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April 14, 2003

Ms. Kedari Reddy, Assistant Regional Counsel
Office of Regional Counsel – Region II
U.S. Environmental Protection Agency
290 Broadway – 17th Floor
New York, New York 10007-1866

Re: Former Biocraft Laboratories, Inc. (now known as Teva
Pharmaceuticals USA, Inc.) facility in Waldwick, New Jersey
Lower Passaic River Study Area Response to USEPA
Request for Information Pursuant to 42 U.S.C. §§ 9601-9675

Dear Ms. Reddy:

This letter responds to the U.S. Environmental Protection Agency (USEPA) Request for Information, pursuant to 42 U.S.C. §§ 9601-9675, dated February 27, 2003, addressed to both Teva Pharmaceuticals USA, Inc. and Biocraft Laboratories, Inc., in connection with the Lower Passaic River Study Area (the "Request for Information"). In or about June 1996, pursuant to an Agreement and Plan of Merger, Biocraft Laboratories, Inc. ("Biocraft") became a wholly-owned subsidiary of Teva Pharmaceutical Industries Limited, an Israeli public company. In or about July 1996, as part of a reorganization of the parent company's United States operations, TAG Pharmaceuticals, Inc., another subsidiary of Teva Pharmaceutical Industries Limited was merged into Biocraft, with Biocraft being the surviving entity. Thereafter, Biocraft was renamed Teva Pharmaceuticals USA, Inc. ("Teva"). Subsequently, a decision was made to close all pharmaceutical manufacturing operations at Teva's (f/k/a Biocraft) Waldwick, New Jersey plant in or about September 1997, and the plant has been inactive for approximately 6 years.

In a conversation between Teva's outside counsel and Ms. Kedari Reddy on March 5, 2003, Ms. Reddy clarified that although the USEPA's Request for Information was addressed to both Biocraft and Teva, insofar as Biocraft no longer exists, a response is required only from Teva. Accordingly, the responses provided below are provided only by Teva.

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The scope of the Passaic River Study Area as published on USEPA's website (http://www.epa.gov/region02/superfund/pass_ou2.htm) covers all parts of the Passaic River from one mile south of the Second River Tributary in northern Newark, to the mouth of the Passaic River in Newark Bay. Teva's Waldwick Plant is not located within that Study Area. However, Ms. Reddy clarified that the USEPA's Request for Information in connection with the Passaic River Study Area has been extended to include all tributaries to that stretch of the Passaic River. Teva's Waldwick Plant is located in the vicinity of the Allendale Brook, which feeds into the Ho-Ho-Kus Brook, which feeds into Saddle River, which enters the Passaic River at Garfield-Wallington. Accordingly, based on the oral understandings and clarifications provided by Ms. Reddy, the responses set forth below are only for Teva's plant (Block 154, Lot 46) located at 12 Industrial Park, Waldwick, New Jersey (the "Plant").

Insofar as Teva's Waldwick Plant ceased operations and has been inactive for approximately 6 years, many of the documents associated with that Plant have either been destroyed or stored in multiple locations, which storage locations may not yet have been identified. Moreover, many of the former Biocraft and Teva personnel associated with that Plant no longer work for Teva and their whereabouts are unknown. Nevertheless, Teva is in the process of trying to locate and identify additional documentation that may be responsive to the USEPA's Request for Information. If any such documentation is located and is determined to be responsive, Teva will supplement its responses. Teva's responses to the USEPA Request for Information follow each of USEPA's Requests for Information, and are set forth below.

USEPA Request for Information 1): How long has your company operated at the facility? If your company no longer operates at this facility, during what years did your company operate at the facility?

Response 1): Biocraft purchased the property (Block 154, Lot 46), built the Plant and associated site improvements, and began operations in or about 1972. See above for a description of the 1996 merger between Biocraft and Teva. Teva ceased operations and closed the Plant in or about 1997.

USEPA Request for Information 2)a): Does your company have or has it in the past had a permit or permits issued pursuant to the Resource Conservation and Recovery Act 42 U.S.C. §§ 6901- et. seq.?

Response 2)a): Teva is unaware of any permits having been issued to the former Biocraft Waldwick Plant pursuant to the Resource Conservation and Recovery Act.

USEPA Request for Information 2)b): Does your company have or has it had in the past had a permit or permits issued to the Federal Pollution Control Act, 22 U.S.C. § 1251, et. seq.? If "yes" please provide the years that your company held such a permit.

Response 2)b): During the periods specified below, the Plant had the following Federal Pollution Control Act permits:

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From	To	Discharge Type & Quantity, if known	Discharge/Disposal Point
1/1/96	12/31/01	Industrial Wastewater Pretreatment Discharge - Approximately 7,800 gpd (Manufacturing Plant)	Publicly Owned Treatment Works - Northwest Bergen County Utilities Authority (Permit No. 95002)
6/23/93	11/1/97	New Jersey Pollutant Discharge Elimination System (NJPDES) Storm Water Discharge Permit (Manufacturing Plant)	Allendale Brook (Permit No. NJ0088315)

USEPA Request for Information 3): Did your company receive, utilize, manufacture, discharge, release, store, or dispose of any materials containing the following substances:

Response 3):

Former Biocraft Waldwick Plant Materials List

	Yes	No
2,3,7,8 tetrachlorodibenzo-p-dioxin		X
2,4-Dichlorophenoxy acetic acid (2,4-D)		X
2,4,5-Trichlorophenoxy acetic acid (2,4,5-T)		X
2,4,5-Trichlorophenol (2,4,5-TCP)		X
or other dioxin compounds		X
Dichlorodiphenyl-trichloroethate (DDT)		X
Benzene *	X*	
Ethyl Benzene		X
Total Petroleum Hydrocarbons (TPEH)	X	
Poly Aromatic Hydrocarbons (PAH)	X	
If yes please list specified compounds	No. 2 Fuel Oil	
Toluene	X	
Xylene	X	
PCBs		X
Antimony *	X*	
Argon		X
Arsenic *	X*	
Cadmium *	X*	
Chlorine		X
Chromium *	X*	
Copper *	X*	
Iron *	X*	
Lead *	X*	
Mercury *	X*	
Nickel *	X*	

Silver *	X*	
Sulfur *	X*	
Titanium		X
Vanadium		X
Zinc *	X*	
Cyanide		X
Acetone	X	
Acetylene	X	
Acetylene Tetrabromide		X
2-butoxy ethanol		X
Bis (2-ethyl hexyl) phthalate		X
Chlorodifluoromethane		X
Chloropentafluoromethane		X
Chlorotrifluoromethane		X
Dibutyl phthalate		X
Dichlorofluoromethane	X	
Naphtha	X	
Silver Nitrate *	X*	
Sodium Bisulfide		X
Sodium Hydroxide	X	
Sodium Nitrate		X
Tungsten		X

* - Indicates small Laboratory Quantities Only (See Table 1, attached)

4)a): Provide a description of the manufacturing process for which all hazardous substances, including but not limited to, the substances in response to item (3), were a product or by-product.

Response to 4)a): The Waldwick Plant manufactured semi-synthetic penicillin products in bulk form using a proprietary process. In general, the penicillin products were manufactured in separate production runs which would last a minimum of one week for each product. The penicillins were manufactured using batch chemical processes which involved the following key steps: (1) chemical reactions (one or more), (2) batch extraction, (3) crystallization, (4) centrifuging, (5) drying, (6) compaction, (7) milling, and (8) blending.

Most materials used at the Plant were delivered in bulk (tank truck) and drum quantities. Raw materials used in manufacturing generally included methylene chloride, acetone, hydrochloric acid, sodium hydroxide, and liquid nitrogen. Materials stored in drums included triethylamine, dimethyl acetamide, 2,6-lutidine, and pivaloyl chloride. Small quantities of hazardous materials also were used and stored in laboratories located in the Plant.

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USEPA Request for Information 4)b): During what parts of the manufacturing processes identified in the response to items 4)a), above, were hazardous substances, including but not limited to, the substances listed in response to item (3), generated?

- i) Describe the chemical composition of these hazardous substances.*
- ii) For each process, what amount of hazardous substance was generated per volume of finished product?*
- iii) Were these hazardous substances combined with wastes from other processes? If so, wastes from what processes?*

Response to 4)b): Hazardous substances were part of the following manufacturing process key steps described in response to Request for Information 4)a) above: (1) chemical reactions (one or more), (2) batch extraction, (3) crystallization, (4) centrifuging, and (5) drying.

Response to 4)b)i): See Response to 4)a) above. Onsite boilers for steam generation were fired using natural gas or No. 2 fuel oil.

Response to 4)b)ii): The Waldwick Plant manufactured semi-synthetic penicillin products in bulk form using a proprietary process over an approximately 25 year period. In general, the penicillin products were manufactured in separate production runs which would last a minimum of one week for each product. The amount of hazardous substances generated per volume of finished products varied depending on the type of penicillin manufactured and the duration of the particular production run. As of the date of this response, Teva has been unable to locate any responsive documents identifying the volume of hazardous substances per volume of finished product. This response letter will be supplemented if responsive documents are located in the future.

Response to 4)b)iii): Teva does not believe that hazardous substances were combined with wastes from other processes.

USEPA Request for Information 5): Describe the methods of collection, storage, treatment, and disposal of all hazardous substances, including, but not limited to, the substances listed in response item (3) and (4). Include information on the following:

- a) Identify all persons who arranged for and managed the processing, treatment, storage and disposal of hazardous substances.*

Response to 5)a): As of the date of this response, Teva has been unable to locate responsive documents identifying all persons who arranged for and managed the processing, treatment, storage, and disposal of hazardous substances. This response letter will be supplemented if responsive documents are located in the future.

- b) If hazardous substances were taken off-site by a hauler or transporter, provide the names and addresses of the waste haulers and the disposal site locations.*

Response to 5)b): As of the date of this response, Teva has been unable to locate responsive documents identifying the names and addresses of waste haulers and disposal sites used for off site disposal. However, Teva believes that such information may be available on the USEPA Envirofacts web-site (<http://www.epa.gov/enviro/>) which includes summaries of the hazardous waste inventory forms filed by Biocraft or Teva with the USEPA at various times. We refer you to that web-site for responsive information.

- c) *Describe all storage practices employed by your company with respect to all hazardous substances from the time operations commenced until the present. Include all on-site and off-site storage activities.*
- i) *If drums were stored outside, were the drums stored on the ground or were they stored on areas that had been paved with asphalt or concrete? Please provide a complete description of these storage areas.*
 - ii) *When drums were stored outside, were empty drums segregated from full drums?*

Response 5)c): Hazardous materials and wastes used and generated at the Plant generally were stored in drums and aboveground, below grade (vaulted) storage tanks during the operation of the Plant. The structural integrity testing of tanks Nos. 1 through 10 was last conducted in or about 1995 through visual inspection and static head testing. At that time, tanks Nos. 1 through 10 were found to be in good condition with no indication of product leakage. Heating oil (No. 2 fuel oil) was stored in one underground storage tank located outside the Plant. The storage areas are described below.

- Hydrochloric Acid was stored in one 6,000-gallon, single wall, fiberglass aboveground storage tank. The tank had no internal heating coils. The tank was located within secondary containment constructed of poured reinforced concrete walls and floor. The concrete interior walls and floor were coated with chemically resistant epoxy. All tank piping was aboveground and did not pass through the containment walls. Pipe valves were readily accessible and were close to the tank to permit shut off in the event of a pipe rupture outside of the containment unit. The tank was equipped with a liquid level gauge and a high liquid level alarm. Tank overflow piping was directed to the containment unit. The tank and secondary containment unit were visually inspected daily in accord with SOP #WH-0033. The tank was visually and hydrostatically tested in or about February 1994 and found to be in satisfactory condition.
- Sodium Hydroxide was stored in a 6,000-gallon single wall, stainless steel, aboveground storage tank. The tank had no internal heating coils. The tank was located within secondary containment constructed of poured reinforced concrete walls and floor. The concrete interior walls and concrete were coated with chemically resistant epoxy. All tank piping was aboveground and did not pass

through the containment walls. Pipe valves were readily accessible and close to the tank to permit shut off in the event of a pipe rupture outside of the containment unit. The tank was equipped with a liquid level gauge and a high liquid level alarm. Tank overflow piping was directed to the containment unit. The tank and secondary containment unit were inspected daily in accord with SOP #WH-0033. The stainless steel tank was installed in or about February 1995 as a replacement/upgrade of the original fiberglass tank.

- No. 2 Fuel Oil was stored in a 6,000-gallon, double wall, fiberglass, underground storage tank. Tank piping was constructed of double wall fiberglass and was equipped with an annular space leak detection system. The tank had no internal heating coils. The tank was equipped with a liquid level gauge, a high liquid level alarm, and an annular space leak detection system. The tank was installed in or about 1991.
- Acetone and Methylene Chloride were stored in four, 10,000-gallon, single wall, fiberglass below grade storage tanks (Tank Nos. 1 through 4). The tanks had no internal heating coils. Two tanks stored virgin acetone and methylene chloride and two tanks stored acetone and methylene chloride recovered from the manufacturing process. The tanks were located in two below grade vaults. The vault walls, floors, and covers were poured, reinforced concrete. The concrete was coated with chemically resistant epoxy. All tank piping was aboveground and did not pass through the containment walls. Pipe valves were readily accessible and close to the tank to permit shut off in the event of a pipe rupture outside of the containment unit. Each tank was equipped with a liquid level gauge, a high liquid level alarm, and a nitrogen blanketing system. The tank vault was equipped with an automatic leak detection system which was installed at the low point of the vault floor. The tanks were installed in or about 1990.
- Hazardous wastes generated from the manufacturing process were stored in six 10,000 gallon, single wall, fiberglass tanks (Tank Nos. 5 through 10). The tanks had no internal heating coils. The tanks were located in three below grade vaults. The vault walls, floors, and covers were poured, reinforced concrete. The concrete was coated with chemically resistant epoxy. All tank piping was aboveground and did not pass through the containment walls. Pipe valves were readily accessible and were close to the tank to permit shut off in the event of a pipe rupture outside of the containment unit. Each tank was equipped with a liquid level gauge, a high liquid level alarm, and a nitrogen blanketing system. The tank vault was equipped with an automatic leak detection system which was installed at the low point of the vault floor. The tanks were installed in or about 1990.
- Liquid nitrogen was stored in a 15,000 gallon, aboveground cryogenic tank. The tank had no internal heating coils. The tank was equipped with a level gauge, a pressure gauge, and a pressure relief valve.

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- Raw materials stored in drums include triethylamine, dimethyl acetamide, 2,6-Lutidine, and pivaloyl chloride. Hazardous wastes were not stored in the drum storage area. The number of drums stored varied with the product being manufactured, but generally ranged from 150 to 200 55-gallon drums. The drums were stored in one area (approximately 1,800 square feet), on a poured, reinforced concrete slab. The drums were stored on portable containment skids and covered by water repellent tarps. The drum storage pad was sloped to direct runoff to the parking lot. The maximum capacity of the drum storage area was 72 portable containment skids (approximately 280 drums). Empty drums were segregated from full drums.
- Process reactors, centrifuges, and distillation tanks in the manufacturing building were constructed of stainless steel. Secondary containment for these tanks was provided by concrete curbing and the building masonry walls. Except for two floor drains in Production Area 1, all floor drains were sealed. The two floor drains in Production Area 1 were connected to the sanitary sewer which discharged to the Publicly Owned Treatment Works ("POTW"). The drains were covered during manufacturing operations with caps constructed of chemically resistant materials. The caps were removed during housekeeping activities, and hazardous substances were not discharged into the floor drains. The tanks in Production Area 1 were equipped with a sight glass to determine liquid levels; liquid level gauges were not used because of varying reactor temperatures and pressures. The distillation tanks in Production Area 2 were equipped with liquid level gauges. All tanks were equipped with pressure relief valves.
- Small quantities of hazardous materials were stored and used in the research and development, quality control, and microbiology laboratories in the Plant. Glass or plastic containers which held solid materials and non-flammable liquids were stored in metal cabinets. Glass or plastic containers which held flammable solids and liquids were stored in cabinets approved for storing flammable substances. Incompatible materials were stored in separate cabinets. Secondary containment of the laboratories was provided by the building masonry walls.
- The manufacturing building electricity was supplied through one transformer which was mounted on a poured concrete slab. This transformer did not contain dielectric fluid.

d) *What processes do you use to treat your waste? What do you do with the waste after it is treated?*

Response 5)d): The Waldwick Plant has been closed and inactive since 1997. Accordingly, no wastes are generated from that Plant. During the Plant's operation, hazardous wastes generated from manufacturing were recovered and sent off-site for disposal or recovered (distillation) onsite. The hazardous waste streams sent for off-site disposal included: process wastewater and still bottoms from methylene chloride distillation. Solvent was recovered and recycled for reuse in manufacturing from crude

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methylene chloride waste streams and the acetone-water waste stream. Water generated during the manufacturing process was pretreated by a bioreactor system prior to discharge to the POTW, in accordance with the Plant's POTW permit.

USEPA Request for Information 6)a): For process waste waters generated at the facility which contained hazardous substances, including, but not limited to, the substances listed in response to item (3) and (4):

i) Where was the waste water discharged and during what years?

Response 6)a)i): Water generated during the manufacturing process was pretreated by a bioreactor system prior to discharge to the Northwest Bergen County Utilities Authority Publicly Owned Treatment Works between 1972 (when Plant operations began) and 1997 (when Plant operations ceased).

ii) Was the waste water discharged into a sanitary sewer and if so, during what years.

Response 6)a)ii): See response to 6)a)i) above.

iii) Was the waste water treated before being discharged to the sanitary sewer and if so, how?

Response 6)a)iii): See response to 6)a)i) above.

iv) If the waste waters were not discharged to the sanitary sewer, where were they disposed of and during what years?

Response 6)a)iv): Not applicable.

v) Please provide the results of any analyses performed on any waste process streams generated at the facility?

Response 6)a)v): As of the date of this response, Teva has been unable to locate any responsive documents containing the results of process waste water analyses. This response letter will be supplemented, if responsive documents are located in the future.

USEPA Request for Information 6)b): For floor drains or other disposal drains at the facility:

i) Did the drains connect to a sanitary sewer, and if so, during what years?

Response 6)b)i): All floor drains in the Plant discharged to the sanitary sewer between approximately 1972 (when Plant operations began) and 1997 (when Plant operations ceased).

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- ii) *If the floor drains or other disposal drains at the facility were not discharged to the sanitary sewer, where did they discharge and during what years?*

Response 6)b)ii): Not applicable.

USEPA Request for Information 6)c)i): Did any storm sewers, catch basins, or lagoons exist at any time at the facility and if so, during what years?

Response 6)c)i): Storm water from the parking lots and roof runoff have discharged to storm sewers commencing in or about 1972 (when Plant operations began).

USEPA Request for Information 6)c)ii): If catch basins or lagoons existed, were they lined or unlined?

Response 6)c)ii): There were never any catch basins or lagoons onsite.

USEPA Request for Information 6)c)iii): What was stored in the lagoons?

Response 6)c)iii): Not applicable.

USEPA Request for Information 6)c)iv): Where was the discharge from any of these structures released and during what years? Was this discharge treated before its release and if so, how and during what years? What was the chemical composition of any waste waters released?

Response 6)c)iv): The storm water has been conveyed from the storm sewers to the municipal storm water system through underground concrete pipes commencing in or about 1972 (when Plant operations began). The storm water was discharged in compliance with the New Jersey Department of Environmental Protection ("NJDEP") Storm Water General Industrial Permit No. NJ0088315. Sampling of the storm water runoff was not conducted and was not required under the Plant's General Industrial Permit.

USEPA Request for Information 6)d): Please supply diagrams of any waste water collection, transport, or disposal system on the property.

Response 6)d): A copy of the responsive diagram is attached.

USEPA Request for Information 7)a): For each hazardous substance, including, but not limited to, the substances listed in response to item (3) or identified in the responses to item (4), above, provide the total amount generated during operation of the facility on an annual basis.

Response 7)a): As of the date of this response, Teva has been unable to locate any responsive documents indicating the total amount of hazardous substances generated on

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an annual basis. However, Teva believes that such information is available on the USEPA Envirofacts web-site (<http://www.epa.gov/enviro/>). This response letter will be supplemented, if responsive documents are located in the future.

USEPA Request for Information 7)b): Were any hazardous substances, including, but not limited to, the substances listed in response to item (3) or identified in the responses to item (4), above, disposed of in the Passaic River or discharged to the Passaic River? If yes, identify the hazardous substances, estimate the amount of material discharged to or disposed of in the Passaic River and the frequency with which the discharge or disposal occurred. Also, please include any sampling of the river which you might have done after the discharge or disposal.

Response 7)b): Hazardous substances were not disposed of or discharged to the Passaic River.

USEPA Request for Information 8: Please identify any leaks, spills, explosions, fires, or other incidents of accidental material discharge that occurred at the facility during which or as a result of which any hazardous substances, including, but not limited to, the substances listed in response to item (3) or (4), were released on the property, into the waste water or storm water drainage system at the facility or to the Passaic River. Provide any documents or information related to these incidents, including the ultimate disposal of any contaminated materials.

a) Please provide the results of any sampling of the soil, water, air or other media after any such incident and before and after clean-up. Please provide in this information all sampling performed for or by NJDEP.

Response 8:

Surface Water- A 100-foot long underground steel pipe was installed at the Plant in or about 1972 to transfer wastewater from the manufacturing building processing area to an underground wastewater storage tank. The wastewater contained low concentrations of acetone, methylene chloride, n-butyl alcohol, and dimethyl aniline. A leak in the underground transfer line reportedly was discovered in or about 1975 during a NJDEP investigation requested by the Northwest Bergen Regional Health Commission (NWBRC) to determine the causes of grayish-black algae growth on the surface water of Allendale Brook.

The NJDEP February 28, 1991 Site Inspection Report indicates that the USEPA collected seven water samples from the storm sewer (at unspecified locations) and two stream samples (at unspecified locations) from Allendale Brook in 1975. Methylene chloride (13 µg/L, 113 µg/L, and 114 µg/L), butyl alcohol (37 µg/L, 63 µg/L, and 343 µg/L), acetone (0.2 µg/L, 4.2 µg/L, and 7 µg/L) were detected in three of the seven storm sewer samples. Butyl alcohol (4 µg/L), dimethyl aniline (0.1 µg/L), and phenylacetic acid (23 µg/L) were detected in one of the stream samples. Methylene chloride and acetone (the contaminants of concern) were below the laboratory minimum detection limits for

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both samples. The analytical results of surface water samples collected from Allendale Brook in 1975 were well below the Surface Water Standards.

In response to the reported release, Biocraft removed the source of the discharge (the leaking underground lines) and reduced any potential discharges to surface water by installing the biodegradation/biostimulation system to control downgradient migration of VOCs by extracting and treating groundwater.

At the request of NJDEP, a sediment sample (SED-1) was collected by Teva from Allendale Brook below the storm water discharge pipe on November 5, 1999 and analyzed for grain size distribution, aniline, and dimethyl aniline. The sampling indicated that aniline and dimethyl aniline were not detected above the laboratory minimum detection limits (84 $\mu\text{g}/\text{kg}$ for aniline and 210 $\mu\text{g}/\text{kg}$ for dimethyl aniline). The grain size distribution indicates that the sample consisted of coarse to fine sand and fine gravel with trace fines. The sampling results confirm that the underground transfer line leak had not adversely affected Allendale Brook surface water or sediment quality.

Groundwater – After the leak was discovered in the underground pipe in or about November 1975, Biocraft removed the pipe from service. Monitoring wells were installed and groundwater samples were collected and analyzed to determine whether the underground transfer line leak had impacted groundwater quality. The groundwater sampling showed elevated concentrations of methylene chloride, acetone, and butyl alcohol. The nature and extent of groundwater contamination at the Plant has been documented in extensive groundwater investigations conducted between 1979 and 2002.

Biocraft pumped groundwater from three on-site recovery wells between 1975 and 1981 and disposed of the groundwater off-site. Disposal of the recovered groundwater off-site became cost-prohibitive and, accordingly, with NJDEP's approval, Biocraft undertook an extensive research and development project to develop a process to remove and treat groundwater. The research resulted in the development of a sophisticated biodegradation/biostimulation process which was patented in the U.S.

Biocraft initiated groundwater monitoring to evaluate the progress and effectiveness of the groundwater biodegradation/biostimulation system. The groundwater sampling data indicates that butyl alcohol, acetone, and dimethyl aniline concentrations have been less than the NJDEP Class IIA Groundwater Quality Criteria for the past 25 quarterly monitoring events in all on-site and off-site groundwater monitoring wells. The groundwater sampling data indicates that butyl alcohol, acetone, and dimethyl aniline concentrations have been less than the NJDEP Class IIA Groundwater Quality Criteria for the past 15 quarterly monitoring events in all on-site and off-site groundwater monitoring wells. The groundwater data indicates that there are no continuing sources of groundwater contamination at the site.

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USEPA Request for Information 9)a): Was your facility ever subject to flooding. If so, was the flooding due to:

- i) overflow from sanitary or storm sewer backup and/or*
- ii) flood overflow from the Passaic River*

Response 9)a)i) and 9)a)ii): There have been no reported flooding incidents at the Waldwick Plant.

USEPA Request for Information 9)b): Please provide the date and duration of each flood event.

Response 9)b): Not applicable.

USEPA Request for Information 10): Please provide a detailed description of any civil, criminal, or administrative proceedings against your company for violations of any local, State, or federal laws or regulations relating to water pollution or hazardous waste generation, storage, transport, or disposal. Provide copies of all pleadings and depositions or testimony given in these proceedings.

Response 10):

Item 1:

- a) **Name and address of agency that initiated the enforcement action:** New Jersey Department of Environmental Protection, Trenton, New Jersey
- b) **Date of Enforcement Action:** April 26, 1989
- c) **Section of statute, rule, or permit allegedly violated:** N.J.A.C. 7:27-8.3(e)1
- d) **Type of enforcement action:** Administrative Order and Notice of Civil Administrative Penalty Assessment
- e) **Description of violation:** Use of sodium hydroxide not covered under NJDEP Air Permit No. 41930.
- f) **How was the violation resolved:** Biocraft revised and resubmitted the permit.

Item 2:

- a) **Name and address of agency that initiated the enforcement action:** New Jersey Department of Environmental Protection, Trenton, New Jersey
- b) **Date of Enforcement Action:** November 23, 1994
- c) **Section of statute, rule, or permit allegedly violated:** N.J.A.C. 7:1E-4.6(a) & (b)4
- d) **Type of enforcement action:** Administrative Order and Notice of Civil Administrative Penalty Assessment
- e) **Description of violation:** A DPCC/DCR Plan had not been prepared for the Plant
- f) **How was the violation resolved:** A DPCC/DCR Plan was prepared, submitted, and approved by the NJDEP in June 1995 for the Plant.

Item 3:

- a) **Name and address of agency that initiated the enforcement action:** New Jersey Department of Environmental Protection, Trenton, New Jersey

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- b) **Date of Enforcement Action:** September 25, 1980
- c) **Section of statute, rule, or permit allegedly violated:** N.J.S.A. 13:10-1 et.seq., N.J.S.A. 13:1E-1 et. seq., and N.J.A.C. 7:26-12-1
- d) **Type of enforcement action:** Administrative Consent Order
- e) **Description of violation:** Hazardous waste stored in two 10,000-gallon underground storage tanks. Failure to submit a hazardous waste facility permit application
- f) **How was the violation resolved:** Underground storage tanks were removed according to NJDEP regulations, a contingency plan was prepared, emergency equipment was made available in case of a spill, and an evacuation plan was prepared. NJDEP observed the underground storage tank removal and recommended No Further Action (memo dated April 15, 1992).

Item 4:

- a) **Name and address of agency that initiated the enforcement action:** New Jersey Department of Environmental Protection, West Orange, New Jersey
- b) **Date of Enforcement Action:** May 12, 1994
- c) **Section of statute, rule, or permit allegedly violated:** N.J.A.C. 7:26-7.4(1) 4ii and N.J.A.C. 7:26-7.4(a) 4iii
- d) **Type of enforcement action:** Notice of Violation
- e) **Description of violation:** USEPA Identification number, NJ decal number, and correct transporters registration numbers were incorrect or missing on hazardous waste manifest.
- f) **How was the violation resolved:** Proper paperwork was submitted to the NJDEP within the 15 day time frame.

Item 5:

- a) **Name and address of agency that initiated the enforcement action:** New Jersey Department of Environmental Protection, Trenton, New Jersey
- b) **Date of Enforcement Action:** January 12, 1977, December 6, 1978, September 25, 1980, and June 18, 1982
- c) **Section of statute, rule, or permit allegedly violated:** Various sections related to a discharge from underground storage tank piping
- d) **Type of enforcement action:** Administrative Consent Orders
- e) **Description of violation:** The site was subject to a groundwater Administrative Consent Order (ACO) comprised of a NJDEP ACO dated January 12, 1977, as amended by an NJDEP Administrative Order dated December 12, 1978, as amended by an NJDEP ACO dated September 25, 1980, as modified by an NJDEP letter dated June 18, 1982 (collectively, the "Groundwater ACO"). The Groundwater ACO stemmed from a discharge in or about November 1975 from underground lines leading to an underground wastewater tank.
- f) **How was the violation resolved:** The underground lines were removed in or about 1975 and aboveground lines were installed. Subsequently, the underground storage tanks were removed and replaced with vaulted below grade storage tanks with secondary containment and continuous monitoring. Biocraft undertook an extensive research and development project to develop a process to remove and treat groundwater. The research resulted in the development of a sophisticated

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biodegradation/biostimulation process which received a patent from the U.S. Patent Office. The biodegradation/biostimulation system was installed with NJDEP approval and was operated continuously between 1981 and July 2000 (19 years). The analytical data indicates that after the system was turned off in or about July 2000 concentrations of methylene chloride and acetone detected onsite were less than the laboratory minimum detection limit or less than the NJDEP Class IIA Groundwater Quality Criteria.

* * *

There were no pleadings, depositions or testimony associated with any of the enforcement proceedings identified above.

USEPA Request for Information 11): Provide a copy of each document which relates to the generation, purchase, use, handling, hauling, and or disposal of all hazardous substances, including, but not limited to, the substances listed in response to items (3) and (4). If you are unable to provide a copy of any document, then identify the document by describing the nature of the document (e.g., letter, file memo, invoice, inventory form, billing record, hazardous waste manifest, etc.). Describe the relevant information contained therein. Identify by name and job title the person who prepared the document. If the document is not readily available, state where it is stored, maintained, or why it is unavailable.

Response 11): As of the date of this response, Teva has been unable to locate documents which relate to the generation, purchase, use, handling, hauling, and or disposal of all hazardous substances, including, but not limited to, the substances listed in response to items (3) and (4). As stated in Response 1) above, the facility was closed in or about 1997. Some of the records were shipped to off-site storage facilities. Some records were destroyed after they were maintained for the minimum time frames as required by state and federal regulations and permits. This response letter will be supplemented, if responsive documents are located in the future.

USEPA Request for Information 12)a): Did you or anyone one else sample the soil, groundwater, surface water, ambient air, or other environmental media at the facility for purposes other than those identified in questions above?

Response 12)a): Extensive soil, groundwater, and Allendale Brook sediment sampling has been conducted as part of the NJDEP Industrial Site Recovery Act (ISRA). ISRA-required activities are being conducted by Teva at the Waldwick Plant under an ISRA Remediation Agreement dated May 30, 1996 (ISRA case #96070).

USEPA Request for Information 12)b): If so, please provide all other documents pertaining to the results of these analyses.

Response 12)b): The following documents were prepared and submitted to NJDEP as part of the ISRA case # 96070:

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Date	Description or Title	Prepared By
2/1/96	General Information Notice	Eder Associates
3/1/96	Preliminary Assessment	Eder Associates
3/25/96	Letter to Gail Port regarding Preliminary Assessment	NJDEP
3/26/96	Remediation Agreement Application	Eder Associates
5/30/96	Remediation Agreement	NJDEP
6/13/96	Report of Inspection	NJDEP
7/19/96	Response to NJDEP Report of Inspection Received June 13, 1996	Eder Associates
4/97	Remedial Investigation Report	Eder Associates
10/15/97	NJDEP Comment Letter on Eder's July 19, 1996 Response Letter and the September 1996 NJPDES Application	NJDEP
12/15/97	Response to NJDEP 10/15/97 Comment Letter	Eder Associates
7/1/98	NJDEP Comment Letter on Eder's 12/15/97 Response Letter	NJDEP
1/12/99	Remedial Investigation Workplan	Eder Associates division of Gannett Fleming
4/19/99	Remedial Investigation Workplan Addendum	Eder Associates division of Gannett Fleming
5/28/99	NJDEP Comment Letter on 1/12/99 RIW and 4/19/99 RIW addendum	NJDEP
6/30/00	Remedial Investigation Report and NJDPES Discharge to Groundwater Permit Application	Environmental Strategies Corporation
5/13/01	Draft Groundwater Data Summary	Environmental Strategies Corporation
5/30/01	NJDEP Comment Letter on 6/30/01 RIR	NJDEP
12/31/01	Remedial Investigation Report	Environmental Strategies Corporation
2/15/02	Baseline Ecological Evaluation	AMEC Associates
9/5/02	Semi-Annual Groundwater Report	Environmental Strategies Corporation
2/4/03	NJDEP Comment Letter on 12/31/01 RIR, BEE, and Semi-Annual Groundwater Report	NJDEP
3/11/03	Proposed Recovery Well Sampling Procedures Letter	Environmental Strategies Corporation
3/18/03	Memorandum with Comments on Sampling Procedures	NJDEP
3/19/03	Response to NJDEP Memo	Environmental Strategies Corporation

These documents are too voluminous to copy. However, copies of these documents are readily available at the NJDEP's offices in Trenton, New Jersey. Teva will provide copies of select documents, if requested by the USEPA.

USEPA Request for Information 13)a): Has your company owned the facility at the location designated above? If so, from whom did your company purchase the property and in what year? If your company subsequently sold the property, to whom did your company sell it and in what year? Please provide copies of any deeds and documents of sale.

Response 13)a): Biocraft purchased the Plant in or about 1972 from Paul and Antoinette Nigrito and F. William and Margaret Koestner. As described above in the introduction to these responses, as a consequence of a merger with Biocraft and related reorganization, Teva currently owns the Plant. Copies of the responsive deeds are attached.

USEPA Request for Information 13)b): If your company did not own the facility, from whom did your company rent the facility and for what years? Please provide copies of any rental agreements.

Response 13)b): Not applicable.

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USEPA Request for Information 13)c): To the extent that you know, please provide the names of all parties who owned or operated the facility during the period 1940 through the present. Describe the relationship, if any, of each of those parties with your company.

Response 13)c):

Owner Name	Operator Name	From	To	Relation to Teva
George B. and Adele Smith	Unimproved Land Portion of Parcel	2/7/17	7/27/20	None
Daniel B. and Margaretta Smith	Unimproved Land Portion of Parcel	2/7/17	12/18/20	None
Andrew B. Smith	Unimproved Land	12/18/20	?	None
Elli Steinbuch (widow) et als	Unimproved Land	?	1/25/38	None
Alan Investment	Unimproved Land	1/25/38	?	None
Elizabeth S. Gunderson	Unimproved Land	?	11/20/62	None
Waldwick Industrial Park (Nigrito, President) and F. William and Margaret Koestner	Unimproved Land	11/20/62	6/20/63	None
Paul and Antoinette Nigrito and F. William and Margaret Koestner	Unimproved Land	6/20/63	1/11/72	None
Biocraft Laboratories, Inc.	Biocraft Laboratories, Inc. (Plant constructed in or about 1972)	1/11/72	in or about 6/96	Predecessor to Teva
Teva Pharmaceuticals USA, Inc.	Teva Pharmaceuticals USA, Inc. (Plant ceased operations in or about 1997)	in or about 6/96	present	Same

USEPA Request for Information 14): Answer the following questions regarding your business or company. In identifying a company that no longer exists, provide all the information requested, except for the agent for service of process. If your company did business under more than one name, list each name.

a) *State the legal name of your company:*

Response 14)a): Teva Pharmaceuticals USA, Inc.

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b) State the name and address of the president or the chairman of the board or other presiding officers of your company:

Response 14)b): George Barrett is the President of Teva Pharmaceuticals USA, Inc., 1090 Horsham Road, North Wales, PA 19454-1090.

c) State the number of people employed by your company:

Response 14)c): Approximately 1327.

d) Identify the state of incorporation of your company and your company's agent for service of process in the state of incorporation and in New Jersey:

Response 14)d): Teva Pharmaceuticals USA, Inc. is incorporated in Delaware. CT Corporation is Teva's agent for service of process in New Jersey and Delaware.

e) Provide a copy of your company's "Certificate of Incorporation" and any amendments thereto:

Response 14)e): Copies of the responsive documents are attached.

f) If your company is a subsidiary or affiliate of another company, or has subsidiaries, or is a successor to another company, identify these related companies. For each related company, describe the relationship to your company, indicate the date and manner in which each relationship was established:

Response 14)f): This Request is overbroad and burdensome. However, responsive information generally can be found on the following websites: <http://www.Tevapharmusa.com> and <http://www.Tevapharm.com> and in the Form 20-F for fiscal year ended 12/31/02 filed by Teva Pharmaceutical Industries Limited, which can be accessed through the websites listed above.

g) Identify any predecessor organization and the dates that such company became part of your company.

Response 14)g): This Request is overbroad and burdensome. See responsive information on: <http://www.Tevapharmusa.com>.

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h) Identify any other companies which were acquired by your company or merged with your company.

Response 14)h): This Request is overbroad and burdensome. See responsive information on: <http://www.Tevapharmusa.com>.

i) Identify the date of incorporation, state of incorporation, agents for service of process in the state of incorporation and New Jersey, and nature of business activity for each company identified in the responses to items (14(e), (f), and (g), above:

Response 14)i): This Request is overbroad and burdensome. See responsive information on: <http://www.Tevapharmusa.com>.

j) Identify all previous owners or parent companies, address(es), and the date change in ownership occurred.

Response 14)j): This Request is overbroad and burdensome. See response 14)f) above.

USEPA Request for Information 15): Provide the name, address, telephone number, title and occupation of the person(s) answering this Request for Information" and state whether such person(s) has personal knowledge of the responses. In addition, identify each person who assisted in any way in responding to the "Request for Information" and specify the question to which each person assisted in responding. Please include the names and addresses of former employees who were contacted to respond to any of the questions.

Response 15): The certification of the responses to the USEPA's Request for Information is being made by:

Kirsten Bauer, Esq.
Director, Legal Affairs
Teva Pharmaceuticals USA, Inc.
1090 Horsham Road
North Wales, PA 19454-1090
Phone: 215-591-3000

Ms. Bauer, an in-house lawyer at Teva, does not have personal knowledge of the responses, but has based the certification on her review of the information provided in

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these responses and the accompanying documents and inquiries of the persons listed below who assisted in the preparation of Teva's responses. The following people assisted in the preparation of Teva's responses to the USEPA's Request for Information:

Mark R. Foley
Project Director
Environmental Strategies Corporation
334 Elizabeth Avenue Suite B
Somerset, NJ 08873
Phone: 732-564-0888

- and -

Gail S. Port, Esq.
Senior Counsel
Proskauer Rose LLP
(outside counsel to Teva)
1585 Broadway
New York, New York 10036-8299
Phone: 212-969-3000

Both Mr. Foley and Ms. Port assisted in preparing each of Teva's responses set forth above.

CERTIFICATION OF ANSWERS TO REQUEST FOR INFORMATION

State of PENNSYLVANIA :

County of MONTGOMERY :

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document (response to EPA Request for Information) and all documents submitted herewith, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete and that all documents submitted herewith are complete and authentic unless otherwise indicated. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. I am also aware that my company is under a continuing obligation to supplement its response to EPA's Request for Information if any additional information relevant to the matters addressed in EPA's Request for Information or the company's response thereto should become known or available to the company.

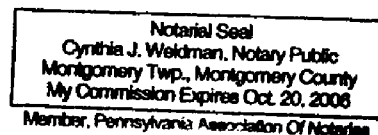
Kristen E Bauer
NAME (print or type)

Director, Legal Affairs
TITLE (print or type)

Kristen E Bauer
SIGNATURE

Sworn to before me this 14th day of Apr 2003

Cynthia J. Weidman
Notary Public Signature



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RESPONSE 3)

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854850022

**FORMER BIOCRAFT LABORATORIES, INC.
WALDWICK PLANT
WALDWICK, NEW JERSEY**

TABLE I

MATERIALS LIST

Substance Name	CAS Number	Typical Annual Usage *		Storage Method		Location/Keyed to Location Map	To Remain On-Site	Maximum Daily Quantity (lbs.)
		Quantity	Units	Container Type	Container Size			
Acenaphthene	83-32-9	50 g		Bottles or Jugs (glass)	100 g	Laboratories	Yes	Less than 1 lb.
Acetamide	60-35-5	50 g		Bottles or Jugs (glass)	500 g	Laboratories	Yes	Less than 1 lb.
Acetic Acid	64-19-7	10 L		Bottles or Jugs (glass)	2.5 L & 500 mL	Laboratories	Yes	1 - 10
Acetic Anhydride	108-24-7	10 L		Bottles or Jugs (glass)	2.5 L & 500 mL	Laboratories	Yes	1 - 10
Acetone	67-64-1	1,000,000 lbs		Bottles or Jugs (glass), AST	10,000 gal	Laboratories, Production, Tank Farm	Yes	100,001 - 250,000
Acetonitrile	75-05-8	200 l.		Bottles or Jugs (glass)	2.5 l.	Laboratories	Yes	1-10
Adipic Acid	124-04-09	50 g		Bottles or Jugs (glass)	100 g	Laboratories	Yes	Less than 1 lb.
Ammonia	7664-41-7	100 lbs		Cylinder	Cylinder	Laboratories	Yes	11 - 100
Ammonium Acetate	631-61-8	75 g		Bottles or Jugs (glass)	1 Kg	Laboratories	Yes	Less than 1 lb.
Ammonium Bicarbonate	1066-33-7	50 g		Bottles or Jugs (glass)	500 g	Laboratories	Yes	Less than 1 lb.
Ammonium Chloride	12125-02-9	50 g		Bottles or Jugs (glass), Bag	500 g	Laboratories, Tank Farm	Yes	Less than 1 lb.
Ammonium Hydroxide	1336-21-6	10 L		Bottles or Jugs (glass)	2.5 L	Laboratories	Yes	1-10
Ammonium Nitrate	6484-52-2	10 L		Bottles or Jugs (plastic)	2.5 L	Laboratories	Yes	1-10
Ammonium Oxalate	1113-38-8	50 g		Bottles or Jugs (glass)	125 g	Laboratories	Yes	Less than 1 lb.
Ammonium Persulfate	7727-54-0	50 g		Bottles or Jugs (glass)	500 g	Laboratories	Yes	Less than 1 lb.
Ammonium Thiocyanate	1762-95-4	50 g		Bottles or Jugs (glass)	1 Kg	Laboratories	Yes	Less than 1 lb.
Aniline	62-53-3	1 L		Bottles or Jugs (glass)	1 L	Laboratories	Yes	Less than 1 lb.
Anthracene	120-12-7	50 g		Bottles or Jugs (glass)	250 g	Laboratories	Yes	Less than 1 lb.
Antimony	7440-36-0	50 g		Bottles or Jugs (glass)	125 g	Laboratories	Yes	Less than 1 lb.
Arsenic Trioxide	1327-53-3	50 g		Bottles or Jugs (glass)	125 g	Laboratories	Yes	Less than 1 lb.
Benzene	71-43-2	4 L		Bottles or Jugs (glass)	500 mL	Laboratories	Yes	Less than 1 lb.
Benzoic Acid	65-85-0	1 l.		Bottles or Jugs (glass)	125 g	Laboratories	Yes	Less than 1 lb.
Benzoyl Chloride	98-88-4	50 g		Bottles or Jugs (glass)	500 g	Laboratories	Yes	Less than 1 lb.
Benzyl Chloride	100-44-7	1 L		Bottles or Jugs (glass)	500 mL	Laboratories	Yes	1 - 10
Beryllium Sulfate	13510-49-1	50 g		Bottles or Jugs (glass)	25 g	Laboratories	Yes	Less than 1 lb.
2-Butanol	78-92-2	10 l.		Bottles or Jugs (glass)	1 L	Laboratories	Yes	1 - 10
N-Butanol	71-36-3	10 L		Bottles or Jugs (glass)	1 L	Laboratories	Yes	Less than 1 lb.
Butyl Acetate	123-86-4	10 L		Bottles or Jugs (glass)	1 L	Laboratories	Yes	Less than 1 lb.

Notes:

* - Laboratory chemicals are purchased, stored and used in very small quantities. Annual usage quantities are estimated.

g - grams

L - liters

Kg - Kilograms

lbs - pounds

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TABLE 1 Continues . . .

Substance Name	CAS Number	Typical Annual Usage *		Storage Method		Location/Keyed to Location Map	To Remain On-Site	Maximum Daily Quantity (lbs.)
		Quantity	Units	Container Type	Container Size			
Cadmium	7440-43-9	50 g		Bottles or Jugs (glass)	250 g	Laboratories	Yes	Less than 1 lb.
Carbon Disulfide	75-15-0	1 L		Bottles or Jugs (glass)	500 mL	Laboratories	Yes	Less than 1 lb.
Carbon Tetrachloride	56-23-5	1 L		Bottles or Jugs (glass)	500 mL	Laboratories	Yes	Less than 1 lb.
Chlorobenzene	108-90-7	1 L		Bottles or Jugs (glass)	1 L & 500 mL	Laboratories	Yes	Less than 1 lb.
Chloroform	67-66-3	1 L		Bottles or Jugs (glass)	1 L & 500 mL	Laboratories	Yes	1 - 10
Chlorophenol	95-57-8	1 L		Bottles or Jugs (glass)	1 L & 500 mL	Laboratories	Yes	Less than 1 lb.
Chromium	7440-47-3	25 g		Bottles or Jugs (glass)	100 g	Laboratories	Yes	Less than 1 lb.
Chromium Chloride	10025-73-7	100 g		Bottles or Jugs (glass)	500 g	Laboratories	Yes	Less than 1 lb.
Cupric Acetate	142-71-2	25 g		Bottles or Jugs (glass)	250 g	Laboratories	Yes	Less than 1 lb.
Cupric Chloride	1344-67-8	50 g		Bottles or Jugs (glass)	125 g	Laboratories	Yes	Less than 1 lb.
Cupric Sulfate	10380-29-7	50 g		Bottles or Jugs (glass)	500 g	Laboratories	Yes	Less than 1 lb.
Cyclohexane	110-82-7	1 L		Bottles or Jugs (glass)	500 mL	Laboratories	Yes	Less than 1 lb.
1,2-Dichlorobenzene	95-50-1	500 mL		Bottles or Jugs (glass)	500 mL	Laboratories	Yes	1 - 10
Dichloromethane	75-09-2	See Methylene Chloride		Bottles or Jugs (glass), AST, Steel Drum	10,000 gallon tank	Laboratories, Tank Farm, Production	Yes	100,001-250,000
N,N Dimethyl Aniline	121-69-7	500 mL		Bottles or Jugs (glass)	500 mL	Laboratories	Yes	1-10
Diethylamine	109-89-7	50 g		Bottles or Jugs (glass)	50 g	Laboratories	Yes	Less than 1 lb.
Diethyl Ether	60-29-7	50 g		Bottles or Jugs (glass)	50 g	Laboratories	Yes	Less than 1 lb.
Diethyl Phthalate	84-66-2	500 mL		Bottles or Jugs (glass)	500 mL	Laboratories	Yes	Less than 1 lb.
Dimethyl Dichlorosilane	75-78-5	500 mL		Bottles or Jugs (glass)	500 mL	Laboratories	Yes	1-10
1,4 Dioxane	123-91-1	2.5 L		Bottles or Jugs (glass)	500 mL	Laboratories	Yes	Less than 1 lb.
Diphenyl Amine	122-39-4	50 g		Bottles or Jugs (glass)	125 g	Laboratories	Yes	Less than 1 lb.
Ethyl Acetate	141-78-6	1 L		Bottles or Jugs (glass)	500 mL	Laboratories	Yes	1-10
Ethyl Chloroformate	541-41-3	50 g		Bottles or Jugs (glass)	500 g	Laboratories	Yes	11 - 100
Ethylene Dichloride	107-06-2	1 L		Bottles or Jugs (glass)	150 mL	Laboratories	Yes	Less than 1 lb.
Ethylene Glycol	107-21-1	4,000 lbs		Steel Drum	55 gallon	Laboratories, Tank Farm	Yes	10,001-50,000
Ferric Chloride	7783-50-8	200 g		Can	500 g	Laboratories	Yes	1-10
Ferric Nitrate	10421-48-4	100 Kg		Bottles or Jugs (glass)	20 L Carboy/50 g bottle	Laboratories	Yes	1-10
Ferrous Ammonium Sulfate	10045-89-03	250 g		Bottles or Jugs (glass)	500 g	Laboratories	Yes	1-10
Ferrous Sulfate	7720-78-7	250 g		Bottles or Jugs (glass)	500g	Laboratories	Yes	1-10

Notes:

* - Laboratory chemicals are purchased, stored and used in very small quantities. Annual usage quantities are estimated.

g - grams

L - Liters

Kg - Kilograms

lbs - pounds

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TABLE 1 Continues ...

Substance Name	CAS Number	Typical Annual Usage *		Storage Method		Location/Keyed to Location Map	To Remain On-Site	Maximum Daily Quantity (lbs.)
		Quantity	Units	Container Type	Container Size			
Formaldehyde	50-00-0	1	L	Bottles or Jugs (glass)	150 mL	Laboratories	Yes	1-10
Formic Acid	64-18-6	10	L	Bottles or Jugs (glass)	1 L	Laboratories	Yes	Less than 1 lb.
Fuel Oil (#2)	-	60,000	gal	IUST	6,000 gallon tank	Tank Farm	Yes	50,001-100,000
Hydrazine Sulfate	10034-93-2	500	g	Bottles or Jugs (glass)	500 g	Laboratories	Yes	Less than 1 lb.
Hydrochloric Acid	7647-01-0	60,000	lbs	Bottles or Jugs (glass), AST	6,000 gallon tank	Laboratories, Tank Farm, Production	Yes	50,001-100,000
Hydrogen Peroxide	7722-84-1	1	L	Bottles or Jugs (glass)	1 L	Laboratories	Yes	Less than 1 lb.
Hydrogen Sulfide	7783-06-4	10	lbs	Cylinder	Cylinder	Laboratories	Yes	Less than 1 lb.
Hydroquinone	123-31-9	25	g	Bottles or Jugs (glass)	500 g	Laboratories	Yes	Less than 1 lb.
Isobutanol	78-83-1	25	L	Bottles or Jugs (glass)	1 L	Laboratories	Yes	1-10
Isobutyl Acetate	110-19-0	25	L	Bottles or Jugs (glass)	4 L	Laboratories	Yes	Less than 1 lb.
Isopropanol	67-63-0	50	L	Bottles or Jugs (glass)	4 L	Laboratories	Yes	1-10
Lead	7439-92-1	25	g	Bottles or Jugs (glass)	500 g	Laboratories	Yes	Less than 1 lb.
Lead Acetate	301-04-3	25	g	Bottles or Jugs (glass)	500 g	Laboratories	Yes	Less than 1 lb.
Lead Nitrate	10099-74-8	25	g	Bottles or Jugs (glass)	125 g	Laboratories	Yes	Less than 1 lb.
Lead Sulfide	1314-87-0	25	g	Bottles or Jugs (glass)	125 g	Laboratories	Yes	Less than 1 lb.
Mercuric Acetate	1600-27-7	25	g	Bottles or Jugs (glass)	50 g	Laboratories	Yes	Less than 1 lb.
Mercuric Chloride	10124-48-8	25	g	Bottles or Jugs (glass)	125 g	Laboratories	Yes	Less than 1 lb.
Mercuric Oxide	21908-53-2	25	g	Bottles or Jugs (glass)	125 g	Laboratories	Yes	Less than 1 lb.
Mercuric Sulfate	7783-35-9	25	g	Bottles or Jugs (glass)	125 g	Laboratories	Yes	Less than 1 lb.
Mercuric Nitrate	778-26-7	1	L	Bottles or Jugs (glass)	1 L	Laboratories	Yes	Less than 1 lb.
Mercury	7439-97-6	1	Kg	Bottles or Jugs (plastic)	500 g	Laboratories	Yes	1-10
2-Methoxyethanol	109-86-4	10	L	Bottles or Jugs (glass)	1 L	Laboratories	Yes	Less than 1 lb.
Methyl Alcohol	67-56-1	100	L	Bottles or Jugs (glass)	1 L	Laboratories	Yes	1-10
Methyl Ethyl Ketone	78-93-3	4	L	Bottles or Jugs (glass)	4 L	Laboratories	Yes	1-10
Methyl Isobutyl Ketone	108-10-1	1	L	Bottles or Jugs (glass)	500 mL	Laboratories	Yes	1-10
Methylene Chloride	75-09-2	2,500,000	lbs	AST	10,000-gallon tank	Tank Farm, Production	Yes	50,001-100,000
Molybdenum Trioxide	1313-27-5	50	g	Bottles or Jugs (glass)	125 g	Laboratories	Yes	Less than 1 lb.
Napthalene	91-20-3	50	g	Bottles or Jugs (glass)	500 g	Laboratories	Yes	Less than 1 lb.
Nickel Chloride	7718-54-9	50	g	Bottles or Jugs (glass)	125 g	Laboratories	Yes	Less than 1 lb.
Nickel Sulfate	7786-81-4	50	g	Bottles or Jugs (glass)	250 g	Laboratories	Yes	Less than 1 lb.

Notes:

* - Laboratory chemicals are purchased, stored and used in very small quantities. Annual usage quantities are estimated.

g - grams

L - Liters

Kg - Kilograms

lbs - pounds

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TABLE I Continues ...

Substance Name	CAS Number	Typical Annual Usage *		Storage Method		Location/Keyed to Location Map	To Remain On-Site	Maximum Daily Quantity (lbs.)
		Quantity	Units	Container Type	Container Size			
Nitric Acid	7697-37-2	10	L	Bottles or Jugs (glass)	1 L	Laboratories	Yes	1-10
Nitrobenzene	98-95-3	2	L	Bottles or Jugs (glass)	1 L	Laboratories	Yes	1-10
2-Nitrophenol	88-75-5	50	g	Bottles or Jugs (glass)	100 g	Laboratories	Yes	Less than 1 lb.
Pentachlorophenol	87-86-5	50	g	Bottles or Jugs (glass)	100 g	Laboratories	Yes	Less than 1 lb.
Peracetic Acid	79-21-0	500	mL	Bottles or Jugs (glass)	500 mL	Laboratories	Yes	Less than 1 lb.
Phenacetin	62-44-2	50	g	Bottles or Jugs (glass)	125 g	Laboratories	Yes	Less than 1 lb.
Phenol	108-95-7	50	g	Bottles or Jugs (glass)	500 g	Laboratories	Yes	Less than 1 lb.
Phosphoric Acid	7664-38-2	10	L	Bottles or Jugs (glass)	1 L & 500 mL	Laboratories	Yes	1-10
Phosphorous Pentachloride	10026-13-8	500	g	Bottles or Jugs (glass)	500 g	Laboratories	Yes	1-10
Phosphorous Trichloride	7719-12-2	25	mL	Bottles or Jugs (glass)	25 mL	Laboratories	Yes	Less than 1 lb.
Picoline	109-06-8	250	mL	Bottles or Jugs (glass)	500 mL	Laboratories	Yes	Less than 1 lb.
Potassium Bromate	7758-01-2	50	g	Bottles or Jugs (glass)	500 g	Laboratories	Yes	1-10
Potassium Chromate	7789-00-6	500	g	Bottles or Jugs (glass)	250 g	Laboratories	Yes	1-10
Potassium Cyanide	151-50-8	25	g	Bottles or Jugs (glass)	25 g	Laboratories	Yes	Less than 1 lb.
Potassium Dichromate	7778-50-9	50	g	Bottles or Jugs (glass)	100 g	Laboratories	Yes	1-10
Potassium Hydroxide	1310-58-3	1	L	Bottles or Jugs (glass)	1 L	Laboratories	Yes	1-10
Potassium Permanganate	7722-64-7	500	mL	Bottles or Jugs (glass)	500 mL	Laboratories	Yes	Less than 1 lb.
Pyrene	129-00-0	1	L	Bottles or Jugs (glass)	1 L	Laboratories	Yes	Less than 1 lb.
Pyridine	110-86-1	10	L	Bottles or Jugs (glass)	1 L	Laboratories	Yes	1-10
Quinoline	91-22-5	1	L	Bottles or Jugs (glass)	1 L	Laboratories	Yes	Less than 1 lb.
Rancy Nickel	7440-02-0	25	g	Bottles or Jugs (glass)	100 g	Laboratories	Yes	Less than 1 lb.
Saccharin	81-07-2	100	lbs	Bottles or Jugs (glass)	30 gallon containers	Laboratories	Yes	11 - 100
Semicarbazide Hydrochloride	563-41-7	25	g	Bottles or Jugs (glass)	100 g	Laboratories	Yes	Less than 1 lb.
Silver Nitrate	7761-88-8	25	g	Bottles or Jugs (glass)	30 g	Laboratories	Yes	Less than 1 lb.
Sodium	7740-23-5	1	Kg	Bottles or Jugs (glass)	500 g	Laboratories	Yes	Less than 1 lb.
Sodium Arsenate	7631-89-2	25	g	Bottles or Jugs (glass)	250 g	Laboratories	Yes	Less than 1 lb.
Sodium Azide	26628-22-8	25	g	Bottles or Jugs (glass)	100 g	Laboratories	Yes	Less than 1 lb.

Notes:

* - Laboratory chemicals are purchased, stored and used in very small quantities. Annual usage quantities are estimated.

g - grams

L - liters

Kg - kilograms

lbs - pounds

854850026

TABLE 1 Continues ...

Substance Name	CAS Number	Typical Annual Usage *		Storage Method		Location/Keyed to Location Map	To Remain On-Site	Maximum Daily Quantity (lbs.)
		Quantity	Units	Container Type	Container Size			
Sodium Chlorate	7775-09-9	50 g		Bottles or Jugs (glass)	500 g	Laboratories	Yes	Less than 1 lb.
Sodium Dichromate	10588-01-9	1 Kg		Bottles or Jugs (glass)	500 g	Laboratories	Yes	1-10
Sodium Fluoride	7681-49-4	50 g		Bottles or Jugs (glass)	500 g	Laboratories	Yes	Less than 1 lb.
Sodium Hydride	7646-69-7	50 g		Can	500 g	Laboratories	Yes	1-10
Sodium Hydroxide	1310-73-2	60,000 lbs		Bottles or Jugs (glass), Steel Drum, AST	6,000 gal	Laboratories	Yes	11-100
Sodium Hypochlorite	7681-52-9	10 L		Plastic Drum	1 L	Laboratories	Yes	11-100
Sodium Methoxide	124-41-4	500 g		Bottles or Jugs (glass)	125 g	Laboratories	Yes	1-10
Sodium Sulfide	1313-82-2	50 g		Bottles or Jugs (glass)	500 g	Laboratories	Yes	Less than 1 lb.
Sulfuric Acid	7664-93-9	5 L		Bottles or Jugs (glass)	1 L	Laboratories	Yes	1-10
Tetrachloroethylene	127-18-4	1 L		Bottles or Jugs (glass)	500 mL	Laboratories	Yes	1-10
Tetrahydrofuran	109-99-9	1 L		Bottles or Jugs (glass)	1 L	Laboratories	Yes	1-10
Thioacetamide	62-55-5	500 g		Bottles or Jugs (glass)	125 g	Laboratories	Yes	1-10
Thiourea	62-56-6	50 g		Bottles or Jugs (glass)	125 g	Laboratories	Yes	Less than 1 lb.
Toluene	108-88-3	50 L		Bottles or Jugs (glass)	4 L	Pilot Plant Laboratories, Tank Farm	Yes	1,001-10,000
Trichloroethylene	79-01-6	1 L		Bottles or Jugs (glass)	500 mL	Laboratories	Yes	Less than 1 lb.
Triethylamine	121-44-8	30,000 lbs		Bottles or Jugs (glass), Steel Drum	55 gallons	Laboratories, Tank Farm, Production	Yes	1,001-10,000
Triethylchlorosilane	75-77-4	50 g		Bottles or Jugs (glass)	50 g	Laboratories	Yes	1-10
Uranyl Acetate	541-09-3	50 g		Bottles or Jugs (glass)	500 g	Laboratories	Yes	1-10
Uranyl Nitrate	10102-06-4	50 g		Bottles or Jugs (glass)	500 g	Laboratories	Yes	Less than 1 lb.
Waste Oil	-	500 gal		Steel Drum	55 gallons	Tank Farm, Boiler Room	Yes	11-100
Waste Waters (acetone)	67-64-1	70,000 lbs		Bottles or Jugs (glass)	10,000 gallon tank	Laboratories, Tank Farm, Production	Yes	50,001-100,000
Zinc Acetate	557-34-6	50 g		Bottles or Jugs (glass)	500 g	Laboratories	Yes	Less than 1 lb.
Zinc Chloride	7446-85-7	50 g		Bottles or Jugs (glass)	500 g	Laboratories	Yes	Less than 1 lb.
Zinc Sulfate	7733-02-0	50 g		Bottles or Jugs (glass)	500 g	Laboratories	Yes	Less than 1 lb.

Notes:

* - Laboratory chemicals are purchased, stored and used in very small quantities. Annual usage quantities are estimated.

g - grams

L - liters

Kg - Kilograms

lbs - pounds


854850027

RESPONSE 6d)

6

854850028

THIS MAP CAN BE FOUND IN THE SITE FILE LOCATED AT: U.S. EPA SUPERFUND RECORDS CENTER, 290 BROADWAY, 18TH FLOOR, NY, NY 10007

 **Tectonic Associates Engineers**
a member of Uniplan
© 1985 Uniplan
Waldwick, New Jersey 08095

Uniplan
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PROPOSED PLANT FOR
BIOCRAPT LABORATORIES - INC.
WALDWICK, NEW JERSEY
Donald Fentel, AIA, Architect
a member of Uniplan

PLUMBING PLAN

854850029

THIS MAP CAN BE FOUND IN THE SITE FILE LOCATED AT: U.S. EPA SUPERFUND RECORDS
CENTER, 290 BROADWAY, 18TH FLOOR, NY, NY 10007

TOPOGRAPHICAL SURVEY of LOT 46 BLOCK 154 BOROUGH OF WALDWICK BERGEN COUNTY, N.J. made for BIOCRAFT LABORATORIES		BOSWELL ENGINEERING CO. CONSULTING ENGINEERS <i>H. L. Boswell</i>	
DEC. 1976		HOWARD L. BOSWELL N.J.P.E. & L.S. 7613	
JOB N ^o 76-258		RIDGEFIELD PARK, N.J.	
SHEET N ^o 1 of 1			

854850029 A

RESPONSE 13)a)

854850030

This Indenture,

Made the ELEVENTH - - - - day of JANUARY - - - - , in the year of our Lord One Thousand Nine Hundred and Seventy-two.

Between PAUL NIGITO and ANTOINETTE NIGITO, his wife, residing at 936 Fifth Avenue, in the Borough of River Edge, Bergen County, New Jersey

AND P. WILLIAM KOESTNER JR and MARGARET E. KOESTNER, his wife residing at 27 Kramer Drive

in the Borough of Paramus County of Bergen and State of New Jersey party of the first part;

And BIOCRAPT LABORATORIES, INC. a Corporation of the State of New Jersey with its principal office at 92 Route #46

in the Borough of East Paterson County of Bergen and State of New Jersey party of the second part;

Witnesseth, That the said party of the first part, for and in consideration of One hundred Sixty-five thousand (\$165,000) dollars

lawful money of the United States of America, to them in hand well and truly paid by the said party of the second part, at or before the sealing and delivery of these presents, the receipt whereof is hereby acknowledged, and the said party of the first part being therewith fully satisfied, contented and paid, have given, granted, bargained, sold, aliened, released, enfeoffed, conveyed and confirmed and by these presents do give, grant, bargain, sell, alien, release, convey and confirm unto the said party of the second part, and to its successors and assigns, forever,

All that tract or parcel of land and premises, hereinafter particularly described, situate, lying and being in the Borough of Waldwick County of Bergen and State of New Jersey

BEGINNING at a point in the southerly line of a road known as Industrial Park, which point is distant 365.00 feet westerly from a point formed by the intersection of the southerly line of Industrial Park, if produced, with the new westerly line of Hopper Avenue, if produced, as shown on map entitled "Final Plat, Waldwick Industrial Park, located in the Borough of Waldwick, Bergen County, New Jersey", dated March 10, 1964 and filed in the office of the Clerk of the County of Bergen on May 26, 1964 as Map No., 6150, which point is in the northwesterly corner of lands now or formerly of Werner & Pfleiderer Corporation, and from thence running

- (1) South 6° 06' 50" West along the westerly line of lands now or formerly of Werner & Pfleiderer Corporation, 220.36 feet to a corner of said lands, thence
- (2) South 80° 04' 40" East along the southerly line of lands now or formerly of Werner & Pfleiderer Corporation, 170 feet, thence
- (3) South 81° 07' 50" East still along the said southerly line of lands now or formerly of Werner & Pfleiderer Corporation, 170 feet to a point in the said new westerly line of Hopper Avenue, thence
- (4) South 12° 40' West along the said new westerly line of Hopper Avenue, 39.566 feet to a bend in same, thence
- (5) South 12° 28' East still along the new westerly line of Hopper Avenue, 249.919 feet to a point in the northerly line of lands now or formerly of Theodore Czopek, thence

(cont'd)

BOOK 5605 PAGE 62

854850031

- (6) North 85° 11' 3" West along the said northerly line of lands now or formerly of Theodore Czopek, 378.475 feet to a corner in said lands, thence 43"
- (7) North 7° 22' West along the easterly line of lands now or formerly of Theodore Czopek, 187.16 feet to a corner in said lands, thence
- (8) North 86° 16' West along the northerly line of lands now or formerly of Theodore Czopek, 79.113 feet to a point in the southerly line of Industrial Park, thence
- (9) Northeasterly, northerly and northwesterly along the southeasterly, easterly and northeasterly lines of Industrial Park on a curve to the left with a radius of 51 feet an arc distance of 107.817 feet to point of reverse curve, thence
- (10) Northwesterly and northerly along the southeasterly and easterly lines of Industrial Park on a curve to the right with radius of 35 feet an arc distance of 32.76 feet to a point of tangency, thence
- (11) North 9° 55' 20" East along the easterly line of Industrial Park, 223.12 feet to a point of curve, thence
- (12) Northeasterly and easterly on a curve to the right with a radius of 30 feet an arc distance of 47.12 feet to a monument in the southerly line of Industrial Park, thence
- (13) South 80° 04' 40" East along the said southerly line of Industrial Park, 143.20 feet to the point or place of BEGINNING. (C)

Being the same premises conveyed by WALDWICK INDUSTRIAL PARK, INC to PAUL NIGITO and F. WILLIAM KOESTNER JR. by deed dated October 11, 1970 and recorded in the Bergen County Clerk's office in Book 5595 of Deeds at page 371.

Being designated as Lots 36 and 46 in Block 154, Waldwick Tax Map consisting of approximately four acres plus or minus.

The above description is in accordance with a survey made by Boswell Engineering Co., Ridgefield Park, New Jersey dated Nov. 1971.

RECEIVED
 1972 JAN 17 AM 10:43
Alison A. Allen
 BERGEN COUNTY CLERK

Together with all and singular the houses, buildings, tenements, ways, waters, ponds, pastures, and advantages, with the appurtenances to the same belonging or in anywise appertaining.

Also, all the estate, right, title, interest, property, claim and demand whatsoever, of the said party of the first part, of, in and to the same, and of, in and to every part and parcel thereof.

To have and to hold all and singular the above described land and premises, with the appurtenances, unto the said party of the second part. Its successors heirs and assigns, to the only proper use, benefit and behoof of the said party of the second part, its successors heirs, and assigns forever.

And the said PAUL NIGITO and ANTOINETTE NIGITO, his wife, and P. WILLIAM KOESTNER JR. and MARGARET E. KOESTNER, his wife,

for their heirs, executors and administrators, do covenant, promise and agree to and with the said party of the second part, its successors and assigns that they have not made, done, committed, executed or suffered any act or acts, thing or things whatsoever, whereby or by means whereof the above mentioned and described premises, or any part or parcel thereof, now are, or at any time hereafter shall or may be impeached, charged or encumbered, in any manner or way whatsoever.

In Witness Whereof, the part 1st of the first part has set their hand and seal, or caused these presents to be signed by its proper corporate officers and caused its proper corporate seal to be hereunto affixed, the day and year first above written.

Signed, sealed and witnessed in the presence of

Notary Public Seal: *John J. Gallice*
John J. Gallice
Notary Public of New Jersey
My Comm. expires July 20, 1918

Paul Nigito
Paul Nigito
Antoinette Nigito
Antoinette Nigito
P. William Koestner Jr.
P. William Koestner Jr.
Margaret E. Koestner
Margaret E. Koestner

Deed Prepared by P. William Koestner Jr.

BE IT REMEMBERED, that on this 11th day of January, 1972 before me, the subscriber, a Notary Public of New Jersey personally appeared Paul Nigito, and Antoinette Nigito, his wife, and P. William Koestner Jr. and Margaret E. Koestner, his wife who, I am satisfied, are the grantor mentioned in the within Deed, and thereupon acknowledged that they signed, sealed and delivered the same as their act and deed, for the uses and purposes therein expressed.

The full and actual consideration paid or to be paid for the transfer of title to realty evidenced by the within deed, as such consideration is defined in P.L. 1961, c. 49, Sec. 1(c), is \$ 165,000.00.

Debra J. DeFelice
 Notary Public of New Jersey
 My Commission Expires July 20, 1978

STATE OF NEW JERSEY,
 COUNTY OF _____ } ss:

BE IT REMEMBERED, that on this _____ day of _____ 19____ before me, the subscriber, a _____ personally appeared _____ who, being by me duly sworn on a _____ oath, doth depose and make proof to my satisfaction, that he is the _____ of _____ the grantor named in the within Deed, that _____ is the _____ of said corporation; that the execution as well as the making of this Deed, has been duly authorized by a proper resolution of the Board of _____ of the said corporation; that deponent well knows the corporate seal of said corporation; and the seal affixed to said Deed is such corporate seal and was thereto affixed, and said Deed signed and delivered by said _____ President, as and for the voluntary act and deed of said corporation, in presence of deponent, who thereupon subscribed his name thereto as witness.

The full and actual consideration paid or to be paid for the transfer of title to realty evidenced by the within deed, as such consideration is defined in P.L. 1961, c. 49, Sec. 1(c), is \$ _____

Sworn to and subscribed before me, _____ at _____ the date aforesaid.

Consideration
 Realty Transfer Fee
 Recording Fee
 by _____ Total
 \$ _____

DEED

PAUL NIGITO and
 ANTOINETTE NIGITO, his wife, and
 P. WILLIAM KOESTNER, JR. and
 MARGARET E. KOESTNER, his wife,
 2,435 10.25 16500 17525
 TO
 BIOCRAFT LABORATORIES, INC.,
 A New Jersey Corporation

Dated: JANUARY 11, 1972

Subscribed in the _____ Office of _____
 the County of _____ N. J.,
 on the _____ day of _____ 19____
 at _____ o'clock, in the _____
 presence of _____
 Recorded in Book _____ of DEEDS for
 said County, on page _____

Debra J. DeFelice
 Beckerman, Franzblau & Cohen, P.A.
 1180 Raymond Boulevard
 Newark, New Jersey 07102

DEED

This Deed is made on **APRIL 17**, 19**85**

BETWEEN
BIOCRAFT LABORATORIES, INC., A DELAWARE CORPORATION

whose address is **92 ROUTE 46, Elmwood Park, New Jersey**
referred to as the Grantor.

AND

BIOCRAFT LABORATORIES, INC., A DELAWARE CORPORATION

whose post office address is **92 ROUTE 46, ELMWOOD PARK, NEW JERSEY**
referred to as the Grantee.

The words "Grantor" and "Grantee" shall mean all Grantors and all Grantees listed above.

Transfer of Ownership. The Grantor grants and conveys (transfers ownership of) the property described below to the Grantee. This transfer is made for the sum of **One (\$1.00) DOLLAR**

The Grantee acknowledges receipt of this money.


Tax Map Reference. (N.J.S.A. 46:13-11) Municipality of **Waldwick**
Block No. **154** Lot No. **46** Assessed No.

No property tax identification number is available on the date of this deed. (check box if applicable)

Property. The property consists of the land and all the buildings and structures on the land in the **BOROUGH** of **WALDWICK** County of **BERGEN** and State of New Jersey. The legal description is:
Description of Newly subdivided lot fronting on Hopper Avenue, South of Industrial Park, Waldwick, Bergen County, New Jersey.

BEGINNING at a point on the westerly line of Hopper Avenue, said point being the dividing line between Lot 44 and Lot 36, Block 154, as shown on the Tax Map of Waldwick, Bergen County, New Jersey, thence (1) along said dividing line North 81 degrees 07 minutes 50 seconds West 170.0 feet to the southerly line of Lot 45, Block 154 on said Tax Map; Thence (2) along a portion of said southerly line, North 80 degrees 04 minutes 40 seconds West 112.67 feet to the new westerly line of said Lot 36; thence (3) along said new westerly line, South 09 degrees 35 minutes 20 seconds West 141.07 feet to the new northerly line of said Lot 36; Thence (4) along said new northerly line, North 80 degrees 04 minutes 40 seconds West 163.0 feet to the easterly line of Lot 35A, Block 154, as shown on said Tax Map; thence (5) along said easterly line, South 07 degrees 22 minutes 43 seconds East 160.78 feet to the southerly line of said Lot 36 and the northerly line of said Lot 35A; thence (6) along said southerly and northerly line, South 77 degrees 33 minutes 37 seconds East 386.72 feet to the westerly line of Hopper Avenue; thence (7) along said westerly line, North 12 degrees 26 minutes 33 seconds East 25.41 feet to an angle point; thence (8) continuing along said westerly line, North 12 degrees 28 minutes 17 seconds East 249.91 feet to an angle point; thence (9) continuing along said westerly line, North 12 degrees 40 minutes East 39.57 feet to the southerly line of said Lot 44 and the point and place of **BEGINNING**

Containing 2.436 acres.

Prepared by: 
GARY L. FALKO
Attorney at Law of New Jersey

RECEIVED
JUN 13 3 00 PM '85
BERGEN COUNTY CLERK

6932 Price 920

854850035

New Lot 46, Block 154, Tax Map of Waldwick

DESCRIPTION of Newly subdivided lot fronting on Industrial Park,
West of Hopper Avenue, Waldwick, Bergen County, New Jersey.

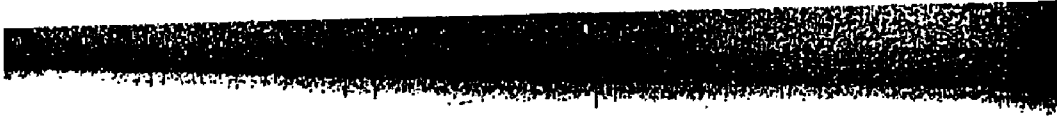
P.O.
BEGINNING at a point on the southerly line of Industrial Park,
said point being the dividing line between Lot 46 and Lot 45,
Block 154, as shown on the Tax Map of Waldwick, Bergen County,
N.J.; thence (1) along said dividing line, South 06 degrees 06
minutes 30 seconds West 220.36 feet to the southerly line of said
Lot 45 and the new westerly line of said Lot 46; thence (2) along
said new westerly line South 80 degrees 04 minutes 40 seconds
East 57.13 feet to the new easterly line of said Lot 46; thence
(3) along said new easterly line, South 09 degrees 55 minutes 20
seconds West 141.07 feet, to the new southerly line of said Lot
46; thence (4) along said new southerly line, North 80 degrees 04
minutes 40 seconds West 163.0 feet to an angle point; thence (5)
continuing along said new southerly line, North 86 degrees 16
minutes 43 seconds West 79.11 feet to the easterly line of the
cul-de-sac on Industrial Park; thence (6) along said easterly
line, on a curve to the left having a radius of 31.0 feet, an arc
length of 107.82 feet to a point of reverse curve; thence (7)
continuing along said easterly line, on a curve to the right
having a radius of 35.0 feet, an arc length of 12.76 feet to the
easterly line of said Industrial Park; thence (8) along said
easterly line, North 09 degrees 55 minutes 20 seconds East 223.12
feet to a point of curve; thence (9) on a curve to the right
having a radius of 30.0 feet, an arc length of 47.12 feet to the
southerly line of Industrial Park; thence (10) along said
easterly line, South 80 degrees 04 minutes 40 seconds East 143.20
feet to the westerly line of said Lot 45 and the point and place
of BEGINNING.

CONTAINING 1.673 acres.

The above descriptions being in accordance with map entitled
"Sketch Plat, Proposed Subdivision of Lots 36 and 46, Block 154,
Tax Map of Waldwick, Bergen County, N.J.", prepared by Walter M.
Staskus, Land Surveyor, dated October 27, 1983, revised March 17,
1984.

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Promises by Grantor. The Grantor promises that the Grantor has done no act to encumber the property. This promise is called a "covenant as to grantor's acts" (N.J.S.A. 46:4-8). This promise means that the Grantor has not allowed anyone else to obtain any legal rights which affect the property (such as by making a mortgage or allowing a judgment to be entered against the Grantor).

Signatures. The Grantor signs this Deed as of the date at the top of the first page.

XXXXXXXXXXXX Attest:

Beatrice Snyder
BEATRICE SNYDER, Secretary

BIOCRAFT LABORATORIES, INC. (Seal)
A DELAWARE CORPORATION

Harold Snyder (Seal)
BY HAROLD SNYDER, PRESIDENT



STATE OF NEW JERSEY, COUNTY OF

SS.:

I CERTIFY that on

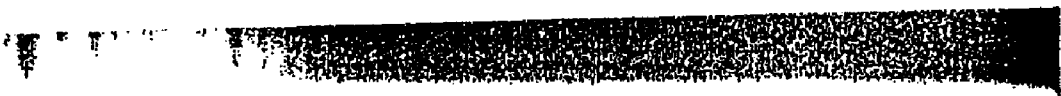
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and acknowledged under oath, to my satisfaction, that this person (or if more than one, each person):
(a) is named in and personally signed this Deed;
(b) signed, sealed and delivered this Deed as his or her act and deed; and
(c) made this Deed for \$ as the full and actual consideration paid or to be paid for the transfer of title. (Such consideration is defined in N.J.S.A. 46:13-3.)

(Print name and title before signature)

6932:922

854850037



1 - N. J. ACKNOWLEDGMENT, Corporation
Printed by T. J. Publishing, Newark, N. J.

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One Commerce Bldg., Camden, N. J. 08102

STATE OF NEW JERSEY, COUNTY OF BERGEN

SS.:

I CERTIFY that on APRIL 19 85
BEATRICE SNYDER

personally came before me and this person acknowledged under oath, to my satisfaction, that:

- (a) this person is the secretary of BIOCRAFT LABORATORIES, INC.
the corporation named in the attached document;
 - (b) this person is the attesting witness to the signing of this document by the proper corporate officers who is
HAROLD SNYDER the President of the corporation;
 - (c) this document was signed and delivered by the corporation as its voluntary act duly authorized by a
proper resolution of its Board of Directors;
 - (d) this person knows the proper seal of the corporation which was affixed to this document; and
 - (e) this person signed this proof to attest to the truth of these facts.
- (2) made this Deed for \$1.00 as the full and actual consideration paid.

Signed and sworn to before me on
June 18, 1985

Beatrice Snyder
A NOTARY PUBLIC OF NEW JERSEY
MY COMM. EXPIRES March 10, 1987

Beatrice Snyder
BEATRICE SNYDER, SECRETARY



6932 12X 922A

854850038

STATE OF NEW JERSEY
AFFIDAVIT OF CONSIDERATION OR EXEMPTION
(N. J. P.L. 1988)

PARTIAL EXEMPTION
(N. J. P.L. 1975)

To Be Recorded With Deed Pursuant to N. J. P.L. 1948 (N.J.S.A. 17:25-5 et seq.)

COUNTY OF ESSEX

Realty Transfer Fee 3.75
Date 7/3/85 By [Signature]

(1) PARTY OR LEGAL REPRESENTATIVE (See Instructions #3, 4 and 5 on reverse side)

Deponent, GARY L. FALKIN, being duly sworn according to law upon his/her oath deposes and says that he/she is the LEGAL REPRESENTATIVE
in a deed dated April 17, 1985 transferring real property identified as Block No. 154
Lot No. 46 located at 12 Industrial Way, Waldwick, New Jersey

(2) CONSIDERATION (See Instruction #6)

Deponent states that, with respect to deed herein annexed, the actual amount of money and the monetary value of any other thing of value constituting the entire consideration paid or to be paid for the transfer of title to the land, tenements or other realty, including the remaining amount of any prior mortgage to which the transfer is subject or which is to be assumed and agreed to be paid by the grantee and any other lien or encumbrance thereon not paid, satisfied or removed in connection with the transfer of title is 1.00

(3) FULL EXEMPTION FROM FEE Deponent claims that this deed transaction is fully exempt from the Realty Transfer Fee imposed by N.J. P.L. 1948, for the following reason(s): Explain in detail. (See Instruction #7.) Here reference to exemption symbol is not sufficient.

PURPOSE OF DEED IS TO RECORD A SUBDIVISION

(4) PARTIAL EXEMPTION FROM FEE NOTE: All boxes below apply to grantor(s) only. ALL BOXES IN APPROPRIATE CATEGORY MUST BE CHECKED. Failure to do so will void claim for partial exemption. (See Instruction #8)

Deponent claims that this deed transaction is exempt from the limited portion of the Realty Transfer Fee imposed by N.J. P.L. 1975 for the following reason(s):

- 1) SENIOR CITIZEN (See Instruction #9)
 - Grantor(s) 62 yrs. of age or older.
 - One or two-family residential premises.
 - Owned and occupied by grantor(s) at time of sale.
 - No joint owners other than spouse or other qualified exempt owners.
- 2) BLIND (See Instruction #9)
 - Grantor(s) legally blind.
 - One or two-family residential premises.
 - Owned and occupied by grantor(s) at time of sale.
 - No joint owners other than spouse or other qualified exempt owners.
- 3) DISABLED (See Instruction #9)
 - Grantor(s) permanently and totally disabled.
 - One or two-family residential premises.
 - Receiving disability payments.
 - Owned and occupied by grantor(s) at time of sale.
 - Not gainfully employed.
 - No joint owners other than spouse or other qualified exempt owners.
- 4) NEW CONSTRUCTION (See Instruction #9)
 - Entirely new improvement.
 - Not previously used for any purpose.
 - Not previously occupied.

Deponent makes affidavit to induce the County Clerk or Register of Deeds to record the deed and accept the fee submitted here-with in accordance with the provisions of N. J. P.L. 1948.

Subscribed and Sworn to before me this 20th day of JUNE 1985
[Signature]
GARY L. FALKIN
ATTORNEY AT LAW OF NEW JERSEY

MARGARET C. FIRMAN
NOTARY PUBLIC OF NEW JERSEY
MY COMM. EXPIRES 4/18/88

FOR OFFICIAL USE ONLY This space for use of County Clerk or Register of Deeds.
Instrument Number _____ County _____ Page _____
Deed Number _____ Book _____ Date Recorded _____
Deed Dated _____

IMPORTANT - BEFORE COMPLETING THIS AFFIDAVIT, PLEASE READ THE INSTRUCTIONS ON THE REVERSE SIDE HEREOF. This form is prescribed by the Director, Division of Taxation in the Department of the Treasury, as required by law, and may not be altered or amended without the approval of the Director.
ORIGINAL - White copy to be retained by County.
DUPLICATE - Yellow copy to be forwarded by County to Division of Taxation, pursuant to N.J.A.C. 17:26-9.12.
TRIPlicate - Pink copy to your file copy.

The within Deed evidences the Approval of the Planning Board of the Borough of Waldwick to the within minor subdivision which was approved by Resolution on April 3, 1985.

CHAIRMAN OF THE PLANNING BOARD OF THE
BOROUGH OF WALDWICK

BY *E. J. ...*

ATTEST:

Jack C. ...
SECRETARY OF THE PLANNING BOARD
OF THE BOROUGH OF WALDWICK

DEED

BIOCRAFT LABORATORIES, INC.
A DELAWARE CORPORATION

TO

BIOCRAFT LABORATORIES, INC.
A DELAWARE CORPORATION

Grantor.

Grantee.

Dated: APRIL 17, 1985

Record and return to:

GARY L. FALKIN, ESQ.
FRANZBLAU, FALKIN & GOLDMAN
50 Commerce Street
Newark, New Jersey

ABSTRACTED

6932 924

END OF DOCUMENT.

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RESPONSE 14)e)

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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 ARE TRUE AND CORRECT COPIES OF ALL DOCUMENTS ON FILE OF "TEVA PHARMACEUTICALS USA, INC." AS RECEIVED AND FILED IN THIS OFFICE.

THE FOLLOWING DOCUMENTS HAVE BEEN CERTIFIED:

CERTIFICATE OF INCORPORATION, FILED THE TWENTY-EIGHTH DAY OF JANUARY, A.D. 1985, AT 3 O'CLOCK P.M.

CERTIFICATE OF OWNERSHIP, FILED THE THIRTIETH DAY OF JANUARY, A.D. 1985, AT 10 O'CLOCK A.M.

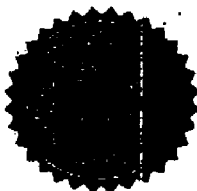
CERTIFICATE OF AMENDMENT, FILED THE THIRTIETH DAY OF OCTOBER, A.D. 1986, AT 9 O'CLOCK A.M.

CERTIFICATE OF MERGER, FILED THE THIRTY-FIRST DAY OF MAY, A.D. 1996, AT 11 O'CLOCK A.M.

CERTIFICATE OF AGREEMENT OF MERGER, FILED THE TWENTY-SIXTH DAY OF JULY, A.D. 1996, AT 1:01 O'CLOCK P.M.

CERTIFICATE OF OWNERSHIP, CHANGING ITS NAME FROM "BIOCRAFT LABORATORIES, INC." TO "TEVA PHARMACEUTICALS USA, INC.", FILED THE TWENTY-SIXTH DAY OF JULY, A.D. 1996, AT 1:02 O'CLOCK P.M.

AND I DO HEREBY FURTHER CERTIFY THAT THE AFORESAID CERTIFICATES ARE THE ONLY CERTIFICATES ON RECORD OF THE



Harriet Smith Windsor

Harriet Smith Windsor, Secretary of State

2053734 8100H

030231803

AUTHENTICATION: 2355018

DATE: 04-08-03

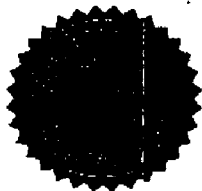
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Delaware

PAGE 2

The First State

AFORESAID CORPORATION.



Harriet Smith Windsor
Harriet Smith Windsor, Secretary of State

2053734 8100H

AUTHENTICATION: 2355018

030231803

DATE: 04-08-03

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JAN 20 1985 PM

CERTIFICATE OF INCORPORATION
OF
BIOCRAFT LABORATORIES, INC.

Michael Harkin
Secretary of State

The undersigned, a natural person, for the purpose of organizing a corporation pursuant to the provisions of the General Corporation Law of the State of Delaware, does make and file this Certificate of Incorporation and does hereby certify as follows:

FIRST: The name of the corporation is Biocraft Laboratories, Inc. (hereinafter referred to as the "Corporation").

SECOND: The address of the Corporation's registered office in Delaware is Corporation Trust Center, 1209 Orange Street, City of Wilmington, County of New Castle. The name of its registered agent at such address is The Corporation Trust Company.

THIRD: The nature of the business and purposes to be conducted or promoted by the Corporation is to engage in any lawful act or activity for which corporations may be organized under the General Corporation Law of the State of Delaware.

FOURTH: I. The aggregate number of shares which the Corporation shall have authority to issue is twenty two million (22,000,000) shares, of which twenty million (20,000,000) shares

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shall be common stock of the par value of \$.01 each (the "Common Stock") and two million (2,000,000) shares shall be preferred stock of the par value of \$1.00 each (the "Preferred Stock").

II. The Board of Directors of the Corporation is authorized, subject to limitations prescribed by law and the provisions of this Article FOURTH, to provide for the issuance from time to time in one or more series of any number of shares of Preferred Stock, and, by filing a certificate pursuant to the Corporation Law of the State of Delaware, to establish the number of shares to be included in each such series, and to fix the designation, relative rights, preferences, qualifications and limitations of the shares of each such series. The authority of the Board of Directors with respect to each series shall include, but not be limited to, determination of each of the following:

A. The number of shares constituting that series and the distinctive designation of that series;

B. The dividend rate on the shares of the series, whether dividends shall be cumulative, and, if so, from which date or dates, and whether they shall be payable in preference to, or in another relation to, the dividends payable on any other class or classes or series of stock;

C. Whether that series shall have voting rights, in addition to the voting rights provided by law, and, if so, the terms of such voting rights;

D. Whether that series shall have conversion or exchange privileges, and, if so, the terms and conditions of such conversion or exchange, including provision for adjustment of the conversion or exchange rate in such events as the Board of Directors shall determine;

E. Whether or not the shares of that series shall be redeemable, and, if so, the terms and conditions of such redemption, including the manner of selecting shares for redemption if less than all shares are to be redeemed, the date or dates upon or after which they shall be redeemable, and the amount per share payable in case of redemption, which amount may vary under different conditions and at different redemption dates;

F. Whether that series shall be entitled to the benefit of a sinking fund to be applied to the purchase or redemption of shares of that series, and, if so, the terms and amounts of such sinking fund;

G. The right of the shares of that series to the benefit of conditions and restrictions upon the creation of indebtedness of the Corporation or any subsidiary, upon the issue of any additional stock (including additional shares of such series or of any other series) and upon the payment of dividends or the making of other distributions on, and the purchase, redemption or other acquisition by the Corporation or any subsidiary of any outstanding stock of the Corporation;

H. The right of the shares of that series in the event of any voluntary or involuntary liquidation, dissolution or winding up of the Corporation and whether such rights shall be in preference to, or in another relation to, the comparable rights of any other class or classes or series of stock; and

I. Any other relative, participating, optional or other special rights, qualifications, limitations or restrictions of that series.

III. Shares of any series of Preferred Stock which have been redeemed (whether through the operation of a sinking fund or otherwise) or which, if convertible or exchangeable, have been converted into or exchanged for shares of

stock of any other class or classes shall have the status of authorized and unissued shares of Preferred Stock of the same series and may be reissued as a part of the series of which they were originally a part or may be reclassified and reissued as part of a new series of Preferred Stock to be created by resolution or resolutions of the Board of Directors or as part of any other series of Preferred Stock, all subject to the conditions and the restrictions on issuance set forth in the resolution or resolutions adopted by the Board of Directors providing for the issue of any series of Preferred Stock.

IV. Subject to the provisions of any applicable law, or except as otherwise provided by the resolution or resolutions providing for the issue of any series of Preferred Stock, the holders of outstanding shares of Common Stock shall exclusively possess voting power for the election of directors and for all other purposes, each holder of record of shares of Common Stock being entitled to one vote for each share of Common Stock standing in his name on the books of the Corporation.

V. Except as otherwise provided by the resolution or resolutions providing for the issue of any series of Preferred Stock, after payment shall have been made to the holders of Preferred Stock of the full amount of dividends to which they shall be entitled pursuant to the resolution or resolutions providing for the issue of any series of Preferred Stock, the holders of Common Stock shall be entitled, to the exclusion of

the holders of Preferred Stock of any and all series, to receive such dividends as from time to time may be declared by the Board of Directors.

VI. Except as otherwise provided by the resolution or resolutions providing for the issue of any series of Preferred Stock, in the event of any liquidation, dissolution or winding up of the Corporation whether voluntary or involuntary, after payment shall have been made to the holders of Preferred Stock of the full amount to which they shall be entitled pursuant to the resolution or resolutions providing for the issue of any series of Preferred Stock, the holders of Common Stock shall be entitled, to the exclusion of the holders of Preferred Stock of any and all series, to share, ratably according to the number of shares of Common Stock held by them, in all remaining assets of the Corporation available for distribution to its stockholders.

VII. The number of authorized shares of any class may be increased or decreased by the affirmative vote of the holders of a majority of the stock of the Corporation entitled to vote.

FIFTH: The name of the incorporator is Jacqueline Kadi and her mailing address is 200 Park Avenue, New York, New York 10166.

SIXTH: The affirmative vote of 66 2/3% of all outstanding shares of the Corporation entitled to vote thereon shall be required.

(a) for the adoption of any agreement for the merger of the Corporation with or into any other corporation or for the consolidation of the Corporation with any other corporation; or

(b) to authorize any sale, lease, transfer or exchange of all or substantially all of the assets of the Corporation to any other person (as hereinafter defined).

For the purpose of this Article SIXTH, the term 'person' shall mean any corporation, partnership, association, or other business entity, trust, estate or individual.

The affirmative vote of 66 2/3% of all outstanding shares of the corporation entitled to vote thereon shall be required for the amendment of all or any part of this Article SIXTH.

SEVENTH: The number of directors which shall constitute the entire Board of Directors of the Corporation shall be not less than six, the exact number to be fixed from time to time exclusively by the Board of Directors pursuant to a resolution duly adopted by a majority of the entire Board. The Board of Directors shall be divided into three classes, each to be as nearly equal in number as possible. At the 1985 annual meeting of stockholders, one class of such directors shall be elected for a one-year term, one class for a two-year term, and one class for a three-year term. Commencing with the 1986 annual meeting of stockholders and at each succeeding annual stockholders' meeting, successors to the class of directors whose term expires at such annual stockholders' meeting shall be elected for a three-year

term. If the number of such directors is changed, any increase or decrease in such directors shall be apportioned by the Board of Directors among the classes so as to maintain the number of directors comprising each class as nearly equal as possible, provided that no decrease in the number of directors shall affect the term of any director then in office. A director shall hold office until the annual stockholders' meeting for the year in which his term expires and until his successor is elected and qualified. In case of any increase in the number of directors or any vacancy in any class or classes, the additional directorships or vacancies may be filled by a majority of the directors then in office, though less than a quorum, and any director so elected shall hold office until the next annual meeting of stockholders, and until his successor shall have been elected and qualified. Any or all of the directors may be removed for cause by the stockholders or by the Board of Directors.

The affirmative vote of the holders of 66 2/3% or more of the shares entitled to vote in the election of directors shall be required to amend or repeal, or adopt any provisions inconsistent with, this Article SEVENTH.

IN WITNESS WHEREOF, the undersigned, being the incorporator of the above named corporation, has hereunto signed this Certificate of Incorporation on the 20th day of January, 1985.

Jacqueline Kadi
Jacqueline Kadi

State of New York)
) ss.1
County of New York)

On this 28th day of January, 1985, before me personally came Jacqueline Kadi, to me known to be the person described in and who executed the foregoing certificate, and she duly acknowledged to me that she executed the same and that the facts therein stated are truly set forth.

Mary Alonzo

Notary Public

MARY ALONZO
Notary Public, State of New York
No. 31-480782
Qualified in New York County
Commission Expires March 26, 1986

725030002

CERTIFICATE OF OWNERSHIP AND MERGER

of

Biocraft Laboratories, Inc.

(a New Jersey corporation).

into

Biocraft Laboratories, Inc.

(a Delaware corporation)

FILED
JAN 30 1985
JAN 30 985

10AM

Michael Hartman

It is hereby certified that:

1. Biocraft Laboratories, Inc. (hereinafter called the "corporation") is a corporation of the State of New Jersey, the laws of which permit a merger of a corporation of that jurisdiction with a corporation of another jurisdiction.

2. The corporation, as the owner of all of the outstanding shares of the stock of Biocraft Laboratories, Inc., a corporation of the State of Delaware, hereby merges itself into Biocraft Laboratories, Inc. (the Delaware corporation).

3. The following is a copy of the resolutions adopted on the 25th day of January, 1985, by the Board of Directors of the corporation to merge the corporation into Biocraft Laboratories, Inc. (the Delaware corporation):

RESOLVED that this corporation be reincorporated in the State of Delaware by merging itself into Biocraft Laboratories, Inc., a corporation of the State of Delaware, which is sometimes hereinafter referred to as the "surviving corporation", pursuant to the laws of the State of New Jersey and the State of Delaware as hereinafter provided, so that the separate existence of this corporation shall cease as soon as the merger shall become effective, and thereupon this corporation and the surviving corporation will become a single corporation, which shall continue to exist under, and be governed by, the laws of the State of Delaware.

RESOLVED that the terms and conditions of the proposed merger are as follows:

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(a) From and after the effective time of the merger, all of the estate, property, rights, privileges, powers, and franchises of this corporation shall become vested in and held by the surviving corporation as fully and entirely and without change or diminution as the same were before held and enjoyed by this corporation, and the surviving corporation shall assume all of the obligations of this corporation.

(b) No pro rata issuance of the shares of the stock of the surviving corporation which are owned by this corporation immediately prior to the effective time of the merger shall be made, and such shares shall be surrendered and extinguished.

(c) Each share of common stock, without par value, of this corporation which shall be issued and outstanding immediately prior to the effective time of the merger shall be converted into 75,000 issued and outstanding shares of common stock, \$.01 par value, of the surviving corporation, and, from and after the effective time of the merger, the holders of all of said issued and outstanding shares of common stock of this corporation shall automatically be and become holders of shares of the surviving corporation upon the basis above specified, whether or not certificates representing said shares are then issued and delivered.

(d) After the effective time of the merger, each holder of record of any outstanding certificate or certificates theretofore representing common stock of this corporation may surrender the same to the surviving corporation at its office in Elmwood Park, New Jersey, and such holder shall be entitled upon such surrender to receive in exchange therefor a certificate or certificates representing the number of shares of common stock of the surviving corporation to which he is entitled upon the basis specified in (c) above. Until so surrendered, each outstanding certificate which prior to the effective time of the merger represented one or more shares of common stock of this corporation shall be deemed for all corporate purposes to evidence ownership of the number

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of shares of common stock of the surviving corporation to which he is entitled upon the basis specified in (c) above.

(e) From and after the effective time of the merger, the Certificate of Incorporation and the By-Laws of the surviving corporation shall be the Certificate of Incorporation and the By-Laws of the surviving corporation as in effect immediately prior to such effective time.

(f) The members of the Board of Directors and officers of the surviving corporation shall be the members of the Board of Directors and the corresponding officers of the surviving corporation immediately before the effective time of the merger.

(g) From and after the effective time of the merger, the assets and liabilities of this corporation and of the surviving corporation shall be entered on the books of the surviving corporation at the amounts at which they shall be carried at such time on the respective books of this corporation and of the surviving corporation, subject to such inter-corporate adjustments or eliminations, if any, as may be required to give effect to the merger; and, subject to such action as may be taken by the Board of Directors of the surviving corporation, in accordance with generally accepted accounting principles, the capital and surplus of the surviving corporation shall be equal to the capital and surplus of this corporation and of the surviving corporation.

RESOLVED that these resolutions to merge be submitted to the stockholders entitled to vote of this corporation at a meeting to be called and held after twenty days' notice of the time, place and purpose thereof mailed to each holder of the outstanding shares of stock entitled to vote of this corporation at his address as it appears on the records of this corporation or pursuant to a written waiver of such notice signed by all of the persons entitled thereto, unless the holders of all of the outstanding shares of stock entitled to vote of this corporation shall dispense with the holding of a meeting and shall act in writing without a meeting; and, in the event that the holders of at least a majority of the

outstanding stock entitled to vote of this corporation shall vote for the approval of the merger at a meeting, or, in the event that the holders of all of the outstanding stock entitled to vote of this corporation shall dispense with a meeting and shall consent in writing signed by them for the approval of the proposed merger, the proposed merger shall be deemed to be approved.

RESOLVED that, in the event the proposed merger shall be approved, the proper officers of this corporation be and they hereby are authorized and directed to make and execute, under the corporate seal of this corporation, a Certificate of Ownership and Merger setting forth a copy of these resolutions to merge itself into the surviving corporation and the date of adoption thereof, and to cause the same to be filed and recorded as provided by law, and to do all acts and things whatsoever, within the States of Delaware and New Jersey and in any other appropriate jurisdiction, necessary or proper to effect this merger.

4. The proposed merger herein certified has been approved in writing by the holders of all of the outstanding stock entitled to vote of the corporation in accordance with the provisions of Section 228 of the General Corporation Law of Delaware.

Executed on January 29, 1985.

BIOCRAPT LABORATORIES, INC.
(a New Jersey corporation)



Its President

Attest:



Its Secretary

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Certificate of Ownership of the "BIOCRAFT LABORATORIES, INC.",
a corporation organized and existing under the laws of the State of Delaware,
merging "BIOCRAFT LABORATORIES, INC.",
a corporation organized and existing under the laws of the State of New Jersey,
pursuant to Section 253 of the General Corporation Law of the State of Delaware,
as received and filed in this office the thirtieth day of January,
A.D. 1985, at 10 o'clock A.M.

And I do hereby further certify that the aforesaid Corporation
shall be governed by the laws of the State of Delaware.

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CERTIFICATE OF AMENDMENT
OF
CERTIFICATE OF INCORPORATION
OF
BIOCRAFT LABORATORIES, INC.

FILED

OCT 30 1988

[Signature]
RECORDS & FILE

(Pursuant to Section 242^{422B} of the Delaware General Corporation Law)

BIOCRAFT LABORATORIES, 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 at a meeting of the Board of Directors of BIOCRAFT LABORATORIES, INC., resolutions were duly adopted setting forth proposed amendments to the Certificate of Incorporation of said Corporation, declaring said amendments to be advisable, and submitting said amendments at the next annual meeting of the stockholders of said Corporation for consideration thereof. The resolutions setting forth the proposed amendments are as follows:

RESOLVED, that the Board of Directors deems it advisable that, subject to stockholder approval at the 1986 Annual Meeting, the Company's Certificate of Incorporation be amended by striking out the first paragraph of Article FOURTH thereof and by substituting in lieu thereof the following:

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"FOURTH: 1. The aggregate number of shares which the corporation shall have authority to issue is thirty two million (32,000,000) shares of which thirty million (30,000,000) shares shall be common stock of the par value of \$.01 per share (the "Common Stock") and two million (2,000,000) shares shall be preferred stock of the par value of \$1.00 per share (the "Preferred Stock");"

RESOLVED, that the Board of Directors deems it advisable that, subject to stockholder approval at the 1986 Annual Meeting, the Company's Certificate of Incorporation be amended to add thereto a new Article EIGHTH to read as follows:

"EIGHTH: No director of the Corporation shall be personally liable to the Corporation or its stockholders for monetary damages for breach of fiduciary duty as a director, provided that this Article EIGHTH shall not eliminate or limit the liability of a director (i) for any breach of such director's duty of loyalty to the Corporation or its stockholders, (ii) for acts or omissions of such director not in good faith or which involve intentional misconduct or a knowing violation of law, (iii) under Section 174 of the Delaware General Corporation Law, or (iv) for any transaction from which such director derived an improper personal benefit; nor shall this Article EIGHTH eliminate or limit the liability of a director for any act or omission occurring prior to the date this Article EIGHTH becomes effective."

SECOND, That thereafter, pursuant to resolution of its Board of Directors, an annual meeting of the stockholders of said Corporation was duly called and held, upon notice in accordance with

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Section 222 of the General Corporation law of the State of Delaware, at which meeting the necessary number of shares as required by statute were voted in favor of the amendments.

THIRD: That said amendments were duly adopted in accordance with the provision of Section 242^{422F} of the General Corporation Law of the State of Delaware.

IN WITNESS WHEREOF, said BIOCRAFT LABORATORIES, INC. has caused its corporate seal to be hereunto affixed and this certificate to be signed by its President and attested by its Secretary, this 30 day of September, 1986.



By Harold Snyder
Harold Snyder
President

By Beatrice Snyder
Beatrice Snyder
Secretary

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STATE OF NEW JERSEY)
)
) **
)
COUNTY OF BERGEN)

BE IT REMEMBERED that on this 30 day of September, 1986, personally came before me, a Notary Public, in and for the County and State aforesaid, HAROLD SNYDER, president of BIOCRAFT LABORATORIES, 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 Secretary of said corporation is the corporate seal of said corporation.

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

Sandra Caspos
Notary Public in and for said
County and State

My commission expires:
SANDRA C. CSAPOSS
NOTARY PUBLIC OF NEW JERSEY
MY COMMISSION EXPIRES NOV. 12, 1990



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**CERTIFICATE
OF
MERGER**

merging
Genco Merger Corporation
with and into
Biocraft Laboratories, Inc.

Pursuant to Section 251 of the General
Corporation Law of the State of Delaware

The undersigned, Biocraft Laboratories, Inc., a
corporation duly organized and existing under and by virtue of
the General Corporation Law of the State of Delaware
("Biocraft"), does hereby certify that:

FIRST: The name and state of incorporation of each of
the constituent corporations of the merger is as follows:

<u>NAME:</u>	<u>STATE OF INCORPORATION:</u>
Biocraft Laboratories, Inc.	Delaware
Genco Merger Corporation	Delaware

SECOND: The Agreement and Plan of Merger, dated as of
January 29, 1996 (the "Merger Agreement"), among Biocraft, Teva
Pharmaceutical Industries Limited, a corporation organized and
existing under the laws of the State of Israel ("Teva"), and
Genco Merger Corporation, a wholly owned subsidiary of Teva
("Genco"), providing for the merger of Genco with and into
Biocraft (the "Merger"), has been approved, adopted, certified,
executed and acknowledged by each of the constituent corporations
in accordance with the requirements of Section 251 of the General
Corporation Law of the State of Delaware.

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THIRD: The name of the surviving corporation of the merger is Biocraft Laboratories, Inc.

FOURTH: The Certificate of Incorporation of Biocraft shall be amended in its entirety to read as attached hereto as Exhibit A.

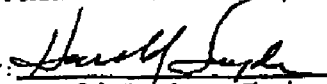
FIFTH: The executed Merger Agreement is on file at the principal place of business of Biocraft, which is located at 18-01 River Road, Fair Lawn, New Jersey 07410.

SIXTH: A copy of the Merger Agreement will be furnished by Biocraft, on request and without cost, to any stockholder of any constituent corporation.

SEVENTH: This Certificate of Merger shall be effective at 4:01 p.m. E.S.T. on May 31, 1996.

IN WITNESS WHEREOF, Biocraft Laboratories, Inc. has caused this certificate to be signed by its Chairman, President and Chief Executive Officer and attested to by its Senior Vice President and Secretary as of May 31, 1996.

BIOCRAFT LABORATORIES, INC.

By: 
Harold Snyder, Chairman of
the Board, President and
Chief Executive Officer

Attest:

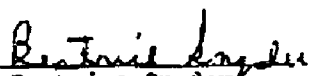
By: 
Beatrice Snyder,
Senior Vice President
and Secretary

EXHIBIT A

CERTIFICATE OF INCORPORATION
OF
BIOCRAFT LABORATORIES, INC.

* * * * *

1. The name of the corporation (the "Corporation") is Biocraft Laboratories, Inc.
2. The address of its registered office in the State of Delaware is 1209 Orange Street in the City of Wilmington, County of New Castle. The name of its registered agent at such address is The Corporation Trust Company.
3. The nature of the business or purposes to be conducted or promoted by the Corporation is to engage in any lawful act or activity for which corporations may be organized under the General Corporation Law of the State of Delaware.
4. The total number of shares of stock which the Corporation shall have authority to issue is 1,000 shares of Common Stock, each of which shall have a par value of one dollar (\$1.00) per share.
5. In furtherance and not in limitation of the powers conferred by statute, the by-laws of the Corporation may be made, altered, amended or repealed by the stockholders or by a majority of the entire Board of Directors.
6. Elections of directors need not be by written ballot.

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7. (a) The Corporation shall indemnify to the fullest extent permitted under and in accordance with the laws of the State of Delaware any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative by reason of the fact that he is or was a director, officer, employee or agent of the Corporation, or is or was serving at the request of the Corporation as a director, officer, trustee, employee or agent of or in any other capacity with another corporation, partnership, joint venture, trust or other enterprise, against expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by him in connection with such action, suit or proceeding if he acted in good faith and in a manner he reasonably believed to be in or not opposed to the best interests of the Corporation, and, with respect to any criminal action or proceeding, had no reasonable cause to believe his conduct was unlawful.

(b) Expenses incurred in defending a civil or criminal action, suit or proceeding shall (in the case of any action, suit or proceeding against a director of the Corporation) or may (in the case of any action, suit or proceeding against an officer, trustee, employee or agent) be paid by the Corporation in advance of the final disposition of such action, suit or proceeding as authorized by the Board upon receipt of an undertaking by or on behalf of the indemnified person to repay such amount if it shall

ultimately be determined that he is not entitled to be indemnified by the Corporation as authorized in this Article.

(c) The indemnification and other rights set forth in this paragraph shall not be exclusive of any provisions with respect thereto in the by-laws or any other contract or agreement between the Corporation and any officer, director, employee or agent of the Corporation.

(d) Neither the amendment nor repeal of this paragraph 7, subparagraph (a), (b) or (c), nor the adoption of any provision of this Certificate of Incorporation inconsistent with paragraph 7, subparagraph (a), (b) or (c), shall eliminate or reduce the effect of this paragraph 7, subparagraphs (a), (b) and (c), in respect of any matter occurring before such amendment, repeal or adoption of an inconsistent provision or in respect of any cause of action, suit or claim relating to any such matter which would have given rise to a right of indemnification or right to receive expenses pursuant to this paragraph 7, subparagraph (a), (b) or (c), if such provision had not been so amended or repealed or if a provision inconsistent therewith had not been so adopted.

(e) No director shall be personally liable to the Corporation or any stockholder for monetary damages for breach of fiduciary duty as a director, except for any matter in respect of which such director (a) shall be liable under Section 174 of the General Corporation Law of the State of Delaware or any amendment thereto or successor provision thereto, or (b) shall be liable by

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reason that, in addition to any and all other requirements for liability, he:

(i) shall have breached his duty of loyalty to the Corporation or its stockholders;

(ii) shall not have acted in good faith or, in failing to act, shall not have acted in good faith;

(iii) shall have acted in a manner involving intentional misconduct or a knowing violation of law or, in failing to act, shall have acted in a manner involving intentional misconduct or a knowing violation of law; or

(iv) shall have derived an improper personal benefit.

8. If the General Corporation Law of the State of Delaware is amended after the date hereof to authorize corporate action further eliminating or limiting the personal liability of directors, then the liability of a director of the Corporation shall be eliminated or limited to the fullest extent permitted by the General Corporation Law of the State of Delaware, as so amended.

State of Delaware - Division of Corporations



FAX DFS

DOCUMENT FILING SHEET

2073

Priority 1
(Two Hr. Service)

Priority 2
(Same Day)

Priority 3
(24 Hour)

Priority 4
(Must Approve)

Priority 5
(Reg. Approval)

Priority 6
(Reg. Work)

DATE SUBMITTED JULY 25, 1996

REQUESTOR NAME The Corporation Trust Company

ADDRESS _____

ATTN. D. M. Dembkowski/lk
PHONE (302) 658-7581

FILE DATE 7/26/96

FILE TIME 101 pm

NAME of COMPANY/ENTITY BIOCRAFT LABORATORIES, INC. (DE.DCM.) 2053734

Merging: TAG PHARMACEUTICALS, INC. (DE.DCM.) 2070335

960218376

SRV NUMBER

FILE NUMBER

00010

FILER'S NUMBER

RESERVATION NO.

TYPE of DOCUMENT AGREEMENT OF MERGER

DOCUMENT CODE 251

CHANGE of NAME _____ CHANGE of AGENT / OFFICE _____ CHANGE of STOCK _____

CORPORATIONS	
FRANCHISE TAX YEAR	\$ _____
FILING FEE TAX	\$ _____
RECEIVING & INDEXING	\$ _____
CERTIFIED COPIES NO. <u>1</u>	\$ _____
SPECIAL SERVICES	\$ _____
KENT COUNTY RECORDER	\$ _____
NEW CASTLE COUNTY RECORDER	\$ _____
SUSSEX COUNTY RECORDER	\$ _____
TOTAL:	\$ _____

METHOD of RETURN
<input type="checkbox"/> MESSENGER / PICKUP
<input type="checkbox"/> FED. EXPRESS Acc # _____
<input type="checkbox"/> REGULAR MAIL
<input type="checkbox"/> FAX No. _____
<input type="checkbox"/> OTHER _____

COMMENTS / FILING INSTRUCTIONS
WITHDRAW \$30.00 IN PAYMENT OF TAXES TO MERGE
NOTE-DOCUMENT WAS PRECLEARED

CREDIT CARD CHARGES
You have my authorization to charge my credit card for this service:
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> - <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> - <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> - <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Exp. Date _____
Signature _____ Printed Name _____

AGENT USE ONLY

INSTRUCTIONS
1. Fully shade in the required Priority square using a dark pencil or marker, staying within the square.
2. Each request must be submitted on a separate item, with its own Filing sheet as the FIRST PAGE.

STATE OF DELAWARE
SECRETARY OF STATE
DIVISION OF CORPORATIONS
FILED 01:01 PM 07/26/1996
960218376 - 2053734

AGREEMENT AND PLAN OF MERGER

BY AND BETWEEN

TAG PHARMACEUTICALS, INC.

AND

BIOCRAFT LABORATORIES, INC.

Dated as of July 26, 1996

854850068

AGREEMENT AND PLAN OF MERGER

AGREEMENT AND PLAN OF MERGER, dated as of July 26, 1996 (this "Agreement"), pursuant to Section 251 of the General Corporation Law of the State of Delaware (the "DGCL"), by and between TAG PHARMACEUTICALS, INC., a Delaware corporation ("TAG") and a wholly owned subsidiary of Orvet B.V., a corporation organized under the laws of Holland ("Orvet"), and BIOCRAFT LABORATORIES, INC., a Delaware corporation and a wholly owned subsidiary of Orvet ("Biocraft").

WHEREAS, the respective Boards of Directors of TAG and Biocraft, and Orvet acting as the sole stockholder of TAG and Biocraft, have each approved the merger of TAG with and into Biocraft pursuant to the terms and conditions set forth in this Agreement;

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

ARTICLE I

THE MERGER

1.01. The Merger. At such time as this Agreement is filed with the Secretary of State of the State of Delaware (the "Effective Time"), TAG shall be merged with and into Biocraft (the "Merger") and the separate corporate existence of TAG shall cease, and Biocraft shall continue as the surviving corporation under the laws of the State of Delaware under the name of "Biocraft Laboratories, Inc." (the "Surviving Corporation").

1.02 Effective Time of the Merger. The Board of Directors of each of TAG and Biocraft shall take all action necessary in order that the Merger shall be effective pursuant to the DGCL. The Effective Time of the Merger shall be July 26, 1996; provided, however, that, notwithstanding such Effective Time, the effective time of the Merger for all accounting purposes shall be as of the close of business on July 26, 1996. From and after the Effective Time, the Merger shall have the effects set forth in Section 259(a) of the DGCL.

1.03 Certificate of Incorporation of the Surviving Corporation. The Certificate of Incorporation of Biocraft, as heretofore amended and as in effect on the date of the Merger, shall continue in full force and effect as the Certificate of Incorporation of the Surviving Corporation unless and until subsequently amended; provided, however, that paragraph 4 of the Certificate of Incorporation of the Surviving Corporation shall be amended in its entirety to read as follows:

854850069

"4. The total number of shares of stock which the Corporation shall have authority to issue is 3,500 shares of Common Stock, each of which shall have a par value of one dollar (\$1.00) per share."

1.04 By-Laws of the Surviving Corporation. The By-Laws of Biocraft, as in effect immediately prior to the Effective Time, shall be the By-Laws of the Surviving Corporation until the same shall be subsequently amended or repealed as therein provided.

1.05 Directors and Officers of the Surviving Corporation. The directors and officers of Biocraft in office immediately prior to the Effective Time shall be the directors and officers of the Surviving Corporation until their respective successors shall be duly elected or appointed and qualified.

ARTICLE II

EFFECT OF THE MERGER

2.01 Conversion of Shares. At the Effective Time, by virtue of the Merger and without any action on the part of the holder of the shares of the capital stock of TAG or Biocraft, the outstanding shares of the Common Stock of TAG and Biocraft shall be converted into the shares of the Surviving Corporation as follows:

(a) Each share of the Common Stock of TAG which shall be outstanding at the Effective Time shall become two fully paid and nonassessable shares of Common Stock, \$1.00 par value, of the Surviving Corporation.

(b) Each share of the Common Stock of Biocraft which shall be outstanding at the Effective Time will be unchanged as a result of the Merger and shall remain one outstanding share of Common Stock of the Surviving Corporation after the Merger.

(c) After the Effective Time, Orvet shall surrender to the Surviving Corporation all certificates representing shares of the Common Stock of TAG that it holds and shall be entitled upon such surrender to receive certificates evidencing shares of Common Stock of the Surviving Corporation as provided in (a) above.

2.02 Effect of the Merger. Upon the Effective Time, all the rights, privileges, immunities, powers, franchises, patents, trademarks, permits, licenses, registrations, and all of the properties, real and personal, including causes of action, and all other assets of every kind and description, of TAG shall be transferred to and vested in the Surviving Corporation without further act or deed.

2.03 Additional Documents. TAG hereby agrees from time to time, as and when requested by the Surviving Corporation, to execute and deliver or cause to be executed and delivered all such deeds and instruments and to take or cause to be taken such further or other action as the Surviving Corporation may deem necessary or desirable in order to vest in and confirm to the Surviving Corporation title to and possession of any property of TAG acquired or to be acquired by reason of or as a result of the Merger and otherwise to carry out the intent and purposes hereof.

ARTICLE III

MISCELLANEOUS

3.01 Entire Agreement. This Agreement contains the entire understanding of the parties hereto with respect to the subject matter contained herein and supersedes all prior agreements and understandings, oral and written, with respect thereto.

3.02 Termination. Notwithstanding anything contained herein to the contrary, this Agreement and the Merger may be terminated and abandoned at any time prior to the Effective Time by the consent of the Boards of Directors of each of TAG and Biocraft.

3.03 Counterparts. This Agreement may be executed in counterparts, each of which shall be deemed to be an original, and all of which together shall be deemed to be one and the same instrument.

3.04 Applicable Law. This Agreement shall be governed by and construed in accordance with the DGCL.

0131321-01

IN WITNESS WHEREOF, each of the parties hereto, pursuant to the approval and authority duly given by resolutions adopted by their respective Boards of Directors and that fact having been certified by the Secretary of each party hereto, has caused this Agreement to be executed by their respective officers or directors, all as of the date first above written.

TAG PHARMACEUTICALS, INC.

By: Eli Hurvitz
Eli Hurvitz
President

BIOCRAFT LABORATORIES, INC.

By: William A. Fletcher
William Fletcher
President

I, Peter H. Jakes, Secretary of TAG Pharmaceuticals, Inc., a Delaware corporation ("TAG"), hereby certify, as such Secretary, that the Agreement and Plan of Merger to which this Certificate is attached, after having been first duly signed on behalf of TAG and having been signed on behalf of Biocraft Laboratories, Inc., a Delaware corporation, was duly adopted pursuant to Section 228 of the General Corporation Law of the State of Delaware by the written consent of the sole stockholder of TAG holding 100% of the outstanding capital stock of TAG, which Agreement and Plan of Merger was thereby adopted as the act of the sole stockholder of TAG, and the duly adopted agreement and act of TAG.

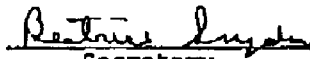
WITNESS my hand on this 26th day of July, 1996.


Secretary

854850073

I, Beatrice Snyder, Secretary of Biocraft Laboratories, Inc., a Delaware corporation ("Biocraft"), hereby certify, as such Secretary, that the Agreement and Plan of Merger to which this Certificate is attached, after having been first duly signed on behalf of Biocraft and having been signed on behalf of TAG Pharmaceuticals, Inc., a Delaware corporation, was duly adopted pursuant to Section 228 of the General Corporation Law of the State of Delaware by the written consent of the sole stockholder of Biocraft holding 100% of the outstanding capital stock of Biocraft, which Agreement and Plan of Merger was thereby adopted as the act of the sole stockholder of Biocraft and the duly adopted agreement and act of Biocraft.

WITNESS my hand on this 26th day of July, 1996.


Secretary

854850074

RESOLVED, that the Lemmon Merger shall be effective upon the date of filing with the Secretary of State of the State of Delaware a Certificate of Ownership and Merger; and further

RESOLVED, that the officers of the Corporation be, and each of them hereby is, authorized and directed to make and execute a Certificate of Ownership and Merger setting forth a copy of the resolutions of the Corporation with respect to the Lemmon Merger and the assumption of the liabilities and obligations of Lemmon, and the date of adoption thereof, and to cause the same to be filed with the Secretary of State of the State of Delaware and to take all such actions as they shall deem necessary or desirable to carry out the purposes of the foregoing resolutions; and further

RESOLVED, that the Corporation change its corporate name by changing Article 1 of the Corporation's Certificate of Incorporation to read as follows:

"1. The name of the corporation (the 'Corporation') is Teva Pharmaceuticals USA, Inc."

IN WITNESS WHEREOF, Biocraft Laboratories, Inc. has caused this Certificate of Ownership and Merger to be signed by its President and Chief Executive Officer and attested to by its Secretary as of July 26, 1996.

BIOCRAFT LABORATORIES, INC.

By: William A. Fletcher
William Fletcher, President
and Chief Executive Officer

Attest:

By: Beatrice Snyder
Beatrice Snyder,
Secretary

STATE OF DELAWARE
SECRETARY OF STATE
DIVISION OF CORPORATIONS
FILED 01:02 PM 07/26/1996
940210361 - 2053734

CERTIFICATE
OF
OWNERSHIP AND MERGER

merging
Lemmon Company
with and into
Biocraft Laboratories, Inc.

Pursuant to Section 253 of the General
Corporation Law of the State of Delaware

The undersigned, Biocraft Laboratories, Inc., a corporation duly organized and existing under and by virtue of the General Corporation Law of the State of Delaware (the "Corporation"), does hereby certify that:

FIRST: The Corporation was incorporated on the 28th day of January, 1965, pursuant to the General Corporation Law of the State of Delaware.

SECOND: The Corporation owns all of the outstanding shares of the capital stock of Lemmon Company, a corporation incorporated on the 26th day of February, 1981, pursuant to the General Corporation Law of the State of Delaware.

THIRD: The Corporation, by the following resolutions of its Board of Directors, duly adopted at a meeting held on the 25th day of June, 1996, determined to and did merge Lemmon Company into itself:

RESOLVED, that the merger of Lemmon Company, a Delaware corporation and, after the effective time of the merger of TAG Pharmaceuticals, Inc. with and into the Corporation, a wholly-owned subsidiary of the Corporation ("Lemmon"), with and into the Corporation (the "Lemmon Merger"), and the assumption by the Corporation of all of Lemmon's liabilities and obligations, are hereby approved; and further

854850076

PROSKAUER ROSE LLP

1585 Broadway
New York, NY 10036-8299
Telephone 212.969.3000
Fax 212.969.2900

LOS ANGELES
WASHINGTON DC
BOCA RATON
NEWARK
PARIS

Gail S. Port

Direct Dial 212.969.3243
gport@proskauer.com

August 22, 2003

BY FEDERAL EXPRESS

Ms. Kedari Reddy, Assistant Regional Counsel
Office of Regional Counsel – Region II
U.S. Environmental Protection Agency
290 Broadway – 17th Floor
New York, New York 10007-1866

Re: Former Biocraft Laboratories, Inc. (now known as Teva Pharmaceuticals USA, Inc.)
Facility in Waldwick, New Jersey Lower Passaic River Study Area Response to
USEPA Request for Information Pursuant to 42 U.S.C. §§ 9601-9675

Dear Ms. Reddy:

Pursuant to the request made by Alex Ince, (from USEPA, Region II) to my client Kirsten E. Bauer, Esq., enclosed are the following reports containing sampling data previously sent to you which was referenced in the response by Teva Pharmaceuticals USA, Inc. to Question 12(a) of the above referenced Request For Information, dated February 27, 2003:

- ✓ (i) Preliminary Assessment Report prepared by Eder Associates, dated March 1 1996;
- ✓ (ii) Remedial Investigation Report prepared by Eder Associates, dated April 1997;
- ✓ (iii) Remedial Investigation Workplan prepared by Eder Associates Division of Gannett Fleming, dated December 12, 1999;
- ✓ (iv) Remedial Investigation Report and NJPDES Discharge to Groundwater Permit Application prepared by Environmental Strategies Corporation, dated June 30, 2000;
- ✓ (v) Remedial Investigation Report prepared by Environmental Strategies Corporation, dated December 31, 2001;

0608/72600-002 NYWORD/145491 v1

854820001

TIERRA-B-008995

PROSKAUER ROSE LLP

Ms. Kedari Reddy
August 22, 2002
Page 2

- (vi) Baseline Ecological Evaluation prepared by AMEC Associated, dated February 15, 2002; and
- (vii) Semi-Annual Groundwater Report prepared by Environmental Strategies Corporation, dated September 5, 2002.

Very truly yours,


Gail S. Port

GSP:cs

Attachment

cc: Kirsten E. Bauer, Esq. (w/o enclosures)

3/1/96

7/95

**NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF RESPONSIBLE PARTY SITE REMEDIATION
CN028, TRENTON, NJ 08625-0028**

PRELIMINARY ASSESSMENT REPORT

Please refer to the instructions and the Technical Requirements for Site Remediation, N.J.A.C. 7:26E-3.1 through 3.2, before completing this form. Answer all questions. Should you encounter any problems in completing this form, we recommend that you discuss the matter with a representative from the Site Remediation Program. Submitting incorrect or insufficient data may cause processing delays and possible postponement of your transaction. Please call (609) 633-7141 between the hours of 8:30 a.m. and 4:30 p.m. to request assistance.

PLEASE PRINT OR TYPE

	<i>Date</i>	March 1, 1996
<i>Industrial Establishment/Site Name</i>		Biocraft Laboratories, Inc. (Biocraft)
<i>Address</i>		12 Industrial Park ("Plant") and 140 Hopper Avenue ("Warehouse")
<i>City or Town</i>	<i>Waldwick</i>	<i>Zip Code</i> 07463
<i>Municipality</i>	<i>Waldwick</i>	<i>County</i> Bergen
<i>Lot (s)</i>	36,46	<i>Block (s)</i> 154
<i>Site Remediation Case Number or EPA Identification Number</i>		NID056356066

Revision No.: _____
Revision Date: _____
Facility: Biocraft Laboratories, Inc., Waldwick, New Jersey

854820003

1. *Operational and Ownership History from the time the site was naturally vegetated or used as farmland. (Attach additional sheets if necessary).*

Plant, 12 Industrial Park (Lot 46, Block 154), Manufacturing Operations

<i>Name</i>	<i>Owner</i>	<i>From</i>	<i>To</i>
George B. and Adele Smith	Unimproved Land Portion of Parcel	2/7/17	7/27/20
Daniel B. and Margaretta Smith	Unimproved Land Portion of Parcel	2/7/17	12/18/20
Andrew B. Smith	Unimproved Land	12/18/20	?
Elli Steinbuch (widow) et als	Unimproved Land	?	1/25/38
Alan Investment	Unimproved Land	1/25/38	?
Elizabeth S. Gunderson	Unimproved Land	?	11/20/62
Waldwick Industrial Park (Nigrito, President) and F. William and Margaret Koestner	Unimproved Land	11/20/62	6/20/63
Paul and Antoinette Nigrito and F. William and Margaret Koestner	Unimproved Land Both Lots 46 (Plant) and 36 (Warehouse)	6/20/63	1/11/72

Revision No.: _____

Revision Date: _____

Facility: *Biocraft Laboratories, Inc., Waldwick, New Jersey*

854820004

Plant, 12 Industrial Park (Lot 46, Block 154), Manufacturing Operations

<i>Name</i>	<i>Operator</i>	<i>From</i>	<i>To</i>
Biocraft Laboratories, Inc.	Facility built in 1972	1/11/72	Present

Warehouse, 140 Hopper Avenue (Lot 36, Block 154)

<i>Name</i>	<i>Operator</i>	<i>From</i>	<i>To</i>
Biocraft Laboratories, Inc.	Lot subdivided from Lot 46 in 1985, Warehouse built in 1985	after 4/17/85	Present

Sources: Real Estate Title Search (June 1995 and February 1996), McRae's Directory (1994), New Jersey Manufacturing Directory (1995), Harris Publishing, New Jersey Business to Business (1995)

2A. *Provide a brief description of the past operation(s) (e.g., industrial/commercial) conducted on site by each owner and operator (Attach additional sheets if necessary).*

No other operations were conducted on the Plant site until Biocraft Laboratories purchased the property, built the plant, and associated site improvements and began operations in 1972. No operations were conducted on the Warehouse site until Biocraft Laboratories purchased the property and built the Warehouse building in 1985. Lots 36 and 46 were unimproved prior to Biocraft's ownership.

2B. *Include a detailed description of the most recent operations subject to this preliminary assessment (Attach additional sheets if necessary).*

The Waldwick Plant manufactures five semi-synthetic bulk generic penicillin products using proprietary processes. The bulk penicillin product is manufactured in separate production

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Facility: *Biocraft Laboratories, Inc., Waldwick, New Jersey*

854820005

campaigns, each of which lasts a minimum of one week for each product. They are manufactured using batch chemical processes which include the following key steps: chemical reactions (one or more), 2) batch extraction, 3) crystallization, 4) centrifuging, 5) drying, 7) milling, and 8) blending. The bulk generic penicillin products are packed in fiber drums. The Plant also houses a small R&D laboratory.

Bulk finished products and some raw materials are used in manufacturing at the Plant are stored in the Warehouse. The Warehouse also houses the Quality Control and Microbiology Laboratories. The bulk generic penicillin products which are packed in fiber drums at the plant are stored in the Warehouse where they are again quarantined, inspected, and released. Following release, the separate bulk generic penicillin products are brought to Biocraft's Elmwood Park facility (see PA form for this facility) where they are compressed, encapsulated, or mixed into dosage forms (tablets, capsuled and powders).

3. *Hazardous Substance/Waste Inventory: List all raw materials, finished products, formulations and hazardous substances, hazardous wastes, hazardous constituent and pollutants, including intermediates and by-products that are or were historically present on the site (attach additional sheets if necessary).*

Material Name	Typical Annual Usage	Storage Method/Container Type/Size	Location Reference Keyed to Site Map	To Remain on site? If yes, indicate quantity
See Table 1				

Revision No.: _____

Revision Date: _____

Facility: *Biocraft Laboratories, Inc., Waldwick, New Jersey*

854820006

4. *Summary of Wastewater Discharges of Sanitary and /or Industrial Waste and/or sanitary sludges: Present and past production processes, including dates, and their respective water use shall be identified and evaluated, including ultimate and potential discharge and disposal points and how and where materials are or were received on-site. All discharge and disposal points shall be clearly depicted on a scaled site map.*

A. Discharge Period:

<i>From</i>	<i>To</i>	<i>Discharge Type & Quantity, if known</i>	<i>Discharge/Disposal Point</i>
1972	Present	Sanitary and Non-Contact Cooling Water - Not Metered (Plant)	Publicly Owned Treatment Works - Northwest Bergen County Utilities Authority
1995	Present	Industrial Waste Pretreatment Discharge approximately 7,800 gpd (Plant)	Publicly Owned Treatment Works - Northwest Bergen County Utilities Authority (Permit No. 95002)
1987	Present	Sanitary - Not Metered (Warehouse)	Publicly Owned Treatment Works - Northwest Bergen County Utilities Authority
1987	Present	Non-Categorical Discharge approximately 4,500 gpd (Warehouse)	Publicly Owned Treatment Works - Northwest Bergen County Utilities Authority (Permit No. 87061)

B. Provide a narrative of disposal processes for all process waste streams and disposal points. (attach additional sheets if necessary).

In the Plant, hazardous waste streams generated from the manufacturing processes are captured and either sent to the Plant's on-site solvent recovery system (distillation) or are disposed of off-site disposal. The hazardous waste streams sent for off-site disposal are limited amounts of process wastewater and still bottoms from methylene chloride distillation. Onsite solvent recovery is

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Revision Date: _____

Facility: Biocraft Laboratories, Inc., Waldwick, New Jersey

854820007

performed on the crude methylene chloride waste stream and the acetone-water waste stream. Water recovered during manufacturing is pre-treated prior to being discharged to the POTW.

Warehouse operations generate laboratory wastes which are captured as hazardous wastes. Wastewater generated from rinsing laboratory equipment with tap water are discharged to the POTW in compliance with the permit conditions.

5. In accordance with N.J.A.C. 7:26E-3.2(a) 3.1, provide a scaled site plan, depicting the site boundaries, known limits of fill, paved and unpaved areas, structures and any of the potential areas of environmental concern listed below.

In accordance with N.J.A.C. 7:26E3.1(c)1.v., a narrative shall also be provided for each area of concern describing the (A) Type; (B) Age; (C) Dimensions of each container/area; (D) Chemical Content; (E) Volume; (F) Construction materials; (G) Location; (H) Integrity (i.e., tank test reports, description of drum storage pad); and (I) Inventory control records, unless a Department-approved leak detection system; pursuant to N.J.A.C. 7:1E or 7:14B, has always been in place and there is no discharge history. A site investigation must be completed in accordance with N.J.A.C. 7:26E-3.10 for all areas which require sampling.

PLANT

A. Bulk storage tanks and appurtenances, including, without limitation:

Area of Concern	Currently/Formerly exists at facility Yes/No	Location Reference Keyed to Site Map	Sampling Proposed Yes/No	Page or Appendix # for Narrative
<i>Aboveground Tanks and associated piping</i>	Currently/Yes	Drawing 1 No. 1	No	Appendix A Section 5.1
<i>Underground Tanks and associated piping</i>	Currently/Yes (No. 2 Fuel Oil) Formerly/Yes	Drawing 1 No. 2	No Yes	Appendix A Section 5.2

Revision No.: _____

Revision Date: _____

Facility: *Biocraft Laboratories, Inc., Waldwick, New Jersey*

854820008

Area of Concern	Currently/Formerly exists at facility Yes/No	Location Reference Keyed to Site Map	Sampling Proposed Yes/No	Page or Appendix # for Narrative
<i>Rail Spurs or Sidings</i>	No			
<i>Above or below ground pump stations</i>	No			
<i>Sumps</i>	No			
<i>Pits</i>	No			
<i>Rail/Truck loading and unloading areas</i>	Currently/Yes (Truck)	Drawing 1 No. 3	No	Appendix A Section 5.3
<i>Storage Pads and areas including drum and/or waste storage</i>	Currently/Yes	Drawing 1 No. 4	No	Appendix A Section 5.4
<i>Surface Lagoons and impoundments</i>	No			
<i>Dumpsters</i>	Currently/Yes	Drawing 1 No. 5	No	Appendix A Section 5.5
<i>Chemical Storage Cabinets or Closets</i>	Currently/Yes (Interior)	Drawing 1 No. 6	No	Appendix A Section 5.6

B. Drainage systems and areas, including, without limitation:

<i>Floor Drains or trenches and piping</i>	Currently/Yes	Drawing 1 No. 7	No	Appendix A Section 5.7
<i>Process area sinks and piping which receive process waste</i>	Currently/Yes (Lab)	Drawing 1 No. 8	No	Appendix A Section 5.8

Revision No.: _____

Revision Date: _____

Facility: *Biocraft Laboratories, Inc., Waldwick, New Jersey*

854820009

Area of Concern	Currently/Formerly exists at facility Yes/No	Location Reference Keyed to Site Map	Sampling Proposed Yes/No	Page or Appendix # for Narrative
<i>Roof leaders when process operations vent to roof</i>	Currently/Yes	Drawing 1 No. 9	No	Appendix A Section 5.9
<i>Drainage swales and culverts</i>	No			
<i>Storm sewer collection systems</i>	Currently/Yes	Drawing 1 No. 10	No	Appendix A Section 5.10
<i>Storm water detention ponds & fire water ponds</i>	No			
<i>Surface water bodies</i>	No			
<i>Septic systems, leachfields or seepage pits</i>	No			
<i>Dry wells</i>	No			

C. *Discharge and disposal areas, including, without limitation:*

<i>Waste Piles</i>	No			
<i>Landfills or landfarms</i>	No			
<i>Sprayfields</i>	No			
<i>Incinerators</i>	No			
<i>Open pipe discharges</i>	No			

Revision No.: _____

Revision Date: _____

Facility: *Biocraft Laboratories, Inc., Waldwick, New Jersey*

854820010

D. Other areas of concern, including, without limitation:

Area of Concern	Currently/Formerly exists at facility Yes/No	Location Reference Keyed to Site Map	Sampling Proposed Yes/No	Page or Appendix # for Narrative
<i>Electrical transformers and capacitors</i>	Currently/Yes (PSE&G Owned)	Drawing 1 No. 11	No	Appendix A Section 5.11
<i>Areas of stressed vegetation</i>	No			
<i>Underground piping, including industrial process sewers</i>	Formerly/Yes (USTs) Currently/Yes (Groundwater Remediation System)	Drawing 1 No. 2	Yes	Appendix A Section 5.12
<i>Compressor vent discharges</i>	Currently/Yes (Captured as hazardous waste)	Drawing 1 No. 12	No	Appendix A Section 5.13
<i>Non-Contact Cooling water discharges</i>	Currently/Yes (To POTW)	Drawing 1 No. 13	No	Appendix A Section 5.14
<i>Discolored areas or spill areas</i>	No			
<i>Active or inactive production wells</i>	Currently/Yes	Drawing 1 No. 14	Yes	Appendix A Section 5.15

Revision No.: _____

Revision Date: _____

Facility: *Biocraft Laboratories, Inc., Waldwick, New Jersey*

854820011

E. Building interior areas with a potential for discharge to the environment, including, without limitation:

Area of Concern	Currently/Formerly exists at facility Yes/No	Location Reference Keyed to Site Map	Sampling Proposed Yes/No	Page or Appendix # for Narrative
<i>Loading or transfer areas</i>	Currently/Yes	Drawing 1 No. 15	No	Appendix A Section 5.16
<i>Waste treatment areas</i>	Currently/Yes	Drawing 1 No. 16	No	Appendix A Section 5.17
<i>Boiler Rooms</i>	Currently/Yes	Drawing 1 No. 17	No	Appendix A Section 5.18
<i>Air vents and ducts</i>	Currently/Yes	Drawing 1 No. 18	No	Appendix A Section 5.19
<i>Hazardous Material storage or handling areas</i>	Currently/Yes	Drawing 1 No. 6 and 19	No	Appendix A Section 5.6 and 5.20

F. Any other site specific area of concern.

None

WAREHOUSE

A.2. Bulk storage tanks and appurtenances, including, without limitation:

Area of Concern	Currently/Formerly exists at facility Yes/No	Location Reference Keyed to Site Map	Sampling Proposed Yes/No	Page or Appendix # for Narrative
<i>Aboveground Tanks and associated piping</i>	No			

Revision No. : _____

Revision Date: _____

Facility: *Biocraft Laboratories, Inc., Waldwick, New Jersey*

854820012

Area of Concern	Currently/Formerly exists at facility Yes/No	Location Reference Keyed to Site Map	Sampling Proposed Yes/No	Page or Appendix # for Narrative
<i>Underground Tanks and associated piping</i>	No			
<i>Silos</i>	No			
<i>Rail Spurs or Sidings</i>	No			
<i>Above or below ground pump stations</i>	No			
<i>Sumps</i>	No			
<i>Pits</i>	No			
<i>Rail/Truck loading and unloading areas</i>	Currently/Yes (Truck)	Drawing 1 No. 3	No	Appendix A Section 5.3
<i>Storage Pads and areas including drum and/or waste storage</i>	Currently/Yes (Interior)	Drawing 1 No. 4	No	Appendix A Section 5.4
<i>Surface Lagoons and impoundments</i>	No			
<i>Dumpsters</i>	Currently/Yes	Drawing 1 No. 5	No	Appendix A Section 5.5
<i>Chemical Storage Cabinets or Closets</i>	Currently/Yes (Interior)	Drawing 1 No. 6	No	Appendix A Section 5.6

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B. Drainage systems and areas, including, without limitation:

Area of Concern	Currently/Formerly exists at facility Yes/No	Location Reference Keyed to Site Map	Sampling Proposed Yes/No	Page or Appendix # for Narrative
<i>Floor Drains or trenches and piping</i>	Currently/Yes	Drawing 1 No. 7	No	Appendix A Section 5.7
<i>Process area sinks and piping which receive process waste</i>	Currently/Yes (Lab)	Drawing 1 No. 8	No	Appendix A Section 5.8
<i>Roof leaders when process operations vent to roof</i>	Currently/Yes (Lab Hoods)	Drawing 1 No. 9	No	Appendix A Section 5.9
<i>Drainage swales and culverts</i>	No			
<i>Storm sewer collection systems</i>	Currently/Yes	Drawing 1 No. 10	No	Appendix A Section 5.10
<i>Storm water detention ponds & fire water ponds</i>	No			
<i>Surface water bodies</i>	No			
<i>Septic systems, leachfields or seepage pits</i>	No			
<i>Dry wells</i>	No			

C. Discharge and disposal areas, including, without limitation:

<i>Waste Piles</i>	No			
<i>Landfills or landfarms</i>	No			

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Area of Concern	Currently/Formerly exists at facility Yes/No	Location Reference Keyed to Site Map	Sampling Proposed Yes/No	Page or Appendix # for Narrative
<i>Sprayfields</i>	No			
<i>Incinerators</i>	No			
<i>Open pipe discharges</i>	No			

D. Other areas of concern, including, without limitation:

<i>Electrical transformers and capacitors</i>	Currently/Yes (PSE&G Owned)	Drawing 1 No. 11	No	Appendix A Section 5.1
<i>Areas of stressed vegetation</i>	No			
<i>Underground piping, including industrial process sewers</i>	Currently/Yes (Plant Groundwater Remediation System)	Drawing 1 No. 2	Yes	Appendix A Section 5.12
<i>Compressor vent discharges</i>	No			
<i>Non-Contact Cooling water discharges</i>	No			
<i>Discolored areas or spill areas</i>	No			
<i>Active or inactive production wells</i>	No			
<i>Dry wells</i>	No			

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E. *Building interior areas with a potential for discharge to the environment, including, without limitaiton:*

Area of Concern	Currently/Formerly exists at facility Yes/No	Location Reference Keyed to Site Map	Sampling Proposed Yes/No	Page or Appendix # for Narrative
<i>Loading or transfer areas</i>	Currently/Yes	Drawing 1 No. 15	No	Appendix A Section 5.16
<i>Waste treatment areas</i>	No			
<i>Boiler Rooms</i>	Currently/Yes	Drawing 1 No. 17	No	Appendix A Section 5.18
<i>Air vents and ducts</i>	Currently/Yes	Drawing 1 No. 18	No	Appendix A Section 5.19
<i>Hazardous Material storage or handling areas</i>	Currently/Yes	Drawing 1 No. 6 and 19	No	Appendix A Section 5.6 and 5.20

F. *Any other site specific area of concern.*

None

6. *Protectiveness of past remedies, Order of Magnitude Analysis*

A. *Have any areas of environmental concern previously received a No-Further-Action approval from the Department or other equivalent government agency for which no additional remediation is proposed? Yes No If no, go to question #7. If yes, complete B.*

B. *In accordance with N.J.S.A. 58:10B-13 (e) the following evaluation of the protectiveness of past remedies shall be completed for all areas of environmental concern for which no further action was previously approved by the Department or other equivalent government agency and for which no additional remediation is proposed. All final sampling*

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results shall be evaluated to determine if contaminant levels remaining on site are in compliance with current remediation standards. The applicant shall determine:

- i. if contaminant levels remaining on site are greater than the current cleanup criteria by an order of magnitude (factor of 10) or more by tabulating all sampling results, including sampling location, sample media, field and laboratory identification numbers, and method detection limits, as necessary, and analytical results for all individual contaminants; and*
- ii. compare each contaminant result to the current remediation criteria.*

I hereby certify that I have completed the order of magnitude analysis required pursuant to N.J.S.A. 58:10B-13(e), since the issuance of a No-Further-Action approval, negative declaration approval or equivalent remediation approval; and

Based on the order of magnitude analysis there has been no discharge of a hazardous substance or hazardous waste, subsequent to the issuance of a No-Further-Action approval, negative declaration approval or equivalent remediation approval at the areas of environmental concern listed below and no levels of contamination remain which exceed the current applicable cleanup criteria by more than an order of magnitude.

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Please list the areas of concern for which the previous certification applies.

Area of Concern	Location Reference Keyed to Site Map	Area of Concern	Location Reference Keyed to Site Map
1. Removal of Underground Storage Tanks	Drawing 1 No. 2	9.	
2.		10.	
3.		11.	
4.		12.	
5.		13.	
6.		14.	
7.		15.	
8.		16.	

7. *Historical Data on environmental quality at the Industrial establishment*

A. *Have any previous sampling results documenting environmental quality of the Industrial Establishment not received a no further action approval from the Department or been denied approval by the department?*

Yes (see Attachment # _____) No

B. *Have there been any known changes in site conditions or new information developed since completion of previous sampling or remediation? If sampling results were obtained, but are not part of this application, please explain below:*

Recent and historic sampling results and a narrative on the continuing groundwater remediation at the plant site are included in the Preliminary Assessment Report (Section 7.0).

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8. Discharge History of Hazardous Substances and Wastes:

A. Have there been any discharges of hazardous substances and wastes?

Yes (complete Items B-E) No

B. Was the Department notified of the discharge?

Yes No (Go to Item 9D)

If yes, provide the case # The site is subject to a groundwater Administrative Consent Order (ACO) comprised of a NJDEP ACO dated 1/12/77, as amended by NJDEP Administrative Order (AO) dated 12/6/78, as amended by NJDEP ACO 9/25/80 as modified by NJDEP letter dated 6/18/82 (collectively, the "Groundwater ACO").

C. Was a no-further-action letter, negative declaration approval or full-compliance letter issued as a result of the cleanup of this discharge?

Yes (Submit a copy and go to item 9E) No (Remediation and monitoring ongoing in accord with NJDEP ACO)

D. Were sample results obtained?

Yes No

E. Provide a description of the discharge and the response and resolution.

The Groundwater ACO stems from a discharge from underground lines leading to the underground waste solvent tank in November 1975. The lines were removed in the winter of 1975 and aboveground lines were installed. Subsequently, the underground storage tanks were removed and replaced with vaulted below grade storage tanks with secondary containment and continuous monitoring. Biocraft undertook an extensive research and development project to develop a process to remove and treat the impacted groundwater. The research resulted in the development of a sophisticated biodegradation/biostimulation process which has received a patent from the US Patent Office. The biodegradation/biostimulation system was installed and has been

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operating since 1977. Extensive monitoring in accord with the Groundwater ACO shows that groundwater quality has progressively improved and Biocraft currently estimates that 90% of the groundwater plume has been remediated. The sampling data show that the treatment system reduces the influent concentrations of methylene chloride by greater than 90%. Groundwater elevation and sampling data show that the zone of influence of the recovery system maintains hydraulic control of the groundwater plume. A detailed discussion of the remediation system and groundwater sampling results are found in the Preliminary Assessment Report (Section 7.0).

9. *Aerial Photographic interpretation for sites larger than two acres from 1932 to present or to the earliest photograph available (Attach additional sheets if necessary).*

Aerial Photographs from 1940, 1951, 1961, and 1974 were reviewed at the New Jersey Department of Environmental Protection Offices. The aerial photo review included both facilities (the Plant and Warehouse).

<u>4/6/40</u>	<u>Scale 1:20,000</u>	<u>The area is wooded with scattered agricultural and single family homes on adjacent property.</u>
<u>4/7/51</u>	<u>Scale 1:20,000</u>	<u>The property is wooded. Surrounding property is agricultural with single family homes.</u>
<u>4/23/61</u>	<u>Scale 1:18,000</u>	<u>The property is wooded. Surrounding property is agricultural with single family homes.</u>
<u>4/11/74</u>	<u>Scale 1:18,000</u>	<u>The Biocraft building is present. Surrounding properties include industrial buildings to the east, north, west and northwest.</u>

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10. List all federal, state and local environmental permits at this facility, including permits for all previous and current owners or operators, applied for, received, or both (Attach additional sheets if necessary).

Check here if no permits are involved _____

A. New Jersey Air Pollution Control

Permit Number	Certificate Number	Date of Approval or Denial	Reason for Denial (If Applicable)	Expiration Date
	049648	4/16/81		1/5/98
	049649	4/16/81		1/5/98
	049650	4/16/81		1/5/98
	049651	4/16/81		1/5/98
	108250	8/13/92		8/13/97
	108251	8/13/92		8/13/97
	108252	8/13/92		8/13/97
	108253	8/13/92		8/13/97
	108254	8/10/92		8/10/97
	108255	8/3/92		8/3/97
	108256	8/13/92		8/13/97
	108257	8/13/92		8/13/97
	108258	8/10/92		8/10/97
	108259	8/13/92		8/13/97
	121828*			7/18/95

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Permit Number	Certificate Number	Date of Approval or Denial	Reason for Denial (If Applicable)	Expiration Date
	041929	4/30/79		4/28/99
	118896*	10/27/94		10/21/00
	01944239	10/26/94**		
	01944240	10/26/94**		
	01944241	10/26/94**		
	019342	8/10/89		10/7/00

* Temporary Permit until Certification received from NIDEP.

** Renewal Application Submitted, Permits approved by NIDEP, Biocraft awaiting certificates.

B. *Underground Storage Tank Registration Number* Not Applicable

C. *New Jersey Pollutant Discharge Elimination System (NJPDES) Permit*

Number	Discharge Activity	Date Issued or Denied	Expiration Date	Body of Water Discharged Into
	Not Applicable			

D. *Resource Conservation and Recovery Act (RCRA) permit # - EPA#NID056356066*

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E. All other federal, state, local government permits.

Agency Issuing Permit	Permit #	Type of Permit	Date of Approval or Denial	Expiration Date
NJDEP Bureau of Stormwater Permitting	NJ0088315 (Plant)	Stormwater	6/23/93	11/1/97
Northwest Bergen County Utilities Authority	87041 (Warehouse)	Industrial Wastewater Discharge	1/1/96	12/31/98
Northwest Bergen County Utilities Authority	95002 (Plant)	Industrial Wastewater Discharge	1/1/96	12/31/98
State of New Jersey (Boiler)	95303 (Plant)	Certificate of Registration	7/14/95	7/15/96
State of New Jersey (Boiler)	95304 (Plant)	Certificate of Registration	7/14/95	7/15/96
State of New Jersey (Boiler)	89-2044-H (Warehouse)	Certificate of Registration	7/14/95	7/15/95

11. Summary of enforcement actions (including but not limited to, Notice of Violations, Court Orders, official notices or directives) for violations of environmental laws or regulations (attach additional sheets if necessary):

A. Check here if no enforcement actions are involved _____
 The "Groundwater ACO" is discussed in item B.1 below.

B.1 (1) Name and address of agency that initiated the enforcement action

NIDEP, Trenton, New Jersey

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- (2) *Date of the enforcement action* 1/12/77, 12/6/78, 9/25/80, letter 6/18/82 collectively, the "Groundwater ACO".
- (3) *Section of statute, rule or permit allegedly violated*
Various sections related to a discharge from underground storage tank piping.
- (4) *Type of enforcement action* The Groundwater ACO
- (5) *Description of the violation* Leak detected in underground piping to underground storage tanks
- (6) *How was the violation resolved?* Groundwater ~~Biodegradation/~~ Biostimulation system installed in 1977, continues to be operated, and extensive monitoring and reporting has continued since that date.

- B.2 (1) *Name and address of agency that initiated the enforcement action*
NIDEP, Trenton, New Jersey
- (2) *Date of the enforcement action* 4/26/89
- (3) *Section of statute, rule or permit allegedly violated*
N.J.A.C. 7:27-8.3(e)1
- (4) *Type of enforcement action* Administrative Order and Notice of Civil Administrative Penalty Assessment

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- (5) *Description of the violation* Use of sodium hydroxide not covered under NJDEP Air Permit No. 41930.
- (6) *How was the violation resolved?* Biocraft revised and resubmitted the permit
- B.3 (1) *Name and address of agency that initiated the enforcement action*
NJDEP, 401 East State Street, Trenton, New Jersey
- (2) *Date of the enforcement action* 11/23/94
- (3) *Section of statute, rule or permit allegedly violated*
N.J.A.C. 7:1E-4.6(a)&(b)4
- (4) *Type of enforcement action* Administrative Order and Notice of Civil Administrative Penalty Assessment
- (5) *Description of the violation* A DPCC/DCR Plan had not been prepared for the Plant
- (6) *How was the violation resolved?* A DPCC/DCR Plan was prepared, submitted and approved by NJDEP in 6/95 for the Plant
- B.4 (1) *Name and address of agency that initiated the enforcement action*
NJDEP, 1474 Prospect Street, Trenton New Jersey.
- (2) *Date of the enforcement action* 9/25/80
- (3) *Section of statute, rule or permit allegedly violated*
N.J.S.A. 13:10-1 et seq., N.J.S.A. 13:1E-1 et seq. and N.J.A.C. 7:26-12-1

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- (4) *Type of enforcement action* Administrative Consent Order
- (5) *Description of the violation* Hazardous waste stored in two 10,000 gallon underground storage tanks. Failure to submit a hazardous waste facility permit application
- (6) *How was the violation resolved?* Underground storage tanks were removed according to NJDEP regulations, contingency plan was written, emergency equipment was made available in case of a spill and an evacuation plan was submitted. NJDEP observed removal and recommended no further action (memo dated 4/15/92).

B.5 (1) *Name and address of agency that initiated the enforcement action*

NJDEP, Division of Enforcement Field Operations, Metro Enforcement, 2 Babcock Place, West Orange, New Jersey.

- (2) *Date of the enforcement action* 5/12/94
- (3) *Section of statute, rule or permit allegedly violated*
N.J.A.C. 7:26-7.4(1)4ii and N.J.A.C. 7.4(a)4viii
- (4) *Type of enforcement action* Notice of Violation

- (5) *Description of the violation*
USEPA identification number, NJ decal number and correct transporters registration numbers were incorrect or missing on hazardous waste manifest.

- (6) *How was the violation resolved?*
Proper paperwork was submitted within 15 day time frame.

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Facility: Biocraft Laboratories, Inc., Waldwick, New Jersey

12. *Site Map*

A. *In accordance with N.J.A.C. 7:26E-3.2(a) 3.1, submit a scaled site plan, detailing the subject lot and block, property and or leasehold boundaries, location of current and former buildings, fill areas, paved and unpaved areas, vegetated areas, and all areas of concern identified above and all active or inactive wells.*

B. *Scaled historical site maps and facility as built drawings (if available).*

C. *A copy of the United States Geologic Survey (USGS) 7.5 minute topographical quadrangle that includes the site and an area of at least one mile radius around the site. The facility location shall be clearly noted. If a portion of the USGS quadrangle is used, the scale, north arrow, contour interval, longitude and latitude with the name and date of the USGS quadrangle shall be noted on the map.*

13. *List any other information you are submitting or which has been formerly requested by the Department:*

Description	Attachment #
NONE	

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CERTIFICATIONS:

A. The following certification shall be signed by the highest ranking individual at the site with overall responsibility for that site or activity. Where there is no individual at the site with overall responsibility for that site or activity, this certification shall be signed by the individual having responsibility for the overall operation of the site or activity.

I certify under penalty of law that the information provided in this document is true, accurate and complete. I am aware that there are significant civil penalties for knowingly submitting false, inaccurate or incomplete information, and that I am committing a crime of the fourth degree if I make a written false statement which I do not believe to be true. I am also aware that if I knowingly direct or authorize the violation of any statute, I am personally liable for the penalties.

Typed/Printed Name Vito Rapisardi Title Plant Manager

Signature Vito Rapisardi Date 2/29/96

Sworn to and Subscribed Before Me on this 29th day

Date of 29th February 1996

Anna M. Rudi NOTARY PUBLIC OF NEW JERSEY
Notary MY COMMISSION EXPIRES 5-30-96

B. The following certification shall be signed as follows:

1. For a corporation, by a principal executive officer of at least the level of vice president;
2. For a partnership or sole proprietorship, by a general partner or the proprietor, respectively; or
3. For a municipality, State, Federal or other public agency, by either a principal executive officer or ranking elected official; or
4. For persons other than 1-3 above, by the person with the legal responsibility for the site.

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein and all attached documents, and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate and complete. I am aware that there are significant civil penalties for knowingly submitting false, inaccurate or incomplete information, and that I am committing a crime of the fourth degree if I make a written false statement which I do not believe to be true. I am also aware that if I knowingly direct or authorize the violation of any statute I am personally liable for the penalties.

Typed/Printed Name Melvin Kaufman Title Vice President - Operations

Signature M Kaufman Date 2/29/96

Sworn to and Subscribed Before Me on this 29th

Date of February 1996

Ethyl Andersen
Notary ETHYL ANDERSEN
NOTARY PUBLIC OF NEW JERSEY
My Commission Expires May 1, 2000

Revision No: _____
Revision Date: _____

854820028

BIOCRAFT LABORATORIES, INC.
WALDWICK, NEW JERSEY
ISRA CASE #96070

PRELIMINARY ASSESSMENT REPORT
ITEM No. 6
TANK CLOSURE CERTIFICATION - APRIL 15, 1992

854820029

TIERRA-B-009023

Form ADW-012

02-64-03

MEMO

NON ARMY STATE DEPARTMENT OF ENVIRONMENTAL PROTECTION

TO David Oster

DATE 4/15/92

FROM Arnold Schiff Prin. Env. Spec.

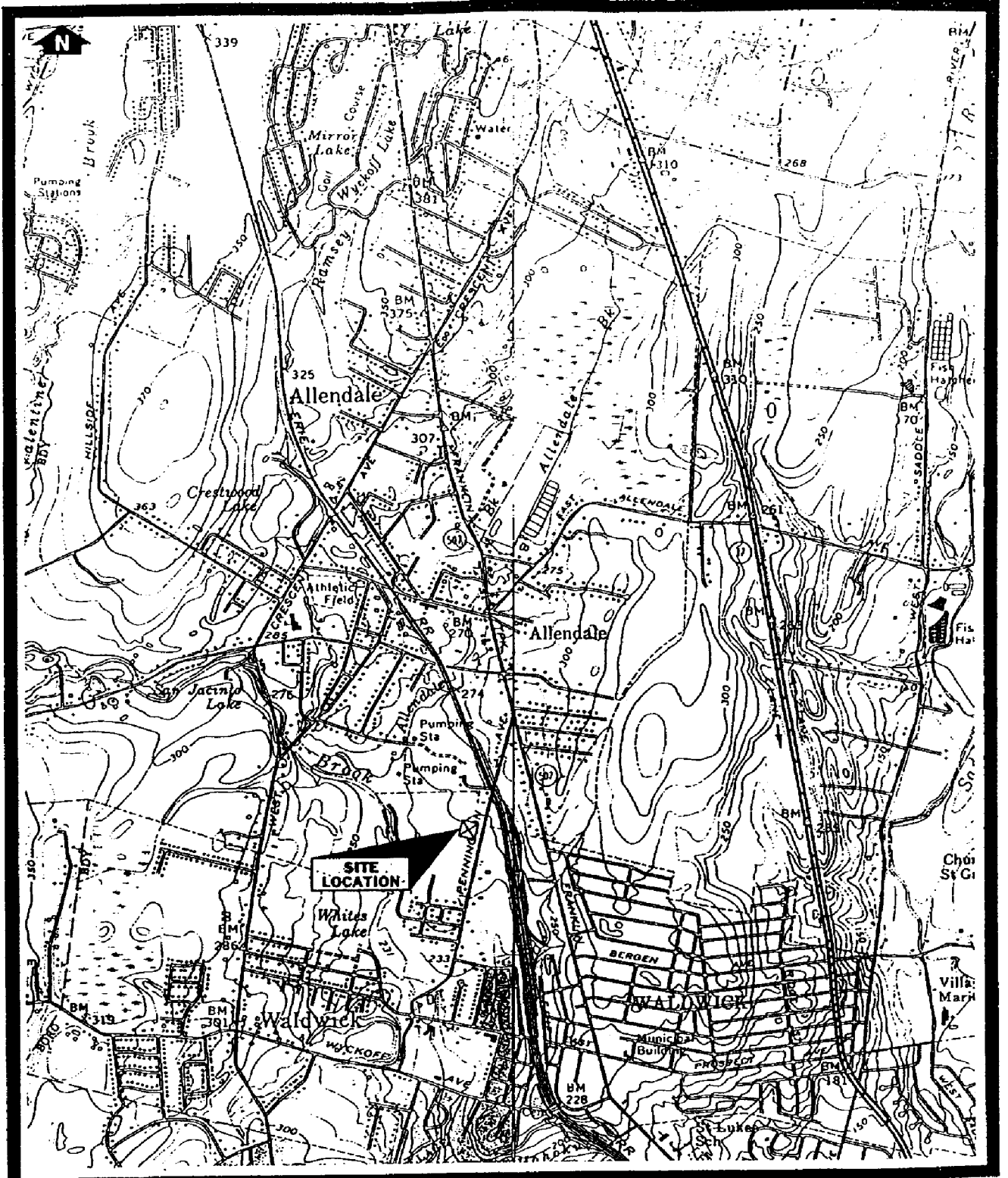
SUBJECT Biscraft Laboratories Tank Closure. 920210SP02M

Based upon being present at removal of tanks on 2/7/92 and the test results received by the Department on 4/15/92 from VECTRE Corporation sent out on 4/10/92, I recommend that no further action be taken. The ground-water and soil samples came up non-detect for the VOS.

854820030

FIGURES

854820031



Real Estate Graphics Inc. COPYRIGHT 1978

FIGURE 1 - SITE LOCATION MAP

Biocraft Laboratories, Inc., Waldwick, New Jersey

Scale 1:24,000

Contour Interval 10 Feet

Longitude 74.07.30

Latitude 41.00.00

USGS, 7.5 Minute Quadrangle Map, Ramsey, NY-NJ, 1955

USGS, 7.5 Minute Quadrangle Map, Park Ridge, NY-NJ, 1955

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TABLES

854820033

BIOCRAFT LABORATORIES, INC.
WALDWICK, NEW JERSEY

TABLE 1 (Preliminary Assessment Form Item 3)

HAZARDOUS SUBSTANCES STORED AT FACILITY

Substance Name	CAS Number	Typical Annual Usage *		Storage Method		Location/Keyed to Location Map	To Remain On-Site	Maximum Daily Quantity (lbs.)
		Quantity	Units	Container Type	Container Size			
Acenaphthene	83-32-9	50 g		Bottles or Jugs (glass)	100 g	Laboratories	Yes	Less than 1 lb.
Acetamide	60-35-5	50 g		Bottles or Jugs (glass)	500 g	Laboratories	Yes	Less than 1 lb.
Acetic Acid	64-19-7	10 L		Bottles or Jugs (glass)	2.5 L & 500 mL	Laboratories	Yes	1 - 10
Acetic Anhydride	108-24-7	10 L		Bottles or Jugs (glass)	2.5 L & 500 mL	Laboratories	Yes	1 - 10
Acetone	67-64-1	1,000,000 lbs		Bottles or Jugs (glass), AST	10,000 gal	Laboratories, Production, Tank Farm	Yes	100,001 - 250,000
Acetonitrile	75-05-8	200 L		Bottles or Jugs (glass)	2.5 L	Laboratories	Yes	1-10
Adipic Acid	124-04-09	50 g		Bottles or Jugs (glass)	100 g	Laboratories	Yes	Less than 1 lb.
Ammonia	7664-41-7	100 lbs		Cylinder	Cylinder	Laboratories	Yes	11 - 100
Ammonium Acetate	631-61-8	75 g		Bottles or Jugs (glass)	1 Kg	Laboratories	Yes	Less than 1 lb.
Ammonium Bicarbonate	1066-33-7	50 g		Bottles or Jugs (glass)	500 g	Laboratories	Yes	Less than 1 lb.
Ammonium Chloride	12125-02-9	50 g		Bottles or Jugs (glass), Bag	500 g	Laboratories, Tank Farm	Yes	Less than 1 lb.
Ammonium Hydroxide	1336-21-6	10 L		Bottles or Jugs (glass)	2.5 L	Laboratories	Yes	1-10
Ammonium Nitrate	6484-52-2	10 L		Bottles or Jugs (plastic)	2.5 L	Laboratories	Yes	1-10
Ammonium Oxalate	1113-38-8	50 g		Bottles or Jugs (glass)	125 g	Laboratories	Yes	Less than 1 lb.
Ammonium Persulfate	7727-54-0	50 g		Bottles or Jugs (glass)	500 g	Laboratories	Yes	Less than 1 lb.
Ammonium Thiocyanate	1762-95-4	50 g		Bottles or Jugs (glass)	1 Kg	Laboratories	Yes	Less than 1 lb.
Aniline	62-53-3	1 L		Bottles or Jugs (glass)	1 L	Laboratories	Yes	Less than 1 lb.
Anthracene	120-12-7	50 g		Bottles or Jugs (glass)	250 g	Laboratories	Yes	Less than 1 lb.
Antimony	7440-36-0	50 g		Bottles or Jugs (glass)	125 g	Laboratories	Yes	Less than 1 lb.
Arsenic Trioxide	1327-53-3	50 g		Bottles or Jugs (glass)	125 g	Laboratories	Yes	Less than 1 lb.
Benzene	71-43-2	4 L		Bottles or Jugs (glass)	500 mL	Laboratories	Yes	Less than 1 lb.
Benzoic Acid	65-85-0	1 L		Bottles or Jugs (glass)	125 g	Laboratories	Yes	Less than 1 lb.
Benzoyl Chloride	98-88-4	50 g		Bottles or Jugs (glass)	500 g	Laboratories	Yes	Less than 1 lb.
Benzyl Chloride	100-44-7	1 L		Bottles or Jugs (glass)	500 mL	Laboratories	Yes	1 - 10
Beryllium Sulfate	13510-49-1	50 g		Bottles or Jugs (glass)	25 g	Laboratories	Yes	Less than 1 lb.
2-Butanol	78-92-2	10 L		Bottles or Jugs (glass)	1 L	Laboratories	Yes	1 - 10
n-Butanol	71-36-3	10 L		Bottles or Jugs (glass)	1 L	Laboratories	Yes	Less than 1 lb.
Butyl Acetate	123-86-4	10 L		Bottles or Jugs (glass)	1 L	Laboratories	Yes	Less than 1 lb.

Notes:

* - Laboratory chemicals are purchased, stored and used in very small quantities. Annual usage quantities are estimated.

g - grams

L - Liters

Kg - Kilograms

lbs - pounds

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TABLE 1 Continues...

Substance Name	CAS Number	Typical Annual Usage *		Storage Method		Location/Keyed to Location Map	To Remain On-Site	Maximum Daily Quantity (lbs.)
		Quantity	Units	Container Type	Container Size			
Cadmium	7440-43-9		50 g	Bottles or Jugs (glass)	250 g	Laboratories	Yes	Less than 1 lb.
Carbon Disulfide	75-15-0		1 L	Bottles or Jugs (glass)	500 mL	Laboratories	Yes	Less than 1 lb.
Carbon Tetrachloride	56-23-5		1 L	Bottles or Jugs (glass)	500 mL	Laboratories	Yes	Less than 1 lb.
Chlorobenzene	108-90-7		1 L	Bottles or Jugs (glass)	1 L & 500 mL	Laboratories	Yes	Less than 1 lb.
Chloroform	67-66-3		1 L	Bottles or Jugs (glass)	1 L & 500 mL	Laboratories	Yes	1 - 10
Chlorophenol	95-57-8		1 L	Bottles or Jugs (glass)	1 L & 500 mL	Laboratories	Yes	Less than 1 lb.
Chromium	7440-47-3		25 g	Bottles or Jugs (glass)	100 g	Laboratories	Yes	Less than 1 lb.
Chromium Chloride	10025-73-7		100 g	Bottles or Jugs (glass)	500 g	Laboratories	Yes	Less than 1 lb.
Cupric Acetate	142-71-2		25 g	Bottles or Jugs (glass)	250 g	Laboratories	Yes	Less than 1 lb.
Cupric Chloride	1344-67-8		50 g	Bottles or Jugs (glass)	125 g	Laboratories	Yes	Less than 1 lb.
Cupric Sulfate	10380-29-7		50 g	Bottles or Jugs (glass)	500 g	Laboratories	Yes	Less than 1 lb.
Cyclohexane	110-82-7		1 L	Bottles or Jugs (glass)	500 mL	Laboratories	Yes	1 - 10
1,2-Dichlorobenzene	95-50-1		500 mL	Bottles or Jugs (glass)	500 mL	Laboratories	Yes	Less than 1 lb.
Dichloromethane	75-09-2	See Methylene Chloride		Bottles or Jugs (glass), AST, Steel Drum	10,000 gallon tank	Laboratories, Tank Farm, Production	Yes	100,001-250,000
N,N Dimethyl Aniline	121-69-7		500 mL	Bottles or Jugs (glass)	500 mL	Laboratories	Yes	1-10
Diethylamine	109-89-7		50 g	Bottles or Jugs (glass)	50 g	Laboratories	Yes	Less than 1 lb.
Diethyl Ether	60-29-7		50 g	Bottles or Jugs (glass)	50 g	Laboratories	Yes	Less than 1 lb.
Diethyl Phthalate	84-66-2		500 mL	Bottles or Jugs (glass)	500 mL	Laboratories	Yes	Less than 1 lb.
Dimethyl Dichlorosilane	75-78-5		500 mL	Bottles or Jugs (glass)	500 mL	Laboratories	Yes	1-10
1,4 Dioxane	123-91-1		2.5 L	Bottles or Jugs (glass)	500 mL	Laboratories	Yes	Less than 1 lb.
Diphenyl Amine	122-39-4		50 g	Bottles or Jugs (glass)	125 g	Laboratories	Yes	Less than 1 lb.
Ethyl Acetate	141-78-6		1 L	Bottles or Jugs (glass)	500 mL	Laboratories	Yes	1-10
Ethyl Chloroformate	541-41-3		50 g	Bottles or Jugs (glass)	500 g	Laboratories	Yes	11 - 100
Ethylene Dichloride	107-06-2		1 L	Bottles or Jugs (glass)	150 mL	Laboratories	Yes	Less than 1 lb.
Ethylene Glycol	107-21-1		4,000 lbs	Steel Drum	55 gallon	Laboratories, Tank Farm	Yes	10,001-50,000
Ferric Chloride	7783-50-8		200 g	Can	500 g	Laboratories	Yes	1-10
Ferric Nitrate	10421-48-4		100 Kg	Bottles or Jugs (glass)	20 L Carboy/50 g bottle	Laboratories	Yes	1-10
Ferrous Ammonium Sulfate	10045-89-03		250 g	Bottles or Jugs (glass)	500 g	Laboratories	Yes	1-10
Ferrous Sulfate	7720-78-7		250 g	Bottles or Jugs (glass)	500g	Laboratories	Yes	1-10

Notes:

* - Laboratory chemicals are purchased, stored and used in very small quantities. Annual usage quantities are estimated.

g - grams

L - Liters

Kg - Kilograms

lbs - pounds

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TABLE 1 Continues ...

Substance Name	CAS Number	Typical Annual Usage *		Storage Method		Location/Keyed to Location Map	To Remain On-Site	Maximum Daily Quantity (lbs.)
		Quantity	Units	Container Type	Container Size			
Formaldehyde	50-00-0		1 L	Bottles or Jugs (glass)	150 mL	Laboratories	Yes	1-10
Formic Acid	64-18-6		10 L	Bottles or Jugs (glass)	1 L	Laboratories	Yes	Less than 1 lb.
Fuel Oil (#2)	-	60,000 gal		UST	6,000 gallon tank	Tank Farm	Yes	50,001-100,000
Hydrazine Sulfate	10034-93-2		500 g	Bottles or Jugs (glass)	500 g	Laboratories	Yes	Less than 1 lb.
Hydrochloric Acid	7647-01-0	60,000 lbs		Bottles or Jugs (glass), AST	6,000 gallon tank	Laboratories, Tank Farm, Production	Yes	50,001-100,000
Hydrogen Peroxide	7722-84-1		1 L	Bottles or Jugs (glass)	1 L	Laboratories	Yes	Less than 1 lb.
Hydrogen Sulfide	7783-06-4		10 lbs	Cylinder	Cylinder	Laboratories	Yes	Less than 1 lb.
Hydroquinone	123-31-9		25 g	Bottles or Jugs (glass)	500 g	Laboratories	Yes	Less than 1 lb.
Isobutanol	78-83-1		25 L	Bottles or Jugs (glass)	1 L	Laboratories	Yes	1-10
Isobutyl Acetate	110-19-0		25 L	Bottles or Jugs (glass)	4 L	Laboratories	Yes	Less than 1 lb.
Isopropanol	67-63-0		50 L	Bottles or Jugs (glass)	4 L	Laboratories	Yes	1-10
Lead	7439-92-1		25 g	Bottles or Jugs (glass)	500 g	Laboratories	Yes	Less than 1 lb.
Lead Acetate	301-04-3		25 g	Bottles or Jugs (glass)	500 g	Laboratories	Yes	Less than 1 lb.
Lead Nitrate	10099-74-8		25 g	Bottles or Jugs (glass)	125 g	Laboratories	Yes	Less than 1 lb.
Lead Sulfide	1314-87-0		25 g	Bottles or Jugs (glass)	125 g	Laboratories	Yes	Less than 1 lb.
Mercuric Acetate	1600-27-7		25 g	Bottles or Jugs (glass)	50 g	Laboratories	Yes	Less than 1 lb.
Mercuric Chloride	10124-48-8		25 g	Bottles or Jugs (glass)	125 g	Laboratories	Yes	Less than 1 lb.
Mercuric Oxide	21908-53-2		25 g	Bottles or Jugs (glass)	125 g	Laboratories	Yes	Less than 1 lb.
Mercuric Sulfate	7783-35-9		25 g	Bottles or Jugs (glass)	125 g	Laboratories	Yes	Less than 1 lb.
Mercuric Nitrate	778-26-7		1 L	Bottles or Jugs (glass)	1 L	Laboratories	Yes	Less than 1 lb.
Mercury	7439-97-6		1 Kg	Bottles or Jugs (plastic)	500 g	Laboratories	Yes	1-10
2-Methoxyethanol	109-86-4		10 L	Bottles or Jugs (glass)	1 L	Laboratories	Yes	Less than 1 lb.
Methyl Alcohol	67-56-1		100 L	Bottles or Jugs (glass)	1 L	Laboratories	Yes	1-10
Methyl Ethyl Ketone	78-93-3		4 L	Bottles or Jugs (glass)	4 L	Laboratories	Yes	1-10
Methyl Isobutyl Ketone	108-10-1		1 L	Bottles or Jugs (glass)	500 mL	Laboratories	Yes	1-10
Methylene Chloride	75-09-2	2,500,000 lbs		AST	10,000-gallon tank	Tank Farm, Production	Yes	50,001-100,000
Molybdenum Trioxide	1313-27-5		50 g	Bottles or Jugs (glass)	125 g	Laboratories	Yes	Less than 1 lb.
Napthalene	91-20-3		50 g	Bottles or Jugs (glass)	500 g	Laboratories	Yes	Less than 1 lb.
Nickel Chloride	7718-54-9		50 g	Bottles or Jugs (glass)	125 g	Laboratories	Yes	Less than 1 lb.
Nickel Sulfate	7786-81-4		50 g	Bottles or Jugs (glass)	250 g	Laboratories	Yes	Less than 1 lb.

Notes:

* - Laboratory chemicals are purchased, stored and used in very small quantities. Annual usage quantities are estimated.

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lbs - pounds

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TABLE 1 Continues...

Substance Name	CAS Number	Typical Annual Usage *		Storage Method		Location/Keyed to Location Map	To Remain On-Site	Maximum Daily Quantity (lbs.)
		Quantity	Units	Container Type	Container Size			
Nitric Acid	7697-37-2	10	L	Bottles or Jugs (glass)	1 L	Laboratories	Yes	1-10
Nitrobenzene	98-95-3	2	L	Bottles or Jugs (glass)	1 L	Laboratories	Yes	1-10
2-Nitrophenol	88-75-5	50	g	Bottles or Jugs (glass)	100 g	Laboratories	Yes	Less than 1 lb.
Pentachlorophenol	87-86-5	50	g	Bottles or Jugs (glass)	100 g	Laboratories	Yes	Less than 1 lb.
Peracetic Acid	79-21-0	500	mL	Bottles or Jugs (glass)	500 mL	Laboratories	Yes	Less than 1 lb.
Phenacetin	62-44-2	50	g	Bottles or Jugs (glass)	125 g	Laboratories	Yes	Less than 1 lb.
Phenol	108-95-7	50	g	Bottles or Jugs (glass)	500 g	Laboratories	Yes	Less than 1 lb.
Phosphoric Acid	7664-38-2	10	L	Bottles or Jugs (glass)	1 L & 500 mL	Laboratories	Yes	1-10
Phosphorous Pentachloride	10026-13-8	500	g	Bottles or Jugs (glass)	500 g	Laboratories	Yes	1-10
Phosphorous Trichloride	7719-12-2	25	mL	Bottles or Jugs (glass)	25 mL	Laboratories	Yes	Less than 1 lb.
Picoline	109-06-8	250	mL	Bottles or Jugs (glass)	500 mL	Laboratories	Yes	Less than 1 lb.
Potassium Bromate	7758-01-2	50	g	Bottles or Jugs (glass)	500 g	Laboratories	Yes	1-10
Potassium Chromate	7789-00-6	500	g	Bottles or Jugs (glass)	250 g	Laboratories	Yes	1-10
Potassium Cyanide	151-50-8	25	g	Bottles or Jugs (glass)	25 g	Laboratories	Yes	Less than 1 lb.
Potassium Dichromate	7778-50-9	50	g	Bottles or Jugs (glass)	100 g	Laboratories	Yes	1-10
Potassium Hydroxide	1310-58-3	1	L	Bottles or Jugs (glass)	1 L	Laboratories	Yes	1-10
Potassium Permanganate	7722-64-7	500	mL	Bottles or Jugs (glass)	500 mL	Laboratories	Yes	Less than 1 lb.
Pyrene	129-00-0	1	L	Bottles or Jugs (glass)	1 L	Laboratories	Yes	Less than 1 lb.
Pyridine	110-86-1	10	L	Bottles or Jugs (glass)	1 L	Laboratories	Yes	1-10
Quinoline	91-22-5	1	L	Bottles or Jugs (glass)	1 L	Laboratories	Yes	Less than 1 lb.
Raney Nickel	7440-02-0	25	g	Bottles or Jugs (glass)	100 g	Laboratories	Yes	Less than 1 lb.
Saccharin	81-07-2	100	lbs	Bottles or Jugs (glass)	30 gallon containers	Laboratories	Yes	11 - 100
Semicarbazide Hydrochloride	563-41-7	25	g	Bottles or Jugs (glass)	100 g	Laboratories	Yes	Less than 1 lb.
Silver Nitrate	7761-88-8	25	g	Bottles or Jugs (glass)	30 g	Laboratories	Yes	Less than 1 lb.
Sodium	7740-23-5	1	Kg	Bottles or Jugs (glass)	500 g	Laboratories	Yes	Less than 1 lb.
Sodium Arsenate	7631-89-2	25	g	Bottles or Jugs (glass)	250 g	Laboratories	Yes	Less than 1 lb.
Sodium Azide	26628-22-8	25	g	Bottles or Jugs (glass)	100 g	Laboratories	Yes	Less than 1 lb.

Notes:

* - Laboratory chemicals are purchased, stored and used in very small quantities. Annual usage quantities are estimated.

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TABLE 1 Continues ...

Substance Name	CAS Number	Typical Annual Usage *		Storage Method		Location/Keyed to Location Map	To Remain On-Site	Maximum Daily Quantity (lbs.)
		Quantity	Units	Container Type	Container Size			
Sodium Chlorate	7775-09-9	50 g		Bottles or Jugs (glass)	500 g	Laboratories	Yes	Less than 1 lb.
Sodium Dichromate	10588-01-9	1 Kg		Bottles or Jugs (glass)	500 g	Laboratories	Yes	1-10
Sodium Fluoride	7681-49-4	50 g		Bottles or Jugs (glass)	500 g	Laboratories	Yes	Less than 1 lb.
Sodium Hydride	7646-69-7	50 g		Can	500 g	Laboratories	Yes	1-10
Sodium Hydroxide	1310-73-2	60,000 lbs		Bottles or Jugs (glass), Steel Drum, AST	6,000 gal	Laboratories	Yes	11-100
Sodium Hypochlorite	7681-52-9	10 L		Plastic Drum	1 L	Laboratories	Yes	11-100
Sodium Methoxide	124-41-4	500 g		Bottles or Jugs (glass)	125 g	Laboratories	Yes	1-10
Sodium Sulfide	1313-82-2	50 g		Bottles or Jugs (glass)	500 g	Laboratories	Yes	Less than 1 lb.
Sulfuric Acid	7664-93-9	5 L		Bottles or Jugs (glass)	1 L	Laboratories	Yes	1-10
Tetrachloroethylene	127-18-4	1 L		Bottles or Jugs (glass)	500 mL	Laboratories	Yes	1-10
Tetrahydrofuran	109-99-9	1 L		Bottles or Jugs (glass)	1 L	Laboratories	Yes	1-10
Thioacetamide	62-55-5	500 g		Bottles or Jugs (glass)	125 g	Laboratories	Yes	1-10
Thiourea	62-56-6	50 g		Bottles or Jugs (glass)	125 g	Laboratories	Yes	Less than 1 lb.
Toluene	108-88-3	50 L		Bottles or Jugs (glass)	4 L	Pilot Plant Laboratories, Tank Farm	Yes	1,001-10,000
Trichloroethylene	79-01-6	1 L		Bottles or Jugs (glass)	500 mL	Laboratories	Yes	Less than 1 lb.
Triethylamine	121-44-8	30,000 lbs		Bottles or Jugs (glass), Steel Drum	55 gallons	Laboratories, Tank Farm, Production	Yes	1,001-10,000
Triethylchlorosilane	75-77-4	50 g		Bottles or Jugs (glass)	50 g	Laboratories	Yes	1-10
Uranyl Acetate	541-09-3	50 g		Bottles or Jugs (glass)	500 g	Laboratories	Yes	1-10
Uranyl Nitrate	10102-06-4	50 g		Bottles or Jugs (glass)	500 g	Laboratories	Yes	Less than 1 lb.
Waste Oil	-	500 gal		Steel Drum	55 gallons	Tank Farm, Boiler Room	Yes	11-100
Waste Waters (acetone)	67-64-1	70,000 lbs		Bottles or Jugs (glass)	10,000 gallon tank	Laboratories, Tank Farm, Production	Yes	50,001-100,000
Zinc Acetate	557-34-6	50 g		Bottles or Jugs (glass)	500 g	Laboratories	Yes	Less than 1 lb.
Zinc Chloride	7446-85-7	50 g		Bottles or Jugs (glass)	500 g	Laboratories	Yes	Less than 1 lb.
Zinc Sulfate	7733-02-0	50 g		Bottles or Jugs (glass)	500 g	Laboratories	Yes	Less than 1 lb.

Notes:

* - Laboratory chemicals are purchased, stored and used in very small quantities. Annual usage quantities are estimated.

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BIOCRAFT LABORATORIES, INC.
WALDWICK, NEW JERSEY
ISRA CASE #96070

APPENDIX A
PRELIMINARY ASSESSMENT REPORT

854820040

TIERRA-B-009034

1.0 PURPOSE AND ORGANIZATION

The New Jersey Department of Environmental Protection (NJDEP) Industrial Site Recovery Act (ISRA) regulations require that Biocraft conduct a Preliminary Assessment (PA) containing the elements outlined in N.J.A.C. 7:26E-3.2. The report is organized into the following sections: 1.0 Purpose and Organization, 2.0 Introduction and Site History, 3.0 Materials and Products, 4.0 Production Processes, 5.0 Areas of Concern, 6.0 Discharges, and 7.0 Remediation Activities.

2.0 INTRODUCTION AND SITE HISTORY

The Biocraft Waldwick facility consists of a manufacturing building and a warehouse building on two contiguous properties with frontages on 12 Industrial Park (the "Plant") and 140 Hopper Avenue (the "Warehouse"), Waldwick, New Jersey. Figure 1 shows the site location. The general site plan (Drawing 1) includes the manufacturing and warehouse buildings, the property lines, fencing, storage tanks, drum storage area, and secondary containment units.

Historical information was obtained through a Title Search, MacRae's Industrial Directory, communication with Biocraft personnel, and site plans. Sanborn fire insurance maps were not available for this site. The title search was conducted by First Jersey Title Services, Inc., Paramus, New Jersey.

The site was undeveloped until Biocraft Laboratories, Inc. purchased the property in January, 1972 and built the Plant on the site. The office maintenance, and production areas, and research and development laboratories are located in the Plant building. The Warehouse building was constructed in 1985. Finished products and some raw materials are stored in the Warehouse building, which also houses the quality control and microbiology laboratories. The site plan is shown on Drawing 1.

The site is subject to a groundwater Administrative Consent Order (ACO) comprised of a NJDEP ACO dated January 12, 1977, as amended by NJDEP Administrative Order dated December 12, 1978, as amended by NJDEP ACO September 25, 1980, as modified by NJDEP letter dated June 18, 1982 (collectively, the "Groundwater ACO"). The Groundwater ACO stems from a discharge in November 1975 from underground lines leading to an underground waste solvent tank. The underground lines were removed during the winter of 1975 and aboveground lines were installed. Subsequently, the underground storage tanks were removed and replaced with vaulted below grade storage tanks with secondary containment and continuous monitoring. Biocraft undertook an

extensive research and development project to develop a process to remove and treat groundwater. The research resulted in the development of a sophisticated biodegradation/biostimulation process which has received a patent from the U.S. Patent Office. The biodegradation/biostimulation system was installed with NJDEP approval and has been operating since 1977. Extensive monitoring in accord with the Groundwater ACO shows that groundwater quality has progressively improved and Biocraft estimates that 90 percent of the groundwater plume has been remediated. The sampling data indicate that the treatment system reduced the influent concentrations of methylene chloride by greater than 90 percent. No butyl alcohol or acetone was detected in the effluent samples analyzed for the past four quarters. Groundwater elevation and sampling data show that the zone of influence of the recovery system maintains hydraulic control of the groundwater plume.

3.0 MATERIALS AND PRODUCTS

The Waldwick facility has manufactured five semi-synthetic penicillin products in bulk form under a proprietary process since opening in 1972. Materials used at the Plant are delivered in bulk (tank truck) and drum quantities. Raw materials used in manufacturing include methylene chloride, acetone, hydrochloric acid, sodium hydroxide, No. 2 fuel oil, and liquid nitrogen. Materials stored in drums include triethylamine, dimethyl acetamide, 2,6-lutidine, and pivaloyl chloride.

Small quantities of hazardous materials are stored in laboratories in the Plant and Warehouse Buildings. Hazardous materials are listed on Table 1.

4.0 PRODUCTION PROCESSES

The penicillin products are manufactured in the plant in separate production runs which last a minimum of one week for each product. The penicillins are manufactured using batch chemical processes which include the following key steps: 1) chemical reactions (one or more), 2) batch extraction, 3) crystallization, 4) centrifuging, 5) drying, 6) compaction, 7) milling, and 8) blending.

4.1 Materials Delivery

PLANT

Raw materials shipped by truck to the Plant in bulk containers (tank trucks, fiber and steel drums). The tank truck loading/unloading area is shown on Drawing 1. All tank contents are loaded/unloaded from this area through aboveground piping. Tank truck loading/unloading is performed in accord with Biocraft standard operating procedures. All tank truck seals, ports, and discharge lines are visually examined by a Biocraft employee when the truck arrives at the facility to verify that they are closed. The truck is backed into the loading/unloading area and the truck wheels are chocked to prevent movement. After completing loading/unloading, tank truck seals and ports are visually examined for leakage, and if necessary, tightened, adjusted, repaired, or replaced to prevent leakage in transit.

The fiber and steel drums are unloaded from the truck using a forklift and are stored on portable secondary containment skids in the drum storage area, or stored in the production areas of the plant. The truck loading bay is poured concrete and is in good condition.

WAREHOUSE

Bulk generic penicillin products and some raw materials which are used in manufacturing at the Plant are stored in the Warehouse. The raw materials are delivered by truck and unloaded using a forklift. Bulk finished products are loaded onto a company truck using a forklift and shipped to Biocraft's Elmwood Park facility. The truck loading and unloading areas are paved with asphalt and the pavement is in good condition.

4.2 Waste Practices

PLANT

Hazardous wastes generated from manufacturing are recovered and sent off-site for disposal or recovered (distillation) on-site. The hazardous waste streams sent for off-site disposal include: process waste water and still bottoms from methylene chloride distillation. Solvent is recovered and recycled for reuse in manufacturing from crude methylene chloride waste stream and the acetone-water waste stream. Water generated during the manufacturing process is pretreated by a bioreactor system prior to discharge to the POTW. This discharge is in compliance with the POTW permit.

WAREHOUSE

Hazardous wastes generated from the laboratories are disposed of off-site. Wastewater generated from the rinsing of laboratory glassware is discharged in compliance with the POTW permit.

5.0 AREAS OF CONCERN

5.1 Aboveground Tanks and Associated Piping

PLANT

Hazardous materials and wastes used and generated at the Plant are stored in drums, and aboveground and below grade (vaulted) storage tanks. One underground storage tank (No. 2 fuel oil) is outside the Plant building. Table 2 summarizes the tank storage area sizes, construction, and contents. The storage areas are described below:

Aboveground and Below Grade (Vaulted) Storage Tanks

- ▶ Hydrochloric acid is stored in one 6,000-gallon, single wall, fiberglass aboveground storage tank. The tank has no internal heating coils. The tank is located inside secondary containment constructed of poured reinforced concrete walls and floor. All tank piping is aboveground and does not pass through the containment walls. The concrete interior walls and concrete are coated with chemically resistant epoxy. Pipe valves are readily accessible and are close to the tank to permit shutoff in the event of a pipe rupture outside of the containment unit. The tank is equipped with a liquid level gauge and a high liquid level alarm. Tank overflow piping is directed into the containment. The tank was visually and hydrostatically tested in February 1994 and found to be in satisfactory condition.
- ▶ Sodium hydroxide is stored in a 6,000-gallon single wall, stainless steel aboveground storage tank. The tank has no internal heating coils. The tank is located inside secondary containment constructed of poured concrete walls and floor. The concrete interior walls and concrete are coated with chemically resistant epoxy. All tank piping is aboveground and does not pass through the containment walls. Pipe valves are readily accessible and

close to the tank to permit shut off in the event of a pipe rupture outside of the containment unit. The tank is equipped with a liquid level gauge and a high liquid level alarm. Tank overflow piping is directed to the containment unit. This stainless steel tank was installed in February 1995 as a replacement of the original fiberglass tank.

- ▶ Acetone and methylene chloride are stored in four, 10,000-gallon, single wall, carbon steel below grade storage tanks. The tanks have no internal heating coils. Two tanks store virgin acetone and methylene chloride and two tanks store acetone and methylene chloride recovered from the manufacturing process. The tanks are located in two below grade vaults. The vault walls, floors, and covers are poured, reinforced concrete coated with chemically resistant epoxy. All tank piping is aboveground and does not pass through the containment walls. Pipe valves are readily accessible and close to the tank to permit shutoff in the event of a pipe rupture outside of the containment unit. Each tank is equipped with a liquid level gauge, a high liquid level alarm, and a nitrogen blanketing system. The tank vault is equipped with an automatic leak detection system which is installed at the low point of the vault floor. The tanks were installed in 1990. The tanks were visually and hydrostatically tested in July 1995 and found to be in satisfactory condition.

- ▶ Hazardous wastes generated from the manufacturing process are stored in six 10,000 gallon, single wall, carbon steel tanks (Tank Nos. 5 through 10). The tanks have no internal heating coils. The tanks are located in three below grade vaults. The vault walls, floors, and covers are poured, reinforced concrete. The concrete is coated with chemically resistant epoxy. All tank piping is aboveground and does not pass through the containment walls. Pipe valves are readily accessible and are close to the tank to permit shutoff in the event of a pipe rupture outside of the containment unit. Each tank is equipped with a liquid level gauge, a high liquid level alarm, and a nitrogen blanketing system. The tank vault is equipped with an automatic leak detection system which is installed at the low point of the vault floor. The tanks were installed in 1990. The tanks were visually and

hydrostatically tested in September 1995 and found to be in satisfactory condition.

- Liquid nitrogen is stored in a 15,000 gallon, aboveground cryogenic tank. The tank has no internal heating coils. The tank is equipped with a level gauge, a pressure gauge, and a pressure relief valve.
- Process reactors, centrifuges, and distillation tanks in the manufacturing building are stainless steel. Secondary containment for the process reactors and centrifuges is provided by concrete curbing and the building masonry walls. The process reactors and centrifuges are equipped with a sight glass to determine liquid levels; liquid level gauges are not used because of varying reactor temperatures and pressures. The distillation tanks are equipped with liquid level gauges. All tanks are equipped with pressure relief valves.

Aboveground and Below Grade (Vaulted) Storage Tank Secondary Containment Units

All portions of the Biocraft facility where hazardous substances are refined, produced, stored, held, handled, processed or transferred are designed to minimize the possibility that a leak will become a discharge. Secondary containment units were designed to block all probable routes by which a released hazardous substance could reasonably be expected to become a discharge to the environment. In the event of a release into a secondary containment unit, Biocraft's standard operating procedures would require the prompt removal of the released hazardous materials from a secondary containment unit. Secondary containment units at the facility include concrete dikes, concrete vaults, and a double wall tank and piping. A summary of secondary containment unit construction and capacity is presented in Table 2. A description of the secondary containment units is presented below.

- The hydrochloric acid and sodium hydroxide tanks are located within two secondary containment dikes constructed of poured reinforced concrete walls and floor. The concrete is coated with chemically resistant epoxy. Chemically resistant water stops were installed

at the joints between the floor and the walls. The containment dikes do not drain into a watercourse, ditch, storm drain or sewer which leads directly or indirectly to a watercourse or POTW. Each containment dike contains one tank and incompatible materials are not stored in tanks in the same dike. Each containment dike has a storage capacity of approximately 7,000 gallons, which is greater than the volume of the tank (6,000-gallons) and 6-inches of accumulated rainwater (approximately 700 gallons).

- ▶ The acetone, methylene chloride, and process waste tanks (Tank Nos. 1 through 10) are located in five below grade vaults. The vaults walls, floors, and covers are poured, reinforced concrete. The concrete is coated with chemically resistant epoxy. Stainless steel water stops were installed at the joints between the floor and the walls. The concrete vaults do not drain into a watercourse, ditch, storm drain or sewer which leads directly or indirectly to a water course or POTW. Each vault contains two tanks; incompatible materials are not stored in the same vault. The acetone and methylene chloride vaults each have a storage capacity of approximately 78,500 gallons, which is greater than the volume of the tanks (20,000 gallons per vault) and 6 inches of accumulated rainwater (approximately 2,400 gallons). The process waste tank vaults each have a storage capacity of approximately 80,000 gallons, which is greater than the volume of the tanks (20,000 gallons per vault) and 6 inches of accumulated rainwater (approximately 3,000 gallons).

WAREHOUSE

Small quantities of hazardous materials are stored and used in the quality control and microbiology laboratories. These materials are stored in approved chemical storage cabinets (Section 5.6). Hazardous wastes generated by the laboratory are stored in lab pack containers and are disposed of off-site.

5.2 Underground Storage Tanks

Former Underground Storage Tanks

PLANT

One 10,000-gallon No. 2 Fuel Oil underground storage tank was removed in 1991 in accord with a tank closure plan prepared by Tank and Line Compliance Corporation, Lafayette, New Jersey and approved by NJDEP. Post-excavation soil samples were not required because soil and groundwater bioremediation was being conducted at the time of tank removal (Sections 2.0, 5.12, and 6.0).

Ten 10,000-gallon underground storage tanks which contained solvents, waste solvents, and process wastewaters were removed in 1992 in accord with the NJDEP approved tank closure plan prepared by Vectre Corporation, Lafayette, New Jersey. Soil samples were collected from the excavation base and sidewalls in the area of the four hazardous waste storage tanks at the time of the tank removal. Sampling indicates that volatile organic compound concentrations were well below the Impact to Groundwater Soil Cleanup Criteria and the Residential Direct Contact Soil Cleanup Criteria. Soil samples were not required for the area of the hazardous materials storage tanks because soil and groundwater bioremediation was being conducted at the time of tank removal (Sections 2.0, 5.12, and 6.0). Soil samples were collected in the vicinity of the former hazardous materials storage tanks in September and October 1995 to confirm the absence of volatile organic compounds in the soil and to enable Biocraft to certify in this ISRA application that the only discharge which requires remediation was the UST system and that the remediation performed meets the current NJDEP Residential Direct Contact Soil Cleanup Criteria, Non-Residential Direct Contact Soil Cleanup Criteria or the Impact to Groundwater Soil Cleanup Criteria (Sections 5.12, 6.0, and 7.1).

WAREHOUSE

There were no underground storage tanks at the Warehouse.

Existing Underground Storage Tank

PLANT

No. 2 fuel oil is stored in a 6,000-gallon, double walled, fiberglass, underground storage tank. Tank piping is constructed of carbon steel within a fiberglass rickwell for secondary containment and is equipped with an annular space leak detection system. The tank has no internal heating coils. The tank is equipped with a liquid level gauge, a high liquid level alarm, and an annular space leak detection system. The tank was installed in 1991.

WAREHOUSE

There are no underground storage tanks at the Warehouse.

5.3 Truck Loading/Unloading Area

PLANT

The tank truck loading/unloading area is shown on Drawing 1. All tank contents are loaded/unloaded from this area through aboveground piping. The truck ramp consists of a concrete slab, concrete curbing and a concrete trough. The concrete slab consists of 8-inch thick, poured, reinforced concrete which is pitched to the trough located at the midpoint of the slab. The concrete curbing is poured reinforced concrete with a maximum height of 2 feet. The concrete

pad, curbing, and trough are coated with chemically resistant epoxy. Stainless steel water stops are installed at all joints between the curb and the slab. The poured, reinforced concrete sump drain is 18 inches wide by 18 inches deep. The trough is covered with steel grating. An 8-inch diameter stainless steel pipe connects the truck pad overflow to the Tank 3 and 4 secondary containment unit. The stainless steel pipe passes through the wall of the secondary containment unit and is capped with an 8-inch diameter test plug which can be opened using a chain located on top of the curbing. In the event of a leak, the test plug would be opened and liquid would be allowed to discharge into the Tank 3 and 4 secondary containment unit. The truck ramp storage capacity is approximately 8,000-gallons and the Tank 3 and 4 secondary containment unit storage capacity is 78,500-gallons. The total capacity of the system is 86,500-gallons which is greater than the volume of the largest compartment of any tank truck loaded/unloaded in this area.

Fiber and steel drums are unloaded from the truck using a forklift and are stored on portable secondary containment skids in the drum storage area, or stored in the production areas of the plant. The truck loading bay is poured concrete and is in good condition.

WAREHOUSE

Bulk generic penicillin products and some raw materials which are used in manufacturing at the Plant are stored in the Warehouse. The raw materials are delivered by truck and unloaded using a forklift. Bulk finished products are loaded onto a company truck using a forklift and shipped to Biocraft's Elmwood Park facility. The truck loading and unloading areas are paved with asphalt and the pavement is in good condition.

5.4 Drum Storage Area

PLANT

Raw materials stored in drums include triethylamine, dimethyl acetamide, 2,6-Lutidine, and

pivaloyl chloride. Hazardous wastes are not stored in the drum storage area. The number of drums stored varies with the product being manufactured, but generally ranges from 150 to 200 55-gallon drums. The drums are stored in one area (approximately 1,800 square feet), on a poured, reinforced concrete slab. The drums are covered by water repellent tarps and stored on portable containment skids designed to store the volume of the largest drum. The drum storage pad is sloped to direct runoff to the parking lot and a concrete curb is located along the east side of the pad. The maximum capacity of the drum storage area is 72 portable containment skids (approximately 280 drums).

WAREHOUSE

Bulk generic penicillin products (dry powders) are packed in fiber drums in the Plant and stored in the Warehouse where they are quarantined, inspected and released. Following release, the bulk generic penicillin products are brought to Biocraft's Elmwood Park facility.

5.5 Dumpsters

PLANT

Non-hazardous solid wastes include paper products, cardboard, plastic, and general cafeteria wastes. These wastes are placed into a dumpster in the parking lot area and disposed of off-site.

WAREHOUSE

Non-hazardous solid wastes include paper products, cardboard, plastic, and general cafeteria wastes. These wastes are placed into a dumpster in the parking lot area and disposed of off-site.

5.6.....Chemical Storage Cabinets and Closets

PLANT

Small quantities of hazardous materials are stored and used in the research and development laboratory in the Plant. Glass or plastic containers which hold solid materials and non-flammable liquids are stored in metal cabinets. Glass or plastic containers of flammable liquids are stored in cabinets approved for storing flammable substances. Incompatible materials are stored in separate cabinets. Secondary containment of the laboratory materials is provided by the building masonry walls. Biocraft has adequate supplies of sorbent materials, chemical neutralizing agents and other materials necessary to contain and clean up small leaks or discharges that may occur during ordinary laboratory operations. These materials are stored near the workplaces.

WAREHOUSE

Small quantities of hazardous materials are stored and used in the quality control and microbiology laboratories in the Warehouse. Glass or plastic containers which hold solid materials and non-flammable liquids are stored in metal cabinets. Glass or plastic containers of flammable liquids are stored in cabinets approved for storing flammable substances. Incompatible materials are stored in separate cabinets. Secondary containment of the laboratory materials is provided by the building masonry walls. Biocraft has adequate supplies of sorbent materials, chemical neutralizing agents and other materials necessary to contain and clean up small leaks or discharges that may occur during ordinary laboratory operations. These materials are stored near the workplaces.

DRAINAGE SYSTEMS

5.7 Floor Drains

PLANT

Except for a floor drain (Drain 1) in the production area of the Plant, all floor drains are sealed. Drain 1 is connected to the sanitary sewer which discharges to the POTW. Drain 1 is covered with a cap constructed of chemically resistant materials during the manufacturing operations. The cap is removed during housekeeping activities. No hazardous substances are discharged into the floor drain.

WAREHOUSE

Floor drains in the Warehouse building are connected to the sanitary sewer. Washwater from housekeeping activities is discharged to the floor drains. Hazardous substances are not discharged into the floor drains.

5.8 Process Area Sinks

PLANT

Wastewater generated by rinsing laboratory glassware with tap water is discharged to process area sinks connected to the municipal sewer system (POTW). The sanitary waste stream is monitored in accord with the facility's POTW permit. The Plant Manager indicated that there have been no sanitary effluent permit exceedances.

WAREHOUSE

Wastewater generated by rinsing laboratory glassware with tap water is discharged to process area sinks connected to the municipal sewer system (POTW). The sanitary waste stream is monitored in accord with the facility's POTW permit. The Plant Manager indicated that there have been no sanitary effluent permit exceedances.

5.9 Roof Leaders

PLANT

Certain of Biocraft's manufacturing and laboratory operations generate limited air emissions which are discharged to a rooftop scrubber through an air vent and duct system. Stormwater runoff from the manufacturing building is discharged onto the paved parking lot area through several roof leaders. It is unlikely that volatile organic compounds would be detected in the stormwater runoff.

WAREHOUSE

Biocraft's laboratories generate very limited air emissions which are discharged to the atmosphere through several roof mounted ducts in compliance with the applicable permit conditions. Stormwater runoff from the Warehouse roof is discharged onto the paved parking lot area through several roof leaders. There have been no permit exceedances from air emission discharges and it is unlikely that volatile organic compounds would be detected in the stormwater runoff.

5.10 Storm Sewer Collection Systems

PLANT

Stormwater from the parking lot and roof runoff is discharged in compliance with the NJDEP Bureau of Stormwater Permitting Permit No. NJ0088315. Stormwater drains away from the manufacturing building and follows the topography towards the a storm drain in the parking lot. The storm drain discharges to an unnamed tributary to Allendale Brook.

WAREHOUSE

Hazardous materials are stored indoors in the laboratory section of the building and are not in contact with stormwater. Stormwater runoff from the parking lot and roof drains away from the building following the natural topography and is discharged into municipal stormwater collection basins along Hopper Avenue.

OTHER

5.11 Electrical Transformers and Capacitors

PLANT

Electricity for the Plant is supplied through a PSE&G owned transformer which is mounted on a poured concrete slab. This transformer does not contain dielectric fluid. Capacitors in on-site electrical equipment do not contain PCB dielectric.

WAREHOUSE

The Warehouse building electricity is supplied through a PSE&G transformer which is mounted

on a poured concrete slab. This transformer does not contain dielectric fluid.

5.12 Underground Piping

PLANT

Former Underground Piping

Underground piping was used to transfer solvents and wastewater/solvents from the former underground storage tanks to the Plant process areas. A leak in the underground wastewater/solvent piping was discovered in 1975 and all underground piping was removed and replaced with aboveground piping in 1975. A summary of the underground piping discharge is presented in Section 2.0 and 6.0.

WAREHOUSE

There were no underground piping systems at the Warehouse.

Existing Underground Piping

PLANT

Sanitary wastewater and non-contact cooling water are discharged to the POTW through underground piping. Underground storage tank (No. 2 Fuel Oil Tank) piping is constructed of carbon steel within a fiberglass rickwell for secondary containment and is equipped with an annular space leak detection system. Treated groundwater from the bioremediation/biostimulation system is discharged to two underground infiltration trenches which are located on the Plant site and partially, encroach on the Warehouse site.

WAREHOUSE

Sanitary wastewater and non-categorical wastewater generated from rinsing laboratory glassware with tap water are discharged to the POTW through underground piping. Treated groundwater from the bioremediation/biostimulation system is discharged to two underground infiltration trenches which are located on the Plant site and partially, encroach on the Warehouse site.

5.13 Compressor Vent Discharges

PLANT

Air compressor blowdown condensate is collected in a 55-gallon drum and disposed of as hazardous waste with the manufacturing process wastestream.

WAREHOUSE

There are no air compressors at the Warehouse.

5.14 Non-Contact Cooling Water Discharges

PLANT

Non-contact cooling water is discharged to the sanitary sewer which discharges to the POTW in compliance with the POTW permit.

WAREHOUSE

Warehouse operations do not require non-contact cooling water.

5.15 Active Production Wells

PLANT

One on-site deep bedrock water supply well is constructed with 50-feet of 8-inch diameter steel casing with an open borehole in bedrock from 50-feet to 300-feet below grade. The well water is used for non-contact cooling water. This well is continually pumped at an average rate of approximately 11.5 gallons per minute. Groundwater samples are collected and analyzed bi-annually in accord with the Groundwater ACO (Section 2.0).

WAREHOUSE

There are no production wells at the Warehouse.

BUILDING INTERIOR AREAS

5.16 Loading and Transfer Areas

PLANT

Hazardous materials are handled in the production and laboratory areas of the facility. Concrete curbing and the building masonry walls provide secondary containment for the production areas. Laboratory chemicals are stored in approved chemical storage cabinets (Section 5.6). Biocraft has adequate supplies of sorbent materials, chemical neutralizing agents and other materials necessary to contain and clean up small leaks or discharges that may occur during ordinary operations. These materials are stored near the workplaces.

WAREHOUSE

Hazardous materials are handled laboratory areas of the facility. These materials are stored in approved chemical storage cabinets (Section 5.6). Biocraft has adequate supplies of sorbent materials, chemical neutralizing agents and other materials necessary to contain and clean up small leaks or discharges that may occur during ordinary operations. These materials are stored near the workplaces.

5.17 Waste Treatment Area

PLANT

Wastewater which contains acetone and methylene chloride is treated in a bioreactor system located in the production area of the Plant. Concrete curbing and the building masonry walls provide secondary containment for the production areas. Laboratory chemicals are stored in approved chemical storage cabinets (Section 5.6). Biocraft has adequate supplies of sorbent materials, chemical neutralizing agents and other materials necessary to contain and clean up small leaks or discharges that may occur during ordinary operations. These materials are stored near the workplaces.

WAREHOUSE

There are no waste treatment areas in the Warehouse.

5.18 Boiler Room

PLANT

Boiler exhaust is discharged to the atmosphere through a roof duct in accord with applicable

permit conditions. Boiler condensate is collected in a 55-gallon drum and disposed of as hazardous waste with the manufacturing process wastestream.

WAREHOUSE

Boiler exhaust is discharged to the atmosphere through a roof duct in accord with applicable permit conditions. Boiler condensate is collected in a 55-gallon drum and disposed of as hazardous waste with the manufacturing process waste stream.

5.19 Air Vents and Ducts

PLANT

Biocraft's manufacturing operation generates air emissions which are treated and discharged to the atmosphere through several roof mounted ducts in compliance with the applicable permit conditions. Other air vents and ducts located throughout the facility are associated with the heating and air conditioning system.

WAREHOUSE

The quality control and microbiology laboratories generate air emissions which are discharged to the atmosphere through several roof mounted ducts in compliance with applicable permit conditions. Other air vents and ducts located throughout the facility are associated with the heating and air conditioning system.

5.20 Hazardous Materials Storage or Handling Areas

PLANT

Hazardous materials are handled in the production and laboratory areas of the facility. Concrete curbing and the building masonry walls provide secondary containment for the production areas. Laboratory chemicals are stored in approved chemical storage cabinets (Section 5.6). Biocraft has adequate supplies of sorbent materials, chemical neutralizing agents and other materials necessary to contain and clean up small leaks or discharges that may occur during ordinary operations. These materials are stored near the workplaces.

WAREHOUSE

Hazardous materials are handled laboratory areas of the facility. These materials are stored in approved chemical storage cabinets (Section 5.6). Biocraft has adequate supplies of sorbent materials, chemical neutralizing agents and other materials necessary to contain and clean up small leaks or discharges that may occur during ordinary operations. These materials are stored near the workplaces.

6.0 DISCHARGES

The site is subject to a groundwater Administrative Consent Order (ACO) comprised of a NJDEP ACO dated January 12, 1977, as amended by NJDEP Administrative Order dated December 12, 1978, as amended by NJDEP ACO September 25, 1980, as modified by NJDEP letter dated June 18, 1982 (collectively, the "Groundwater ACO"). The Groundwater ACO stems from a discharge in November 1975 from underground lines leading to an underground waste solvent tank.

A 100-foot long underground steel pipe was installed in 1972 to transfer wastewater from the manufacturing building processing area to an underground wastewater storage tank. The wastewater contained low concentrations of acetone, methylene chloride, n-butyl alcohol, and dimethyl aniline. Biocraft discovered the leak in the underground pipe in November 1975 and removed the pipe from service. All underground pipes were replaced by aboveground pipes in the winter of 1975. Subsequently, the underground storage tanks were removed and replaced with vaulted below grade storage tanks with secondary containment and continuous monitoring. Biocraft pumped groundwater from on-site recovery wells and disposed of the groundwater off site between 1976 and 1981. The cost of disposing of the recovered groundwater off-site became prohibitive and with NJDEP's approval Biocraft constructed an on-site bioremediation/biostimulation system in June 1981. The system included a biostimulation process to decontaminate the groundwater. Soil samples were collected and analyzed in September and October 1995 from the area of the former underground transfer line and the stormwater collection sewer to confirm the absence of volatile organic compounds in the soil and to enable Biocraft to certify in this ISRA application that the only discharge which requires remediation was the UST system and that the remediation performed meets the current NJDEP Residential Direct Contact Soil Cleanup Criteria, Non-Residential Direct Contact Soil Cleanup Criteria or the Impact to Groundwater Soil Cleanup Criteria. The soil sampling is summarized in Section 7.0. The groundwater collection and treatment system are summarized in Section 7.0

Approximately 50-gallons of hydrochloric acid was discharged from a hydrochloric acid tank line (Drawing 1) which was damaged during routine maintenance operations on December 13, 1993. NJDEP was notified (Case No. 93-12-13-1607-57) and assisted in spill response activities. A small volume of hydrochloric acid was discharged into the stormwater collection system. Potable water was used to dilute the spill by pumping the water into the stormwater collection system for a period of four hours. Secondary containment for the hydrochloric acid tank and piping was constructed to minimize the potential for future discharges.

A second discharge of hydrochloric acid occurred on February 24, 1994. Hydrochloric acid leaked into the secondary containment unit from a broken valve on the hydrochloric acid tank. The leak seeped through the walls of the secondary containment unit and onto the parking lot pavement. NJDEP was notified (Case No. 94-2-24-1623-01) and assisted in the spill response. The discharged hydrochloric acid was contained and neutralized using sorbent material and soda ash. A new secondary containment unit with chemical resistant epoxy coating was constructed.

7.0 PROPOSED SAMPLING AND REMEDIATION

This preliminary assessment identified one area of concern warranting sampling: the former underground transfer line. Soil sampling in the area of the former underground transfer line associated with the UST system was proposed to confirm the absence of volatile organic compounds in the soil. In accordance with the Groundwater ACO, the company will continue its operation of the groundwater biodegradation/biostimulation system and will continue groundwater monitoring and quarterly groundwater reporting and annual reporting in accord with the groundwater ACO.

7.1 Former Underground Transfer Line

Soil samples were collected and analyzed in September and October 1995 from the area of the former underground transfer line and the stormwater collection sewer to confirm the absence of volatile organic compounds in the soil. The soil sampling did not detect any compounds above the NJDEP Residential Direct Contact Soil Cleanup Criteria, Non-Residential Soil Cleanup Criteria, or the Impact to Groundwater Soil Cleanup Criteria. The Field Sampling Plan, Site Investigation Report, and laboratory report are included in Attachment A.

7.2 Groundwater Monitoring

A quarterly groundwater monitoring program is performed at the Biocraft site. The monitoring program evaluates the progress and effectiveness of the groundwater biodegradation/biostimulation system installed to remediate methylene chloride, acetone, and butyl alcohol impacted groundwater. This program consists of sampling 11 wells quarterly and 26 wells annually, and analyzing the samples for methylene chloride, acetone, butyl alcohol, BOD, COD, TOC, chloride, and total phosphorous as specified in the ACO. The results of the quarterly and annual samples are submitted to the NJDEP.

The nature and extent of groundwater contamination at the Biocraft site has been documented in extensive groundwater investigations performed by Geraghty and Miller (G&M) between 1979 and 1995, and was supplemented by the monitoring program initiated by Biocraft in 1985. The G&M groundwater investigation reports and supplemental monitoring data have been submitted to the NJDEP in accord with the Groundwater ACO.

Biocraft has been operating the on-site remedial system pursuant to the Groundwater ACO which requires Biocraft to continue to extract and treat groundwater until acceptable groundwater quality is achieved. The ACO indicates that acceptable quality of groundwater is defined by the following parameters: BOD = 6.0 mg/L, COD = 23.0 mg/L, TOC = 18.0 mg/L, chlorides = 153 mg/L, pH = 4.0 to 7.5, methylene chloride = 8 ug/L, acetone = 100 ug/L, and butyl alcohol = 100 ug/L.

The groundwater sampling shows that groundwater quality has progressively improved and Biocraft currently estimates that 90 percent of the groundwater plume has been remediated. Groundwater elevation measurements and sampling data show that the zone of influence created by the recovery system maintains hydraulic control of the groundwater contaminant plume. The groundwater sampling data show that the highest concentrations of methylene chloride and acetone are in the southern area of the property and that the concentrations have been reduced significantly from the concentrations existing prior to biodegradation/biostimulation system startup.

7.3 Groundwater Biodegradation/Biostimulation System

Monitoring wells were installed and groundwater samples were collected and analyzed to determine whether the underground transfer line leak had impacted groundwater quality. The groundwater sampling showed elevated concentrations of methylene chloride, acetone, and butyl alcohol. Biocraft undertook an extensive research and development project to develop a process to remove and treat groundwater. The research resulted in the development of a sophisticated biodegradation/biostimulation process which has received a patent from the U.S. Patent Office.

The biodegradation/biostimulation system consists of several pumping wells, infiltration trenches, and a biological treatment system. The remediation system has been operating for 15 years and extensive groundwater monitoring at and downgradient of the site has been conducted to determine the effectiveness of the remediation system. The data shows that groundwater quality has progressively improved and Biocraft estimates that 90 percent of the groundwater plume has been remediated. The sampling data show the treatment system reduces the influent concentrations of methylene chloride by greater than 90 percent. No butyl alcohol or acetone have been detected in the effluent samples for all of the past four quarters.

7.3.1 Biodegradation/Biostimulation System Description

The biodegradation/biostimulation system consists of two identical activated sludge units, ACT I and ACT II. Each unit consists of an aeration tank and a settling tank. Both systems are operated in parallel, with ACT I treating groundwater pumped from Well 30, and ACT II treating groundwater pumped from Wells 32A/B and 13. Groundwater from Well 32A is pumped into the Well 32B casing, and the combined groundwater from Well 32B is pumped to the treatment system. The combined stream is called Well 32A/B groundwater. Groundwater is pumped from the wells to the surface using submersible pumps, and is then pumped into the treatment system.

Groundwater enters the aeration tanks, where it is aerated by a blower and diffuser which also keeps the tank contents mixed. Additional mixing is provided by internally recycling the tank contents by pumping. The aeration tank effluent is pumped to the settling tank and to separate the bacteria from the water. The settled bacteria (sludge) are recycled to the aeration tank to keep bacteria concentrations in the system high enough to remove organic compounds. A system pilot study is being conducted to determine whether system efficiency can be improved.

7.4 Groundwater Remediation

The company will continue its compliance with the requirements of the ACO with continued operation of the groundwater biodegradation/biostimulation system and long-term groundwater monitoring will protect the environment. Groundwater collection and treatment ensures that methylene chloride and acetone concentrations are reduced through on-site bioremediation. Long-term groundwater monitoring will effectively track the concentrations of methylene chloride and acetone in groundwater and the improvement of groundwater quality due to groundwater collection and treatment. The groundwater collection and treatment system performance will continue to be evaluated using treatment system influent and effluent sampling data.

BIOCRAFT LABORATORIES, INC.
WALDWICK, NEW JERSEY
ISRA CASE #96070

APPENDIX A
TABLES

854820071

BIOCRAFT LABORATORIES, INC.
WALDWICK, NEW JERSEY

TABLE 1 (Preliminary Assessment Form Item 3)

HAZARDOUS SUBSTANCES STORED AT FACILITY

Substance Name	CAS Number	Typical Annual Usage *		Storage Method		Location/Keyed to Location Map	To Remain On-Site	Maximum Daily Quantity (lbs.)
		Quantity	Units	Container Type	Container Size			
Acenaphthene	83-32-9	50 g		Bottles or Jugs (glass)	100 g	Laboratories	Yes	Less than 1 lb.
Acetamide	60-35-5	50 g		Bottles or Jugs (glass)	500 g	Laboratories	Yes	Less than 1 lb.
Acetic Acid	64-19-7	10 L		Bottles or Jugs (glass)	2.5 L & 500 mL	Laboratories	Yes	1 - 10
Acetic Anhydride	108-24-7	10 L		Bottles or Jugs (glass)	2.5 L & 500 mL	Laboratories	Yes	1 - 10
Acetone	67-64-1	1,000,000 lbs		Bottles or Jugs (glass), AST	10,000 gal	Laboratories, Production, Tank Farm	Yes	100,001 - 250,000
Acetonitrile	75-05-8	200 L		Bottles or Jugs (glass)	2.5 L	Laboratories	Yes	1-10
Adipic Acid	124-04-09	50 g		Bottles or Jugs (glass)	100 g	Laboratories	Yes	Less than 1 lb.
Ammonia	7664-41-7	100 lbs		Cylinder	Cylinder	Laboratories	Yes	11 - 100
Ammonium Acetate	631-61-8	75 g		Bottles or Jugs (glass)	1 Kg	Laboratories	Yes	Less than 1 lb.
Ammonium Bicarbonate	1066-33-7	50 g		Bottles or Jugs (glass)	500 g	Laboratories	Yes	Less than 1 lb.
Ammonium Chloride	12125-02-9	50 g		Bottles or Jugs (glass), Bag	500 g	Laboratories, Tank Farm	Yes	Less than 1 lb.
Ammonium Hydroxide	1336-21-6	10 L		Bottles or Jugs (glass)	2.5 L	Laboratories	Yes	1-10
Ammonium Nitrate	6484-52-2	10 L		Bottles or Jugs (plastic)	2.5 L	Laboratories	Yes	1-10
Ammonium Oxalate	1113-38-8	50 g		Bottles or Jugs (glass)	125 g	Laboratories	Yes	Less than 1 lb.
Ammonium Persulfate	7727-54-0	50 g		Bottles or Jugs (glass)	500 g	Laboratories	Yes	Less than 1 lb.
Ammonium Thiocyanate	1762-95-4	50 g		Bottles or Jugs (glass)	1 Kg	Laboratories	Yes	Less than 1 lb.
Aniline	62-53-3	1 L		Bottles or Jugs (glass)	1 L	Laboratories	Yes	Less than 1 lb.
Anthracene	120-12-7	50 g		Bottles or Jugs (glass)	250 g	Laboratories	Yes	Less than 1 lb.
Antimony	7440-36-0	50 g		Bottles or Jugs (glass)	125 g	Laboratories	Yes	Less than 1 lb.
Arsenic Trioxide	1327-53-3	50 g		Bottles or Jugs (glass)	125 g	Laboratories	Yes	Less than 1 lb.
Benzene	71-43-2	4 L		Bottles or Jugs (glass)	500 mL	Laboratories	Yes	Less than 1 lb.
Benzoic Acid	65-85-0	1 L		Bottles or Jugs (glass)	125 g	Laboratories	Yes	Less than 1 lb.
Benzoyl Chloride	98-88-4	50 g		Bottles or Jugs (glass)	500 g	Laboratories	Yes	Less than 1 lb.
Benzyl Chloride	100-44-7	1 L		Bottles or Jugs (glass)	500 mL	Laboratories	Yes	1 - 10
Beryllium Sulfate	13510-49-1	50 g		Bottles or Jugs (glass)	25 g	Laboratories	Yes	Less than 1 lb.
2-Butanol	78-92-2	10 L		Bottles or Jugs (glass)	1 L	Laboratories	Yes	1 - 10
N-Butanol	71-36-3	10 L		Bottles or Jugs (glass)	1 L	Laboratories	Yes	Less than 1 lb.
Butyl Acetate	123-86-4	10 L		Bottles or Jugs (glass)	1 L	Laboratories	Yes	Less than 1 lb.

Notes:

* - Laboratory chemicals are purchased, stored and used in very small quantities. Annual usage quantities are estimated.

g - grams

L - Liters

Kg - Kilograms

lbs - pounds

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TABLE 1 Continues . . .

Substance Name	CAS Number	Typical Annual Usage *		Storage Method		Location/Keyed to Location Map	To Remain On-Site	Maximum Daily Quantity (lbs.)
		Quantity	Units	Container Type	Container Size			
Cadmium	7440-43-9	50 g		Bottles or Jugs (glass)	250 g	Laboratories	Yes	Less than 1 lb.
Carbon Disulfide	75-15-0	1 L		Bottles or Jugs (glass)	500 mL	Laboratories	Yes	Less than 1 lb.
Carbon Tetrachloride	56-23-5	1 L		Bottles or Jugs (glass)	500 mL	Laboratories	Yes	Less than 1 lb.
Chlorobenzene	108-90-7	1 L		Bottles or Jugs (glass)	1 L & 500 mL	Laboratories	Yes	Less than 1 lb.
Chloroform	67-66-3	1 L		Bottles or Jugs (glass)	1 L & 500 mL	Laboratories	Yes	1 - 10
Chlorophenol	95-57-8	1 L		Bottles or Jugs (glass)	1 L & 500 mL	Laboratories	Yes	Less than 1 lb.
Chromium	7440-47-3	25 g		Bottles or Jugs (glass)	100 g	Laboratories	Yes	Less than 1 lb.
Chromium Chloride	10025-73-7	100 g		Bottles or Jugs (glass)	500 g	Laboratories	Yes	Less than 1 lb.
Cupric Acetate	142-71-2	25 g		Bottles or Jugs (glass)	250 g	Laboratories	Yes	Less than 1 lb.
Cupric Chloride	1344-67-8	50 g		Bottles or Jugs (glass)	125 g	Laboratories	Yes	Less than 1 lb.
Cupric Sulfate	10380-29-7	50 g		Bottles or Jugs (glass)	500 g	Laboratories	Yes	Less than 1 lb.
Cyclohexane	110-82-7	1 L		Bottles or Jugs (glass)	500 mL	Laboratories	Yes	1 - 10
1,2-Dichlorobenzene	95-50-1	500 mL		Bottles or Jugs (glass)	500 mL	Laboratories	Yes	Less than 1 lb.
Dichloromethane	75-09-2	See Methylene Chloride		Bottles or Jugs (glass), AST, Steel Drum	10,000 gallon tank	Laboratories, Tank Farm, Production	Yes	100,001-250,000
N,N Dimethyl Aniline	121-69-7	500 mL		Bottles or Jugs (glass)	500 mL	Laboratories	Yes	1-10
Diethylamine	109-89-7	50 g		Bottles or Jugs (glass)	50 g	Laboratories	Yes	Less than 1 lb.
Diethyl Ether	60-29-7	50 g		Bottles or Jugs (glass)	50 g	Laboratories	Yes	Less than 1 lb.
Diethyl Phthalate	84-66-2	500 mL		Bottles or Jugs (glass)	500 mL	Laboratories	Yes	Less than 1 lb.
Dimethyl Dichlorosilane	75-78-5	500 mL		Bottles or Jugs (glass)	500 mL	Laboratories	Yes	1-10
1,4 Dioxane	123-91-1	2.5 L		Bottles or Jugs (glass)	500 mL	Laboratories	Yes	Less than 1 lb.
Diphenyl Amine	122-39-4	50 g		Bottles or Jugs (glass)	125 g	Laboratories	Yes	Less than 1 lb.
Ethyl Acetate	141-78-6	1 L		Bottles or Jugs (glass)	500 mL	Laboratories	Yes	1-10
Ethyl Chloroformate	541-41-3	50 g		Bottles or Jugs (glass)	500 g	Laboratories	Yes	11 - 100
Ethylene Dichloride	107-06-2	1 L		Bottles or Jugs (glass)	150 mL	Laboratories	Yes	Less than 1 lb.
Ethylene Glycol	107-21-1	4,000 lbs		Steel Drum	55 gallon	Laboratories, Tank Farm	Yes	10,001-50,000
Ferric Chloride	7783-50-8	200 g		Can	500 g	Laboratories	Yes	1-10
Ferric Nitrate	10421-48-4	100 Kg		Bottles or Jugs (glass)	20 L Carboy/50 g bottle	Laboratories	Yes	1-10
Ferrous Ammonium Sulfate	10045-89-03	250 g		Bottles or Jugs (glass)	500 g	Laboratories	Yes	1-10
Ferrous Sulfate	7720-78-7	250 g		Bottles or Jugs (glass)	500g	Laboratories	Yes	1-10

Notes:

* - Laboratory chemicals are purchased, stored and used in very small quantities. Annual usage quantities are estimated.

g - grams

L - Liters

Kg - Kilograms

lbs - pounds

854820073

TABLE 1 Continues . . .

Substance Name	CAS Number	Typical Annual Usage *		Storage Method		Location/Keyed to Location Map	To Remain On-Site	Maximum Daily Quantity (lbs.)
		Quantity	Units	Container Type	Container Size			
Formaldehyde	50-00-0		1 L	Bottles or Jugs (glass)	150 mL	Laboratories	Yes	1-10
Formic Acid	64-18-6		10 L	Bottles or Jugs (glass)	1 L	Laboratories	Yes	Less than 1 lb.
Fuel Oil (#2)		60,000	gal	UST	6,000 gallon tank	Tank Farm	Yes	50,001-100,000
Hydrazine Sulfate	10034-93-2		500 g	Bottles or Jugs (glass)	500 g	Laboratories	Yes	Less than 1 lb.
Hydrochloric Acid	7647-01-0	60,000	lbs	Bottles or Jugs (glass), AST	6,000 gallon tank	Laboratories, Tank Farm, Production	Yes	50,001-100,000
Hydrogen Peroxide	7722-84-1		1 L	Bottles or Jugs (glass)	1 L	Laboratories	Yes	Less than 1 lb.
Hydrogen Sulfide	7783-06-4		10 lbs	Cylinder	Cylinder	Laboratories	Yes	Less than 1 lb.
Hydroquinone	123-31-9		25 g	Bottles or Jugs (glass)	500 g	Laboratories	Yes	Less than 1 lb.
Isobutanol	78-83-1		25 L	Bottles or Jugs (glass)	1 L	Laboratories	Yes	1-10
Isobutyl Acetate	110-19-0		25 L	Bottles or Jugs (glass)	4 L	Laboratories	Yes	Less than 1 lb.
Isopropanol	67-63-0		50 L	Bottles or Jugs (glass)	4 L	Laboratories	Yes	1-10
Lead	7439-92-1		25 g	Bottles or Jugs (glass)	500 g	Laboratories	Yes	Less than 1 lb.
Lead Acetate	301-04-3		25 g	Bottles or Jugs (glass)	500 g	Laboratories	Yes	Less than 1 lb.
Lead Nitrate	10099-74-8		25 g	Bottles or Jugs (glass)	125 g	Laboratories	Yes	Less than 1 lb.
Lead Sulfide	1314-87-0		25 g	Bottles or Jugs (glass)	125 g	Laboratories	Yes	Less than 1 lb.
Mercuric Acetate	1600-27-7		25 g	Bottles or Jugs (glass)	50 g	Laboratories	Yes	Less than 1 lb.
Mercuric Chloride	10124-48-8		25 g	Bottles or Jugs (glass)	125 g	Laboratories	Yes	Less than 1 lb.
Mercuric Oxide	21908-53-2		25 g	Bottles or Jugs (glass)	125 g	Laboratories	Yes	Less than 1 lb.
Mercuric Sulfate	7783-35-9		25 g	Bottles or Jugs (glass)	125 g	Laboratories	Yes	Less than 1 lb.
Mercuric Nitrate	778-26-7		1 L	Bottles or Jugs (glass)	1 L	Laboratories	Yes	Less than 1 lb.
Mercury	7439-97-6		1 Kg	Bottles or Jugs (plastic)	500 g	Laboratories	Yes	1-10
2-Methoxyethanol	109-86-4		10 L	Bottles or Jugs (glass)	1 L	Laboratories	Yes	Less than 1 lb.
Methyl Alcohol	67-56-1		100 L	Bottles or Jugs (glass)	1 L	Laboratories	Yes	1-10
Methyl Ethyl Ketone	78-93-3		4 L	Bottles or Jugs (glass)	4 L	Laboratories	Yes	1-10
Methyl Isobutyl Ketone	108-10-1		1 L	Bottles or Jugs (glass)	500 mL	Laboratories	Yes	1-10
Methylene Chloride	75-09-2	2,500,000	lbs	AST	10,000-gallon tank	Tank Farm, Production	Yes	50,001-100,000
Molybdenum Trioxide	1313-27-5		50 g	Bottles or Jugs (glass)	125 g	Laboratories	Yes	Less than 1 lb.
Napthalene	91-20-3		50 g	Bottles or Jugs (glass)	500 g	Laboratories	Yes	Less than 1 lb.
Nickel Chloride	7718-54-9		50 g	Bottles or Jugs (glass)	125 g	Laboratories	Yes	Less than 1 lb.
Nickel Sulfate	7786-81-4		50 g	Bottles or Jugs (glass)	250 g	Laboratories	Yes	Less than 1 lb.

Notes:

* - Laboratory chemicals are purchased, stored and used in very small quantities. Annual usage quantities are estimated.

g - grams

L - Liters

Kg - Kilograms

lbs - pounds

854820074

TABLE 1 Continues...

Substance Name	CAS Number	Typical Annual Usage *		Storage Method		Location/Keyed to Location Map	To Remain On-Site	Maximum Daily Quantity (lbs.)
		Quantity	Units	Container Type	Container Size			
Nitric Acid	7697-37-2	10	L	Bottles or Jugs (glass)	1 L	Laboratories	Yes	1-10
Nitrobenzene	98-95-3	2	L	Bottles or Jugs (glass)	1 L	Laboratories	Yes	1-10
2-Nitrophenol	88-75-5	50	g	Bottles or Jugs (glass)	100 g	Laboratories	Yes	Less than 1 lb.
Pentachlorophenol	87-86-5	50	g	Bottles or Jugs (glass)	100 g	Laboratories	Yes	Less than 1 lb.
Peroacetic Acid	79-21-0	500	mL	Bottles or Jugs (glass)	500 mL	Laboratories	Yes	Less than 1 lb.
Phenacetin	62-44-2	50	g	Bottles or Jugs (glass)	125 g	Laboratories	Yes	Less than 1 lb.
Phenol	108-95-7	50	g	Bottles or Jugs (glass)	500 g	Laboratories	Yes	Less than 1 lb.
Phosphoric Acid	7664-38-2	10	L	Bottles or Jugs (glass)	1 L & 500 mL	Laboratories	Yes	1-10
Phosphorous Pentachloride	10026-13-8	500	g	Bottles or Jugs (glass)	500 g	Laboratories	Yes	1-10
Phosphorous Trichloride	7719-12-2	25	mL	Bottles or Jugs (glass)	25 mL	Laboratories	Yes	Less than 1 lb.
Picoline	109-06-8	250	mL	Bottles or Jugs (glass)	500 mL	Laboratories	Yes	Less than 1 lb.
Potassium Bromate	7758-01-2	50	g	Bottles or Jugs (glass)	500 g	Laboratories	Yes	1-10
Potassium Chromate	7789-00-6	500	g	Bottles or Jugs (glass)	250 g	Laboratories	Yes	1-10
Potassium Cyanide	151-50-8	25	g	Bottles or Jugs (glass)	25 g	Laboratories	Yes	Less than 1 lb.
Potassium Dichromate	7778-50-9	50	g	Bottles or Jugs (glass)	100 g	Laboratories	Yes	1-10
Potassium Hydroxide	1310-58-3	1	L	Bottles or Jugs (glass)	1 L	Laboratories	Yes	1-10
Potassium Permanganate	7722-64-7	500	mL	Bottles or Jugs (glass)	500 mL	Laboratories	Yes	Less than 1 lb.
Pyrene	129-00-0	1	L	Bottles or Jugs (glass)	1 L	Laboratories	Yes	Less than 1 lb.
Pyridine	110-86-1	10	L	Bottles or Jugs (glass)	1 L	Laboratories	Yes	1-10
Quinoline	91-22-5	1	L	Bottles or Jugs (glass)	1 L	Laboratories	Yes	Less than 1 lb.
Rancy Nickel	7440-02-0	25	g	Bottles or Jugs (glass)	100 g	Laboratories	Yes	Less than 1 lb.
Saccharin	81-07-2	100	lbs	Bottles or Jugs (glass)	30 gallon containers	Laboratories	Yes	11 - 100
Semicarbazide Hydrochloride	563-41-7	25	g	Bottles or Jugs (glass)	100 g	Laboratories	Yes	Less than 1 lb.
Silver Nitrate	7761-88-8	25	g	Bottles or Jugs (glass)	30 g	Laboratories	Yes	Less than 1 lb.
Sodium	7740-23-5	1	Kg	Bottles or Jugs (glass)	500 g	Laboratories	Yes	Less than 1 lb.
Sodium Arsenate	7631-89-2	25	g	Bottles or Jugs (glass)	250 g	Laboratories	Yes	Less than 1 lb.
Sodium Azide	26628-22-8	25	g	Bottles or Jugs (glass)	100 g	Laboratories	Yes	Less than 1 lb.

Notes:

* - Laboratory chemicals are purchased, stored and used in very small quantities. Annual usage quantities are estimated.

g - grams

L - Liters

Kg - Kilograms

lbs - pounds

854820075

TABLE 1 Continues...

Substance Name	CAS Number	Typical Annual Usage *		Storage Method		Location/Keyed to Location Map	To Remain On-Site	Maximum Daily Quantity (lbs.)
		Quantity	Units	Container Type	Container Size			
Sodium Chlorate	7775-09-9	50 g		Bottles or Jugs (glass)	500 g	Laboratories	Yes	Less than 1 lb.
Sodium Dichromate	10588-01-9	1 Kg		Bottles or Jugs (glass)	500 g	Laboratories	Yes	1-10
Sodium Fluoride	7681-49-4	50 g		Bottles or Jugs (glass)	500 g	Laboratories	Yes	Less than 1 lb.
Sodium Hydride	7646-69-7	50 g		Can	500 g	Laboratories	Yes	1-10
Sodium Hydroxide	1310-73-2	60,000 lbs		Bottles or Jugs (glass), Steel Drum, AST	6,000 gal	Laboratories	Yes	11-100
Sodium Hypochlorite	7681-52-9	10 L		Plastic Drum	1 L	Laboratories	Yes	11-100
Sodium Methoxide	124-41-4	500 g		Bottles or Jugs (glass)	125 g	Laboratories	Yes	1-10
Sodium Sulfide	1313-82-2	50 g		Bottles or Jugs (glass)	500 g	Laboratories	Yes	Less than 1 lb.
Sulfuric Acid	7664-93-9	5 L		Bottles or Jugs (glass)	1 L	Laboratories	Yes	1-10
Tetrachloroethylene	127-18-4	1 L		Bottles or Jugs (glass)	500 mL	Laboratories	Yes	1-10
Tetrahydrofuran	109-99-9	1 L		Bottles or Jugs (glass)	1 L	Laboratories	Yes	1-10
Thioacetamide	62-55-5	500 g		Bottles or Jugs (glass)	125 g	Laboratories	Yes	1-10
Thiourea	62-56-6	50 g		Bottles or Jugs (glass)	125 g	Laboratories	Yes	Less than 1 lb.
Toluene	108-88-3	50 L		Bottles or Jugs (glass)	4 L	Pilot Plant Laboratories, Tank Farm	Yes	1,001-10,000
Trichloroethylene	79-01-6	1 L		Bottles or Jugs (glass)	500 mL	Laboratories	Yes	Less than 1 lb.
Triethylamine	121-44-8	30,000 lbs		Bottles or Jugs (glass), Steel Drum	55 gallons	Laboratories, Tank Farm, Production	Yes	1,001-10,000
Triethylchlorosilane	75-77-4	50 g		Bottles or Jugs (glass)	50 g	Laboratories	Yes	1-10
Uranyl Acetate	541-09-3	50 g		Bottles or Jugs (glass)	500 g	Laboratories	Yes	1-10
Uranyl Nitrate	10102-06-4	50 g		Bottles or Jugs (glass)	500 g	Laboratories	Yes	Less than 1 lb.
Waste Oil	-	500 gal		Steel Drum	55 gallons	Tank Farm, Boiler Room	Yes	11-100
Waste Waters (acetone)	67-64-1	70,000 lbs		Bottles or Jugs (glass)	10,000 gallon tank	Laboratories, Tank Farm, Production	Yes	50,001-100,000
Zinc Acetate	557-34-6	50 g		Bottles or Jugs (glass)	500 g	Laboratories	Yes	Less than 1 lb.
Zinc Chloride	7446-85-7	50 g		Bottles or Jugs (glass)	500 g	Laboratories	Yes	Less than 1 lb.
Zinc Sulfate	7733-02-0	50 g		Bottles or Jugs (glass)	500 g	Laboratories	Yes	Less than 1 lb.

Notes:

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g - grams

L - Liters

Kg - Kilograms

lbs - pounds

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BIOCRAFT LABORATORIES, INC.
WALDWICK, NEW JERSEY

TABLE 2

SECONDARY CONTAINMENT UNIT SUMMARY

Tank No	Contents	Secondary Containment	Container Volume (Gallons)	Containment Volume (Gallons)	Leak Detection Systems
1 & 2	Prime Acetone/Recovered Acetone	Concrete Vault	20,000	78,500	Automatic Leak Detection System in vault, level indicator, hi-level alarm
3 & 4	Prime Methylene Chloride/Recovered Methylene Chloride	Concrete Vault	20,000	78,500	Automatic Leak Detection System in vault, level indicator, hi-level alarm
5 & 6	Empty	Concrete Vault	20,000	80,000	Automatic Leak Detection System in vault, level indicator, hi-level alarm
7 & 8	Tank Bottoms/Process Waste Water	Concrete Vault	20,000	80,000	Automatic Leak Detection System in vault, level indicator, hi-level alarm
9 & 10	Acetone and Water Waste/Methylene Chloride and Waste Water	Concrete Vault	20,000	80,000	Automatic Leak Detection System in vault, level indicator, hi-level alarm
	Hydrochloric Acid	Concrete Dike	6,000	7,000	Daily visual inspection, level indicator, hi-level alarm
	Sodium Hydroxide	Concrete Dike	6,000	7,000	Daily visual inspection, level indicator, hi-level alarm
	Nitrogen	Not Required	15,000	Not Required	Not Required
	No. 2 Fuel Oil	Double wall, Fiberglass	6,000	Not Applicable	Automatic Leak Detection System in annular space, level indicator, hi-level alarm
	Tank Truck Loading/Unloading Area	Concrete Dike	6,000 (1)	86,500 (2)	Daily visual inspection
	Drum Storage Area	Portable Containment Skid	55/container (3)	65	Daily visual inspection

NOTES:

(1) - Volume of largest compartment of any tank truck loaded/unloaded in this area

(2) - Volume of truck ramp storage capacity is 8,000 gallons, additional available capacity is 78,500 gallons, and total capacity of the system is 86,500 gallons

(3) - Maximum of four containers per portable containment skid

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**BIOCRAFT LABORATORIES, INC.
WALDWICK, NEW JERSEY**

**TABLE 3
HISTORIC GROUNDWATER ANALYTICAL RESULTS DATA
MW-1**

Date Sampled	BOD	COD	TOC	Chloride	Methylene Chloride	Butanol	Acetone
4/25/88-8/8/88	7.0	9.0	25.0	38.0	< 5.0	< 10.0	< 10.0
12/4/88-3/19/89	28.0	32.0	11.0	27.0	< 5.0	< 10.0	< 10.0
2/25/90-4/29/90	35.0	43.0	5.5	4.0	< 5.0	< 10.0	< 10.0
5/6/90-9/30/90	5.0	12.0	8.0	18.7	< 5.0	< 10.0	< 10.0
5/94	-	-	2.4	-	< 10.0	< 50.0	< 10.0
11/95	-	11.0	-	-	2.5	-	9.1

MW-2

Date Sampled	BOD	COD	TOC	Chloride	Methylene Chloride	Butanol	Acetone
4/25/88-8/8/88	18.0	10.0	14.0	23.0	< 5.0	< 10.0	< 10.0
12/4/88-3/19/89	25.0	43.0	16.0	30.0	< 5.0	< 10.0	< 10.0
2/25/90-4/29/90	10.0	30.0	8.6	6.5	< 5.0	< 10.0	< 10.0
5/6/90-9/30/90	< 3.0	10.0	42.0	32.3	< 5.0	< 10.0	< 10.0
5/94	-	3.0	3.6	-	< 10.0	< 50.0	< 10.0
11/95	-	15.0	-	-	2.7	-	6.7

MW-3

Date Sampled	BOD	COD	TOC	Chloride	Methylene Chloride	Butanol	Acetone
5/94	-	40.0	35.8	-	< 10.0	< 50.0	< 10.0
11/95	-	36.0	-	-	2.6	-	31.0

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TABLE 3 Continued . . .

MW-4

Date Sampled	BOD	COD	TOC	Chloride	Methylene Chloride	Butanol	Acetone
7/8/85-9/29/85	35.6	47.0	14.0	128.0	< 3.0	< 10.0	< 10.0
3/16/86-1/3/87	32.0	45.0	14.0	110.0	< 5.0	< 10.0	< 10.0
1/5/87-4/4/87	18.0	25.0	10.0	40.0	< 5.0	< 10.0	< 10.0
4/5/87-7/4/87	31.7	65.0	6.0	48.0	< 5.0	< 10.0	< 10.0
7/5/87-10/3/87	35.6	38.0	8.0	162.0	< 5.0	< 10.0	< 10.0
10/4/87-1/2/88	-	-	8.0	-	< 5.0	< 10.0	< 10.0
1/3/88-4/18/88	17.0	2.0	5.0	40.0	< 5.0	< 10.0	< 10.0
4/25/88-8/8/88	2.0	17.0	5.0	46.0	< 5.0	< 10.0	< 10.0
8/15/88-11/27/88	45.0	60.0	6.0	36.0	< 5.0	< 10.0	< 10.0
3/26/89-7/9/89	63.0	40.0	46.6	25.0	< 5.0	< 10.0	< 10.0
11/5/89-2/18/90	64.0	55.0	9.8	6.0	< 5.0	< 10.0	< 10.0
2/25/90-4/29/90	30.0	40.0	7.8	5.5	< 5.0	< 10.0	< 10.0
5/6/90-9/30/90	< 3.0	10.0	9.0	100.0	< 5.0	< 10.0	< 10.0

MW-5

Date Sampled	BOD	COD	TOC	Chloride	Methylene Chloride	Butanol	Acetone
7/8/85-9/29/85	22.7	-	9.0	47.0	< 3.0	< 10.0	< 10.0
3/16/86-1/3/87	25.0	30.0	8.0	45.0	< 5.0	< 10.0	< 10.0
1/5/87-4/4/87	30.0	48.0	9.0	15.0	< 5.0	< 10.0	< 10.0
4/5/87-7/4/87	20.0	38.0	5.0	36.0	< 5.0	< 10.0	< 10.0
7/5/87-10/3/87	-	-	9.0	48.0	< 5.0	< 10.0	< 10.0
10/4/87-1/2/88	18.8	38.0	9.0	48.0	< 5.0	< 10.0	< 10.0
1/3/88-4/18/88	7.0	9.0	24.0	30.0	< 5.0	< 10.0	< 10.0
8/15/88-11/27/88	-	-	9.0	48.0	< 5.0	< 10.0	< 10.0
12/4/88-3/19/89	18.0	20.0	9.0	25.0	< 5.0	< 10.0	< 10.0
3/26/89-7/9/89	13.0	20.0	5.3	15.0	< 5.0	< 10.0	< 10.0
11/5/89-2/18/90	21.0	40.0	3.5	4.6	< 5.0	< 10.0	< 10.0
5/6/90-9/30/90	33.0	60.0	8.6	31.6	< 5.0	< 10.0	< 10.0

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TABLE 3 Continued . . .

MW-6

Date Sampled	BOD	COD	TOC	Chloride	Methylene Chloride	Butanol	Acetone
7/8/85-9/29/85	-	35.0	11.0	22.0	< 3.0	< 10.0	< 10.0
3/16/86-1/3/87	15.0	23.0	6.0	20.0	< 5.0	< 10.0	< 10.0
1/5/87-4/4/87	27.0	45.0	14.0	30.0	< 5.0	< 10.0	< 10.0
4/5/87-7/4/87	20.0	10.0	6.0	43.0	< 5.0	< 10.0	< 10.0
7/5/87-10/3/87	47.6	60.0	6.0	36.0	< 5.0	< 10.0	< 10.0
10/4/87-1/2/88	31.7	60.0	6.0	36.0	< 5.0	< 10.0	< 10.0
1/3/88-4/18/88	30.0	48.0	9.0	15.0	< 5.0	< 10.0	< 10.0
8/15/88-11/27/88	35.6	38.0	8.0	62.0	< 5.0	< 10.0	< 10.0
12/4/88-3/19/89	32.0	40.0	14.0	23.0	< 5.0	< 10.0	< 10.0
3/26/89-7/9/89	16.0	25.0	9.6	20.0	< 5.0	< 10.0	< 10.0
11/5/89-2/18/90	16.0	32.0	9.6	12.0	< 5.0	< 10.0	< 10.0
5/6/90-9/30/90	21.0	45.0	9.9	24.8	< 5.0	< 10.0	< 10.0
5/94	-	1.0	5.6	-	< 10.0	< 50.0	< 10.0
11/94	130.0	230.0	22.0	160.0	3.0	< 10.0	< 2.0
2/13/95	11.0	22.0	7.8	170.0	< 7.0	< 10.0	< 14.0
5/2/95	8.0	69.0	7.3	160.0	< 2.0	< 10.0	< 2.0
11/95	9.0	180.0	12.0	140.0	< 1.0	< 5.0	< 1.0

Butanol

MW-8

Date Sampled	BOD	COD	TOC	Chloride	Methylene Chloride	Butanol	Acetone
5/94	-	47.0	9.2	-	< 10.0	< 50.0	< 10.0
11/95	-	19.0	-	-	2.0	-	21.0

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TABLE 3 Continued...

MW-9

Date Sampled	BOD	COD	TOC	Chloride	Methylene Chloride	Butanol	Acetone
7/8/85-9/29/85	43.2	55.0	16.0	78.0	< 3.0	< 10.0	< 10.0
3/16/86-1/3/87	35.0	48.0	15.0	55.0	< 5.0	< 10.0	< 10.0
1/5/87-4/4/87	30.0	43.0	14.0	25.0	< 5.0	< 10.0	< 10.0
4/5/87-7/4/87	9.7	35.0	6.0	25.0	< 5.0	< 10.0	< 10.0
7/5/87-10/3/87	25.1	65.0	5.0	43.0	< 5.0	< 10.0	< 10.0
10/4/87-1/2/88	20.0	65.0	5.0	43.0	< 5.0	< 10.0	< 10.0
1/3/88-4/18/88	18.0	25.0	10.0	40.0	< 5.0	< 10.0	< 10.0
4/25/88-8/8/88	9.7	35.0	6.0	23.0	< 5.0	< 10.0	< 10.0
8/15/88-11/27/88	35.6	30.0	6.0	25.0	< 5.0	< 10.0	< 10.0
3/26/89-7/9/89	17.0	15.0	13.7	25.0	< 5.0	< 10.0	< 10.0
7/16/89-10/26/89	10.0	19.0	14.3	10.0	< 5.0	< 10.0	< 10.0
11/5/89-2/18/90	32.0	40.0	5.2	10.0	< 5.0	< 10.0	< 10.0
2/25/90-4/29/90	15.0	25.0	6.2	6.0	< 5.0	< 10.0	< 10.0
5/6/90-9/30/90	32.0	53.0	5.2	20.0	< 5.0	< 10.0	< 10.0
5/94	-	28.0	7.8	-	< 10.0	< 50.0	< 10.0
11/94	140.0	210.0	35.0	170.0	3.0	< 10.0	77.0
2/13/95	50.0	81.0	23.0	1200.0	5.0	< 100.0	18.0
5/2/95	< 4.0	72.0	12.0	200.0	30.0	< 10.0	< 2.0
8/15/95	23.0	150.0	20.0	-	13.0	Butanol	< 1.0
11/95	16.0	66.0	43.0	160.0	5.1	< 5.0	< 1.0

MW-10

Date Sampled	BOD	COD	TOC	Chloride	Methylene Chloride	Butanol	Acetone
7/8/85-9/29/85	47.6	55.0	12.0	89.0	< 3.0	< 10.0	< 10.0
3/16/86-1/3/87	30.0	45.0	17.0	38.0	< 5.0	< 10.0	< 10.0
1/5/87-4/4/87	18.0	20.0	9.0	20.0	< 5.0	< 10.0	< 10.0
4/5/87-7/4/87	25.1	42.5	8.0	27.0	< 5.0	< 10.0	< 10.0
7/5/87-10/3/87	20.0	38.0	6.0	25.0	< 5.0	< 10.0	< 10.0
10/4/87-1/2/88	20.0	38.0	6.0	25.0	< 5.0	< 10.0	< 10.0
1/3/88-4/18/88	27.0	45.0	14.0	30.0	< 5.0	< 10.0	< 10.0
4/25/88-8/8/88	23.0	40.0	8.0	25.0	< 5.0	< 10.0	< 10.0
8/15/88-11/27/88	47.6	60.0	6.0	30.0	< 5.0	< 10.0	< 10.0
3/26/89-7/9/89	20.0	30.0	9.6	30.0	< 5.0	< 10.0	< 10.0
7/16/89-10/26/89	16.0	20.0	10.0	7.0	< 5.0	< 10.0	< 10.0
11/5/89-2/18/90	20.0	30.0	9.6	-	< 5.0	< 10.0	< 10.0
2/25/90-4/29/90	12.0	20.0	7.6	10.0	< 5.0	< 10.0	< 10.0
5/6/90-9/30/90	20.0	38.0	9.5	4.3	< 5.0	< 10.0	< 10.0
5/94	-	23.0	12.6	-	< 10.0	< 50.0	< 10.0
5/2/95	-	-	-	-	76.0	< 10.0	420.0
8/15/95	-	-	-	-	26.0	< 5.0	41.0
11/95	13.0	38.0	19.0	84.0	< 1.0	< 5.0	< 1.0

854820081

TABLE 3 Continued . . .

P-13

Date Sampled	BOD	COD	TOC	Chloride	Methylene Chloride	Butanol	Acetone
7/8/85-9/29/85	18.8	38.0	8.0	62.0	< 3.0	< 10.0	< 10.0
3/16/86-1/3/87	35.0	47.0	10.0	115.0	8.0	< 10.0	40.0
1/5/87-4/4/87	38.0	50.0	18.0	115.0	< 5.0	< 10.0	< 10.0
4/5/87-7/4/87	35.6	60.0	9.0	30.0	< 5.0	< 10.0	< 10.0
7/5/87-10/3/87	22.7	47.0	14.0	128.0	< 5.0	< 10.0	< 10.0
10/4/87-1/2/88	35.6	47.0	14.0	128.0	< 5.0	< 10.0	< 10.0
1/3/88-4/18/88	32.0	45.0	14.0	110.0	< 5.0	< 10.0	< 10.0
4/25/88-8/8/88	18.8	38.0	8.0	33.0	< 5.0	< 10.0	< 10.0
8/15/88-11/27/88	22.7	47.0	14.0	28.0	< 5.0	< 10.0	< 10.0
12/4/88-3/19/89	40.0	55.0	20.0	80.0	< 5.0	< 10.0	< 10.0
3/26/89-7/9/89	11.0	18.0	7.0	30.0	< 5.0	< 10.0	< 10.0
7/16/89-10/26/89	15.0	20.0	6.4	15.5	< 5.0	< 10.0	< 10.0
11/5/89-2/18/90	11.0	10.0	7.5	15.0	< 5.0	< 10.0	< 10.0
2/25/90-4/29/90	15.0	28.0	7.0	15.0	< 5.0	< 10.0	< 10.0
5/6/90-9/30/90	57.0	32.0	4.7	200.0	< 5.0	< 10.0	< 10.0
5/94	-	56.0	19.6	-	< 10.0	< 1,000.0	< 2,100.0
11/4/94	6.7	< 10.0	< 5.0	43.0	< 2.0	< 10.0	< 2.0
2/13/95	36.0	< 10.0	20.0	420.0	6.0	< 100.0	56.0
5/2/95	11.0	97.0	17.0	260.0	< 2.0	Butanol	< 2.0
8/15/95	11.0	33.0	12.0	-	54.0	< 5.0	120.0
11/95	5.0	22.0	30.0	170.0	4.2	< 5.0	< 1.0

MW-14

Date Sampled	BOD	COD	TOC	Chloride	Methylene Chloride	Butanol	Acetone
4/25/88-8/8/88	< 3.0	9.0	5.0	15.0	< 5.0	< 10.0	< 10.0
12/4/88-3/19/89	30.0	45.0	10.0	15.0	< 5.0	< 10.0	< 10.0
2/25/90-4/29/90	10.0	25.0	8.0	20.0	< 5.0	< 10.0	< 10.0
5/6/90-9/30/90	< 3.0	21.0	8.0	31.3	< 5.0	< 10.0	< 10.0
5/94	-	26.0	18.1	-	< 10.0	< 50.0	< 10.0
11/95	-	32.0	-	-	2.9	-	11.0

854820082

TABLE 3 Continued . . .

MW-17

Date Sampled	BOD	COD	TOC	Chloride	Methylene Chloride	Butanol	Acetone
7/8/85-9/29/85	11.6	42.5	8.0	17.0	< 3.0	< 10.0	< 10.0
3/16/86-1/3/87	28.0	32.0	11.0	27.0	< 5.0	< 10.0	< 10.0
1/5/87-4/4/87	28.0	32.0	11.0	27.0	< 5.0	< 10.0	< 10.0
4/5/87-7/4/87	11.6	55.0	12.0	17.0	< 5.0	< 10.0	< 10.0
7/5/87-10/3/87	31.7	10.0	6.0	27.0	< 5.0	< 10.0	< 10.0
10/4/87-1/2/88	9.7	10.0	6.0	27.0	< 5.0	< 10.0	< 10.0
1/3/88-4/18/88	9.0	< 3.0	5.0	25.0	< 5.0	< 10.0	< 10.0
8/15/88-11/27/88	25.1	65.0	5.0	43.0	< 5.0	< 10.0	< 10.0
12/4/88-3/19/89	20.0	23.0	12.0	35.0	< 5.0	< 10.0	< 10.0
3/26/89-7/9/89	18.0	20.0	11.6	15.0	< 5.0	< 10.0	< 10.0
7/16/89-10/26/89	12.0	22.0	9.0	9.0	< 5.0	< 10.0	< 10.0
11/5/89-2/18/90	18.0	18.0	11.6	16.0	< 5.0	< 10.0	< 10.0
5/6/90-9/30/90	< 3.0	12.0	7.3	26.1	< 5.0	< 10.0	< 10.0
11/94	7.7	58.0	7.1	32.0	< 2.0	< 10.0	< 2.0
2/13/95	< 2.0	36.0	5.9	1800.0	5.0	< 100.0	5.0
5/2/95	< 2.0	50.0	6.7	310.0	< 2.0	< 10.0	< 2.0
8/15/95	< 2.0	< 10.0	9.8	-	22.0	< 5.0	< 1.0
11/95	< 4.0	< 10.0	19.0	45.0	3.9	< 5.0	< 1.0

Butanol

MW-24

Date Sampled	BOD	COD	TOC	Chloride	Methylene Chloride	Butanol	Acetone
7/8/85-9/29/85	25.1	35.0	6.0	27.0	< 3.0	< 10.0	< 10.0
3/16/86-1/3/87	18.0	20.0	9.0	20.0	< 5.0	< 10.0	< 10.0
1/5/87-4/4/87	30.0	45.0	17.0	38.0	< 5.0	< 10.0	< 10.0
4/5/87-7/4/87	47.6	55.0	16.0	39.0	< 5.0	< 10.0	< 10.0
7/5/87-10/3/87	18.8	42.5	8.0	17.0	< 5.0	< 10.0	< 10.0
10/4/87-1/2/88	25.1	35.0	8.0	17.0	< 5.0	< 10.0	< 10.0
1/3/88-4/18/88	44.0	4.0	10.0	27.0	< 5.0	< 10.0	< 10.0
8/15/88-11/27/88	20.0	38.0	6.0	25.0	< 5.0	< 10.0	< 10.0
12/4/88-3/19/89	30.0	38.0	15.0	50.0	< 5.0	< 10.0	< 10.0
3/26/89-7/9/89	17.0	25.0	6.7	20.0	< 5.0	< 10.0	< 10.0
7/16/89-10/26/89	20.0	35.0	8.0	18.0	< 5.0	< 10.0	< 10.0
11/5/89-2/18/90	12.0	15.0	9.3	3.9	< 5.0	< 10.0	< 10.0
5/6/90-9/30/90	61.0	87.0	5.3	3.9	< 5.0	< 10.0	< 10.0
5/94	-	35.0	9.6	-	< 10.0	< 50.0	< 10.0
11/94	150.0	74.0	14.0	16.0	4.0	< 10.0	< 2.0
2/13/95	8.5	41.0	12.0	45.0	4.0	< 200.0	7.0
5/2/95	< 2.0	62.0	7.0	29.0	4.0	< 10.0	< 2.0
8/15/95	< 2.0	20.0	7.7	-	15.0	< 5.0	< 1.0
11/95	< 2.0	12.0	16.0	49.0	< 1.0	< 5.0	< 1.0

854820083

TABLE 3 Continued . . .

MW-25

Date Sampled	BOD	COD	TOC	Chloride	Methylene Chloride	Butanol	Acetone
7/8/85-9/29/85	9.7	10.0	6.0	25.0	< 3.0	< 10.0	< 10.0
3/16/86-1/3/87	30.0	43.0	14.0	25.0	< 5.0	< 10.0	< 10.0
1/5/87-4/4/87	35.0	48.0	15.0	55.0	< 5.0	< 10.0	< 10.0
4/5/87-7/4/87	43.2	35.0	11.0	28.0	< 5.0	< 10.0	< 10.0
7/5/87-10/3/87	20.0	55.0	12.0	89.0	< 5.0	< 10.0	< 10.0
10/4/87-1/2/88	11.6	42.5	12.0	89.0	< 5.0	< 10.0	< 10.0
1/3/88-4/18/88	249.0	5.0	9.0	38.0	< 5.0	< 10.0	< 10.0
8/15/88-11/27/88	18.8	42.5	8.0	28.0	< 5.0	< 10.0	< 10.0
12/4/88-3/19/89	12.0	20.0	8.0	25.0	< 5.0	< 10.0	< 10.0
3/26/89-7/9/89	20.0	30.0	12.0	18.0	< 5.0	< 10.0	< 10.0
7/16/89-10/26/89	12.0	30.0	6.0	22.0	< 5.0	< 10.0	< 10.0
11/5/89-2/18/90	20.0	20.0	3.5	21.0	< 5.0	< 10.0	< 10.0
5/6/90-9/30/90	6.0	15.0	5.7	21.1	< 5.0	< 10.0	< 10.0
5/94	-	42.0	8.4	-	< 10.0	< 50.0	< 10.0
11/94	7.2	< 10.0	7.9	240.0	< 2.0	< 10.0	240.0
2/13/95	7.0	49.0	13.0	190.0	6.0	< 100.0	18.0
5/2/95	< 2.0	70.0	11.0	160.0	3.0	< 10.0	56.0
8/15/95	7.0	39.0	13.0	-	13.0	< 5.0	42.0
11/95	< 4.0	17.0	18.0	6.7	< 1.0	Butanol	< 1.0

MW-26

Date Sampled	BOD	COD	TOC	Chloride	Methylene Chloride	Butanol	Acetone
4/25/88-8/8/88	4.0	44.0	10.0	28.0	< 5.0	< 10.0	< 10.0
12/4/88-3/19/89	35.0	42.0	18.0	85.0	< 5.0	< 10.0	< 10.0
2/25/90-4/29/90	15.0	28.0	9.3	12.0	< 5.0	< 10.0	< 10.0
5/6/90-9/30/90	< 3.0	18.0	42.0	21.7	< 5.0	< 10.0	< 10.0

854820084

TABLE 3 Continued . . .

MW-27

Date Sampled	BOD	COD	TOC	Chloride	Methylene Chloride	Butanol	Acetone
5/94	-	43.0	8.4	-	< 10.0	< 50.0	< 10.0
11/95	-	17.0	-	-	2.8	-	17.0

MW-28

Date Sampled	BOD	COD	TOC	Chloride	Methylene Chloride	Butanol	Acetone
7/8/85-9/29/85	20.0	38.0	5.0	43.0	< 3.0	< 10.0	< 10.0
3/16/86-1/3/87	27.0	45.0	14.0	30.0	< 5.0	< 10.0	< 10.0
1/5/87-4/4/87	15.0	21.0	6.0	20.0	< 5.0	< 10.0	< 10.0
4/5/87-7/4/87	-	-	9.0	22.0	< 5.0	< 10.0	< 10.0
7/5/87-10/3/87	9.7	55.0	16.0	78.0	< 5.0	< 10.0	< 10.0
10/4/87-1/2/88	47.6	55.0	16.0	78.0	< 5.0	< 10.0	< 10.0
1/3/88-4/18/88	219.0	14.0	13.0	55.0	< 5.0	< 10.0	< 10.0
1/5/88-11/27/8	20.0	55.0	12.0	89.0	< 5.0	< 10.0	< 10.0
12/4/88-3/19/89	28.0	35.0	10.0	40.0	< 5.0	Butanol	< 10.0
3/26/89-7/9/89	23.0	40.0	15.0	30.0	< 5.0	< 10.0	< 10.0
1/16/89-10/26/8	13.0	17.0	13.7	17.0	< 5.0	< 10.0	< 10.0
11/5/89-2/18/90	11.0	10.0	4.9	14.0	< 5.0	< 10.0	< 10.0
5/6/90-9/30/90	11.0	21.0	4.9	40.0	< 5.0	< 10.0	< 10.0
5/94	-	104.0	35.6	-	< 10.0	< 50.0	< 10.0
11/94	42.0	240.0	13.0	230.0	< 2.0	Butanol	< 2.0
2/13/95	22.0	58.0	14.0	280.0	13.0	< 100.0	12.0
5/2/95	7.0	210.0	74.0	300.0	42.0	< 10.0	130.0
8/15/95	13.0	43.0	15.0	-	12.0	< 5.0	78.0

854820085

TABLE 3 Continued . . .

MW-29

Date Sampled	BOD	COD	TOC	Chloride	Methylene Chloride	Butanol	Acetone
7/8/85-9/29/85	20.0	65.0	6.0	36.0	< 3.0	< 10.0	< 10.0
3/16/86-1/3/87	30.0	48.0	9.0	15.0	< 5.0	< 10.0	< 10.0
1/5/87-4/4/87	25.0	30.0	8.0	45.0	< 5.0	< 10.0	< 10.0
4/5/87-7/4/87	22.7	47.0	14.0	25.0	< 5.0	< 10.0	< 10.0
7/5/87-10/3/87	11.6	35.0	11.0	22.0	< 5.0	< 10.0	< 10.0
10/4/87-1/2/88	43.2	55.0	11.0	22.0	< 5.0	< 10.0	< 10.0
1/3/88-4/18/88	141.0	< 3.0	5.0	20.0	< 5.0	< 10.0	< 10.0
8/15/88-11/27/88	10.0	55.0	16.0	78.0	< 5.0	< 10.0	< 10.0
12/4/88-3/19/89	30.0	40.0	15.0	80.0	< 5.0	< 10.0	< 10.0
3/26/89-7/9/89	15.0	25.0	10.0	25.0	< 5.0	< 10.0	< 10.0
7/16/89-10/26/89	20.0	30.0	10.0	15.0	< 5.0	< 10.0	< 10.0
11/5/89-2/18/90	< 3.0	10.0	8.8	14.0	< 5.0	< 10.0	< 10.0
5/6/90-9/30/90	< 3.0	15.0	8.8	4.1	< 5.0	< 10.0	< 10.0
11/95	17.0	80.0	39.0	250.0	4.6	< 5.0	< 1.0

P-30

Date Sampled	BOD	COD	TOC	Chloride	Methylene Chloride	Butanol	
						Butanol	Acetone
7/8/85-9/29/85	38.8	510.0	120.0	331.0	25,000.0	< 10.0	40,000.0
3/16/86-1/3/87	38.0	50.0	18.0	75.0	30.0	< 10.0	40.0
1/5/87-4/4/87	48.0	63.0	28.0	62.0	8,500.0	Butanol	4,500.0
4/5/87-7/4/87	52.0	65.0	26.0	40.0	8,000.0	< 10.0	4,200.0
7/5/87-10/3/87	45.0	55.0	22.0	50.0	5,000.0	< 10.0	3,000.0
10/4/87-1/2/88	40.0	52.0	20.0	60.0	4,500.0	< 10.0	2,000.0
1/3/88-4/18/88	48.0	63.0	28.0	62.0	3,000.0	< 10.0	1,300.0
4/25/88-8/8/88	52.0	55.0	25.0	40.0	2,900.0	< 10.0	1,200.0
8/15/88-11/27/88	45.0	55.0	25.0	30.0	1,200.0	< 10.0	1,400.0
12/4/88-3/19/89	30.0	50.0	18.0	60.0	1,500.0	< 10.0	1,800.0
3/26/89-7/9/89	25.0	33.0	605.0	30.0	20,000.0	< 10.0	950.0
7/16/89-10/26/89	40.0	55.0	15.0	19.0	1,000.0	< 10.0	200.0
11/5/89-2/18/90	75.0	97.0	23.0	20.0	1,200.0	< 10.0	150.0
2/25/90-4/29/90	40.0	50.0	8.5	25.0	1,000.0	< 10.0	< 10.0
5/6/90-9/30/90	18.0	27.0	71.5	100.0	900.0	< 10.0	< 10.0
5/94	-	64.0	15.8	-	970.0	< 500.0	< 10.0
11/4/94	9.0	< 10.0	7.5	100.0	31.0	< 10.0	74.0
2/13/95	8.9	26.0	17.0	220.0	970.0	< 1,000.0	990.0
5/2/95	3.0	45.0	8.0	160.0	575.0	< 10.0	160.0
8/15/95	12.0	45.0	15.0	-	3,000.0	< 250	460.0
11/95	< 2.0	26.0	22.0	200.0	< 1.0	< 5.0	53.0

854820086

TABLE 3 Continued . . .

MW-31

Date Sampled	BOD	COD	TOC	Chloride	Methylene Chloride	Butanol	Acetone
4/25/88-8/8/88	5.0	249.0	9.0	22.0	< 5.0	< 10.0	< 10.0
7/16/89-10/26/89	18.0	30.0	3.8	30.0	< 5.0	< 10.0	< 10.0
2/25/90-4/29/90	20.0	32.0	5.5	15.0	< 5.0	< 10.0	< 10.0
5/6/90-9/30/90	8.0	10.0	46.0	19.3	< 5.0	< 10.0	< 10.0
5/94	-	27.0	7.1	-	< 10.0	< 50.0	< 10.0
11/95	-	11.0	-	-	4.6	-	8.9

MW-32

Date Sampled	BOD	COD	TOC	Chloride	Methylene Chloride	Butanol	Acetone
4/25/88-8/8/88	14.0	219.0	13.0	25.0	< 5.0	< 10.0	< 10.0
7/16/89-10/26/89	20.0	28.0	5.5	15.0	< 5.0	< 10.0	< 10.0
2/25/90-4/29/90	15.0	30.0	4.0	20.0	< 5.0	< 10.0	< 10.0
5/6/90-9/30/90	45.0	35.0	132.0	22.4	< 5.0	< 10.0	< 10.0
5/94	-	33.0	9.7	-	< 10.0	Butanol	< 10.0
11/95	-	19.0	-	-	4.5	-	14.0

MW-33A

Date Sampled	BOD	COD	TOC	Chloride	Methylene Chloride	Butanol	Acetone
						Butanol	
4/25/88-8/8/88	141.0	< 3.0	5.0	30.0	< 5.0	< 10.0	< 10.0
7/16/89-10/26/89	15.0	25.0	6.0	20.0	< 5.0	< 10.0	< 10.0
2/25/90-4/29/90	10.0	23.0	4.5	30.0	< 5.0	< 10.0	< 10.0
5/6/90-9/30/90	< 3.0	15.0	253.0	20.7	< 5.0	< 10.0	< 10.0
11/95	-	19.0	-	-	4.3	-	15.0

854820087

TABLE 3 Continued...

P-32AB

Date Sampled	BOD	COD	TOC	Chloride	Methylene Chloride	Butanol	Acetone
7/8/85-9/29/85	910.0	1,300.0	360.0	335.0	75,000.0	27,000.0	82,000.0
3/16/86-1/3/87	850.0	1,450.0	250.0	228.0	110,000.0	69,000.0	120,000.0
1/5/87-4/4/87	175.0	225.0	65.0	115.0	62,000.0	25,100.0	32,000.0
4/5/87-7/4/87	180.0	262.0	60.0	110.0	58,000.0	12,300.0	25,000.0
7/5/87-10/3/87	175.0	250.0	50.0	115.0	51,000.0	10,500.0	16,000.0
10/4/87-1/2/88	150.0	225.0	42.0	110.0	45,000.0	5,000.0	9,000.0
1/3/88-4/18/88	175.0	225.0	65.0	115.0	74,000.0	7,800.0	11,000.0
4/25/88-8/8/88	100.0	150.0	40.0	70.0	66,700.0	7,500.0	17,000.0
8/15/88-11/27/88	90.0	120.0	30.0	25.0	50,200.0	8,000.0	10,000.0
12/4/88-3/19/89	80.0	100.0	25.0	70.0	40,000.0	5,600.0	8,000.0
3/26/89-7/9/89	43.0	55.0	10.0	18.0	35,500.0	5,100.0	8,500.0
7/16/89-10/26/89	60.0	70.0	18.0	20.0	40,000.0	4,800.0	7,800.0
11/5/89-2/18/90	82.0	115.0	35.0	25.0	35,250.0	2,800.0	5,000.0
2/25/90-4/29/90	70.0	80.0	22.0	20.0	30,200.0	800.0	3,200.0
5/6/90-9/30/90	171.0	230.0	70.1	100.0	26,000.0	< 10.0	2,100.0
5/94	-	138.0	51.6	-	18,000.0	< 5,000.0	9,000.0
11/4/94	6.1	< 10.0	8.8	170.0	510.0	< 10.0	190.0
2/13/95	63.0	70.0	45.0	140.0	3,000.0	< 20,000.0	15,000.0
5/2/95	16.0	92.0	21.0	150.0	5,420.0	Butanol	3,290.0
8/15/95	160.0	230.0	56.0	-	59,000.0	< 1,000.0	12,000.0
11/95	< 2.0	56.0	40.0	79.0	190.0	< 5.0	90.0

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Butanol

Date Sampled	BOD	COD	TOC	Chloride	Methylene Chloride	Butanol	Acetone
7/8/85-9/29/85	31.7	60.0	9.0	48.0	< 3.0	< 10.0	< 10.0
3/16/86-1/3/87	18.0	25.0	10.0	40.0	< 5.0	< 10.0	< 10.0
1/5/87-4/4/87	32.0	45.0	14.0	110.0	< 5.0	< 10.0	< 10.0
4/5/87-7/4/87	18.8	38.0	8.0	33.0	< 5.0	< 10.0	< 10.0
7/5/87-10/3/87	43.2	-	9.0	47.0	< 5.0	< 10.0	< 10.0
10/4/87-1/2/88	22.7	35.0	9.0	47.0	< 5.0	< 10.0	< 10.0
1/3/88-4/18/88	22.0	< 3.0	2.0	45.0	< 5.0	< 10.0	< 10.0
4/25/88-8/8/88	< 3.0	22.0	2.0	25.0	< 5.0	< 10.0	< 10.0
8/15/88-11/27/88	11.6	35.0	11.0	22.0	< 5.0	< 10.0	< 10.0
3/26/89-7/9/89	< 3.0	10.0	3.0	19.0	< 5.0	< 10.0	< 10.0
7/16/89-10/26/89	10.0	15.0	8.0	18.0	< 5.0	< 10.0	< 10.0
11/5/89-2/18/90	22.0	10.0	13.5	5.0	< 5.0	< 10.0	< 10.0
2/25/90-4/29/90	18.0	25.0	9.0	10.0	< 5.0	< 10.0	< 10.0
5/6/90-9/30/90	< 3.0	18.0	3.0	5.1	< 5.0	< 10.0	< 10.0
5/94	-	-	4.2	-	< 10.0	< 50.0	< 10.0
11/94	4.2	< 10.0	< 5.0	61.0	< 2.0	< 10.0	< 2.0
2/13/95	< 2.0	< 10.0	< 5.0	41.0	6.0	< 100.0	3.0
5/2/95	< 2.0	35.0	< 5.0	29.0	< 2.0	< 10.0	< 2.0
8/15/95	< 2.0	< 10.0	5.9	-	9.6	< 5.0	< 1.0
11/95	-	45.0	-	-	1.8	-	200.0

2.7
G.M. report

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TABLE 3 Continued . . .

DEEP WELL

Date Sampled	BOD	COD	TOC	Chloride	Methylene Chloride	Butanol	Acetone
5/94	-	62.0	1.1	-	< 10.0	< 50.0	< 10.0
11/95	-	43.0	-	-	1.5	-	-

EFFLUENT

Date Sampled	BOD	COD	TOC	Chloride	Methylene Chloride	Butanol	Acetone
7/8/85-9/29/85	52.0	70.0	20.0	40.0	< 3.0	< 10.0	< 10.0
3/16/86-1/3/87	30.0	43.0	48.0	40.0	< 5.0	< 10.0	< 10.0
1/5/87-4/4/87	-	-	45.0	42.0	< 5.0	< 10.0	< 10.0
4/5/87-7/4/87	-	-	-	-	< 5.0	< 10.0	< 10.0
7/5/87-10/3/87	33.0	41.0	38.0	30.0	< 5.0	< 10.0	< 10.0
10/4/87-1/2/88	31.0	42.0	39.0	35.0	< 5.0	< 10.0	< 10.0
1/3/88-4/18/88	21.0	37.0	10.0	42.0	< 5.0	< 10.0	< 10.0
4/25/88-8/8/88	20.0	10.0	6.0	27.0	< 5.0	< 10.0	< 10.0
1/15/88-11/27/8	33.0	40.0	35.0	30.0	< 5.0	Butanol	< 10.0
12/4/88-3/19/89	25.0	35.0	10.0	28.0	< 5.0	< 10.0	< 10.0
3/26/89-7/9/89	< 3.0	10.0	5.0	9.0	< 5.0	< 10.0	< 10.0
1/16/89-10/26/8	10.0	15.0	6.3	18.0	< 5.0	< 10.0	< 10.0
11/5/89-2/18/90	20.0	30.0	10.0	60.0	< 5.0	< 10.0	< 10.0
2/25/90-4/29/90	15.0	20.0	5.5	15.0	< 5.0	< 10.0	< 10.0
5/6/90-9/30/90	< 3.0	12.0	6.6	100.0	< 5.0	Butanol	< 10.0
2/13/95	12.0	24.0	9.7	250.0	240.0	< 200.0	110.0
5/2/95	7.0	48.0	8.6	220.0	87.0	< 10.0	24.0
8/15/95	130.0	33.0	5.0	-	350.0	< 5.0	59.0

854820089

**BIOCRAFT LABORATORIES, INC.
WALDWICK, NEW JERSEY
ISRA CASE #96070**

**APPENDIX A
ATTACHMENT A
FIELD SAMPLING PLAN**

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1.0 INTRODUCTION

This Field Sampling Plan (FSP) describes the sampling procedures, field measurements, and sample analyses to be performed during the Industrial Site Recovery Act (ISRA) investigation at the Biocraft Laboratories, Inc. (Biocraft) property, in Waldwick, New Jersey.

The FSP is provided to ensure that all field investigation information, data, and resulting decisions are technically sound, statistically valid and properly documented.

2.0 SITE DESCRIPTION

Biocraft Laboratories, Inc. (Biocraft) manufactures semi-synthetic penicillin products in bulk form. The facility consists of two buildings, a manufacturing building and warehouse, which are located on two contiguous properties with frontages on 12 Industrial Park and 140 Hopper Avenue in Waldwick, Bergen County, New Jersey. Figure 1 shows the site location. The office, maintenance, and production areas, and research and development laboratories are located in the manufacturing building. Bulk finished products and some raw materials are stored in the warehouse building, which also houses the quality control and microbiology laboratories.

The manufacturing and warehouse buildings, and parking areas cover approximately 30 percent of the 4.3 acre property. Landscaped areas cover approximately 10 percent of the property, and the remainder of the property is lightly wooded. The property is relatively flat with slopes ranging from 1 to 3 percent. Drawing 1 shows the site plan.

3.0 PHYSICAL SETTING

3.1 Soil

The dominant soil type in the study area is classified as Dunellen. Dunellen soils have a very dark, grayish brown loam surface layer approximately 5 inches thick. The subsoil is approximately 21 inches thick, of which, the upper 10 inches is friable, dark yellowish brown loam and the lower 11 inches is friable brown loam. The substratum is stratified reddish brown gravelly sand, sand, and loamy sand and brown sandy loam to a depth of 66 inches. Permeability of the Dunellen soils is moderate to moderately rapid in the subsoil and rapid in the substratum.

3.2 Geology and Hydrogeology

The site is located in an area of unstratified and stratified drift deposited by the Wisconsin glacier and its meltwaters during the Pleistocene Epoch of the Quaternary Period. Thin layers of silt and gravel are generally found from grade to 3 feet below grade. Glacial till underlies the site at a thicknesses of 8 to 15 feet. The glacial till consists of a poorly sorted mixture of boulders, cobbles, pebbles, sand, silt, and clay. Approximately 40 feet of semiconsolidated silt and fine sand underlie the till layer. Brunswick Shale of the Triassic Newark Group underlies the site at a depth of 50 to 60 feet below grade. The thickness of the Brunswick Shale is not known but is estimated to be greater than 6,000 feet.

Groundwater beneath the site exists in the void spaces of the unconsolidated quaternary glacial sediments and in the joints and fractures of the Brunswick Formation. The depth to groundwater ranges from grade to 9 feet below grade, depending on seasonal fluctuations. The groundwater flow direction is influenced by the groundwater recovery, treatment, and reinjection system. The inferred direction of groundwater flow is to the north, northwest at the northern section of the site, and to the south, southeast in the central and southern sections of the site.

4.0 AREA OF CONCERN

4.1 Former Underground Transfer Line

A 100-foot long underground steel pipe was installed in 1972 to transfer wastewater from the manufacturing building processing area to an underground wastewater storage tank. Plant Engineer Fred Furman indicated that the pipe was buried approximately 4 to 6 feet below grade. The wastewater contained low concentrations of acetone, methylene chloride, n-butyl alcohol and dimethyl aniline. Biocraft discovered a leak in the underground pipe in 1975 and removed the pipe from service. All underground pipes were replaced by aboveground pipes in 1975.

5.0 FIELD INVESTIGATION PROCEDURE

Eder Associates (EDER) will be responsible for project coordination, overall quality assurance (QA), sampling operations, field screening, and quality control (QC). Samples will be analyzed by a New Jersey certified laboratory who will be responsible for laboratory QC, data quality review, analytical performance and systems auditing.

Data collected during the field investigation will be used to determine whether the former underground pipe leak has impacted site soil. If so, additional data will be collected and used to define the nature and extent of contamination, and to determine the need for corrective action. The sample locations, number of samples collected and analytical parameters have been selected based on the contaminant source, the characteristics of the contaminant, and the physical environment (e.g., soil) into which the contaminant may have been released.

5.1 Soil Sampling Procedures

Four borings will be drilled near the former underground pipe and one boring will be drilled near the storm water sewer manhole west of the former pipe leak using hollow stem augers. Boring locations are shown on Figure 2. Soil samples will be collected continuously from grade to 8-feet below grade or to the water table. Soil samples will be collected in 24-inch intervals using a split spoon. Each 24-inch sample will be split into four 6-inch intervals and screened for organic vapor using a photoionization detector (PID). The sample from the 4 to 8-foot below grade interval with the highest PID reading will be analyzed in the laboratory. The sample from the 6-inch interval above groundwater or the sample collected from 7.5 to 8-feet below grade sample will be sent for laboratory analysis if all PID readings are the same.

6.0 LABORATORY ANALYSIS

One sample from each boring will be sent to a New Jersey certified laboratory and analyzed for volatile organic compounds (VOCs) using USEPA Method 8240. Four QA/QC samples (one field blank, one matrix spike, one matrix spike duplicate, and one field duplicate) will also be analyzed for VOCs. All laboratory reports will meet NJDEP Reduced Deliverable requirements.

7.0 QUALITY ASSURANCE/QUALITY CONTROL PLAN

The overall QA/QC objective is to develop and implement for sampling, laboratory analyses, field measurement, and reporting procedures that will provide data quality consistent with its intended use. The following sections outline the procedures to achieve the QA/QC objectives.

7.1 Sample Containers and Sample Preservatives

Sample containers and sample preservatives will be selected based on the sample matrix, potential contaminants, and the analytical methods, as outlined in USEPA SW-846. All sample containers will be prepared and quality controlled by the analytical laboratory.

Sample volumes, containers, preservatives, and holding times required for each analysis will meet the NJDEP requirements outlined in the May 1992 Field Sampling Procedures Manual.

7.2 Sample Holding, Shipping and Custody

Pertinent sample identification information will be recorded on the labels at the sampling location, and the labels will be affixed to the sample container and protected by clear waterproof tape. The sample jars will be placed in appropriate containers provided by the laboratory and maintained chilled with ice. A custody seal will be placed over the container lid to assure the integrity of the samples until they arrive at the laboratory.

Sample handling and chain-of-custody procedures will be maintained at all times. A chain-of-custody form will be initiated and completed by the laboratory performing the analyses. The chain-of-custody form will provide an accurate written record to trace sample possession and holding from the time of sampling through data analysis and reporting. The following information will be specified for each sample on the chain-of-custody form: 1) sample number, 2) sample collection date, 3) approximate sample collection time, 4) sample location (which may be

incorporated in the sample number), 5) sample preservation method, 6) sample matrix, and 7) analyses requested.

The chain-of-custody will be signed by the on-site field supervisor and placed in a water tight plastic bag taped to the underside of the sample shipping container.

All sample containers will be shipped to the laboratory as soon as possible but no later than 24-hours after sample collection for a one day sampling effort. The samples will be shipped no later than 48 hours after sample collection, if either an overnight carrier is required or the sampling effort exceeds one day. Samples will be checked in by the laboratory's sample custodian on arrival at the laboratory. The custodian will sign the chain-of-custody documenting receipt of the samples from the carrier, verify that the number of samples received in the shipment is listed on the chain-of-custody, verify label information, and document the integrity and condition of all samples on the chain-of-custody form. The custodian will notify EDER's project manager in the event that there are any discrepancies or problems with the sample shipment.

The laboratory will retain the samples for 30 days after the analyses are complete.

7.3 Field Documentation

Bound field ledgers/books will be used to record all field activities. Entries will be made in as much detail as possible in order to reconstruct a particular situation at a later date without relying on memory. Field ledgers will be assigned to all field personnel and will be stored in the project file. Each ledger will be identified by the project number and book number. All entries will be made in ink and no erasures will be made. If an incorrect entry is made, the information will be crossed out with a single mark. All pertinent calibration information, field measurements, descriptions and photolog information will be documented.

7.4 Sample Location Identification

Data that identify the sample location will be maintained in the project log book and will consist of the following:

- Date
- Time
- Location (measured from a fixed reference point)
- Sample type
- Sample preservation and analysis
- Sample handling (such as field filtration)
- Sampler's name and affiliation
- Client's name and project number

7.5 Calibration Procedures and Frequency

All field and laboratory equipment will be calibrated prior to use. The calibration procedures will follow the manufacturer's instructions to assure that the equipment is functions within the tolerances established by the manufacturer and analytical requirements.

Laboratory calibration will be performed in accord with the laboratory's SOP.

Microtip - Field calibration will be based on an isobutylene in air standard. The calibration will be verified daily using a standard reference gas. If readings vary more than 10 percent from the standard value and the unit cannot be recalibrated, it will be replaced. All calibrations will be recorded in a bound ledger.

7.6 QA/QC Samples

Field duplicates and field blanks will be collected and sent to the laboratory to provide a means to assess the quality of the data from the field sampling program. Field duplicate samples will be analyzed to evaluate sampling and analytical reproducibility. Field blank samples will be analyzed to check for procedural contamination.

7.6.1 Field Blanks

One field blank will be collected for all sampling equipment and for each matrix. The field blank will be an identical bottle to bottle transfer. The blank water will be the same that the laboratory uses for its method blanks.

Non-Aqueous Matrix

Field blanks will only be analyzed for VOCs using EPA Method 8240. It is anticipated that one field blank will be required for this sampling event, but field blanks will be collected at a rate of 10 percent of the total number of samples collected throughout a sampling event that lasts longer than one day.

7.6.2 Trip Blanks

Trip blank is not required for non-aqueous matrix sampling.

7.6.3 Field Duplicates

One duplicate sample per matrix will be obtained for every 20 samples collected.

Non-Aqueous Matrix

Samples collected for VOC analyses will be collected from discrete intervals without compositing or mixing. The sample will be divided in half and the containers filled by scooping material alternately from each half. A detailed description of soil sampling is presented in Section 5.1

7.7 Field Equipment

Soil samples will be collected using the equipment listed in Table 1.

7.8 Decontamination of Sampling Equipment

All sampling equipment will be decontaminated to reduce the potential for cross-contamination. The drill rig will be steam-cleaned or pressure washed at a designated decontamination area, away from the drilling area, before and after each boring is drilled. Augers, drill rods, and assorted hand tools will also be steam cleaned or pressure washed on pipe racks or pallets at the decontamination area. Equipment cleaning will be of sufficient duration to remove dirt, contamination, and/or oil and grease.

Split spoon samplers, stainless steel spatulas and other soil sampling equipment will be decontaminated in the field using the procedures outlined in the NJDEP Field Sampling Procedures Manual, May 1992.

Water generated during decontamination will be applied to the ground surface at the location specified by the on-site field supervisor. In accordance with the protocols outlined in the May 1992 NJDEP Field Sampling Procedures Manual, the decon water will be poured onto the ground provided it does not: 1) migrate off-site; 2) contaminate a previously uncontaminated aquifer and; 3) cause an increase in surface soil contamination. The decon water will be containerized if these conditions cannot be met.

7.9 Field Measurements

The sampling activities will include field measurements to establish conditions at the time of sampling.

Field measurements will be made under conditions, at frequencies, and for the length of time determined by the work and the characteristics of the contaminant. Ancillary data such as weather conditions and the time of day will be collected to determine if related factors (e.g. rainfall) impact the sample quality.

Information related to field measurement operations and procedures will be recorded in the project log book. This information will include:

- procedures and forms for recording raw data and the exact location, time, and facility-specific considerations associated with the data acquisition
 - calibration of equipment
 - collection of replicate measurements
 - submission of field blanks
 - potential interferences
 - field equipment used
- decontamination procedures

7.11 Sample Analysis

A New Jersey Certified Laboratory will be selected by competitive bids. The laboratory will be responsible for the following

- Chain-of-custody procedures, including
 1. identifying the laboratory sample custodian

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2. providing a laboratory sample custody log consisting of serially-numbered lab-tracking report sheets
 3. specifying laboratory sample custody procedures for sample handling, storage, and disbursement for analysis
- Sample storage and holding times
 - Sample preparation methods
 - Analytical procedures, including
 1. scope and application of the procedure
 2. sample matrix
 3. potential interferences
 4. precision and accuracy of the methodology
 5. method detection limits
 - Calibration procedures and frequency
 - Data reduction, validation, and reporting
 - Internal quality control checks, laboratory performance, and system audits and frequency, including:
 1. method blank(s)
 2. laboratory control sample(s)
 3. calibration check sample(s)
 4. replicate sample(s)
 5. matrix-spiked sample(s)
 6. "blind" quality control sample(s)
 7. control charts
 8. surrogate samples
 9. zero and span gases
 10. reagent quality control checks

- Preventative maintenance procedures and schedules
- Corrective action for laboratory problems
- Turnaround time

The laboratory's QA manual will be submitted to the NJDEP upon request

8.0 HEALTH AND SAFETY PLAN

8.1 Introduction

This HASP applies to EDER personnel where EDER's operations at the site involve employee exposure (or the reasonable possibility of employee exposure) to safety or health hazards. EDER's policy is to minimize the possibility of work-related injury through aware and qualified supervision, health and safety training, medical monitoring and the use of appropriate personal protective equipment. EDER has established a guidance program and intends that the policy be implemented in a manner that protects its personnel to the maximum reasonable extent. The Corporate Health and Safety Program is documented in Appendix A of EDER's Employee Handbook, which is issued to each employee.

This HASP describes emergency response procedures and actual and potential physical and chemical hazards at the worksite. This HASP also provides information and guidance to contractors retained by EDER or Biocraft and to other parties who are outside of EDER's ability to control.

Notwithstanding the intent of this HASP as site specific hazard information and guidance, which is made available to all parties, contractors retained by EDER are independent contractors and are responsible for assuring the worksite safety of all of their employees and any other party retained by them.

This HASP was developed with the most recent and available information including applicable regulatory requirements (OSHA 29 CFR Parts 1910, 1926) and state and local codes. Activities governed by this HASP will be performed in conjunction with Biocraft health and safety procedures and human resource personnel responsible for health and safety. This HASP will be amended accordingly if additional safety measures are required. Site conditions may require that the site project manager/safety officer increase or decrease personnel protective measures. All workers will be briefed on any amendments made to this plan.

8.2 Hazard Evaluation

This Hazard Evaluation identifies the activity-specific hazards associated with site operations and standard operating procedures (SOPs) that should be implemented to 1) reduce hazards, 2) identify, general physical hazards that can be expected at the site, and 3) evaluate documented or potential chemical hazards at the site. Every effort must be made to reduce or eliminate these hazards. Those which cannot be eliminated must be guarded against using engineering controls and/or personal protective equipment.

Activities to be conducted during site remediation are drilling and soil sampling.

Overhead and underground utilities will be identified before any drilling work is done. Drilling work will be coordinated with Biocraft plant management who are familiar with the underground utility locations at the facility.

8.2.1 Activity-Specific Hazards and Standard Operating Procedures

8.2.1.1 Drilling and Soil Sampling

Hazards

- Inhalation of dust and/or volatile vapors;
- Skin contact with contaminated soil and groundwater;
- Physical impact with equipment;
- Slip/trip/fall;
- Noise;
- Electrical shock;
- Underground utilities;
- Explosion/fire;
- Heat stress and/or cold stress.

SOPs to Avoid Hazards

- Conduct air monitoring using a PID/FID to determine if respiratory protection is necessary;
- Wear appropriate personal protective equipment (gloves, tyvek, overboots, etc),
- Avoid the use of loose belts, drawstrings, loose straps that might catch on moving equipment, and keep work areas free of obstructions;
- Be familiar with site topography and site layout hazards. Keep all tools and equipment in a designated area;
- Wear hearing protection when working near heavy equipment;
- Lockout and tag electric main service when working on electrical components
- Electric tools must be connected through ground-fault interrupters;
- Markout utilities before excavating;
- Maintain fire extinguisher or other fire fighting equipment in work area;
- Ensure that all site personnel are familiar with the symptoms of heat stress and cold stress.

8.2.2 Chemical Hazards

Previous investigations indicate that volatile organic compounds (methylene chloride, acetone, and dimethylanine) are the primary contaminants of concern in the site soil.

This plan will be amended, as necessary, if other contaminants are identified in concentrations which may warrant additional safety precautions.

8.2.3 Biological Hazards

Biological agents can cause infection or disease to persons who are exposed, and may involve plants, animals or insects. Many biological agents require a carrier, such as bees, ticks, and snakes, to

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inoculate a host and controlling the agent may require controlling or avoiding the carrier. The most common biological agents that may be encountered at the site are bees and ticks. Workers should wear light colored, long sleeve shirts and pants while working at the site. Workers will not be permitted to wear shorts. A first-aid kit containing antiseptic and tweezers will be available at the site.

8.3 Key Personnel and Responsibilities

The following personnel and responsibilities are assigned during remedial activities:

Frederick H. Inyard, P.E.
Principal-in-Charge, Quality Assurance Officer
Eder Associates

Carol S. Graff
Senior Project Manager
Eder Associates

Mark Foley
Project Engineer
Eder Associates

The principal-in-charge is responsible for overall project management. Mark Foley will be the on-site health and safety officer (HSO), and will oversee daily safety issues and ensure that the HASP is implemented during remedial work.

The qualifications of the HSO comply with the OSHA training requirements (29 CFR Part 1910). The HSO has the authority to suspend site work based on safety concerns. The general responsibilities of the HSO are as follows:

1. To implement, enforce and monitor this HASP.

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2. Inform all personnel of the information in this safety plan and any other safety requirements to be observed during work area operations, including
 - a. Potential hazards,
 - b. Designation of key staff responsibilities;
 - c. Designation of work zones and levels of protection;
 - d. Decontamination procedures;
 - e. Air monitoring;
 - f. Personnel hygiene principles,
 - g. Personnel protective equipment,
 - h. Respiratory protective equipment usage and fit testing; and
 - i. Emergency procedures dealing with fire and medical situations.
3. Monitor air quality and all other hazards during operations.
4. Maintain a log that documents: (a) the names of workers and visitors in the work zone; (b) any chemical exposure symptoms exhibited by workers; and (c) safety problems encountered and mitigative actions taken.

8.4 Work Area Definition and Site Entry Procedures

Remedial investigation will take place at the location shown on Figure 2. A thirty foot radius area around this location will define the "work area". Access to work areas will be restricted to personnel who are familiar with this HASP and who have received OSHA-required (29 CFR 1910) training.

Decontamination areas will be established by the HSO to decontaminate construction and sampling equipment

The names of all personnel entering the work area will be recorded in the field notes. Before engaging in any site work, all personnel involved in such work will be briefed on the following

1. Identity of project manager/safety officer.
2. Chemical contaminants suspected of being in the work area and their signs and symptoms of exposure.
3. Location of first-aid equipment and qualified personnel.
4. Decontamination procedures when required.
5. Procedures to be used in contacting emergency response personnel, including potential site evacuation procedures in case of emergencies.
6. Contractor staff person in charge.
7. Activities taking place that day.
8. Heat or cold stress symptoms. All personnel will be advised to watch for signs of stress in staff working in the study area.
9. Personal protective equipment requirements and limitations.

It is the duty of the HSO to require all personnel entering the work areas at the site including workers and visitors to read this HASP and sign a statement indicating that they have done so

8.5 Personal Protection

The selection of personal protective equipment (PPE) will be in accord with the site air monitoring program described in Section 7.7 of this HASP, OSHA 29 CFR 1910.120(c) and (g), and 1910.132. Protective equipment shall be NIOSH-approved and the use of respiratory protection shall conform to OSHA 29 CFR 1910.133 and 1910.134 specifications; head protection shall conform to 1910.135, eye and face protection shall conform to 1910.133, and foot protection shall conform to 1910.136.

8.5.1 Level D

Level D PPE shall be donned when the atmosphere contains no known hazard and work functions preclude splashes, immersion or the potential for unexpected inhalation of, or contact with, hazardous concentrations of harmful chemicals. Level D PPE consists of:

- Standard work uniform or coveralls (or tyvek, as needed);
- Steel toe and steel shank work boots;
- Hard hat as needed;
- Gloves as needed; and
- Safety glasses as needed.

8.5.2 Level C

Level C PPE shall be donned when the concentrations of measured total organic vapors in the breathing zone are greater than the ACGIH 300 ppm TLV for gasoline using a PID/FID. The specifications on the air purifying respirator filters used must be appropriate for contaminants identified or expected to be encountered. Level C PPE consists of:

- Chemical resistant or coated tyvek coveralls;
- Steel toe and steel shank workboots;
- Chemical resistant overboots or disposable boot covers;

- Disposable inner gloves (surgical gloves),
- Disposable outer gloves;
- Full-face air purifying respirator fitted with organic vapor/dust and mist filters or filters appropriate for the contaminants identified or expected to be encountered,
- Hard-hat,
- Splash shield, as needed; and
- Ankles/wrists taped with duct tape

8.5.3 Activity-Specific Levels of Personal Protection

All remedial work will be performed in Level D PPE. This level of protection may be changed during site work based on the air quality monitoring.

8.5.4 Surveillance Equipment and Materials

Air sampling will be performed around the perimeter of the work zone using a PID/FID to establish background VOC conditions before starting field activities. A discussion of the sampling procedures is included in Section 7.7 of this HASP.

8.5.5 Medical Surveillance

A yearly medical exam of the general state of health, baseline physiological data and ability to wear personal protective equipment will be required for individuals engaged in on-site work activities in accordance with the USEPA's "Standard Operating Safety Guides" and OSHA CFR 29 Part 1910.120 (f). This HASP addresses only emergency medical care and treatment.

8.5.6 Personnel Safety/Hygiene

All on-site personnel shall follow the following safety practices:

- 1 Eating, drinking, chewing gum or tobacco, smoking, or any similar practice is prohibited in the work and decontamination areas
- 2 Hands and face must be thoroughly washed upon leaving the work area.
- 3 Whenever decontamination procedures for outer garments are in effect, it is recommended that the entire body be thoroughly washed as soon as possible after the protective garment is removed.
- 4 No excessive facial hair, which interferes with a satisfactory fit of the mask-to-face seal, is allowed for personnel required to wear respiratory protective equipment.
- 5 Contact with potentially contaminated surfaces in the work area should be avoided. Whenever possible, do not walk through puddles, mud, and other discolored surfaces; kneel on ground; or lean, sit or place equipment on drums, containers, vehicles, or the ground.
6. Medicine and alcohol can exaggerate the effects from exposure to toxic chemicals. Alcoholic beverages will not be allowed on-site.

Fluids will be provided to staff to replace perspiration. All fluids for ingestion will be kept in sealed containers outside of the work area.

The protective outer wear worn by workers will decrease body ventilation, which increases the potential for heat casualties. Extended outdoor work during cold periods may result in cold stress hazards. Site personnel will be instructed in the identification of a heat/cold stress victim, the first-aid treatment procedures, and the prevention of heat/cold stress casualties. A Heat/Cold Casualty Prevention Plan describes the symptoms and treatment for heat exhaustion, heat stroke, hypothermia and frostbite, and lists precautions to prevent heat/cold stress.

The following equipment will be maintained on-site for use in the event of an emergency

1. Twenty pound ABC type dry chemical fire extinguishers
2. An industrial first-aid kit.

8.5.7 Personnel Training

All personnel will be trained in accordance with the OSHA requirements in 29 CFR Part 1910.120(e) prior to working at this site. Training requirements include the initial 40-hour health and safety course and the 8-hour supervisor and refresher courses. All on-site personnel directly involved in field activities will be briefed by the on-site manager/safety officer on the levels of personal protective equipment required for site activities, safety and hygiene procedures, general cleanup procedures, symptoms of chemical exposure, heat/cold stress, work area entry and exit, and notification of emergency personnel. Periodic safety meetings will be held, as necessary, to inform these workers of changes in the safety plan and/or area conditions.

8.6 Decontamination Procedures

Decontamination procedures will be used when contact is made with the soil and groundwater in the work area. All decontamination procedures will be performed in the decontamination area designated by the HSO. The following are the personnel decontamination procedures:

1. All disposable protective clothing (garments, boot covers, gloves, etc.) will be removed in the decontamination area, placed in bags or drums, and properly disposed of.
2. Personnel engaged in site work shall wash their hands and face as appropriate before proceeding off-site, and shower and wash garments as soon as possible.

All potentially contaminated equipment will be decontaminated on-site by the use of either a pressure washer or potable water and detergent.

8.7 Air Quality Monitoring

Air quality will be monitored for total organic vapors using a Photovac Microtip® and/or Foxboro OVA before beginning the site work. Air monitoring equipment will be calibrated and maintained in accordance with manufacturer's instructions. Sampling will be performed as follows

1. Organic vapors will be monitored using a photoionization flame ionization detector instrument.
 - a. At least four measurements will be taken throughout the work area before starting the remedial construction to establish background concentrations
 - b. Measurements will be made continuously during excavation work.
 - c. Routine measurements will be made during sampling activities.
2. All measurements will be logged in a field notebook.
3. Level D protection will be used when organic vapor concentrations are less than 300 ppm.
4. Level C protection would be used if organic concentrations exceed 300 ppm.

8.8 Emergency Contingency Plan

Site personnel must be prepared in the event of an emergency. Emergencies can take many forms, illnesses or injuries, chemical exposure, fires, explosions, spills, leaks, releases of harmful contaminants, or sudden changes in the weather.

The HSO will conduct a meeting with all on-site personnel before the start of site work to discuss personnel roles during an emergency, lines of authority and communication, and emergency recognition and prevention. All emergency and PPE equipment will be inspected and tested during the meeting. Safe places of refuge and evacuation routes will be updated on an as needed basis.

A post-emergency meeting with all site personnel will be held if an emergency occurs to review the cause and resolution of the emergency, and to determine whether the HASP adequately addressed the emergency that occurred. The HASP will be revised to incorporate the information obtained during the post-emergency meeting.

A list of emergency telephone numbers and a map to the hospital will be available at the site. Site personnel should be familiar with the emergency incident procedures, and the locations of site safety, first aid, and communication equipment.

8.8.1 Emergency Equipment On-Site

Private Telephones	Biocraft Office, EDER mobile phone
Emergency Alarms	Portable Air Horn
First Aid Kits	On-Site EDER vehicle
Fire Extinguisher	On-Site EDER vehicle, Drill Rig

8.8.2 Emergency Contacts

Community

Police Department and EMS	911
Fire Department (including Ambulance)	911
Health Department	201-599-6100
Hospital	201-447-8100

Government Environmental Agencies

National Response Center	1-800-424-8802
Poison Control Center	1-800-962-1253
NJDEP	609-633-7141

8.8.3 Personnel Responsibilities During an Emergency

The HSO has primary responsibility to respond to and correct emergency situations.

- Take appropriate measures to protect personnel including: withdrawal from the work zone, total evacuation and securing of the site or upgrading or downgrading the level of protective clothing and respiratory protection;
- Ensure that appropriate Federal, State and local agencies are informed, and emergency response plans are coordinated. The local fire department must be summoned immediately in the event of fire or explosion. The local authorities must be informed in the event of an air release of toxic materials in order to assess the need for evacuation.

- Ensure that appropriate decontamination, treatment, or testing of exposed or injured personnel is obtained;
- Help the appropriate agencies to determine the cause of the incident and make recommendations to prevent recurrence; and
- Ensure that all required reports have been prepared

8.8.4 Medical Emergencies

Any person who becomes ill or injured in the exclusion zone must be decontaminated to the maximum extent possible. Full decontamination should be completed and first aid administered prior to transport if the injury or illness is minor. First aid should be administered while waiting for an ambulance or paramedics. Any person transporting an injured/exposed person to a clinic or hospital for treatment should take directions to the hospital and information on the chemical(s) to which they may have been exposed.

8.8.5 Fire or Explosion

The local fire department must be summoned immediately in the event of fire or explosion. The HSO or designated alternate will advise the fire commander of the location, nature and identification of the hazardous materials on-site. If it is safe to do so, site personnel may:

- Use fire fighting equipment available on site; or
- Remove or isolate flammable or other hazardous materials which may contribute to the fire.

8.8.6 Evacuation Routes

Evacuation routes established by work area locations for this site will be highlighted on a site map and reviewed periodically.

Evacuation should be conducted immediately and without regard for equipment under extreme emergency conditions. Evacuation notification will be a continuous blast of a vehicle horn, if possible, and/or by verbal communication. Site personnel should:

- Keep upwind of smoke, vapors or spill location.
- Remove contaminated clothing once they are in a location of safety and leave it in a safe place.

The HSO will conduct a head count to ensure all personnel have been evacuated safely.

8.8.7 Spill Control Procedures

In the event of a leak or a release, site personnel will:

- Inform the HSO and/or supervisor immediately;
- Locate the source or the spillage and stop the flow if it can be done safely; and
- Begin containment and recovery of the spilled materials.

Equipment will be kept on-site to contain a spill. Spill containment equipment (adsorbent pads and "Speedy Dry") will be stored in the work area and the support zone.

8.8.8 Emergency Response Protocols

All emergency telephone numbers and a map showing the emergency route to the hospital (Figure 3) will be distributed to all on-site workers. The site safety officer or any other qualified person will initiate first-aid and, if necessary, call the Fire Department to dispatch an ambulance in the event of

physical injury. A physician will be informed, as specifically as possible, of the chemical(s) to which the person has been exposed and the toxicological properties of the chemical(s) if chemical exposure occurs. Site evacuation procedures and emergency response protocols will be reviewed with the site personnel prior to site investigation activities.

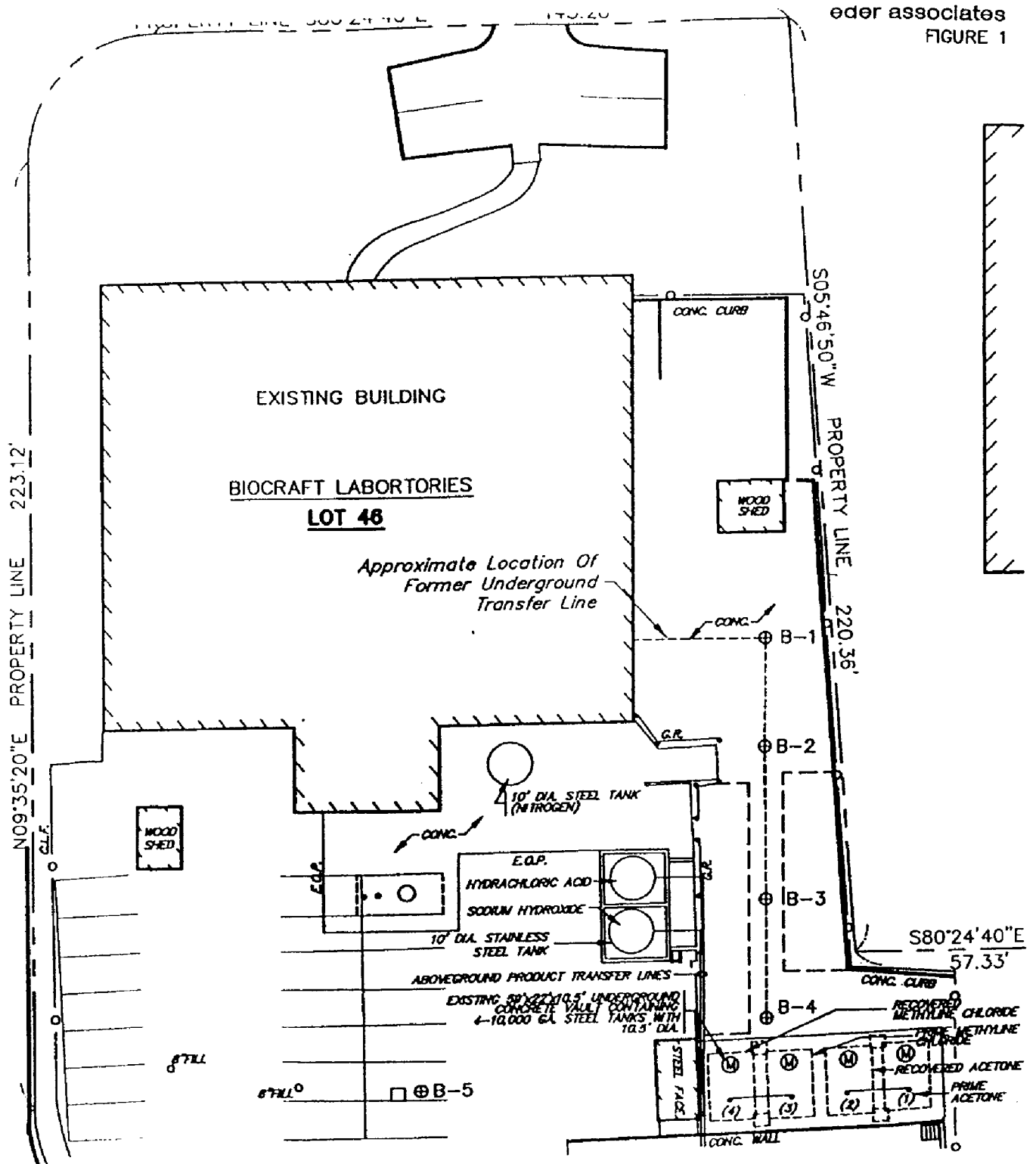
8.8.9 Emergency Route to Valley Hospital

Directions from the site to the hospital are as follows:

- Exit site on Industrial Park
- Right onto Hopper Avenue
- Left onto Prospect Street
- Right onto Franklin Turnpike
- Right onto North Maple Avenue
- Left onto Meadowbrook Avenue
- Valley Hospital is on the corner of Meadowbrook Avenue and North Van Dien Avenue

8.9 Confined Space

A confined space is defined as a space or work area not designed or intended for normal human occupancy, having limited means of access and poor natural ventilation, and any structure, including buildings or rooms which have limited means of egress. Examples include tanks, vats, and basements. By their very nature, confined spaces may contain oxygen-deficient atmospheres, flammable atmospheres, and/or toxic atmospheres. Confined space entry is not anticipated at the site. The health and safety plan will be amended and the requirements for a confined space entry will be followed in the event that confined space entry is necessary.



LEGEND

⊕ Proposed Soil Boring Location

PROPOSED SOIL BORING LOCATION MAP

BIOCRAFT LABORATORIES, INC.
WALDWICK, NEW JERSEY



SK13503A
091395

854820121

BIOCRAFT LABORATORIES, INC.
WALDWICK, NEW JERSEY
ISRA CASE #96070

APPENDIX A
ATTACHMENT A
SITE ASSESSMENT REPORT

854820122

TIERRA-B-009116

1.0 INTRODUCTION

This report presents the results of the soil investigation performed as part of the Industrial Site Recovery Act (ISRA) compliance program at the Biocraft Laboratories, Inc. (Biocraft) facility, Waldwick, New Jersey on September 28, 1995.

Table 1 summarizes the soil sampling data. Sample locations are shown on Figure 1. The boring logs are located in Appendix A.

2.0 BACKGROUND

Biocraft manufactures semi-synthetic penicillin products in bulk form. The Biocraft facility consists of a warehouse and manufacturing buildings located on two contiguous properties with frontages on 12 Industrial Park and 140 Hopper Avenue, Waldwick, New Jersey.

A 100-foot long underground steel pipe was installed four to six feet below grade in 1972 to transfer wastewater from the manufacturing building processing area to an underground wastewater storage tank. The wastewater contained low concentrations of acetone, methylene chloride, n-butyl alcohol and dimethyl aniline. Biocraft discovered a leak in an underground pipe in 1975 and all underground pipes were replaced with aboveground lines. Biocraft signed an Administrative Consent Order (ACO) with the New Jersey Department of Environmental Protection (NJDEP) to clean-up the groundwater contamination from the leak using bioremediation.

The groundwater collection and treatment system consists of monitoring wells, several pumping wells, infiltration trenches and in-situ and aboveground biological treatment systems.

3.0 SOIL INVESTIGATION

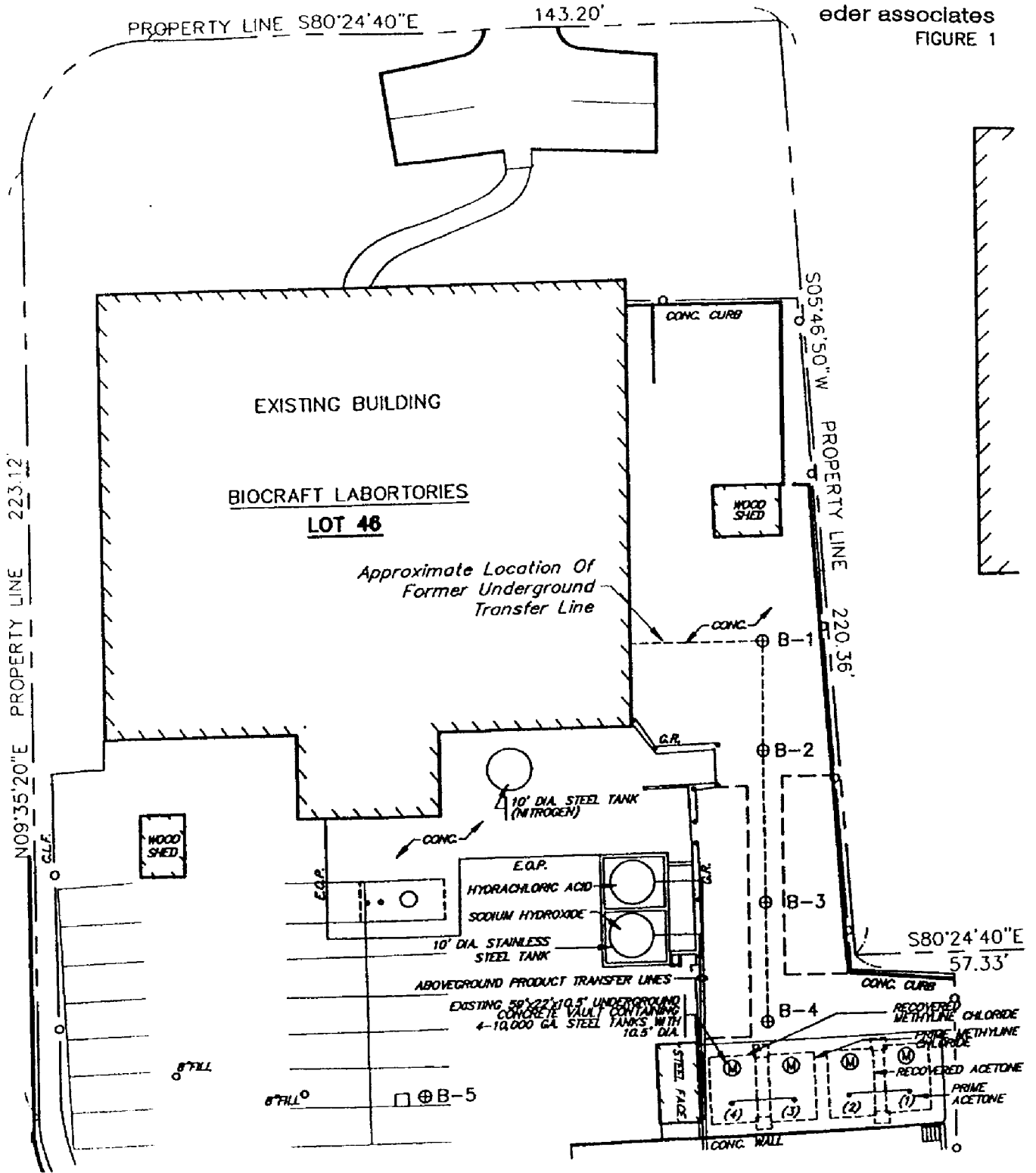
Four borings (SS-B1 through SS-B4) were drilled near the former underground pipe and one boring (SS-B5) was drilled near the storm water sewer manhole west of the former pipe leak on September 28, 1995. The boring locations are shown in Figure 1. Four soil samples per boring were collected in 24-inch intervals from grade to eight feet below grade using a split spoon. The soil samples were screened in discrete six inch intervals for organic vapor using a Photoionization detector (PID). The sample from the 4 to 8 foot below grade interval with the highest PID reading was sent to Laboratory Resources, Inc., Teterboro, New Jersey (New Jersey Certification No. 02046) and analyzed for volatile organic compounds (VOCs) by EPA method 8240. The sample was collected from 7.5 to 8 feet below grade if all PID readings were the same. The sample results are shown in Table 1. The boring logs are presented in Appendix A.

The soil sampling did not detect any compounds above the NJDEP Residential Direct Contact Soil Cleanup Criteria, Non-Residential Direct Contact Soil Cleanup Criteria, or the Impact to Groundwater Soil Cleanup Criteria. The results of the soil investigation are summarized below:

- Carbon disulfide was detected in each sample at concentrations ranging from 6.8 to 16.0 micrograms per kilograms ($\mu\text{g}/\text{kg}$).
- Methylene chloride was detected in four of the five samples at concentrations ranging from 3.9 to 6.5 $\mu\text{g}/\text{kg}$. The sample concentrations are well below the Impact to Groundwater Soil Cleanup Criteria of 1,000 $\mu\text{g}/\text{kg}$.
- Tetrachloroethene was detected in SS-B1 and SS-B4 at concentrations of 3.4 $\mu\text{g}/\text{kg}$ and 1.3 $\mu\text{g}/\text{kg}$, respectively. The sample concentrations are well below the Impact to Groundwater Soil Cleanup Criteria of 1,000 $\mu\text{g}/\text{kg}$.

4.0 SUMMARY

A soil investigation of the former underground pipe did not detect any compounds above the NJDEP Residential Direct Contact Soil Cleanup Criteria, Non-Residential Direct Contact Soil Cleanup Criteria, or the Impact to Groundwater Soil Cleanup Criteria. No additional investigation or remediation is warranted.



LEGEND

⊕ Proposed Soil Boring Location

PROPOSED SOIL BORING LOCATION MAP

BIOCRAFT LABORATORIES, INC.
WALDWICK, NEW JERSEY



K13503A
395

854820127

BIOCRAFT LABORATORIES, INC.
WALDWICK, NEW JERSEY

TABLE I
SOIL SAMPLING RESULTS SUMMARY

Sample Number	SS-B1	SS-B2	SS-B3	SS-B4	SS-B5	SS-B6	Field Blank
Sample Matrix	Soil	Soil	Soil	Soil	Soil	Soil	Water
Sample Depth	6.0-6.5 ft b.g.	5.5-6.0 ft b.g.	7.5-8.0 ft b.g.	7.5-8.0 ft b.g.	7.5-8.0 ft b.g.	7.5-8.0 ft b.g.	-
Date Collected	9/28/95	9/28/95	9/28/95	9/28/95	9/28/95	9/28/95	9/28/95
Concentration Units	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/L
<i>Volatle Organic Compounds</i>							
Chloromethane	< 2.2	< 2.2	< 2.2	< 2.2	< 11.0	< 2.2	< 2.0
Vinyl Chloride	< 2.2	< 2.2	< 2.2	< 2.2	< 11.0	< 2.2	< 2.0
Bromomethane	< 2.2	< 2.2	< 2.2	< 2.2	< 11.0	< 2.2	< 2.0
Chloroethane	< 2.2	< 2.2	< 2.2	< 2.2	< 11.0	< 2.2	< 2.0
Trichlorofluoromethane	< 2.2	< 2.2	< 2.2	< 2.2	< 11.0	< 2.2	< 2.0
Acrolein	< 11.0	< 11.0	< 11.0	< 11.0	< 55.0	< 11.0	< 10.0
1,1-Dichloroethene	< 1.1	< 1.1	< 1.1	< 1.1	< 5.5	< 1.1	< 1.0
Acetone	< 1.1	< 1.1	< 1.1	< 1.1	< 5.5	< 1.1	< 1.0
Carbon Disulfide	16.0	7.0	8.6	6.8	16.0 D	4.7	< 1.0
Methylene Chloride	6.5	3.9	4.7	5.6	< 5.5	4.2	< 1.0
Acrylonitrile	< 11.0	< 11.0	< 11.0	< 11.0	< 55.0	< 11.0	< 10.0
Trans-1,2-Dichloroethene	< 1.1	< 1.1	< 1.1	< 1.1	< 5.5	< 1.1	< 1.0
1,1-Dichloroethane	< 1.1	< 1.1	< 1.1	< 1.1	< 5.5	< 1.1	< 1.0
2-Butanone	< 1.1	< 1.1	< 1.1	< 1.1	< 5.5	< 1.1	< 1.0
Chloroform	< 1.1	< 1.1	< 1.1	< 1.1	< 5.5	< 1.1	< 1.0
1,2-Dichloroethane	< 1.1	< 1.1	< 1.1	< 1.1	< 5.5	< 1.1	< 1.0
Vinyl Acetate	< 1.1	< 1.1	< 1.1	< 1.1	< 5.5	< 1.1	< 1.0
1,1,1-Trichloroethane	< 1.1	< 1.1	< 1.1	< 1.1	< 5.5	< 1.1	< 1.0
Carbon Tetrachloride	< 1.1	< 1.1	< 1.1	< 1.1	< 5.5	< 1.1	< 1.0
Benzene	< 1.1	< 1.1	< 1.1	< 1.1	< 5.5	< 1.1	< 1.0
2-Chloroethylvinylether	< 5.6	< 5.6	< 5.6	< 5.6	< 27.0	< 5.6	< 5.0
Trichloroethene	< 1.1	< 1.1	< 1.1	< 1.1	< 5.5	< 1.1	< 1.0
1,2-Dichloropropane	< 1.1	< 1.1	< 1.1	< 1.1	< 5.5	< 1.1	< 1.0
Bromodichloromethane	< 1.1	< 1.1	< 1.1	< 1.1	< 5.5	< 1.1	< 1.0
cis-1,3-Dichloropropene	< 1.1	< 1.1	< 1.1	< 1.1	< 5.5	< 1.1	< 1.0
trans-1,3-Dichloropropene	< 1.1	< 1.1	< 1.1	< 1.1	< 5.5	< 1.1	< 1.0
1,1,2-Trichloroethane	< 1.1	< 1.1	< 1.1	< 1.1	< 5.5	< 1.1	< 1.0
Dibromochloromethane	< 1.1	< 1.1	< 1.1	< 1.1	< 5.5	< 1.1	< 1.0
Bromoform	< 1.1	< 1.1	< 1.1	< 1.1	< 5.5	< 1.1	< 1.0
4-Methyl-2-Pentanone	< 1.1	< 1.1	< 1.1	< 1.1	< 5.5	< 1.1	< 1.0
Toluene	< 1.1	< 1.1	< 1.1	< 1.1	< 5.5	< 1.1	< 1.0
2-Hexanone	< 1.1	< 1.1	< 1.1	< 1.1	< 5.5	< 1.1	< 1.0
Tetrachloroethene	3.4	< 1.1	< 1.1	1.3	< 5.5	< 1.1	< 1.0
Chlorobenzene	< 1.1	< 1.1	< 1.1	< 1.1	< 5.5	< 1.1	< 1.0
Ethylbenzene	< 1.1	< 1.1	< 1.1	< 1.1	< 5.5	< 1.1	< 1.0
m&p Xylene	< 1.1	< 1.1	< 1.1	< 1.1	< 5.5	< 1.1	< 1.0
o-Xylene	< 1.1	< 1.1	< 1.1	< 1.1	< 5.5	< 1.1	< 1.0
Styrene	< 1.1	< 1.1	< 1.1	< 1.1	< 5.5	< 1.1	< 1.0
1,1,1,2-Tetrachloroethane	< 1.1	< 1.1	< 1.1	< 1.1	< 5.5	< 1.1	< 1.0
m-Dichlorobenzene	< 1.1	< 1.1	< 1.1	< 1.1	< 5.5	< 1.1	< 1.0
p-Dichlorobenzene	< 1.1	< 1.1	< 1.1	< 1.1	< 5.5	< 1.1	< 1.0
o-Dichlorobenzene	< 1.1	< 1.1	< 1.1	< 1.1	< 5.5	< 1.1	< 1.0

NOTES:

- < - Less Than
- D - Indicates compound reported from a more diluted sample
- ug/Kg - Micrograms per Kilogram
- ug/L - Micrograms per Liter
- ft b.g. - Feet Below Grade

854820128

BORING REPORT		EDER ASSOCIATES CONSULTING ENGINEERS, P.C. 480 Forest Avenue, Locust Valley, NY 11560 8000 Excelsior Drive, Madison, WI 53717 326 South State Street, Ann Arbor, MI 48104 4519 Pleasant Home Road, Augusta, GA 30907 9417 Baymeadows Road, Jacksonville, FL 32256 413 Riverview Executive Park, Trenton, NJ 08611					Sheet <u>1</u> of <u>1</u>		
DATE STARTED: 9/28/95		DATE FINISHED: 9/28/95		BORING NO.: SB-1					
CLIENT: Biocraft Laboratories				PROJECT NO.: 1350-03					
PROJECT NAME AND LOCATION: Biocraft Laboratories, Waldwick, NJ				PREPARED BY: Charles Kirman					
DRILLING CONTRACTOR: Uni-Tech Drilling		LOGGED BY: Charlers Kirman		DRILLER:					
EQUIPMENT	CASING	SOIL SAMPLER:		CORE BARREL	AUGER	MONITORING WELL:		DRILL RIG AND METHOD HSA	
TYPE:		SPLIT SPOON				RISER	SCREEN		
SIZE:		S. Steel							
HAMMER WT/FALL		2' x 2"							
		140 lbs 18 ins		BIT					
SURFACE ELEVATION:				SURFACE CONDITIONS:					
WATER LEVEL AT:		FT. AFTER		HRS.		FT. AFTER		HRS.	
DEPTH BELOW GRADE (ft.)	PID/PID READINGS (PPM)	SAMPLE			BLOWS/6" OR CORE TIME	STRATA DEPTH/ELEV.	DESCRIPTION & REMARKS TRACE=0-10%, LITTLE=10-20% SOME=20-30%, AND=35-50%		
		TYPE AND NO.	DEPTH (FROM-TO)	MOISTURE CONTENT	RECOVERY				
0-1	4.3	SS-1	0-2'	MOIST	1.5'	4, 3	SILT, some m to f Sand, lt Clay soft, sl.pl., brown		
1-2						5, 5			
2-3	3.1	SS-2	2-4'	MOIST	1.0'	6, 5	Similiar to SS-1		
3-4						11, 12			
4-5	26	SS-3	4-6'	MOIST	0.2'	9, 7	SILT, lt f Sand and Clay, tr Gravel, soft, sl.pl., brown-purple		
5-6						8, 8			
6-7	127	SS-4	6-8'	MOIST-WET	1.5'	20, 21	SILT and GRAVEL, clasts 1" sub-rounded, lt m to f Sand, soft, n.pl., olive		
7-8						33, 49			
8-9							END OF BORING @ 8 FT b.g.s.		
9-10									
10-11									
11-12									
12-13									
13-14									
14-15									
15-16									
16-17									
17-18									
18-19									
19-20									

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BORING REPORT		EDER ASSOCIATES CONSULTING ENGINEERS, P.C. 480 Forest Avenue, Locust Valley, NY 11560 8000 Excelsior Drive, Madison, WI 53717 326 South State Street, Ann Arbor, MI 48104 4519 Pleasant Home Road, Augusta, GA 30907 9417 Baymeadows Road, Jacksonville, FL 32256 413 Riverview Executive Park, Trenton, NJ 08611					Sheet <u>1</u> of <u>1</u>		
DATE STARTED: 9/28/95		DATE FINISHED: 9/28/95			BORING NO.: SB-2				
CLIENT: Biocraft Laboratories					PROJECT NO.: 1350-03				
PROJECT NAME AND LOCATION: Biocraft Laboratories, Waldwick, NJ					PREPARED BY: Charles Kirman				
DRILLING CONTRACTOR: Uni-Tech Drilling			LOGGED BY: Charles Kirman		DRILLER:				
EQUIPMENT	CASING	SOIL SAMPLER:			MONITORING WELL:		DRILL RIG AND METHOD		
		SPLIT SPOON	CORE BARREL	AUGER	RISER	SCREEN			
TYPE:		S. Steel					HSA		
SIZE:		2' x 2"							
HAMMER WT/FALL		140 lbs 18 ins			BIT				
SURFACE ELEVATION:				SURFACE CONDITIONS:					
WATER LEVEL AT:		FT. AFTER		HRS.		FT. AFTER		HRS.	
DEPTH BELOW GRADE (ft.)	PID/FID READINGS (PPH)	SAMPLE				BLOWS/6" OR CORE TIME	STRATA DEPTH/ELEV.	DESCRIPTION & REMARKS	
		TYPE AND NO.	DEPTH (FROM-TO)	MOISTURE CONTENT	RECOVERY				
0-1	23	SS-1	0-2'	MOIST	1.3'	27, 17		SILT, some Gravel, lt f Sand and Clay, soft, sl.pl., brown	
1-2						18, 16			
2-3	40	SS-2	2-4'	MOIST	1.0'	11, 11		SILT, lt f Sand, tr Gravel, soft, sl.pl., dk purple	
3-4						8, 9			
4-5	47	SS-3	4-6'	MOIST	1.5'	16, 13		SILT, lt v f Sand, sl.pl., soft olive	
5-6						12, 11			
6-7	24	SS-4	6-8'	MOIST-WET	1.5'	11, 9		Similiar to SS-3	
7-8						8, 7			
8-9									
9-10									
10-11									
11-12									
12-13									
13-14									
14-15									
15-16									
16-17									
17-18									
18-19									
19-20								END OF BORING @ 8 FT b.g.s.	

854820130

BORING REPORT		EDER ASSOCIATES CONSULTING ENGINEERS, P.C. 480 Forest Avenue, Locust Valley, NY 11560 8000 Excelsior Drive, Madison, WI 53717 326 South State Street, Ann Arbor, MI 48104 4519 Pleasant Home Road, Augusta, GA 30907 9417 Baymeadows Road, Jacksonville, FL 32256 413 Riverview Executive Park, Trenton, NJ 08611					Sheet 1 of 1		
DATE STARTED: 9/28/95			DATE FINISHED: 9/28/95			BORING NO.: SB-3			
CLIENT: Biocraft Laboratories						PROJECT NO.: 1350-03			
PROJECT NAME AND LOCATION: Biocraft Laboratories, Waldwick, NJ						PREPARED BY: Charles Kirman			
DRILLING CONTRACTOR: Uni-Tech Drilling				LOGGED BY: Charles Kirman		DRILLER:			
EQUIPMENT	CASING	SOIL SAMPLER:		CORE BARREL	AUGER	MONITORING WELL:		DRILL RIG AND METHOD	
		SPLIT SPOON				RISER	SCREEN		
TYPE:		S. Steel							HSA
SIZE:		2'x 2"							
HAMMER WT/FALL		140 lbs 18 ins		BIT					
SURFACE ELEVATION:					SURFACE CONDITIONS:				
WATER LEVEL AT:		FT. AFTER		HRS.		FT. AFTER		HRS.	
DEPTH BELOW GRADE (ft.)	PID/PID READINGS (PPM)	SAMPLE				BLOWS/6" OR CORE TIME	STRATA DEPTH/ELEV.	DESCRIPTION & REMARKS TRACE=0-10%, LITTLE=10-20% SOME=20-30%, AND=35-50%	
		TYPE AND NO.	DEPTH (FROM-TO)	MOISTURE CONTENT	RECOVERY				
0-1	0	SS-1	0-2'	MOIST	1.2'	24, 20		SILT and GRAVEL, lt m to f Sand, firm, n.pl., brown	
1-2						15, 24			
2-3	0	SS-2	2-4'	MOIST	0.4'	30, 16		SILT, some Gravel, lt m to f Sand, firm, sl.pl., brown	
3-4						15, 12			
4-5	0	SS-3	4-6'	MOIST	0.5'	23, 24		Similar to SS-2	
5-6						22, 26			
6-7	57	SS-4	6-8'	MOIST-WET	1.0'	21, 19		SILT, lt f Sand, tr Gravel, soft, sl.pl., olive	
7-8						16, 15		END OF BORING @ 8 FT b.g.s.	
8-9									
9-10									
10-11									
11-12									
12-13									
13-14									
14-15									
15-16									
16-17									
17-18									
18-19									
19-20									

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BORING REPORT		EDER ASSOCIATES CONSULTING ENGINEERS, P.C. 480 Forest Avenue, Locust Valley, NY 11560 8000 Excelsior Drive, Madison, WI 53717 326 South State Street, Ann Arbor, MI 48104 4519 Pleasant Home Road, Augusta, GA 30907 9417 Baymeadows Road, Jacksonville, FL 32256 413 Riverview Executive Park, Trenton, NJ 08611					Sheet <u>1</u> of <u>1</u>			
DATE STARTED: 9/28/95		DATE FINISHED: 9/28/95			BORING NO.: SB-4					
CLIENT: Biocraft Laboratories		PROJECT NAME AND LOCATION: Biocraft Laboratories, Waldwick, NJ			PROJECT NO.: 1350-03					
DRILLING CONTRACTOR: Uni-Tech Drilling		LOGGED BY: Charles Kirman			PREPARED BY: Charles Kirman					
DRILLER:										
EQUIPMENT	CASING	SOIL SAMPLER:			CORE BARREL	AUGER	MONITORING WELL:		DRILL RIG AND METHOD	
		SPLIT SPOON					RISER	SCREEN		
TYPE:		S. Steel							HSA	
SIZE:		2' x 2"								
HAMMER WT/FALL		140 lbs 18 ins			BIT					
SURFACE ELEVATION:					SURFACE CONDITIONS:					
WATER LEVEL AT:		FT. AFTER		HRS.		FT. AFTER		HRS.		
DEPTH BELOW GRADE (ft.)	PID/FID READINGS (PPH)	SAMPLE				BLOWS/6" OR CORE TIME	STRATA DEPTH/ELEV.	DESCRIPTION & REMARKS TRACE=0-10%, LITTLE=10-20% SOME=20-30%, AND=35-50%		
		TYPE AND NO.	DEPTH (FROM-TO)	MOISTURE CONTENT	RECOVERY					
0-1	0	SS-1	0-2'	MOIST	1.5'	18, 23	SILT some Gravel, lt cs to f Sand, firu, n.pl., reddish brown Similiar to SS-1 SILT, lt f Sand, tr Gravel, soft, sl.pl., purple-brown Similiar to SS-3 END OF BORING @ 8 FT b.g.s.			
1-2						24, 22				
2-3	2.3	SS-2	2-4'	MOIST	1.5'	18, 21				
3-4						24, 19				
4-5	4.2	SS-3	4-6'	MOIST	0.2'	16, 12				
5-6						18, 9				
6-7	5.7	SS-4	6-8'	MOIST-WET	1.5'	7, 9				
7-8						9, 9				
8-9										
9-10										
10-11										
11-12										
12-13										
13-14										
14-15										
15-16										
16-17										
17-18										
18-19										
19-20										

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BORING REPORT		EDER ASSOCIATES CONSULTING ENGINEERS, P.C. 480 Forest Avenue, Locust Valley, NY 11560 8000 Excelsior Drive, Madison, WI 53717 326 South State Street, Ann Arbor, MI 48104 4519 Pleasant Home Road, Augusta, GA 30907 9417 Baymeadows Road, Jacksonville, FL 32256 413 Riverview Executive Park, Trenton, NJ 08611					Sheet <u>1</u> of <u>1</u>		
DATE STARTED: 9/28/95		DATE FINISHED: 9/28/95			BORING NO.: SB-5				
CLIENT: Biocraft Laboratories					PROJECT NO.: 1350-03				
PROJECT NAME AND LOCATION: Biocraft Laboratories, Waldwick, NJ					PREPARED BY: Charles Kirwan				
DRILLING CONTRACTOR: Uni-Tech Drilling			LOGGED BY: Charles Kirwan		DRILLER:				
EQUIPMENT	CASING	SOIL SAMPLER:		CORE BARREL	AUGER	MONITORING WELL:		DRILL RIG AND METHOD	
		SPLIT SPOON				RISER	SCREEN		
TYPE:		S. Steel						HSA	
SIZE:		2' x 2"							
HAMMER WT/FALL		140 lbs 18 ins		BIT					
SURFACE ELEVATION:					SURFACE CONDITIONS:				
WATER LEVEL AT:		FT. AFTER		HRS.	FT. AFTER		HRS.	FT. AFTER	HRS.
DEPTH BELOW GRADE (ft.)	PID/FID READINGS (PPM)	SAMPLE				BLOWS/6" OR CORE TIME	STRATA DEPTH/ELEV.	DESCRIPTION & REMARKS TRACE=0-10%, LITTLE=10-20% SOME=20-30%, AND=35-50%	
		TYPE AND NO.	DEPTH (FROM-TO)	MOISTURE CONTENT	RECOVERY				
0-1	0	SS-1	0-2'	MOIST	1.4'	24, 38	Cs to f SAND and GRAVEL, lt Silt, loose, n.pl., grey SILT, some cs to f. Sand, lt Gravel, soft to firm, sl.pl., grey-brown Similiar to SS-2 SILT and cs to SAND, lt Gravel, firm, n.pl., brown saturated at 8' b.g.s. END OF BORING @ 8' FT b.g.s.		
1-2						30, 40			
2-3	0	SS-2	2-4'	MOIST	0.4'	9, 18			
3-4						24, 32			
4-5	0	SS-3	4-6'	MOIST-WET	1.0'	15, 22			
5-6						27, 32			
6-7	0	SS-4	6-8'	WET-SAT	1.5'	60, 42			
7-8						22, 24			
8-9									
9-10									
10-11									
11-12									
12-13									
13-14									
14-15									
15-16									
16-17									
17-18									
18-19									
19-20									

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**BIOCRAFT LABORATORIES, INC.
WALDWICK, NEW JERSEY
ISRA CASE #96070**

**APPENDIX A
ATTACHMENT A
LABORATORY REPORT**

854820134

4/97

TEVA PHARMACEUTICALS USA
WALDWICK, NEW JERSEY

BIOCRAFT LABORATORIES, INC.
REMEDIAL INVESTIGATION REPORT
ISRA CASE #96070

PROJECT #1350-05
APRIL 1997

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854820135

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FIGURES

FIGURE 1 Site Location Map
FIGURE 3 Groundwater Flow Map, March 1, 1996
FIGURE 4 Groundwater Flow Map, May 15, 1996
FIGURE 5 Groundwater Flow Map, July 24, 1996
FIGURE 6 Groundwater Flow Map, November 13, 1996

TABLES

TABLE 1 Groundwater Sampling Results Summary, February 1996
TABLE 2 Groundwater Sampling Results Summary, May 1996
TABLE 3 Groundwater Sampling Results Summary, July 1996
TABLE 4 Groundwater Sampling Results Summary, November 1996
TABLE 5 QA/QC Results Summary - February Through November 1996
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APPENDICES

APPENDIX A Laboratory Reports (Bound Separately)
APPENDIX B Field Sampling Forms
APPENDIX C Contour Map Reporting Forms

1.0 TECHNICAL OVERVIEW

This Remedial Investigation Report (RIR) summarizes the groundwater monitoring conducted in February, May, July, and November 1996 at the Biocraft Laboratories, Inc. (Biocraft) property in Waldwick, New Jersey.

1.1 Sample Collection and Analysis

All sampling activities were conducted in accordance with the New Jersey Department of Environmental Protection (NJDEP) "Field Sampling Procedures Manual" May 1992, with the following exception:

- Samples were not collected from monitoring well MW-10 during the May, July, and November monitoring events because of well drawdown and insufficient recharge.

The February, May, and July 1996 groundwater samples were analyzed by Laboratory Resources, Inc., Teterboro, New Jersey (N.J. Certification #02046) and the November 1996 groundwater samples were analyzed by Accutest Laboratories, Dayton, New Jersey (N.J. Certification #12129). All samples were analyzed within the required holding time and all parameters were within their respective quality control ranges, with the following exceptions:

- February 1996 - Methylene Chloride was detected at a concentration beyond the calibration range for sample BIO-P-32A. The sample holding time expired before re-analysis was possible.
- May 1996 - The quantitation limits are elevated due to the dilution required for sample BIO-P-32A.
- July 1996 - The quantitation limits are elevated due to the dilution required for sample BIO-

P-32A. Methylene chloride was detected in the field blank and trip blanks at concentrations of 3.9 and 3.0 $\mu\text{g/l}$, respectively.

1.2 Analytical Results

Butyl alcohol concentrations in all samples were less than the laboratory minimum detection limit or less than the 500 micrograms per liter ($\mu\text{g/l}$) Class IIA - Ground Water Quality Criteria. Acetone concentrations were less than the laboratory minimum detection limit or less than the 700 $\mu\text{g/l}$ Class IIA Groundwater Quality Criteria in all groundwater samples, except samples from recovery well P-32A/32B where concentrations ranged from 1,200 $\mu\text{g/l}$ to 10,000 $\mu\text{g/l}$. Methylene chloride was detected at concentrations ranging from less than the laboratory minimum detection limit to 5,000 $\mu\text{g/l}$ (recovery well P-32A/32B). Methylene chloride concentrations were 9 $\mu\text{g/l}$ or less in 90 percent of the samples.

Analytical results of groundwater samples collected from off-site monitoring wells downgradient of the Biocraft groundwater recovery and treatment system show methylene chloride and butyl alcohol concentrations were below the laboratory minimum detection limit (MDL), and acetone concentrations were below the laboratory MDL or the Class IIA - Groundwater Quality Criteria. The analytical data suggests that the recovery system is capturing the full width of the groundwater contaminant plume.

2.0 SITE DESCRIPTION

Biocraft manufactures semi-synthetic penicillin products in bulk. The facility consists of two buildings, a manufacturing building and warehouse, located on contiguous properties with frontages on 12 Industrial Park and 140 Hopper Avenue in Waldwick, Bergen County, New Jersey. Figure 1 shows the site location. The office, maintenance, and production areas, and research and development laboratories are located in the manufacturing building. Bulk finished products and some raw materials are stored in the warehouse building which also houses the quality control and microbiology laboratories.

The manufacturing and warehouse buildings and parking areas cover approximately 30 percent of the 4.3 acre property. Landscaped areas cover approximately 10 percent of the property, and the remainder of the property is lightly wooded. The property is relatively flat with slopes ranging from 1 to 3 percent.

3.0 PHYSICAL SETTING

3.1 Soil

The dominant soil type in the study area is classified as Dunellen. Dunellen soils have a very dark, grayish brown loam surface layer approximately 5 inches thick. The subsoil is approximately 21 inches thick, of which, the upper 10 inches is friable, dark yellowish brown loam and the lower 11 inches is friable brown loam. The substratum is stratified reddish brown gravelly sand, sand, and loamy sand and brown sandy loam to an average depth of 66 inches. The permeability of the Dunellen soils is moderate to moderately rapid in the subsoil and rapid in the substratum.

3.2 Geology and Hydrogeology

The site is located in an area of unstratified and stratified drift deposited by the Wisconsin glacier and its meltwaters during the Pleistocene Epoch of the Quaternary Period. Thin layers of silt and gravel are generally found from grade to 3 feet below grade. Glacial till. Glacial till consisting of a poorly sorted mixture of boulders, cobbles, pebbles, silt, sand, and clay underlies the site at a thickness of 8 to 15 feet. Approximately 40 feet of semiconsolidated silt and fine sand underlie the till layer. Brunswick shale of the Triassic Newark Group underlies the site at a depth of 50 to 60 feet below grade. The thickness of the Brunswick Shale is not known but is estimated to be greater than 6,000 feet.

Groundwater beneath the site occurs in void spaces of unconsolidated quaternary glacial sediments and in the joints and fractures of the Brunswick Formation. The depth to groundwater ranges from grade to 9 feet below grade, depending on seasonal fluctuations. The groundwater flow direction is influenced by the groundwater recovery, treatment, and reinjection system. The inferred direction of groundwater flow is to the north, northwest at the northern section of the site, and to the south, southeast in the central and southern sections of the site.

4.0 AREA OF CONCERN

A 100-foot long underground steel pipe was installed in 1972 to transfer wastewater from the manufacturing building processing area to an underground wastewater storage tank. The wastewater contained low concentrations of acetone, methylene chloride, n-butyl alcohol, and dimethyl aniline. Biocraft discovered a leak in the underground pipe in November 1975 and removed the pipe from service. Monitoring wells were installed and groundwater samples were collected and analyzed to determine whether the underground transfer line leak had impacted groundwater quality. The groundwater sampling showed elevated concentrations of methylene chloride, acetone, and butyl alcohol. The nature and extent of groundwater contamination at the Biocraft site has been documented in extensive groundwater investigations conducted by Geraghty and Miller (G&M) between 1979 and 1995, supplemented by the groundwater monitoring program initiated by Biocraft in 1985.

Biocraft pumped groundwater from three on-site recovery wells between 1975 and 1981 and disposed of the groundwater off-site. The cost of disposing of the recovered groundwater off-site became prohibitive and with NJDEP's approval, Biocraft undertook an extensive research and development project to develop a process to remove and treat groundwater. The research resulted in the development of a sophisticated biodegradation/biostimulation process which was patented in the U.S.

Biocraft initiated groundwater monitoring to evaluate the progress and effectiveness of the groundwater biodegradation/biostimulation system. This program consists of sampling 11 wells quarterly and 26 wells annually, and analyzing the samples for methylene chloride, acetone, butyl alcohol, BOD, COD, TOC, chloride, and total phosphorous. The groundwater sampling shows that groundwater quality has steadily improved and Biocraft currently estimates that 90 percent of the groundwater plume has been remediated. Groundwater elevation measurements and sampling data show that the zone of influence created by the recovery system maintains hydraulic control of the groundwater contaminant plume. The groundwater sampling data show that the highest

concentrations of methylene chloride and acetone are in the southern area of the property and that these concentrations have been reduced significantly from concentrations existing prior to biodegradation/biostimulation system.

5.0 QUARTERLY GROUNDWATER MONITORING RESULTS

The quarterly groundwater monitoring results for February, May, July, and November 1996 are summarized in Sections 5.1 through 5.4. The laboratory reports are in Appendix A. Field sampling forms are in Appendix B. Analytical data are summarized in Tables 1 through 5.

5.1 February 1996

Samples were collected from eight monitoring wells (MW-6, MW-9, MW-10, MW-17, MW-24, MW-25, MW-28, and MW-42) and analyzed for acetone, methylene chloride, butyl alcohol, COD, BOD, and TOC. Acetone concentrations in all samples were below the Class IIA - Groundwater Quality Criteria. Methylene chloride was detected at concentrations above the Class IIA - Groundwater Quality Criteria in monitoring wells MW-10 (8.9 $\mu\text{g/l}$) and MW-28 (67 $\mu\text{g/l}$). Butyl alcohol concentrations were below the laboratory MDL. BOD concentrations ranged from less than 2 milligrams per liter (mg/l) to 8 mg/l (MW-9). COD concentrations ranged from 14 mg/l to 41 mg/l (MW-17). TOC concentrations ranged from less than 5 mg/l to 7.4 mg/l (MW-9).

5.2 May 1996

Samples were collected from seven monitoring wells (MW-6, MW-9, MW-17, MW-24, MW-25, MW-28, and MW-42) and the on-site production well, and analyzed for acetone, methylene chloride, butyl alcohol, COD, BOD, and TOC. Acetone concentrations in all samples were less than the Class IIA - Groundwater Quality Criteria. Methylene chloride concentrations exceeded the Class IIA - Groundwater Quality Criteria in monitoring wells MW-6 (5 $\mu\text{g/l}$) and MW-17 (4.6 $\mu\text{g/l}$). Butyl alcohol concentrations in all samples were below the laboratory MDL. BOD concentrations ranged from less than 2 mg/l to 10 mg/l (MW-28). COD concentrations ranged from 13 mg/l to 80 mg/l (MW-28). TOC concentrations ranged from less than 5 mg/l to 31 mg/l (MW-28).

5.3 July 1996

Samples were collected from seven monitoring wells (MW-6, MW-9, MW-17, MW-24, MW-25, MW-28, and MW-42) and analyzed for acetone, methylene chloride, butyl alcohol, COD, BOD, and TOC. Acetone concentrations in all samples were below the Class IIA - Groundwater Quality Criteria. Methylene chloride was detected in the field blank and trip blank at concentrations of 3.9 and 3.0 $\mu\text{g/l}$, respectively. Methylene chloride was detected in all wells at concentrations ranging from 2.3 $\mu\text{g/l}$ (MW-9) to 8.7 $\mu\text{g/l}$ (MW-25). Butyl alcohol concentrations in all samples were below the laboratory MDL. BOD concentrations ranged from less than 4 mg/l to 56 mg/l (MW-9). COD concentrations ranged from less than 10 mg/l to 230 mg/l (MW-9). TOC concentrations ranged from less than 5 mg/l to 69 mg/l (MW-9).

5.4 November 1996 (Annual Monitoring Event)

Samples were collected from 23 monitoring wells and the on-site production well, and analyzed for acetone, methylene chloride, butyl alcohol, COD, BOD, and TOC. Acetone concentrations in all samples were below the Class IIA - Groundwater Quality Criteria. Methylene chloride concentrations exceeded the Class IIA - Groundwater Quality Criteria in monitoring well MW-1 (4.6 $\mu\text{g/l}$) and the on-site production well (4.0 $\mu\text{g/l}$). The methylene chloride detected in the on-site production well is considered as anomalous because all previous sampling showed no detection. The on-site production well will be resampled in May 1997. Butyl alcohol concentrations in all samples were below the laboratory MDL. BOD concentrations ranged from less than 2 mg/l to 21.6 mg/l (W-2). COD concentrations ranged from less than 20 mg/l to 95.1 mg/l (MW-24). TOC concentrations ranged from less than 1 mg/l to 20.1 mg/l (MW-9).

5.5 Groundwater Flow

Groundwater elevation contour maps (Figures 2 through 5) developed from depth to water measurements made during the quarterly groundwater monitoring program show that groundwater

flow is to the north-northwest at the northern section of the site, and to the south-southeast in the central and southern sections of the site and that groundwater discharged to the recharge trench system flows downgradient towards the recovery well system.

6.0 BIODEGRADATION/BIOSTIMULATION SYSTEM

6.1 Biodegradation/Biostimulation System Description

The Biocraft groundwater biodegradation/biostimulation system was designed as a "closed loop" system so that the treated groundwater is discharged upgradient and within the capture zone of the recovery well network. The biodegradation/biostimulation system consists of three recovery wells (P-13, P-30, and P-32A/32B), two infiltration trenches (Trench B and Trench C), and a biological treatment unit.

The biological treatment unit consists of two identical activated sludge units, ACT I and ACT II. Each unit consists of an aeration tank and a settling tank. Both systems are operated in parallel, with ACT I treating groundwater pumped from P-30, and ACT II treating groundwater pumped from P-13 and P-32A/32B. Groundwater enters the aeration tanks, and is aerated by a blower and diffuser which also keeps the tank contents mixed. Additional mixing is provided by internally pumping the tank contents. The aeration tank effluent is pumped to the settling tank to separate the bacteria from the water. The settled bacteria (sludge) is recycled to the aeration tank to keep bacteria concentrations in the system high enough to remove organic compounds. The biodegradation/biostimulation system effluent is passed through a dual vessel (in series) granular activated carbon unit (added in May 1996) and the treated groundwater is discharged to two recharge trenches upgradient of recovery wells P-30 and P-32A/32B. The maximum system flowrate is 8 gallons per minute (gpm).

6.2 Biodegradation/Biostimulation System Monitoring

Biodegradation/biostimulation system influent samples are collected from the three recovery wells, P-13, P-30, and P-32A/32B, and the effluent sample is collected from the discharge side of the activated carbon units. The influent and effluent samples are analyzed for acetone, methylene chloride, butyl alcohol, COD, BOD, and TOC.

6.2.1 February 1996

Influent acetone concentrations ranged from 2 $\mu\text{g/l}$ (P-32A/32B) to 590 $\mu\text{g/l}$ (P-13) which is less than the 700 $\mu\text{g/l}$ Class IIA - Groundwater Quality Criteria. Influent methylene chloride concentrations ranged from less than 2 $\mu\text{g/l}$ (P-13) to 1,200 $\mu\text{g/l}$ (P-32A/32B). Influent butyl alcohol concentrations ranged from an estimated concentration of 3.3 $\mu\text{g/l}$ (P-32A/32B) to 13 $\mu\text{g/l}$ (P-13), which is less than the 500 $\mu\text{g/l}$ Class IIA- Groundwater Quality Criteria. BOD concentrations ranged from 2 mg/l to 75 mg/l (P-13). COD concentrations ranged from 34 mg/l to 210 mg/l (P-13). TOC concentrations ranged from 5.6 mg/l to 57 mg/l (P-13).

The effluent sample was collected from the discharge side of the biological treatment unit because the carbon system was not added until May 1996. The effluent acetone concentration was 190 $\mu\text{g/l}$. The effluent methylene chloride concentration was below the 2 $\mu\text{g/l}$ laboratory MDL. The effluent butyl alcohol concentration was 13 $\mu\text{g/l}$. The BOD concentration was 6 mg/l. The COD concentration was 28 mg/l. The TOC concentration was 10 mg/l.

6.2.2 May 1996

Influent acetone concentrations ranged from less than 8.7 $\mu\text{g/l}$ (P-13, P-30) to 2,900 $\mu\text{g/l}$ (P-32A/32B). Influent methylene chloride concentrations ranged from less than 1.4 $\mu\text{g/l}$ (P-13, P-30) to 10,000 $\mu\text{g/l}$ (P-32A/32B). Influent butyl alcohol concentrations were below the laboratory MDL. BOD concentrations ranged from 3 mg/l to 12 mg/l (P-32A/32B). COD concentrations ranged from 32 mg/l to 48 mg/l (P-32A/32B). TOC concentrations ranged from 13 mg/l to 16 mg/l (P-32A/32B).

The effluent acetone concentration was below the 8.7 $\mu\text{g/l}$ laboratory MDL. The effluent methylene chloride concentration was 19 $\mu\text{g/l}$. The effluent butyl alcohol concentration was below the 200 $\mu\text{g/l}$ laboratory MDL. The BOD concentration was below 2 mg/l. The COD concentration was below 31 mg/l. The TOC concentration was below 6.5 mg/l.

6.2.3 July 1996

Influent acetone concentrations ranged from less than 8.7 $\mu\text{g/l}$ (P-13) to 5,000 $\mu\text{g/l}$ (P-32A/32B). Influent methylene chloride concentrations ranged from 6.6 $\mu\text{g/l}$ (P-13) to 3,600 $\mu\text{g/l}$ (P-32A/32B). Influent butyl alcohol concentrations were below the laboratory MDL. BOD concentrations ranged from 7 mg/l to 23 mg/l (P-32A/32B). COD concentrations ranged from 36 mg/l to 58 mg/l (P-32A/32B). TOC concentrations ranged from 13 mg/l to 20 mg/l (P-32A/32B).

The effluent acetone concentration was below the 8.7 $\mu\text{g/l}$ laboratory MDL. The effluent methylene chloride concentration was 7.5 $\mu\text{g/l}$. The effluent butyl alcohol concentration was below the 200 $\mu\text{g/l}$ laboratory MDL. The BOD concentration was below 4 mg/l. The COD concentration was 15 mg/l. The TOC concentration was below 5 mg/l.

6.2.4 November 1996

Influent acetone concentrations ranged from less than 72.7 $\mu\text{g/l}$ (P-30) to 1,520 $\mu\text{g/l}$ (P-32A/32B). Influent methylene chloride concentrations ranged from less than 0.61 $\mu\text{g/l}$ (P-13) to 9,630 $\mu\text{g/l}$ (P-32A/32B). Influent butyl alcohol concentrations were less than the laboratory MDL. BOD concentrations ranged from less than 3 mg/l to 72.8 mg/l (P-32A/32B). COD concentrations ranged from 26.6 mg/l to 205 mg/l (P-32A/32B). TOC concentrations ranged from 8.1 mg/l to 50.1 mg/l (P-32A/32B).

The effluent acetone concentration was below the 0.46 $\mu\text{g/l}$ laboratory MDL. The effluent methylene chloride concentration was 1.4 $\mu\text{g/l}$. The effluent butyl alcohol concentration was less than the 200 $\mu\text{g/l}$ laboratory MDL. The BOD concentration was less than 2 mg/l. The COD concentration was less than 20 mg/l. The TOC concentration was 1.2 mg/l.

6.3 Biodegradation/Bio stimulation System Pumping Rates

The average flow rates of the biodegradation/bio stimulation system are summarized in Table 6. The biodegradation/bio stimulation system extracted, treated, and recharged approximately 325,000 gallons of groundwater during the 12 month period ending February 1997.

6.4 Biodegradation/Bio stimulation System Removal Percentage

The biodegradation/bio stimulation system (with activated carbon unit) removed over 99 percent of the acetone and methylene chloride present in the influent water.

**BIOCRAFT LABORATORIES, INC.
WALDWICK, NEW JERSEY**

TABLE 1

GROUNDWATER SAMPLING RESULTS SUMMARY - FEBRUARY 1996

Sample Number	MW-6	MW-9	MW-10	MW-17	MW-24	MW-25	MW-28	MW-42
Sample Matrix	Water	Water	Water	Water	Water	Water	Water	Water
Date Collected	2/14/96	2/14/96	2/14/96	2/14/96	2/14/96	2/14/96	2/14/96	2/14/96
<i>Volatile Organic Compounds (ug/L)</i>								
Acetone	< 1.0	40.0	120.0	130.0	2.2	17.0	70.0	< 1.0
Methylene Chloride	< 1.0	< 1.0	8.9	1.3	1.4	< 1.0	67.0	< 1.0
Butyl Alcohol	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
BOD (mg/L)	< 4.0	8.0	NS	< 2.0	< 2.0	< 2.0	< 4.0	< 2.0
COD (mg/L)	14.0	31.0	NS	41.0	17.0	35.0	31.0	20.0
TOC (mg/L)	< 5.0	7.4	NS	7.1	5.6	6.8	6.0	< 5.0

NOTES:

< - Less Than

J - Result is less than the quantitation limit or is an estimated result due to exceedance of holding time.

mg/L - Micrograms per Liter

ug/L - Micrograms per Liter

NS - Not Sampled

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**BIOCRAFT LABORATORIES, INC.
WALDWICK, NEW JERSEY**

TABLE 2

GROUNDWATER SAMPLING RESULTS SUMMARY - MAY 1996

Sample Number	MW-6	MW-9	MW-10	MW-17	MW-24	MW-25	MW-28	MW-42
Sample Matrix	Water	Water	Water	Water	Water	Water	Water	Water
Date Collected	5/15/96	5/15/96	5/15/96	5/15/96	5/15/96	5/15/96	5/15/96	5/15/96
<i>Volatile Organic Compounds (ug/L)</i>								
Acetone	< 8.7	< 8.7	NS	< 8.7	< 8.7	< 8.7	120.0	< 8.7
Methylene Chloride	5.0	< 1.4	NS	4.6	< 1.4	2.1	2.3	< 1.4
Butyl Alcohol	< 200.0	< 200.0	NS	< 200.0	< 200.0	< 200.0	< 200.0	< 200.0
BOD (mg/L)	< 2.0	7.0	NS	< 2.0	4.0	5.0	10.0	< 2.0
COD (mg/L)	14.0	29.0	NS	47.0	60.0	51.0	80.0	13.0
TOC (mg/L)	6.5	11.0	NS	15.0	14.0	12.0	31.0	< 5.0

NOTES:

< - Less Than

J - Result is less than the quantitation limit or is an estimated result due to exceedance of holding time.

mg/L - Micrograms per Liter

ug/L - Micrograms per Liter

NS - Not Sampled

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**BIOCRAFT LABORATORIES, INC.
WALDWICK, NEW JERSEY**

TABLE 3

GROUNDWATER SAMPLING RESULTS SUMMARY - JULY 1996

Sample Number	MW-6	MW-9	MW-10	MW-17	MW-24	MW-25	MW-28	MW-42
Sample Matrix	Water	Water	Water	Water	Water	Water	Water	Water
Date Collected	7/24/96	7/24/96	7/24/96	7/24/96	7/24/96	7/24/96	7/24/96	7/24/96
<i>Volatile Organic Compounds (ug/L)</i>								
Acetone	< 8.7	86.0	NS	65.0	< 8.7	< 8.7	37.0	< 8.7
Methylene Chloride	8.1	2.3	NS	8.2	7.8	8.7	8.5	8.2
Butyl Alcohol	< 200.0	< 200.0	NS	< 200.0	< 200.0	< 200.0	< 200.0	< 200.0
BOD (mg/L)	< 4.0	56.0	NS	17.0	< 4.0	< 4.0	8.0	< 4.0
COD (mg/L)	< 10.0	230.0	NS	100.0	28.0	< 12.0	55.0	< 10.0
TOC (mg/L)	< 5.0	69.0	NS	28.0	11.0	8.8	20.0	< 5.0

NOTES:

< - Less Than

J - Result is less than the quantitation limit or is an estimated result due to exceedance of holding time.

mg/L - Micrograms per Liter

ug/L - Micrograms per Liter

NS - Not Sampled

854820153

BIOCRAFT LABORATORIES, INC.
WALDWICK, NEW JERSEY

TABLE 4

GROUNDWATER SAMPLING RESULTS SUMMARY - NOVEMBER 1996

Sample Number	MW-1	MW-2	MW-3	MW-6	MW-8	MW-9	MW-10
Sample Matrix	Water	Water	Water	Water	Water	Water	Water
Date Collected	11/12/96	11/12/96	11/12/96	11/12/96	11/12/96	11/12/96	11/12/96
<i>Volatile Organic Compounds (ug/L)</i>							
Acetone	< 0.46	< 0.46	106.0	< 0.46	6.00	68.3	NS
Methylene Chloride	4.60	< 0.61	< 0.61	< 0.61	< 0.61	< 0.61	NS
Butyl Alcohol	< 1.40	< 1.40	< 1.40	< 1.40	< 1.40	< 1.40	NS
BOD (mg/L)	< 2.0	< 2.0	5.9	< 2.0	< 2.0	18.1	NS
COD (mg/L)	< 20.0	< 20.0	46.9	< 20.0	< 20.0	42.0	NS
TOC (mg/L)	2.6	1.3	15.7	3.0	5.8	20.1	NS

NOTES:

< - Less Than

J - Result is less than the quantitation limit or is an estimated result due to exceedance of holding time.

mg/L - Micrograms per Liter

ug/L - Micrograms per Liter

854820154

TABLE 4 Continued...

Sample Number	MW-14	MW-17	MW-24	MW-25	MW-28	MW-31	MW-32
Sample Matrix	Water	Water	Water	Water	Water	Water	Water
Date Collected	11/12/96	11/12/96	11/12/96	11/12/96	11/12/96	11/13/96	11/12/96
<i>Volatile Organic Compounds (ug/L)</i>							
Acetone	< 0.46	2.7	< 0.46	< 0.46	87.4	< 0.46	< 0.46
Methylene Chloride	< 0.61	< 0.61	< 0.61	< 0.61	< 0.61	< 0.61	< 0.61
Butyl Alcohol	< 1.40	< 1.40	< 1.40	< 1.40	< 1.40	< 1.40	< 1.40
BOD (mg/L)	< 2.0	< 2.0	6.4	< 3.0	6.7	< 2.0	< 2.0
COD (mg/L)	< 20.0	27.2	95.1	58.5	54.3	25.3	25.3
TOC (mg/L)	6.2	9.1	14.4	10.5	17.0	9.5	8.8

NOTES:

< - Less Than

J - Result is less than the quantitation limit or is an estimated result due to exceedance of holding time.

mg/L - Micrograms per Liter

ug/L - Micrograms per Liter

854820155

TABLE 4 Continued...

Sample Number	MW-33A	MW-42	MW-D	PROD			
Sample Matrix	Water	Water	Water	Water			
Date Collected	11/13/96	11/13/96	11/13/96	11/12/96			
<i>Volatile Organic Compounds (ug/L)</i>			Duplicate	Deep Well			
Acetone	< 0.42	< 0.42	< 0.42	< 0.46			
Methylene Chloride	< 0.61	< 0.61	< 0.61	4.00			
Butyl Alcohol	< 1.40	< 1.40	< 1.40	< 1.4			
BOD (mg/L)	< 2.0	< 2.0	< 2.0	< 2.0			
COD (mg/L)	21.4	< 20.0	< 20.0	< 20.0			
TOC (mg/L)	6.7	< 2.0	2.2	< 1.0			

NOTES:

< - Less Than

J - Result is less than the quantitation limit or is an estimated result due to exceedance of holding time.

mg/L - Micrograms per Liter

ug/L - Micrograms per Liter

854820156

TABLE 4 Continued...

Sample Number	BIO-DEP-1A	W-1	W-2	W-3	W-4	W-5	W-6
Sample Matrix	Water	Water	Water	Water	Water	Water	Water
Date Collected	11/13/96	11/13/96	11/13/96	11/13/96	11/13/96	11/13/96	11/13/96
<i>Volatile Organic Compounds (ug/L)</i>							
Acetone	< 0.46	6.4	143.0	< 0.46	< 0.46	< 0.46	< 0.46
Methylene Chloride	< 0.61	< 0.61	< 0.61	< 0.61	< 0.61	< 0.61	< 0.61
Butyl Alcohol	< 1.40	< 1.40	< 1.40	< 1.40	< 1.40	< 1.40	< 1.40
BOD (mg/L)	< 2.0	10.2	21.6	14.9	4.1	4.5	< 2.0
COD (mg/L)	< 20.0	52.6	20.1	25.3	< 20.0	< 20.0	< 20.0
TOC (mg/L)	1.7	17.8	12.2	7.6	3.5	3.7	3.2

NOTES:

< - Less Than

J - Result is less than the quantitation limit or is an estimated result due to exceedance of holding time.

mg/L - Micrograms per Liter

ug/L - Micrograms per Liter

854820157

**BIOCRAFT LABORATORIES, INC.
WALDWICK, NEW JERSEY**

TABLE 5

QA/QC RESULTS SUMMARY - FEBRUARY THROUGH NOVEMBER 1996

Sample Number	Field Blank	Trip Blank	Field Blank	Trip Blank	Field Blank	Trip Blank
Sample Matrix	Water	Water	Water	Water	Water	Water
Date Collected	2/14/96	2/14/96	5/15/96	5/15/96	7/24/96	7/24/96
<i>Volatile Organic Compounds (ug/L)</i>						
Acetone	< 1.0	< 1.0	< 8.7	< 8.7	< 8.7	< 8.7
Methylene Chloride	< 1.0	< 1.0	< 1.4	< 1.4	3.9	3.0
Butyl Alcohol	< 5.0	< 5.0	< 200.0	< 200.0	< 200.0	< 200.0
BOD (mg/L)	< 2.0	NA	< 2.0	NA	< 4.0	NA
COD (mg/L)	< 10.0	NA	12.0	NA	< 10.0	NA
TOC (mg/L)	< 5.0	NA	< 5.0	NA	< 5.0	NA

NOTES:

< - Less Than

J - Result is less than the quantitation limit or is an estimated result due to exceedance of holding time.

mg/L - Micrograms per Liter

ug/L - Micrograms per Liter

NA - Not Analyzed

TABLE 5 Continued . .

Sample Number	Field Blank	Trip Blank	Field Blank 2	Trip Blank 2		
Sample Matrix	Water	Water	Water	Water		
Date Collected	11/12/96	11/12/96	11/13/96	11/13/96		
<i>Volatile Organic Compounds (ug/L)</i>						
Acetone	< 0.46	< 0.46	< 0.46	< 0.46		
Methylene Chloride	< 0.61	< 0.61	< 0.61	< 0.61		
Butyl Alcohol	< 1.40	< 1.40	< 1.40	< 1.40		
BOD (mg/L)	< 2.0	NA	< 2.0	NA		
COD (mg/L)	< 20.0	NA	< 20.0	NA		
TOC (mg/L)	< 1.0	NA	< 1.0	NA		

NOTES:

< - Less Than

J - Result is less than the quantitation limit or is an estimated result due to exceedance of holding time.

mg/L - Micrograms per Liter

ug/L - Micrograms per Liter

NA - Not Analyzed

854820158

**BIOCRAFT LABORATORIES, INC.
WALDWICK, NEW JERSEY**

TABLE 6

BIODEGRADATION/BIOSTIMULATION SYSTEM SAMPLING RESULTS SUMMARY - FEBRUARY THROUGH NOVEMBER 1996

Sample Number	PW-13	PW-30	MW-P32A	BIO-EFF	PW-13	PW-30	MW-P32A	BIO-EFF
Sample Matrix	Water	Water	Water	Water	Water	Water	Water	Water
Date Collected	2/14/96	2/14/96	2/14/96	2/14/96	5/15/96	5/15/96	5/15/96	5/15/96
<i>Volatile Organic Compounds (ug/L)</i>								
Acetone	590.0 D	72.0	2.0	190.0	< 8.7	< 8.7	2,900.0 E	< 8.7
Methylene Chloride	< 2.0	5.1	1,200.0 E	< 2.0	< 1.4	< 1.4	10,000.0 E	19.0
Butyl Alcohol	13.0 D	< 5.0	3.3 J	13.0 D	< 200.0	< 200.0	< 1000.0	< 200.0
BOD (mg/L)	75.0	2.0	6.0	6.0	7.0	3.0	12.0	< 2.0
COD (mg/L)	210.0	37.0	34.0	28.0	38.0	32.0	48.0	< 31.0
TOC (mg/L)	57.0	11.0	5.6	10.0	13.0	13.0	16.0	< 6.5

NOTES:

< - Less Than

J - Result is less than the quantitation limit or is an estimated result due to exceedance of holding time.

mg/L - Micrograms per Liter

ug/L - Micrograms per Liter

854820159

TABLE 6 Continued...

Sample Number	PW-13	PW-30	MW-P32A	BIO-EFF	PW-13	PW-30	MW-P32A	BIO-EFF
Sample Matrix	Water	Water	Water	Water	Water	Water	Water	Water
Date Collected	7/24/96	7/24/96	7/24/96	7/24/96	11/13/96	11/13/96	11/13/96	11/13/96
<i>Volatile Organic Compounds (ug/L)</i>								
Acetone	< 8.7	72.0	5,000.0 D	< 8.7	169.0	72.7	1,520.0	< 0.46
Methylene Chloride	6.6	66.0	3,600.0 D	7.5	< 0.61	1.9	9,630.0	1.4
Butyl Alcohol	< 200.0	< 200.0	< 4,000.0	< 200.0 D	< 1.40	< 1.40	< 7.0	< 1.40
BOD (mg/L)	15.0	7.0	23.0	< 4.0	34.0	< 3.0	72.8	< 2.0
COD (mg/L)	36.0	40.0	58.0	15.0	77.3	26.6	205.0	< 20.0
TOC (mg/L)	13.0	13.0	20.0	< 5.0	16.9	8.1	50.1	1.2

NOTES:

< - Less Than

J - Result is less than the quantitation limit or is an estimated result due to exceedance of holding time.

mg/L - Micrograms per Liter

ug/L - Micrograms per Liter

854820160

WELL SAMPLING LOG	Eder Associates 413 Riverview Executive Park Trenton, New Jersey 08611 (609) 695-1050 (Telephone) (609) 695-1003 (Facsimile)	OFFICES: New York Wisconsin Michigan Georgia Florida New Jersey
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I. General Information:

Client Name: Biocraft Laboratories, Inc.

Project No.: 1350-05

Project Name: Biocraft - GW

Sampled By: MF/CK

Well No.: MW-6

Well Use: Monitoring

Sample ID: MW-6

Sample Date: 2.14.96

Sample Time: 1330

II. Well Information:

PID Reading: 0

Well Diameter: 2 inches

Static Depth to Water: 10.16 ft. below m.p.

Measuring Point (m.p.): PVC Casing

Total Well Depth: 14.00 ft. below m.p.

Measuring Point (m.p.): PVC Casing

Δ h: 3.84 feet

Volume of Standing Water: 0.61 gallons

Volume to be removed: 1.84 gallons

Actual Volume removed: 2.00 gallons

III. Sampling Information:

Purging Method:

Peristaltic Pump

Submersible Pump

Bailer

Other _____

Well Drawdown/Recovery: Good

Poor

Other _____

Pump Flow Rate: ≤ 0.25 gpm

Purge Time: 10 min.

Purge Chemistry:

Time	Gallons	pH (Std. Units)	Sp. Cond. (ms)	D. O. (ppm)	Temp. (°C)
1230	1	6.5	604	-	8.8
1235	2	6.4	640	-	9.3
				-	
				-	
				-	
				-	

Depth to water after purge: 10.4 ft. below m.p.

Time: 1240

Depth to water prior to sampling: 10.4 ft. below m.p.

Time: 1330

Sample Appearance: Turbid

Slightly Turbid

Clear

Other _____

Sample Odor: None

Other _____

IV. Sample Analyses:

Sample Parameters: Methylene Chloride, Acetone, Butyl Alcohol, BOD, COD, TOC, Cl, Total Phosphorous

Metals: Filtered

Unfiltered

Laboratory: Laboratory Resources

Date Shipped: 2/15/96

854820161

WELL SAMPLING LOG	Eder Associates 413 Riverview Executive Park Trenton, New Jersey 08611 (609) 695-1050 (Telephone) (609) 695-1003 (Facsimile)	OFFICES: New York Wisconsin Michigan Georgia Florida New Jersey
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I. General Information:

Client Name: Biocraft Laboratories, Inc. Project No.: 1350-05
 Project Name: Biocraft - GW Sampled By: ME/CK
 Well No.: MW-9 Well Use: Monitoring
 Sample ID: MW-9 Sample Date: 2.14.96 Sample Time: 1030

II. Well Information:

PID Reading: 0 Well Diameter: 1 inches
 Static Depth to Water: 3.61 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Total Well Depth: 11.60 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Δ h: 8.00 feet Volume of Standing Water: 0.32 gallons
 Volume to be removed: 1.00 gallons Actual Volume removed: 1.00 gallons

III. Sampling Information:

Purging Method:
 Peristaltic Pump Submersible Pump
 Bailer Other _____
 Well Drawdown/Recovery: Good Poor Other _____
 Pump Flow Rate: <0.5 gpm Purge Time: 3 min.

Purge Chemistry:

Time	Gallons	pH (Std. Units)	Sp. Cond. (ms)	D. O. (ppm)	Temp. (°C)
1020	0.25	6.0	629	-	5.7
1023	0.50	6.0	650	-	6.4
1028	0.75	6.1	719	-	7.1
1030	1.0	6.1	795	-	7.5

Depth to water after purge: 4.1 ft. below m.p. Time: 1030
 Depth to water prior to sampling: 4.1 ft. below m.p. Time: 1030
 Sample Appearance: Turbid Slightly Turbid Clear Other _____
 Sample Odor: None Other _____

IV. Sample Analyses:

Sample Parameters: Methylene Chloride, Acetone, Butyl Alcohol, BOD, COD, TOC, Cl, Total Phosphorous
 Metals: Filtered Unfiltered
 Laboratory: Laboratory Resources Date Shipped: 2/15/96

854820162

WELL SAMPLING LOG	Eder Associates 413 Riverview Executive Park Trenton, New Jersey 08611 (609) 695-1050 (Telephone) (609) 695-1003 (Facsimile)	OFFICES: New York Wisconsin Michigan Georgia Florida New Jersey
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I. General Information:

Client Name: Biocraft Laboratories, Inc. Project No.: 1350-05
 Project Name: Biocraft - GW Sampled By: ME/CK
 Well No.: MW-10 Well Use: Monitoring
 Sample ID: MW-10 Sample Date: 2.14.96 Sample Time: 1820

II. Well Information:

PID Reading: 0 Well Diameter: 1 inches
 Static Depth to Water: 2.15 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Total Well Depth: 12.00 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Δ h: 9.85 feet Volume of Standing Water: 0.39 gallons
 Volume to be removed: 1.17 gallons Actual Volume removed: 0.40 gallons

III. Sampling Information:

Purging Method:
 Peristaltic Pump Submersible Pump
 Bailer Other _____
 Well Drawdown/Recovery: Good Poor Other Well Did Not
Recover - Only VOC collected
 Pump Flow Rate: ≤ 0.25 gpm Purge Time: _____ min.

Purge Chemistry:

Time	Gallons	pH (Std. Units)	Sp. Cond. (ms)	D. O. (ppm)	Temp. (°C)
				-	
				-	
				-	
				-	

Depth to water after purge: 12.00 ft. below m.p. Time: 1020
 Depth to water prior to sampling: 11.4 ft. below m.p. Time: 1830
 Sample Appearance: Turbid Slightly Turbid Clear Other _____
 Sample Odor: None Other _____

IV. Sample Analyses:

Sample Parameters: Methylene Chloride, Acetone, Butyl Alcohol
 Metals: Filtered Unfiltered
 Laboratory: Laboratory Resources Date Shipped: 2/15/96

854820163

WELL SAMPLING LOG	Eder Associates 413 Riverview Executive Park Trenton, New Jersey 08611 (609) 695-1050 (Telephone) (609) 695-1003 (Facsimile)	OFFICES: New York Wisconsin Michigan Georgia Florida New Jersey
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I. General Information:

Client Name: Biocraft Laboratories, Inc. Project No.: 1350-05
 Project Name: Biocraft - GW Sampled By: MF/CK
 Well No.: MW-17 Well Use: Monitoring
 Sample ID: MW-17 Sample Date: 2.14.96 Sample Time: 1030

II. Well Information:

PID Reading: 0 Well Diameter: 4 inches
 Static Depth to Water: 4.85 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Total Well Depth: 10.45 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Δ h: 5.60 feet Volume of Standing Water: 3.64 gallons
 Volume to be removed: 10.90 gallons Actual Volume removed: 11.00 gallons

III. Sampling Information:

Purging Method:
 Peristaltic Pump Submersible Pump
 Bailer Other _____
 Well Drawdown/Recovery: Good Poor Other _____
 Pump Flow Rate: < 0.5 gpm Purge Time: 22 min.

Purge Chemistry:

Time	Gallons	pH (Std. Units)	Sp. Cond. (ms)	D. O. (ppm)	Temp. (°C)
1007	3	6.79	904	-	7.7
1013	6	6.92	893	-	7.8
1019	9	6.94	916	-	8.0
1023	11	6.94	916	-	8.1

Depth to water after purge: 5.9 ft. below m.p. Time: 1030
 Depth to water prior to sampling: 5.9 ft. below m.p. Time: 1030
 Sample Appearance: Turbid Slightly Turbid Clear Other _____
 Sample Odor: None Other _____

IV. Sample Analyses:

Sample Parameters: Methylene Chloride, Acetone, Butyl Alcohol, BOD, COD, TOC, Cl, Total Phosphorous
 Metals: Filtered Unfiltered
 Laboratory: Laboratory Resources Date Shipped: 2/15/96

854820164

WELL SAMPLING LOG	Eder Associates 413 Riverview Executive Park Trenton, New Jersey 08611 (609) 695-1050 (Telephone) (609) 695-1003 (Facsimile)	OFFICES: New York Wisconsin Michigan Georgia Florida New Jersey
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I. General Information:

Client Name: Biocraft Laboratories, Inc. Project No.: 1350-05
 Project Name: Biocraft - GW Sampled By: ME/CK
 Well No.: MW-24 Well Use: Monitoring
 Sample ID: MW-24 Sample Date: 2.14.96 Sample Time: 1805

II. Well Information:

PID Reading: 0 Well Diameter: 2 inches
 Static Depth to Water: 3.86 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Total Well Depth: 13.08 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Δ h: 9.22 feet Volume of Standing Water: 1.47 gallons
 Volume to be removed: 4.40 gallons Actual Volume removed: 5.00 gallons

III. Sampling Information:

Purging Method:
 Peristaltic Pump Submersible Pump
 Bailer Other _____
 Well Drawdown/Recovery: Good Poor Other _____
 Pump Flow Rate: ≤0.5 gpm Purge Time: 10 min.

Purge Chemistry:

Time	Gallons	pH (Std. Units)	Sp. Cond. (ms)	D. O. (ppm)	Temp. (°C)
1757	2.5	7.68	169	-	5.9
1802	5.0	7.82	190	-	6.0
				-	
				-	

Depth to water after purge: 5.9 ft. below m.p. Time: 1805
 Depth to water prior to sampling: 5.9 ft. below m.p. Time: 1805
 Sample Appearance: Turbid Slightly Turbid Clear Other _____
 Sample Odor: None Other _____

IV. Sample Analyses:

Sample Parameters: Methylene Chloride, Acetone, Butyl Alcohol, BOD, COD, TOC, Cl, Total Phosphorous
 Metals: Filtered Unfiltered
 Laboratory: Laboratory Resources Date Shipped: 2/15/96

854820165

WELL SAMPLING LOG	Eder Associates 413 Riverview Executive Park Trenton, New Jersey 08611 (609) 695-1050 (Telephone) (609) 695-1003 (Facsimile)	OFFICES: New York Wisconsin Michigan Georgia Florida New Jersey
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I. General Information:

Client Name: Biocraft Laboratories, Inc. Project No.: 1350-05
 Project Name: Biocraft - GW Sampled By: ME/CK
 Well No.: MW-25 Well Use: Monitoring
 Sample ID: MW-25 Sample Date: 2.14.96 Sample Time: 1730

II. Well Information:

PID Reading: 0 Well Diameter: 2 inches
 Static Depth to Water: 3.53 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Total Well Depth: 10.00 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Δ h: 6.47 feet Volume of Standing Water: 1.04 gallons
 Volume to be removed: 3.10 gallons Actual Volume removed: 5.00 gallons

III. Sampling Information:

Purging Method:
 Peristaltic Pump Submersible Pump
 Bailer Other _____
 Well Drawdown/Recovery: Good Poor Other _____
 Pump Flow Rate: 1.0 gpm Purge Time: 5 min.

Purge Chemistry:

Time	Gallons	pH (Std. Units)	Sp. Cond. (ms)	D. O. (ppm)	Temp. (°C)
1726	2.5	6.59	1211	-	6.0
1729	5.0	6.63	1281	-	6.7
				-	
				-	

Depth to water after purge: 3.76 ft. below m.p. Time: 1730
 Depth to water prior to sampling: 3.76 ft. below m.p. Time: 1730
 Sample Appearance: Turbid Slightly Turbid Clear Other _____
 Sample Odor: None Other _____

IV. Sample Analyses:

Sample Parameters: Methylene Chloride, Acetone, Butyl Alcohol, BOD, COD, TOC, Cl, Total Phosphorous
 Metals: Filtered Unfiltered
 Laboratory: Laboratory Resources Date Shipped: 2/15/96

854820166

WELL SAMPLING LOG	Eder Associates 413 Riverview Executive Park Trenton, New Jersey 08611 (609) 695-1050 (Telephone) (609) 695-1003 (Facsimile)	OFFICES: New York Wisconsin Michigan Georgia Florida New Jersey
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I. General Information:

Client Name: Biocraft Laboratories, Inc. Project No.: 1350-05
 Project Name: Biocraft - GW Sampled By: MF/CK
 Well No.: MW-28 Well Use: Monitoring
 Sample ID: MW-28 Sample Date: 2.14.96 Sample Time: 1445

II. Well Information:

PID Reading: 0 Well Diameter: 2 inches
 Static Depth to Water: 1.97 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Total Well Depth: 8.55 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Δ h: 6.58 feet Volume of Standing Water: 1.05 gallons
 Volume to be removed: 3.15 gallons Actual Volume removed: 3.50 gallons

III. Sampling Information:

Purging Method:
 Peristaltic Pump Submersible Pump
 Bailer Other _____
 Well Drawdown/Recovery: Good Poor Other _____
 Pump Flow Rate: 0.25 gpm Purge Time: 20 min.

Purge Chemistry:

Time	Gallons	pH (Std. Units)	Sp. Cond. (ms)	D. O. (ppm)	Temp. (°C)
1420	1	6.46	1093	-	5.2
1425	2	6.44	1101	-	4.9
1430	3.5	6.41	1117	-	4.9
				-	

Depth to water after purge: 2.25 ft. below m.p. Time: 1430
 Depth to water prior to sampling: 2.00 ft. below m.p. Time: 1445
 Sample Appearance: Turbid Slightly Turbid Clear Other _____
 Sample Odor: None Other _____

IV. Sample Analyses:

Sample Parameters: Methylene Chloride, Acetone, Butyl Alcohol, BOD, COD, TOC, Cl, Total Phosphorous
 Metals: Filtered Unfiltered
 Laboratory: Laboratory Resources Date Shipped: 2/15/96

854820167

WELL SAMPLING LOG	Eder Associates 413 Riverview Executive Park Trenton, New Jersey 08611 (609) 695-1050 (Telephone) (609) 695-1003 (Facsimile)	OFFICES: New York Wisconsin Michigan Georgia Florida New Jersey
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I. General Information:

Client Name: Biocraft Laboratories, Inc. Project No.: 1350-05
 Project Name: Biocraft - GW Sampled By: MF/CK
 Well No.: MW-42 Well Use: Monitoring
 Sample ID: MW-42 Sample Date: 2.14.96 Sample Time: 1700

II. Well Information:

PID Reading: 0 Well Diameter: 2 inches
 Static Depth to Water: 2.17 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Total Well Depth: 15.55 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Δ h: 13.33 feet Volume of Standing Water: 2.14 gallons
 Volume to be removed: 6.42 gallons Actual Volume removed: 6.80 gallons

III. Sampling Information:

Purging Method:
 Peristaltic Pump Submersible Pump
 Bailer Other _____
 Well Drawdown/Recovery: Good Poor Other _____
 Pump Flow Rate: 0.5 gpm Purge Time: 15 min.

Purge Chemistry:

Time	Gallons	pH (Std. Units)	Sp. Cond. (ms)	D. O. (ppm)	Temp. (°C)
1626	2	5.42	82.7	-	7.3
1630	4	6.05	259	-	7.9
1636	6.5	6.21	277	-	7.9
				-	

Depth to water after purge: 6.8 ft. below m.p. Time: 1640
 Depth to water prior to sampling: 2.2 ft. below m.p. Time: 1700
 Sample Appearance: Turbid Slightly Turbid Clear Other _____
 Sample Odor: None Other _____

IV. Sample Analyses:

Sample Parameters: Methylene Chloride, Acetone, Butyl Alcohol, BOD, COD, TOC, Cl, Total Phosphorous
 Metals: Filtered Unfiltered
 Laboratory: Laboratory Resources Date Shipped: 2/15/96

854820168

WELL SAMPLING LOG	Eder Associates 413 Riverview Executive Park Trenton, New Jersey 08611 (609) 695-1050 (Telephone) (609) 695-1003 (Facsimile)	OFFICES: New York Wisconsin Michigan Georgia Florida New Jersey
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I. General Information:

Client Name: Biocraft Laboratories, Inc. Project No.: 1350-05
 Project Name: Biocraft - GW Sampled By: CK
 Well No.: MW-9 Well Use: Monitoring
 Sample ID: BIO-MW-9 Sample Date: 5/15/96 Sample Time: 1000

II. Well Information:

PID Reading: 0 Well Diameter: 1 inches
 Static Depth to Water: 3.65 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Total Well Depth: 11.60 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Δ h: 7.95 feet Volume of Standing Water: 0.32 gallons
 Volume to be removed: 0.96 gallons Actual Volume removed: 1.50 gallons

III. Sampling Information:

Purging Method:
 Peristaltic Pump Submersible Pump
 Bailer Other _____
 Well Drawdown/Recovery: Good Poor Other _____
 Pump Flow Rate: 0.25 gpm Purge Time: 25 min.

Purge Chemistry:

Time	Gallons	pH (Std. Units)	Sp. Cond. (ms)	D. O. (ppm)	Temp. (°C)
830	0	7.39	452	3.0	15.4
850	1	7.48	440	5.7	15.6
855	1.5	7.28	440	5.4	16.6

Depth to water after purge: 11.1 ft. below m.p. Time: 855
 Depth to water prior to sampling: 5.2 ft. below m.p. Time: 1000
 Sample Appearance: Turbid Slightly Turbid Clear Other _____
 Sample Odor: None Other _____

IV. Sample Analyses:

Sample Parameters: Methylene Chloride, Acetone, Butyl Alcohol, BOD, COD, TOC, Cl, Total Phosphorous
 Metals: Filtered Unfiltered
 Laboratory: Accutest Date Shipped: 5/16/97

854820169

WELL SAMPLING LOG	Eder Associates 413 Riverview Executive Park Trenton, New Jersey 08611 (609) 695-1050 (Telephone) (609) 695-1003 (Facsimile)	OFFICES: New York Wisconsin Michigan Georgia Florida New Jersey
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I. General Information:

Client Name: Biocraft Laboratories, Inc. Project No.: 1350-05
 Project Name: Biocraft - GW Sampled By: CK
 Well No.: MW-6 Well Use: Monitoring
 Sample ID: BIO-MW-6 Sample Date: 5/15/97 Sample Time: 1245

II. Well Information:

PID Reading: 0 Well Diameter: 1.5 inches
 Static Depth to Water: 10.32 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Total Well Depth: 14.00 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Δ h: 3.61 feet Volume of Standing Water: 0.32 gallons
 Volume to be removed: 0.96 gallons Actual Volume removed: 1.50 gallons

III. Sampling Information:

Purging Method:
 Peristaltic Pump Submersible Pump
 Bailer Other _____
 Well Drawdown/Recovery: Good Poor Other _____
 Pump Flow Rate: 0.25 gpm Purge Time: 26 min.

Purge Chemistry:

Time	Gallons	pH (Std. Units)	Sp. Cond. (ms)	D. O. (ppm)	Temp. (°C)
1130	0	7.14	516	5.6	18.6
1146	1	7.38	565	6.2	18.4
1156	1.5	7.39	566	6.5	18.3

Depth to water after purge: 13.4 ft. below m.p. Time: 1156
 Depth to water prior to sampling: 11.2 ft. below m.p. Time: 1245
 Sample Appearance: Turbid Slightly Turbid Clear Other _____
 Sample Odor: None Other _____

IV. Sample Analyses:

Sample Parameters: Methylene Chloride, Acetone, Butyl Alcohol, BOD, COD, TOC, Cl, Total Phosphorous
 Metals: Filtered Unfiltered
 Laboratory: Accutest Date Shipped: 5/16/97

854820170

WELL SAMPLING LOG	Eder Associates 413 Riverview Executive Park Trenton, New Jersey 08611 (609) 695-1050 (Telephone) (609) 695-1003 (Facsimile)	OFFICES: New York Wisconsin Michigan Georgia Florida New Jersey

I. General Information:

Client Name: Biocraft Laboratories, Inc.

Project No.: 1350-05

Project Name: Biocraft - GW

Sampled By: CK

Well No.: MW-42

Well Use: Monitoring

Sample ID: BIO-MW-42

Sample Date: 5/15/97

Sample Time: 1530

II. Well Information:

PID Reading: 0

Well Diameter: 2 inches

Static Depth to Water: 2.35 ft. below m.p.

Measuring Point (m.p.): PVC Casing

Total Well Depth: 15.55 ft. below m.p.

Measuring Point (m.p.): PVC Casing

Δ h: 13.20 feet

Volume of Standing Water: 2.11 gallons

Volume to be removed: 6.33 gallons

Actual Volume removed: 7.00 gallons

III. Sampling Information:

Purging Method:

Peristaltic Pump

Submersible Pump

Bailer

Other _____

Well Drawdown/Recovery:

Good

Poor

Other _____

Pump Flow Rate: 0.25 gpm

Purge Time: 30 min.

Purge Chemistry:

Time	Gallons	pH (Std. Units)	Sp. Cond. (ms)	D. O. (ppm)	Temp. (°C)
1442	2.5	5.74	138	10.9	11.0
1452	5	6.04	163	9.3	10.8
1502	7	6.14	189	8.5	10.8

Depth to water after purge: 4.8 ft. below m.p.

Time: 1502

Depth to water prior to sampling: 2.4 ft. below m.p.

Time: 1530

Sample Appearance: Turbid

Slightly Turbid

Clear

Other _____

Sample Odor: None

Other _____

IV. Sample Analyses:

Sample Parameters: Methylene Chloride, Acetone, Butyl Alcohol, BOD, COD, TOC, Cl, Total Phosphorous

Metals:

Filtered

Unfiltered

Laboratory: Accutest

Date Shipped: 5/16/97

854820171

WELL SAMPLING LOG	Eder Associates 413 Riverview Executive Park Trenton, New Jersey 08611 (609) 695-1050 (Telephone) (609) 695-1003 (Facsimile)	OFFICES: New York Wisconsin Michigan Georgia Florida New Jersey
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I. General Information:

Client Name: Biocraft Laboratories, Inc. Project No.: 1350-05
 Project Name: Biocraft - GW Sampled By: CK
 Well No.: MW-28 Well Use: Monitoring
 Sample ID: BIO-MW-28 Sample Date: 5/15/97 Sample Time: 1050

II. Well Information:

PID Reading: 0 Well Diameter: 1 inches
 Static Depth to Water: 1.90 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Total Well Depth: 8.15 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Δ h: 6.60 feet Volume of Standing Water: 0.26 gallons
 Volume to be removed: 0.78 gallons Actual Volume removed: 1.50 gallons

III. Sampling Information:

Purging Method:
 Peristaltic Pump Submersible Pump
 Bailer Other _____
 Well Drawdown/Recovery: Good Poor Other _____
 Pump Flow Rate: .05 gpm Purge Time: 3 min.

Purge Chemistry:

Time	Gallons	pH (Std. Units)	Sp. Cond. (ms)	D. O. (ppm)	Temp. (°C)
1031	0	7.22	842	0.5	17.7
1032	1	7.15	837	0.8	17.5
1040	1.5	7.14	825	1.5	17.3

Depth to water after purge: 2.8 ft. below m.p. Time: 1040
 Depth to water prior to sampling: 1.9 ft. below m.p. Time: 1050
 Sample Appearance: Turbid Slightly Turbid Clear Other _____
 Sample Odor: None Other _____

IV. Sample Analyses:

Sample Parameters: Methylene Chloride, Acetone, Butyl Alcohol, BOD, COD, TOC, Cl, Total Phosphorous
 Metals: Filtered Unfiltered
 Laboratory: Accutest Date Shipped: 5/16/96

854820172

WELL SAMPLING LOG	Eder Associates 413 Riverview Executive Park Trenton, New Jersey 08611 (609) 695-1050 (Telephone) (609) 695-1003 (Facsimile)	OFFICES: New York Wisconsin Michigan Georgia Florida New Jersey
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I. General Information:

Client Name: Biocraft Laboratories, Inc.

Project No.: 1350-05

Project Name: Biocraft - GW

Sampled By: CK

Well No.: MW-25

Well Use: Monitoring

Sample ID: BIO-MW-25

Sample Date: 5/15/97

Sample Time: 1145

II. Well Information:

PID Reading: 0

Well Diameter: 2 inches

Static Depth to Water: 4.15 ft. below m.p.

Measuring Point (m.p.): PVC Casing

Total Well Depth: 10.00 ft. below m.p.

Measuring Point (m.p.): PVC Casing

Δ h: 5.85 feet

Volume of Standing Water: 0.94 gallons

Volume to be removed: 2.82 gallons

Actual Volume removed: 3.00 gallons

III. Sampling Information:

Purging Method:

Peristaltic Pump

Submersible Pump

Bailer

Other _____

Well Drawdown/Recovery: Good

Poor

Other _____

Pump Flow Rate: 0.5 gpm

Purge Time: 6 min.

Purge Chemistry:

Time	Gallons	pH (Std. Units)	Sp. Cond. (ms)	D. O. (ppm)	Temp. (°C)
1130	1	6.86	451	4.0	16.0
1132	2	7.02	446	8.5	16.7
1134	3	6.93	493	6.4	15.2

Depth to water after purge: 7.8 ft. below m.p.

Time: 1134

Depth to water prior to sampling: 5.2 ft. below m.p.

Time: 1145

Sample Appearance: Turbid

Slightly Turbid

Clear

Other _____

Sample Odor: None

Other _____

IV. Sample Analyses:

Sample Parameters: Methylene Chloride, Acetone, Butyl Alcohol, BOD, COD, TOC, Cl, Total Phosphorous

Metals:

Filtered

Unfiltered

Laboratory: Accutest

Date Shipped: 5/16/96

854820173

WELL SAMPLING LOG	Eder Associates 413 Riverview Executive Park Trenton, New Jersey 08611 (609) 695-1050 (Telephone) (609) 695-1003 (Facsimile)	OFFICES: New York Wisconsin Michigan Georgia Florida New Jersey
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I. General Information:

Client Name: Biocraft Laboratories, Inc. Project No.: 1350-05
 Project Name: Biocraft - GW Sampled By: CK
 Well No.: MW-24 Well Use: Monitoring
 Sample ID: BIO-MW-24 Sample Date: 5/15/97 Sample Time: 1500

II. Well Information:

PID Reading: 0 Well Diameter: 2 inches
 Static Depth to Water: 3.71 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Total Well Depth: 13.08 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Δ h: 9.37 feet Volume of Standing Water: 1.50 gallons
 Volume to be removed: 4.50 gallons Actual Volume removed: 5.00 gallons

III. Sampling Information:

Purging Method:
 Peristaltic Pump Submersible Pump
 Bailer Other _____
 Well Drawdown/Recovery: Good Poor Other _____
 Pump Flow Rate: 0.25 gpm Purge Time: 20 min.

Purge Chemistry:

Time	Gallons	pH (Std. Units)	Sp. Cond. (ms)	D. O. (ppm)	Temp. (°C)
1322	2.5	7.74	441	11.2	15.2
1332	5	7.43	486	7.9	14.7

Depth to water after purge: 11.8 ft. below m.p. Time: 1332
 Depth to water prior to sampling: 3.8 ft. below m.p. Time: 1500
 Sample Appearance: Turbid Slightly Turbid Clear Other _____
 Sample Odor: None Other _____

IV. Sample Analyses:

Sample Parameters: Methylene Chloride, Acetone, Butyl Alcohol, BOD, COD, TOC, Cl, Total Phosphorous
 Metals: Filtered Unfiltered
 Laboratory: Accutest Date Shipped: 5/16/96

854820174

WELL SAMPLING LOG	Eder Associates 413 Riverview Executive Park Trenton, New Jersey 08611 (609) 695-1050 (Telephone) (609) 695-1003 (Facsimile)	OFFICES: New York Wisconsin Michigan Georgia Florida New Jersey
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I. General Information:

Client Name: Biocraft Laboratories, Inc. Project No.: 1350-05
 Project Name: Biocraft - GW Sampled By: CK
 Well No.: MW-17 Well Use: Monitoring
 Sample ID: BIO-MW-17 Sample Date: 5/15/96 Sample Time: 930

II. Well Information:

PID Reading: 0 Well Diameter: 4 inches
 Static Depth to Water: 4.87 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Total Well Depth: 10.45 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Δ h: 5.58 feet Volume of Standing Water: 3.63 gallons
 Volume to be removed: 10.89 gallons Actual Volume removed: 11.00 gallons

III. Sampling Information:

Purging Method:
 Peristaltic Pump Submersible Pump
 Bailer Other _____
 Well Drawdown/Recovery: Good Poor Other _____
 Pump Flow Rate: 0.5 gpm Purge Time: 22 min.

Purge Chemistry:

Time	Gallons	pH (Std. Units)	Sp. Cond. (ms)	D. O. (ppm)	Temp. (°C)
910	4	6.62	1058	8.5	14.1
918	8	7.19	1036	2.7	13.6
924	11	7.17	1036	2.7	13.3

Depth to water after purge: 4.87 ft. below m.p. Time: 924
 Depth to water prior to sampling: 4.87 ft. below m.p. Time: 930
 Sample Appearance: Turbid Slightly Turbid Clear Other _____
 Sample Odor: None Other _____

IV. Sample Analyses:

Sample Parameters: Methylene Chloride, Acetone, Butyl Alcohol, BOD, COD, TOC, Cl, Total Phosphorous
 Metals: Filtered Unfiltered
 Laboratory: Accutest Date Shipped: 5/16/96

854820175

WELL SAMPLING LOG	Eder Associates 413 Riverview Executive Park Trenton, New Jersey 08611 (609) 695-1050 (Telephone) (609) 695-1003 (Facsimile)	OFFICES: New York Wisconsin Michigan Georgia Florida New Jersey
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I. General Information:

Client Name: Biocraft Laboratories, Inc. Project No.: 1350-05
 Project Name: Biocraft - GW Sampled By: CK
 Well No.: MW-9 Well Use: Monitoring
 Sample ID: BIO-MW-9 Sample Date: 7/24/96 Sample Time: 1000

II. Well Information:

PID Reading: 0 Well Diameter: 1 inches
 Static Depth to Water: 3.98 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Total Well Depth: 11.60 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Δ h: 7.62 feet Volume of Standing Water: 0.30 gallons
 Volume to be removed: 0.90 gallons Actual Volume removed: 1.50 gallons

III. Sampling Information:

Purging Method:
 Peristaltic Pump Submersible Pump
 Bailer Other _____
 Well Drawdown/Recovery: Good Poor Other _____
 Pump Flow Rate: 0.25 gpm Purge Time: 50 min.

Purge Chemistry:

Time	Gallons	pH (Std. Units)	Sp. Cond. (ms)	D. O. (ppm)	Temp. (°C)
810	0.5	7.44	944	11.1	19.4
812	1	7.42	947	10.2	19.8
900	1.5	6.92	898	7.0	19.2

Depth to water after purge: 11.1 ft. below m.p. Time: 900
 Depth to water prior to sampling: 5.1 ft. below m.p. Time: 1000
 Sample Appearance: Turbid Slightly Turbid Clear Other _____
 Sample Odor: None Other _____

IV. Sample Analyses:

Sample Parameters: Methylene Chloride, Acetone, Butyl Alcohol, BOD, COD, TOC, Cl, Total Phosphorous
 Metals: Filtered Unfiltered
 Laboratory: Accutest Date Shipped: 7/25/96

854820176

WELL SAMPLING LOG	Eder Associates 413 Riverview Executive Park Trenton, New Jersey 08611 (609) 695-1050 (Telephone) (609) 695-1003 (Facsimile)	OFFICES: New York Wisconsin Michigan Georgia Florida New Jersey
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I. General Information:

Client Name: Biocraft Laboratories, Inc.

Project No.: 1350-05

Project Name: Biocraft - GW

Sampled By: CK

Well No.: MW-6

Well Use: Monitoring

Sample ID: BIO-MW-6

Sample Date: 7/24/96

Sample Time: 1045

II. Well Information:

PID Reading: 0

Well Diameter: 1.5 inches

Static Depth to Water: 10.62 ft. below m.p.

Measuring Point (m.p.): PVC Casing

Total Well Depth: 14.00 ft. below m.p.

Measuring Point (m.p.): PVC Casing

Δ h: 3.38 feet

Volume of Standing Water: 0.30 gallons

Volume to be removed: 0.90 gallons

Actual Volume removed: 1.00 gallons

III. Sampling Information:

Purging Method:

Peristaltic Pump

Submersible Pump

Bailer

Other _____

Well Drawdown/Recovery: Good

Poor

Other _____

Pump Flow Rate: 0.25 gpm

Purge Time: 37 min.

Purge Chemistry:

Time	Gallons	pH (Std. Units)	Sp. Cond. (ms)	D. O. (ppm)	Temp. (°C)
855	.5	7.60	555	3.2	17.6
930	1	7.19	673	6.7	17.8

Depth to water after purge: 13.4 ft. below m.p.

Time: 930

Depth to water prior to sampling: 11.4 ft. below m.p.

Time: 1045

Sample Appearance: Turbid

Slightly Turbid

Clear

Other _____

Sample Odor: None

Other _____

IV. Sample Analyses:

Sample Parameters: Methylene Chloride, Acetone, Butyl Alcohol, BOD, COD, TOC, Cl, Total Phosphorous
Metals: Filtered Unfiltered

Laboratory: Accutest

Date Shipped: 7/25/96

854820177

WELL SAMPLING LOG	Eder Associates 413 Riverview Executive Park Trenton, New Jersey 08611 (609) 695-1050 (Telephone) (609) 695-1003 (Facsimile)	OFFICES: New York Wisconsin Michigan Georgia Florida New Jersey
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I. General Information:

Client Name: Biocraft Laboratories, Inc.

Project No.: 1350-05

Project Name: Biocraft - GW

Sampled By: CK

Well No.: MW-42

Well Use: Monitoring

Sample ID: BIO-MW-42

Sample Date: 7/24/96

Sample Time: 1400

II. Well Information:

PID Reading: 0

Well Diameter: 2 inches

Static Depth to Water: 3.50 ft. below m.p.

Measuring Point (m.p.): PVC Casing

Total Well Depth: 15.50 ft. below m.p.

Measuring Point (m.p.): PVC Casing

Δ h: 12.00 feet

Volume of Standing Water: 1.92 gallons

Volume to be removed: 5.76 gallons

Actual Volume removed: 6.00 gallons

III. Sampling Information:

Purging Method:

Peristaltic Pump

Submersible Pump

Bailer

Other _____

Well Drawdown/Recovery:

Good

Poor

Other _____

Pump Flow Rate: 0.5 gpm

Purge Time: 12 min.

Purge Chemistry:

Time	Gallons	pH (Std. Units)	Sp. Cond. (ms)	D. O. (ppm)	Temp. (°C)
1332	2	5.23	119	5.0	15.2
1336	4	6.15	183	10.3	14.0
1340	6	6.22	200	11.8	14.0

Depth to water after purge: 5.2 ft. below m.p.

Time: 1340

Depth to water prior to sampling: 3.7 ft. below m.p.

Time: 1400

Sample Appearance: Turbid

Slightly Turbid

Clear

Other _____

Sample Odor: None

Other _____

IV. Sample Analyses:

Sample Parameters: Methylene Chloride, Acetone, Butyl Alcohol, BOD, COD, TOC, Cl, Total Phosphorous
Metals: Filtered Unfiltered

Laboratory: Accutest

Date Shipped: 7/25/96

854820178

WELL SAMPLING LOG	Eder Associates 413 Riverview Executive Park Trenton, New Jersey 08611 (609) 695-1050 (Telephone) (609) 695-1003 (Facsimile)	OFFICES: New York Wisconsin Michigan Georgia Florida New Jersey
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I. General Information:

Client Name: Biocraft Laboratories, Inc. Project No.: 1350-05
 Project Name: Biocraft - GW Sampled By: CK
 Well No.: MW-28 Well Use: Monitoring
 Sample ID: BIO-MW-28 Sample Date: 7/24/96 Sample Time: 930

II. Well Information:

PID Reading: 0 Well Diameter: 1 inches
 Static Depth to Water: 2.80 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Total Well Depth: 8.15 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Δ h: 5.35 feet Volume of Standing Water: 0.21 gallons
 Volume to be removed: 0.63 gallons Actual Volume removed: 1.00 gallons

III. Sampling Information:

Purging Method:
 Peristaltic Pump Submersible Pump
 Bailer Other _____
 Well Drawdown/Recovery: Good Poor Other _____
 Pump Flow Rate: .05 gpm Purge Time: 1 min.

Purge Chemistry:

Time	Gallons	pH (Std. Units)	Sp. Cond. (ms)	D. O. (ppm)	Temp. (°C)
830	0.5	6.47	1340	5.0	22.8
831	1	6.46	1400	5.6	22.1

Depth to water after purge: 3.6 ft. below m.p. Time: 831
 Depth to water prior to sampling: 2.8 ft. below m.p. Time: 930
 Sample Appearance: Turbid Slightly Turbid Clear Other _____
 Sample Odor: None Other _____

IV. Sample Analyses:

Sample Parameters: Methylene Chloride, Acetone, Butyl Alcohol, BOD, COD, TOC, Cl, Total Phosphorous
 Metals: Filtered Unfiltered

Laboratory: Accutest Date Shipped: 7/25/96

854820179

WELL SAMPLING LOG	Eder Associates 413 Riverview Executive Park Trenton, New Jersey 08611 (609) 695-1050 (Telephone) (609) 695-1003 (Facsimile)	OFFICES: New York Wisconsin Michigan Georgia Florida New Jersey
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I. General Information:

Client Name: Biocraft Laboratories, Inc. Project No.: 1350-05
 Project Name: Biocraft - GW Sampled By: CK
 Well No.: MW-25 Well Use: Monitoring
 Sample ID: BJO-MW-25 Sample Date: 7/24/96 Sample Time: 1300

II. Well Information:

PID Reading: 0 Well Diameter: 2 inches
 Static Depth to Water: 5.10 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Total Well Depth: 10.00 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Δ h: 4.90 feet Volume of Standing Water: 0.78 gallons
 Volume to be removed: 2.34 gallons Actual Volume removed: 3.00 gallons

III. Sampling Information:

Purging Method:
 Peristaltic Pump Submersible Pump
 Bailer Other _____
 Well Drawdown/Recovery: Good Poor Other _____
 Pump Flow Rate: 0.25 gpm Purge Time: 12 min.

Purge Chemistry:

Time	Gallons	pH (Std. Units)	Sp. Cond. (ms)	D. O. (ppm)	Temp. (°C)
1220	1	6.47	481	5.0	20.9
1224	2	6.46	524	5.1	20.4
1228	3	6.40	527	8.2	20.5

Depth to water after purge: 9.5 ft. below m.p. Time: 1230
 Depth to water prior to sampling: 6.8 ft. below m.p. Time: 1300
 Sample Appearance: Turbid Slightly Turbid Clear Other _____
 Sample Odor: None Other _____

IV. Sample Analyses:

Sample Parameters: Methylene Chloride, Acetone, Butyl Alcohol, BOD, COD, TOC, Cl, Total Phosphorous
 Metals: Filtered Unfiltered

Laboratory: Accutest Date Shipped: 7/25/96

854820180

WELL SAMPLING LOG	Eder Associates 413 Riverview Executive Park Trenton, New Jersey 08611 (609) 695-1050 (Telephone) (609) 695-1003 (Facsimile)	OFFICES: New York Wisconsin Michigan Georgia Florida New Jersey
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I. General Information:

Client Name: Biocraft Laboratories, Inc. Project No.: 1350-05
 Project Name: Biocraft - GW Sampled By: CK
 Well No.: MW-24 Well Use: Monitoring
 Sample ID: BIO-MW-24 Sample Date: 7/24/96 Sample Time: 1245

II. Well Information:

PID Reading: 0 Well Diameter: 2 inches
 Static Depth to Water: 5.13 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Total Well Depth: 13.08 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Δ h: 7.95 feet Volume of Standing Water: 1.27 gallons
 Volume to be removed: 3.81 gallons Actual Volume removed: 4.00 gallons

III. Sampling Information:

Purging Method:
 Peristaltic Pump Submersible Pump
 Bailer Other _____
 Well Drawdown/Recovery: Good Poor Other _____
 Pump Flow Rate: 0.25 gpm Purge Time: 16 min.

Purge Chemistry:

Time	Gallons	pH (Std. Units)	Sp. Cond. (ms)	D. O. (ppm)	Temp. (°C)
1205	2	7.08	463	7.7	23.4
1214	4	7.02	451	12.5	22.2

Depth to water after purge: 12.6 ft. below m.p. Time: 1214
 Depth to water prior to sampling: 7.2 ft. below m.p. Time: 1245
 Sample Appearance: Turbid Slightly Turbid Clear Other _____
 Sample Odor: None Other _____

IV. Sample Analyses:

Sample Parameters: Methylene Chloride, Acetone, Butyl Alcohol, BOD, COD, TOC, Cl, Total Phosphorous
 Metals: Filtered Unfiltered
 Laboratory: Accutest Date Shipped: 7/25/96

854820181

WELL SAMPLING LOG	Eder Associates 413 Riverview Executive Park Trenton, New Jersey 08611 (609) 695-1050 (Telephone) (609) 695-1003 (Facsimile)	OFFICES: New York Wisconsin Michigan Georgia Florida New Jersey
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I. General Information:

Client Name: Biocraft Laboratories, Inc. Project No.: 1350-05
 Project Name: Biocraft - GW Sampled By: CK
 Well No.: MW-17 Well Use: Monitoring
 Sample ID: BIO-MW-17 Sample Date: 7/24/96 Sample Time: 900

II. Well Information:

PID Reading: 0 Well Diameter: 4 inches
 Static Depth to Water: 5.28 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Total Well Depth: 10.45 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Δ h: 5.17 feet Volume of Standing Water: 3.36 gallons
 Volume to be removed: 10.08 gallons Actual Volume removed: 11.00 gallons

III. Sampling Information:

Purging Method:
 Peristaltic Pump Submersible Pump
 Bailer Other _____
 Well Drawdown/Recovery: Good Poor Other _____
 Pump Flow Rate: 0.5 gpm Purge Time: 22 min.

Purge Chemistry:

Time	Gallons	pH (Std. Units)	Sp. Cond. (ms)	D. O. (ppm)	Temp. (°C)
710	4	6.86	925	8.1	19.9
712	8	6.84	887	7.1	20.4
714	11	6.84	873	6.3	20.8

Depth to water after purge: 5.28 ft. below m.p. Time: 714
 Depth to water prior to sampling: 5.28 ft. below m.p. Time: 900
 Sample Appearance: Turbid Slightly Turbid Clear Other _____
 Sample Odor: None Other _____

IV. Sample Analyses:

Sample Parameters: Methylene Chloride, Acetone, Butyl Alcohol, BOD, COD, TOC, Cl, Total Phosphorous
 Metals: Filtered Unfiltered
 Laboratory: Accutest Date Shipped: 7/25/96

854820182

WELL SAMPLING LOG	Eder Associates 413 Riverview Executive Park Trenton, New Jersey 08611 (609) 695-1050 (Telephone) (609) 695-1003 (Facsimile)	OFFICES: New York Wisconsin Michigan Georgia Florida New Jersey
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I. General Information:

Client Name: Biocraft Laboratories, Inc. Project No.: 1350-05
 Project Name: Biocraft - GW Sampled By: CK
 Well No.: W-1 Well Use: Monitoring
 Sample ID: BIO-W-1 Sample Date: 11/13/96 Sample Time: 1220

II. Well Information:

PID Reading: 0 Well Diameter: 2 inches
 Static Depth to Water: 6.90 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Total Well Depth: 16.60 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Δ h: 9.70 feet Volume of Standing Water: 1.55 gallons
 Volume to be removed: 4.65 gallons Actual Volume removed: 5.00 gallons

III. Sampling Information:

Purging Method:
 Peristaltic Pump Submersible Pump
 Bailer Other _____
 Well Drawdown/Recovery: Good Poor Other _____
 Pump Flow Rate: 0.5 gpm Purge Time: 2 min.

Purge Chemistry:

Time	Gallons	pH (Std. Units)	Sp. Cond. (ms)	D. O. (ppm)	Temp. (°C)
1124	2.5	6.31	350	4.5	11.9
1129	5	6.44	360	4.6	12.1

Depth to water after purge: 10.7 ft. below m.p. Time: 1130
 Depth to water prior to sampling: 7.0 ft. below m.p. Time: 1220
 Sample Appearance: Turbid Slightly Turbid Clear Other _____
 Sample Odor: None Other _____

IV. Sample Analyses:

Sample Parameters: Methylene Chloride, Acetone, Butyl Alcohol, BOD, COD, TOC, Cl, Total Phosphorous
 Metals: Filtered Unfiltered
 Laboratory: Accutest Date Shipped: 11/14/96

854820183

WELL SAMPLING LOG	Eder Associates 413 Riverview Executive Park Trenton, New Jersey 08611 (609) 695-1050 (Telephone) (609) 695-1003 (Facsimile)	OFFICES: New York Wisconsin Michigan Georgia Florida New Jersey
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I. General Information:

Client Name: Biocraft Laboratories, Inc. Project No.: 1350-05
 Project Name: Biocraft - GW Sampled By: CK
 Well No.: W-2 Well Use: Monitoring
 Sample ID: BIO-W-2 Sample Date: 11/13/96 Sample Time: 1210

II. Well Information:

PID Reading: 0 Well Diameter: 2 inches
 Static Depth to Water: 7.52 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Total Well Depth: 19.65 ft. below m.p. Measuring Point (m.p.): PVC Casing
 A h: 12.13 feet Volume of Standing Water: 1.94 gallons
 Volume to be removed: 5.82 gallons Actual Volume removed: 6.00 gallons

III. Sampling Information:

Purging Method:
 Peristaltic Pump Submersible Pump
 Bailer Other _____
 Well Drawdown/Recovery: Good Poor Other _____
 Pump Flow Rate: 0.5 gpm Purge Time: 12 min.

Purge Chemistry:

Time	Gallons	pH (Std. Units)	Sp. Cond. (ms)	D. O. (ppm)	Temp. (°C)
1109	2	6.42	275	4.2	12.7
1113	4	6.62	355	4.6	12.8
1117	6	6.72	357	3.4	12.9

Depth to water after purge: 15.5 ft. below m.p. Time: 1120
 Depth to water prior to sampling: 7.8 ft. below m.p. Time: 1210
 Sample Appearance: Turbid Slightly Turbid Clear Other _____
 Sample Odor: None Other _____

IV. Sample Analyses:

Sample Parameters: Methylene Chloride, Acetone, Butyl Alcohol, BOD, COD, TOC, Cl, Total Phosphorous
 Metals: Filtered Unfiltered
 Laboratory: Accutest Date Shipped: 11/14/96

854820184

WELL SAMPLING LOG	Eder Associates 413 Riverview Executive Park Trenton, New Jersey 08611 (609) 695-1050 (Telephone) (609) 695-1003 (Facsimile)	OFFICES: New York Wisconsin Michigan Georgia Florida New Jersey
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I. General Information:

Client Name: Biocraft Laboratories, Inc. Project No.: 1350-05
 Project Name: Biocraft - GW Sampled By: CK
 Well No.: W-3 Well Use: Monitoring
 Sample ID: BIO-W-3 Sample Date: 11/13/96 Sample Time: 1200

II. Well Information:

PID Reading: 0 Well Diameter: 2 inches
 Static Depth to Water: 7.73 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Total Well Depth: 20.32 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Δ h: 12.59 feet Volume of Standing Water: 2.01 gallons
 Volume to be removed: 6.03 gallons Actual Volume removed: 6.00 gallons

III. Sampling Information:

Purging Method:
 Peristaltic Pump Submersible Pump
 Bailer Other _____
 Well Drawdown/Recovery: Good Poor Other _____
 Pump Flow Rate: 0.5 gpm Purge Time: 12 min.

Purge Chemistry:

Time	Gallons	pH (Std. Units)	Sp. Cond. (ms)	D. O. (ppm)	Temp. (°C)
1054	2	6.75	368	2.2	12.9
1058	4	6.76	385	2.5	13.0
1102	6	6.77	385	3.0	13.0

Depth to water after purge: 17.5 ft. below m.p. Time: 1102
 Depth to water prior to sampling: 8.2 ft. below m.p. Time: 1200
 Sample Appearance: Turbid Slightly Turbid Clear Other _____
 Sample Odor: None Other _____

IV. Sample Analyses:

Sample Parameters: Methylene Chloride, Acetone, Butyl Alcohol, BOD, COD, TOC, Cl, Total Phosphorous
 Metals: Filtered Unfiltered
 Laboratory: Accutest Date Shipped: 11/14/96

854820185

WELL SAMPLING LOG	Eder Associates 413 Riverview Executive Park Trenton, New Jersey 08611 (609) 695-1050 (Telephone) (609) 695-1003 (Facsimile)	OFFICES: New York Wisconsin Michigan Georgia Florida New Jersey
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I. General Information:

Client Name: Biocraft Laboratories, Inc. Project No.: 1350-05
 Project Name: Biocraft - GW Sampled By: CK
 Well No.: W-6 Well Use: Monitoring
 Sample ID: BIO-W-6 Sample Date: 11/13/96 Sample Time: 1120

II. Well Information:

PID Reading: 0 Well Diameter: 2 inches
 Static Depth to Water: 7.11 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Total Well Depth: 21.60 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Δ h: 14.05 feet Volume of Standing Water: 2.25 gallons
 Volume to be removed: 6.75 gallons Actual Volume removed: 7.00 gallons

III. Sampling Information:

Purging Method:
 Peristaltic Pump Submersible Pump
 Bailer Other _____
 Well Drawdown/Recovery: Good Poor Other _____
 Pump Flow Rate: 0.5 gpm Purge Time: 14 min.

Purge Chemistry:

Time	Gallons	pH (Std. Units)	Sp. Cond. (ms)	D. O. (ppm)	Temp. (°C)
1029	2	7.23	663	3.1	14.9
1033	4	7.25	698	3.3	14.8
1038	6	7.26	728	3.2	14.7

Depth to water after purge: 18.7 ft. below m.p. Time: 1038
 Depth to water prior to sampling: 9.5 ft. below m.p. Time: 1120
 Sample Appearance: Turbid Slightly Turbid Clear Other _____
 Sample Odor: None Other _____

IV. Sample Analyses:

Sample Parameters: Methylene Chloride, Acetone, Butyl Alcohol, BOD, COD, TOC, Cl, Total Phosphorous
 Metals: Filtered Unfiltered
 Laboratory: Accutest Date Shipped: 11/14/96

854820186

WELL SAMPLING LOG	Eder Associates 413 Riverview Executive Park Trenton, New Jersey 08611 (609) 695-1050 (Telephone) (609) 695-1003 (Facsimile)	OFFICES: New York Wisconsin Michigan Georgia Florida New Jersey
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I. General Information:

Client Name: Biocraft Laboratories, Inc. Project No.: 1350-05
 Project Name: Biocraft - GW Sampled By: CK
 Well No.: W-4 Well Use: Monitoring
 Sample ID: BIO-W-4 Sample Date: 11/13/96 Sample Time: 1140

II. Well Information:

PID Reading: Q Well Diameter: 2 inches
 Static Depth to Water: 5.77 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Total Well Depth: 18.00 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Δ h: 12.23 feet Volume of Standing Water: 1.96 gallons
 Volume to be removed: 5.88 gallons Actual Volume removed: 6.00 gallons

III. Sampling Information:

Purging Method:
 Peristaltic Pump Submersible Pump
 Bailer Other _____
 Well Drawdown/Recovery: Good Poor Other _____
 Pump Flow Rate: 0.5 gpm Purge Time: 12 min.

Purge Chemistry:

Time	Gallons	pH (Std. Units)	Sp. Cond. (ms)	D. O. (ppm)	Temp. (°C)
1010	2	6.67	253	0.9	14.0
1014	4	6.81	306	2.2	14.2
1018	6	7.11	425	0.7	14.4

Depth to water after purge: 14.7 ft. below m.p. Time: 1018
 Depth to water prior to sampling: 6.2 ft. below m.p. Time: 1140
 Sample Appearance: Turbid Slightly Turbid Clear Other _____
 Sample Odor: None Other _____

IV. Sample Analyses:

Sample Parameters: Methylene Chloride, Acetone, Butyl Alcohol, BOD, COD, TOC, Cl, Total Phosphorous
 Metals: Filtered Unfiltered
 Laboratory: Accutest Date Shipped: 11/14/96

854820187

WELL SAMPLING LOG	Eder Associates 413 Riverview Executive Park Trenton, New Jersey 08611 (609) 695-1050 (Telephone) (609) 695-1003 (Facsimile)	OFFICES: New York Wisconsin Michigan Georgia Florida New Jersey
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I. General Information:

Client Name: Biocraft Laboratories, Inc.

Project No.: 1350-05

Project Name: Biocraft - GW

Sampled By: CK

Well No.: W-5

Well Use: Monitoring

Sample ID: BIO-W-5

Sample Date: 11/13/96

Sample Time: 1130

II. Well Information:

PID Reading: 0

Well Diameter: 2 inches

Static Depth to Water: 5.98 ft. below m.p.

Measuring Point (m.p.): PVC Casing

Total Well Depth: 20.60 ft. below m.p.

Measuring Point (m.p.): PVC Casing

Δ h: 14.62 feet

Volume of Standing Water: 2.34 gallons

Volume to be removed: 7.02 gallons

Actual Volume removed: 7.00 gallons

III. Sampling Information:

Purging Method:

Peristaltic Pump

Submersible Pump

Bailer

Other -----

Well Drawdown/Recovery: Good

Poor

Other -----

Pump Flow Rate: 0.5 gpm

Purge Time: 14 min.

Purge Chemistry:

Time	Gallons	pH (Std. Units)	Sp. Cond. (ms)	D. O. (ppm)	Temp. (°C)
1015	2	6.92	416	2.1	14.4
1019	4	6.81	607	1.7	15.1
1024	7	7.10	570	2.1	15.0

Depth to water after purge: 17.2 ft. below m.p.

Time: 1024

Depth to water prior to sampling: 6.1 ft. below m.p.

Time: 1130

Sample Appearance: Turbid

Slightly Turbid

Clear

Other -----

Sample Odor: None

Other -----

IV. Sample Analyses:

Sample Parameters: Methylene Chloride, Acetone, Butyl Alcohol, BOD, COD, TOC, Cl, Total Phosphorous

Metals:

Filtered

Unfiltered

Laboratory: Accutest

Date Shipped: 11/14/96

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I. General Information:

Client Name: Biocraft Laboratories, Inc. Project No.: 1350-05
 Project Name: Biocraft - GW Sampled By: CK
 Well No.: MW-42 Well Use: Monitoring
 Sample ID: BIO-MW-42 Sample Date: 11/13/96 Sample Time: 1100

II. Well Information:

PID Reading: 0 Well Diameter: 2 inches
 Static Depth to Water: 3.05 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Total Well Depth: 15.50 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Δ h: 12.45 feet Volume of Standing Water: 1.92 gallons
 Volume to be removed: 5.97 gallons Actual Volume removed: 6.00 gallons

III. Sampling Information:

Purging Method:
 Peristaltic Pump Submersible Pump
 Bailer Other _____
 Well Drawdown/Recovery: Good Poor Other _____
 Pump Flow Rate: 0.5 gpm Purge Time: 12 min.

Purge Chemistry:

Time	Gallons	pH (Std. Units)	Sp. Cond. (ms)	D. O. (ppm)	Temp. (°C)
937	2	5.46	109	3.6	12.6
941	4	5.38	136	3.7	12.8
945	6	6.34	181	3.7	12.9

Depth to water after purge: 7.6 ft. below m.p. Time: 945
 Depth to water prior to sampling: 3.1 ft. below m.p. Time: 1100
 Sample Appearance: Turbid Slightly Turbid Clear Other _____
 Sample Odor: None Other _____

IV. Sample Analyses:

Sample Parameters: Methylene Chloride, Acetone, Butyl Alcohol, BOD, COD, TOC, Cl, Total Phosphorous
 Metals: Filtered Unfiltered
 Laboratory: Accutest Date Shipped: 11/14/96

854820189

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I. General Information:

Client Name: Biocraft Laboratories, Inc. Project No.: 1350-05
 Project Name: Biocraft - GW Sampled By: CK
 Well No.: DEP-1A Well Use: Monitoring
 Sample ID: BIO-DEP-1A Sample Date: 11/13/96 Sample Time: 1110

II. Well Information:

PID Reading: 0 Well Diameter: 2 inches
 Static Depth to Water: 2.58 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Total Well Depth: 7.55 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Δ h: 4.97 feet Volume of Standing Water: 0.80 gallons
 Volume to be removed: 2.40 gallons Actual Volume removed: 3.00 gallons

III. Sampling Information:

Purging Method:
 Peristaltic Pump Submersible Pump
 Bailer Other _____
 Well Drawdown/Recovery: Good Poor Other _____
 Pump Flow Rate: 0.5 gpm Purge Time: 6 min.

Purge Chemistry:

Time	Gallons	pH (Std. Units)	Sp. Cond. (ms)	D. O. (ppm)	Temp. (°C)
957	1.5	6.38	143	2.2	11.7
100	3	6.38	144	3.7	11.6

Depth to water after purge: 5.23 ft. below m.p. Time: 1000
 Depth to water prior to sampling: 2.6 ft. below m.p. Time: 1110
 Sample Appearance: Turbid Slightly Turbid Clear Other _____
 Sample Odor: None Other _____

IV. Sample Analyses:

Sample Parameters: Methylene Chloride, Acetone, Butyl Alcohol, BOD, COD, TOC, Cl, Total Phosphorous
 Metals: Filtered Unfiltered
 Laboratory: Accutest Date Shipped: 11/14/96

854820190

WELL SAMPLING LOG	Eder Associates 413 Riverview Executive Park Trenton, New Jersey 08611 (609) 695-1050 (Telephone) (609) 695-1003 (Facsimile)	OFFICES: New York Wisconsin Michigan Georgia Florida New Jersey
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I. General Information:

Client Name: Biocraft Laboratories, Inc. Project No.: 1350-05
 Project Name: Biocraft - GW Sampled By: CK
 Well No.: MW-33A Well Use: Monitoring
 Sample ID: BIO-MW-33A Sample Date: 11/13/96 Sample Time: 900

II. Well Information:

PID Reading: 0 Well Diameter: 2 inches
 Static Depth to Water: 5.40 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Total Well Depth: 9.48 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Δ h: 4.08 feet Volume of Standing Water: 0.65 gallons
 Volume to be removed: 1.95 gallons Actual Volume removed: 2.00 gallons

III. Sampling Information:

Purging Method:
 Peristaltic Pump Submersible Pump
 Bailer Other _____
 Well Drawdown/Recovery: Good Poor Other _____
 Pump Flow Rate: 0.25 gpm Purge Time: 8 min.

Purge Chemistry:

Time	Gallons	pH (Std. Units)	Sp. Cond. (ms)	D. O. (ppm)	Temp. (°C)
853	0	7.42	712	2.0	14.3
857	1	6.99	721	1.9	16.2
900	2	6.99	715	3.1	10.9

Depth to water after purge: 7.2 ft. below m.p. Time: 900
 Depth to water prior to sampling: 7.2 ft. below m.p. Time: 900
 Sample Appearance: Turbid Slightly Turbid Clear Other _____
 Sample Odor: None Other _____

IV. Sample Analyses:

Sample Parameters: Methylene Chloride, Acetone, Butyl Alcohol, BOD, COD, TOC, Cl, Total Phosphorous
 Metals: Filtered Unfiltered
 Laboratory: Accutest Date Shipped: 11/14/96

854820191

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I. General Information:

Client Name: Biocraft Laboratories, Inc.

Project No.: 1350-05

Project Name: Biocraft - GW

Sampled By: CK

Well No.: MW-31

Well Use: Monitoring

Sample ID: BIO-MW-31

Sample Date: 11/13/96

Sample Time: 830

II. Well Information:

PID Reading: 0

Well Diameter: 2 inches

Static Depth to Water: 4.36 ft. below m.p.

Measuring Point (m.p.): PVC Casing

Total Well Depth: 11.62 ft. below m.p.

Measuring Point (m.p.): PVC Casing

Δ h: 7.26 feet

Volume of Standing Water: 1.16 gallons

Volume to be removed: 3.48 gallons

Actual Volume removed: 4.00 gallons

III. Sampling Information:

Purging Method:

Peristaltic Pump

Submersible Pump

Bailer

Other _____

Well Drawdown/Recovery: Good

Poor

Other _____

Pump Flow Rate: 0.5 gpm

Purge Time: 8 min.

Purge Chemistry:

Time	Gallons	pH (Std. Units)	Sp. Cond. (ms)	D. O. (ppm)	Temp. (°C)
812	0	6.50	288	2.8	11.9
816	2	6.42	266	3.1	11.9
819	4	6.79	412	3.0	12.4

Depth to water after purge: 5.26 ft. below m.p.

Time: 820

Depth to water prior to sampling: 4.4 ft. below m.p.

Time: 830

Sample Appearance: Turbid

Slightly Turbid

Clear

Other _____

Sample Odor: None

Other _____

IV. Sample Analyses:

Sample Parameters: Methylene Chloride, Acetone, Butyl Alcohol, BOD, COD, TOC, Cl, Total Phosphorous
Metals: Filtered Unfiltered

Laboratory: Accutest

Date Shipped: 11/14/96

854820192

WELL SAMPLING LOG	Eder Associates 413 Riverview Executive Park Trenton, New Jersey 08611 (609) 695-1050 (Telephone) (609) 695-1003 (Facsimile)	OFFICES: New York Wisconsin Michigan Georgia Florida New Jersey
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I. General Information:

Client Name: Biocraft Laboratories, Inc.

Project No.: 1350-05

Project Name: Biocraft - GW

Sampled By: CK

Well No.: MW-32

Well Use: Monitoring

Sample ID: BIO-MW-32

Sample Date: 11/12/96

Sample Time: 1515

II. Well Information:

PID Reading: 0

Well Diameter: 2 inches

Static Depth to Water: 3.69 ft. below m.p.

Measuring Point (m.p.): PVC Casing

Total Well Depth: 11.50 ft. below m.p.

Measuring Point (m.p.): PVC Casing

Δ h: 7.81 feet

Volume of Standing Water: 1.25 gallons

Volume to be removed: 3.75 gallons

Actual Volume removed: 4.00 gallons

III. Sampling Information:

Purging Method:

Peristaltic Pump

Submersible Pump

Bailer

Other _____

Well Drawdown/Recovery: Good

Poor

Other _____

Pump Flow Rate: 0.5 gpm

Purge Time: 8 min.

Purge Chemistry:

Time	Gallons	pH (Std. Units)	Sp. Cond. (ms)	D. O. (ppm)	Temp. (°C)
1435	0	5.90	551	3.3	12.6
1439	2	5.66	545	5.4	12.4
1443	4	5.52	540	4.2	12.4

Depth to water after purge: 7.8 ft. below m.p.

Time: 1445

Depth to water prior to sampling: 4.2 ft. below m.p.

Time: 1515

Sample Appearance: Turbid

Slightly Turbid

Clear

Other _____

Sample Odor: None

Other _____

IV. Sample Analyses:

Sample Parameters: Methylene Chloride, Acetone, Butyl Alcohol, BOD, COD, TOC, Cl, Total Phosphorous

Metals: Filtered

Unfiltered

Laboratory: Accutest

Date Shipped: 11/13/96

854820193

WELL SAMPLING LOG	Eder Associates 413 Riverview Executive Park Trenton, New Jersey 08611 (609) 695-1050 (Telephone) (609) 695-1003 (Facsimile)	OFFICES: New York Wisconsin Michigan Georgia Florida New Jersey
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I. General Information:

Client Name: Biocraft Laboratories, Inc. Project No.: 1350-05
 Project Name: Biocraft - GW Sampled By: CK
 Well No.: MW-24 Well Use: Monitoring
 Sample ID: BIO-MW-24 Sample Date: 11/12/96 Sample Time: 1415

II. Well Information:

PID Reading: 0 Well Diameter: 2 inches
 Static Depth to Water: 5.00 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Total Well Depth: 13.00 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Δ h: 8.00 feet Volume of Standing Water: 1.28 gallons
 Volume to be removed: 3.84 gallons Actual Volume removed: 4.00 gallons

III. Sampling Information:

Purging Method:
 Peristaltic Pump Submersible Pump
 Bailer Other _____
 Well Drawdown/Recovery: Good Poor Other _____
 Pump Flow Rate: 0.5 gpm Purge Time: 8 min.

Purge Chemistry:

Time	Gallons	pH (Std. Units)	Sp. Cond. (ms)	D. O. (ppm)	Temp. (°C)
1354	1	7.20	320	4.1	15.1
1356	2	7.37	298	4.2	15.5
1400	4	7.67	288	3.7	15.6

Depth to water after purge: 8.2 ft. below m.p. Time: 1400
 Depth to water prior to sampling: 6.5 ft. below m.p. Time: 1415
 Sample Appearance: Turbid Slightly Turbid Clear Other _____
 Sample Odor: None Other _____

IV. Sample Analyses:

Sample Parameters: Methylene Chloride, Acetone, Butyl Alcohol, BOD, COD, TOC, Cl, Total Phosphorous
 Metals: Filtered Unfiltered
 Laboratory: Accutest Date Shipped: 11/13/96

854820194

WELL SAMPLING LOG	Eder Associates 413 Riverview Executive Park Trenton, New Jersey 08611 (609) 695-1050 (Telephone) (609) 695-1003 (Facsimile)	OFFICES: New York Wisconsin Michigan Georgia Florida New Jersey
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I. General Information:

Client Name: Biocraft Laboratories, Inc. Project No.: 1350-05
 Project Name: Biocraft - GW Sampled By: CK
 Well No.: MW-25 Well Use: Monitoring
 Sample ID: BIO-MW-25 Sample Date: 11/12/96 Sample Time: 1430

II. Well Information:

PID Reading: 0 Well Diameter: 2 inches
 Static Depth to Water: 5.06 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Total Well Depth: 10.00 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Δ h: 4.94 feet Volume of Standing Water: 0.79 gallons
 Volume to be removed: 2.37 gallons Actual Volume removed: 3.00 gallons

III. Sampling Information:

Purging Method:
 Peristaltic Pump Submersible Pump
 Bailer Other _____
 Well Drawdown/Recovery: Good Poor Other _____
 Pump Flow Rate: 0.5 gpm Purge Time: 6 min.

Purge Chemistry:

Time	Gallons	pH (Std. Units)	Sp. Cond. (ms)	D. O. (ppm)	Temp. (°C)
1348	0	6.87	409	4.2	14.0
1350	1.5	6.79	452	4.2	14.1
1353	3	6.79	461	3.8	14.1

Depth to water after purge: 7.7 ft. below m.p. Time: 1353
 Depth to water prior to sampling: 5.1 ft. below m.p. Time: 1430
 Sample Appearance: Turbid Slightly Turbid Clear Other _____
 Sample Odor: None Other _____

IV. Sample Analyses:

Sample Parameters: Methylene Chloride, Acetone, Butyl Alcohol, BOD, COD, TOC, Cl, Total Phosphorous
 Metals: Filtered Unfiltered
 Laboratory: Accutest Date Shipped: 11/13/96

854820195

WELL SAMPLING LOG	Eder Associates 413 Riverview Executive Park Trenton, New Jersey 08611 (609) 695-1050 (Telephone) (609) 695-1003 (Facsimile)	OFFICES: New York Wisconsin Michigan Georgia Florida New Jersey
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I. General Information:

Client Name: Biocraft Laboratories, Inc. Project No.: 1350-05
 Project Name: Biocraft - GW Sampled By: CK
 Well No.: MW-17 Well Use: Monitoring
 Sample ID: BIO-MW-17 Sample Date: 11/12/96 Sample Time: 1340

II. Well Information:

PID Reading: 0 Well Diameter: 4 inches
 Static Depth to Water: 5.13 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Total Well Depth: 10.45 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Δ h: 5.32 feet Volume of Standing Water: 3.46 gallons
 Volume to be removed: 10.38 gallons Actual Volume removed: 10.50 gallons

III. Sampling Information:

Purging Method:
 Peristaltic Pump Submersible Pump
 Bailer Other _____
 Well Drawdown/Recovery: Good Poor Other _____
 Pump Flow Rate: 0.5 gpm Purge Time: 20 min.

Purge Chemistry:

Time	Gallons	pH (Std. Units)	Sp. Cond. (ms)	D. O. (ppm)	Temp. (°C)
1310	0	7.00	451	3.8	14.1
1320	5	6.95	467	3.2	14.7
1331	10.5	6.95	452	4.6	14.7

Depth to water after purge: 5.13 ft. below m.p. Time: 1331
 Depth to water prior to sampling: 5.13 ft. below m.p. Time: 1340
 Sample Appearance: Turbid Slightly Turbid Clear Other _____
 Sample Odor: None Other _____

IV. Sample Analyses:

Sample Parameters: Methylene Chloride, Acetone, Butyl Alcohol, BOD, COD, TOC, Cl, Total Phosphorous
 Metals: Filtered Unfiltered
 Laboratory: Accutest Date Shipped: 11/13/96

854820196

WELL SAMPLING LOG	Eder Associates 413 Riverview Executive Park Trenton, New Jersey 08611 (609) 695-1050 (Telephone) (609) 695-1003 (Facsimile)	OFFICES: New York Wisconsin Michigan Georgia Florida New Jersey
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I. General Information:

Client Name: Biocraft Laboratories, Inc. Project No.: 1350-05
 Project Name: Biocraft - GW Sampled By: CK
 Well No.: MW-28 Well Use: Monitoring
 Sample ID: BIO-MW-28 Sample Date: 11/12/96 Sample Time: 1300

II. Well Information:

PID Reading: 0 Well Diameter: 1 inches
 Static Depth to Water: 2.82 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Total Well Depth: 8.15 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Δ h: 5.33 feet Volume of Standing Water: 0.21 gallons
 Volume to be removed: 0.63 gallons Actual Volume removed: 1.50 gallons

III. Sampling Information:

Purging Method:
 Peristaltic Pump Submersible Pump
 Bailer Other _____
 Well Drawdown/Recovery: Good Poor Other _____
 Pump Flow Rate: 0.5 gpm Purge Time: 3 min.

Purge Chemistry:

Time	Gallons	pH (Std. Units)	Sp. Cond. (ms)	D. O. (ppm)	Temp. (°C)
1247	0	6.58	863	3.5	15.1
1249	1.0	6.58	857	2.9	15.7
1250	1.5	6.58	853	2.1	16.1

Depth to water after purge: 6.62 ft. below m.p. Time: 1250
 Depth to water prior to sampling: 4.5 ft. below m.p. Time: 1300
 Sample Appearance: Turbid Slightly Turbid Clear Other _____
 Sample Odor: None Other _____

IV. Sample Analyses:

Sample Parameters: Methylene Chloride, Acetone, Butyl Alcohol, BOD, COD, TOC, Cl, Total Phosphorous
 Metals: Filtered Unfiltered
 Laboratory: Accutest Date Shipped: 11/13/96

854820197

WELL SAMPLING LOG	Eder Associates 413 Riverview Executive Park Trenton, New Jersey 08611 (609) 695-1050 (Telephone) (609) 695-1003 (Facsimile)	OFFICES: New York Wisconsin Michigan Georgia Florida New Jersey
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I. General Information:

Client Name: Biocraft Laboratories, Inc. Project No.: 1350-05
 Project Name: Biocraft - GW Sampled By: CK
 Well No.: MW-9 Well Use: Monitoring
 Sample ID: BIO-MW-9 Sample Date: 11/12/96 Sample Time: 1100

II. Well Information:

PID Reading: 0 Well Diameter: 1 inches
 Static Depth to Water: 4.26 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Total Well Depth: 11.60 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Δ h: 7.34 feet Volume of Standing Water: 0.29 gallons
 Volume to be removed: 0.87 gallons Actual Volume removed: 1.50 gallons

III. Sampling Information:

Purging Method:
 Peristaltic Pump Submersible Pump
 Bailor Other _____
 Well Drawdown/Recovery: Good Poor Other _____
 Pump Flow Rate: 0.5 gpm Purge Time: 3 min.

Purge Chemistry:

Time	Gallons	pH (Std. Units)	Sp. Cond. (ms)	D. O. (ppm)	Temp. (°C)
927	0	7.20	523	3.6	16.1
931	1	6.98	523	4.1	16.0
933	1.5	6.97	540	4.3	16.3

Depth to water after purge: 10.5 ft. below m.p. Time: 933
 Depth to water prior to sampling: 5.5 ft. below m.p. Time: 1100
 Sample Appearance: Turbid Slightly Turbid Clear Other _____
 Sample Odor: None Other _____

IV. Sample Analyses:

Sample Parameters: Methylene Chloride, Acetone, Butyl Alcohol, BOD, COD, TOC, Cl, Total Phosphorous
 Metals: Filtered Unfiltered
 Laboratory: Accutest Date Shipped: 11/13/96

854820198

WELL SAMPLING LOG	Eder Associates 413 Riverview Executive Park Trenton, New Jersey 08611 (609) 695-1050 (Telephone) (609) 695-1003 (Facsimile)	OFFICES: New York Wisconsin Michigan Georgia Florida New Jersey
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I. General Information:

Client Name: Biocraft Laboratories, Inc. Project No.: 1350-05
 Project Name: Biocraft - GW Sampled By: CK
 Well No.: MW-3 Well Use: Monitoring
 Sample ID: BIO-MW-3 Sample Date: 11/12/96 Sample Time: 1050

II. Well Information:

PID Reading: 0 Well Diameter: 1 inches
 Static Depth to Water: 4.47 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Total Well Depth: 11.00 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Δ h: 6.53 feet Volume of Standing Water: 0.26 gallons
 Volume to be removed: 0.78 gallons Actual Volume removed: 1.50 gallons

III. Sampling Information:

Purging Method:
 Peristaltic Pump Submersible Pump
 Bailer Other _____
 Well Drawdown/Recovery: Good Poor Other _____
 Pump Flow Rate: 0.25 gpm Purge Time: 6 min.

Purge Chemistry:

Time	Gallons	pH (Std. Units)	Sp. Cond. (ms)	D. O. (ppm)	Temp. (°C)
912	0	7.27	529	3.3	15.2
916	1	7.12	496	3.2	15.1
918	1.5	7.10	492	3.3	15.1

Depth to water after purge: 10.5 ft. below m.p. Time: 918
 Depth to water prior to sampling: 6.3 ft. below m.p. Time: 1050
 Sample Appearance: Turbid Slightly Turbid Clear Other _____
 Sample Odor: None Other _____

IV. Sample Analyses:

Sample Parameters: Methylene Chloride, Acetone, Butyl Alcohol, BOD, COD, TOC, Cl, Total Phosphorous
 Metals: Filtered Unfiltered
 Laboratory: Accutest Date Shipped: 11/13/96

854820199

WELL SAMPLING LOG	Eder Associates 413 Riverview Executive Park Trenton, New Jersey 08611 (609) 695-1050 (Telephone) (609) 695-1003 (Facsimile)	OFFICES: New York Wisconsin Michigan Georgia Florida New Jersey
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I. General Information:

Client Name: Biocraft Laboratories, Inc. Project No.: 1350-05
 Project Name: Biocraft - GW Sampled By: CK
 Well No.: MW-6 Well Use: Monitoring
 Sample ID: BIO-MW-6 Sample Date: 11/12/96 Sample Time: 1035

II. Well Information:

PID Reading: 0 Well Diameter: 1.5 inches
 Static Depth to Water: 10.76 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Total Well Depth: 14.00 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Δ h: 3.24 feet Volume of Standing Water: 0.29 gallons
 Volume to be removed: 0.87 gallons Actual Volume removed: 1.50 gallons

III. Sampling Information:

Purging Method:
 Peristaltic Pump Submersible Pump
 Bailer Other _____
 Well Drawdown/Recovery: Good Poor Other _____
 Pump Flow Rate: 0.25 gpm Purge Time: 6 min.

Purge Chemistry:

Time	Gallons	pH (Std. Units)	Sp. Cond. (ms)	D. O. (ppm)	Temp. (°C)
847	0	6.90	614	5.2	14.3
851	1	7.24	553	5.6	15.4
853	1.5	6.89	652	3.4	15.0

Depth to water after purge: 13.5 ft. below m.p. Time: 853
 Depth to water prior to sampling: 11.5 ft. below m.p. Time: 1035
 Sample Appearance: Turbid Slightly Turbid Clear Other _____
 Sample Odor: None Other _____

IV. Sample Analyses:

Sample Parameters: Methylene Chloride, Acetone, Butyl Alcohol, BOD, COD, TOC, Cl, Total Phosphorous
 Metals: Filtered Unfiltered
 Laboratory: Accutest Date Shipped: 11/13/96

854820200

WELL SAMPLING LOG	Eder Associates 413 Riverview Executive Park Trenton, New Jersey 08611 (609) 695-1050 (Telephone) (609) 695-1003 (Facsimile)	OFFICES: New York Wisconsin Michigan Georgia Florida New Jersey
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I. General Information:

Client Name: Biocraft Laboratories, Inc. Project No.: 1350-05
 Project Name: Biocraft - GW Sampled By: CK
 Well No.: MW-14 Well Use: Monitoring
 Sample ID: BIO-MW-14 Sample Date: 11/12/96 Sample Time: 1025

II. Well Information:

PID Reading: 0 Well Diameter: 1.5 inches
 Static Depth to Water: 3.84 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Total Well Depth: 5.96 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Δ h: 3.24 feet Volume of Standing Water: 0.19 gallons
 Volume to be removed: 0.57 gallons Actual Volume removed: 1.00 gallons

III. Sampling Information:

Purging Method:
 Peristaltic Pump Submersible Pump
 Bailer Other _____
 Well Drawdown/Recovery: Good Poor Other _____
 Pump Flow Rate: 0.25 gpm Purge Time: 4 min.

Purge Chemistry:

Time	Gallons	pH (Std. Units)	Sp. Cond. (ms)	D. O. (ppm)	Temp. (°C)
832	0	7.25	271	5.8	12.7
834	0.5	7.29	236	4.5	13.0
836	1	7.10	236	4.8	13.0

Depth to water after purge: 5.2 ft. below m.p. Time: 836
 Depth to water prior to sampling: 4.2 ft. below m.p. Time: 1925
 Sample Appearance: Turbid Slightly Turbid Clear Other _____
 Sample Odor: None Other _____

IV. Sample Analyses:

Sample Parameters: Methylene Chloride, Acetone, Butyl Alcohol, BOD, COD, TOC, Cl, Total Phosphorous
 Metals: Filtered Unfiltered
 Laboratory: Accutest Date Shipped: 11/13/96

854820201

WELL SAMPLING LOG	Eder Associates 413 Riverview Executive Park Trenton, New Jersey 08611 (609) 695-1050 (Telephone) (609) 695-1003 (Facsimile)	OFFICES: New York Wisconsin Michigan Georgia Florida New Jersey
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I. General Information:

Client Name: Biocraft Laboratories, Inc. Project No.: 1350-05
 Project Name: Biocraft - GW Sampled By: CK
 Well No.: MW-1 Well Use: Monitoring
 Sample ID: BIO-MW-1 Sample Date: 11/12/96 Sample Time: 1000

II. Well Information:

PID Reading: 0 Well Diameter: 1.5 inches
 Static Depth to Water: 4.73 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Total Well Depth: 3.60 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Δ h: 3.87 feet Volume of Standing Water: 0.34 gallons
 Volume to be removed: 1.02 gallons Actual Volume removed: 1.50 gallons

III. Sampling Information:

Purging Method:
 Peristaltic Pump Submersible Pump
 Bailor Other _____
 Well Drawdown/Recovery: Good Poor Other _____
 Pump Flow Rate: 0.25 gpm Purge Time: 6 min.

Purge Chemistry:

Time	Gallons	pH (Std. Units)	Sp. Cond. (ms)	D. O. (ppm)	Temp. (°C)
814	0	6.82	215	6.6	13.6
818	1	6.91	264	6.2	13.7
820	1.5	6.98	266	5.6	12.3

Depth to water after purge: 7.5 ft. below m.p. Time: 820
 Depth to water prior to sampling: 4.8 ft. below m.p. Time: 1000
 Sample Appearance: Turbid Slightly Turbid Clear Other _____
 Sample Odor: None Other _____

IV. Sample Analyses:

Sample Parameters: Methylene Chloride, Acetone, Butyl Alcohol, BOD, COD, TOC, Cl, Total Phosphorous
 Metals: Filtered Unfiltered
 Laboratory: Accutest Date Shipped: 11/13/96

854820202

WELL SAMPLING LOG	Eder Associates 413 Riverview Executive Park Trenton, New Jersey 08611 (609) 695-1050 (Telephone) (609) 695-1003 (Facsimile)	OFFICES: New York Wisconsin Michigan Georgia Florida New Jersey
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I. General Information:

Client Name: Biocraft Laboratories, Inc. Project No.: 1350-05
 Project Name: Biocraft - GW Sampled By: CK
 Well No.: MW-2 Well Use: Monitoring
 Sample ID: BIO-MW-2 Sample Date: 11/12/96 Sample Time: 1010

II. Well Information:

PID Reading: 0 Well Diameter: 1.5 inches
 Static Depth to Water: 5.57 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Total Well Depth: 10.60 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Δ h: 5.03 feet Volume of Standing Water: 0.45 gallons
 Volume to be removed: 1.35 gallons Actual Volume removed: 1.50 gallons

III. Sampling Information:

Purging Method:
 Peristaltic Pump Submersible Pump
 Bailer Other _____
 Well Drawdown/Recovery: Good Poor Other _____
 Pump Flow Rate: 0.25 gpm Purge Time: 6 min.

Purge Chemistry:

Time	Gallons	pH (Std. Units)	Sp. Cond. (ms)	D. O. (ppm)	Temp. (°C)
826	0	7.60	335	4.4	13.6
830	1	7.62	524	5.0	13.5
832	1.5	7.62	522	5.6	13.5

Depth to water after purge: 9.0 ft. below m.p. Time: 832
 Depth to water prior to sampling: 5.8 ft. below m.p. Time: 1010
 Sample Appearance: Turbid Slightly Turbid Clear Other _____
 Sample Odor: None Other _____

IV. Sample Analyses:

Sample Parameters: Methylene Chloride, Acetone, Butyl Alcohol, BOD, COD, TOC, Cl, Total Phosphorous
 Metals: Filtered Unfiltered
 Laboratory: Accutest Date Shipped: 11/13/96

854820203

WELL SAMPLING LOG	Eder Associates 413 Riverview Executive Park Trenton, New Jersey 08611 (609) 695-1050 (Telephone) (609) 695-1003 (Facsimile)	OFFICES: New York Wisconsin Michigan Georgia Florida New Jersey
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I. General Information:

Client Name: Biocraft Laboratories, Inc. Project No.: 1350-05
 Project Name: Biocraft - GW Sampled By: CK
 Well No.: MW-8 Well Use: Monitoring
 Sample ID: BIO-MW-8 Sample Date: 11/12/96 Sample Time: 1115

II. Well Information:

PID Reading: 0 Well Diameter: 1.5 inches
 Static Depth to Water: 4.15 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Total Well Depth: 7.35 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Δ h: 3.20 feet Volume of Standing Water: 0.13 gallons
 Volume to be removed: 0.39 gallons Actual Volume removed: 1.00 gallons

III. Sampling Information:

Purging Method:
 Peristaltic Pump Submersible Pump
 Bailer Other _____
 Well Drawdown/Recovery: Good Poor Other _____
 Pump Flow Rate: 0.25 gpm Purge Time: 4 min.

Purge Chemistry:

Time	Gallons	pH (Std. Units)	Sp. Cond. (ms)	D. O. (ppm)	Temp. (°C)
942	0	6.83	305	5.0	16.1
944	0.5	6.81	809	6.3	16.9
946	1	6.82	809	5.8	16.7

Depth to water after purge: 6.8 ft. below m.p. Time: 948
 Depth to water prior to sampling: 5.5 ft. below m.p. Time: 1115
 Sample Appearance: Turbid Slightly Turbid Clear Other _____
 Sample Odor: None Other _____

IV. Sample Analyses:

Sample Parameters: Methylene Chloride, Acetone, Butyl Alcohol, BOD, COD, TOC, Cl, Total Phosphorous
 Metals: Filtered Unfiltered
 Laboratory: Accutest Date Shipped: 11/13/96

854820204

Project No.: 1350-05

Project Name: Biocraft Laboratories, Inc.

Drawing Description: Groundwater Elevation and Direction of Groundwater Flow at Biocraft Laboratories, Inc., Waldwick, NJ, March 1, 1996

- 5. Has the ground water flow direction changed more than 45° from the previous groundwater contour map? Yes No

If yes, discuss reason for change.

- 6. Has ground water mounding and/or depressions been identified in the ground water contour map? Yes No

Unless the ground water mound and/or depressions are caused by the ground water remediation system, discuss the reasons for this occurrence.

Groundwater remediation system.

- 7. Are the wells used in the contour map screened in the same water-bearing zone? Yes No

If no, justify inclusion of those wells.

- 8. Were the ground water contours

- computer generated,
- computer aided, or
- hand drawn?

If computer aided or generated, identify the interpolation method(s) used.

854820205

Project No.: 1350-05

Project Name: Biocraft Laboratories, Inc.

Drawing Description: Groundwater Elevation and Direction of Groundwater Flow at Biocraft Laboratories, Waldwick, NJ, March 1, 1996

Contour Map Reporting Form

This reporting form shall accompany each ground water contour map submittal. Use additional sheets as necessary.

- 1. Did any surveyed well casing elevations change from the previous Yes No sampling events?

If yes, attach new "Well Certification - Form B" and identify the reason for the elevation Change (damage to casing, installation of recovery system in monitoring well, etc.)

- 2. Are there any monitoring wells in unconfined aquifers in which the water table elevation is higher than the top of the well screen? Yes No

If yes, identify these wells.

- 3. Are there any monitoring wells present at the site but omitted from the contour map? Yes No

Unless the omission of the well(s) has been previously approved by the Department, justify the omissions.

Several wells are no longer in service as reported to the NJDEP by Geraghty and Miller.

- 4. Are there any monitoring wells containing separate phase product during this measuring event? Yes No

Were any of the monitoring wells with separate phase product included in the ground water contour map? Yes No

If yes, show the formula used to correct the water table elevation.

854820206

Project No.: 1350-05

Project Name: Biocraft Laboratories, Inc.

Drawing Description: Groundwater Elevation and Direction of Groundwater Flow at Biocraft Laboratories, Waldwick, NJ, May 15, 1996

Contour Map Reporting Form

This reporting form shall accompany each ground water contour map submittal. Use additional sheets as necessary.

- 1. Did any surveyed well casing elevations change from the previous sampling events? Yes No

If yes, attach new "Well Certification - Form B" and identify the reason for the elevation Change (damage to casing, installation of recovery system in monitoring well, etc.)

- 2. Are there any monitoring wells in unconfined aquifers in which the water table elevation is higher than the top of the well screen? Yes No

If yes, identify these wells.

- 3. Are there any monitoring wells present at the site but omitted from the contour map? Yes No

Unless the omission of the well(s) has been previously approved by the Department, justify the omissions.

Several wells are no longer in service as reported to the NJDEP by Geraghty and Miller.

- 4. Are there any monitoring wells containing separate phase product during this measuring event? Yes No

Were any of the monitoring wells with separate phase product included in the ground water contour map? Yes No

If yes, show the formula used to correct the water table elevation.

854820207

Project No.: 1350-05

Project Name: Biocraft Laboratories, Inc.

Drawing Description: Groundwater Elevation and Direction of Groundwater Flow at Biocraft Laboratories, Inc., Waldwick, NJ, May 15, 1996

- 5. Has the ground water flow direction changed more than 45° from the previous groundwater contour map? Yes No

If yes, discuss reason for change.

- 6. Has ground water mounding and/or depressions been identified in the ground water contour map? Yes No

Unless the ground water mound and/or depressions are caused by the ground water remediation system, discuss the reasons for this occurrence.

Groundwater remediation system.

- 7. Are the wells used in the contour map screened in the same water-bearing zone? Yes No

If no, justify inclusion of those wells.

- 8. Were the ground water contours
 - computer generated,
 - computer aided, or
 - hand drawn?

If computer aided or generated, identify the interpolation method(s) used.

854820208

Project No.: 1350-05

Project Name: Biocraft Laboratories, Inc.

Drawing Description: Groundwater Elevation and Direction of Groundwater Flow at Biocraft Laboratories, Waldwick, NJ, July 24, 1996

Contour Map Reporting Form

This reporting form shall accompany each ground water contour map submittal. Use additional sheets as necessary.

- 1. Did any surveyed well casing elevations change from the previous sampling events? Yes No

If yes, attach new "Well Certification - Form B" and identify the reason for the elevation Change (damage to casing, installation of recovery system in monitoring well, etc.)

- 2. Are there any monitoring wells in unconfined aquifers in which the water table elevation is higher than the top of the well screen? Yes No

If yes, identify these wells.

- 3. Are there any monitoring wells present at the site but omitted from the contour map? Yes No

Unless the omission of the well(s) has been previously approved by the Department, justify the omissions.

Several wells are no longer in service as reported to the NJDEP by Geraghty and Miller.

- 4. Are there any monitoring wells containing separate phase product during this measuring event? Yes No

Were any of the monitoring wells with separate phase product included in the ground water contour map? Yes No

If yes, show the formula used to correct the water table elevation.

854820209

Project No.: 1350-05

Project Name: Biocraft Laboratories, Inc.

Drawing Description: Groundwater Elevation and Direction of Groundwater Flow at Biocraft Laboratories, Inc., Waldwick, NJ, July 24, 1996

- 5. Has the ground water flow direction changed more than 45° from the previous groundwater contour map? Yes No

If yes, discuss reason for change.

- 6. Has ground water mounding and/or depressions been identified in the ground water contour map? Yes No

Unless the ground water mound and/or depressions are caused by the ground water remediation system, discuss the reasons for this occurrence.

Groundwater remediation system.

- 7. Are the wells used in the contour map screened in the same water-bearing zone? Yes No

If no, justify inclusion of those wells.

- 8. Were the ground water contours
 - computer generated,
 - computer aided, or
 - hand drawn?

If computer aided or generated, identify the interpolation method(s) used.

854820210

Drawing Description: Groundwater Elevation and Direction of Groundwater Flow at Biocraft Laboratories, Waldwick, NJ, November 13, 1996

Contour Map Reporting Form

This reporting form shall accompany each ground water contour map submittal. Use additional sheets as necessary.

- 1. Did any surveyed well casing elevations change from the previous sampling events? Yes No

If yes, attach new "Well Certification - Form B" and identify the reason for the elevation Change (damage to casing, installation of recovery system in monitoring well, etc.)

- 2. Are there any monitoring wells in unconfined aquifers in which the water table elevation is higher than the top of the well screen? Yes No

If yes, identify these wells.

- 3. Are there any monitoring wells present at the site but omitted from the contour map? Yes No

Unless the omission of the well(s) has been previously approved by the Department, justify the omissions.

Several wells are no longer in service as reported to the NJDEP by Geraghty and Miller.

- 4. Are there any monitoring wells containing separate phase product during this measuring event? Yes No

Were any of the monitoring wells with separate phase product included in the ground water contour map? Yes No

If yes, show the formula used to correct the water table elevation.

854820211

Project No.: 1350-05

Project Name: Biocraft Laboratories, Inc.

Drawing Description: Groundwater Elevation and Direction of Groundwater Flow at Biocraft Laboratories, Inc., Waldwick, NJ November 15, 1996

- 5. Has the ground water flow direction changed more than 45° from the previous groundwater contour map? Yes No

If yes, discuss reason for change.

- 6. Has ground water mounding and/or depressions been identified in the ground water contour map? Yes No

Unless the ground water mound and/or depressions are caused by the ground water remediation system, discuss the reasons for this occurrence.

Groundwater remediation system.

- 7. Are the wells used in the contour map screened in the same water-bearing zone? Yes No

If no, justify inclusion of those wells.

- 8. Were the ground water contours
 - computer generated,
 - computer aided, or
 - hand drawn?

If computer aided or generated, identify the interpolation method(s) used.

854820212

TEVA PHARMACEUTICALS USA
WALDWICK, NEW JERSEY

BIOCRAFT LABORATORIES, INC.
REMEDIAL INVESTIGATION REPORT
APPENDIX A - LABORATORY REPORTS
VOLUME 1 OF 2
ISRA CASE #96070

PROJECT #1350-05
APRIL 1997

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854820213

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WALDWICK, NEW JERSEY

BIOCRAFT LABORATORIES, INC.
REMEDIAL INVESTIGATION REPORT
APPENDIX A - LABORATORY REPORTS
VOLUME 2 OF 2
ISRA CASE #96070

PROJECT #1350-05
APRIL 1997

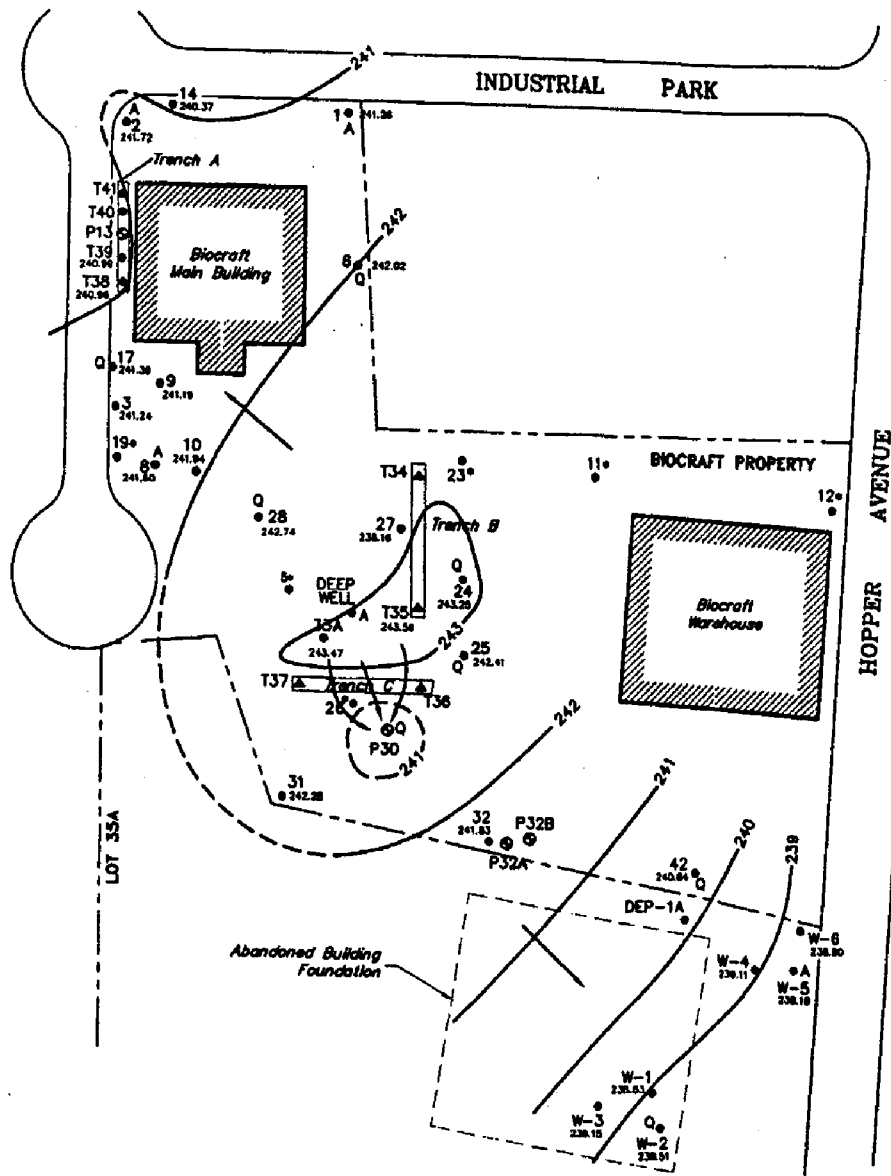
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854820214

854820215

eder associates
FIGURE 2



LEGEND

- 242 — Groundwater Isocontour Line
- Direction Of Groundwater Flow
- 28 ● Monitoring Well Location
- A ● Annual Monitoring Location
- Q ● Quarterly Monitoring Location
- Recovery Well Location
- P30 ● Recovery Well Location
- DEEP WELL ● Production Well
- T34 ▲ Trench Piezometer
- No Data

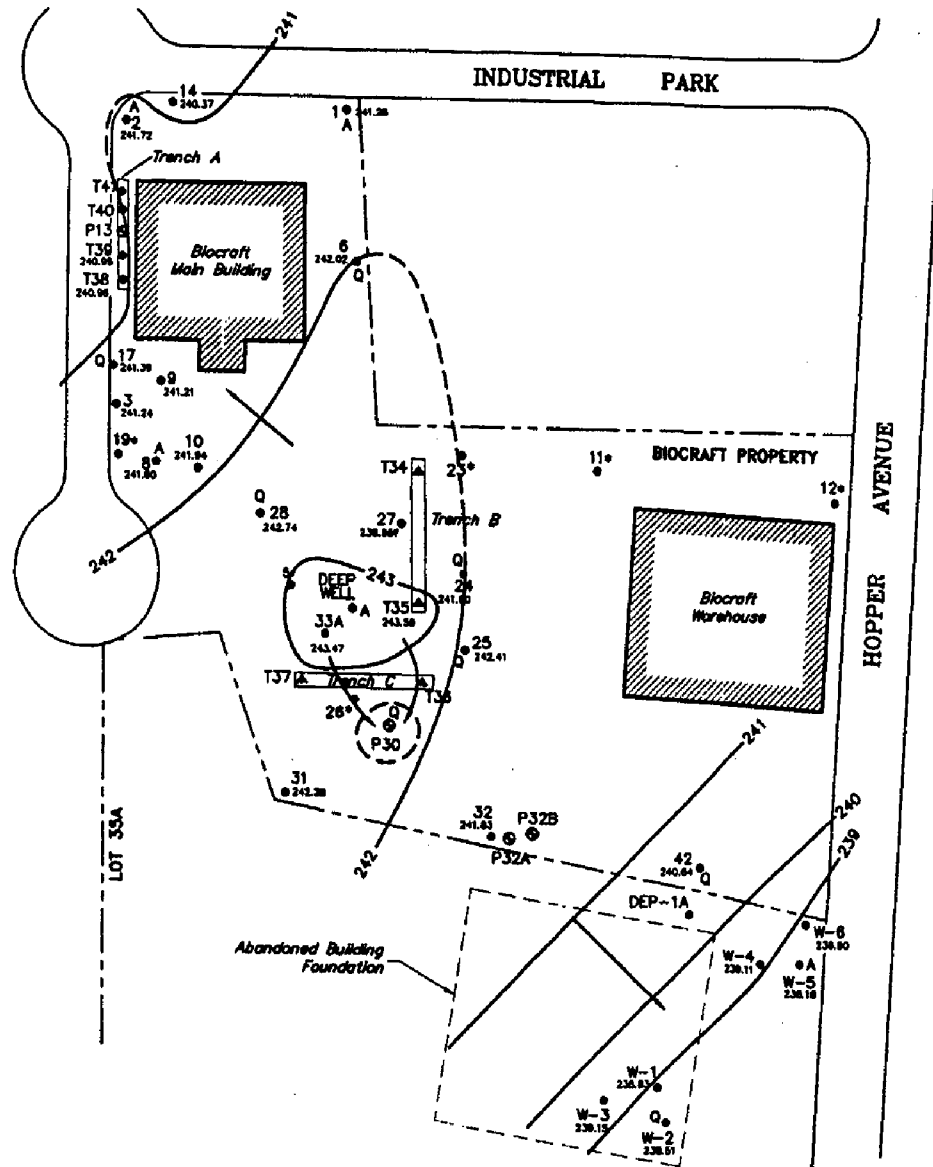


GROUNDWATER FLOW MAP
MARCH 1, 1996
 BIOCRAFT LABORATORIES, INC.
 WALDWICK, NEW JERSEY

MS13000A
041487

854820216

eder associates
FIGURE 3



LEGEND

- 242 — Groundwater Isocontour Line
- Direction Of Groundwater Flow
- 28 ● Monitoring Well Location
- A Annual Monitoring Location
- Q Quarterly Monitoring Location
- Recovery Well Location
- P30 Production Well
- DEEP WELL ● Production Well
- T34 ▲ Trench Piezometer
- No Data

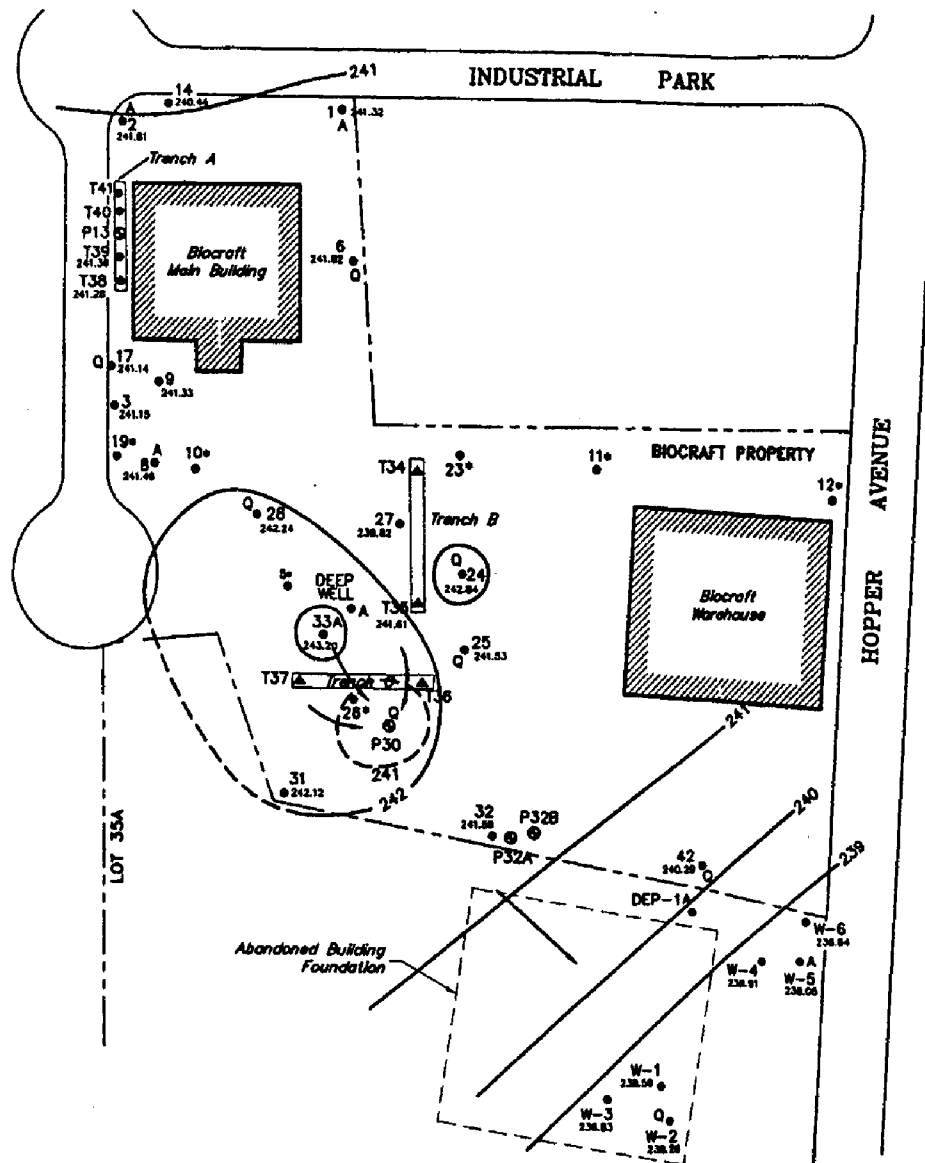


GROUNDWATER FLOW MAP
MAY 15, 1996
 BIOCRAFT LABORATORIES, INC.
 WALDWICK, NEW JERSEY

MS135058
041487

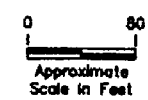
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oder associates
FIGURE 4



LEGEND

- 242 — Groundwater Isocontour Line
- Direction Of Groundwater Flow
- 28 • Monitoring Well Location
- A • Annual Monitoring Location
- Q • Quarterly Monitoring Location
- ⊙ • Recovery Well Location
- P30 • Recovery Well Location
- DEP WELL ⊙ • Production Well
- T34 ▲ Trench Piezometer
- No Data

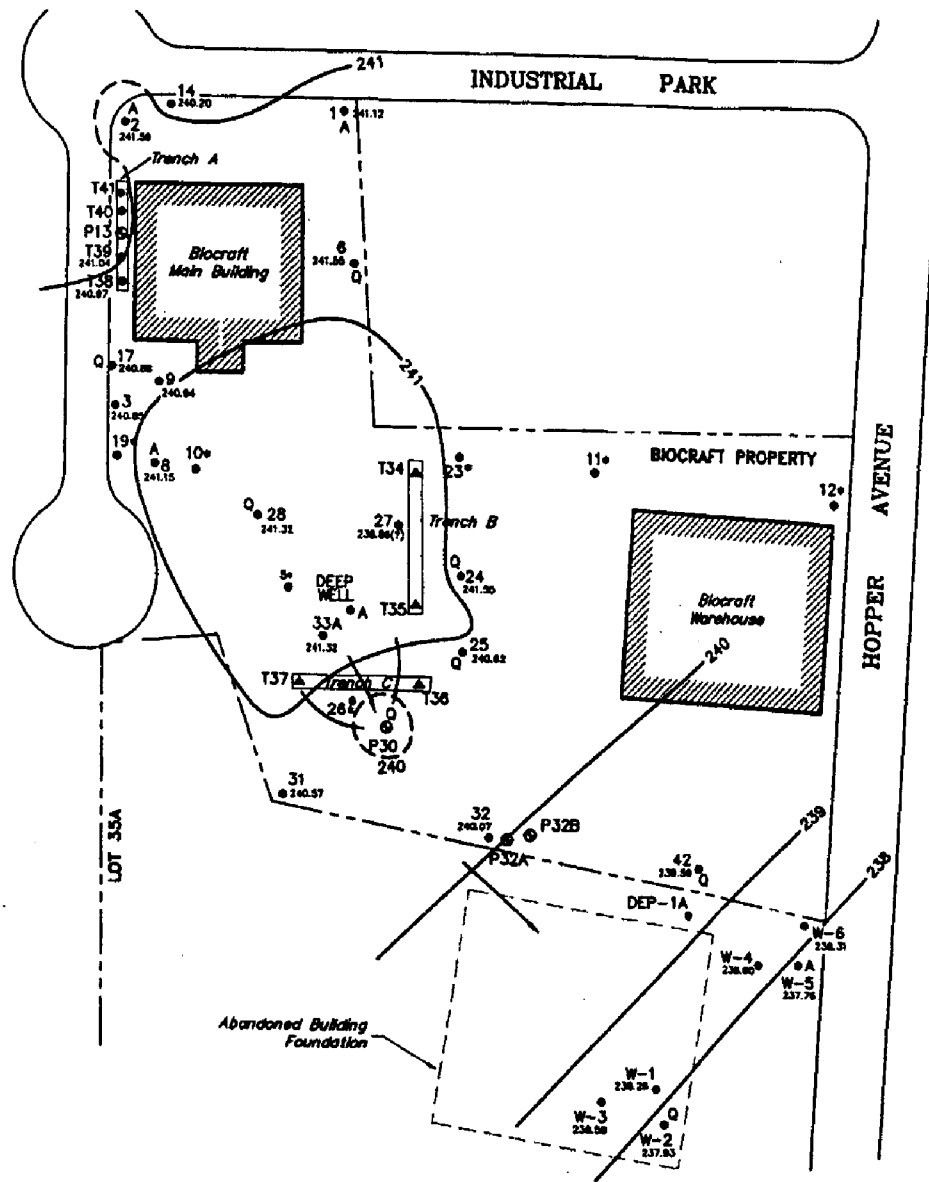


GROUNDWATER FLOW MAP
JULY 24, 1996
 BIOCRAFT LABORATORIES, INC.
 WALDWICK, NEW JERSEY

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ecder associates
FIGURE 5.



LEGEND

- 242 — Groundwater Isocontour Line
- Direction Of Groundwater Flow
- 28 • Monitoring Well Location
- A Annual Monitoring Location
- Quarterly Monitoring Location
- ⊙ Recovery Well Location
- P30 Recovery Well Location
- DEEP WELL • Production Well
- T34 ▲ Trench Piezometer
- No Data



GROUNDWATER FLOW MAP
NOVEMBER 13, 1996
 BIOCRAFT LABORATORIES, INC.
 WALDWICK, NEW JERSEY

MS130000
041497

1/99

REMEDIAL INVESTIGATION WORKPLAN
TEVA PHARMACEUTICALS USA
(f.k.a. BIOCRAFT LABORATORIES, INC.)
WALDWICK, NEW JERSEY
ISRA CASE #96070



Gannett Fleming

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TEVA PHARMACEUTICALS USA (f.k.a. BIOCRAFT LABORATORIES, INC.)
WALDWICK, NEW JERSEY

REMEDIAL INVESTIGATION WORKPLAN
TEVA PHARMACEUTICALS USA
(f.k.a. BIOCRAFT LABORATORIES, INC.)
WALDWICK, NEW JERSEY
ISRA CASE #96070

PROJECT #34596

JANUARY 1999

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1.0 INTRODUCTION

This Remedial Investigation Report (RIR)/Remedial Investigation Workplan (RIW) summarizes the groundwater monitoring conducted in February, May, August, and December 1997, and March, June, and September 1998 at the Teva Pharmaceuticals USA (Teva), formerly known as Biocraft Laboratories, Inc., property in Waldwick, New Jersey and summarizes the work to be conducted to address the New Jersey Department of Environmental Protection (NJDEP) July 1, 1998 letter.

2.0 SITE DESCRIPTION

Teva formerly manufactured semi-synthetic penicillin products in bulk at its Waldwick, New Jersey facility. The facility consists of two buildings, the former manufacturing building and warehouse, located on contiguous properties with frontages on 12 Industrial Park and 140 Hopper Avenue in Waldwick, Bergen County, New Jersey. Figure 1 shows the site location. The office, maintenance, and production areas, and research and development laboratories were located in the manufacturing building. Bulk finished products and some raw materials are stored in the warehouse building which also house the quality control and microbiology laboratories.

The manufacturing and warehouse buildings and parking areas cover approximately 30 percent of the 4.3 acre property. Landscaped areas cover approximately 10 percent of the property, and the remainder of the property is lightly wooded. The property is relatively flat with slopes ranging from 1 to 3 percent.

3.0 PHYSICAL SETTING

3.1 Soil

The dominant soil type in the study area is classified as Dunellen. Dunellen soils have a very dark, grayish brown loam surface layer approximately 5 inches thick. The subsoil is approximately 21 inches thick, of which, the upper 10 inches is friable, dark yellowish brown loam and the lower 11 inches is friable brown loam. The substratum is stratified reddish brown gravelly sand, sand, and loamy sand and brown sandy loam to an average depth of 66 inches. The permeability of the Dunellen soils is moderate to moderately rapid in the subsoil and rapid in the substratum.

3.2 Geology and Hydrogeology

The site is located in an area of unstratified and stratified drift deposited by the Wisconsin glacier and its meltwaters during the Pleistocene Epoch of the Quaternary Period. Thin layers of silt and gravel are generally found from grade to 3 feet below grade. Glacial till. Glacial till consisting of a poorly sorted mixture of boulders, cobbles, pebbles, silt, sand, and clay underlies the site at a thickness of 8 to 15 feet. Approximately 40 feet of semiconsolidated silt and fine sand underlie the till layer. Brunswick shale of the Triassic Newark Group underlies the site at a depth of 50 to 60 feet below grade. The thickness of the Brunswick Shale is not known but is estimated to be greater than 6,000 feet.

Groundwater beneath the site occurs in void spaces of unconsolidated quaternary glacial sediments and in the joints and fractures of the Brunswick Formation. The depth to groundwater ranges from grade to 9 feet below grade, depending on seasonal fluctuations. The groundwater flow direction is influenced by the groundwater recovery, treatment, and reinjection system. The inferred direction of groundwater flow is to the north, northwest at the northern section of the site, and to the south, southeast in the central and southern sections of the site.

4.0 QUARTERLY GROUNDWATER MONITORING RESULTS

The quarterly groundwater monitoring results for February, May, August, and December 1997, and March, June, and September 1998 are summarized in Sections 4.1 through 4.10. The laboratory reports are in Appendix A. Field sampling forms are in Appendix B. Analytical data are summarized in Tables 1 through 5.

4.1 Sample Collection and Analysis

All sampling activities were conducted in accordance with the New Jersey Department of Environmental Protection (NJDEP) "Field Sampling Procedures Manual" May 1992, with the following exception:

- Samples were not collected from monitoring well MW-10 because of well drawdown and insufficient recharge.

The groundwater samples were analyzed by by Accutest Laboratories, Dayton, New Jersey (N.J. Certification #12129). All samples were analyzed within the required holding time and all parameters were within their respective quality control ranges, with the following exceptions:

- August 1997 - The matrix spike/matrix spike duplicate recovery exceeded the recovery criteria for volatile organic analysis.
- December 1997 - BOD was analyzed out of holding time due to a laboratory scheduling error. The matrix spike for Total Phosphorous was not within the acceptable matrix spike limit.
- March 1998 - The matrix spike/matrix spike duplicate recovery exceeded the recovery

criteria for volatile organic analysis. The matrix spike for Total Organic Carbon was not within the acceptable matrix spike limit.

- June 1998 - The matrix spike/matrix spike duplicate recovery exceeded the recovery criteria for volatile organic analysis.
- September 1998 - The matrix spike for Total Phosphorous was not within the acceptable matrix spike limit.

4.2 Analytical Results Summary

Butyl alcohol concentrations in all samples were less than the laboratory minimum detection limit or less than the 500 micrograms per liter ($\mu\text{g/l}$) Class IIA - Ground Water Quality Criteria.

Acetone concentrations were less than the laboratory minimum detection limit or less than the 700 $\mu\text{g/l}$ Class IIA Groundwater Quality Criteria in all groundwater samples, except samples from recovery wells P-13 at a concentration of 2,140 $\mu\text{g/l}$ (February 1997), and P-32A/32B at concentrations of 1,820 $\mu\text{g/l}$ (May 1997), 3,350 $\mu\text{g/l}$ (August 1997), 970 $\mu\text{g/l}$ (December 1997), and 1,990 $\mu\text{g/l}$ (September 1998).

Methylene chloride was detected at concentrations ranging from less than the laboratory minimum detection limit to 17,600 $\mu\text{g/l}$ (recovery well P-32A/32B). Methylene chloride was detected in four monitoring wells, MW-9 (7.8 $\mu\text{g/l}$, February 1997), MW-17 (4.8 $\mu\text{g/l}$, February 1997), MW-28 (185 $\mu\text{g/l}$, February 1997), and MW-25 (85.2 $\mu\text{g/l}$, June 1998) at concentrations exceeding the 3 $\mu\text{g/l}$ Class IIA Ground Water Quality Criteria.

Analytical results of groundwater samples collected from off-site monitoring wells downgradient of the Teva groundwater recovery and treatment system show methylene chloride and butyl alcohol concentrations were below the laboratory minimum detection limit (MDL), and acetone

concentrations were below the laboratory MDL or the Class IIA - Groundwater Quality Criteria. The analytical data suggests that the recovery system is capturing the full width of the groundwater contaminant plume.

4.3 February 1997

Samples were collected from seven monitoring wells (MW-6, MW-9, MW-17, MW-24, MW-25, MW-28, and MW-42) and analyzed for acetone, methylene chloride, butyl alcohol, COD, BOD, TOC, total phosphorous, and chloride. Acetone concentrations in all samples were below the Class IIA - Groundwater Quality Criteria. Methylene chloride was detected at concentrations above the Class IIA - Groundwater Quality Criteria in monitoring wells MW-9 (7.8 $\mu\text{g/l}$), MW-17 (4.8 $\mu\text{g/l}$), and MW-28 (185 $\mu\text{g/l}$). Butyl alcohol concentrations were below the 1.4 $\mu\text{g/l}$ laboratory MDL.

BOD concentrations ranged from less than 2 milligrams per liter (mg/l) to 12.1 mg/l (MW-28). COD concentrations ranged from less than 20 mg/l to 39.4 mg/l (MW-28). TOC concentrations ranged from 1.7 mg/l to 12.7 mg/l (MW-28). Total phosphorous concentrations ranged from less than 0.1 mg/l to 0.14 mg/l (MW-28). Chloride concentrations ranged from 17.5 mg/l to 867 mg/l (MW-17).

4.4 May 1997

Samples were collected from seven monitoring wells (MW-6, MW-9, MW-17, MW-24, MW-25, MW-28, and MW-42) and the on-site production well, and analyzed for acetone, methylene chloride, butyl alcohol, COD, BOD, TOC, total phosphorous, and chloride. Acetone concentrations in all samples were less than the Class IIA - Groundwater Quality Criteria. Methylene chloride concentrations in all samples were less than the Class IIA - Groundwater Quality Criteria. Butyl alcohol concentrations in all samples were below the 1.4 $\mu\text{g/l}$ laboratory MDL.

BOD concentrations ranged from less than 2 mg/l to 9.6 mg/l (MW-28). COD concentrations ranged

from less than 20 mg/l to 43.2 mg/l (MW-28). TOC concentrations ranged from 1.8 mg/l to 11.9 mg/l (MW-28). Total phosphorous concentrations ranged from less than 0.1 mg/l to 0.47 mg/l (MW-28). Chloride concentrations ranged from 16.5 mg/l to 1,040 mg/l (MW-25).

4.5 August 1997

Samples were collected from seven monitoring wells (MW-6, MW-9, MW-17, MW-24, MW-25, MW-28, and MW-42) and analyzed for acetone, methylene chloride, butyl alcohol, COD, BOD, TOC, total phosphorous, and chloride. Acetone concentrations in all samples were below the Class IIA - Groundwater Quality Criteria. Methylene chloride concentrations in all samples were below the 0.61 μ g/l laboratory MDL. Butyl alcohol concentrations in all samples were below the 1.4 μ g/l laboratory MDL.

BOD concentrations ranged from less than 2.8 mg/l to 19 mg/l (MW-28). COD concentrations ranged from less than 20 mg/l to 42.2 mg/l (MW-25). TOC concentrations ranged from 3 mg/l to 11.3 mg/l (MW-28). Total phosphorous concentrations ranged from less than 0.1 mg/l to 0.95 mg/l (MW-25). Chloride concentrations ranged from 41 mg/l to 400 mg/l (MW-25).

4.6 December 1997 (Annual Monitoring Event)

Samples were collected from 22 monitoring wells and analyzed for acetone, methylene chloride, butyl alcohol, aniline, N,N-dimethyl aniline, COD, BOD, TOC, total phosphorous, and chloride. Acetone concentrations in all samples were below the Class IIA - Groundwater Quality Criteria. Methylene chloride concentrations in all samples were below the 0.61 μ g/l laboratory MDL. Butyl alcohol concentrations in all samples were below the 1.4 μ g/l laboratory MDL.

Aniline concentrations were less than the 0.78 μ g/l laboratory MDL in all samples except W-1 (1.0 μ g/l). N,N-dimethyl aniline concentrations were less than the 5 μ g/l laboratory MDL in all samples except W-1 (estimated concentration of 4.1 μ g/l) and W-2 (estimated concentration of 2.7 μ g/l).

BOD concentrations ranged from less than 2 mg/l to 28.4 mg/l (W-1). COD concentrations ranged from less than 20 mg/l to 152 mg/l (W-2). TOC concentrations ranged from 3.4 mg/l to 141 mg/l (W-2). Total phosphorous concentrations ranged from less than 0.1 mg/l to 19.5 mg/l (MW-24). Chloride concentrations ranged from 27.5 mg/l to 148 mg/l (MW-28).

4.7 March 1998

Samples were collected from seven monitoring wells (MW-6, MW-9, MW-17, MW-24, MW-25, MW-28, and MW-42) and analyzed for acetone, methylene chloride, butyl alcohol, COD, BOD, TOC, total phosphorous, and chloride. Acetone concentrations in all samples were below the Class IIA - Groundwater Quality Criteria. Methylene chloride concentrations in all samples were below the 0.61 $\mu\text{g/l}$ laboratory MDL. Butyl alcohol concentrations in all samples were below the 1.4 $\mu\text{g/l}$ laboratory MDL.

BOD concentrations ranged from less than 2.8 mg/l to 18 mg/l (MW-28). COD concentrations ranged from less than 20 mg/l to 143 mg/l (MW-24). TOC concentrations ranged from 2.3 mg/l to 28 mg/l (MW-24). Total phosphorous concentrations ranged from less than 0.1 mg/l to 0.62 mg/l (MW-25). Chloride concentrations ranged from 26.2 mg/l to 335 mg/l (MW-6).

4.8 June 1998

Samples were collected from seven monitoring wells (MW-6, MW-9, MW-17, MW-24, MW-25, MW-28, and MW-42) and analyzed for acetone, methylene chloride, butyl alcohol, aniline, N,N-dimethyl aniline, COD, BOD, TOC, total phosphorous, and chloride. Acetone concentrations in all samples were below the Class IIA - Groundwater Quality Criteria. Methylene chloride concentrations in all samples were below the 0.61 $\mu\text{g/l}$ laboratory MDL, except for MW-25 (85.2 $\mu\text{g/l}$). Butyl alcohol concentrations in all samples were below the 1.4 $\mu\text{g/l}$ laboratory MDL.

Aniline concentrations were less than the 0.8 $\mu\text{g/l}$ laboratory MDL in all samples. N,N-dimethyl

aniline concentrations were less than the 5 $\mu\text{g/l}$ laboratory MDL in all samples except MW-28 (estimated concentration of 1.9 $\mu\text{g/l}$).

BOD concentrations ranged from less than 2.8 mg/l to 8.1 mg/l (MW-28). COD concentrations ranged from less than 20 mg/l to 44.9 mg/l (MW-28). TOC concentrations ranged from 3 mg/l to 10 mg/l (MW-28). Total phosphorous concentrations ranged from less than 0.1 mg/l to 0.55 mg/l (MW-28). Chloride concentrations ranged from 18.8 mg/l to 171 mg/l (MW-6).

4.9 September 1998

Samples were collected from seven monitoring wells (MW-6, MW-9, MW-17, MW-24, MW-25, MW-28, and MW-42) and analyzed for acetone, methylene chloride, butyl alcohol, aniline, N,N-dimethyl aniline, COD, BOD, TOC, total phosphorous, and chloride. Acetone concentrations in all samples were below the Class IIA - Groundwater Quality Criteria. Methylene chloride concentrations in all samples were below the 0.61 $\mu\text{g/l}$ laboratory MDL. Butyl alcohol concentrations in all samples were below the 1.4 $\mu\text{g/l}$ laboratory MDL.

Aniline concentrations were less than the 0.8 $\mu\text{g/l}$ laboratory MDL in all samples. N,N-dimethyl aniline concentrations were less than the 5 $\mu\text{g/l}$ laboratory MDL in all samples except MW-6 (5.1 $\mu\text{g/l}$) and MW-28 (estimated concentration of 1.9 $\mu\text{g/l}$).

BOD concentrations ranged from less than 2.0 mg/l to 19.8 mg/l (MW-28). COD concentrations ranged from less than 20 mg/l to 83.1 mg/l (MW-28). TOC concentrations ranged from 3.7 mg/l to 9.9 mg/l (MW-28). Total phosphorous concentrations ranged from less than 0.1 mg/l to 0.95 mg/l (MW-28). Chloride concentrations ranged from 45.7 mg/l to 181 mg/l (MW-6).

4.10 Groundwater Flow

Groundwater elevation contour maps (Figures Section) developed from depth to water measurements

made during the quarterly groundwater monitoring program (period March 1998 through September 1998) show that groundwater flow is to the north-northwest at the northern section of the site, and to the south-southeast in the central and southern sections of the site and that groundwater discharged to the recharge trench system flows downgradient towards the recovery well system.

5.0 BIODEGRADATION/BIOSTIMULATION SYSTEM

5.1 Biodegradation/Biostimulation System Description

The Teva groundwater biodegradation/biostimulation system was designed so that the treated groundwater is discharged upgradient and within the capture zone of the recovery well network. The biodegradation/biostimulation system consists of three recovery wells (P-13, P-30, and P-32A/32B), two infiltration trenches (Trench B and Trench C), and a biological treatment unit.

The biological treatment unit consists of two identical activated sludge units, ACT I and ACT II. Each unit consists of an aeration tank and a settling tank. Both systems are operated in parallel, with ACT I treating groundwater pumped from P-30, and ACT II treating groundwater pumped from P-13 and P-32A/32B. Groundwater enters the aeration tanks, and is aerated by a blower and diffuser which also keeps the tank contents mixed. Additional mixing is provided by internally pumping the tank contents. The aeration tank effluent is pumped to the settling tank to separate the bacteria from the water. The settled bacteria (sludge) is recycled to the aeration tank to keep bacteria concentrations in the system high enough to remove organic compounds. The biodegradation/biostimulation system effluent is passed through a dual vessel (in series) granular activated carbon unit (added in May 1996) and the treated groundwater is discharged to two recharge trenches upgradient of recovery wells P-30 and P-32A/32B. The maximum system flowrate is 8 gallons per minute (gpm).

5.2 Biodegradation/Biostimulation System Monitoring

Biodegradation/biostimulation system influent samples are collected from the three recovery wells, P-13, P-30, and P-32A/32B, and the effluent sample is collected from the discharge side of the activated carbon units.

5.2.1 February 1997

The influent and effluent samples are analyzed for acetone, methylene chloride, butyl alcohol, COD, BOD, TOC, total phosphorous, and chloride. Influent acetone concentrations were 2,140 $\mu\text{g/l}$ (P-13), 72.5 $\mu\text{g/l}$ (P-30), and 241 $\mu\text{g/l}$ (P-32A/32B). Influent methylene chloride concentrations were 573 $\mu\text{g/l}$ (P-13), 19.8 $\mu\text{g/l}$ (P-30), and 2,230 $\mu\text{g/l}$ (P-32A/32B). Influent butyl alcohol concentrations were less than the laboratory MDL of 14 $\mu\text{g/l}$ (which is less than the 500 $\mu\text{g/l}$ Class II-A- Groundwater Quality Criteria).

BOD concentrations were 54.7 mg/l (P-13), 5.5 mg/l (P-30), and 9.9 mg/l (P-32A/32B). COD concentrations were 45.7 mg/l (P-13), 41.9 mg/l (P-30), and 31.8 mg/l (P-32A/32B). TOC concentrations were 14.3 mg/l (P-13), 10.9 mg/l (P-30), and 10.0 mg/l (P-32A/32B). Total phosphorous concentrations were 4.4 mg/l (P-13), 6.8 mg/l (P-30), and 2.3 mg/l (P-32A/32B). Chloride concentrations were 444 mg/l (P-13), 140 (P-30), and 127 mg/l (P-32A/32B).

The effluent sample was collected from the discharge side of the carbon system. The effluent acetone concentration was 299 $\mu\text{g/l}$. The effluent methylene chloride concentration was 401 $\mu\text{g/l}$. The effluent butyl alcohol concentration was less than the 2.8 $\mu\text{g/l}$ laboratory MDL. The BOD concentration was 10.2 mg/l. The COD concentration was 29.2 mg/l. The TOC concentration was 9.3 mg/l. Total phosphorous concentration was 10.1 mg/l. Chloride concentration was 192 mg/l.

5.2.2 May 1997

The influent and effluent samples are analyzed for acetone, methylene chloride, butyl alcohol, COD, BOD, TOC, total phosphorous, and chloride. Influent acetone concentrations were 16.8 $\mu\text{g/l}$ (P-13), 27.5 $\mu\text{g/l}$ (P-30), and 1,820 $\mu\text{g/l}$ (P-32A/32B). Influent methylene chloride concentrations were less than 0.61 $\mu\text{g/l}$ (P-13), less than 0.61 $\mu\text{g/l}$ (P-30), and 11,200 $\mu\text{g/l}$ (P-32A/32B). Influent butyl alcohol concentrations were less than the laboratory MDL of 1.4 $\mu\text{g/l}$ (which is less than the 500 $\mu\text{g/l}$ Class IIA- Groundwater Quality Criteria).

BOD concentrations were 8.3 mg/l (P-13), less than 2.9 mg/l (P-30), and 15.3 mg/l (P-32A/32B). COD concentrations were 40.6 mg/l (P-13), 24.1 mg/l (P-30), and 49.5 mg/l (P-32A/32B). TOC concentrations were 9.6 mg/l (P-13), 7.1 mg/l (P-30), and 15.3 mg/l (P-32A/32B). Total phosphorous concentrations were 22.4 mg/l (P-13), 19.2 mg/l (P-30), and 15.3 mg/l (P-32A/32B). Chloride concentrations were 575 mg/l (P-13), 230 (P-30), and 145 mg/l (P-32A/32B)

The effluent sample was collected from the discharge side of the carbon system. The effluent acetone concentration was 7 μ g/l. The effluent methylene chloride concentration was 150 μ g/l. The effluent butyl alcohol concentration was less than the 1.4 μ g/l laboratory MDL. The BOD concentration was less than 2 mg/l. The COD concentration was 30.5 mg/l. The TOC concentration was 6.1 mg/l. Total phosphorous concentration was 0.45 mg/l. Chloride concentration was 200 mg/l.

5.2.3 August 1997

The influent and effluent samples are analyzed for acetone, methylene chloride, butyl alcohol, COD, BOD, TOC, total phosphorous, and chloride. Influent acetone concentrations were 479 μ g/l (P-13), 104 μ g/l (P-30), and 3,350 μ g/l (P-32A/32B). Influent methylene chloride concentrations were 3,100 μ g/l (P-13), 40.2 μ g/l (P-30), and 16,400 μ g/l (P-32A/32B). Influent butyl alcohol concentrations were less than the laboratory MDL of 1.4 μ g/l (which is less than the 500 μ g/l Class IIA- Groundwater Quality Criteria).

BOD concentrations were 5.5 mg/l (P-13), 6.2 mg/l (P-30), and 42.2 mg/l (P-32A/32B). COD concentrations were 27.5 mg/l (P-13), 29.8 mg/l (P-30), and 86.8 mg/l (P-32A/32B). TOC concentrations were 6.4 mg/l (P-13), 8.6 mg/l (P-30), and 24.7 mg/l (P-32A/32B). Total phosphorous concentrations were 0.36 mg/l (P-13), 1.5 mg/l (P-30), and 1.8 mg/l (P-32A/32B). Chloride concentrations were 169 mg/l (P-13), 315 mg/l (P-30), and 250 mg/l (P-32A/32B)

The effluent sample was collected from the discharge side of the carbon system. The effluent

acetone concentration was 76.4 $\mu\text{g/l}$. The effluent methylene chloride concentration was 69.2 $\mu\text{g/l}$. The effluent butyl alcohol concentration was less than the 1.4 $\mu\text{g/l}$ laboratory MDL. The BOD concentration was 17.3 mg/l. The COD concentration was 28.5 mg/l. The TOC concentration was 7.5 mg/l. Total phosphorous concentration was 1.0 mg/l. Chloride concentration was 255 mg/l.

5.2.4 December 1997

The influent and effluent samples are analyzed for acetone, methylene chloride, butyl alcohol, aniline, N,N-dimethyl aniline, COD, BOD, TOC, total phosphorous, and chloride. Influent acetone concentrations were 55.1 $\mu\text{g/l}$ (P-13), 17.1 $\mu\text{g/l}$ (P-30), and 970 $\mu\text{g/l}$ (P-32A/32B). Influent methylene chloride concentrations were less than 0.61 $\mu\text{g/l}$ (P-13), less than 0.61 $\mu\text{g/l}$ (P-30), and 13,000 $\mu\text{g/l}$ (P-32A/32B). Influent butyl alcohol concentrations were 201 $\mu\text{g/l}$ (P-13), 26.4 $\mu\text{g/l}$ (P-30), and less than 70 $\mu\text{g/l}$ (P-32A/32B). Influent aniline concentrations were less than 0.78 $\mu\text{g/l}$ (P-13), 27.3 $\mu\text{g/l}$ (P-30), and 441 $\mu\text{g/l}$ (P-32A/32B). Influent N,N-dimethyl aniline concentrations were less than 5.0 $\mu\text{g/l}$ (P-13), less than 5.0 $\mu\text{g/l}$ (P-30), and 37 $\mu\text{g/l}$ (P-32A/32B).

BOD concentrations were 7.4 mg/l (P-13), less than 2.9 mg/l (P-30), and 24.9 mg/l (P-32A/32B). COD concentrations were 20.9 mg/l (P-13), less than 20 mg/l (P-30), and 120 mg/l (P-32A/32B). TOC concentrations were 16.3 mg/l (P-13), 9.5 mg/l (P-30), and 32 mg/l (P-32A/32B). Total phosphorous concentrations were 1.1 mg/l (P-13), 0.73 mg/l (P-30), and 25.3 mg/l (P-32A/32B). Chloride concentrations were 350 mg/l (P-13), 283 mg/l (P-30), and 241 mg/l (P-32A/32B).

The effluent sample was collected from the discharge side of the carbon system. The effluent acetone concentration was 171 $\mu\text{g/l}$. The effluent methylene chloride concentration was 141 $\mu\text{g/l}$. The effluent butyl alcohol concentration was less than the 1.4 $\mu\text{g/l}$ laboratory MDL. The effluent aniline concentration was less than the 0.78 $\mu\text{g/l}$ laboratory MDL. The effluent N,N-dimethyl aniline concentration was an estimated 1.1 $\mu\text{g/l}$. The BOD concentration was 4.0 mg/l. The COD concentration was less than 20 mg/l. The TOC concentration was 7.2 mg/l. Total phosphorous concentration was 7.3 mg/l. Chloride concentration was 286 mg/l.

5.2.5 March 1998

The influent and effluent samples are analyzed for acetone, methylene chloride, butyl alcohol, COD, BOD, TOC, total phosphorous, and chloride. Recovery well P-13 was not sampled because the pump was being serviced. Influent acetone concentrations were 63.5 $\mu\text{g/l}$ (P-30) and 273 $\mu\text{g/l}$ (P-32A/32B). Influent methylene chloride concentrations were 2.4 $\mu\text{g/l}$ (P-30) and 2,650 $\mu\text{g/l}$ (P-32A/32B). Influent butyl alcohol concentrations were less than the 1.4 $\mu\text{g/l}$ laboratory MDL.

BOD concentrations were 2.9 mg/l (P-30) and 5.2 mg/l (P-32A/32B). COD concentrations were 21.2 mg/l (P-30) and 26.4 mg/l (P-32A/32B). TOC concentrations were 6.5 mg/l (P-30) and 8.5 mg/l (P-32A/32B). Total phosphorous concentrations were 0.41 mg/l (P-30) and 0.72 mg/l (P-32A/32B). Chloride concentrations were 113 mg/l (P-30) and 93.7 mg/l (P-32A/32B).

The effluent sample was collected from the discharge side of the carbon system. The effluent acetone concentration was 32.7 $\mu\text{g/l}$. The effluent methylene chloride concentration was 10.2 $\mu\text{g/l}$. The effluent butyl alcohol concentration was less than the 1.4 $\mu\text{g/l}$ laboratory MDL. The BOD concentration was 3.0 mg/l. The COD concentration was less than 20 mg/l. The TOC concentration was 5.8 mg/l. Total phosphorous concentration was 0.66 mg/l. Chloride concentration was 104 mg/l.

5.2.6 June 1998

The influent and effluent samples are analyzed for acetone, methylene chloride, butyl alcohol, aniline, N,N-dimethyl aniline, COD, BOD, TOC, total phosphorous, and chloride. Influent acetone concentrations were 53.2 $\mu\text{g/l}$ (P-13), 11.8 $\mu\text{g/l}$ (P-30), and 191 $\mu\text{g/l}$ (P-32A/32B). Influent methylene chloride concentrations were less than 0.61 $\mu\text{g/l}$ (P-13), 122 $\mu\text{g/l}$ (P-30), and 1,260 $\mu\text{g/l}$ (P-32A/32B). Influent butyl alcohol concentrations were less than the 1.4 $\mu\text{g/l}$ laboratory MDL. Influent aniline concentrations were less than 0.79 $\mu\text{g/l}$ (P-13), 32 $\mu\text{g/l}$ (P-30), and 111 $\mu\text{g/l}$ (P-32A/32B). Influent N,N-dimethyl aniline concentrations were less than 2.3 $\mu\text{g/l}$ (P-13), 2.5 $\mu\text{g/l}$ (P-

30), and 31.8 $\mu\text{g/l}$ (P-32A/32B).

BOD concentrations were 5.3 mg/l (P-13), less than 2 mg/l (P-30), and 6.4 mg/l (P-32A/32B). COD concentrations were 21.1 mg/l (P-13), less than 20 mg/l (P-30), and less than 20 mg/l (P-32A/32B). TOC concentrations were 11.8 mg/l (P-13), 7.6 mg/l (P-30), and 8.9 mg/l (P-32A/32B). Total phosphorous concentrations were 0.44 mg/l (P-13), 0.54 mg/l (P-30), and 0.29 mg/l (P-32A/32B). Chloride concentrations were 463 mg/l (P-13), 246 mg/l (P-30), and 174 mg/l (P-32A/32B).

The effluent sample was collected from the discharge side of the carbon system. The effluent acetone concentration was 36.6 $\mu\text{g/l}$. The effluent methylene chloride concentration was 3.6 $\mu\text{g/l}$. The effluent butyl alcohol concentration was less than the 1.4 $\mu\text{g/l}$ laboratory MDL. The effluent aniline concentration was less than the 0.79 $\mu\text{g/l}$ laboratory MDL. The effluent N,N-dimethyl aniline concentration was less than the 5 $\mu\text{g/l}$ laboratory MDL. The BOD concentration was less than 2.0 mg/l. The COD concentration was less than 20 mg/l. The TOC concentration was 6.7 mg/l. Total phosphorous concentration was 2.8 mg/l. Chloride concentration was 263 mg/l.

5.2.7 September 1998

The influent and effluent samples are analyzed for acetone, methylene chloride, butyl alcohol, aniline, N,N-dimethyl aniline, COD, BOD, TOC, total phosphorous, and chloride. Influent acetone concentrations were 24.8 $\mu\text{g/l}$ (P-13), 148 $\mu\text{g/l}$ (P-30), and 1,990 $\mu\text{g/l}$ (P-32A/32B). Influent methylene chloride concentrations were less than 0.61 $\mu\text{g/l}$ (P-13), 9.9 $\mu\text{g/l}$ (P-30), and 17,600 $\mu\text{g/l}$ (P-32A/32B). Influent butyl alcohol concentrations were less than the laboratory MDL. Influent aniline concentrations were less than 0.80 $\mu\text{g/l}$ (P-13), 77.7 $\mu\text{g/l}$ (P-30), and 144 $\mu\text{g/l}$ (P-32A/32B). Influent N,N-dimethyl aniline concentrations were less than 2 $\mu\text{g/l}$ (P-13), 7.3 $\mu\text{g/l}$ (P-30), and 62.4 $\mu\text{g/l}$ (P-32A/32B).

BOD concentrations were 26.3 mg/l (P-13), 14.6 mg/l (P-30), and less than 2 mg/l (P-32A/32B). COD concentrations were 68.2 mg/l (P-13), less than 20 mg/l (P-30), and 63.2 mg/l (P-32A/32B).

TOC concentrations were 12 mg/l (P-13), 11.7 mg/l (P-30), and 19.8 mg/l (P-32A/32B). Total phosphorous concentrations were 30.6 mg/l (P-13), 2.3 mg/l (P-30), and 1.2 mg/l (P-32A/32B). Chloride concentrations were 270 mg/l (P-13), 236 mg/l (P-30), and 212 mg/l (P-32A/32B)

The effluent sample was collected from the discharge side of the carbon system. The effluent acetone concentration was 13.9 μ g/l. The effluent methylene chloride concentration was less than 0.61 μ g/l. The effluent butyl alcohol concentration was less than the 1.4 μ g/l laboratory MDL. The effluent aniline concentration was less than the 0.79 μ g/l laboratory MDL. The effluent N,N-dimethyl aniline concentration was less than the 5 μ g/l laboratory MDL. The BOD concentration was 6.8 mg/l. The COD concentration was less than 20 mg/l. The TOC concentration was 5.5 mg/l. Total phosphorous concentration was 0.13 mg/l. Chloride concentration was 268 mg/l.

5.3 Biodegradation/Bio stimulation System Pumping Rates

The biodegradation/bio stimulation system extracted, treated, and recharged approximately 325,000 gallons of groundwater during the 12 month period ending November 1998.

6.0 REMEDIAL INVESTIGATION

This section describes the sampling procedures, field measurements, and sample analyses to be conducted during the Remedial Investigation. The procedures described in this section will ensure that all field investigation information, data, and resulting decisions are technically sound, statistically valid, and properly documented. Proposed monitoring well locations are shown in the Figures Section.

6.1 Soil

6.1.1 Drum Storage Area

Lubricating oil, ethylene glycol, triethylamine, dimethyl acetamide, 2,6-Lutidine, pivaloyl chloride, and, on occasion, hydrochloric acid and sodium hydroxide were stored on the concrete drum storage pad. No materials have been stored on the drum storage pad since the facility shut-down. The original building plan dated February 24, 1972 does not specify the location of the drum storage pad. The earliest drawing which depicts the drum storage pad was prepared in December 1976 and shows that the landscaped area extended 60-feet south from the northeast corner of the manufacturing building to a concrete pad which continued south along the southern fence line. Teva personnel indicated that employees used the landscaped area for recreation until the concrete pad and curbing was installed in the mid-1980s.

One soil boring will be drilled through the concrete drum storage pad approximately 20 feet east of the manufacturing building and 60 feet south of the northeast corner of the manufacturing building. Four soil borings will be drilled along the eastern edge of the concrete drum storage pad (one every 30 linear feet) starting from the wood shed continuing south to the bend in the property line. Soil samples will be collected continuously from the base of the concrete pad to 24-inches below grade. Soil samples will be collected using a split spoon or direct push recovery tool. Each 24-inch sample will be divided into four 6-inch intervals and screened for organic vapors using a photoionization

detector (PID) or flame ionization detector (FID). The sample with the highest PID/FID reading, or, if all readings are the same, the sample from 18 to 24-inches below grade will be analyzed for volatile organic compounds (VO+10), base/neutral extractable compounds (BN+15) including aniline and dimethyl aniline, and total petroleum hydrocarbons (TPH).

6.1.2 Methylene Chloride Vessels

Two 100-gallon process vessels observed at the southwest corner of the parking lot during the April 18, 1996 NJDEP site visit were decontaminated in the manufacturing building before they were placed outside. The vessels were used to store wastewater containing methylene chloride and were decontaminated by draining their contents, rinsing the interior with hot, caustic solution, followed by triple rinsing with hot potable water. The vessels were allowed to air dry and placed horizontally to minimize the amount of rainwater that would collect in the vessels. The connection port (approximately 1 inch in diameter) protruding from the top and bottom of the vessels were open, but did not face the ground.

As requested by the NJDEP, one soil boring will be drilled at the former methylene chloride vessel storage location. A soil sample will be collected continuously from the base of the concrete pad to 24-inches below grade. The sample will be collected using a split spoon or direct push recovery tool. The 24-inch sample will be divided into four 6-inch intervals and screened for organic vapors using a PID or FID. If all PID/FID readings are at background levels, no soil samples will be collected. If the PID/FID readings exceed background, the sample with the highest PID/FID reading, or, if all readings are the same, the sample from 18 to 24-inches below grade will be analyzed for methylene chloride.

6.1.3 Underground Fuel Oil Storage Tank

One 10,000-gallon No. 2 fuel oil underground storage tank was removed in 1991 in accordance with a tank closure plan prepared by Tank and Line Compliance Corporation, Lafayette, New Jersey and

approved by NJDEP (Closure Approval #C-91-2139). No soil sampling was conducted and no detectable organic vapors were recorded during and after the excavation and removal. A 6,000-gallon new double wall fiberglass underground storage tank was installed in the same excavation. This tank is still in service. EDER contacted Raphael Rivera, Bureau of Underground Storage Tanks, on November 19, 1997 to determine the status of this case. Mr. Rivera indicated that the NJDEP's database shows the case was closed by the Department on November 23, 1992.

Six soil borings will be drilled around the existing 6,000-gallon underground fuel oil tank. Two soil borings will be drilled along each of the tank side walls and one boring will be drilled along each of the tank end walls. Soil samples will be collected continuously from grade to the water table (which is approximately 6-feet below grade). Soil samples will be collected using a split spoon or direct push recovery tool. Each 24-inch sample will be divided into four 6-inch intervals and screened for organic vapors using a PID or FID. The sample with the highest PID/FID reading, or, if all readings are the same, the sample from the 6-inch interval above the water table will be analyzed for TPH.

6.1.4 Aboveground Hydrochloric Acid Tank

Hydrochloric acid (HCl) was stored in a 6,000-gallon single wall fiberglass aboveground storage tank. The tank was on a concrete pad within concrete block walls to provide secondary containment. There were two releases associated with this tank (Spill Nos. 93-12-13-1607-57 and 94-02-24-1623-01). Approximately 50-gallons of hydrochloric acid were discharged from an aboveground line during routine maintenance on December 13, 1993. On February 24, 1994 approximately 1,950 gallons of hydrochloric acid leaked into the secondary containment unit from a broken valve on the hydrochloric acid tank. On both occasions, the hydrochloric acid was mainly contained within the concrete block secondary containment unit, but a small volume of liquid seeped through a crack in the block wall and onto the asphalt pavement surrounded the containment dike. The asphalt pavement was in good condition (no visual evidence of deterioration) prior to and after the discharge (see Affidavit of Bruce Bright, Site Manager in Appendix C).

Because there was no discharge to the soil below the asphalt pavement, no additional sampling or remediation of this area is proposed.

6.1.5 Off-Site Soil (Lot 35A)

A soil investigation was conducted on the property adjacent (Lot 35A) to the Teva site by Geraghty & Miller (G&M) in 1987. The sampling showed that acetone was detected at estimated concentrations ranging from less than 25 micrograms per kilogram ($\mu\text{g}/\text{kg}$) to 5,900 $\mu\text{g}/\text{kg}$, which is well below the 1,000 mg/kg Unrestricted Use Soil Cleanup Criteria; dimethyl aniline concentrations ranged from less than 40 $\mu\text{g}/\text{kg}$ to 900 $\mu\text{g}/\text{kg}$ which is well below the 10,000 mg/kg total organic contaminant soil cleanup criteria; bis (2-ethylhexyl) phthalate concentrations ranged from less than 40 $\mu\text{g}/\text{kg}$ to 620 $\mu\text{g}/\text{kg}$ which is well below the 49 mg/kg Unrestricted Use Soil Cleanup Criteria; and aniline concentrations were well below the 10,000 mg/kg total organic contaminant soil cleanup criteria with the exception of one sample (GM-OD 20-21') which exceeded the criteria (13,000 mg/kg).

As agreed to in our September 14, 1998 meeting with the NJDEP, no additional soil sampling or remediation will be conducted because the sample was collected from within the saturated zone. Groundwater samples will be collected from existing monitoring wells and analyzed for aniline and dimethyl aniline in accordance with Section 6.2.4.

6.2 Groundwater

A 100-foot long underground steel pipe was installed in 1972 to transfer wastewater from the manufacturing building processing area to an underground wastewater storage tank. The wastewater contained low concentrations of acetone, methylene chloride, n-butyl alcohol, and dimethyl aniline. Teva discovered a leak in the underground pipe in November 1975 and removed the pipe from service. Monitoring wells were installed and groundwater samples were collected and analyzed to determine whether the underground transfer line leak had impacted groundwater quality. The

groundwater sampling showed elevated concentrations of methylene chloride, acetone, and butyl alcohol. The nature and extent of groundwater contamination at the Teva site has been documented in extensive groundwater investigations conducted by Geraghty and Miller (G&M) between 1979 and 1995, supplemented by the groundwater monitoring program initiated by Teva in 1985.

Teva pumped groundwater from three on-site recovery wells between 1975 and 1981 and disposed of the groundwater off-site. The cost of disposing of the recovered groundwater off-site became prohibitive and with NJDEP's approval, Teva undertook an extensive research and development project to develop a process to remove and treat groundwater. The research resulted in the development of a sophisticated biodegradation/biostimulation process which was patented in the U.S.

Teva initiated groundwater monitoring to evaluate the progress and effectiveness of the groundwater biodegradation/biostimulation system. This program consists of sampling 11 wells quarterly and 26 wells annually, and analyzing the samples for methylene chloride, acetone, butyl alcohol, BOD, COD, TOC, chloride, and total phosphorous. The groundwater sampling shows that groundwater quality has steadily improved. Groundwater elevation measurements and sampling data show that the zone of influence created by the recovery system maintains hydraulic control of the groundwater contaminant plume. The groundwater sampling data show that the highest concentrations of methylene chloride and acetone are in the southern area of the property and that these concentrations have been reduced significantly from concentrations existing prior to biodegradation/biostimulation system.

6.2.1 Groundwater Contaminant Concentration Fluctuations

The concentration changes are attributable to a significant decrease in groundwater elevations measured in the third quarter of 1995. The third quarter 1995 sampling was conducted during a severe drought where groundwater levels were between 0.27 and 8.98 feet lower than those measured in the fourth quarter 1995. Precipitation data from the Office of the New Jersey State

Climatologist, Rutgers University, show that the total precipitation for the six month period (March through August) was 8.24 inches which was considerably less than precipitation for that same six month period in 1994 (30.14 inches), 1996 (24.67 inches), and 1997 (25.45 inches). Graph I shows the relationship between precipitation and volatile organic compound concentrations in P-32A/32B for the period between 1994 and 1997.

6.2.2 Off-Site Delineation

The quarterly groundwater monitoring program show that groundwater flow is to the north-northwest at the northern section of the site, and to the south-southeast in the central and southern sections of the site and that groundwater discharged to the recharge trench system flows downgradient towards the recovery well system.

As discussed in our September 14, 1998 meeting with the NJDEP, the historical data was reviewed to determine whether there were a sufficient number of monitoring points to demonstrate that the entire plume is being captured. Based on this review it was determined that there is a sufficient number of monitoring points south of the site to demonstrate that recovery wells P-32A/32B and P-30 are capturing the full width of the plume. This determination was based on the groundwater flow and analytical data. Sampling conducted between 1994 and 1998 shows that the highest concentrations of contaminants on the south side of the property are detected in recovery well P-32A/32B. The sampling indicates acetone concentrations in downgradient wells W-1 through W-6 ranged from less than the laboratory MDL to 49.7 $\mu\text{g/l}$ which is well below the 700 Class IIA Groundwater Quality Criteria and an order of magnitude less than concentrations detected in P-32A/32B. The sampling indicates methylene chloride concentrations in downgradient wells W-1 through W-6 were less than the laboratory MDL which is several orders of magnitude less than concentrations detected in P-32A/32B.

The review indicated that additional off-site monitoring wells are required to demonstrate that the entire plume is being captured along the north side of the property. Sampling shows that methylene

chloride and acetone concentrations occasionally exceed the Class IIA-Ground Water Quality Criteria. Two shallow monitoring wells will be installed, one north of Industrial Park and one west of Industrial Park. The wells will be installed in the Township right-of-way. The borings will be drilled using hollow stem augers to an approximate depth of 15 feet below grade or to the top of bedrock, whichever is encountered first. The wells will be constructed of 10-feet of 2-inch diameter, flush joint, machine perforated PVC well screen and 5-feet of PVC riser pipe. The wells will be completed using a flush mount protective casing.

6.2.3 Vertical Delineation

One bedrock monitoring well will be installed to confirm that there has been no vertical migration of contaminants. The well will be installed midway between P-32A/32B and P-30. The boring will be installed using air rotary drilling equipment to a depth of approximately 65 feet below grade. The upper zone will be casing using steel conductor pipe extending from grade to competent bedrock (approximately 30 feet below grade). The well will be constructed of 10-feet of 2-inch diameter, flush joint, machine perforated PVC well screen and 55-feet of PVC riser pipe. The well will be completed using a steel protective casing.

6.2.4 Groundwater Monitoring

Groundwater samples will be collected quarterly from existing wells MW-6, MW-17, MW-24, MW-25, MW-28, MW-42, W-2, P-13, P-30, and P-32A/32B, and from the proposed shallow and deep monitoring wells. In addition to the quarterly samples, annual sampling will be conducted at MW-1, MW-2, MW-8, MW-31, and the on-site production well. The samples will be analyzed for methylene chloride, acetone, butyl alcohol, aniline, dimethyl aniline, COD, BOD, and TOC.

6.2.5 Monitoring Well Abandonment

Monitoring wells MW-6, MW-9, MW-10, MW-11, and MW-12 are constructed of small diameter

well casings (less than 2 inches) and will be abandoned in accordance with NJDEP regulations. Monitoring wells MW-6 and MW-9 will be replaced by drilling two new borings within 10 feet of the abandoned wells using hollow stem augers to an approximate depth of 15 feet below grade or to the top of bedrock, whichever is encountered first. The wells will be constructed of 10-feet of 2-inch diameter, flush joint, machine perforated PVC well screen and 5-feet of PVC riser pipe. The wells will be completed using a flush mount protective casing.

6.3 Sediment

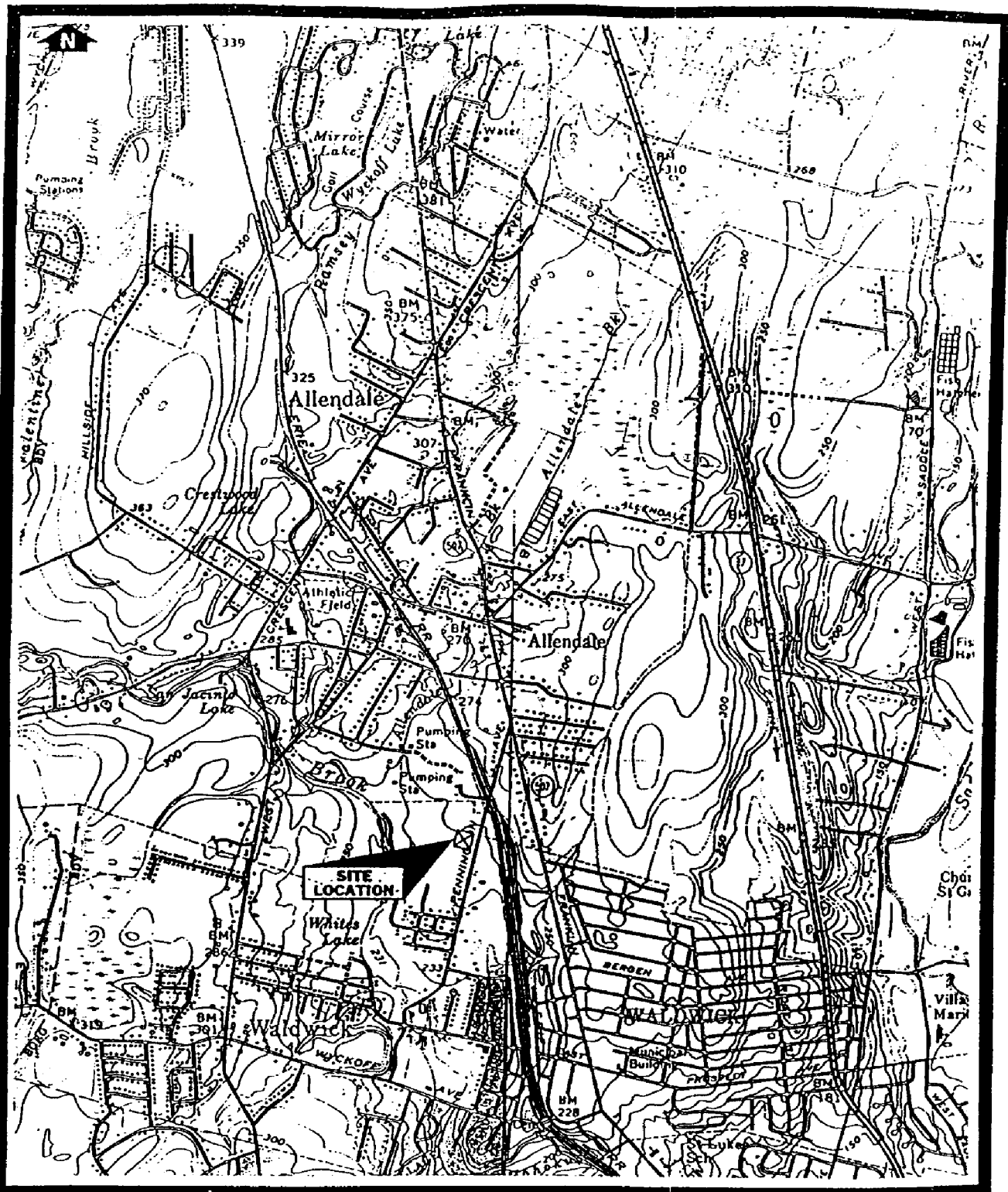
The leak in the underground transfer lines reportedly was discovered in 1975 during a NJDEP investigation requested by the Northwest Bergen Regional Health Commission (NWBHRHC) to determine the causes of grayish-black algae growth on the surface water of Allendale Brook. The analytical results of surface water samples collected from Allendale Brook in 1975 and again in 1991 were well below the Surface Water Standards. Sediment sampling was not conducted.

These data show that surface water quality was not effected by this discharge and it is unlikely that these contaminants would be detected 22 years later because Biocraft removed the source of the discharge (the leaking underground lines) and reduced any potential discharges to surface water by installing the biodegradation/biostimulation system to control downgradient migration of VOCs by extracting and treating groundwater.

Nevertheless, as discussed during our September 14, 1998 meeting with the NJDEP, Teva proposes to collect one sediment sample from the discharge location of the on-site catch basin into Allendale Brook. The sample will be collected using a field decontaminated stainless steel sediment sampler. The sample will be collected from the 6-inch interval below the stream bed and analyzed for aniline and dimethyl aniline.

FIGURES

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FIGURE 1 - SITE LOCATION MAP

Biocraft Laboratories, Inc., Waldwick, New Jersey

Scale 1:24,000

Contour Interval 10 Feet

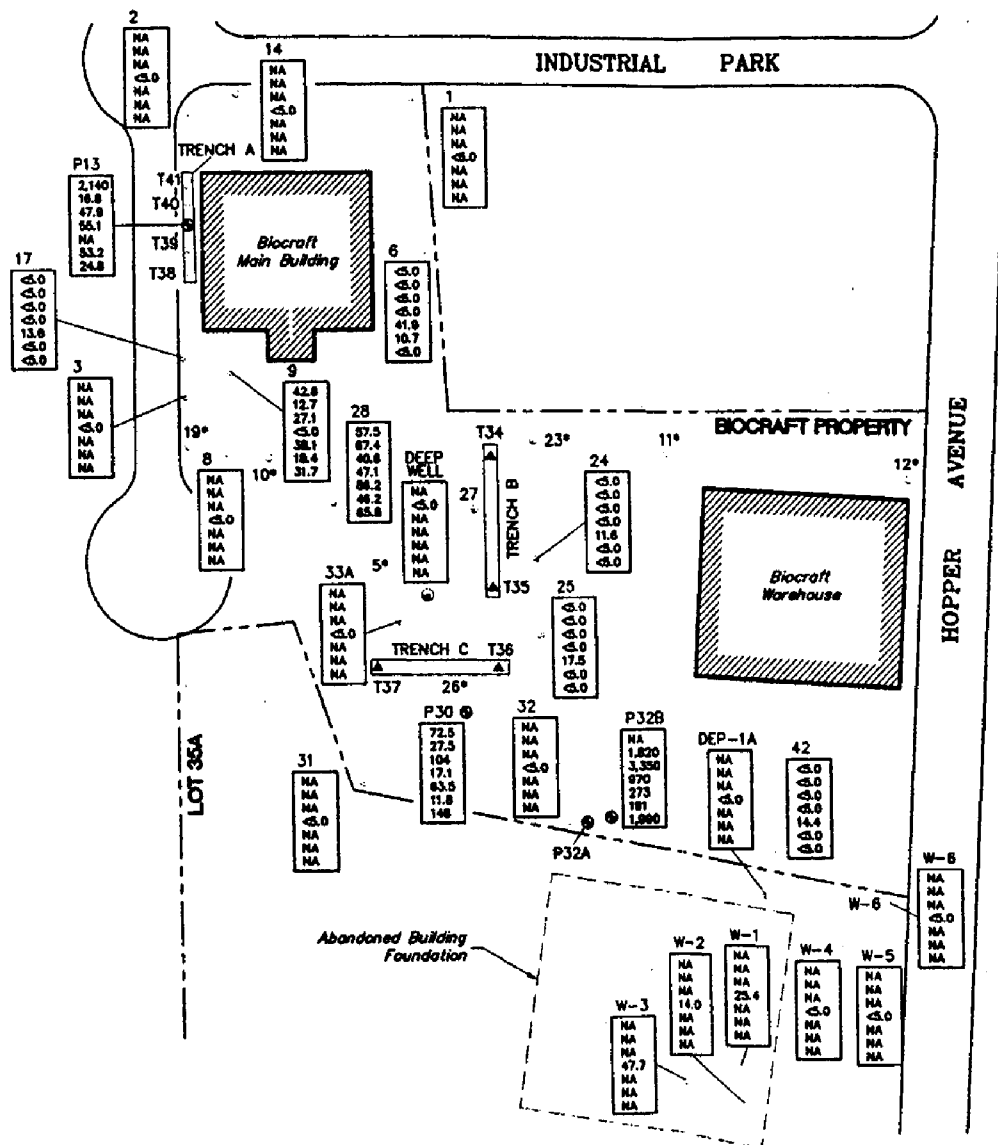
Longitude 74.07.30

Latitude 41.00.00

USGS, 7.5 Minute Quadrangle Map, Ramsey, NY-NJ, 1955

USGS, 7.5 Minute Quadrangle Map, Park Ridge, NY-NJ, 1955

854820249



LEGEND

- (µg/l) Acetone Concentration in µg/l (NA = Not Analyzed)
- Monitoring Well Location
- ⊙ Recovery Well Location
- ⊗ Production Well Location
- ▲ Trench Piezometer
- No Data

Monitoring Date

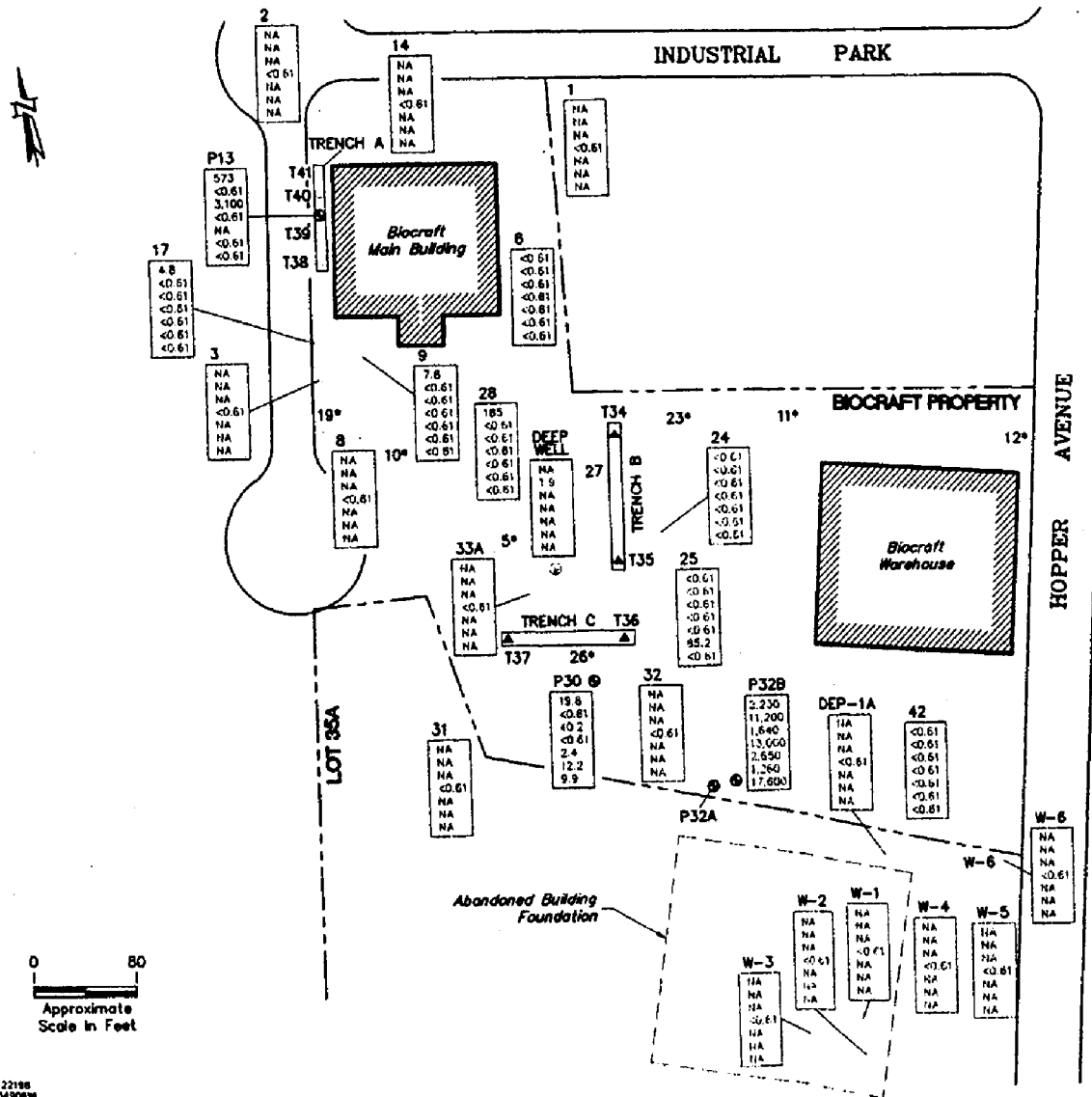
FEBRUARY	1987
MAY	1987
AUGUST	1987
DECEMBER	1987
MARCH	1988
JUNE	1988
SEPTEMBER	1988

**ACETONE
CONCENTRATIONS IN
GROUNDWATER**
BIOCRAFT LABORATORIES, INC.
WALDWICK, NEW JERSEY

854820250



122188
34908W



LEGEND

(31.7) Methylene Chloride Concentration in µg/l
(NA = Not Analyzed)

- Monitoring Well Location
- ⊙ Recovery Well Location
- ⊙ Production Well Location
- ▲ Trench Piezometer
- No Data

Monitoring Date

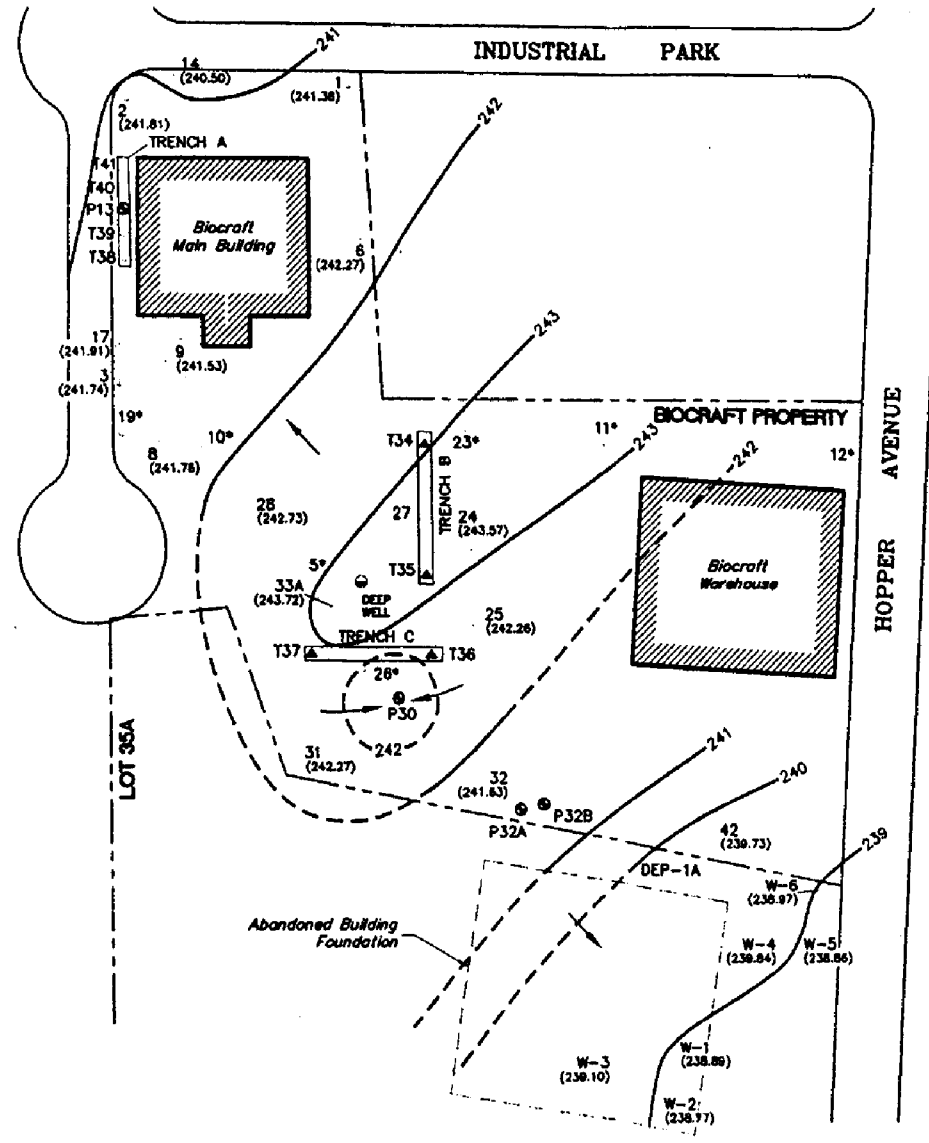
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AUGUST	1997
DECEMBER	1997
MARCH	1998
JUNE	1998
SEPTEMBER	1998

**METHYLENE CHLORIDE
CONCENTRATIONS IN
GROUNDWATER**

BIOCRAFT LABORATORIES, INC.
WALDWICK, NEW JERSEY

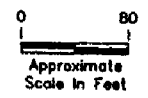
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Emmett Fleming



LEGEND

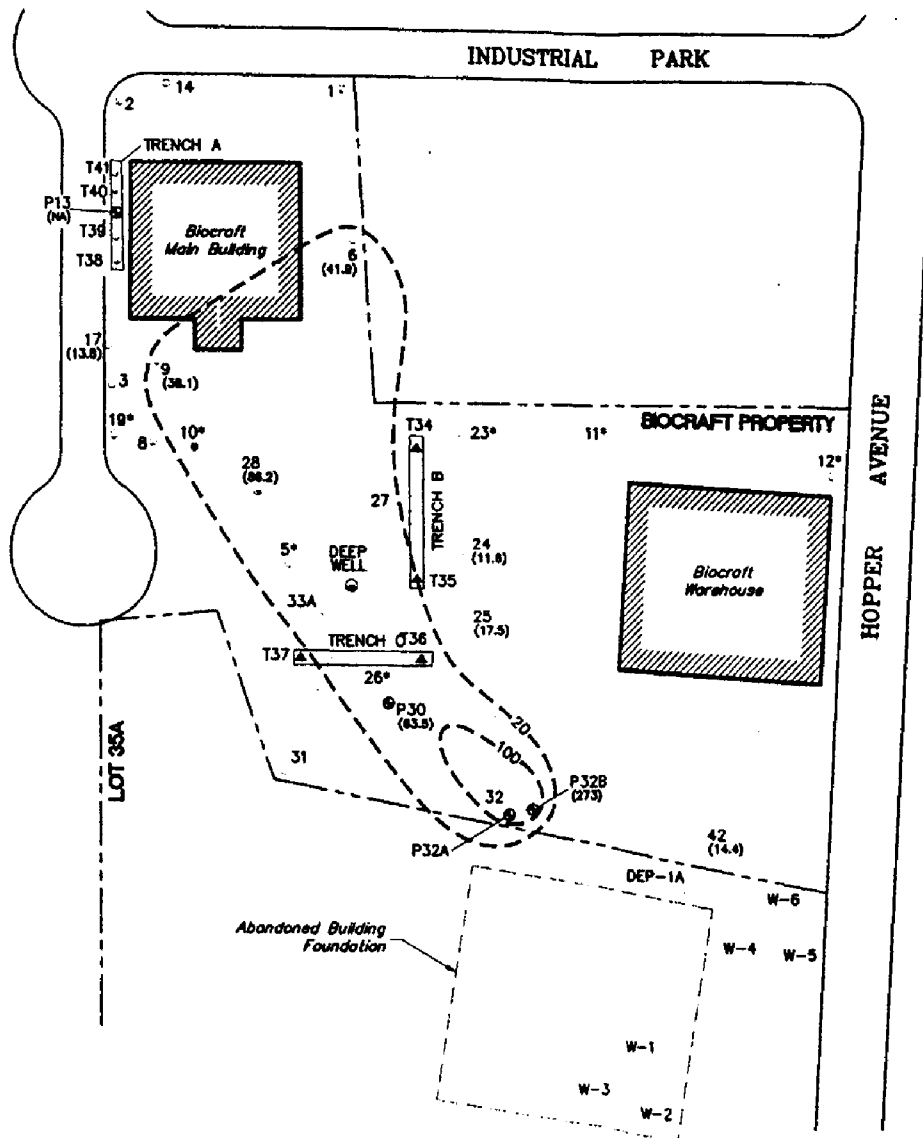
- Groundwater Isocountour Line (Dashed Where Inferred)
- (238.73) Groundwater Elevation
- Groundwater Flow Direction
- Monitoring Well Location
- ⊙ Recovery Well Location
- ⊙ Production Well Location
- ▲ Trench Piezometer
- No Data



122398
34908Wk

**GROUNDWATER FLOW
MAP (MARCH 1998)**
BIOCRAFT LABORATORIES, INC.
WALDWICK, NEW JERSEY

854820252



LEGEND

- Acetone Isoconcentration Line (Dashed Where Inferred)
- (Δ , \circ) Acetone Concentration in $\mu\text{g}/\text{l}$ (NA = Not Analyzed)
- Monitoring Well Location
- ⊙ Recovery Well Location
- ⊖ Production Well Location
- ▲ Trench Piezometer
- No Data

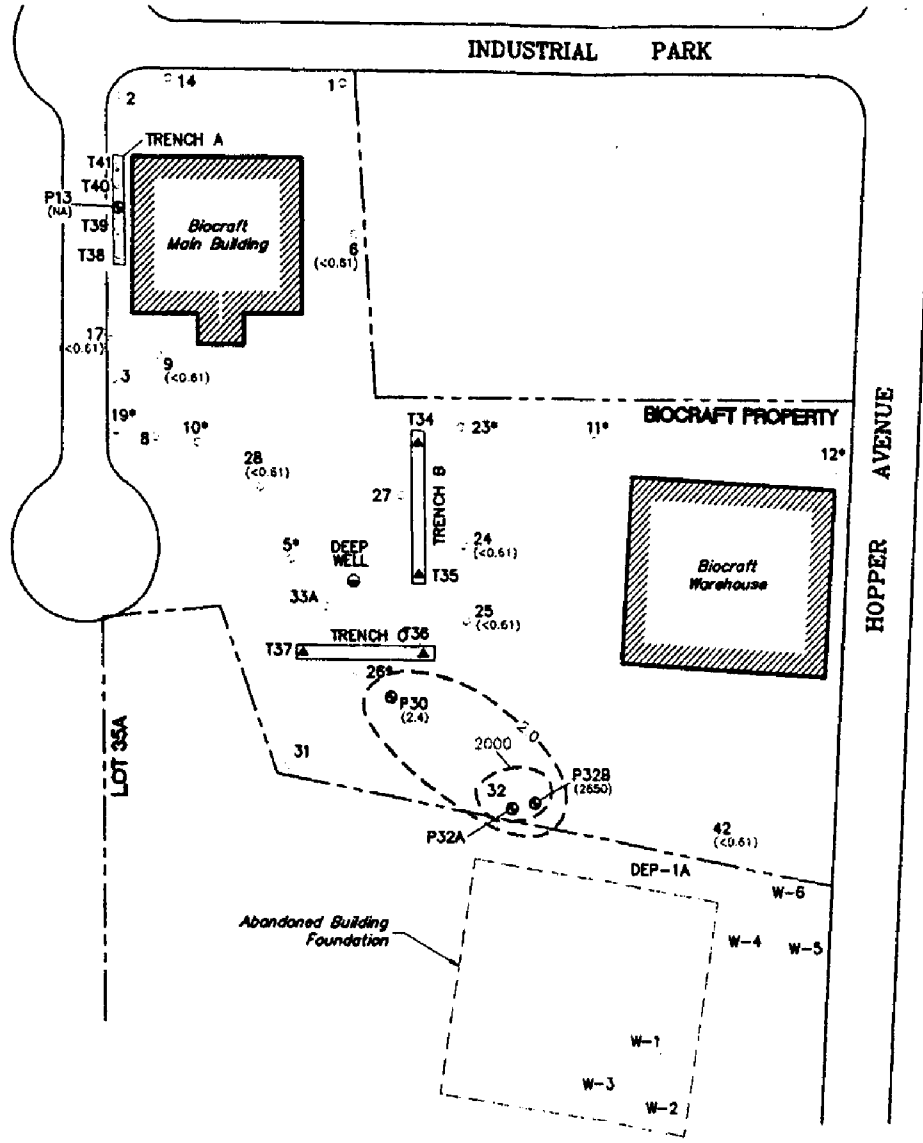


132198
3490698

**ACETONE ISOCONCENTRATION
MAP (MARCH 1998)**

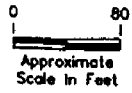
BIOCRAFT LABORATORIES, INC.
WALDWICK, NEW JERSEY

854820253



LEGEND

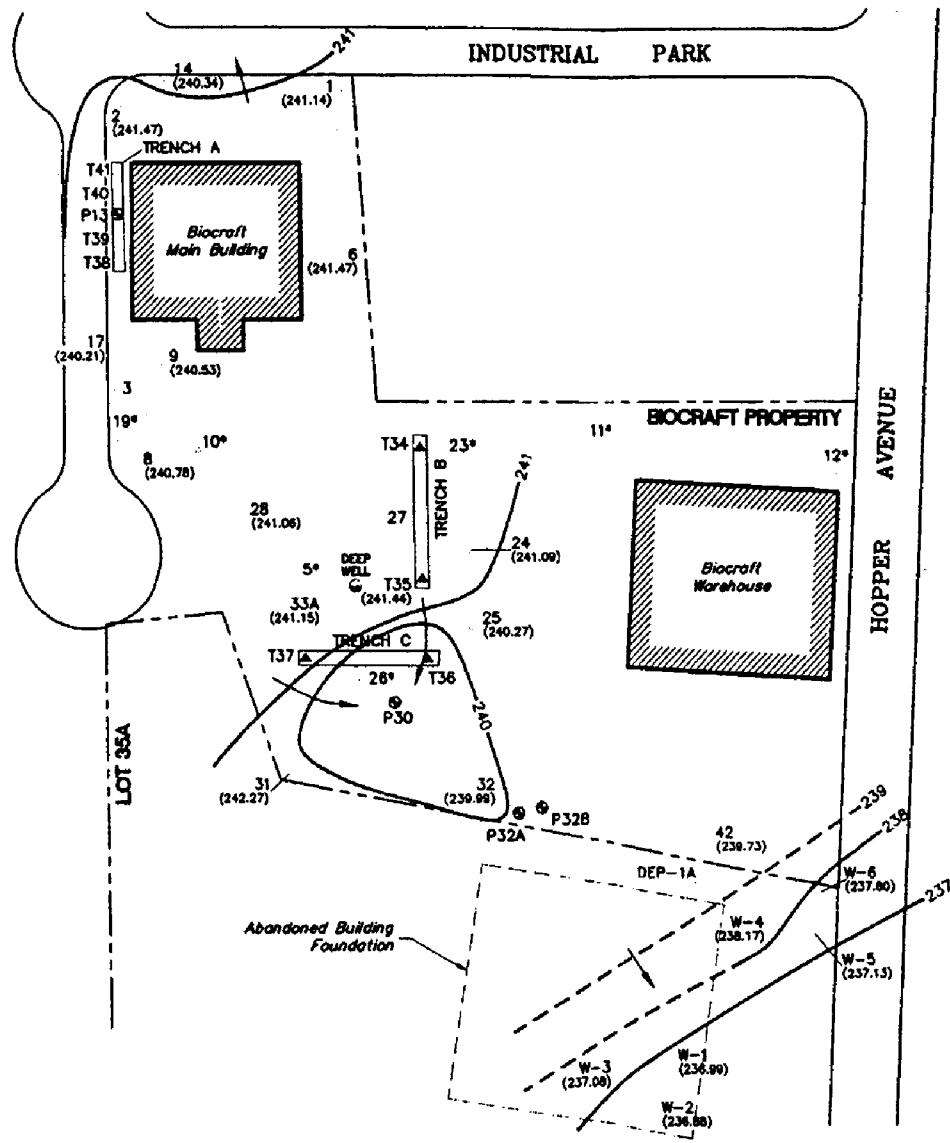
- Methylene Chloride Isoconcentration Line (Dashed Where Inferred)
- (<0.61) Methylene Chloride Concentration in $\mu\text{g/l}$ (NA = Not Analyzed)
- Monitoring Well Location
- Recovery Well Location
- ⊙ Production Well Location
- ▲ Trench Piezometer
- No Data



122189
3/98aw

**METHYLENE CHLORIDE
ISOCONCENTRATION
MAP (MARCH 1998)**
BIOCRAFT LABORATORIES, INC.
WALDWICK, NEW JERSEY

854820254



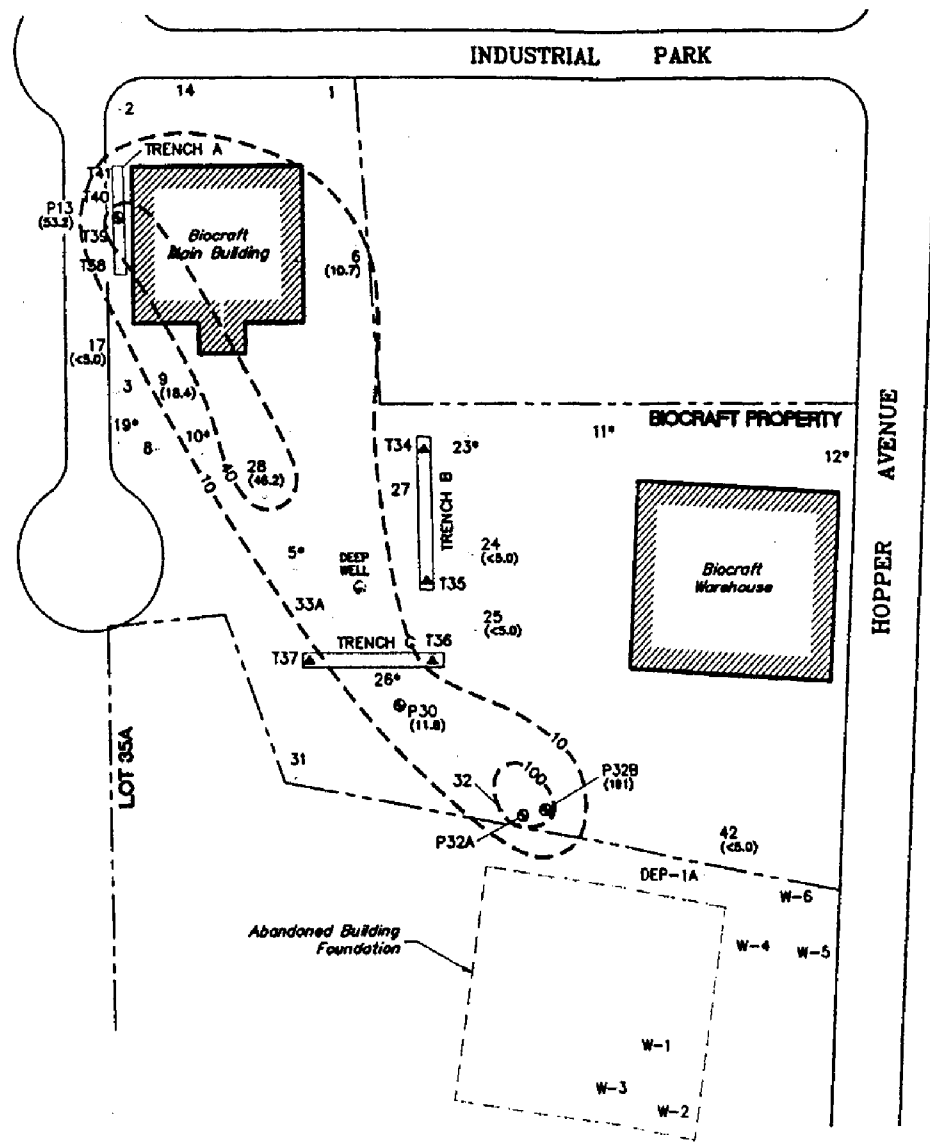
- LEGEND**
- Groundwater Isocontour Line (Dashed Where Inferred)
 - (238.73) Groundwater Elevation
 - ← Groundwater Flow Direction
 - Monitoring Well Location
 - ⊙ Recovery Well Location
 - △ Production Well Location
 - * No Data



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34908M

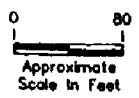
**GROUNDWATER FLOW
MAP (JUNE 1998)**
BIOCRAFT LABORATORIES, INC.
WALDWICK, NEW JERSEY

854820255



LEGEND

- Acetone Isoconcentration Line (Dashed Where Inferred)
- (*c.s.*) Acetone Concentration in µg/l (NA = Not Analyzed)
- Monitoring Well Location
- ⊕ Recovery Well Location
- ⊙ Production Well Location
- ▲ Trench Piezometer
- No Data

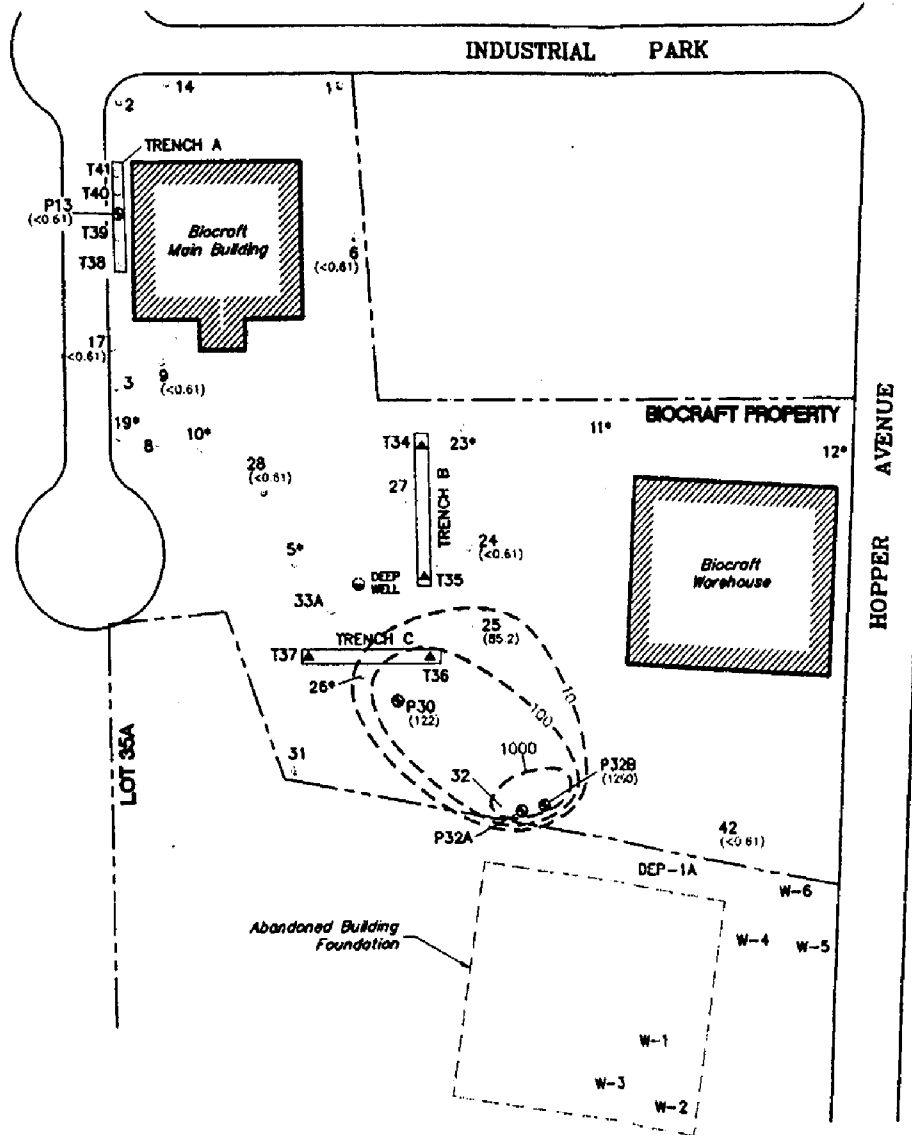


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**ACETONE ISOCONCENTRATION
MAP (JUNE 1998)**
BIOCRAFT LABORATORIES, INC.
WALDWICK, NEW JERSEY

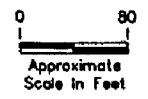
854820256

INDUSTRIAL PARK



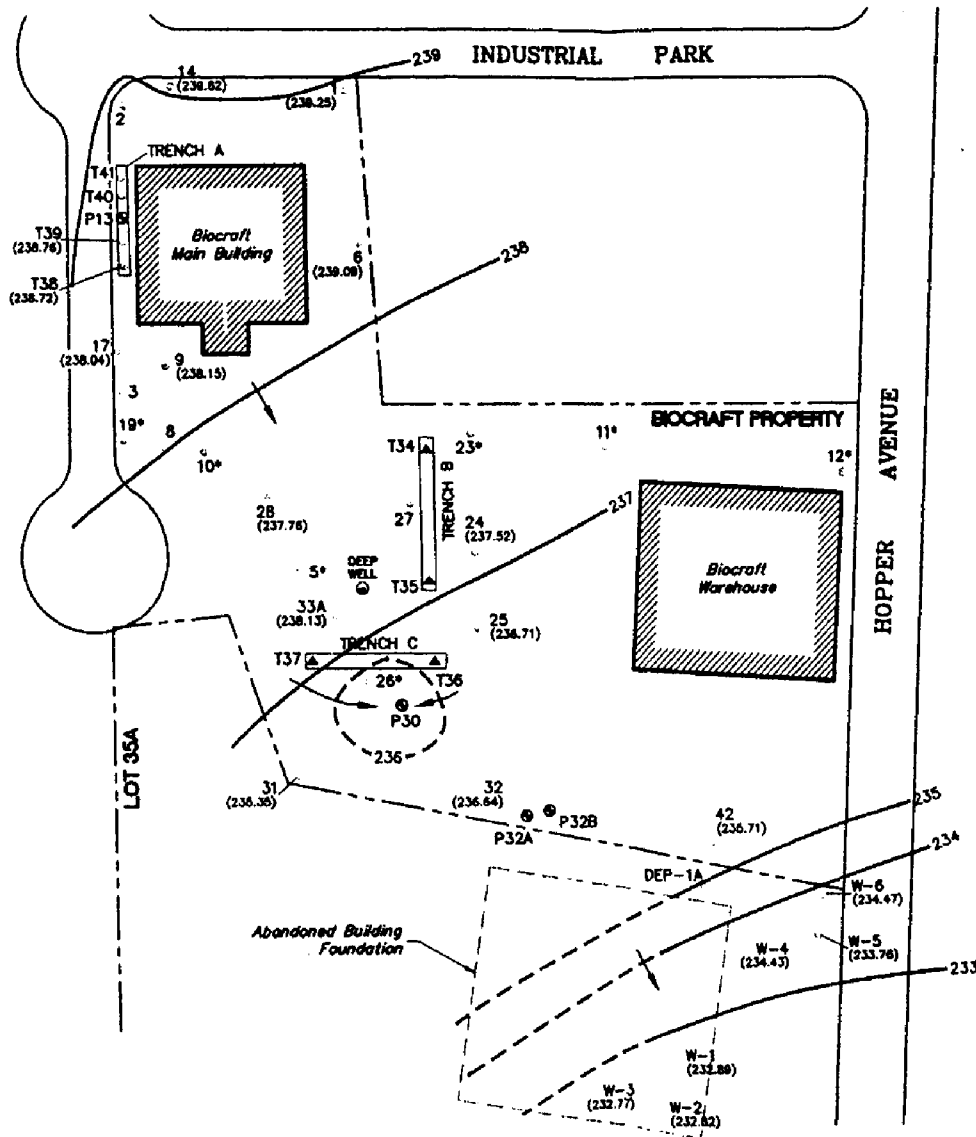
LEGEND

- Methylene Chloride Isoconcentration Line (Dashed Where Inferred)
- (<0.61) Methylene Chloride Concentration in $\mu\text{g/l}$ (NA = Not Analyzed)
- Monitoring Well Location
- ⊙ Recovery Well Location
- ⊕ Production Well Location
- ▲ Trench Piezometer
- No Data



122398
34906WC

**METHYLENE CHLORIDE
ISOCONCENTRATION
MAP (JUNE 1998)**
 BIOCRAFT LABORATORIES, INC.
 WARDENYK NEW JERSEY
 854820257



LEGEND

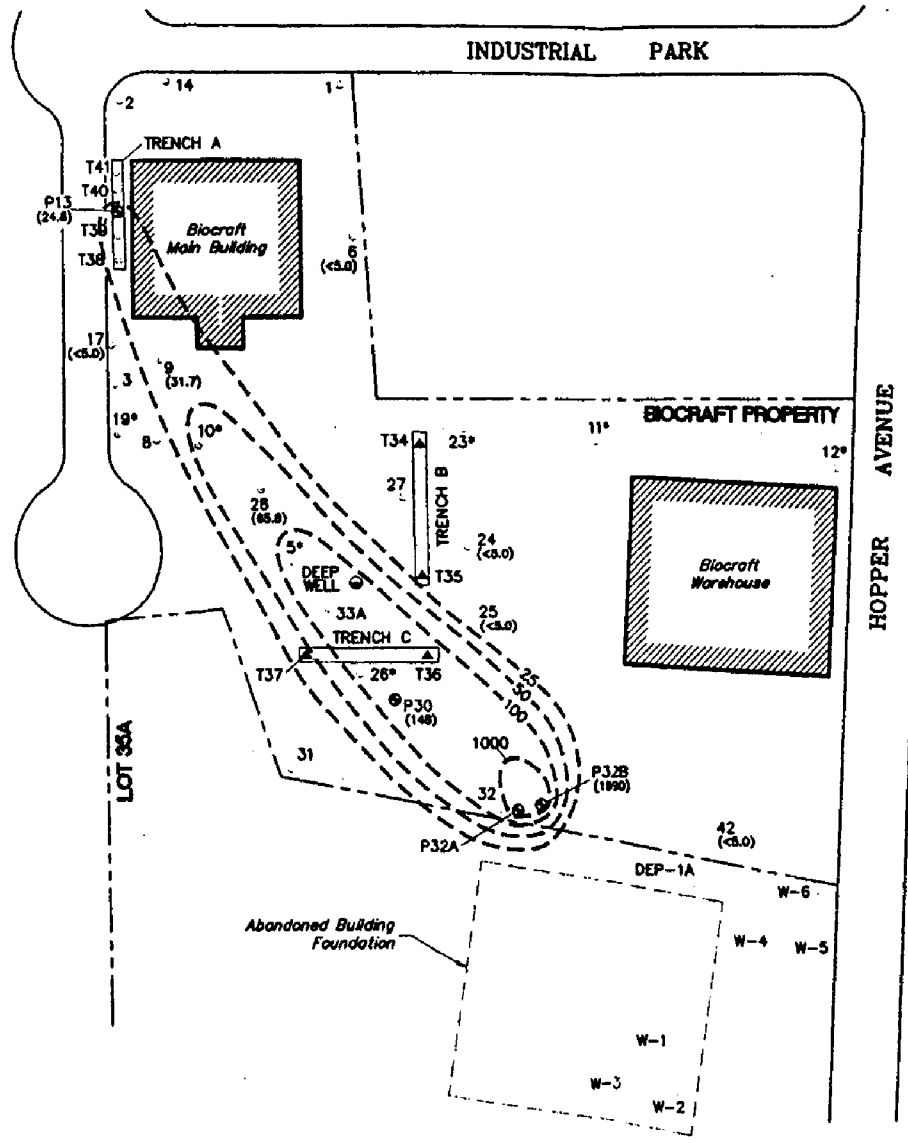
- Groundwater Isocountour Line (Dashed Where Inferred)
- (235.71) Groundwater Elevation
- Groundwater Flow Direction
- Monitoring Well Location
- ⊙ Recovery Well Location
- ⊙ Production Well Location
- ▲ Trench Piezometer
- No Data



122,396
34902.MXD

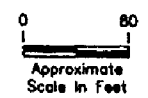
**GROUNDWATER FLOW
MAP (SEPTEMBER 1998)**
BIOCRAFT LABORATORIES, INC.
WALDICK, NEW JERSEY

854820258



LEGEND

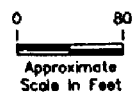
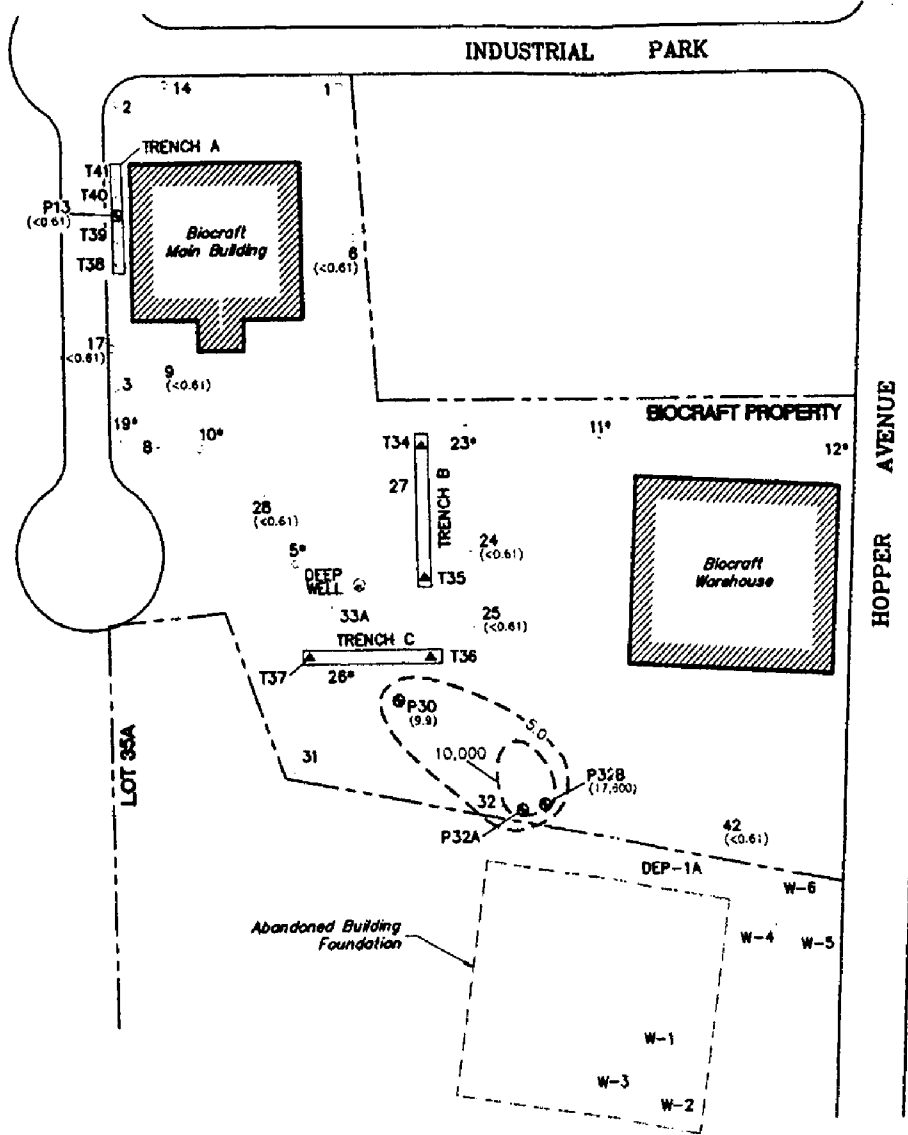
- Acetone Isoconcentration Line (Dashed Where Inferred)
- (<0.0) Acetone Concentration in µg/l (NA = Not Analyzed)
- Monitoring Well Location
- ⊙ Recovery Well Location
- ⊖ Production Well Location
- ▲ Trench Piezometer
- No Data



122198
34926W

**ACETONE ISOCONCENTRATION
MAP (SEPTEMBER 1998)**
BIOCRAFT LABORATORIES, INC.
WALDWICK, NEW JERSEY

854820259



122198
34808-WH

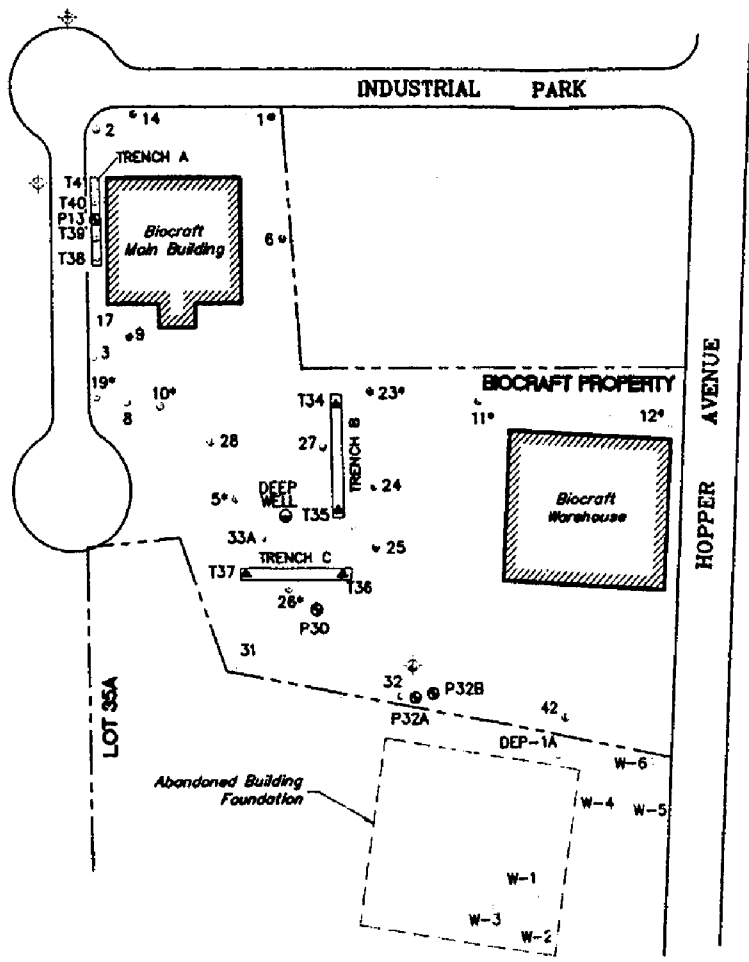
LEGEND

- Methylene Chloride Isoconcentration Line (Dashed Where Inferred)
- (<0.61) Methylene Chloride Concentration in µg/l (NA = Not Analyzed)
- Monitoring Well Location
- Recovery Well Location
- ⊙ Production Well Location
- ▲ Trench Piezometer
- No Data

**METHYLENE CHLORIDE
ISOCONCENTRATION
MAP (SEPTEMBER 1998)**

BIOCRAFT LABORATORIES, INC.
WALDWICK, NEW JERSEY

854820260



LEGEND

- ⊕ Proposed Deep Monitoring Well Location
- ⊕ Proposed Shallow Monitoring Well Location
- Monitoring Well Location
- ⊕ Recovery Well Location
- ⊕ Production Well Location
- ▲ Trench Piezometer
- No Data

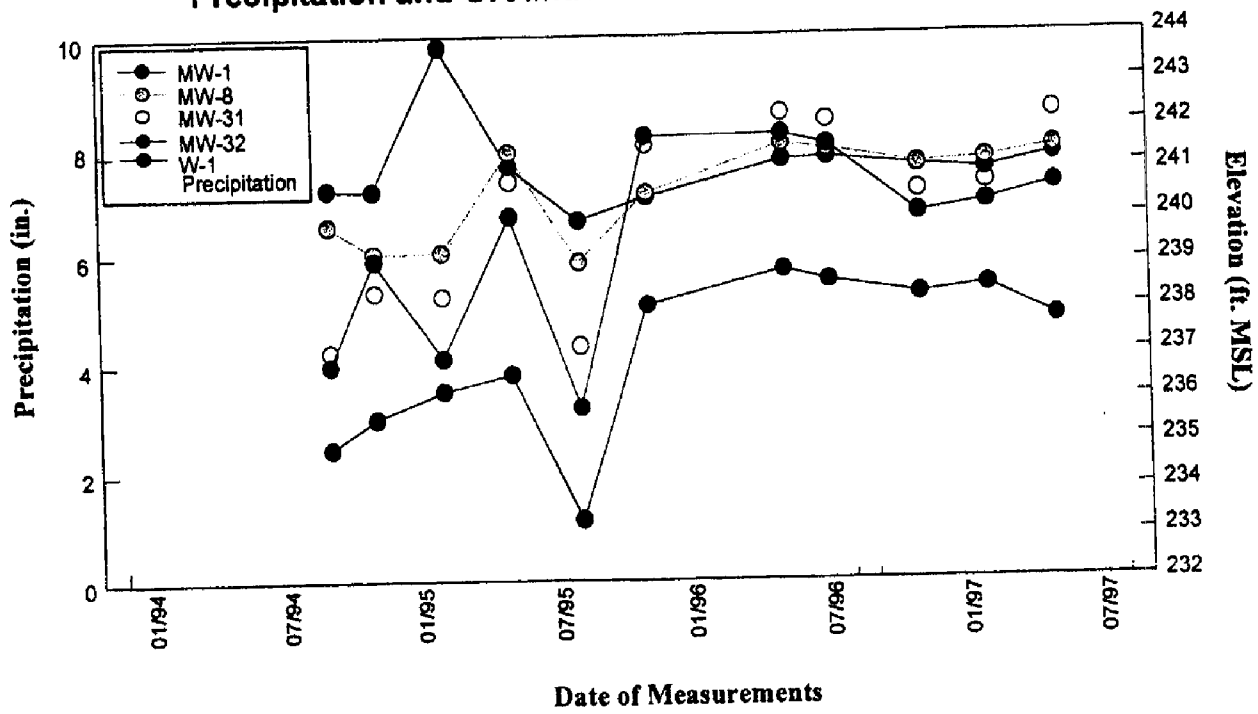
PROPOSED MONITORING WELL LOCATIONS

BIOCRAFT LABORATORIES, INC.
WALDWICK, NEW JERSEY

854820261

122188
34005NA

Precipitation and Groundwater Elevation versus Time



854820262

TABLES

854820263

BIOCRAFT LABORATORIES, INC.
WALDWICK, NEW JERSEY

TABLE 1

GROUNDWATER SAMPLING RESULTS SUMMARY - FEBRUARY 1997

Sample Number	MW-6	MW-9	MW-17	MW-24	MW-25	MW-28	MW-42
Sample Matrix	Water	Water	Water	Water	Water	Water	Water
Date Collected	2/19/97	2/19/97	2/19/97	2/19/97	2/19/97	2/19/97	2/19/97
<i>Volatile Organic Compounds (ug/L)</i>							
Acetone	< 5.0	42.6	< 5.0	< 5.0	< 5.0	57.5	< 5.0
Methylene Chloride	< 0.61	7.8	4.8	< 0.61	< 0.61	185.0	< 0.61
Butyl Alcohol	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4
BOD (mg/L)	< 2.0	10.9	< 2.0	< 2.0	< 2.0	12.1	< 2.0
COD (mg/L)	< 20	21.6	< 20	< 20	< 20	39.4	< 20
Chloride (mg/L)	183.0	153.0	867	17.5	40.0	192	20
Phosphorus, Total (mg/L)	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.14	< 0.10
TOC (mg/L)	2.3	6.9	3.7	3.9	4.7	12.7	1.7

NOTES:

< - Less Than

J - Result is less than the quantitation limit or is an estimated result due to exceedance of holding time.

mg/L - Milligrams per Liter

ug/L - Micrograms per Liter

854820264

TABLE 1 Continued...

Sample Number	PW-13	PW-30	MW-P32A	BIO-EFF	MW-D
Sample Matrix	Water	Water	Water	Water	Water
Date Collected	02/19/97	02/19/97	02/19/97	02/19/97	02/19/97
<i>Volatile Organic Compounds (ug/L)</i>					Duplicate
Acetone	2140	72.5	241	299.0	296
Methylene Chloride	573	19.8	2230	401.0	441
Butyl Alcohol	< 14	< 1.4	< 14	< 2.8	< 2.8
BOD (mg/L)	54.7	5.5	9.9	10.2	10.4
COD (mg/L)	45.7	41.9	31.8	29.2	26.7
Chloride (mg/L)	444	140	127	192	185.0
Phosphorus, Total (mg/L)	4.4	6.8	2.3	10.1	15.7
TOC (mg/L)	14.3	10.9	10.0	9.3	9.5

NOTES:

< - Less Than

J - Result is less than the quantitation limit or is an estimated result due to exceedance of holding time.

mg/L - Milligrams per Liter

ug/L - Micrograms per Liter

B - Compound was also detected in method blank.

U - Compound was not detected.

854820265

BIOCRAFT LABORATORIES, INC.
WALDWICK, NEW JERSEY

TABLE 2

GROUNDWATER SAMPLING RESULTS SUMMARY - MAY 1997

Sample Number	MW-6	MW-9	MW-17	MW-24	MW-25	MW-28	MW-42
Sample Matrix	Water	Water	Water	Water	Water	Water	Water
Date Collected	05/08/97	05/08/97	05/08/97	05/08/97	05/08/97	05/08/97	05/08/97
<i>Volatile Organic Compounds (ug/L)</i>							
Acetone	< 5.0	12.7	< 5.0	< 5.0	< 5.0	67.4	< 5.0
Methylene Chloride	< 0.61	< 0.61	< 0.61	< 0.61	< 0.61	< 0.61	< 0.61
Butyl Alcohol	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4
BOD (mg/L)	< 2.0	5.4	< 2.0	< 2.0	< 2.0	9.6	< 2.0
COD (mg/L)	< 20	41.9	21.6	< 20	21.6	43.2	< 20
Chloride (mg/L)	154.0	111.0	187	199	1040	187	16.5
Phosphorus, Total (mg/L)	< 0.10	0.12	< 0.10	< 0.10	0.27	0.47	< 0.10
TOC (mg/L)	2.8	4.6	7.0	5.8	4.6	11.9	1.8

NOTES:

< - Less Than

J - Result is less than the quantitation limit or is an estimated result due to exceedance of holding time.

mg/L - Milligrams per Liter

ug/L - Micrograms per Liter

854820266

TABLE 2 Continued...

Sample Number	MW-D	PROD	PW-13	PW-30	MW-P32A	BIO-EFF
Sample Matrix	Water	Water	Water	Water	Water	Water
Date Collected	05/08/97	05/08/97	05/08/97	05/08/97	05/08/97	05/08/97
<i>Volatile Organic Compounds (ug/L)</i>	Duplicate	Deep Well				
Acetone	27.3	< 5.0	16.8	27.5	1820	7.0
Methylene Chloride	< 0.61	1.9	< 0.61	< 0.61	11200	150.0
Butyl Alcohol	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4
BOD (mg/L)	< 2.0	< 2.0	8.3	< 2.9	15.3	< 2.0
COD (mg/L)	24.1	< 20	40.6	24.1	49.5	30.5
Chloride (mg/L)	230	82.5	575	230	145	200
Phosphorus, Total (mg/L)	19.9	< 0.10	22.4	19.2	15.3	0.45
TOC (mg/L)	7.2	< 1.0	9.6	7.1	15.3	6.1

NOTES:

< - Less Than

J - Result is less than the quantitation limit or is an estimated result due to exceedance of holding time.

mg/L - Milligrams per Liter

ug/L - Micrograms per Liter

854820267

BIOCRAFT LABORATORIES, INC.
WALDWICK, NEW JERSEY

TABLE 3

GROUNDWATER SAMPLING RESULTS SUMMARY - AUGUST 1997

Sample Number	MW-6	MW-9	MW-17	MW-24	MW-25	MW-28	MW-42
Sample Matrix	Water	Water	Water	Water	Water	Water	Water
Date Collected	08/28/97	08/29/97	08/29/97	08/29/97	08/29/97	08/29/97	08/29/97
<i>Volatile Organic Compounds (ug/L)</i>							
Acetone	< 5.0	27.1	< 5.0	< 5.0	< 5.0	40.6	< 5.0
Methylene Chloride	< 0.61	< 0.61	< 0.61	< 0.61	< 0.61	< 0.61	< 0.61
Butyl Alcohol	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4
BOD (mg/L)	4.0	11.2	< 2.8	< 2.0	< 2.8	19.0	< 2.0
COD (mg/L)	< 20	37.2	24.8	26.0	42.2	37.2	< 20
Chloride (mg/L)	161.0	154.0	148	41.0	400	199	52.5
Phosphorus, Total (mg/L)	< 0.10	0.20	0.12	< 0.10	0.95	0.76	< 0.10
TOC (mg/L)	3.0	8.0	8.4	8.8	10.7	11.3	3.3

NOTES:

< - Less Than

J - Result is less than the quantitation limit or is an estimated result due to exceedance of holding time.

mg/L - Milligrams per Liter

ug/L - Micrograms per Liter

854820268

TABLE 3 Continued...

Sample Number	MW-D	PW-13	PW-30	MW-P32A	BIO-EFF
Sample Matrix	Water	Water	Water	Water	Water
Date Collected	08/29/97	08/29/97	08/29/97	08/29/97	08/29/97
<i>Volatile Organic Compounds (ug/L)</i>	Duplicate				
Acetone	< 5.0	479.0	104.0	3,350.0	76.4
Methylene Chloride	< 0.61	3,100	40.2	16,400	69.2
Butyl Alcohol	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4
BOD (mg/L)	< 2.0	5.5	6.2	42.2	17.3
COD (mg/L)	45.9	27.5	29.8	86.8	28.5
Chloride (mg/L)	285.0	169.0	315.0	250.0	255.0
Phosphorus, Total (mg/L)	0.76	0.36	1.5	1.8	1.0
TOC (mg/L)	9.6	6.4	8.6	24.7	7.5

NOTES:

< - Less Than

J - Result is less than the quantitation limit or is an estimated result due to exceedance of holding time.

mg/L - Milligrams per Liter

ug/L - Micrograms per Liter

854820269

BIOCRAFT LABORATORIES, INC.
WALDWICK, NEW JERSEY

TABLE 4

GROUNDWATER SAMPLING RESULTS SUMMARY - DECEMBER 1997

Sample Number	MW-1	MW-2	MW-3	MW-6	MW-8	MW-9	MW-14	MW-17	MW-24
Sample Matrix	Water	Water	Water	Water	Water	Water	Water	Water	Water
Date Collected	12/18/97	12/18/97	12/18/97	12/17/97	12/18/97	12/17/97	12/18/97	12/18/97	12/17/97
<i>Volatile Organic Compounds (ug/L)</i>									
Acetone	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Methylene Chloride	< 0.61	< 0.61	< 0.61	< 0.61	< 0.61	< 0.61	< 0.61	< 0.61	< 0.61
Butyl Alcohol	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4
Aniline	< 0.78	< 0.78	< 0.78	< 0.78	< 0.78	< 0.78	< 0.78	< 0.78	< 0.78
N,N-Dimethyl Aniline	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
BOD (mg/L)	< 2.0	< 2.0	8.1	2.2	5.7	8.8	< 2.0	7.6	< 2.0
COD (mg/L)	< 20	< 20	< 20	< 20	63.2	< 20	< 20	27.1	161
Chloride (mg/L)	298	190.0	150.0	180.0	194.0	118.0	51.7	158	27.5
Phosphorus, Total (mg/L)	< 0.10	0.14	5.0	< 0.10	0.26	0.19	< 0.10	0.45	19.5
TOC (mg/L)	8.9	7.0	18.6	3.4	20.8	7.6	8.2	11.1	7.4

NOTES:

< - Less Than

J - Result is less than the quantitation limit or is an estimated result due to exceedance of holding time.

mg/L - Milligrams per Liter

ug/L - Micrograms per Liter

854820270

TABLE 4 Continued...

Sample Number	MW-25	MW-28	MW-31	MW-32	MW-33A	MW-42	MW-D	BIO-DEP-1A	W-1
Sample Matrix	Water	Water	Water	Water	Water	Water	Water	Water	Water
Date Collected	12/17/97	12/17/97	12/18/97	12/18/97	12/18/97	12/17/97	12/18/97	12/18/97	12/19/97
<i>Volatile Organic Compounds (ug/L)</i>							Duplicate		
Acetone	< 5.0	47.1	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	25.4
Methylene Chloride	< 0.61	< 0.61	< 0.61	< 0.61	< 0.61	< 0.61	< 0.61	< 0.61	< 0.61
Butyl Alcohol	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4
Aniline	< 0.78	< 0.78	< 0.78	< 0.78	< 0.78	< 0.78	< 0.78	< 0.78	1.0
N,N-Dimethyl Aniline	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	4.1 J
BOD (mg/L)	< 2.0	23.2	< 2.0	3.2	< 2.0	< 2.0	3.2	< 2.0	28.4
COD (mg/L)	20.8	85.7	29.7	148.0	20.6	< 20	128.0	< 20	69.3
Chloride (mg/L)	48	148	63.6	308	217	60.5	306.0	40.9	80.8
Phosphorus, Total (mg/L)	0.76	14.2	0.14	9.9	8.6	< 0.10	13.9	< 0.10	14.0
TOC (mg/L)	7.2	19.4	63.9	77.3	13.9	10.5	97.5	14.6	51.7

NOTES:

< - Less Than

J - Result is less than the quantitation limit or is an estimated result due to exceedance of holding time.

mg/L - Milligrams per Liter

ug/L - Micrograms per Liter

854820271

TABLE 4 Continued...

Sample Number	W-2	W-3	W-4	W-5	W-6	PW-13	PW-30	MW-P32A	BIO-EFF
Sample Matrix	Water	Water	Water	Water	Water	Water	Water	Water	Water
Date Collected	12/19/97	12/19/97	12/19/97	12/19/97	12/19/97	12/19/97	12/19/97	12/19/97	12/19/97
<i>Volatile Organic Compounds (ug/L)</i>									
Acetone	14.0	49.7	< 5.0	< 5.0	< 5.0	55.1	17.1	970	171.0
Methylene Chloride	< 0.61	< 0.61	< 0.61	< 0.61	< 0.61	< 0.61	< 0.61	13,000	141.0
Butyl Alcohol	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	201.0	26.4	< 70	< 1.4
Aniline	< 0.78	< 0.78	< 0.78	< 0.78	< 0.78	< 0.78	27.3	441.0	< 0.78
N,N-Dimethyl Aniline	2.7 J	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	37.0	1.1 J
BOD (mg/L)	27.7	18.1	6.8	4.5	< 2.9	7.4	< 2.9	24.9	4.0
COD (mg/L)	152.0	63.7	49.7	28.8	< 20	20.9	< 20	120.0	< 20
Chloride (mg/L)	43.4	33.5	45.8	57.7	80.3	350.0	283.0	241.0	286.0
Phosphorus, Total (mg/L)	13.2	11.6	0.34	14.1	0.42	1.1	0.73	25.3	7.3
TOC (mg/L)	141.0	64.6	10.9	7.7	8.8	16.3	9.5	32.0	7.2

NOTES:

< - Less Than

J - Result is less than the quantitation limit or is an estimated result due to exceedance of holding time.

mg/L - Milligrams per Liter

ug/L - Micrograms per Liter

854820272

BIOCRAFT LABORATORIES, INC.
WALDWICK, NEW JERSEY

TABLE 5

GROUNDWATER SAMPLING RESULTS SUMMARY - MARCH 1998

Sample Number	MW-6	MW-9	MW-17	MW-24	MW-25	MW-28	MW-D
Sample Matrix	Water	Water	Water	Water	Water	Water	Water
Date Collected	03/26/98	03/26/98	03/26/98	03/26/98	03/26/98	03/26/98	03/26/98
<i>Volatile Organic Compounds (ug/L)</i>							Duplicate
Acetone	41.9	38.1	13.8	11.6	17.5	86.2	138.0
Methylene Chloride	< 0.61	< 0.61	< 0.61	< 0.61	< 0.61	< 0.61	< 0.61
Butyl Alcohol	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4
BOD (mg/L)	< 2.8	5.3	3.8	< 2.0	< 2.0	18.0	20.0
COD (mg/L)	21.1	< 20	52.8	143	29	73.9	68.6
Chloride (mg/L)	335.0	137.0	114.0	59.7	15.1	46.6	47.6
Phosphorus, Total (mg/L)	< 0.10	0.19	0.4	1.7	0.62	0.55	0.54
TOC (mg/L)	11.8	6.7	8.6	28.0	10.7	13.6	13.3

NOTES:

< - Less Than

J - Result is less than the quantitation limit or is an estimated result due to exceedance of holding time.

mg/L - Milligrams per Liter

ug/L - Micrograms per Liter

854820273

TABLE 5 Continued. . .

Sample Number	MW-42	P-30	P-32A/B	BIO-EFF
Sample Matrix	Water	Water	Water	Water
Date Collected	03/27/98	03/27/98	03/27/98	03/27/98
<i>Volatile Organic Compounds (ug/L)</i>				
Acetone	14.4	63.5	273.0	32.7
Methylene Chloride	< 0.61	2.4	2,650.0	10.2
Butyl Alcohol	< 1.4	< 1.4	< 1.4	< 1.4
BOD (mg/L)	< 2.0	2.9	5.2	3.0
COD (mg/L)	< 20	21.1	26.4	< 20
Chloride (mg/L)	26.2	113.0	93.7	104.0
Phosphorus, Total (mg/L)	< 0.10	0.41	0.72	0.66
TOC (mg/L)	2.3	6.5	8.5	5.8

NOTES:

< - Less Than

J - Result is less than the quantitation limit or is an estimated result due to exceedance of holding time.

mg/L - Milligrams per Liter

ug/L - Micrograms per Liter

NS - Not Sampled due to pump malfunction

854820274

BIOCRAFT LABORATORIES, INC.
WALDWICK, NEW JERSEY

TABLE 6

GROUNDWATER SAMPLING RESULTS SUMMARY - JUNE 1998

Sample Number	MW-6	MW-9	MW-17	MW-24	MW-D	MW-25	MW-28
Sample Matrix	Water	Water	Water	Water	Dup. 24	Water	Water
Date Collected	06/25/98	06/25/98	06/25/98	06/25/98	06/25/98	06/25/98	06/25/98
<i>Volatile Organic Compounds (ug/L)</i>							
Acetone	10.7	18.4	< 5.0	< 5.0	< 5.0	< 5.0	46.2
Methylene Chloride	< 0.61	< 0.61	< 0.61	< 0.61	< 0.61	85.2	< 0.61
Butyl Alcohol	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4
Aniline (ug/L)	< 0.78	< 0.79	< 0.80	< 0.80	< 0.80	< 0.79	< 0.79
N,N-Dimethyl Aniline (ug/L)	< 5.0	< 5.0	< 5.1	< 5.2	< 5.2	< 5.0	1.9
BOD (mg/L)	< 2.0	5.7	3.7	< 2.0	< 2.0	< 2.0	8.1
COD (mg/L)	< 20	< 20	29	21.1	< 20	< 20	44.9
Chloride (mg/L)	171.0	121.0	56.9	18.8	33.3	58.8	27.0
Phosphorus, Total (mg/L)	< 0.10	< 0.10	< 0.10	0.14	< 0.10	0.34	0.55
TOC (mg/L)	3.3	6.2	7.1	9.1	9.3	7	10

NOTES:

< - Less Than

J - Result is less than the quantitation limit or is an estimated result due to exceedance of holding time.

mg/L - Milligrams per Liter

ug/L - Micrograms per Liter

854820275

TABLE 6 Continued...

Sample Number	MW-42	P-30	P-32A/B	BIO-EFF	P-13
Sample Matrix	Water	Water	Water	Water	Water
Date Collected	06/26/98	06/26/98	06/26/98	06/26/98	06/26/98
<i>Volatile Organic Compounds (ug/L)</i>					
Acetone	< 5.0	11.8	191.0	36.6	53.2
Methylene Chloride	< 0.61	122.0	1,260.0	3.6	< 0.61
Butyl Alcohol	< 1.4	< 1.4	< 14	< 1.4	< 1.4
Aniline (ug/L)	< 0.79	32	111	< 0.79	< 0.79
N,N-Dimethyl Aniline (ug/L)	< 5.0	2.5	31.8	< 5.0	2.3
BOD (mg/L)	< 2.0	< 2.0	6.4	< 2.0	5.3
COD (mg/L)	< 20	< 20	< 20	< 20	21.1
Chloride (mg/L)	76.2	246.0	174.0	263.0	463.0
Phosphorus, Total (mg/L)	< 0.10	0.54	0.29	2.8	0.44
TOC (mg/L)	3	7.6	8.9	6.7	11.8

NOTES:

< - Less Than

J - Result is less than the quantitation limit or is an estimated result due to exceedance of holding time.

mg/L - Milligrams per Liter

ug/L - Micrograms per Liter

NS - Not Sampled due to pump malfunction

854820276

BIOCRAFT LABORATORIES, INC.
WALDWICK, NEW JERSEY

TABLE 7

GROUNDWATER SAMPLING RESULTS SUMMARY - SEPTEMBER 1998

Sample Number	MW-6	MW-9	MW-17	MW-24	MW-D	MW-25	MW-28
Sample Matrix	Water	Water	Water	Water	Dup. 24	Water	Water
Date Collected	09/24/98	09/24/98	09/24/98	09/24/98	09/24/98	09/25/98	09/24/98
<i>Volatile Organic Compounds (ug/L)</i>							
Acetone	< 5.0	31.7	< 5.0	< 5.0	< 5.0	< 5.0	65.8
Methylene Chloride	< 0.61	< 0.61	< 0.61	< 0.61	< 0.61	< 0.61	< 0.61
Butyl Alcohol	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4
Aniline (ug/L)	< 0.80	< 0.78	< 0.78	< 0.79	< 0.78	< 0.78	< 0.79
N,N-Dimethyl Aniline (ug/L)	5.1	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	1.9
BOD (mg/L)	< 2.0	15.2	8	< 2.8	< 2.0	6.7	19.8
COD (mg/L)	23.6	48.4	48.4	< 20	< 20	23.6	83.1
Chloride (mg/L)	181.0	180.0	45.7	54.6	61.4	117.0	55.1
Phosphorus, Total (mg/L)	< 0.10	0.30	< 0.10	< 0.10	< 0.10	0.17	0.95
TOC (mg/L)	3.7	7.8	10.5	7.9	7.9	9.9	9.6

NOTES:

< - Less Than

J - Result is less than the quantitation limit or is an estimated result due to exceedance of holding time.

mg/L - Milligrams per Liter

ug/L - Micrograms per Liter

854820277

TABLE 7 Continued...

Sample Number	MW-42	P-30	P-32A/B	BIO-EFF	P-13
Sample Matrix	Water	Water	Water	Water	Water
Date Collected	09/25/98	09/25/98	09/24/98	09/25/98	09/25/98
<i>Volatile Organic Compounds (ug/L)</i>					
Acetone	< 5.0	148.0	1,990 a	13.9	24.8
Methylene Chloride	< 0.61	9.9	17,600 a	< 0.61	< 0.61
Butyl Alcohol	< 1.4	< 1.4	< 7	< 1.4	< 1.4
Aniline (ug/L)	< 0.78	77.7	144	< 0.79	< 0.80
N,N-Dimethyl Aniline (ug/L)	< 5.0	7.3	62.4	< 5.0	1.1 J
BOD (mg/L)	< 2.0	14.6	< 2.0	6.8	26.3
COD (mg/L)	< 20	< 20	63.2	< 20	68.2
Chloride (mg/L)	118.0	236.0	212.0	268.0	270.0
Phosphorus, Total (mg/L)	< 0.10	2.3	1.2	0.13	30.6
TOC (mg/L)	5	11.7	19.8	5.5	12

NOTES:

< - Less Than

J - Result is less than the quantitation limit or is an estimated result due to exceedance of holding time.

mg/L - Milligrams per Liter

ug/L - Micrograms per Liter

NS - Not Sampled

a - Result is from Run # 2

854820278

APPENDIX A

LABORATORY DATA REPORTS
(SUBMITTED UNDER SEPARATE COVER)

854820279

**BIOCRAFT LABORATORIES, INC.
WALDWICK, NEW JERSEY**

TABLE 8

WATER LEVEL MEASUREMENTS, FEBRUARY 19, 1997

Well Number	Measuring Point Elevation (ft. above mean sea level)	Depth to Water (ft. below MP)	Water Level Elevation (ft. above mean sea level)
MW1	245.83	4.80	241.03
MW2	247.12	5.49	241.63
MW3	245.12	4.20	240.92
MW6	252.21	10.82	241.39
MW8	244.80	3.55	241.25
MW9	244.98	4.00	240.98
MW10	244.19	0.30	243.89
MW14	244.04	3.93	240.11
MW17	246.01	5.04	240.97
MW24	246.55	3.65	242.90
MW25	245.68	4.90	240.78
MW27	246.56	9.21	237.35
MW28	244.14	2.50	241.64
MW-31	244.93	4.20	240.73
MW-32	244.60	4.30	240.30
MW33A	246.72	5.28	241.44
MW42	242.64	2.22	240.42
T35	250.20	7.65	242.55
T38	246.58	5.58	241.00
T39	246.96	5.83	241.13
W-1	244.51	6.05	238.46
W-2	244.56	6.50	238.06
W-3	244.38	5.63	238.75
W-4	243.68	4.95	238.73
W-5	243.11	5.20	237.91
W-6	244.91	6.48	238.43

ALL VALUES MEASURED IN FEET

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**BIOCRAFT LABORATORIES, INC.
WALDWICK, NEW JERSEY**

TABLE 9

WATER LEVEL MEASUREMENTS, MAY 8, 1997

Well Number	Measuring Point Elevation (ft. above mean sea level)	Depth to Water (ft. below MP)	Water Level Elevation (ft. above mean sea level)
MW1	245.83	4.50	241.33
MW2	247.12	5.56	241.56
MW3	245.12	3.91	241.21
MW6	252.21	10.36	241.85
MW8	244.80	3.29	241.51
MW9	244.98	3.73	241.25
MW10	244.19	0.60	243.59
MW14	244.04	3.85	240.19
MW17	246.01	4.80	241.21
MW24	246.55	3.46	243.09
MW25	245.68	3.59	242.09
MW27	246.56	8.70	237.86
MW28	244.14	2.10	242.04
MW-31	244.93	2.65	242.28
MW-32	244.60	3.91	240.69
MW33A	246.72	3.57	243.15
MW42	242.64	2.38	240.26
P30	241.78	2.86	238.92
T35	250.20	6.92	243.28
T38	246.58	5.70	240.88
T39	246.96	5.93	241.03
W-1	244.51	6.77	237.74
W-2	244.56	6.95	237.61
W-3	244.38	5.22	239.16
W-4	243.68	4.87	238.81
W-5	243.11	5.56	237.55
W-6	244.91	6.56	238.35

ALL VALUES MEASURED IN FEET

854820281

BIOCRAFT LABORATORIES, INC.
WALDWICK, NEW JERSEY

TABLE 10

WATER LEVEL MEASUREMENTS, MARCH 27, 1998

Well Number	Measuring Point Elevation (ft. above mean sea level)	Depth to Water (ft. below MP)	Water Level Elevation (ft. above mean sea level)
MW1	245.83	4.45	241.38
MW2	247.12	5.31	241.81
MW3	245.12	3.38	241.74
MW6	252.21	9.94	242.27
MW8	244.80	3.04	241.76
MW9	244.98	3.45	241.53
MW10	244.19	N.M.	N.M.
MW14	244.04	3.54	240.50
MW17	246.01	4.10	241.91
MW24	246.55	2.98	243.57
MW25	245.68	3.42	242.26
MW27	246.56	N.M.	N.M.
MW28	244.14	1.41	242.73
MW-31	244.93	2.66	242.27
MW-32	244.60	2.97	241.63
MW33A	246.72	3.00	243.72
MW42	242.64	2.91	239.73
P30	241.78	N.M.	N.M.
T35	250.20	N.M.	N.M.
T38	246.58	N.M.	N.M.
T39	246.96	N.M.	N.M.
W-1	244.51	5.62	238.89
W-2	244.56	5.79	238.77
W-3	244.38	5.28	239.10
W-4	243.68	3.84	239.84
W-5	243.11	4.75	238.36
W-6	244.91	5.94	238.97

ALL VALUES MEASURED IN FEET
N.M. - Not Measured

854820282

**BIOCRAFT LABORATORIES, INC.
WALDWICK, NEW JERSEY**

TABLE 11

WATER LEVEL MEASUREMENTS, JUNE 26, 1998

Well Number	Measuring Point Elevation (ft. above mean sea level)	Depth to Water (ft. below MP)	Water Level Elevation (ft. above mean sea level)
MW1	245.83	4.69	241.14
MW2	247.12	5.65	241.47
MW3	245.12	N.M.	N.M.
MW6	252.21	10.74	241.47
MW8	244.80	4.02	240.78
MW9	244.98	4.45	240.53
MW10	244.19	N.M.	N.M.
MW14	244.04	3.70	240.34
MW17	246.01	5.80	240.21
MW24	246.55	5.46	241.09
MW25	245.68	5.41	240.27
MW27	246.56	N.M.	N.M.
MW28	244.14	3.08	241.06
MW-31	244.93	4.83	240.10
MW-32	244.60	4.61	239.99
MW33A	246.72	5.57	241.15
MW42	242.64	2.91	239.73
P30	241.78	N.M.	N.M.
T35	250.20	8.76	241.44
T38	246.58	N.M.	N.M.
T39	246.96	N.M.	N.M.
W-1	244.51	7.52	236.99
W-2	244.56	7.68	236.88
W-3	244.38	7.30	237.08
W-4	243.68	5.51	238.17
W-5	243.11	5.98	237.13
W-6	244.91	7.11	237.80
DEP 1A	N.M.	3.14	N.M.

N.M. - Not Measured
ALL VALUES MEASURED IN FEET

854820283

**BIOCRAFT LABORATORIES, INC.
WALDWICK, NEW JERSEY**

TABLE 12

WATER LEVEL MEASUREMENTS, SEPTEMBER 25, 1998

Well Number	Measuring Point Elevation (ft. above mean sea level)	Depth to Water (ft. below MP)	Water Level Elevation (ft. above mean sea level)
MW1	245.83	6.58	239.25
MW2	247.12	7.50	239.62
MW3	245.12	N.M.	N.M.
MW6	252.21	13.12	239.09
MW8	244.80	N.M.	N.M.
MW9	244.98	6.83	238.15
MW10	244.19	N.M.	N.M.
MW14	244.04	N.M.	N.M.
MW17	246.01	7.97	238.04
MW24	246.55	9.03	237.52
MW25	245.68	8.97	236.71
MW27	246.56	N.M.	N.M.
MW28	244.14	6.38	237.76
MW-31	244.93	9.58	235.35
MW-32	244.60	7.96	236.64
MW33A	246.72	8.59	238.13
MW42	242.64	6.93	235.71
P30	241.78	N.M.	N.M.
T35	250.20	N.M.	N.M.
T38	246.58	7.86	238.72
T39	246.96	8.20	238.76
W-1	244.51	11.62	232.89
W-2	244.56	11.74	232.82
W-3	244.38	11.61	232.77
W-4	243.68	9.25	234.43
W-5	243.11	9.35	233.76
W-6	244.91	10.44	234.47

N.M. - Not Measured
ALL VALUES MEASURED IN FEET

854820284

APPENDIX A

854820285

APPENDIX B

854820286

APPENDIX B

GROUNDWATER SAMPLING FIELD DATA FORMS

854820287

WELL SAMPLING LOG	Eder Associates 413 Riverview Executive Park Trenton, New Jersey 08611 (609) 695-1050 (Telephone) (609) 695-1003 (Facsimile)	OFFICES: New York Wisconsin Michigan Georgia Florida New Jersey
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I. General Information:

Client Name: Biocraft Laboratories, Inc. Project No.: 1350-05
 Project Name: Biocraft - GW Sampled By: CK
 Well No.: MW-6 Well Use: Monitoring
 Sample ID: BIO-MW-6 Sample Date: 2/19/97 Sample Time: 1300

II. Well Information:

PID Reading: 0 Well Diameter: 1.5 inches
 Static Depth to Water: 10.82 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Total Well Depth: 14.00 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Δ h: 3.18 feet Volume of Standing Water: 0.29 gallons
 Volume to be removed: 0.87 gallons Actual Volume removed: 1.50 gallons

III. Sampling Information:

Purging Method:
 Peristaltic Pump Submersible Pump
 Bailer Other _____
 Well Drawdown/Recovery: Good Poor Other _____
 Pump Flow Rate: 0.25 gpm Purge Time: 20 min.

Purge Chemistry:

Time	Gallons	pH (Std. Units)	Sp. Cond. (ms)	D. O. (ppm)	Temp. (°C)
1120	0	6.93	552	2.7	9.8
1124	1	7.12	565	3.8	9.7
1140	1.5	7.14	566	3.8	9.7

Depth to water after purge: 13.2 ft. below m.p. Time: 1140

Depth to water prior to sampling: 11.2 ft. below m.p. Time: 1300

Sample Appearance: Turbid Slightly Turbid Clear Other _____
 Sample Odor: None Other _____

IV. Sample Analyses:

Sample Parameters: Methylene Chloride, Acetone, Butyl Alcohol, BOD, COD, TOC, Cl, Total Phosphorous
 Metals: Filtered Unfiltered

Laboratory: Accutest Date Shipped: 2/20/97

854820288

WELL SAMPLING LOG	Eder Associates 413 Riverview Executive Park Trenton, New Jersey 08611 (609) 695-1050 (Telephone) (609) 695-1003 (Facsimile)	OFFICES: New York Wisconsin Michigan Georgia Florida New Jersey
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I. General Information:

Client Name: Biocraft Laboratories, Inc. Project No.: 1350-05
 Project Name: Biocraft - GW Sampled By: CK
 Well No.: MW-9 Well Use: Monitoring
 Sample ID: BIO-MW-9 Sample Date: 2/19/97 Sample Time: 1000

II. Well Information:

PID Reading: 0 Well Diameter: 1 inches
 Static Depth to Water: 4.00 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Total Well Depth: 11.60 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Δ h: 7.60 feet Volume of Standing Water: 0.30 gallons
 Volume to be removed: 0.90 gallons Actual Volume removed: 1.50 gallons

III. Sampling Information:

Purging Method:
 Peristaltic Pump Submersible Pump
 Bailer Other _____
 Well Drawdown/Recovery: Good Poor Other _____
 Pump Flow Rate: 0.25 gpm Purge Time: 25 min.

Purge Chemistry:

Time	Gallons	pH (Std. Units)	Sp. Cond. (ms)	D. O. (ppm)	Temp. (°C)
900	0	6.25	336	12.5	9.5
920	1	6.39	442	6.6	9.9
925	1.5	6.40	420	10.6	10.2

Depth to water after purge: 11.0 ft. below m.p. Time: 925
 Depth to water prior to sampling: 6.8 ft. below m.p. Time: 1000
 Sample Appearance: Turbid Slightly Turbid Clear Other _____
 Sample Odor: None Other _____

IV. Sample Analyses:

Sample Parameters: Methylene Chloride, Acetone, Butyl Alcohol, BOD, COD, TOC, Cl, Total Phosphorous
 Metals: Filtered Unfiltered
 Laboratory: Accutest Date Shipped: 2/20/97

854820289

WELL SAMPLING LOG	Eder Associates 413 Riverview Executive Park Trenton, New Jersey 08611 (609) 695-1050 (Telephone) (609) 695-1003 (Facsimile)	OFFICES: New York Wisconsin Michigan Georgia Florida New Jersey
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I. General Information:

Client Name: Biocraft Laboratories, Inc. Project No.: 1350-05
 Project Name: Biocraft - GW Sampled By: CK
 Well No.: MW-17 Well Use: Monitoring
 Sample ID: BIO-MW-17 Sample Date: 2/19/97 Sample Time: 800

II. Well Information:

PID Reading: 0 Well Diameter: 4 inches
 Static Depth to Water: 5.04 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Total Well Depth: 10.45 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Δ h: 5.41 feet Volume of Standing Water: 3.52 gallons
 Volume to be removed: 10.56 gallons Actual Volume removed: 11.00 gallons

III. Sampling Information:

Purging Method:
 Peristaltic Pump Submersible Pump
 Bailer Other _____
 Well Drawdown/Recovery: Good Poor Other _____
 Pump Flow Rate: 0.5 gpm Purge Time: 22 min.

Purge Chemistry:

Time	Gallons	pH (Std. Units)	Sp. Cond. (ms)	D. O. (ppm)	Temp. (°C)
730	4	6.87	251	13.5	7.5
735	8	6.57	250	12.7	7.0
740	11	6.56	246	12.7	7.0

Depth to water after purge: 5.04 ft. below m.p. Time: 740
 Depth to water prior to sampling: 5.04 ft. below m.p. Time: 800
 Sample Appearance: Turbid Slightly Turbid Clear Other _____
 Sample Odor: None Other _____

IV. Sample Analyses:

Sample Parameters: Methylene Chloride, Acetone, Butyl Alcohol, BOD, COD, TOC, Cl, Total Phosphorous
 Metals: Filtered Unfiltered
 Laboratory: Accutest Date Shipped: 2/20/97

854820290

WELL SAMPLING LOG	Eder Associates 413 Riverview Executive Park Trenton, New Jersey 08611 (609) 695-1050 (Telephone) (609) 695-1003 (Facsimile)	OFFICES: New York Wisconsin Michigan Georgia Florida New Jersey
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I. General Information:

Client Name: Biocraft Laboratories, Inc. Project No.: 1350-05
 Project Name: Biocraft - GW Sampled By: CK
 Well No.: MW-24 Well Use: Monitoring
 Sample ID: BIO-MW-24 Sample Date: 2/19/97 Sample Time: 1345

II. Well Information:

PID Reading: 0 Well Diameter: 2 inches
 Static Depth to Water: 3.65 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Total Well Depth: 13.08 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Δ h: 9.43 feet Volume of Standing Water: 1.51 gallons
 Volume to be removed: 4.53 gallons Actual Volume removed: 5.00 gallons

III. Sampling Information:

Purging Method:
 Peristaltic Pump Submersible Pump
 Bailer Other _____
 Well Drawdown/Recovery: Good Poor Other _____
 Pump Flow Rate: 0.25 gpm Purge Time: 20 min.

Purge Chemistry:

Time	Gallons	pH (Std. Units)	Sp. Cond. (ms)	D. O. (ppm)	Temp. (°C)
1330	2.5	6.86	195	11.7	6.4
1340	5	6.82	201	8.8	6.6

Depth to water after purge: 6.2 ft. below m.p. Time: 1340
 Depth to water prior to sampling: 6.2 ft. below m.p. Time: 1345
 Sample Appearance: Turbid Slightly Turbid Clear Other _____
 Sample Odor: None Other _____

IV. Sample Analyses:

Sample Parameters: Methylene Chloride, Acetone, Butyl Alcohol, BOD, COD, TOC, Cl, Total Phosphorous
 Metals: Filtered Unfiltered
 Laboratory: Accutest Date Shipped: 2/20/97

854820291

WELL SAMPLING LOG	Eder Associates 413 Riverview Executive Park Trenton, New Jersey 08611 (609) 695-1050 (Telephone) (609) 695-1003 (Facsimile)	OFFICES: New York Wisconsin Michigan Georgia Florida New Jersey
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I. General Information:

Client Name: Biocraft Laboratories, Inc. Project No.: 1350-05
 Project Name: Biocraft - GW Sampled By: CK
 Well No.: MW-25 Well Use: Monitoring
 Sample ID: BIO-MW-25 Sample Date: 2/19/97 Sample Time: 1400

II. Well Information:

PID Reading: 0 Well Diameter: 2 inches
 Static Depth to Water: 4.90 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Total Well Depth: 10.00 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Δ h: 5.10 feet Volume of Standing Water: 0.82 gallons
 Volume to be removed: 2.46 gallons Actual Volume removed: 3.00 gallons

III. Sampling Information:

Purging Method:
 Peristaltic Pump Submersible Pump
 Bailer Other _____
 Well Drawdown/Recovery: Good Poor Other _____
 Pump Flow Rate: 0.25 gpm Purge Time: 12 min.

Purge Chemistry:

Time	Gallons	pH (Std. Units)	Sp. Cond. (ms)	D. O. (ppm)	Temp. (°C)
1345	1	6.93	228	14.0	6.0
1349	2	6.91	236	6.1	6.2
1353	3	6.91	236	2.9	6.3

Depth to water after purge: 8.6 ft. below m.p. Time: 1353
 Depth to water prior to sampling: 6.2 ft. below m.p. Time: 1400
 Sample Appearance: Turbid Slightly Turbid Clear Other _____
 Sample Odor: None Other _____

IV. Sample Analyses:

Sample Parameters: Methylene Chloride, Acetone, Butyl Alcohol, BOD, COD, TOC, Cl, Total Phosphorous
 Metals: Filtered Unfiltered
 Laboratory: Accutest Date Shipped: 2/20/97

854820292

WELL SAMPLING LOG	Eder Associates 413 Riverview Executive Park Trenton, New Jersey 08611 (609) 695-1050 (Telephone) (609) 695-1003 (Facsimile)	OFFICES: New York Wisconsin Michigan Georgia Florida New Jersey
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I. General Information:

Client Name: Biocraft Laboratories, Inc. Project No.: 1350-05
 Project Name: Biocraft - GW Sampled By: CK
 Well No.: MW-42 Well Use: Monitoring
 Sample ID: BIO-MW-42 Sample Date: 2/19/97 Sample Time: 1500

II. Well Information:

PID Reading: 0 Well Diameter: 2 inches
 Static Depth to Water: 2.22 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Total Well Depth: 15.50 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Δ h: 13.28 feet Volume of Standing Water: 2.12 gallons
 Volume to be removed: 6.36 gallons Actual Volume removed: 8.00 gallons

III. Sampling Information:

Purging Method:
 Peristaltic Pump Submersible Pump
 Bailer Other _____
 Well Drawdown/Recovery: Good Poor Other _____
 Pump Flow Rate: 0.5 gpm Purge Time: 16 min.

Purge Chemistry:

Time	Gallons	pH (Std. Units)	Sp. Cond. (ms)	D. O. (ppm)	Temp. (°C)
1450	4	5.08	86.8	9.6	8.7
1458	8	5.04	98.5	13.6	8.8

Depth to water after purge: 4.7 ft. below m.p. Time: 1500
 Depth to water prior to sampling: 4.7 ft. below m.p. Time: 1500
 Sample Appearance: Turbid Slightly Turbid Clear Other _____
 Sample Odor: None Other _____

IV. Sample Analyses:

Sample Parameters: Methylene Chloride, Acetone, Butyl Alcohol, BOD, COD, TOC, Cl, Total Phosphorous
 Metals: Filtered Unfiltered
 Laboratory: Accutest Date Shipped: 2/20/97

854820293

WELL SAMPLING LOG	Eder Associates 413 Riverview Executive Park Trenton, New Jersey 08611 (609) 695-1050 (Telephone) (609) 695-1003 (Facsimile)	OFFICES: New York Wisconsin Michigan Georgia Florida New Jersey
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I. General Information:

Client Name: Biocraft Laboratories, Inc. Project No.: 1350-05
 Project Name: Biocraft - GW Sampled By: CK
 Well No.: MW-6 Well Use: Monitoring
 Sample ID: BIO-MW-6 Sample Date: 5/8/97 Sample Time: 1200

II. Well Information:

PID Reading: 0 Well Diameter: 1 inches
 Static Depth to Water: 10.36 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Total Well Depth: 14.00 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Δ h: 3.64 feet Volume of Standing Water: 0.15 gallons
 Volume to be removed: 0.45 gallons Actual Volume removed: 1.00 gallons

III. Sampling Information:

Purging Method:
 Peristaltic Pump Submersible Pump
 Bailer Other _____
 Well Drawdown/Recovery: Good Poor Other _____
 Pump Flow Rate: 0.1 gpm Purge Time: 25 min.

Purge Chemistry:

Time	Gallons	pH (Std. Units)	Sp. Cond. (ms)	D. O. (ppm)	Temp. (°C)
1040	0.5	7.63	461	8.4	12.9
1100	1	7.52	465	2.7	12.9

Depth to water after purge: 13.8 ft. below m.p. Time: 1100
 Depth to water prior to sampling: 11.0 ft. below m.p. Time: 1200
 Sample Appearance: Turbid Slightly Turbid Clear Other _____
 Sample Odor: None Other _____

IV. Sample Analyses:

Sample Parameters: Methylene Chloride, Acetone, Butyl Alcohol, BOD, COD, TOC, Cl, Total Phosphorous
 Metals: Filtered Unfiltered
 Laboratory: Accutest Date Shipped: 5/8/97

854820294

WELL SAMPLING LOG	Eder Associates 413 Riverview Executive Park Trenton, New Jersey 08611 (609) 695-1050 (Telephone) (609) 695-1003 (Facsimile)	OFFICES: New York Wisconsin Michigan Georgia Florida New Jersey
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I. General Information:

Client Name: Biocraft Laboratories, Inc. Project No.: 1350-05
 Project Name: Biocraft - GW Sampled By: CK
 Well No.: MW-9 Well Use: Monitoring
 Sample ID: BIO-MW-9 Sample Date: 5/8/97 Sample Time: 1115

II. Well Information:

PID Reading: 0 Well Diameter: 1 inches
 Static Depth to Water: 3.73 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Total Well Depth: 11.60 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Δ h: 7.87 feet Volume of Standing Water: 0.32 gallons
 Volume to be removed: 0.96 gallons Actual Volume removed: 1.00 gallons

III. Sampling Information:

Purging Method:
 Peristaltic Pump Submersible Pump
 Bailer Other _____
 Well Drawdown/Recovery: Good Poor Other _____
 Pump Flow Rate: 0.1 gpm Purge Time: 50 min.

Purge Chemistry:

Time	Gallons	pH (Std. Units)	Sp. Cond. (ms)	D. O. (ppm)	Temp. (°C)
845	0.5	6.81	296	6.5	12.9
930	1	6.93	359	10.2	13.1

Depth to water after purge: 11.0 ft. below m.p. Time: 930
 Depth to water prior to sampling: 5.2 ft. below m.p. Time: 1115
 Sample Appearance: Turbid Slightly Turbid Clear Other _____
 Sample Odor: None Other _____

IV. Sample Analyses:

Sample Parameters: Methylene Chloride, Acetone, Butyl Alcohol, BOD, COD, TOC, Cl, Total Phosphorous
 Metals: Filtered Unfiltered
 Laboratory: Accutest Date Shipped: 5/8/97

854820295

WELL SAMPLING LOG	Eder Associates 413 Riverview Executive Park Trenton, New Jersey 08611 (609) 695-1050 (Telephone) (609) 695-1003 (Facsimile)	OFFICES: New York Wisconsin Michigan Georgia Florida New Jersey
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I. General Information:

Client Name: Biocraft Laboratories, Inc. Project No.: 1350-05
 Project Name: Biocraft - GW Sampled By: CK
 Well No.: MW-17 Well Use: Monitoring
 Sample ID: BIO-MW-17 Sample Date: 5/8/97 Sample Time: 800

II. Well Information:

PID Reading: 0 Well Diameter: 4 inches
 Static Depth to Water: 4.80 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Total Well Depth: 10.45 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Δ h: 5.65 feet Volume of Standing Water: 3.67 gallons
 Volume to be removed: 11.01 gallons Actual Volume removed: 12.00 gallons

III. Sampling Information:

Purging Method:
 Peristaltic Pump Submersible Pump
 Bailer Other _____
 Well Drawdown/Recovery: Good Poor Other _____
 Pump Flow Rate: 0.5 gpm Purge Time: 24 min.

Purge Chemistry:

Time	Gallons	pH (Std. Units)	Sp. Cond. (ms)	D. O. (ppm)	Temp. (°C)
734	4	6.50	520	9.4	12.2
742	8	6.78	543	4.7	12.1
753	12	6.80	544	3.2	12.1

Depth to water after purge: 4.8 ft. below m.p. Time: 753
 Depth to water prior to sampling: 4.8 ft. below m.p. Time: 800
 Sample Appearance: Turbid Slightly Turbid Clear Other _____
 Sample Odor: None Other _____

IV. Sample Analyses:

Sample Parameters: Methylene Chloride, Acetone, Butyl Alcohol, BOD, COD, TOC, Cl, Total Phosphorous
 Metals: Filtered Unfiltered
 Laboratory: Accutest Date Shipped: 5/8/97

854820296

WELL SAMPLING LOG	Eder Associates 413 Riverview Executive Park Trenton, New Jersey 08611 (609) 695-1050 (Telephone) (609) 695-1003 (Facsimile)	OFFICES: New York Wisconsin Michigan Georgia Florida New Jersey
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I. General Information:

Client Name: Biocraft Laboratories, Inc. Project No.: 1350-05
 Project Name: Biocraft - GW Sampled By: CK
 Well No.: MW-24 Well Use: Monitoring
 Sample ID: BIO-MW-24 Sample Date: 5/8/97 Sample Time: 1220

II. Well Information:

PID Reading: 0 Well Diameter: 2 inches
 Static Depth to Water: 3.46 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Total Well Depth: 13.08 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Δ h: 9.62 feet Volume of Standing Water: 1.54 gallons
 Volume to be removed: 4.62 gallons Actual Volume removed: 5.00 gallons

III. Sampling Information:

Purging Method:
 Peristaltic Pump Submersible Pump
 Bailer Other _____
 Well Drawdown/Recovery: Good Poor Other _____
 Pump Flow Rate: 0.25 gpm Purge Time: 20 min.

Purge Chemistry:

Time	Gallons	pH (Std. Units)	Sp. Cond. (ms)	D. O. (ppm)	Temp. (°C)
1125	2.5	7.26	497	8.8	15.2
1135	5	7.32	584	10.5	14.1

Depth to water after purge: 7.5 ft. below m.p. Time: 1135
 Depth to water prior to sampling: 3.5 ft. below m.p. Time: 1220
 Sample Appearance: Turbid Slightly Turbid Clear Other _____
 Sample Odor: None Other _____

IV. Sample Analyses:

Sample Parameters: Methylene Chloride, Acetone, Butyl Alcohol, BOD, COD, TOC, Cl, Total Phosphorous
 Metals: Filtered Unfiltered
 Laboratory: Accutest Date Shipped: 5/8/97

854820297

WELL SAMPLING LOG	Eder Associates 413 Riverview Executive Park Trenton, New Jersey 08611 (609) 695-1050 (Telephone) (609) 695-1003 (Facsimile)	OFFICES: New York Wisconsin Michigan Georgia Florida New Jersey
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I. General Information:

Client Name: Biocraft Laboratories, Inc. Project No.: 1350-05
 Project Name: Biocraft - GW Sampled By: CK
 Well No.: MW-25 Well Use: Monitoring
 Sample ID: BIO-MW-25 Sample Date: 5/8/97 Sample Time: 1300

II. Well Information:

PID Reading: 0 Well Diameter: 2 inches
 Static Depth to Water: 3.59 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Total Well Depth: 10.00 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Δ h: 6.41 feet Volume of Standing Water: 1.03 gallons
 Volume to be removed: 3.09 gallons Actual Volume removed: 4.00 gallons

III. Sampling Information:

Purging Method:
 Peristaltic Pump Submersible Pump
 Bailer Other _____
 Well Drawdown/Recovery: Good Poor Other _____
 Pump Flow Rate: 0.25 gpm Purge Time: 16 min.

Purge Chemistry:

Time	Gallons	pH (Std. Units)	Sp. Cond. (ms)	D. O. (ppm)	Temp. (°C)
1230	2	6.41	2600	11.0	12.9
1238	4	6.30	2330	13.7	12.9

Depth to water after purge: 8.5 ft. below m.p. Time: 1238
 Depth to water prior to sampling: 5.2 ft. below m.p. Time: 1300
 Sample Appearance: Turbid Slightly Turbid Clear Other _____
 Sample Odor: None Other _____

IV. Sample Analyses:

Sample Parameters: Methylene Chloride, Acetone, Butyl Alcohol, BOD, COD, TOC, Cl, Total Phosphorous
 Metals: Filtered Unfiltered
 Laboratory: Accutest Date Shipped: 5/8/97

854820298

WELL SAMPLING LOG	Eder Associates 413 Riverview Executive Park Trenton, New Jersey 08611 (609) 695-1050 (Telephone) (609) 695-1003 (Facsimile)	OFFICES: New York Wisconsin Michigan Georgia Florida New Jersey
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I. General Information:

Client Name: Biocraft Laboratories, Inc. Project No.: 1350-05
 Project Name: Biocraft - GW Sampled By: CK
 Well No.: MW-28 Well Use: Monitoring
 Sample ID: BIO-MW-28 Sample Date: 5/8/97 Sample Time: 1030

II. Well Information:

PID Reading: 0 Well Diameter: 1 inches
 Static Depth to Water: 2.10 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Total Well Depth: 8.15 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Δ h: 6.05 feet Volume of Standing Water: 0.24 gallons
 Volume to be removed: 0.72 gallons Actual Volume removed: 1.00 gallons

III. Sampling Information:

Purging Method:
 Peristaltic Pump Submersible Pump
 Bailer Other _____
 Well Drawdown/Recovery: Good Poor Other _____
 Pump Flow Rate: 0.25 gpm Purge Time: 4 min.

Purge Chemistry:

Time	Gallons	pH (Std. Units)	Sp. Cond. (ms)	D. O. (ppm)	Temp. (°C)
1010	0.5	6.47	641	6.5	13.5
1012	1	6.49	646	5.9	13.5

Depth to water after purge: 3.9 ft. below m.p. Time: 1012
 Depth to water prior to sampling: 2.4 ft. below m.p. Time: 1030
 Sample Appearance: Turbid Slightly Turbid Clear Other _____
 Sample Odor: None Other _____

IV. Sample Analyses:

Sample Parameters: Methylene Chloride, Acetone, Butyl Alcohol, BOD, COD, TOC, Cl, Total Phosphorous
 Metals: Filtered Unfiltered
 Laboratory: Accutest Date Shipped: 5/8/97

854820299

WELL SAMPLING LOG	Eder Associates 413 Riverview Executive Park Trenton, New Jersey 08611 (609) 695-1050 (Telephone) (609) 695-1003 (Facsimile)	OFFICES: New York Wisconsin Michigan Georgia Florida New Jersey
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I. General Information:

Client Name: Biocraft Laboratories, Inc. Project No.: 1350-05
 Project Name: Biocraft - GW Sampled By: CK
 Well No.: MW-42 Well Use: Monitoring
 Sample ID: BIO-MW-42 Sample Date: 5/8/97 Sample Time: 1400

II. Well Information:

PID Reading: 0 Well Diameter: 2 inches
 Static Depth to Water: 2.38 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Total Well Depth: 15.50 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Δ h: 13.12 feet Volume of Standing Water: 2.10 gallons
 Volume to be removed: 6.30 gallons Actual Volume removed: 7.00 gallons

III. Sampling Information:

Purging Method:
 Peristaltic Pump Submersible Pump
 Bailer Other _____
 Well Drawdown/Recovery: Good Poor Other _____
 Pump Flow Rate: 0.5 gpm Purge Time: 14 min.

Purge Chemistry:

Time	Gallons	pH (Std. Units)	Sp. Cond. (ms)	D. O. (ppm)	Temp. (°C)
1325	3.5	5.52	102	6.5	12.1
1332	7	5.48	107	2.3	12.0

Depth to water after purge: 6.8 ft. below m.p. Time: 1332
 Depth to water prior to sampling: 2.5 ft. below m.p. Time: 1400
 Sample Appearance: Turbid Slightly Turbid Clear Other _____
 Sample Odor: None Other _____

IV. Sample Analyses:

Sample Parameters: Methylene Chloride, Acetone, Butyl Alcohol, BOD, COD, TOC, Cl, Total Phosphorous Metals:
 Filtered Unfiltered
 Laboratory: Accutest Date Shipped: 5/8/97

854820300

WELL SAMPLING LOG	Eder Associates 413 Riverview Executive Park Trenton, New Jersey 08611 (609) 695-1050 (Telephone) (609) 695-1003 (Facsimile)	OFFICES: New York Wisconsin Michigan Georgia Florida New Jersey
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I. General Information:

Client Name: Biocraft Laboratories, Inc.

Project No.: 1350-05

Project Name: Biocraft - GW

Sampled By: CK

Well No.: MW-6

Well Use: Monitoring

Sample ID: BIO-MW-6

Sample Date: 8/21/97

Sample Time:

II. Well Information:

PID Reading: 0

Well Diameter: 1.5 inches

Static Depth to Water: 11.34 ft. below m.p.

Measuring Point (m.p.): PVC Casing

Total Well Depth: 14.00 ft. below m.p.

Measuring Point (m.p.): PVC Casing

Δ h: 2.66 feet

Volume of Standing Water: 0.97 gallons

Volume to be removed: 2.92 gallons

Actual Volume removed: 3.00 gallons

III. Sampling Information:

Purging Method:

Peristaltic Pump

Submersible Pump

Bailer

Other

Well Drawdown/Recovery: Good

Poor

Other

Pump Flow Rate: <1 gpm

Purge Time: min.

Purge Chemistry:

Time	Gallons	pH (Std. Units)	Sp. Cond. (ms)	D. O. (ppm)	Temp. (°C)
1604	1	6.7	500		20.0

Depth to water after purge: ft. below m.p.

Time:

Depth to water prior to sampling: ft. below m.p.

Time:

Sample Appearance: Turbid

Slightly Turbid

Clear

Other

Sample Odor: None

Other

IV. Sample Analyses:

Sample Parameters: Methylene Chloride, Acetone, Butyl Alcohol, BOD, COD, TOC, Cl, Total Phosphorous

Metals:

Filtered

Unfiltered

Laboratory: Accutest

Date Shipped: 5/8/97

854820301

WELL SAMPLING LOG	Eder Associates 413 Riverview Executive Park Trenton, New Jersey 08611 (609) 695-1050 (Telephone) (609) 695-1003 (Facsimile)	OFFICES: New York Wisconsin Michigan Georgia Florida New Jersey
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I. General Information:

Client Name: Biocraft Laboratories, Inc. Project No.: 1350-05
 Project Name: Biocraft - GW Sampled By: CK
 Well No.: MW-9 Well Use: Monitoring
 Sample ID: BIO-MW-9 Sample Date: 8/29/97 Sample Time:

II. Well Information:

PID Reading: 0 Well Diameter: 1 inches
 Static Depth to Water: 5.09 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Total Well Depth: 11.60 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Δ h: 6.51 feet Volume of Standing Water: 0.26 gallons
 Volume to be removed: 0.78 gallons Actual Volume removed: 1.50 gallons

III. Sampling Information:

Purging Method:
 Peristaltic Pump Submersible Pump
 Bailer Other
 Well Drawdown/Recovery: Good Poor Other
 Pump Flow Rate: gpm Purge Time: min.

Purge Chemistry:

Time	Gallons	pH (Std. Units)	Sp. Cond. (ms)	D. O. (ppm)	Temp. (°C)
940	1	6.8	400		21.0

Depth to water after purge: ft. below m.p. Time:
 Depth to water prior to sampling: ft. below m.p. Time:
 Sample Appearance: Turbid Slightly Turbid Clear Other
 Sample Odor: None Other

IV. Sample Analyses:

Sample Parameters: Methylene Chloride, Acetone, Butyl Alcohol, BOD, COD, TOC, Cl, Total Phosphorous
 Metals: Filtered Unfiltered
 Laboratory: Accutest Date Shipped:

854820302

WELL SAMPLING LOG	Eder Associates 413 Riverview Executive Park Trenton, New Jersey 08611 (609) 695-1050 (Telephone) (609) 695-1003 (Facsimile)	OFFICES: New York Wisconsin Michigan Georgia Florida New Jersey
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I. General Information:

Client Name: Biocraft Laboratories, Inc. Project No.: 1350-05
 Project Name: Biocraft - GW Sampled By: CK
 Well No.: MW-25 Well Use: Monitoring
 Sample ID: BIO-MW-25 Sample Date: 8/21/97 Sample Time: 1300

II. Well Information:

PID Reading: 0 Well Diameter: 2 inches
 Static Depth to Water: 6.65 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Total Well Depth: 10.00 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Δ h: 3.35 feet Volume of Standing Water: 0.53 gallons
 Volume to be removed: 1.60 gallons Actual Volume removed: 2.00 gallons

III. Sampling Information:

Purging Method:
 Peristaltic Pump Submersible Pump
 Bailer Other _____
 Well Drawdown/Recovery: Good Poor Other _____
 Pump Flow Rate: ≤1 gpm Purge Time: _____ min.

Purge Chemistry:

Time	Gallons	pH (Std. Units)	Sp. Cond. (ms)	D. O. (ppm)	Temp. (°C)
1510	2	6.6	775	11.0	22.0

Depth to water after purge: _____ ft. below m.p. Time: _____
 Depth to water prior to sampling: _____ ft. below m.p. Time: _____
 Sample Appearance: Turbid Slightly Turbid Clear Other _____
 Sample Odor: None Other _____

IV. Sample Analyses:

Sample Parameters: Methylene Chloride, Acetone, Butyl Alcohol, BOD, COD, TOC, Cl, Total Phosphorous
 Metals: Filtered Unfiltered
 Laboratory: Accutest Date Shipped: _____

854820303

WELL SAMPLING LOG	Eder Associates 413 Riverview Executive Park Trenton, New Jersey 08611 (609) 695-1050 (Telephone) (609) 695-1003 (Facsimile)	OFFICES: New York Wisconsin Michigan Georgia Florida New Jersey
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I. General Information:

Client Name: Biocraft Laboratories, Inc. Project No.: 1350-05
 Project Name: Biocraft - GW Sampled By: CK
 Well No.: MW-28 Well Use: Monitoring
 Sample ID: BIO-MW-28 Sample Date: 8/29/97 Sample Time:

II. Well Information:

PID Reading: 0 Well Diameter: 2 inches
 Static Depth to Water: 4.13 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Total Well Depth: 8.15 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Δ h: 4.02 feet Volume of Standing Water: 0.64 gallons
 Volume to be removed: 1.92 gallons Actual Volume removed: 2.50 gallons

III. Sampling Information:

Purging Method:
 Peristaltic Pump Submersible Pump
 Bailer Other
 Well Drawdown/Recovery: Good Poor Other
 Pump Flow Rate: gpm Purge Time: min.

Purge Chemistry:

Time	Gallons	pH (Std. Units)	Sp. Cond. (ms)	D. O. (ppm)	Temp. (°C)
1015	1	6.3	700		22.0
1025	2	6.3	800	5.9	22.0

Depth to water after purge: ft. below m.p. Time:
 Depth to water prior to sampling: ft. below m.p. Time:
 Sample Appearance: Turbid Slightly Turbid Clear Other
 Sample Odor: None Other

IV. Sample Analyses:

Sample Parameters: Methylene Chloride, Acetone, Butyl Alcohol, BOD, COD, TOC, Cl, Total Phosphorous
 Metals: Filtered Unfiltered
 Laboratory: Accutest Date Shipped:

854820304

WELL SAMPLING LOG	Eder Associates 413 Riverview Executive Park Trenton, New Jersey 08611 (609) 695-1050 (Telephone) (609) 695-1003 (Facsimile)	OFFICES: New York Wisconsin Michigan Georgia Florida New Jersey
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I. General Information:

Client Name: Biocraft Laboratories, Inc. Project No.: 1350-05
 Project Name: Biocraft - GW Sampled By: CK
 Well No.: MW-42 Well Use: Monitoring
 Sample ID: BIO-MW-42 Sample Date: 8/21/97 Sample Time:

II. Well Information:

PID Reading: 0 Well Diameter: 2 inches
 Static Depth to Water: 6.16 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Total Well Depth: 15.55 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Δ h: 9.39 feet Volume of Standing Water: 1.50 gallons
 Volume to be removed: 4.50 gallons Actual Volume removed: 5.00 gallons

III. Sampling Information:

Purging Method:
 Peristaltic Pump Submersible Pump
 Bailer Other
 Well Drawdown/Recovery: Good Poor Other
 Pump Flow Rate: <1 gpm Purge Time: min.

Purge Chemistry:

Time	Gallons	pH (Std. Units)	Sp. Cond. (ms)	D. O. (ppm)	Temp. (°C)
1725	3.5	6.7	550	6.5	14.5
1738	4.5	6.8	600	2.3	14.5

Depth to water after purge: ft. below m.p. Time:
 Depth to water prior to sampling: ft. below m.p. Time:
 Sample Appearance: Turbid Slightly Turbid Clear Other
 Sample Odor: None Other

IV. Sample Analyses:

Sample Parameters: Methylene Chloride, Acetone, Butyl Alcohol, BOD, COD, TOC, Cl, Total Phosphorous
 Metals: Filtered Unfiltered
 Laboratory: Accutest Date Shipped:

854820305

WELL SAMPLING LOG	Eder Associates 413 Riverview Executive Park Trenton, New Jersey 08611 (609) 695-1050 (Telephone) (609) 695-1003 (Facsimile)	OFFICES: New York Wisconsin Michigan Georgia Florida New Jersey
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I. General Information:

Client Name: Biocraft Laboratories, Inc. Project No.: 1350-05
 Project Name: Biocraft - GW Sampled By: NB/DM
 Well No.: MW-1 Well Use: Monitoring
 Sample ID: BIO-MW-1 Sample Date: 12/18/97 Sample Time: 1740

II. Well Information:

PID Reading: Well Diameter: 1.5 inches
 Static Depth to Water: 5.37 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Total Well Depth: 8.60 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Δh : 3.23 feet Volume of Standing Water: 0.29 gallons
 Volume to be removed: 0.87 gallons Actual Volume removed: 1.00 gallons

III. Sampling Information:

Purging Method:
 Peristaltic Pump Submersible Pump
 Bailer Other
 Well Drawdown/Recovery: Good Poor Other
 Pump Flow Rate: gpm Purge Time: min.

Purge Chemistry:

Time	Gallons	pH (Std. Units)	Sp. Cond. (ms)	D. O. (ppm)	Temp. (°C)
1730	0.5	7.6	200		9.0

Depth to water after purge: ft. below m.p. Time:
 Depth to water prior to sampling: ft. below m.p. Time:
 Sample Appearance: Turbid Slightly Turbid Clear Other
 Sample Odor: None Other

IV. Sample Analyses:

Sample Parameters: Methylene Chloride, Acetone, Butyl Alcohol, BOD, COD, TOC, Cl, Total Phosphorous
 Metals: Filtered Unfiltered
 Laboratory: Accutest Date Shipped: 12/19/97

854820306

WELL SAMPLING LOG	Eder Associates 413 Riverview Executive Park Trenton, New Jersey 08611 (609) 695-1050 (Telephone) (609) 695-1003 (Facsimile)	OFFICES: New York Wisconsin Michigan Georgia Florida New Jersey
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I. General Information:

Client Name: Biocraft Laboratories, Inc. Project No.: 1350-05
 Project Name: Biocraft - GW Sampled By: NB/DM
 Well No.: MW-2 Well Use: Monitoring
 Sample ID: BIO-MW-2 Sample Date: 12/18/97 Sample Time: 1630

II. Well Information:

PID Reading: Well Diameter: 1.5 inches
 Static Depth to Water: 6.15 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Total Well Depth: 10.60 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Δ h: 4.45 feet Volume of Standing Water: 0.40 gallons
 Volume to be removed: 1.20 gallons Actual Volume removed: 1.50 gallons

III. Sampling Information:

Purging Method:
 Peristaltic Pump Submersible Pump
 Bailer Other
 Well Drawdown/Recovery: Good Poor Other
 Pump Flow Rate: gpm Purge Time: min.

Purge Chemistry:

Time	Gallons	pH (Std. Units)	Sp. Cond. (ms)	D. O. (ppm)	Temp. (°C)
1630	1	7.5	300		8.0

Depth to water after purge: ft. below m.p. Time:
 Depth to water prior to sampling: ft. below m.p. Time:
 Sample Appearance: Turbid Slightly Turbid Clear Other
 Sample Odor: None Other

IV. Sample Analyses:

Sample Parameters: Methylene Chloride, Acetone, Butyl Alcohol, BOD, COD, TOC, Cl, Total Phosphorous
 Metals: Filtered Unfiltered
 Laboratory: Accutest Date Shipped: 12/19/97

854820307

WELL SAMPLING LOG	Eder Associates 413 Riverview Executive Park Trenton, New Jersey 08611 (609) 695-1050 (Telephone) (609) 695-1003 (Facsimile)	OFFICES: New York Wisconsin Michigan Georgia Florida New Jersey
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I. General Information:

Client Name: Biocraft Laboratories, Inc. Project No.: 1350-05
 Project Name: Biocraft - GW Sampled By: NB/DM
 Well No.: MW-3 Well Use: Monitoring
 Sample ID: BIO-MW-3 Sample Date: 12/18/97 Sample Time: 945

II. Well Information:

PID Reading: ----- Well Diameter: 1 inches
 Static Depth to Water: 5.14 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Total Well Depth: 11.00 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Δ h: 5.86 feet Volume of Standing Water: 0.53 gallons
 Volume to be removed: 1.59 gallons Actual Volume removed: 1.70 gallons

III. Sampling Information:

Purging Method:
 Peristaltic Pump Submersible Pump
 Bailer Other -----
 Well Drawdown/Recovery: Good Poor Other -----
 Pump Flow Rate: ----- gpm Purge Time: ----- min.

Purge Chemistry:

Time	Gallons	pH (Std. Units)	Sp. Cond. (ms)	D. O. (ppm)	Temp. (°C)
940	1	7.6	500		8.0

Depth to water after purge: ----- ft. below m.p. Time: -----
 Depth to water prior to sampling: ----- ft. below m.p. Time: -----
 Sample Appearance: Turbid Slightly Turbid Clear Other -----
 Sample Odor: None Other -----

IV. Sample Analyses:

Sample Parameters: Methylene Chloride, Acetone, Butyl Alcohol, BOD, COD, TOC, Cl, Total Phosphorous
 Metals: Filtered Unfiltered
 Laboratory: Accutest Date Shipped: 12/19/97

854820308

WELL SAMPLING LOG	Eder Associates 413 Riverview Executive Park Trenton, New Jersey 08611 (609) 695-1050 (Telephone) (609) 695-1003 (Facsimile)	OFFICES: New York Wisconsin Michigan Georgia Florida New Jersey
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I. General Information:

Client Name: Biocraft Laboratories, Inc. Project No.: 1350-05
 Project Name: Biocraft - GW Sampled By: NB/DM
 Well No.: MW-6 Well Use: Monitoring
 Sample ID: BIO-MW-6 Sample Date: 12/17/97 Sample Time: 1430

II. Well Information:

PID Reading: Well Diameter: 1.5 inches
 Static Depth to Water: 11.41 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Total Well Depth: 14.00 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Δ h: 2.59 feet Volume of Standing Water: 0.23 gallons
 Volume to be removed: 0.70 gallons Actual Volume removed: 0.80 gallons

III. Sampling Information:

Purging Method:
 Peristaltic Pump Submersible Pump
 Bailor Other
 Well Drawdown/Recovery: Good Poor Other
 Pump Flow Rate: gpm Purge Time: min.

Purge Chemistry:

Time	Gallons	pH (Std. Units)	Sp. Cond. (ms)	D. O. (ppm)	Temp. (°C)
1125	0.5	7.4	500		14.0
1230	0.7	7.0	520		14.5

Depth to water after purge: ft. below m.p. Time:
 Depth to water prior to sampling: ft. below m.p. Time:
 Sample Appearance: Turbid Slightly Turbid Clear Other
 Sample Odor: None Other

IV. Sample Analyses:

Sample Parameters: Methylene Chloride, Acetone, Butyl Alcohol, BOD, COD, TOC, Cl, Total Phosphorous
 Metals: Filtered Unfiltered
 Laboratory: Accutest Date Shipped: 12/18/97

854820309

WELL SAMPLING LOG	Eder Associates 413 Riverview Executive Park Trenton, New Jersey 08611 (609) 695-1050 (Telephone) (609) 695-1003 (Facsimile)	OFFICES: New York Wisconsin Michigan Georgia Florida New Jersey
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I. General Information:

Client Name: Biocraft Laboratories, Inc. Project No.: 1350-05
 Project Name: Biocraft - GW Sampled By: NB/DM
 Well No.: MW-8 Well Use: Monitoring
 Sample ID: BIO-MW-8 Sample Date: 12/18/97 Sample Time: 1200

II. Well Information:

PID Reading: Well Diameter: 3 inches
 Static Depth to Water: 4.87 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Total Well Depth: 7.35 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Δ h: 2.48 feet Volume of Standing Water: 0.94 gallons
 Volume to be removed: 2.80 gallons Actual Volume removed: 3.00 gallons

III. Sampling Information:

Purging Method:
 Peristaltic Pump Submersible Pump
 Bailer Other
 Well Drawdown/Recovery: Good Poor Other
 Pump Flow Rate: gpm Purge Time: min.

Purge Chemistry:

Time	Gallons	pH (Std. Units)	Sp. Cond. (ms)	D. O. (ppm)	Temp. (°C)
1120	3	7.1	790		12.0

Depth to water after purge: ft. below m.p. Time:
 Depth to water prior to sampling: ft. below m.p. Time:
 Sample Appearance: Turbid Slightly Turbid Clear Other
 Sample Odor: None Other

IV. Sample Analyses:

Sample Parameters: Methylene Chloride, Acetone, Butyl Alcohol, BOD, COD, TOC, Cl, Total Phosphorous
 Metals: Filtered Unfiltered
 Laboratory: Accutest Date Shipped: 12/19/97

854820310

WELL SAMPLING LOG	Eder Associates 413 Riverview Executive Park Trenton, New Jersey 08611 (609) 695-1050 (Telephone) (609) 695-1003 (Facsimile)	OFFICES: New York Wisconsin Michigan Georgia Florida New Jersey
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I. General Information:

Client Name: Biocraft Laboratories, Inc. Project No.: 1350-05
 Project Name: Biocraft - GW Sampled By: NB/DM
 Well No.: MW-9 Well Use: Monitoring
 Sample ID: BIO-MW-9 Sample Date: 12/17/97 Sample Time: 100

II. Well Information:

PID Reading: Well Diameter: 1 inches
 Static Depth to Water: 5.08 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Total Well Depth: 11.60 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Δ h: 6.52 feet Volume of Standing Water: 0.27 gallons
 Volume to be removed: 0.81 gallons Actual Volume removed: 0.85 gallons

III. Sampling Information:

Purging Method:
 Peristaltic Pump Submersible Pump
 Bailer Other
 Well Drawdown/Recovery: Good Poor Other
 Pump Flow Rate: gpm Purge Time: min.

Purge Chemistry:

Time	Gallons	pH (Std. Units)	Sp. Cond. (ms)	D. O. (ppm)	Temp. (°C)
1040	0.3	7.6	290		14.5
1044	0.8	7.5	450		15.0

Depth to water after purge: ft. below m.p. Time:
 Depth to water prior to sampling: ft. below m.p. Time:
 Sample Appearance: Turbid Slightly Turbid Clear Other
 Sample Odor: None Other

IV. Sample Analyses:

Sample Parameters: Methylene Chloride, Acetone, Butyl Alcohol, BOD, COD, TOC, Cl, Total Phosphorous
 Metals: Filtered Unfiltered
 Laboratory: Accutest Date Shipped: 12/18/97

854820311

WELL SAMPLING LOG	Eder Associates 413 Riverview Executive Park Trenton, New Jersey 08611 (609) 695-1050 (Telephone) (609) 695-1003 (Facsimile)	OFFICES: New York Wisconsin Michigan Georgia Florida New Jersey
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I. General Information:

Client Name: Biocraft Laboratories, Inc. Project No.: 1350-05
 Project Name: Biocraft - GW Sampled By: NB/DM
 Well No.: MW-14 Well Use: Monitoring
 Sample ID: BIO-MW-14 Sample Date: 12/18/97 Sample Time: 1715

II. Well Information:

PID Reading: ----- Well Diameter: 1.5 inches
 Static Depth to Water: 4.30 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Total Well Depth: 5.96 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Δ h: 1.66 feet Volume of Standing Water: 0.15 gallons
 Volume to be removed: 0.45 gallons Actual Volume removed: 0.50 gallons

III. Sampling Information:

Purging Method:
 Peristaltic Pump Submersible Pump
 Bailer Other -----
 Well Drawdown/Recovery: Good Poor Other -----
 Pump Flow Rate: ----- gpm Purge Time: ----- min.

Purge Chemistry:

Time	Gallons	pH (Std. Units)	Sp. Cond. (ms)	D. O. (ppm)	Temp. (°C)
1710	0.3	7.8	250		8.0

Depth to water after purge: ----- ft. below m.p. Time: -----
 Depth to water prior to sampling: ----- ft. below m.p. Time: -----
 Sample Appearance: Turbid Slightly Turbid Clear Other -----
 Sample Odor: None Other -----

IV. Sample Analyses:

Sample Parameters: Methylene Chloride, Acetone, Butyl Alcohol, BOD, COD, TOC, Cl, Total Phosphorous
 Metals: Filtered Unfiltered
 Laboratory: Accutest Date Shipped: 12/19/97

854820312

WELL SAMPLING LOG	Eder Associates 413 Riverview Executive Park Trenton, New Jersey 08611 (609) 695-1050 (Telephone) (609) 695-1003 (Facsimile)	OFFICES: New York Wisconsin Michigan Georgia Florida New Jersey
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I. General Information:

Client Name: Biocraft Laboratories, Inc. Project No.: 1350-05
 Project Name: Biocraft - GW Sampled By: NB/DM
 Well No.: MW-17 Well Use: Monitoring
 Sample ID: BIO-MW-17 Sample Date: 12/18/97 Sample Time: 930

II. Well Information:

PID Reading: Well Diameter: 4 inches
 Static Depth to Water: 5.96 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Total Well Depth: 10.45 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Δ h: 4.49 feet Volume of Standing Water: 3.00 gallons
 Volume to be removed: 9.00 gallons Actual Volume removed: 10.00 gallons

III. Sampling Information:

Purging Method:
 Peristaltic Pump Submersible Pump
 Bailer Other
 Well Drawdown/Recovery: Good Poor Other
 Pump Flow Rate: gpm Purge Time: 5 min.

Purge Chemistry:

Time	Gallons	pH (Std. Units)	Sp. Cond. (ms)	D. O. (ppm)	Temp. (°C)
930	10	8.0	500		9.0

Depth to water after purge: ft. below m.p. Time:
 Depth to water prior to sampling: ft. below m.p. Time:
 Sample Appearance: Turbid Slightly Turbid Clear Other
 Sample Odor: None Other

IV. Sample Analyses:

Sample Parameters: Methylene Chloride, Acetone, Butyl Alcohol, BOD, COD, TOC, Cl, Total Phosphorous
 Metals: Filtered Unfiltered
 Laboratory: Accutest Date Shipped: 12/19/97

854820313

WELL SAMPLING LOG	Eder Associates 413 Riverview Executive Park Trenton, New Jersey 08611 (609) 695-1050 (Telephone) (609) 695-1003 (Facsimile)	OFFICES: New York Wisconsin Michigan Georgia Florida New Jersey
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I. General Information:

Client Name: Biocraft Laboratories, Inc. Project No.: 1350-05
 Project Name: Biocraft - GW Sampled By: NB/DM
 Well No.: MW-24 Well Use: Monitoring
 Sample ID: BIO-MW-24 Sample Date: 12/17/97 Sample Time: 1400

II. Well Information:

PID Reading: Well Diameter: 2 inches
 Static Depth to Water: 5.70 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Total Well Depth: 13.00 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Δ h: 7.30 feet Volume of Standing Water: 1.17 gallons
 Volume to be removed: 3.51 gallons Actual Volume removed: 3.60 gallons

III. Sampling Information:

Purging Method:
 Peristaltic Pump Submersible Pump
 Bailer Other
 Well Drawdown/Recovery: Good Poor Other
 Pump Flow Rate: gpm Purge Time: min.

Purge Chemistry:

Time	Gallons	pH (Std. Units)	Sp. Cond. (ms)	D. O. (ppm)	Temp. (°C)
1305	1.5	7.6	200		11.5
1325	2.0	7.5	200		13.0

Depth to water after purge: ft. below m.p. Time:
 Depth to water prior to sampling: ft. below m.p. Time:
 Sample Appearance: Turbid Slightly Turbid Clear Other
 Sample Odor: None Other

IV. Sample Analyses:

Sample Parameters: Methylene Chloride, Acetone, Butyl Alcohol, BOD, COD, TOC, Cl, Total Phosphorous
 Metals: Filtered Unfiltered
 Laboratory: Accutest Date Shipped: 12/18/97

854820314

WELL SAMPLING LOG	Eder Associates 413 Riverview Executive Park Trenton, New Jersey 08611 (609) 695-1050 (Telephone) (609) 695-1003 (Facsimile)	OFFICES: New York Wisconsin Michigan Georgia Florida New Jersey
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I. General Information:

Client Name: Biocraft Laboratories, Inc. Project No.: 1350-05
 Project Name: Biocraft - GW Sampled By: NB/DM
 Well No.: MW-25 Well Use: Monitoring
 Sample ID: BIO-MW-25 Sample Date: 12/17/97 Sample Time: 1420

II. Well Information:

PID Reading: ----- Well Diameter: 2 inches
 Static Depth to Water: 5.47 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Total Well Depth: 10.00 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Δ h: 4.53 feet Volume of Standing Water: 0.72 gallons
 Volume to be removed: 2.20 gallons Actual Volume removed: 2.50 gallons

III. Sampling Information:

Purging Method:
 Peristaltic Pump Submersible Pump
 Bailer Other -----
 Well Drawdown/Recovery: Good Poor Other -----
 Pump Flow Rate: ----- gpm Purge Time: ----- min.

Purge Chemistry:

Time	Gallons	pH (Std. Units)	Sp. Cond. (ms)	D. O. (ppm)	Temp. (°C)
1430	2	7.6	600		9.5

Depth to water after purge: ----- ft. below m.p. Time: -----
 Depth to water prior to sampling: ----- ft. below m.p. Time: -----
 Sample Appearance: Turbid Slightly Turbid Clear Other -----
 Sample Odor: None Other -----

IV. Sample Analyses:

Sample Parameters: Methylene Chloride, Acetone, Butyl Alcohol, BOD, COD, TOC, Cl, Total Phosphorous
 Metals: Filtered Unfiltered
 Laboratory: Accutest Date Shipped: 12/18/97

854820315

WELL SAMPLING LOG	Eder Associates 413 Riverview Executive Park Trenton, New Jersey 08611 (609) 695-1050 (Telephone) (609) 695-1003 (Facsimile)	OFFICES: New York Wisconsin Michigan Georgia Florida New Jersey
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I. General Information:

Client Name: Biocraft Laboratories, Inc. Project No.: 1350-05
 Project Name: Biocraft - GW Sampled By: NB/DM
 Well No.: MW-28 Well Use: Monitoring
 Sample ID: BIO-MW-28 Sample Date: 12/17/97 Sample Time: 1215

II. Well Information:

PID Reading: ----- Well Diameter: 1 inches
 Static Depth to Water: 3.57 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Total Well Depth: 8.15 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Δ h: 4.58 feet Volume of Standing Water: 0.18 gallons
 Volume to be removed: 0.54 gallons Actual Volume removed: 0.60 gallons

III. Sampling Information:

Purging Method:
 Peristaltic Pump Submersible Pump
 Bailer Other -----
 Well Drawdown/Recovery: Good Poor Other -----
 Pump Flow Rate: ----- gpm Purge Time: ----- min.

Purge Chemistry:

Time	Gallons	pH (Std. Units)	Sp. Cond. (ms)	D. O. (ppm)	Temp. (°C)
1200	0.5	6.8	600		12.0

Depth to water after purge: ----- ft. below m.p. Time: -----
 Depth to water prior to sampling: ----- ft. below m.p. Time: -----
 Sample Appearance: Turbid Slightly Turbid Clear Other -----
 Sample Odor: None Other -----

IV. Sample Analyses:

Sample Parameters: Methylene Chloride, Acetone, Butyl Alcohol, BOD, COD, TOC, Cl, Total Phosphorous
 Metals: Filtered Unfiltered
 Laboratory: Accutest Date Shipped: 12/18/97

854820316

WELL SAMPLING LOG	Eder Associates 413 Riverview Executive Park Trenton, New Jersey 08611 (609) 695-1050 (Telephone) (609) 695-1003 (Facsimile)	OFFICES: New York Wisconsin Michigan Georgia Florida New Jersey
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I. General Information:

Client Name: Biocraft Laboratories, Inc. Project No.: 1350-05
 Project Name: Biocraft - GW Sampled By: NB/DM
 Well No.: MW-31 Well Use: Monitoring
 Sample ID: BIO-MW-31 Sample Date: 12/18/97 Sample Time: 1400

II. Well Information:

PID Reading: Well Diameter: 2 inches
 Static Depth to Water: 5.69 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Total Well Depth: 11.62 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Δ h: 5.93 feet Volume of Standing Water: 0.95 gallons
 Volume to be removed: 2.85 gallons Actual Volume removed: 3.00 gallons

III. Sampling Information:

Purging Method:
 Peristaltic Pump Submersible Pump
 Bailer Other
 Well Drawdown/Recovery: Good Poor Other
 Pump Flow Rate: gpm Purge Time: min.

Purge Chemistry:

Time	Gallons	pH (Std. Units)	Sp. Cond. (ms)	D. O. (ppm)	Temp. (°C)
1355	0.5	7.8	250		9.0

Depth to water after purge: ft. below m.p. Time:
 Depth to water prior to sampling: ft. below m.p. Time:
 Sample Appearance: Turbid Slightly Turbid Clear Other
 Sample Odor: None Other

IV. Sample Analyses:

Sample Parameters: Methylene Chloride, Acetone, Butyl Alcohol, BOD, COD, TOC, Cl, Total Phosphorous
 Metals: Filtered Unfiltered
 Laboratory: Accutest Date Shipped: 12/19/97

854820317

WELL SAMPLING LOG	Eder Associates 413 Riverview Executive Park Trenton, New Jersey 08611 (609) 695-1050 (Telephone) (609) 695-1003 (Facsimile)	OFFICES: New York Wisconsin Michigan Georgia Florida New Jersey
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I. General Information:

Client Name: Biocraft Laboratories, Inc.

Project No.: 1350-05

Project Name: Biocraft - GW

Sampled By: NB/DM

Well No.: MW-32

Well Use: Monitoring

Sample ID: BIO-MW-32

Sample Date: 12/18/97

Sample Time: 1115

II. Well Information:

PID Reading: -----

Well Diameter: 2 inches

Static Depth to Water: 5.70 ft. below m.p.

Measuring Point (m.p.): PVC Casing

Total Well Depth: 11.50 ft. below m.p.

Measuring Point (m.p.): PVC Casing

Δ h: 5.80 feet

Volume of Standing Water: 0.93 gallons

Volume to be removed: 2.79 gallons

Actual Volume removed: 3.00 gallons

III. Sampling Information:

Purging Method:

Peristaltic Pump

Submersible Pump

Bailer

Other -----

Well Drawdown/Recovery:

Good

Poor

Other -----

Pump Flow Rate: gpm

Purge Time: min.

Purge Chemistry:

Time	Gallons	pH (Std. Units)	Sp. Cond. (ms)	D. O. (ppm)	Temp. (°C)
1045	1.5	7.6	650		10.0

Depth to water after purge: ft. below m.p.

Time: -----

Depth to water prior to sampling: ft. below m.p.

Time: -----

Sample Appearance: Turbid

Slightly Turbid

Clear

Other -----

Sample Odor: None

Other -----

IV. Sample Analyses:

Sample Parameters: Methylene Chloride, Acetone, Butyl Alcohol, BOD, COD, TOC, Cl, Total Phosphorous

Metals:

Filtered

Unfiltered

Laboratory: Accutest

Date Shipped: 12/19/97

854820318

WELL SAMPLING LOG	Eder Associates 413 Riverview Executive Park Trenton, New Jersey 08611 (609) 695-1050 (Telephone) (609) 695-1003 (Facsimile)	OFFICES: New York Wisconsin Michigan Georgia Florida New Jersey
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I. General Information:

Client Name: Biocraft Laboratories, Inc. Project No.: 1350-05
 Project Name: Biocraft - GW Sampled By: NB/DM
 Well No.: MW-33A Well Use: Monitoring
 Sample ID: BIO-MW-33A Sample Date: 12/18/97 Sample Time: 1345

II. Well Information:

PID Reading: Well Diameter: 2 inches
 Static Depth to Water: 5.67 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Total Well Depth: 9.48 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Δ h: 3.81 feet Volume of Standing Water: 0.61 gallons
 Volume to be removed: 1.83 gallons Actual Volume removed: 2.00 gallons

III. Sampling Information:

Purging Method:
 Peristaltic Pump Submersible Pump
 Bailer Other
 Well Drawdown/Recovery: Good Poor Other
 Pump Flow Rate: gpm Purge Time: min.

Purge Chemistry:

Time	Gallons	pH (Std. Units)	Sp. Cond. (ms)	D. O. (ppm)	Temp. (°C)
1320	1	8.0	600		11.0

Depth to water after purge: ft. below m.p. Time:
 Depth to water prior to sampling: ft. below m.p. Time:
 Sample Appearance: Turbid Slightly Turbid Clear Other
 Sample Odor: None Other

IV. Sample Analyses:

Sample Parameters: Methylene Chloride, Acetone, Butyl Alcohol, BOD, COD, TOC, Cl, Total Phosphorous
 Metals: Filtered Unfiltered
 Laboratory: Accutest Date Shipped: 12/19/97

854820319

WELL SAMPLING LOG	Eder Associates 227 Wall Street Princeton, New Jersey 08540 (609) 279-9140 (Telephone) (609) 279-9436 (Facsimile)	OFFICES: New York Wisconsin Michigan Georgia Florida New Jersey
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I. General Information:

Client Name: Biocraft Laboratories, Inc. Project No.: 34906.000
 Project Name: Biocraft - GW Sampled By: DG/FA
 Well No.: MW-28 Well Use: Monitoring
 Sample ID: BIO-MW-28 Sample Date: 9/24/98 Sample Time: 12:25

II. Well Information:

PID Reading: - Well Diameter: 2 inches
 Static Depth to Water: 5.98 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Total Well Depth: 8.10 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Δ h: 2.12 feet Volume of Standing Water: 0.34 gallons
 Volume to be removed: 1.02 gallons Actual Volume removed: 1.2 gallons

III. Sampling Information:

Purging Method:
 Peristaltic Pump Submersible Pump
 Bailer Other _____
 Well Drawdown/Recovery: Good Poor Other _____
 Purge Start Time: 11:55 Purge Time: 22 min. Pump Flow Rate: 0.055 gpm

Purge Chemistry:

Time	Gallons	pH (Std. Units)	Sp. Cond. (ms)	D. O. (ppm)	Temp. (°C)
12:03	0.5	6.2	375		24.8

Depth to water after purge: 7.31 ft. below m.p. Time: 12:17
 Depth to water prior to sampling: 7.31 ft. below m.p. Time: 12:22
 Sample Appearance: Turbid Slightly Turbid Clear Other Sheen
 Sample Odor: None Other Hydrogen sulphide

IV. Sample Analyses:

Sample Parameters: Methylene chloride, Acetone, Butyl Alcohol, BOD, COD, TOC, Cl, Total Phosphorus, BN
 Metals: Filtered Unfiltered
 Laboratory: Accutest Date Shipped: 9/25/98

854820320

WELL SAMPLING LOG	Eder Associates 413 Riverview Executive Park Trenton, New Jersey 08611 (609) 695-1050 (Telephone) (609) 695-1003 (Facsimile)	OFFICES: New York Wisconsin Michigan Georgia Florida New Jersey
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I. General Information:

Client Name: Biocraft Laboratories, Inc. Project No.: 1350-05
 Project Name: Biocraft - GW Sampled By: NB/DM
 Well No.: MW-42 Well Use: Monitoring
 Sample ID: BIO-MW-42 Sample Date: 12/17/97 Sample Time: 1610

II. Well Information:

PID Reading: Well Diameter: 2 inches
 Static Depth to Water: 4.64 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Total Well Depth: 15.50 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Δ h: 10.86 feet Volume of Standing Water: 1.74 gallons
 Volume to be removed: 5.22 gallons Actual Volume removed: 5.50 gallons

III. Sampling Information:

Purging Method:
 Peristaltic Pump Submersible Pump
 Bailer Other
 Well Drawdown/Recovery: Good Poor Other
 Pump Flow Rate: gpm Purge Time: min.

Purge Chemistry:

Time	Gallons	pH (Std. Units)	Sp. Cond. (ms)	D. O. (ppm)	Temp. (°C)
1545	1.5	7.5	200		11.0
1605	5	6.8	600		11.0

Depth to water after purge: ft. below m.p. Time:
 Depth to water prior to sampling: ft. below m.p. Time:
 Sample Appearance: Turbid Slightly Turbid Clear Other
 Sample Odor: None Other

IV. Sample Analyses:

Sample Parameters: Methylene Chloride, Acetone, Butyl Alcohol, BOD, COD, TOC, Cl, Total Phosphorous
 Metals: Filtered Unfiltered
 Laboratory: Accutest Date Shipped: 12/18/97

854820321

WELL SAMPLING LOG	Eder Associates 413 Riverview Executive Park Trenton, New Jersey 08611 (609) 695-1050 (Telephone) (609) 695-1003 (Facsimile)	OFFICES: New York Wisconsin Michigan Georgia Florida New Jersey
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I. General Information:

Client Name: Biocraft Laboratories, Inc. Project No.: 1350-05
 Project Name: Biocraft - GW Sampled By: NB/DM
 Well No.: DEP-1A Well Use: Monitoring
 Sample ID: BIO-DEP-1A Sample Date: 12/18/97 Sample Time: 1330

II. Well Information:

PID Reading: 0 Well Diameter: 2 inches
 Static Depth to Water: 4.18 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Total Well Depth: 7.55 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Δ h: 3.37 feet Volume of Standing Water: 0.54 gallons
 Volume to be removed: 1.62 gallons Actual Volume removed: 1.75 gallons

III. Sampling Information:

Purging Method:
 Peristaltic Pump Submersible Pump
 Bailer Other

Well Drawdown/Recovery: Good Poor Other

Pump Flow Rate: _____ gpm Purge Time: _____ min.

Purge Chemistry:

Time	Gallons	pH (Std. Units)	Sp. Cond. (ms)	D. O. (ppm)	Temp. (°C)
1315	1	7.4	200		12.5

Depth to water after purge: _____ ft. below m.p. Time:

Depth to water prior to sampling: _____ ft. below m.p. Time:

Sample Appearance: Turbid Slightly Turbid Clear Other

Sample Odor: None Other

IV. Sample Analyses:

Sample Parameters: Methylene Chloride, Acetone, Butyl Alcohol, BOD, COD, TOC, Cl, Total Phosphorous
 Metals: Filtered Unfiltered

Laboratory: Accutest Date Shipped: 12/19/97

854820322

WELL SAMPLING LOG	Eder Associates 413 Riverview Executive Park Trenton, New Jersey 08611 (609) 695-1050 (Telephone) (609) 695-1003 (Facsimile)	OFFICES: New York Wisconsin Michigan Georgia Florida New Jersey
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I. General Information:

Client Name: Biocraft Laboratories, Inc. Project No.: 1350-05
 Project Name: Biocraft - GW Sampled By: NB/DM
 Well No.: W-1 Well Use: Monitoring
 Sample ID: BIO-W-1 Sample Date: 12/19/97 Sample Time: 1330

II. Well Information:

PID Reading: ----- Well Diameter: 2 inches
 Static Depth to Water: 9.21 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Total Well Depth: 16.60 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Δ h: 7.39 feet Volume of Standing Water: 1.18 gallons
 Volume to be removed: 3.54 gallons Actual Volume removed: 3.75 gallons

III. Sampling Information:

Purging Method:
 Peristaltic Pump Submersible Pump
 Bailer Other -----
 Well Drawdown/Recovery: Good Poor Other -----
 Pump Flow Rate: ----- gpm Purge Time: ----- min.

Purge Chemistry:

Time	Gallons	pH (Std. Units)	Sp. Cond. (ms)	D. O. (ppm)	Temp. (°C)
1345	3	6.8	430		11.5

Depth to water after purge: ----- ft. below m.p. Time: -----
 Depth to water prior to sampling: ----- ft. below m.p. Time: -----
 Sample Appearance: Turbid Slightly Turbid Clear Other -----
 Sample Odor: None Other -----

IV. Sample Analyses:

Sample Parameters: Methylene Chloride, Acetone, Butyl Alcohol, BOD, COD, TOC, Cl, Total Phosphorous
 Metals: Filtered Unfiltered
 Laboratory: Accutest Date Shipped: 12/19/97

854820323

WELL SAMPLING LOG	Eder Associates 413 Riverview Executive Park Trenton, New Jersey 08611 (609) 695-1050 (Telephone) (609) 695-1003 (Facsimile)	OFFICES: New York Wisconsin Michigan Georgia Florida New Jersey
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I. General Information:

Client Name: Biocraft Laboratories, Inc. Project No.: 1350-05
 Project Name: Biocraft - GW Sampled By: NB/DM
 Well No.: W-2 Well Use: Monitoring
 Sample ID: BIO-W-2 Sample Date: 12/19/97 Sample Time: 1345

II. Well Information:

PID Reading: Well Diameter: 2 inches
 Static Depth to Water: 9.38 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Total Well Depth: 19.65 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Δ h: 10.27 feet Volume of Standing Water: 1.64 gallons
 Volume to be removed: 4.92 gallons Actual Volume removed: 5.00 gallons

III. Sampling Information:

Purging Method:
 Peristaltic Pump Submersible Pump
 Bailer Other

Well Drawdown/Recovery: Good Poor Other

Pump Flow Rate: _____ gpm Purge Time: _____ min.

Purge Chemistry:

Time	Gallons	pH (Std. Units)	Sp. Cond. (ms)	D. O. (ppm)	Temp. (°C)
1340	5	7.2	330		10.5

Depth to water after purge: _____ ft. below m.p. Time:

Depth to water prior to sampling: _____ ft. below m.p. Time:

Sample Appearance: Turbid Slightly Turbid Clear Other

Sample Odor: None Other

IV. Sample Analyses:

Sample Parameters: Methylene Chloride, Acetone, Butyl Alcohol, BOD, COD, TOC, Cl, Total Phosphorous
 Metals: Filtered Unfiltered
 Laboratory: Accutest Date Shipped: 12/19/97

854820324

WELL SAMPLING LOG	Eder Associates 413 Riverview Executive Park Trenton, New Jersey 08611 (609) 695-1050 (Telephone) (609) 695-1003 (Facsimile)	OFFICES: New York Wisconsin Michigan Georgia Florida New Jersey
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I. General Information:

Client Name: Biocraft Laboratories, Inc. Project No.: 1350-05
 Project Name: Biocraft - GW Sampled By: NB/DM
 Well No.: W-3 Well Use: Monitoring
 Sample ID: BIO-W-3 Sample Date: 12/19/97 Sample Time: 1220

II. Well Information:

PID Reading: Well Diameter: 2 inches
 Static Depth to Water: 8.93 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Total Well Depth: 20.32 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Δ h: 11.39 feet Volume of Standing Water: 1.82 gallons
 Volume to be removed: 5.46 gallons Actual Volume removed: 5.50 gallons

III. Sampling Information:

Purging Method:
 Peristaltic Pump Submersible Pump
 Bailer Other
 Well Drawdown/Recovery: Good Poor Other
 Pump Flow Rate: gpm Purge Time: min.

Purge Chemistry:

Time	Gallons	pH (Std. Units)	Sp. Cond. (ms)	D. O. (ppm)	Temp. (°C)
1215	1.5	7.2	180		10.0

Depth to water after purge: ft. below m.p. Time:
 Depth to water prior to sampling: ft. below m.p. Time:
 Sample Appearance: Turbid Slightly Turbid Clear Other
 Sample Odor: None Other

IV. Sample Analyses:

Sample Parameters: Methylene Chloride, Acetone, Butyl Alcohol, BOD, COD, TOC, Cl, Total Phosphorous
 Metals: Filtered Unfiltered
 Laboratory: Accutest Date Shipped: 12/19/97

854820325

WELL SAMPLING LOG	Eder Associates 413 Riverview Executive Park Trenton, New Jersey 08611 (609) 695-1050 (Telephone) (609) 695-1003 (Facsimile)	OFFICES: New York Wisconsin Michigan Georgia Florida New Jersey
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I. General Information:

Client Name: Biocraft Laboratories, Inc. Project No.: 1350-05
 Project Name: Biocraft - GW Sampled By: NB/DM
 Well No.: W-4 Well Use: Monitoring
 Sample ID: BIO-W-4 Sample Date: 12/19/97 Sample Time: 1100

II. Well Information:

PID Reading: ----- Well Diameter: 2 inches
 Static Depth to Water: 7.08 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Total Well Depth: 18.00 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Δ h: 10.92 feet Volume of Standing Water: 1.75 gallons
 Volume to be removed: 5.25 gallons Actual Volume removed: 5.50 gallons

III. Sampling Information:

Purging Method:
 Peristaltic Pump Submersible Pump
 Bailer Other -----
 Well Drawdown/Recovery: Good Poor Other -----
 Pump Flow Rate: ----- gpm Purge Time: ----- min.

Purge Chemistry:

Time	Gallons	pH (Std. Units)	Sp. Cond. (ms)	D. O. (ppm)	Temp. (°C)
930	3.5	7.8	300		12.0

Depth to water after purge: ----- ft. below m.p. Time: -----
 Depth to water prior to sampling: ----- ft. below m.p. Time: -----
 Sample Appearance: Turbid Slightly Turbid Clear Other -----
 Sample Odor: None Other -----

IV. Sample Analyses:

Sample Parameters: Methylene Chloride, Acetone, Butyl Alcohol, BOD, COD, TOC, Cl, Total Phosphorous
 Metals: Filtered Unfiltered
 Laboratory: Accutest Date Shipped: 12/19/97

854820326

WELL SAMPLING LOG	Eder Associates 413 Riverview Executive Park Trenton, New Jersey 08611 (609) 695-1050 (Telephone) (609) 695-1003 (Facsimile)	OFFICES: New York Wisconsin Michigan Georgia Florida New Jersey
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I. General Information:

Client Name: Biocraft Laboratories, Inc. Project No.: 1350-05
 Project Name: Biocraft - GW Sampled By: NB/DM
 Well No.: W-5 Well Use: Monitoring
 Sample ID: BIO-W-5 Sample Date: 12/19/97 Sample Time: 1140

II. Well Information:

PID Reading: ----- Well Diameter: 2 inches
 Static Depth to Water: 7.25 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Total Well Depth: 20.60 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Δ h: 13.35 feet Volume of Standing Water: 2.14 gallons
 Volume to be removed: 6.42 gallons Actual Volume removed: 6.50 gallons

III. Sampling Information:

Purging Method:
 Peristaltic Pump Submersible Pump
 Bailer Other -----
 Well Drawdown/Recovery: Good Poor Other -----
 Pump Flow Rate: ----- gpm Purge Time: ----- min.

Purge Chemistry:

Time	Gallons	pH (Std. Units)	Sp. Cond. (ms)	D. O. (ppm)	Temp. (°C)
1130	1	7.5	410		12.0

Depth to water after purge: ----- ft. below m.p. Time: -----
 Depth to water prior to sampling: ----- ft. below m.p. Time: -----
 Sample Appearance: Turbid Slightly Turbid Clear Other -----
 Sample Odor: None Other -----

IV. Sample Analyses:

Sample Parameters: Methylene Chloride, Acetone, Butyl Alcohol, BOD, COD, TOC, Cl, Total Phosphorous
 Metals: Filtered Unfiltered
 Laboratory: Accutest Date Shipped: 12/19/97

854820327

WELL SAMPLING LOG	Eder Associates 413 Riverview Executive Park Trenton, New Jersey 08611 (609) 695-1050 (Telephone) (609) 695-1003 (Facsimile)	OFFICES: New York Wisconsin Michigan Georgia Florida New Jersey
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I. General Information:

Client Name: Biocraft Laboratories, Inc. Project No.: 1350-05
 Project Name: Biocraft - GW Sampled By: NB/DM
 Well No.: W-6 Well Use: Monitoring
 Sample ID: BIO-W-6 Sample Date: 12/19/97 Sample Time: 1125

II. Well Information:

PID Reading: Well Diameter: 2 inches
 Static Depth to Water: 8.34 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Total Well Depth: 21.60 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Δ h: 13.26 feet Volume of Standing Water: 2.12 gallons
 Volume to be removed: 6.36 gallons Actual Volume removed: 6.50 gallons

III. Sampling Information:

Purging Method:
 Peristaltic Pump Submersible Pump
 Bailer Other
 Well Drawdown/Recovery: Good Poor Other
 Pump Flow Rate: gpm Purge Time: min.

Purge Chemistry:

Time	Gallons	pH (Std. Units)	Sp. Cond. (ms)	D. O. (ppm)	Temp. (°C)
925	6	7.9	600		12.0

Depth to water after purge: ft. below m.p. Time:
 Depth to water prior to sampling: ft. below m.p. Time:
 Sample Appearance: Turbid Slightly Turbid Clear Other
 Sample Odor: None Other

IV. Sample Analyses:

Sample Parameters: Methylene Chloride, Acetone, Butyl Alcohol, BOD, COD, TOC, Cl, Total Phosphorous
 Metals: Filtered Unfiltered
 Laboratory: Accutest Date Shipped: 12/19/97

854820328

WELL SAMPLING LOG	Eder Associates 227 Wall Street Princeton, New Jersey 08540 (609) 279-9140 (Telephone) (609) 279-9436 (Facsimile)	OFFICES: New York Wisconsin Michigan Georgia Florida New Jersey
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I. General Information:

Client Name: Biocraft Laboratories, Inc. Project No.: 34906-000
 Project Name: Biocraft - GW Sampled By: NB/JW
 Well No.: MW-6 Well Use: Monitoring
 Sample ID: BIO-MW-6 Sample Date: 3/26/98 Sample Time: 1120

II. Well Information:

PID Reading: - Well Diameter: 1.5 inches
 Static Depth to Water: 9.97 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Total Well Depth: 14.00 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Δ h: 4.03 feet Volume of Standing Water: 0.37 gallons
 Volume to be removed: 1.11 gallons Actual Volume removed: 1.20 gallons

III. Sampling Information:

Purging Method:
 Peristaltic Pump Submersible Pump
 Bailer Other _____
 Well Drawdown/Recovery: Good Poor Other _____
 Pump Flow Rate: 0.2 gpm Purge Time: 6 min.

Purge Chemistry:

Time	Gallons	pH (Std. Units)	Sp. Cond. (ms)	D. O. (ppm)	Temp. (°C)
1050	1.2	7.1	1200		12.7

Depth to water after purge: 11.5 ft. below m.p. Time: 1119
 Depth to water prior to sampling: 11.5 ft. below m.p. Time: 1119
 Sample Appearance: Turbid Slightly Turbid Clear Other _____
 Sample Odor: None Other _____

IV. Sample Analyses:

Sample Parameters: Methylene Chloride, Acetone, Butyl Alcohol, BOD, COD, TOC, Cl, Total Phosphorous
 Metals: Filtered Unfiltered
 Laboratory: Accutest Date Shipped: 3/27/98

854820329

WELL SAMPLING LOG	Eder Associates 227 Wall Street Princeton, New Jersey 08540 (609) 279-9140 (Telephone) (609) 279-9436 (Facsimile)	OFFICES: New York Wisconsin Michigan Georgia Florida New Jersey
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I. General Information:

Client Name: Biocraft Laboratories, Inc. Project No.: 34906-000
 Project Name: Biocraft - GW Sampled By: NB/JW
 Well No.: MW-9 Well Use: Monitoring
 Sample ID: BIO-MW-9 Sample Date: 3/26/98 Sample Time: 1400

II. Well Information:

PID Reading: - Well Diameter: 1 inches
 Static Depth to Water: 2.59 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Total Well Depth: 11.60 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Δ h: 9.01 feet Volume of Standing Water: 0.36 gallons
 Volume to be removed: 1.08 gallons Actual Volume removed: 1.10 gallons

III. Sampling Information:

Purging Method:
 Peristaltic Pump Submersible Pump
 Bailer Other _____
 Well Drawdown/Recovery: Good Poor Other _____
 Pump Flow Rate: 0.2 gpm Purge Time: 6 min.

Purge Chemistry:

Time	Gallons	pH (Std. Units)	Sp. Cond. (ms)	D. O. (ppm)	Temp. (°C)
1340	1.1	7	290		11.9

Depth to water after purge: - ft. below m.p. Time: 1341
 Depth to water prior to sampling: 7.36 ft. below m.p. Time: 1359
 Sample Appearance: Turbid Slightly Turbid Clear Other _____
 Sample Odor: None Other _____

IV. Sample Analyses:

Sample Parameters: Methylene Chloride, Acetone, Butyl Alcohol, BOD, COD, TOC, Cl, Total Phosphorous
 Metals: Filtered Unfiltered
 Laboratory: Accutest Date Shipped: 3/27/98

854820330

WELL SAMPLING LOG	Eder Associates 227 Wall Street Princeton, New Jersey 08540 (609) 279-9140 (Telephone) (609) 279-9436 (Facsimile)	OFFICES: New York Wisconsin Michigan Georgia Florida New Jersey
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I. General Information:

Client Name: Biocraft Laboratories, Inc. Project No.: 34906-000
 Project Name: Biocraft - GW Sampled By: NB/JW
 Well No.: MW-17 Well Use: Monitoring
 Sample ID: BIO-MW-17 Sample Date: 3/26/98 Sample Time: 1000

II. Well Information:

PID Reading: - Well Diameter: 4 inches
 Static Depth to Water: 4.00 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Total Well Depth: 10.45 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Δ h: 6.45 feet Volume of Standing Water: 4.20 gallons
 Volume to be removed: 12.60 gallons Actual Volume removed: 13.00 gallons

III. Sampling Information:

Purging Method:
 Peristaltic Pump Submersible Pump
 Bailer Other _____
 Well Drawdown/Recovery: Good Poor Other _____
 Pump Flow Rate: 1 gpm Purge Time: 13 min.

Purge Chemistry:

Time	Gallons	pH (Std. Units)	Sp. Cond. (ms)	D. O. (ppm)	Temp. (°C)
0940	9	7.7	350		12.6
0945	13	7.4	350		12.5

Depth to water after purge: 6.56 ft. below m.p. Time: 0946
 Depth to water prior to sampling: 5.5 ft. below m.p. Time: 0959
 Sample Appearance: Turbid Slightly Turbid Clear Other _____
 Sample Odor: None Other _____

IV. Sample Analyses:

Sample Parameters: Methylene Chloride, Acetone, Butyl Alcohol, BOD, COD, TOC, Cl, Total Phosphorous
 Metals: Filtered Unfiltered
 Laboratory: Accutest Date Shipped: 3/27/98

854820331

WELL SAMPLING LOG	Eder Associates 227 Wall Street Princeton, New Jersey 08540 (609) 279-9140 (Telephone) (609) 279-9436 (Facsimile)	OFFICES: New York Wisconsin Michigan Georgia Florida New Jersey
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I. General Information:

Client Name: Biocraft Laboratories, Inc. Project No.: 34906-000
 Project Name: Biocraft - GW Sampled By: NB/JW
 Well No.: MW-24 Well Use: Monitoring
 Sample ID: BIO-MW-24 Sample Date: 3/26/98 Sample Time: 1530

II. Well Information:

PID Reading: - Well Diameter: 2 inches
 Static Depth to Water: 2.00 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Total Well Depth: 13.08 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Δ h: 10.13 feet Volume of Standing Water: 1.62 gallons
 Volume to be removed: 4.86 gallons Actual Volume removed: 5.00 gallons

III. Sampling Information:

Purging Method:
 Peristaltic Pump Submersible Pump
 Bailer Other _____
 Well Drawdown/Recovery: Good Poor Other _____
 Pump Flow Rate: 1 gpm Purge Time: 5 min.

Purge Chemistry:

Time	Gallons	pH (Std. Units)	Sp. Cond. (ms)	D. O. (ppm)	Temp. (°C)
1515	4	7.4	200		8.5

Depth to water after purge: - ft. below m.p. Time: 1517
 Depth to water prior to sampling: 7.1 ft. below m.p. Time: 1529
 Sample Appearance: Turbid Slightly Turbid Clear Other _____
 Sample Odor: None Other _____

IV. Sample Analyses:

Sample Parameters: Methylene Chloride, Acetone, Butyl Alcohol, BOD, COD, TOC, Cl, Total Phosphorous
 Metals: Filtered Unfiltered
 Laboratory: Accutest Date Shipped: 3/27/98

854820332

WELL SAMPLING LOG	Eder Associates 227 Wall Street Princeton, New Jersey 08540 (609) 279-9140 (Telephone) (609) 279-9436 (Facsimile)	OFFICES: New York Wisconsin Michigan Georgia Florida New Jersey
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I. General Information:

Client Name: Biocraft Laboratories, Inc. Project No.: 34906-000
 Project Name: Biocraft - GW Sampled By: NB/JW
 Well No.: MW-25 Well Use: Monitoring
 Sample ID: BIO-MW-25 Sample Date: 3/26/98 Sample Time: 1540

II. Well Information:

PID Reading: - Well Diameter: 2 inches
 Static Depth to Water: 3.36 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Total Well Depth: 10.00 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Δ h: 6.64 feet Volume of Standing Water: 1.06 gallons
 Volume to be removed: 3.18 gallons Actual Volume removed: 3.20 gallons

III. Sampling Information:

Purging Method:
 Peristaltic Pump Submersible Pump
 Bailer Other _____
 Well Drawdown/Recovery: Good Poor Other _____
 Pump Flow Rate: 1 gpm Purge Time: 3.5 min.

Purge Chemistry:

Time	Gallons	pH (Std. Units)	Sp. Cond. (ms)	D. O. (ppm)	Temp. (°C)
1510	3.2	7.6	150		7.7

Depth to water after purge: - ft. below m.p. Time: 1510
 Depth to water prior to sampling: 3.62 ft. below m.p. Time: 1539
 Sample Appearance: Turbid Slightly Turbid Clear Other _____
 Sample Odor: None Other _____

IV. Sample Analyses:

Sample Parameters: Methylene Chloride, Acetone, Butyl Alcohol, BOD, COD, TOC, Cl, Total Phosphorous
 Metals: Filtered Unfiltered
 Laboratory: Accutest Date Shipped: 3/27/98

854820333

WELL SAMPLING LOG	Eder Associates 227 Wall Street Princeton, New Jersey 08540 (609) 279-9140 (Telephone) (609) 279-9436 (Facsimile)	OFFICES: New York Wisconsin Michigan Georgia Florida New Jersey
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I. General Information:

Client Name: Biocraft Laboratories, Inc. Project No.: 34906-000
 Project Name: Biocraft - GW Sampled By: NB/JW
 Well No.: MW-28 Well Use: Monitoring
 Sample ID: BIO-MW-28 Sample Date: 3/26/98 Sample Time: 1210

II. Well Information:

PID Reading: - Well Diameter: 1 inches
 Static Depth to Water: 0.79 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Total Well Depth: 8.15 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Δ h: 7.36 feet Volume of Standing Water: 0.29 gallons
 Volume to be removed: 0.87 gallons Actual Volume removed: 0.90 gallons

III. Sampling Information:

Purging Method:
 Peristaltic Pump Submersible Pump
 Bailer Other _____
 Well Drawdown/Recovery: Good Poor Other _____
 Pump Flow Rate: 0.2 gpm Purge Time: 5 min.

Purge Chemistry:

Time	Gallons	pH (Std. Units)	Sp. Cond. (ms)	D. O. (ppm)	Temp. (°C)
1157	0.9	7.1	270		9.3

Depth to water after purge: 3.5 ft. below m.p. Time: 1158
 Depth to water prior to sampling: 1.4 ft. below m.p. Time: 1209
 Sample Appearance: Turbid Slightly Turbid Clear Other _____
 Sample Odor: None Other _____

IV. Sample Analyses:

Sample Parameters: Methylene Chloride, Acetone, Butyl Alcohol, BOD, COD, TOC, Cl, Total Phosphorous
 Metals: Filtered Unfiltered
 Laboratory: Accutest Date Shipped: 3/27/98

854820334

WELL SAMPLING LOG	Eder Associates 227 Wall Street Princeton, New Jersey 08540 (609) 279-9140 (Telephone) (609) 279-9436 (Facsimile)	OFFICES: New York Wisconsin Michigan Georgia Florida New Jersey
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I. General Information:

Client Name: Biocraft Laboratories, Inc. Project No.: 34906-000
 Project Name: Biocraft - GW Sampled By: NB/JW
 Well No.: MW-42 Well Use: Monitoring
 Sample ID: BIO-MW-42 Sample Date: 3/27/98 Sample Time: 1000

II. Well Information:

PID Reading: - Well Diameter: 2 inches
 Static Depth to Water: 2.91 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Total Well Depth: 15.55 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Δ h: 12.64 feet Volume of Standing Water: 2.00 gallons
 Volume to be removed: 6.00 gallons Actual Volume removed: 6.00 gallons

III. Sampling Information:

Purging Method:
 Peristaltic Pump Submersible Pump
 Bailer Other _____
 Well Drawdown/Recovery: Good Poor Other _____
 Pump Flow Rate: 0.2 gpm Purge Time: 30 min.

Purge Chemistry:

Time	Gallons	pH (Std. Units)	Sp. Cond. (ms)	D. O. (ppm)	Temp. (°C)
0925	3.5	8	130		9.5
0940	6	6.7	150		9.5

Depth to water after purge: 8.15 ft. below m.p. Time: 0941
 Depth to water prior to sampling: 4.51 ft. below m.p. Time: 0959
 Sample Appearance: Turbid Slightly Turbid Clear Other _____
 Sample Odor: None Other _____

IV. Sample Analyses:

Sample Parameters: Methylene Chloride, Acetone, Butyl Alcohol, BOD, COD, TOC, Cl, Total Phosphorous
 Metals: Filtered Unfiltered
 Laboratory: Accutest Date Shipped: 3/27/98

854820335

WELL SAMPLING LOG	Eder Associates 227 Wall Street Princeton, New Jersey 08540 (609) 279-9140 (Telephone) (609) 279-9436 (Facsimile)	OFFICES: New York Wisconsin Michigan Georgia Florida New Jersey
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I. General Information:

Client Name: Biocraft Laboratories, Inc. Project No.: 34906.000
 Project Name: Biocraft - GW Sampled By: DG/NB
 Well No.: MW-6 Well Use: Monitoring
 Sample ID: BIO-MW-6 Sample Date: 6/25/98 Sample Time: 10:00

II. Well Information:

PID Reading: - Well Diameter: 1.5 inches
 Static Depth to Water: 10.73 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Total Well Depth: 14.00 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Δ h: 3.27 feet Volume of Standing Water: 0.28 gallons
 Volume to be removed: 0.85 gallons Actual Volume removed: 1.0 gallons

III. Sampling Information:

Purging Method:
 Peristaltic Pump Submersible Pump
 Bailer Other _____
 Well Drawdown/Recovery: Good Poor Other _____
 Pump Flow Rate: 0.01 gpm Purge Time: 100 min.

Purge Chemistry:

Time	Gallons	pH (Std. Units)	Sp. Cond. (ms)	D. O. (ppm)	Temp. (°C)
9:43	1	6.5	550		17.7

Depth to water after purge: 14.00 ft. below m.p. Time: 9:44
 Depth to water prior to sampling: 12.4 ft. below m.p. Time: 9:55
 Sample Appearance: Turbid Slightly Turbid Clear Other _____
 Sample Odor: None Other _____

IV. Sample Analyses:

Sample Parameters: Methylene Chloride, Acetone, Butyl Alcohol, BOD, COD, TOC, Cl, Total Phosphorus, BN Metals:
 Filtered Unfiltered
 Laboratory: Accutest Date Shipped: 6/26/98

854820336

WELL SAMPLING LOG	Eder Associates 227 Wall Street Princeton, New Jersey 08540 (609) 279-9140 (Telephone) (609) 279-9436 (Facsimile)	OFFICES: New York Wisconsin Michigan Georgia Florida New Jersey
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I. General Information:

Client Name: Biocraft Laboratories, Inc.

Project No.: 34906.000

Project Name: Biocraft - GW

Sampled By: DG/NB

Well No.: MW-9

Well Use: Monitoring

Sample ID: BIO-MW-9

Sample Date: 6/25/98

Sample Time: 11:15

II. Well Information:

PID Reading: -

Well Diameter: 1.5 inches

Static Depth to Water: 4.43 ft. below m.p.

Measuring Point (m.p.): PVC Casing

Total Well Depth: 11.60 ft. below m.p.

Measuring Point (m.p.): PVC Casing

Δ h: 7.17 feet

Volume of Standing Water: 0.62 gallons

Volume to be removed: 1.87 gallons

Actual Volume removed: 2.0 gallons

III. Sampling Information:

Purging Method:

Peristaltic Pump

Submersible Pump

Bailer

Other _____

Well Drawdown/Recovery:

Good

Poor

Other _____

Purge Start Time: 10:31

Purge Time: 42 min.

Pump Flow Rate: 0.04 gpm

Purge Chemistry:

Time	Gallons	pH (Std. Units)	Sp. Cond. (ms)	D. O. (ppm)	Temp. (°C)
1052	1	7.0	300		21.3
1113	2	7.0	400		20.6

Depth to water after purge: 11.60 ft. below m.p.

Time: 11:13

Depth to water prior to sampling: 3.01 ft. below m.p.

Time: 11:15

Sample Appearance: Turbid

Slightly Turbid

Clear

Other _____

Sample Odor: None

Other

IV. Sample Analyses:

Sample Parameters: Methylene chloride, Acetone, Butyl Alcohol, BOD, COD, TOC, Cl, Total Phosphorus, BN Metals:

Filtered

Unfiltered

Laboratory: Accutest

Date Shipped: 6/26/98

854820337

WELL SAMPLING LOG	Eder Associates 227 Wall Street Princeton, New Jersey 08540 (609) 279-9140 (Telephone) (609) 279-9436 (Facsimile)	OFFICES: New York Wisconsin Michigan Georgia Florida New Jersey
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I. General Information:

Client Name: Biocraft Laboratories, Inc. Project No.: 34906.000
 Project Name: Biocraft - GW Sampled By: DG/NB
 Well No.: MW-17 Well Use: Monitoring
 Sample ID: BIO-MW-17 Sample Date: 6/25/98 Sample Time: 9:20

II. Well Information:

PID Reading: - Well Diameter: 4 inches
 Static Depth to Water: 5.96 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Total Well Depth: 10.45 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Δ h: 4.69 feet Volume of Standing Water: 3.79 gallons
 Volume to be removed: 9.14 gallons Actual Volume removed: 10.0 gallons

III. Sampling Information:

Purging Method:
 Peristaltic Pump Submersible Pump
 Bailer Other _____
 Well Drawdown/Recovery: Good Poor Other _____
 Purge Start Time: 8:50 Purge Time: 10 min. Pump Flow Rate: 1.0 gpm

Purge Chemistry:

Time	Gallons	pH (Std. Units)	Sp. Cond. (ms)	D. O. (ppm)	Temp. (°C)
8:57	5	6.0	420		18.0
9:00	10	6.4	250		17.1

Depth to water after purge: 7.02 ft. below m.p. Time: 9:05
 Depth to water prior to sampling: 6.94 ft. below m.p. Time: 9:18
 Sample Appearance: Turbid Slightly Turbid Clear Other
 Sample Odor: None Other

IV. Sample Analyses:

Sample Parameters: Methylene chloride, Acetone, Butyl Alcohol, BOD, COD, TOC, Cl, Total Phosphorus, BN Metals:
 Filtered Unfiltered
 Laboratory: Accutest Date Shipped: 6/25/98

854820338

WELL SAMPLING LOG	Eder Associates 227 Wall Street Princeton, New Jersey 08540 (609) 279-9140 (Telephone) (609) 279-9436 (Facsimile)	OFFICES: New York Wisconsin Michigan Georgia Florida New Jersey
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I. General Information:

Client Name: Biocraft Laboratories, Inc.

Project No.: 34906.000

Project Name: Biocraft - GW

Sampled By: DG/NB

Well No.: MW-24

Well Use: Monitoring

Sample ID: BIO-MW-24

Sample Date: 6/25/98

Sample Time: 15:00

BIO-MWD

II. Well Information:

PID Reading: -

Well Diameter: 2 inches

Static Depth to Water: 5.26 ft. below m.p.

Measuring Point (m.p.): PVC Casing

Total Well Depth: 13.08 ft. below m.p.

Measuring Point (m.p.): PVC Casing

Δ h: 7.82 feet

Volume of Standing Water: 1.25 gallons

Volume to be removed: 3.75 gallons

Actual Volume removed: 4.0 gallons

III. Sampling Information:

Purging Method:

Peristaltic Pump

Submersible Pump

Bailer

Other _____

Well Drawdown/Recovery:

Good

Poor

Other _____

Purge Start Time: 12:49

Purge Time: 128 min.

Pump Flow Rate: 0.016 gpm

Purge Chemistry:

Time	Gallons	pH (Std. Units)	Sp. Cond. (ms)	D. O. (ppm)	Temp. (°C)
13:45	2	8.0	140		21.1

Depth to water after purge: 13.08 ft. below m.p.

Time: 14:57

Depth to water prior to sampling: 11.71 ft. below m.p.

Time: 14:59

Sample Appearance: Turbid

Slightly Turbid

Clear

Other _____

Sample Odor: None

Other

IV. Sample Analyses:

Sample Parameters: Methylene chloride, Acetone, Butyl Alcohol, BOD, COD, TOC, Cl, Total Phosphorus, BN Metals:

Filtered

Unfiltered

Laboratory: Accutest

Date Shipped: 6/25/98

854820339

WELL SAMPLING LOG	Eder Associates 227 Wall Street Princeton, New Jersey 08540 (609) 279-9140 (Telephone) (609) 279-9436 (Facsimile)	OFFICES: New York Wisconsin Michigan Georgia Florida New Jersey
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I. General Information:

Client Name: Biocraft Laboratories, Inc. Project No.: 34906.000
 Project Name: Biocraft - GW Sampled By: DG/NB
 Well No.: MW-25 Well Use: Monitoring
 Sample ID: BIO-MW-25 Sample Date: 6/25/98 Sample Time: 14:10

II. Well Information:

PID Reading: - Well Diameter: 2 inches
 Static Depth to Water: 5.36 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Total Well Depth: 10.00 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Δ h: 4.64 feet Volume of Standing Water: 0.74 gallons
 Volume to be removed: 2.22 gallons Actual Volume removed: 2.5 gallons

III. Sampling Information:

Purging Method:
 Peristaltic Pump Submersible Pump
 Bailer Other _____
 Well Drawdown/Recovery: Good Poor Other _____
 Purge Start Time: 13:30 Purge Time: 35 min. Pump Flow Rate: 0.07 gpm

Purge Chemistry:

Time	Gallons	pH (Std. Units)	Sp. Cond. (ms)	D. O. (ppm)	Temp. (°C)
13:47	1	7.4	190		19.3

Depth to water after purge: Well went dry Time: 14:05
 Depth to water prior to sampling: 8.65 ft. below m.p. Time: 14:09
 Sample Appearance: Turbid Slightly Turbid Clear Other _____
 Sample Odor: None Other _____

IV. Sample Analyses:

Sample Parameters: Methylene chloride, Acetone, Butyl Alcohol, BOD, COD, TOC, Cl, Total Phosphorus, BN
 Metals: Filtered Unfiltered
 Laboratory: Accutest Date Shipped: 6/25/98

854820340

WELL SAMPLING LOG	Eder Associates 227 Wall Street Princeton, New Jersey 08540 (609) 279-9140 (Telephone) (609) 279-9436 (Facsimile)	OFFICES: New York Wisconsin Michigan Georgia Florida New Jersey
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I. General Information:

Client Name: Biocraft Laboratories, Inc. Project No.: 34906.000
 Project Name: Biocraft - GW Sampled By: DG/NB
 Well No.: MW-28 Well Use: Monitoring
 Sample ID: BIO-MW-28 Sample Date: 6/25/98 Sample Time: 13:00

II. Well Information:

PID Reading: - Well Diameter: 1.5 inches
 Static Depth to Water: 3.06 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Total Well Depth: 8.15 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Δ h: 5.09 feet Volume of Standing Water: 0.46 gallons
 Volume to be removed: 1.4 gallons Actual Volume removed: 1.4 gallons

III. Sampling Information:

Purging Method:
 Peristaltic Pump Submersible Pump
 Bailer Other _____
 Well Drawdown/Recovery: Good Poor Other _____
 Purge Start Time: 12:25 Purge Time: 22 min. Pump Flow Rate: 0.06 gpm

Purge Chemistry:

Time	Gallons	pH (Std. Units)	Sp. Cond. (ms)	D. O. (ppm)	Temp. (°C)
12:46	1	7.1	200		23.8

Depth to water after purge: 6.05 ft. below m.p. Time: 12:47
 Depth to water prior to sampling: 3.29 ft. below m.p. Time: 12:58
 Sample Appearance: Turbid Slightly Turbid Clear Other
 Sample Odor: None Other Hydrogen sulphide

IV. Sample Analyses:

Sample Parameters: Methylene chloride, Acetone, Butyl Alcohol, BOD, COD, TOC, Cl, Total Phosphorus, BN Metals:
 Filtered Unfiltered
 Laboratory: Accutest Date Shipped: 6/25/98

854820341

WELL SAMPLING LOG	Eder Associates 227 Wall Street Princeton, New Jersey 08540 (609) 279-9140 (Telephone) (609) 279-9436 (Facsimile)	OFFICES: New York Wisconsin Michigan Georgia Florida New Jersey
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I. General Information:

Client Name: Biocraft Laboratories, Inc.

Project No.: 34906.000

Project Name: Biocraft - GW

Sampled By: DG/NB

Well No.: MW-42

Well Use: Monitoring

Sample ID: BIO-MW-42

Sample Date: 6/26/98

Sample Time: 9:45

II. Well Information:

PID Reading: -

Well Diameter: 2 inches

Static Depth to Water: 3.41 ft. below m.p.

Measuring Point (m.p.): PVC Casing

Total Well Depth: 15.55 ft. below m.p.

Measuring Point (m.p.): PVC Casing

Δ h: 12.14 feet

Volume of Standing Water: 1.94 gallons

Volume to be removed: 5.82 gallons

Actual Volume removed: 6.0 gallons

III. Sampling Information:

Purging Method:

Peristaltic Pump

Submersible Pump

Bailer

Other _____

Well Drawdown/Recovery:

Good

Poor

Other _____

Purge Start Time: 9:07

Purge Time: 32 min.

Pump Flow Rate: 0.18 gpm

Purge Chemistry:

Time	Gallons	pH (Std. Units)	Sp. Cond. (ms)	D. O. (ppm)	Temp. (°C)
9:23	3	7.2	100		13.8
9:39	6	7.2	190		13.3

Depth to water after purge: 14.66 ft. below m.p.

Time: 9:44

Depth to water prior to sampling: 14.66 ft. below m.p.

Time: 9:44

Sample Appearance: Turbid

Slightly Turbid

Clear

Other _____

Sample Odor: None

Other _____

IV. Sample Analyses:

Sample Parameters: Methylene chloride, Acetone, Butyl Alcohol, BOD, COD, TOC, Cl, Total Phosphorus, BN

Metals:

Filtered

Unfiltered

Laboratory: Accutest

Date Shipped: 6/26/98

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WELL SAMPLING LOG	Eder Associates 227 Wall Street Princeton, New Jersey 08540 (609) 279-9140 (Telephone) (609) 279-9436 (Facsimile)	OFFICES: New York Wisconsin Michigan Georgia Florida New Jersey
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I. General Information:

Client Name: Biocraft Laboratories, Inc. Project No.: 34906.000
 Project Name: Biocraft - GW Sampled By: DG/FA
 Well No.: MW-6 Well Use: Monitoring
 Sample ID: BIO-MW-6 Sample Date: 9/24/98 Sample Time: 14:15

II. Well Information:

PID Reading: - Well Diameter: 1.5 inches
 Static Depth to Water: 13.08 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Total Well Depth: 13.88 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Δ h: 0.8 feet Volume of Standing Water: 0.07 gallons
 Volume to be removed: 0.21 gallons Actual Volume removed: 0.25 gallons

III. Sampling Information:

Purging Method:
 Peristaltic Pump Submersible Pump
 Bailer Other _____
 Well Drawdown/Recovery: Good Poor Other _____
 Pump Flow Rate: _____ gpm Purge Time: _____ min.

Purge Chemistry:

Time	Gallons	pH (Std. Units)	Sp. Cond. (ms)	D. O. (ppm)	Temp. (°C)
14:00	0.25	6.4	500		23.0

Depth to water after purge: 13.85 ft. below m.p. Time: 14:05
 Depth to water prior to sampling: _____ ft. below m.p. Time: _____
 Sample Appearance: Turbid Slightly Turbid Clear Other _____
 Sample Odor: None Other _____

IV. Sample Analyses:

Sample Parameters: Methylene Chloride, Acetone, Butyl Alcohol, BOD, COD, TOC, Cl, Total Phosphorus, BN
 Metals: Filtered Unfiltered
 Laboratory: Accutest Date Shipped: 9/25/98

854820343

WELL SAMPLING LOG	Eder Associates 227 Wall Street Princeton, New Jersey 08540 (609) 279-9140 (Telephone) (609) 279-9436 (Facsimile)	OFFICES: New York Wisconsin Michigan Georgia Florida New Jersey
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I. General Information:

Client Name: Biocraft Laboratories, Inc. Project No.: 34906.000
 Project Name: Biocraft - GW Sampled By: DG/FA
 Well No.: MW-9 Well Use: Monitoring
 Sample ID: BIO-MW-9 Sample Date: 9/24/98 Sample Time: 11:05

II. Well Information:

PID Reading: - Well Diameter: 1 inches
 Static Depth to Water: 6.81 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Total Well Depth: 11.60 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Δ h: 4.79 feet Volume of Standing Water: 0.19 gallons
 Volume to be removed: 0.57 gallons Actual Volume removed: 0.9 gallons

III. Sampling Information:

Purging Method:
 Peristaltic Pump Submersible Pump
 Bailer Other _____
 Well Drawdown/Recovery: Good Poor Other _____
 Purge Start Time: 10:26 Purge Time: 32 min. Pump Flow Rate: 0.028 gpm

Purge Chemistry:

Time	Gallons	pH (Std. Units)	Sp. Cond. (ms)	D. O. (ppm)	Temp. (°C)
10:45	0.5	6.2	275		22.4

Depth to water after purge: 9.25 ft. below m.p. Time: 10:58
 Depth to water prior to sampling: 9.25 ft. below m.p. Time: 11:02
 Sample Appearance: Turbid Slightly Turbid Clear Other _____
 Sample Odor: None Other Hydrogen sulphide

IV. Sample Analyses:

Sample Parameters: Methylene chloride, Acetone, Butyl Alcohol, BOD, COD, TOC, Cl, Total Phosphorus, BN Metals:
 Filtered Unfiltered
 Laboratory: Accutest Date Shipped: 9/25/98

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WELL SAMPLING LOG	Eder Associates 227 Wall Street Princeton, New Jersey 08540 (609) 279-9140 (Telephone) (609) 279-9436 (Facsimile)	OFFICES: New York Wisconsin Michigan Georgia Florida New Jersey
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I. General Information:

Client Name: Biocraft Laboratories, Inc. Project No.: 34906.000
 Project Name: Biocraft - GW Sampled By: DG/FA
 Well No.: MW-17 Well Use: Monitoring
 Sample ID: BIO-MW-17 Sample Date: 9/24/98 Sample Time: 9:55

II. Well Information:

PID Reading: - Well Diameter: 4 inches
 Static Depth to Water: 7.85 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Total Well Depth: 10.41 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Δ h: 2.6 feet Volume of Standing Water: 1.69 gallons
 Volume to be removed: 5.07 gallons Actual Volume removed: 5.0 gallons

III. Sampling Information:

Purging Method:
 Peristaltic Pump Submersible Pump
 Bailer Other _____
 Well Drawdown/Recovery: Good Poor Other _____
 Purge Start Time: 9:30 Purge Time: 5 min. Pump Flow Rate: 1.0 gpm

Purge Chemistry:

Time	Gallons	pH (Std. Units)	Sp. Cond. (ms)	D. O. (ppm)	Temp. (°C)
9:35	5	5.8	375		20.3

Depth to water after purge: 8.02 ft. below m.p. Time: 9:40
 Depth to water prior to sampling: 8.02 ft. below m.p. Time: 9:50
 Sample Appearance: Turbid Slightly Turbid Clear Other Turbid at bottom of bailer
 Sample Odor: None Other Hydrogen sulphide

IV. Sample Analyses:

Sample Parameters: Methylene chloride, Acetone, Butyl Alcohol, BOD, COD, TOC, Cl, Total Phosphorus, BN Metals:
 Filtered Unfiltered

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WELL SAMPLING LOG	Eder Associates 227 Wall Street Princeton, New Jersey 08540 (609) 279-9140 (Telephone) (609) 279-9436 (Facsimile)	OFFICES: New York Wisconsin Michigan Georgia Florida New Jersey
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I. General Information:

Client Name: Biocraft Laboratories, Inc.

Project No.: 34906.000

Project Name: Biocraft - GW

Sampled By: DG/FA

Well No.: MW-24

Well Use: Monitoring

Sample ID: BIO-MW-24

Sample Date: 9/24/98

Sample Time: 16:50

BIO-MWD

II. Well Information:

PID Reading: -

Well Diameter: 2 inches

Static Depth to Water: 9.01 ft. below m.p.

Measuring Point (m.p.): PVC Casing

Total Well Depth: 13.05 ft. below m.p.

Measuring Point (m.p.): PVC Casing

Δ h: 4.04 feet

Volume of Standing Water: 0.64 gallons

Volume to be removed: 1.93 gallons

Actual Volume removed: 2.0 gallons

III. Sampling Information:

Purging Method:

Peristaltic Pump

Submersible Pump

Bailer

Other

Well Drawdown/Recovery:

Good

Poor

Other

Purge Start Time: 14:39

Purge Time: 129 min.

Pump Flow Rate: 0.016 gpm

Purge Chemistry:

Time	Gallons	pH (Std. Units)	Sp. Cond. (ms)	D. O. (ppm)	Temp. (°C)
15:10	1	6.8	300		23.3

Depth to water after purge: 12.71 ft. below m.p.

Time: 16:48

Depth to water prior to sampling: 12.71 ft. below m.p.

Time: 16:49

Sample Appearance: Turbid

Slightly Turbid

Clear

Other

Sample Odor: None

Other Hydrogen

sulphide

IV. Sample Analyses:

Sample Parameters: Methylene chloride, Acetone, Butyl Alcohol, BOD, COD, TOC, Cl, Total Phosphorus, BN

Metals:

Filtered

Unfiltered

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WELL SAMPLING LOG	Eder Associates 227 Wall Street Princeton, New Jersey 08540 (609) 279-9140 (Telephone) (609) 279-9436 (Facsimile)	OFFICES: New York Wisconsin Michigan Georgia Florida New Jersey
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I. General Information:

Client Name: Biocraft Laboratories, Inc. Project No.: 34906.000
 Project Name: Biocraft - GW Sampled By: DG/FA
 Well No.: MW-25 Well Use: Monitoring
 Sample ID: BIO-MW-25 Sample Date: 9/25/98 Sample Time: 11:17

II. Well Information:

PID Reading: - Well Diameter: 2 inches
 Static Depth to Water: 8.97 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Total Well Depth: 10.00 ft. below m.p. Measuring Point (m.p.): PVC Casing
 Δ h: 1.03 feet Volume of Standing Water: 0.16 gallons
 Volume to be removed: 0.5 gallons Actual Volume removed: 0.5 gallons

III. Sampling Information:

Purging Method:
 Peristaltic Pump Submersible Pump
 Bailer Other

Well Drawdown/Recovery: Good Poor Other

Purge Start Time: 9:17 Purge Time: 113 min. Pump Flow Rate: 0.004 gpm

Purge Chemistry:

Time	Gallons	pH (Std. Units)	Sp. Cond. (ms)	D. O. (ppm)	Temp. (°C)
11:10	0.5	7.4	425		21.5

Depth to water after purge: Well went dry Time: 11:12
 Depth to water prior to sampling: _____ ft. below m.p. Time:

Sample Appearance: Turbid Slightly Turbid Clear Other

Sample Odor: None Other Hydrogen sulphide

IV. Sample Analyses:

Sample Parameters: Methylene chloride, Acetone, Butyl Alcohol, BOD, COD, TOC, Cl, Total Phosphorus, BN
 Metals: Filtered Unfiltered

Laboratory: Accutest Date Shipped: 9/25/98

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WELL SAMPLING LOG	Eder Associates 227 Wall Street Princeton, New Jersey 08540 (609) 279-9140 (Telephone) (609) 279-9436 (Facsimile)	OFFICES: New York Wisconsin Michigan Georgia Florida New Jersey
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I. General Information:

Client Name: Biocraft Laboratories, Inc.

Project No.: 34906.000

Project Name: Biocraft - GW

Sampled By: DG/FA

Well No.: MW-42

Well Use: Monitoring

Sample ID: BIO-MW-42

Sample Date: 9/25/98

Sample Time: 10:20

BIO-MS, BIO-MSD

II. Well Information:

PID Reading: -

Well Diameter: 2 inches

Static Depth to Water: 6.93 ft. below m.p.

Measuring Point (m.p.): PVC Casing

Total Well Depth: 15.55 ft. below m.p.

Measuring Point (m.p.): PVC Casing

Δ h: 8.6 feet

Volume of Standing Water: 1.37 gallons

Volume to be removed: 4.12 gallons

Actual Volume removed: 4.2 gallons

III. Sampling Information:

Purging Method:

Peristaltic Pump

Submersible Pump

Bailer

Other

Well Drawdown/Recovery:

Good

Poor

Other

Purge Start Time: 9:21

Purge Time: 58 min.

Pump Flow Rate: 0.072 gpm

Purge Chemistry:

Time	Gallons	pH (Std. Units)	Sp. Cond. (ms)	D. O. (ppm)	Temp. (°C)
9:49	2	7.1	750		14.2

Depth to water after purge: 14.75 ft. below m.p.

Time: 10:19

Depth to water prior to sampling: 14.75 ft. below m.p.

Time: 10:19

Sample Appearance: Turbid

Slightly Turbid

Clear

Other

Sample Odor: None

Other

IV. Sample Analyses:

Sample Parameters: Methylene chloride, Acetone, Butyl Alcohol, BOD, COD, TOC, Cl, Total Phosphorus, BN Metals:

Filtered

Unfiltered

Laboratory: Accutest

Date Shipped: 9/25/98

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APPENDIX C

854820349

APPENDIX C

BRUCE BRIGHT AFFIDAVIT

854820350

AFFIDAVIT OF BRUCE BRIGHT

STATE OF NEW JERSEY)
)
COUNTY OF BERGEN)

Bruce Bright, being duly sworn, deposes and says:

1. I am currently the Site Manager at Teva Pharmaceuticals USA, Inc. ("Teva"), formerly known as Biocraft Laboratories, Inc ("Biocraft"). I have been employed at Biocraft's Waldwick, New Jersey plant since 1975 in a variety of capacities, including lead operator, supervisor, safety director, warehouse manager and production manager. I have personal knowledge of the facts set forth herein.
2. This Affidavit is submitted to the New Jersey Department of Environmental Protection ("NJDEP") in support of Biocraft's position that no discharge was made to the soils or groundwater at Biocraft's Waldwick facility as a result of two spills of hydrochloric acid on December 13, 1993 (Spill Case No. 93-12-13-1607-57) and February 24, 1994 (Spill Case No. 94-02-24-1623-01) respectively.
3. In or about the mid 1980's, Biocraft's Waldwick, New Jersey facility installed a 6000 gallon single wall fiberglass above ground tank for the storage of hydrochloric acid. Hydrochloric acid was used by the facility in the pharmaceutical manufacturing process. This above ground tank was located behind the manufacturing building on a concrete surface and was secondarily contained within a concrete diked area. Surrounding the concrete secondary containment diked area was and still is an asphalt paved parking area.
4. On December 13, 1993 approximately 50 gallons of hydrochloric acid spilled from the above ground tank as a result of a broken flange on the tank. The hydrochloric acid spilled within the secondary containment area onto the concrete paved surface. Although a small amount of the hydrochloric acid breached the secondary containment area through a small crack in the wall of the concrete dike, all of the spilled hydrochloric acid was fully contained within the secondary containment area or on the asphalt paved surface immediately outside the concrete diked area. At the time of this spill and at all times thereafter, the concrete surface underneath the tank and the asphalt paved surface were in good condition with no evidence of deterioration.
5. On February 24, 1994 hydrochloric acid spilled from the above ground tank as a result of a broken valve on the tank. Hydrochloric acid spilled onto the concrete

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paved surface within the secondary containment area. Although a small amount of the hydrochloric acid breached the secondary containment area through a small crack in the wall of the concrete dike, all of the spilled hydrochloric acid was fully contained within the secondary containment area or on the asphalt paved surface immediately outside the concrete diked area. At the time of this spill and at all times thereafter, both the concrete paved surface underneath the hydrochloric acid tank unit and the asphalt paved surface were in good condition with no evidence of deterioration.

6. Accordingly, there is no reason to believe that our soils were impacted and there is no basis for requiring any investigation of the soils under, adjacent to or in the immediate vicinity of the hydrochloric acid tank at Biocraft's Waldwick, New Jersey facility.


Bruce Bright

Sworn to and Subscribed Before Me on this
^{24th} date of November __, 1998.


Notary Public

SHARON M. MULLIGAN
NOTARY PUBLIC OF NEW JERSEY
My Commission Expires May 24, 2000

854820352

6/30/00

ENVIRONMENTAL

STRATEGIES CORPORATION



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ENVIRONMENTAL

STRATEGIES CORPORATION

**REMEDIAL INVESTIGATION REPORT
TEVA PHARMACEUTICALS USA, INC.
12 INDUSTRIAL PARK
WALDWICK, NEW JERSEY
ISRA CASE #E96070**



854820354



ENVIRONMENTAL STRATEGIES CORPORATION

DOING BUSINESS IN NEW JERSEY AS ESC STRATEGIES CORPORATION

270 Davidson Avenue, Suite 102 • Somerset, New Jersey 08873 • (732) 564-0888 • Fax (732) 564-1888

**REMEDIAL INVESTIGATION REPORT
TEVA PHARMACEUTICALS USA, INC.
12 INDUSTRIAL PARK
WALDWICK, NEW JERSEY
ISRA CASE #E96070**

**PREPARED FOR
PROSKAUER ROSE LLP
AND
TEVA PHARMACEUTICALS USA, INC.**

**PREPARED
BY
ENVIRONMENTAL STRATEGIES CORPORATION**

JUNE 30, 2000

854820355

Reston, VA • San Jose, CA • Boxborough, MA • Pittsburgh, PA • Minneapolis, MN • Houston, TX • Cazenovia, NY • Burbank, CA • Durham, NC • Tulsa, OK

TIERRA-B-009349

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Executive Summary

This Remedial Investigation Report (RIR) summarizes the soil, sediment, and groundwater investigations conducted to satisfy the New Jersey Department of Environmental Protection (NJDEP) Industrial Site Recovery Act (ISRA) requirements. ISRA was triggered in 1996 when Teva purchased Biocraft Laboratories (ISRA Case #96070). Teva filed a Remediation in Progress Waiver for the continued operation of a groundwater remediation system. Teva stopped manufacturing products at the Waldwick facility in 1997 and facility closure (including removal of process equipment, cleaning tanks and lines, and general housekeeping cleanup) have been conducted since that time.

Remedial Investigation Findings

Sixteen groundwater monitoring rounds have been conducted under the ISRA program. Groundwater sampling indicates that the highest concentrations of methylene chloride and acetone are in the southern area of the property (P-30 and P-32A/B), that the extent and concentrations of VOCs, aniline, and dimethyl aniline have been reduced significantly from concentrations existing prior to biodegradation/biostimulation system, and that there is no off site migration or vertical migration of groundwater contaminants. Continued groundwater monitoring and operation of the biodegradation/biostimulation system is proposed.

Soil sampling conducted at the former methylene chloride vessel area, the northeast and south drum pads, former underground chemical storage tank area, and underground fuel oil tank area indicated that no individual VOC+10, BN+15, or TPH compound exceeded the applicable most stringent soil cleanup criteria. No additional soil investigation or remediation is proposed or warranted.

Sediment sampling indicates that Allendale Brook sediment quality was not affected by the former underground waste water line discharge. No additional sediment investigation or remediation is proposed or warranted.

1.0 INTRODUCTION

This Remedial Investigation Report (RIR) summarizes the soil, sediment, and groundwater investigations conducted between November 1999 and May 2000, and the groundwater monitoring conducted in December 1998, April 1999, August 1999, December 1999, and April 2000 at the Teva Pharmaceuticals USA, Inc. (Teva) (formerly known as Biocraft Laboratories, Inc.) property in Waldwick, New Jersey. The work conducted also addressed the letters of the New Jersey Department of Environmental Protection (NJDEP) dated July 1, 1998 and May 28, 1999 and is consistent with our discussions with NJDEP during the April 18, 1996 meeting.

2.0 SITE DESCRIPTION

Teva formerly manufactured semi-synthetic penicillin products in bulk at its Waldwick, New Jersey facility. The facility consists of two buildings, the former manufacturing building and warehouse, located on contiguous properties with frontages on 12 Industrial Park and 140 Hopper Avenue in Waldwick, Bergen County, New Jersey. The manufacturing and warehouse buildings and parking areas cover approximately 30 percent of the 4.3 acre property. Landscaped areas cover approximately 10 percent of the property, and the remainder of the property is lightly wooded. The property is relatively flat with slopes ranging from 1 to 3 percent.

The office, maintenance, and production areas, and research and development laboratories were located in the manufacturing building. Finished bulk products and some raw materials were stored in the warehouse building which also housed the quality control and microbiology laboratories.

ISRA was triggered in 1996 when Teva purchased Biocraft Laboratories. Teva filed a Remediation in Progress Waiver for the continued operation of a groundwater remediation system. Teva stopped manufacturing products at the Waldwick facility in 1997 and facility closure (including removal of process equipment, cleaning tanks and lines, and general housekeeping cleanup) have been conducted since that time.

The manufacturing building is currently vacant with no operations or storage of materials. All former process lines and tanks have been rinsed with potable water and the rinse water disposed of off site. All vaulted tank fill pipes and supply lines have been sealed with blank flanges. The quality control and microbiology laboratories still operate at the warehouse building. However, the volume of finished product stored in the warehouse has been significantly reduced.

3.0 PHYSICAL SETTING

3.1 Soil

The dominant soil type in the study area is classified as Dunellen. Dunellen soils have a very dark, grayish brown loam surface layer approximately 5 inches thick. The subsoil is approximately 21 inches thick, of which, the upper 10 inches is friable, dark yellowish brown loam and the lower 11 inches is friable brown loam. The substratum is stratified reddish brown gravelly sand, sand, and loamy sand and brown sandy loam to an average depth of 66 inches. The permeability of the Dunellen soils is moderate to moderately rapid in the subsoil and rapid in the substratum.

3.2 Geology and Hydrogeology

The site is located in an area of unstratified and stratified drift deposited by the Wisconsin glacier and its meltwaters during the Pleistocene Epoch of the Quaternary Period. Thin layers of silt and gravel are generally found from grade to 3 feet below grade. Glacial till. Glacial till consisting of a poorly sorted mixture of boulders, cobbles, pebbles, silt, sand, and clay underlies the site at a thickness of 8 to 15 feet. Approximately 40 feet of silt and fine sand underlie the till layer. Brunswick shale of the Triassic Newark Group underlies the site at a depth of 50 to 60 feet below grade. The thickness of the Brunswick Shale is not known but is estimated to be greater than 6,000 feet.

Groundwater beneath the site occurs in void spaces of unconsolidated quaternary glacial sediments and in the joints and fractures of the Brunswick Formation. The depth to groundwater ranges from grade to 9 feet below grade, depending on seasonal fluctuations. The groundwater flow direction is influenced by the groundwater recovery, treatment, and reinjection system. The inferred direction of groundwater flow is to the north, northwest at the northern section of the site, and to the south, southeast in the central and southern sections of the site.

3.3 Site Specific Geology and Hydrogeology

A 100-foot long underground steel pipe was installed in 1972 to transfer wastewater from the manufacturing building processing area to an underground wastewater storage tank. The wastewater contained low concentrations of acetone, methylene chloride, n-butyl alcohol, and dimethyl aniline. Teva discovered a leak in the underground pipe in November 1975 and removed the pipe from service. Monitoring wells were installed and groundwater samples were collected and analyzed to determine whether the underground transfer line leak had impacted groundwater quality. The groundwater sampling showed elevated concentrations of methylene chloride, acetone, and butyl alcohol. The nature and extent of groundwater contamination at the Teva site has been documented in extensive groundwater investigations conducted by Geraghty and Miller (G&M) between 1979 and 1995, supplemented by the groundwater monitoring program initiated by Teva in 1985.

Teva pumped groundwater from three on-site recovery wells between 1975 and 1981 and disposed of the groundwater off-site. The cost of disposing of the recovered groundwater off-site became prohibitive and with NJDEP's approval, Teva undertook an extensive research and development project to develop a process to remove and treat groundwater. The research resulted in the development of a sophisticated biodegradation/biostimulation process which was patented in the U.S.

Teva initiated groundwater monitoring to evaluate the progress and effectiveness of the groundwater biodegradation/biostimulation system. This program consisted of sampling 11 wells quarterly and 26 wells annually, and analyzing the samples for methylene chloride, acetone, butyl alcohol, BOD, COD, TOC, chloride, and total phosphorous. The groundwater sampling shows that groundwater quality has improved. Groundwater elevation measurements and sampling data show that the zone of influence created by the recovery system maintains hydraulic control of the groundwater contaminant plume. The groundwater sampling data show that the highest concentrations of methylene chloride and acetone are in the southern area of the property and that these concentrations have been reduced significantly from concentrations existing prior to biodegradation/biostimulation system.

4.0 QUARTERLY GROUNDWATER MONITORING RESULTS

The quarterly groundwater monitoring results for December 1998, April 1999, August 1999, December 1999, and April 2000 are summarized in Sections 4.1 through 4.10. The laboratory reports are in Appendix A. Field sampling forms are in Appendix B. Analytical data are summarized in Tables I through 6. The monitoring well locations, analytical results, concentration isocontour maps, and groundwater flow maps are included as Figures 1 through 17.

4.1 Sample Collection and Analysis

All sampling activities were conducted in accordance with the New Jersey Department of Environmental Protection (NJDEP) Field Sampling Procedures Manual, May 1992, with the following exception:

- Due to a shipping company error the samples collected in July 1999 were lost in transit and arrived at the laboratory beyond the recommended holding time with many of the sample containers broken. Therefore, these samples were not analyzed and groundwater monitoring was conducted again in August 1999 and in December 1999.

The groundwater samples were analyzed by by Accutest Laboratories, Dayton, New Jersey (N.J. Certification #12129). All samples were analyzed within the required holding time and all parameters were within their respective quality control ranges, with the following exceptions:

- December 1998 - The spike amount for total phosphate was low relative to the sample amount for sample W-6.
- April 1999 - The matrix spike/matrix spike duplicate recovery was outside of the control

limits due to a matrix interference for acetone and methylene chloride for sample MW-9, and for acetone in samples Effluent, Field Blank, and Trip Blank.

- August 1999 - The matrix spike/matrix spike duplicate recovery exceeded the recovery criteria for methylene chloride analysis for sample P-32A/B. The matrix spike/matrix spike duplicate recovery exceeded the in-house control limits for aniline. The spike amount for total phosphate was low relative to the sample amount.
- December 2000 - The matrix spike/matrix spike duplicate recovery exceeded the in-house control limits for aniline.

4.2 Analytical Results Summary

Butyl alcohol concentrations in all monitoring well samples for the period February 1996 through April 2000 (16 sampling events) were less than the laboratory minimum detection limit or well below the 500 micrograms per liter ($\mu\text{g/l}$) Class IIA - Ground Water Quality Criteria.

Acetone concentrations were less than the laboratory minimum detection limit or less than the 700 $\mu\text{g/l}$ Class IIA Groundwater Quality Criteria in all monitoring well samples for the period February 1996 through April 2000.

Methylene chloride was detected at concentrations exceeding the 2 $\mu\text{g/l}$ Class IIA Ground Water Quality Criteria in the following samples for the period February 1996 through December 1998:

- MW-1 - 4.6 $\mu\text{g/l}$ (November 1996)
- MW-3 - 3.0 $\mu\text{g/l}$ (December 1998)
- MW-6 - 5.0 $\mu\text{g/l}$ (May 1996), 8.1 $\mu\text{g/l}$ (July 1996)
- MW-9 - 2.3 $\mu\text{g/l}$ (July 1996), 7.8 $\mu\text{g/l}$ (February 1997)

- MW-10 - 8.9 $\mu\text{g/l}$ (February 1996)
- MW-17 - 4.6 $\mu\text{g/l}$ (May 1996), 8.2 $\mu\text{g/l}$ (July 1996), 4.8 $\mu\text{g/l}$ (February 1997)
- MW-24 - 7.8 $\mu\text{g/l}$ (July 1996)
- MW-25 - 2.1 $\mu\text{g/l}$ (May 1996), 8.7 $\mu\text{g/l}$ (July 1996), 85.2 $\mu\text{g/l}$ (June 1998)
- MW-28 - 67 $\mu\text{g/l}$ (February 1996), 2.3 $\mu\text{g/l}$ (May 1996), 8.5 $\mu\text{g/l}$ (July 1996), 185 $\mu\text{g/l}$ (February 1997)
- MW-42 - 8.2 $\mu\text{g/l}$ (July 1996)

Methylene chloride was not detected at concentrations exceeding the laboratory minimum detection limit in any monitoring well sample collected during the period April 1999 through April 2000 (four monitoring events).

Analytical results of groundwater samples collected from off-site monitoring wells downgradient of the Teva groundwater recovery and treatment system show methylene chloride and butyl alcohol concentrations were below the laboratory minimum detection limit (MDL), and acetone concentrations were below the laboratory MDL or the Class IIA - Groundwater Quality Criteria. The analytical data suggests that the recovery system is capturing the full width of the groundwater contaminant plume.

Methylene chloride and butyl alcohol concentrations did not exceed the laboratory MDL in samples collected from the newly installed deep groundwater monitoring well (MW-45D). Acetone was detected at a concentration of 102 $\mu\text{g/l}$ which is well below the 700 $\mu\text{g/l}$ Class IIA Groundwater Quality Criteria. These data indicates that the groundwater quality in the bedrock aquifer has not been affected by former Teva operations.

4.3 December 1998 (Annual Sampling Event)

Samples were collected from 21 monitoring wells (MW-1, MW-2, MW-3, MW-6, MW-8, MW-9, MW-14, MW-17, MW-24, MW-25, MW-28, MW-31, MW-32, MW-33A, MW-42, W-1, W-2, W-3, W-4, W-5, and W-6) and analyzed for acetone, methylene chloride, butyl alcohol, aniline,

dimethyl aniline, COD, BOD, TOC, total phosphorous, and chloride. The December 1998 sampling event was conducted by Eder Associates. Unfortunately, field sampling logs and groundwater elevation data for this sampling event were not available to ESC.

Butyl alcohol concentrations in all groundwater samples did not exceed the 1.4 $\mu\text{g/l}$ laboratory MDL. Acetone concentrations ranged from less than the 5.0 $\mu\text{g/l}$ laboratory MDL to 32.9 $\mu\text{g/l}$ (MW-9) which is less than the 700 $\mu\text{g/l}$ Class IIA - Groundwater Quality Criteria. Except for sample MW-3, methylene chloride concentrations in all groundwater samples did not exceed the 0.61 $\mu\text{g/l}$ laboratory. Methylene chloride was detected in sample MW-3 at a concentration of 3.0 $\mu\text{g/l}$ which exceeds the 2 $\mu\text{g/l}$ Class IIA - Groundwater Quality Criteria. Aniline was detected at concentrations above the laboratory MDL in groundwater samples W-1 (2.3 $\mu\text{g/l}$) and W-3 (27.3 $\mu\text{g/l}$). Dimethyl aniline was detected at concentrations above the laboratory MDL in groundwater samples MW-28 (1.3 $\mu\text{g/l}$), MW-32 (6.4 $\mu\text{g/l}$), W-1 (4.5 $\mu\text{g/l}$), W-2 (4.0 $\mu\text{g/l}$), and W-3 (3.9 $\mu\text{g/l}$).

BOD concentrations ranged from less than 3 milligrams per liter (mg/l) to 143 mg/l (W-3). COD concentrations ranged from less than 20 mg/l to 172 mg/l (W-3). TOC concentrations ranged from 1.5 mg/l to 61.2 mg/l (W-3). Total phosphorous concentrations ranged from less than 0.1 mg/l to 2.0 mg/l (W-3). Chloride concentrations ranged from 34.2 mg/l to 328 mg/l (W-3).

4.4 April 1999

Samples were collected from seven monitoring wells (MW-6, MW-9, MW-17, MW-24, MW-25, MW-28, and MW-42) and analyzed for acetone, methylene chloride, butyl alcohol, aniline, dimethyl aniline, COD, BOD, TOC, total phosphorous, and chloride.

Butyl alcohol concentrations in all groundwater samples did not exceed the 3.5 $\mu\text{g/l}$ laboratory MDL. Except for sample MW-28, acetone concentrations in all groundwater samples did not exceed the 1.3 $\mu\text{g/l}$ laboratory MDL. Acetone was detected at a concentration of 36.7 $\mu\text{g/l}$ in a sample from MW-28, which is less than the 700 $\mu\text{g/l}$ Class IIA - Groundwater Quality Criteria. Methylene chloride concentrations in all groundwater samples did not exceed the 0.40 $\mu\text{g/l}$ laboratory MDL. Aniline concentrations in all groundwater samples did not exceed the 0.78 $\mu\text{g/l}$

laboratory MDL. Dimethyl aniline concentrations in all groundwater samples did not exceed the 5.0 $\mu\text{g/l}$ laboratory MDL.

BOD concentrations ranged from less than 2 mg/l to 10.9 mg/l (MW-28). COD concentrations ranged from less than 20 mg/l to 28.9 mg/l (MW-9). TOC concentrations ranged from 2.4 mg/l to 10.1 mg/l (MW-6). Total phosphorous concentrations ranged from less than 0.1 mg/l to 0.81 mg/l (MW-17). Chloride concentrations ranged from 8.5 mg/l to 217 mg/l (MW-17).

4.5 August 1999

Samples were collected from six monitoring wells (MW-6, MW-9, MW-17, MW-24, MW-28, and MW-42) and analyzed for acetone, methylene chloride, butyl alcohol, aniline, dimethyl aniline, COD, BOD, TOC, total phosphorous, and chloride. There was less than 2-inches of water in MW-25 (due to the extended dry period prior to sampling), therefore a groundwater sample could not be collected.

Butyl alcohol concentrations in all groundwater samples did not exceed the 3.5 $\mu\text{g/l}$ laboratory MDL. Except for samples MW-9 and MW-28, acetone concentrations in all groundwater samples did not exceed the 1.3 $\mu\text{g/l}$ laboratory MDL. Acetone was detected at concentrations of 22.4 $\mu\text{g/l}$ (MW-9) and 35.8 $\mu\text{g/l}$ (MW-28), which are less than the 700 $\mu\text{g/l}$ Class IIA - Groundwater Quality Criteria. Methylene chloride concentrations in all groundwater samples did not exceed the 0.40 $\mu\text{g/l}$ laboratory MDL. Aniline concentrations in all groundwater samples did not exceed the 0.80 $\mu\text{g/l}$ laboratory MDL. Dimethyl aniline concentrations in all groundwater samples did not exceed the 5.0 $\mu\text{g/l}$ laboratory MDL.

BOD concentrations ranged from less than 4.8 mg/l to 19.6 mg/l (MW-9). COD concentrations ranged from less than 20 mg/l to 112 mg/l (MW-28). TOC concentrations ranged from 4.8 mg/l to 11.9 mg/l (MW-17). Total phosphorous concentrations ranged from less than 0.1 mg/l to 3.3 mg/l (MW-6). Chloride concentrations ranged from 13.5 mg/l to 186 mg/l (MW-9).

4.6 December 1999 (Annual Monitoring Event)

Samples were collected from 11 monitoring wells (MW-1, MW-2, MW-6, MW-8, MW-17, MW-24, MW-25, MW-28, MW-31, MW-42, and W-2) and analyzed for acetone, methylene chloride, butyl alcohol, aniline, dimethyl aniline, COD, BOD, and TOC.

Butyl alcohol concentrations in all samples were below the 3.5 $\mu\text{g/l}$ laboratory MDL. Except for samples MW-31 and W-2, acetone concentrations in all groundwater samples did not exceed the 1.3 $\mu\text{g/l}$ laboratory MDL. Acetone was detected at concentrations of 5.8 $\mu\text{g/l}$ (MW-31) and 16.1 $\mu\text{g/l}$ (W-2), which are less than the 700 $\mu\text{g/l}$ Class IIA - Groundwater Quality Criteria. Methylene chloride concentrations in all groundwater samples did not exceed the 0.40 $\mu\text{g/l}$ laboratory MDL. Aniline concentrations in all groundwater samples did not exceed the laboratory MDL. Dimethyl aniline concentrations in all groundwater samples did not exceed the laboratory MDL.

BOD concentrations ranged from less than 2 mg/l to 17.1 mg/l (W-2). COD concentrations ranged from less than 20 mg/l to 34.2 mg/l (W-2). TOC concentrations ranged from 1.1 mg/l to 17.4 mg/l (MW-42).

4.7 April 2000

Samples were collected from seven on-site monitoring wells (MW-6A, MW-9A, MW-17, MW-24, MW-25, MW-28, and MW-42), two off-site monitoring wells (MW-43 and MW-44), and deep a monitoring well (MW-45D). The samples were analyzed for acetone, methylene chloride, butyl alcohol, aniline, dimethyl aniline, COD, BOD, and TOC.

Butyl alcohol concentrations in all samples were below the 3.5 $\mu\text{g/l}$ laboratory MDL. Except for samples MW-28 and MW-45D, acetone concentrations in all groundwater samples did not exceed the 1.3 $\mu\text{g/l}$ laboratory MDL. Acetone was detected at concentrations of 10.3 $\mu\text{g/l}$ (MW-28) and 102 $\mu\text{g/l}$ (MW-45D), which are less than the 700 $\mu\text{g/l}$ Class IIA - Groundwater Quality Criteria. Methylene chloride concentrations in all groundwater samples did not exceed the laboratory MDL. Aniline concentrations in all groundwater samples did not exceed the laboratory MDL. Dimethyl

aniline concentrations in all groundwater samples did not exceed the laboratory MDL.

BOD concentrations ranged from less than 2 mg/l to 6.9 mg/l (MW-45D). COD concentrations ranged from less than 20 mg/l to 31 mg/l (MW-45D). TOC concentrations ranged from 1.4 mg/l to 8.2 mg/l (MW-45D).

4.8 Groundwater Flow

Groundwater elevation contour maps developed from depth to water measurements made during the quarterly groundwater monitoring show that groundwater flow is to the north-northwest at the northern section of the site, and to the south-southeast in the central and southern sections of the site and that groundwater discharged to the recharge trench system flows downgradient towards the recovery well system.

5.0 BIODEGRADATION/BIOSTIMULATION SYSTEM

5.1 Biodegradation/Biostimulation System Description

The Teva groundwater biodegradation/biostimulation system was designed so that the treated groundwater is discharged upgradient and within the capture zone of the recovery well network. The biodegradation/biostimulation system consists of three recovery wells (P-13, P-30, and P-32A/32B), two infiltration trenches (Trench B and Trench C), and a biological treatment unit.

The biological treatment unit consists of two identical activated sludge units, ACT I and ACT II. Each unit consists of an aeration tank and a settling tank. Both systems are operated in parallel, with ACT I treating groundwater pumped from P-30, and ACT II treating groundwater pumped from P-13 and P-32A/32B. Groundwater enters the aeration tanks, and is aerated by a blower and diffuser which also keeps the tank contents mixed. Additional mixing is provided by internally pumping the tank contents. The aeration tank effluent is pumped to the settling tank to separate the bacteria from the water. The settled bacteria (sludge) is recycled to the aeration tank to keep bacteria concentrations in the system high enough to remove organic compounds. The biodegradation/biostimulation system effluent (treated groundwater) is discharged to two recharge trenches upgradient of recovery wells P-30 and P-32A/32B. The maximum system flowrate is 8 gallons per minute (gpm).

5.2 System Operation

Teva's treatment system operations are maintained by a Teva employee who has operated the system for approximately 10 years. Teva prepared and submitted a NJPDES-Discharge to Groundwater permit application in December 1997. NJDEP indicated that a revised NJPDES permit application should be submitted after completing off site and vertical groundwater delineation. Upon NJDEP issuance of the NJPDES permit (a revised NJPDES application is included in Appendix C), it is anticipated that a licensed operator will oversee the treatment system operation, supervise Teva's treatment system operator, and will be responsible for the record keeping required by the NJPDES

permit.

Recovery wells P-13 and P-32A/B have been off line several weeks over the past 12 months for system maintenance (pump bearings needed to be replaced and several lines froze and burst during the winter). The system will be periodically shut down for several days over the next three months for additional repairs and reconfiguration (as to be expected with a system that is over 20 years old). The necessary repairs include: repair/replacement of rusted pipe and pipe fittings, insulating and heat tracing aboveground lines, and upgrading electrical systems. An inline sediment filter and activated carbon canisters will be added to treat the effluent from the settling tank before discharging the treated groundwater to the infiltration trenches. It is not expected that these short duration repairs will affect groundwater quality downgradient of the recovery wells.

5.3 Biodegradation/Biostimulation System Monitoring

Biodegradation/biostimulation system influent samples are collected from the three recovery wells, P-13, P-30, and P-32A/32B, and the effluent sample is collected from the discharge side of the settling tank. The laboratory reports are in Appendix A. Analytical data are summarized in Table 7.

5.3.1 December 1998

The influent and effluent samples are analyzed for acetone, methylene chloride, butyl alcohol, aniline, dimethyl aniline, COD, BOD, TOC, total phosphorous, and chloride. Influent acetone concentrations were 14.4 $\mu\text{g/l}$ (P-13), 66.3 $\mu\text{g/l}$ (P-30), and 3,810 $\mu\text{g/l}$ (P-32A/32B). Influent methylene chloride concentrations were less than 0.61 $\mu\text{g/l}$ (P-13), 2.0 $\mu\text{g/l}$ (P-30), and 29,500 $\mu\text{g/l}$ (P-32A/32B). Influent butyl alcohol concentrations were less than the laboratory MDL (which was less than the 700 $\mu\text{g/l}$ Class IIA- Groundwater Quality Criteria). Influent aniline concentrations were less than 0.85 $\mu\text{g/l}$ (P-13), and 64.3 $\mu\text{g/l}$ (P-30), and 393 $\mu\text{g/l}$ (P-32A/32B). Influent dimethyl aniline concentrations were less than 5.4 $\mu\text{g/l}$ (P-13), 3.6 $\mu\text{g/l}$ (P-30), and 154 $\mu\text{g/l}$

(P-32A/32B).

BOD concentrations were 11.0 mg/l (P-13), less than 3.0 mg/l (P-30), and 58.0 mg/l (P-32A/32B). COD concentrations were 51.2 mg/l (P-13), 28.2 mg/l (P-30), and 156.0 mg/l (P-32A/32B). TOC concentrations were 8.6 mg/l (P-13), 11.1 mg/l (P-30), and 42.2 mg/l (P-32A/32B). Total phosphorous concentrations were 10.5 mg/l (P-13), 1.4 mg/l (P-30), and 2.0 mg/l (P-32A/32B). Chloride concentrations were 254 mg/l (P-13), 266 mg/l (P-30), and 304 mg/l (P-32A/32B).

The effluent sample was collected from the discharge side of the settling tank. The effluent acetone concentration was 34.9 $\mu\text{g/l}$. The effluent methylene chloride concentration was 216 $\mu\text{g/l}$. The effluent butyl alcohol concentration was less than the 1.4 $\mu\text{g/l}$ laboratory MDL. The effluent aniline concentration was less than 0.78 $\mu\text{g/l}$. The effluent dimethyl aniline concentration was less than 5 $\mu\text{g/l}$. The BOD concentration was less than 3.0 mg/l. The COD concentration was 20.5 mg/l. The TOC concentration was 6.5 mg/l. Total phosphorous concentration was 0.56 mg/l. Chloride concentration was 321 mg/l.

5.3.2 April 1999

The influent and effluent samples are analyzed for acetone, methylene chloride, butyl alcohol, aniline, dimethyl aniline, COD, BOD, TOC, total phosphorous, and chloride. Influent acetone concentrations were 35.5 $\mu\text{g/l}$ (P-13), less than 1.3 $\mu\text{g/l}$ (P-30), and 667 $\mu\text{g/l}$ (P-32A/32B). Influent methylene chloride concentrations were less than 0.40 $\mu\text{g/l}$ (P-13), less than 0.40 $\mu\text{g/l}$ (P-30), and 1,550 $\mu\text{g/l}$ (P-32A/32B). Influent butyl alcohol concentrations were less than the laboratory MDL (which was less than the 700 $\mu\text{g/l}$ Class IIA- Groundwater Quality Criteria). Influent aniline concentrations were less than 0.82 $\mu\text{g/l}$ (P-13), less than 0.80 $\mu\text{g/l}$ (P-30), and 81.6 $\mu\text{g/l}$ (P-32A/32B). Influent dimethyl aniline concentrations were 1.1 $\mu\text{g/l}$ (P-13), less than 5.1 $\mu\text{g/l}$ (P-30), and 64.0 $\mu\text{g/l}$ (P-32A/32B).

BOD concentrations were 6.9 mg/l (P-13), less than 2.0 mg/l (P-30), and 16.3 mg/l (P-32A/32B). COD concentrations were less than 20 mg/l (P-13), less than 20 mg/l (P-30), and 25.3

mg/l (P-32A/32B). TOC concentrations were 9.7 mg/l (P-13), 6.6 mg/l (P-30), and 12.6 mg/l (P-32A/32B). Total phosphorous concentrations were 0.21 mg/l (P-13), 0.43 mg/l (P-30), and 0.81 mg/l (P-32A/32B). Chloride concentrations were 240 mg/l (P-13), 129 mg/l (P-30), and 218 mg/l (P-32A/32B).

The effluent sample was collected from the discharge side of the settling tank. The effluent acetone concentration was 47.4 $\mu\text{g/l}$. The effluent methylene chloride concentration was 11.3 $\mu\text{g/l}$. The effluent butyl alcohol concentration was less than the 3.5 $\mu\text{g/l}$ laboratory MDL. The effluent aniline concentration was less than 0.83 $\mu\text{g/l}$. The effluent dimethyl aniline concentration was less than 5.3 $\mu\text{g/l}$. The BOD concentration was 4.7 mg/l. The COD concentration was less than 20 mg/l. The TOC concentration was 6.2 mg/l. Total phosphorous concentration was 0.2 mg/l. Chloride concentration was 230 mg/l.

5.3.3 August 1999

The influent and effluent samples are analyzed for acetone, methylene chloride, butyl alcohol, aniline, dimethyl aniline, COD, BOD, TOC, total phosphorous, and chloride. Recovery well P-13 was out of service for repairs and was not sampled. Influent acetone concentrations were 35.1 $\mu\text{g/l}$ (P-30) and 3,100 $\mu\text{g/l}$ (P-32A/32B). Influent methylene chloride concentrations were less than 0.40 $\mu\text{g/l}$ (P-30) and 29,500 $\mu\text{g/l}$ (P-32A/32B). Influent butyl alcohol concentrations were less than the laboratory MDL (which was less than the 700 $\mu\text{g/l}$ Class IIA- Groundwater Quality Criteria). Influent aniline concentrations were 3.2 $\mu\text{g/l}$ (P-30) and 302 $\mu\text{g/l}$ (P-32A/32B). Influent dimethyl aniline concentrations were 3.7 $\mu\text{g/l}$ (P-30) and 241 $\mu\text{g/l}$ (P-32A/32B).

BOD concentrations were less than 7.2 mg/l (P-30) and 40.8 mg/l (P-32A/32B). COD concentrations were 32.5 mg/l (P-30) and 108 mg/l (P-32A/32B). TOC concentrations were 8.3 mg/l (P-30) and 27.9 mg/l (P-32A/32B). Total phosphorous concentrations were 1.3 mg/l (P-30) and 1.7 mg/l (P-32A/32B). Chloride concentrations were 351 mg/l (P-30) and 285 mg/l (P-32A/32B).

The effluent sample was collected from the discharge side of the settling tank. The effluent acetone concentration was 49.7 $\mu\text{g/l}$. The effluent methylene chloride concentration was 2.3 $\mu\text{g/l}$.

The effluent butyl alcohol concentration was less than the 3.5 $\mu\text{g/l}$ laboratory MDL. The effluent aniline concentration was less than 0.78 $\mu\text{g/l}$. The effluent dimethyl aniline concentration was less than 5 $\mu\text{g/l}$. The BOD concentration was 29.4 mg/l . The COD concentration was 35.1 mg/l . The TOC concentration was 8.3 mg/l . Total phosphorous concentration was 9.3 mg/l . Chloride concentration was 250 mg/l .

5.3.4 December 1999

The influent and effluent samples are analyzed for acetone, methylene chloride, butyl alcohol, aniline, dimethyl aniline, COD, BOD, and TOC. P-32A/32B was off line due to a frozen pipe and was not sampled. Influent acetone concentrations were 48.2 $\mu\text{g/l}$ (P-13) and less than 1.3 $\mu\text{g/l}$ (P-30). Influent methylene chloride concentrations were less than 0.40 $\mu\text{g/l}$ (P-13) and less than 0.40 $\mu\text{g/l}$ (P-30). Influent butyl alcohol concentrations were less than the laboratory MDL (which was less than the 700 $\mu\text{g/l}$ Class IIA- Groundwater Quality Criteria). Influent aniline concentrations were less than 0.83 $\mu\text{g/l}$ (P-13) and less than 0.82 $\mu\text{g/l}$ (P-30). Influent dimethyl aniline concentrations were less than 5.3 $\mu\text{g/l}$ (P-13) and less than 5.2 $\mu\text{g/l}$ (P-30).

BOD concentrations were 11.1 mg/l (P-13) and less than 2.0 mg/l (P-30). COD concentrations were 53.8 mg/l (P-13) and 20.5 mg/l (P-30). TOC concentrations were 11.0 mg/l (P-13) and 5.9 mg/l (P-30).

The effluent sample was collected from the discharge side of the settling tank. The effluent acetone concentration was less than 1.3 $\mu\text{g/l}$. The effluent methylene chloride concentration was less than 0.40 $\mu\text{g/l}$. The effluent butyl alcohol concentration was less than the 3.5 $\mu\text{g/l}$ laboratory MDL. The effluent aniline concentration was less than 0.78 $\mu\text{g/l}$. The effluent dimethyl aniline concentration was less than 5 $\mu\text{g/l}$. The BOD concentration was less than 2.0 mg/l . The COD concentration was 21.1 mg/l . The TOC concentration was 5.5 mg/l .

5.3.5 April 2000

The influent and effluent samples are analyzed for acetone, methylene chloride, butyl alcohol, aniline, dimethyl aniline, COD, BOD, and TOC. Influent acetone concentrations were 46.0 $\mu\text{g/l}$ (P-13), less than 1.3 $\mu\text{g/l}$ (P-30), and less than 1.3 $\mu\text{g/l}$ (P-32A/32B). Influent methylene chloride concentrations were less than 0.40 $\mu\text{g/l}$ (P-13), less than 0.40 $\mu\text{g/l}$ (P-30), and less than 0.40 $\mu\text{g/l}$ (P-32A/32B). Influent butyl alcohol concentrations were less than the laboratory MDL (which was less than the 700 $\mu\text{g/l}$ Class IIA- Groundwater Quality Criteria). Influent aniline concentrations were less than 0.79 $\mu\text{g/l}$ (P-13), less than 0.80 $\mu\text{g/l}$ (P-30), and less than 0.82 $\mu\text{g/l}$ (P-32A/32B). Influent dimethyl aniline concentrations were less than 5.0 $\mu\text{g/l}$ (P-13), less than 5.2 $\mu\text{g/l}$ (P-30), and less than 5.2 $\mu\text{g/l}$ (P-32A/32B).

BOD concentrations were less than 2.0 mg/l (P-13), less than 3.3 mg/l (P-30), and 3.3 mg/l (P-32A/32B). COD concentrations were less than 20 mg/l (P-13), less than 20 mg/l (P-30), and less than 20 mg/l (P-32A/32B). TOC concentrations were 8.3 mg/l (P-13), 6.6 mg/l (P-30), and 7.2 mg/l (P-32A/32B).

P-32A/32B was off line for piping repairs and was pump was started shortly before a sample was collected. The samples were collected after a period of heavy rain and the samples collected may not be representative of aquifer conditions. Samples from P-32A/32B will be collected in July 2000.

The effluent sample was collected from the discharge side of the settling tank. The effluent acetone concentration was less than 1.3 $\mu\text{g/l}$. The effluent methylene chloride concentration was less than 0.4 $\mu\text{g/l}$. The effluent butyl alcohol concentration was less than the 3.5 $\mu\text{g/l}$ laboratory MDL. The effluent aniline concentration was less than 0.78 $\mu\text{g/l}$. The effluent dimethyl aniline concentration was less than 5 $\mu\text{g/l}$. The BOD concentration was less than 3.3 mg/l. The COD concentration was 20.6 mg/l. The TOC concentration was 7.2 mg/l.

5.4 Biodegradation/Bio stimulation System Pumping Rates

The biodegradation/bio stimulation system extracted, treated, and recharged an average of 375 gallons of groundwater per day during the 12 month period ending April 2000.

6.0 REMEDIAL INVESTIGATION

This section describes the sampling procedures, field measurements, and sample analyses conducted during the Remedial Investigation conducted in late 1999 and spring 2000. Tables 8 through 15 summarize the soil sampling results. Figure 17 shows the soil boring locations. Boring logs are included in Appendix D.

6.1 Soil

6.1.1 Drum Storage Area (Northeast Side of Manufacturing Building) and Former Underground Storage Tanks

Lubricating oil, ethylene glycol, triethylamine, dimethyl acetamide, 2,6-Lutidine, pivaloyl chloride, and, on occasion, hydrochloric acid and sodium hydroxide were stored on the concrete drum storage pad. No materials have been stored on the drum storage pad since the facility shut-down. The original building plan dated February 24, 1972 does not specify the location of the drum storage pad. The earliest drawing which depicts the drum storage pad was prepared in December 1976 and shows that the landscaped area extended 60-feet south from the northeast corner of the manufacturing building to a concrete pad which continued south along the southern fence line. Teva personnel indicated that employees used the landscaped area for recreation until the concrete pad and curbing was installed in the mid-1980s. In addition, the former underground storage tanks (removed) and underground transfer lines were located along the northeast side of the manufacturing building under the concrete pad.

One soil boring (EDP-2) was drilled through the concrete drum storage pad approximately 20 feet east of the manufacturing building and 60 feet south of the northeast corner of the manufacturing building. Five soil borings (EDP-1, EDP-3, EDP-4, EDP-5, and EDP-6) were drilled along the eastern edge of the concrete drum storage pad (one every 30 linear feet) starting north of the wood shed continuing south to the bend in the property line. Soil samples were collected continuously from the base of the concrete pad to groundwater (approximately 7 feet below grade).

Soil samples were collected using a split spoon. Each 24-inch sample was divided into 6-inch intervals and screened for organic vapors using a photoionization detector (PID). The sample with the highest PID reading, or, if all readings were the same, the sample from the 6-inch interval above groundwater was analyzed for volatile organic compounds (VO+10), base/neutral extractable compounds (BN+15) including aniline and dimethyl aniline, and total petroleum hydrocarbons (TPH). The compounds triethylamine, dimethyl acetamide, and pivaloyl chloride were included as part of the library search. Standards and an analytical method for detecting 2,6-Lutidine in soil could not be prepared because it is a proprietary compound.

The sampling indicates that all individual VOC+10 and BN+15 compounds were not detected above the laboratory MDL (which was well below the most stringent soil cleanup criteria). Petroleum hydrocarbon concentrations ranged from less than 26 milligrams per kilogram (mg/kg) to 82.5 mg/kg (which is well below the total organic contaminant soil cleanup criteria of 10,000 mg/kg).

The sampling indicates that the drum storage area and former underground storage tanks have not affected soil quality. No additional sampling or remediation of this area is warranted or proposed.

6.1.2 Drum Storage Area (South of Manufacturing Building)

Triethylamine, dimethyl acetamide, 2,6-Lutidine, pivaloyl chloride, hydrochloric acid, and sodium hydroxide were stored on the concrete drum storage pad when the main storage area (northeast of the manufacturing building) was at capacity. No materials have been stored on the drum storage pad since the facility shut-down. The concrete storage pad and curbing were installed in 1990.

Three soil borings (SDP-1, SDP-2, and SDP-3) were drilled along the southern edge of the concrete drum storage pad (one every 30 linear feet). Soil samples were collected continuously from the grade to groundwater (approximately 5 feet below grade). Soil samples were collected using a split spoon. Each 24-inch sample was divided into 6-inch intervals and screened for organic vapors using a PID. The sample with the highest PID reading, or, if all readings are the same, the sample

from the 6-inch interval above groundwater was analyzed for VO+10, BN+15 including aniline and dimethyl aniline, and TPH. The compounds triethylamine, dimethyl acetamide, and pivaloyl chloride were included as part of the library search. Standards and an analytical method for detecting 2,6-Lutidine in soil could not be prepared because it is a proprietary compound.

The sampling indicates that all individual VOC+10 compounds were not detected above the laboratory MDL (which was well below the most stringent soil cleanup criteria), except for dimethyl aniline which was detected in sample SDP-2 at a concentration of 0.318 mg/kg (which is well below the total organic contaminant soil cleanup criteria of 10,000 mg/kg). Petroleum hydrocarbon concentrations ranged from less than 26 mg/kg to 82.5 mg/kg (which is well below the total organic contaminant soil cleanup criteria of 10,000 mg/kg).

The sampling indicates that the drum storage area had not affected soil quality. No additional sampling or remediation of this area is warranted or proposed.

6.1.3 Methylene Chloride Vessels

Two 100-gallon process vessels observed at the southwest corner of the parking lot during the April 18, 1996 NJDEP site visit were decontaminated in the manufacturing building before they were placed outside. The vessels were used to store wastewater containing methylene chloride and were decontaminated by draining their contents, rinsing the interior with hot, caustic solution, followed by triple rinsing with hot potable water. The vessels were allowed to air dry and placed horizontally to minimize the amount of rainwater that would collect in the vessels. The connection port (approximately 1 inch in diameter) protruding from the top and bottom of the vessels were open, but did not face the ground.

As requested by the NJDEP, one soil boring (SB-1) was drilled at the former methylene chloride vessel storage location. Soil samples were collected continuously from ground surface to groundwater (approximately 3.5 feet below grade). The samples were collected using a split spoon. The split spoon samples were divided into 6-inch intervals and screened for organic vapors using a PID. All PID readings were at background levels and no soil samples were sent for laboratory analysis.

The sampling confirms that the soil quality in this area was not affected. Additional sampling or remediation of this area is not warranted or proposed.

6.1.4 Underground Fuel Oil Storage Tank

One 10,000-gallon No. 2 fuel oil underground storage tank was removed in 1991 in accordance with a tank closure plan prepared by Tank and Line Compliance Corporation, Lafayette, New Jersey and approved by NJDEP (Closure Approval #C-91-2139). No soil sampling was conducted and no detectable organic vapors were recorded during and after the excavation and removal. A 6,000-gallon new double wall fiberglass underground storage tank was installed in the same excavation. This tank is still in service. EDER contacted Raphael Rivera, Bureau of Underground Storage Tanks, on November 19, 1997 to determine the status of this case. Mr. Rivera indicated that the NJDEP's database shows the case was closed by the Department on November 23, 1992.

Five soil borings (OT-1, OT-2, OT-3, OT-4, and OT-5) were drilled around the existing 6,000-gallon underground fuel oil tank. Two soil borings (OT-3 and OT-4) were drilled along the south side of the tank, one boring (OT-1) was drilled on the north side of the tank (originally two borings were proposed for this side, however, due to underground utilities only one boring could be drilled safely), and one boring was drilled along each of the tank end walls (OT-2 and OT-5). Soil samples were collected continuously from grade to the water table (which is approximately 5-feet below grade). Soil samples were collected using a split spoon. Each split spoon sample was divided into 6-inch intervals and screened for organic vapors using a PID. The sample with the highest PID reading, or, if all readings are the same, the sample from the 6-inch interval above the water table was analyzed for TPH. The sample with the highest TPH concentration (OT-4) was also analyzed for VOC+10.

TPH concentrations ranged from less than 25 mg/kg to 1,360 mg/kg (OT-4), which is less than the total organic contaminant soil cleanup criteria of 10,000 mg/kg.

The sampling indicates that soil quality in this area has not been affected. Additional sampling or remediation of this area is not proposed.

6.2 Groundwater

The groundwater remedial investigation included installing two off site monitoring wells and a deep groundwater monitoring well, and abandoning and replacing several old monitoring wells. Boring logs, well completion forms, and well abandonment forms are included in Appendix D.

6.2.1 Off-Site Delineation

The quarterly groundwater monitoring program show that groundwater flow is to the north-northwest at the northern section of the site, and to the south-southeast in the central and southern sections of the site and that groundwater discharged to the recharge trench system flows downgradient towards the recovery well system.

As discussed in our September 14, 1998 meeting with the NJDEP, the historical data was reviewed to determine whether there were a sufficient number of monitoring points to demonstrate that the entire plume is being captured. Based on this review it was determined that there is a sufficient number of monitoring points south of the site to demonstrate that recovery wells P-32A/32B and P-30 are capturing the full width of the plume. This determination was based on the groundwater flow and analytical data. Sampling conducted between 1994 and 2000 shows that the highest concentrations of contaminants on the south side of the property are detected in recovery well P-32A/32B. The sampling indicates acetone concentrations in downgradient wells W-1 through W-6 ranged from less than the laboratory MDL to 143 $\mu\text{g/l}$ which is well below the 700 Class IIA Groundwater Quality Criteria and an order of magnitude less than concentrations detected in P-32A/32B. The sampling indicates methylene chloride concentrations in downgradient wells W-1 through W-6 were less than the laboratory MDL which is several orders of magnitude less than concentrations detected in P-32A/32B.

The review indicated that additional off-site monitoring wells were required to demonstrate that the entire plume is being captured along the north side of the property. Sampling shows that

methylene chloride and acetone concentrations occasionally exceed the Class IIA-Ground Water Quality Criteria at P-13. Two shallow monitoring wells (MW-43 and MW-44) were installed, one north of Industrial Park (MW-44) and one west of Industrial Park (MW-43). The wells were installed in the Township right-of-way at the locations approved by the NJDEP. The borings were drilled using air rotary equipment (a zone of cobbles and gravel precluded the use of hollow stem augers in this area) to an approximate depth of 15 feet below. The wells are constructed of 10-feet of 2-inch diameter, flush joint, machine perforated PVC well screen and approximately 5-feet of PVC riser pipe. The wells were completed using a flush mount protective casing.

Groundwater sampling conducted in April 2000 indicates that methylene chloride, acetone, butyl alcohol, aniline, and dimethyl aniline concentrations did not exceed the laboratory MDL. The sampling indicates that recovery well P-13 is capturing the full width of the plume and that there is no off site migration of contaminated groundwater.

6.2.2 Vertical Delineation

One bedrock monitoring well was installed to confirm that there has been no vertical migration of contaminants. The well was installed approximately 100-feet east of P-30 at the location approved by NJDEP. The boring was installed using air rotary drilling equipment to a depth of approximately 67 feet below grade. The upper zone was double cased using steel conductor pipe extending from grade to competent bedrock (approximately 57 feet below grade). The well was constructed of 10-feet of 2-inch diameter, flush joint, machine perforated PVC well screen and approximately 60-feet of PVC riser pipe. The well was completed using a steel protective casing.

Groundwater sampling conducted in April 2000 indicates that methylene chloride, butyl alcohol, aniline, and dimethyl aniline concentrations did not exceed the laboratory MDL. Acetone was detected at a concentration of 102 µg/L which is well below the 700 µg/L Class IIA groundwater quality criteria. The sampling suggests that the seepage between the unconsolidated aquifer and the bedrock aquifer may occur, however, the bedrock groundwater sample concentrations of methylene chloride, acetone, butyl alcohol, aniline, and dimethyl aniline did not exceed the Class IIA

groundwater quality criteria.

6.2.3 Lot 35A

The property immediately south of the Teva facility, known as Lot 35A, has been sold and the new property owner (Waldwick Plastics) is planning on constructing a building on the existing foundation. Downgradient monitoring wells W-1, W-2, and W-3 are located within the existing foundation. According, as approved by the NJDEP, these three wells were abandoned in accordance with NJDEP regulations. Three replacement monitoring wells W-1A, W-2A, and W-3A were installed at the locations shown on Figure 1. The borings were drilled using air rotary equipment (a zone of cobbles and gravel precluded the use of hollow stem augers in this area) to an approximate depth of 15 feet below. The wells are constructed of 10-feet of 2-inch diameter, flush joint, machine perforated PVC well screen and approximately 5-feet of PVC riser pipe. The wells were completed using a protective steel casing.

6.2.4 Monitoring Well Abandonment

Small diameter well casing (less than 2 inches) monitoring wells MW-6, MW-9, MW-10, and MW-12 and three monitoring wells (W-1, W-2, and W-3) on the Lot 35A property were abandoned by Plainfield Well Drilling on March 14, 2000 in accordance with NJDEP regulations. Monitoring well MW-11 could not be located and was assumed to have been paved over when the parking lot was resurfaced several years ago.

Monitoring wells MW-6 and MW-9 were replaced by drilling two new borings (MW-6A and MW-9A) within 10 feet of the abandoned wells using air rotary equipment to an approximate depth of 15 feet below grade. The wells are constructed of 10-feet of 2-inch diameter, flush joint, machine perforated PVC well screen and 5-feet of PVC riser pipe. The wells were completed using a flush mount protective casing.

6.2.5 Well Search

ESC reviewed Township of Waldwick and Allendale municipal well records to identify wells within 0.25-miles of the facility and to determine the groundwater quality of these wells (Table 16). Four wells (Well #2, Well #3, Well #6, and Well#7) operated by the Township of Waldwick were identified. Raw water monitoring conducted by the Township between December 1998 and May 2000 indicates that the volatile organic compounds (VOCs) trichloroethene (TCE) and tetrachloroethene (PCE) were detected in samples from well nos. 2, 3, and 7 at concentrations exceeding the drinking water maximum contaminant level (MCL). VOCs were not detected in well no. 6. Methylene chloride, acetone, and butyl alcohol were not detected above the laboratory MDL in any of the water samples.

Two wells (Well #2 and Well #4) operated by the Township of Allendale were identified. Raw water monitoring conducted by the Township indicates that tetrachloroethane was detected at concentrations exceeding the drinking water MCL in the May 2000 sampling event. Additional monitoring data for the past two years was requested by ESC, but has not yet been received. This data will be tabulated and sent under a separate cover to the NJDEP.

The water quality data indicates that regional groundwater in the bedrock aquifer has elevated concentrations of several VOCs. However, it is highly unlikely that Teva's operations have affected groundwater quality of these wells because: a) site specific groundwater monitoring data indicates that there is no off site migration of contaminated groundwater (the remediation system is capturing the full width of the plume and concentrations of methylene chloride, acetone, and butyl alcohol in monitoring wells downgradient of the remediation system have not exceeded the Class IIA groundwater quality criteria), b) the site specific groundwater monitoring data collected from the on site production well and newly installed bedrock monitoring well indicate that groundwater quality in the bedrock aquifer have not been affected (contaminant concentrations have not been detected above the Class IIA groundwater quality criteria) by groundwater in the shallow unconsolidated zone, and c) the contaminants of concern, methylene chloride and acetone, were not detected at concentrations above the laboratory MDL or the drinking water MCL in the water

samples collected by the municipalities.

Neither the Township of Waldwick nor Allendale maintains records regarding residential potable supply wells, however, both of the Water Department Superintendents were not aware of any active residential potable supply wells within 0.5 miles of the Teva site. The only known residential well listed on the previous well survey prepared by NJDEP was operated by a homeowner on Hopper Street for lawn irrigation. The homeowner indicated that the well has been closed for several years.

6.3 Sediment

The leak in the underground transfer lines was discovered in 1975 during a NJDEP investigation requested by the Northwest Bergen Regional Health Commission (NWRHC) to determine the causes of grayish-black algae growth on the surface water of Allendale Brook. The analytical results of surface water samples collected from Allendale Brook in 1975 and again in 1991 were well below the Surface Water Standards. Sediment sampling was not conducted.

At the request of NJDEP at the September 1998 meeting and as requested in a NJDEP comment letter, a sediment sample (SED-1) was collected from Allendale Brook below the storm water discharge pipe on November 5, 1999 by ESC and analyzed for grain size distribution, aniline, and dimethyl aniline. The sampling indicated that aniline and dimethyl aniline were not detected above the laboratory minimum detection limits (84 $\mu\text{g}/\text{kg}$ for aniline and 210 $\mu\text{g}/\text{kg}$ for dimethyl aniline). The grain size distribution indicates that the sample consisted of coarse to fine sand and fine gravel with trace fines. The sampling results confirm that the underground transfer line leak has not adversely affected Allendale Brook surface water or sediment quality.

7.0 BASELINE ECOLOGICAL EVALUATION (BEE)

This qualitative baseline ecological evaluation (BEE) was prepared based on the site history, site inspections, and site investigation findings. The purpose of the BEE is to identify potential receptors that could be affected from the wastewater release to the environment and the contaminants that can reasonably be expected to accumulate and persist in the environment.

Potential Receptors

The site history and site inspections indicate that the potential receptors would be:

- Allendale Brook surface water and sediment – The potential pathway would be groundwater infiltration into the on site storm water piping which discharges to Allendale Brook, and
- Township of Allendale and Waldwick municipal supply wells – The potential pathway would be seepage of groundwater from the shallow aquifer to the bedrock aquifer and transport through the bedrock aquifer to the municipal supply wells.

Contaminants of Concern

As discussed previously, wastewater containing low concentrations of acetone, methylene chloride, n-butyl alcohol, and dimethyl aniline was discharged to the environment from a leak in an underground transfer line. The characteristics of each compound were evaluated to determine whether they would persist in the environment.

Acetone, methylene chloride, and butyl alcohol would not accumulate nor persist in surface water and sediment because of their relatively high vapor pressures (they would generally volatilize to the atmosphere). Acetone and butyl alcohol may persist in the groundwater, however, because

of their relatively low octanol/water coefficient (less likely to be absorbed by organic matter in the soil) and because they are readily degraded under aerobic conditions the duration in the groundwater is expected to be short. Methylene chloride may persist in the groundwater aquifer because it has a relatively high octanol/water coefficient ($K_{ow}=101.07$) and would be absorbed by organic matter in aquifer soil. Methylene chloride does degraded under aerobic conditions, but a much slower rate than acetone and butyl alcohol.

Aniline and dimethyl aniline may persist in the surface water, sediment, and groundwater because they have low vapor pressures (are less likely to volatilize to the atmosphere), are relatively insoluble in water, and have high octanol/water coefficients (would be expected to be adsorbed by organic matter in the surface water and sediment). Aniline and dimethyl aniline readily degrade under aerobic conditions.

Site Investigation Findings

The analytical results of surface water samples collected from Allendale Brook in 1975 were well below the Surface Water Standards. The NJDEP February 28, 1991 Site Inspection Report indicates that the United States Environmental Protection Agency (USEPA) collected two stream samples on behalf of Teva from Allendale Brook in 1975. Butyl alcohol (4 $\mu\text{g/L}$) and dimethyl aniline (0.1 $\mu\text{g/L}$) were detected in one of the samples. As requested by the NJDEP (April 1996 meeting), ESC collected a sediment sample from Allendale Brook in November 1999 and analyzed the sample for aniline and dimethyl aniline. The sampling indicated that aniline and dimethyl aniline were not detected above the laboratory MDL.

The groundwater sampling data show that the highest concentrations of methylene chloride and acetone are in the unconsolidated aquifer at southern area of the property. Groundwater sampling data from the on site deep monitoring well (MW-45D) indicates that bedrock groundwater quality is well below the class IIA groundwater quality criteria. Municipal well sampling data indicates that VOCs are present in the groundwater, however, methylene chloride, acetone, and butyl alcohol have not been detected above the laboratory MDL in samples collected from the municipal

wells.

These data indicate that the potential receptors have not been affected by the wastewater release at the Teva site.

8.0 OTHER NJDEP REQUIREMENTS

8.1 Treatment System Air Monitoring

Air emissions testing is required to determine the volume volatile organic compounds (VOCs) emissions from the treatment system exhaust. The testing consists of two monitoring events, one conducted in the spring (May 2000) which represents typical system operating conditions (moderate ambient temperatures and humidity), and a second test to be conducted in July 2000 which represents worst case conditions (high ambient temperatures and humidity). A mass balance calculation will be used to determine the volume of VOCs emitted. An air emissions permit applicability determination or air permit application will be submitted to the NJDEP Bureau of New Source Review in September 2000.

8.2 Vaulted Tank Testing

As part of the continuing manufacturing building shut-down, all aboveground piping systems were back-flushed using potable water under high pressure. The rinse water was collected in the vaulted underground storage tanks, the rinse water was pumped from the tanks into waste tanker trucks, the interior of the tanks cleaned and the waste water removed, and the waste water was transported and disposed of off site by a licensed waste hauler. The tanks have been disconnected from the piping systems and the flanges capped. Teva has retained PCA Engineering, Inc. (PCA) of Pompton Lakes, New Jersey to conduct the tank testing during the week of July 24, 2000. PCA conducted the previous tank testing in 1995. PCA's report will be sent under a separate cover.

9.0 SUMMARY AND PROPOSED WORK

9.1 Summary

Sixteen groundwater monitoring rounds have been conducted under the ISRA program. Groundwater sampling indicates that the highest concentrations of methylene chloride and acetone are in the southern area of the property (P-30 and P-32A/B), that the extent and concentrations of VOCs, aniline, and dimethyl aniline have been reduced significantly from concentrations existing prior to biodegradation/biostimulation system, and that there is no off site migration or vertical migration of groundwater contaminants.

Soil sampling conducted at the former methylene chloride vessel area, the northeast and south drum pads, former underground chemical storage tank area, and underground fuel oil tank area indicated that no individual VOC+10, BN+15, or TPH compound exceeded the applicable most stringent soil cleanup criteria.

Sediment sampling indicates that Allendale Brook sediment quality was not affected by the former underground waste water line discharge.

9.2 Proposed Work

9.2.1 Groundwater Monitoring

Teva proposes to reduce the number of groundwater samples and parameters based on the analytical results for the past 16 monitoring events which indicate that VOC, aniline, and dimethyl aniline concentration in many of the currently sampled monitoring wells do not exceed the laboratory MDL. Groundwater samples will be collected quarterly and annually from monitoring wells MW-6A, MW-17, MW-24, MW-42, MW-43, MW-44, MW-45D, W-2, P-13, P-30, and P-32A/32B. The samples will be analyzed for methylene chloride, acetone, aniline, and dimethyl aniline.

9.2.2 Classification Exception Area

Modeling is being conducted to determine whether the remedial timeframe can be reduced by conducting additional remedial measures (such as air sparging and soil vapor extraction). After completing this evaluation, Teva will prepare a Classification Exception Area for the facility which will include the expected remedial timeframe.

Figures

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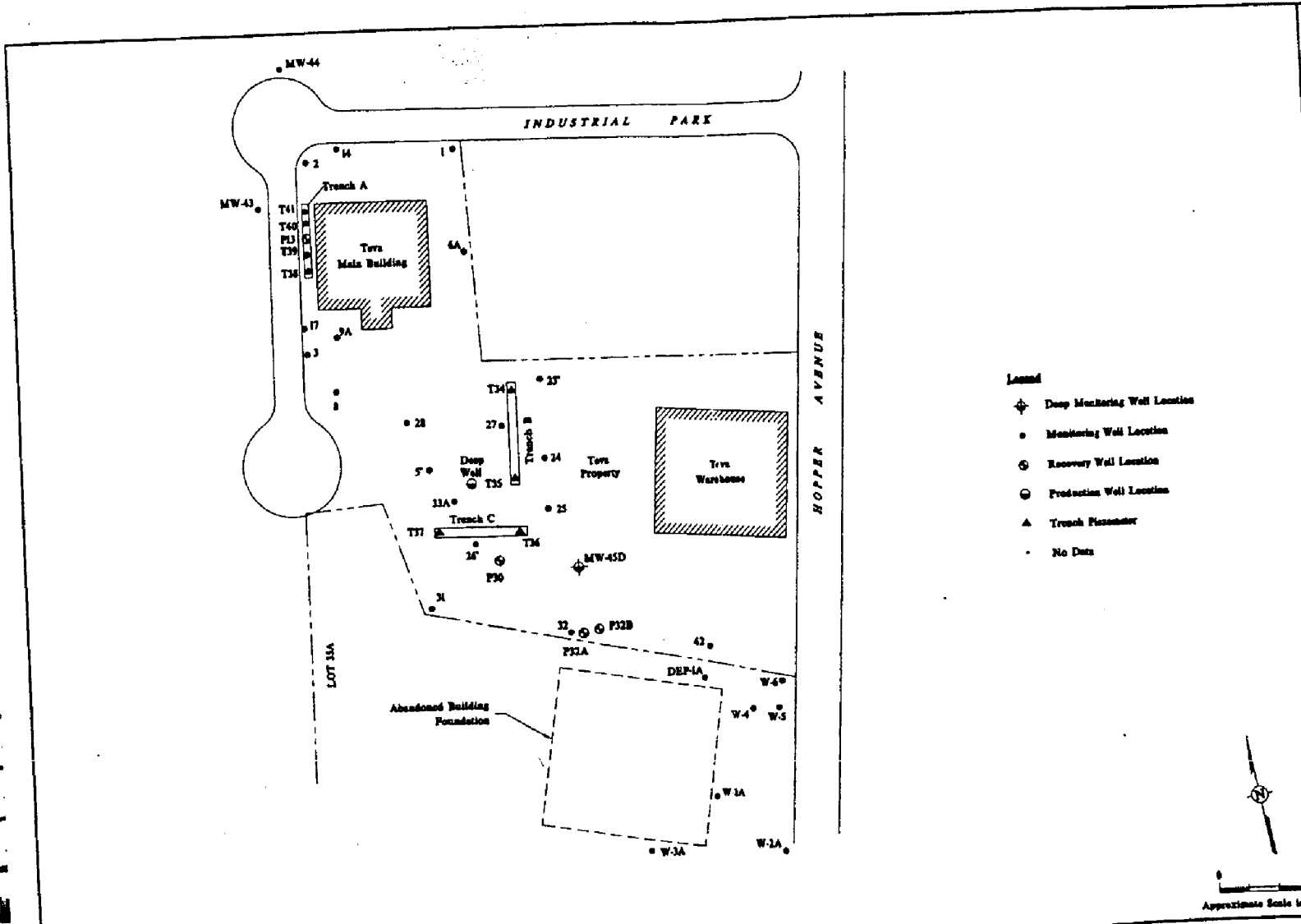


Figure 1
Monitoring Well Locations
Teva Pharmaceuticals, USA
Waldwick, New Jersey

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703-709-6500



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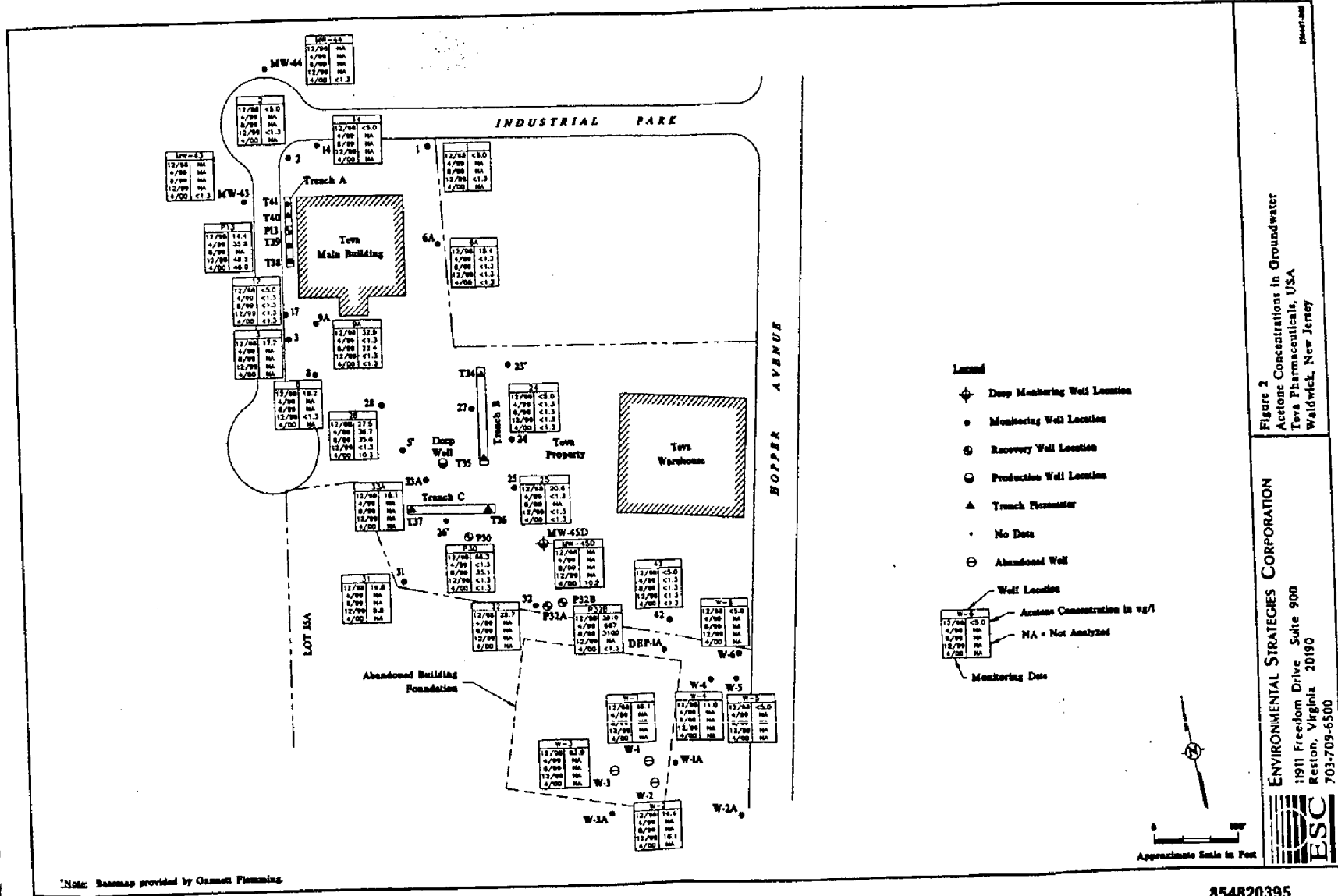
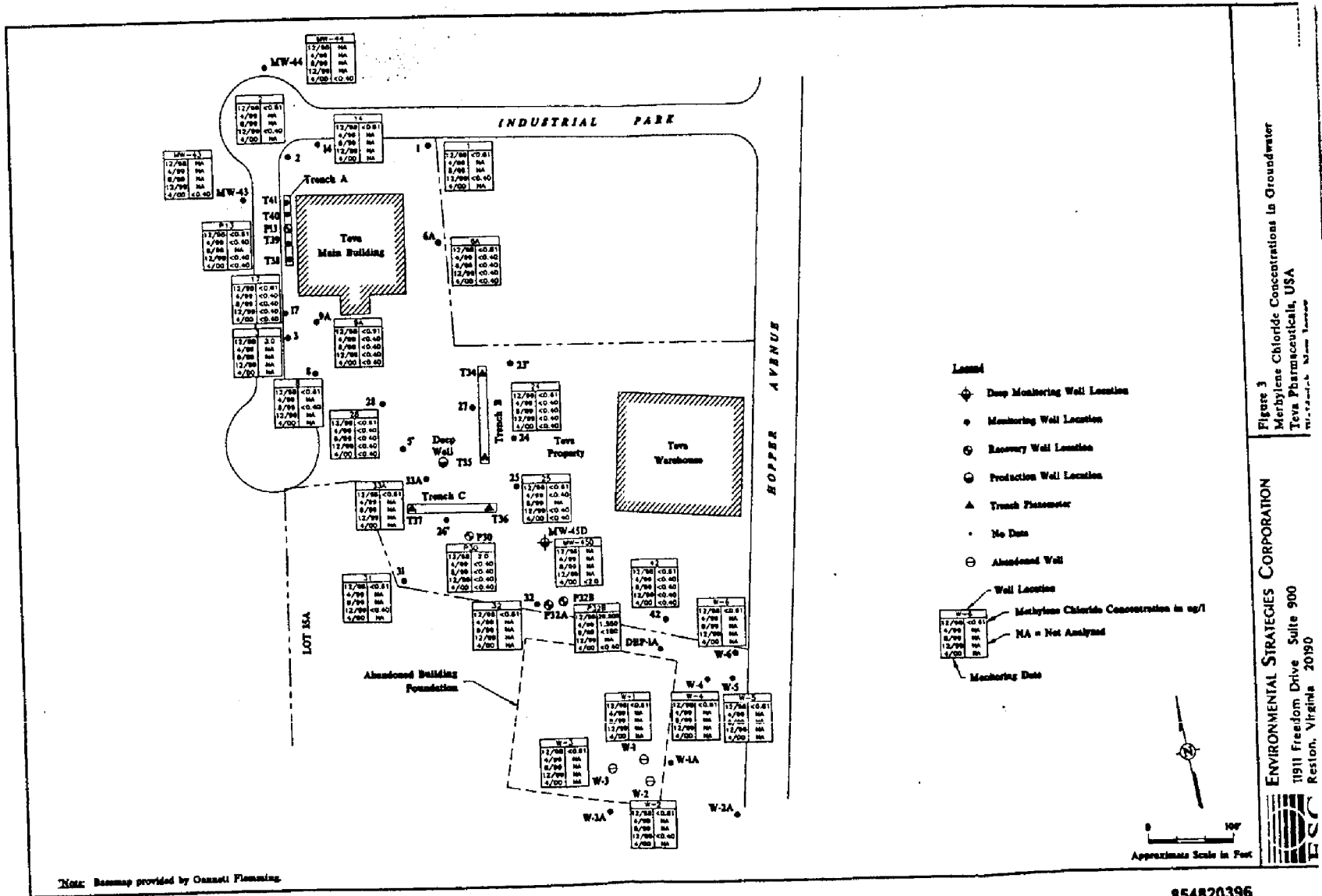


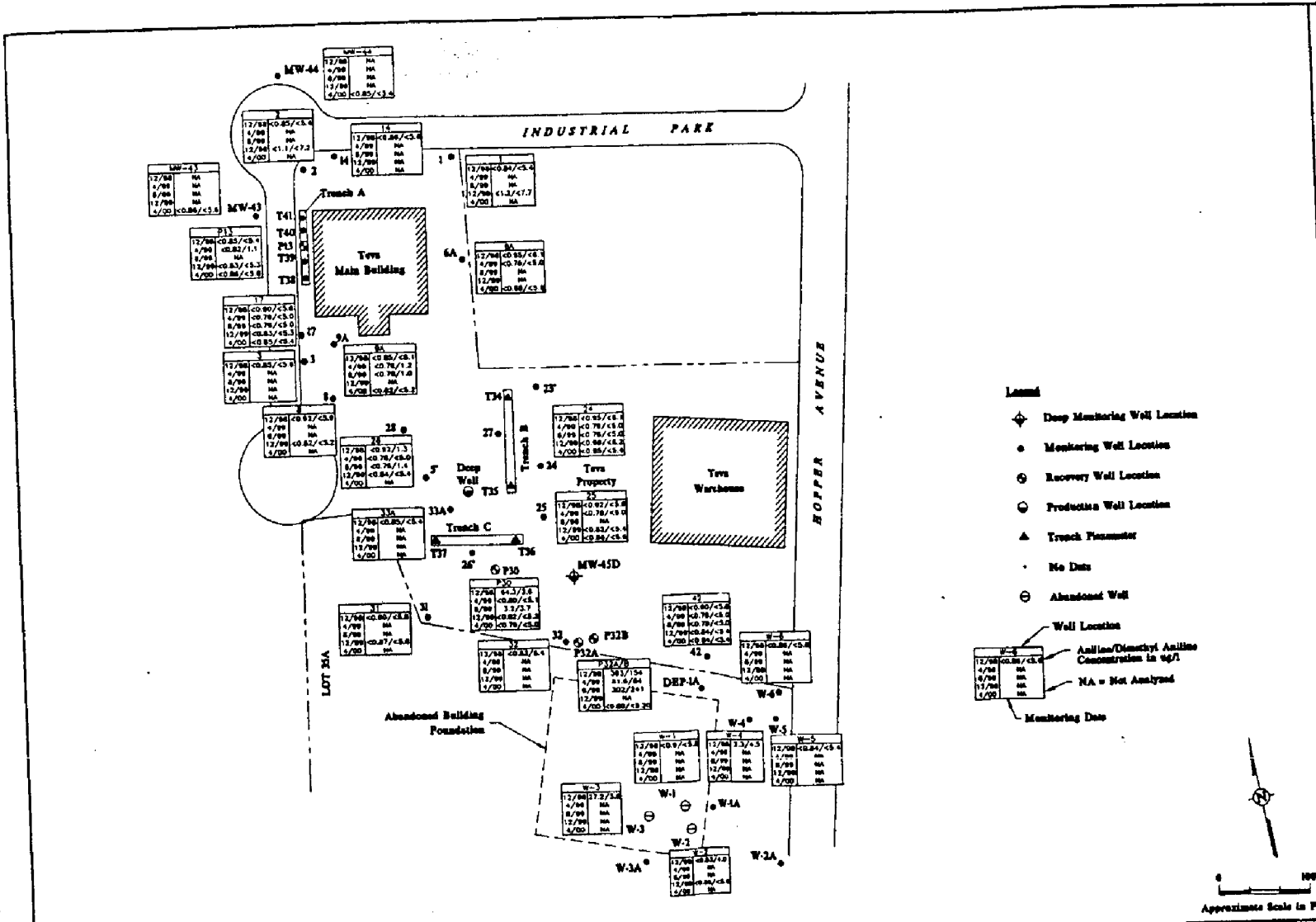
Figure 2
 Acetone Concentrations in Groundwater
 Teva Pharmaceuticals, USA
 Waldwick, New Jersey

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Note: Base map provided by Grant Planning.

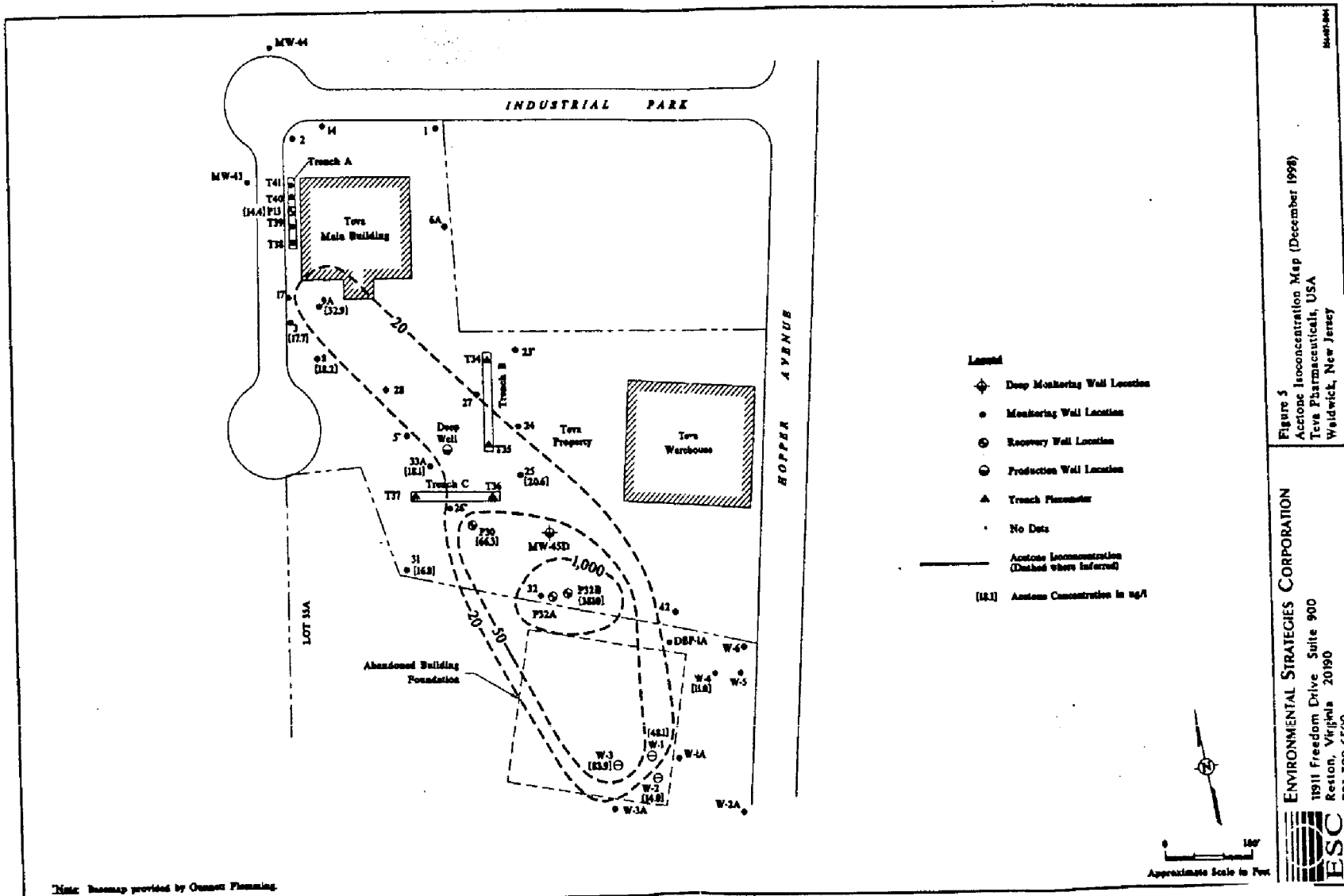
- Legend**
- ◆ Deep Monitoring Well Location
 - Monitoring Well Location
 - ⊙ Recovery Well Location
 - ⊖ Production Well Location
 - ▲ Trench Flagmarker
 - No Data
 - ⊕ Abandoned Well
- Well Location**
- Aniline/Dimethyl Aniline Concentration in ug/l
 - NA = Not Analyzed
 - Monitoring Date

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Figure 4
Aniline/Dimethyl Aniline Concentrations in Groundwater
Teva Pharmaceuticals, USA
Waldwick, New Jersey

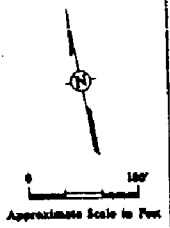
Journal



Note: Basemap provided by Oconnor Planning.

Figure 5
Acetone Isocommunication Map (December 1998)
Teva Pharmaceuticals, USA
Waldwick, New Jersey

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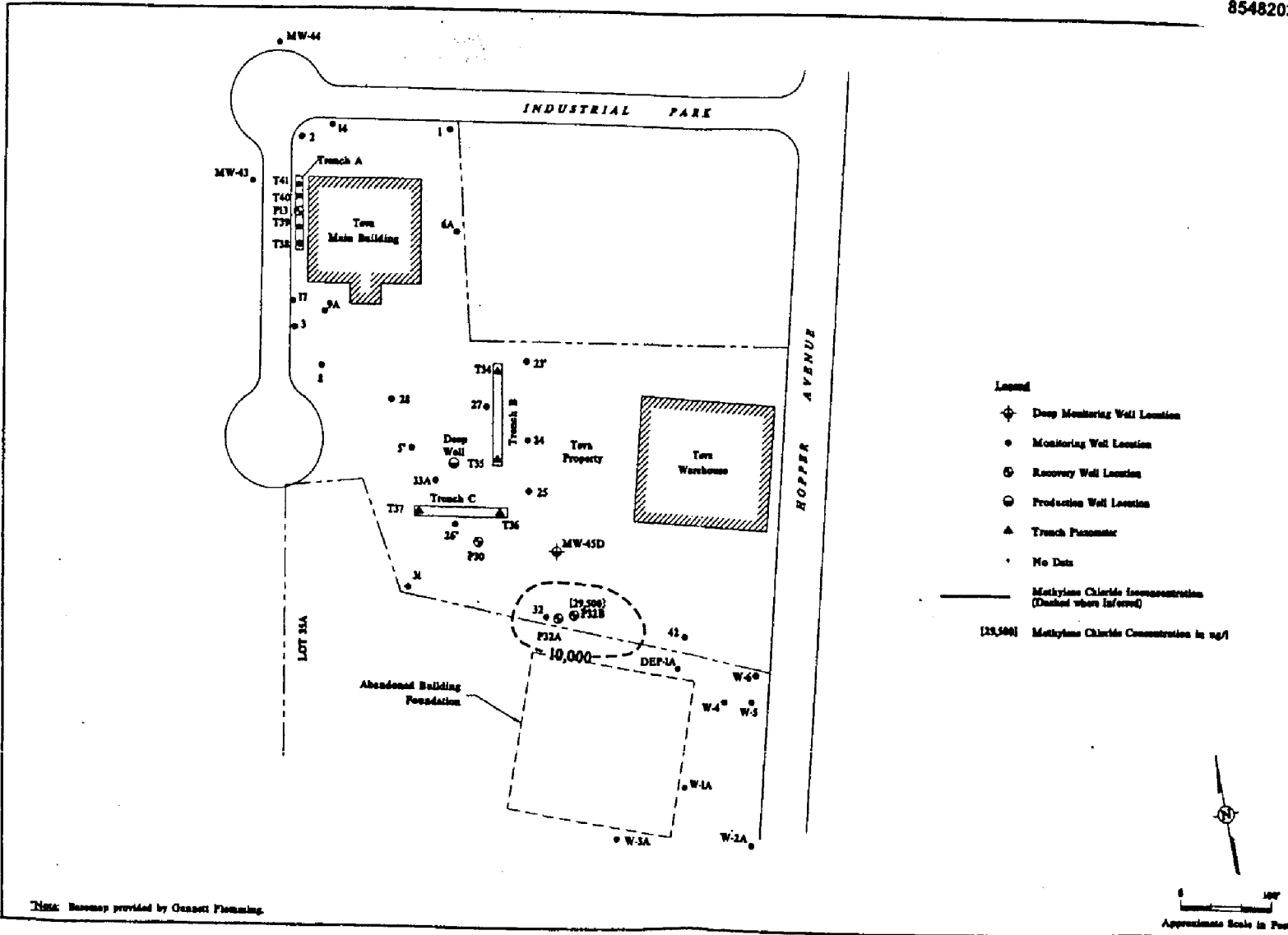
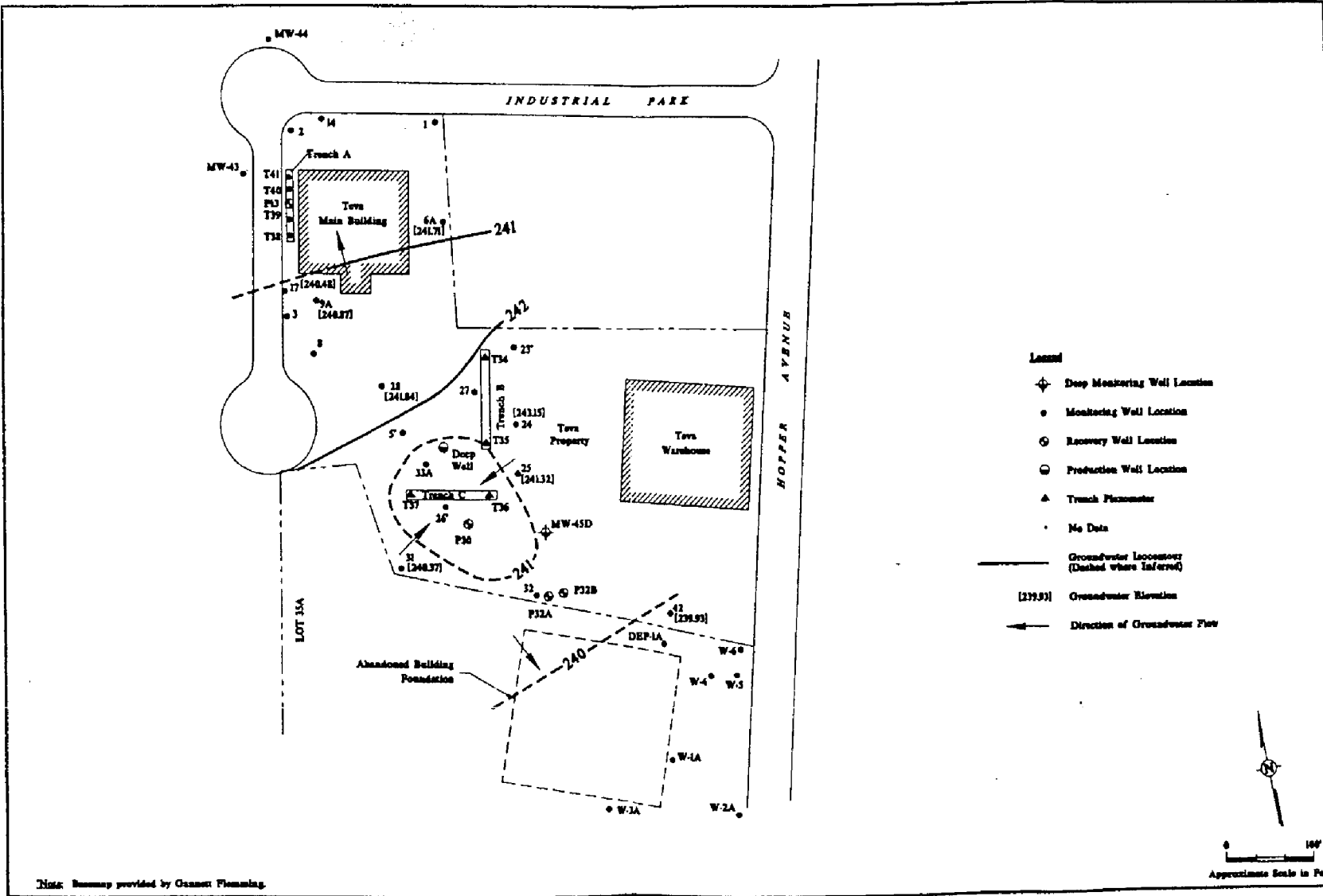
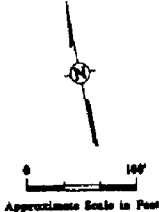


Figure 6
 Methylene Chloride Isoconcentration Map (August 1999)
 Teva Pharmaceuticals, USA
 Waldwick, New Jersey

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 703-709-6500



- Legend**
- ◆ Deep Monitoring Well Location
 - Monitoring Well Location
 - ⊙ Recovery Well Location
 - ⊙ Production Well Location
 - ▲ Trench Planimeter
 - No Data
 - Groundwater Location (Dashed where Inferred)
 - [241.93] Groundwater Elevation
 - Direction of Groundwater Flow



Note: Boundary provided by Cassini Flooding.

Figure 7
Groundwater Flow Map (April 1999)
Teva Pharmaceuticals, USA
Waldwick, New Jersey

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DATE: 04/15/99 BY: [illegible] PROJECT: [illegible]

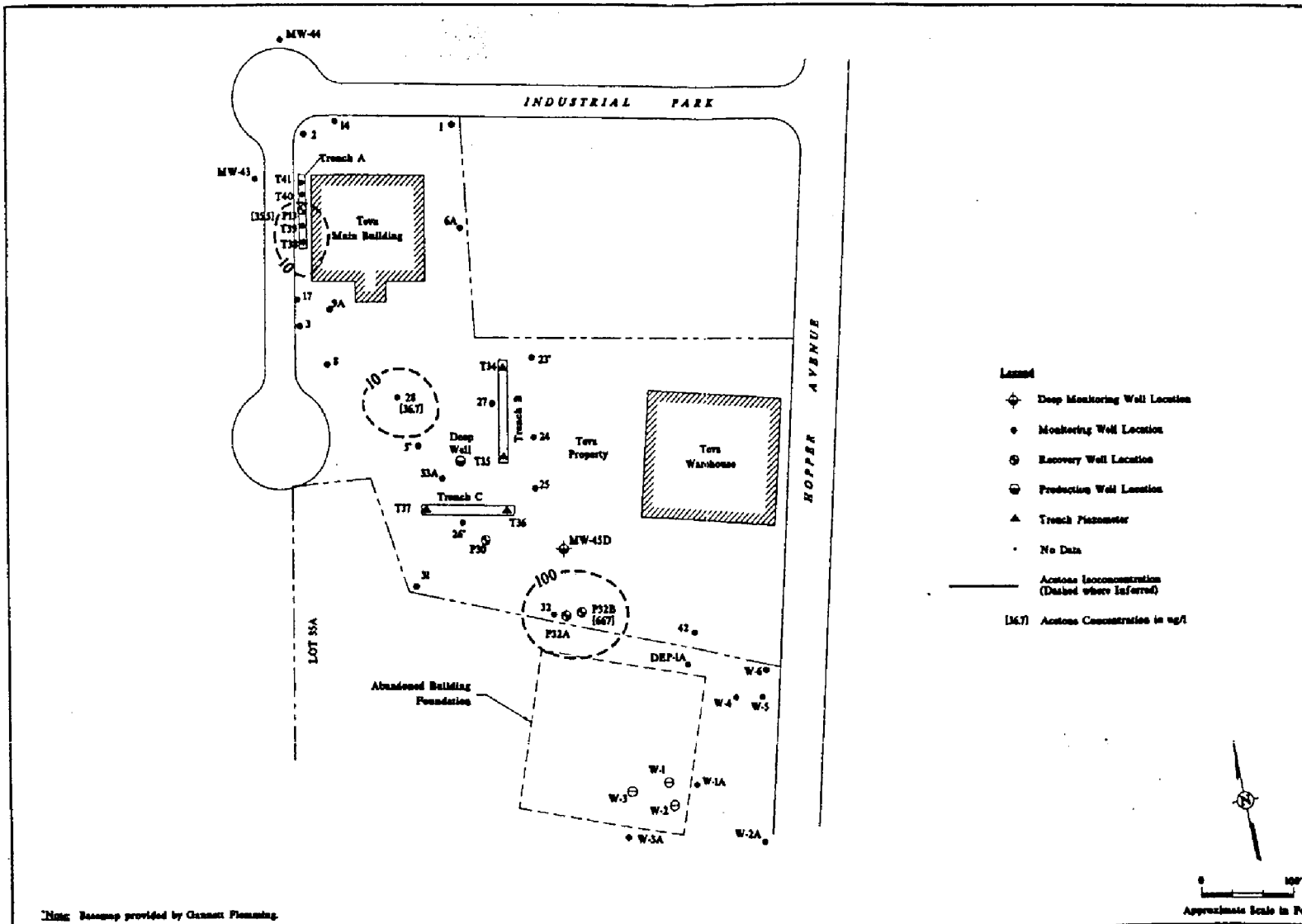


Figure 8
Acetone Isoconcentration Map (April, 1999)
Teva Pharmaceuticals, USA
Waldwick, New Jersey

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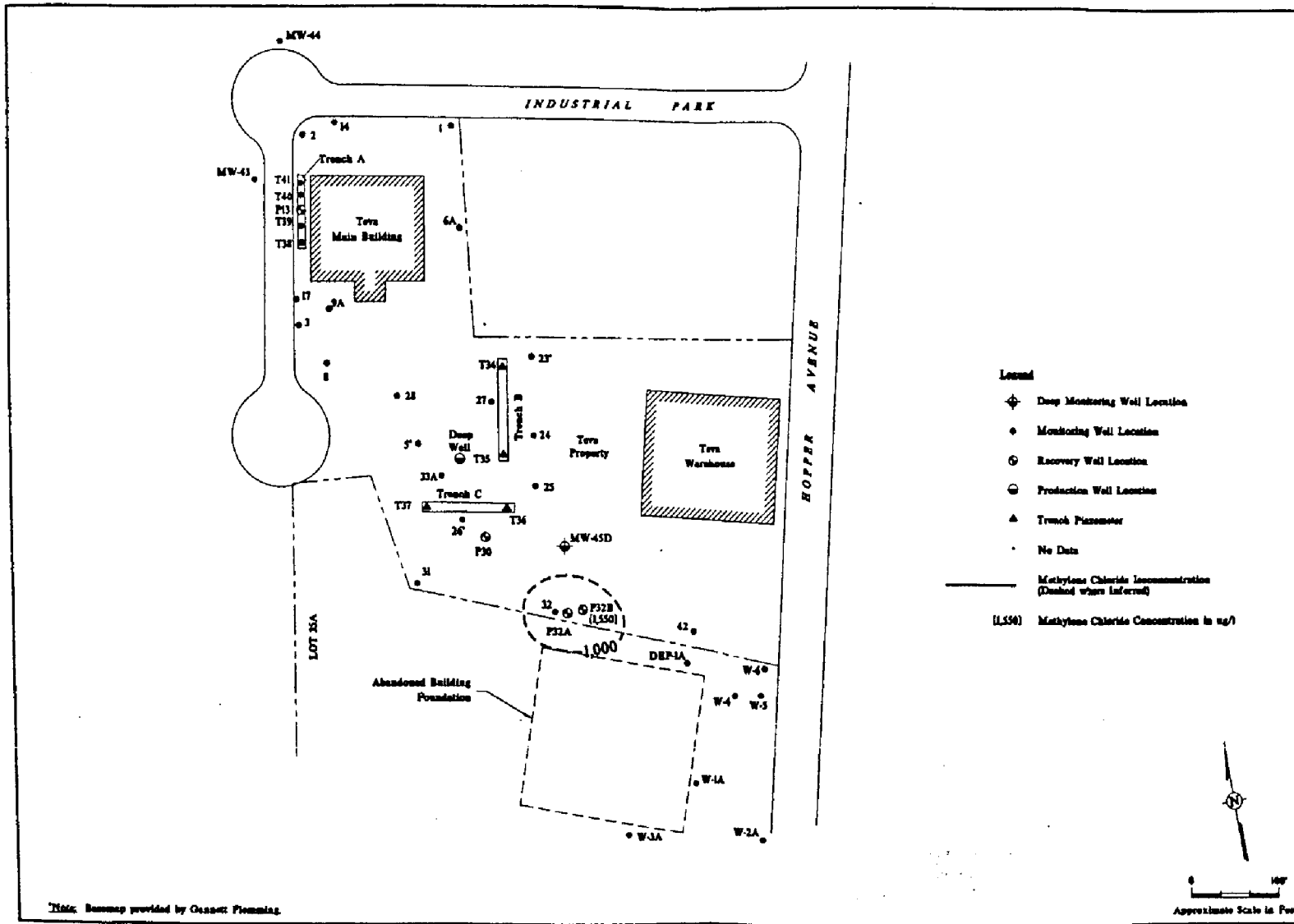


Figure 9
 Methylene Chloride Isoconcentration Map (April 1999)
 Teva Pharmaceuticals, USA
 Watlwick, New Jersey

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 Reston, Virginia 20190
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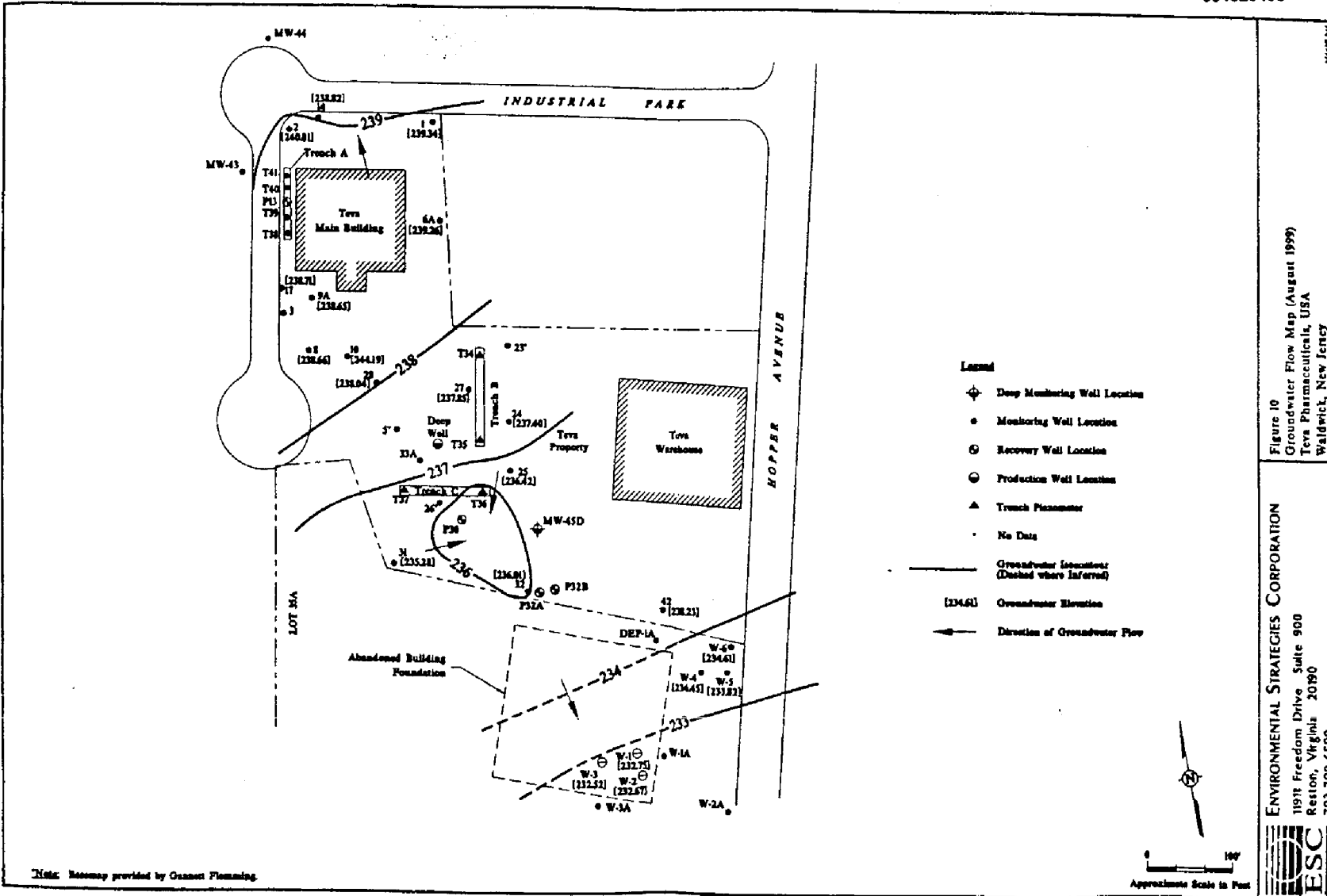
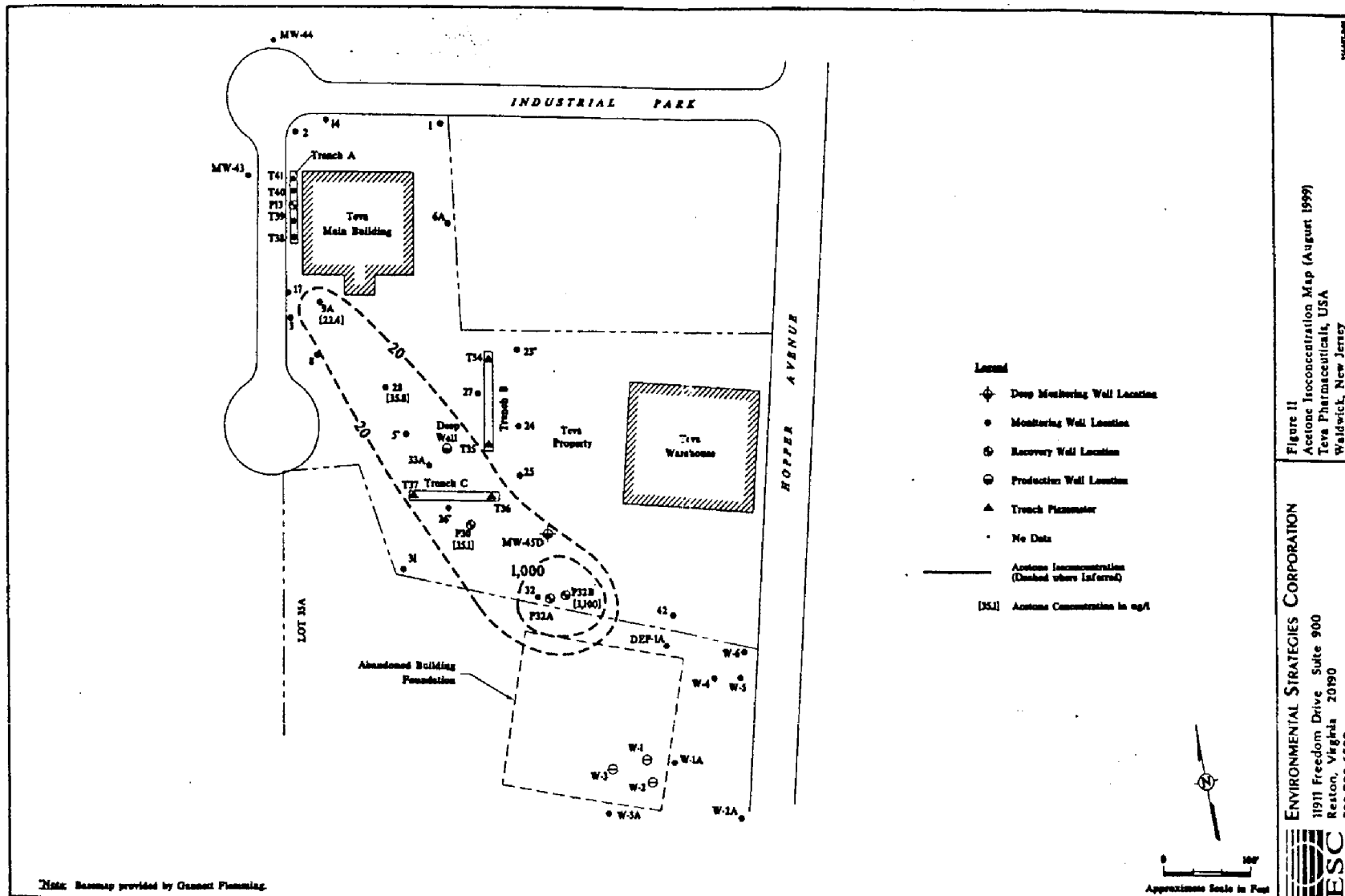


Figure 10
Groundwater Flow Map (August 1999)
Teva Pharmaceuticals, USA
Waldwick, New Jersey

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11911 Freedom Drive, Suite 900
Reston, Virginia 20190
703-709-6500





Note: Basemap provided by Geonnet Planning.

Figure II
Acetone Inconcentration Map (August 1999)
Teva Pharmaceuticals, USA
Waldwick, New Jersey

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1911 Freedom Drive, Suite 900
Reston, Virginia 20190
703-799-6500



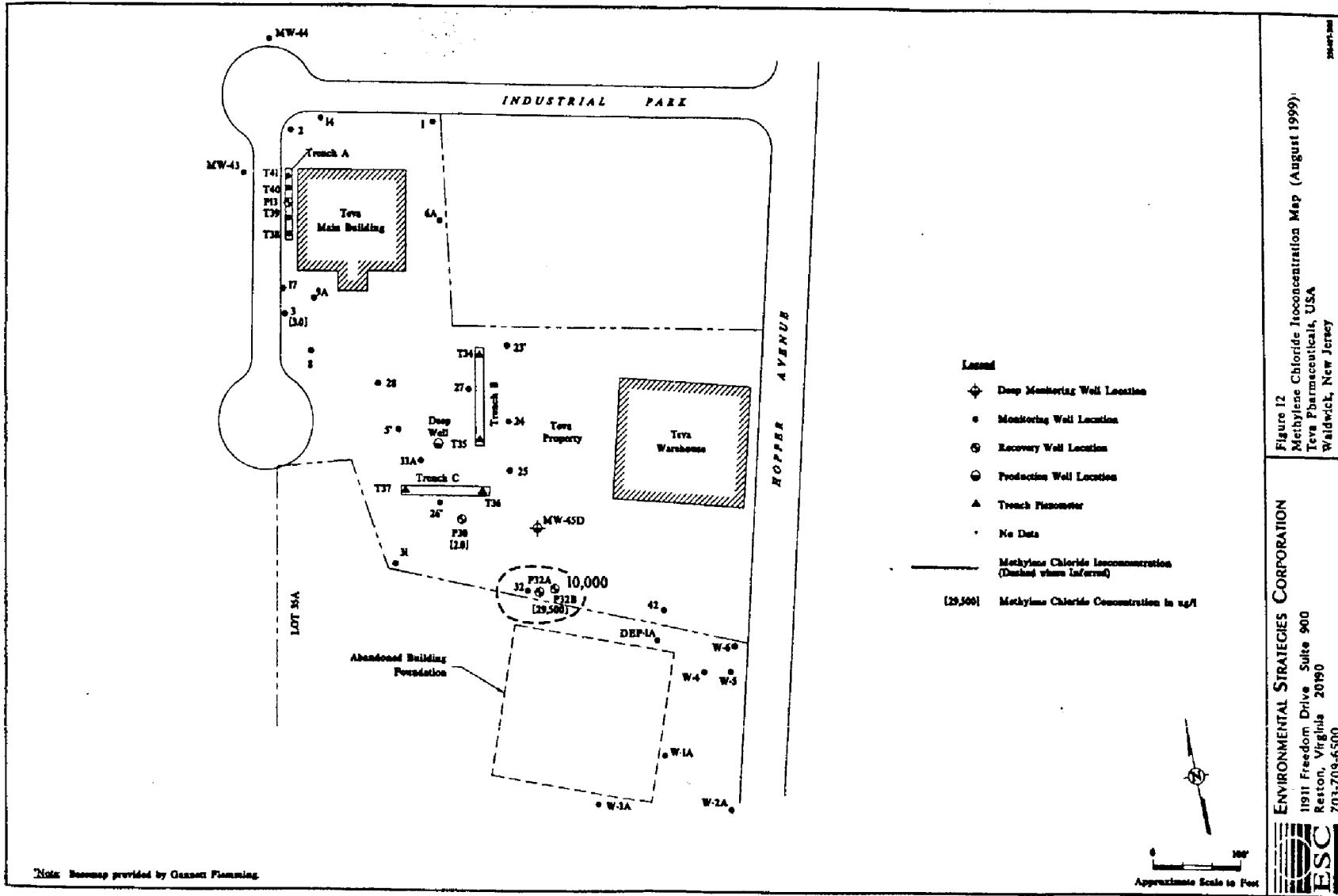


Figure 12
Methylene Chloride Isoconcentration Map (August 1999)
Teva Pharmaceuticals, USA
Waldwick, New Jersey

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Reston, Virginia 20190
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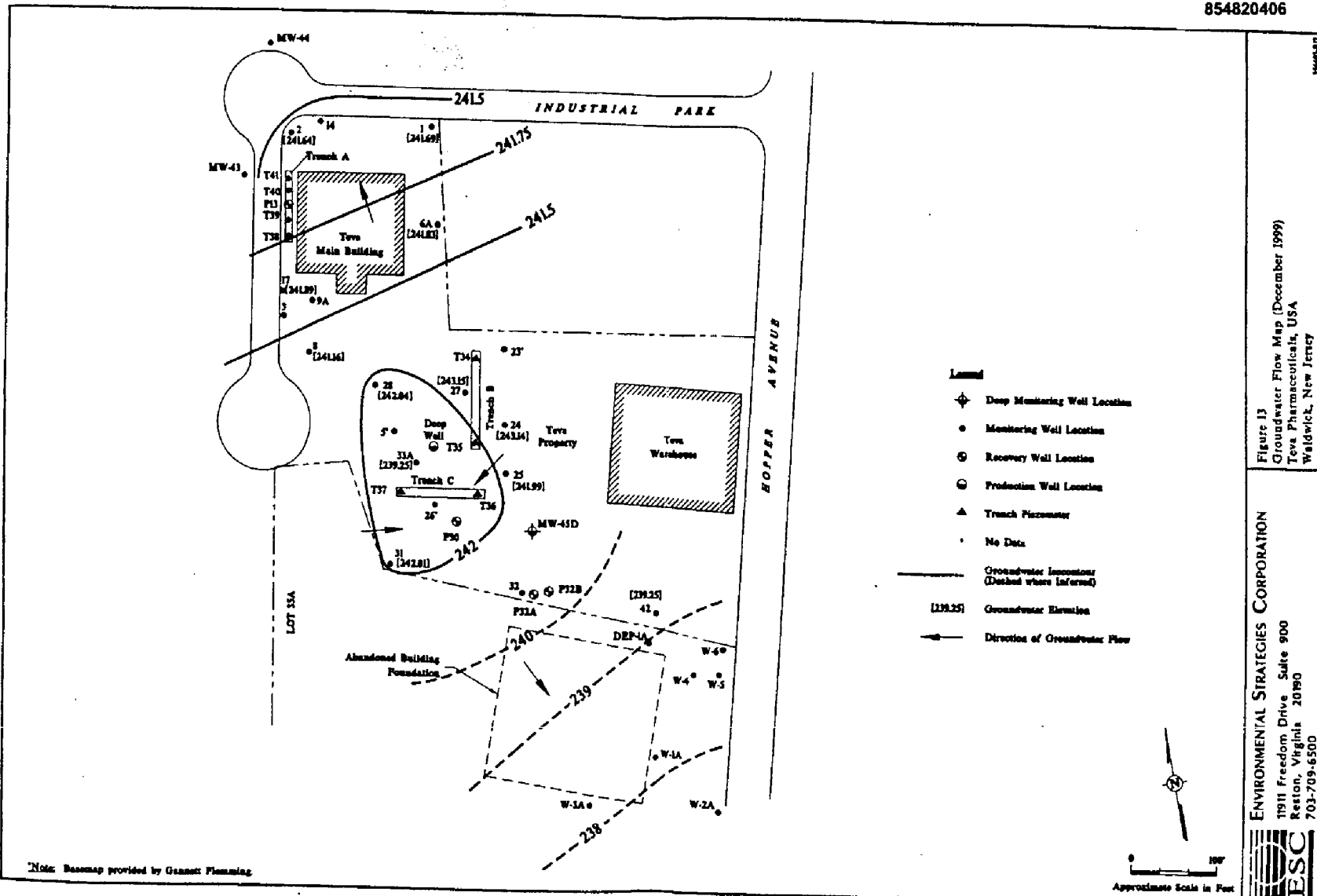
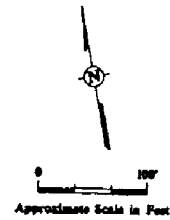


Figure 13
Groundwater Flow Map (December 1999)
Teva Pharmaceuticals, USA
Waldwick, New Jersey

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Reston, Virginia 20190
703-709-6500



Note: Base map provided by Geacat Planning



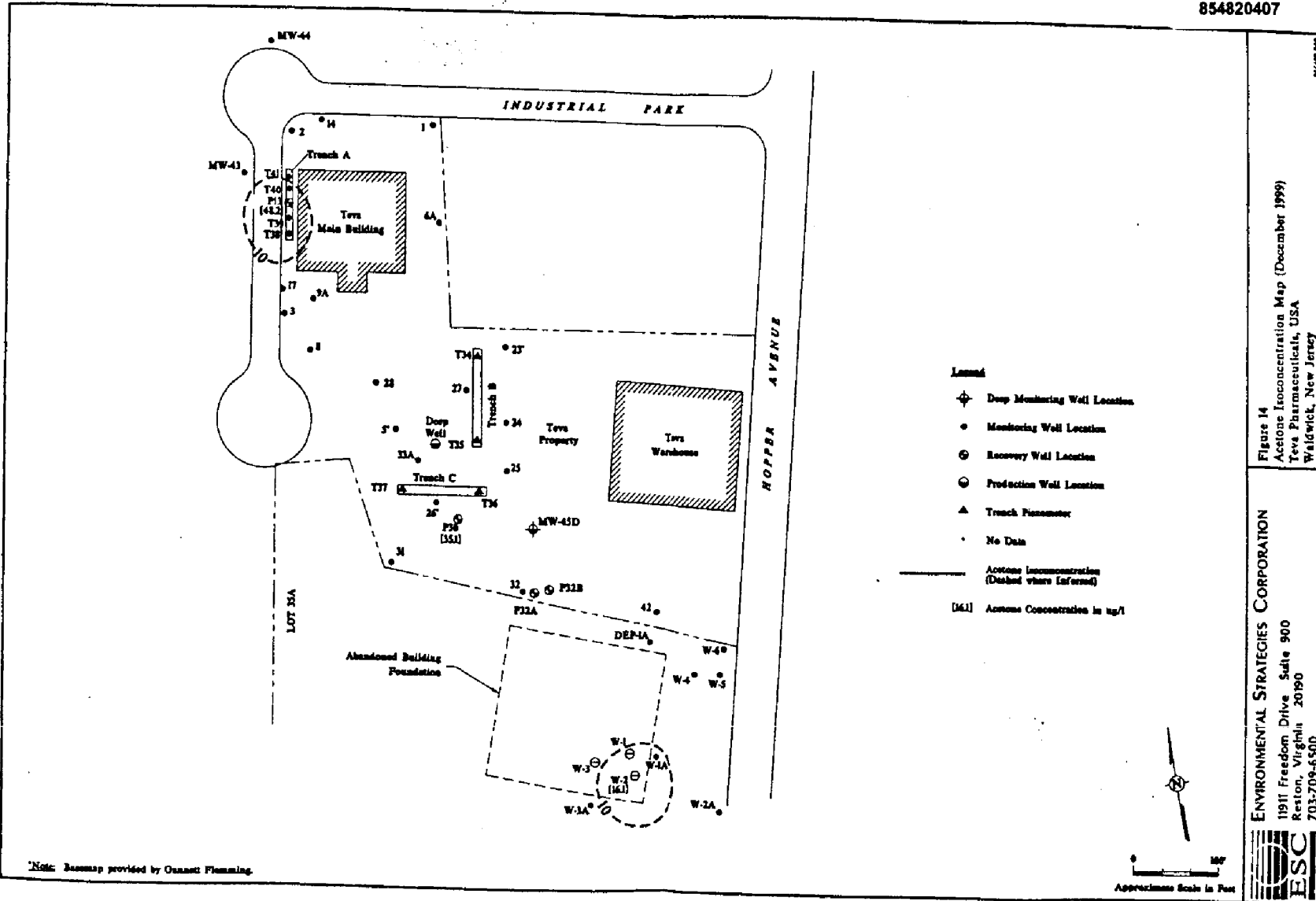
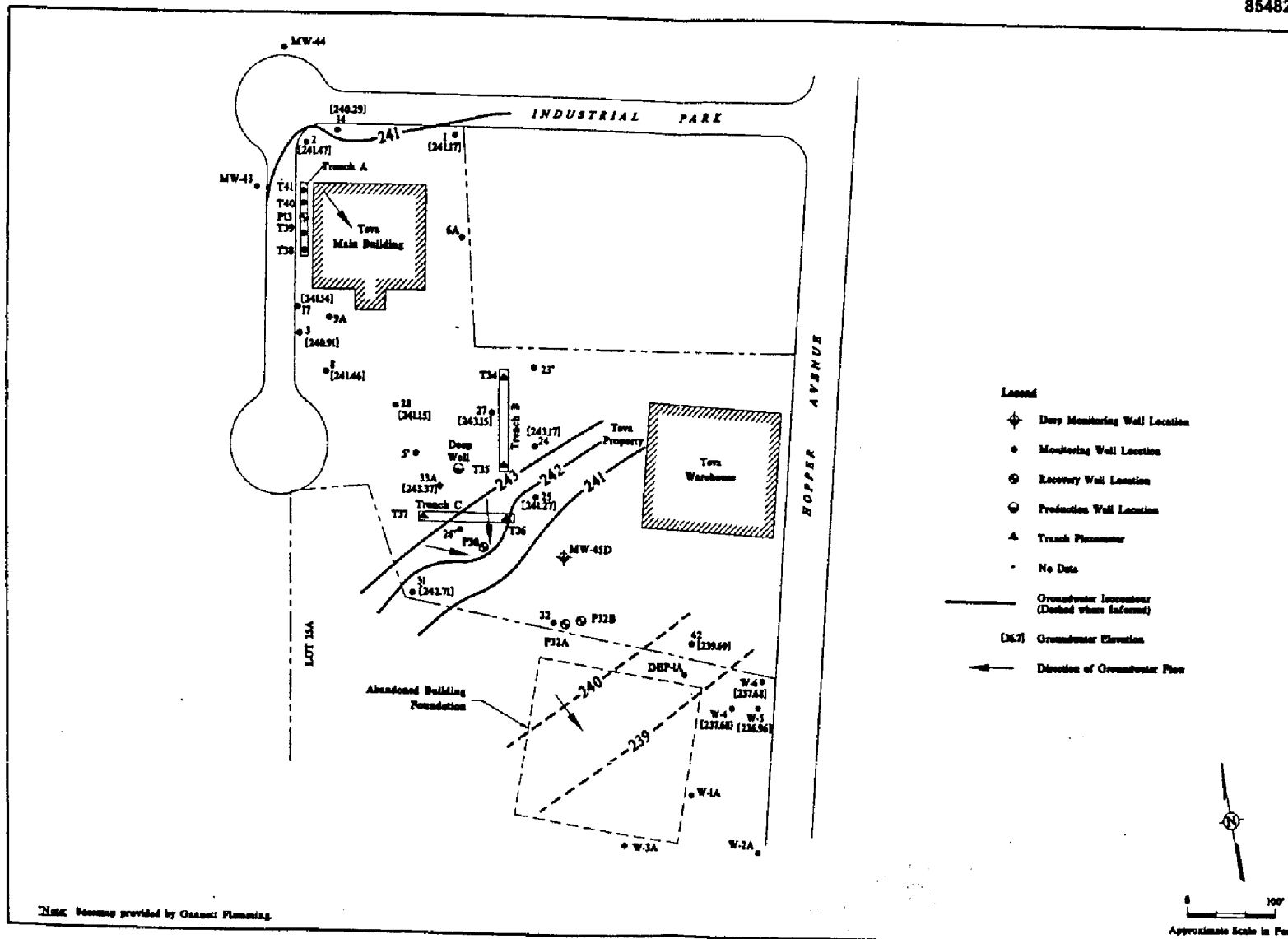


Figure 14
Acetone Inconcentration Map (December 1999)
Teva Pharmaceuticals, USA
Waldwick, New Jersey

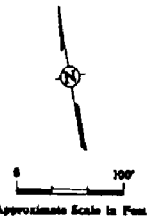
ENVIRONMENTAL STRATEGIES CORPORATION
1911 Freedom Drive Suite 900
Reston, Virginia 20190
703-709-6500





Legend

- ◆ Deep Monitoring Well Location
- Monitoring Well Location
- ⊙ Recovery Wall Location
- ⊙ Protection Wall Location
- ▲ Tranch Planner
- No Data
- Groundwater Isocontour (Dashed where Inferred)
- (M.7) Groundwater Elevation
- Direction of Groundwater Flow

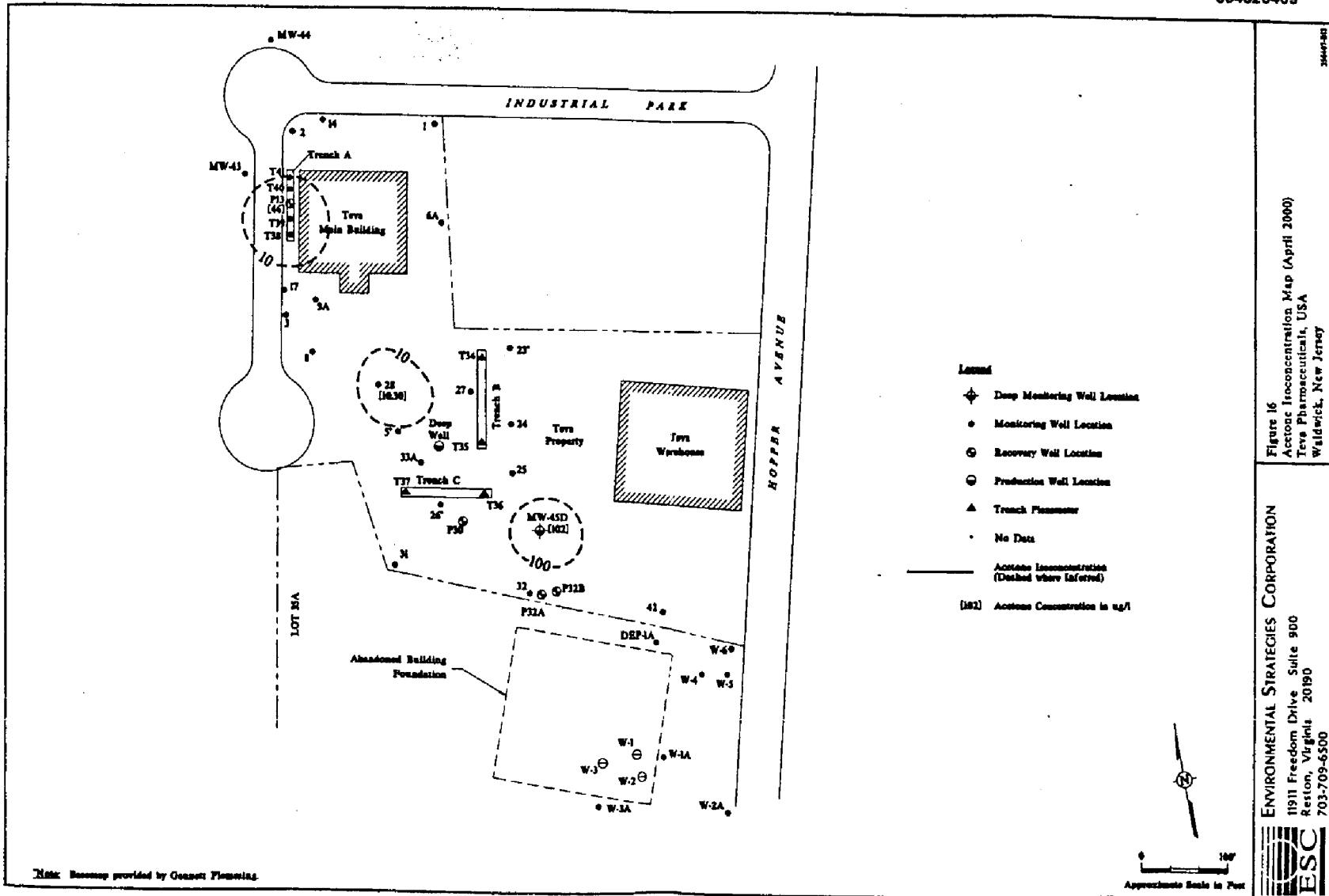


Note: Boundary provided by Geosoft Planning.

Figure 15
Groundwater Flow Map (April 2000)
Teva Pharmaceuticals, USA
Waldwick, New Jersey

ENVIRONMENTAL STRATEGIES CORPORATION
11911 Freedom Drive, Suite 900
Reston, Virginia 20190
703-709-6300





Note: Boundary provided by Cassatt Properties.

Figure 16
Acetone Inconcentration Map (April 2000)
Teva Pharmaceuticals, USA
Wallbridge, New Jersey

ENVIRONMENTAL STRATEGIES CORPORATION
11911 Freedom Drive, Suite 900
Reston, Virginia 20190
703-709-6500



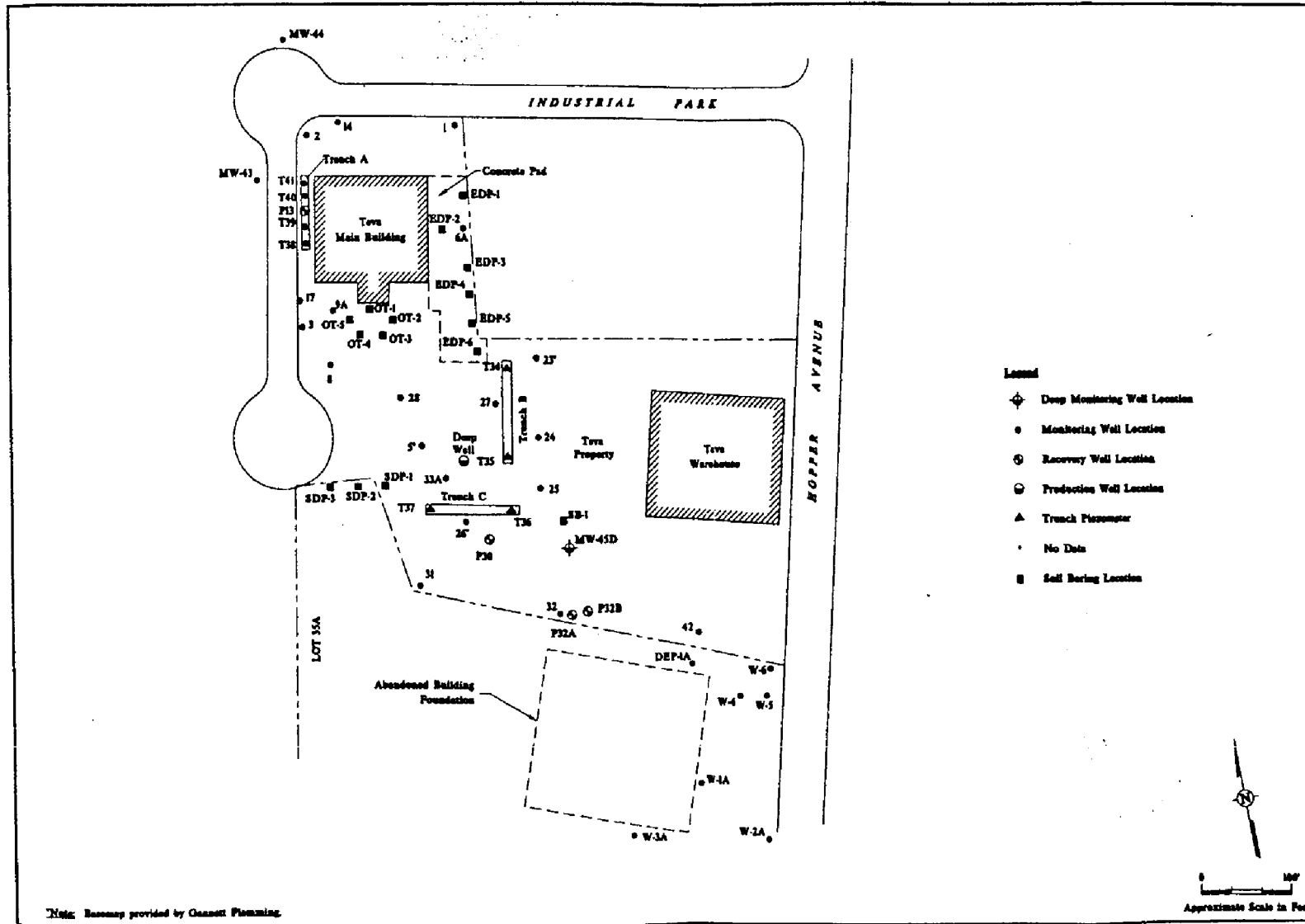


Figure 17
 Soil Boring Locations
 Teva Pharmaceuticals, USA
 Walldrick, New Jersey

ENVIRONMENTAL STRATEGIES CORPORATION
 11911 Freedom Drive Suite 900
 Reston, Virginia 20190
 703-709-6500



854820410

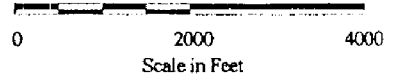


Reference
 7.5 Minute Series Topographic Quadrangle
 Ramsey and Park Ridge, NJ, US 1955
 Scale 1:24,000 Contour Interval 10 Feet
 Longitude 74.07.30 Latitude 41.00.00



Quadrangle Location

MUNICIPAL WELL



ENVIRONMENTAL STRATEGIES CORPORATION
 270 Davidson Avenue, Suite 102
 Somerset, New Jersey 08873
 732-564-0888

Figure 18
Municipal Well Locations
Teva Pharmaceuticals USA
Waldwick, New Jersey

854820411

Tables

854820412

TABLE 1

GROUNDWATER SAMPLE RESULTS, DECEMBER 1998
TEVA PHARMACEUTICALS USA
WALDWICK, NEW JERSEY

Parameter	Class IIA Groundwater Quality Criteria	Sample Number Laboratory ID Sample Matrix Date Collected	MW-1	MW-2	MW-3	MW-6	MW-8	MW-9	MW-14	MW-17
			E43395-4 Water 12/16/98	E43395-2 Water 12/16/98	E43395-1 Water 12/16/98	E43302-4 Water 12/15/98	E43473-14 Water 12/18/98	E43302-1 Water 12/15/98	E43395-3 Water 12/16/98	E43302-2 Water 12/15/98
Acetone (ug/L)	700.00		<5.00	<5.00	17.70	15.40	18.20	32.90	<5.00	<5.00
Methylene Chloride (ug/L)	2.00		<0.61	<0.61	3.00	<0.61	<0.61	<0.61	<0.61	<0.61
Butyl Alcohol (ug/L)	500.00		<1.40	<1.40	<1.40	<1.40	<1.40	<1.40	<1.40	<1.40
Aniline (ug/L)	--		<0.84	<0.85	<0.86	<0.95	<0.92	<0.95	<0.86	<0.90
N,N-Dimethyl Aniline (ug/L)	--		<5.40	<5.40	<5.60	<6.10	<5.90	<6.10	<5.60	<5.80
BOD (mg/L)	--		7.00	<3.00	<3.00	<2.00	<5.00	4.40	<3.00	<2.00
COD (mg/L)	--		<20.00	<20.00	<20.00	<20.00	43.50	26.90	<20.00	39.70
Chloride (mg/L)	250000.00		166.00	173.00	59.40	202.00	76.40	226.00	129.00	46.60
Phosphorus, Total (mg/L)	--		<0.10	<0.10	0.81	<0.10	0.15	0.26	<0.10	0.25
TOC (mg/L)	--		2.20	1.50	6.70	2.70	7.00	9.80	5.20	15.90

NOTES:

Bold - Sample concentration exceeds the Class IIA Groundwater Quality Criteria

< - Less Than

J - Result is less than the quantitation limit or is an estimated result

mg/L - Milligrams per Liter

ug/L - Micrograms per Liter

854820413

TABLE I

GROUNDWATER SAMPLE RESULTS, DECEMBER 1998
TEVA PHARMACEUTICALS USA
WALDWICK, NEW JERSEY

Parameter	Class IIA Groundwater Quality Criteria	Sample Number Laboratory ID Sample Matrix Date Collected	MW-24	MW-25	MW-28	MW-31	MW-32	MW-33A	MW-42	MW-D
			E43302-5 Water 12/15/98	E43473-13 Water 12/18/98	E43302-3 Water 12/18/98	E43473-7 Water 12/17/98	E43473-8 Water 12/17/98	E43473-12 Water 12/18/98	E43302-6 Water 12/15/98	E43302-7 Water 12/15/98
										Duplicate
Acetone (ug/L)	700.00		<5.00	20.60	27.50	16.80	28.70	18.10	<5.00	<5.00
Methylene Chloride (ug/L)	2.00		<0.61	<0.61	<0.61	<0.61	<0.61	<0.61	<0.61	<0.61
Butyl Alcohol (ug/L)	500.00		<1.40	<1.40	<1.40	<1.40	<1.40	<1.40	<1.40	<1.40
Aniline (ug/L)	--		<0.95	<0.92	<0.92	<0.90	<0.82	<0.85	<0.90	<0.92
N,N-Dimethyl Aniline (ug/L)	--		<6.10	<5.90	1.30	<5.80	6.40	<5.40	<5.80	<5.90
BOD (mg/L)	--		<2.00	<5.00	17.80	6.50	14.20	<2.00	<2.00	<2.00
COD (mg/L)	--		33.30	36.00	76.80	69.10	61.40	43.50	<20.00	<20.00
Chloride (mg/L)	250000.00		34.20	121.00	91.70	88.70	227.00	259.00	112.00	113.00
Phosphorus, Total (mg/L)	--		0.28	0.61	1.10	0.32	0.27	10.90	<0.10	<0.10
TOC (mg/L)	--		4.80	6.20	10.90	19.20	23.00	10.40	4.60	4.60

NOTES:

Bold - Sample concentration exceeds the Class IIA Groundwater Quality Criteria

< - Less Than

J - Result is less than the quantitation limit or is an estimated result

mg/L - Milligrams per Liter

ug/L - Micrograms per Liter

854820414

TABLE 1

GROUNDWATER SAMPLE RESULTS, DECEMBER 1998
TEVA PHARMACEUTICALS USA
WALDWICK, NEW JERSEY

Parameter	Class IIA	Sample Number	W-1	W-2	W-3	W-4	W-5	W-6
	Groundwater	Laboratory ID	E43473-4	E43473-5	E43473-6	E43473-2	E43473-3	E43473-1
Quality	Criteria	Sample Matrix	Water	Water	Water	Water	Water	Water
		Date Collected	12/17/98	12/17/98	12/17/98	12/17/98	12/17/98	12/17/98
Acetone (ug/L)	700.00		48.10	14.40	83.90	11.00	<5.00	<5.00
Methylene Chloride (ug/L)	2.00		<0.61	<0.61	<0.61	<0.61	<0.61	<0.61
Butyl Alcohol (ug/L)	500.00		<1.40	<1.40	<1.40	<1.40	<1.40	<1.40
Aniline (ug/L)	--		2.30	<0.83	27.20	<0.90	<0.84	<0.86
N,N-Dimethyl Aniline (ug/L)	--		4.50	4.00	3.90	<5.80	<5.40	<5.60
BOD (mg/L)	--		34.60	29.40	143.00	33.30	<2.00	<2.00
COD (mg/L)	--		81.90	61.40	172.00	41.00	<20.00	69.10
Chloride (mg/L)	250000.00		113.00	37.00	328.00	71.40	49.30	44.30
Phosphorus, Total (mg/L)	--		1.70	0.78	2.00	0.60	0.13	0.66
TOC (mg/L)	--		24.60	8.00	61.20	14.80	4.40	3.50

NOTES:

Bold - Sample concentration exceeds the Class IIA Groundwater Quality Criteria

< - Less Than

J - Result is less than the quantitation limit or is an estimated result

mg/L - Milligrams per Liter

ug/L - Micrograms per Liter

854820415

TABLE 2

GROUNDWATER SAMPLE RESULTS, APRIL 1999
TEVA PHARMACEUTICALS USA
WALDWICK, NEW JERSEY

<i>Sample Number</i>	<i>Class IIA</i>	<i>Sample Number</i>	MW-6	MW-9	MW-17	MW-24	MW-25	MW-28	MW-42
<i>Laboratory ID</i>	<i>Groundwater</i>	<i>Laboratory ID</i>	E49186-1	E49186-2	E49186-3	E49186-4	E49186-5	E49186-6	E49186-7
<i>Sample Matrix</i>	<i>Quality</i>	<i>Sample Matrix</i>	Water	Water	Water	Water	Water	Water	Water
<i>Date Collected</i>	<i>Criteria</i>	<i>Date Collected</i>	4/29/99	4/29/99	4/29/99	4/29/99	4/29/99	4/29/99	4/29/99
Parameter									
Acetone (ug/L)	700.00		<1.30	<1.30	<1.30	<1.30	<1.30	36.70	<1.30
Methylene Chloride (ug/L)	2.00		<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40
Butyl Alcohol (ug/L)	500.00		<3.50	<3.50	<3.50	<3.50	<3.50	<3.50	<3.50
Aniline (ug/L)	--		<0.78	<0.78	<0.78	<0.78	<0.78	<0.78	<0.78
N,N-Dimethyl Aniline (ug/L)	--		<5.00	1.20	<5.00	<5.00	<5.00	<5.00	<5.00
BOD (mg/L)	--		7.00	8.30	8.00	<2.00	<2.00	10.90	<2.00
COD (mg/L)	--		<20.00	28.90	21.10	<20.00	<20.00	<20.00	<20.00
Chloride (mg/L)	250000.00		181.00	124.00	217.00	8.50	48.10	27.80	34.40
Phosphorus, Total (mg/L)	--		<0.10	0.16	0.81	<0.10	0.17	<0.10	<0.10
TOC (mg/L)	--		10.10	6.60	4.80	3.60	5.60	4.50	2.40

NOTES:

Bold - Sample concentration exceeds the Class IIA Groundwater Quality Criteria

< - Less Than

J - Result is less than the quantitation limit or is an estimated result

mg/L - Milligrams per Liter

ug/L - Micrograms per Liter

854820416

TABLE 3

GROUNDWATER SAMPLE RESULTS, AUGUST 1999
TEVA PHARMACEUTICALS USA
WALDWICK, NEW JERSEY

Parameter	Class IIA	Sample Number	MW-6	MW-9	MW-17	MW-24	MW-28	MW-42
	Groundwater	Laboratory ID	E54398-1	E54398-2	E54398-4	E54398-6	E54398-3	E54398-9
Quality	Sample Matrix	Water	Water	Water	Water	Water	Water	Water
Criteria	Date Collected	8/19/99	8/19/99	8/19/99	8/20/99	8/19/99	8/20/99	
Acetone (ug/L)	700.00	<1.30	22.40	<1.30	<1.30	35.80	<1.30	
Methylene Chloride (ug/L)	2.00	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	
Butyl Alcohol (ug/L)	500.00	<3.50	<3.50	<3.50	<3.50	<3.50	<3.50	
Aniline (ug/L)	--	NA	<0.78	<0.78	<0.78	<0.80	<0.78	
N,N-Dimethyl Aniline (ug/L)	--	NA	0.98	<5.00	<5.00	1.40	<5.00	
BOD (mg/L)	--	7.00	19.60	<7.20	<4.80	12.30	<4.80	
COD (mg/L)	--	NA	102.00	67.50	<20.00	112.00	23.00	
Chloride (mg/L)	250000.00	166.00	186.00	122.00	13.50	48.30	98.00	
Phosphorus, Total (mg/L)	--	3.30	0.58	0.81	<0.10	1.70	<0.10	
TOC (mg/L)	--	NA	11.10	11.90	4.80	9.00	6.40	

NOTES:

Bold - Sample concentration exceeds the Class IIA Groundwater Quality Criteria

< - Less Than

J - Result is less than the quantitation limit or is an estimated result

mg/L - Milligrams per Liter

ug/L - Micrograms per Liter

854820417

TABLE 4

GROUNDWATER SAMPLE RESULTS, DECEMBER 1999
 TEVA PHARMACEUTICALS USA
 WALDWICK, NEW JERSEY

Parameter	Class IIA Groundwater Quality Criteria	Sample Number Laboratory ID Sample Matrix Date Collected	MW-1	MW-2	MW-6	MW-8	MW-D	MW-17
			E60999-3 Water 12/21/99	E60999-4 Water 12/21/99	E61153-5 Water 12/22/99	E61153-7 Water 12/22/99	E61153-8 Water 12/22/99	E61153-13 Water 12/23/99
Acetone (ug/L)	700.00		<1.30	<1.30	<1.30	<1.30	Duplicate <1.30	<1.30
Methylene Chloride (ug/L)	2.00		<0.40	<0.40	<0.40	<0.40	<0.40	<0.40
Butyl Alcohol (ug/L)	500.00		<3.50	<3.50	<3.50	<3.50	<3.50	<3.50
Aniline (ug/L)	--		<1.20	<1.10	NC	<0.82	<0.83	<0.83
N,N-Dimethyl Aniline (ug/L)	--		<7.70	<7.20	NC	<5.20	<5.30	<5.30
BOD (mg/L)	--		7.00	<6.60	NC	<2.00	<2.00	<7.10
COD (mg/L)	--		<20.00	<20.00	NC	<20.00	<20.00	<20.00
TOC (mg/L)	--		1.10	1.40	NC	5.60	5.20	5.40

NOTES:

Bold - Sample concentration exceeds the Class IIA Groundwater Quality Criteria

< - Less Than

J - Result is less than the quantitation limit or is an estimated result

mg/L - Milligrams per Liter

ug/L - Micrograms per Liter

854820418

TABLE 4

GROUNDWATER SAMPLE RESULTS, DECEMBER 1999
TEVA PHARMACEUTICALS USA
WALDWICK, NEW JERSEY

Parameter	Class IIA	Sample Number	MW-24	MW-25	MW-28	MW-31	MW-42	W-2
	Groundwater	Laboratory ID	E60999-6	E60999-7	E61153-6	E61153-9	E61153-4	E60999-5
	Quality	Sample Matrix	Water	Water	Water	Water	Water	Water
	Criteria	Date Collected	12/21/99	12/21/99	12/22/99	12/22/99	12/22/99	12/21/99
Acetone (ug/L)	700.00		<1.30	<1.30	<1.30	5.80	<1.30	16.10
Methylene Chloride (ug/L)	2.00		<0.40	<0.40	<0.40	<0.40	<0.40	<0.40
Butyl Alcohol (ug/L)	500.00		<3.50	<3.50	<3.50	<3.50	<3.50	<3.50
Aniline (ug/L)	--		<0.98	<0.82	<0.84	<0.87	<0.84	<0.86
N,N-Dimethyl Aniline (ug/L)	--		<6.20	<5.20	<5.40	<5.80	<5.40	<5.60
BOD (mg/L)	--		<2.00	<2.00	<4.70	<7.10	<4.70	17.70
COD (mg/L)	--		21.10	<20.00	20.50	30.70	<20.00	34.20
TOC (mg/L)	--		3.50	4.80	5.30	7.60	17.40	9.70

NOTES:

Bold - Sample concentration exceeds the Class IIA Groundwater Quality Criteria

< - Less Than

J - Result is less than the quantitation limit or is an estimated result

mg/L - Milligrams per Liter

ug/L - Micrograms per Liter

854820419

TABLE 5

GROUNDWATER SAMPLE RESULTS, APRIL 2000
 TEVA PHARMACEUTICALS USA
 WALDWICK, NEW JERSEY

Parameter	Class IIA Groundwater Quality Criteria	Sample Number	MW-6A	MW-9A	MW-17	MW-24	MW-25	MW-28
		Laboratory ID	E67299-4	E67299-5	E67299-3	E67299-7	E67299-10	E67299-6
		Sample Matrix	Water	Water	Water	Water	Water	Water
		Date Collected	4/12/00	4/12/00	4/12/00	4/12/00	4/12/00	4/12/00
Acetone (ug/L)	700.00		< 1.30	< 1.30	< 1.30	< 1.30	< 1.30	10.30
Methylene Chloride (ug/L)	2.00		< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40
Butyl Alcohol (ug/L)	500.00		< 3.50	< 3.50	< 3.50	< 3.50	< 3.50	< 3.50
Aniline (ug/L)	--		< 0.86	< 0.82	< 0.85	< 0.85	< 0.86	< 0.84
N,N-Dimethyl Aniline (ug/L)	--		< 5.60	< 5.20	< 5.40	< 5.40	< 5.60	< 5.40
BOD (mg/L)	--		< 16.00	< 2.00	< 5.00	< 2.00	< 2.00	< 5.40
COD (mg/L)	--		< 20.00	< 20.00	53.80	< 20.00	< 20.00	< 20.00
TOC (mg/L)	--		3.20	2.80	7.60	2.10	4.00	5.50

NOTES:

Bold - Sample concentration exceeds the Class IIA Groundwater Quality Criteria

< - Less Than

J - Result is less than the quantitation limit or is an estimated result

mg/L - Milligrams per Liter

ug/L - Micrograms per Liter

854820420

TABLE 5

GROUNDWATER SAMPLE RESULTS, APRIL 2000
TEVA PHARMACEUTICALS USA
WALDWICK, NEW JERSEY

Parameter	Class IIA Groundwater Quality Criteria	Sample Number Laboratory ID Sample Matrix Date Collected	MW-42 E67299-9 Water 4/12/00	MW-43 E67299-1 Water 4/12/00	MW-44 E67299-1 Water 4/12/00	MW-45D E67299-15 Water 4/12/00	MW-D* E67299-14 Water 4/12/00
Acetone (ug/L)	700.00		< 1.30	< 1.30	< 1.30	102.0	106.00
Methylene Chloride (ug/L)	2.00		< 0.40	< 0.40	< 0.40	< 2.00	< 0.80
Butyl Alcohol (ug/L)	500.00		< 3.50	< 3.50	< 3.50	< 18.00	< 7.00
Aniline (ug/L)	--		< 0.84	< 0.86	< 0.85	< 0.87	< 0.79
N,N-Dimethyl Aniline (ug/L)	--		< 5.40	< 5.60	< 5.40	< 5.60	< 5.00
BOD (mg/L)	--		< 2.00	< 2.00	< 2.00	6.90	6.90
COD (mg/L)	--		< 20.00	25.10	< 20.00	31.00	29.70
TOC (mg/L)	--		2.60	2.50	1.40	8.20	8.70

NOTES:

Bold - Sample concentration exceeds the Class IIA Groundwater Quality Criteria

< - Less Than

J - Result is less than the quantitation limit or is an estimated result

mg/L - Milligrams per Liter

ug/L - Micrograms per Liter

* - MW-45D (Duplicate)

854820421

TABLE 6

GROUNDWATER SAMPLE RESULTS RECOVERY WELLS AND EFFLUENT, DECEMBER 1998 THROUGH APRIL 2000
TEVA PHARMACEUTICALS USA
WALDWICK, NEW JERSEY

	Class IIA Groundwater Quality Criteria	Sample Number Laboratory ID Sample Matrix Date Collected	PW-13 E43473-11 Water 12/18/98	P-13 E49186-10 Water 4/30/99	P-13 Water	PW-13 E61153-3 Water 12/22/99	P-13 E67299-8 Water 4/12/00
Acetone (ug/L)	700.00		14.40	35.50	NS	48.20	46.00
Methylene Chloride (ug/L)	2.00		<0.61	<0.40	NS	<0.40	<0.40
Butyl Alcohol (ug/L)	500.00		<1.40	<3.50	NS	<3.50	<3.50
Aniline (ug/L)	--		<0.85	<0.82	NS	<0.83	<0.86
N,N-Dimethyl Aniline (ug/L)	--		<5.40	1.10		<5.30	<5.60
BOD (mg/L)	--		11.00	6.90	NS	11.10	21.20
COD (mg/L)	--		51.20	<20.00	NS	53.80	38.70
Chloride (mg/L)	250000.00		254.00	240.00	NS	NA	NA
Phosphorus, Total (mg/L)	--		10.50	0.21	NS	NA	NA
TOC (mg/L)	--		8.60	9.70	NS	11.00	18.10

NOTES:

Bold - Sample concentration exceeds the Class IIA Groundwater Quality Criteria

< - Less Than

J - Result is less than the quantitation limit or is an estimated result

mg/L - Milligrams per Liter

ug/L - Micrograms per Liter

NS - Not Sampled, pump off line for repairs

NA - Not Analyzed

854820422

TABLE 6

GROUNDWATER SAMPLE RESULTS RECOVERY WELLS AND EFFLUENT, DECEMBER 1998 THROUGH APRIL 2000
TEVA PHARMACEUTICALS USA
WALDWICK, NEW JERSEY

	Class IIA Groundwater Quality Criteria	Sample Number Laboratory ID Sample Matrix Date Collected	PW-30 E43395-6 Water 12/16/98	P-30 E49186-11 Water 4/30/99	P-30 E54398-7 Water 8/20/99	PW-30 E61153-12 Water 12/23/99	P-30 E67299-11 Water 4/12/00
Acetone (ug/L)	700.00		66.30	<1.30	35.10	<1.30	< 1.30
Methylene Chloride (ug/L)	2.00		2.00	<0.40	<0.40	<0.40	< 0.40
Butyl Alcohol (ug/L)	500.00		<1.40	<3.50	<3.50	<3.50	< 3.50
Aniline (ug/L)	--		64.30	<0.80	3.20	<0.82	< 0.79
N,N-Dimethyl Aniline (ug/L)	--		3.60	<5.10	3.70	<5.2	< 5.00
BOD (mg/L)	--		<3.00	<2.00	<7.20	<2.00	< 2.00
COD (mg/L)	--		28.20	<20.00	32.50	20.50	< 20.00
Chloride (mg/L)	250000.00		266.00	129.00	351.00	NA	NA
Phosphorus, Total (mg/L)	--		1.40	0.43	1.30	NA	NA
TOC (mg/L)	--		11.10	6.60	8.30	5.90	8.30

NOTES:

Bold - Sample concentration exceeds the Class IIA Groundwater Quality Criteria

< - Less Than

J - Result is less than the quantitation limit or is an estimated result

mg/L - Milligrams per Liter

ug/L - Micrograms per Liter

NS - Not Sampled, pump off line for repairs

NA - Not Analyzed

854820423

TABLE 6

GROUNDWATER SAMPLE RESULTS RECOVERY WELLS AND EFFLUENT, DECEMBER 1998 THROUGH APRIL 2000
TEVA PHARMACEUTICALS USA
WALDWICK, NEW JERSEY

	Class IIA Groundwater Quality Criteria	Sample Number Laboratory ID Sample Matrix Date Collected	MW-P32A E43395-7 Water 12/16/98	P-32A/B E49186-12 Water 4/30/99	P-32A/B E54398-8 Water 8/20/99	MW-P32A Water	P-32A/B E67299-13 Water 4/12/00
Acetone (ug/L)	700.00		3810.00	667.00	3100.00	NS	< 1.30
Methylene Chloride (ug/L)	2.00		29500.00	1550.00	29500.00	NS	< 0.40
Butyl Alcohol (ug/L)	500.00		<140.00	<3.50	<180.00	NS	< 3.50
Aniline (ug/L)	--		393.00	81.60	302.00	NS	< 0.80
N,N-Dimethyl Aniline (ug/L)	--		154.00	64.00	241.00	NS	< 5.20
BOD (mg/L)	--		58.00	16.30	40.80	NS	< 3.30
COD (mg/L)	--		156.00	25.30	108.00	NS	< 20.00
Chloride (mg/L)	250000.00		304.00	218.00	285.00	NS	NA
Phosphorus, Total (mg/L)	--		2.00	0.81	1.70	NS	NA
TOC (mg/L)	--		42.20	12.60	27.90	NS	6.60

NOTES:

Bold - Sample concentration exceeds the Class IIA Groundwater Quality Criteria

< - Less Than

J - Result is less than the quantitation limit or is an estimated result

mg/L - Milligrams per Liter

ug/L - Micrograms per Liter

NS - Not Sampled, pump off line for repairs

NA - Not Analyzed

854820424

TABLE 6

GROUNDWATER SAMPLE RESULTS RECOVERY WELLS AND EFFLUENT, DECEMBER 1998 THROUGH APRIL 2000
TEVA PHARMACEUTICALS USA
WALDWICK, NEW JERSEY

	Class IIA Groundwater Quality Criteria	Sample Number <i>Laboratory ID</i> <i>Sample Matrix</i> <i>Date Collected</i>	BIO-EFF E43395-5 Water 12/16/98	BIO-EFF E49186-13 Water 4/30/99	BIO-EFF E54398-10 Water 8/20/99	BIO-EFF E60999-8 Water 12/21/99	BIO-EFF E67299-12 Water 4/12/00
Acetone (ug/L)	700.00		34.90	47.40	49.70	<1.30	<1.30
Methylene Chloride (ug/L)	2.00		216.00	11.30	2.30	<0.40	<0.40
Butyl Alcohol (ug/L)	500.00		<1.40	<3.50	<3.50	<3.50	<3.50
Aniline (ug/L)	--		<0.78	<0.83	<0.78	<0.78	<0.82
N,N-Dimethyl Aniline (ug/L)	--		<5.00	<5.30	<5.00	<5.00	<5.20
BOD (mg/L)	--		<3.00	4.70	29.40	<2.00	<3.30
COD (mg/L)	--		20.50	<20.00	35.10	21.10	20.60
Chloride (mg/L)	250000.00		321.00	230.00	250.00	NA	NA
Phosphorus, Total (mg/L)	--		0.56	0.20	9.30	NA	NA
TOC (mg/L)	--		6.50	6.20	7.60	5.50	7.20

NOTES:

Bold - Sample concentration exceeds the Class IIA Groundwater Quality Criteria

< - Less Than

J - Result is less than the quantitation limit or is an estimated result

mg/L - Milligrams per Liter

ug/L - Micrograms per Liter

NS - Not Sampled, pump off line for repairs

NA - Not Analyzed

854820425

TABLE 7

GROUNDWATER SAMPLING SUMMARY, FEBRUARY 1996 THROUGH APRIL 2000
TEVA PHARMACEUTICALS USA
WALDWICK, NEW JERSEY

Well No.	Date Sampled	Acetone (ug/L)	Methylene Chloride (ug/L)	Butyl Alcohol (ug/L)	Aniline (ug/L)	Dimethyl Aniline (ug/L)
MW-1	11/12/96	< 0.46	4.60	< 1.40	NA	NA
	12/18/97	< 5.00	< 0.61	< 1.40	< 0.78	< 5.00
	12/16/98	< 5.00	< 0.61	< 1.40	< 0.84	< 5.40
	12/21/99	< 1.30	< 0.40	< 3.50	< 1.20	< 7.70
MW-2	11/12/96	< 0.46	< 0.61	< 1.40	NA	NA
	12/18/97	< 5.00	< 0.61	< 1.40	< 0.78	< 5.00
	12/16/98	< 5.00	< 0.61	< 1.40	< 0.85	< 5.40
	12/21/99	< 1.30	< 0.40	< 3.50	< 1.10	< 7.20
MW-3	11/12/96	106.00	< 0.61	< 1.40	NA	NA
	12/18/97	< 5.00	< 0.61	< 1.40	< 0.78	< 5.00
	12/16/98	17.70	3.00	< 1.40	< 0.86	< 5.60
MW-6	2/14/96	< 1.00	< 1.00	< 5.00	NA	NA
	5/15/96	< 8.70	5.00	< 200.00	NA	NA
	7/24/96	< 8.70	8.10	< 200.00	NA	NA
	11/12/96	< 0.46	< 0.61	< 1.40	NA	NA
	2/19/97	< 5.00	< 0.61	< 1.40	NA	NA
	5/8/97	< 5.00	< 0.61	< 1.40	NA	NA
	8/28/97	< 5.00	< 0.61	< 1.40	NA	NA
	12/17/97	< 5.00	< 0.61	< 1.40	NA	NA
	3/26/98	41.90	< 0.61	< 1.40	NA	NA
	6/25/98	10.70	< 0.61	< 1.40	< 0.78	< 5.00
	9/24/98	< 5.00	< 0.61	< 1.40	< 0.80	5.10
	12/15/98	15.40	< 0.61	< 1.40	< 0.95	< 6.10
	4/29/99	< 1.30	< 0.40	< 3.50	< 0.78	< 5.00
	8/19/99	< 1.30	< 0.40	< 3.50	NA	NA
	12/21/99	< 1.30	< 0.40	< 3.50	< 1.20	< 7.70
4/12/00	< 1.30	< 0.40	< 3.50	< 0.86	< 5.60	

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TABLE 7

GROUNDWATER SAMPLING SUMMARY, FEBRUARY 1996 THROUGH APRIL 2000
TEVA PHARMACEUTICALS USA
WALDWICK, NEW JERSEY

Well No.	Date Sampled	Acetone (ug/L)	Methylene Chloride (ug/L)	Butyl Alcohol (ug/L)	Aniline (ug/L)	Dimethyl Aniline (ug/L)
MW-9	2/14/96	40.00	< 1.00	< 5.00	NA	NA
	5/15/96	< 8.70	< 1.40	< 200.00	NA	NA
	7/24/96	86.00	2.30	< 200.00	NA	NA
	11/12/96	68.30	< 0.61	< 1.40	NA	NA
	2/19/97	42.60	7.80	< 1.40	NA	NA
	5/8/97	12.70	< 0.61	< 1.40	NA	NA
	8/28/97	27.10	< 0.61	< 1.40	NA	NA
	12/17/97	< 5.00	< 0.61	< 1.40	< 0.78	< 5.00
	3/26/98	38.10	< 0.61	< 1.40	NA	NA
	6/25/98	18.40	< 0.61	< 1.40	< 0.79	< 5.00
	9/24/98	31.70	< 0.61	< 1.40	< 0.78	< 5.00
	12/15/98	32.90	< 0.61	< 1.40	< 0.95	< 6.10
	4/29/99	< 1.30	< 0.40	< 3.50	< 0.78	1.20
	8/19/99	22.40	< 0.40	< 3.50	< 0.78	1.00
	4/12/00	< 1.30	< 0.40	< 3.50	< 0.82	< 5.20
MW-17	2/14/96	130.00	1.30	< 5.00	NA	NA
	5/15/96	< 8.70	4.60	< 200.00	NA	NA
	7/24/96	65.00	8.20	< 200.00	NA	NA
	11/12/96	2.70	< 0.61	< 1.40	NA	NA
	2/19/97	< 5.00	4.80	< 1.40	NA	NA
	5/8/97	< 5.00	< 0.61	< 1.40	NA	NA
	8/28/97	< 5.00	< 0.61	< 1.40	NA	NA
	12/17/97	< 5.00	< 0.61	< 1.40	< 0.78	< 5.00
	3/26/98	13.80	< 0.61	< 1.40	NA	NA
	6/25/98	< 5.00	< 0.61	< 1.40	< 0.80	< 5.10
	9/24/98	< 5.00	< 0.61	< 1.40	< 0.78	< 5.00
	12/15/98	< 5.00	< 0.61	< 1.40	< 0.90	< 5.80
	4/29/99	< 1.30	< 0.40	< 3.50	< 0.78	< 5.00
	8/19/99	< 1.30	< 0.40	< 3.50	< 0.78	< 5.00
	12/21/99	< 1.30	< 0.40	< 3.50	< 0.83	< 5.30
4/12/00	< 1.30	< 0.40	< 3.50	< 0.85	< 5.40	

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TABLE 7

GROUNDWATER SAMPLING SUMMARY, FEBRUARY 1996 THROUGH APRIL 2000
 TEVA PHARMACEUTICALS USA
 WALDWICK, NEW JERSEY

Well No.	Date Sampled	Acetone (ug/L)	Methylene Chloride (ug/L)	Butyl Alcohol (ug/L)	Aniline (ug/L)	Dimethyl Aniline (ug/L)
MW-24	2/14/96	2.20	1.40	< 5.00	NA	NA
	5/15/96	< 8.70	< 1.40	< 200.00	NA	NA
	7/24/96	< 8.70	7.80	< 200.00	NA	NA
	11/12/96	< 0.46	< 0.61	< 1.40	NA	NA
	2/19/97	< 5.00	< 0.61	< 1.40	NA	NA
	5/8/97	< 5.00	< 0.61	< 1.40	NA	NA
	8/28/97	< 5.00	< 0.61	< 1.40	NA	NA
	12/17/97	< 5.00	< 0.61	< 1.40	< 0.78	< 5.00
	3/26/98	11.60	< 0.61	< 1.40	NA	NA
	6/25/98	< 5.00	< 0.61	< 1.40	< 0.80	< 5.20
	9/24/98	< 5.00	< 0.61	< 1.40	< 0.79	< 5.00
	12/15/98	< 5.00	< 0.61	< 1.40	< 0.95	< 6.10
	4/29/99	< 1.30	< 0.40	< 3.50	< 0.78	< 5.00
	8/19/99	< 1.30	< 0.40	< 3.50	< 0.78	< 5.00
	12/21/99	< 1.30	< 0.40	< 3.50	< 0.98	< 6.20
4/12/00	< 1.30	< 0.40	< 3.50	< 0.85	< 5.40	
MW-25	2/14/96	17.00	< 1.00	< 5.00	NA	NA
	5/15/96	< 8.70	2.10	< 200.00	NA	NA
	7/24/96	< 8.70	8.70	< 200.00	NA	NA
	11/12/96	< 0.46	< 0.61	< 1.40	NA	NA
	2/19/97	< 5.00	< 0.61	< 1.40	NA	NA
	5/8/97	< 5.00	< 0.61	< 1.40	NA	NA
	8/28/97	< 5.00	< 0.61	< 1.40	NA	NA
	12/17/97	< 5.00	< 0.61	< 1.40	< 0.78	< 5.00
	3/26/98	17.50	< 0.61	< 1.40	NA	NA
	6/25/98	< 5.00	85.20	< 1.40	< 0.79	< 5.00
	9/24/98	< 5.00	< 0.61	< 1.40	< 0.78	< 5.00
	12/15/98	20.60	< 0.61	< 1.40	< 0.92	< 5.90
	4/29/99	< 1.30	< 0.40	< 3.50	< 0.78	< 5.00
	12/21/99	< 1.30	< 0.40	< 3.50	< 0.82	< 5.20
	4/12/00	< 1.30	< 0.40	< 3.50	< 0.86	< 5.60

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TABLE 7

GROUNDWATER SAMPLING SUMMARY, FEBRUARY 1996 THROUGH APRIL 2000
TEVA PHARMACEUTICALS USA
WALDWICK, NEW JERSEY

Well No.	Date Sampled	Acetone (ug/L)	Methylene Chloride (ug/L)	Butyl Alcohol (ug/L)	Aniline (ug/L)	Dimethyl Aniline (ug/L)
MW-28	2/14/96	70.00	67.00	< 5.00	NA	NA
	5/15/96	120.00	2.30	< 200.00	NA	NA
	7/24/96	37.00	8.50	< 200.00	NA	NA
	11/12/96	87.40	< 0.61	< 1.40	NA	NA
	2/19/97	57.50	185.00	< 1.40	NA	NA
	5/8/97	67.40	< 0.61	< 1.40	NA	NA
	8/28/97	40.60	< 0.61	< 1.40	NA	NA
	12/17/97	47.10	< 0.61	< 1.40	< 0.78	< 5.00
	3/26/98	86.20	< 0.61	< 1.40	NA	NA
	6/25/98	46.20	< 0.61	< 1.40	< 0.79	1.90
	9/24/98	65.80	< 0.61	< 1.40	< 0.79	1.90
	12/15/98	27.50	< 0.61	< 1.40	< 0.92	1.30
	4/29/99	< 1.30	< 0.40	< 3.50	< 0.78	< 5.00
	8/19/99	35.80	< 0.40	< 3.50	< 0.80	1.40
	12/21/99	< 1.30	< 0.40	< 3.50	< 0.84	< 5.40
4/12/00	10.30	< 0.40	< 3.50	< 0.84	< 5.40	
MW-42	2/14/96	< 1.00	< 1.00	< 5.00	NA	NA
	5/15/96	< 8.70	< 1.40	< 200.00	NA	NA
	7/24/96	< 8.70	8.20	< 200.0	NA	NA
	11/12/96	< 0.42	< 0.61	< 1.40	NA	NA
	2/19/97	< 5.00	< 0.61	< 1.40	NA	NA
	5/8/97	< 5.00	< 0.61	< 1.40	NA	NA
	8/28/97	< 5.00	< 0.61	< 1.40	NA	NA
	12/17/97	< 5.00	< 0.61	< 1.40	< 0.78	< 5.00
	3/26/98	14.40	< 0.61	< 1.40	NA	NA
	6/25/98	< 5.00	< 0.61	< 1.40	< 0.79	< 5.00
	9/24/98	< 5.00	< 0.61	< 1.40	< 0.78	< 5.00
	12/15/98	< 5.00	< 0.61	< 1.40	< 0.90	< 5.80
	4/29/99	< 1.30	< 0.40	< 3.50	< 0.78	< 5.00
	8/19/99	< 1.30	< 0.40	< 3.50	< 0.78	< 5.00
	12/21/99	< 1.30	< 0.40	< 3.50	< 0.84	< 5.40
4/12/00	< 1.30	< 0.40	< 3.50	< 0.84	< 5.40	

854820429

TABLE 7

GROUNDWATER SAMPLING SUMMARY, FEBRUARY 1996 THROUGH APRIL 2000
TEVA PHARMACEUTICALS USA
WALDWICK, NEW JERSEY

Well No.	Date Sampled	Acetone (ug/L)	Methylene Chloride (ug/L)	Butyl Alcohol (ug/L)	Aniline (ug/L)	Dimethyl Aniline (ug/L)
P-13	2/14/96	590.00	< 2.00	13.00	NA	NA
	5/15/96	< 8.70	< 1.40	< 200.00	NA	NA
	7/24/96	< 8.70	6.60	< 200.00	NA	NA
	11/12/96	169.00	< 0.61	< 1.40	NA	NA
	2/19/97	2140.00	573.00	< 14.00	NA	NA
	5/8/97	16.8	< 0.61	< 1.40	NA	NA
	8/28/97	479.00	3100.00	< 1.40	NA	NA
	12/17/97	55.10	< 0.61	201.00	< 0.78	< 5.00
	6/25/98	53.20	< 0.61	< 1.40	< 0.79	2.30
	9/24/98	24.80	< 0.61	< 1.40	< 0.80	1.10
	12/15/98	14.40	< 0.61	< 1.40	< 0.85	< 5.40
	4/29/99	35.50	< 0.40	< 3.50	< 0.82	1.10
	12/21/99	48.20	< 0.40	< 3.50	< 0.83	< 5.30
	4/12/00	46.00	< 0.40	< 3.50	< 0.86	< 5.60
	P-30	2/14/96	72.00	5.10	< 5.00	NA
5/15/96		< 8.70	< 1.40	< 200.00	NA	NA
7/24/96		72.00	66.00	< 200.00	NA	NA
11/12/96		72.70	1.90	< 1.40	NA	NA
2/19/97		72.50	19.80	< 1.40	NA	NA
5/8/97		27.50	< 0.61	< 1.40	NA	NA
8/28/97		104.00	40.20	< 1.40	NA	NA
12/17/97		17.10	< 0.61	26.40	27.30	< 5.00
3/26/98		63.50	2.40	< 1.40	NA	NA
6/25/98		11.80	127.00	< 1.40	32.00	2.50
9/24/98		148.00	9.90	< 1.40	77.70	7.30
12/15/98		66.30	2.00	< 1.40	64.30	3.60
4/29/99		< 1.30	< 0.40	< 3.50	< 0.80	< 5.10
8/19/99		35.10	< 0.40	< 3.50	3.20	3.70
12/21/99		< 1.30	< 0.40	< 3.50	< 0.82	< 5.20
4/12/00	< 1.30	< 0.40	< 3.50	< 0.79	< 5.00	

854820430

TABLE 7

GROUNDWATER SAMPLING SUMMARY, FEBRUARY 1996 THROUGH APRIL 2000
TEVA PHARMACEUTICALS USA
WALDWICK, NEW JERSEY

Well No.	Date Sampled	Acetone (ug/L)	Methylene Chloride (ug/L)	Butyl Alcohol (ug/L)	Aniline (ug/L)	Dimethyl Aniline (ug/L)
P-32A/B	2/14/96	2.00	1200.00	3.30	NA	NA
	5/15/96	2900.00	10000.00	< 1000.00	NA	NA
	7/24/96	5000.00	3600.00	< 4000.00	NA	NA
	11/12/96	1520.00	9630.00	< 7.00	NA	NA
	2/19/97	241.00	2230.00	< 14.00	NA	NA
	5/8/97	1820.00	11200.00	< 1.40	NA	NA
	8/28/97	3350.00	16400.00	< 1.40	NA	NA
	12/17/97	970.00	13000.00	< 70.00	441.00	37.00
	3/26/98	273.00	2650.00	< 1.40	NA	NA
	6/25/98	191.00	1260.00	< 14.00	111.00	31.80
	9/24/98	1990.00	17600.00	< 7.00	144.00	62.40
	12/15/98	3810.00	29500.00	< 140.00	393.00	154.00
	4/29/99	667.00	1530.00	< 3.50	81.60	64.00
	8/20/99	3100.00	19500.00	< 180.00	302.00	241.00
	4/12/00	< 1.30	< 0.40	< 3.50	< 0.80	< 5.20

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TABLE 8

SOIL SAMPLE VOC RESULTS (SOUTH DRUM PAD), MARCH 2000
TEVA PHARMACEUTICALS USA
WALDWICK, NEW JERSEY

	Residential Direct Contact Soil Cleanup Criteria (mg/kg)	Non-Residential Direct Contact Soil Cleanup Criteria (mg/kg)	Impact to Groundwater Soil Cleanup Criteria (mg/kg)	Sample ID	SDP-1	SDP-2	SDP-3
				Laboratory ID	E65198-6	E65198-7	E65198-8
				Date Collected	3/8/00	3/8/00	3/8/00
				Sample Matrix	Soil	Soil	Soil
				Sample Depth	4-4.5 ft. b.g.	4.5-5.0 ft. b.g.	4.5-5.0 ft. b.g.
				Area of Concern	Drum Pad	Drum Pad	Drum Pad
Acrolein					<7.00	<8.10	<6.80
Acrylonitrile	1	5	1		<0.70	<0.81	<0.68
Benzene	3	13	1		<0.14	<0.16	<0.14
Bromodichloromethane	11	46	1		<0.70	<0.81	<0.68
Bromoform	86	370	1		<0.70	<0.81	<0.68
Bromomethane	79	1000	1		<0.70	<0.81	<0.68
Carbon tetrachloride	2	4	1		<0.70	<0.81	<0.68
Chlorobenzene	37	680	1		<0.70	<0.81	<0.68
Chloroethane					<2.80	<3.20	<2.70
2-Chloroethyl vinyl ether					<0.70	<0.81	<0.68
Chloroform	19	28	1		<0.70	<0.81	<0.68
Chloromethane	520	1000	10		<0.70	<0.81	<0.68
Dibromochloromethane	110	1000	1		<0.70	<0.81	<0.68
1,2-Dichlorobenzene	5100	10000	50		<0.70	<0.81	<0.68
1,3-Dichlorobenzene	5100	10000	100		<0.70	<0.81	<0.68
1,4-Dichlorobenzene	570	10000	100		<0.70	<0.81	<0.68
Dichlorodifluoromethane					<0.70	<0.81	<0.68
1,1-Dichloroethane	570	1000	10		<0.70	<0.81	<0.68
1,2-Dichloroethane	6	24	1		<0.70	<0.81	<0.68
1,1-Dichloroethene	8	150	10		<0.70	<0.81	<0.68
cis-1,2-Dichloroethene	79	1000	1		<0.70	<0.81	<0.68
trans-1,2-Dichloroethene	1000	1000	50		<0.70	<0.81	<0.68
1,2-Dichloropropane	10	43	-		<0.70	<0.81	<0.68
cis-1,3-Dichloropropene	4	5	1		<0.70	<0.81	<0.68
trans-1,3-Dichloropropene	4	5	1		<0.70	<0.81	<0.68
Ethylbenzene	1000	1000	100		<0.14	<0.16	<0.14
Methylene chloride	49	210	1		<0.70	<0.81	<0.68
1,1,1,2-Tetrachloroethane	170	310	1		<0.70	<0.81	<0.68
Tetrachloroethene	4	6	1		<0.70	<0.81	<0.68
Toluene	1000	1000	500		<0.14	<0.16	<0.14
1,1,1-Trichloroethane	210	1000	50		<0.70	<0.81	<0.68
1,1,2-Trichloroethane	22	420	1		<0.70	<0.81	<0.68
Trichloroethene	23	54	1		<0.70	<0.81	<0.68
Trichlorofluoromethane					<0.70	<0.81	<0.68
Vinyl chloride	2	7	10		<0.70	<0.81	<0.68
Xylene (total)	410	1000	67		<0.70	<0.81	<0.68

Notes:

mg/kg - milligrams per kilogram

Bold - Sample concentration exceeds the most stringent Soil Cleanup Criteria**Bold** - The most stringent Soil Cleanup Criteria

854820432

TABLE 9

SOIL SAMPLE SVOC SUMMARY (SOUTH DRUM PAD)
TEVA PHARMACEUTICALS USA
WALDWICK, NEW JERSEY

	Residential	Non-Residential	Impact to	Sample ID	SDP-2	SDP-1	SDP-3
	Direct Contact	Direct Contact	Groundwater	Laboratory ID	E65198-7	E65198-6	E65198-8
	Soil Cleanup	Soil Cleanup	Soil Cleanup	Date Collected	3/8/00	3/8/00	3/8/00
	Criteria (mg/kg)	Criteria (mg/kg)	Criteria (mg/kg)	Sample Matrix	Soil	Soil	Soil
				Sample Depth	4-4.5 ft. b.g.	4.5-5.0 ft. b.g.	4.5-5.0 ft. b.g.
				Area of Concern	Drum Pad	Drum Pad	Drum Pad
Acenaphthene	3400	10000	100		<0.075	<0.070	<0.069
Acenaphthylene					<0.075	<0.070	<0.069
Aniline					<0.075	<0.070	<0.069
Anthracene	10000	10000	100		<0.750	<0.700	<0.690
Benzidine					<0.075	<0.070	<0.069
Benzo(a)anthracene	0.9	4	500		<0.075	<0.070	<0.069
Benzo(a)pyrene	0.66	0.66	100		<0.075	<0.070	<0.069
Benzo(b)fluoranthene	0.9	4	50		<0.075	<0.070	<0.069
Benzo(g,h,i)perylene					<0.075	<0.070	<0.069
Benzo(k)fluoranthene	0.9	4	500		<0.075	<0.070	<0.069
4-Bromophenyl phenyl ether					<0.075	<0.070	<0.069
Butyl benzyl phthalate	1100	10000	50		<0.075	<0.070	<0.069
2-Chloronaphthalene					<0.075	<0.070	<0.069
4-Chloroaniline	230	4200	-		<0.190	<0.170	<0.170
Chrysene	9	40	500		<0.075	<0.070	<0.069
bis(2-Chloroethoxy)methane					<0.075	<0.070	<0.069
bis(2-Chloroethyl)ether	0.66	3	10		<0.075	<0.070	<0.069
bis(2-Chloroisopropyl)ether	2300	10000	10		<0.075	<0.070	<0.069
4-Chlorophenyl phenyl ether					<0.075	<0.070	<0.069
1,2-Dichlorobenzene	5100	10000	50		<0.075	<0.070	<0.069
1,2-Diphenylhydrazine					<0.075	<0.070	<0.069
1,3-Dichlorobenzene	5100	10000	100		<0.075	<0.070	<0.069
1,4-Dichlorobenzene	570	10000	100		<0.075	<0.070	<0.069
2,4-Dinitrotoluene	1	4	10		<0.075	<0.070	<0.069
2,6-Dinitrotoluene	1	4	10		<0.075	<0.070	<0.069
3,3'-Dichlorobenzidine	2	6	100		<0.190	<0.170	<0.170
N,N-Dimethylaniline					<0.075	<0.070	<0.069
Dimethyl Aniline (total)					0.318	<0.170	<0.069
Dibenzo(a,h)anthracene	0.66	0.66	100		<0.075	<0.070	<0.069
Di-n-butyl phthalate	5700	10000	100		<0.075	<0.070	<0.069
Di-n-octyl phthalate	1100	10000	100		<0.075	<0.070	<0.069
Diethyl phthalate	10000	10000	50		<0.075	<0.070	<0.069
Dimethyl phthalate	10000	10000	50		<0.075	<0.070	<0.069
bis(2-Ethylhexyl)phthalate	49	210	100		<0.075	<0.070	<0.069
Fluoranthene	2300	10000	100		<0.075	<0.070	<0.069
Fluorene	2300	10000	100		<0.075	<0.070	<0.069
Hexachlorobenzene	0.66	2	100		<0.075	<0.070	<0.069
Hexachlorobutadiene	1	21	100		<0.075	<0.070	<0.069
Hexachlorocyclopentadiene	400	7300	100		<0.750	<0.700	<0.690
Hexachlorethane	6	100	100		<0.190	<0.170	<0.170
Indeno(1,2,3-cd)pyrene	0.9	4	500		<0.075	<0.070	<0.069
Isophorone	1100	10000	50		<0.075	<0.070	<0.069
Naphthalene	230	4200	100		<0.075	<0.070	<0.069
Nitrobenzene					<0.075	<0.070	<0.069
n-Nitrosodimethylamine					<0.075	<0.070	<0.069
N-Nitroso-di-n-propylamine	0.66	0.66	10		<0.075	<0.070	<0.069
N-Nitrosodiphenylamine	140	600	100		<0.190	<0.170	<0.170
Phenanthrene					<0.075	<0.070	<0.069
Pyrene	1700	10000	100		<0.075	<0.070	<0.069
1,2,4-Trichlorobenzene	68	1200	100		<0.075	<0.070	<0.069

Notes:

mg/kg - milligrams per kilogram

Bold - Sample concentration exceeds the most stringent Soil Cleanup Criteria**Bold** - The most stringent Soil Cleanup Criteria

854820433

TABLE 10

SOIL SAMPLE TPH RESULTS (SOUTH DRUM PAD) MARCH 2000
TEVA PHARMACEUTICALS USA, NEW JERSEY

	<i>Sample ID</i>	SDP-1	SDP-2	SDP-3
	<i>Laboratory ID</i>	E65198-6	E65198-7	E65198-8
Total Organic	<i>Date Collected</i>	3/8/00	3/8/00	3/8/00
Contaminant	<i>Sample Matrix</i>	Soil	Soil	Soil
Soil Cleanup	<i>Sample Depth</i>	4 -4.5 ft.b.g	4.5-5.0 ft. b.g.	4.5-5.0 ft.b.g.
Criteria (mg/kg)	<i>Area of Concern</i>	Drum Pad	Drum Pad	Drum Pad
<i>Total Petroleum Hydrocarbons (mg/kg)</i>	10000	54.3	198.0	< 27.0

NOTES:

mg/kg - milligrams per kilogram

J - Estimated Concentration

ND - Not Detected above laboratory minimum detection limit

BOLD - Sample Concentration exceeds the most stringent Soil Cleanup Criteria

854820434

TABLE 11

SOIL SAMPLE VOC RESULTS (NORTHEAST DRUM PAD), MARCH 2000
TEVA PHARMACEUTICALS USA
WALDWICK, NEW JERSEY

	Residential Direct Contact Soil Cleanup Criteria (mg/kg)	Non-Residential Direct Contact Soil Cleanup Criteria (mg/kg)	Impact to Groundwater Soil Cleanup Criteria (mg/kg)	Sample ID Laboratory ID Date Collected Sample Matrix Sample Depth Area of Concern	EDP-1	EDP-2	EDP-3	EDP-4
					E65198-9 3/8/00 Soil 6.5-7 ft. b.g Drum Pad	E65198-13 3/9/00 Soil 6.5-7 ft. b.g Drum Pad	E65198-11 3/8/00 Soil 6.5-7 ft. b.g Drum Pad	E65198-12 3/9/00 Soil 6.5-7 ft. b.g Drum Pad
Acrolein					<6.80	<7.40	<7.00	<7.30
Acrylonitrile	1	5	1		<0.68	<0.74	<0.70	<0.73
Benzene	3	13	1		<0.14	<0.15	<0.14	<0.15
Bromodichloromethane	11	46	1		<0.68	<0.74	<0.70	<0.73
Bromoform	86	370	1		<0.68	<0.74	<0.70	<0.73
Bromomethane	79	1000	1		<0.68	<0.74	<0.70	<0.73
Carbon tetrachloride	2	4	1		<0.68	<0.74	<0.70	<0.73
Chlorobenzene	37	680	1		<0.68	<0.74	<0.70	<0.73
Chloroethane					<0.68	<0.74	<0.70	<0.73
2-Chloroethyl vinyl ether					<2.70	<2.90	<2.80	<2.90
Chloroform	19	28	1		<0.68	<0.74	<0.70	<0.73
Chloromethane	520	1000	10		<0.68	<0.74	<0.70	<0.73
Dibromochloromethane	110	1000	1		<0.68	<0.74	<0.70	<0.73
1,2-Dichlorobenzene	5100	10000	50		<0.68	<0.74	<0.70	<0.73
1,3-Dichlorobenzene	5100	10000	100		<0.68	<0.74	<0.70	<0.73
1,4-Dichlorobenzene	570	10000	100		<0.68	<0.74	<0.70	<0.73
Dichlorodifluoromethane					<0.68	<0.74	<0.70	<0.73
1,1-Dichloroethane	570	1000	10		<0.68	<0.74	<0.70	<0.73
1,2-Dichloroethane	6	24	1		<0.68	<0.74	<0.70	<0.73
1,1-Dichloroethene	8	150	10		<0.68	<0.74	<0.70	<0.73
cis-1,2-Dichloroethene	79	1000	1		<0.68	<0.74	<0.70	<0.73
trans-1,2-Dichloroethene	1000	1000	50		<0.68	<0.74	<0.70	<0.73
1,2-Dichloropropane	10	43	-		<0.68	<0.74	<0.70	<0.73
cis-1,3-Dichloropropene	4	5	1		<0.68	<0.74	<0.70	<0.73
trans-1,3-Dichloropropene	4	5	1		<0.68	<0.74	<0.70	<0.73
Ethylbenzene	1000	1000	100		<0.14	<0.15	<0.14	<0.15
Methylene chloride	49	210	1		<0.68	<0.74	<0.70	<0.73
1,1,2,2-Tetrachloroethane	170	310	1		<0.68	<0.74	<0.70	<0.73
Tetrachloroethene	4	6	1		<0.68	<0.74	<0.70	<0.73
Toluene	1000	1000	500		<0.14	<0.15	<0.14	<0.15
1,1,1-Trichloroethane	210	1000	50		<0.68	<0.74	<0.70	<0.73
1,1,2-Trichloroethane	22	420	1		<0.68	<0.74	<0.70	<0.73
Trichloroethene	23	54	1		<0.68	<0.74	<0.70	<0.73
Trichlorofluoromethane					<0.68	<0.74	<0.70	<0.73
Vinyl chloride	2	7	10		<0.68	<0.74	<0.70	<0.73
Xyrene (total)	410	1000	67		<0.68	<0.74	<0.70	<0.73

Notes:

mg/kg - milligrams per kilogram

Bold - Sample concentration exceeds the most stringent Soil Cleanup Criteria**Bold** - The most stringent Soil Cleanup Criteria

TABLE 11

SOIL SAMPLE VOC RESULTS (NORTHEAST DRUM PAD), MARCH 2000
TEVA PHARMACEUTICALS USA
WALDWICK, NEW JERSEY

	Residential Soil Cleanup Criteria (mg/kg)	Non-Residential Soil Cleanup Criteria (mg/kg)	Impact to Groundwater Soil Cleanup Criteria (mg/kg)	Sample ID	EDP-5	EDP-6	EDP-60
				Laboratory ID	E65198-14	E65198-15	E65198-16
				Date Collected	3/9/00	3/9/00	3/9/00
				Sample Matrix	Soil	Soil	Soil
				Sample Depth	6.5-7 ft. b.g	6.5-7 ft. b.g	6.5-7 ft. b.g
			Area of Concern	Drum Pad	Drum Pad	Dup EDP-6	
Acrolein					<6.40	<5.90	<6.40
Acrylonitrile	1	5	1		<0.64	<0.59	<0.64
Benzene	3	13	1		<0.13	<0.12	<0.13
Bromodichloromethane	11	46	1		<0.64	<0.59	<0.64
Bromoform	86	370	1		<0.64	<0.59	<0.64
Bromomethane	79	1000	1		<0.64	<0.59	<0.64
Carbon tetrachloride	2	4	1		<0.64	<0.59	<0.64
Chlorobenzene	37	680	1		<0.64	<0.59	<0.64
Chloroethane					<0.64	<0.59	<0.64
2-Chloroethyl vinyl ether					<2.50	<2.40	<2.50
Chloroform	19	28	1		<0.64	<0.59	<0.64
Chloromethane	520	1000	10		<0.64	<0.59	<0.64
Dibromochloromethane	110	1000	1		<0.64	<0.59	<0.64
1,2-Dichlorobenzene	5100	10000	50		<0.64	<0.59	<0.64
1,3-Dichlorobenzene	5100	10000	100		<0.64	<0.59	<0.64
1,4-Dichlorobenzene	570	10000	100		<0.64	<0.59	<0.64
Dichlorodifluoromethane					<0.64	<0.59	<0.64
1,1-Dichloroethane	570	1000	10		<0.64	<0.59	<0.64
1,2-Dichloroethane	6	24	1		<0.64	<0.59	<0.64
1,1-Dichloroethene	8	150	10		<0.64	<0.59	<0.64
cis-1,2-Dichloroethene	79	1000	1		<0.64	<0.59	<0.64
trans-1,2-Dichloroethene	1000	1000	50		<0.64	<0.59	<0.64
1,2-Dichloropropane	10	43	-		<0.64	<0.59	<0.64
cis-1,3-Dichloropropene	4	5	1		<0.64	<0.59	<0.64
trans-1,3-Dichloropropene	4	5	1		<0.64	<0.59	<0.64
Ethylbenzene	1000	1000	100		<0.13	<0.12	<0.13
Methylene chloride	49	210	1		<0.64	<0.59	<0.64
1,1,2,2-Tetrachloroethane	170	310	1		<0.64	<0.59	<0.64
Tetrachloroethene	4	6	1		<0.64	<0.59	<0.64
Toluene	1000	1000	500		<0.13	<0.12	<0.13
1,1,1-Trichloroethane	210	1000	50		<0.64	<0.59	<0.64
1,1,2-Trichloroethane	22	420	1		<0.64	<0.59	<0.64
Trichloroethene	23	54	1		<0.64	<0.59	<0.64
Trichlorofluoromethane					<0.64	<0.59	<0.64
Vinyl chloride	2	7	10		<0.64	<0.59	<0.64
Xylene (total)	410	1000	67		<0.64	<0.59	<0.64

Notes:

mg/kg - milligrams per kilogram

Bold - Sample concentration exceeds the most stringent Soil Cleanup Criteria**Bold** - The most stringent Soil Cleanup Criteria

TABLE 12

SOIL SAMPLE SVOC RESULTS (NORTHEAST DRUM PAD)
TEVA PHARMACEUTICALS USA

	Residential Direct Contact Soil Cleanup Criteria (mg/kg)	Non-Residential Direct Contact Soil Cleanup Criteria (mg/kg)	Impact to Groundwater Soil Cleanup Criteria (mg/kg)	Sample ID	EDP-1	EDP-2	EDP-3	EDP-4
				Laboratory ID	E65198-9	E65198-13	E65198-11	E65198-12
				Date Collected	3/8/00	3/9/00	3/8/00	3/9/00
				Sample Matrix	Soil	Soil	Soil	Soil
				Sample Depth	6.5-7 ft. b.g.	6.5-7 ft. b.g.	6.5-7 ft. b.g.	6.5-7 ft. b.g.
				Area of Concern	Drum Pad	Drum Pad	Drum Pad	Drum Pad
Acenaphthene	3400	10000	100		<0.067	<0.075	<0.069	<0.077
Acenaphthylene					<0.067	<0.075	<0.069	<0.077
Aniline					<0.067	<0.075	<0.069	<0.077
Anthracene	10000	10000	100		<0.670	<0.750	<0.690	<0.770
Benzidine			500		<0.067	<0.075	<0.069	<0.077
Benzo(a)anthracene	0.9	4	100		<0.067	<0.075	<0.069	<0.077
Benzo(a)pyrene	0.66	0.66	100		<0.067	<0.075	<0.069	<0.077
Benzo(b)fluoranthene	0.9	4	50		<0.067	<0.075	<0.069	<0.077
Benzo(g,h,i)perylene			500		<0.067	<0.075	<0.069	<0.077
Benzo(k)fluoranthene	0.9	4	500		<0.067	<0.075	<0.069	<0.077
4-Bromophenyl phenyl ether			50		<0.067	<0.075	<0.069	<0.077
Butyl benzyl phthalate	1100	10000			<0.067	<0.075	<0.069	<0.077
2-Chloronaphthalene			--		<0.170	<0.190	<0.170	<0.190
4-Chloroaniline	230	4200	500		<0.067	<0.075	<0.069	<0.077
Chrysene	9	40	500		<0.067	<0.075	<0.069	<0.077
bis(2-Chloroethoxy)methane			10		<0.067	<0.075	<0.069	<0.077
bis(2-Chloroethyl)ether	0.66	3	10		<0.067	<0.075	<0.069	<0.077
bis(2-Chloroisopropyl)ether	2300	10000	10		<0.067	<0.075	<0.069	<0.077
4-Chlorophenyl phenyl ether			50		<0.067	<0.075	<0.069	<0.077
1,2-Dichlorobenzene	5100	10000	50		<0.067	<0.075	<0.069	<0.077
1,2-Diphenylhydrazine			100		<0.067	<0.075	<0.069	<0.077
1,3-Dichlorobenzene	5100	10000	100		<0.067	<0.075	<0.069	<0.077
1,4-Dichlorobenzene	570	10000	100		<0.067	<0.075	<0.069	<0.077
2,4-Dinitrotoluene	1	4	10		<0.067	<0.075	<0.069	<0.077
2,6-Dinitrotoluene	1	4	10		<0.170	<0.190	<0.170	<0.190
3,3'-Dichlorobenzidine	2	6	100		<0.067	<0.075	<0.069	<0.077
N,N-Dimethylaniline					<0.170	<0.190	<0.170	<0.077
Dimethyl Aniline (total)			100		<0.067	<0.075	<0.069	<0.077
Dibenzo(a,h)anthracene	5700	10000	100		<0.067	<0.075	<0.069	<0.077
Di-n-butyl phthalate	1100	10000	100		<0.067	<0.075	<0.069	<0.077
Di-n-octyl phthalate	1100	10000	100		<0.067	<0.075	<0.069	<0.077
Diethyl phthalate	10000	10000	50		<0.067	<0.075	<0.069	<0.077
Dimethyl phthalate	10000	10000	50		<0.067	<0.075	<0.069	<0.077
bis(2-Ethylhexyl)phthalate	49	210	100		<0.067	<0.075	<0.069	<0.077
Fluoranthene	2300	10000	100		<0.067	<0.075	<0.069	<0.077
Fluorene	2300	10000	100		<0.067	<0.075	<0.069	<0.077
Hexachlorobenzene	0.66	2	100		<0.067	<0.075	<0.069	<0.077
Hexachlorobutadiene	1	21	100		<0.670	<0.750	<0.690	<0.770
Hexachlorocyclopentadiene	400	7300	100		<0.170	<0.190	<0.170	<0.190
Hexachlorethane	6	100	100		<0.067	<0.075	<0.069	<0.077
Indeno(1,2,3-cd)pyrene	0.9	4	500		<0.067	<0.075	<0.069	<0.077
Isophorone	1100	10000	50		<0.067	<0.075	<0.069	<0.077
Naphthalene	230	4200	100		<0.067	<0.075	<0.069	<0.077
Nitrobenzene					<0.067	<0.075	<0.069	<0.077
n-Nitrosodimethylamine			10		<0.067	<0.075	<0.069	<0.077
N-Nitroso-di-n-propylamine	0.66	0.66	100		<0.170	<0.190	<0.170	<0.190
N-Nitrosodiphenylamine	140	600	100		<0.067	<0.075	<0.069	<0.077
Phenathrene			100		<0.067	<0.075	<0.069	<0.077
Pyrene	1700	10000	100		<0.067	<0.075	<0.069	<0.077
1,2,4-Trichlorobenzene	68	1200	100		<0.067	<0.075	<0.069	<0.077

Notes:

mg/kg - milligrams per kilogram

Bold - Sample concentration exceeds the most stringent Soil Cleanup Criteria**Bold** - The most stringent Soil Cleanup Criteria

TABLE 12
SOIL SAMPLE SVOC RESULTS (NORTHEAST DRUM PAD)
TEVA PHARMACEUTICALS USA

	Residential Direct Contact Soil Cleanup Criteria (mg/kg)	Non-Residential Direct Contact Soil Cleanup Criteria (mg/kg)	Impact to Groundwater Soil Cleanup Criteria (mg/kg)	Sample ID	EDP-5	EDP-6	EDP-60
				Laboratory ID	E65198-14	E65198-15	E65198-16
				Date Collected	3/9/00	3/9/00	3/9/00
				Sample Matrix	Soil	Soil	Soil
				Sample Depth	6.5-7 ft. b.g.	6.5-7 ft. b.g.	6.5-7 ft. b.g.
				Area of Concern	Drum Pad	Drum Pad	Dup EDP-6
Acenaphthene	3400	10000	100		<0.071	<0.069	<0.067
Acenaphthylene					<0.071	<0.069	<0.067
Aniline	10000	10000	100		<0.071	<0.069	<0.067
Anthracene					<0.710	<0.690	<0.670
Benzidine	0.9	4	500		<0.071	<0.069	<0.067
Benzo(a)anthracene	0.66	0.66	100		<0.071	<0.069	<0.067
Benzo(a)pyrene	0.9	4	50		<0.071	<0.069	<0.067
Benzo(b)fluoranthene					<0.071	<0.069	<0.067
Benzo(g,h,i)perylene	0.9	4	500		<0.071	<0.069	<0.067
Benzo(k)fluoranthene					<0.071	<0.069	<0.067
4-Bromophenyl phenyl ether					<0.071	<0.069	<0.067
Butyl benzyl phthalate	1100	10000	50		<0.071	<0.069	<0.067
2-Chloronaphthalene	230	4200	-		<0.180	<0.170	<0.170
4-Chloroaniline	9	40	500		<0.071	<0.069	<0.067
Chrysene					<0.071	<0.069	<0.067
bis(2-Chloroethoxy)methane	0.66	3	10		<0.071	<0.069	<0.067
bis(2-Chloroethyl)ether	2300	10000	10		<0.071	<0.069	<0.067
bis(2-Chloroisopropyl)ether					<0.071	<0.069	<0.067
4-Chlorophenyl phenyl ether	5100	10000	50		<0.071	<0.069	<0.067
1,2-Dichlorobenzene					<0.071	<0.069	<0.067
1,2-Diphenylhydrazine	5100	10000	100		<0.071	<0.069	<0.067
1,3-Dichlorobenzene	570	10000	100		<0.071	<0.069	<0.067
1,4-Dichlorobenzene	1	4	10		<0.071	<0.069	<0.067
2,4-Dinitrotoluene	1	4	10		<0.180	<0.170	<0.170
2,6-Dinitrotoluene	2	6	100		<0.071	<0.069	<0.067
3,3'-Dichlorobenzidine					<0.180	<0.170	<0.170
N,N-Dimethylaniline					<0.071	<0.069	<0.067
Dimethyl Aniline (total)	0.66	0.66	100		<0.071	<0.069	<0.067
Dibenzo(a,h)anthracene	5700	10000	100		<0.071	<0.069	<0.067
Di-n-butyl phthalate	1100	10000	100		<0.071	<0.069	<0.067
Di-n-octyl phthalate	10000	10000	50		<0.071	<0.069	<0.067
Diethyl phthalate	10000	10000	50		<0.071	<0.069	<0.067
Dimethyl phthalate	49	210	100		<0.071	<0.069	<0.067
bis(2-Ethylhexyl)phthalate	2300	10000	100		<0.071	<0.069	<0.067
Fluoranthene	2300	10000	100		<0.071	<0.069	<0.067
Fluorene	0.66	2	100		<0.071	<0.069	<0.067
Hexachlorobenzene	1	21	100		<0.710	<0.690	<0.670
Hexachlorobutadiene	400	7300	100		<0.180	<0.170	<0.170
Hexachlorocyclopentadiene	6	100	100		<0.071	<0.069	<0.067
Hexachlorethane	0.9	4	500		<0.071	<0.069	<0.067
Indeno(1,2,3-cd)pyrene	1100	10000	50		<0.071	<0.069	<0.067
Isophorone	230	4200	100		<0.071	<0.069	<0.067
Naphthalene					<0.071	<0.069	<0.067
Nitrobenzene					<0.071	<0.069	<0.067
n-Nitrosodimethylamine	0.66	0.66	10		<0.180	<0.170	<0.170
N-Nitroso-di-n-propylamine	140	600	100		<0.071	<0.069	<0.067
N-Nitrosodiphenylamine					<0.071	<0.069	<0.067
Phenathrene	1700	10000	100		<0.071	<0.069	<0.067
Pyrene	68	1200	100		<0.071	<0.069	<0.067
1,2,4-Trichlorobenzene							

Notes:
mg/kg - milligrams per kilogram
Bold - Sample concentration exceeds the most stringent Soil Cleanup Criteria
Bold - The most stringent Soil Cleanup Criteria

TABLE 13

SOIL SAMPLE TPH RESULTS (NORTHEAST DRUM PAD) MARCH 2000
TEVA PHARMACEUTICALS USA, NEW JERSEY

	<i>Sample ID</i>	EDP-1	EDP-2	EDP-3	EDP-4	EDP-5	EDP-6	EDP-60
	<i>Laboratory ID</i>	E65198-9	E65198-13	E65198-11	E65198-12	E65198-14	E65198-15	E65198-16
Total Organic Contaminant	<i>Date Collected</i>	3/8/00	3/8/00	3/8/00	3/8/00	3/8/00	3/8/00	3/8/00
	<i>Sample Matrix</i>	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Soil Cleanup Criteria (mg/kg)	<i>Sample Depth</i>	6.5-7 ft. b.g	6.5-7 ft. b.g	6.5-7 ft. b.g	6.5-7 ft. b.g	6.5-7 ft. b.g	6.5-7 ft. b.g	6.5-7 ft. b.g
	<i>Area of Concern</i>	Drum Pad	Drum Pad	Drum Pad	Drum Pad	Drum Pad	Drum Pad	Dup EDP-6
Total Petroleum Hydrocarbons (mg/kg)	10000	82.5	< 27	29.8	< 28	< 26	< 26	< 26

NOTES:

mg/kg - milligrams per kilogram

J - Estimated Concentration

ND - Not Detected above laboratory minimum detection limit

BOLD - Sample Concentration exceeds the most stringent Soil Cleanup Criteria

854820439

TABLE 14

SOIL SAMPLE VOC RESULTS (FUEL OIL UST), MARCH 2000
TEVA PHARMACEUTICALS USA
WALDWICK, NEW JERSEY

	Residential Direct Contact Soil Cleanup Criteria (mg/kg)	Non-Residential Direct Contact Soil Cleanup Criteria (mg/kg)	Impact to Groundwater Soil Cleanup Criteria (mg/kg)	Sample ID Laboratory ID Date Collected Sample Matrix Sample Depth Area of Concern	OT-4 E65198-4R 3/8/00 Soil 3.5 to 4 ft. b.g. Oil Tank
Acrolein					<7.10
Acrylonitrile	1	5	1		<0.71
Benzene	3	13	1		<0.14
Bromodichloromethane	11	46	1		<0.71
Bromoform	86	370	1		<0.71
Bromomethane	79	1000	1		<0.71
Carbon tetrachloride	2	4	1		<0.71
Chlorobenzene	37	680	1		<0.71
Chloroethane					<0.71
2-Chloroethyl vinyl ether					<2.80
Chloroform	19	28	1		<0.71
Chloromethane	520	1000	10		<0.71
Dibromochloromethane	110	1000	1		<0.71
1,2-Dichlorobenzene	5100	10000	50		<0.71
1,3-Dichlorobenzene	5100	10000	100		<0.71
1,4-Dichlorobenzene	570	10000	100		<0.71
Dichlorodifluoromethane					<0.71
1,1-Dichloroethane	570	1000	10		<0.71
1,2-Dichloroethane	6	24	1		<0.71
1,1-Dichloroethene	8	150	10		<0.71
cis-1,2-Dichloroethene	79	1000	1		<0.71
trans-1,2-Dichloroethene	1000	1000	50		<0.71
1,2-Dichloropropane	10	43	--		<0.71
cis-1,3-Dichloropropene	4	5	1		<0.71
trans-1,3-Dichloropropene	4	5	1		<0.71
Ethylbenzene	1000	1000	100		<0.14
Methylene chloride	49	210	1		<0.71
1,1,2,2-Tetrachloroethane	170	310	1		<0.71
Tetrachloroethene	4	6	1		<0.71
Toluene	1000	1000	500		<0.14
1,1,1-Trichloroethane	210	1000	50		<0.71
1,1,2-Trichloroethane	22	420	1		<0.71
Trichloroethene	23	54	1		<0.71
Trichlorofluoromethane					<0.71
Vinyl chloride	2	7	10		<0.71
Xylene (total)	410	1000	67		<0.71

Notes:

mg/kg - milligrams per kilogram

Bold - Sample concentration exceeds the most stringent Soil Cleanup Criteria**Bold** - The most stringent Soil Cleanup Criteria

854820440

TABLE 15

SOIL SAMPLE TPH RESULTS (FUEL OIL UST) MARCH 2000
TEVA PHARMACEUTICALS USA, NEW JERSEY

	<i>Sample ID</i>	OT-1	OT-2	OT-3	OT-4	OT-5
Total Organic Contaminant	<i>Laboratory ID</i>	E65198-1	E65198-2	E65198-3	E65198-4	E65198-5
	<i>Date Collected</i>	3/8/00	3/8/00	3/8/00	3/8/00	3/8/00
	<i>Sample Matrix</i>	Soil	Soil	Soil	Soil	Soil
Soil Cleanup Criteria (mg/kg)	<i>Sample Depth</i>	2.5-3.0 ft. b.g.	7.5-8.0 ft. b.g.	4.5-5.0 ft. b.g.	3.5-4.0 ft. b.g.	3.5-4.0 ft. b.g.
	<i>Area of Concern</i>	Oil Tank	Oil Tank	Oil Tank	Oil Tank	Oil Tank
Total Petroleum Hydrocarbons (mg/kg)	10000	< 25	83.5	< 25	1360	< 28

NOTES:

mg/kg - milligrams per kilogram

J - Estimated Concentration

ND - Not Detected above laboratory minimum detection limit

BOLD - Sample Concentration exceeds the most stringent Soil Cleanup Criteria

854820441

TABLE 16

MUNICIPAL WELL SAMPLING SUMMARY (MCL EXCEEDANCES)
TEVA PHARMACEUTICALS USA
WALDWICK, NEW JERSEY

	Maximum Contaminant Level (MCL)	Monitoring Well Influent/Effluent Sample Matrix Date Collected	W-2 Influent Water 12/1999	W-2 Effluent Water 12/1999	W-2 Influent Water 12/1999	W-2 Effluent Water 12/1999
Bromoform (ug/l)	No MCL		ND	2.44	ND	5.62
Bromodichloromethane (ug/l)	No MCL		ND	ND	ND	0.44 J
Chloroform (ug/l)	No MCL		ND	ND	ND	ND
Cis-1,2 Dichloroethene	70.00		ND	ND	ND	ND
Dibromochloromethane (ug/l)	No MCL		ND	0.46	ND	1.96
1,1-Dichloroethane	50.00		ND	ND	ND	ND
MTBE (ug/l)	No MCL		0.46	ND	0.67	ND
Tetrachloroethene (ug/l)	1.00		4.49	ND	5.48	ND
1,1,1-Trichloroethane (ug/l)	30.00		ND	ND	1.21	ND
Trichloroethene (ug/l)	1.00		1.29	ND	1.75	ND
	Maximum Contaminant Level (MCL)	Monitoring Well Influent/Effluent Sample Matrix Date Collected	W-2 Influent Water 11/1999	W-2 Effluent Water 11/1999	W-2 Influent Water 11/1999	W-2 Effluent Water 11/1999
Bromoform (ug/l)	No MCL		ND	1.24	ND	2.52
Bromodichloromethane (ug/l)	No MCL		ND	ND	ND	ND
Chloroform (ug/l)	No MCL		0.51	ND	ND	ND
Cis-1,2 Dichloroethene	70.00		ND	ND	ND	ND
Dibromochloromethane (ug/l)	No MCL		ND	ND	ND	1.29
1,1-Dichloroethane	50.00		ND	ND	ND	ND
MTBE (ug/l)	No MCL		ND	ND	1.12	ND
Tetrachloroethene (ug/l)	1.00		ND	ND	4.25	ND
1,1,1-Trichloroethane (ug/l)	30.00		1.88	ND	1.46	ND
Trichloroethene (ug/l)	1.00		ND	ND	1.72	ND
	Maximum Contaminant Level (MCL)	Monitoring Well Influent/Effluent Sample Matrix Date Collected	W-2 Influent Water 10/1999	W-2 Effluent Water 10/1999	W-2 Influent Water 10/1999	W-2 Effluent Water 10/1999
Bromoform (ug/l)	No MCL		ND	2.79	ND	3.99
Bromodichloromethane (ug/l)	No MCL		ND	ND	ND	ND
Chloroform (ug/l)	No MCL		ND	ND	ND	ND
Cis-1,2 Dichloroethene	70.00		ND	ND	ND	ND
Dibromochloromethane (ug/l)	No MCL		ND	0.68	ND	0.66
1,1-Dichloroethane	50.00		ND	ND	ND	ND
MTBE (ug/l)	No MCL		0.58	ND	0.95	ND
Tetrachloroethene (ug/l)	1.00		4.57	ND	4.51	ND
1,1,1-Trichloroethane (ug/l)	30.00		0.86	ND	1.05	ND
Trichloroethene (ug/l)	1.00		1.50	ND	1.47	ND

TABLE 16

MUNICIPAL WELL SAMPLING SUMMARY (MCL EXCEEDANCES)
TEVA PHARMACEUTICALS USA
WALDWICK, NEW JERSEY

	Maximum Contaminant Level (MCL)	Monitoring Well Influent/Effluent Sample Matrix Date Collected	W-2 Influent Water 9/1999	W-2 Effluent Water 9/1999	W-2 Influent Water 9/1999	W-2 Effluent Water 9/1999
Bromoform (ug/l)	No MCL		ND	1.30	ND	ND
Bromodichloromethane (ug/l)	No MCL		ND	ND	ND	ND
Chloroform (ug/l)	No MCL		ND	ND	ND	ND
Cis-1,2 Dichloroethene	70.00		23.90	ND	2.37	ND
Dibromochloromethane (ug/l)	No MCL		ND	ND	ND	ND
1,1-Dichloroethane	50.00		ND	ND	ND	ND
MTBE (ug/l)	No MCL		ND	ND	ND	ND
Tetrachloroethene (ug/l)	1.00		20.60	ND	5.49	ND
1,1,1-Trichloroethane (ug/l)	30.00		1.97	ND	ND	ND
Trichloroethene (ug/l)	1.00		7.05	ND	1.91	ND
	Maximum Contaminant Level (MCL)	Monitoring Well Influent/Effluent Sample Matrix Date Collected	W-2 Influent Water 8/1999	W-2 Effluent Water 8/1999	W-2 Influent Water 8/1999	W-2 Effluent Water 8/1999
Bromoform (ug/l)	No MCL		ND	1.50	ND	3.67
Bromodichloromethane (ug/l)	No MCL		ND	0.481	ND	ND
Chloroform (ug/l)	No MCL		ND	ND	ND	ND
Cis-1,2 Dichloroethene	70.00		ND	ND	ND	ND
Dibromochloromethane (ug/l)	No MCL		ND	2.89	ND	1.02
1,1-Dichloroethane	50.00		ND	ND	ND	ND
MTBE (ug/l)	No MCL		0.57	ND	0.72	0.50
Tetrachloroethene (ug/l)	1.00		4.41	ND	4.21	ND
1,1,1-Trichloroethane (ug/l)	30.00		1.05	ND	0.88	ND
Trichloroethene (ug/l)	1.00		1.72	ND	1.68	ND
	Maximum Contaminant Level (MCL)	Monitoring Well Influent/Effluent Sample Matrix Date Collected	W-2 Influent Water 7/1999	W-2 Effluent Water 7/1999	W-2 Influent Water 7/1999 (Repeat)	W-2 Effluent Water 7/1999 (Repeat)
Bromoform (ug/l)	No MCL		ND	2.02	ND	1.41
Bromodichloromethane (ug/l)	No MCL		ND	ND	ND	ND
Chloroform (ug/l)	No MCL		ND	ND	ND	ND
Cis-1,2 Dichloroethene	70.00		ND	ND	ND	ND
Dibromochloromethane (ug/l)	No MCL		6.56	1.08	ND	ND
1,1-Dichloroethane	50.00		ND	ND	ND	ND
MTBE (ug/l)	No MCL		1.00	0.61	0.76	ND
Tetrachloroethene (ug/l)	1.00		ND	ND	3.64	ND
1,1,1-Trichloroethane (ug/l)	30.00		1.43	ND	1.50	ND
Trichloroethene (ug/l)	1.00		1.97	ND	2.05	ND

TABLE 16

MUNICIPAL WELL SAMPLING SUMMARY (MCL EXCEEDANCES)
TEVA PHARMACEUTICALS USA
WALDWICK, NEW JERSEY

	Maximum Contaminant Level (MCL)	Monitoring Well Influent/Effluent Sample Matrix Date Collected	W-2 Influent Water 7/1999 (repeat)	W-2 Effluent Water 7/1999 (repeat)	W-2 Influent Water 7/1999 (Repeat)	W-2 Effluent Water 7/1999 (Repeat)
Bromoform (ug/l)	No MCL		3.73	ND	ND	ND
Bromodichloromethane (ug/l)	No MCL		ND	ND	ND	ND
Chloroform (ug/l)	No MCL		ND	ND	ND	ND
Cis-1,2 Dichloroethene	70.00		ND	ND	ND	ND
Dibromochloromethane (ug/l)	No MCL		0.96	ND	ND	ND
1,1-Dichloroethane	50.00		ND	0.64	ND	ND
MTBE (ug/l)	No MCL		0.45J	0.87	ND	ND
Tetrachloroethene (ug/l)	1.00		ND	4.97	ND	ND
1,1,1-Trichloroethane (ug/l)	30.00		ND	1.30	ND	ND
Trichloroethene (ug/l)	1.00		ND	2.05	ND	ND
	Maximum Contaminant Level (MCL)	Monitoring Well Influent/Effluent Sample Matrix Date Collected	W-2 Influent Water 6/1999	W-2 Effluent Water 6/1999	W-2 Influent Water 6/1999	W-2 Effluent Water 6/1999
Bromoform (ug/l)	No MCL		ND	2.70	ND	ND
Bromodichloromethane (ug/l)	No MCL		ND	ND	ND	ND
Chloroform (ug/l)	No MCL		ND	ND	ND	ND
Cis-1,2 Dichloroethene	70.00		1.06	ND	ND	ND
Dibromochloromethane (ug/l)	No MCL		ND	1.16	ND	ND
1,1-Dichloroethane	50.00		ND	ND	ND	ND
MTBE (ug/l)	No MCL		ND	ND	ND	ND
Tetrachloroethene (ug/l)	1.00		5.49	ND	4.40	ND
1,1,1-Trichloroethane (ug/l)	30.00		ND	ND	0.80	ND
Trichloroethene (ug/l)	1.00		1.39	ND	1.34	ND
	Maximum Contaminant Level (MCL)	Monitoring Well Influent/Effluent Sample Matrix Date Collected	W-2 Influent Water 5/1999	W-2 Effluent Water 5/1999	W-2 Influent Water 5/1999	W-2 Effluent Water 5/1999
Bromoform (ug/l)	No MCL		ND	ND	ND	ND
Bromodichloromethane (ug/l)	No MCL		ND	ND	ND	ND
Chloroform (ug/l)	No MCL		ND	ND	ND	ND
Cis-1,2 Dichloroethene	70.00		ND	ND	ND	ND
Dibromochloromethane (ug/l)	No MCL		ND	ND	ND	ND
1,1-Dichloroethane	50.00		ND	ND	ND	ND
MTBE (ug/l)	No MCL		ND	ND	ND	ND
Tetrachloroethene (ug/l)	1.00		4.80	ND	4.77	ND
1,1,1-Trichloroethane (ug/l)	30.00		0.66	ND	0.81	ND
Trichloroethene (ug/l)	1.00		1.25	ND	1.43	ND

TABLE 16

MUNICIPAL WELL SAMPLING SUMMARY (MCL EXCEEDANCES)
TEVA PHARMACEUTICALS USA
WALDWICK, NEW JERSEY

	Maximum Contaminant Level (MCL)	Monitoring Well <i>Influent/Effluent Sample Matrix Date Collected</i>	W-2 Influent Water 4/1999	W-2 Effluent Water 4/1999	W-2 Influent Water 4/1999	W-2 Effluent Water 4/1999
Bromoform (ug/l)	No MCL		ND	ND	ND	ND
Bromodichloromethane (ug/l)	No MCL		ND	ND	ND	ND
Chloroform (ug/l)	No MCL		ND	ND	ND	ND
Cis-1,2 Dichloroethene	70.00		ND	ND	ND	ND
Dibromochloromethane (ug/l)	No MCL		ND	ND	ND	ND
1,1-Dichloroethane	50.00		ND	ND	ND	ND
MTBE (ug/l)	No MCL		ND	ND	ND	0.48J
Tetrachloroethene (ug/l)	1.00		4.64	ND	4.64	ND
1,1,1-Trichloroethane (ug/l)	30.00		0.96	ND	0.96	ND
Trichloroethene (ug/l)	1.00		1.42	ND	1.43	ND
	Maximum Contaminant Level (MCL)	Monitoring Well <i>Influent/Effluent Sample Matrix Date Collected</i>	W-2 Influent Water 3/1999	W-2 Effluent Water 3/1999	W-2 Influent Water 3/1999	W-2 Effluent Water 3/1999
Bromoform (ug/l)	No MCL		ND	1.37	ND	ND
Bromodichloromethane (ug/l)	No MCL		ND	ND	ND	ND
Chloroform (ug/l)	No MCL		ND	ND	ND	ND
Cis-1,2 Dichloroethene	70.00		ND	ND	ND	ND
Dibromochloromethane (ug/l)	No MCL		ND	1.06	ND	ND
1,1-Dichloroethane	50.00		ND	ND	ND	ND
MTBE (ug/l)	No MCL		ND	ND	ND	ND
Tetrachloroethene (ug/l)	1.00		3.39	ND	2.80	ND
1,1,1-Trichloroethane (ug/l)	30.00		0.93	ND	0.92	ND
Trichloroethene (ug/l)	1.00		1.29	ND	1.40	ND
	Maximum Contaminant Level (MCL)	Monitoring Well <i>Influent/Effluent Sample Matrix Date Collected</i>	W-2 Influent Water 2/1999	W-2 Effluent Water 2/1999	W-2 Influent Water 2/1999	W-2 Effluent Water 2/1999
Bromoform (ug/l)	No MCL		ND	4.49	ND	ND
Bromodichloromethane (ug/l)	No MCL		ND	1.14	ND	ND
Chloroform (ug/l)	No MCL		1.06	ND	ND	ND
Cis-1,2 Dichloroethene	70.00		ND	ND	ND	ND
Dibromochloromethane (ug/l)	No MCL		ND	1.67	ND	ND
1,1-Dichloroethane	50.00		1.15	ND	ND	ND
MTBE (ug/l)	No MCL		0.59	0.57	ND	1.32
Tetrachloroethene (ug/l)	1.00		5.96	ND	ND	ND
1,1,1-Trichloroethane (ug/l)	30.00		1.83	ND	ND	ND
Trichloroethene (ug/l)	1.00		2.25	ND	ND	ND

TABLE 16

MUNICIPAL WELL SAMPLING SUMMARY (MCL EXCEEDANCES)
TEVA PHARMACEUTICALS USA
WALDWICK, NEW JERSEY

	Maximum Contaminant Level (MCL)	Monitoring Well Influent/Effluent Sample Matrix Date Collected	W-2 Influent Water 1/1999	W-2 Effluent Water 1/1999	W-2 Influent Water 1/1999	W-2 Effluent Water 1/1999
Bromoform (ug/l)	No MCL		ND	ND	ND	1.38
Bromodichloromethane (ug/l)	No MCL		ND	ND	ND	ND
Chloroform (ug/l)	No MCL		ND	ND	ND	ND
Cis-1,2 Dichloroethene	70.00		ND	ND	ND	ND
Dibromochloromethane (ug/l)	No MCL		ND	ND	ND	ND
1,1-Dichloroethane	50.00		ND	ND	ND	ND
MTBE (ug/l)	No MCL		ND	0.97	ND	ND
Tetrachloroethene (ug/l)	1.00		1.34	ND	ND	ND
1,1,1-Trichloroethane (ug/l)	30.00		1.10	ND	0.84	ND
Trichloroethene (ug/l)	1.00		0.82	ND	ND	ND
	Maximum Contaminant Level (MCL)	Monitoring Well Influent/Effluent Sample Matrix Date Collected	W-3 Influent Water 12/1999	W-3 Effluent Water 12/1999	W-3 Influent Water 12/1999	W-3 Effluent Water 12/1999
Bromoform (ug/l)	No MCL		ND	1.42	ND	10.00
Bromodichloromethane (ug/l)	No MCL		ND	ND	ND	1.53
Chloroform (ug/l)	No MCL		ND	ND	ND	0.48J
Cis-1,2 Dichloroethene	70.00		11.00	ND	2.44	ND
Dibromochloromethane (ug/l)	No MCL		ND	0.65	ND	5.14
1,1-Dichloroethane	50.00		ND	ND	ND	ND
MTBE (ug/l)	No MCL		0.93	ND	2.02	0.82
Tetrachloroethene (ug/l)	1.00		25.80	ND	3.94	ND
1,1,1-Trichloroethane (ug/l)	30.00		0.89	ND	ND	ND
Trichloroethene (ug/l)	1.00		7.60	ND	1.65	ND
	Maximum Contaminant Level (MCL)	Monitoring Well Influent/Effluent Sample Matrix Date Collected	W-3 Influent Water 11/1999	W-3 Effluent Water 11/1999	W-3 Influent Water 11/1999	W-3 Effluent Water 11/1999
Bromoform (ug/l)	No MCL		ND	9.16	ND	6.18
Bromodichloromethane (ug/l)	No MCL		ND	0.80	ND	1.10
Chloroform (ug/l)	No MCL		ND	ND	ND	ND
Cis-1,2 Dichloroethene	70.00		ND	ND	12.90	ND
Dibromochloromethane (ug/l)	No MCL		ND	6.06	ND	2.79
1,1-Dichloroethane	50.00		ND	ND	ND	ND
MTBE (ug/l)	No MCL		ND	ND	1.57	ND
Tetrachloroethene (ug/l)	1.00		4.39	ND	27.90	ND
1,1,1-Trichloroethane (ug/l)	30.00		ND	ND	1.69	ND
Trichloroethene (ug/l)	1.00		ND	ND	8.08	ND

TABLE 16

MUNICIPAL WELL SAMPLING SUMMARY (MCL EXCEEDANCES)
TEVA PHARMACEUTICALS USA
WALDWICK, NEW JERSEY

	Maximum Contaminant Level (MCL)	Monitoring Well Influent/Effluent Sample Matrix Date Collected	W-3 Influent Water 10/1999	W-3 Effluent Water 10/1999	W-3 Influent Water 10/1999	W-3 Effluent Water 10/1999
Bromoform (ug/l)	No MCL		ND	9.13	ND	4.84
Bromodichloromethane (ug/l)	No MCL		ND	0.45J	ND	0.41J
Chloroform (ug/l)	No MCL		ND	ND	ND	ND
Cis-1,2 Dichloroethene	70.00		11.90	ND	3.28	ND
Dibromochloromethane (ug/l)	No MCL		ND	3.12	ND	1.75
1,1-Dichloroethane	50.00		ND	ND	ND	ND
MTBE (ug/l)	No MCL		1.05	0.70	0.73	ND
Tetrachloroethene (ug/l)	1.00		23.50	ND	11.00	ND
1,1,1-Trichloroethane (ug/l)	30.00		1.01	ND	ND	ND
Trichloroethene (ug/l)	1.00		9.46	ND	2.78	ND
	Maximum Contaminant Level (MCL)	Monitoring Well Influent/Effluent Sample Matrix Date Collected	W-3 Influent Water 9/1999	W-3 Effluent Water 9/1999	W-3 Influent Water 9/1999	W-3 Effluent Water 9/1999
Bromoform (ug/l)	No MCL		ND	ND	ND	1.62
Bromodichloromethane (ug/l)	No MCL		ND	ND	ND	ND
Chloroform (ug/l)	No MCL		ND	ND	ND	ND
Cis-1,2 Dichloroethene	70.00		ND	ND	17.23	ND
Dibromochloromethane (ug/l)	No MCL		ND	ND	ND	ND
1,1-Dichloroethane	50.00		0.66	ND	ND	ND
MTBE (ug/l)	No MCL		ND	ND	ND	ND
Tetrachloroethene (ug/l)	1.00		4.59	ND	13.20	ND
1,1,1-Trichloroethane (ug/l)	30.00		1.97	ND	1.80	ND
Trichloroethene (ug/l)	1.00		1.80	ND	5.94	ND
	Maximum Contaminant Level (MCL)	Monitoring Well Influent/Effluent Sample Matrix Date Collected	W-3 Influent Water 8/1999	W-3 Effluent Water 8/1999	W-3 Influent Water 8/1999	W-3 Effluent Water 8/1999
Bromoform (ug/l)	No MCL		ND	ND	ND	ND
Bromodichloromethane (ug/l)	No MCL		ND	ND	ND	ND
Chloroform (ug/l)	No MCL		ND	ND	ND	ND
Cis-1,2 Dichloroethene	70.00		3.84	ND	9.95	ND
Dibromochloromethane (ug/l)	No MCL		ND	ND	ND	ND
1,1-Dichloroethane	50.00		ND	ND	ND	ND
MTBE (ug/l)	No MCL		0.48J	ND	ND	ND
Tetrachloroethene (ug/l)	1.00		9.32	ND	28.40	ND
1,1,1-Trichloroethane (ug/l)	30.00		0.62	ND	0.90	ND
Trichloroethene (ug/l)	1.00		3.10	ND	8.79	ND

TABLE 16

MUNICIPAL WELL SAMPLING SUMMARY (MCL EXCEEDANCES)
TEVA PHARMACEUTICALS USA
WALDWICK, NEW JERSEY

	Maximum Contaminant Level (MCL)	Monitoring Well Influent/Effluent Sample Matrix Date Collected	W-3 Influent Water 7/1999	W-3 Effluent Water 7/1999	W-3 Influent Water 7/1999	W-3 Effluent Water 7/1999
Bromoform (ug/l)	No MCL		ND	8.53	ND	6.00
Bromodichloromethane (ug/l)	No MCL		ND	0.77	ND	1.08
Chloroform (ug/l)	No MCL		ND	ND	ND	ND
Cis-1,2 Dichloroethene	70.00		4.10	ND	9.03	ND
Dibromochloromethane (ug/l)	No MCL		ND	ND	ND	2.55
1,1-Dichloroethane	50.00		ND	ND	ND	ND
MTBE (ug/l)	No MCL		1.25	0.47J	0.85	ND
Tetrachloroethene (ug/l)	1.00		9.32	ND	19.90	ND
1,1,1-Trichloroethane (ug/l)	30.00		0.51	ND	ND	ND
Trichloroethene (ug/l)	1.00		3.20	ND	7.32	ND
	Maximum Contaminant Level (MCL)	Monitoring Well Influent/Effluent Sample Matrix Date Collected	W-3 Influent Water 6/1999	W-3 Effluent Water 6/1999	W-3 Influent Water 6/1999	W-3 Effluent Water 6/1999
Bromoform (ug/l)	No MCL		ND	3.87	ND	5.66
Bromodichloromethane (ug/l)	No MCL		ND	0.42J	ND	0.67
Chloroform (ug/l)	No MCL		ND	ND	ND	ND
Cis-1,2 Dichloroethene	70.00		10.20	ND	8.05	ND
Dibromochloromethane (ug/l)	No MCL		ND	1.56	ND	2.22
1,1-Dichloroethane	50.00		ND	ND	ND	ND
MTBE (ug/l)	No MCL		1.25	ND	0.49J	ND
Tetrachloroethene (ug/l)	1.00		25.80	ND	23.70	ND
1,1,1-Trichloroethane (ug/l)	30.00		0.87	ND	0.96	ND
Trichloroethene (ug/l)	1.00		7.67	ND	6.63	ND
	Maximum Contaminant Level (MCL)	Monitoring Well Influent/Effluent Sample Matrix Date Collected	W-3 Influent Water 5/1999	W-3 Effluent Water 5/1999	W-3 Influent Water 5/1999	W-3 Effluent Water 5/1999
Bromoform (ug/l)	No MCL		ND	8.72	ND	1.44
Bromodichloromethane (ug/l)	No MCL		ND	0.43J	ND	ND
Chloroform (ug/l)	No MCL		ND	ND	ND	ND
Cis-1,2 Dichloroethene	70.00		6.87	ND	9.24	ND
Dibromochloromethane (ug/l)	No MCL		ND	3.00	ND	0.78
1,1-Dichloroethane	50.00		ND	ND	ND	ND
MTBE (ug/l)	No MCL		1.25	ND	0.49J	ND
Tetrachloroethene (ug/l)	1.00		20.50	ND	22.70	ND
1,1,1-Trichloroethane (ug/l)	30.00		0.67	ND	0.86	ND
Trichloroethene (ug/l)	1.00		6.30	ND	6.36	ND

TABLE 16

MUNICIPAL WELL SAMPLING SUMMARY (MCL EXCEEDANCES)
TEVA PHARMACEUTICALS USA
WALDWICK, NEW JERSEY

	Maximum Contaminant Level (MCL)	Monitoring Well Influent/Effluent Sample Matrix Date Collected	W-3 Influent Water 4/1999	W-3 Effluent Water 4/1999	W-3 Influent Water 4/1999	W-3 Effluent Water 4/1999
Bromoform (ug/l)	No MCL		ND	1.09	ND	1.69
Bromodichloromethane (ug/l)	No MCL		ND	ND	ND	ND
Chloroform (ug/l)	No MCL		ND	ND	ND	ND
Cis-1,2 Dichloroethene	70.00		5.31	ND	5.31	ND
Dibromochloromethane (ug/l)	No MCL		ND	ND	ND	0.71
1,1-Dichloroethane	50.00		ND	ND	ND	ND
MTBE (ug/l)	No MCL		1.25	ND	ND	ND
Tetrachloroethene (ug/l)	1.00		11.30	ND	5.45	ND
1,1,1-Trichloroethane (ug/l)	30.00		0.51	ND	ND	ND
Trichloroethene (ug/l)	1.00		3.12	ND	1.85	ND
	Maximum Contaminant Level (MCL)	Monitoring Well Influent/Effluent Sample Matrix Date Collected	W-3 Influent Water 3/1999	W-3 Effluent Water 3/1999	W-3 Influent Water 3/1999	W-3 Effluent Water 3/1999
Bromoform (ug/l)	No MCL		ND	4.49	ND	2.69
Bromodichloromethane (ug/l)	No MCL		ND	0.51	ND	ND
Chloroform (ug/l)	No MCL		ND	ND	ND	ND
Cis-1,2 Dichloroethene	70.00		9.16	ND	ND	ND
Dibromochloromethane (ug/l)	No MCL		ND	2.25	ND	1.54
1,1-Dichloroethane	50.00		ND	ND	ND	ND
MTBE (ug/l)	No MCL		ND	ND	ND	ND
Tetrachloroethene (ug/l)	1.00		17.80	ND	4.11	ND
1,1,1-Trichloroethane (ug/l)	30.00		0.81	ND	ND	ND
Trichloroethene (ug/l)	1.00		5.89	ND	0.84	ND
	Maximum Contaminant Level (MCL)	Monitoring Well Influent/Effluent Sample Matrix Date Collected	W-3 Influent Water 2/1999	W-3 Effluent Water 2/1999	W-3 Influent Water 2/1999	W-3 Effluent Water 2/1999
Bromoform (ug/l)	No MCL		ND	3.18	ND	4.60
Bromodichloromethane (ug/l)	No MCL		ND	1.15	ND	0.73
Chloroform (ug/l)	No MCL		ND	ND	ND	0.64
Cis-1,2 Dichloroethene	70.00		10.20	ND	3.32	ND
Dibromochloromethane (ug/l)	No MCL		ND	1.57	ND	2.59
1,1-Dichloroethane	50.00		ND	ND	ND	ND
MTBE (ug/l)	No MCL		0.62	ND	ND	ND
Tetrachloroethene (ug/l)	1.00		19.70	ND	7.06	ND
1,1,1-Trichloroethane (ug/l)	30.00		1.59	ND	ND	ND
Trichloroethene (ug/l)	1.00		6.29	ND	2.10	ND

TABLE 16

MUNICIPAL WELL SAMPLING SUMMARY (MCL EXCEEDANCES)
TEVA PHARMACEUTICALS USA
WALDWICK, NEW JERSEY

	Maximum Contaminant Level (MCL)	Monitoring Well Influent/Effluent Sample Matrix Date Collected	W-3 Influent Water 1/1999	W-3 Effluent Water 1/1999	W-3 Influent Water 1/1999	W-3 Effluent Water 1/1999
Bromoform (ug/l)	No MCL		ND	6.58	ND	3.82
Bromodichloromethane (ug/l)	No MCL		ND	1.50	ND	0.94
Chloroform (ug/l)	No MCL		ND	0.65	ND	ND
Cis-1,2 Dichloroethene	70.00		0.71	ND	0.70	ND
Dibromochloromethane (ug/l)	No MCL		ND	3.07	ND	2.74
1,1-Dichloroethane	50.00		ND	ND	ND	ND
MTBE (ug/l)	No MCL		0.62	ND	ND	ND
Tetrachloroethene (ug/l)	1.00		1.83	ND	2.71	ND
1,1,1-Trichloroethane (ug/l)	30.00		ND	ND	ND	ND
Trichloroethene (ug/l)	1.00		0.78	ND	1.18	ND
	Maximum Contaminant Level (MCL)	Monitoring Well Influent/Effluent Sample Matrix Date Collected	W-7 Influent Water 12/1999	W-7 Effluent Water 12/1999	W-7 Influent Water 12/1999	W-7 Effluent Water 12/1999
Bromoform (ug/l)	No MCL		ND	ND	ND	2.74
Bromodichloromethane (ug/l)	No MCL		ND	ND	ND	ND
Chloroform (ug/l)	No MCL		ND	ND	ND	ND
Cis-1,2 Dichloroethene	70.00		1.10	ND	1.73	ND
Dibromochloromethane (ug/l)	No MCL		ND	ND	ND	1.4
1,1-Dichloroethane	50.00		ND	ND	ND	ND
MTBE (ug/l)	No MCL		ND	ND	ND	ND
Tetrachloroethene (ug/l)	1.00		6.48	ND	7.21	ND
1,1,1-Trichloroethane (ug/l)	30.00		ND	ND	ND	ND
Trichloroethene (ug/l)	1.00		1.62	ND	2.02	ND
	Maximum Contaminant Level (MCL)	Monitoring Well Influent/Effluent Sample Matrix Date Collected	W-7 Influent Water 11/1999	W-7 Effluent Water 11/1999	W-7 Influent Water 11/1999	W-7 Effluent Water 11/1999
Bromoform (ug/l)	No MCL		ND	5.41	ND	4.38
Bromodichloromethane (ug/l)	No MCL		ND	ND	ND	0.64
Chloroform (ug/l)	No MCL		ND	ND	0.47J	ND
Cis-1,2 Dichloroethene	70.00		0.69	ND	2.54	ND
Dibromochloromethane (ug/l)	No MCL		ND	1.77	ND	2.48
1,1-Dichloroethane	50.00		ND	ND	ND	ND
MTBE (ug/l)	No MCL		ND	ND	ND	ND
Tetrachloroethene (ug/l)	1.00		6.48	ND	4.83	ND
1,1,1-Trichloroethane (ug/l)	30.00		ND	ND	0.53	ND
Trichloroethene (ug/l)	1.00		1.25	ND	1.62	ND

TABLE 16

MUNICIPAL WELL SAMPLING SUMMARY (MCL EXCEEDANCES)
TEVA PHARMACEUTICALS USA
WALDWICK, NEW JERSEY

	Maximum Contaminant Level (MCL)	Monitoring Well Influent/Effluent Sample Matrix Date Collected	W-7 Influent Water 10/1999	W-7 Effluent Water 10/1999	W-7 Influent Water 10/1999	W-7 Effluent Water 10/1999
Bromoform (ug/l)	No MCL		ND	0.52	ND	3.80
Bromodichloromethane (ug/l)	No MCL		ND	ND	ND	ND
Chloroform (ug/l)	No MCL		ND	ND	ND	ND
Cis-1,2 Dichloroethene	70.00		1.13	ND	3.41	ND
Dibromochloromethane (ug/l)	No MCL		ND	ND	ND	1.42
1,1-Dichloroethane	50.00		ND	ND	ND	ND
MTBE (ug/l)	No MCL		ND	ND	ND	ND
Tetrachloroethene (ug/l)	1.00		6.02	ND	5.06	ND
1,1,1-Trichloroethane (ug/l)	30.00		ND	ND	ND	ND
Trichloroethene (ug/l)	1.00		1.64	ND	1.97	ND
	Maximum Contaminant Level (MCL)	Monitoring Well Influent/Effluent Sample Matrix Date Collected	W-7 Influent Water 9/1999	W-7 Effluent Water 9/1999	W-7 Influent Water 9/1999	W-7 Effluent Water 9/1999
Bromoform (ug/l)	No MCL		ND	ND	ND	0.53
Bromodichloromethane (ug/l)	No MCL		ND	ND	ND	ND
Chloroform (ug/l)	No MCL		ND	ND	ND	ND
Cis-1,2 Dichloroethene	70.00		ND	ND	1.84	ND
Dibromochloromethane (ug/l)	No MCL		ND	ND	ND	ND
1,1-Dichloroethane	50.00		0.53	ND	ND	ND
MTBE (ug/l)	No MCL		ND	ND	ND	ND
Tetrachloroethene (ug/l)	1.00		4.53	ND	1.79	ND
1,1,1-Trichloroethane (ug/l)	30.00		1.57	ND	ND	ND
Trichloroethene (ug/l)	1.00		1.75	ND	1.61	ND
	Maximum Contaminant Level (MCL)	Monitoring Well Influent/Effluent Sample Matrix Date Collected	W-7 Influent Water 8/1999	W-7 Effluent Water 8/1999	W-7 Influent Water 8/1999	W-7 Effluent Water 8/1999
Bromoform (ug/l)	No MCL		ND	9.43	ND	5.24
Bromodichloromethane (ug/l)	No MCL		ND	8.69	ND	0.97
Chloroform (ug/l)	No MCL		ND	5.24	ND	ND
Cis-1,2 Dichloroethene	70.00		0.78	ND	ND	ND
Dibromochloromethane (ug/l)	No MCL		ND	14.20	ND	2.47
1,1-Dichloroethane	50.00		ND	ND	ND	ND
MTBE (ug/l)	No MCL		ND	ND	ND	ND
Tetrachloroethene (ug/l)	1.00		4.53	ND	ND	ND
1,1,1-Trichloroethane (ug/l)	30.00		ND	ND	ND	ND
Trichloroethene (ug/l)	1.00		1.53	ND	0.79	ND

TABLE 16

MUNICIPAL WELL SAMPLING SUMMARY (MCL EXCEEDANCES)
TEVA PHARMACEUTICALS USA
WALDWICK, NEW JERSEY

	Maximum Contaminant Level (MCL)	Monitoring Well Influent/Effluent Sample Matrix Date Collected	W-7 Influent Water 7/1999	W-7 Effluent Water 7/1999	W-7 Influent Water 7/1999	W-7 Effluent Water 7/1999
Bromoform (ug/l)	No MCL		ND	14.10	ND	5.48
Bromodichloromethane (ug/l)	No MCL		ND	0.53	ND	0.76
Chloroform (ug/l)	No MCL		ND	ND	ND	ND
Cis-1,2 Dichloroethene	70.00		0.84	ND	1.67	ND
Dibromochloromethane (ug/l)	No MCL		ND	3.87	ND	2.62
1,1-Dichloroethane	50.00		ND	ND	ND	ND
MTBE (ug/l)	No MCL		ND	ND	ND	ND
Tetrachloroethene (ug/l)	1.00		4.82	ND	5.24	ND
1,1,1-Trichloroethane (ug/l)	30.00		ND	ND	ND	ND
Trichloroethene (ug/l)	1.00		1.53	ND	1.74	ND
	Maximum Contaminant Level (MCL)	Monitoring Well Influent/Effluent Sample Matrix Date Collected	W-7 Influent Water 6/1999	W-7 Effluent Water 6/1999	W-7 Influent Water 6/1999	W-7 Effluent Water 6/1999
Bromoform (ug/l)	No MCL		ND	1.60	ND	4.73
Bromodichloromethane (ug/l)	No MCL		ND	ND	ND	ND
Chloroform (ug/l)	No MCL		ND	ND	ND	ND
Cis-1,2 Dichloroethene	70.00		ND	ND	ND	ND
Dibromochloromethane (ug/l)	No MCL		ND	ND	ND	1.54
1,1-Dichloroethane	50.00		ND	ND	ND	ND
MTBE (ug/l)	No MCL		ND	ND	ND	ND
Tetrachloroethene (ug/l)	1.00		4.66	ND	ND	ND
1,1,1-Trichloroethane (ug/l)	30.00		0.88	ND	ND	ND
Trichloroethene (ug/l)	1.00		1.50	ND	0.62	ND
	Maximum Contaminant Level (MCL)	Monitoring Well Influent/Effluent Sample Matrix Date Collected	W-7 Influent Water 5/1999	W-7 Effluent Water 5/1999	W-7 Influent Water 5/1999	W-7 Effluent Water 5/1999
Bromoform (ug/l)	No MCL		ND	ND	ND	ND
Bromodichloromethane (ug/l)	No MCL		ND	ND	ND	ND
Chloroform (ug/l)	No MCL		ND	ND	ND	ND
Cis-1,2 Dichloroethene	70.00		1.36	ND	3.36	ND
Dibromochloromethane (ug/l)	No MCL		ND	ND	ND	ND
1,1-Dichloroethane	50.00		ND	ND	ND	ND
MTBE (ug/l)	No MCL		ND	ND	ND	ND
Tetrachloroethene (ug/l)	1.00		6.59	ND	6.78	ND
1,1,1-Trichloroethane (ug/l)	30.00		ND	ND	ND	ND
Trichloroethene (ug/l)	1.00		1.34	ND	1.52	ND

TABLE 16

MUNICIPAL WELL SAMPLING SUMMARY (MCL EXCEEDANCES)
TEVA PHARMACEUTICALS USA
WALDWICK, NEW JERSEY

	Maximum Contaminant Level (MCL)	Monitoring Well Influent/Effluent Sample Matrix Date Collected	W-7 Influent Water 4/1999	W-7 Effluent Water 4/1999	W-7 Influent Water 4/1999	W-7 Effluent Water 4/1999
Bromoform (ug/l)	No MCL		ND	1.25	ND	1.12
Bromodichloromethane (ug/l)	No MCL		ND	ND	ND	ND
Chloroform (ug/l)	No MCL		ND	ND	ND	ND
Cis-1,2 Dichloroethene	70.00		0.79	ND	1.17	ND
Dibromochloromethane (ug/l)	No MCL		ND	ND	ND	ND
1,1-Dichloroethane	50.00		ND	ND	ND	ND
MTBE (ug/l)	No MCL		ND	ND	ND	ND
Tetrachloroethene (ug/l)	1.00		11.00	ND	6.75	ND
1,1,1-Trichloroethane (ug/l)	30.00		ND	ND	ND	ND
Trichloroethene (ug/l)	1.00		1.31	ND	1.67	ND
	Maximum Contaminant Level (MCL)	Monitoring Well Influent/Effluent Sample Matrix Date Collected	W-7 Influent Water 3/1999	W-7 Effluent Water 3/1999	W-7 Influent Water 3/1999	W-7 Effluent Water 3/1999
Bromoform (ug/l)	No MCL		ND	3.20	ND	ND
Bromodichloromethane (ug/l)	No MCL		ND	ND	ND	ND
Chloroform (ug/l)	No MCL		ND	ND	ND	ND
Cis-1,2 Dichloroethene	70.00		1.75	ND	1.36	ND
Dibromochloromethane (ug/l)	No MCL		ND	1.44	ND	ND
1,1-Dichloroethane	50.00		ND	ND	ND	ND
MTBE (ug/l)	No MCL		ND	ND	ND	ND
Tetrachloroethene (ug/l)	1.00		6.91	ND	6.88	ND
1,1,1-Trichloroethane (ug/l)	30.00		ND	ND	ND	ND
Trichloroethene (ug/l)	1.00		1.80	ND	1.76	ND
	Maximum Contaminant Level (MCL)	Monitoring Well Influent/Effluent Sample Matrix Date Collected	W-7 Influent Water 2/1999	W-7 Effluent Water 2/1999	W-7 Influent Water 2/1999	W-7 Effluent Water 2/1999
Bromoform (ug/l)	No MCL		ND	ND	2.13	ND
Bromodichloromethane (ug/l)	No MCL		ND	ND	ND	ND
Chloroform (ug/l)	No MCL		1.17	ND	ND	ND
Cis-1,2 Dichloroethene	70.00		3.20	ND	ND	ND
Dibromochloromethane (ug/l)	No MCL		ND	ND	1.05	ND
1,1-Dichloroethane	50.00		0.86	ND	ND	ND
MTBE (ug/l)	No MCL		ND	ND	ND	ND
Tetrachloroethene (ug/l)	1.00		8.37	ND	ND	ND
1,1,1-Trichloroethane (ug/l)	30.00		1.25	ND	ND	ND
Trichloroethene (ug/l)	1.00		2.73	ND	ND	ND

TABLE 16

MUNICIPAL WELL SAMPLING SUMMARY (MCL EXCEEDANCES)
 TEVA PHARMACEUTICALS USA
 WALDWICK, NEW JERSEY

	Maximum Contaminant Level (MCL)	Monitoring Well Influent/Effluent Sample Matrix Date Collected	W-7 Influent Water 1/1999	W-7 Effluent Water 1/1999	W-7 Influent Water 1/1999	W-7 Effluent Water 1/1999
Bromoform (ug/l)	No MCL		ND	2.34	ND	ND
Bromodichloromethane (ug/l)	No MCL		ND	ND	ND	ND
Chloroform (ug/l)	No MCL		ND	ND	ND	ND
Cis-1,2 Dichloroethene	70.00		ND	ND	ND	ND
Dibromochloromethane (ug/l)	No MCL		ND	0.57	ND	ND
1,1-Dichloroethane	50.00		ND	ND	ND	ND
MTBE (ug/l)	No MCL		ND	ND	ND	ND
Tetrachloroethene (ug/l)	1.00		ND	ND	ND	ND
1,1,1-Trichloroethane (ug/l)	30.00		ND	ND	ND	ND
Trichloroethene (ug/l)	1.00		ND	ND	1.07	ND
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	Maximum Contaminant Level (MCL)	Monitoring Well Influent/Effluent Sample Matrix Date Collected	W-2 Influent Water May-00	W-2 Effluent Water May-00	W-2 Influent Water May-00	W-2 Effluent Water May-00
Bromoform (ug/l)	No MCL		ND	2.02	ND	0.99
Bromodichloromethane (ug/l)	No MCL		ND	ND	ND	ND
Chloroform (ug/l)	No MCL		ND	ND	ND	ND
Cis-1,2 Dichloroethene	70.00		ND	ND	ND	ND
Dibromochloromethane (ug/l)	No MCL		ND	ND	ND	ND
1,1-Dichloroethane	50.00		ND	ND	ND	ND
MTBE (ug/l)	No MCL		0.43J	ND	0.51	ND
Tetrachloroethene (ug/l)	1.00		1.84	ND	2.16	ND
1,1,1-Trichloroethane (ug/l)	30.00		0.61	ND	0.71	ND
Trichloroethene (ug/l)	1.00		ND	ND	ND	ND
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	Maximum Contaminant Level (MCL)	Monitoring Well Influent/Effluent Sample Matrix Date Collected	W-2 Influent Water Apr-00	W-2 Effluent Water Apr-00	W-2 Influent Water Apr-00	W-2 Effluent Water Apr-00
Bromoform (ug/l)	No MCL		ND	3.41	ND	5.06
Bromodichloromethane (ug/l)	No MCL		ND	ND	ND	ND
Chloroform (ug/l)	No MCL		0.68	ND	ND	ND
Cis-1,2 Dichloroethene	70.00		ND	ND	ND	ND
Dibromochloromethane (ug/l)	No MCL		ND	0.74	ND	1.5
1,1-Dichloroethane	50.00		ND	ND	ND	ND
MTBE (ug/l)	No MCL		ND	ND	0.63	ND
Tetrachloroethene (ug/l)	1.00		ND	ND	4.63	ND
1,1,1-Trichloroethane (ug/l)	30.00		1.69	ND	1.02	ND
Trichloroethene (ug/l)	1.00		ND	ND	1.56	ND

TABLE 16

MUNICIPAL WELL SAMPLING SUMMARY (MCL EXCEEDANCES)
TEVA PHARMACEUTICALS USA
WALDWICK, NEW JERSEY

	Maximum Contaminant Level (MCL)	Monitoring Well Influent/Effluent Sample Matrix Date Collected	W-2 Influent Water Mar-00	W-2 Effluent Water Mar-00	W-2 Influent Water Mar-00	W-2 Effluent Water Mar-00
Bromoform (ug/l)	No MCL		ND	1.61	ND	5.37
Bromodichloromethane (ug/l)	No MCL		ND	ND	ND	ND
Chloroform (ug/l)	No MCL		ND	ND	ND	ND
Cis-1,2 Dichloroethene	70.00		ND	ND	1.22	ND
Dibromochloromethane (ug/l)	No MCL		ND	0.51	ND	0.85
1,1-Dichloroethane	50.00		ND	ND	ND	ND
MTBE (ug/l)	No MCL		1.19	0.53	ND	ND
Tetrachloroethene (ug/l)	1.00		5.62	ND	1.08	ND
1,1,1-Trichloroethane (ug/l)	30.00		1.14	ND	2.43	ND
Trichloroethene (ug/l)	1.00		1.53	ND	0.85	ND
	Maximum Contaminant Level (MCL)	Monitoring Well Influent/Effluent Sample Matrix Date Collected	W-2 Influent Water Feb-00	W-2 Effluent Water Feb-00	W-2 Influent Water Feb-00	W-2 Effluent Water Feb-00
Bromoform (ug/l)	No MCL		ND	2.18	ND	1.56
Bromodichloromethane (ug/l)	No MCL		ND	ND	ND	ND
Chloroform (ug/l)	No MCL		ND	ND	ND	ND
Cis-1,2 Dichloroethene	70.00		ND	ND	ND	ND
Dibromochloromethane (ug/l)	No MCL		ND	ND	ND	ND
1,1-Dichloroethane	50.00		ND	ND	ND	ND
MTBE (ug/l)	No MCL		0.57	ND	1.02	.411
Tetrachloroethene (ug/l)	1.00		1.83	ND	6.78	ND
1,1,1-Trichloroethane (ug/l)	30.00		0.73	ND	1.29	ND
Trichloroethene (ug/l)	1.00		0.51	ND	1.71	ND
	Maximum Contaminant Level (MCL)	Monitoring Well Influent/Effluent Sample Matrix Date Collected	W-2 Influent Water Jan-00	W-2 Effluent Water Jan-00	W-2 Influent Water Jan-00	W-2 Effluent Water Jan-00
Bromoform (ug/l)	No MCL		ND	7.87	ND	11.20
Bromodichloromethane (ug/l)	No MCL		ND	ND	ND	ND
Chloroform (ug/l)	No MCL		ND	ND	ND	ND
Cis-1,2 Dichloroethene	70.00		ND	ND	ND	ND
Dibromochloromethane (ug/l)	No MCL		ND	1.24	ND	1.99
1,1-Dichloroethane	50.00		ND	ND	ND	ND
MTBE (ug/l)	No MCL		0.55	ND	0.59	ND
Tetrachloroethene (ug/l)	1.00		3.17	ND	4.16	ND
1,1,1-Trichloroethane (ug/l)	30.00		0.71	ND	0.60	ND
Trichloroethene (ug/l)	1.00		0.99	ND	1.26	ND



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 2
290 BROADWAY
NEW YORK, NY 10007-1866

SEP 15 2003

**GENERAL NOTICE LETTER
CERTIFIED MAIL-RETURN RECEIPT REQUESTED**

George Barrett, President
Teva Pharmaceuticals USA Inc.
1090 Horsham Road
North Wales, Pennsylvania 19454

RE: Diamond Alkali Superfund Site
Notice of Potential Liability for
Response Actions in the Lower Passaic River, New Jersey

Dear Mr. Barrett:

The United States Environmental Protection Agency ("EPA") is charged with responding to the release and/or threatened release of hazardous substances, pollutants, and contaminants into the environment and with enforcement responsibilities under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended ("CERCLA"), 42 U.S.C. §9601 *et seq.* Accordingly, EPA is seeking your cooperation in an innovative approach to environmental remediation and restoration activities for the Lower Passaic River.

EPA has documented the release or threatened release of hazardous substances, pollutants and contaminants into the six-mile stretch of the river, known as the Passaic River Study Area, which is part of the Diamond Alkali Superfund Site ("Site") located in Newark, New Jersey. Based on the results of previous CERCLA remedial investigation activities and other environmental studies, including a reconnaissance study of the Passaic River conducted by the United States Army Corps of Engineers ("USACE"), EPA has further determined that contaminated sediments and other potential sources of hazardous substances exist along the entire 17-mile tidal reach of the Lower Passaic River. Thus, EPA has decided to expand the Study to include the areal extent of contamination to which hazardous substances from the six-mile stretch were transported; and those sources from which hazardous substances outside the six-mile stretch have come to be located within the expanded Study Area.

By this letter, EPA is notifying Teva Pharmaceuticals USA Inc. ("Teva") of its potential liability relating to the Site pursuant to Section 107(a) of CERCLA, 42 U.S.C. §9607(a). Under CERCLA, potentially responsible parties ("PRPs") include current and past owners of a facility, as well as persons who arranged for the disposal or treatment of hazardous substances at the Site, or the transport of hazardous substances to the Site.

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In recognition of our complementary roles, EPA has formed a partnership with USACE and the New Jersey Department of Transportation-Office of Maritime Resources ("OMR") ["the governmental partnership"] to identify and to address water quality improvement, remediation, and restoration opportunities in the 17-mile Lower Passaic River. This governmental partnership is consistent with a national Memorandum of Understanding ("MOU") executed on July 2, 2002 between EPA and USACE. This MOU calls for the two agencies to cooperate, where appropriate, on environmental remediation and restoration of degraded urban rivers and related resources. In agreeing to implement the MOU, the EPA and USACE will use their existing statutory and regulatory authorities in a coordinated manner. These authorities for EPA include CERCLA, the Clean Water Act, and the Resource Conservation and Recovery Act. The USACE's authority stems from the Water Resources Development Act ("WRDA"). WRDA allows for the use of some federal funds to pay for a portion of the USACE's approved projects related to ecosystem restoration.

For the first phase of the Lower Passaic River Project, the governmental partners are proceeding with an integrated five- to seven-year study to determine an appropriate remediation and restoration plan for the river. The study will involve investigation of environmental impacts and pollution sources, as well as evaluation of alternative actions, leading to recommendations of environmental remediation and restoration activities. This study is being conducted by EPA under the authority of CERCLA and by USACE and OMR, as local sponsor, under WRDA. EPA, USACE, and OMR are coordinating with the New Jersey Department of Environmental Protection and the Federal and State Natural Resource Trustee agencies. EPA, USACE, and OMR estimate that the study will cost approximately \$20 million, with the WRDA and CERCLA shares being about \$10 million each. EPA will be seeking its share of the costs of the study from PRPs.

Based on information that EPA evaluated during the course of its investigation of the Site, EPA believes that hazardous substances were being released from the former Biocraft Laboratories facility located at 12 Industrial Park in Waldwick, New Jersey, into the Lower Passaic River. Hazardous substances, pollutants and contaminants released from the facility into the river present a risk to the environment and the humans who may ingest contaminated fish and shellfish. Therefore, Teva may be potentially liable for response costs which the government may incur relating to the study of the Lower Passaic River. In addition, responsible parties may be required to pay damages for injury to, destruction of, or loss of natural resources, including the cost of assessing such damages.

Enclosed is a list of the other PRPs who have received Notice letters. This list represents EPA's findings on the identities of PRPs to date. We are continuing efforts to locate additional PRPs who have released hazardous substances, directly or indirectly, into the Passaic River. Inclusion on, or exclusion from, the list does not constitute a final determination by EPA concerning the liability of any party for the release or threat of release of hazardous substances at the Site. Be advised that notice of your potential liability at the Site is being forwarded to all parties on this list.

We request that you consider becoming a "cooperating party" for the Lower Passaic River

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Project. As a cooperating party, you, along with many other such parties, will be expected to fund EPA's share of the study costs. Upon completion of the study, it is expected that CERCLA and WRDA processes will be used to identify the required remediation and restoration programs, as well as the assignment of remediation and restoration costs. At this time, the commitments of the cooperating parties will apply only to the study. For those who choose not to cooperate, EPA may apply the CERCLA enforcement process, pursuant to Sections 106 (a) and 107(a) of CERCLA, 42 U.S.C. §9606(a) and §9607(a) and other laws.

Pursuant to CERCLA Section 113(k), EPA must establish an administrative record that contains documents that form the basis of EPA's decision on the selection of a response action for a site. The administrative record files, which contain the documents related to the response action selected for this Site are located at EPA's Region 2 office (290 Broadway, New York) on the 18th floor. You may call the Records Center at (212) 637-4308 to make an appointment to view the administrative record for the Lower Passaic River Project.

EPA will be holding a meeting with all PRPs on October 29, 2003 at 10:00 AM in Conference Room 27A at the Region 2 office. At that meeting, EPA will provide information about the actions taken to date in the Lower Passaic River, as well as plans for future activities. After the presentation, PRPs will be given the opportunity to caucus, and EPA will return to answer any questions that might be generated during the private session. Please be advised that due to increased security measures, all visitors need to be registered with the security desk in the lobby in order to gain entry to the office. In order to ensure a smooth arrival, you will need to provide EPA with a list of attendees no later than October 15, 2003.

EPA recommends that the cooperating parties select a steering committee to represent the group's interest as soon as possible, since EPA expects a funding commitment for the financing of the CERCLA share of the \$20 million study by mid-November 2003. If you wish to discuss this further, please contact Ms. Alice Yeh, Remedial Project Manager, at (212) 637-4427 or Ms. Kedari Reddy, Assistant Regional Counsel, at (212) 637-3106. Please note that all communications from attorneys should be directed to Ms. Reddy.

Sincerely yours,



George Pavlou, Director
Emergency and Remedial Response Division

Enclosure

cc: Kirsten E. Bauer, Esq.
Teva North America

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PRPs in Receipt of Notice Letters:

PRP	Legal Counsel
<p>J. Roger Hirl President and Chairman of the Board Occidental Chemical Co. Occidental Tower 5005 LBJ Freeway Dallas, Texas 75244</p>	<p>Paul W. Herring, Esq. Andrews & Kurth L.L.P. 1717 Main Street, Suite 3700 Dallas, Texas 75201</p>
<p>Joseph Gabriel Vice President of Operations 360 North Pastoria Environmental Corp. 1100 Ridgeway Avenue Rochester, New York 14652-6280</p>	<p>Philip Sellinger, Esq. Sills Cummis Zuckerman One Riverfront Plaza Newark, NJ 07102</p>
<p>Robert Ball, President Alcan Aluminum Corporation 100 Erieview Plaza, 29th Floor Cleveland, Ohio 44114</p>	<p>Lawrence Salibra, Esq. Alcan Aluminum Corporation 6060 Parkland Blvd. Mayfield Hts., OH 44124</p>
<p>Mark Epstein, President Alden Leeds Inc. 55 Jacobus Ave. Kearny, New Jersey 07032</p>	<p>Eric Aronson, Esq. Whitman Breed Abbott & Morgan One Gateway Center Newark, NJ 07102</p>
<p>Alan Bendelius, President Alliance Chemical, Inc. Linden Avenue Ridgefield, New Jersey 07657</p>	<p>Fredi L. Pearlmutter, Esq. Cooper, Rose & English, LLP 480 Morris Avenue Summit, New Jersey 07901-1527</p>
<p>William Gentner, President The Andrew Jergens Co. 2535 Spring Grove Ave. Cincinnati, Ohio 45214</p>	<p>A. Christian Worrell III, Esq. Head & Ritchey, LLP 1900 Fifth Third Center 511 Walnut Street Cincinnati, OH 45202</p>
<p>Gary Cappeline, President Ashland Specialty Chemical Co. 5200 Blazer Parkway Dublin, Ohio 43017</p>	<p>Stephen Leermakers, Esq. Ashland Specialty Chemical Co. 5200 Blazer Parkway Dublin, OH 43017</p>
<p>Klaus Peter Loebbe, President BASF Corporation 3000 Continental Drive North Mount Olive, New Jersey 07828</p>	<p>Nan Bernardo, Esq. and Nancy Lake Martin, Esq. BASF Corporation 3000 Continental Drive North Mount Olive, NJ 07828</p>

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Yvan Dupay, President Benjamin Moore & Co. 51 Chestnut Ridge Road Montvale, New Jersey 07645	Arthur Schulz, Esq. Environmental Counsel 4910 Massachusetts Ave., N.W. Suite 221 Washington, DC 20016
Alberto Celleri, President Chemical Compounds Inc. 10 Baldwin Court Roseland, New Jersey 07086	Jim Giannotti Chemical Compounds Inc. 29-75 Riverside Avenue Newark, NJ 07104
President Chris-Craft Industries, Inc. 767 Fifth Avenue, 46th Floor New York, New York 10153	Brian Kelly, Esq. Chris-Craft Industries, Inc. 767 Fifth Avenue, 46th Floor New York, NY 10153
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Martin Benante, Chairman Curtiss-Wright Corp. 4 Becker Farm Road Roseland, New Jersey 07068	James Maher, Esq. Curtiss-Wright Corp. 4 Becker Farm Road Roseland, NJ 07068
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Edgar Woolard, Chairman E.I. du Pont de Nemours & Co. 1007 Market Street Wilmington, Delaware 19898	Bernard J. Reilly, Esq. Corporate Counsel E.I. du Pont de Nemours & Co. 1007 Market Street Wilmington, DE 19898

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David Weisman, CEO Elan Chemical Company 268 Doremus Ave. Newark, New Jersey 07105	Jeffrey Schwartz, Esq. Sarber Schlesinger Satz & Goldstein One Gateway Center Newark, NJ 07102
Al Reisch, President E M Sergeant Pulp & Chemical Co. Inc. 6 Chelsea Road Clifton, New Jersey 07102	None
Mark Tucker, Esq. Essex Chemical Corp. 2030 WMDC Midland, Michigan 48674	Kenneth Mack, Esq. Fox, Rothschild, O'Brien & Frankel Princeton Pike Corp.Center 997 Lenox Drive, Building 3 Lawrenceville, NJ 08648
Todd Walker, President Fairmount Chemical Co. Inc. 117 Blanchard St. Newark, New Jersey 07105	John Ix, Esq. Porzio Bromberg & Newman 163 Madison Ave. Morristown, NJ 07962
Bradley Buechler, President Franklin-Burlington Plastics Inc. 113 Passaic Ave. Kearny, New Jersey 07032	Robert M. Becker, Esq. Kraemer, Burns, Mytelka & Lovell, P.A. 675 Morris Ave. Springfield, NJ 07081
Henry Benz, President Hoescht Celanese Chemicals, Inc. Route 202-206 P.O.Box 2500 Somerville, New Jersey 08876	Anne Conley-Pitchell, Esq. Hoescht Celanese Corp. Route 202-206 P.O.Box 2500 Somerville, NJ 08876
Francine Rothschild, President Kearny Smelting & Refining 936 Harrison Ave #5 Kearny, New Jersey 07032	None
Henry Schact, CEO Lucent Technologies, Inc. 600 Mountain Avenue Murray Hill, New Jersey 07974	Ralph McMurry, Esq. Hill, Betts & Nash LLP 1 Riverfront Plaza, Suite 327 Newark, NJ 07102-5401
Richard Meelia, President Mallinckrodt, Inc. 675 McDonnell Blvd. Hazelwood, Missouri 63042	Patricia Duft, Esq. Mallinckrodt, Inc. 675 McDonnell Blvd. Hazelwood, MO 63042

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<p>Robert Finn, President RSR Corporation 2777 Stemmons Freeway, Suite 1800 Dallas, Texas 75207</p>	<p>Howard Myers, Esq. RSR Corporation 2777 Stemmons Freeway, Suite 1800 Dallas, TX 75207</p>
<p>Christopher Connor, CEO The Sherwin-Williams Company 101 Prospect Avenue, N.W. Cleveland, Ohio 44115-1075</p>	<p>Donald McConnell, Esq. The Sherwin-Williams Co. 101 Prospect Ave., N.W. Cleveland, OH 44115</p>
<p>George Barrett, President Teva Pharmaceuticals USA Inc. 1090 Horsham Road North Wales, Pennsylvania 19454</p>	<p>Kirsten E. Bauer, Esq. Teva North America 1090 Horsham Road North Wales, PA 19454</p>
<p>Robert Senior, President Three County Volkswagen 701 Riverside Ave. Lyndhurst, New Jersey 07071</p>	<p>Robert DiLascio, Esq. 30 Park Avenue, Suite 101 Lyndhurst, NJ 07071</p>
<p>Michael Jordan, President Westinghouse Electric Corp. 11 Stanwix Street Pittsburgh, Pennsylvania 15222</p>	<p>Roger Willis, Esq. Westinghouse Electric Corp. 11 Stanwix Street Pittsburgh, PA 15222</p>
<p>Isaac Weinberger, President Wiggins Plastics Inc. 547 Maitland Ave. Teaneck, New Jersey 07666</p>	<p>None</p>

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