In the event of a medical emergency, outside assistance will be requested by contacting 911.

Injured personnel not in imminent danger should not be moved. Wait for outside medical assistance to arrive.

# 4.4 Toxic Gas or Chemical Release/Spill

- Ensure that the employee assembly area selected is upwind of the toxic gas leak to protect personnel. If necessary, evacuate all personnel to a safe area outside of the facility using routes and exits that avoid the hazard area.
- 2) Rescuing an unconscious person in a leak area should only be attempted by trained personnel wearing an SCBA and necessary protective equipment.
- Contact Air Liquide's emergency response network via CHEMTREC at 1-800-424-9300 and the local emergency response agency at 562-944-9713 (local fire dept.)
- 4) Never re-enter affected area until it is ventilated and determined to be safe by qualified personnel. A list of Air Liquide's emergency response team members is included with the Plan and will be maintained by the CC

Note: Only qualified and trained personnel can attempt to respond to a toxic gas release.

5) Spills of liquid hazardous materials, such as oil, fuel, and solvents, will be cleaned up by trained personnel using absorbent material and necessary personal protective equipment. Absorbent materials would be used to dike and contain spilled materials and spilled material and absorbent would be disposed of according to federal and state hazardous waste disposal requirements.

# 4.5 Flammable Gas Release

- 1) Remove all sources of ignition from area of leak.
- 2) Shut off source of gas, if possible.
- 3) If a flammable gas cylinder is leaking, move it to an open area away from sources of ignition, oxygen or other flammable if this can be done safely.

#### 4.6 Earthquake

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Preventative and preparedness, response, and recovery procedures are outlined in Air Liquide America Corporation's Region Safety Manual, Section 51. Employees are trained regarding these procedures.

### 5.0 **PREVENTION AND PREPAREDNESS**

Emergency Coordinator or designate personnel shall ensure that all emergency equipment is inspected and maintained so that they will function properly in an emergency.

Fire extinguishers shall be inspected monthly and serviced annually.

Fire sprinkler systems shall be inspected, maintained, and serviced in accordance with applicable regulations to ensure proper operation should a fire occur.

Alarm and shutdown systems shall be maintained in accordance with applicable regulations to ensure that they operate properly in an emergency.

First aid and disaster supplies shall be inspected and maintained to ensure that they are readily adequate and readily available in an emergency.

A monthly safety inspection will be conducted to ensure that any safety hazards or defects regarding safety and emergency equipment are identified and corrected in a timely manner.

Cylinders shall be secured in a manner that will not prevent personnel from evacuating the site and accessing emergency equipment.

Plant personnel are instructed to adhere to standard operating procedures at all times. Personnel are encouraged to work safely and monthly safety meetings are held to provide on-going safety training and maintain safety awareness and address safety concerns and issues present at the facility.

Plant personnel are trained in proper handling of hazardous materials and wastes. Personnel are familiar with requirement to maintain separation of incompatible materials, such as oxidizers and flammables.

Plant personnel are informed of the importance of good housekeeping towards preventing accidents and spills.

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Safety equipment, such as eye wash/safety showers. spill containment equipment, monitoring devices, crash posts, warning signs, proper labeling, etc., are located throughout the facility. A list of the types of safety and fire suppression equipment is included in this Plan.

Note: Facility utilizes Air Liquide America Corporation's Region Safety Manual which outlines various safety procedures, such as handling and storage of compressed and liquefied gases and other hazardous materials, maintenance and inspection of safety and fire suppression equipment, and other safe operating procedures that all employees must adhere to.

#### 6.0 **EMPLOYEE TRAINING**

- All employees shall receive and complete training, at least annually, regarding their role and responsibilities in the implementation of the location's Emergency Response Plan. Training shall also include evacuation plans, alarm systems, reporting procedures, shutdown procedures, and types of potential emergencies.
- 2) All employees shall be familiar with the location's Emergency Response Plan.
- 3) All employees shall participate in emergency drills that will be conducted annually.
- 4) Employees with designated roles on the Emergency Response Team will receive training to ensure competency.
- 5) Training on the Plan will be conducted initially when new employees are hired.
- 6) Additional training will be provided whenever new equipment, materials, or processes are introduced or when procedures are updated or revised or when emergency exercises show that employee performance is inadequate.
- Employees shall be familiar with locations and associated hazards involved with hazardous materials present at the facility.
- 8) Employees receive training regarding the company's Hazard Communication program, including labeling requirements and use and location of material safety data sheets for hazardous materials located at the facility.

# 7.0 POST EMERGENCY PROCEDURES

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Contact Area Health, Safety & Environmental Specialist and Corporate HSE Department, if this has not already been done.

An investigation of an incident, if appropriate, will be conducted by the Area HSE Specialist and the facility's Emergency Response Team. A written report of the incident will be prepared and distributed to affected personnel (i.e. location personnel, Plant Manager, MSC Department, Corporate HSE Department).

The Area HSE Specialist or designated personnel will notify and report to local, state, and federal agencies as required by law, following an emergency incident.

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...) 1 The Emergency Coordinator shall inspect and inventory emergency equipment used and request replacement items as necessary.

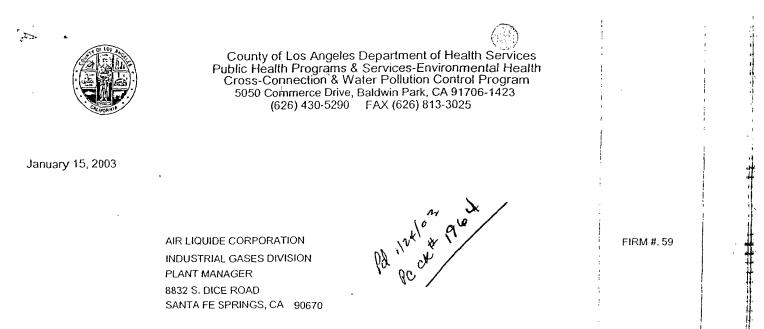
The Emergency Response Team and the Area HSE Specialist shall meet in order to critique the response and determine what changes or improvements. if any, need to occur in the system to ensure a more effective response in the future.

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On September 2, 2002 the Los Angeles County Board of Supervisors passed an ordinance amending Title 8 of the Los Angeles County Code which approves the establishment of a Department of Health Services fee of \$14 per device to recover costs associated with the monitoring of backflow prevention devices by the Environmental Health's Cross-Connection and Water Pollution Control Program. The Cross-Connection and Water Pollution Control Program monitors backflow prevention devices installed on public water systems, which ensures the exclusion of contaminants from entering the local water supply.

Questions regarding this bill can be directed to the office of the Cross-Connection and Water Pollution Control Program at (626) 430-5292 between 8:00 a.m. and 5:00 p.m.

Please remit by check \$42.00 payable to the County of Los Angeles and mail to:

Los Angeles County Department of Health Services Fiscal Services 5555 Ferguson Dr., Suite 100-50 Commerce, CA 90022

| Late penalty assessed if 10.50               | 3 Device(s        | @ \$14.00 per devic | ;e = | \$42.00 |             |
|----------------------------------------------|-------------------|---------------------|------|---------|-------------|
| not received by due date                     | • •               |                     | ·    | 10.50   |             |
| Total due if received after due date \$52.50 | Total due if rece | ived after due date | 1    | \$52.50 | ι<br>•<br>• |
|                                              |                   |                     |      |         |             |
| PLEASE WRITE FIRM #: 59 ON CHECK             | PLEASE WR         | ITE FIRM #:         | - 59 | ON CHE  | εcκ         |

Due Date: March 31, 2003

# Please cut off at dotted line and send upper portion of this page with remittance.

| FIRM #:<br>FIRM N | 00       | QUIDE CORPORATI | ION      |                  | 3 Device(s @ \$1 | 4.00 per device = \$42.00                        |
|-------------------|----------|-----------------|----------|------------------|------------------|--------------------------------------------------|
| #                 | DEVICE # | MANUFACTURER    | SERIAL # | LOCATION ADDRESS | CITY             | DEVLOC                                           |
| 1                 | 276      | FEBCO           | AC1045   | 8832 DICE ROAD   | SANTA FE SPRINGS | FRONT OF PROPERTY AT                             |
| 2                 | 68942    | FEBCO           | AD-5014  | 8832 DICE ROAD   | SANTA FE SPRINGS | INDUSTRIAL GAS PRODUCTION<br>BUILDING NORTH SIDE |
| 3                 | 68943    | FEBCO           | AB-4395  | 8832 DICE BOAD   | SANTA EE SPRINGS | HYDROSTATIC TESTING/PAINT                        |

# **DICE 00809**

BOOTH-SOUTH SIDE OF PAINT

SHOP

|                      |                                             | $\int$                            |                                                                                                                                       | $\sim$                                                             |                                                               |
|----------------------|---------------------------------------------|-----------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------|---------------------------------------------------------------|
|                      |                                             | Public Hea<br>Cross-Co<br>5050 Co | of Los Angeles Departme<br>Ith Programs & Services<br>Innection & Water Pollut<br>Inmerce Drive, Baldwin Pa<br>626) 430-5290 FAX (626 | -Environmental Health<br>ion Control Program<br>ark, CA 91706-1423 |                                                               |
|                      |                                             |                                   |                                                                                                                                       |                                                                    |                                                               |
| January 1            | 5, 2003 .                                   |                                   |                                                                                                                                       |                                                                    |                                                               |
|                      |                                             |                                   |                                                                                                                                       | M J /                                                              |                                                               |
| FOIA ex 6, Pe        | ersonal Privacy                             |                                   |                                                                                                                                       |                                                                    | 1                                                             |
|                      |                                             |                                   |                                                                                                                                       |                                                                    |                                                               |
|                      |                                             |                                   |                                                                                                                                       |                                                                    |                                                               |
|                      |                                             |                                   |                                                                                                                                       |                                                                    |                                                               |
|                      |                                             |                                   |                                                                                                                                       |                                                                    |                                                               |
|                      |                                             |                                   |                                                                                                                                       |                                                                    |                                                               |
|                      |                                             |                                   |                                                                                                                                       |                                                                    |                                                               |
|                      |                                             |                                   |                                                                                                                                       |                                                                    |                                                               |
|                      |                                             |                                   |                                                                                                                                       |                                                                    |                                                               |
| F<br>T               | Please remit by check<br>\$42.00 payable to | the County                        | of Los Angeles                                                                                                                        | Late penalty assessed if                                           | 0 per device = \$42.00<br>10.50                               |
| a                    | nd mail to:                                 |                                   | of Los Angeles                                                                                                                        | not received by due date<br>Total due if received after of         | ·                                                             |
|                      | os Angeles County D<br>iscal Services       | )epartment o                      | of Health Services                                                                                                                    | PLEASE WRITE                                                       | RM #: 59 ON CHECK                                             |
| 5                    | 555 Ferguson Dr., Su<br>Commerce, CA 90022  | ite 100-50                        |                                                                                                                                       | L                                                                  |                                                               |
| C C                  |                                             |                                   |                                                                                                                                       | Due Date: March 31                                                 | , 2003                                                        |
|                      | Please cut off                              | at dotted lin                     | e and send upper port                                                                                                                 | ion of this page with                                              | remittance.                                                   |
| FIRM #:<br>FIRM NAME | 59<br>: AIR LIQUIDE CORPORATI               | ION                               |                                                                                                                                       |                                                                    | .00 per device = \$42.00                                      |
|                      | VICE # MANUFACTURER                         |                                   | LOCATION ADDRESS                                                                                                                      | 3 Device(s @ \$14                                                  | .00 per device = \$42.00<br>DEV LOC                           |
| 1                    | 276 FEBCO                                   | AC1045                            | 8832 DICE ROAD                                                                                                                        |                                                                    | FRONT OF PROPERTY AT                                          |
| . 2                  | 68942 FEBCO                                 | AD-5014                           | 8832 DICE ROAD                                                                                                                        |                                                                    | INDUSTRIAL GAS PRODUCTION<br>BUILDING <sub>T</sub> NORTH SIDE |
| 3                    | 68943 FEBCO                                 | AB-4395                           | 8832 DICE ROAD                                                                                                                        | SANTA FE SPRINGS                                                   | HYDROSTATIC TESTING/PAINT                                     |
|                      |                                             |                                   |                                                                                                                                       |                                                                    | BOOTH-SOUTH SIDE OF PAINT                                     |
|                      |                                             |                                   |                                                                                                                                       |                                                                    | SHOP                                                          |
|                      |                                             |                                   |                                                                                                                                       |                                                                    |                                                               |
|                      |                                             |                                   |                                                                                                                                       |                                                                    |                                                               |
|                      |                                             |                                   |                                                                                                                                       |                                                                    | DICE 00810                                                    |
|                      |                                             |                                   |                                                                                                                                       | - <b></b>                                                          |                                                               |

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FORM 5-608A (REV. 4-82)

# NO 87551

STATE OF CALIFORNIA DEPARTMENT OF INDUSTRIAL RELATIONS

DIVISION OF OCCUPATIONAL SAFETY AND HEALTH PRESSURE VESSEL UNIT

P.O. Box 420603, SAN FRANCISCO, CA 94142

# **Permit to Operate Air Pressure Tank**

TANK NO-21808-92 NB 20549

Location of Tank Owner or User Air Liquide America Corp Jard- Bulk Storage F SANTA FE Springs Fill PLANT

This Permit to Operate shall be kept conspicuously posted under glass on or near the tank or at a convenient location near the tank, and shall be made available to any authorized person.

This Permit expires

This Is TO CENTRY that the above described Air Pressure Tank has been inspected by the Division of Industrial

Safety and may be operated at a pressure not to exceed

5471\_pounds per square inch.

three years from date of inspection
 Nive years from date of inspection

Labor Code, Division 5, Part 6

NAME OF m. Osland INSPECTOR EMPLOYED BY

(E) OSP 00 45665

DICE 00811

3

| MAR 20'03 (THU) 12:31       | ALR LIQUIDE                                                              | TEL:562 693 1156                    | P. 003                                       |
|-----------------------------|--------------------------------------------------------------------------|-------------------------------------|----------------------------------------------|
| , JAN 24 102 10:5           | BAM AL FINANCE                                                           |                                     | P.1                                          |
|                             | SOUTH COAST AIR QUALITY<br>21865 East Copiey Drive, D<br>PERMIT' TO OPER | Diamond Bar, CA 91765               | page 1<br>Permit No.<br>F15616<br>A/N 343310 |
| This International States   |                                                                          |                                     | District.                                    |
| LEGAL OWNER<br>OR OPERATOR; | AIR LIQUIDE AMERICAN COI<br>8832 DICE RD<br>SANTA FE SPRINGS, CA 906'    |                                     | ID 055690                                    |
| Equipment Locat             | Ion: 8832 DICE RD, SANTA PE SP                                           | RINGE, CA 90670-2540                |                                              |
| Equipment Descr             | ption;                                                                   |                                     |                                              |
|                             |                                                                          | R TYPE, 8'-0" W. X 8'-0" L. X 7'-0" |                                              |

# Conditions:

1= Salvert Cleaning opportune.

- 1) OPERATION OF THIS EQUIPMENT SHALL BE CONDUCTED IN ACCORDANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT IS ISSUED UNLESS OTHERWISE NOTED BELOW.
- 2) THIS EQUIPMENT SHALL BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.
- 3) THIS SPRAY BOOTH SHALL NOT BE OPERATED UNLESS ALL EXHAUST AIR PASSES THROUGH FILTER MEDIA AT LEAST 2 INCHES THICK.
- 4) THE TOTAL QUANTITY OF VOLATILE ORGANIC COMPOUND (VOC) EMISSIONS FROM THIS EQUIPMENT SHALL NOT EXCEED 30 POUNDS IN ANY ONE DAY.
- 5) THE OPBRATOR SHALL COMPLY WITH RULE 109 (RECORDKEEPING FOR VOLATILE ORGANIC COMPOUND EMISSIONS),
- 6) IN ADDITION TO THE REQUIREMENTS OF RULE 109, THE OPERATOR SHALL KEEP ADEQUATE RECORDS FOR THIS BQUIPMENT TO VERIFY DAILY VOLATILE ORGANIC COMPOUND (VOC) EMISSIONS IN POUNDS AND THE VOC CONTENT OF EACH MATERIAL AS APPLIED (INCLUDING WATER AND EXEMPT COMPOUNDS), ALL RECORDS SHALL BE PREPARED IN A FORMAT WHICH IS ACCEPTABLE TO THE DISTRICT,
- 7) THIS EQUIPMENT SHALL BE OPERATED IN COMPLIANCE WITH RULES 1107 AND 1121.
- 8) COATINGS, ADHESIVES, INKS, REDUCERS, THINNERS, AND CLEAN-UP SOLVENTS USED IN THIS EQUIPMENT SHALL NOT CONTAIN ANY COMPOUNDS IDENTIFIED AS CARCINOGENIC AIR CONTAMINANTS IN RULE 1401 AS AMENDED DECEMBER 7, 1990.

|           | 671 Date Pages | ••••••   |
|-----------|----------------|----------|
| TO CIUSA  | From           | <b>-</b> |
| Cc./Dept. | Co.            |          |
| Phone #   | Phone #        |          |
| Fex #     | Fax #          |          |

**DICE 00812** 

| MAR 20 | )' 03 (THU) | 12:31 | AIR LIQUIDE                                                      | TEL:562              | 693 .1156 | : P.                                        | 004    |
|--------|-------------|-------|------------------------------------------------------------------|----------------------|-----------|---------------------------------------------|--------|
| 1.<br> |             |       | AG FINANCE                                                       |                      |           | P.2                                         |        |
|        |             |       | SOUTH COAST AIR QUAL<br>21865 East Copley Drive<br>PERMIT TO OPE | e, Diamond Bar, CA 9 |           | page 2<br>Permit No<br>F15616<br>A/N 343310 |        |
| ,<br>, |             |       | CONTRACTORIES                                                    |                      |           |                                             | ،<br>، |

- 9) MATERIAL SAFETY DATA SHEETS FOR ALL COATINGS AND SOLVENTS USED AT THIS FACILITY SHALL BE KEPT CURRENT AND MADE AVAILABLE TO DISTRICT PERSONNEL UPON REQUEST.
- CLEANUP MATERIAL USED IN THIS EQUIPMENT SHALL NOT CONTAIN ANY VOLATILE ORGANIC COMPOUNDS (VOC).
- (1) POWDER COATING SHALL NOT BE APPLIED IN THIS EQUIPMENT.

#### NOTICE

IN ACCORDANCE WITH RULE 206, THIS PERMIT TO OPERATE OR COPY SHALL BE POSTED ON OR WITHIN 8 METERS OF THE EQUIPMENT.

THIS PERMIT DOES NOT AUTHORIZE THE EMISSION OF AIR CONTAMINANTS IN EXCESS OF THOSE ALLOWED BY DIVISION 26 OF THE HEALTH AND SAFETY CODE OF THE STATE OF CALIFORNIA OR THE RULES OF THE AIR QUALITY MANAGEMENT DISTRICT. THIS PERMIT CANNOT BE CONSIDERED AS PERMISSION TO VIOLATE EXISTING LAWS, ORDINANCES, REGULATIONS OR STATUTES OF OTHER GOVERNMENT AGENCIES.

EXECUTIVE OFFICER

Danis on Bailey

By Dom's M. Balley/p 8/25/1998

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### **FILE COPY**

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# South Coast AIR QUALITY MANAGEMENT DISTRICT

21865 E. Copley Drive, Diamond Bar, CA 91765-4182 (909) 396-2000

16, 1993 NOVEMBER

> ID - 096813 LIQUID AIR CORP 8832 DICE RD SANTA FE SPRINGS

> > OFFICIAL DOCUMENT

CA

ANNUAL VALIDATION OF PERMIT TO OPERA

90670

Dear Permit Holder:

This letter is the official notice of renewal and acknowledgement of payment for the attached list of Permit(s) To Operate Operation under this letter and the permit(s) which it renews must be conducte in compliance with all information included with the intrial application as well as the initial permit conditions. The equipment must be maintained and kept in good condition at all times. Unless otherwise specifically stated, the original Permit To Operate remains in full force and effect, and must be retained and argonal with the rules and regulations of the South Coast All compliance Management District.

For further information, or if you have any questions regarding the letter, please call Customer Service at (909) 396-2900.

Sincerely,

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James M. Lents, Ph.D. Executive Officer

Renewal(s) attached

PAGE

1

**DICE 00814** 



#### SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

# INVOICE

For Information Call - 909-396-2900

Mail Remittance To: P.O. Box 4943 Diamond Bar Ca. 91765-0943

California Health and Safety Code Section 40510 and South Coast Air Quality Management District Rule 30.1 authorizes the District to charge permit fees on the equipment identified below.

| EQUIPMENT                  | 8832 DICE RD                              | INVOICE06/23/93<br>DATE |            |             |       |
|----------------------------|-------------------------------------------|-------------------------|------------|-------------|-------|
|                            | SANTA FE SPRINGS                          | СА                      | 90670-2540 | ANNUAL BILL | MONTH |
|                            |                                           |                         | -          | JULY        |       |
| LEGAL OWNER<br>DR OPERATOR | 055690<br>LIQUID AIR CORP<br>8832 DICE RD |                         |            | •           |       |
|                            | SANTA FE SPRINGS                          | CA                      | 90670-2540 |             |       |

TRANSACTI TRANSACTIC AMOUN STORAGE TANK ACETONE 01914162 062393 D13808 ANNUAL BILLING 164.00 164.00 SPRAY BOOTH PAINT AND SOLVENT 01914163 062393 M26258 ANNUAL BILLING 164.00 164.00 ACETYLENE, REACTION 01914164 062393 P26935 ANNUAL BILLING 587.00 587.00 ABRASIVE BLASTING (CABINET/MA 01914165 062393 M31205 ANNUAL BILLING 164.00 164.00 DRY FILTER ( 100-500 SQ FT) 01914166 062393 M31204 ANNUAL BILLING 164.00 164.00 DRY FILTER ( 100-500 SQ FT) 01914167 062393 M51114 ANNUAL BILLING 164.00 164.00

PIP DIP 11 APP 1000

DICE 00815

055690-02-

ARKS PLEASE RETURN THE DUPLICATE COPY OF THIS INVOICE WITH YOUR REMITTANCE TO ENSURE PROPER CREDIT TO YOUR ACCOUNT. 'F YOU HAVE ANY QUESTIONS, PLEASE CALL (909)396-2900. \$1,407.00

/ment not received by 10/01/93
ment not received by 10/01/93
application/permit will be delinquent.
application/permit will expire. Operation of equipment without a
subjects owner or operator to misdemeanor or civil penalties for each day of operation.

resobarduplicate copy with remittance. "Make.check:payable to South Coast A.Q.M.D."



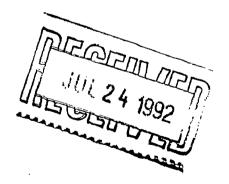
HEADQUARTERS, 9150 FLAIR DR., EL MONTE, CA 91731

JULY..... 16, 1992

ID - 055690 LIQUID AIR CORP 8832 DICE RD SANTA FE SPRINGS CA 90670-2540

#### PERMIT RENEWALS

| PERMIT         |                                                                                                      | APPLIC | EXPIRATION |
|----------------|------------------------------------------------------------------------------------------------------|--------|------------|
| NUMBER         | DESCRIPTION                                                                                          | NUMBER | DATE       |
| ~~~~~          | و به هو به ما و به ما به به به به به به به به به به ما و ما به ما به ما به ما به ما به ما به ما به م |        |            |
|                |                                                                                                      |        |            |
| <b>D1380</b> 8 | STORAGE TANK ACETONE                                                                                 | 204680 | 07/16/93   |



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PAGE 2

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HEADQUARTERS, 9150 FLAIR DR., EL MONTE, CA 91731

JULY

16, 1992....

ID - 055690 LIQUID AIR CORP 8832 DICE RD SANTA FE SPRINGS CA 90670-2540

#### OFFICIAL DOCUMENT

#### ANNUAL VALIDATION OF PERMIT TO OPERATE

#### DEAR PERMIT HOLDER:

THIS LETTER IS THE OFFICIAL NOTICE OF RENEWAL AND ACKNOWLEDGEMENT OF PAYMENT FOR THE ATTACHED LIST OF PERMIT(S) TO OPERATE. OPERATION UNDER THIS LETTER AND THE PERMIT(S) WHICH IT RENEWS MUST BE CONDUCTED IN COMPLIANCE WITH ALL INFORMATION INCLUDED WITH THE INITIAL APPLICATION AS WELL AS THE INITIAL PERMIT CONDITIONS. THE EQUIPMENT MUST BE MAINTAINED AND KEPT IN GOOD CONDITION AT ALL TIMES. UNLESS OTHERWISE SPECIFICALLY STATED, THE ORIGINAL PERMIT TO OPERATE REMAINS IN FULL FORCE AND EFFECT, AND MUST BE RETAINED IN ACCORDANCE WITH THE RULES AND REGULATIONS OF THE SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT.

FOR FURTHER INFORMATION, OR IF YOU HAVE ANY QUESTIONS REGARDING THIS LETTER, PLEASE CALL CUSTOMER SERVICE AT (714) 395-2900.

PAGE

 1

**DICE 00817** 

SINCERELY,

JAMES M. LENTS, PH.D. EXECUTIVE OFFICER

RENEWAL(S) ATTACHED



SOUTH COAST AIR QUALITY MANAGEMENT/DISTRICT 21965 East Copley Drive, Diamond Bar, CA 2565

**FERMIT TO OPERATE** 

This initial permit must be renewed ANNUALLY unless the equipment is moved or changes ownership. If the billing for annual renewal fee (Rule 301 f) is not received by the expiration date, contact the District. 

LEGAL OWNER OR OPERATOR:

AIR LIQUIDE AMERICAN CORP 8832 DICE RD SANTA FE SPRINGS, CA .90670-2540

Equipment Location: 8832 DICE RD, SANTA FE SPRINGS, CA 90670-2540

# **Equipment Description:**

SPRAY BOOTH, SPRAYLINE TECHNOLOGIES, FLOOR TYPE, 8'-0" W. X 8'-0" L. X 7'-0" H., WITH SIXTEEN 20" X 20" EXHAUST FILTERS AND ONE 2 HP EXHAUST FAN.

# **Conditions:**

- 1) OPERATION OF THIS EQUIPMENT SHALL BE CONDUCTED IN ACCORDANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT IS ISSUED UNLESS OTHERWISE NOTED BELOW:
- THIS EOUPMENT SHALL BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING 2) CONDITION AT ALL TIMES.
- THIS SPRAY BOOTH SHALL NOT BE OPERATED UNLESS ALL EXHAUST AIR PASSES THROUGH 3) FILTER MEDIA AT LEAST 2 INCHES THICK.
- THE TOTAL QUANTITY OF VOLATILE ORGANIC COMPOUND (VOC) EMISSIONS FROM THIS 4) EQUIPMENT SHALL NOT EXCEED 30 POUNDS IN ANY ONE DAY.
- THE OPERATOR SHALL COMPLY WITH RULE 109 (RECORDKEEPING FOR VOLATILE ORGANIC 5) COMPOUND EMISSIONS).
- IN ADDITION TO THE REQUIREMENTS OF RULE 109, THE OPERATOR SHALL KEEP ADEQUATE 6) RECORDS FOR THIS EQUIPMENT TO VERIFY DAILY VOLATILE ORGANIC COMPOUND (VOC) EMISSIONS IN POUNDS AND THE VOC CONTENT OF EACH MATERIAL AS APPLIED (INCLUDING WATER AND EXEMPT COMPOUNDS). ALL RECORDS SHALL BE PREPARED IN A FORMAT WHICH IS ACCEPTABLE TO THE DISTRICT.
- 7) THIS EQUIPMENT SHALL BE OPERATED IN COMPLIANCE WITH RULES 1107 AND 1171
- 8) COATINGS, ADHESIVES, INKS, REDUCERS, THINNERS, AND CLEAN-UP SOLVENTS USED IN THIS EQUIPMENT SHALL NOT CONTAIN ANY COMPOUNDS IDENTIFIED AS CARCINOGENIC AIR CONTAMINANTS IN RULE 1401 AS AMENDED DECEMBER 7, 1990.



**DICE 00818** 

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ID:055690

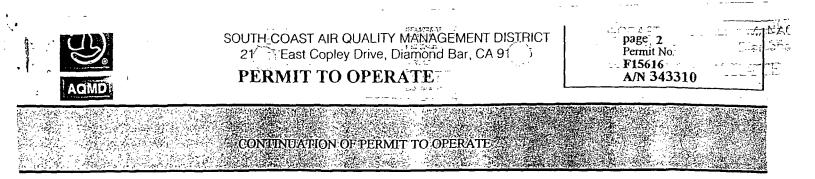
\*09-05-98\*1

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Permit No: F15616

A/N 343310



- 9) MATERIAL SAFETY DATA SHEETS FOR ALL COATINGS AND SOLVENTS USED AT THIS FACILITY SHALL BE KEPT CURRENT AND MADE AVAILABLE TO DISTRICT PERSONNEL UPON REQUEST.
- 10) CLEANUP MATERIAL USED IN THIS EQUIPMENT SHALL NOT CONTAIN ANY VOLATILE ORGANIC COMPOUNDS (VOC)
- 11) POWDER COATING SHALL NOT BE APPLIED IN THIS EQUIPMENT.

#### NOTICE

IN ACCORDANCE WITH RULE 206, THIS PERMIT TO OPERATE OR COPY SHALL BE POSTED ON OR WITHIN 8 METERS OF THE EQUIPMENT.

THIS PERMIT DOES NOT AUTHORIZE THE EMISSION OF AIR CONTAMINANTS IN EXCESS OF THOSE ALLOWED BY DIVISION 26 OF THE HEALTH AND SAFETY CODE OF THE STATE OF CALIFORNIA OR THE RULES OF THE AIR QUALITY MANAGEMENT DISTRICT THIS PERMIT CANNOT BE CONSIDERED AS PERMISSION TO VIOLATE EXISTING LAWS, ORDINANCES, REGULATIONS OR STATUTES OF OTHER GOVERNMENT AGENCIES.

EXECUTIVE OFFICER

Derris on Bailey

By Dorris M. Bailey/lp 8/25/1998



ORIGINAL

**DICE 00819** 

| $\mathbb{O}$                                                     | SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT                                     | INVOICE<br>1393271 |
|------------------------------------------------------------------|---------------------------------------------------------------------------------|--------------------|
| <u>D</u> MD                                                      | COPY                                                                            | PAGE: 1            |
| alifornia Health and Safety Coo<br>arge the fee described below. | de Section 40510 and South Coast Air Quality Management District Rule 301(e) au | thorize AQMD t     |
|                                                                  |                                                                                 |                    |
| EQUIPMENT                                                        | 8832 DICE RDINVOICESANTA FE SPRINGS, CA, 90670DATE:                             | 05/16/02           |
| EQUIRMENT<br>LOCATED AT:<br>FACILITY ID:                         |                                                                                 |                    |
| EQUIRMENT<br>LOCATEDAT:                                          | SANTA FE SPRINGS, CA, 90670 DATE:                                               |                    |

# ORIGINAL INVOICE

SANTA FE SPRINGS, CA, 90670

| TRANSACTION<br>NUMBER | TRANSACTION<br>DATE | REFERENCE | DESCRIPTION               | TRANSACTION<br>AMOUNT | TRANSACTION<br>BALANCE |
|-----------------------|---------------------|-----------|---------------------------|-----------------------|------------------------|
| 6303636               | 05/16/02            | FY02-03   | Flat Annual Emissions Fee | 75.00                 | 75.00                  |
|                       | • • • • • •         |           |                           |                       |                        |
|                       |                     |           |                           |                       |                        |
|                       | •                   |           |                           |                       |                        |
|                       |                     |           |                           |                       |                        |
|                       |                     |           | 30400 0002 43511 933      |                       |                        |
|                       |                     |           | . D                       |                       |                        |
|                       |                     |           | William 5/28              |                       |                        |
|                       |                     |           | V = 5/20                  |                       |                        |
|                       |                     |           |                           |                       |                        |
|                       |                     |           |                           |                       |                        |

REMARKS
PLEASE RETURN THE DUPLICATE COPY OF THIS INVOICE WITH YOUR
REMITTANCE TO ENSURE PROPER CREDIT TO YOUR ACCOUNT. RETURNED
CHECKS MAY BE SUBJECT TO A \$27.74 SERVICE CHARGE.

If payment not received by 07/16/02 a 5% late payment penalty will be imposed.

- --- -

Please return duplicate copy with remittance. Make check payable to South Coast A.Q.M.D. For Information: Inside California Call Our Toll-Free Number (866) 888-8838 Or Call (909) 396-2900. Outside California Call (909) 396-2900 Only. Mail Remittance to: P.O. Box 4943 Diamond Bar CA, 91765-0943

| SOUTH COAST AIR QUALITY MANAGEMEN | דחופדייינסוח דו |
|-----------------------------------|-----------------|
|                                   |                 |
|                                   |                 |
| Comp. P                           |                 |
|                                   | 0.00            |
|                                   |                 |
| ANNUAL OPERATING FEES INV         | UIUE            |

INVOICE NÖ. 1392060

PAGE: 1

California Health and Safety Code Section 40510 and South Coast Air Quality Management District Rule 301 authorizes AQMD to charge permit fees on the equipment identified below.

| EQUIPM ENT<br>LOCATED AT:   |     | 8832 DICE RD<br>SANTA FE SPRINGS, CA, 90670 |    | • | INVOICE<br>DATE: | 05/16/02 |       |
|-----------------------------|-----|---------------------------------------------|----|---|------------------|----------|-------|
| FACILITY ID:                |     | 55690                                       | •• |   |                  |          |       |
|                             | •   |                                             |    |   |                  |          | · · · |
| LEGAL OWNER<br>OR OPERATOR: | • • | AIR LIQUIDE AMERICAN CORP<br>8832 DICE RD   |    |   |                  |          |       |
|                             |     | SANTA FE SPRINGS, CA, 90670                 |    |   |                  |          |       |

# **DUPLICATE COPY**

| TRANSACTION<br>NUMBER | TRANSACTION<br>DATE | REFERENCE<br>NUMBER | DESCRIPTION                   | TRANSACTION<br>AMOUNT | TRANSACTION<br>BALANCE |
|-----------------------|---------------------|---------------------|-------------------------------|-----------------------|------------------------|
| 6301492               | 05/16/02            | F15616              | SPRAY BOOTH PAINT AND SOLVENT | 195.89                | 195.89                 |
| 6301491               | 05/16/02            | D13808              | STORAGE TANK ACETONE          | <del>195.89</del>     | <del>195.89</del>      |
|                       |                     |                     |                               | ч.:                   |                        |
|                       |                     |                     |                               |                       |                        |
|                       |                     |                     |                               |                       |                        |
|                       |                     |                     |                               |                       |                        |
|                       |                     |                     |                               |                       |                        |
|                       |                     |                     |                               |                       |                        |
|                       |                     | •                   | 30400 0002 43511 933          |                       |                        |
|                       |                     |                     | $\lambda$                     |                       |                        |
|                       |                     |                     | ACETONE TANK WAS REMOVED!     |                       |                        |
|                       |                     |                     |                               |                       |                        |
|                       |                     |                     | APETRIE TANK WAS REMOVED.     |                       |                        |
|                       |                     |                     |                               |                       |                        |
|                       |                     |                     |                               |                       |                        |

REMARKS

PLEASE RETURN THE DUPLICATE COPY OF THIS INVOICE WITH YOUR REMITTANCE TO ENSURE PROPER CREDIT TO YOUR ACCOUNT. RETURNED CHECKS MAY BE SUBJECT TO A \$27.74 SERVICE CHARGE. /9'5, 8 INVOICE TOTAL: \$391.78

**DICE 00821** 

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If payment not received by 07/16/02 application/permit will be delinquent. If payment not received by 08/16/02 application/permit will expire. Operation of equipment without a permit subjects owner or operator to misdemeanor or civil penalties for each day of operation.

Please return duplicate copy with remittance. Make check payable to South Coast A.Q.M.D. For Information: Inside California Call Our Toll-Free Number (866) 888-8838 Or Call (909) 396-2900. Outside California Call (909) 396-2900 Only. Mail Remittance to: P.O. Box 4943 Diamond Bar CA, 91765-0943

| AR 20' 03 (THU) 1.2 : 30                             | AIP LIQUIDE                                      | TEL: 562 693 1156                    |                  | P. 002                 |
|------------------------------------------------------|--------------------------------------------------|--------------------------------------|------------------|------------------------|
| 5                                                    | SOUTH COAST AIR QUALI                            | TY MANAGEMENT DISTRIC I              |                  |                        |
| 3                                                    | EMISSIONS FE                                     | ES INVOICE                           |                  | INVOICE NO.<br>1222080 |
| AQMD                                                 |                                                  |                                      |                  | PAGE: 1                |
| California Health and Sa<br>charge the fee described | fety Code Section 40510 and South Coas<br>below. | st Air Quality Management District R | ule 301(e) aud   | norize AQMD to         |
| EQUIPMENT<br>LOCATED AT:                             | 8832 DICE RD<br>SANTA FE SPRINGS, CA, 9          | 00670                                | INVOICE<br>DATE: | 06/13/01               |

8832 DICE RD SANTA FE SPRINGS, CA, 90670

AIR LIQUIDE AMERICAN CORP

55690

# ORIGINAL INVOICE

1205-2

| TRANSACTORS<br>MIMBER | TRANSACTION | REFERENCE |             |           | DESCRIPTION |                 |         | TRANSACTION   | TRANSACTION:<br>BALANCE |
|-----------------------|-------------|-----------|-------------|-----------|-------------|-----------------|---------|---------------|-------------------------|
| 5962164               | 06/13/01    | EmiFlat   | Flat Annual | Emissions | Fee         |                 |         | 37.50         |                         |
|                       |             |           |             |           |             |                 |         |               | 3                       |
|                       |             |           |             |           |             |                 |         |               |                         |
|                       |             |           |             |           |             |                 |         |               |                         |
|                       |             |           |             |           |             |                 |         |               |                         |
|                       |             |           |             | 70-       | 401392-     | S7SR            |         |               |                         |
|                       |             |           | 10          | CATION    | ACTIVITY    | NATURAL ACCOUNT | PRODUCT | LINE          |                         |
|                       |             |           | 300         | 600       | 0002        | 43511           | 93]     |               |                         |
|                       |             |           |             |           |             |                 |         |               |                         |
|                       |             |           |             |           |             |                 |         |               |                         |
|                       |             |           | APPR        | OVAL:     |             | 1               |         | <del>  </del> |                         |
|                       |             |           |             |           |             |                 |         | J             |                         |
|                       |             |           |             |           |             |                 |         |               |                         |

**EEMARS** 

FACILITY ID:

LEGAL OWNER

**OR OPERATOR:** 

PLEASE RETURN THE DUPLICATE COPY OF THIS INVOICE WITH YOUR REMITTANCE TO ENSURE PROPER CREDIT TO YOUR ACCOUNT. RETURNED CHECKS MAY BE SUBJECT TO A \$26.75 SERVICE CHARGE.

INVOICE TOTAL: \$37.50

D 001

If payment not received by 08/16/01 a 5% late payment penalty will be imposed.

Please return duplicate copy with remittance. Make check payable to South Coast A.Q.M.D. For Information: Inside California Call Our Toll-Free Number (866) #88-8838 Or Cali (909) 396-2900. Outside California Call (909) 396-2900 Only. Mail Remittance to: P.O. Box 4943 Diamond Bar CA, 91765-0943

**DICE 00822** 

|                                                                                                                                                      | Certified Mail Receipt:<br>7002 3150 0001 8451 1097                                                                                                                 |
|------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| September 26, 2006                                                                                                                                   | U.S. Postal Servicem<br>CERTIFIED MAIL RECEIPT<br>(Domestic Mail Only; No Instance Coverage Provided)<br>For delivery Information visit our website at www.usps.com |
| South Coast Air Quality Management District<br>2004-2005 Annual Emissions Report<br>File No-54493<br>Los Angeles, CA 90074-4493<br>Attn: Ali Ghasemi | Contilied Fee<br>Here<br>Festicated Delivery Fee<br>(Endorsement Required)<br>Total Postage & Fees<br>Sent. To                                                      |
| Re: 2 <sup>nd</sup> Notice of Delinquency                                                                                                            | SC-AQMD<br>Street, Apt. No;<br>or PO Box No;<br>City, State, ZIP+4<br>AACA - 90074-4493<br>PS Form 3800, June 2002<br>See Reverse for Instructions                  |
| Dear Mr. Ghasemi:                                                                                                                                    |                                                                                                                                                                     |

Please find enclosed, the required reporting forms for the Air Liquide facility located at 8832 Dice Road, Sante Fe Springs, CA.

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Thank you for your assistance if filing this information. Should you have any questions regarding the information submitted, please feel free to contact me at FOIA ex 6, Personal FOIA ex 6, Personal Privacy

Sincerely. Ung 110 Russell W. Kiesling

Russell W. Kiesling HSE Specialist

> AIR LIQUIDE AMERICA L.P. 2700 Post Oak Blvd., Suite 1800, Houston, TX 77056 Mailing Address: P. O. Box 460229; Houston, TX 77056-8229 Phone: 713/624-8000; Fax: 713/402-2096

DICE 00823

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Form S

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# Fees Due Summary

|   | Submittal Date: No later<br>than September 30, 2005 | Total Permitted<br>Emissions from Form<br>C, Line 7 (tons) | Total Non-Permitted<br>Emissions from Form<br>CU, Line 7 (tons) | Total Emissions<br>from Form CR<br>(tons) | Total Emissions | Emission Fees Due |  |
|---|-----------------------------------------------------|------------------------------------------------------------|-----------------------------------------------------------------|-------------------------------------------|-----------------|-------------------|--|
| 1 | ORGANIC GASES                                       | 0.62                                                       | 0.00                                                            |                                           | 0               | \$0.00            |  |
| 2 | SPECIFIC ORGANICS                                   | 0.00                                                       |                                                                 |                                           | 0               | \$0.00            |  |
| 3 | NITROGEN OXIDES                                     | 0.00                                                       |                                                                 |                                           | 0               | \$0.00            |  |
| 4 | SULFUR OXIDES                                       | 0.00                                                       |                                                                 |                                           | 0               | \$0.00            |  |
| 5 | CARBON MONOXIDE                                     | 0.00                                                       |                                                                 |                                           | 0               | \$0.00            |  |
| 6 | PARTICULATE MATTER                                  | 0.04                                                       |                                                                 |                                           | 0               | \$0.00            |  |
| 1 | TOTAL EMISSION FEES FO                              | R ALL CRITERIA POLLUTA                                     | NTS                                                             |                                           | ·               | \$0.00            |  |
| 2 | TOXIC AIR CONTAMINANTS/OZONE DEPLETER FEES          |                                                            |                                                                 |                                           |                 |                   |  |
|   |                                                     | ··· ··· ··· ··· ··· ··· ··· ··· ··· ··                     |                                                                 |                                           |                 |                   |  |

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| C AIR CONTAMINANTS/OZONE DEPLETER FEES                                        | \$0.00                                                                                                                                                                                                                                                                                                                                                            |
|-------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| AL FEES DUE                                                                   | \$0.00                                                                                                                                                                                                                                                                                                                                                            |
| Ilments Paid For FY 2004-2005 (if any) All Criteria Pollutants                | \$0.00                                                                                                                                                                                                                                                                                                                                                            |
| Ilments Paid For FY 2004-2005 (if any) Toxic Air Contaminants/Ozone Depleters | \$0.00                                                                                                                                                                                                                                                                                                                                                            |
| nce Due (Line 3 - Line 4 - Line 5)                                            | \$0.00                                                                                                                                                                                                                                                                                                                                                            |
| Fee (if any)                                                                  | \$0.00                                                                                                                                                                                                                                                                                                                                                            |
| unt Due (Line 6 + Line 7)                                                     | \$0.00                                                                                                                                                                                                                                                                                                                                                            |
| unt Enclosed (please write Facility ID#(s) and 2004-2005 AER on the check)    | \$0.00                                                                                                                                                                                                                                                                                                                                                            |
|                                                                               | AL FEES DUE<br>aliments Paid For FY 2004-2005 (if any) All Criteria Pollutants<br>aliments Paid For FY 2004-2005 (if any) Toxic Air Contaminants/Ozone Depleters<br>nce Due (Line 3 - Line 4 - Line 5)<br>Fee (if any)<br>Punt Due (Line 6 + Line 7)<br>punt Due (Line 6 + Line 7)<br>punt Enclosed (please write Facility ID#(s) and 2004-2005 AER on the check) |

**DICE 00824** 

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055690 Air Liquide America

9/26/2006 11:48:44 AM

Form X - Signature Sheet

AQMD 2004-2005 AER

# Software Submittal Signature Sheet Submittal Date : No later than 9/30/2005

Facility ID : 055690 SIC Code : 5169

#### MAILING INFORMATION

Ilya Kazhokin Plant Manager Air Liquide America LP 8832 Dice Road Sante Fe Springs, CA 90670-Contact Telephone : 562 4641205 Ext: Contact Fax : 562 4645262 Contact Email : FOIA ex 6, Personal Privacy

#### EQUIPMENT LOCATION

Facility Name : A Equipment Location : 8 City : 9

: Air Liquide America : 8832 Dice'Road : Sante Fe Springs

#### BRIEF DESCRIPTION OF OPERATION

Industrial gas cylinder filling and bulk material handling

#### BUSINESS OPERATING HOURS

| Hours per day  | : | 16 |
|----------------|---|----|
| Days per week  | : | 5  |
| Weeks per year | : | 52 |

I declare under penalty of perjury that the data submitted-truly represents throughput and emissions for this reporting period, and that the emission factors represent the best available data for my company in the calculation of annual emission figures.

|                                                                                                              | Authorized Signature_                                                                                                        | Kunnell W. K   | un line | Date 9/26/06 |  |
|--------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|----------------|---------|--------------|--|
| Title : HSE<br>Phone : 713                                                                                   | esling Russell<br>2 Specialist<br>4 4022111 Ext:<br>9 8037051                                                                | Russell 4 - Ku | a ling  | - 9/26/D6    |  |
| Preparer Name<br>Preparer Title<br>Preparer Organization<br>Preparer Phone<br>Preparer Fax<br>Preparer Email | <pre>Preparer Signature : Russell Kiesling : HSE Specialist : Air Liquide America L : 713 4022111 Ext: : 713 8037051 :</pre> | ,              |         | Date 7/20/06 |  |

**DICE 00825** 

055690 Air Liquide America

minimum of five years.

S.C.A Q.M.D reserves the right to audit the reported emissions. All records and calculations used in completing this summary are recommended to be retained a

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AQMD 2004-2005 AER

# List of Emission Sources

| Row | Reference<br>#                        | Emission Source Category Description                 | Contains<br>TAC/ODC |
|-----|---------------------------------------|------------------------------------------------------|---------------------|
| 1   | B3-1                                  | Material 991-Sher-Cryl HPA Acrylic                   | No                  |
| 2   | B4-1                                  | Activity Code-36. Spraybooth - Particulate emissions | NO                  |
| 3   |                                       |                                                      |                     |
| 4   |                                       |                                                      |                     |
| 5   |                                       |                                                      |                     |
| б   |                                       |                                                      |                     |
| 7   | · · · · · · · · · · · · · · · · · · · |                                                      |                     |
| 8   |                                       |                                                      |                     |
| 9   |                                       |                                                      |                     |
| 10  |                                       |                                                      |                     |

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# Form A - Status Update, Exemption Request, and Refund Request

#### Facility ID : 055690 Facility Name : Air Liquide America STATUS UPDATES Shutdown Facility : not applicable Change Of Ownership : not applicable Change in Equipment Location : not applicable Variance/Abatement Case Number : not applicable Other Reason for Zero Emissions : not applicable REFUND REQUEST Request refund for overpayment : NO EXEMPTION REQUEST Request for exemption : Yes USE OF ALTERNATIVE EMISSION FACTORS OR CALCULATION METHODOLOGIES Not Applicable CONTRACTOR INFORMATIONS Not Applicable

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# AQMD 2004-2005 AER

Form C

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# Annual Emissions Summary - Permitted

| Row                  |                                                                          | Organic<br>Gases<br>(tons) | Methane<br>(tons) | Specific<br>Organics<br>(tons) | Nitrogen<br>Oxides<br>(tons) | Sulfur<br>Oxides<br>(tons) | Carbon<br>Monoxide<br>(tons) | Particulate<br>Matter<br>(tons) |
|----------------------|--------------------------------------------------------------------------|----------------------------|-------------------|--------------------------------|------------------------------|----------------------------|------------------------------|---------------------------------|
| 1                    | Form B1, DCB or AB                                                       |                            |                   |                                |                              |                            |                              |                                 |
| 1<br>2<br>3<br>4     | Form B2                                                                  |                            |                   |                                |                              |                            |                              |                                 |
| 3                    | B3 - W                                                                   | 0.31                       |                   | 0.00                           |                              |                            |                              |                                 |
| <u>4</u><br>5        | Form B4<br>Form E1                                                       | 0.31                       |                   | 0.00                           | 0.00                         | 0.00                       | 0.00                         | 0.04                            |
| 6                    | Form R1                                                                  |                            |                   |                                |                              |                            |                              |                                 |
| 7                    | Total Permitted Emissions                                                | 0.62                       | 0.00              | 0.00                           | 0.00                         | 0.00                       | 0.00                         | 0.04                            |
| Form B3<br>Form W (; | Gases Emission Credit(s) :<br>(pounds) = 620.16 lb<br>pounds) = 0.00 lbs | s                          |                   |                                |                              |                            |                              |                                 |
| Form B3<br>520.16 -  | (pounds) - Form W (pounds)<br>0.00 = 620.16 lb                           | s or 0.31 tons             |                   |                                |                              |                            | :                            |                                 |
|                      |                                                                          |                            |                   |                                |                              |                            |                              |                                 |
| 1                    | ł                                                                        |                            |                   |                                |                              |                            |                              | ·                               |
|                      |                                                                          | i                          |                   |                                |                              |                            |                              |                                 |
|                      |                                                                          |                            |                   |                                |                              |                            |                              |                                 |
|                      |                                                                          |                            |                   |                                |                              |                            |                              |                                 |
|                      |                                                                          |                            |                   |                                |                              |                            |                              |                                 |
|                      |                                                                          |                            |                   |                                |                              |                            | ,<br>,                       |                                 |
|                      |                                                                          |                            |                   |                                |                              |                            |                              |                                 |
|                      |                                                                          |                            |                   |                                |                              |                            | :                            |                                 |
|                      |                                                                          |                            |                   |                                |                              |                            |                              |                                 |
|                      |                                                                          |                            |                   |                                |                              |                            |                              |                                 |
|                      | ·                                                                        |                            |                   |                                |                              |                            |                              |                                 |

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### Form CU

### AQMD 2004-2005 AER

### Annual Emissions Summary - Non-Permitted

| Row |                               | Organic<br>Gases<br>(tons) | Methane<br>(tons) | Specific<br>Organics<br>(tons) | Nitrogen<br>Oxides<br>(tons) | Sulfur<br>Oxides<br>(tons) | Carbon<br>Monoxide<br>(tons) | Particulate<br>Matter<br>(tons) |
|-----|-------------------------------|----------------------------|-------------------|--------------------------------|------------------------------|----------------------------|------------------------------|---------------------------------|
|     | Form B1U, DCB or AB           |                            |                   |                                |                              |                            |                              |                                 |
| 2   | Form B10, DCB or AB           |                            |                   |                                |                              |                            |                              |                                 |
| 3   | B3U - WU                      |                            |                   |                                |                              |                            |                              |                                 |
| 4   | Form B4U                      |                            |                   |                                |                              |                            |                              |                                 |
| 5   | Form E1U                      |                            |                   |                                |                              |                            |                              |                                 |
| 6   | Form R1U                      |                            |                   |                                |                              |                            |                              |                                 |
| 7   | Total Non-Permitted Emissions | 0.00                       | 0.00              | 0.00                           | 0.00                         | 0.00                       | 0.00                         | 0.00                            |

#### Organic Gases Emission Credit(s) :

Form B3U (pounds) = 0.00 lbs Form WU (pounds) = 0.00 lbs

Form B3U (pounds) - Form WU (pounds) 0.00 - 0.00 = 0.00 lbs or 0.00 tons

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055690 Air Liquide America

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Form R1

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AQMD 2004-2005 AER

Annual Emissions Summary from Refinery, Oil/Gas Production, Marketing and Chemical Plants -Permitted

| Row        |                 | Organic<br>Gases (tons) | Methane<br>(tons)                      | Nitrogen<br>Oxides (tons) | Sulfur<br>Oxides (tons)                 | Carbon<br>Monoxide<br>(tons) | Particulate<br>Matter (tons) |
|------------|-----------------|-------------------------|----------------------------------------|---------------------------|-----------------------------------------|------------------------------|------------------------------|
| 1          | Form B6         |                         |                                        |                           |                                         |                              |                              |
| 2          | Form B7         |                         |                                        |                           |                                         |                              |                              |
| 3          | Form B8         |                         |                                        |                           |                                         |                              |                              |
| 4          | Form R2         |                         |                                        |                           |                                         |                              |                              |
| 5          | Form R3         |                         | ······································ |                           |                                         |                              |                              |
| 6          | Form R4         |                         |                                        |                           | · [ · · · · · · · · · · · · · · · · · · |                              |                              |
| 7          | Form R5         |                         |                                        |                           |                                         |                              |                              |
| 8          | Form R6         |                         |                                        |                           |                                         |                              |                              |
| 9          | Form R7         |                         |                                        |                           |                                         |                              |                              |
| 10         | Form P1         |                         |                                        |                           |                                         |                              |                              |
| 11         | Form P2         |                         |                                        |                           |                                         |                              |                              |
| 12         | Form T1         |                         |                                        |                           |                                         |                              |                              |
| ( <u> </u> | ·               |                         |                                        |                           |                                         |                              | ,                            |
| 13         | TOTAL EMISSIONS | 0.00                    | 0.00                                   | 0.00                      | 0.00                                    | 0.00                         | 0.00                         |

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### Form R1U

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AQMD 2004-2005 AER

I.

Annual Emissions Summary from Refinery, Oil/Gas Production, Marketing and Chemical Plants - Non-Permitted

| Row |                 | Organic Gases (tons)                   | Methane (tons) |                                       |
|-----|-----------------|----------------------------------------|----------------|---------------------------------------|
|     |                 |                                        |                | · · · · · · · · · · · · · · · · · · · |
| 1   | Form B7U        |                                        |                |                                       |
| 2   | Form B8U        |                                        |                |                                       |
| 3   | Form P1U        |                                        |                |                                       |
| 4   | Form P2U        |                                        |                |                                       |
|     |                 | ······································ |                |                                       |
| 5   | TOTAL EMISSIONS |                                        | 0.00           | 0.0                                   |

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Form TACS

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### Toxic Air Contaminants and Ozone Depleters Emissions / Fee Summary

| Row      | TAC<br>Code | Toxic Air Contaminants (TAC)/Ozone<br>Depleters (ODC) | References | Annual Gross Emissions<br>(155) | Recycling Credit<br>(1bs) | Annual Net<br>Emissions (1bs) | Fee (5/1b) | Fee Due |
|----------|-------------|-------------------------------------------------------|------------|---------------------------------|---------------------------|-------------------------------|------------|---------|
|          | 32          | Ammonia                                               | ·          |                                 |                           |                               | \$0.02     |         |
| 2        | 01          | Asbestos                                              |            |                                 |                           |                               | \$4.07     |         |
| 3        | 02          | Benzene                                               |            |                                 |                           |                               | \$1.36     |         |
| 4        | 03          | Beryllium                                             |            |                                 |                           |                               | \$4.07     |         |
| 5        | 04          | 1,3-Butadiene                                         |            |                                 |                           |                               | \$4,07     |         |
| 6        | 05          | Cadmium                                               |            |                                 |                           |                               | \$4.07     |         |
| 7        | 06          | Carbon Tetrachloride                                  |            |                                 |                           |                               | \$1.36     |         |
| 8        | 07          | Chlorinated Dioxins & Dibenzofurans                   |            |                                 |                           |                               | \$6.77     |         |
| 9        | 08          | 1,4-Dioxane                                           |            |                                 |                           |                               | \$0.29     |         |
| 10       | 09          | Ethylene Dibromide                                    | 1          |                                 |                           |                               | \$1.36     |         |
| 11<br>12 | 10          | Ethylene Dichloride                                   |            |                                 |                           |                               | \$1.36     |         |
|          | 11          | Ethylene Oxide                                        |            |                                 |                           |                               | \$1.36     |         |
| 13       | 12          | Formaldehyde                                          |            |                                 |                           |                               | \$0.29     |         |
| 14       | 13          | Hexavalent Chromium                                   |            |                                 |                           |                               | \$5.42     |         |
| 15       | 14          | Inorganic Arsenic                                     |            |                                 |                           |                               | \$4.07     |         |
| 16       | 15          | Lead                                                  |            |                                 |                           |                               | \$1.36     |         |
| 17       | 16          | Methylene Chloride                                    |            |                                 |                           |                               | \$0.06     |         |
| 18       | 17          | Nickel                                                |            |                                 |                           |                               | \$2.69     |         |
| 19       | 18          | Perchloroethylene                                     |            |                                 |                           |                               | \$0.29     | 1       |
| 20       | 19          | Polynuclear Aromatic Hydrocarbons<br>(PAHs)           |            |                                 |                           |                               | \$4.07     |         |
| 21       | 20          | Trichloroethylene                                     |            |                                 | 1                         |                               | \$0.12     | 1       |
| 22       | 21          | Vinyl Chloride                                        |            |                                 |                           |                               | \$1.36     |         |
| 23       | 22          | Chlorofluorocarbons (CFCs/Freons)                     |            |                                 |                           |                               | \$0.25     |         |
| 24       | 23          | 1,1.1-Tricholoroethane (Methyl chloroform)            |            |                                 |                           |                               | \$0.04     |         |

| TOTAL | · · · · · · · · · · · · · · · · · · · |
|-------|---------------------------------------|
|       | \$0.00                                |
|       |                                       |

055690 Air Liquide America

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Form TAC

This form has no data.

055690 Air Liquide America

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### AQMD 2004-2005 AER

### Form B3

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### Permitted Annual Emissions from the Use of Organics

| Row   | Material<br>Code | Activity<br>Code       | Material Description                   | Contains<br>Organic<br>TAC/ODC | Rule    | Annual Usage | Units<br>(lbs or<br>gal) | Emission<br>Factor | Use Default<br>Emission<br>Factor | Overall<br>Control<br>Efficiency | Organic Gases<br>Emission | Specific<br>Organics<br>Emission |
|-------|------------------|------------------------|----------------------------------------|--------------------------------|---------|--------------|--------------------------|--------------------|-----------------------------------|----------------------------------|---------------------------|----------------------------------|
| 1     | 991              | 5.<br>Metal<br>Coating | Sher-Cryl HPA<br>Acrylic               | NO                             | UNKNOWN | 816.00       | 2.<br>gallon             | 0.76               | No                                |                                  | 620 16                    |                                  |
| 2     |                  |                        |                                        |                                |         | l            |                          |                    |                                   | l                                |                           |                                  |
| 3     |                  |                        |                                        |                                |         |              |                          |                    |                                   |                                  |                           |                                  |
| 4     |                  |                        |                                        |                                |         |              |                          |                    |                                   |                                  |                           |                                  |
| 5     |                  |                        |                                        |                                |         |              |                          |                    |                                   |                                  |                           |                                  |
| 6     | _                |                        | · · · · · · · · · · · · · · · · · · ·  |                                |         |              |                          |                    |                                   |                                  |                           | ļ                                |
| 7     |                  |                        |                                        |                                |         |              |                          |                    |                                   |                                  |                           |                                  |
| 8     |                  |                        |                                        |                                |         |              |                          |                    |                                   |                                  |                           |                                  |
| 9     |                  |                        |                                        |                                |         |              |                          |                    |                                   |                                  |                           |                                  |
| 10    |                  |                        |                                        | l                              |         |              | l                        |                    | -l                                |                                  |                           | <u> 1</u>                        |
| TOTAL |                  | ·                      | ······································ |                                | ·       |              | r                        |                    |                                   | -T                               | 620.16                    | 0.00                             |
| lbs   |                  | +                      |                                        |                                |         |              |                          | +                  |                                   | <u> </u>                         | 620.16                    |                                  |
| tons  | !                | 1                      |                                        | L                              |         |              | L                        |                    | <u></u>                           | _i                               | 0.31                      | 0.00                             |

|            | · · · · · · · · · · · · · · · · · · · |
|------------|---------------------------------------|
| 620.16 lbs | 0.00 lbs                              |
| 0.31 tons  | 0.00 tons                             |

620.16 1bs or 0.31 tons

Organic Gases Emission Credit(s): Form B3 = 620.16 lbs Form W = 0.00 lbs

Form B3 - Form W 620.16 - 0.00 =

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055690 Air Liquide America

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### AGMD 2004-2005 AER

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### Permitted Annual Equipment Emissions from Miscellaneous Sources

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- Section 1 -Product Identification

# **Material Safety Data Sheet**

The Sherwin-Williams Co. 101 Prospect Ave. N.W. Cleveland, OH 44115 Emergency telephone number Information telephone number Date of preparation (216) 566-2917 (216) 566-2902 August 22, 2002

©2002. The Sherwin-Williams Co

B66-300

## SHER-CRYL<sup>™</sup> HPA High Performance Acrylic, Gloss

| CAS No.    |                                  | ACGIH<br>TLV<br><stel></stel> | OSHA<br>PEL<br><stel></stel> | Units                           | LD50<br>(Rat-Oral)<br>mg/kg | LC50<br>(Rat)<br>ppm/4hr. | Vapor<br>Pressure<br>mm | <b>B66W300</b><br>Ultra<br>White | <b>B66W311</b><br>Extra<br>White | B66T304<br>Clear<br>Tint Base | <b>B66B300</b><br>Safety<br>Black | <b>B66E300</b><br>Safety<br>Orange | B66R300<br>Safety<br>Red | B66Y300<br>Safety<br>Yellow |
|------------|----------------------------------|-------------------------------|------------------------------|---------------------------------|-----------------------------|---------------------------|-------------------------|----------------------------------|----------------------------------|-------------------------------|-----------------------------------|------------------------------------|--------------------------|-----------------------------|
| 111-77-3   | § 2-(2-Methoxyethoxy)-ethanoi    | NAv                           | NAv                          |                                 | 5500                        | NAv                       | 1.0                     | 2                                | 1                                | 2                             | 2                                 | 2                                  | 2                        | 2                           |
| 1332-58-7  | Kaolin                           | [2]                           | 10[5]                        | mg/m3 as Dus<br>[Resp. Fraction |                             | NAv                       |                         |                                  |                                  | 3                             | 3                                 | 3                                  | 3                        | 3                           |
| 13463-67-7 | Titanium Dioxide.                | 10                            | 10[5]                        | mg/m3 as Dus<br>[Resp. Fraction | NIAU                        | NAv                       |                         | 23                               | 14                               | 0 - 5                         |                                   | 1                                  |                          | 5                           |
| 1333-86-4  | Carbon Black.                    | 3.5                           | 3.5                          | mg/m3                           | NAv                         | NAv                       |                         | < 3% may                         | be added du                      | e to tinting                  | 1                                 |                                    |                          |                             |
|            | Weight per Gallon (lbs.)         |                               |                              |                                 |                             |                           |                         | 10.30                            | 9.61                             | 8.76                          | 8.80                              | 8.98                               | 8.87                     | 9.29                        |
|            | Solids by Weight (%)             |                               |                              |                                 |                             |                           |                         | 50.2                             | 47.0                             | 42.5                          | 42.2                              | 43.8                               | 43.2                     | 45.6                        |
|            | Solids by Volume (%)             |                               |                              |                                 |                             |                           |                         | 37.4                             | 37.8                             | 38 6                          | 38 0                              | 38.5                               | 38.6                     | 38.4                        |
|            | Percent Water,                   |                               |                              |                                 |                             |                           |                         | 42.4                             | 44.8                             | 49.3                          | 49.9                              | 48.2                               | 48.8                     | 46.7                        |
| 2          | VOC (Volatile Organic Compoun    | ds) Emitte                    | d - Ibs./ga                  | 1.                              |                             |                           |                         | 0.73                             | 0.76                             | 0 70                          | 0,68                              | 0.70                               | 0.68                     | 0.68                        |
|            | VOC Less Water & Federally Ex    | empt Solve                    | nts - Ibs./                  | gal.                            |                             |                           |                         | 1.57                             | 1.59                             | 1,47                          | 1 45                              | 1.47                               | 1.44                     | 1.45                        |
| ,          | Photochemically Reactive         |                               |                              |                                 |                             |                           |                         | No                               | No                               | No                            | No                                | No                                 | No                       | No                          |
|            | Flash Point (°F)                 |                               | _                            |                                 |                             |                           |                         | None                             | None                             | None                          | None                              | None                               | None                     | None                        |
|            | HMIS (NFPA) Rating (health - fla | mmability                     | - reactivit                  | v)                              |                             |                           |                         | 2-0-0                            | 2 - 0 - 0                        | 2-0-0                         | 2* • 0 - 0                        | 2 - 0 - 0                          | 2-0-0                    | 2-0-0                       |

<sup>9</sup> Ingredient subject to the reporting requirements of the Superfund Amendments and Reauthorization Act (SARA) Section 313; 40 CFR 372:65 C

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→→→ MSDS Text Page Follows →→

## SHER-CRYL<sup>™</sup> HPA High Performance Acrylic, Gloss

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#### Section 3 - Hazards Identification

ROUTES OF EXPOSURE - Exposure may be by INHALATION and/or SKIN or EYE contact, depending on conditions of use. To minimize exposure, follow recommendations for proper use, ventilation, and personal protective equipment.

EFFECTS OF OVEREXPOSURE - Irritation of eyes, skin and upper respiratory system. In a confined area vapors in high concentration may cause headache, nausea or dizziness.

SIGNS AND SYMPTOMS OF OVEREXPOSURE - Redness and itching or burning sensation may indicate eye or excessive skin exposure.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE - None generally recognized. CANCER INFORMATION - For complete discussion of toxicology data refer to Section 11.

Section 4 — First Aid Measures

| If INHALED:   | If affected, remove from exposure. Restore breathing. Keep warm and quiet.    |
|---------------|-------------------------------------------------------------------------------|
| If on SKIN:   | Wash affected area thoroughly with soap and water.                            |
| •.            | Remove contaminated clothing and launder before re-use.                       |
| If in EYES:   | Flush eyes with large amounts of water for 15 minutes. Get medical attention, |
| If SWALLOWED: | Do not induce vomiting. Get medical attention immediately.                    |
|               |                                                                               |

#### Section 5 — Fire Fighting Measures

| FLASH POINT |      | LEL  | UEL  |
|-------------|------|------|------|
| See TABLE   |      | N.A. | N.A. |
|             | <br> |      |      |

FLAMMABILITY CLASSIFICATION - Not Applicable

EXTINGUISHING MEDIA - Carbon Dioxide, Dry Chemical, Alcohol Foam

UNUSUAL FIRE AND EXPLOSION HAZARDS - Closed containers may explode when exposed to extreme heat. During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.

SPECIAL FIRE FIGHTING PROCEDURES - Full protective equipment including self-contained breathing apparatus should be used. Water spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

#### Section 6 - Accidental Release Measures

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED - Remove all sources of ignition. Ventilate the area. Remove with inert absorbent.

#### Section 7 - Handling and Storage

#### (STORAGE CATEGORY - Not Applicable

C. PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING - Keep container closed when not in use. Transfer only to approved containers with complete and appropriate labeling. Do not take internally. Keep out of the reach of children.

#### Section 8 --- Exposure Controls/Personal Protection

PRECAUTIONS TO BE TAKEN IN USE - Use only with adequate ventilation. Avoid contact with skin and eyes. Avoid breathing vapor and spray mist. Wash hands after using.

These coalings may contain materials classified as nuisance particulates (listed "as Dust" in Section 2) which may be present at hazardous levels only during sanding or abrading of the dried film. It no specific dusts are listed in Section 2, the applicable limits for nuisance dusts are ACGIH TLV 10 mg./m3 (total dust), 3 mg./m3 (respirable fraction), OSHA PEL 15 mg./m3 (total dust), 5 mg./m3 (respirable fraction).

VENTILATION - Local exhaust preferable. General exhaust acceptable if the exposure to materials in Section 2 is maintained below applicable exposure limits. Refer to OSHA Standards 1910.94, 1910.107, 1910.108. IN RESPIRATORY PROTECTION - If personal exposure cannot be controlled below applicable limits by ventilation, wear a properly fitted organic vapor/particulate respirator approved by NIOSH/MSHA for protection against materials in Section 2.

When sanding or abrading the dried film, wear a dust/mist respirator approved by NIOSH/MSHA for dust which may be generated from this product, underlying paint, or the abrasive.

PROTECTIVE GLOVES - Wear gloves which are recommended by glove supplier for protection against materials in Section 2.

EYE PROTECTION - Wear safety spectacles with unperforated sideshields

#### Section 9 - Physical and Chemical Properties

| PRODUCT WEIGHT   | See TABLE    | EVAPORATION RATE    | Slower than ether |
|------------------|--------------|---------------------|-------------------|
| SPECIFIC GRAVITY | 1.05 - 1.24  | VAPOR DENSITY       | Heavier than air  |
| BOILING POINT    | 212 - 477 °F | MELTING POINT       | Not Available     |
| VOLATILE VOLUME  | 61 - 62 %    | SOLUBILITY IN WATER | Not Available     |
| pН               | 9.0          |                     |                   |
|                  |              |                     |                   |

#### Section 10 - Stability and Reactivity

STABILITY - Stable

CONDITIONS TO AVOID - None known. INCOMPATIBILITY - None known.

HAZARDOUS DECOMPOSITION PRODUCTS - By fire: Carbon Dioxide, Carbon Monoxide HAZARDOUS PECOMPOSITION - Will not occur

Section 11 - Toxicological Information

CHRONIC Health Hazards - Carbon Black is classified by IARC as possibly carcinogenic to humans (group 2B) based on experimental animal data, however, there is insufficient evidence in humans for its carcinogenicity. Rats exposed to titanium dioxide dust at 250 mg./m3 developed lung cancer, however, such exposure levels are n attainable in the workplace.

Section 12 - Ecological Information

No data available.

#### Section 13 - Disposal Considerations

WASTE DISPOSAL METHOD - Waste from these products is not hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261.

Incinerate in approved facility. Do not incinerate closed container. Dispose of in accordance with Federal, State/Provincial, and Local regulations regarding pollution.

Section 14 --- Transport Information

#### No data avallable.

Section 15 - Regulatory Information

CALIFORNIA PROPOSITION 65 - WARNING: These products contain chemicals known to the State of California to cause cancer and birth defects or other reproductive harm

TSCA CERTIFICATION - All chemicals in these products are listed, or are exempt from listing, on the TSCA inventory.

#### Section 16 --- Other Information

These products have been classified in accordance with the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR.

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The above information pertains to these products as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to these products may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.

DICE 0083

--- Section 1 ---Product Identification

02



**Material Safety Data Sheet** 

The Sherwin-Williams Co. 101 Prospect Ave. N.W. Cleveland, OH 44115 Emergency telephone number Information telephone number Date of preparation

· (216) 566-2917 (216) 566-2902 August 22, 2002

@2002, The Sherwin-Williams Co

B66-350

## SHER-CRYL<sup>™</sup> HPA High Performance Acrylic, Semi-Gloss

|            |                                                               | · · · · · · · · · · · · · · · · · · · |                              |                                  |                             |                           |                         |                                  |                           |                                      | _      |
|------------|---------------------------------------------------------------|---------------------------------------|------------------------------|----------------------------------|-----------------------------|---------------------------|-------------------------|----------------------------------|---------------------------|--------------------------------------|--------|
| CAS No.    | - Section 2 -<br>Hazardous Ingredients<br>(percent by weight) | ACGIH<br>TLV<br><stel></stel>         | OSHA<br>PEL<br><stel></stel> | Units                            | LD50<br>(Rat-Oral)<br>mg/kg | LC50<br>(Rat)<br>ppm/4hr. | Vapor<br>Pressure<br>mm | <b>B66W350</b><br>Ultra<br>White | B66W351<br>Extra<br>White | <b>B66T354</b><br>Clear<br>Tint Base | ]      |
| 111-77-3   | § 2-(2-Methoxyethoxy)-ethanol                                 | NAv                                   | NAv                          |                                  | 5500                        | NAv                       | 1.0                     | 1                                | 1                         | 1                                    | %      |
| 14808-60-7 | Quartz                                                        | 0 05                                  | 0.1                          | mg/m3 as<br>Resp. Dust           | NAv                         | NAv                       |                         |                                  |                           | 0.1                                  | В      |
| 1332-58-7  | Kaolin                                                        | [2]                                   | 10[5]                        | mg/m3 as Dust<br>[Resp. Fraction |                             | NAv                       |                         |                                  |                           | 3                                    | l w    |
| 14807-96-6 | Taic                                                          | 2                                     | 2                            | mg/m3 as<br>Resp. Dust           | NAv                         | NAv                       |                         | 8                                | 10                        | 11                                   | E      |
| 13463-67-7 | Titanium Dioxide.                                             | 10                                    | 10[5]                        | mg/m3 as Dus<br>[Resp. Fraction  |                             | NAv                       |                         | 21                               | 12                        | 0 - 5                                | G      |
| 1333-86-4  | Carbon Black.                                                 | 3.5                                   | 3.5                          | mg/m3                            | NAv                         | NAv                       |                         | < 3% ma                          | ay be added due           | to tinting                           | н<br>т |
|            | Weight per Galion (lbs.)                                      |                                       |                              |                                  |                             |                           |                         | 10.76                            | 10.11                     | 9.38                                 | Ţ      |
|            | Solids by Weight (%)                                          |                                       |                              |                                  |                             |                           |                         | 53.9                             | 51.4                      | 47.1                                 |        |
|            | Solids by Volume (%)                                          |                                       |                              |                                  |                             |                           |                         | 39.4                             | 40.1                      | 39.4                                 |        |
|            | Percent Water                                                 |                                       |                              |                                  |                             |                           |                         | 39.0                             | 40.7                      | 43.9                                 | 7      |
|            | VOC (Voiatile Organic Compour                                 | ds) Emitte                            | d - Ibs./ga                  | 1.                               |                             |                           |                         | 0.74                             | 0.76                      | 0.82                                 | 1      |
|            | VOC Less Water & Federally Ex                                 | empt Solve                            | ints - Ibs./                 | ʻgal.                            |                             |                           |                         | 1.51                             | 1.53                      | 1.64                                 |        |
|            | Photochemically Reactive                                      |                                       |                              |                                  |                             |                           |                         | No                               | No                        | No                                   | ]      |
|            | Flash Point (°F)                                              |                                       |                              |                                  |                             |                           |                         | None                             | None                      | None                                 |        |
|            | HMIS (NFPA) Rating (health - fi                               | ammability                            | - reactivit                  | y)                               |                             |                           |                         | 2 - 0 - 0                        | 2 - 0 - 0                 | 2* - 0 - 0                           | 1      |

§ Ingredient subject to the reporting requirements of the Superfund Amendments and Reauthorization Act (SARA) Section 313, 40 CFR 372.65 C

## SHER-CRYL<sup>™</sup> HPA High Performance Acrylic, Semi-Gloss

#### Section 3 — Hazards Identification

- ROUTES OF EXPOSURE Exposure may be by INHALATION and/or SKIN or EYE contact, depending on conditions of use. To minimize exposure, follow recommendations for proper use, ventilation, and personal protective equipment
- EFFECTS OF OVEREXPOSURE Irritation of eyes, skin and upper respiratory system. In a confined area vapors in high concentration may cause headache, nausea or dizziness
- SIGNS AND SYMPTOMS OF OVEREXPOSURE Redness and itching or burning sensation may indicate eye or excessive skin exposure.
- MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE . None generally recognized.
- CANCER INFORMATION For complete discussion of toxicology data refer to Section 11

#### Section 4 — First Aid Measures

| If INHALED:   | If affected, remove from exposure. Restore breathing. Keep warm and quiet.    |
|---------------|-------------------------------------------------------------------------------|
| If on SKIN:   | Wash affected area thoroughly with soap and water.                            |
| · ·           | Remove contaminated clothing and launder before re-use.                       |
| If in EYES.   | Flush eyes with large amounts of water for 15 minutes. Get medical attention. |
| If SWALLOWED: | Do not induce vomiting. Get medical attention immediately                     |
|               |                                                                               |

#### Section 5 — Fire Fighting Measures

| FLASH POINT | LEL  | UEL  |
|-------------|------|------|
| See TABLE   | N.A. | N.A. |
|             |      |      |

FLAMMABILITY CLASSIFICATION - Not Applicable

EXTINGUISHING MEDIA - Carbon Dioxide, Dry Chemical, Alcohol Foam

UNUSUAL FIRE AND EXPLOSION HAZARDS - Closed containers may explode when exposed to extreme heat. During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention,

SPECIAL FIRE FIGHTING PROCEDURES - Full protective equipment including self-contained breathing apparatus should be used. Water spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

#### Section 6 - Accidental Release Measures

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED - Remove all sources of ignition. Ventilate the area. Remove with inert absorbent.

#### Section 7 — Handling and Storage

5

STORAGE CATEGORY - Not Applicable

...,PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING - Keep container closed when not in use. Transfer only to approved containers with complete and appropriate labeling. Do not take internally. Keep out of the reach of children.

#### Section 8 --- Exposure Controls/Personal Protection

PRECAUTIONS TO BE TAKEN IN USE - Use only with adequate ventilation. Avoid contact with skin and eyes. Avoid breathing vapor and spray mist. Wash hands after using.

These coatings may contain materials classified as nuisance particulates (listed "as Dust" in Section 2) which may be present at hazardous levels only during sanding or abrading of the dried film. If no specific dusts are listed in

Section 2, the applicable limits for nuisance dusts are ACGIH TLV 10 mg./m3 (total dust), 3 mg./m3 (respirable fraction), OSHA PEL 15 mg./m3 (total dust), 5 mg./m3 (respirable fraction).

- JVENTILATION Local exhaust preferable. General exhaust acceptable if the exposure to materials in Section 2 is maintained below applicable exposure limits. Refer to OSHA Standards 1910.94,1910 107, 1910.108.
- , RESPIRATORY PROTECTION If personal exposure cannot be controlled below applicable limits by ventilation,
- wear a properly fitted organic vapor/particulate respirator approved by NIOSH/MSHA for protection against materials in Section 2.

When sanding or abrading the dried film, wear a dust/mist respirator approved by NIOSH/MSHA for dust which may be generated from this product, underlying paint, or the abrasive.

PROTECTIVE GLOVES - Wear gloves which are recommended by glove supplier for protection against materials in Section 2.

EYE PROTECTION - Wear safety spectacles with unperforated sideshields.

#### Section 9 - Physical and Chemical Properties

| PRODUCT WEIGHT   | See TABLE    |
|------------------|--------------|
| SPECIFIC GRAVITY | 1.13 - 1.30  |
| BOILING POINT    | 212 - 477 °F |
| VOLATILE VOLUME  | 59 - 60 %    |
| bH               | 9.0          |
|                  |              |

EVAPORATION RATE VAPOR DENSITY MELTING POINT SOLUBILITY IN WATER

Slower than ether Heavier than air Not Available R Not Available

#### Section 10 --- Stability and Reactivity

CONDITIONS TO AVOID - None known. INCOMPATIBILITY - None known. HAZARDOUS DECOMPOSITION PRODUCTS - By fire: Carbon Dioxide, Carbon Monoxide HAZARDOUS POLYMERIZATION - Will not occur

#### Section 11 - Toxicological Information

CHRONIC Health Hazards - Carbon Black is classified by IARC as possibly carcinogenic to humans (group 2B) based on experimental animal data, however, there is insufficient evidence in humans for its carcinogenicity. Crystalline Silica (Quartz, Cristobalite) is listed by IARC and NTP. Long term exposure to high levels of silica dust which can occur only when sanding or abrading the dry film, may cause lung damage (silicosis) and possibly cancer. Rats exposed to titanium dioxide dust at 250 mg./m3 developed lung cancer, however, such exposure levels are not attainable in the workplace.

#### Section 12 - Ecological Information

No data available.

STABILITY - Stable

#### Section 13 - Disposal Considerations

WASTE DISPOSAL METHOD - Waste from these products is not hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261

Incinerate in approved facility Do not incinerate closed container. Dispose of in accordance with Federal, State/Provincial, and Local regulations regarding pollution.

#### Section 14 — Transport Information

No data available.

DICE

00839

#### Section 15 --- Regulatory Information

CALIFORNIA PROPOSITION 65 - WARNING: These products contain chemicals known to the State of California to cause cancer and birth defects or other reproductive harm

TSCA CERTIFICATION - All chemicals in these products are listed, or are exempt from listing, on the TSCA Inventory.

Section 16 - Other Information

These products have been classified in accordance with the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR.

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The above information pertains to these products as currently formulated, and is based on the information available at this time Addition of reducers or other additives to these products may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no tiability in connection with any use of this information.

State of California - California Environmental Protection Agency Department of Toxic Substances Control P.O. Box 806 Sacramento, CA 95812-0806

Generator Information Services Section 1-877-454-4012 (Calif. Callers Only Toll Free) or 1-916-255-4439 (Outside Calif.) www.dtsc.ca.gov

## 2006 VERIFICATION QUESTIONNAIRE

(See back of this form for instructions.)

Complete and return all forms with appropriate fees not later than 30 days from the date of receipt. Failure to return all forms will lead to the suspension of your EPA Identification Number. . . . . . . . . . . . . . . .

If your mailing address has changed, please PRINT or TYPE the correct address below: Do not abbreviate. AIR LIQUIDE AMERICA CORP AIR UQUIDE AMERICA LP Address: 8832 DICE RD SANTA FE SPRINGS, CA 90670-0000 City/State/Zip: DO NOT ALTER INFORMATION IN THIS AREA 1. EPA ID Number: CAL000021169 8832 DICE ROAD 2. Location address: SANTA FE SPRINGS, CA 90670-0000 If your business has moved, call GISS. 58-093905 3.Føderal Employer Number UIA 4.BOE ID Number\_ 5. COMPANY OWNER INFO: NOTE: California EPA ID numbers issued by DTSC may not be transferred to another owner. If the ownership of your organization has changed, please call GISS for assistance. Do NOT fill in new owner information below. AIR LIQUIDE AMERICA LP Company owner or Corp. name: 2700 POST OAK BLVD HOUSTON, TX 77056-0000 Address: (713)524-8000 City/State/Zip:\_\_\_\_\_ (000)000-0000 Telephone.\_\_\_ Fax Number\_\_\_\_ Date of ownership change: 6. D My new EPA ID number is \_\_\_\_ \_ ------7. COMPANY NAME: If printed company name is incorrect, please provide correct name:

AIR LIQUIDE AMERICA CORP Company name/ AKA: 8. CONTACT INFO: If printed contact is incorrect or blank, please provide correct information: Name/Title ILYA KAZHOKIN Address:\_\_\_ 8832 DICE RD CA, CA 90570-0000 City/State/Zip:\_\_\_\_\_ (562)464-5242 Telephone. (000)000-0000 Fax Number Business email address:

9. SIC CODE (4 digits):

If printed SIC Code is incorrect or blank, please provide correct information:

5169

10. If the business has moved you must CANCEL the EPA ID number listed on Line 1. (See reverse side.) Check here if you wish to CANCEL the EPA ID number.

DTSC 1193 [front] (3/08) 10581

Printed on Recycled Paper 1

**DICE 00840** 

 $\Omega/3$ 

#### Hazardous Waste Handlers:

This is your fee assessment for the Environmental Protection Agency Identification (EPA ID) Number Verification Fee and Manifest Fee as required by Health and Safety Code, Sections 25205.16 and 25205.15. The EPA ID Number Verification Fee is for all valid EPA ID numbers held by your organization during the fiscal year 2005/2006 (from July 1, 2005 through June 30, 2006). The Manifest Fee assessment is for all manifests used by your organization from January 1, 2005 through December 31, 2005.

.. ...

. . .

Instructions are included to assist you in completing these forms and calculating the required fees, if applicable. Frequently asked questions and answers are available under "Managing Hazardous Waste" at our website www.dtsc.ca.gov. If you have any questions, please contact DTSC's Generator Information Services Section (GISS) toll free at 1-877-454-4012 if you are dialing within California, or 1-916-255-4439 if you are outside California. The GISS operating hours are 8:30 a.m. to 4:30p.m. (Pacific Standard Time), Monday through Friday. (Note: The phone lines will be very busy. Please be prepared to be placed on hold.)

All forms and payment, if any, are due 30 days from the receipt of this assessment notice. Checks are to be made payable to the Department of Toxic Substances Control or "DTSC". Return all forms and payment in the enclosed return envelope or to the following address:

Accounting Unit, EPA ID Department of Toxic Substances Control PO Boy 806 Sacramento, CA 95812-0808

### INSTRUCTIONS FOR COMPLETING THE VERIFICATION QUESTIONNAIRE

#### You are mandated by law to provide or verify the information on the verification guestionnaire and return it to DTSC.

#### Printed organization name and mailing address:

Provide any correction to the organization's printed mailing address.

Lines 1 and 2 (shaded box): Check your records to verify that the printed EPA ID number and location address are both correct. Do not change, strike out, or write over this information. If the information is incorrect, please call GISS for assistance. (NOTE: EPA ID numbers are site specific to the location to which they are originally issued. EPA ID numbers cannot be moved to another location. If the location address printed on Line 2 is no longer the address of your site, please call GISS for assistance. You may need a new EPA ID number.)

### Lines 3 and 4:

Provide your Federal Employer Number and BOE ID Number, you may call BOE at (916) 322-9477 for more information

#### Lines 5 & 6

Provide any corrections and/or additions to the information pre-printed on this form. However, if there has been a change in ownership, call GISS. When there is a change in ownership, you must get a new EPA ID number. GISS staff will instruct you about Line 6 when you call.

#### Lines7 and 8:

Provide any corrections and/or additions to the information pre-printed on this form. Please provide your business email address. This will be part of the facility record and can be used to send you information on the annual verification process. For security reasons, we do not accept personal Hotmail, Yahoo, or Juno email addresses.

#### Line 9:

Provide any corrections to your SIC (Standard Industrial Classification) Code for your primary business activity. If no SIC Code is pre-printed on Line 9, please provide the primary SIC Code for your business. The SIC Code is a four digit number that best describes your company's primary business activity. If your company's SIC Code is unknown, you can obtain the number on the Internet at: www.osha.gov/oshstats/sicser.html

#### Line10:

Check this box ONLY if you wish to cancel the EPA ID number shown on Line 1. The cancellation date will be June 30, 2006. If your operations will continue after June 30, 2006, do not check the box at this time. Please notify DTSC when you cease operations. Please notify US EPA when canceling a US EPA ID number at (415) 495-8895.

If your organization has more than one EPA ID number, you should receive a Verification Questionnaire and a Schedule A - Manifest Calculation Sheet for each of your permanent EPA ID numbers. You must complete both forms for each EPA ID number assigned to your organization. (NOTE: The total dollar amount owed by your organization includes the manifest fees for all of your organization's EPA ID numbers. The total manifest fee dollar amount must be entered in Section B of the Schedule B - Fees Summary Sheet.)

DTSC 1193 [back] (3/06)

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**DICE 00841** 

- \_\_ Jun. 20. 2006 16:42: \_\_ P.:04 (.e.)

State of California – California Environmental Protection Agency Department of Toxic Substances Control P.O. Box 806 Sacramento, CA 95812-0806

Generator Information Services Section 1-877-454-4012 (Calif. Callers Only Toll Free) or 1-918-255-4439 (Outside Calif.) www.dtsc.ca.gov

### SCHEDULE A – MANIFEST FEE CALCULATION SHEET (2005 Manifests)

(See back of this form for sample manifest form.)

- 1 **-** - -

EPA ID Number: CAL000021160 Name of organization: AIR LIQUIDE AMERICA CORP

| and the second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second s |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | _      |                         |                                       |
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| the Do<br>the nu                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | January 1, 2005 through December 31, 2005,<br>epartment of Toxic Substances Control recorded<br>onber of California Manifests shown at the right<br>the EPA ID printed above.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | F      | Recycled:               | i i i i i i i i i i i i i i i i i i i |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | المتحدين المحمد المحمد المحمد المحمد المحمد المحمد المحمد المحمد المحمد المحمد المحمد المحمد المحمد المحمد المحمد المحمد المحمد المحمد المحمد المحمد المحمد المحمد المحمد المحمد المحمد المحمد المحمد المحمد المحمد المحمد المحمد المحمد المحمد المحمد المحمد المحمد المحمد المحمد المحمد المحمد المحمد المحمد المحمد المحمد المحمد المحمد المحمد المحمد المحمد المحمد المحمد المحمد المحمد المحمد المحمد المحمد المحمد المحمد المحمد المحمد المحمد المحمد المحمد المحمد المحمد المحمد المحمد المحمد المحمد المحمد المحمد المحمد المحمد المحمد المحمد المحمد المحمد المحمد المحمد المحمد المحمد المحمد المحمد المحمد المحمد المحمد المحمد المحمد المحمد المحمد المحمد المحمد المحمد المحمد المحمد المحمد المحمد المحمد المحمد المحمد الم |        | e for solely rec        | cieu manifests.)                      |
| Man                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | ifest Fee Calculation:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |        |                         |                                       |
| a.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Enter the total number of non-recycled manifests from above                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 0      |                         |                                       |
| ь.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | How many of the <b>non-recycled</b> manifests listed on Line a. are non-recycled air compliance solvent manifests                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 0      | X \$3.50 = \$ _         | 0                                     |
| c.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Subtract the number of manifests on Line b. from Line a                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 0      | X \$7.50 = \$           | 0                                     |
| d.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | No fee due for recycled manifests                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | •••••  | \$ _                    | 0.00                                  |
| e.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Total of Line b. + Line c<br>Note: The manifest count on Lines b. and c. should equal t                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | the co | = \$<br>punt on Line a. | 0,00                                  |

### INSTRUCTIONS FOR COMPLETING SCHEDULE A

1. For lines a. – e. above, enter the numbers requested for each line.

- For line b. multiply the number of manifests by \$3.50 and record the dollar amount.
- For line c. multiply the number of manifests by \$7.50 and record the dollar amount.
- For line e. add dollar amounts of lines b. and c. This total is the manifest fees due for the EPA ID number shown at the top of the page.
- 2. For this assessment there are three types of manifests: non-recycled, recycled and air compliance solvents manifests. Manifests used solely for recycled waste will have a handling code reported as "01" or "R01" in item K on the manifest form (see circled area on manifest sample on the back of this form). All wastes listed on a manifest must have handling codes of "01" or "R01" to be counted as a solely recycled manifest. You need to pay manifest fees only for non-recycled manifests. There is no fee for recycled manifests.
- 3. If you believe the manifest totals shown in the box above are incorrect, you may use the manifest totals from your own files to calculate the fee. However, please be aware that any difference between the amount you report and the amount printed above is subject to audit by DTSC.
- 4. On January 1, 1999 many businesses were required to switch from petroleum-based solvents to air compliance solvents (also called water-based cleaners). The fee for manifests used solely for hazardous waste derived from air compliance solvents was reduced from \$7.50 to \$3.50. Most air compliance solvent waste is now recyclable. Manifests used to ship air compliance solvents that were recycled should not be charged \$3.50. The Manifest Fee Calculation above includes air compliance solvent manifests as part of the non-recycled manifest count. Businesses that do not recycle their air compliance solvent waste who desire to use the reduced \$3.50 fee must use their internal records to identify manifests used solely for air compliance solvent wastes.

DTSC 1194A (3/06)

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DICE 00842

| California—Emmental Franciska Agency<br>proved OMS No. 2010–2019 (Expires 9-30-96)<br>and or type. Form designed for use on ellio (12-pitch) typewriter. | See Instructions on back of page 6.                                                                                                                               | Department al Taxle Substances Co<br>Sacramento, Culifornia             |
|----------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------|
| UNIFORM HAZARDOUS                                                                                                                                        | US SPA ID Na. Anniest Document Na. 2, Po                                                                                                                          | ge 1 Information in the shaded creas<br>is not required by Federal law, |
| T-Segerator's Name and Mailing Address                                                                                                                   | A. Stute Manifest De                                                                                                                                              |                                                                         |
|                                                                                                                                                          | 8. State Generater's                                                                                                                                              | 95302045                                                                |
| 4. Generator's Phone ( )                                                                                                                                 |                                                                                                                                                                   |                                                                         |
| 5. Transporter 1 Company Name                                                                                                                            | 6. US EPA ID Number S. Store Transporter                                                                                                                          | s (D                                                                    |
| المحافظة مراجع والمحافظة والمحافظة والمحافظة والمحافظة والمحافظة والمحافظة والمحافظة والمحافظة والمحافظة والمحاف                                         | D. Tramporter's Phoe                                                                                                                                              |                                                                         |
| 7. Transporter 2 Company Name                                                                                                                            | 6. US EPA 10-HOmber E. Stole Transported                                                                                                                          |                                                                         |
| 9. Designanod Fadility Name and Site Address                                                                                                             | 10. US EPA ID Number G. Stone Facility NO                                                                                                                         |                                                                         |
|                                                                                                                                                          | H. Facility's Phane                                                                                                                                               |                                                                         |
|                                                                                                                                                          |                                                                                                                                                                   | T.                                                                      |
| 11. US DOT a contrar (induced Property john lame and                                                                                                     | a C , and (D ) abov                                                                                                                                               | y Wi/Vol : Worke Number                                                 |
|                                                                                                                                                          |                                                                                                                                                                   |                                                                         |
| DA NAT                                                                                                                                                   |                                                                                                                                                                   |                                                                         |
| DU INUI                                                                                                                                                  |                                                                                                                                                                   |                                                                         |
|                                                                                                                                                          |                                                                                                                                                                   | State                                                                   |
| This is a sample manifest includ                                                                                                                         | ed for your information only.                                                                                                                                     | EPA/Other                                                               |
| d                                                                                                                                                        |                                                                                                                                                                   | State-                                                                  |
|                                                                                                                                                          |                                                                                                                                                                   | BA/Otw                                                                  |
| J. Additional Descriptions for Materials Lided Above                                                                                                     | K. Handling. Codes for                                                                                                                                            | Watter Lipted Above                                                     |
|                                                                                                                                                          | a.                                                                                                                                                                | b.                                                                      |
|                                                                                                                                                          | <i>c</i>                                                                                                                                                          | d                                                                       |
| 5. Special Handling Instructions and Additional Information                                                                                              |                                                                                                                                                                   |                                                                         |
| order to determine if your wast                                                                                                                          | te was recycled or non-                                                                                                                                           |                                                                         |
|                                                                                                                                                          | es in Item K. (circled above) on you                                                                                                                              | r manifest copy(s).                                                     |
| on-GENERATOR'S CERTIFICATION: ( hereby declare that the con                                                                                              | ments of this consignment are fully and accurately described above by pro-<br>condition for transport by highway according to applicable international e          | per shipping name and an classified                                     |
|                                                                                                                                                          | ogram in place to reduce the volume and tailcity of wate generated to                                                                                             |                                                                         |
|                                                                                                                                                          | vie method of meanment, process, or disposal currently available to me w<br>hall quantity generator, i have made a good faith effort to minimize my<br>na efford. |                                                                         |
| Amed/Typed Nume                                                                                                                                          | Signorure                                                                                                                                                         | Month Day Year                                                          |
| 7. Transporter 1 Acknowledgement at Recent of Manuals                                                                                                    |                                                                                                                                                                   |                                                                         |
| inted/Typed Name                                                                                                                                         | Standin                                                                                                                                                           | Mansh Day Year                                                          |
| <ol> <li>Transporter 2 Acknowledgement of Receipt of Materials<br/>Intel/Typed Nanto</li> </ol>                                                          | Pitgrature                                                                                                                                                        | Manits Day Year                                                         |
| P. Discrepancy Indication Space                                                                                                                          |                                                                                                                                                                   |                                                                         |
|                                                                                                                                                          |                                                                                                                                                                   |                                                                         |
|                                                                                                                                                          | -                                                                                                                                                                 |                                                                         |
| . Facility Owner or Operator Certification of receipt of hazardays<br>med/Insta Name                                                                     | naterials covered by this manifest except as noted in stem 19<br>Signature                                                                                        | Marth Bay Year                                                          |
|                                                                                                                                                          | )<br>:<br>:                                                                                                                                                       |                                                                         |
| 90                                                                                                                                                       | NOT WRITE BELOW THIS LINE.                                                                                                                                        |                                                                         |
|                                                                                                                                                          |                                                                                                                                                                   |                                                                         |

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## DICE 00843

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State of California – California Environmental Protection Agency Department of Toxic Substances Control P.O. Box 806 Sacramento, CA 95812-0806

AIR LIQUIDE AMERICA LP Fax: 15626931156

Generator Information Services Section 1-877-454-4012 (Calif. Callers Only Toll Free) or 1-916-255-4439 (Outside Calif.) www.dtsc.ca.gov 2008

Jun 20, 2006 / 16, 42 P. 06

### SCHEDULE B – FEES SUMMARY SHEET

(See back of this form for complete instructions.)

All completed forms and appropriate fees must be submitted not later than 30 days from the date of receipt.

### A. EPA ID NUMBER VERIFICATION FEE (July 1, 2005 through June 30, 2006)

- 1. Name of your organization: <u>AIY LIPLICE L.P.</u>
- 2. Enter the total number of California employees in your entire organization: 283 (*Please read instructions for Line 2 on the back of this form.*)

| Number of<br>Employees                 | 1 - 49   | 50 - 74     | 75 - 99        | 100 - 249       | 250 - 499 | 500 or more |
|----------------------------------------|----------|-------------|----------------|-----------------|-----------|-------------|
| EPA ID<br>Fee Rate                     | NÓ FEE   | \$150       | \$175          | \$200           | \$225     | \$250       |
| ······································ | Tabal CO | 10 Marshart | Manifiantian F | less met to ave |           |             |

(Total EPA ID Number Verification Fees not to exceed \$5000)

- 3. Enter the EPA ID Number Verification Fee rate from the table above:
- 5. Multiply Line 3 by Line 4:
- TOTAL EPA ID Number Verification Fee due (Enter the dollar amount from Line 5 above OR \$5000, whichever amount is less.):

### B. MANIFEST FEE (January 1, 2005 through December 31, 2005)

7942

 Enter the dollar amount from Line e on your Schedule A – Manifest Fee Calculation Sheet. (If you are reporting more than one ID number, enter the **TOTAL** of the dollar amounts from Line e on all of your Schedule A – Manifest Fee Calculation Sheets.)

### C. GRAND TOTAL OF EPA ID NUMBER VERIFICATION FEES AND MANIFEST FEES

Hazbolly

 Add Line A6 and Line B1, enter the total dollar amount. It is not uncommon to not owe fees. You are still required to complete and submit all forms. If fee is due, please make your check payable to "DTSC" for the total amount on this line: =\$ 225 Please write one of your EPA ID numbers on your check.

To pay your fees via credit card, complete the enclosed "EPA ID and Manifest Fee Credit Card Payment Form".

I hereby certify under penalty of perjury that the information on the Verification Questionnaire(s), Schedule A(s) and Schedule B is true and correct Signature of Preparer: <u>Mark Montcourse</u> Title: <u>Plust Markager</u>

Date:

| THIS SECTION FOR DEPARTMENT USE ONLY |           |               |          |  |  |  |
|--------------------------------------|-----------|---------------|----------|--|--|--|
| Check No:                            | SAMOUNT   | DATE:         | CID NO:  |  |  |  |
| 12560055:                            | 12560092  | 12560065:     |          |  |  |  |
| 12560035:                            | 12560091: | AMOUNT DUE    |          |  |  |  |
| 12560075:                            | 12560096: | PRIMARY ID #: | <u>_</u> |  |  |  |

DTSC 11948 [front] (3/06)

Name (please print):\_\_

**DICE 00844** 

Phone: FOIA ex 6, Personal Privacy

\$ 225

<u>=s</u> 225

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### INSTRUCTIONS FOR COMPLETING SCHEDULE B - FEES SUMMARY SHEET

### SECTION A (EPA ID Number Verification Fee for 2005/2006)

NOTE: Health and Safety Code, Section 25205.16 requires DTSC to verify the accuracy of information related to generators, transporters and facilities authorized to treat, dispose of, store, or recycle hazardous waste. DTSC captures this data through the Verification Questionnaire and uses the collected information to ensure that the Hazardous Waste Information Network database is current and accurate. The EPA ID Number Verification Fee, which has been established by State legislation, funds this effort.

Line 1: Enter the full name of your organization. Do not abbreviate.

Line 2: Enter the total number of individuals employed in California by your organization. An employee must have worked more than 500 hours during the calendar year 2005 to be included in your calculation. ("Organization" is defined as a registered corporation, sole proprietor, partnership, or company. For public agencies, "organization" is defined as a city, county, commission, agency, department or district.)

Line 3: Based on the number of employees entered on Line 2, determine your EPA ID Number Verification Fee rate by using the table shown and then enter that rate on Line 3.

Line 4: Enter the total number of permanent EPA ID numbers assigned to your organization. Do not include "CAC" numbers in your total, as they are temporary and not subject to the EPA ID Number Verification Fee. If you indicated on the Verification Questionnaire that you wish to deactivate a permanent EPA ID number, you must still include that number in this total. The fee is required because that EPA ID number was active during the billing period (July 1, 2005 through June 30, 2006).

Enter the EPA ID Number Verification Fee. This fee is determined by multiplying the fee rate Line 5: (reported on Line 3) by the total of permanent EPA ID numbers assigned to your organization (reported on Line 4).

Line 6: Enter either the amount shown on Line 5, OR \$5000 (whichever amount is less). The maximum EPA ID Number Verification Fee is \$5000 per organization.

### SECTION B (Manifest Fees for January 1, 2005 through December 31, 2005)

Line 1: Enter the total manifest fees due. This amount is shown on Line e on the Schedule A - Manifest Fee Calculation Sheet. If your organization has more than one EPA ID number, enter the total of the dollar amounts from all your Schedule A - Manifest Fee Calculation Sheets.

### SECTION C (Grand total of all EPA ID Number Verification Fees and Manifest Fees owed)

Line 1: Add Line A6 and B1. The sum of these two amounts is the total fee due from your organization. Please make your check payable to "DTSC" or use the credit card payment form. Please write one of your EPA ID numbers on your check.

#### **IMPORTANT:** YOU MUST RETURN THE ORIGINAL OF THE FOLLOWING DOCUMENTS WITHIN 30 DAYS:

Verification Questionnaire (one form for each EPA ID number)

107

- Schedule A Manifest Fee Calculation Sheet (one form for each EPA ID number)
- Schedule B Fee Summary Sheet (only ONE of these forms is needed for your entire organization)

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DTSC 1194B [back] (3/06)

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CSP 05P 06 98210

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#### DICE 00845

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| AIR LIQUIDE AMERICA                                                                                                                          | LP Fax:15626931156                                                                                         | Jun 20.2006 -                                                                                                                                                                                      | <b>16:43</b> ⊇ P. 08 ⊖.                                                                                                            |
|----------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                                                              |                                                                                                            |                                                                                                                                                                                                    |                                                                                                                                    |
| ate of Calitomia – California Environmental<br>epartment of Toxic Substances Control<br>O. Box 806<br>acramento, CA 95812-0806               | Protection Agency                                                                                          | <ul> <li>Final And California - Construction State</li> <li>Final And California - Construction State</li> <li>Final Angle (Construction State</li> <li>Final Angle (Construction State</li> </ul> | nerator Information Services Section<br>4-4012 (Callf. Callers Only Toll Fre-<br>or 1-915-255-4439 (Outside Call<br>www.dtsc.ca.go |
| EPA ID AND M                                                                                                                                 | ANIFEST FEE CF                                                                                             |                                                                                                                                                                                                    | NT FORM                                                                                                                            |
| pay your EPA ID number fee<br>mpleted:                                                                                                       | and manifest fees by cr                                                                                    | redit card, complete this for                                                                                                                                                                      | m and return it with your                                                                                                          |
| Verification Questionnaire(s) – or<br>Manifest Fee Calculation Sheet S<br>Fees Summary Sheet Schedule E<br>If you prefer to pay by check, pl | chedule A(s) – one for e<br>3 – only one is required t                                                     | ach EPA ID number reporte                                                                                                                                                                          | d in this packet; and                                                                                                              |
| ) Company Name: <u>A</u><br>?) Name on Credit Card:                                                                                          | ir Lipuide                                                                                                 | L.P.                                                                                                                                                                                               |                                                                                                                                    |
|                                                                                                                                              |                                                                                                            |                                                                                                                                                                                                    |                                                                                                                                    |
|                                                                                                                                              |                                                                                                            |                                                                                                                                                                                                    |                                                                                                                                    |
|                                                                                                                                              | eported as grand total on                                                                                  | the Fees Summary Sheet Sc                                                                                                                                                                          | hedule B)                                                                                                                          |
| (Should match the amount re<br>7) Signature: Ar                                                                                              | eported as grand total on<br>Ha Macia                                                                      | the Fees Summary Sheet Sc                                                                                                                                                                          |                                                                                                                                    |
| (Should match the amount re<br>7) Signature:                                                                                                 | eported as grand total on<br>Ha Macia                                                                      | the Fees Summary Sheet Sc                                                                                                                                                                          |                                                                                                                                    |
| (Should match the amount re<br>7) Signature:                                                                                                 | eported as grand total on<br><u>Ha</u> <u>Macca</u><br>ler's original signature must<br>22) <u>464-523</u> | the Fees Summary Sheet Sc                                                                                                                                                                          |                                                                                                                                    |

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PRIVACY STATEMENT: The information on this form is requested by the Department of Toxic Substances Control, Accounting Unit. All information is voluntary. The purpose of this information is to verify the authenticity of the credit card you wish to use to pay your EPA ID Number and Manifest Fees. Failure to provide answers to any of the questions may cause your credit card payment request to be denied. For more information or access to this record, please contact the DTSC Accounting Unit at (918) 327-8514 or you may write to the address shown above.

| 1/110 0201       | ION FOR DEPARTMENT USE ONLY |              |
|------------------|-----------------------------|--------------|
| PRIMARY ID NO:   |                             |              |
|                  |                             |              |
| DTSC 1245 (3/06) |                             | CSP 05 96210 |

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**DICE 00846** 

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| ، <del></del> | F.         | IR LIGU           | IDE               | <br><br><br>       | 883<br>Santa Fe I   | ide America L.P.<br>2 Dice Road (1997) 12<br>Springs, CA 99670<br>162-693-1156 | ·<br>· |
|---------------|------------|-------------------|-------------------|--------------------|---------------------|--------------------------------------------------------------------------------|--------|
|               | Fax Co     | over              |                   |                    |                     |                                                                                |        |
|               | Date:      | 6/19/06-          |                   | Pages:             | 10 (inclu           | ding-cover)                                                                    |        |
|               | īo:        | Taming            | Davis             | From:              | Ilya                | Kazhowy                                                                        | _      |
|               | Company:   | 0                 |                   | Company:           | Air Liquide         |                                                                                | _      |
|               | Fax:       |                   |                   | Fax:               | 562-693-11          | 56                                                                             | _      |
| -             | Phone:     |                   |                   | Phone:             |                     |                                                                                | _      |
|               | Re:        |                   |                   |                    |                     |                                                                                | -      |
|               | 🗆 Urgent   | For Review        | 🗆 Please Comm     | nent 🛛 As req      | uested              |                                                                                |        |
|               |            | No. L             | rees with a low   |                    |                     |                                                                                | -      |
|               |            |                   |                   |                    |                     |                                                                                |        |
|               | PROPERTY O | FAIR LIQUIDE AMEI | RICA CORPORATION. | The information in | h this facsimile me | sage is intended only for<br>hination, distribution, or                        |        |

DICE 00847

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| State of California – California Environmer                                                                                                                    | al Protection Agency                                                                                                                                                                                                                                                                                                                   | Nines Section      |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|
| Department of Toxic Substances Control<br>P.O. Box 806<br>Sacramento, CA 95812-0808                                                                            | تر من 1-877-454-4012 (Calif. Caliers C<br>من من 1-916-255-4439 (في من 1-916-255-4439 (في من 1-916-255-4439 (في من الم                                                                                                                                                                                                                  | Inty Toll Free)    |
| 200                                                                                                                                                            | 6 VERIFICATION QUESTIONNAIRE<br>(See back of this form for instructions.)                                                                                                                                                                                                                                                              |                    |
| Complete and <u>return all forms</u> with appr<br>suspension of your EPA Identification M<br>AIR LIQUIDE AMERICA CORP<br>AIR UQUIDE AMERICA LP<br>8632 DICE RD | opriate fees not later than 30 days from the date of receipt. Failure to return all forms w<br>umber.<br>If your mailing address has changed, please<br>PRINT or TYPE the correct address below: Do not abbr<br>Address:                                                                                                               | eviate.            |
| SANTA FE SPRINGS, CA 90670-                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                        |                    |
| 1. EPA ID Number: CALO<br>2. Location address: 8832 I                                                                                                          | D NOT ALTER INFORMATION IN THIS AREA<br>0021160<br>ICE ROAD<br>A FE SPRINGS, CA 90670-0000<br>If your business has moved, call GISS.                                                                                                                                                                                                   |                    |
| 3#Federal#EmployerNumber<br>480ElIDNumber///                                                                                                                   | 8-0939059 Fed Tax 10 Mumber<br>. Mererata Fie Aut 1                                                                                                                                                                                                                                                                                    | en for Bu<br># 757 |
| 5. COMPANY OWNER INFO:<br>AIR LIQUIDE AMERICA LP<br>2700 POST OAK BLVD<br>HOUSTON, TX 77058-0000<br>(713)624-8000<br>(000)000-0000                             | NOTE: California EPA ID numbers issued by DTSC may not be trans<br>to another owner. If the ownership of your organization has changed<br>call GISS for assistance. Do NOT fill in new owner information below<br>Company owner or Corp. name:<br>Address:<br>City/State/Zip:<br>Talephone.<br>Fax Number<br>Date of ownership change: | , please           |
|                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                        | <b>111</b>         |
| 7. COMPANY NAME:<br>AIR LIQUIDE AMERICA CORP                                                                                                                   | If printed company name is incorrect, please provide correct name:<br>Company name/ AKA:                                                                                                                                                                                                                                               |                    |
| 8. CONTACT INFO:<br>ILYA KAZHOKIN<br>8832 DICE RD<br>CA, CA 90670-0000<br>(562)464-5242<br>(000)000-0000                                                       | If printed contact is incorrect or blank, please provide correct informat<br>Name/Title                                                                                                                                                                                                                                                | <br>               |
|                                                                                                                                                                | Fax Number                                                                                                                                                                                                                                                                                                                             |                    |
| 9. SIC CODE (4 digits):<br>5169                                                                                                                                | Business email address:                                                                                                                                                                                                                                                                                                                | ation:             |
|                                                                                                                                                                | d you must CANCEL the EPA ID number listed on Line 1. (See reve<br>CEL the EPA ID number.                                                                                                                                                                                                                                              | erse side.)        |
|                                                                                                                                                                | Printed on Recycled Paper     DICI                                                                                                                                                                                                                                                                                                     | E 00848            |
| DTSC 1193 (Iront] (3/06)<br>10581                                                                                                                              | 1 Lin                                                                                                                                                                                                                                                                                                                                  | 0/3                |

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#### Hazardous Waste Handlers:

This is your fee assessment for the Environmental Protection Agency Identification (EPA ID) Number Verification Fee and Manifest Fee as required by Health and Safety Code, Sections 25205.16 and 25205.15. The EPA ID Number Verification Fee is for all valid EPA ID numbers held by your organization during the fiscal year 2005/2006 (from July 1, 2005 through June 30, 2006). The Manifest Fee assessment is for all manifests used by your organization from January 1, 2005 through December 31, 2005.

Instructions are included to assist you in completing these forms and calculating the required fees, if applicable. Frequently asked questions and answers are available under "Managing Hazardous Waste" at our website www.dtsc.ca.gov. If you have any questions, please contact DTSC's Generator Information Services Section (GISS) toll free at 1-877-454-4012 if you are dialing within California, or 1-916-255-4439 if you are outside California. The GISS operating hours are 8:30 a.m. to 4:30 p.m. (Pacific Standard Time), Monday through Friday. (Note: The phone lines will be very busy. Please be prepared to be placed on hold.)

All forms and payment, if any, are due 30 days from the receipt of this assessment notice. Checks are to be made payable to the Department of Toxic Substances Control or "DTSC". Return all forms and payment in the enclosed return envelope or to the following address:

Accounting Unit, EPA ID Department of Toxic Substances Control PO Box 806 Sacramento, CA 95812-0806

#### INSTRUCTIONS FOR COMPLETING THE VERIFICATION QUESTIONNAIRE

You are mandated by law to provide or verify the information on the verification questionnaire and return It to DTSC.

#### Printed organization name and mailing address:

Provide any correction to the organization's printed mailing address.

#### Lines 1 and 2 (shaded box):

Check your records to verify that the printed EPA ID number and location address are both correct. Do not change, strike out, or write over this information. If the information is incorrect, please call GISS for assistance. (NOTE: EPA ID numbers are site specific to the location to which they are originally issued. EPA ID numbers cannot be moved to another location. If the location address printed on Line 2 is no longer the address of your site, please call GISS for assistance. You may need a new EPA ID number.)

#### Lines 3 and 4:

Provide your Federal Employer Number and BOE ID Number, you may call BOE at (918) 322-9477 for more information

Provide any corrections and/or additions to the information pre-printed on this form. However, if there has been a change in ownership, call GISS. When there is a change in ownership, you must get a new EPA ID number. GISS staff will instruct you about Line 6 when you call.

#### Lines7 and 8.

Provide any corrections and/or additions to the information pre-printed on this form. Please provide your business email address. This will be part of the facility record and can be used to send you information on the annual verification process. For security reasons, we do not accept personal Hotmail, Yahoo, or Juno email addresses,

#### Line 9:

Provide any corrections to your SIC (Standard Industrial Classification) Code for your primary business activity. If no SIC Code is pre-printed on Line 9, please provide the primary SIC Code for your business. The SIC Code is a four digit number that best describes your company's primary business activity. If your company's SIC Code is unknown, you can obtain the number on the Internet at: www.osha.gov/oshstats/sicser.html

#### <u>Line10:</u>

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Check this box ONLY if you wish to cancel the EPA ID number shown on Line 1. The cancellation date will be June 30, 2006. If your operations will continue after June 30, 2008, do not check the box at this time. Please notify DTSC when you cease operations. Please notify US EPA when canceling a US EPA ID number at (415) 495-8895.

If your organization has more than one EPA ID number, you should receive a Verification Questionnaire and a Schedule A - Manifest Calculation Sheet for each of your permanent EPA ID numbers. You must complete both forms for each EPA ID number assigned to your organization. (NOTE: The total dollar amount owed by your organization includes the manifest fees for all of your organization's EPA ID numbers. The total manifest fee dollar amount must be entered in Section B of the Schedule B - Fees Summary Sheet.)

DTSC 1193 [back] (3/06)

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#### DICE 00849

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|                    | AIR LIQUIDE AMERICA LP Fax:1562693                                                                                                   | 51156                           | Jun 19:20069:19      | 9= P. 04            | - 13 - <b>55</b> |
|--------------------|--------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|----------------------|---------------------|------------------|
| Departm<br>P.O. Bo | California – California Environmental Protection Agency<br>nent of Toxic Substances Control<br>x 808<br>ento, CA 95812-0808          |                                 |                      | Calif. Callers Only | / Toll Free)     |
|                    | SCHEDULE A – MANIFEST FEE<br>(See back of this                                                                                       | ECALCULATIC                     |                      | 5 Manifest          | ts)              |
| EPA                | ID Number: N                                                                                                                         | Name of organiza                | tion: AIR LIQUIDE AI | MERICA CORP         | <b></b>          |
| the De             | January 1, 2005 through December 31, 2<br>epartment of Toxic Substances Control reco<br>unber of California Manifests shown at the l | orded                           | Non-recyc            | ied: 🛍              | <u> </u>         |
|                    | imber of California Manifests shown at the i<br>the EPA ID printed above.                                                            |                                 |                      | 87 B                |                  |
|                    | ifest Fee Calculation:<br>Enter the total number of non-recycled m                                                                   | anifests from above             | )                    | (u<br>u             | sed piltars)     |
| b.                 | How many of the <b>non-recycled</b> manifests<br>non-recycled air compliance solvent mani                                            | s listed on Line a. an<br>fests | e<br>X \$3.50        | ) = \$              | _                |
| C.                 | Subtract the number of manifests on Line                                                                                             | b. from Line a                  | X \$7.5              | 0 = \$              |                  |
| d.                 | No fee due for recycled manifests                                                                                                    |                                 |                      | \$0.                | <u>00</u>        |
| <b>e</b> ,         | Total of Line b. + Line c<br>Note: The manifest count on Lines                                                                       |                                 |                      |                     |                  |

### **INSTRUCTIONS FOR COMPLETING SCHEDULE A**

- For lines a. e. above, enter the numbers requested for each line.
  - For line b. multiply the number of manifests by \$3.50 and record the dollar amount.
  - For line c. multiply the number of manifests by \$7.50 and record the dollar amount.
  - For line e. add dollar amounts of lines b. and c. This total is the manifest fees due for the EPA ID number shown at the top of the page.
- 2. For this assessment there are three types of manifests: non-recycled, recycled and air compliance solvents manifests. Manifests used solely for recycled waste will have a handling code reported as "01" or "R01" in item K on the manifest form (see circled area on manifest sample on the back of this form). All wastes listed on a manifest must have handling codes of "01" or "R01" to be counted as a solely recycled manifest. You need to pay manifest fees only for non-recycled manifests. There is no fee for recycled manifests.
- 3. If you believe the manifest totals shown in the box above are incorrect, you may use the manifest totals from your own files to calculate the fee. However, please be aware that any difference between the amount you report and the amount printed above is subject to audit by DTSC.
- •4. On January 1, 1999 many businesses were required to switch from petroleum-based solvents to air compliance solvents (also called water-based cleaners). The fee for manifests used solely for hazardous waste derived from air compliance solvents was reduced from \$7.50 to \$3.50. Most air compliance solvent waste is now recyclable. Manifests used to ship air compliance solvents that were recycled should not be charged \$3.50. The Manifest Fee Calculation above includes air compliance solvent manifests as part of the non-recycled manifest count. Businesses that do not recycle their air compliance solvent waste who desire to use the reduced \$3.50 fee must use their internal records to identify manifests used solely for air compliance solvent wastes.

DTSC 1194A (3/06)

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| prest or       | d OMB No. 2050–0039 (Expires 9-30-96)<br>type Form designed for me on stite (12-pM        | ken type ther.                              | tructions on back                            |                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | , Colifernies                                                                                                   |
|----------------|-------------------------------------------------------------------------------------------|---------------------------------------------|----------------------------------------------|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|
|                | UNIFORM HAZARDOUS<br>WASTE MANIFEST                                                       | 1. Generator's US EPA ID No.                | Manifest Docume                              | nt No. 2. Poge 1            | intermation in the shirt is not required by fo                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | aded creas<br>derol law,                                                                                        |
| 1-5            | Segenator's Name and Mailing Address                                                      | <u></u>                                     |                                              | A. State Manifest Docume    | M Number                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                 |
| {              |                                                                                           |                                             |                                              | B. State Generator's 10     | 9230                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 2045                                                                                                            |
| 4              | Generotar's Phone (                                                                       |                                             |                                              |                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | t I                                                                                                             |
| 5.             | Transporter ) Company Name                                                                | 6. US EPA ID Numb                           | kar                                          | C Sice Transporter's ID     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                 |
|                |                                                                                           |                                             |                                              | D. Transporter's Phone      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                 |
| 7.             | Transporter 2 Company Name                                                                | B. US EPA ID Numb                           |                                              | E. State Transporter's ID   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                 |
|                | · · · · · · · · · · · · · · · · · · ·                                                     |                                             |                                              | T-Gamporter's Phone         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                 |
| 9.1            | Designated Focility Name and Sile Address                                                 | 10. US EPA ID Numb                          | ¢(                                           | G. Slove Funity -40         | <u> </u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | +++                                                                                                             |
|                |                                                                                           |                                             |                                              | H. Facility's Phone         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                 |
|                |                                                                                           |                                             |                                              |                             | <b>F. T. B</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | and the second day of the second day of the second day of the second day of the second day of the second day of |
| 11.1           | US DOT Standard (including Property in                                                    | In theme of a Car, and ID backer            | N A                                          | a, Total: .                 | 14 Junit<br>Mary No. Waster N                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | tumber                                                                                                          |
|                |                                                                                           |                                             |                                              |                             | and the second                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | -                                                                                                               |
|                |                                                                                           |                                             | ╺╈╾╺╼┲┼╴┆╶╒┳┵                                |                             | TPA/Other                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 0                                                                                                               |
| t t            |                                                                                           |                                             |                                              |                             | 30                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                 |
|                |                                                                                           |                                             | <u>,</u> , , , , , , , , , , , , , , , , , , |                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                 |
|                | ······                                                                                    |                                             |                                              | ╶╌┸╼╌┟╼╌┖╼╴                 | State                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                 |
| 1.0            | is is a sample manife                                                                     | st included for your                        | information                                  | only.                       | EPA/Other                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                 |
| d              |                                                                                           |                                             |                                              |                             | Sitelig                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                 |
|                | •                                                                                         |                                             |                                              |                             | EPA/Other                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                 |
|                |                                                                                           | · -                                         |                                              |                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                 |
| J. Ad          | differed Descriptions for Materials Lined Ab                                              | iove ·                                      |                                              | L. Handling, Coder for Walk | b.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                 |
|                |                                                                                           |                                             |                                              |                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                 |
|                |                                                                                           |                                             | ( · ·   •                                    | :                           | ۹                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | •                                                                                                               |
| 15. 5          | pecial Handling Instructions and Additional                                               | Information                                 |                                              |                             | 7                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                 |
| <b>n</b> 01    | rder to determine if y                                                                    | our waste was recve                         | led or non-                                  | <b>.</b>                    | T                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                 |
|                | cled, look at the hand                                                                    | -                                           |                                              | ove) on your r              | – i<br>nanifest cor                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | w(g)                                                                                                            |
| G              | ENERATOR'S CERTIFICATION: I hereby a                                                      | deciare that the common of this component   | one fully and accurately a                   | escribed above by proper th | iopina nome and are cia                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | the list of the list of the list of the list of the list of the list of the list of the list of the list of the |
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| **             | ) ann a large queatty generator, ) cartity<br>anomically procticable and that I have sele | acted the promicable method of moment.      | storage, or disposed curv                    | why available to me which ; | withing the present on                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | d future }                                                                                                      |
| w              | reat to human health and the environment;<br>aske management method that is available t   | to me and that I can attend.                | have made a good tailt                       | effort to minimize muserian |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                 |
| Primed         | I/Typed Name                                                                              | Signature                                   |                                              |                             | Month Day                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Year                                                                                                            |
|                | monorer 1 Acknowledgement of Receipt at                                                   |                                             |                                              |                             | Manth Day                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Year                                                                                                            |
| r n <b>ord</b> | /Typed Name                                                                               | 5.000                                       |                                              |                             | Manth Day                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                 |
|                | missorier 2 Acknowledgement of Receipt of                                                 | Materiak                                    | · · · · · · · · · · · · · · · · · · ·        |                             | Month Day                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Yeer                                                                                                            |
| aned,          | /Typed Name                                                                               | ugnulory                                    |                                              |                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                 |
|                | Kingancy Indication Space                                                                 |                                             |                                              |                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                 |
| 19. Dis        |                                                                                           |                                             | ·                                            |                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                 |
| 19. Dis        |                                                                                           |                                             |                                              |                             | <u> </u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                 |
|                |                                                                                           | seipt of hazaraous materials covered by thi | is manifest except as nome                   | in Item 17                  | Month Ser                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Yetar -                                                                                                         |
| 0. fas         | alin Owner of Operator Conflication of rea<br>Justic Name                                 | Signeture                                   |                                              |                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <b>-</b>                                                                                                        |
| 0. fas         |                                                                                           | Signeture                                   |                                              |                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                 |
| 0. řac         |                                                                                           | Signerure                                   | OW THIS LINE.                                |                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                 |
| 0. fas         |                                                                                           |                                             | OW THIS LINE.                                |                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                 |

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AIR LIQUIDE AMERICA LP Fax: 15626931156

State of California – California Environmental Protection Agency Department of Toxic Substances Control P.O. Box 806

Sacramento, CA 95812-0806

Generator Information Services Section or 1-916-255-4439 (Outside Calif.) www.dtsc.ca.gov 2006

P.06 5331155

Jun 19, 2006 - 9:19

## SCHEDULE B - FEES SUMMARY SHEET

(See back of this form for complete instructions.)

All completed forms and appropriate fees must be submitted not later than 30 days from the date of receipt.

A. EPADDINUMBERBYERHECATIONSEE (July 1, 2005 through June 30, 2006)

- 1. <u>Nemerolyourorganization.</u>
- 2. Enterthe and a structions for Line 2 on the back of this form.)

| Number of<br>Employees                    | 1 - 49                           | 50 - 74                                                 | 75 <b>-</b> 99                                          | 100 - 249                                                                          | 250 - 499         | 500 or more |  |
|-------------------------------------------|----------------------------------|---------------------------------------------------------|---------------------------------------------------------|------------------------------------------------------------------------------------|-------------------|-------------|--|
| EPA ID<br>Fee Rate                        | NO FEE                           | \$150                                                   | \$175                                                   | \$200                                                                              | \$225             | \$250       |  |
|                                           | (Total EP/                       | ID Number                                               | Verification F                                          | ees not to exc                                                                     | eed \$5000)       |             |  |
| 3. Enterthe                               | ERAID:Numb                       | erVerification.F                                        | ee rate from th                                         | e table above:                                                                     |                   | \$          |  |
| (NOTE:                                    | Attach a VQ for                  | rm and Schedu                                           | le A for each p                                         | neld by your or<br>ermanent EPA II<br>in your total on                             | ) number you ar   |             |  |
| 5. Multiply I                             | ine 3 by Line 4                  |                                                         |                                                         | -                                                                                  |                   | =\$         |  |
|                                           | PAID Number<br>0, whichever ar   |                                                         |                                                         | e dollar amount i                                                                  | from Line 5 abov  | /e<br>\$    |  |
| (If you ar                                | dollar amount<br>e reporting mor | from Line e on<br>re than one ID r                      | your Schedule<br>number, enter ti                       | I <b>, 2005)</b><br>A – Manifest Fee<br>he <b>TOTAL</b> of the<br>Ilation Sheets.) |                   |             |  |
| 1. Add Line<br>It is not u<br>If fee is d | A6 and Line B<br>ncommon to no   | 1, enter the tota<br>of owe fees. Yo<br>e your check pa | al dollar amoun<br>ou are still requi<br>yable to "DTSC | red to complete :<br>" for the total amo                                           | and submit all fo |             |  |
|                                           |                                  |                                                         |                                                         |                                                                                    |                   |             |  |

Name (please print):

Date:

Phone:

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| THIS SECTION FOR DEPARTMENT USE ONLY |           |               |                                        |  |  |  |  |
|--------------------------------------|-----------|---------------|----------------------------------------|--|--|--|--|
| Check No                             | \$AMOUNT  | DATE:         | CID NO:                                |  |  |  |  |
| 12560055:                            | 12560092  | 12580065:     |                                        |  |  |  |  |
| 12560035.                            | 12580091: | AMOUNT DUE:   |                                        |  |  |  |  |
| 12560075:                            | 12560096: | PRIMARY ID #: | ······································ |  |  |  |  |

DTSC 1194B [front] (3/06)

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**DICE 00852** 

### INSTRUCTIONS FOR COMPLETING SCHEDULE B-FEES SUMMARY SHEET

### SECTION A (EPA ID Number Verification Fee for 2005/2006)

NOTE: Health and Safety Code, Section 25205.16 requires DTSC to verify the accuracy of information related to generators, transporters and facilities authorized to treat, dispose of, store, or recycle hazardous waste. DTSC captures this data through the Verification Questionnaire and uses the collected information to ensure that the Hazardous Waste Information Network database is current and accurate. The EPA ID Number Verification Fee, which has been established by State legislation, funds this effort.

Line 1: Enter the full name of your organization. Do not abbreviate.

Line 2: Enter the total number of individuals employed in California by your organization. An employee must have worked more than 500 hours during the calendar year 2005 to be included in your calculation. ("Organization" is defined as a registered corporation, sole proprietor, partnership, or company. For public agencies, "organization" is defined as a city, county, commission, agency, department or district.)

Line 3: Based on the number of employees entered on Line 2, determine your EPA ID Number Verification Fee rate by using the table shown and then enter that rate on Line 3.

Line 4: Enter the total number of permanent EPA ID numbers assigned to your organization. Do not include "CAC" numbers in your total, as they are temporary and not subject to the EPA ID Number Verification Fee. If you indicated on the Verification Questionnaire that you wish to deactivate a permanent EPA ID number, you must still include that number in this total. The fee is required because that EPA ID number was active during the billing period (July 1, 2005 through June 30, 2006).

Line 5: Enter the EPA ID Number Verification Fee. This fee is determined by multiplying the fee rate (reported on Line 3) by the total of permanent EPA ID numbers assigned to your organization (reported on Line 4).

Enter either the amount shown on Line 5. OR \$5000 (whichever amount is less). The maximum Line 6: EPA ID Number Verification Fee is \$5000 per organization.

### SECTION B (Manifest Fees for January 1, 2005 through December 31, 2005)

Line 1: Enter the total manifest fees due. This amount is shown on Line e on the Schedule A – Manifest Fee Calculation Sheet. If your organization has more than one EPA ID number, enter the total of the dollar amounts from all your Schedule A - Manifest Fee Calculation Sheets.

### SECTION C (Grand total of all EPA ID Number Verification Fees and Manifest Fees owed)

Line 1: Add Line A6 and B1. The sum of these two amounts is the total fee due from your organization. Please make your check payable to "DTSC" or use the credit card payment form. Please write one of your EPA ID numbers on your check.

#### **IMPORTANT:** YOU MUST RETURN THE ORIGINAL OF THE FOLLOWING DOCUMENTS WITHIN 30 DAYS:

Verification Questionnaire (one form for each EPA ID number)

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Schedule A – Manifest Fee Calculation Sheet (one form for each EPA ID number)

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Schedule B – Fee Summary Sheet (only ONE of these forms is needed for your entire organization)

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DTSC 1194B (back) (3/08)

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State of California - California Environmental Protection Agency Department of Toxic Substances Control P.O. Box 806 Sacramento, CA 95812-0806

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### EPA ID AND MANIFEST FEE CREDIT CARD PAYMENT FORM

To pay your EPA ID number fee and manifest fees by credit card, complete this form and return it with your completed:

Verification Questionnaire(s) - one for each EPA ID number reported in this packet; Manifest Fee Calculation Sheet Schedule A(s) - one for each EPA ID number reported in this packet; and Fees Summary Sheet Schedule B - only one is required for your entire organization. If you prefer to pay by check, please discard this form.

| 1)   | Company Name:                                       |                                                                                                  |
|------|-----------------------------------------------------|--------------------------------------------------------------------------------------------------|
| 2)   | Name on Credit Card:                                |                                                                                                  |
| 3)   |                                                     | COVER MASTERCARD VISA                                                                            |
| 4)   | Credit Card Number: / / / / / / / / / /             |                                                                                                  |
| 5)   | Expiration Date: <u>/ / / / / /</u><br>Mo. Yr.      |                                                                                                  |
| 6)   | Total Amount of Fee Being Paid: \$                  | ees Summary Sheet Schedule B)                                                                    |
| 7)   | Signature:                                          | isent in order for your payment request to be processed.)                                        |
| 8)   | Telephone Number: ()                                |                                                                                                  |
| Send | nd completed forms and payment to the following add | iress:                                                                                           |
| ٦    | Department of Toxic Substances Control              | ou want to ensure the confidentiality of your<br>dit card information, please send all completed |

Sacramento, CA 95812-0876

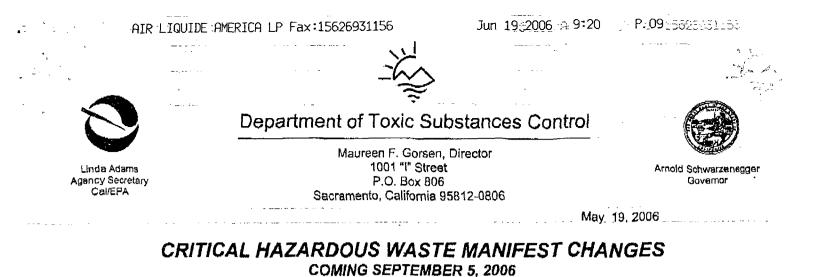
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provided.

IMPORTANT: By completing and signing this form, you are authorizing DTSC to request funds from the credit card company you have indicated. If the request is denied by your credit card company, DTSC will contact you and require payment by another acceptable means.

PRIVACY STATEMENT: The information on this form is requested by the Department of Toxic Substances Control, Accounting Unit, All information is voluntary. The purpose of this information is to verify the authenticity of the credit card you wish to use to pay your EPA ID Number and Manifest Fees. Failure to provide answers to any of the questions may cause your credit card payment request to be denied. For more information or access to this record. please contact the DTSC Accounting Unit at (916) 327-8514 or you may write to the address shown above.

| PRIMARY ID NO: | CID NO: |            |
|----------------|---------|------------|
|                |         | DICE 00854 |



To All Hazardous Waste Handlers,

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Federal and state hazardous waste manifest regulations change on September 5, 2006, and require you to use a new manifest form.

- IF YOU MANIFEST HAZARDOUS WASTE, WE URGE YOU TO BECOME FAMILIAR WITH THESE
   NEW REQUIREMENTS TO DETERMINE HOW THEY AFFECT YOU AND YOUR BUSINESS.
- If you are a generator that uses a Consolidated Transporter and never directly manifest hazardous wastes, these changes will not affect you.
- If you only ship Universal Waste and do not manifest now, these changes do not affect you.

What Are the Major Changes? U.S. EPA revised the Uniform Hazardous Waste Manifest and mandated its use throughout the nation, replacing all state versions. You cannot use current versions of California's manifest or manifests from other states for shipments that start after September 4, 2006.

However, the new six-page manifest form is different. It is not color-coded and does not include a copy for generators to submit to the state. You must purchase manifests printed by a U.S. EPA-approved printer for shipping wastes on and after September 5, 2006. DTSC will not print manifests.

The new U.S. EPA manifest rules also change the hazardous waste label but you can use your current supply of labels as long as it contains the Generator ID number. Please see the Supplemental Instructions (attached) and fact sheet (online) for detailed changes including new handling codes, now called HW Report Management Method codes. Carefully review the form and federal instructions on our website to determine how the changes impact you. *Supplemental California Manifest Instructions contain instructions that WILL NOT APPEAR on the new federal manifest. Retain these supplemental instructions!* 

**For More Information:** Go to DTSC's webpage at <u>www.dtsc.ca.gov/iDManifest</u>. Send comments and questions to <u>CAManRegs@dtsc.ca.gov</u> or call the DTSC Public and Business Liaisons at 1-800-72-TOXIC. Your transporter and facility are also sources of manifest information.

**Training Workshops This Summer:** DTSC will present training workshops in coordination with the California Waste Association (CWA), the Independent Waste Oil Collectors and Transporters Association (IWOC) and other business groups. For only the CWA sessions (in June and July), register on line at <u>www.go2cwa.org</u> or call 562-983-8142. For dates and times, and for online copies of the training slides and handouts, check DTSC's website. Your local agencies (CUPAs) may also offer training. Please check with them.

Printed on Recycled Paper

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### **DICE 00855**

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South Coast Air Quality Management District

21865 E. Copley Drive, Diamond Bar, CA 91765-4182 (909) 396-2000 • www.aqmd.gov

### ACKNOWLEDGEMENT OF ANNUAL OPERATING PERMIT FEE PAYMENT

### Dear Permit Holder:

This letter acknowledges your recent annual operating permit fee payment for the permits to operate or applications listed on the enclosed attachment. The next renewal date for each permit or application is stated on the attachment. For facilities that have been issued a RECLAIM facility permit, the facility permit serves as a comprehensive permit to operate the equipment listed on the facility permit.

# This payment acknowledgment letter does NOT replace your original Permit to Operate, and you should NOT discard the original permit.

You are required by AQMD Rule 206 to affix the <u>original Permit to Operate or a legible</u> <u>facsimile of the permit</u> upon the equipment so that the permit number, equipment description, and the operating conditions are clearly visible.

If you have any questions about this permit renewal acknowledgement letter please call AQMD's Customer Service section. From inside California call our toll-free number (866) 888-8838 or call (909) 396-2900. Outside California call (909) 396-2900 only. If you need a photocopy of your permit to operate please contact the Public Records Request section at (909) 396-3700. You may request a certified copy of an active permit to operate by submitting the request in writing. A fee of \$15.89 must accompany your written request. (If your facility is a RECLAIM facility, you may request a certified copy of your RECLAIM facility permit by submitting the request in writing. A fee of \$15.89 for the first page and \$1.13 for each additional page in the facility permit must accompany your written request.) The written request and the fee for a certified copy of an active permit should be sent to SCAQMD, P.O. Box 4943, Diamond Bar, CA 91765-0943.

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|-----------------------------------------|-------------------------------------------------------------------------------------------------------|----------------------|
| 21865 E. (                              | n Coast<br>Quality Management Dis<br>Copley Drive, Diamond Bar, CA 91765-4182<br>-2000 · www.aqmd.gov | strict               |
|                                         |                                                                                                       | DATE: 08-19-03       |
| EQUIPMENT LOCATED AT:                   | 8832 DICE RD<br>SANTA FE SPRINGS, CA 90670- 254                                                       | :0                   |
| LEGAL OWNER CO. ID:<br>OR OPERATOR      | 55690<br>AIR LIQUIDE AMERICAN CORP<br>8832 DICE RD<br>SANTA FE SPRINGS, CA 90670- 254                 | e <b>O</b>           |
|                                         | PERMIT/APPLICATION RENEWALS                                                                           | ;                    |
| PERMIT/ EQUIPMENT D<br>APPL NBR         | ESCRIPTION                                                                                            | NEXT RENEWAL<br>DATE |
|                                         | 2003<br>PAINT AND SOLVENT                                                                             | 07-31-04             |
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DICE 00858

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| 6    | SOUTHAST | AIR QUALITY MANAGEMENT |   |                        |
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| ES.  | EMIS     | SIONS FEES INVOICE     | - | INVOICE NO.<br>1509231 |
| AQMD |          |                        |   | PAGE: 1                |

California Health and Safety Code Section 40510 and South Coast Air Quality Management District Rule 301(e) authorize AQMD to charge the fee described below.

| EQUIPMENT    | 8832 DICE RD                | INVOICE | 06/17/03 |
|--------------|-----------------------------|---------|----------|
| LOCATED AT:  | SANTA FE SPRINGS, CA, 90670 | DATE:   |          |
| FACILITY ID: | 55690                       |         | · · · ·  |

| LEGAL OWNER  | AIR LIQUIDE AMERICAN CORP   |
|--------------|-----------------------------|
| OR OPERATOR: | 8832 DICE RD                |
|              | SANTA FE SPRINGS, CA, 90670 |

### **DUPLICATE COPY**

| TRANSACTION<br>NUMBER | TRANSACTION<br>DATE | REFERENCE<br>NUMBER    | DESCRIPTION               | TRANSACTION<br>AMOUNT | TRANSACTION<br>BALANCE |
|-----------------------|---------------------|------------------------|---------------------------|-----------------------|------------------------|
| 6510235               | 06/17/03            | FY03-04                | Flat Annual Emissions Fee | 75.00                 | 75.00                  |
|                       |                     | paymova<br>Paym<br>7/, | d Ja<br>ent<br>4/03<br>AR |                       |                        |
|                       |                     |                        |                           |                       |                        |

REMARKS

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PLEASE RETURN THE DUPLICATE COPY OF THIS INVOICE WITH YOUR REMITTANCE TO ENSURE PROPER CREDIT TO YOUR ACCOUNT. RETURNED CHECKS MAY BE SUBJECT TO TO A \$28.43 SERVICE CHARGE. INVOICE TOTAL: \$75.00

If payment not received by 08/16/03 a 5% late payment penalty will be imposed.

**DICE 00859** 

- 5 Dias

 Please return duplicate copy with remittance. Make check payable to South Coast A.Q.M.D.

 For Information

 Inside California Call Our Toll-Free Number (866) 888-8838 Or Call (909) 396-2900. Outside California Call (909) 396-2900 Only.

 Mail Remittance to: P.O. Box 4943 Diamond Bar CA, 91765-0943

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|------------|---|
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| AQME       | ) |

SOUTH AST AIR QUALITY MANAGEMENT DIST

**ANNUAL OPERATING FEES INVOICE** 

INVOICE NO 1508032

PAGE: 1

California Health and Safety Code Section 40510 and South Coast Air Quality Management District Rule 301 authorizes AQMD to charge permit fees on the equipment identified below.

| EQUIPMENT<br>LOCATED AT: | 8832 DICE RD<br>SANTA FE SPRINGS, | CA, 90670 | INVOICE<br>DATE:        | 06/17/03 |  |
|--------------------------|-----------------------------------|-----------|-------------------------|----------|--|
| FACILITY ID:             | 55690                             |           | · · · · · · · · · · · · |          |  |

| LEGAL OWNER  | AIR LIQUIDE AMERICAN CORP   |  |  |
|--------------|-----------------------------|--|--|
| OR OPERATOR: | 8832 DICE RD                |  |  |
|              | SANTA FE SPRINGS, CA, 90670 |  |  |

### DUPLICATE COPY

| TRANSACTION<br>NUMBER | TRANSACTION<br>DATE | REFERENCE<br>NUMBER | description                   | TRANSACTION<br>AMOUNT | TRANSACTION<br>BALANCE |
|-----------------------|---------------------|---------------------|-------------------------------|-----------------------|------------------------|
| 6508095               | 06/17/03            | F15616              | SPRAY BOOTH PAINT AND SOLVENT | 201.77                | 201.77                 |
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|                       | 1/17/               |                     |                               |                       |                        |

REMARKS

PLEASE RETURN THE DUPLICATE COPY OF THIS INVOICE WITH YOUR REMITTANCE TO ENSURE PROPER CREDIT TO YOUR ACCOUNT. RETURNED CHECKS MAY BE SUBJECT TO TO A \$28.43 SERVICE CHARGE. INVOICE TOTAL: \$201.77

**DICE 00860** 

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- 5202

If payment not received by 08/16/03 application/permit will be delinquent. If payment not received by 09/16/03 application/permit will expire. Operation of equipment without a permit subjects owner or operator to misdemeanor or civil penalties for each day of operation.

Please return duplicate copy with remittance. Make check payable to South Coast A.Q.M.D. For Information Inside California Call Our Toll-Free Number (866) 888-8838 Or Call (909) 396-2900 Outside California Call (909) 396-2900 Only. City of Santa Fe Springs Fire Department Fire Protection Division - Environmental Protection Division 11300 Greenstone Avenue, Santa Fe Springs, CA 90670-4619 (562) 944-9713 FAX (562) 941-1817 fire@santafesprings.org

### INVOICE

36600,0002, 43511,933 Weech "/10/03

AIR LIQUIDE AMERICA L.P. 8832 DICE SANTA FE SPRINGS CA 90670

| Period Covered                                 | 07/01/2003-06/30/2004    |
|------------------------------------------------|--------------------------|
| Permit No                                      | 600094                   |
| Today's Date <sup>.</sup><br>Payment Due Date: | 11/05/2003<br>12/05/2003 |
|                                                |                          |

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A PENALTY WILL BE ASSESSED FOR TOTAL FEES NOT RECEIVED BY THE DUE DATE ABOVE

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For Facility Located at 8832 DICE

SANTA FE SPRINGS, CA 90670

| CUPA PROGRAM ELEMENTS                                                                     |            |              |            |
|-------------------------------------------------------------------------------------------|------------|--------------|------------|
| Hazardous Materials Fee                                                                   |            |              | \$3,290.00 |
| Hazardous Materials Volume Fee                                                            |            |              | \$1,170.00 |
| Hazardous Waste Generator Fee                                                             |            |              | \$830.00   |
| Tier Permit Fee                                                                           |            |              | \$0.00     |
| Underground Storage Tank Fee                                                              |            |              | \$0.00     |
| CalARP Fee                                                                                |            |              | \$0.00     |
| Aboveground Storage Tanks                                                                 |            |              | \$0.00     |
| STATE SERVICE FEES                                                                        |            |              |            |
| Underground Storage Tank Service Fee                                                      | 🗌 (Exempt) |              | \$0.00     |
| CalARP Service Fee                                                                        | 🗌 (Exempt) |              | \$0.00     |
| Program Oversight Fee                                                                     | 🗌 (Exempt) |              | \$24.00    |
| OTHER                                                                                     |            |              |            |
| Industrial Waste Permit Fee                                                               |            |              | \$408.00   |
| Rain Diversion Fee                                                                        |            |              | \$204.00   |
| Fire Permit Fee                                                                           |            |              | \$2,180.00 |
| Stormwater Fee                                                                            |            | -            | \$53.00    |
| This fee is due and payable upon receipt Please indicate the                              |            | Above Total: | \$8,159.00 |
| number 600094 on your check Make check payable to 'CIT'<br>SANTA FE SPRINGS' and remit to |            | Late Fee:    | \$0 00     |
| City of Santa Fe Springs Fire Departme                                                    | nt         | Amount Paid  | \$0.00     |
| 11300 Greenstone Avenue<br>Santa Fe Springs, CA 90670                                     | TOTAL      | AMOUNT DUE:  | \$8,159.00 |

**DICE 00861** 

|                                       |                                                                          |                                                                                                                |                                                                       |                                                        |                                                                                 |                                                        | <del>و المع</del> ري |
|---------------------------------------|--------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------|--------------------------------------------------------|---------------------------------------------------------------------------------|--------------------------------------------------------|----------------------|
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| •                                     |                                                                          |                                                                                                                |                                                                       |                                                        | ( )                                                                             |                                                        |                      |
|                                       | Requ                                                                     |                                                                                                                | ESOURCES CON<br>INVOICE<br>for Storm Wate<br>13260/of the C           | er Permit.                                             |                                                                                 |                                                        |                      |
| ( asin j = ( · · = )                  | 4 191000389<br>LIQUID AIR<br>8832 DICE RD<br>SANTA FE SPRING             | SS, CA                                                                                                         |                                                                       |                                                        | Invoice No:<br>Billing Period:<br>Invoice Date:                                 | 0318001<br>04/01/04-03/31/05<br>04/09/04               | -                    |
| ÷.                                    | Total Amount D                                                           | ue by 05/09/04                                                                                                 |                                                                       |                                                        | \$830                                                                           |                                                        |                      |
| ATTN: A<br>8832 DIC                   | JIDE AMERICA L<br>ARON TESCH<br>DE RD<br>TE SPRINGS, CA                  |                                                                                                                | s are shown on the                                                    | 6381.<br>ØSC                                           | 199.600<br>Isco                                                                 |                                                        |                      |
|                                       |                                                                          | Invoice details                                                                                                | s are shown on the                                                    | hack 4                                                 | 4/12                                                                            |                                                        |                      |
|                                       |                                                                          |                                                                                                                |                                                                       |                                                        | ,<br>                                                                           |                                                        |                      |
|                                       |                                                                          | ATE WATER RES<br>Annual Fee f<br>ed by SECTION 1                                                               | or Storm Water                                                        | Permit                                                 |                                                                                 |                                                        |                      |
| Facility ID: 4                        | 191000389                                                                | Billing                                                                                                        | Period: 04/01/                                                        | 04-03/31/                                              | 05                                                                              | Quarter: 04                                            |                      |
| Invoice No 031                        | 8001                                                                     | Amount Due: \$1                                                                                                | 830                                                                   | Due By:                                                | Sunday, May 9                                                                   | 2004                                                   |                      |
| LATE PAY<br>SECTIO<br>YOURI<br>PLIEAS | MENT COULD<br>IN 13261 THE<br>FEE, OR OTHE<br>E NOTE THAT<br>RE A NEW ST | UR PAYMENT O<br>RESULT IN PEI<br>SE ACTIONS CO<br>R ACTIONS DE<br>TRANSFER OF<br>ORM WATER PE<br>LETED, PLEASE | NALTIES UND<br>DULD INCLUDI<br>EMED APPRO<br>OWNERSHIP<br>RMIT IF YOU | ER PROV<br>E DAILY F<br>PRIATE I<br>OR RELC<br>FACILIT | VISIONS OF THI<br>PENALTIES IN<br>BY THE REGIO<br>OCATION OF T<br>Y IS CLOSED C | EWATER CODI<br>ADDITION TO<br>NAL BOARD<br>HE FACILITY |                      |
|                                       | @ Mak                                                                    | e your check p                                                                                                 | ayable to SW                                                          | RCB FE                                                 | ES                                                                              |                                                        |                      |
|                                       | 2                                                                        |                                                                                                                | -                                                                     |                                                        |                                                                                 |                                                        |                      |
| l                                     | f you have any q                                                         | uestions about this                                                                                            | invoice, please c                                                     | all Storm W                                            | Vater Unit at (916                                                              | i) 341-5247                                            |                      |
| Retain this portion fo                | or your records                                                          |                                                                                                                |                                                                       |                                                        |                                                                                 |                                                        |                      |
| Please detach and re                  |                                                                          | your payment                                                                                                   | ACK                                                                   | А                                                      | AIR LIQUIDE AMER                                                                |                                                        |                      |
| PLEASE PRIN                           | No: 0318001<br>T THIS NUMBER OF<br>MONEY ORDER                           |                                                                                                                |                                                                       |                                                        | 3ANTA FE SPRING<br>502) 945-1383                                                | S, CA 90670                                            |                      |
|                                       |                                                                          |                                                                                                                | AMC                                                                   | UNT DUE:                                               | \$830                                                                           |                                                        |                      |
| SWRCRA                                | CCOUNTING                                                                |                                                                                                                |                                                                       |                                                        | 04/01/04-03/31/05                                                               |                                                        |                      |
| ATTN: AF                              |                                                                          |                                                                                                                | DILLING                                                               |                                                        | 05/09/04                                                                        |                                                        |                      |
| P. O. Box                             |                                                                          |                                                                                                                | FACILITY                                                              |                                                        | 4 191000389                                                                     |                                                        |                      |
|                                       |                                                                          | 812-1999                                                                                                       |                                                                       | TY NAME:                                               | LIQUID AIR                                                                      |                                                        |                      |
| JACKANI                               | ENTO, CA 95                                                              | 014-1000                                                                                                       |                                                                       |                                                        | 8832 DICE RD                                                                    |                                                        |                      |
|                                       |                                                                          |                                                                                                                |                                                                       |                                                        | SANTA FE SPRI                                                                   | IGS, CA                                                |                      |

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Governor

Secretary for Environmental Protection

## MOST FREQUENTLY ASKED QUESTIONS ABOUT SWRCB STORM WATER FEES

#### \_\_\_\_ 1.\_\_\_ What is this invoice for?

Storm Water fee invoices are sent to every person who filed a Notice of Intent with the State Water Resources Control Board (SWRCB). The invoice is your bill for the twelve month period shown. Under state law, a fee is assessed annually for persons who may discharge industrial and/or construction storm water under a general permit.

### 2. If I don't have any pollutants in my storm water discharge, am I still subject to an annual fee?

Yes. As long as you discharge storm water, you are subject to this fee regardless of whether or not there are pollutants in the discharges. You must pay the fee no matter how often or long your discharge occurs.

### 3. What is my fee going toward?

The annual fee pays for the implementation and administration of the Storm Water Program.

### 4. What is a Facility Identification Number or WDID Number?

The facility identification number or WDID number is the number the SWRCB gives each permittee when they apply for an NOI. Consider it your account number with the SWRCB.

#### 5. What is the SWRCB's Federal Tax Identification Number?

#### 68-0281986

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# 6. If my construction project has been completed, or my facility is closed, am I still subject to the annual fee?

You are subject to the annual fee until you (1) file a Notice of Termination (NOT) with the Regional Board, and (2) the Regional Board approves your NOT.

#### 7. Where are Notice Of Terminations sent to?

### **DICE 00863**

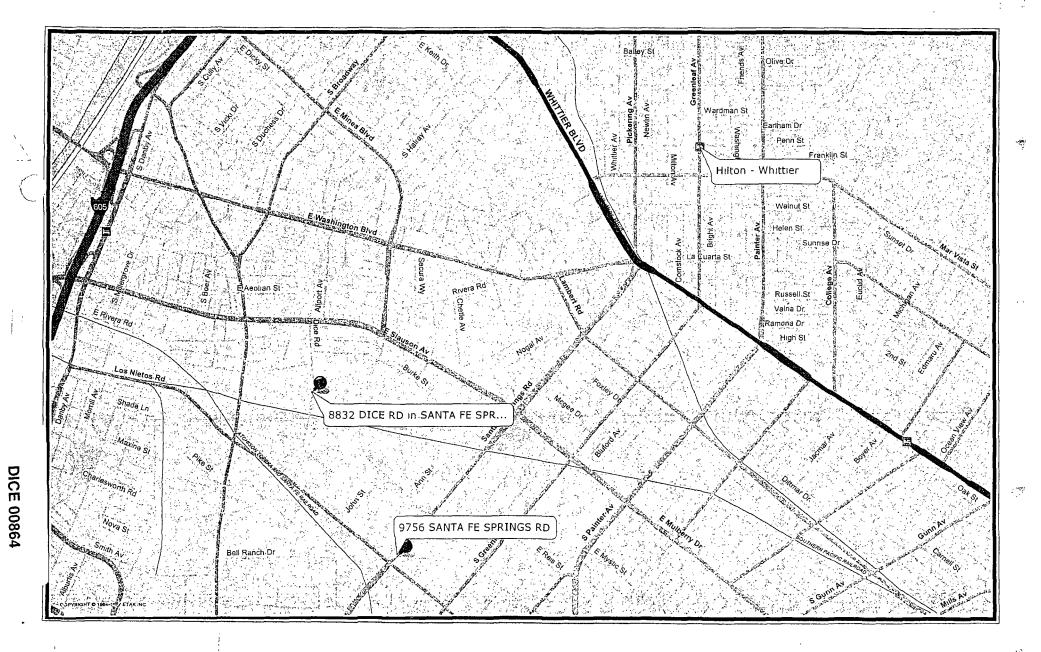
NOTs are sent to the Regional Board which has the jurisdiction over your site. Please refer to the last page of an NOT packet for Regional Board locations. If you have already submitted an NOT and still received an invoice, please contact the Regional Board.

# 8. If a Notice of Termination has been submitted to the Regional Board, do I still have to pay the fee?

Possibly. Send or fax us a copy of your NOT and we will place you on "billing hold" pending Regional Board decision. If the Regional Board approves your NOT, and (1) the project's completion date for construction activity is prior to the annual fee billing date, or (2) the

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## **Current Map**



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| STATEWATER/RESOURCES.CONTROLBOARD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
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| INVOICEDETAILS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
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| INVOICE NO: 0318001 BILLING PERIOD: 04/01/04-03/31/05 FACILITY ID (WDID): 4 191000389                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
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| INVOICE TOTAL: \$830                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
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| If you have any questions about this invoice, please call Storm Water Unit at (916) 341-5247                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
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| NOTICE OF CHANGE IN FACILITY (WDID) ID NUMBERS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | an an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair an thair |
| EFFECTIVE THIS YEAR, STORMWATER FACILITY ID NUMBERS HAVE BEEN<br>MODIFIED TO DISTINGUISH BETWEEN CONSTRUCTION AND INDUSTRIAL<br>PERMITS. THE <b>"S"</b> IDENTIFIER HAS CHANGED TO <b>"C"</b> FOR CONSTRUCTION<br>OR <b>"I"</b> FOR INDUSTRIAL. FOR EXAMPLE, 8 00 <u>S</u> 000000 IS NOW 8 00 <u>C</u> 000000<br>OR 8 00 <u>10000000</u> . IF YOUR ID NUMBER HAS <u>NOT</u> CHANGED PLEASE CONTACT<br>US AT (916) 341-5247.<br>* Questions regarding the Ambient Water Monitoring surcharge can be answered by<br>accessing the SWRCB's web site at: http://www.swrcb.ca.gov/swamp/ or by                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| contacting the fee unit at (916) 341-5247.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
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| BILLING ADDRESS CORRECTIONS<br>Please print the new billing address information in the space provided below                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| FACILITY ID (WDID): 4 191000389                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
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| CONTACT PERSON:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
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| STATE:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
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| ZIP:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |

### DICE 00865

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| BOF-501-HG (S1F) REV. 12 (1-04)                                                                | PC                         | STATE OF CALIFORNIA<br>DF EQUALIZATION<br>BOARD USE ONLY |
|------------------------------------------------------------------------------------------------|----------------------------|----------------------------------------------------------|
| HAZARDOUS WASTE GENERAT                                                                        | OR FEE RETURN 2/131        | D RR-B/A AUD REG                                         |
| DUE ON OR BEFORE 02/29/01                                                                      | FOR JANUARY - DECEMBER, 20 | RR-OS FILE REF                                           |
| HWCA RVHG05                                                                                    | HA EF 36-02                | EFF                                                      |
| BOARD OF EQUALIZATION<br>EXCISE TAXES AND FEES DI<br>PO BOX 942879<br>SACRAMENTO CA 94279-6009 |                            | IS INCORRECT                                             |
| 8832 DICE RD<br>CALODOO21160                                                                   | OPY                        | READ INSTRUCTIONS<br>BEFORE PREPARING                    |

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Che Cita

If you are registered to make your payment by electronic funds transfer (EFT), you must still file your return timely. You can mail your return in the envelope provided or fax it to 916-327-0859. To register to make payments via EFT please contact us at 916-322-9534.

1. Please check this box if you no longer generate hazardous waste at this site. Enter the date of last generation . Your account will be closed as of the date entered. For consolidated accounts, use the enclosed Schedule G to indicate the date each site last generated waste, if hazardous waste is no longer being generated at that site.

| 0.00<br>163.00<br>1305.00<br>3262.00<br>16310.00 | \$ (                                                                                       | )              |
|--------------------------------------------------|--------------------------------------------------------------------------------------------|----------------|
| 163.00<br>1305.00<br>3262.00                     |                                                                                            |                |
| 1305.00<br>3262.00                               |                                                                                            |                |
| 3262.00                                          |                                                                                            |                |
|                                                  |                                                                                            |                |
|                                                  |                                                                                            |                |
| 32620.00                                         |                                                                                            |                |
| 48930.00                                         |                                                                                            |                |
| 65240.00                                         |                                                                                            |                |
| 10.                                              | \$                                                                                         |                |
| 11.                                              | \$                                                                                         |                |
| 12.                                              | \$                                                                                         |                |
| PENALTY 13.                                      | \$                                                                                         |                |
| INTEREST 14                                      | \$ DICE 0                                                                                  |                |
| 15                                               | \$ (                                                                                       |                |
|                                                  | INTEREST 14<br>15<br>mits, has been<br>mplete return.<br>HONE NUMBER<br>DIA ex 6, Personal | INTEREST 14 \$ |

Always write your account number on your check or money order. Make a copy of this document for your records