Sammamish Plateau
Water and Sewer District

City of Issaquah

Lower Issaquah Valley Wellhead Protection Plan

Volume II - Supplemental Appendices

Submitted by:
Golder Associates
In Association with
Carr/Associates and
The Barton Group

November 1993

98199329

Sammamish Plateau
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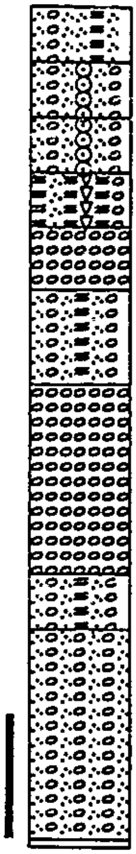
Appendix A

APPENDIX A

SELECTED WELL LOGS

CITY OF ISSAQUAH
RISDON WELL 1 (COI-1)
Lithology

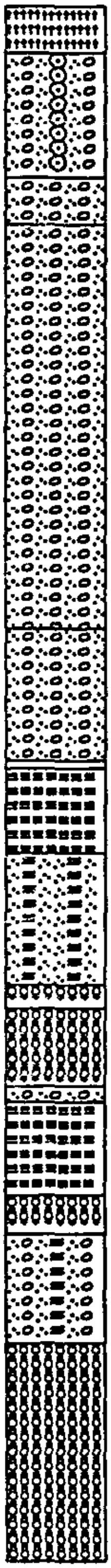
surf. elev = 72.57'



0	Brown Sand with gravel
7	Brown Hardpan with boulders
14	Brown Hardpan with boulders and cobbles
21	Brown Hardpan
28	Gravel
36	Tight Gravel
48	Small & coarse Gravel
72	Brown Sand & Gravel layers, silt & clay
79	Brown Sand with up to 10-inch Gravels
106 107	Blue brown Clay

Risdon Well 2 (COI-2)
Lithologic Log

surf. elev= 93.06'

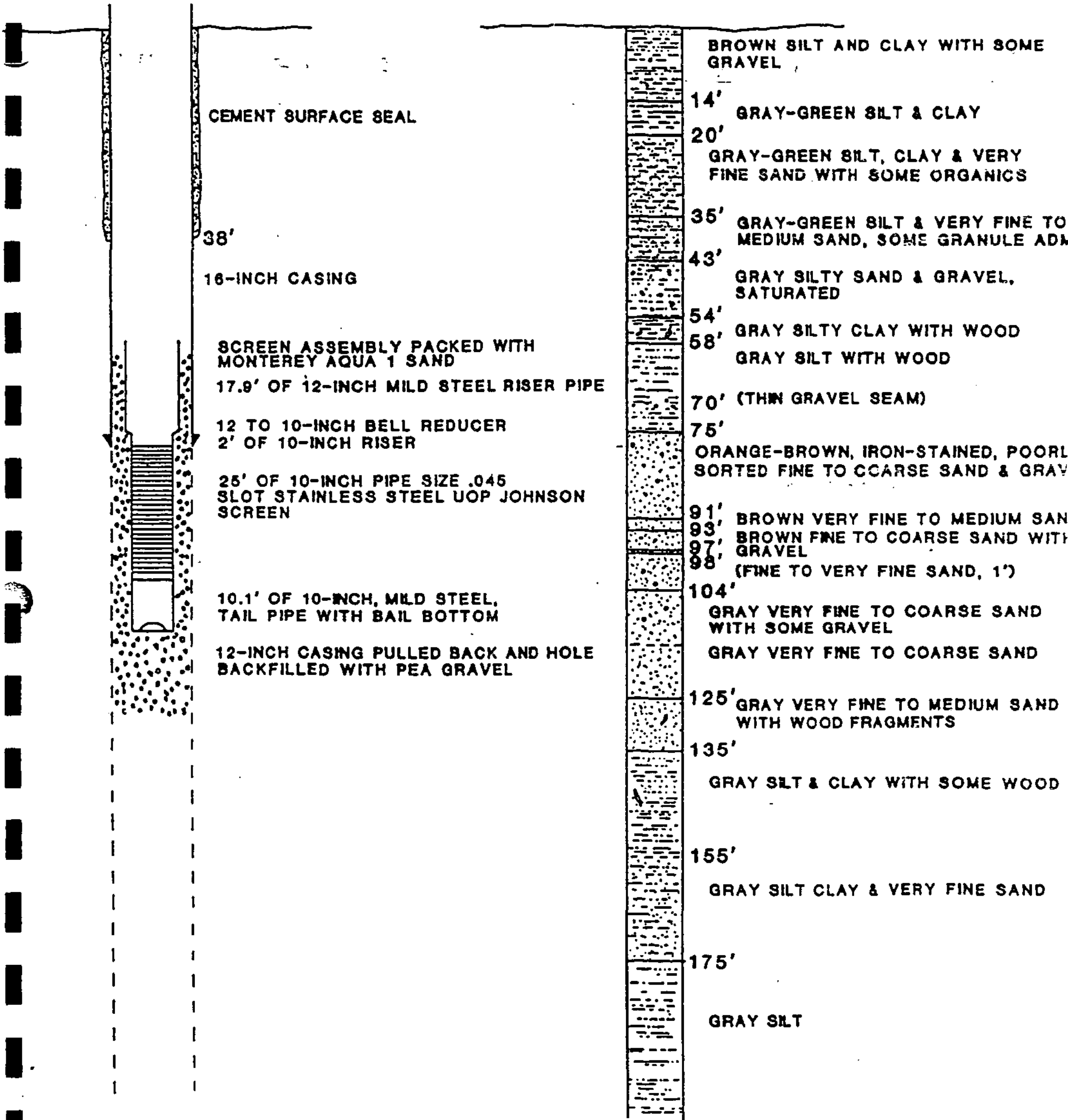


0–6	Brown Sandy Topsoil
6–22	Brown cemented Sand & Gravel with Boulders
22–28	Hardpacked Sand & Gravel
28–80	Hardpacked Water Bearing Sand & Gravel
80–97	Clean Water Bearing Sand & Gravel
97–98	Brown Silt
98–109	Blue Clay
109–126	Blue silty Sand
126–129	Blue cemented Sand & Gravel
129–139	Brown cemented Sand & Gravel
139–141	Clean Water Bearing Sand & Gravel
141–153	Blue Clay
153–158	Cemented Sand & Gravel
158–172	Silty Sand & Gravel
172–200	Cemented Sand & Gravel

SHALLOW PRODUCTION WELL

CONSTRUCTION DETAILS

GEOLOGIC LOG



File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

DEC 23 1985 RECEIVED

Permit No. ....

(1) OWNER: Name: CITY OF ISSAQUAH Address: 130 E SUNSET WAY ISSAQUAH WA 980[27]

(2) LOCATION OF WELL: County: KING — NW ¼ NE ¼ Sec. 28 T. 24 N., R. 6 E.W.M.

Bearing and distance from section or subdivision corner: APPROXIMATELY 1900 FT WEST AND 500 FT SOUTH OF NE SEC C

(3) PROPOSED USE: Domestic ☐ Industrial ☐ Municipal ☒ Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one): 5
New well ☒ Deepened ☐ Reconditioned ☐
Method: Dug ☐ Cable ☒ Rotary ☐ Bored ☐ Driven ☐ Jetted ☐

(5) DIMENSIONS: Diameter of well 16 & 12 inches.
Drilled 412 ft. Depth of completed well 412 ft.

(6) CONSTRUCTION DETAILS: 12" REMOVED

Casing installed: 16" Diam. from 1.5 ft. to 309 ft.
Threaded ☐ 12" Diam. from 1.5 ft. to 412 ft.
Welded ☒ ......" Diam. from ...... ft. to ...... ft.

Perforations: Yes ☐ No ☒
Type of perforator used ......
SIZE of perforations ...... in. by ...... in.
...... perforations from ...... ft. to ...... ft.
...... perforations from ...... ft. to ...... ft.
...... perforations from ...... ft. to ...... ft.

Screens: Yes ☒ No ☐
Manufacturer's Name: UOP JOHNSON
Type: STAINLESS STEEL Model No. ......
Diam. 6.25 Slot size .025 from 323 ft. to 405 ft.
Diam. ...... Slot size ...... from ...... ft. to ...... ft.

Gravel packed: Yes ☒ No ☐ Size of gravel: MONTEREY AQUA 8
Gravel placed from 305 ft. to 412 ft.

Surface seal: Yes ☒ No ☐ To what depth? 20 ft.
Material used in seal ......
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? ...... Depth of strata ......
Method of sealing strata off ......

(7) PUMP: Manufacturer's Name ......
Type: ...... H.P. ......

(8) WATER LEVELS: Land-surface elevation above mean sea level 60 ft.
Static level 25 ft. below top of well Date 9-26-85
Artesian pressure ...... lbs. per square inch Date ......
Artesian water is controlled by ...... (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☐ If yes, by whom? RFN INC
Yield: 1000 gal./min. with 122 ft. drawdown after 24 hrs.

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level
5m	25.5	21m	17.25	102m	12.68
7m	21.0	41m	15.00	150m	11.46
10m	21.25	70m	13.78	204m	10.55

Date of test ......
Bailer test ...... gal./min. with ...... ft. drawdown after ...... hrs.
Artesian flow ...... g.p.m. Date ......
Temperature of water ...... Was a chemical analysis made? Yes ☒ No ☐

DEC 27 ...

(10) WELL LOG:

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
BROWN SILT WITH SOME GRAVEL	1.5	14
GRAY-GREEN SILT AND CLAY	14	35
GRAY SILT FINE SAND AND OCC. GRAVEL	35	75
SAND AND GRAVEL WITH SOME SILTY LINES	75	125
GRAY VERY FINE TO MEDIUM SAND	125	135
GRAY SILT AND CLAY	135	155
GRAY SANDY SILT AND CLAY	155	170
GRAY SILT	170	200
GRAY SILT SAND AND CLAY	200	240
GRAY ALTERNATING THIN BEDS OF SILT AND CLAY AND SAND OR SAND AND GRAVEL	240	270
GRAY FINE SAND WITH SOME SILTY LENSES AND SOME GRAVELLY ZONES	270	405
GRAY VERY FINE TO FINE SAND WITH SILT AND CLAY MATRIX	405	412
PREPARED BY: E. Michael Krautkramer ROBINSON AND NOBLE INC GROUND WATER GEOLOGISTS		

Work started ...... 19...... Completed ...... 19......

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME ARMSTRONG & CHARON, INC. (Person, firm, or corporation) (Type or print)

Address 10715 66th Ave. East-Puyallup-9[8371]

[Signed] John E. Charon (Well Driller)

License No. 1190 Date December 20, 1985

CITY OF ISSAQUAH

(USE ADDITIONAL SHEETS IF NECESSARY)

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT
STATE OF WASHINGTON

Permit No. ......

(1) OWNER: Name CITY OF ISSAQUAH Address 120 E. SUNSET WAY ISSAQUAH WA 9801

(2) LOCATION OF WELL: County KING — NW ¼ NE ¼ Sec. 28 T 24 N., R. 6E

Bearing and distance from section or subdivision corner APPROXIMATELY 1900 FT WEST AND 500 FT SOUTH OF NE SEC COR

(3) PROPOSED USE: Domestic ☐ Industrial ☐ Municipal ☐ Irrigation ☐ Test Well ☒ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one)....
New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 8 inches.
Drilled 650 ft. Depth of completed well 450 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6 " Diam. from +3 ft. to 450 ft.
Threaded ☐ ......" Diam. from ...... ft. to ...... ft.
Welded ☐ ......" Diam. from ...... ft. to ...... ft.

Perforations: Yes ☒ No ☐
Type of perforator used MACHINE SLOTTED
SIZE of perforations 3/32 in. by 3 in.
12 PER FT. perforations from 330 ft. to 450 ft.
...... perforations from ...... ft. to ...... ft.
...... perforations from ...... ft. to ...... ft.

Screens: Yes ☐ No ☒
Manufacturer's Name......
Type...... Model No......
Diam. ...... Slot size ...... from ...... ft. to ...... ft.
Diam. ...... Slot size ...... from ...... ft. to ...... ft.

Gravel packed: Yes ☐ No ☒ Size of gravel: ......
Gravel placed from ...... ft. to ...... ft.

Surface seal: Yes ☒ No ☐ To what depth? 18 ft.
Material used in seal BENTONITE
Did any strata contain unusable water? Yes ☐ No ☒
Type of water?...... Depth of strata......
Method of sealing strata off......

(7) PUMP: Manufacturer's Name......
Type: ...... H.P......

(8) WATER LEVELS: Land-surface elevation above mean sea level.... 60 ft.
Static level 7 ft. below top of well Date 3-2-85
Artesian pressure ...... lbs. per square inch Date......
Artesian water is controlled by...... (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☒ No ☐ If yes, by whom?......
Yield: ≈300 gal./min. with UNK. ft. drawdown after 3 hrs.
" 60 " 9 " 5 "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test ......
Bailer test...... gal./min. with...... ft. drawdown after...... hrs.
Artesian flow...... g.p.m. Date......
Temperature of water...... Was a chemical analysis made? Yes ☒ No ☐

(10) WELL LOG:

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
BROWN SILT WITH SOME GRAVEL	0	14
GRAY-GREEN SILT AND CLAY	14	35
GRAY SILT, FINE SAND AND OCC. GRAVEL	35	75
SAND AND GRAVEL WITH SOME SILTY ZONES	75	125
GRAY VERY FINE TO MEDIUM SAND	125	135
GRAY SILT AND CLAY	135	155
GRAY SANDY SILT AND CLAY	155	170
GRAY SILT	170	200
GRAY SILT SAND AND CLAY	200	240
GRAY ALTERNATING THIN SILT AND CLAY AND THIN SAND AND GRAVEL OR SAND	240	270
GRAY FINE SAND WITH SOME SILTY ZONES	270	405
GRAY VERY FINE TO FINE SAND WITH SILT AND CLAY MATRIX	405	419
GRAY SAND AND SILT WITH SOME GRAVEL	419	450
GRAY CLAY AND SILT	450	630
DARK GRAVEL AND SAND (CLAY MATRIX?)	630	640
GRAY SILTY CLAY	640	650

PREPARED BY: E. MICHAEL KRAUTKRAMER
ROBINSON AND NOBLE INC
GROUND WATER GEOLOGISTS

RECEIVED
FEB 27 1985
DEPARTMENT OF ECOLOGY
NORTHWEST REGION

Work started...... 19...... Completed...... 19......

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Richardson Well Drilling Co.
(Person, firm, or corporation) (Type or print)

Address P.O. Box 44427 Tacoma, Wa. 98444

[Signed]......
(Well Driller)

License No. 0419 Date 1-20, 19......

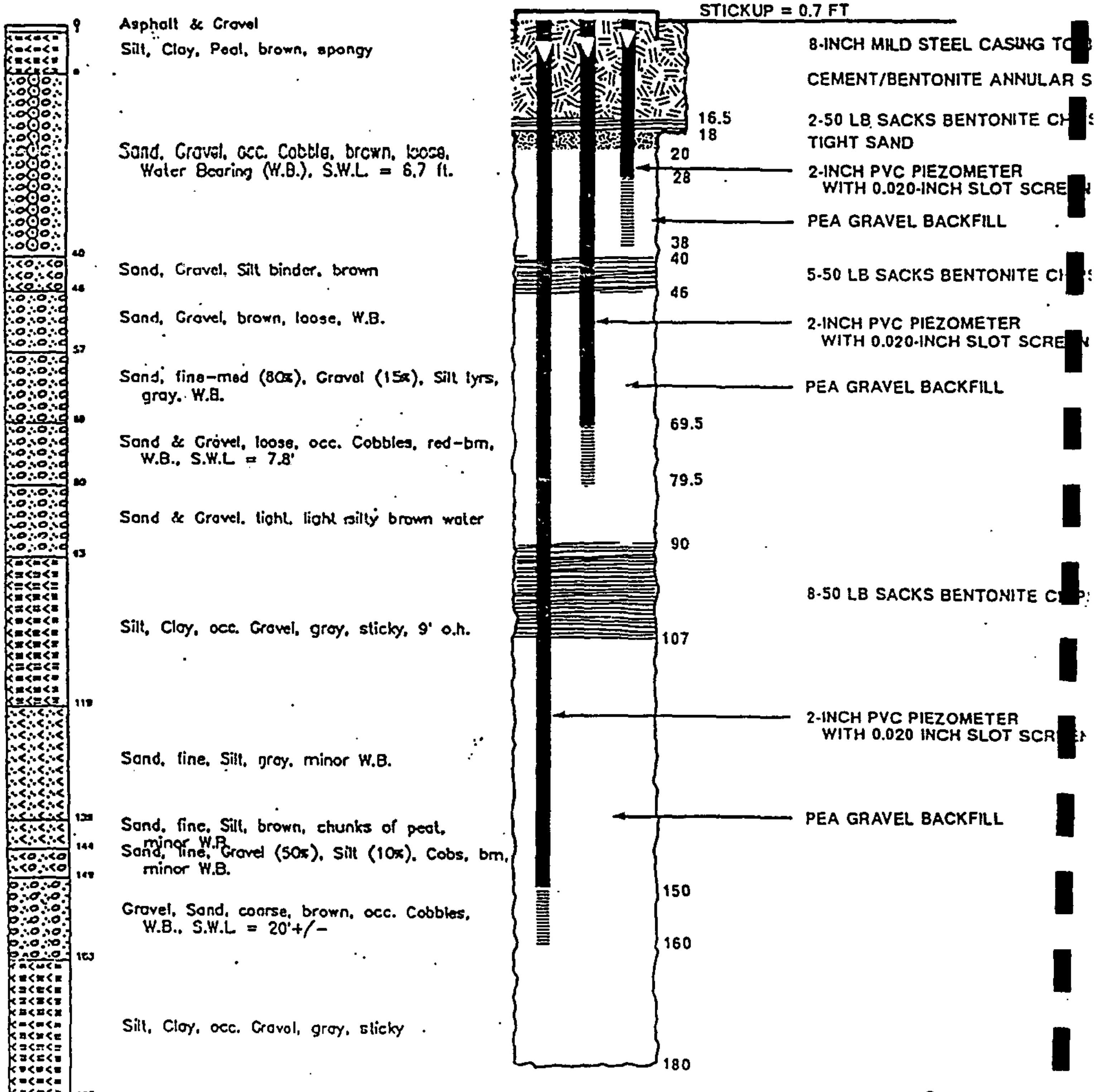
SAMMAMISH PLATEAU WATER AND SEWER DISTRICT/CITY OF ISSAQUAH

ISSAQUAH VALLEY TEST WELL 1 (VT-1)

STATIC WATER LEVELS
BELOW GROUND SURFACE, 3/9/90
5.19 FT.
6.92 FT.
7.09 FT.

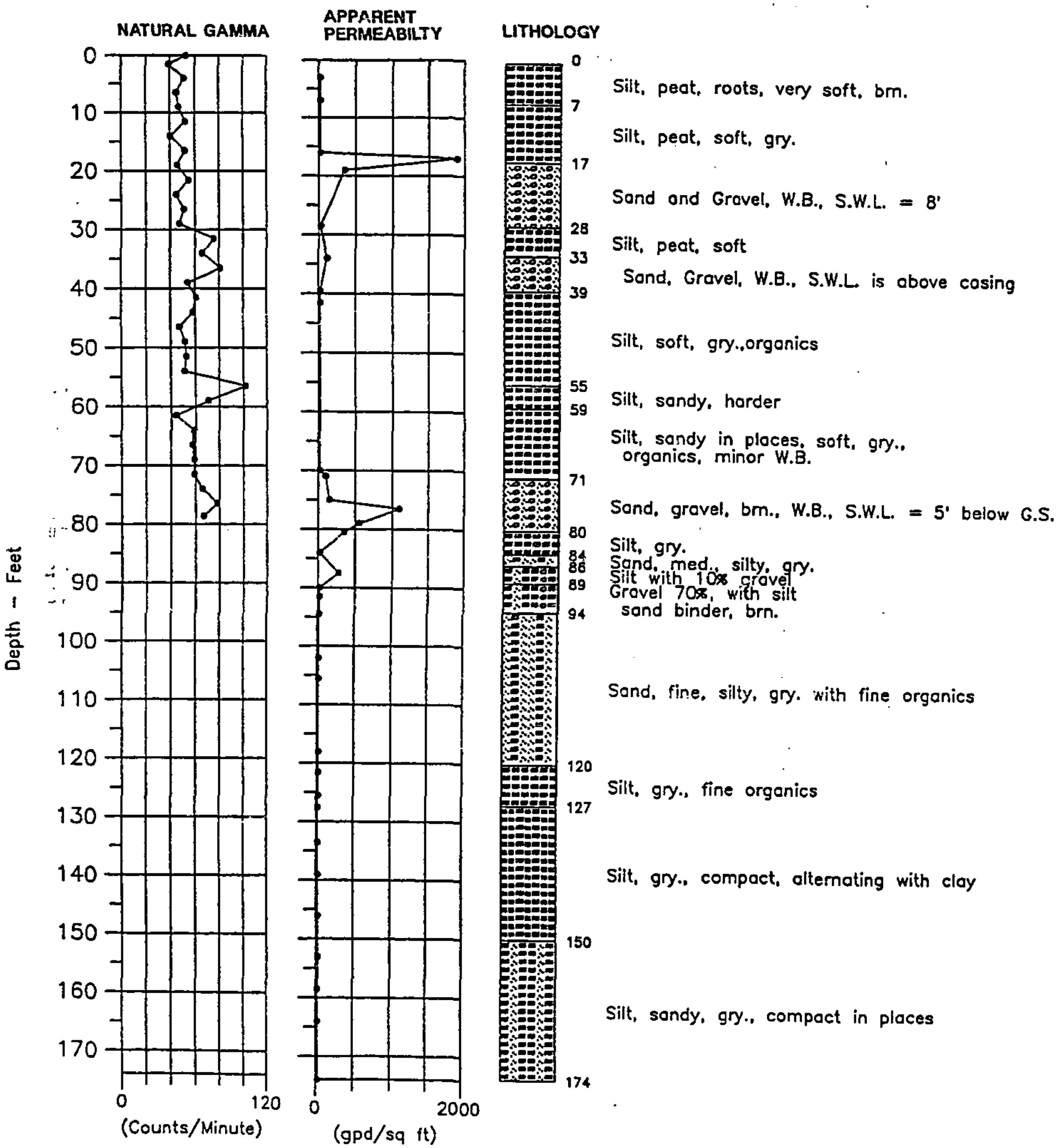
SPWD/COI VTW 1
LITHOLOGIC LOG

FINAL COMPLETION

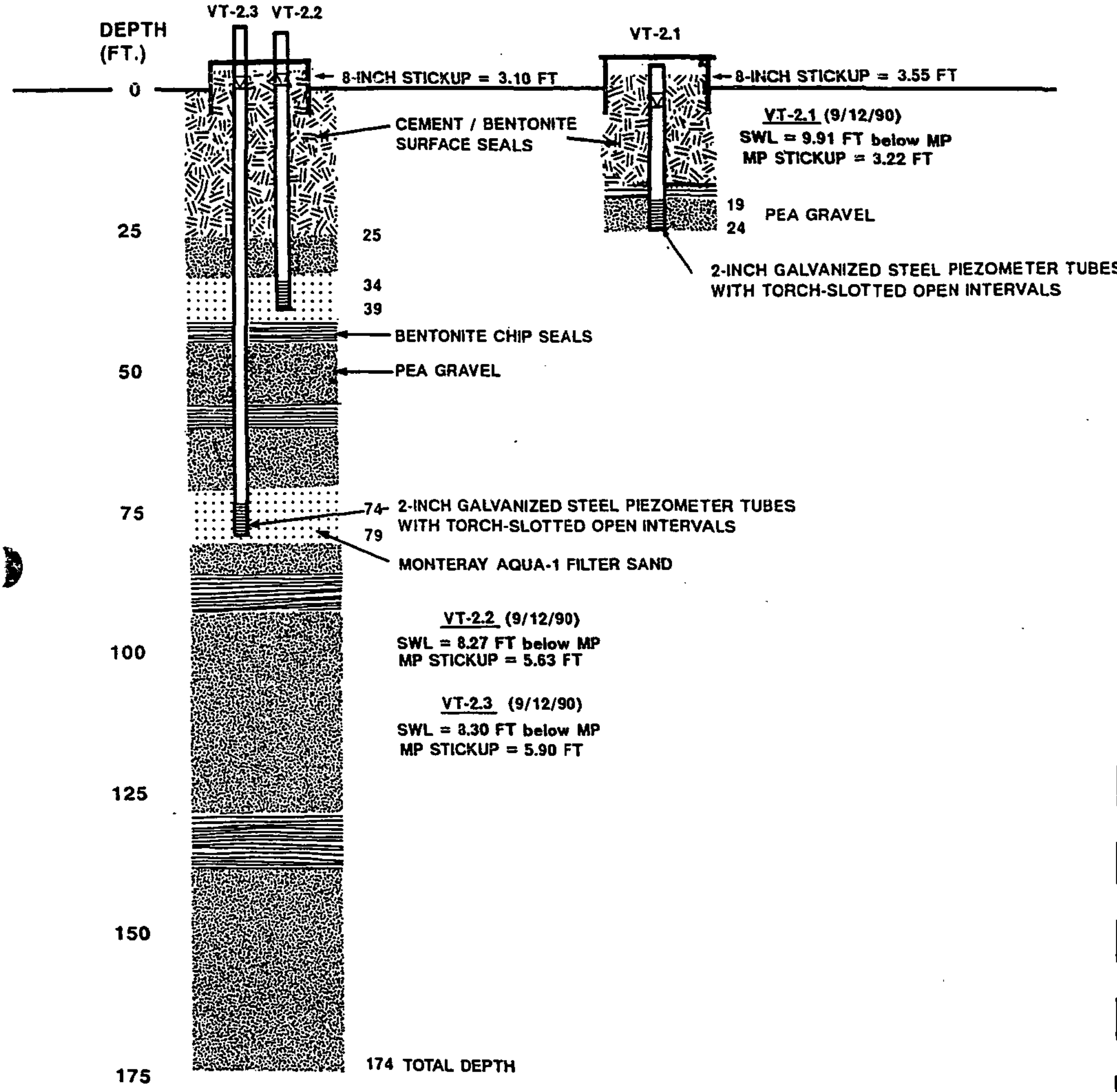


CARR/ASSOCI

SAMMAMISH PLATEAU WATER AND SEWER DISTRICT
VALLEY TEST WELL 2 (VT-2.1,VT-2.2,VT-2.3)
HYDROGEOLOGIC LOGS



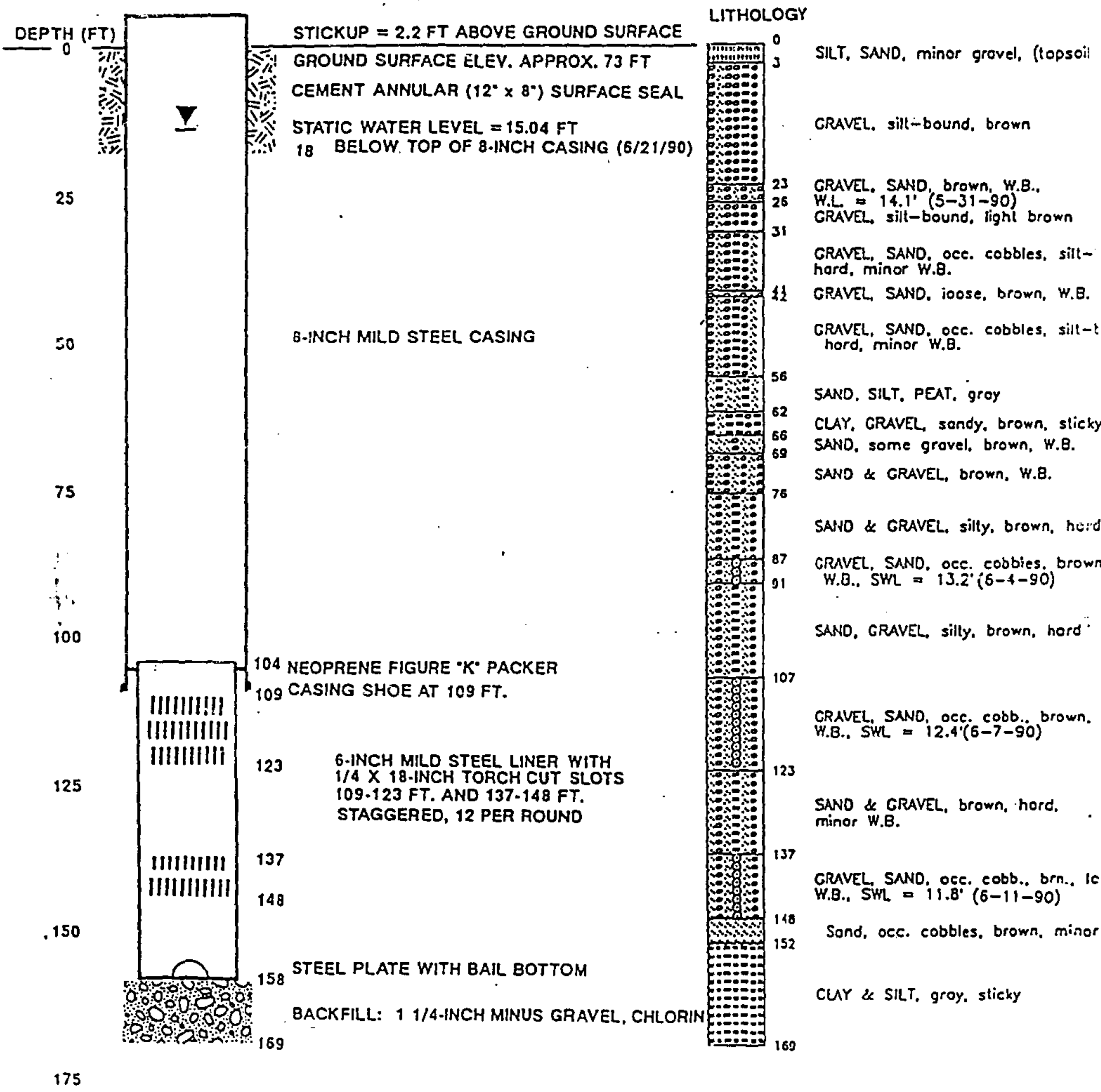
SAMMAMISH PLATEAU WATER & SEWER DISTRICT / CITY OF ISSAQUAH
ISSAQUAH VALLEY TEST WELL SITE 2 (VT-2.1, VT-2.2, VT-2.3)



SAMMAMISH PLATEAU WATER AND SEWER DISTRICT

VALLEY TEST WELL 3 (VT-3)

HYDROGEOLOGIC LOGS



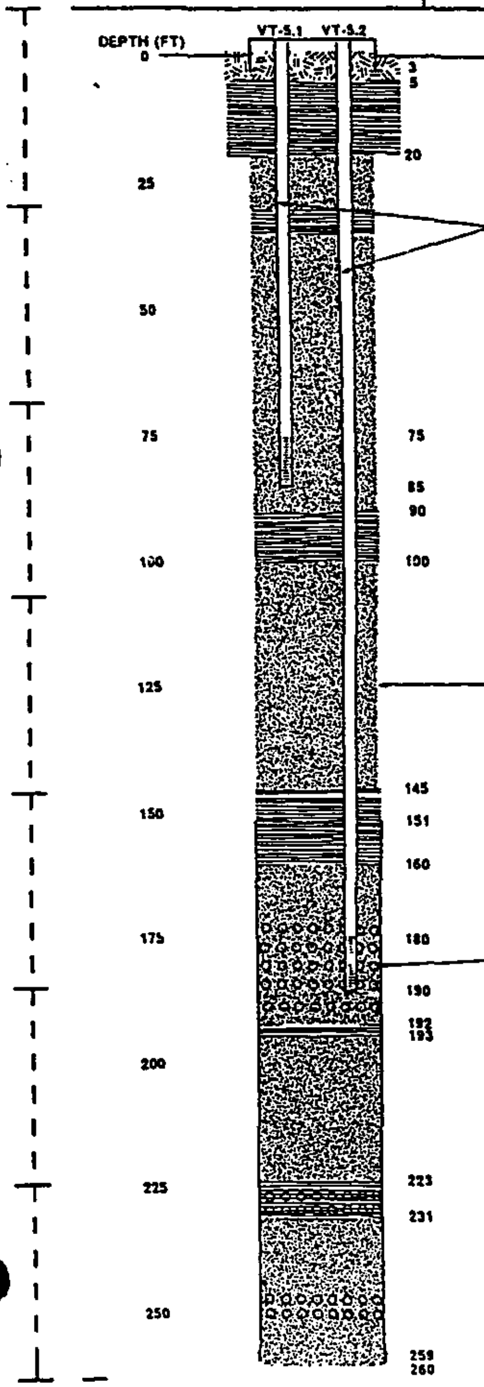
RESOURCE PROTECTION WELL REPORT

START CARD NO. 012220

PROJECT NAME: SPWSD Valley Test Wells
WELL IDENTIFICATION NO. VT-5
DRILLING METHOD: Cable Tool
DRILLER: Bob Carper
FIRM: Hokkaido Drilling & Developing Corp
SIGNATURE:
CONSULTING FIRM: Carr/Associates, Inc.
REPRESENTATIVE: John Houck

COUNTY: King
LOCATION: NE¼ SE ¼ Sec 21 Twn 24N R 6E
STREET ADDRESS OF WELL: 100'E. at the Intersec of SE 62nd & E Lake Sammamish Parkway SE
WATER LEVEL ELEVATION: VT-5.1=59.34, VT-5.2=60.4
GROUND SURFACE ELEVATION: 66.11 ft.
INSTALLED: 1-8-91 to 1-28-91
DEVELOPED:

AS-BUILT



WELL DATA

stickup = 2.20 ft.
CEMENT SEAL
BENTONITE SEAL
PIEZOMETERS ARE 2-INCH FLUSH COUPLED PVC, WITH 0.020 SLOT SCREENS AND TWO CENTRALIZERS PER ASSEMBLY

STATIC WATER LEVELS (4/12/90)
VT-5.1 = 6.77 ft.
VT-5.2 = 5.64 ft.

BENTONITE SEAL
PEA GRAVEL BACKFILL
BENTONITE SEAL
DRIVE SHOE AND CASING REMNANT (151 - 259 ft.)
CASING PERFORATIONS: 170 - 190 ft.
225 - 230 ft.
245 - 250 ft.
MILLS KNIFE PERFORATIONS
BENTONITE SEAL
BENTONITE SEAL
TOTAL DEPTH

FORMATION DESCRIPTION

0	Sand, Gravel, Silt, cemented, compact, gry.
4	Sand, Silty, some Gravel, minor water bearing (W.B.)
8	Sand and Gravel, Silty, brn., W.B.
16	Sand and Gravel, dark brn. with peat, foam, W.B.
29	Sand, Silty, minor Gravel, light brn.
35	Sand, Gravel, brn., W.B., SWL = 5.3' (1/9/91)
57	Sand, fine to coarse, heave, minor Gravel, brn., W.B.
63	Sand, fine to coarse, Gravel, W.B. SWL = 5.4' (1/10/91)
80	Gravel, large, Sand, brn., hard, heave, W.B.
91	Sand, Gravel, silt-bound, brn.
98	Sand, medium to coarse, minor Gravel, W.B.
110	Sand, fine to medium, minor Gravel, Silt binder, brn.
137	Sand, Gravel, Silty, min. W.B., SWL = 3.2' (1/14/91)
134	Gravel, fine, Silt binder, brn.
142	Sand, medium, Gravel, cleaner, W.B.
145	Sand, Silty
156	Sand, medium, Gravel, orng-brn, silt layers, SWL = 6.5'
168	Sand and dark Gravel, minor silt layers, W.B.
184	Sand, dark brn., minor Gravel, clean
186	Sand and Gravel, minor Silt, W.B.
207	Sand and Gravel, Silt-bound, brn., thin layers of blue
219	Silt, weathered orange-brn Sandstone (tallus?), minor
250	Silt, Sand, Gravel, brown, v. minor W.B.
254	Silt, Sand, Gravel, peat, gry
260	

SCALE: 1" =

PAGE ____ OF ____

RESOURCE PROTECTION WELL REPORT

START CARD NO. ________

PROJECT NAME: SPWSD Valley Test Wells

WELL IDENTIFICATION NO. VT-6

DRILLING METHOD: Cable Tool

DRILLER: Bob Carper

FIRM: Hokkaido Drilling & Developing Corp

SIGNATURE: ________

CONSULTING FIRM: Carr/Associates, Inc.

REPRESENTATIVE: John Houck

COUNTY: King

LOCATION: SW¼ SE ¼ Sec 27 Twn 24N R 6E

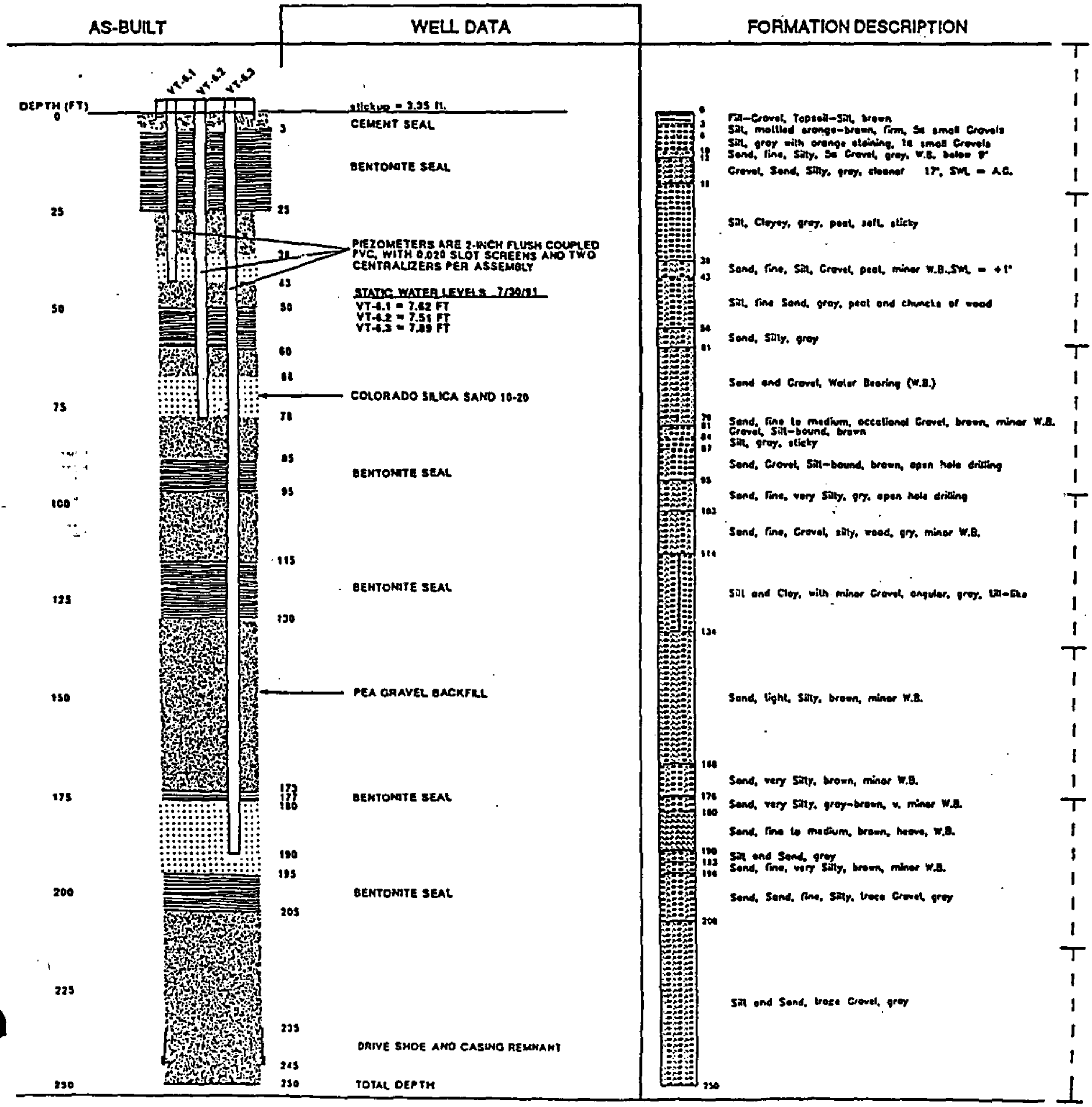
STREET ADDRESS OF WELL: 350's of the Intersecti[on] of S.E. 62nd St & Ranier Blvd. N.

WATER LEVEL ELEVATION: VT-6.1 = 7.62 FT VT-6.2 = 7.51 FT VT-6.3 = 7.89

GROUND SURFACE ELEVATION: ________

INSTALLED: 1-29-91 to 2-14-91

DEVELOPED: ________



SCALE: 1" = ________ PAGE ________ OF ________

ECY 050-12 (Rev. 11/89)

RESOURCE PROTECTION WELL REPORT

START CARD NO. ____________

PROJECT NAME: SPWSD Valley Test Wells

WELL IDENTIFICATION NO. VT-7

DRILLING METHOD: Cable Tool

DRILLER: Bob Carper

FIRM: Hokkaido Drilling & Developing Corp

SIGNATURE: ____________

CONSULTING FIRM: Carr/Associates, Inc.

REPRESENTATIVE: John Houck

COUNTY: King

LOCATION SE ¼ NW ¼ Sec 27 Twn 24N R 6E

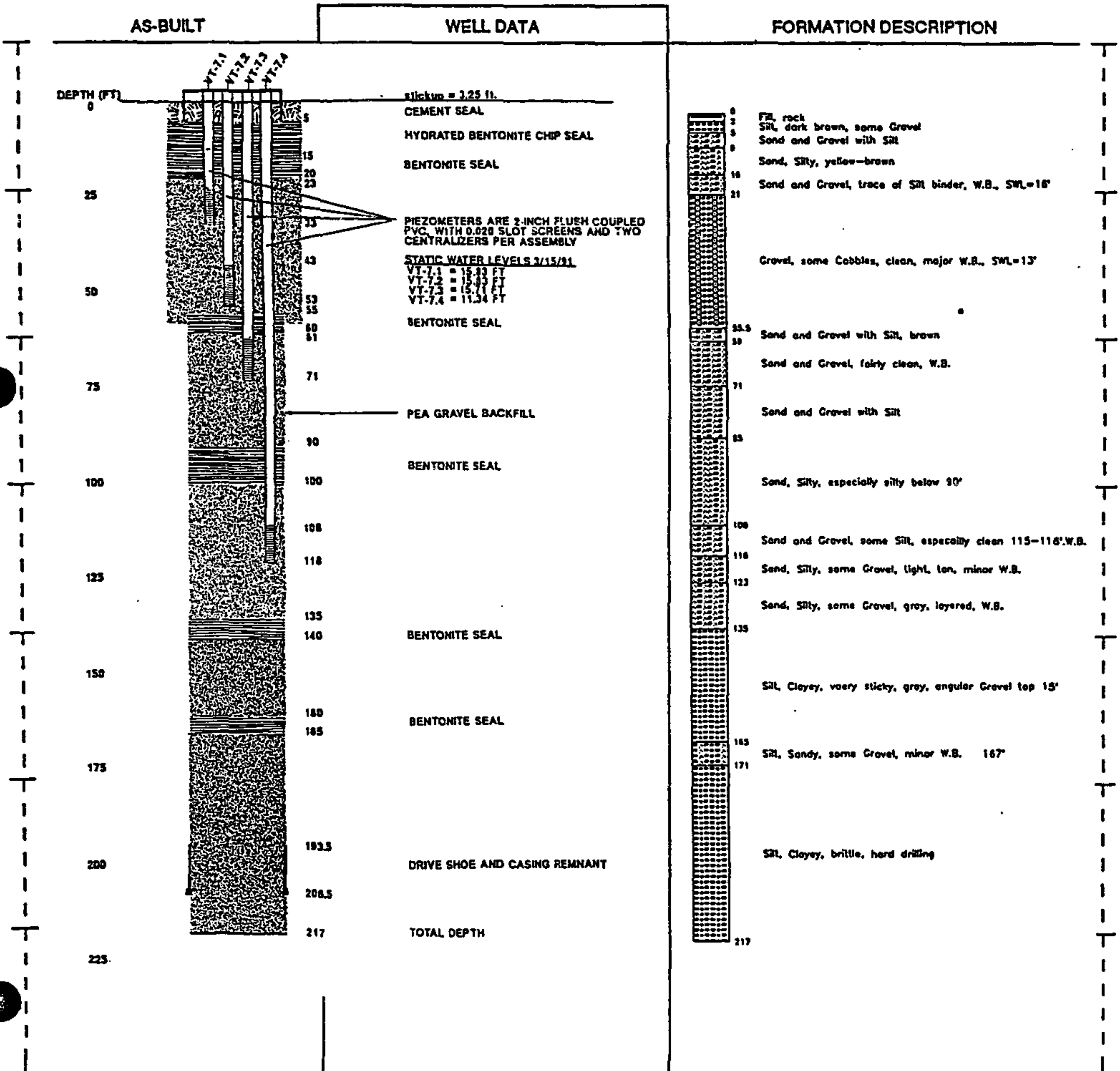
STREET ADDRESS OF WELL: 930 1st Ave. N.E.

WATER LEVEL ELEVATION: VT-7.1=63.45, VT-7.2=63.45, VT-7.3=63.5, VT-7.4=67.9

GROUND SURFACE ELEVATION: 79.28

INSTALLED: 2-2-91 to 3-8-91

DEVELOPED: ____________



SCALE: 1" = ____________

PAGE ______ OF ______

ECY 050-12 (Rev. 11/89)

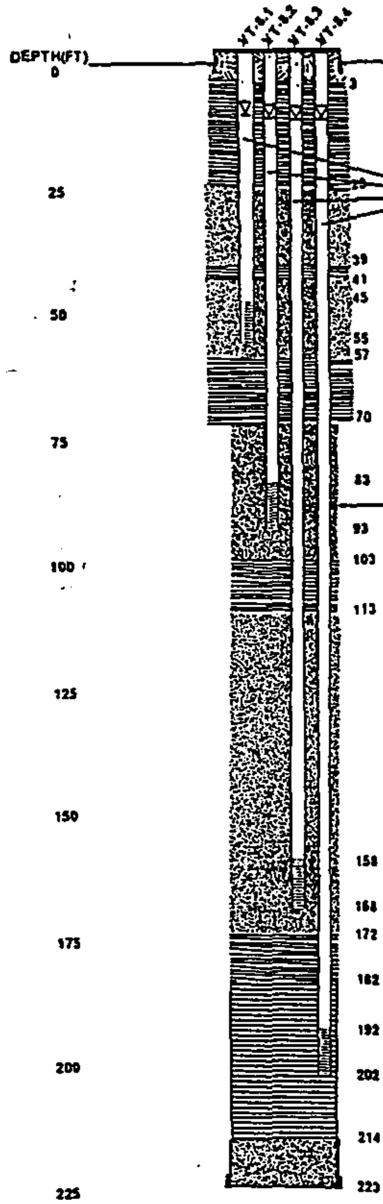
RESOURCE PROTECTION WELL REPORT

START CARD NO. ________

PROJECT NAME: SPWSD Valley Test Wells
WELL IDENTIFICATION NO. VT-8
DRILLING METHOD: Cable Tool
DRILLER: Bob Carper
FIRM: Hokkaido Drilling & Developing Corp
SIGNATURE: ________
CONSULTING FIRM: Carr/Associates, Inc.
REPRESENTATIVE: John Houck

COUNTY: King
LOCATION: SE ¼ NW ¼ Sec 27 Twn 24N R 6E
STREET ADDRESS OF WELL: 930 1st Ave. N.E.
WATER LEVEL ELEVATION: VT-8.1=63.83, VT-8.2=63.49, VT-8.4=63
GROUND SURFACE ELEVATION: 76.80 ft.
INSTALLED: 3-17-90 to 4-2-90
DEVELOPED: ________

AS-BUILT



WELL DATA

stickup = 2.90 ft
CEMENT SEAL
BENTONITE SEAL
PIEZOMETERS ARE 2-INCH FLUSH COUPLED PVC, WITH 0.020 SLOT SCREENS AND TWO CENTRALIZERS PER ASSEMBLY
BENTONITE SEAL
BENTONITE SEAL
12-INCH CASING WAS PLACED TO 70 FEET
PEA GRAVEL BACKFILL
BENTONITE SEAL

STATIC WATER LEVELS 5/1/91
VT-8.1 = 12.97 FT
VT-8.2 = 13.31 FT
VT-8.3 = 13.58 FT
VT-8.4 = 13.47 FT

BENTONITE SEAL
8-INCH TELESCOPIC SCREEN 0.040 SLOT STAINLESS STEEL LEFT IN PLACE
DRIVE SHOE AND CASING REMNANT
TOTAL DEPTH

FORMATION DESCRIPTION

0	
2	Fill: rock, sandy topsoil
	GRAVEL with sand, some cobbles, large, brown
8	
	SILT, sandy, some gravel, yellow-brown
17	SAND, silty, some gravel, light, brown
18	SAND, silty, some gravel, brown, minor Water Bearing (W.B.)
23	
	SAND with gravel, some cobbles, med-coarse, brown, minor W.B.
29	
33	SAND and GRAVEL, with silt, light, brown
	SAND and GRAVEL, with silt, soft, brown, minor W.B.
41	
45	SAND, silty, some gravel, light, open hole drilling, red-brown
	SAND and GRAVEL, red-brown, some grvls ext. oxidized, W.B., SWL = 9.5 ft.
55	
	SILT, sandy, brown
60	
	SAND and GRAVEL, with silt, peat, brown
66	
	SILT, sandy, some gravel, grey
70	
	GRAVEL with sand and silt, brown, minor W.B.
80	
	GRAVEL and SAND, brown, drilling, W.B.
95	
	SAND, medium, clean, heave, brown, W.B.
103	
	SAND, silty, some gravel, & Cobbles, brown
118	SAND with gravel and silt, occ. Cobble,
	SAND, brown, occ. gravel, bail & drive, minor W.B.
130	
	SAND with gravel and silt, brown, drilling
158.5	
	SAND with gravel, some cobbles, light, trace silt, grey-brown, W.B., SWL = 12.3 ft. 3-28-91
172	
178	SAND and GRAVEL, with silt-bound layers, minor W.B., light, hard
	SAND with gravel and silt, minor W.B., hard
193	
	GRAVEL and SAND, grey-brown, W.B.
201	SAND and GRAVEL, with silt, grey, hard
204	
	GRAVEL and SAND, grey-brown, minor W.B., hard
211	GRAVEL and SAND, grey-brown, W.B.
214	
	SILT, sandy, grey, some gravel at 216 ft
223	

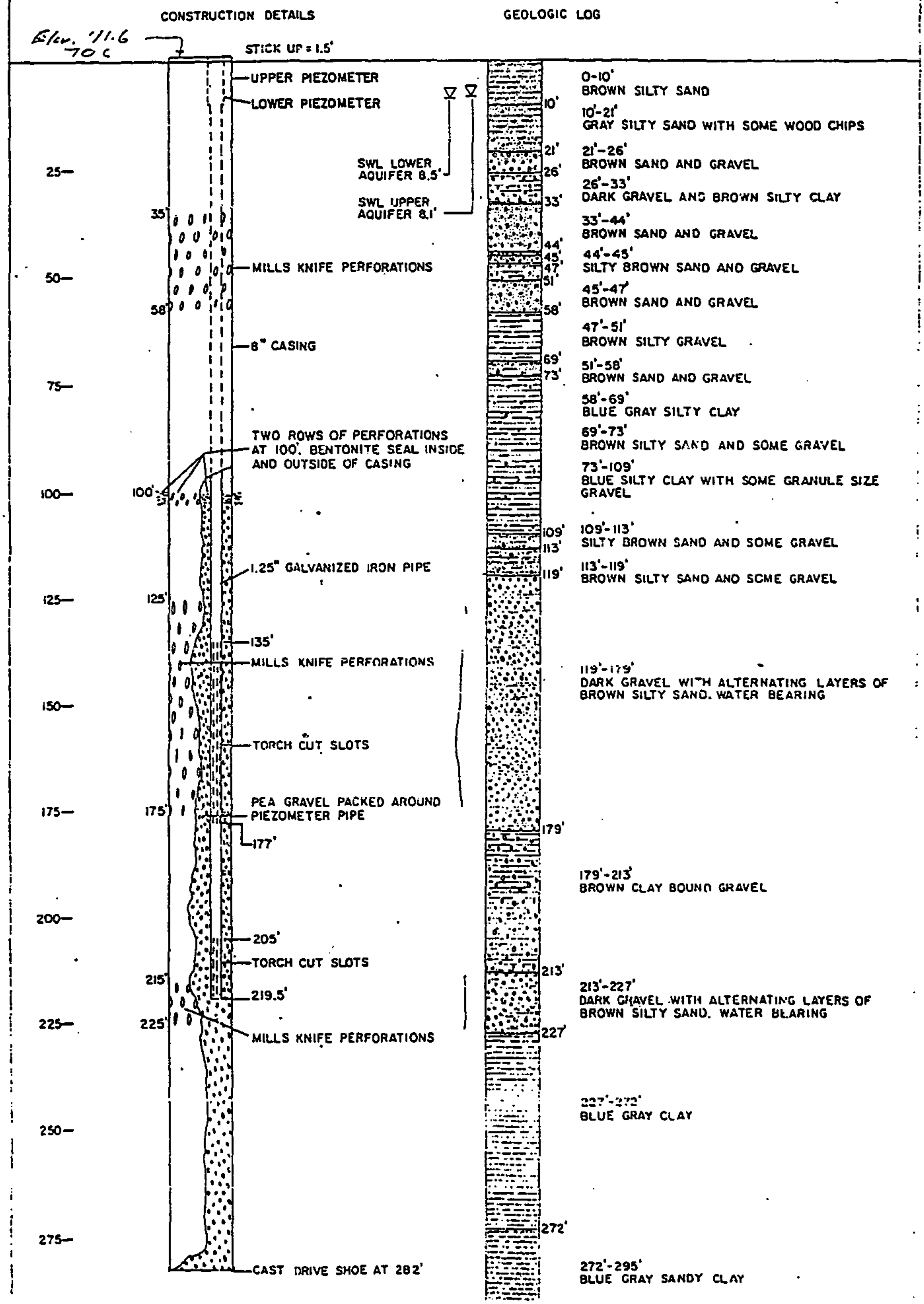
SCALE: 1" = ________ PAGE ________ OF ________

ECY 050-12 (Rev. 11/89)

FIGURE SPT-1

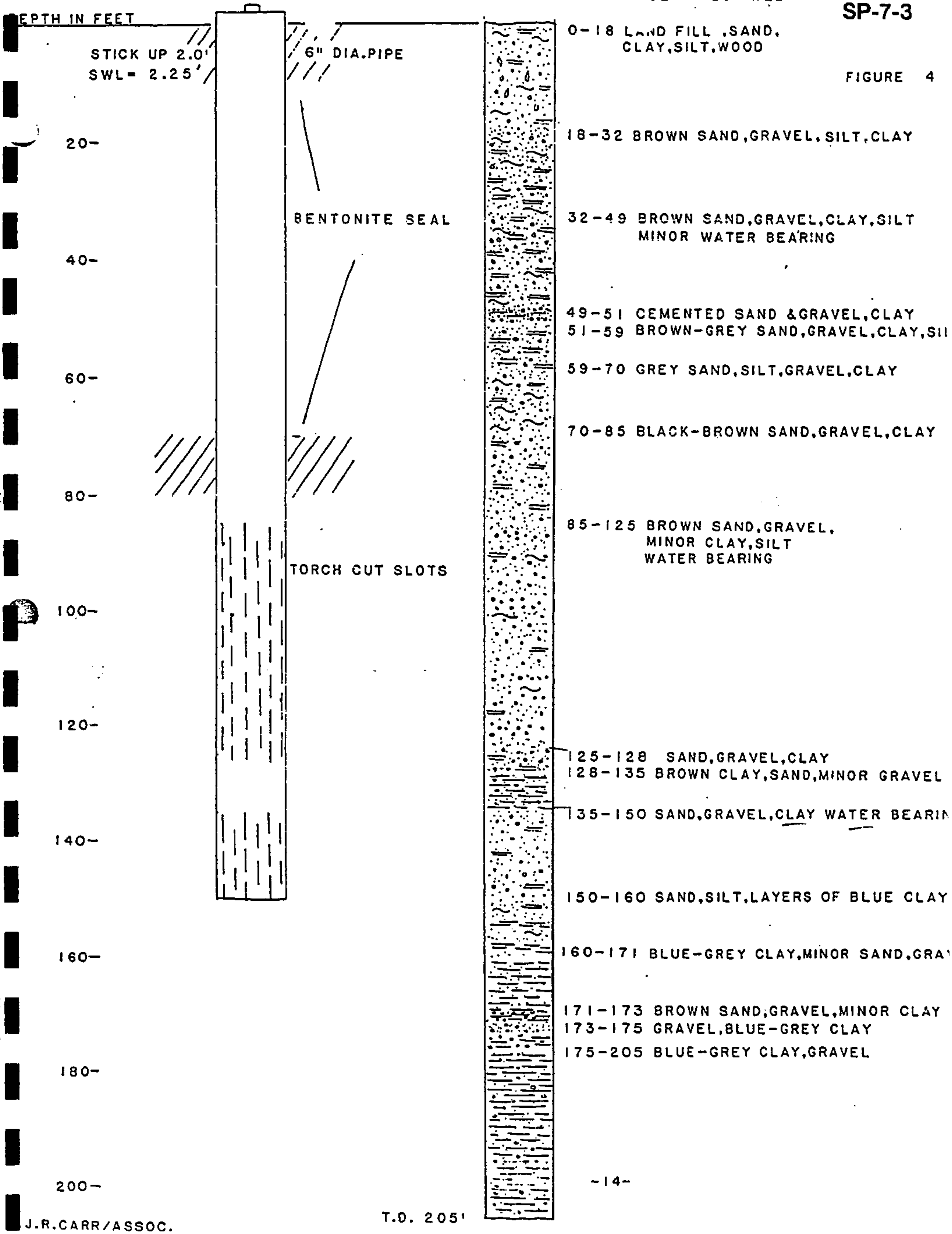
KING COUNTY WATER DISTRICT NO. 82
8 INCH TEST WELL AT SITE 7

Nov 7.1



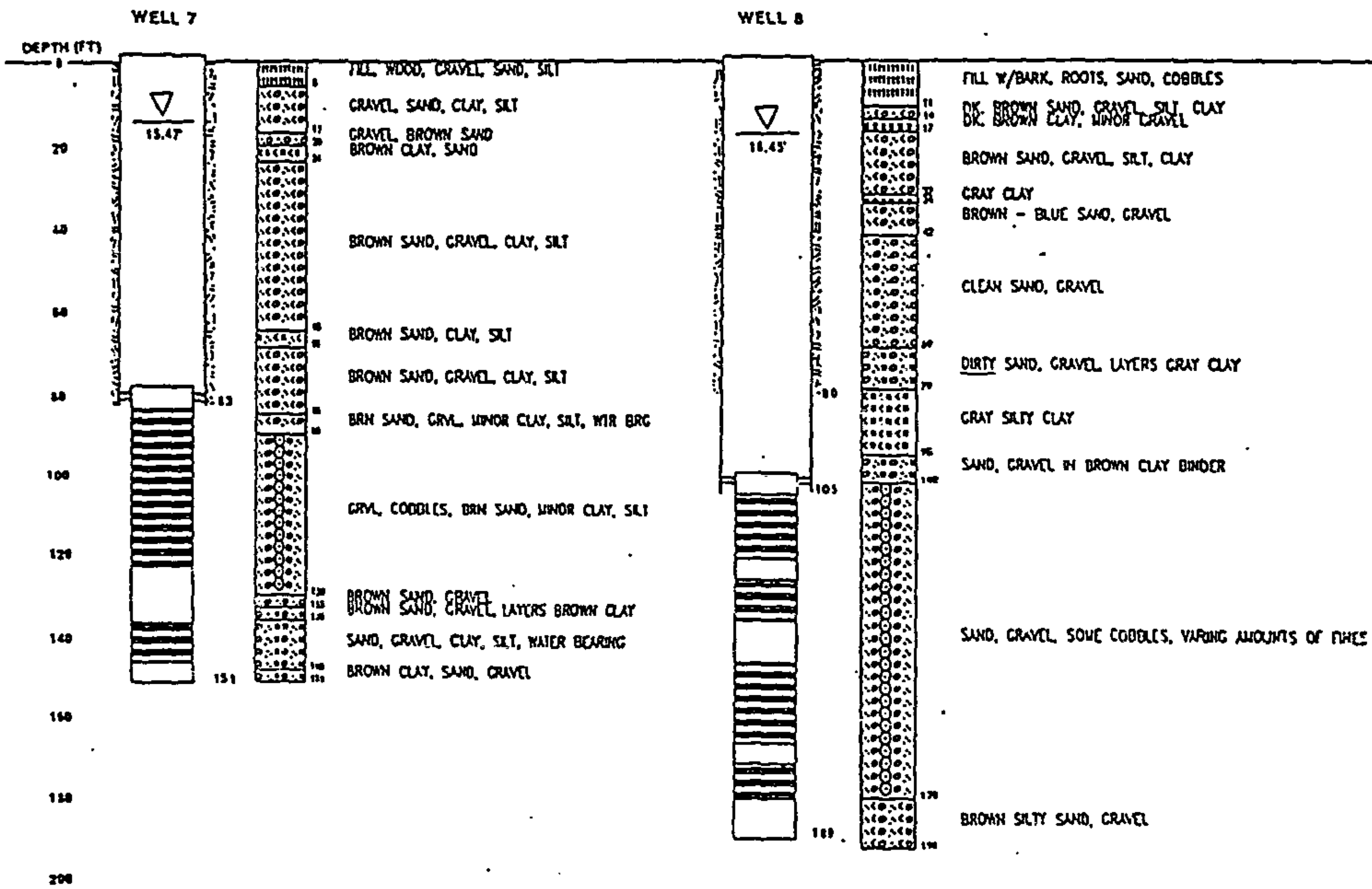
SP-7-3

FIGURE 4

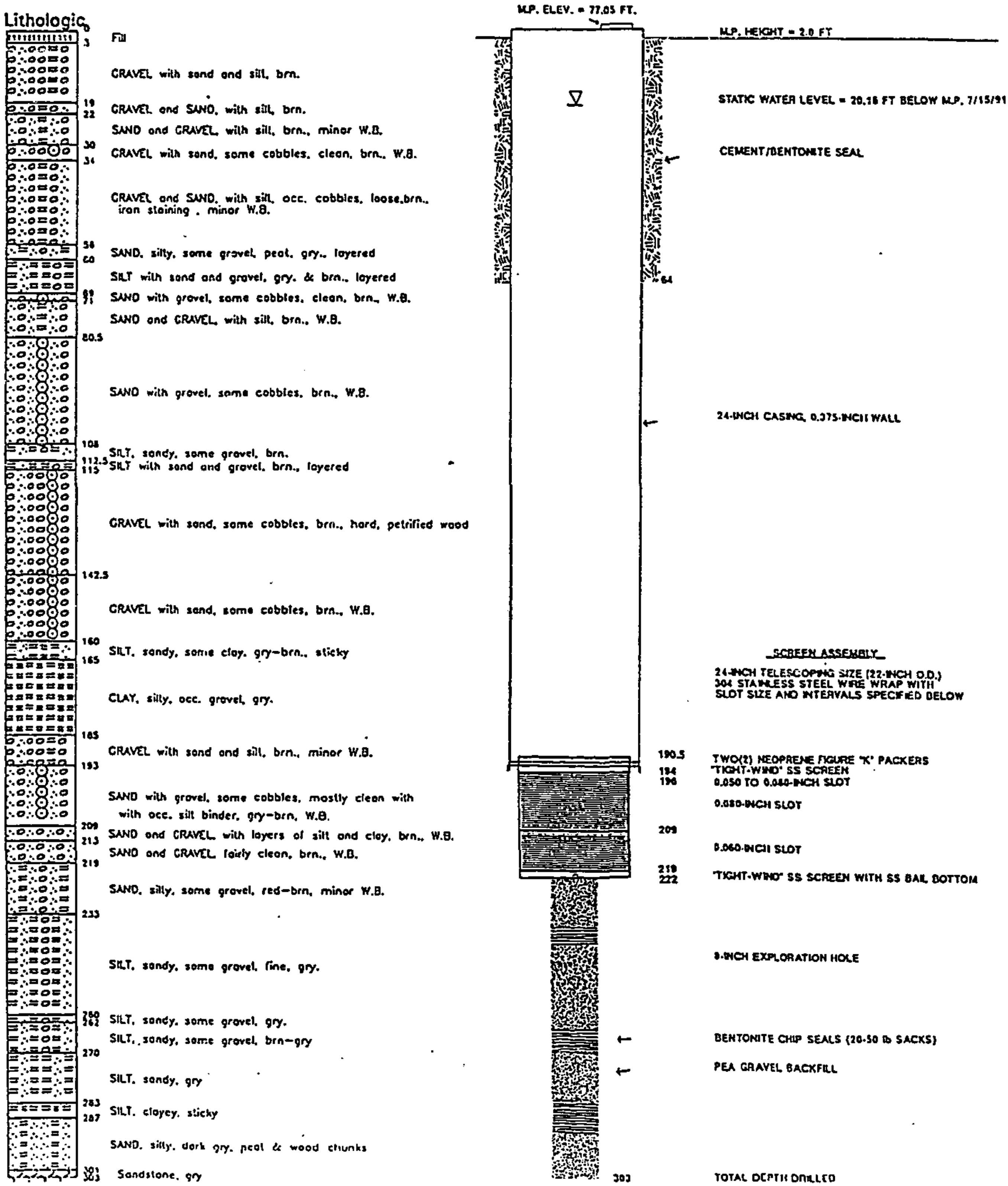


J.R.CARR/ASSOC.

SPW&SD WELLS 7 & 8
PUMPING WELLS



SPWSD
PRODUCTION WELL 9
CONSTRUCTION DIAGRAM

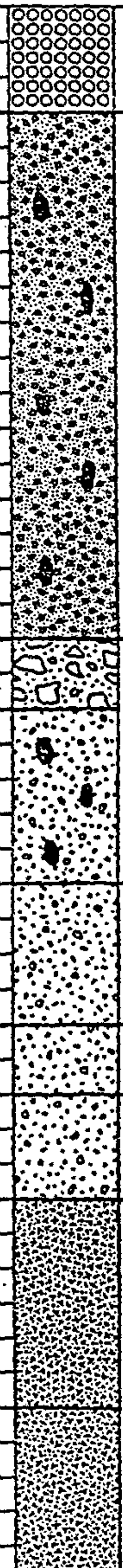


C/A 10358

COMPANY MERIDIAN LAND &MINERAL CO. HOLE NO. MR-24627-4 (83)

PROJECT LAKESIDE DATE Oct. 6, 1983

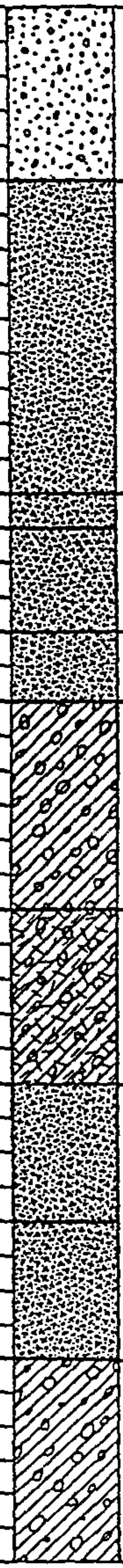
LOCATION Sec. 27, T.24N.,R.6E. (see page 4) ELEV. 483.5' Bar



Depth	Sample No.	DESCRIPTION
0		Damp, red-brown, silty, sandy, gravelly, cobbly (small) soil and overburden about 3' thick.
3		Dry, gray, silty, fine-coarse sandy, cobbly (small), very slightly brown silt coated, fine-very coarse predominantly basaltic gravel with occasional granitic and metamorphic gravel. Good, typical gravel.
18		Gravel becoming more coarse with cobbles to about 8" diameter.
20	S1	40 blows-12". Very poor, unrepresentative, low volume sample due to plugged sample tube. Appears to be typical gravel as above except fo larger very coarse gravel and small cobble fractions. Silt and sand fractions are brown.
25		Good typical gravel which is damp, has a heavier brown silt coating and a smaller coarse gravel fraction.
29		Ditto above except very damp. Note: Driller is no longer losing air indicating tighter material.
31		Ditto above except slightly damp, very brown, very sandy (fine-medium gravel.
34		Slightly damp, brown, gravelly, well sorted, fine-medium, clean sand.
40	S2	35 blows-7". Excellent sample. Ditto well sorted, fine-medium, c[illegible]a sand above except wet and gravelly. Note: Hole making small amount of water.
45		

COMPANY MERIDIAN LAND &MINERAL CO. HOLE NO. MR-24627-4 (83)

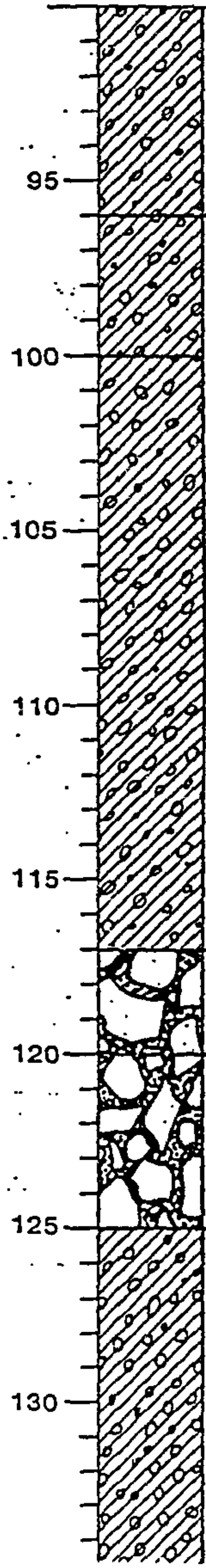
PROJECT LAKESIDE



Depth	Sample No.	DESCRIPTION
		Transition from sand to gravel at 45'. Wet, brown, sandy, heavily silt and sand coated gravel.
50		Transition from gravel to sand at 50'. Wet, brown, gravelly, fairly well sorted, fine-medium coarse, clean sand.
55		
		Note: Driller adding water at 59'
60	S3	7 blows-18". Fair sample. Wet, brown, clean, well sorted, fine-medium grained sand.
		Note: Driller reports drilling rate indicates that material is more firm.
65		Glacial till encountered at 65'
70		
		Wet (driller adding water), blue, very clayey, silty, sandy, gravelly (fine), glacial till.
75		
		Glacial till is getting very sandy. Top of sand lens at 76'.
80	S4	24 blows-12". Excellent sample. Wet, blue-gray, clean, well sorted, fine-medium sand. Note: Hole making about 12-15 gpm water Note: 8' thick sand lens in 76'-84' interval.
		Back in wet (driller adding water), blue, glacial till. Bottom of 8' thick sand lens at 84'.
85		
90		

COMPANY MERIDIAN LAND &MINERAL CO. HOLE NO. MR-24627-4 (83)

PROJECT LAKESIDE



Depth	Sample No.	DESCRIPTION
96		Glacial till is sandy and gravelly. Firmer drilling.
100	S5	30 blows-18". Excellent sample of glacial till. From bottom of sample tube first 4" is tight, damp, blue clay; 4" of wet, sandy (fine-very coarse) gravel; and 10" of damp, blue-gray, clean, well sorted, fine-medium grained sand.
117		Encountered boulder nest at 117'
120		No sample taken because of boulder nest. Note: Alternating layers or lenses of blue clay, sand, and gravel averaging about 1' thick throughout 100'-200' interval. Material probably similar to Sample #5 at 100'.
125		Bottom of boulder nest. Note: Boulder nest in 117'-125' interval.

COMPANY MERIDIAN LAND &MINERAL CO. HOLE NO. MR-24627-4 (83)

PROJECT LAKESIDE

Depth	Sample No.	DESCRIPTION
140	S6	30 blows-12". Poor, unrepresentative sample. Driller has been adding water which has removed all of the clay, silt, and much of the sand from the glacial till. Note: Glacial till is uniform and tight throughout the 120'-140' interval unlike the 100'-120' interval. High gravel content in 100'-140' interval.
		Note: Boulder nest in 142'-146' interval. Boulder diameters to 12'.
145		Glacial till is heavy to blue clay.
150		Glacial till has increased coarse gravel fraction and possibly some cobbles.
155		
160	S7	30 blows-18". Good sample. Damp, blue, clayey (blue), fine-coarse sandy, fine-very coarse gravelly, very tight glacial till. Note: Occasional 6"-12" lenses of blue clay, sand, and gravel throughout 120'-160' interval. Terminated hole at 160'.
165		
170		Bottom of hole 160' Note: Glacial till from 65'-160' at bottom of hole Note: Encountered 12-15 gpm water flow at 80' and minor water volumes in several of the clean sand and/or gravel lenses in the glacial till Hole cased 6". 160' of casing and one 6" drive shoe left in hole. 20 minutes standby time with crew. 7 samples.
175		Location: Midpoint of line between SW¼NE¼ and SE¼NE¼ Sec. 27, T.24N., R.6E.

MERIDIAN LAND &MINERAL CO.

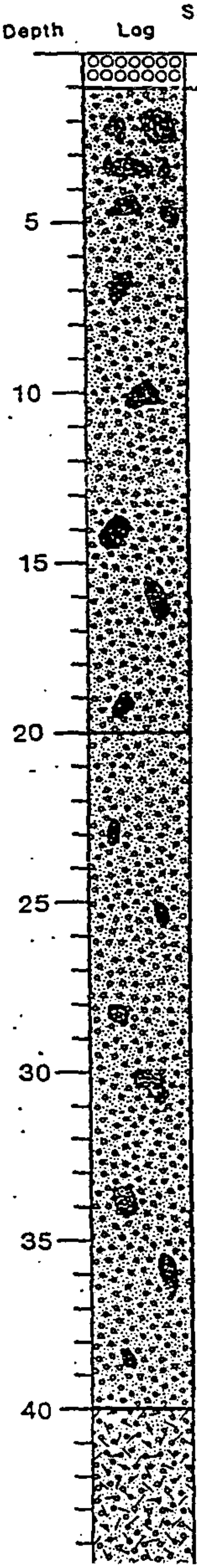
JECT LAKESIDE

LOCATION Sec. 27, T.24N., R.6E. (see page 4)

HOLE NO. MR-24627-9 (83)

DATE Oct. 17, 1983

ELEV. 594' Bar



Depth	Sample No.	DESCRIPTION
0		Damp, red-brown, organic, silty, sandy, gravelly, cobbly, bouldery soil and overburden about 1' thick.
		Damp, gray, silty, fine-coarse sandy, cobbly, bouldery (small), heavily tan-brown silt and sand coated, fine-very coarse, predominantly basaltic gravel with occasional granitic and metamorphic gravel and very occasional small chips of milky white quartz. Good, typical gravel with more than usual amount of oversize material.
20	S1	40 blows-12". Fair sample. Ditto description above. Note: Numerous cobbles and boulders in 0'-5' interval and occasional cobbles and boulders in 5'-20' interval.
40	S2	40 blows-12". Fair sample. Ditto description of Sample #1 except almost wet, brown-gray, and very slightly clayey.

COMPANY MERIDIAN LAND &MINERAL CO.　　HOLE NO. [illegible]

PROJECT LAKESIDE

Depth	Sample No.	DESCRIPTION
50		
55		Encountered one small cobble.
60	S3	40 blows-16". Excellent sample. Wet, brownish greenish gray, gravelly (fine-very coarse), well sorted, clean, fine-medium sand. Note: Except for one cobble at 55' no other cobbles or boulders were encountered in the 40'-60' interval. Note: Sand lens in 60'-62' interval. Wet, slightly clayey, silty (brown) gravel with scattered cobbles. Note: Loose hole - driller losing his air.
65		
70		
75		
80	S4	40 blows-14". Good sample. Wet, green-gray (almost olive drab color) slightly clayey, silty, sandy (fine-coarse), cobbly, fine-very coars predominantly basaltic gravel with occasional granitic and metamorphic gravel and very occasional small pebbles and chips of milky white quartz. Gravel is heavily coated with silt and sand. Note: Driller reports that the hole is reasonably tight and he has been able to hold his air most of the time within the 60'-80' interval. He also reports that the gravel is very coarse and that he encountered occasional, scattered cobbles in the 60'-80' interval.
85		
90		

COMPANY MERIDIAN LAND &MINERAL CO. HOLE NO. MR-24627-9 (83)

PROJECT LAKESIDE

Depth	Log	Sample No.	DESCRIPTION
95			Gravel has changed color to brown and it is slightly more clayey and sandy.
			Wet, brown, slightly silty, gravelly (fine), fine-coarse, fairly clean sand.
100		S5	40 blows-10". Excellent sample. Wet, brown, slightly clayey, silty, slightly gravelly, fine-coarse sand. Note: Driller was not able to hold his air but otherwise experienced good drilling and there was no oversized material encountered.
105			Sand is very wet and more clayey.
110			Sand changed color from brown to gray. Note: Driller started adding water.
115			Soupy blue clay that is slightly sandy and gravelly. This is top of glacial till at 115'. Hole is tighter.
120		S6	18 blows-18". Very good sample. Damp, silty, sandy, very tight blue clay (glacial till). Top of sample is wet from water being added by driller.
			Glacial till is sandy and gravelly.
125			Bottom of glacial till at 125'. Wet, brown, clean coarse sand and typical gravel. Note: Encountered water at 125'. Hole making about 25 gpm. Note: Glacial till in 115'-125' interval.
130			Gravel fraction becoming more coarse. Small piece of carbonaceous material recovered. This may be Salmon Springs Formation.
			Color changing to brownish gray and gravel is more silty and probab[illegible]

COMPANY MERIDIAN LAND &MINERAL CO. HOLE NO. MR-24627-9 (83)

PROJECT LAKESIDE

Depth	Log	Sample No.	DESCRIPTION
			Hole making about 60 gpm water.
			Color change to gray-blue.
140			30 blows-14". Extremely poor, minimal sample was supplemented with material brought up in the air return. Wet, sandy (medium-coarse) fine-very coarse, clean gravel. Hole still making about 60 gpm brown colored water. Hole terminated at 140'.
145			Bottom of hole 140'. Encountered water at 125'. Hole making about 25 gpm initially and increasing with depth to about 60 gpm. Static water level - 98'8" Note: Sand lens in 60'-62' interval. Note: Clayey sand lens in 97'-115' interval. Note: Glacial till in 115'-125' interval.
150			Hole cased 6". 140' of casing and one 6" drive shoe left in hole. 2 hours 50 minutes standby time with crew. 7 samples
155			Location: 675' west of gas line R/W on south side of telephone cable R/W near the 1/16th corner on the east line of the NE¼ Sec. 27, T.24N., R.6E.
160			
165			
170			
175			

COMPANY MERIDIAN LAND &MINERAL CO.

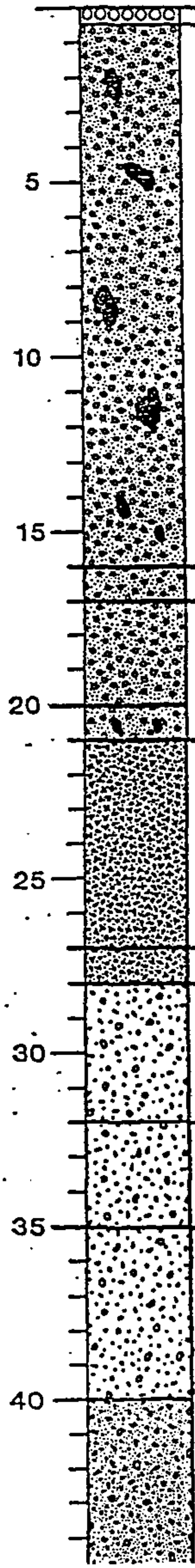
HOLE NO. MR-24627-10 (83)

PROJECT LAKESIDE

DATE Oct. 18, 1983

LOCATION Sec. 27, T.24N., R.6E. (see page 3)

ELEV. 462' Bar

Depth / Log	Sample No.	DESCRIPTION
		Damp, red-brown, organic, silty, sandy, gravelly, cobbly, bouldery soil and overburden about 6" thick. Abundant very coarse gravel, cobbles, and boulders observed on the surface. Most soil and overbur-den removed during site preparation.
		Damp, gray, silty, fine-coarse sandy, cobbly, brown silt coated, fine very coarse predominantly basaltic gravel with occasional granitic and metamorphic gravel and very occasional small chips of milky white quartz.
		Gravel is very damp and heavily brown silt and sand coated.
		Damp, brown and very sandy gravel.
	S1	25 blows-18". Good sample. Damp, brown, silty, very sandy (fine-coarse), cobbly (small), heavily silt and sand coated, fine-very coarse gravel.
		Note: Most of the cobbles and boulders are in the 0'-10' interval. Coarse gravel in the 10'-20' interval. Good, typical gravel except quite sandy.
		Damp, brown, slightly silty and gravelly, well sorted, fairly clean, fine-medium sand.
		Ditto above description except almost no silt and gravel fractions in the brown sand.
		Very damp, brown, heavily silt and sand coated gravel.
		Ditto above except brown clay balls present.
		No more clay balls.
	S2	40 blows-15". Excellent sample. Damp, brown, silty, very sandy, bro silt and sand coated, fine-coarse-very coarse typical gravel.
		Note: Alternatively very sandy gravel or gravelly sand in 17'-40' interval.

COMPANY MERIDIAN LAND &MINERAL CO. HOLE NO. MR-24627-10 (83)

PROJECT LAKESIDE

Depth	Log	Sample No.	DESCRIPTION
			Damp, brown, well sorted, clean, fine-medium sand
50			
55			Typical gravel ditto description of Sample #2.
			Damp, brown, well sorted, clean, fine-medium sand
60		S3	30 blows-15". Excellent sample. Damp, brown, slightly silty, slightly gravelly (brown silt and sand coated), well sorted, clean fine sand. <u>Note</u>: Alternately very sandy gravel or gravelly sand in 40'-60' interval.
65			
70			
			Ditto above but wet and gray-brown.
75			
			Wet, greenish gray (olive drab), very clayey, gravelly <u>glacial till</u>. This is top of till.
80		S4	40 blows-9". Good sample. Wet, greenish gray (olive drab), very clayey, sandy, gravelly, very tight <u>glacial till</u>. <u>Note</u>: Color similar to that observed in hole number MR-24627-9 (83) but different than the usual blue of the typical glacial till in this area.
85			
			Driller started adding water. Color has changed to tan.

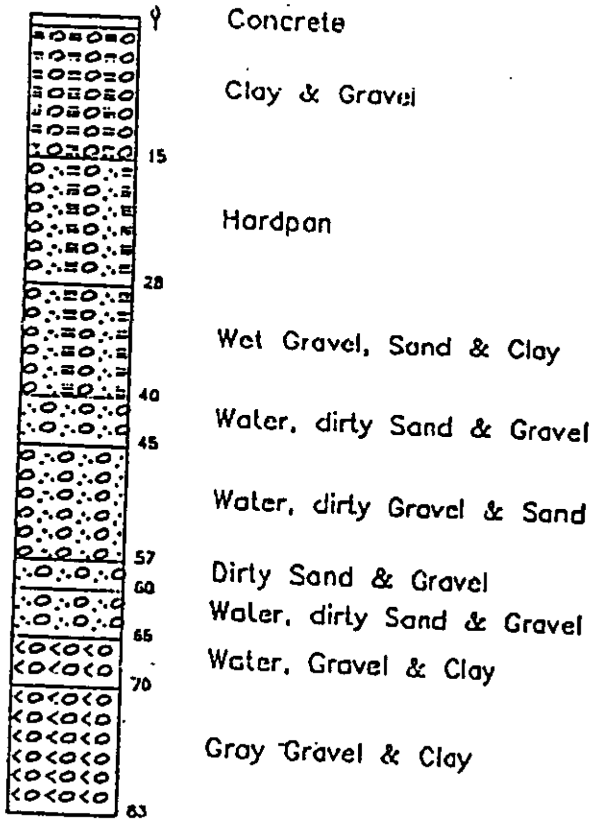
COMPANY MERIDIAN LAND &MINERAL CO. HOLE NO. MR-24627-10 (83)

PROJECT LAKESIDE

Depth	Log	Sample No.	DESCRIPTION
95			
100		S5	40 blows-10". Poor sample recovery. Sample not representative because driller has been adding water and the clay, silt, and sand fractions have been washed out. Sample consists of a small quantity of wet, clean, fine-medium-coarse-very coarse gravel. Probably still in glacial till. Hole terminated at 100'. Note: Driller reports that hole is very tight in 80'-100' interval. He encountered continuous 3"-8" diameter oversize material in the 80'-100' intervdal and drilling and driving casing was difficult.
105			
110			Bottom of hole 100'. Note: Sand lens in 21'-28' interval. Note: Clayey gravel lens in 32'-35' interval. Note: Sand lens in 49'-55' interval. Note: Glacial till in 77'-100' interval. This till is greenish gray (olive drab) and tan in color and therefore not typical. Hole cased 6". 100' of casing and one 6" drive shoe left in hole. 20 minutes sandby time with crew. 5 samples
115			
120			Location: Near center of Sec. 27 at SW corner of SW¼NE¼ Sec. 27, T.24N., R.6E. on Lakeside leasehold.
125			
130			

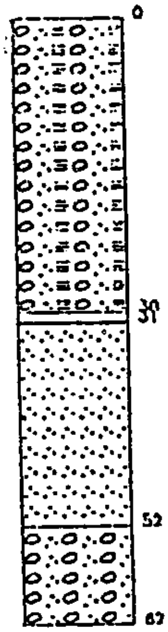
Lakeside Jan. '90 Well

elev. approx 75 ft.



Name of Well	Lakeside NEW Wash Plant Well
Well No.	
Date Drilled	1/1990 (LS. is waiting for pumping test)
Diameter	12-inch
Total Depth Drilled	83 ft.
Completion Depth	70 ft.
Completion	Perforated 40 - 70 ft.
Discharge	150 gpm air lifted
Drawdown	18 ft. +-
Static Water Level	20 ft.

Lakeside's 1953 Well



Name of Well	Lakeside Backup Batch Plant Well
Well No.	Lakeside Well 3
Date Drilled	1953
Diameter	12-inch
Total Depth Drilled	62 ft.
Completion Depth	62 ft.
Completion	Screen 52-62 ft.
Discharge	250 gpm
Drawdown	
Static Water Level	10.28 ft.

GERAGHTY & MILLER, INC. LOG OF BORINGS

PROJECT NO WA126.2C

PROJECT NAME ARCO SERVICE STATION #4466

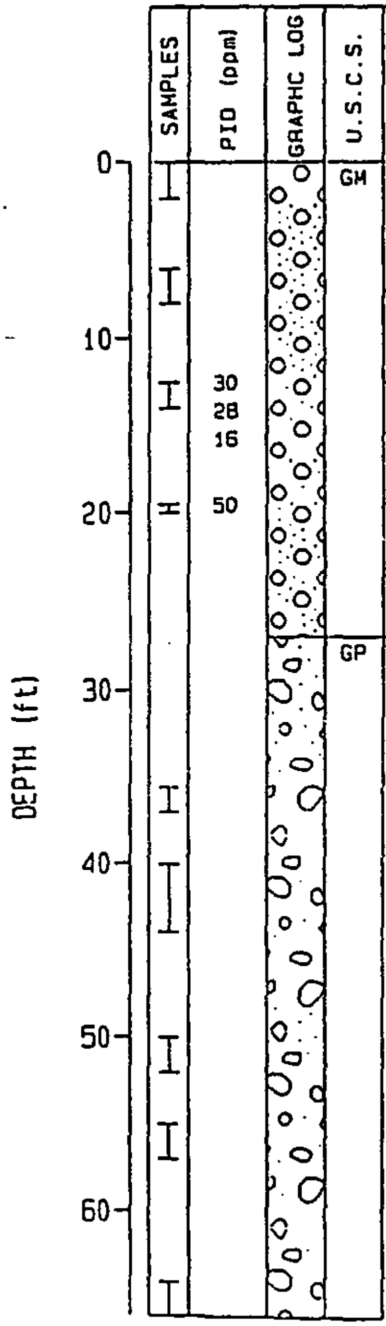
LOCATION ISSAQUAH, WASHINGTON

LOG OF MW-6, MW-7, MW-8

DATE DRILLED: 02-OCT-90

METHOD: CABLE TOOL

LOGGED BY: C. WAGONER



DESCRIPTION OF MATERIAL

SILTY GRAVEL with some clay, subangular gravel to 4 in. in diameter, dark yellow-brown.

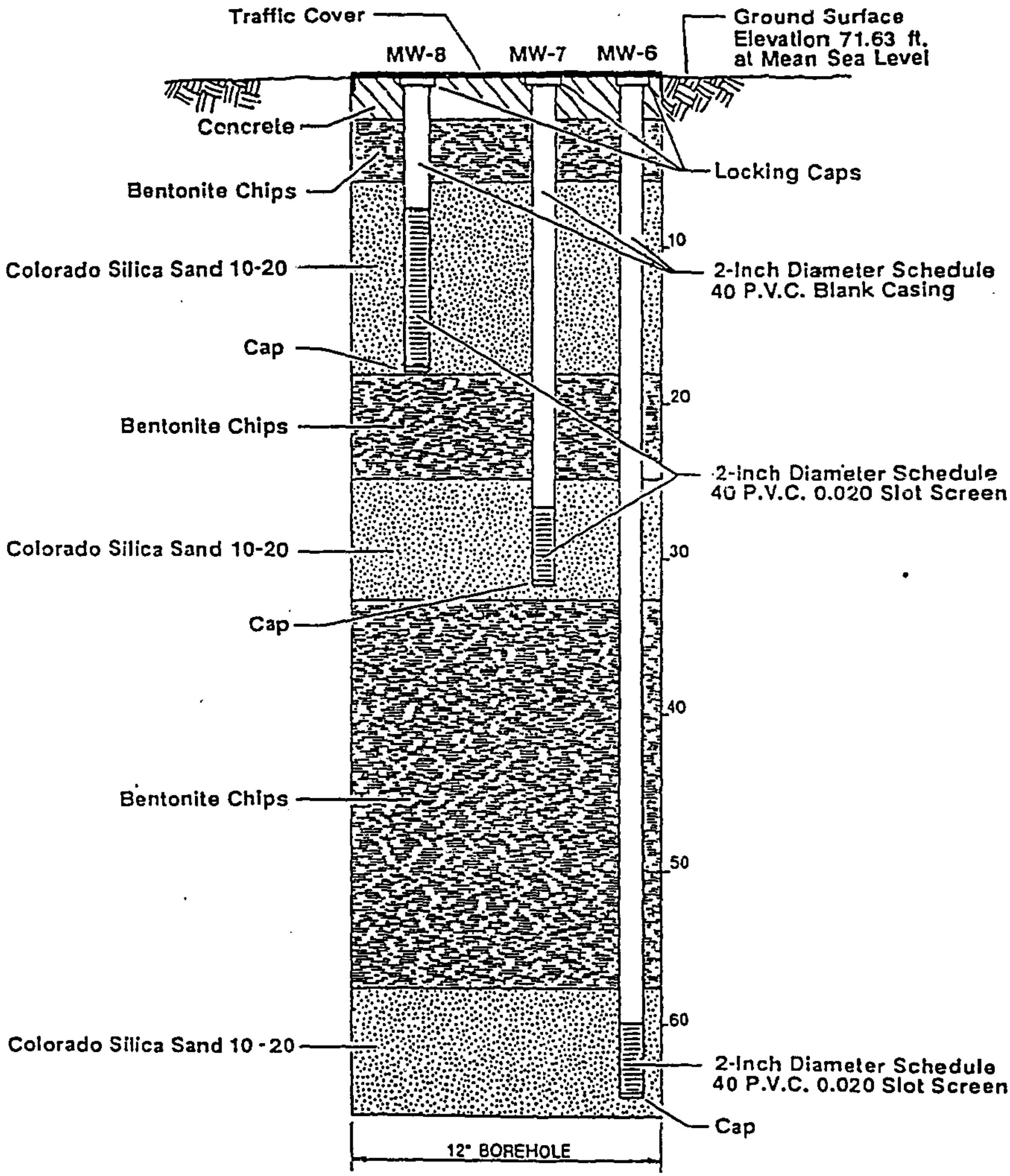
Same as above, mottled yellow-brown and yellow-orange.

Note: High blow count due to gravel. Water level recorded in MW-6 on 11/5/90.

Same as above, little gravel to 1.5 in. diameter, little sand, dark yellow-orange nodules.

Same as above, cobbles to 6 in. diameter, yellow-brown.

Poorly graded SANDY GRAVEL, subrounded to rounded cobbles to 8 in. diameter, coarse to very coarse subangular sand, trace to little silt, grey-brown.



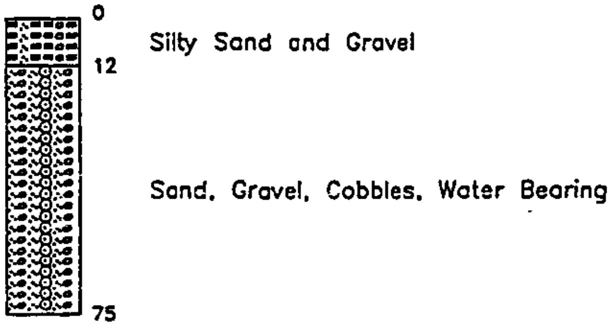
ARCO Service Station #4466

PROJECT NO. WA466.2C
GERAGHTY & MILLER, INC.
Environmental Services

800 FRONT STREET NORTH
ISSAQUAH, WASHINGTON

DATE: FEBRUARY 199

Arco-RW-2

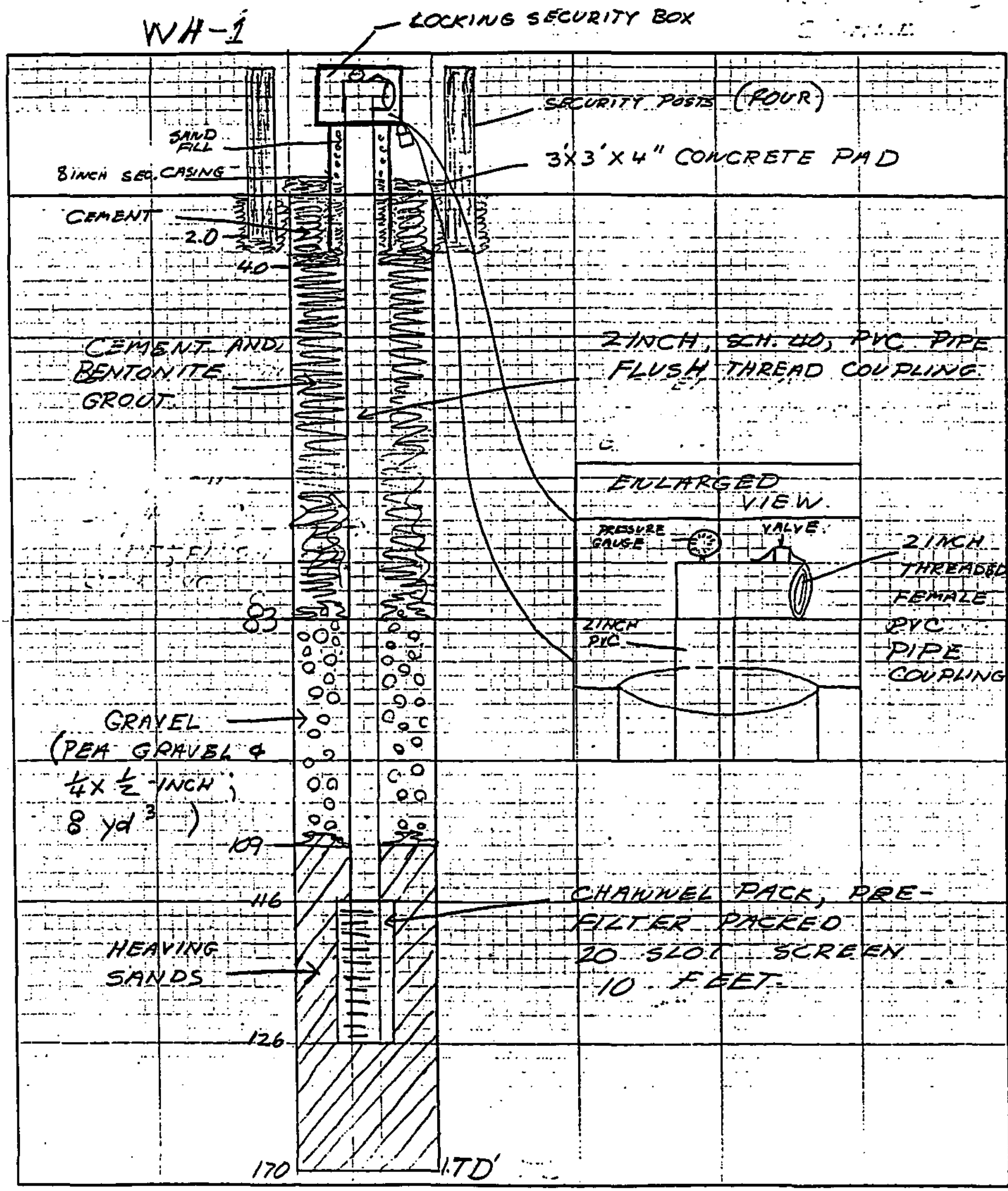

0
12
75
Silty Sand and Gravel
Sand, Gravel, Cobbles, Water Bearing

GOLDER/SPWSD/WELL HEAD PROT.

CARR/ASSOCIATES INC.
P.O. BOX 1158
GIG HARBOR, WA 98335
(206) 851-5562

JOB 10330 (CONSTRUCTION DIAGRAM)
SHEET NO. 1 OF 1
CALCULATED BY KC DATE 9/24/92
CHECKED BY ______ DATE ______
SCALE NOT TO SCALE

WH-1



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GIG HARBOR, WA 98335
(206) 851-5562

JOB: GOLDER/SPWSD/ WELLHEAD PROTECTION 10330 (DRILLING) WH-1
SHEET NO. 1 OF 5
CALCULATED BY KC DATE 9/24/92
CHECKED BY ___ DATE ___
SCALE GEOLOGIC LOG

WH-1

Depth	Description	USCS CLASS.
0	BRN., SAND WITH GRAVEL, WELL GRADED, DAMP	SW
5	TAN, SAND WITH SILT AND GRAVEL, WELL GRADED, COBBLES, DRY, TOUGH DRILLING	SW-SM
10	TAN, SAND WITH SILT AND GRAVEL, WELL GRADED, COBBLES, DRY, TOUGH DRILLING.	SW-SM
15	BRN, SAND WITH SILT AND GRAVEL, WELL GRADED, DAMP.	SW-SM
20	TAN-BRN., SAND WITH GRAVEL, WELL GRADED, MOIST.	SW
25	BRN.-GRAY, SAND WITH GRAVEL, WELL GRADED, MOIST.	SW
	▽ ESTIMATED WATER TABLE WATER FIRST ENCOUNTERED	
30	BRN.-GRAY, GRAVEL WITH SAND, WELL GRADED, WET	GW
35	GRAY, SAND WITH GRAVEL, WELL GRADED, WET	SW
40		

GOLDER / SPWSD / WELL HEAD PROT.

CARR/ASSOCIATES INC.
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JOB 10330 (DRILLING) WH-1
SHEET NO. 2 OF 5
CALCULATED BY KC DATE 9/24/92
CHECKED BY ______ DATE ______
SCALE GEOLOGIC LOG

Depth	Description	USCS CLASS.
40	GRAY, SILTY SANDS WITH GRAVEL, WET	SM
45		
	GRAY, SANDY SILT WITH GRAVEL.	ML
50		
55	GRAY SILT	ML
60		
	〃 〃	
65		
70	GRAY SILT	ML
75	〃 〃	
80		

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JOB 10330 (DRILLING) WH1

SHEET NO. 3 OF 5

CALCULATED BY KC DATE 9/24/92

CHECKED BY ________ DATE ________

SCALE GEOLOGIC LOG

Depth	Description	USCS CLASS
80–85	GRAY, GRAVEL WITH SILT AND SAND, WELL GRADED	GW-GM
85–90	GRAY, SILTY SAND WITH GRAVEL	SM
90–95	GRAY, SANDY SILT WITH GRAVEL	ML
95–100	" "	
100–105	GRAY, FINE SAND, DENSE - COMPACT, POORLY GRADED.	SW
105–110	" "	
110–115		
115–120	GRAY, FINE SAND - MED. SAND, DENSE - COMPACT, POORLY GRADED.	SW

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JOB 10330 (DRILLING) WH-1
SHEET NO. 4 OF 5
CALCULATED BY KC DATE 9/24/92
CHECKED BY ______ DATE ______
SCALE GEOLOGIC LOG.

Depth	Description	USCS CLASS
120		
125	GRAY, WELL GRADED SAND WITH GRAVEL	SW
	GRAY, SAND WITH GRAVEL, WELL GRADED, FINE - COARSE SAND.	SW
130		
135		
140	GRAY, SAND WITH GRAVEL, WELL GRADED.	SW
145		
150	GRAY, FINE SAND, ~~POORLY GRADED, WITH~~ SOME PIECES OF WOOD AND CONSOLIDATED PEAT.	SW
155		
160	GRAY, SAND (FINE-COARSE) WITH. GRAVEL, WELL GRADED.	SW.

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JOB 10330 (DRILLING) WH-1
SHEET NO. 5 OF 5
CALCULATED BY KC DATE 9/24/92
CHECKED BY DATE
SCALE GEOLOGIC LOG

Depth	Description	USCS CLASS
160		
165	GRAY, SAND WITH GRAVEL, WELL GRADED, PIECES OF CONSOLIDATED PEAT	SW
170	BED ROCK, CONGLOMERATE, SANDSTONE MATRIX, WELL CEMENTED, UNABLE TO DRIVE CASING	
	TD ≈ 170.5	

GOLDER / SPWSD / WELL HEAD PROT.

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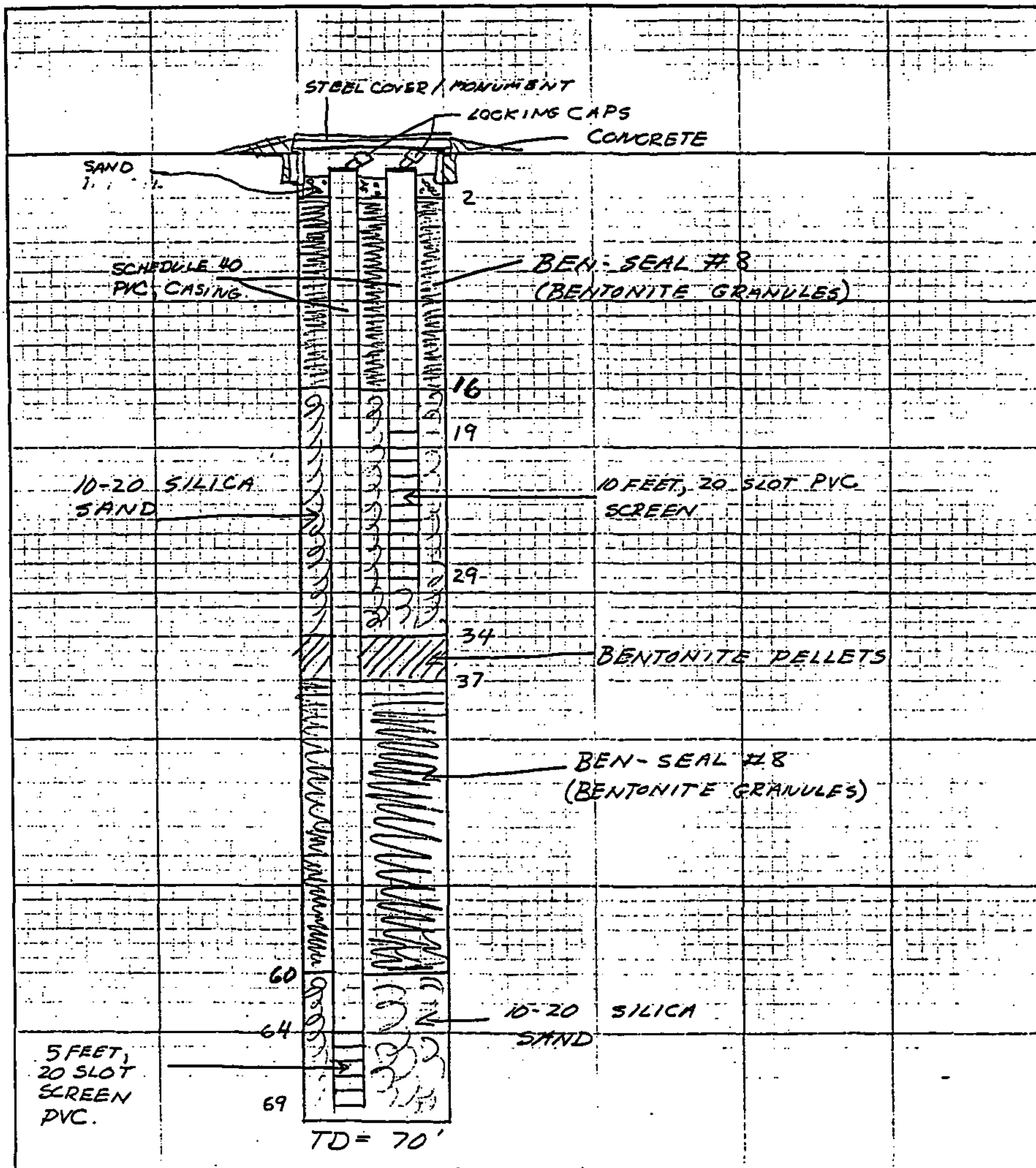
JOB 10330 (CONST. DIAGRAMS)
SHEET NO. 1 OF 1
CALCULATED BY KC DATE 9/24/92
CHECKED BY ______ DATE ______
SCALE NOT TO SCALE

WH-2



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(206) 851-5562

JOB 10330 (DRILLING) WH-2
SHEET NO. 1 OF 2
CALCULATED BY KC DATE 9/24/92
CHECKED BY ______ DATE ______
SCALE GEOLOGIC LOG

WH-2

Depth	Description	USCS CLASS
0	BRN, SILTY SAND WITH MINOR GRAVELS, WELL GRADED, DAMP. (FILL?)	SM
5		
10	BRN, MED. SAND WITH GRAVEL, POORLY GRADED, ~~SOME WOOD CHIPS AND BARK~~, DAMP, (FILL?) WATER FIRST ENCOUNTERED @ 13.5±	SM
15	BRN, SILTY GRAVEL WITH SAND, WET.	GM
20	BRN, MED.-SAND WITH GRAVEL, POORLY GRADED, WET.	SM
25		
30	BRN-GRAY, MED.-SAND WITH GRAVEL, MODERATELY GRADED, WET.	SM
35	"	"
40		

GOLDER/SPWSD/WELLHEAD PROT.

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JOB 10330 (DRILLING) WH-2
SHEET NO. 2 OF 2
CALCULATED BY KC DATE 9/24/92
CHECKED BY ____ DATE ____
SCALE GEOLOGIC LOG

WH-2

Depth	Description	USCS CLASS.
40	SOFT SAND LAYER, ACCORDING TO DRILLER	SW
45	BRN., WELL GRADED SAND WITH GRAVEL	SW
50	BRN, WELL GRADED GRAVEL WITH MED. TO COARSE SAND.	GW
55	BRN, POORLY GRADED FINE SAND	SW
60	~~BRN-GRAY, WELL GRADED~~ GRAVEL AND SAND WITH SOME GRAY CLAY LAYERS	GP-GC
	TAN, SILTY FINE SAND	SM
70		

GOLDER/SPWSD/WELL HEAD PROT.

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JOB 10330 (CONST. DIAGRAMS)

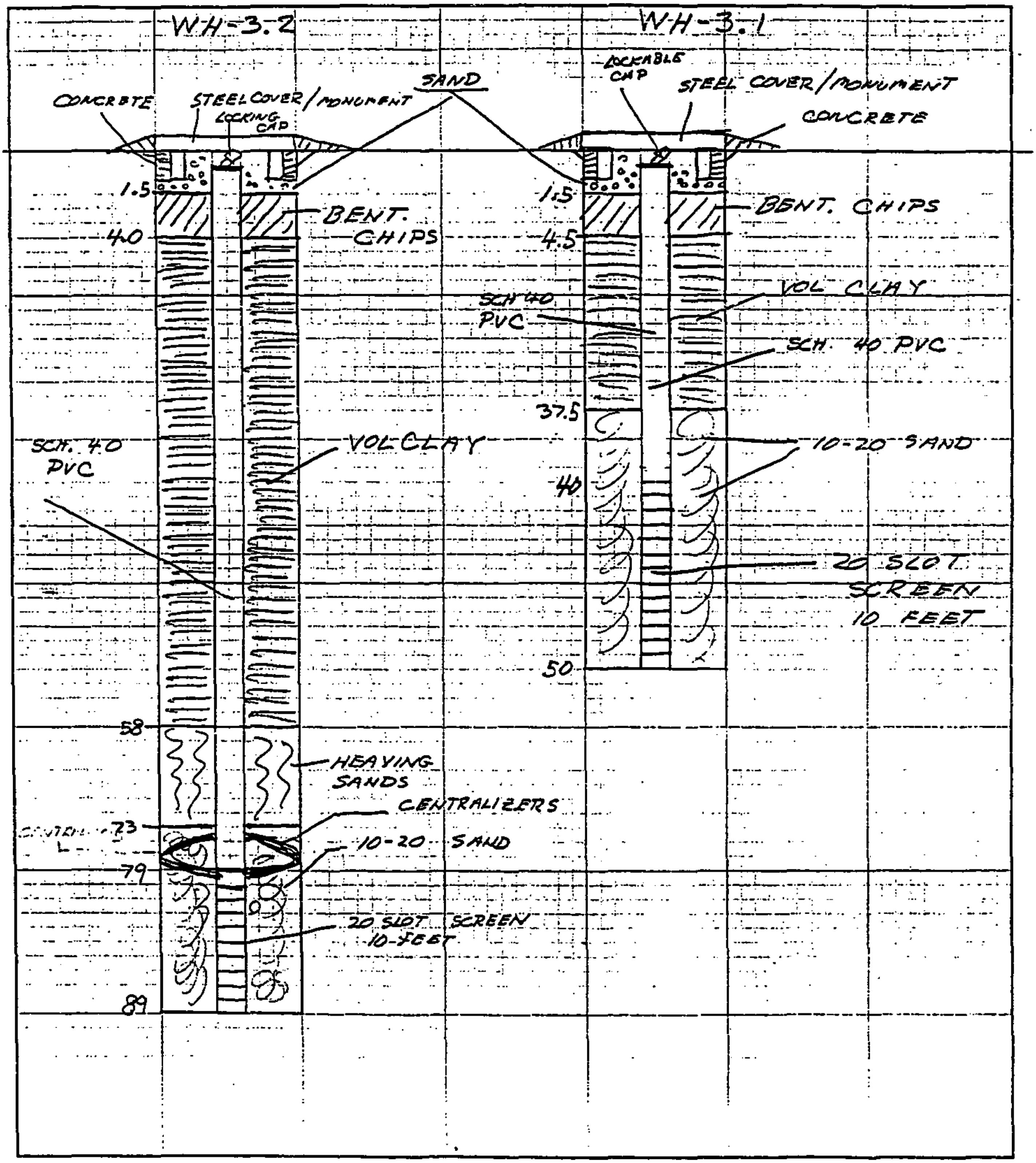
SHEET NO. 1 OF 1

CALCULATED BY KC DATE 9/23/92

CHECKED BY ______ DATE ______

SCALE WH-3

NOT TO SCALE



GOLDER/SPWSD/WELLHEAD PROT.

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GIG HARBOR, WA 98335
(206) 851-5562

JOB 10330 (DRILLING) WH3.1-3.2

CALCULATED BY KC DATE 9/23/92

CHECKED BY ______ DATE ______

~~SCALE~~ GEOLOGIC LOGS

WH-3.1 & WH-3.2

Depth	Description	USCS CLASS
0		
5	BROWN, SAND WITH GRAVEL, WELL GRADED, DAMP (FILL?)	SW
10	GRAY, SAND (Fine-Med) WITH GRAVEL, WELL GRADED, DAMP	SW
15	BRN-GRAY, SILTY SAND WITH GRAVEL, WELL GRADED, WET	SM
20		
25	DRK. GRAY, ORGANIC SILT WITH PLANT AND WOOD DEBRIS, MOIST, SOFT DRILLING	ML-OH
30	DRK. GRAY, SILTY FINE SAND WITH GRAVEL, WET	SM
35		
40		

CARR/ASSOCIATES INC.
P.O. BOX 1158
GIG HARBOR, WA 98335
(206) 851-5562

JOB 10330 (DRILLING) WH-3.1-3.2
SHEET NO. 2 OF 3
CALCULATED BY KC DATE 9/23/92
CHECKED BY ______ DATE ______
~~SCALE~~ GEOLOGIC LOG

WH-3.1 & WH-3.2

Depth	Description	USCS CLASS.
40	GRAY-TAN, WELL GRADED SAND WITH GRAVEL	SW
45	DRK GRAY, SILTY FINE SAND	SM
50		
55		
	SPLIT SPOON SAMPLE; HYDRO-PUNCH (NO WATER RECOVERY)	
60	DRK GRAY, SILTY FINE SAND	SM
65		
70	BRN, SILTY FINE SAND WITH GRAVEL	SM
75	〃 〃	
80		

GOLDER/SPWSD/WELL HEAD F.

CARR/ASSOCIATES INC.

P.O. BOX 1158
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(206) 851-5562

JOB 10330 (DRILLING) WH-3.1 - 3.2

SHEET NO. 3 OF 3

CALCULATED BY KC DATE 9/23/92

CHECKED BY ______ DATE ______

SCALE ______

WH-3.1 & WH-3.2

Depth	Description	USCS CLASS
80	BROWN, FINE SAND WITH SOME GRAVEL, WELL GRADED	SW
85		
	// //	
90		
95		
	- - - - - - TD - - - - - - -	

Appendix B

APPENDIX B

WATER-LEVEL HYDROGRAPHS

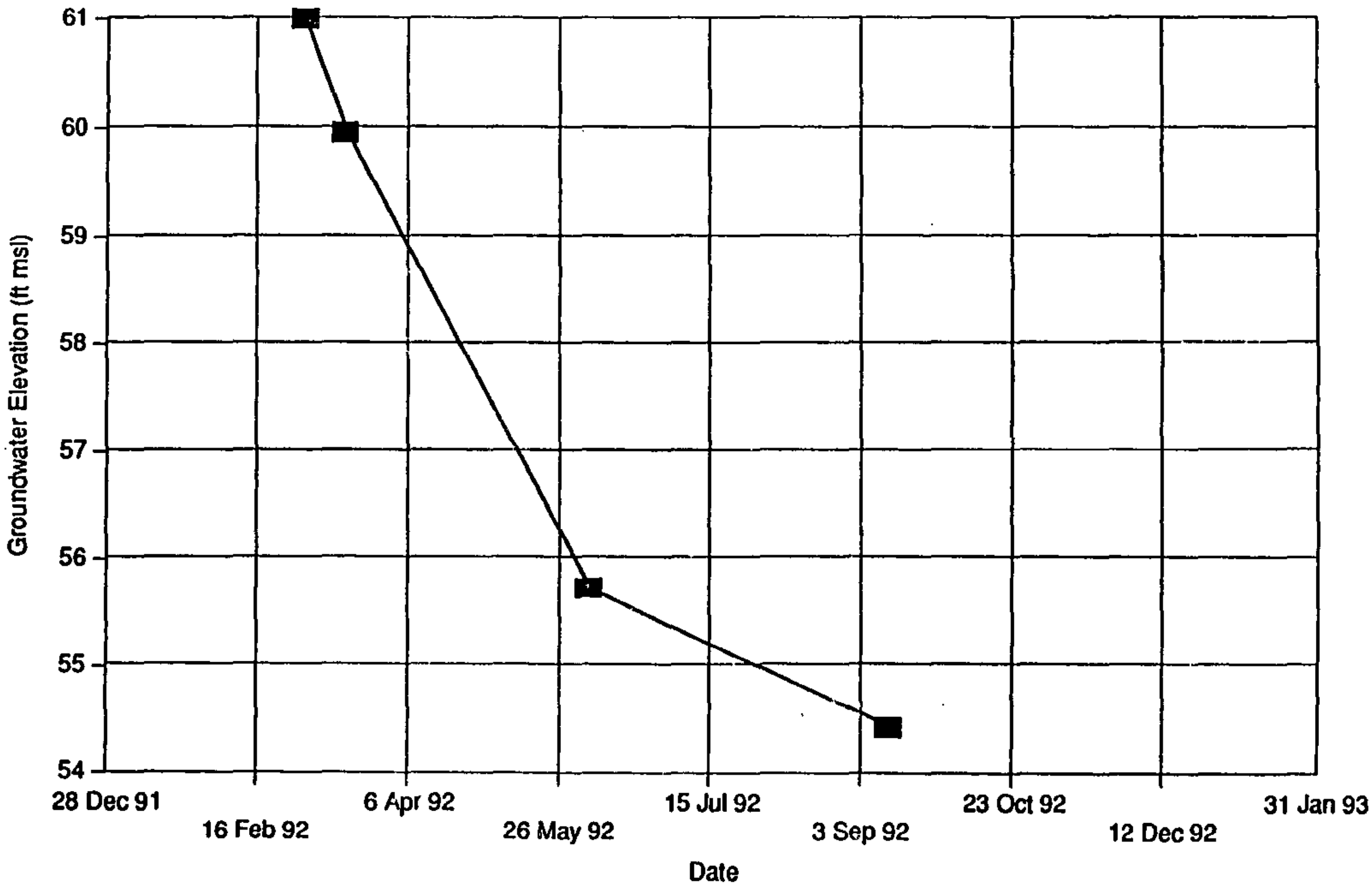


FIGURE **B-1**
HYDROGRAPH BELL
SAMMAMISH/PREFARE PLAN/WA

PROJECT NO. 913 1252.009 DRAWING NO. 45479 DATE 5/3/93 DRAWN BY EA

Golder Associates

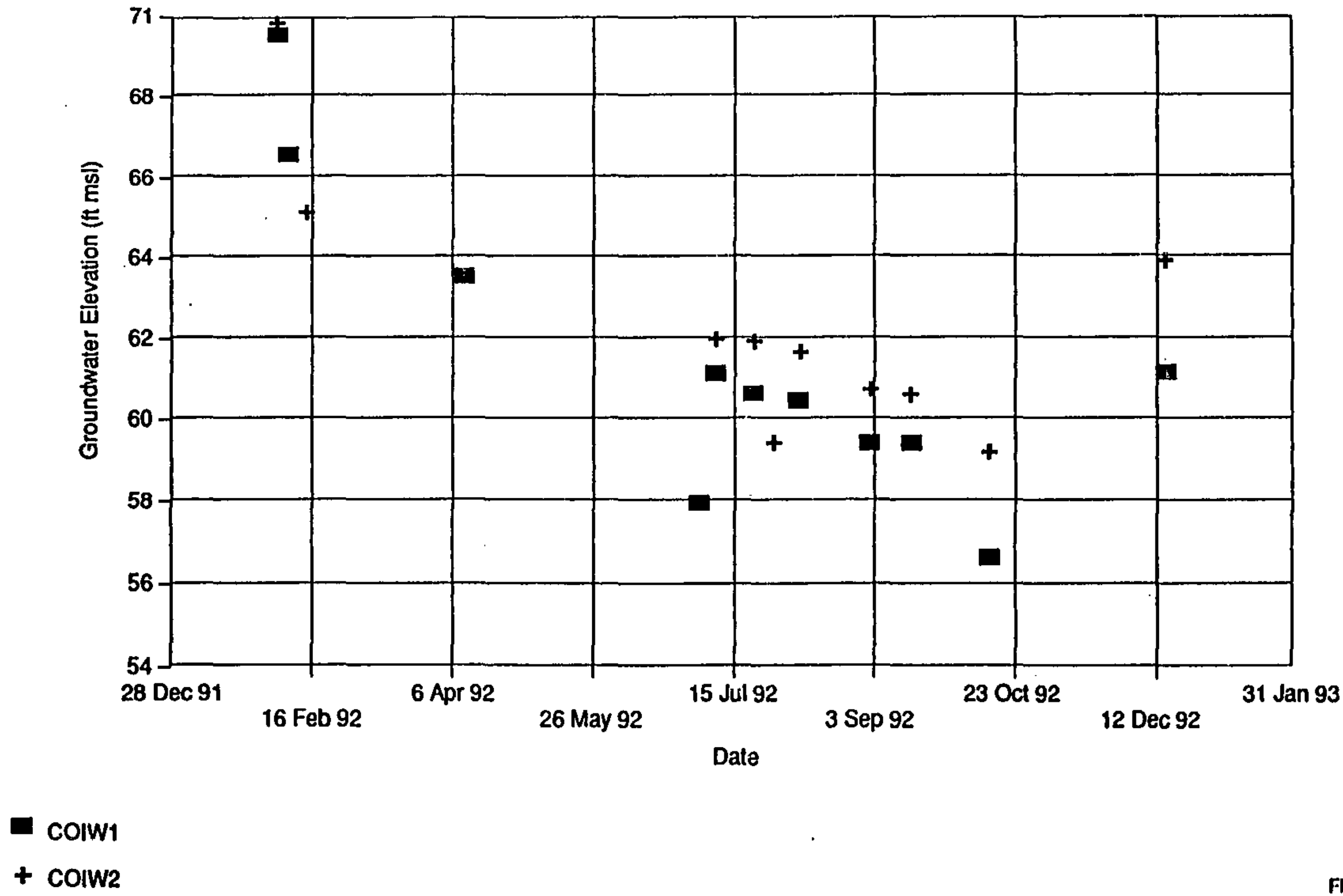


FIGURE **B-2**

HYDROGRAPH COI1/2

SAMMAMISH/PREPARE PLAN/WA

PROJECT NO. 913 1252.009 DRAWING NO. 45480 DATE 5/4/93 DRAWN BY EA

Golder Associates

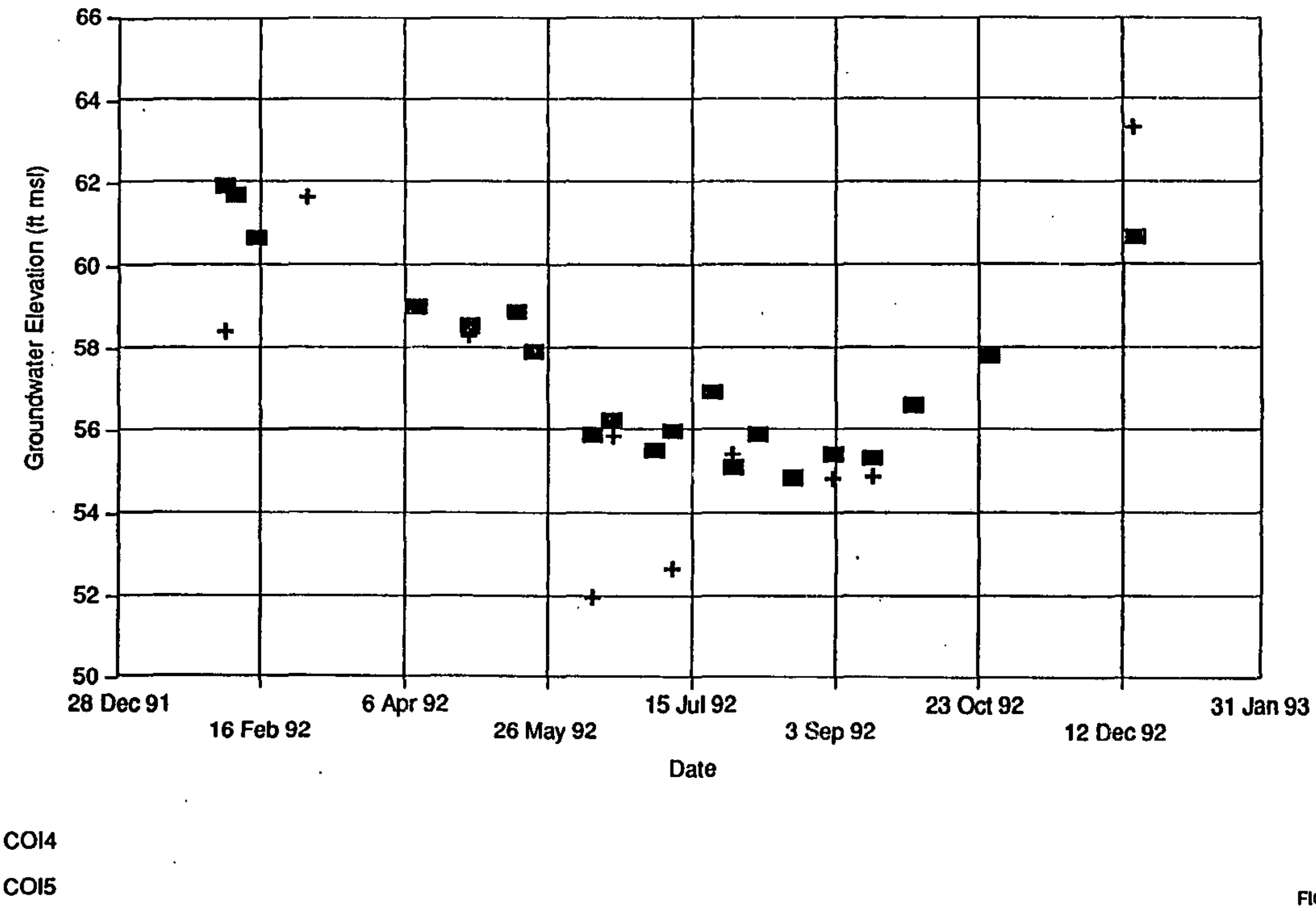


FIGURE **B-3**
HYDROGRAPH COI4/5
SAMMAMISH/PREPARE PLAN/WA

PROJECT NO. 913 1252.009 DRAWING NO. 45481 DATE 5/4/93 DRAWN BY EA

Golder Associates

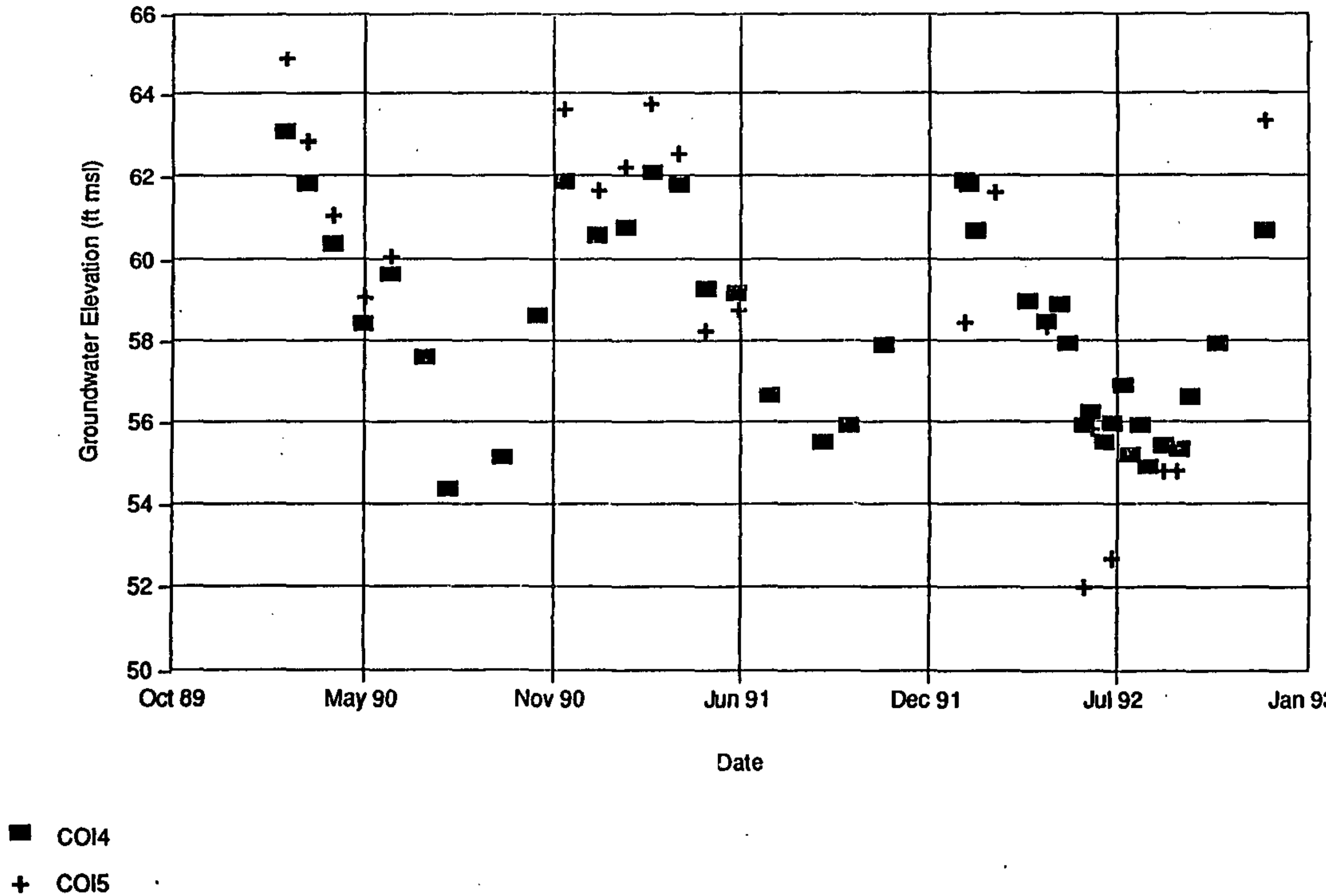


FIGURE **B-4**
HYDROGRAPH COI4/5
SAMMAMISH/PREPARE PLAN/WA

PROJECT NO. 913 1252.009 DRAWING NO. 45482 DATE 5/4/93 DRAWN BY EA

Golder Associates

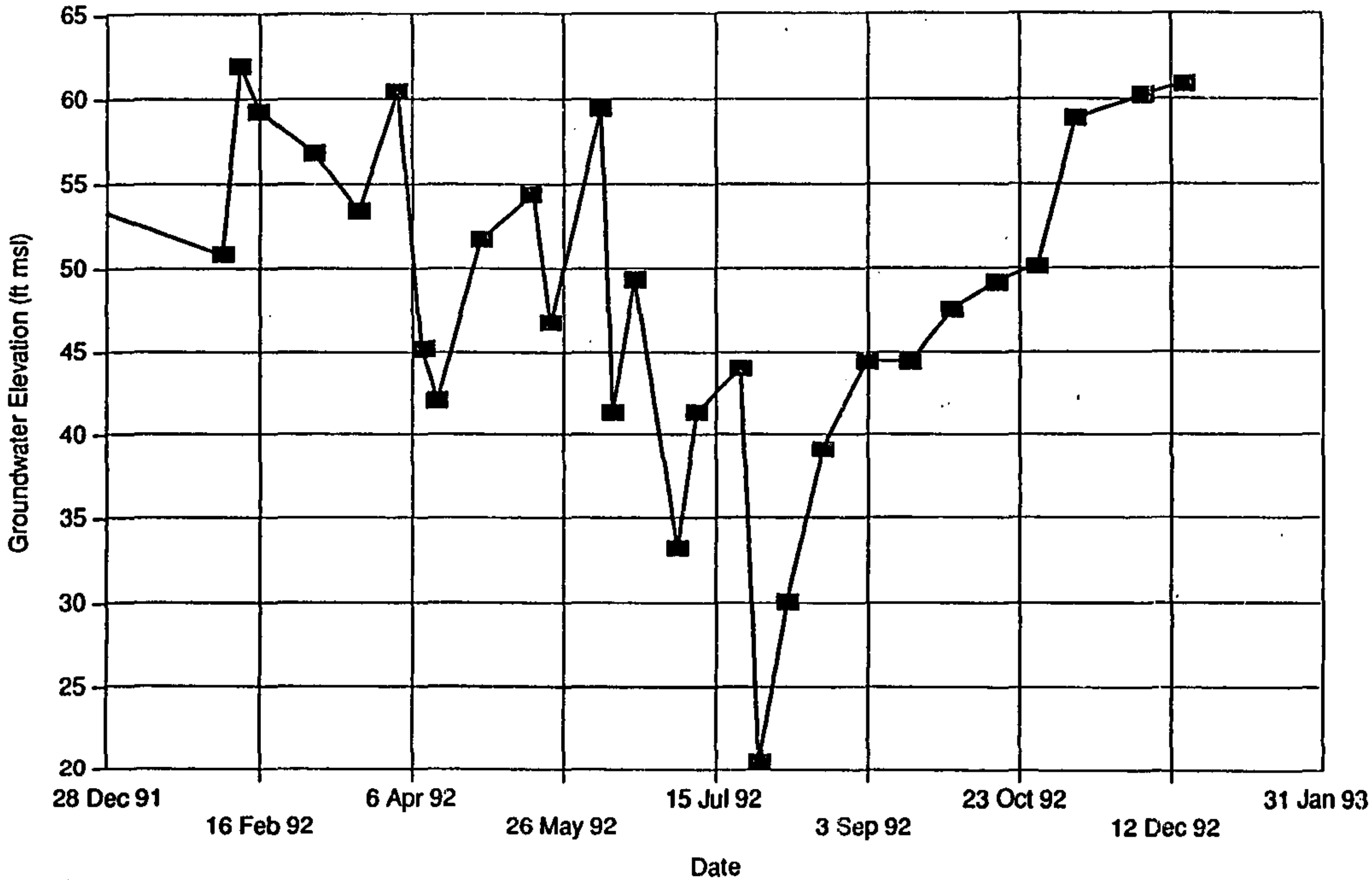


FIGURE **B-5**
HYDROGRAPH COITW
SAMMAMISH/PREPARE PLAN/WA

PROJECT NO. 913 1252.009 DRAWING NO. 45483 DATE 5/4/93 DRAWN BY EA

Golder Associates

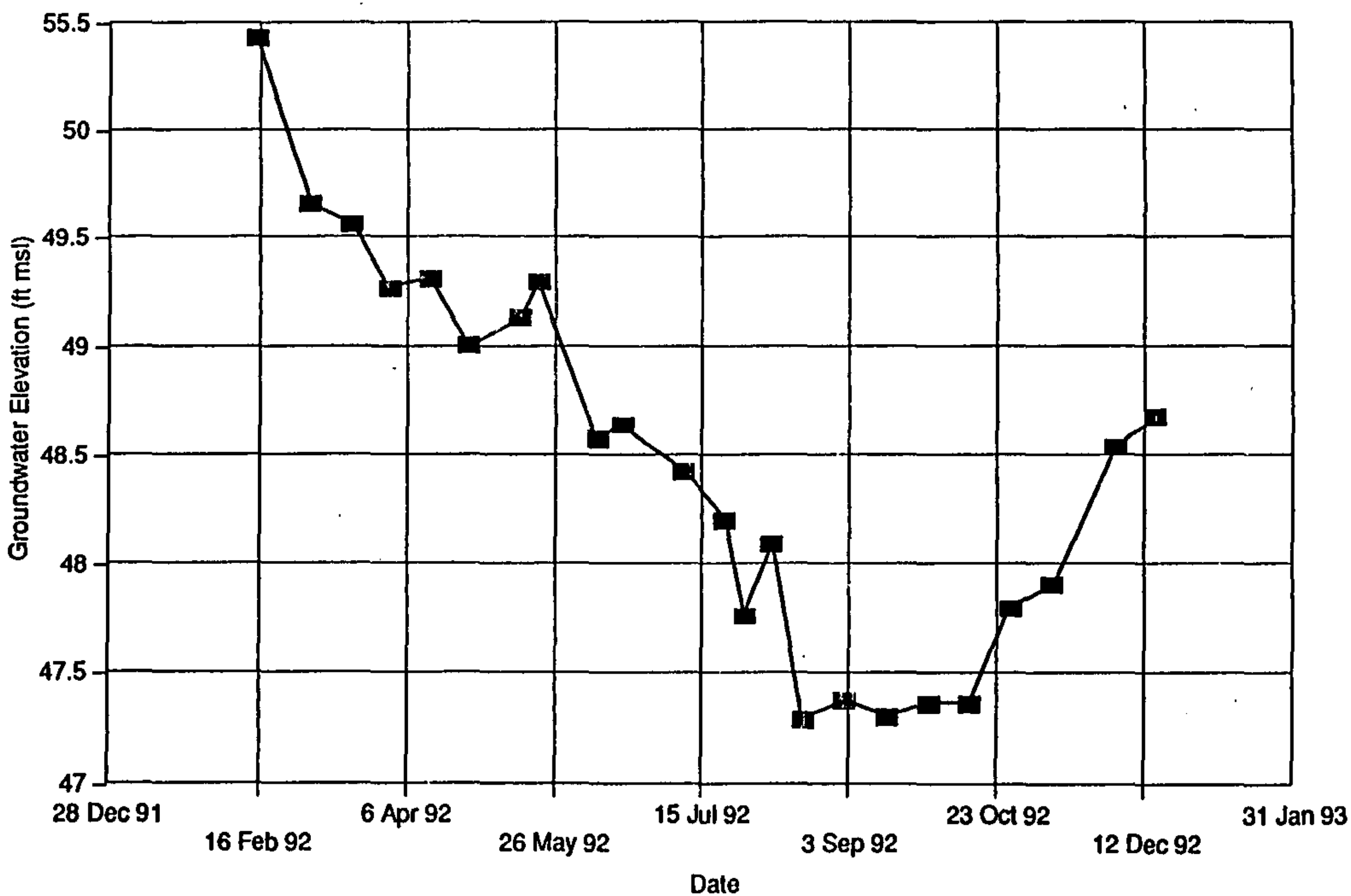


FIGURE **B-6**

HYDROGRAPH EGG2

SAMMAMISH/PREPARE PLAN/WA

PROJECT NO. 913 1252.009 DRAWING NO. 45484 DATE 5/4/93 DRAWN BY EA

Golder Associates

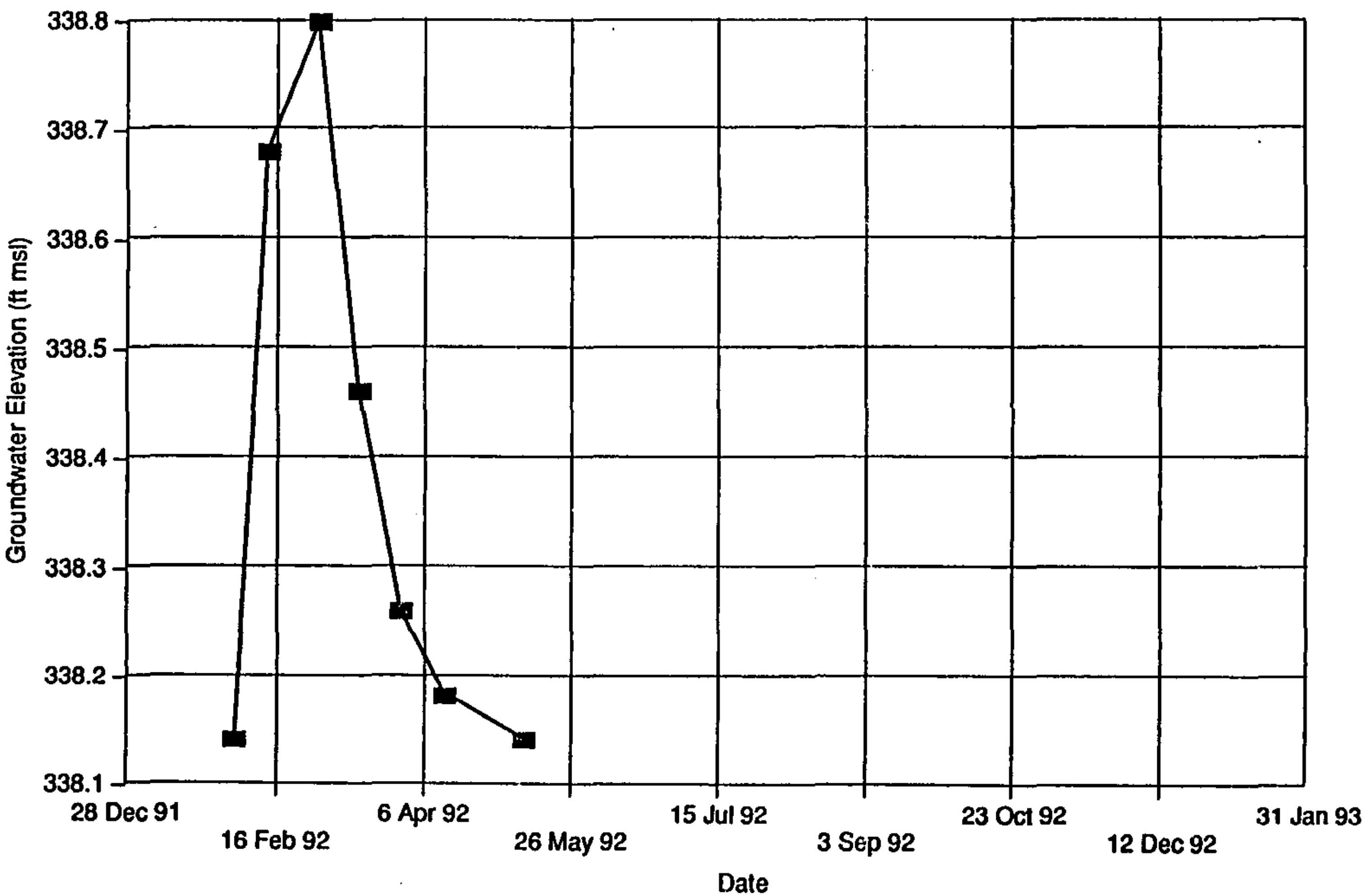


FIGURE **B-7**
HYDROGRAPH JAMES-DEAN
SAMMAMISH/PREPARE PLAN/WA

PROJECT NO. 913 1252.009 DRAWING NO. 45485 DATE 5/4/93 DRAWN BY EA

Golder Associates

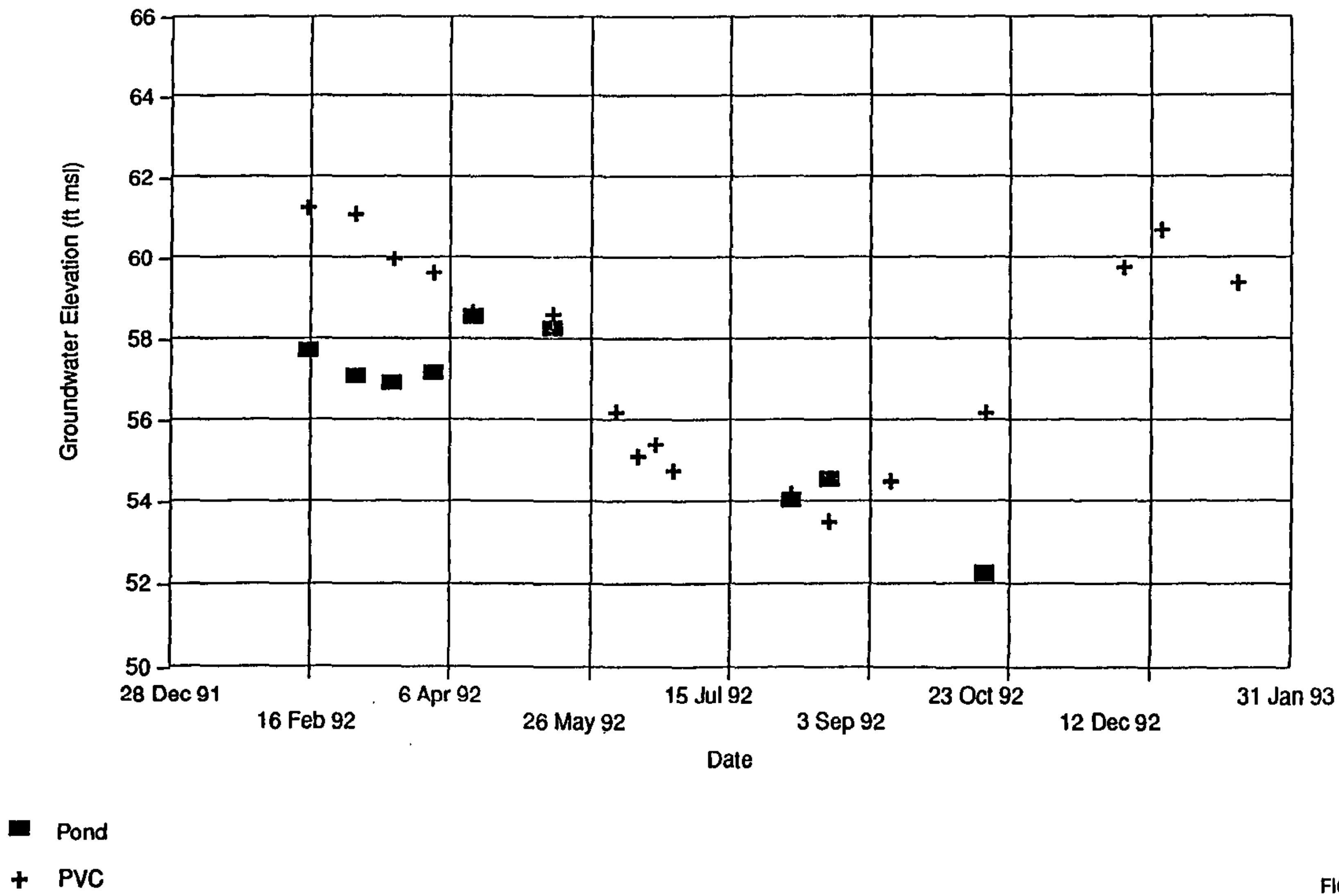


FIGURE **B-8**

HYDROGRAPH REID-POND/PVC

SAMMAMISH/PREPARE PLAN/WA

PROJECT NO. 913 1252.009 DRAWING NO. 45486 DATE 6/10/93 DRAWN BY EA

Golder Associates

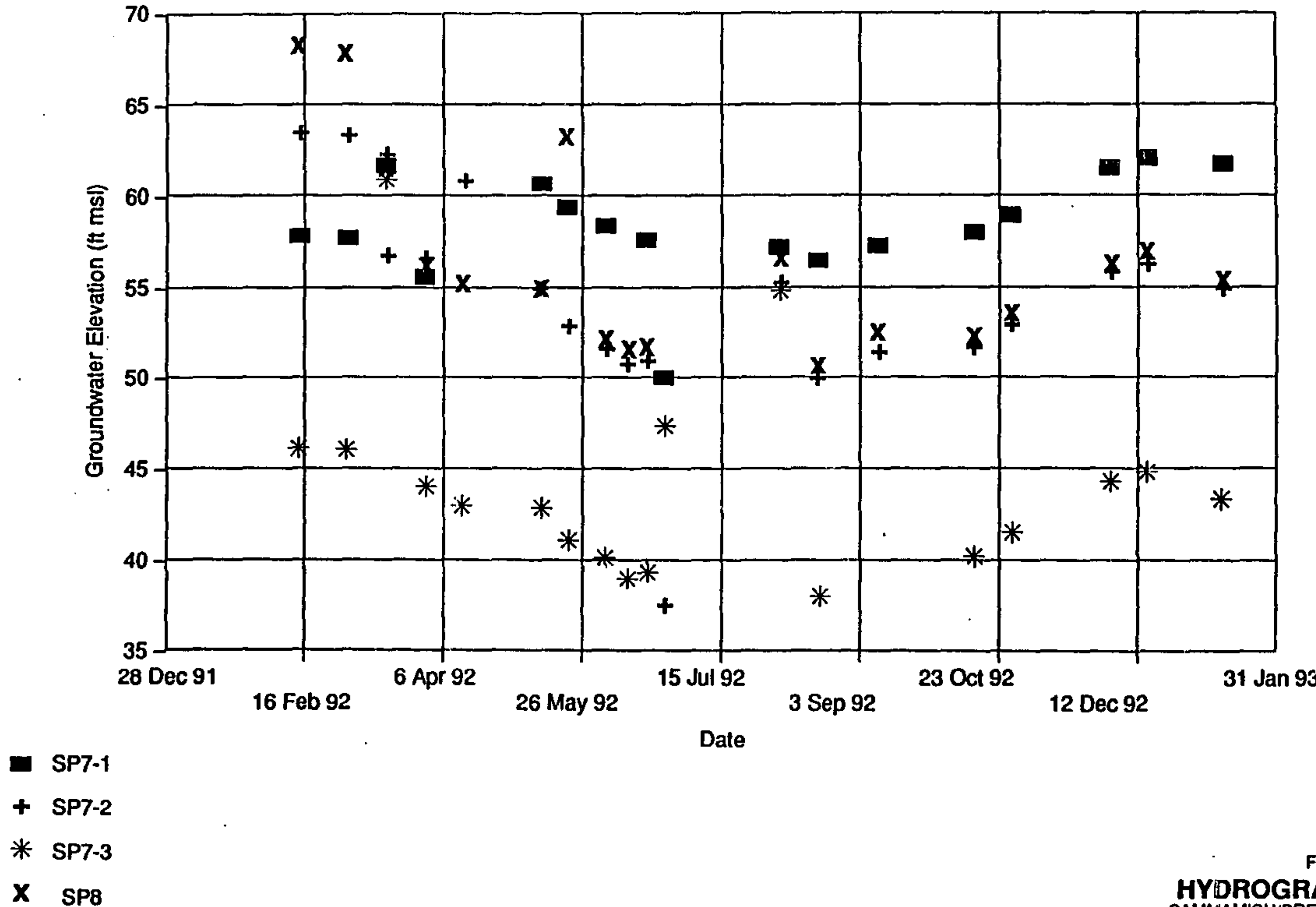


FIGURE **B-9**
HYDROGRAPH SP7/8
SAMMAMISH/PREPARE PLAN/WA

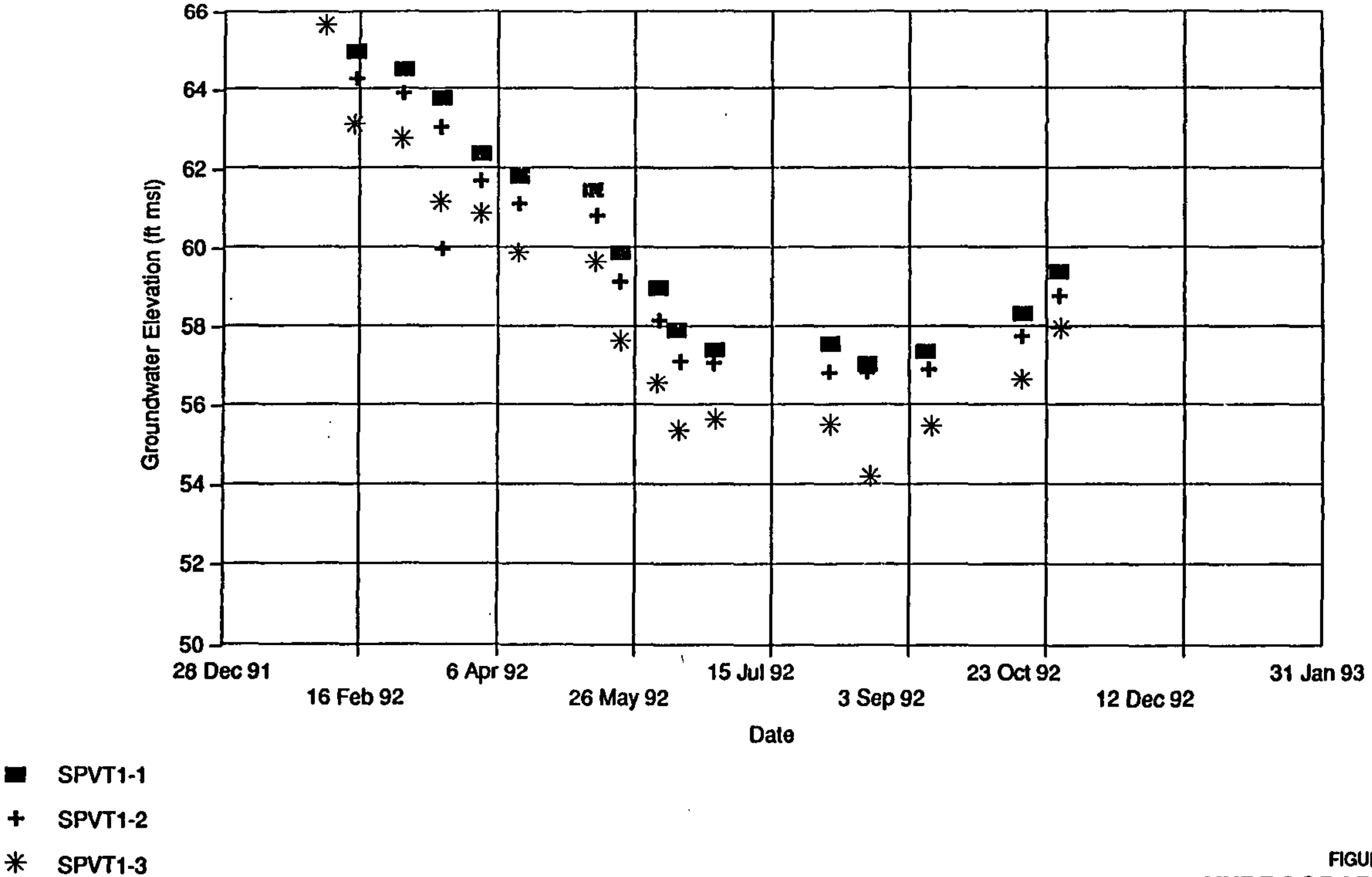


FIGURE **B-10**

HYDROGRAPH SPVT 1

SAMMAMISH/PREPARE PLAN/WA

PROJECT NO. 913 1252.009 DRAWING NO. 45488 DATE 5/4/93 DRAWN BY EA

Golder Associates

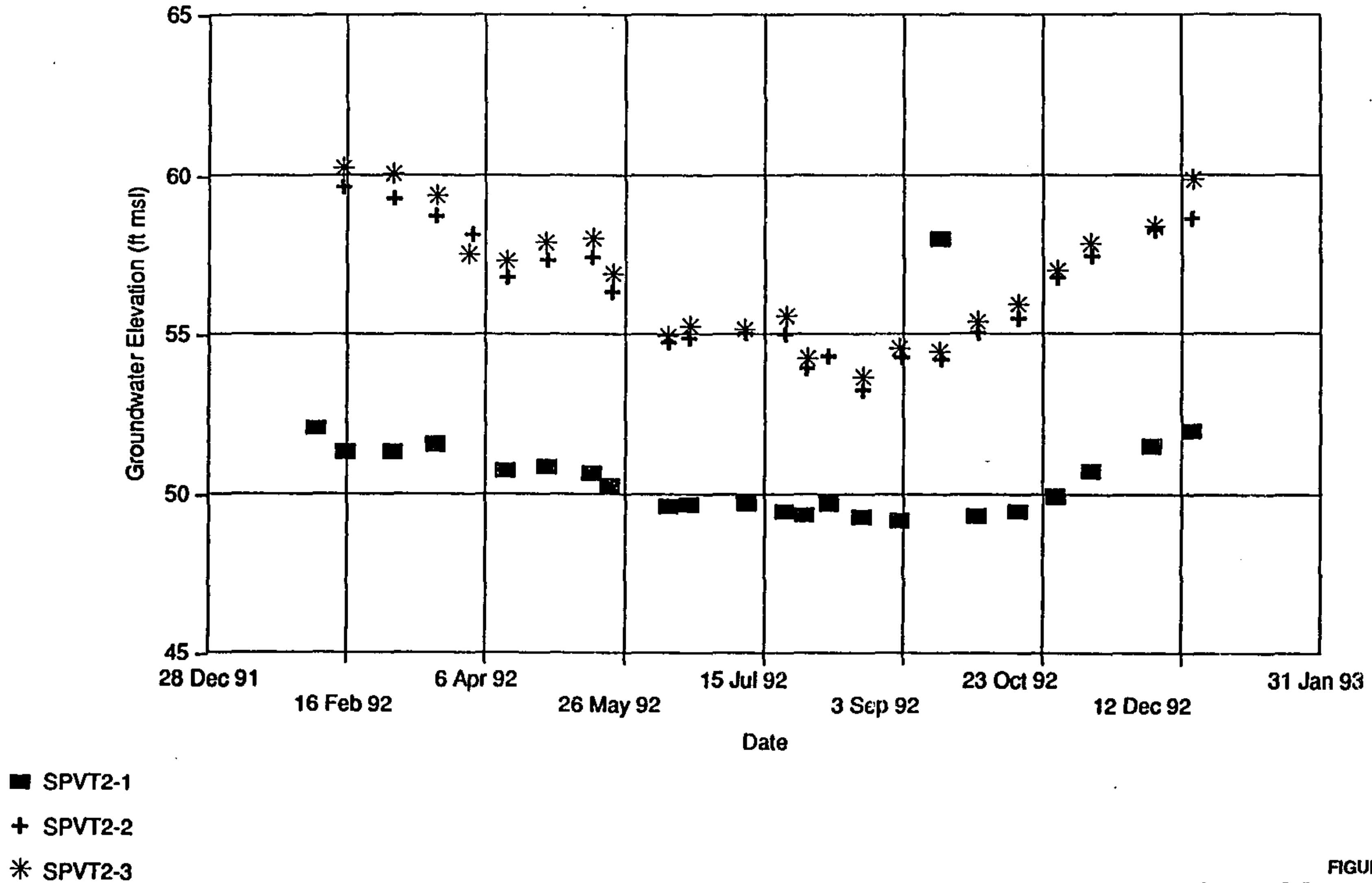


FIGURE **B-11**
HYDROGRAPH SPVT 2
SAMMAMISH/PREPARE PLAN/WA

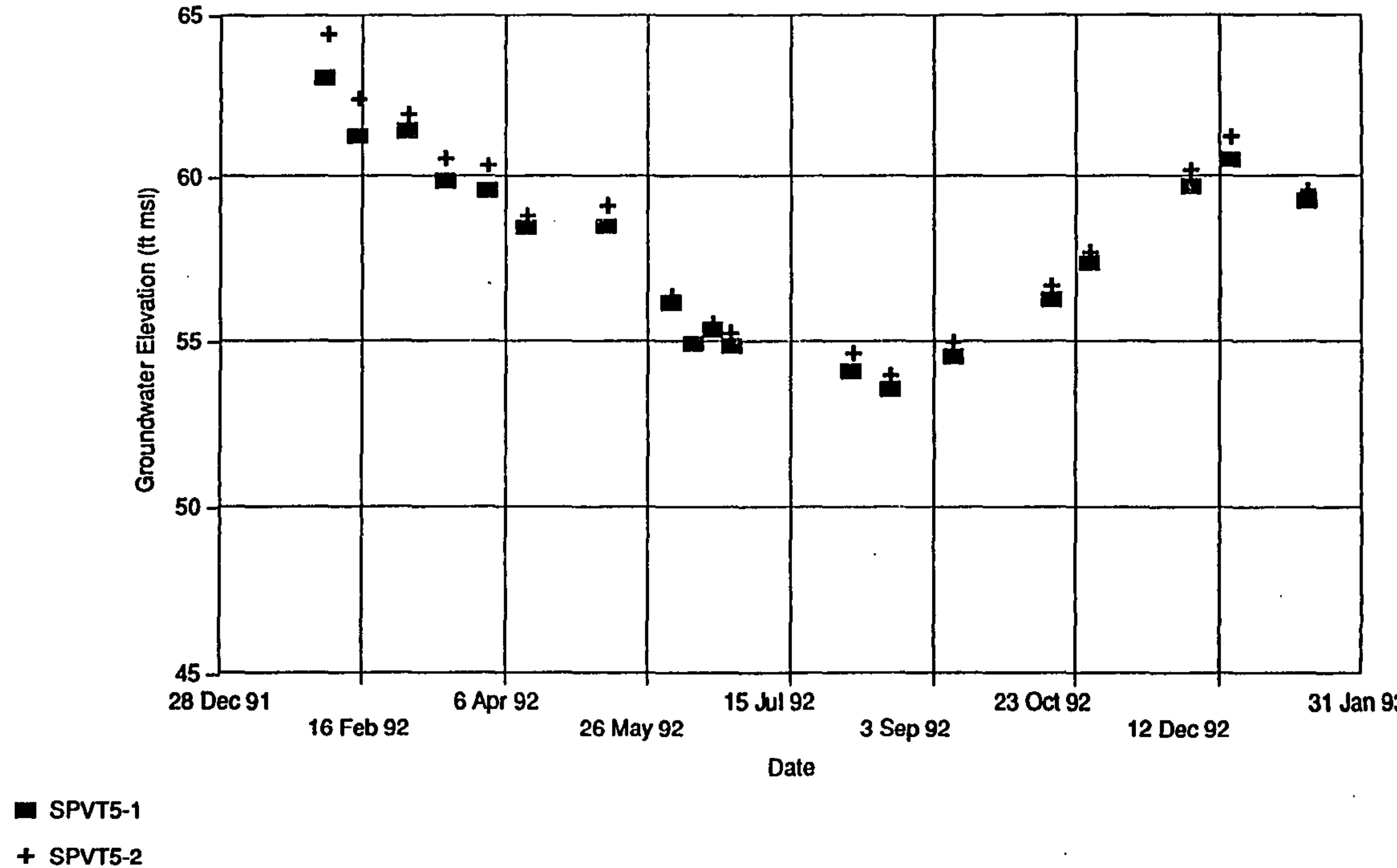


FIGURE **B-12**
HYDROGRAPH SPVT 5
SAMMAMISH/PREPARE PLAN/WA

PROJECT NO. 913 1252.009 DRAWING NO. 45490 DATE 5/4/93 DRAWN BY EA

Golder Associates

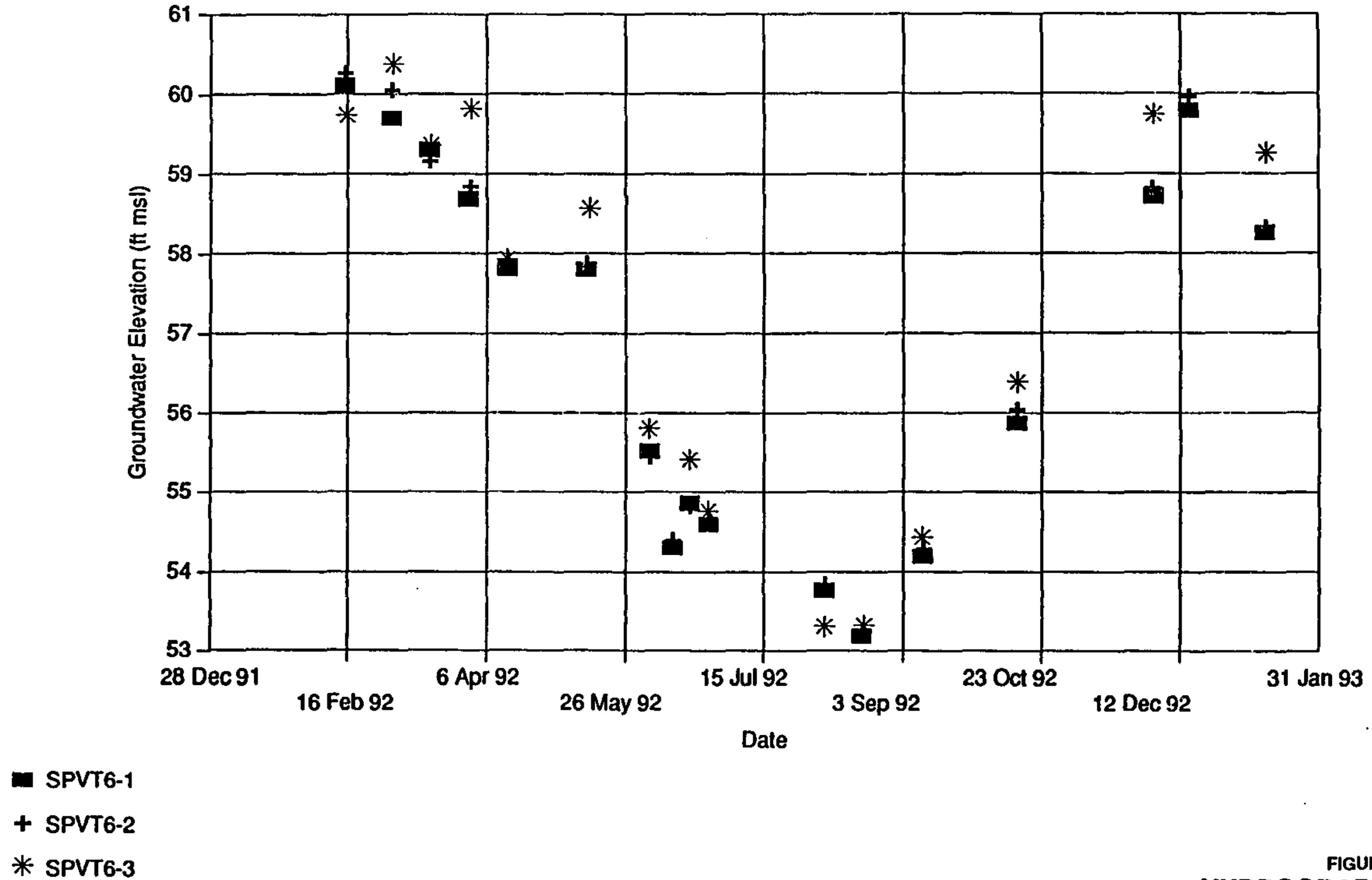


FIGURE **B-13**
HYDROGRAPH SPVT 6
SAMMAMISH/PREPARE PLAN/WA

PROJECT NO. 913 1252.009 DRAWING NO. 45491 DATE 5/4/93 DRAWN BY EA

Golder Associates

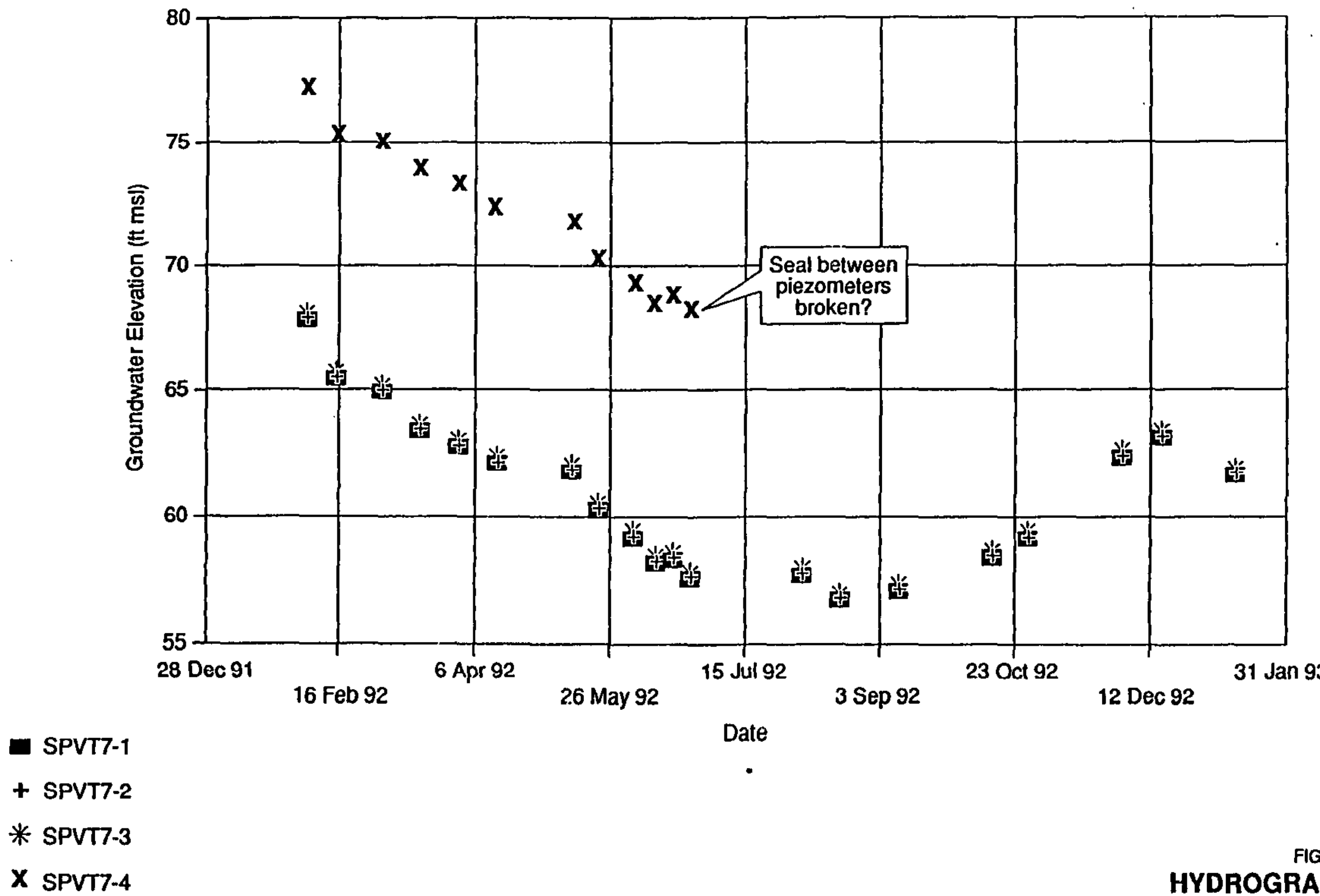


FIGURE **B-14**
HYDROGRAPH SPVT 7
SAMMAMISH/PREPARE PLAN/WA

PROJECT NO. 913 1252.009 DRAWING NO. 45492 DATE 6/10/93 DRAWN BY EA

Golder Associates

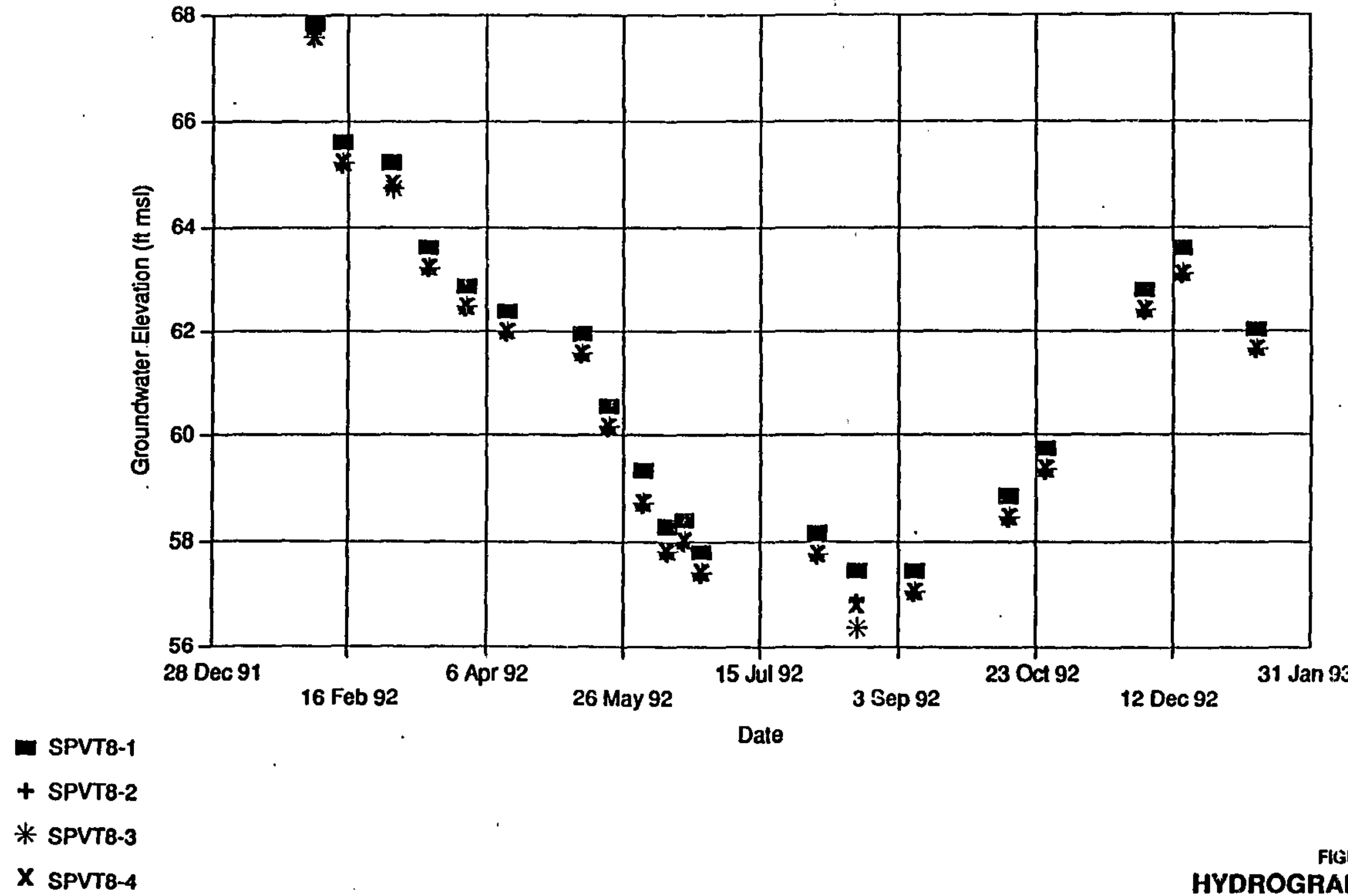


FIGURE **B-15**
HYDROGRAPH SPVT 8
SAMMAMISH/PREPARE PLAN/WA

PROJECT NO. 913 1252.009 DRAWING NO. 45493 DATE 5/4/93 DRAWN BY EA

Golder Associates

TABLE B-1

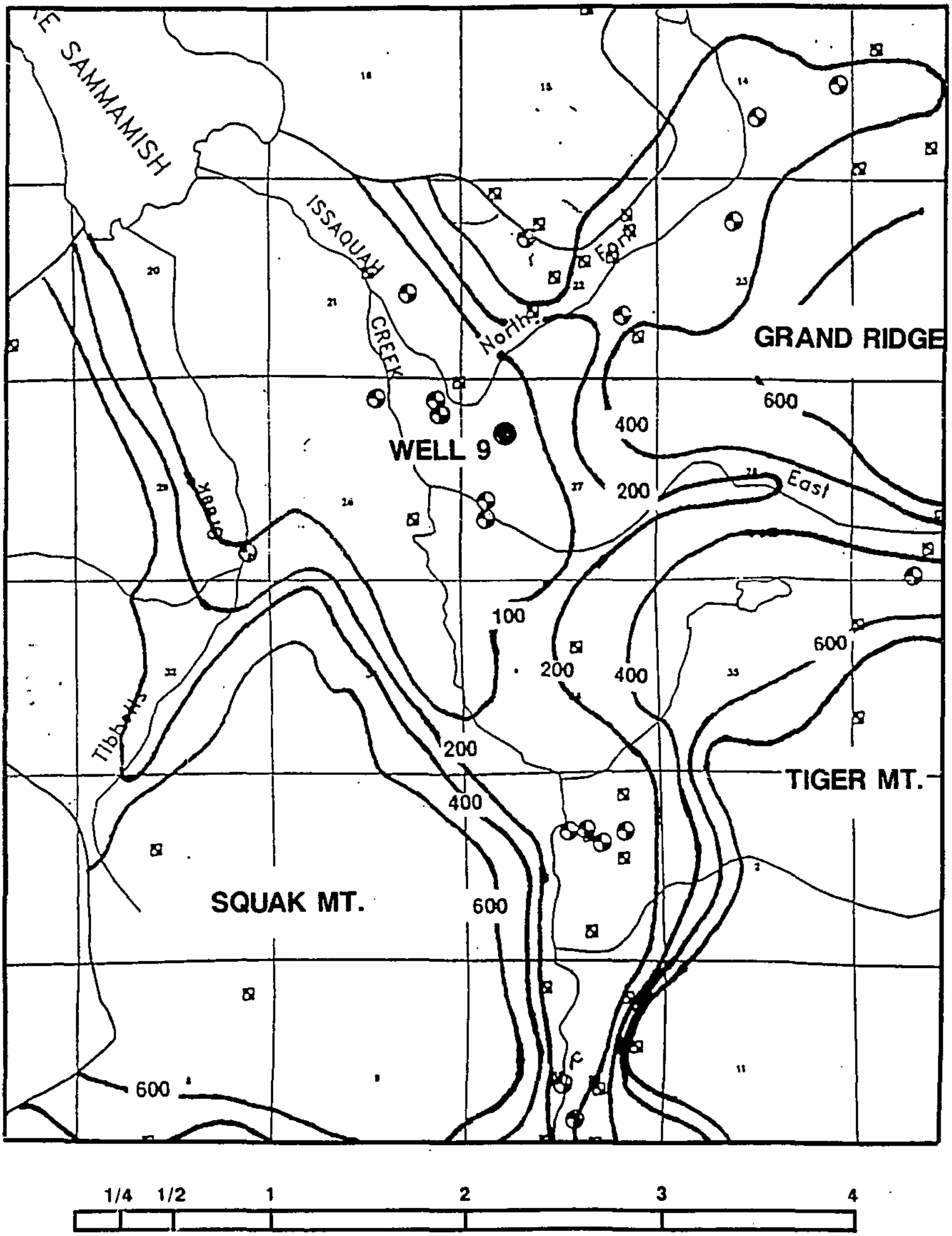
VERTICAL HYDRAULIC GRADIENTS

Well	MP Elev. (ft msl)	Comp. Depth (ft)	Scrn Len (ft)	Top filt (ft)	Bot. filt (ft)	Avg Depth (ft)	Piezometer Combinations	Avg Vert. Hydr. Gradient
COIW1	93.29	106	16	90	106	98		
COIW2	94	97	15	82	97	89.5	COI2-COI1	1.7E-01
COIW4	66.19	112	25	77	102	89.5		
COIW5	67.16	405	82	323	405	364	COI5-COI4	-2.0E-03
SP7-1	72.3	58	57	35	58	46.5	7_3-7_1	-4.5E-02
SP7-2	72.3	220	23	80	220	150	7_2-7_1	-1.3E-03
SP7-3	70.1	150	55	80	150	115	7_2-7_3	5.1E-02
SP8	73.94	189	54	105	179	142	8-7_3	3.0E-01
SPVT1-1	73.16	38	10	20	40	30	3-2	3.2E-04
SPVT1-2	73.16	80	10	46	90	68	2-1	2.4E-04
SPVT1-3	73.16	160	10	107	180	143.5	3-1	2.8E-04
SPVT2-1	59.35	24	5	19	24	21.5	3-2	1.3E-04
SPVT2-2	61.87	39	5	27	40	33.5	2-1	2.1E-01
SPVT2-3	62.14	79	5	60	80	70	3-1	1.6E-02
SPVT5-1	68.61	85	10	27	90	58.5		
SPVT5-2	68.61			160	192	176	2-1	2.7E-05
SPVT6-1	60.59	50	5	25	50	37.5	3-2	6.2E-06
SPVT6-2	60.59	85	10	60	85	72.5	2-1	7.1E-06
SPVT6-3	60.59	195	10	177	195	186	3-1	6.2E-06
SPVT7-1	82.5	33	10	20	55	37.5	4-3	1.8E-02
SPVT7-2	82.5	53	10	20	55	37.5	3-2	1.5E-05
SPVT7-3	82.5	71	10	60	90	75	2-1	NA
SPVT7-4	82.5	118	10	100	135	117.5	4-1	6.0E-03
SPVT8-1	79.7	55	10	41	57	49	4-3	5.6E-06
SPVT8-2	79.7	93		70	103	86.5	3-2	-2.2E-05
SPVT8-3	79.7	168	10	113	172	142.5	2-1	-6.2E-05
SPVT8-4	79.7	202	10	182	214	198	4-1	-8.9E-06

positive = upward
negative = downward

FIGURE 2.8

REGIONAL GROUND WATER CONTOUR MAP



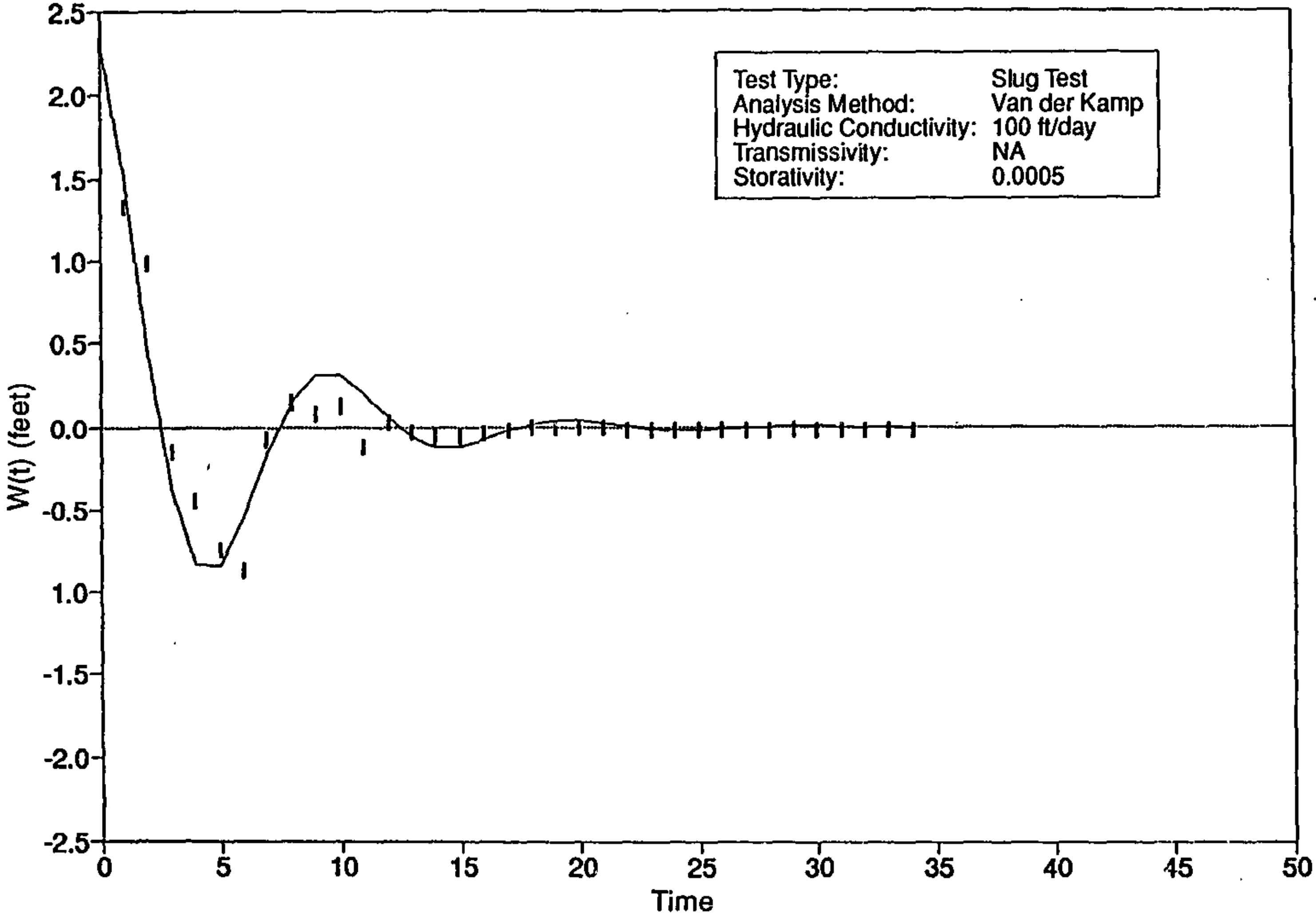
SCALE IN MILES

C/A 12428

Appendix C

APPENDIX C

AQUIFER TEST RESULTS

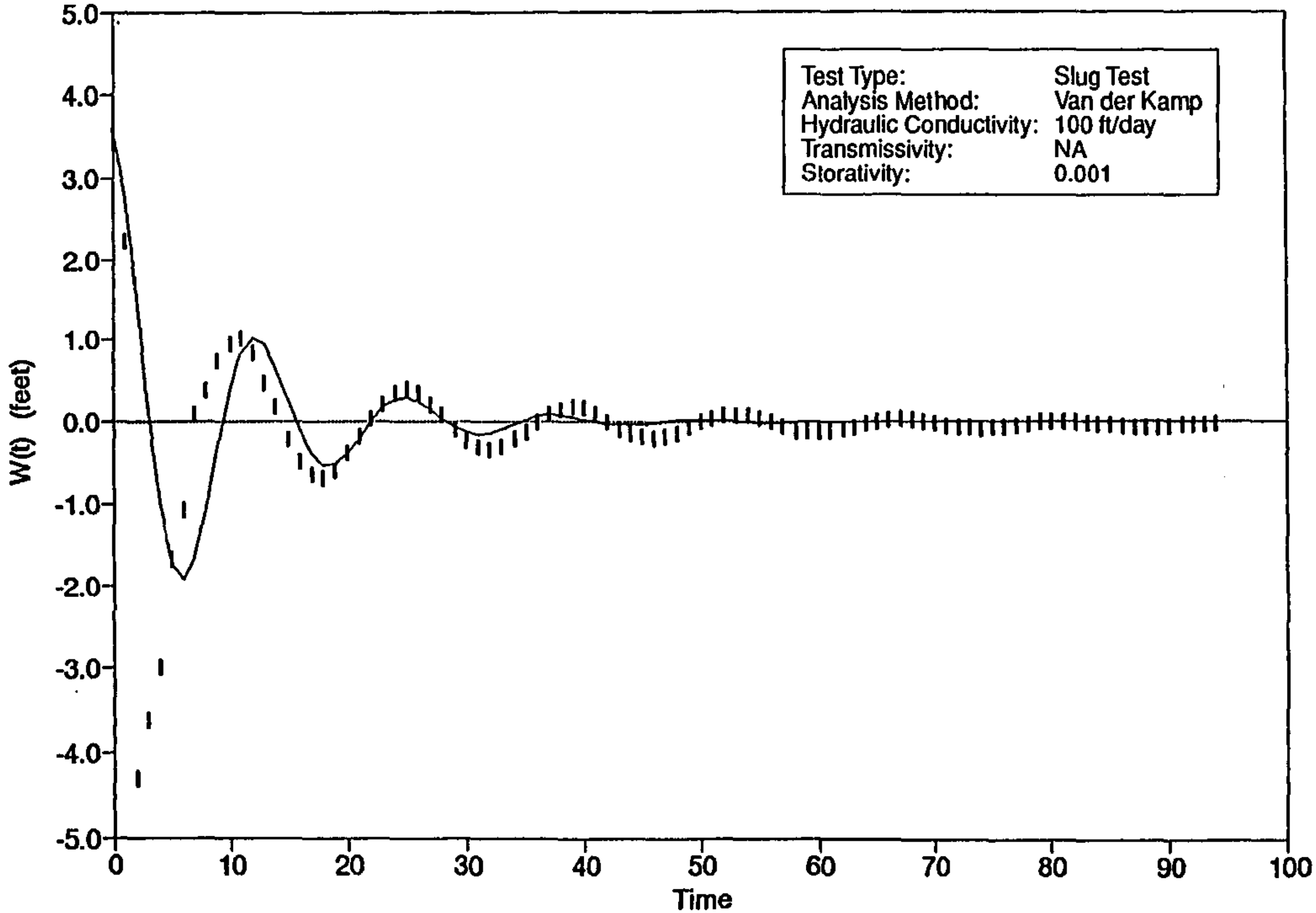


I = Observed
— = Model
NA = Not Applicable

FIGURE **C-1**
SPVT-1.2
SAMMAMISH/PREPARE PLAN/WA

PROJECT NO. 913 1252.009 DRAWING NO. 46120 DATE 6/8/93 DRAWN BY CB

Golder Associates



I = Observed
— = Model
NA = Not Applicable

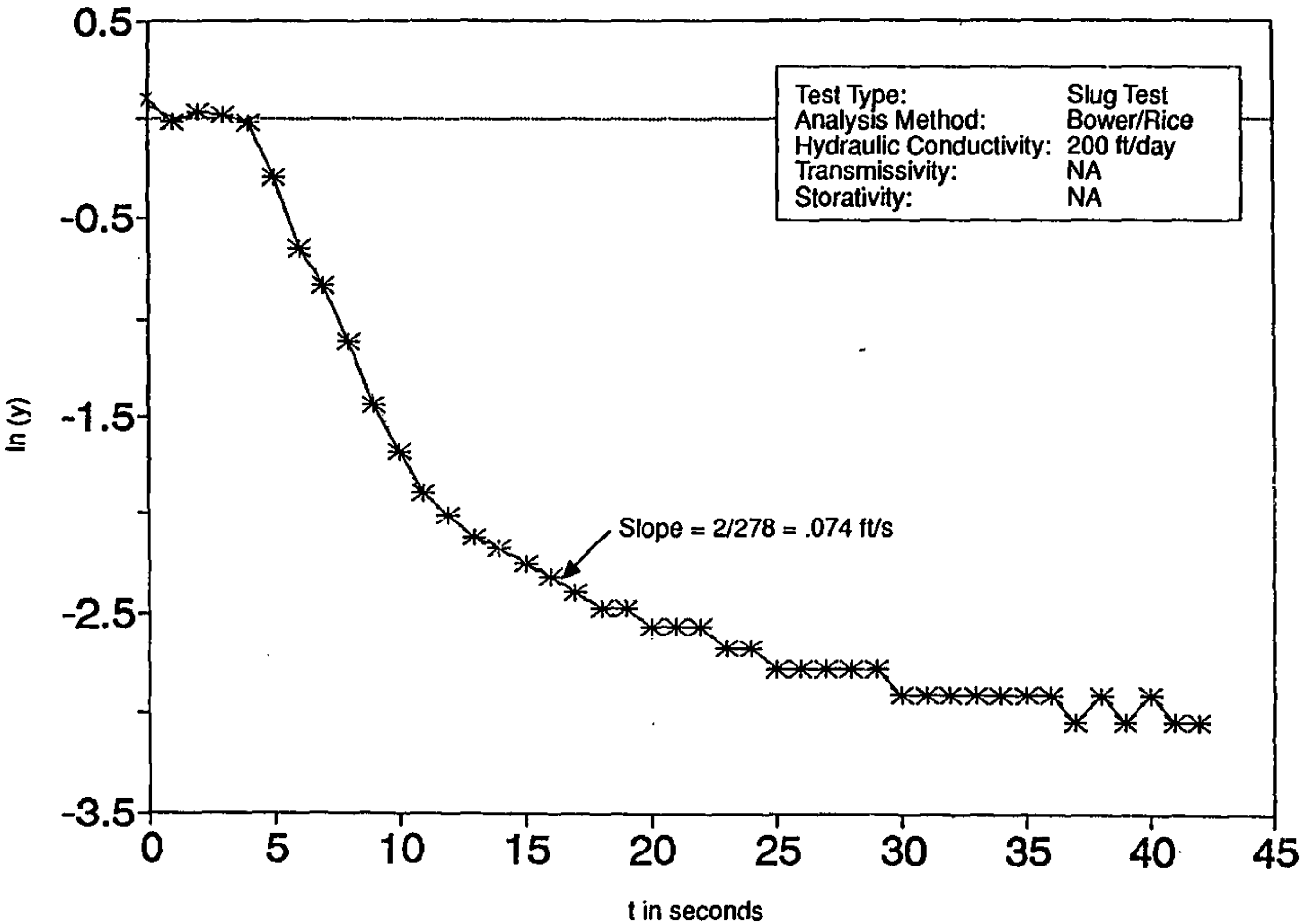
FIGURE **C-2**

SPVT-1.3

SAMMAMISH/PREPARE PLAN/WA

PROJECT NO. 913 1252.009 DRAWING NO. 46124 DATE 6/8/93 DRAWN BY EA

Golder Associates

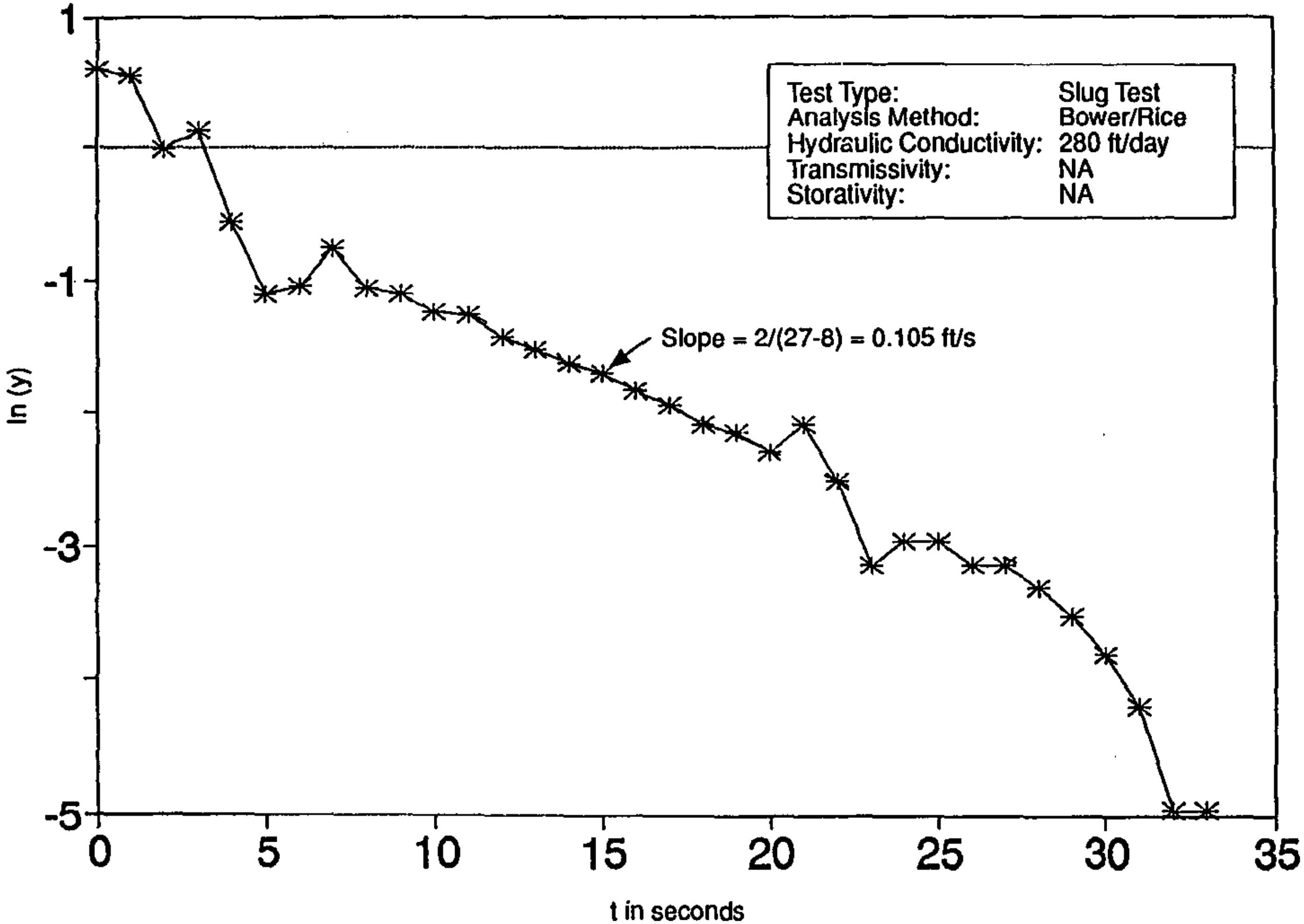


I = Observed
— = Model
NA = Not Applicable

FIGURE **C-3**
SPVT-2.1
SAMMAMISH/PREPARE PLAN/WA

PROJECT NO. 913 1252.009 DRAWING NO. 46125 DATE 6/8/93 DRAWN BY EA

Golder Associates

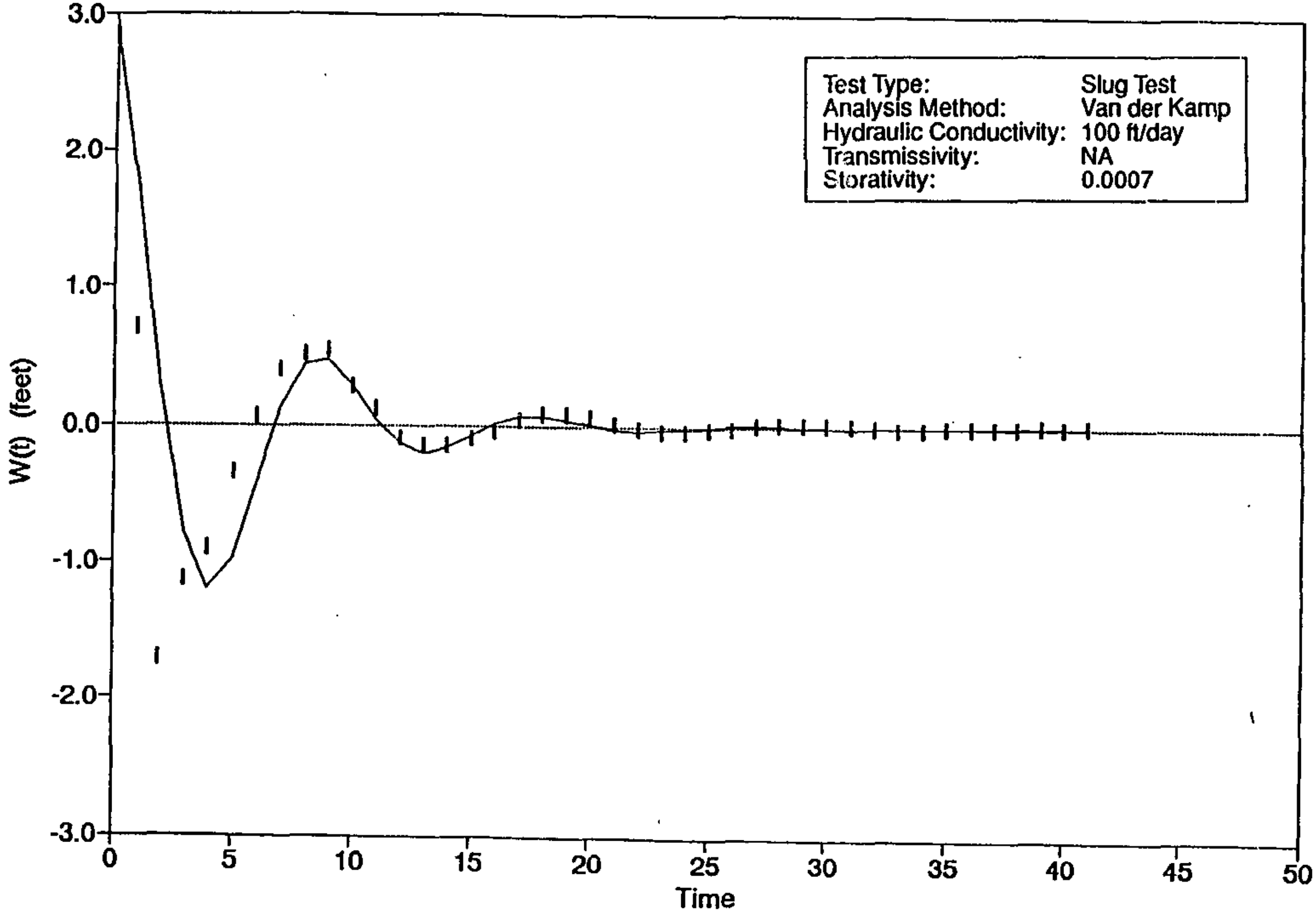


I = Observed
— = Model
NA = Not Applicable

FIGURE **C-4**
SPVT-2.2
SAMMAMISH/PREPARE PLAN/WA

PROJECT NO. 913 1252.009 DRAWING NO. 46126 DATE 6/8/93 DRAWN BY EA

Golder Associates



I = Observed
— = Model
NA = Not Applicable

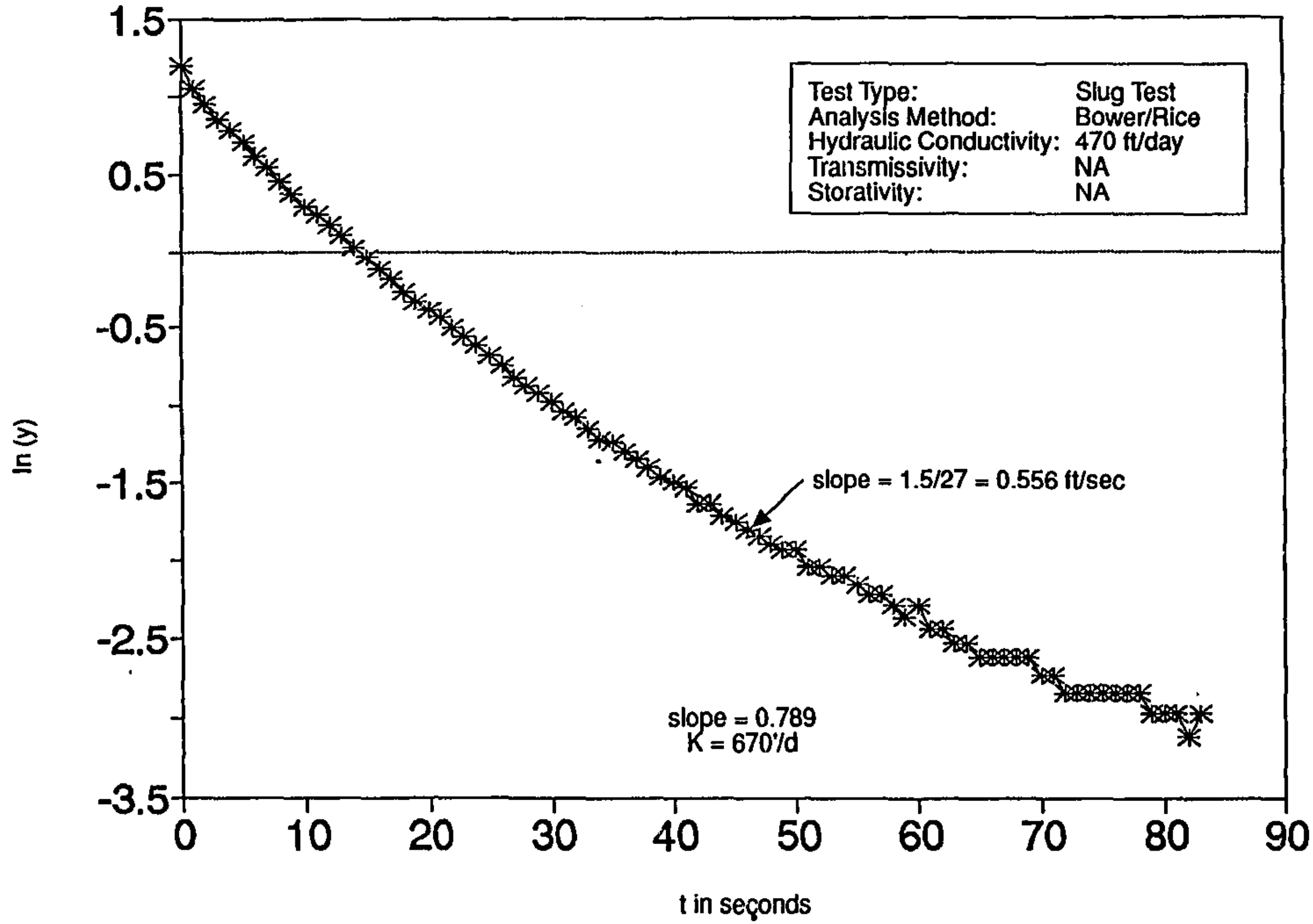
FIGURE **C-5**

SPVT-5.1

SAMMAMISH/PREPARE PLAN/WA

PROJECT NO. 913 1252.009 DRAWING NO. 46127 DATE 6/8/93 DRAWN BY EA

Golder Associates

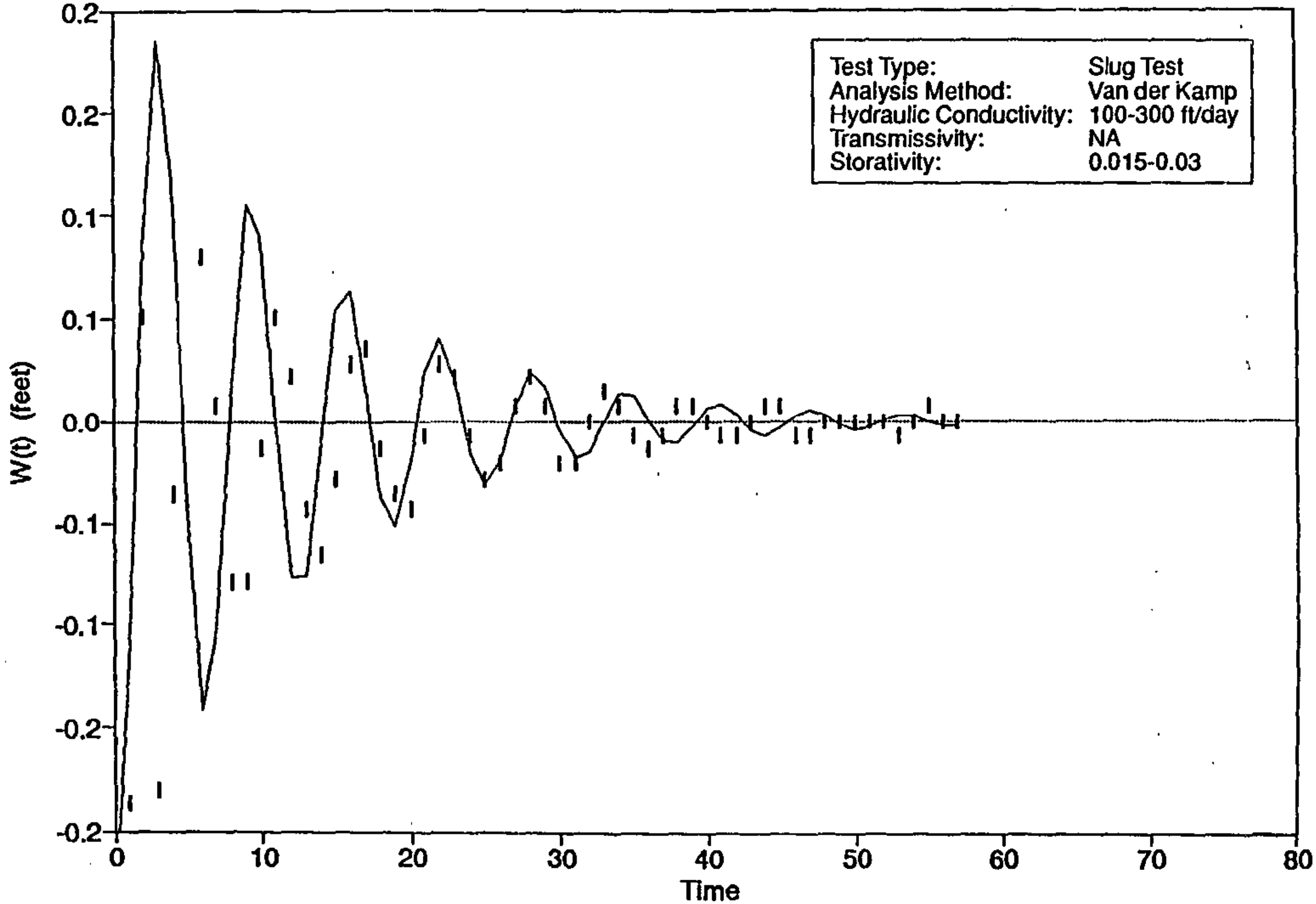


I = Observed
— = Model
NA = Not Applicable

FIGURE **C-6**
SPVT-6.2
SAMMAMISH/PREPARE PLAN/WA

PROJECT NO. 913 1252.009 DRAWING NO. 46128 DATE 6/7/93 DRAWN BY EA

Golder Associates



I = Observed
— = Model
NA = Not Applicable

FIGURE **C-7**
SPVT-7.2
SAMMAMISH/PREPARE PLAN/WA

PROJECT NO. 913 1252.009 DRAWING NO. 46129 DATE 6/8/93 DRAWN BY EA

Golder Associates

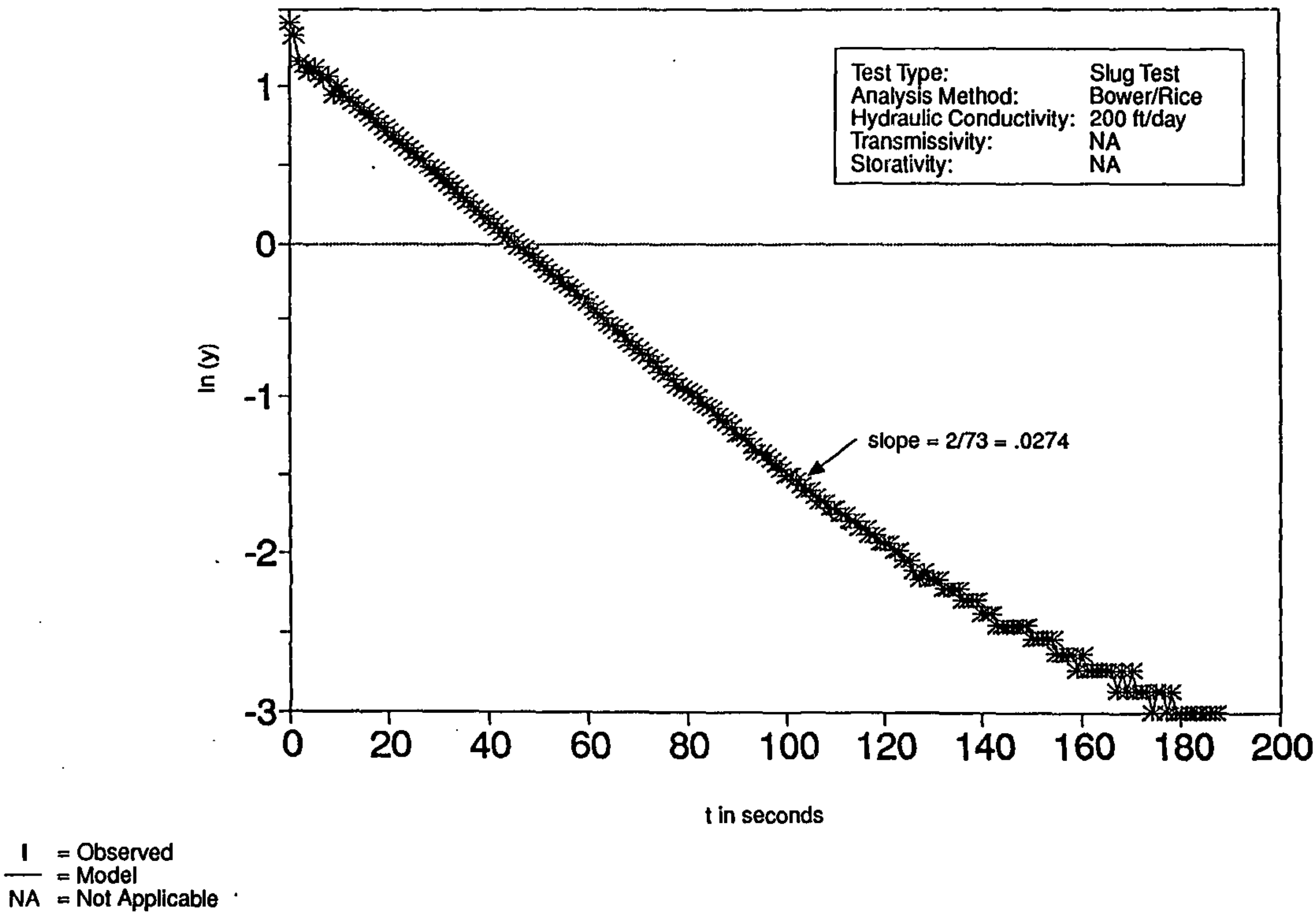
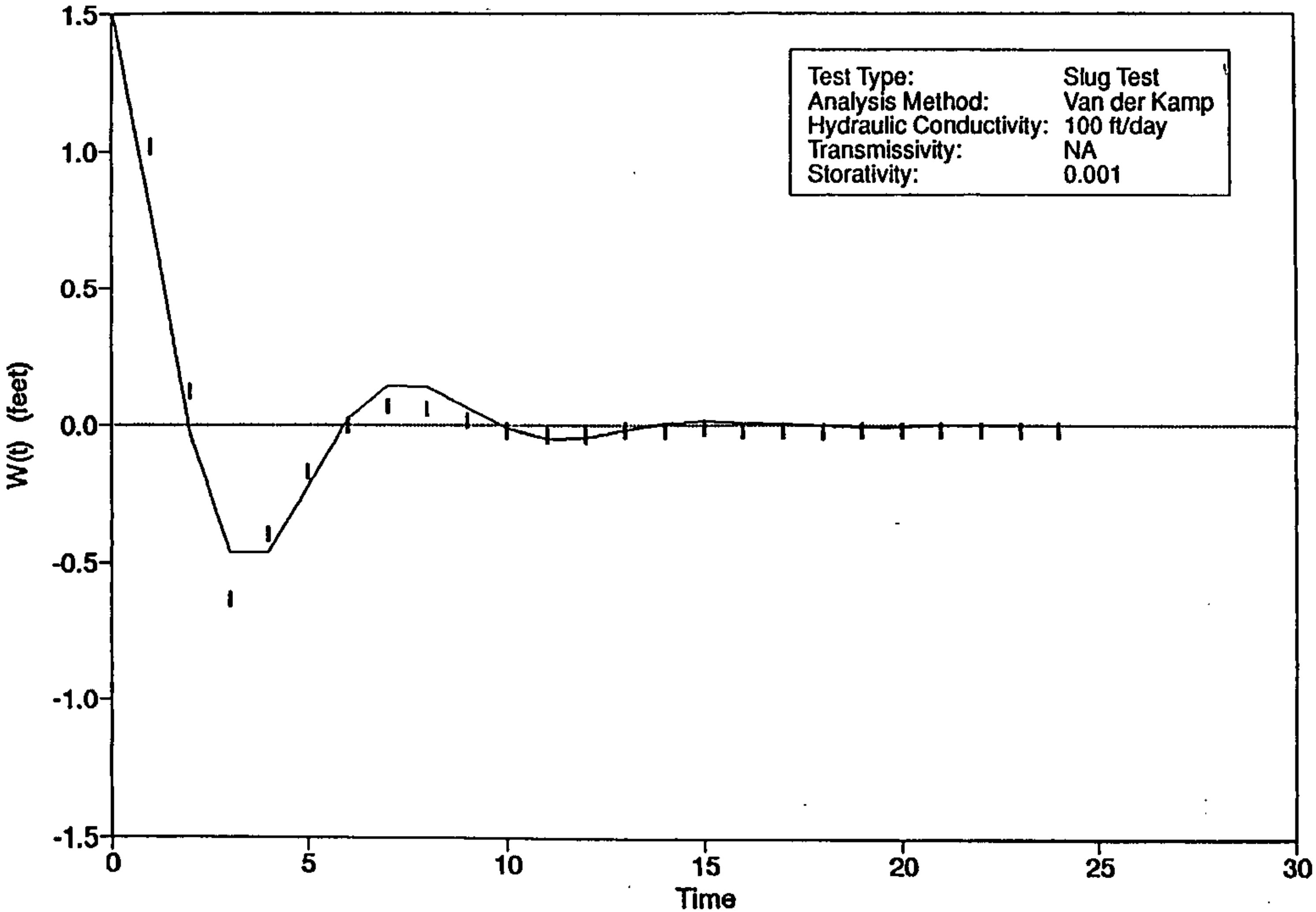


FIGURE **C-8**
SPVT-7.3
SAMMAMISH/PREPARE PLAN/WA

PROJECT NO. 913 1252.009 DRAWING NO. 48130 DATE 6/8/93 DRAWN BY EA

Golder Associates

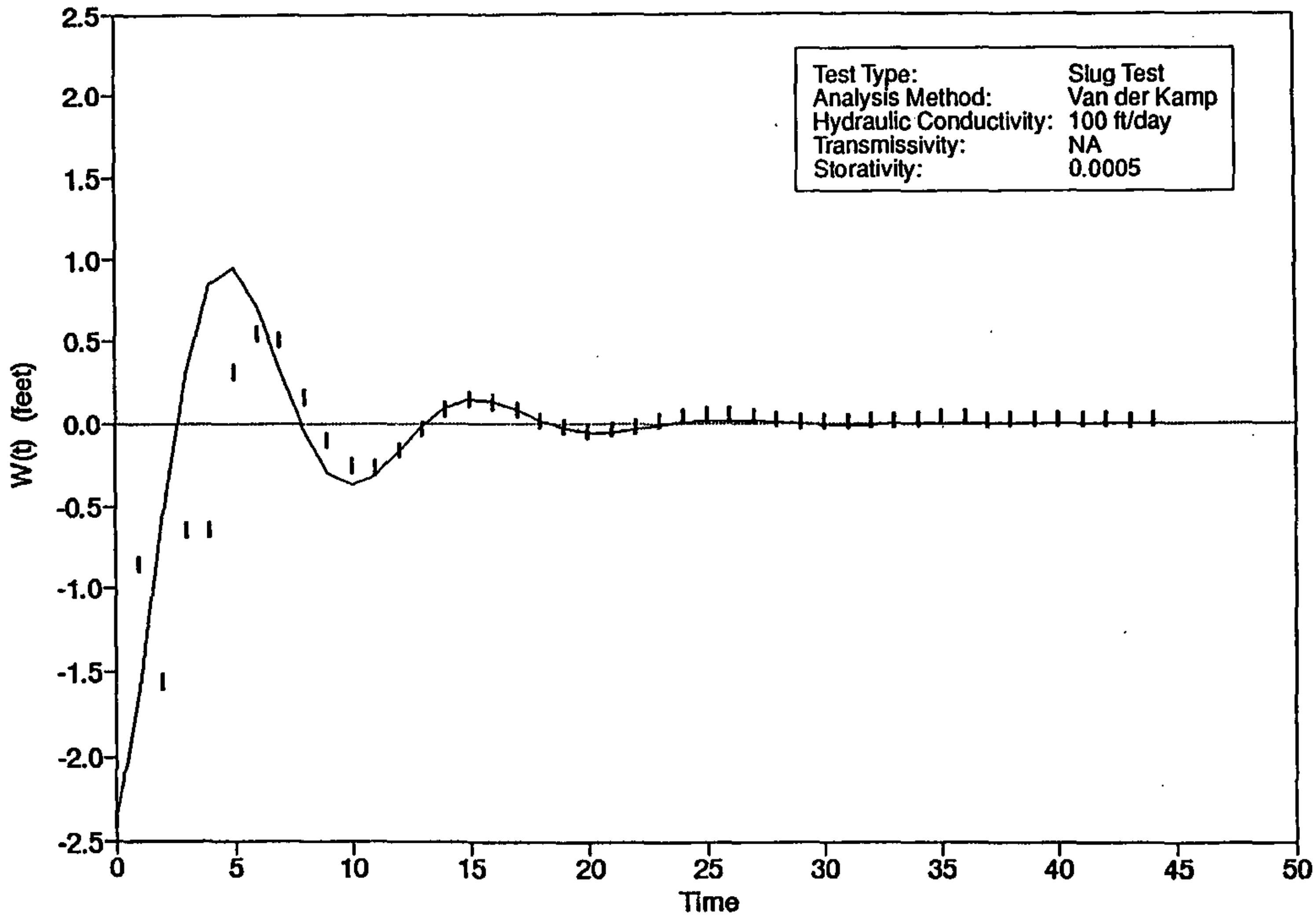


I = Observed
— = Model
NA = Not Applicable

FIGURE **C-9**
SPVT-8.1
SAMMAMISH/PREPARE PLAN/WA

PROJECT NO. 913 1252.009 DRAWING NO. 46131 DATE 6/8/93 DRAWN BY EA

Golder Associates

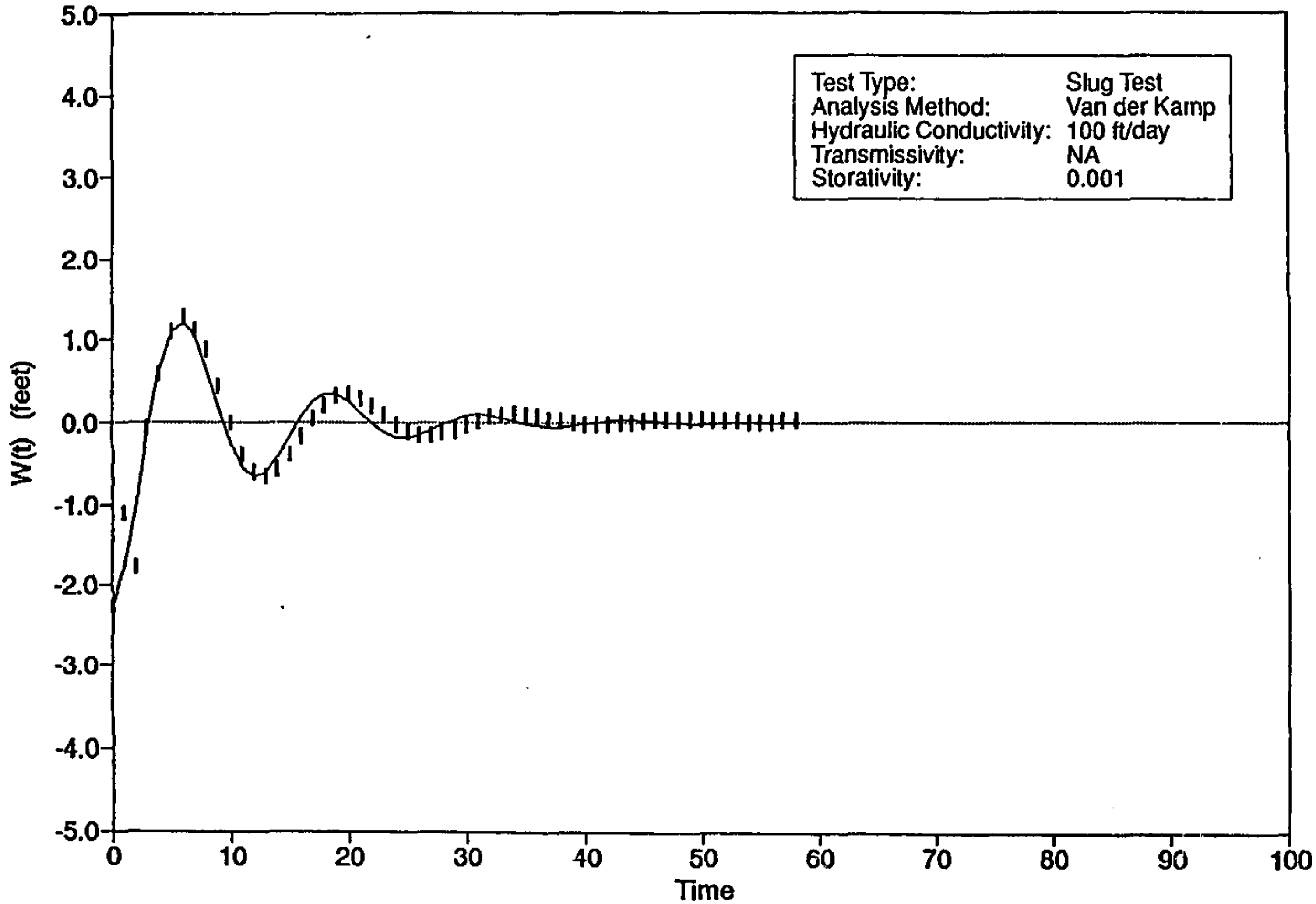


I = Observed
— = Model
NA = Not Applicable

FIGURE **C-10**
SPVT-8.2
SAMMAMISH/PREPARE PLAN/WA

PROJECT NO. 913 1252.009 DRAWING NO. 46132 DATE 6/8/93 DRAWN BY EA

Golder Associates

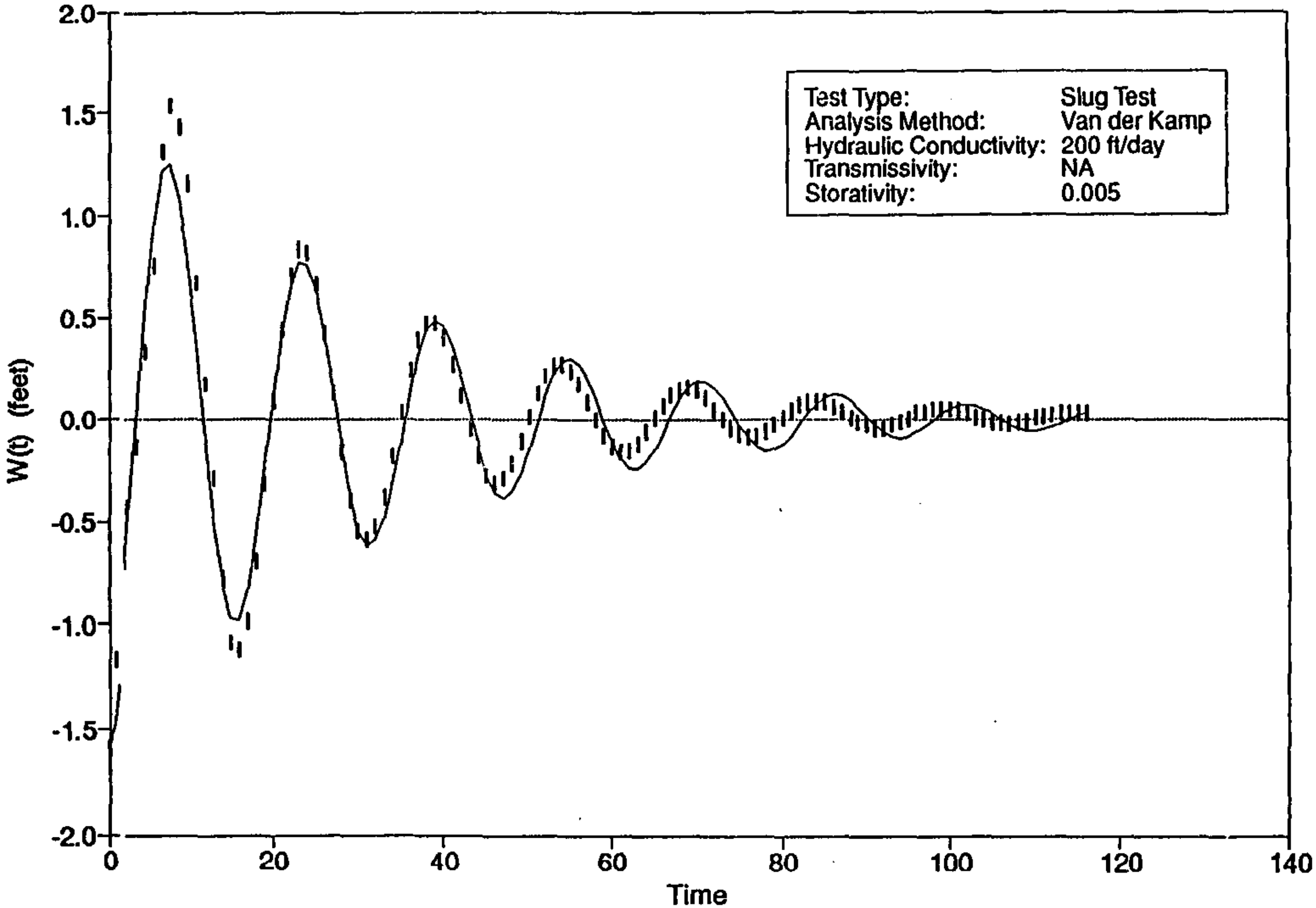


I = Observed
— = Model
NA = Not Applicable

FIGURE **C-11**
SPVT-8.3
SAMMAMISH/PREPARE PLAN/WA

PROJECT NO. 913 1252.009 DRAWING NO. 46133 DATE 6/8/93 DRAWN BY EA

Golder Associates

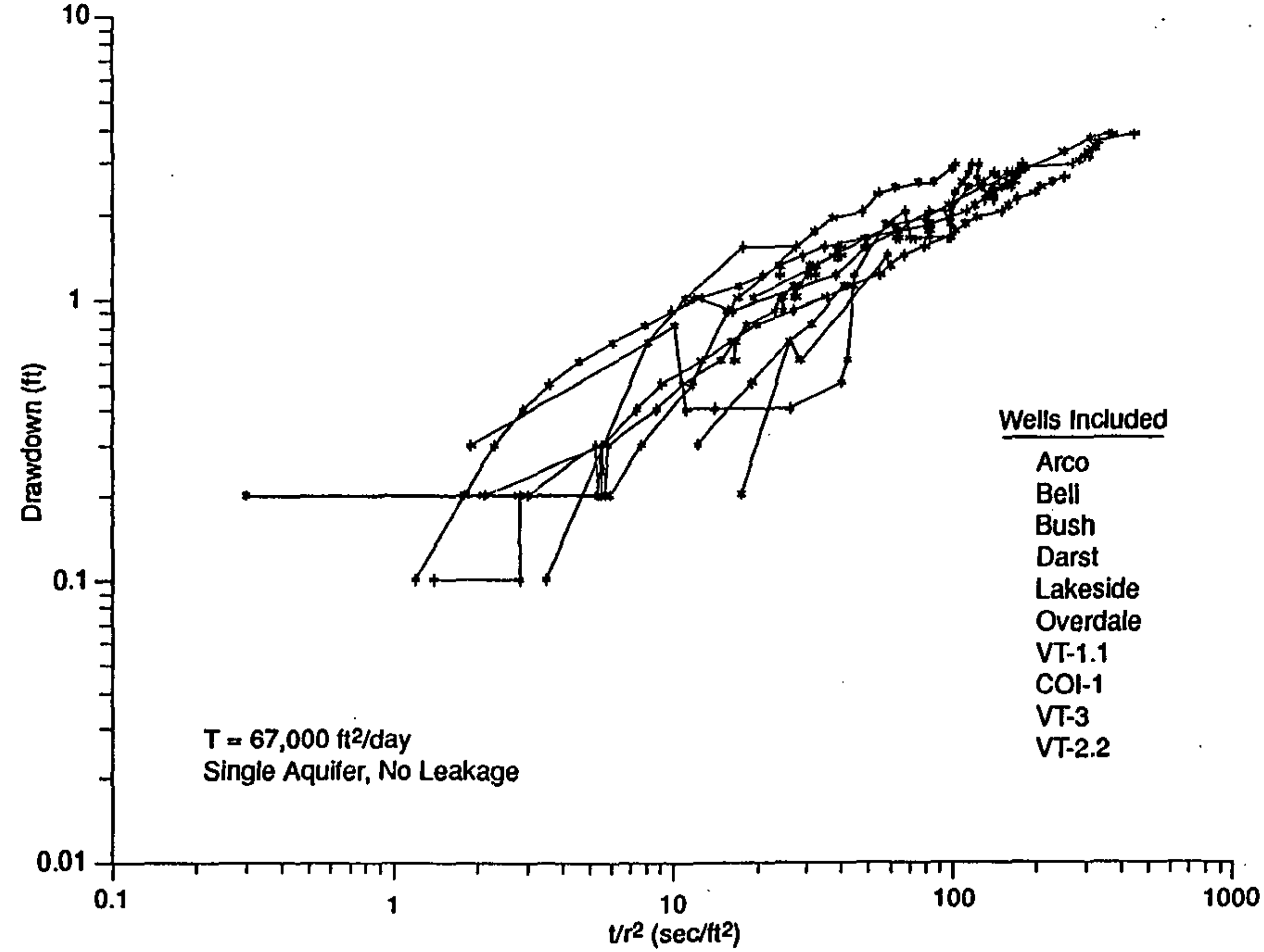


I = Observed
— = Model
NA = Not Applicable

FIGURE **C-12**
SPVT-8.4
SAMMAMISH/PREPARE PLAN/WA

PROJECT NO. 913 1252.009 DRAWING NO. 46117 DATE 6/8/93 DRAWN BY CB

Golder Associates



Test performed by Carr Associates, 1990.

FIGURE **C-13**
SPWSD WELL 7/8 TEST
t/r^2 ANALYSIS
SPWSD/PREPARE PLAN/WA

PROJECT NO. 913 1252.009 DRAWING NO. 46523 DATE 6/10/92 DRAWN BY CW

Golder Associates

	Late Time-Jacob Analysis				Carr Associates Modeling		
	T=2.3 Q/4*PI *ds						
	ds = drawdown over 1 log-cycle						
	Well	ds	T (FT^2/DAY)		Well	T (FT^2/DAY)	
	Well 9	1.2	68,636		VT-8.3	73,857	
	LS-OWP	1.3	63,356		VT-8.2	83,952	
	VT-1.3	1.2	68,636		VT-8.1	83,520	
	VT-5.2	1.2	68,636		VT-7.4	97,516	
	VT-8.4	1.2	68,636		VT-7.3	79,257	
	VT-7.4	1.2	68,636		VT-7.2	74,448	
	WELL 8	1	82,363		VT-7.1	75,456	
	VT-3	1.2	68,636		VT-5.2	101,088	
	VT-5.1	1.4	58,831		VT-3	135,993	
	VT-2.1	1.2	68,636		VT-1.3	75,168	
	7-1.1	0.7	117,661				
	7-1.2	1	82,363				
	7-3.1	1	82,363		AVERAGE	88,026	
	VT-7.1	1.3	63,356				
	VT-2.2	1.3	63,356				
	VT-2.3	1.7	48,449				
	VT-6.1	1.4	58,831				
	VT-6.2	1.4	58,831				
	VT-6.3	1.4	58,831				
	VT-7.2	1.2	68,636				
	VT-7.4	1.25	65,890				
	VT-8.1	1.1	74,875				
	VT-8.3	1.3	63,356				
	VT-8.4	1.3	63,356				
	BELL	1.2	68,636				
	ARCO 7	1	82,363				
	COI2	0.8	102,953				
	COI4	1.25	65,890				
	REID	1.4	58,831				
	PZ-1.2	1.3	63,356				
		AVERAGE	69,906				

TABLE 1.1
LIST OF WELLS MONITORED
DURING SPWSD WELL 9 PUMPING TEST
JULY 12 TO 22, 1992

Map Code	Location (T R-S S/16)	Owner Name	Well Name	Screened Interval Depth (ft)
SP-W9	24N/6E-27E	SPWSD*	WELL 9	194 - 219
SP-W8	24N/6E-28A	SPWSD	WELL 8	105 - 179
VT-1	24N/6E-27D	SPWSD	VT-1.1	28 - 38
VT-1	24N/6E-27D	SPWSD	VT-1.2	70 - 80
VT-1	24N/6E-27D	SPWSD	VT-1.3	150 - 160
VT-2	24N/6E-21Q	SPWSD	VT-2.1	19 - 24
VT-2	24N/6E-21Q	SPWSD	VT-2.2	34 - 39
VT-2	24N/6E-21Q	SPWSD	VT-2.3	74 - 79
VT-3	24N/6E-27E	SPWSD	VT-3	109 - 148
VT-5	24N/6E-21R	SPWSD	VT-5.1	75 - 85
VT-5	24N/6E-21R	SPWSD	VT-5.2	180 - 190
VT-6	24N/6E-21R	SPWSD	VT-6.1	38 - 48
VT-6	24N/6E-21R	SPWSD	VT-6.2	68 - 78
VT-6	24N/6E-21R	SPWSD	VT-6.3	180 - 190
VT-7	24N/6E-27E	SPWSD	VT-7.1	23 - 33
VT-7	24N/6E-27E	SPWSD	VT-7.2	43 - 53
VT-7	24N/6E-27E	SPWSD	VT-7.3	61 - 71
VT-7	24N/6E-27E	SPWSD	VT-7.4	108 - 118
VT-8	24N/6E-27E	SPWSD	VT-8.1	45 - 55
VT-8	24N/6E-27E	SPWSD	VT-8.2	83 - 93
VT-8	24N/6E-27E	SPWSD	VT-8.3	158 - 168
VT-8	24N/6E-27E	SPWSD	VT-8.4	192 - 202
SP7-1	24N/6E-28A	SPWSD	7-1.1	35 - 58
SP7-1	24N/6E-28A	SPWSD	7-1.2	135 - 220
SP7-3	24N/6E-28A	SPWSD	7-3	85 - 150
COI-W1	24N/6E-27M	COI*	WELL 1	90 - 106
COI-W2	24N/6E-27M	COI	WELL 2	82 - 97
COI-W4	24N/6E-28B	COI	WELL 4	77 - 102
COI-W5	24N/6E-28B	COI	WELL 5	323 - 405
COI-TW	24N/6E-28B	COI	DEEP TEST WELL	330 - 450
COI-B2	24N/6E-21F	COI	B2	75 - 77
OWA-P	24N/6E-21J	OVERDALE WATER ASSOCIATION	PRINCIPAL WELL	130 - 140
LS-OWP	24N/6E-27D	LAKESIDE INDUSTRIES	WELL 2-OLD WASH PLANT WELL	31 - 42
LS-MCD	24N/6E-22N	LAKESIDE INDUSTRIES	McDONALD HOUSE WELL	? - 53
BTW	24N/6E-27D	LAKESIDE INDUSTRIES	BELL TELEPHONE WELL	48 - 52
RGP-W	24N/6E-21R	REID SAND AND GRAVEL CO.	10-INCH WELL	? - 60
RSP	24N/6E-21R	REID SAND AND GRAVEL CO.	REID SAND POINT	? - 97
DAR-2	24N/6E-28J	DARIGOLD	WELL 2 - (OUTSIDE BUILDING)	75 - 89
EH-MW	24N/6E-28J	EGGHEAD SOFTWARE	NORTH SIDE OF BUILDING	? - 44
DSP	24N/6E-21K	ROCKY TERRY	DARST SAND POINT	? - 73

TABLE 1.1 (CONTINUED)
LIST OF WELLS MONITORED
DURING SPWSD WELL 9 PUMPING TEST
JULY 12 TO 22, 1992

Map Code	Location (T R-S S/16)	Owner Name	Well Name	Screened Interval Depth (ft)
AR-6	24N/6E-27E	ARCO	MW-6	60 - 65
AR-7	24N/6E-27E	ARCO	MW-7	27 - 32
AR-8	24N/6E-27E	ARCO	MW-8	8 - 18
AR-9	24N/6E-27E	ARCO	MW-9	25 - 30
AR-10	24N/6E-27E	ARCO	MW-10	6 - 16
AR-17	24N/6E-27E	ARCO	MW-17	5 - 25
TEX-3	24N/6E-34D	TEXACO	MW-3	?
PZ-1.1	24N/6E-27D	SPWSD	PZ-1.1	1.5 - 2.20
PZ-1.2	24N/6E-27D	SPWSD	PZ-1.2	5.5 - 6.0
PZ-3	24N/6E-28D	SPWSD	PZ-3	4.5 - 5.0
PZ-4	24N/6E-28B	SPWSD	PZ-4	5.5 - 6.0
PZ-5	24N/6E-21F	SPWSD	PZ-5	5.5 - 6.0
PZ-6	24N/6E-27D	SPWSD	PZ-6	5.0 - 5.5

* SPWSD = SAMMAMISH PLATEAU WATER & SEWER DISTRICT, COI = CITY OF ISSAQUAH
* VT-4 WAS ABONDONED IN 1991

TABLE 1.2
LIST OF SURFACE WATER GAGES MONITORED DURING SPWSD WELL 9 PUMPING TEST JULY 12 TO 22, 1992

Map Code	Location (T R-S S/16)	GAGE OWNER'S NAME	WATER BODY	DESCRIPTION
S-1	24N/6E-21F	USGS-12121600	ISSAQUAH CK.	USGS gage station on SE 56th St.
S-2	24N/6E-22N	SPWSD-McD/LS	JORDAN CK.	SPWSD gage station near McDonald well
S-3	24N/6E-27D	SWM-46A	JORDAN CK.	KC SWM gage station at SE 66th St.
S-4	24N/6E-27Q	SPWSD-EFK/SUNSET	E. FORK ISSAQUAH CK.	SPWSD gage at E. Sunset Way
S-6	24N/6E-21K	SPWSD	JORDAN CK.	Bush Lane gage
S-7	24N/6E-28R	SPWSD-ISS/DOGWOOD	ISSAQUAH CK.	SPWSD gage at NW Dogwood St.
S-9	24N/6E-21R	SPWSD-RIED POND	REID POND	SPWSD gage at Reid Pond
S-10A	24N/6E-28A	SPWSD-BVR WETLND	JORDAN CK./WETLAND	SPWSD gage at beaver pond near Well 7
S-12	24N/6E-12	USGS-12122000	LAKE SAMMAMISH	USGS gage station 5 to 6 miles south of outlet
S-13	24N/6E-28J	DNR	E. FORK ISSAQUAH CK.	Darigold gage
S-14	24N/6E-28A	SPWSD	JORDAN CK.	Well 7 gage
S-15	24N/6E-28A	SPWSD	JORDAN CK.	Well 8 gage
S-16	24N/6E-22N	SPWSD	JORDAN CK.	McDonald Bridge gage
S-17	24N/6E-27D	SPWSD	TRIBUTARY/JORDAN CK.	Lakeside wetland plume

* Jordan Creek also is called North Fork Issaquah Creek

TABLE 2.2

DRAWDOWN IN OBSERVATION WELLS							
Well	Elev. (ft)	Screen (ft)	Zone	Day 3	Day 6	Day 9	Distance (ft)
AR-10	70	6 - 16	A	0.29	0.51	0.78	
AR-17	72	5 - 25	A	0.07	0.31	0.59	1155
AR-3	77	9 - 24	A	0.05	0.35	0.50	838
AR-5	75	41 - 48	A	0.05	0.35	0.45	813
AR-6	71	60 - 65	A	0.22	0.42	0.71	762
AR-7	71	27 - 32	A	0.22	0.42	0.71	762
AR-8	71	8 - 18	A	0.22	0.42	0.71	762
AR-9	70	25 - 30	A	0.23	0.42	0.72	640
BTW	86	48 - 54	B	0.69	1.09	1.39	1877
COI-B2	51	75 - 77	A	0.0	0.3	0.4	5721
COI-TW	67	330 - 450	B	pump	pump	pump	3119
COI-W1	93	90 - 106	B	0.30	0.60	0.80	1405
COI-W2	94	82 - 97	B	0.40	0.60	0.80	1399
COI-W4	66	77 - 102	A	0.0	-0.1	0.5	3125
COI-W5	67	232 - 405	B	pump	pump	pump	3125
DAR-2		75 - 89	B	pump	pump	pump	
DSP	54	< 73	A	0.06	0.58	0.61	4421
LS-MCD	123	< 53	A	0.08	0.10	0.16	2315
LS-OWP	86	31 - 42	C	2.20	2.41	2.87	1140
OWA-P				pump	pump	pump	
PZ-1.2		5.5 - 6.0	A	0.45	0.71	1.15	976
RGP-W	70	< 60	B	0.35	0.97	1.16	3262
RSP		< 97	B	0.31	0.76	1.05	2792
SP-7-1.1	72	35 - 58	A	-0.04	0.23	-0.44	1447
SP-7-1.2	72	135 - 220	B	0.39	0.80	1.01	1447
SP-7-3		85 - 150	A	0.51	1.11	1.44	1759
SP-W8		105 - 179	B	0.51	0.82	1.15	1392
SP-W9	78	194 - 319	C	22.27	22.18	22.45	0
VT-1.1	73	28 - 38	A	0.83	1.07	1.27	515
VT-1.2	73	70 - 80	B	0.99	1.18	1.37	511
VT-1.3	73	150 - 160	C	2.68	2.86	3.19	514
VT-2.1	59	19 - 24	A	0.12	0.26	0.30	3268
VT-2.2	62	34 - 39	A	-0.40	0.0	0.18	3268
VT-2.3	62	74 - 79	B	-0.16	0.24	0.57	3264
VT-3	78	109 - 148	B	1.2	1.8	1.61	54
VT-5.1	68	75 - 85	A	0.28	0.87	1.08	3065
VT-5.2	68	180 - 190	B	1.35	1.70	2.02	3065
VT-6.1	61	38 - 43	A	0.14	0.62	0.91	2856
VT-6.2	61	68 - 78	A	0.01	0.47	0.69	2855
VT-6.3	61	180 - 190	B	0.47	0.91	1.25	2855
VT-7.1	83	23 - 33	C	2.43	2.72	2.97	352
VT-7.2	83	43 - 53	C	2.43	2.72	2.96	354
VT-7.3	83	61 - 71	C	2.22	2.81	3.06	352
VT-7.4	83	108 - 118	C	2.05	2.43	2.74	354
VT-8.1	80	45 - 55	B	1.56	1.83	1.97	185
VT-8.2	80	83 - 93	C	2.63	2.91	3.17	182
VT-8.3	80	158 - 168	C	2.85	3.12	3.39	185
VT-8.4	80	192 - 202	C	2.68	2.97	3.24	182

FIGURE 3.3

TIME - DRAWDOWN IN AQUIFER ZONE "C" WELLS

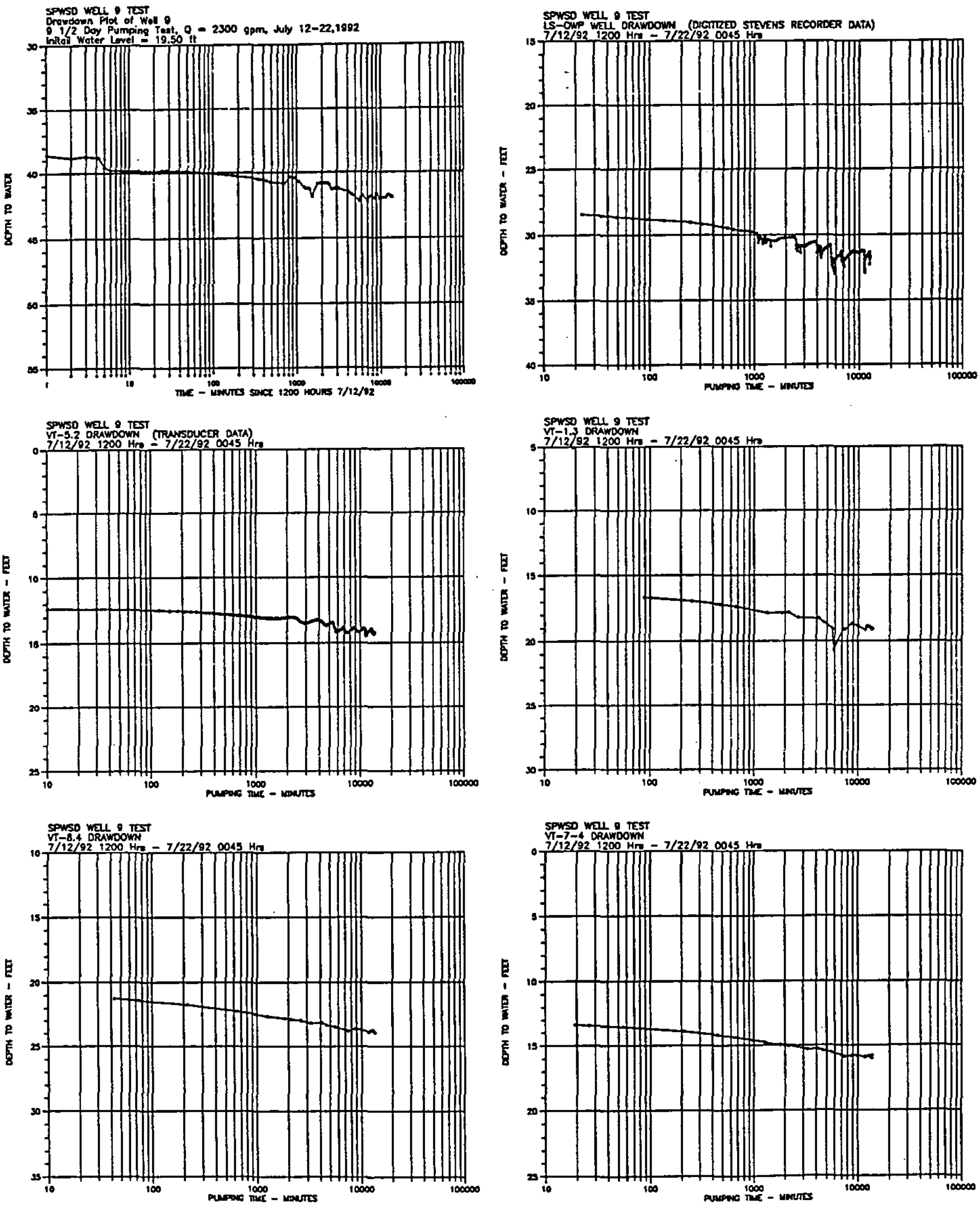
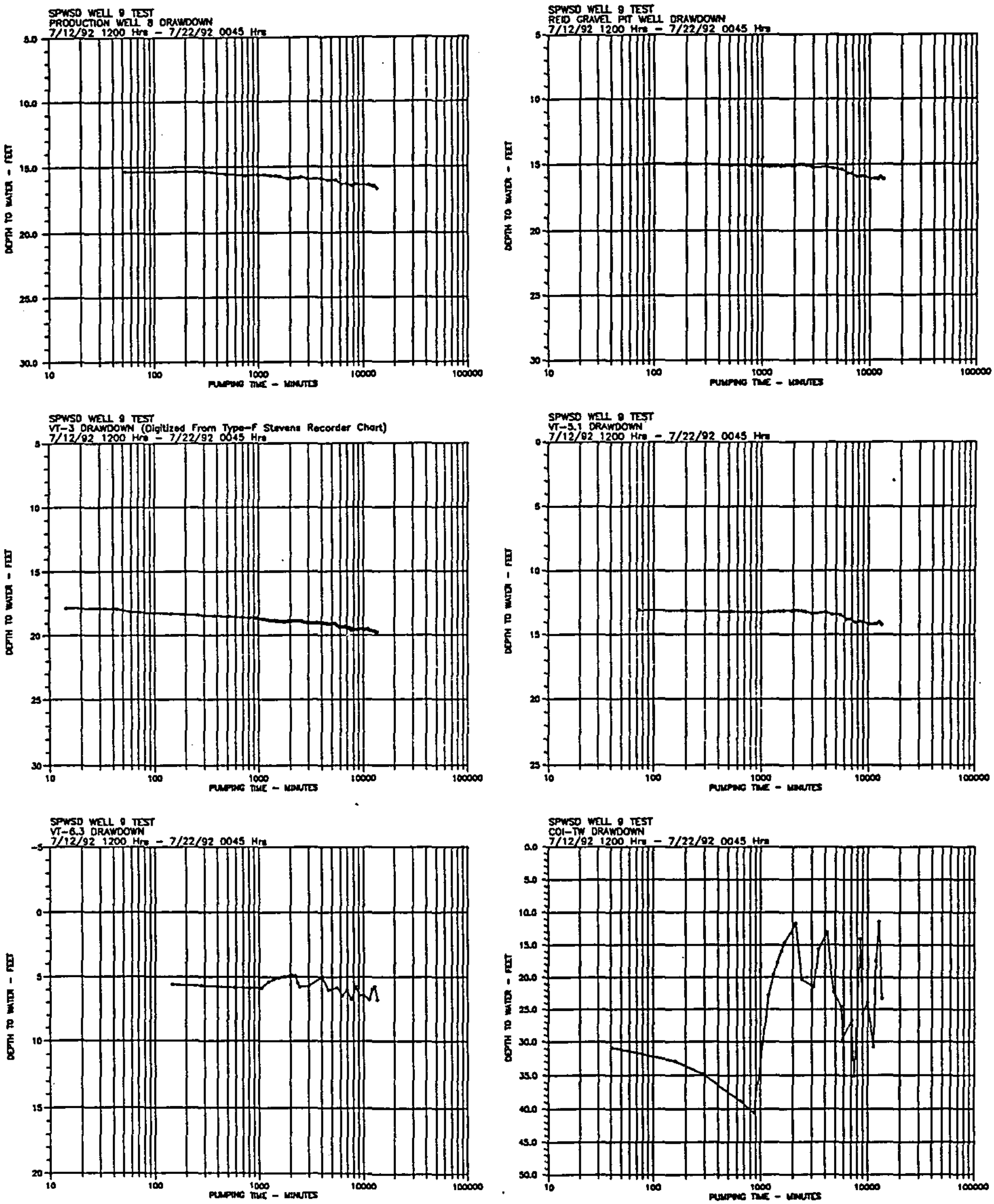


FIGURE 3.4

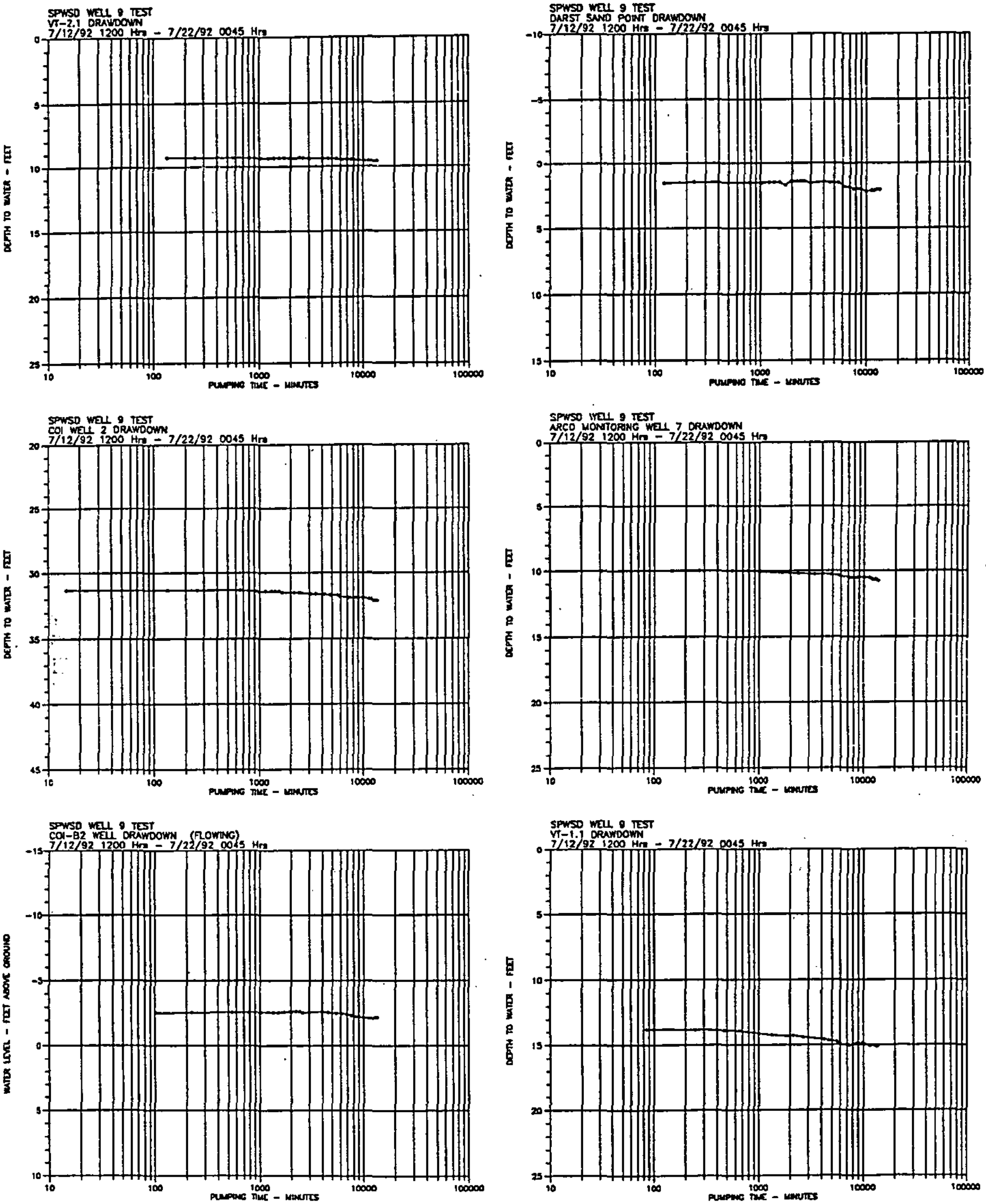
TIME - DRAWDOWN IN AQUIFER ZONE "B" WELLS



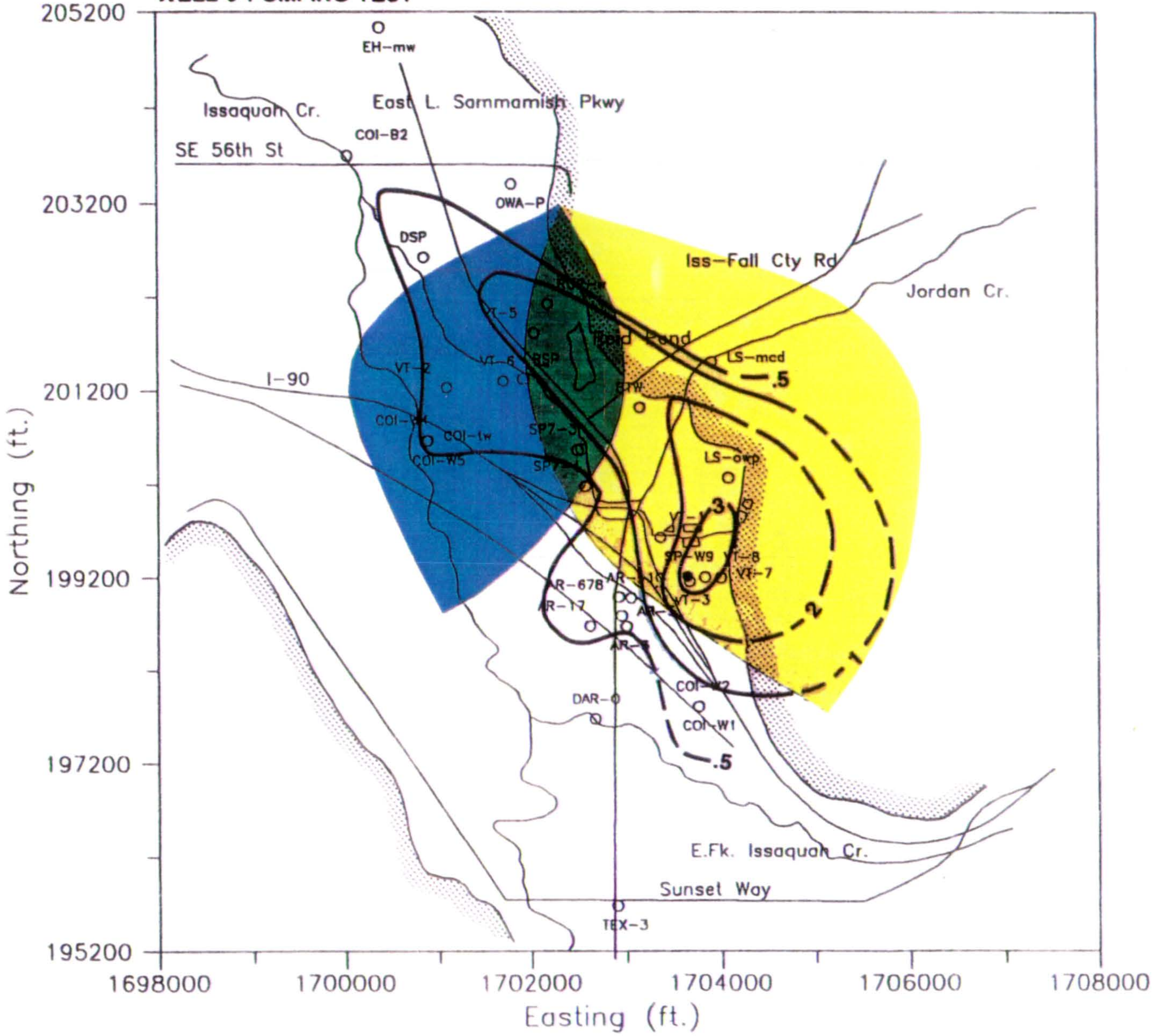
C/A 12428

FIGURE 3.5

TIME - DRAWDOWN IN AQUIFER ZONE "A" WELLS



ZONE OF INFLUENCE AT
WELL 9 PUMPING TEST



LEGEND

1 — Contour on drawdown (feet) (dashed where inferred)

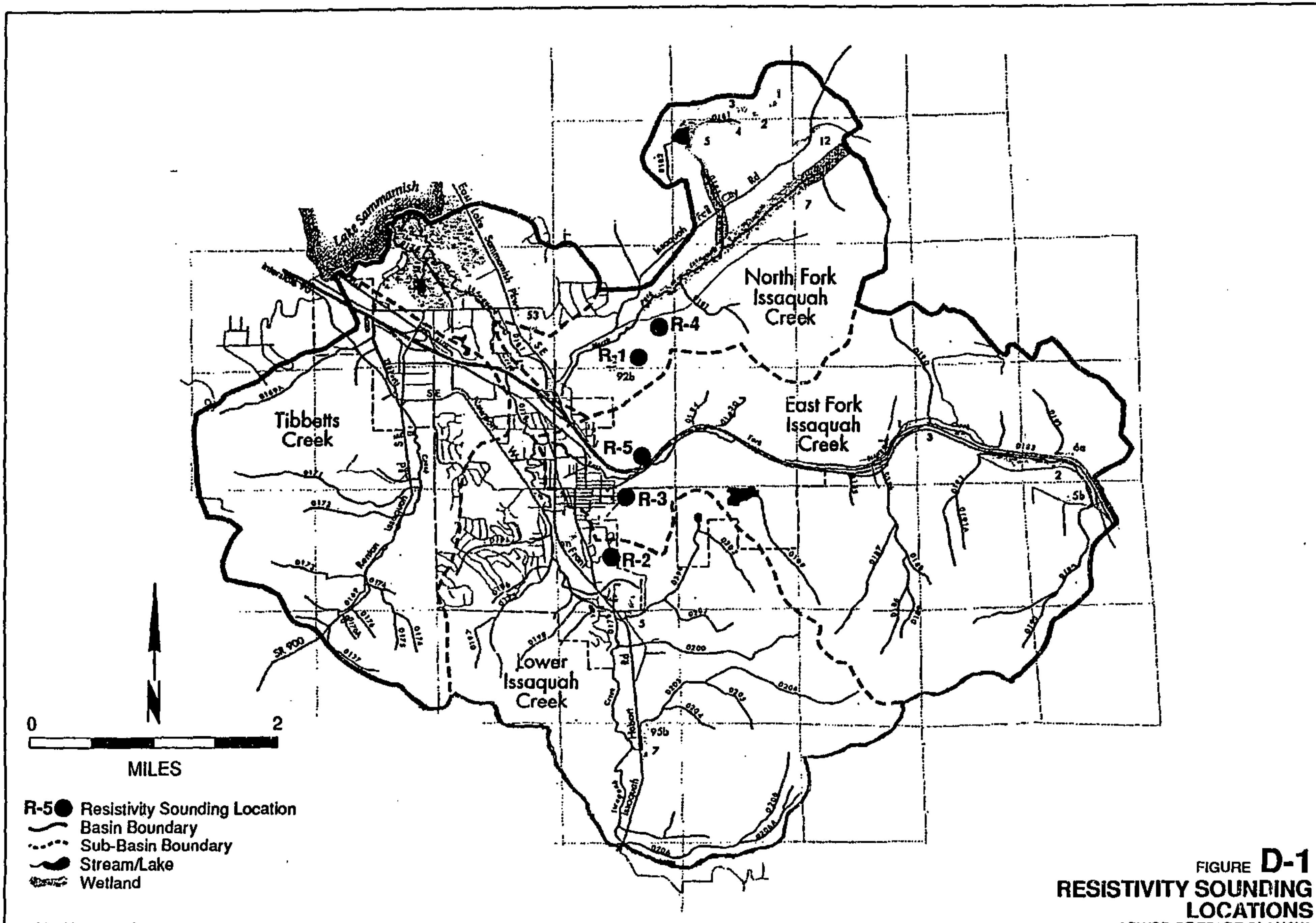
Boundary of Well LS-NWP pumping signature

Boundary of Well COI W-5 pumping signature

Appendix D

APPENDIX D

GEOPHYSICAL RESULTS



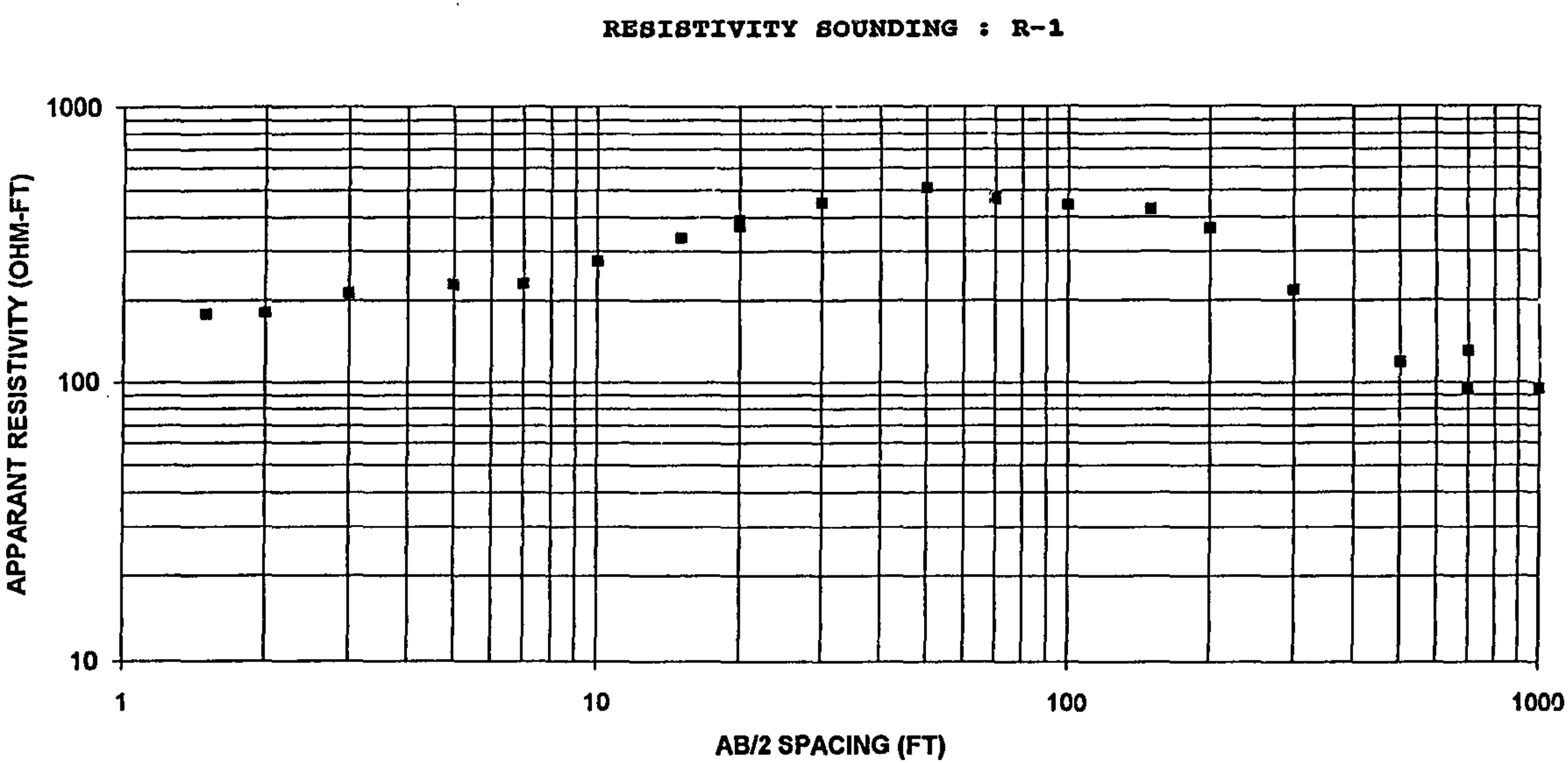
R-5 ● Resistivity Sounding Location
Basin Boundary
Sub-Basin Boundary
Stream/Lake
Wetland

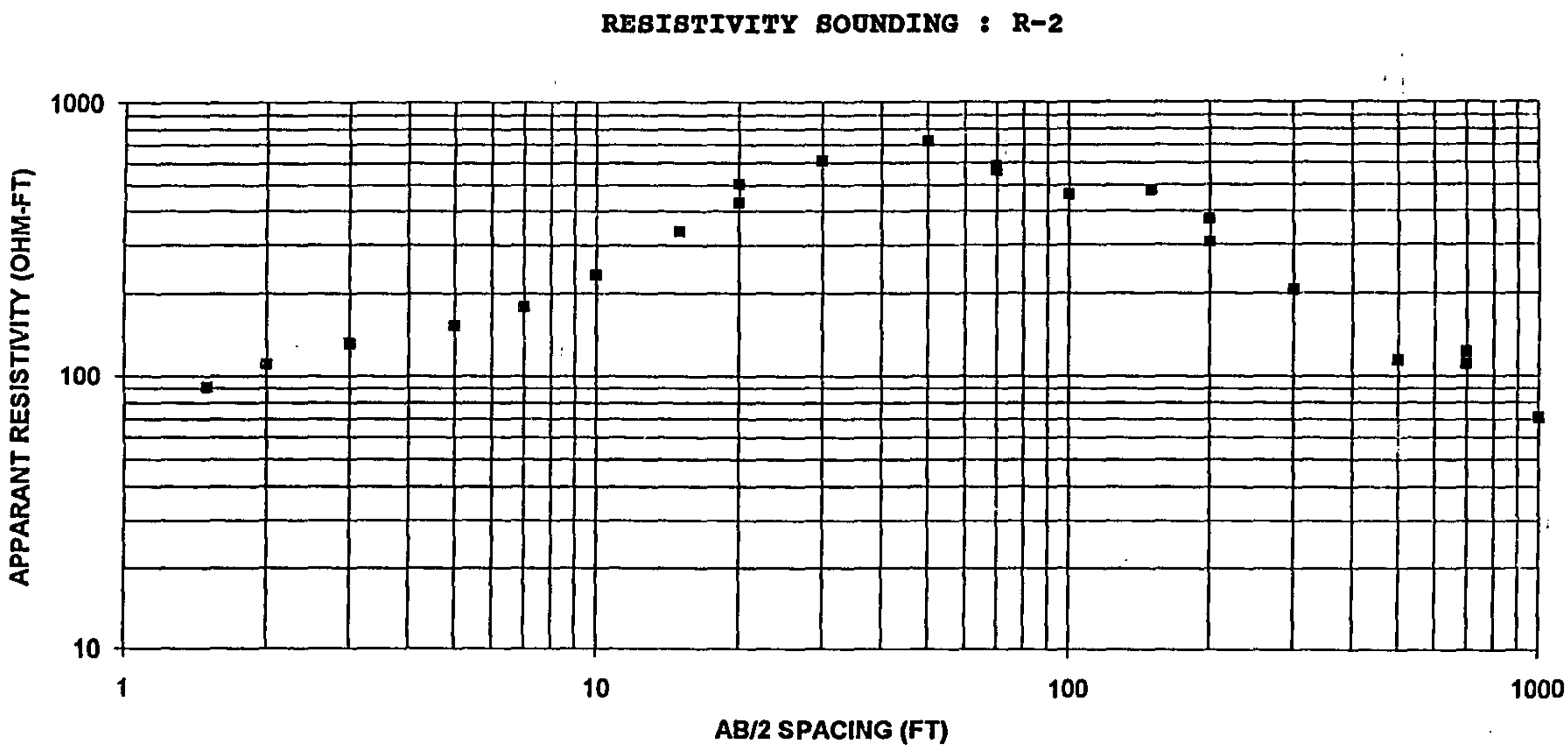
Modified from SWM, 1992

FIGURE **D-1**
RESISTIVITY SOUNDING LOCATIONS
SPWSD/PREPARE PLAN/WA

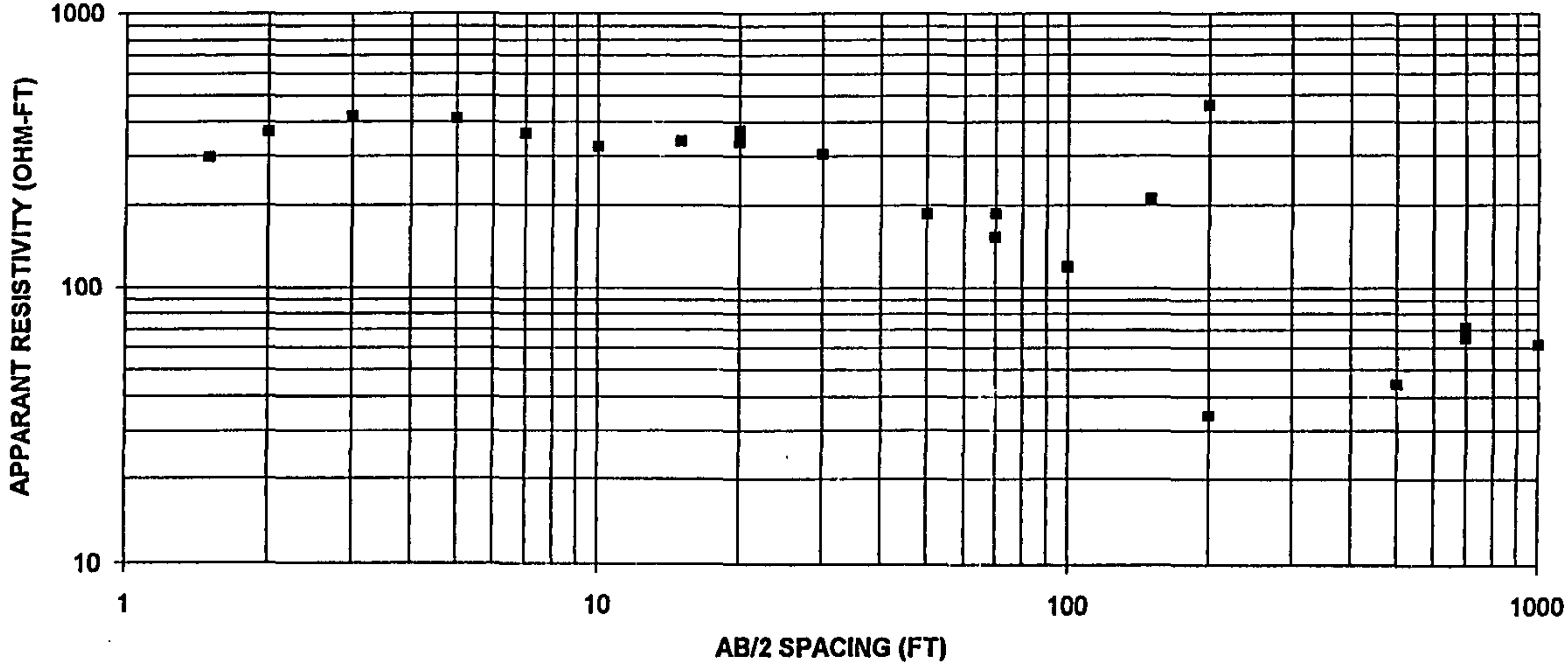
PROJECT NO. 913 1252.009 DRAWING NO. 45791 DATE 6/3/93 DRAWN BY TB

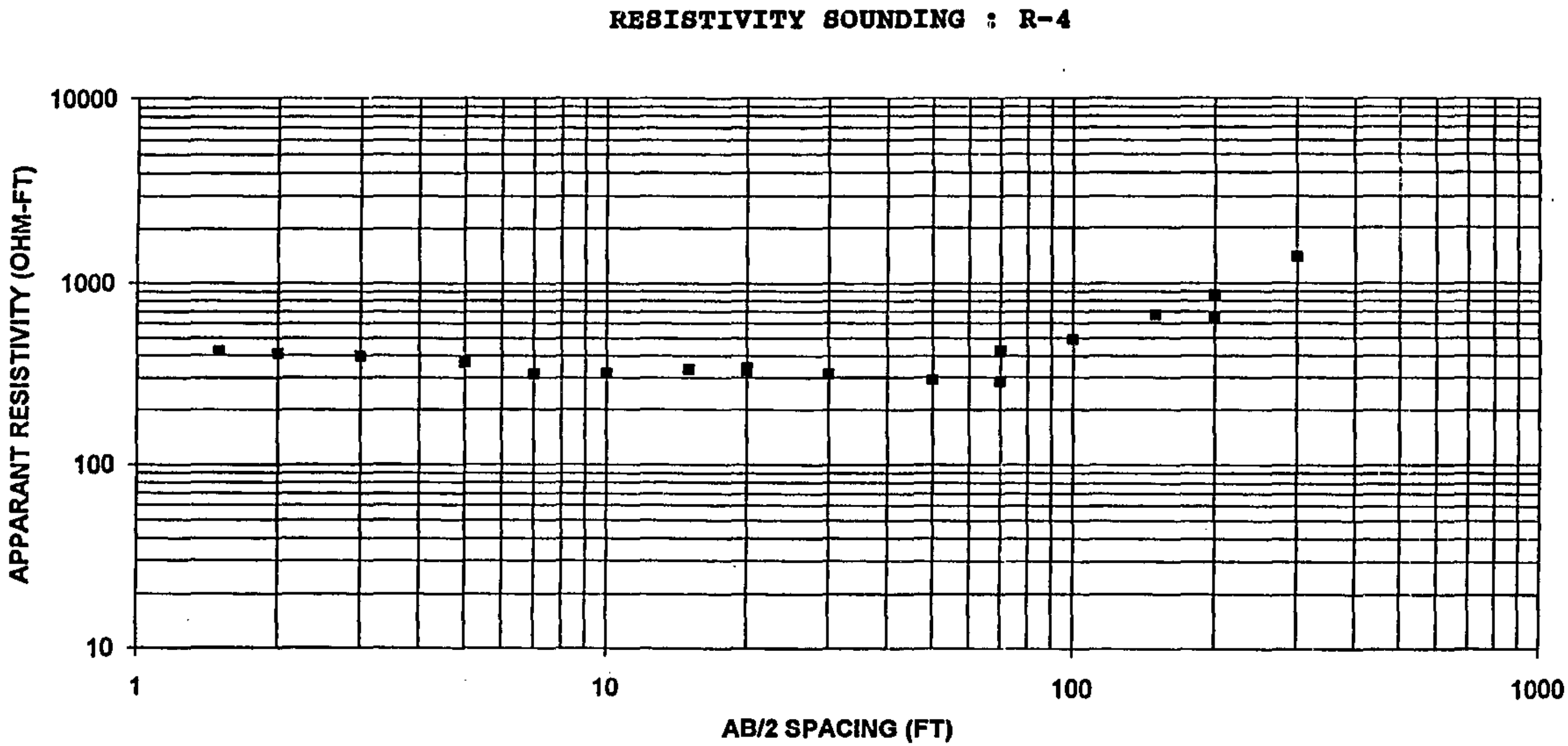
Golder Associates

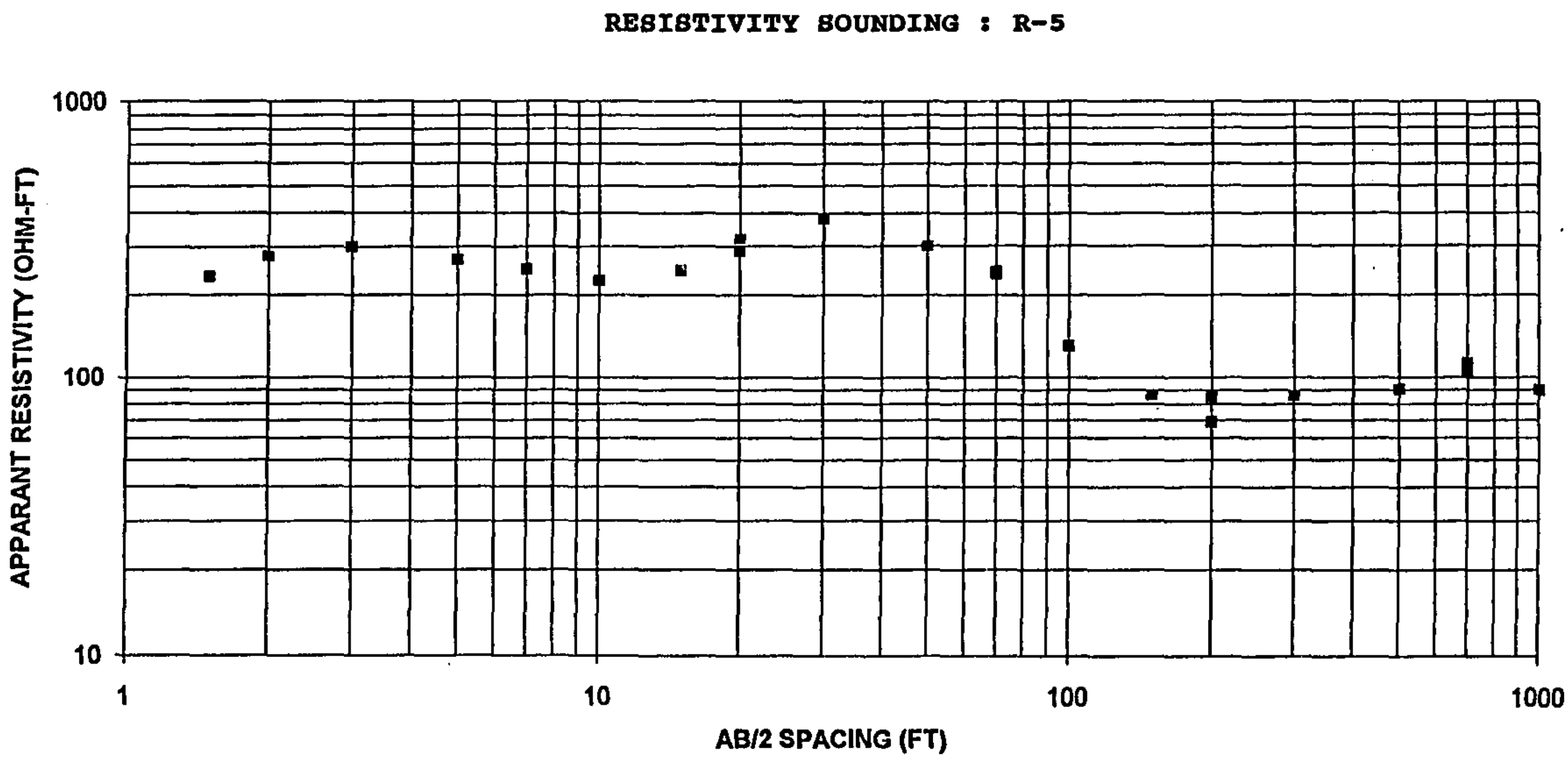

RESISTIVITY SOUNDING : R-1
1000
100
10
APPARANT RESISTIVITY (OHM-FT)
1
10
100
1000
AB/2 SPACING (FT)


RESISTIVITY SOUNDING : R-2
1000
100
10
1
10
100
1000
APPARANT RESISTIVITY (OHM-FT)
AB/2 SPACING (FT)

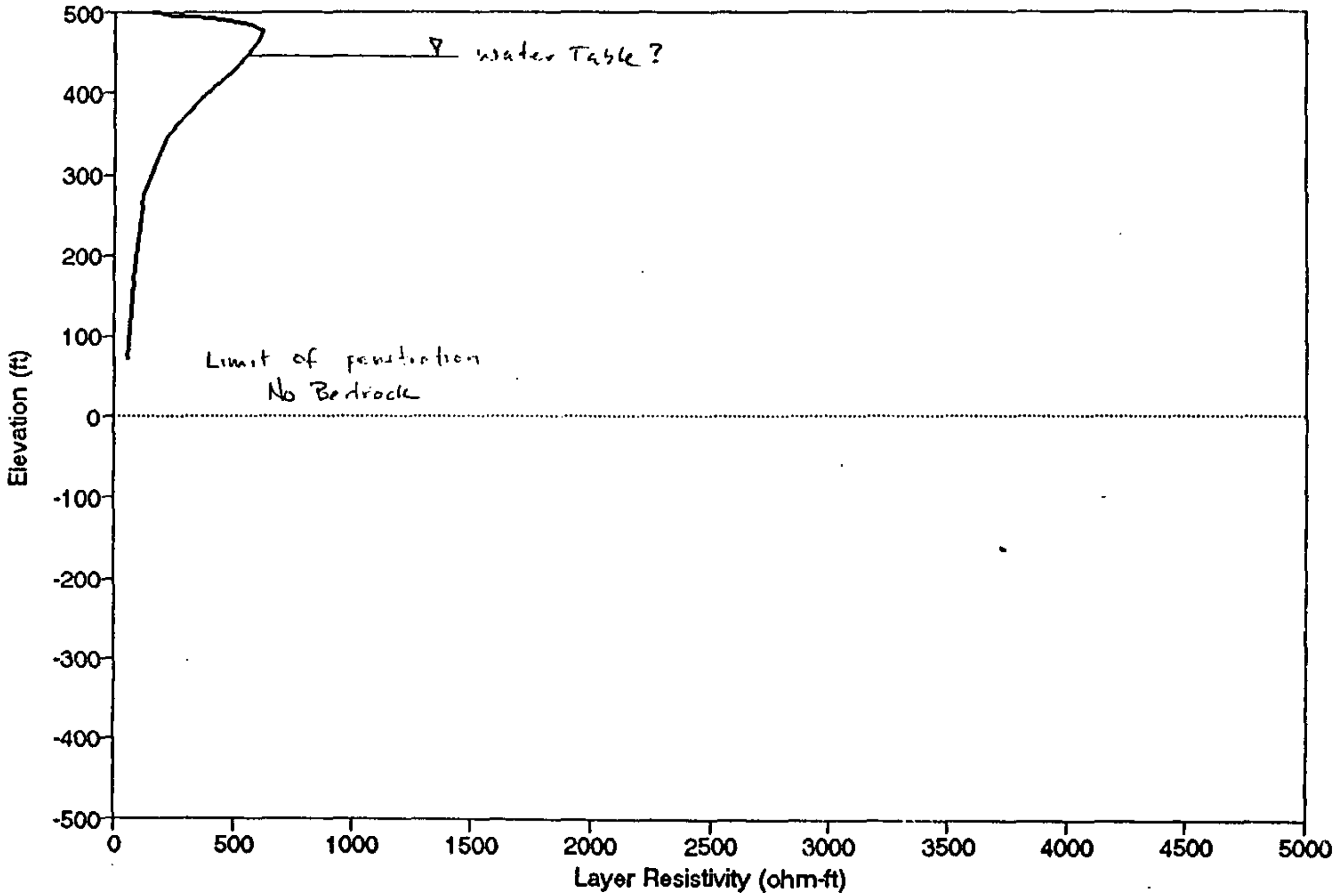
RESISTIVITY SOUNDING : R-3



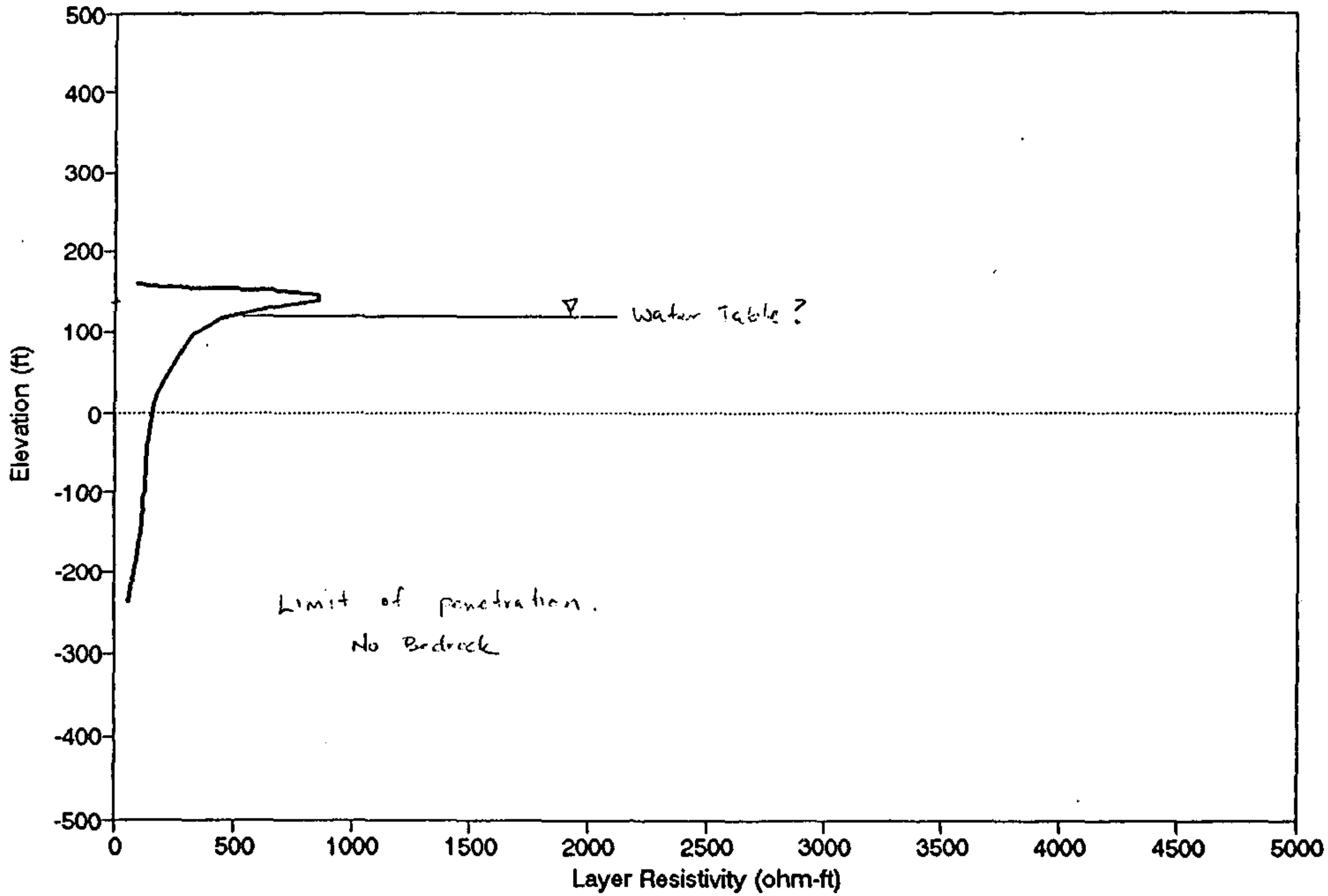

RESISTIVITY SOUNDING : R-4
APPARANT RESISTIVITY (OHM-FT)
10000
1000
100
10
1
10
100
1000
AB/2 SPACING (FT)


RESISTIVITY SOUNDING : R-5
1000
100
10
APPARANT RESISTIVITY (OHM-FT)
1
10
100
1000
AB/2 SPACING (FT)

MODELED RESISTIVITY RESULTS
Sounding R–1 : Grand Ridge

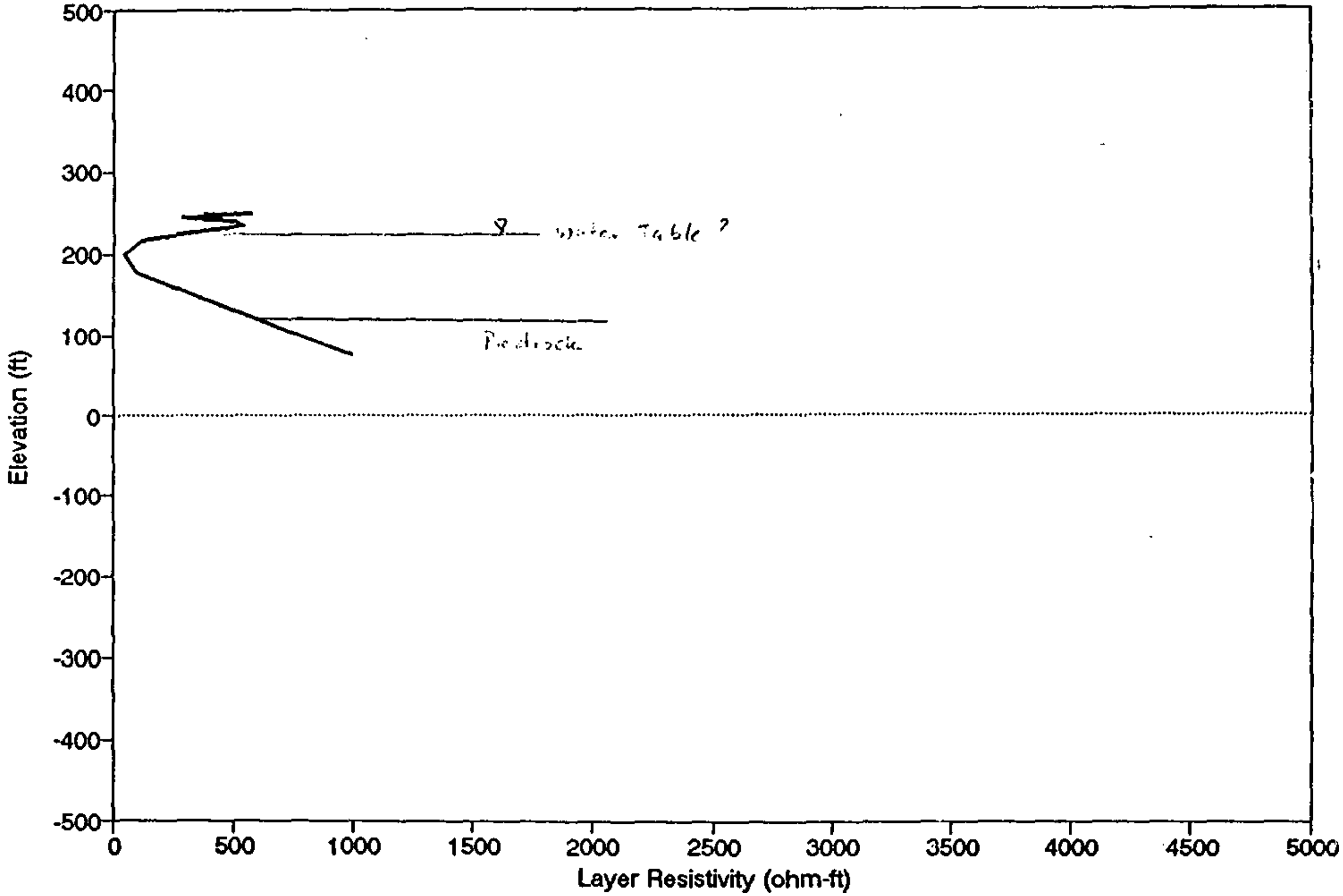


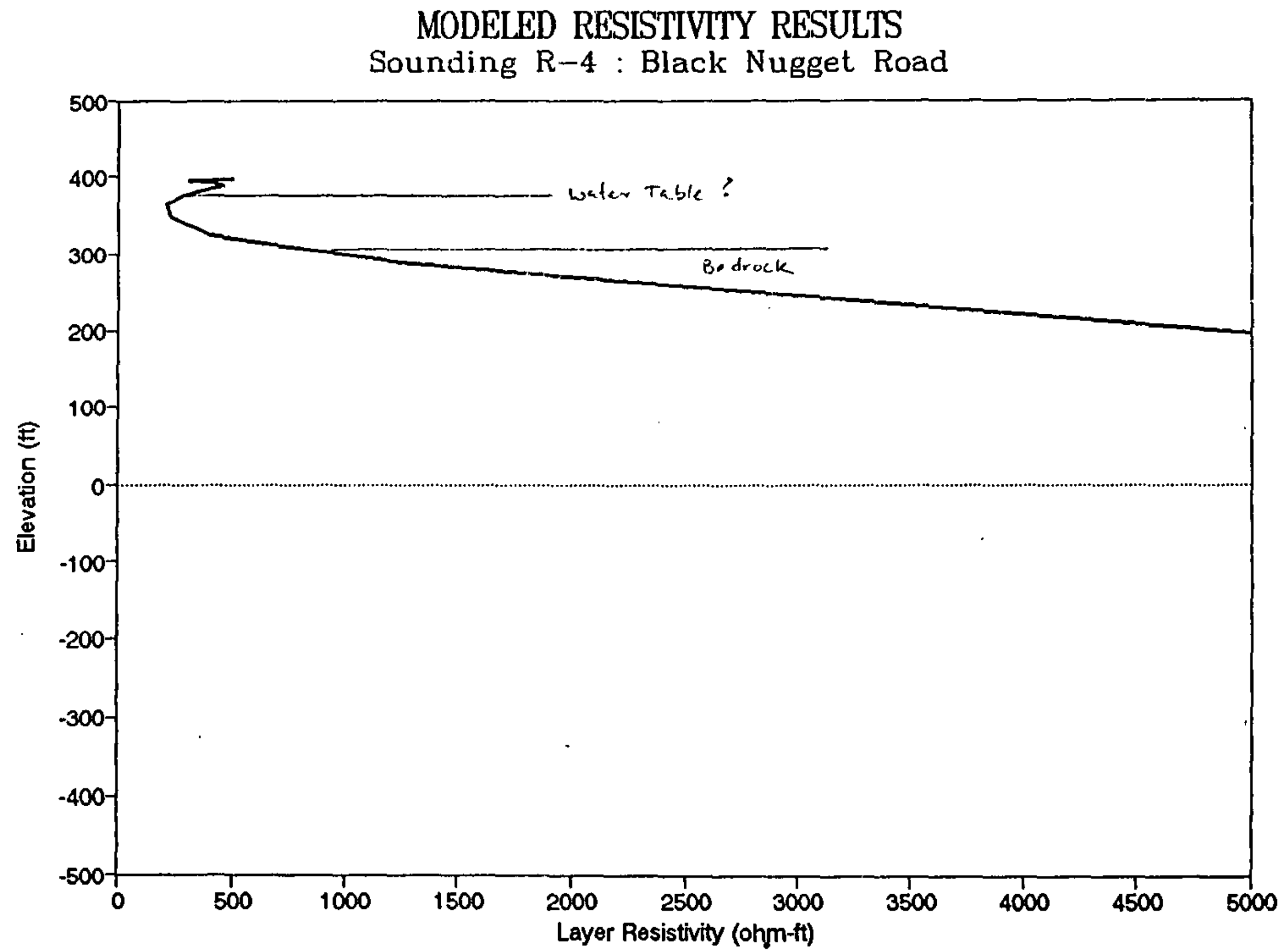
MODELED RESISTIVITY RESULTS
Sounding R-2 : Clark High School



MODELED RESISTIVITY RESULTS

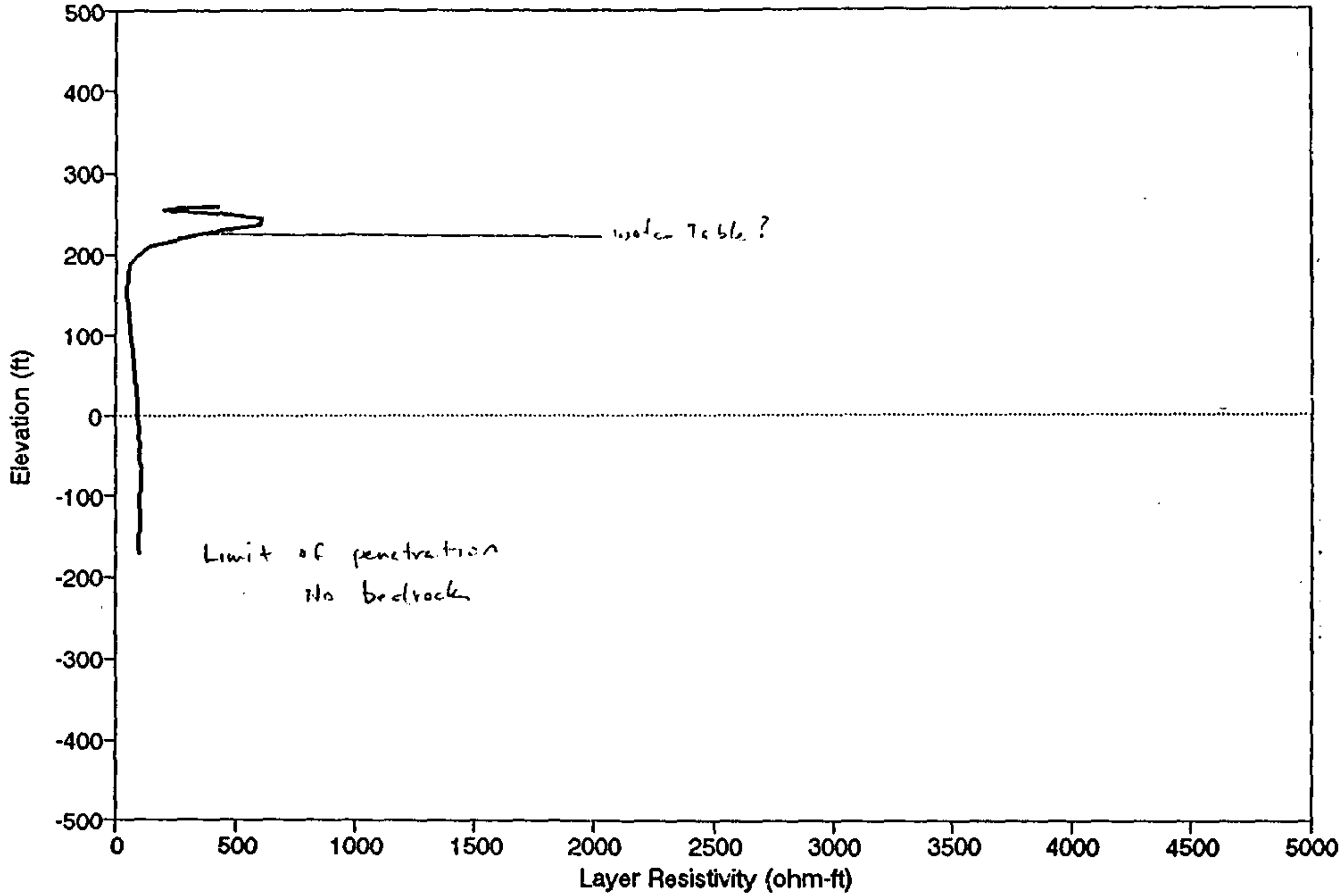
Sounding R-3 : Sunset Onramp

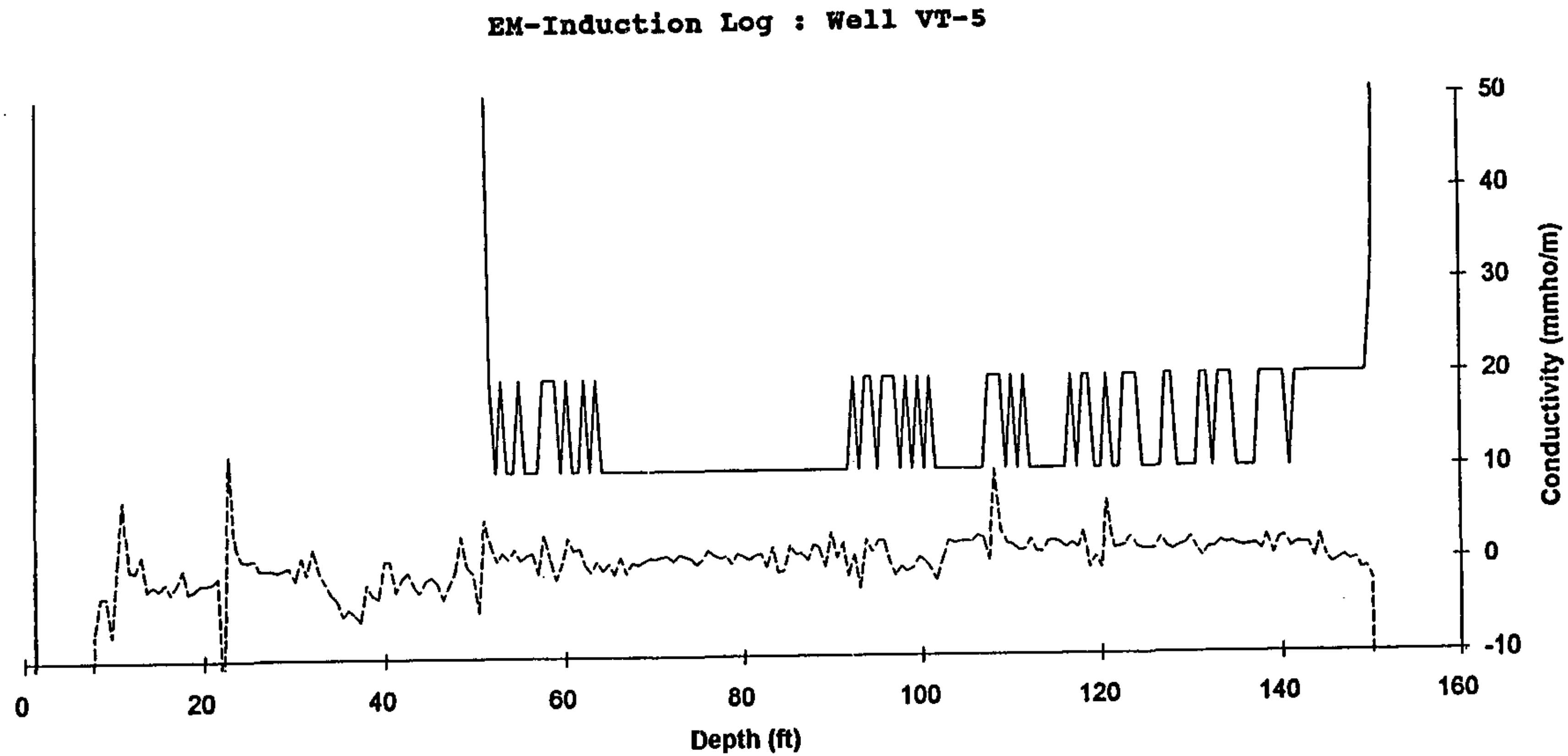




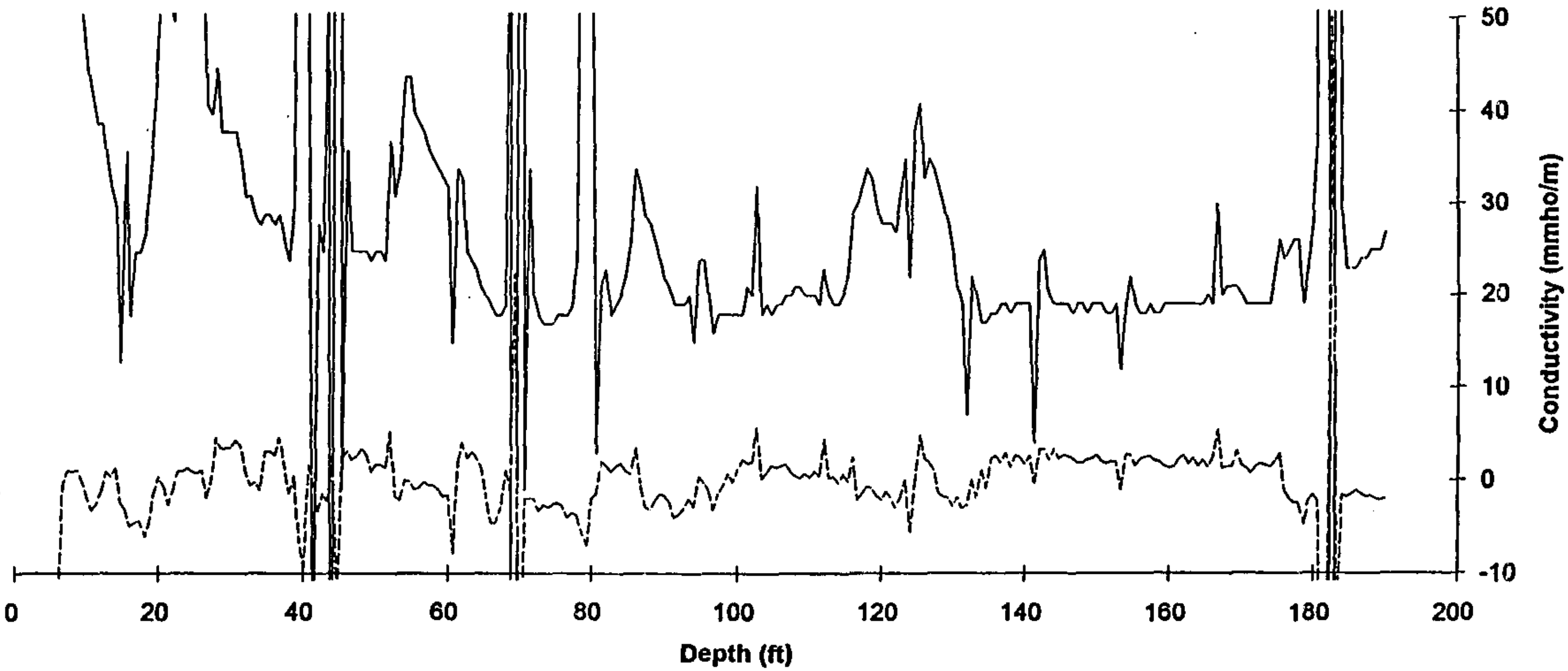
MODELED RESISTIVITY RESULTS
Sounding R-4 : Black Nugget Road
Water Table ?
Bedrock
Elevation (ft)
500
400
300
200
100
0
-100
-200
-300
-400
-500
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
Layer Resistivity (ohm-ft)

MODELED RESISTIVITY RESULTS
Sounding R-5 : I-90 RxR Grade

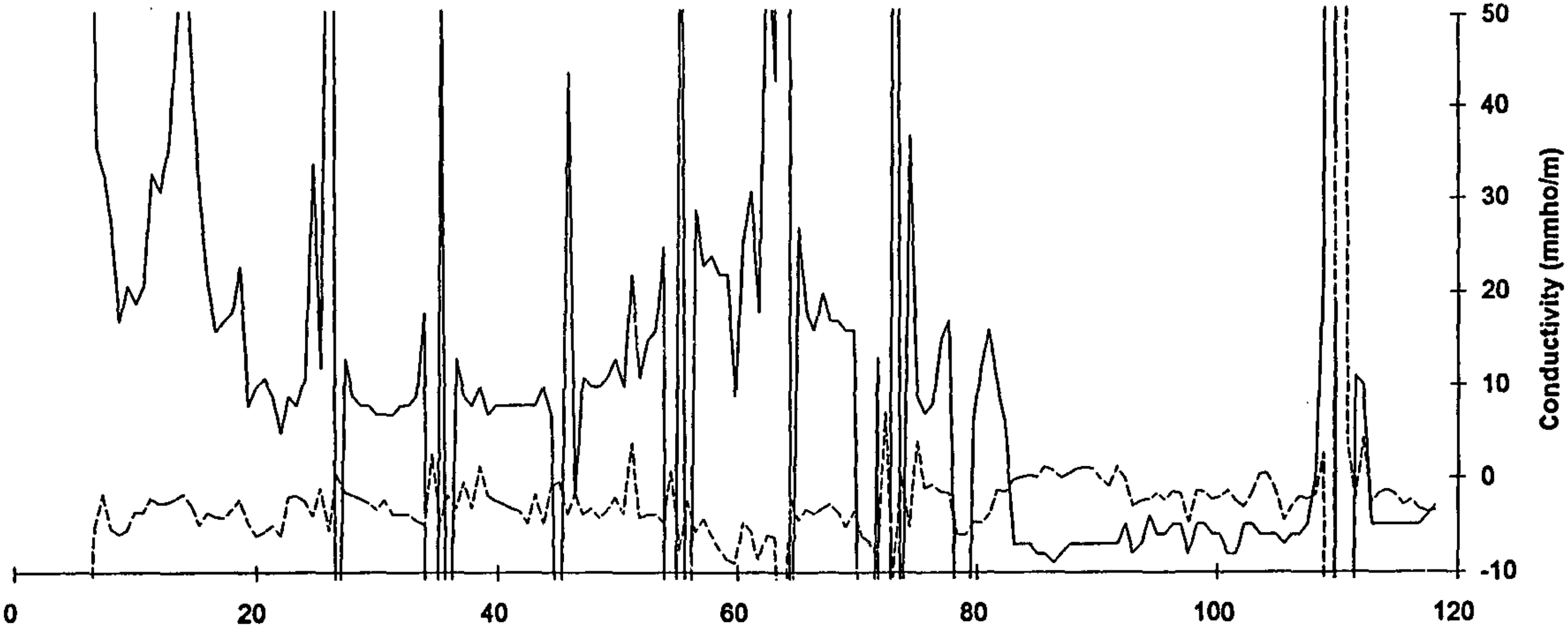


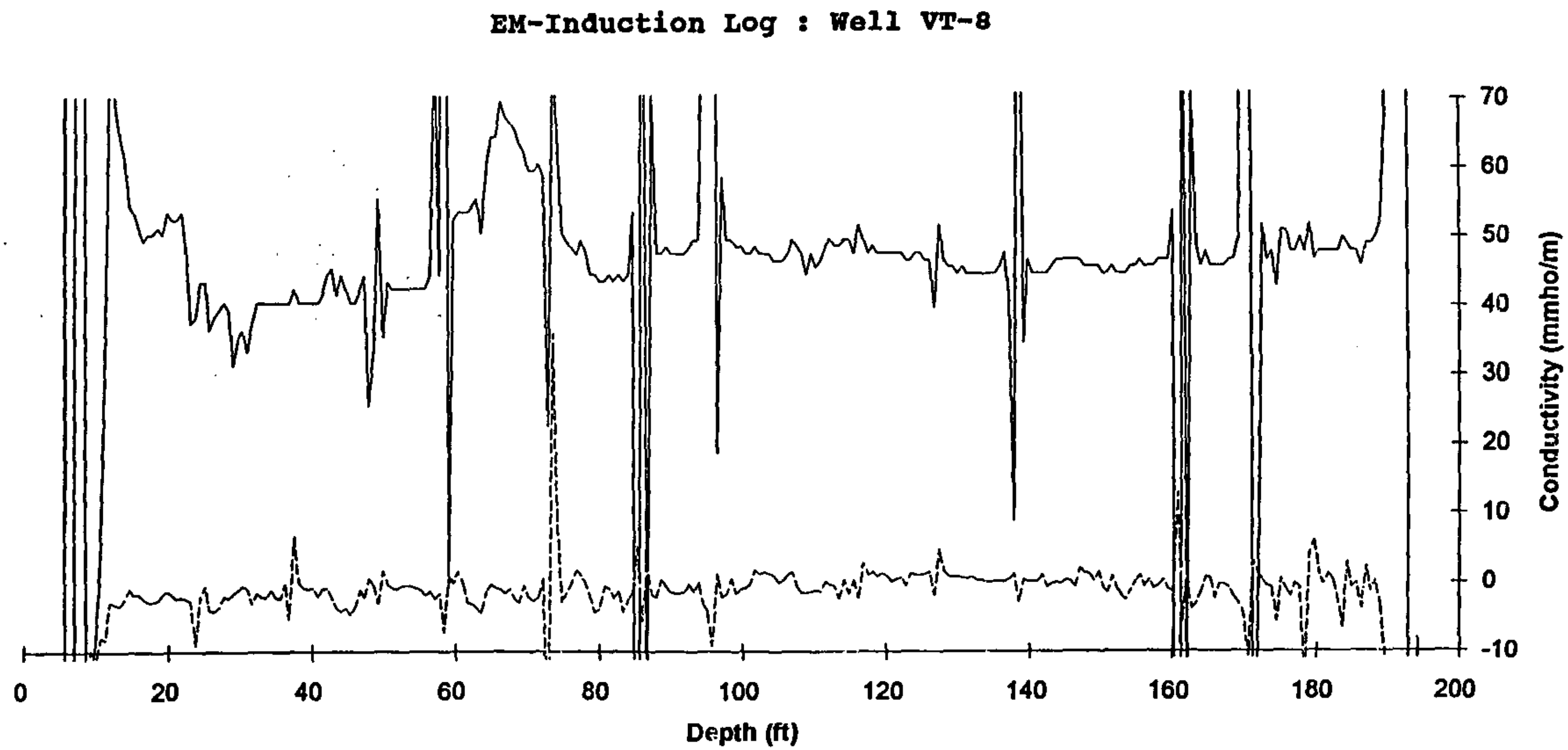

EM-Induction Log : Well VT-5
50
40
30
20
10
0
-10
Conductivity (mmho/m)
0
20
40
60
80
100
120
140
160
Depth (ft)

EM-Induction Log : Well VT-6



EM-Induction Log : Well VT-7




EM-Induction Log : Well VT-8
Conductivity (mmho/m)
70
60
50
40
30
20
10
0
-10
0
20
40
60
80
100
120
140
160
180
200
Depth (ft)

Appendix E

APPENDIX E

HYDROLOGIC RESULTS

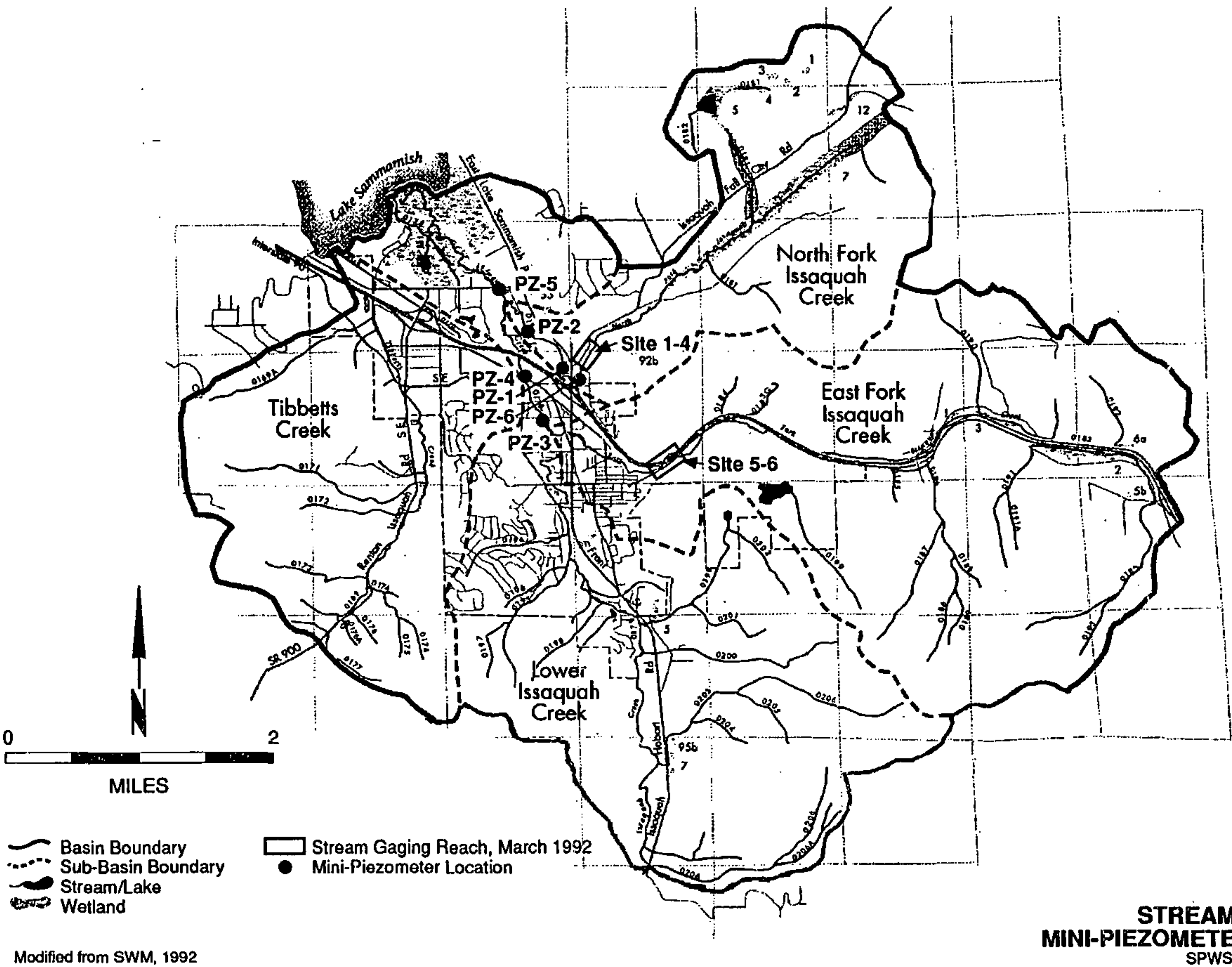


FIGURE **E-1**

STREAM GAGING AND MINI-PIEZOMETER LOCATIONS

SPWSD/PREPARE PLAN/WA

PROJECT NO. 913 1252.009 DRAWING NO. 45793 DATE 11/10/93 DRAWN BY EA

Golder Associates

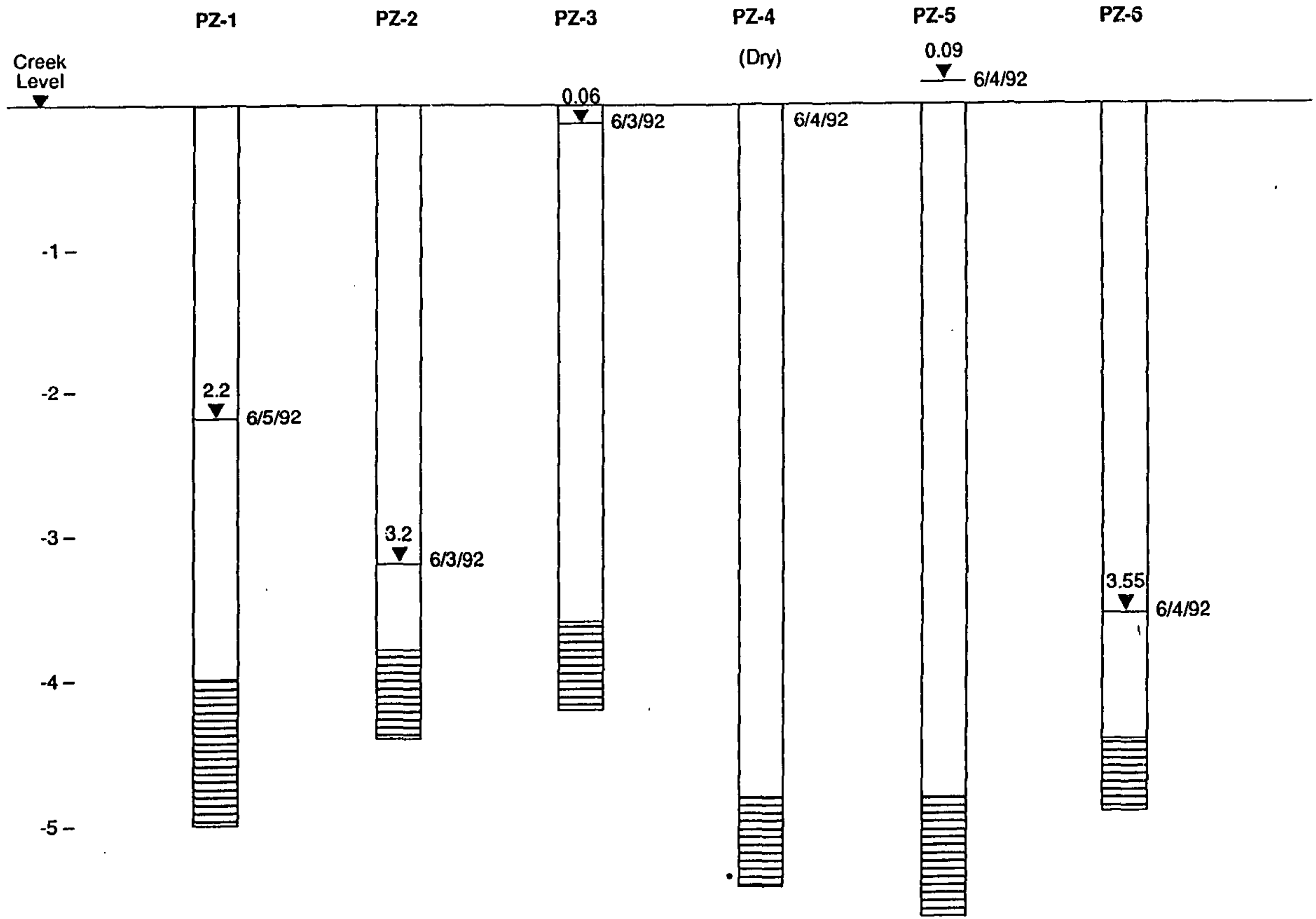


FIGURE **E-2**
SUMMARY OF MINI PIEZOMETER COMPLETIONS
SPWSD/PREPARE PLAN/WA

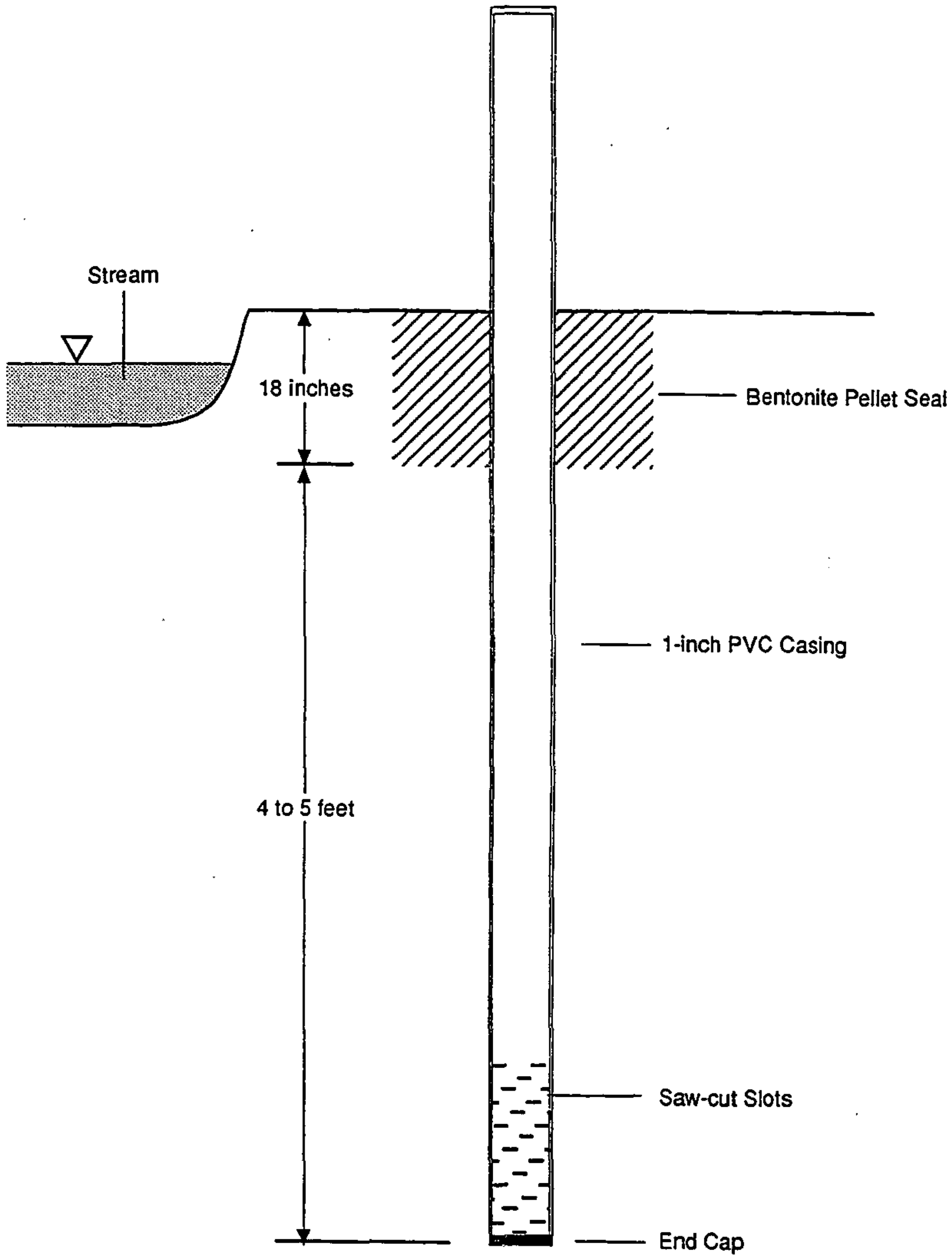


FIGURE **E-3**
MINI PIEZOMETER DESIGN
SPWSD/PREPARE PLAN/WA

PROJECT NO. 913 1252.009 DRAWING NO. 46524 DATE 6/10/93 DRAWN BY CW

Golder Associates

Location: Jordan crk. approx. 300 ft. upstream of McDonald house bridge
Date: 4/2/92 11:00 a.m.
Conditions: Little or no rain previous 2 weeks

dist.	Section	Meas. pt.	Left marg.	Right marg.	Sec. width	Sec. depth	Sec. area	Avg. vel.	Sec. flow
4.00	1	5.00	4.00	5.625	1.63	0.18	0.2925	0.14	0.0410
5.00	2	6.25	5.63	7.125	1.50	0.35	0.5250	0.60	0.3150
6.25	3	8.00	7.13	8.5	1.38	0.75	1.0313	0.91	0.9384
8.00	4	9.00	8.50	9.7	1.20	0.53	0.6360	0.24	0.1526
9.00	5	10.40	9.70	10.65	0.95	0.75	0.7125	0.26	0.1852
10.40	6	10.90	10.65	11.45	0.80	0.80	0.6400	1.55	0.9920
10.90	7	12.00	11.45	12.5	1.05	0.80	0.8400	0.52	0.4368
12.00	8	13.00	12.50	13.5	1.00	0.65	0.6500	0.34	0.2210
13.00	9	14.00	13.50	14.5	1.00	0.65	0.6500	0.05	0.0325
14.00	10	15.00	14.50	17.5	3.00	0.80	2.4000	0.00	0.0000
15.00									
17.50									

Streamflow = 3.31

Site 2

(300 ft)

Location: Jordan crk. under bridge at McDonald house
Date: 4/2/92 1:15 p.m.
Conditions: Little or no rain previous 2 weeks

dist.	Section	Meas. pt.	Left marg.	Right marg.	Sec. width	Sec. depth	Sec. area	Avg. vel.	Sec. flow
2.00	1	3.00	2.00	3.45	1.45	0.27	0.3915	0.28	0.1096
3.00	2	3.90	3.45	4.45	1.00	0.58	0.5800	0.41	0.2378
3.90	3	5.00	4.45	5.5	1.05	0.23	0.2415	1.33	0.3212
5.00	4	6.00	5.50	6.5	1.00	0.67	0.6700	0.58	0.3886
6.00	5	7.00	6.50	7.5	1.00	0.57	0.5700	0.76	0.4332
7.00	6	8.00	7.50	8.5	1.00	0.57	0.5700	0.41	0.2337
8.00	7	9.00	8.50	9.5	1.00	0.36	0.3600	0.08	0.0288
9.00	8	10.00	9.50	10.5	1.00	0.61	0.6100	0.98	0.5978
10.00	9	11.00	10.50	11.5	1.00	0.36	0.3600	0.83	0.2988
11.00	10	12.00	11.50	12.9	1.40	0.20	0.2800	0.49	0.1372
12.00									
12.90									

Streamflow = 2.79

SWM gage on Jordan crk (at bridge near Lakeside Industries)
Water level at 4.26' 4/2/92 2:15 p.m.

~ 2.6 cfs
(per comm. w/ Dave Funke, SWM 4/6/92)

Site 5

Location: Jordan crk., approx. 15 ft. upstream of bridge at SE 60th St.
Date: 4/2/92 3:00 p.m.
Conditions: Little or no rain previous 2 weeks

dist.	Section	Meas. pt.	Left marg.	Right marg.	Sec. width	Sec. depth	Sec. area	Avg. vel.	Sec. flow
1.00	1	2.00	1.00	2.50	1.50	1.00	1.5000	0.00	0.0000
2.00	2	3.00	2.50	3.50	1.00	1.15	1.1500	0.09	0.1035
3.00	3	4.00	3.50	4.50	1.00	1.28	1.2800	0.19	0.2432
4.00	4	5.00	4.50	5.50	1.00	1.46	1.4600	0.41	0.5986
5.00	5	6.00	5.50	6.50	1.00	1.47	1.4700	0.22	0.3234
6.00	6	7.00	6.50	7.50	1.00	1.18	1.1800	0.19	0.2242
7.00	7	8.00	7.50	8.50	1.00	0.79	0.7900	0.24	0.1896
8.00	8	9.00	8.50	10.00	1.50	0.34	0.5100	0.15	0.0765
9.00									
10.00									

Streamflow = 1.76

Water level below I-Beam on SW corner of bridge = 3.65'
(SE 60th St bridge over Jordan Cr)

Location: Jordan crk., Approx. 80 ft. downstream of bridge at SE 60th St.
Date: 4/2/92 3:30 p.m.
Conditions: Little or no rain previous 2 weeks

dist.	Section	Meas. pt.	Left marg.	Right marg.	Sec. width	Sec. depth	Sec. area	Avg. vel.	Sec. flow
0.90	1	2.00	0.90	2.50	1.60	0.51	0.8160	0.82	0.6691
2.00	2	3.00	2.50	3.50	1.00	0.57	0.5700	1.15	0.6555
3.00	3	4.00	3.50	4.50	1.00	0.55	0.5500	1.42	0.7810
4.00	4	5.00	4.50	5.50	1.00	0.51	0.5100	1.09	0.5559
5.00	5	6.00	5.50	6.50	1.00	0.46	0.4600	1.54	0.7084
6.00	6	7.00	6.50	7.50	1.00	0.42	0.4200	0.86	0.3612
7.00	7	8.00	7.50	9.00	1.50	0.51	0.7650	0.52	0.3978
8.00									
9.00									

Streamflow = 4.13

Site 2

Location: E. Fork Issaquah crk, under Sunset overpass and I–90 (beside wooden bridge)
Date: 4/2/92 4:45 p.m.
Conditions: Little or no rain previous 2 weeks

dist.	Section	Meas. pt.	Left marg.	Right marg.	Sec. width	Sec. depth	Sec. area	Avg. vel.	Sec. flow
2.00	1	3.00	2.00	3.50	1.50	0.65	0.9750	0.20	0.1950
3.00	2	4.00	3.50	4.50	1.00	0.98	0.9800	0.00	0.0000
4.00	3	5.00	4.50	5.50	1.00	1.11	1.1100	0.00	0.0000
5.00	4	6.00	5.50	6.50	1.00	1.40	1.4000	0.05	0.0700
6.00	5	7.00	6.50	7.50	1.00	1.32	1.3200	0.40	0.5280
7.00	6	8.00	7.50	8.50	1.00	1.14	1.1400	0.90	1.0260
8.00	7	9.00	8.50	9.50	1.00	1.00	1.0000	1.60	1.6000
9.00	8	10.00	9.50	10.50	1.00	0.90	0.9000	1.66	1.4940
10.00	9	11.00	10.50	11.50	1.00	0.93	0.9300	1.37	1.2741
11.00	10	12.00	11.50	12.50	1.00	0.66	0.6600	1.82	1.2012
12.00	11	13.00	12.50	13.50	1.00	0.55	0.5500	1.58	0.8690
13.00	12	14.00	13.50	14.50	1.00	0.43	0.4300	1.50	0.6450
14.00	13	15.00	14.50	15.50	1.00	0.33	0.3300	1.55	0.5115
15.00	14	16.00	15.50	16.50	1.00	0.35	0.3500	0.80	0.2800
16.00	15	17.00	16.50	20.50	4.00	0.17	0.6800	0.27	0.1836
17.00									
20.50									

Streamflow = 9.88

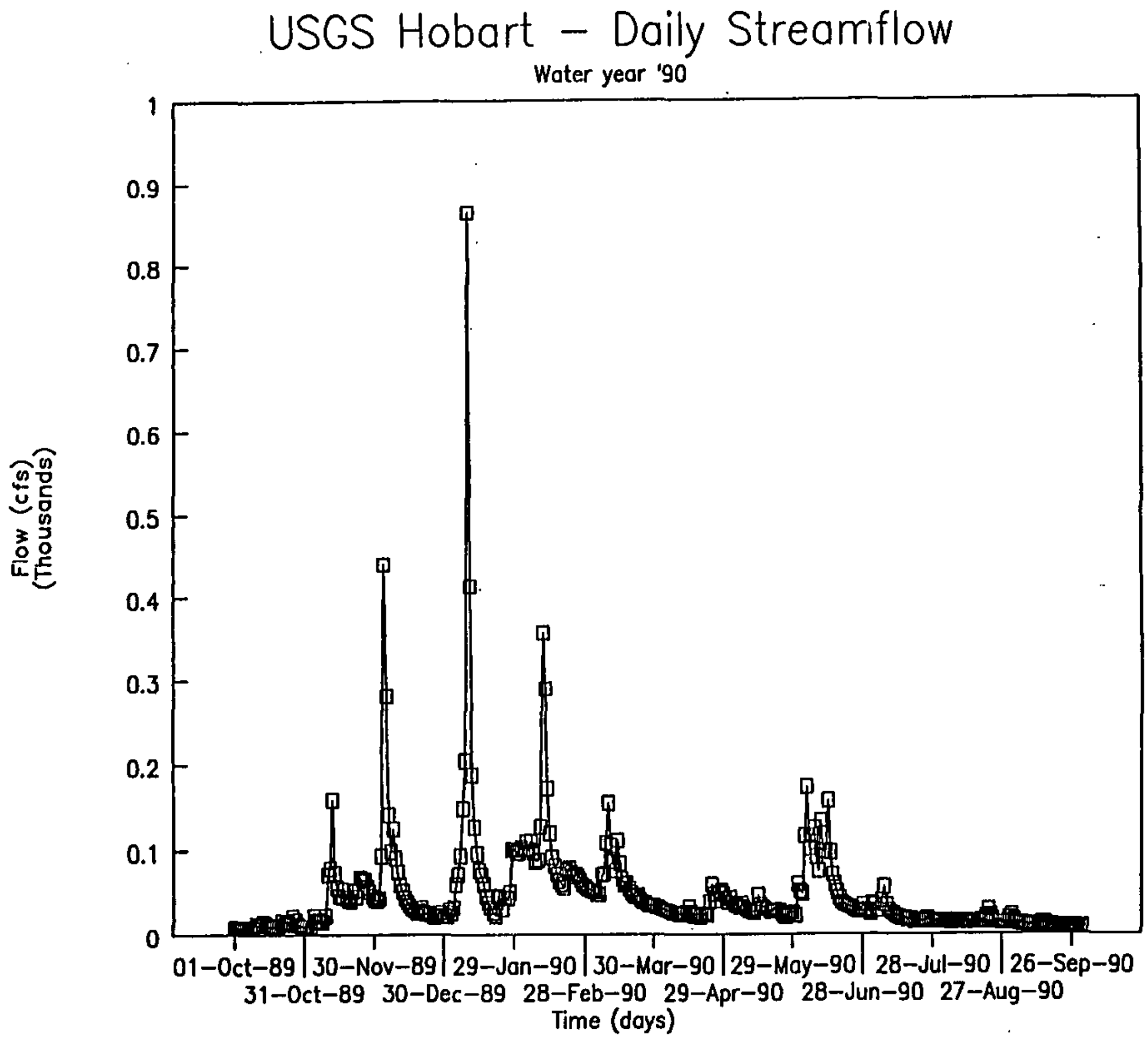
Distance from top of 2x6 on bridge to water
5.97' 4/2/92 6:15 p.m.

1000 F

Location: E. Fork Issaquah crk, approx. 1000 ft. downstream of Sunset overpass/I-90
gaging location is approx. 60 ft. downstream of culvert draining Lk. Tradition
Date: 4/2/92 5:20 p.m.
Conditions: Little or no rain previous 2 weeks

dist.	Section	Meas. pt.	Left marg.	Right marg.	Sec. width	Sec. depth	Sec. area	Avg. vel.	Sec. flow
13.30	1	15.00	13.30	15.50	2.20	0.28	0.6160	0.98	0.6037
15.00	2	16.00	15.50	16.50	1.00	0.28	0.2800	1.14	0.3192
16.00	3	17.00	16.50	17.50	1.00	0.45	0.4500	1.25	0.5625
17.00	4	18.00	17.50	18.50	1.00	0.93	0.9300	0.46	0.4278
18.00	5	19.00	18.50	19.50	1.00	1.00	1.0000	1.25	1.2500
19.00	6	20.00	19.50	20.50	1.00	1.10	1.1000	1.27	1.3970
20.00	7	21.00	20.50	21.50	1.00	1.02	1.0200	1.27	1.2954
21.00	8	22.00	21.50	22.50	1.00	0.81	0.8100	0.00	0.0000
22.00	9	23.00	22.50	23.50	1.00	0.99	0.9900	1.32	1.3068
23.00	10	24.00	23.50	24.50	1.00	1.00	1.0000	1.64	1.6400
24.00	11	25.00	24.50	25.50	1.00	1.03	1.0300	0.44	0.4532
25.00	12	26.00	25.50	27.00	1.50	0.80	1.2000	0.00	0.0000
26.00									
27.00									

Streamflow = 9.26

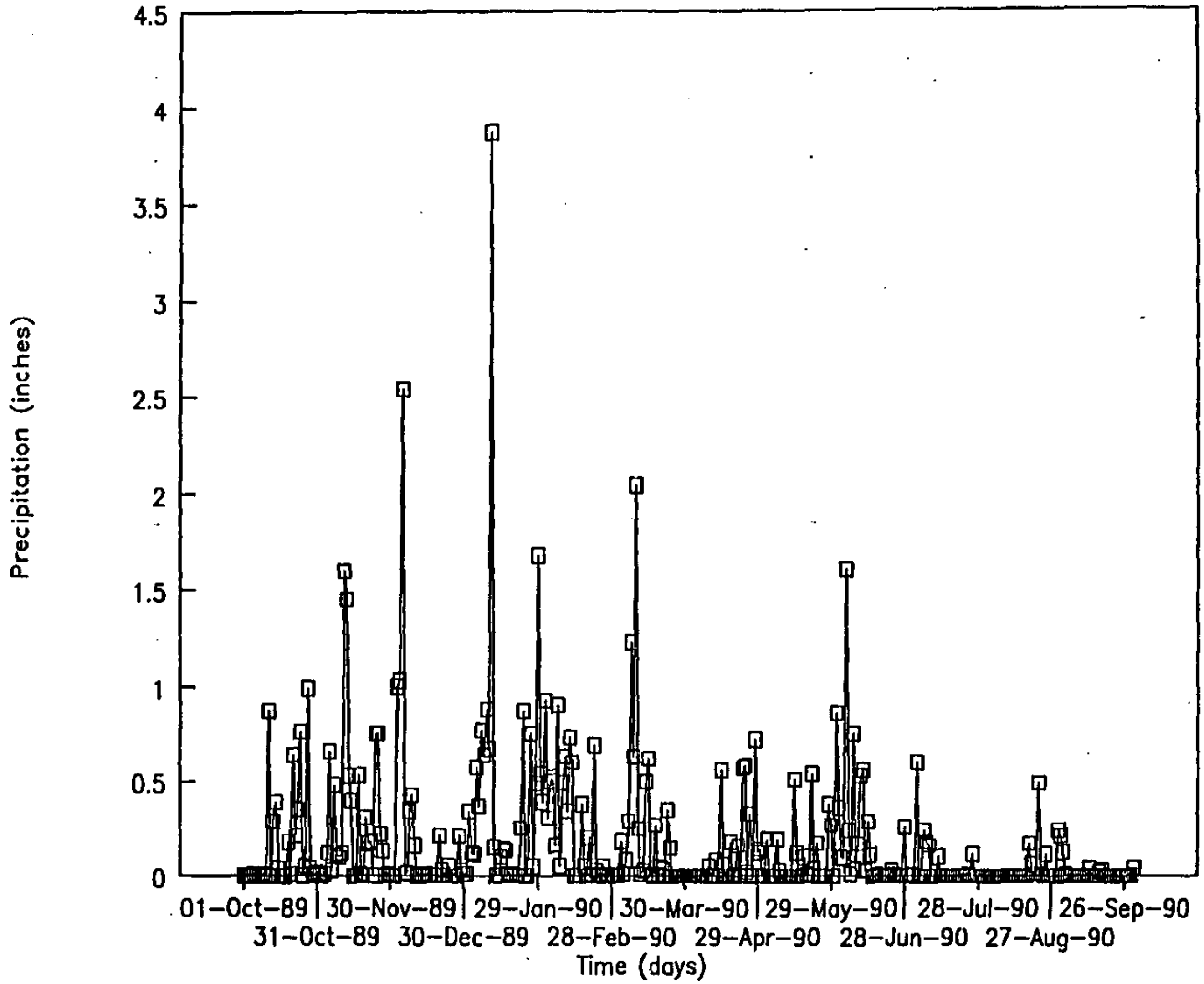


Avg. monthly streamflow

Oct	12.2
Nov	46.6
Dec	66.4
Jan	109
Feb.	103
Mar	61.1
Apr	31.9
May	31.5
Jun	69.3
Jul	23.3
Aug	16.5
Sep	11.2
Annual	48.1

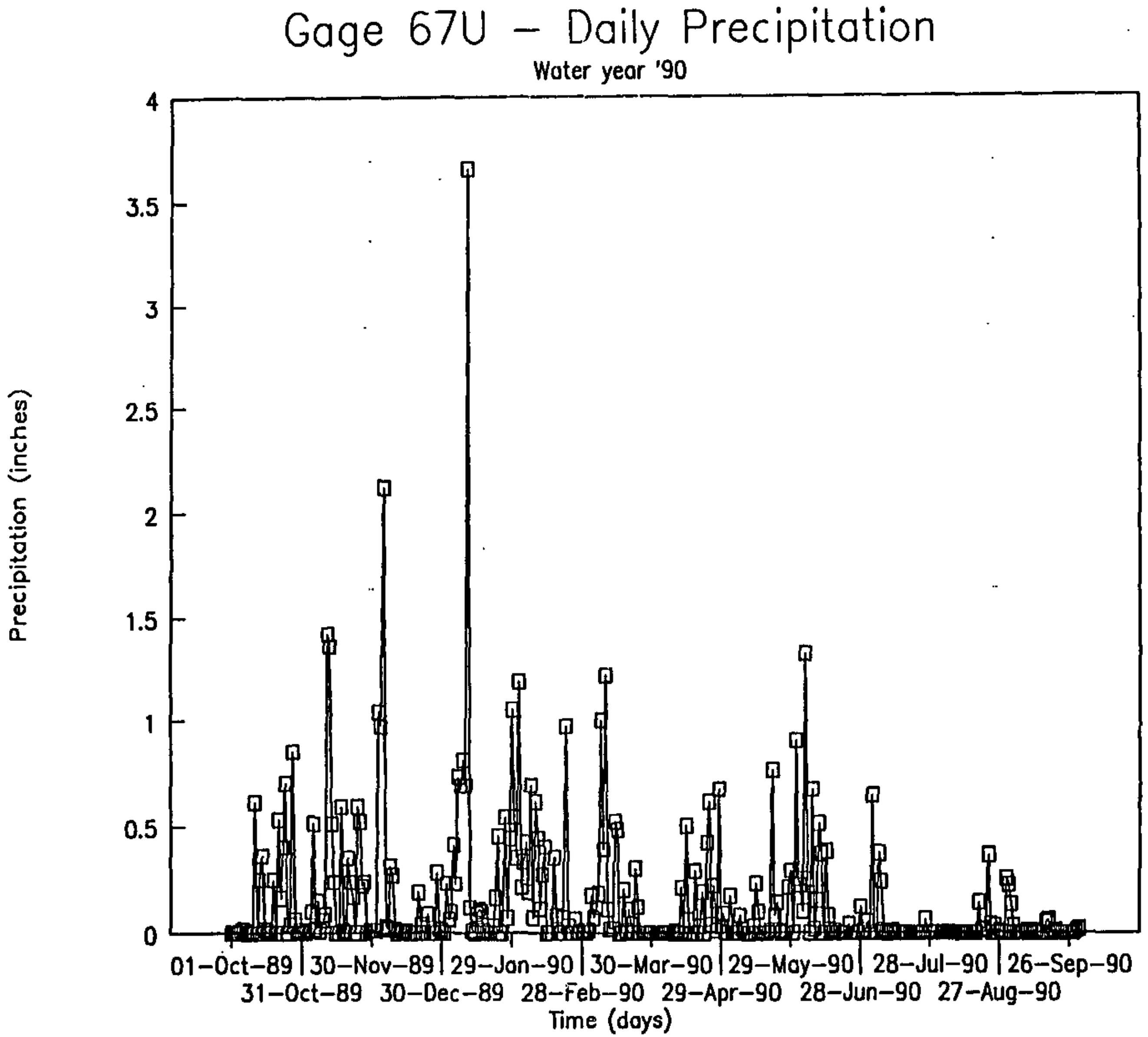
Gage 14U – Daily Precipitation

Water year '90



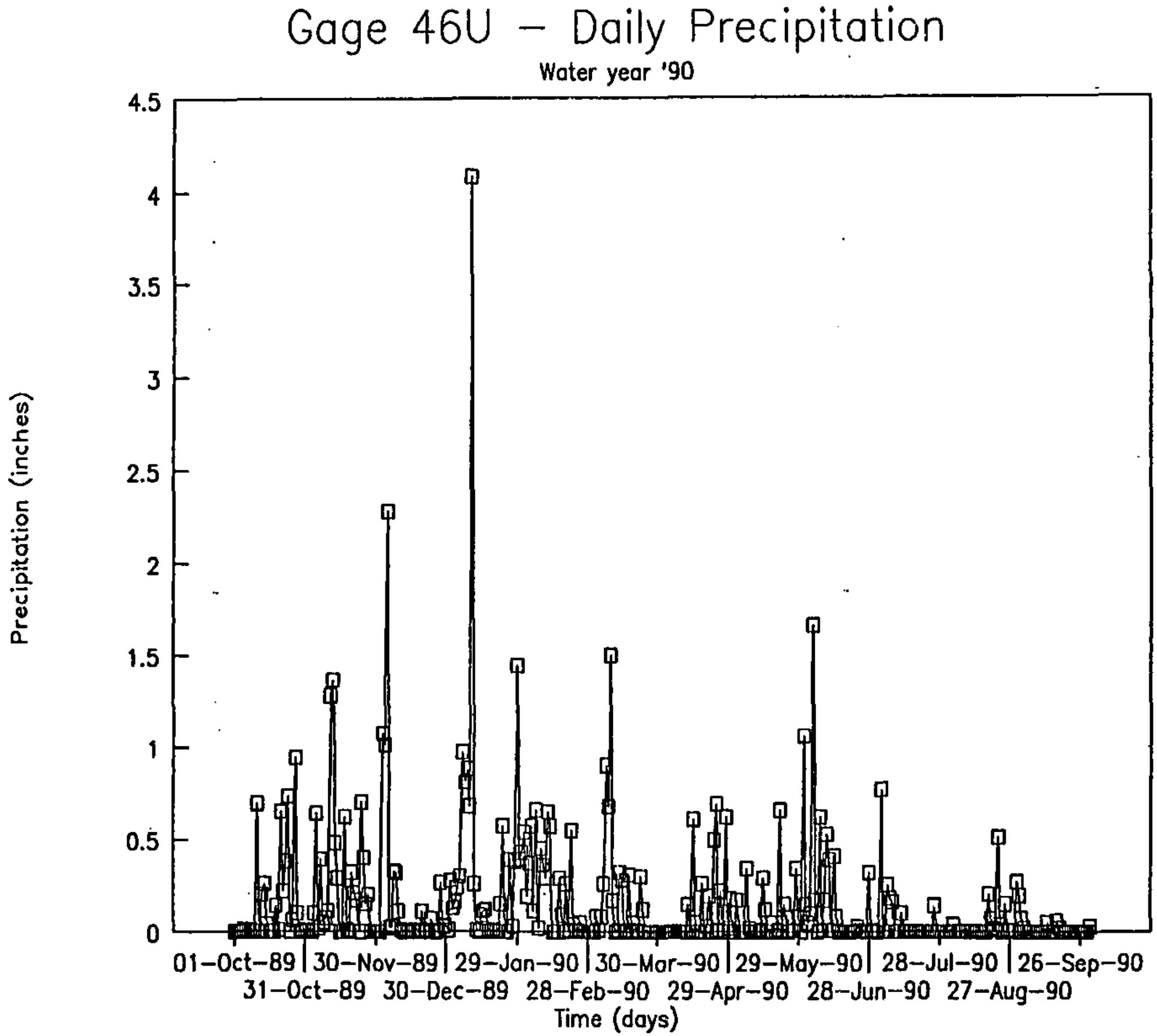
Monthly precip. (inches)

Oct.	4.87
Nov	8.69
Dec	6.11
Jan	13.52
Feb	7.98
Mar	6.75
Apr	3.44
May	2.69
Jun	6.05
Jul	1.41
Aug	1.10
Sept	0.47
Total	63.08



Monthly Precip (inches)

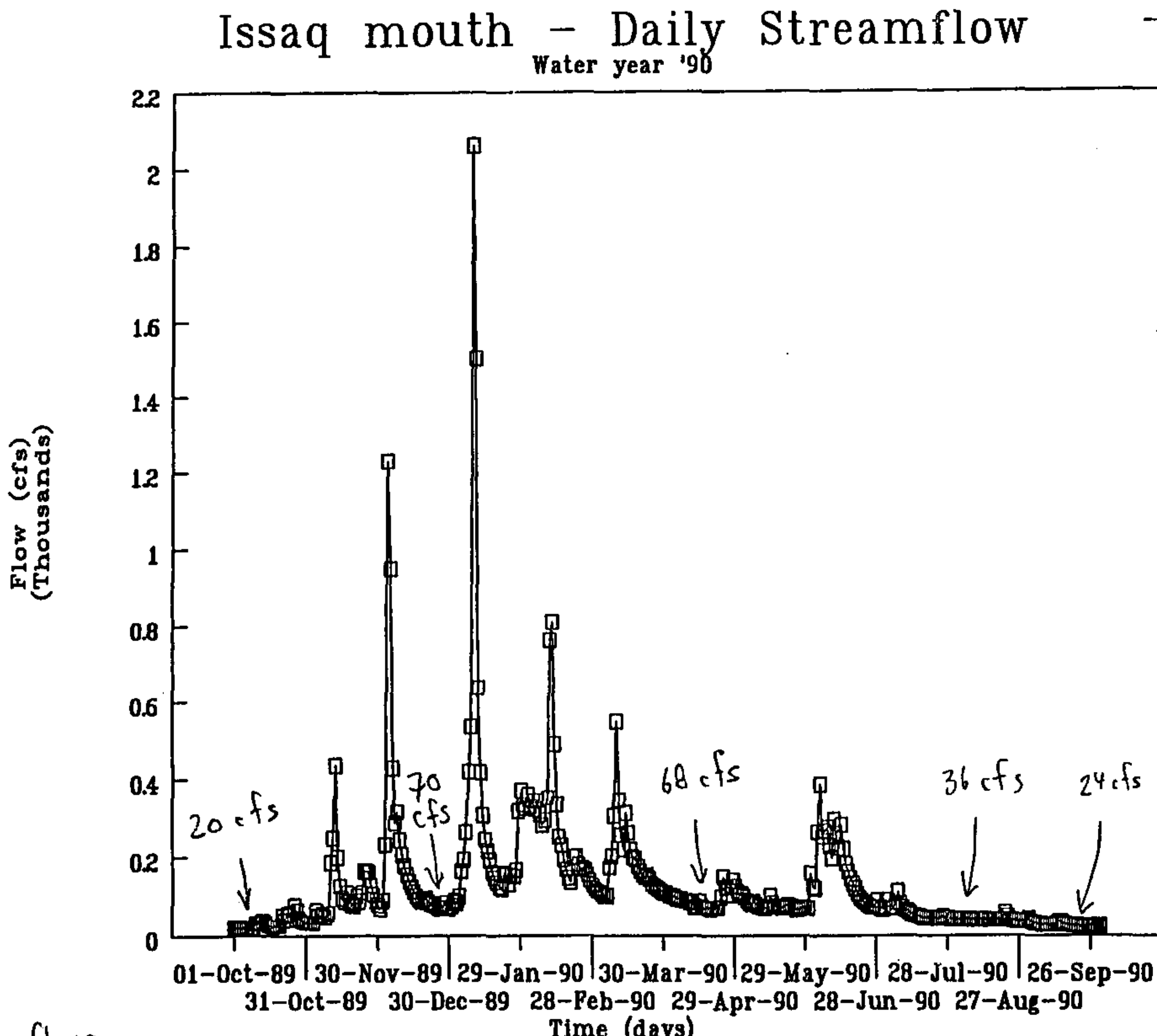
Oct	4.29
Nov	7.42
Dec	5.46
Jan	11.33
Feb	6.84
Mar	5.11
Apr	3.29
May	2.22
Jun	5.40
Jul	1.38
Aug	0.87
Sept	0.55
Total	54.16



Monthly precip. totals

Oct	4.46
Nov	7.58
Dec	6.06
Jan	13.17
Feb	5.54
Mar	5.10
Apr	3.53
May	3.51
Jun	4.57
Jul	1.66
Aug	1.58
Sept	0.18
Total	56.88

Main stem Issaquah creek - USGS gage



1990

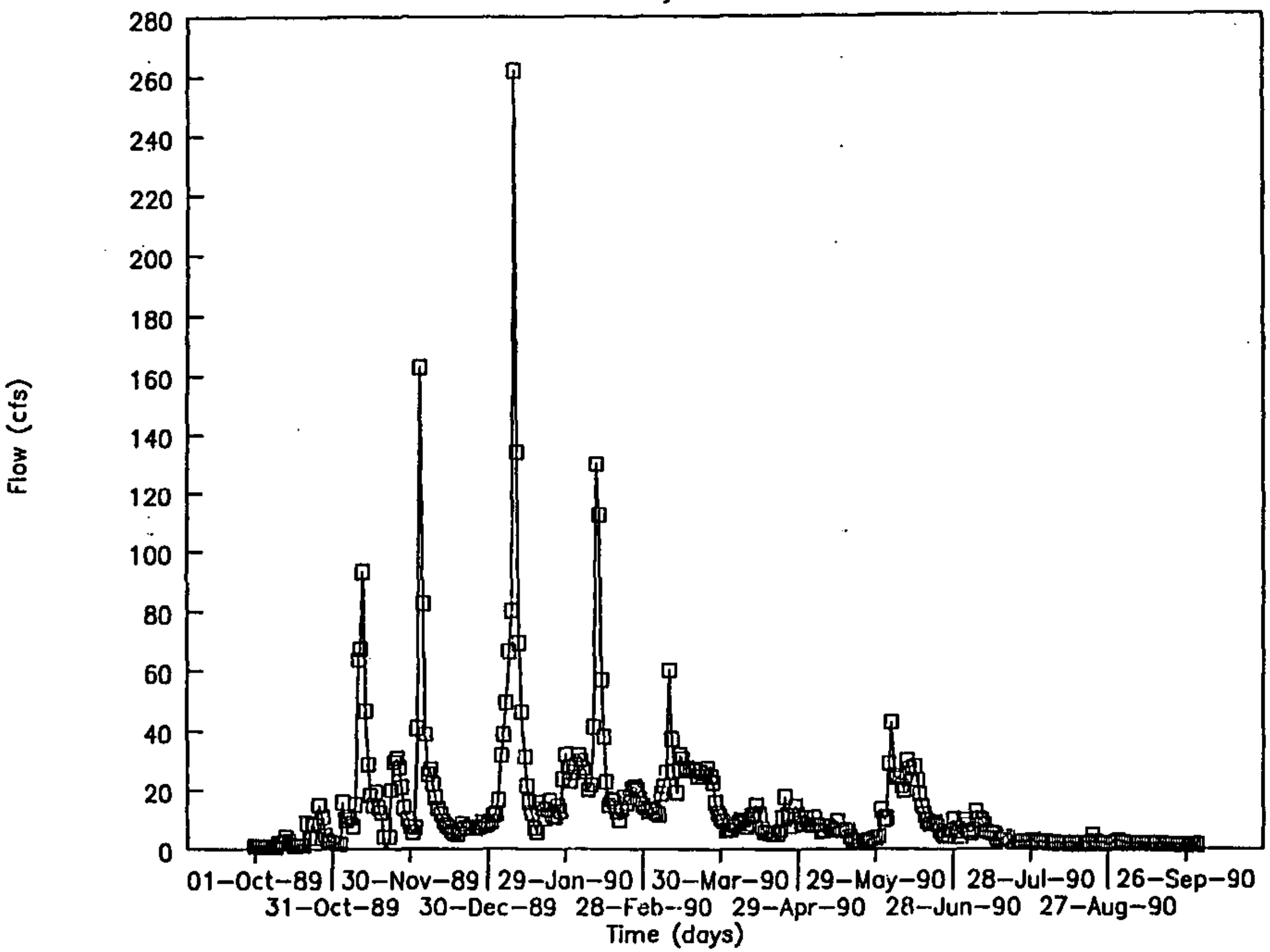
	Monthly avg. flows	Min. flows
Oct	34.1	20
Nov	111	34
Dec	195	69
Jan	334	83
Feb	284	128
Mar	182	102
Apr	73.5	68
May	81.7	66
Jun	167	68
Jul	58.4	43
Aug	41.4	36
Sep.	28.4	24
Annual	133	

Seasonal baseflows

Month	October	December	April	August
baseflow	20 cfs	70 cfs	68 cfs	36 cfs
antecedent conditions	4 wks. with .4"/precip	~.5"/precip in 2.5 wks	~.25" precip over previous 4 wks.	2 months with a trace precip and a single ... event

Gage 25C -- Daily Streamflow

Water year '90



Avg. Monthly Streamflow

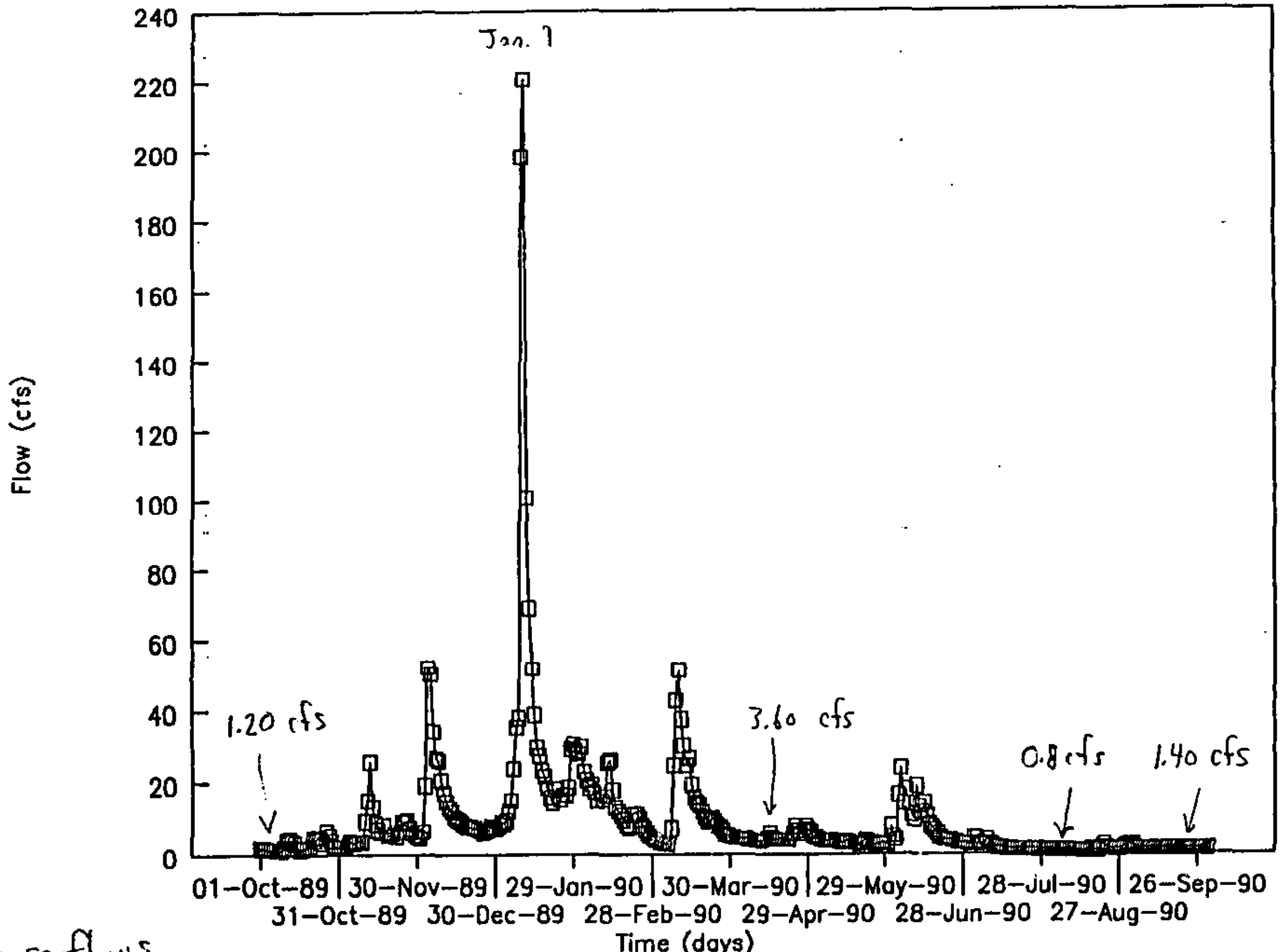
Oct	3.17
Nov	20.67
Dec	19.27
Jan	36.14
Feb	30.13
Mar	22.80
Apr	8.89
May	5.70
Jun	15.84
Jul	4.76
Aug	1.71
Sep	1.60
Annual	14.26

North Fk. Issaquah crk. at mouth

N. Fk.

Gage 46A – Daily Streamflow

Water year '90



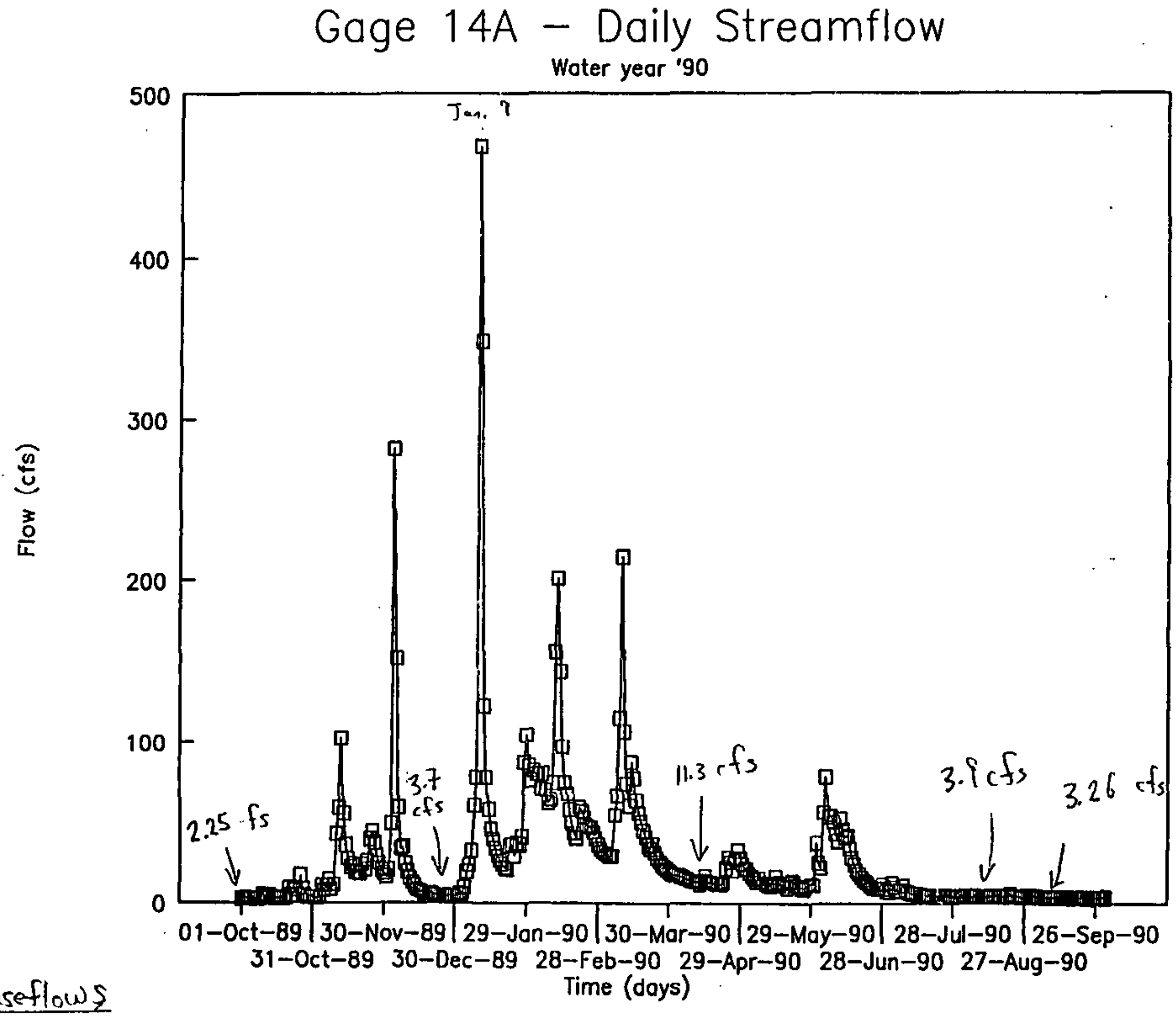
1990

	Monthly averages	Min. flows
Oct	2.70	1.20
Nov	6.80	2.13
Dec	14.06	4.50
Jan	38.67	8.57
Feb	14.10	4.54
Mar	13.89	2.84
Apr	4.91	3.59
May	3.68	2.52
Jun	3.58	2.83
Jul	1.97	1.10
Aug	1.26	0.81
Sept	1.49	1.40
Annual	9.34	

Seasonal base flows

Month	October	December	March	August
base flow	1.20 cfs	6.2 cfs	2.8 cfs	0.8 cfs
antecedent conditions	4 wks. with .4"/precip	17 days with .25"/precip	12 days with .23"/precip	2 months with a trace of precip.

E. Fork Issaquah creek at its mouth



1990

Avg. Streamflow

		Min flows
Oct	4.32	2.24
Nov	26.01	3.10
Dec	26.50	3.67
Jan	68.25	5.38
Feb	72.25	35.74
Mar	51.29	18.59
Apr	17.27	11.30
May	13.77	8.63
Jun	28.56	7.61
July	6.13	4.40
Aug	4.51	3.80
Sept.	3.89	3.26

Annual Avg 26.90

Seasonal baseflows

Month baseflow antecedent conditions	October	December	April	August
	2.25 cfs	3.7 cfs	11.80 cfs	~ 4.0 cfs
	4 wks. with .4"/precip	3 wks. with .50"/precip	20 days with .13"/precip	following 2 months with a

		Value	Unit
P	Mean Annual Precip (Seatac)	3.22	ft
PET	Potential Evapotranspiration (Puyallup)	1.92	ft
F	Elevation Adjustment for Precip	1 - 1.5	
A	Sub-Catchement Area	Varies	ft^2
Q	Average Flow from Sub-Catchement	Varies	cfs
V	Average Yearly Volume	Varies	ft^3
R	Run-off (=V/A)	Varies	ft
RCH	Recharge = P*F - R - PET		ft
Qrch	Recharge Rate = RCH*A/t		cfs

North Fork Issaquah Creek

Area (ft^2)	1.25E+08
Elev. Adjustment of Precip	1.29
1990 Average Flow (cfs)	7.6
Yearly Volume (ft^3)	2.4E+08
Yearly Run-off (ft)	1.91
Annual Recharge (ft)	0.32
Recharge Rate (cfs)	1.28

East Fork Issaquah Creek

Area (ft^2)	2.44E+08
Elev. Adjustment of Precip	1.5
1990 Average Flow (cfs)	17.9
Yearly Volume (ft^3)	5.64E+08
Yearly Run-off (ft)	2.31
Annual Recharge (ft)	0.60
Recharge Rate (cfs)	4.62

Lower Fork Issaquah Creek

Area (ft^2)	1.53E+09
Elev. Adjustment of Precip	1.29
1990 Average Flow (cfs)**	92
Yearly Volume (ft^3)	2.9E+09
Yearly Run-off (ft)	1.90
Annual Recharge (ft)	0.34
Recharge Rate (cfs)	16.24

Tibbets Creek

Area (ft^2)	1.51E+08
Elev. Adjustment of Precip	1.29
1990 Average Flow (cfs)**	10.4
Yearly Volume (ft^3)	3.28E+08
Yearly Run-off (ft)	2.18
Annual Recharge (ft)	0.06
Recharge Rate (cfs)	0.28

TOTAL RECHARGE **22.42**

PREDICTED STREAMFLOW AT LAKE SAMMAMISH
GR +ST - P - ET

GR	GROUNDWATER RECHARGE	22.42
P	GROUNDWATER WITHDRAWAL	5
ET	WETLAND ET (Estimated)	4
GD	GROUNDWATER DISCHARGE	13.42
ST	STREAMFLOW ABOVE WETLAND (SWM, 1990)	117.5

STREAMFLOW PLUS GW DISCHARGE	130.92
Predicted (HSPF Model, SWM, 1990)	129.00
WATER BALANCE RESIDUAL	1.92
	1%

Appendix F

APPENDIX F

WATER QUALITY RESULTS

Inorganics

LAB ID	CLIENT ID	PARAMETER	RESULT	RESULT FLAG	UNITS	PQL	SAMPLING DATE
		Specific Conductance	150		Micromhos/cm		5/07/92
9205467-08	#8 Bell Tel. Well	Alkalinity,Bicarb,CaCO3	58		mg/L	0	5/07/92
9205467-08	#8 Bell Tel. Well	Alkalinity,Carb as CaCO3	0		mg/L	0	5/07/92
9205467-08	#8 Bell Tel. Well	Calcium (Method 215.1)	15		mg/L	1	5/07/92
9205467-08	#8 Bell Tel. Well	Chloride (Method 300.0)	4		mg/L	1	5/07/92
9205467-08	#8 Bell Tel. Well	Magnesium (Method 242.1)	5		mg/L	0	5/07/92
9205467-08	#8 Bell Tel. Well	Nitrate + Nitrite as N	.75		mg/L	0	5/07/92
9205467-08	#8 Bell Tel. Well	Potassium (Method 258.1)	1.3		mg/L	0	5/07/92
9205467-08	#8 Bell Tel. Well	Sodium (Method 273.1)	7.4		mg/L	0	5/07/92
9205467-08	#8 Bell Tel. Well	Specific Conductance	150		Micromhos/cm	5	5/07/92
9205467-08	#8 Bell Tel. Well	Sulfate as SO4 (300.0)	8		mg/L	1	5/07/92
9205467-08	#8 Bell Tel. Well	Total Dissolved Solids	100		mg/L	2	5/07/92
9205467-08	#8 Bell Tel. Well	Turbidity	9.3		NTU	1	5/07/92
		Dissolved Oxygen			mg/L		10/13/92
		Specific Conductance	121		Micromhos/cm		10/13/92
		Temperature	10.8		Degrees Celc		10/13/92
		pH	7.09		Std. Units		10/13/92
9210752-10	#14 SPWSD Caldwell	Alkalinity,Bicarb,CaCO3	50.		mg/L	0	10/13/92
9210752-10	#14 SPWSD Caldwell	Anion/Cation Balance	1.25/1.41		meq/L		10/13/92
9210752-10	#14 SPWSD Caldwell	Calcium (Method 215.1)	8.1		mg/L	1	10/13/92
9210752-10	#14 SPWSD Caldwell	Chloride (Method 300.0)	3.		mg/L	1	10/13/92
9210752-10	#14 SPWSD Caldwell	Iron (Method 236.1)	0.05	U	mg/L	0	10/13/92
9210752-10	#14 SPWSD Caldwell	Magnesium (Method 242.1)	10.		mg/L	0	10/13/92
9210752-10	#14 SPWSD Caldwell	Manganese (Method 243.1)	0.002	U	mg/L	0	10/13/92
9210752-10	#14 SPWSD Caldwell	Nitrate as N (300.0)	1.1		mg/L	0	10/13/92
9210752-10	#14 SPWSD Caldwell	Potassium (Method 258.1)	0.72		mg/L	0	10/13/92
9210752-10	#14 SPWSD Caldwell	Sodium (Method 273.1)	3.8		mg/L	0	10/13/92
9210752-10	#14 SPWSD Caldwell	Sulfate as SO4 (300.0)	4.		mg/L	1	10/13/92
9210752-10	#14 SPWSD Caldwell	Turbidity	0.5	U	NTU	1	10/13/92
		Specific Conductance	130		Micromhos/cm		5/07/92
9205467-07	#7a Darigold Well 2	Alkalinity,Bicarb,CaCO3	48		mg/L	0	5/07/92
9205467-07	#7a Darigold Well 2	Alkalinity,Carb as CaCO3	0		mg/L	0	5/07/92
9205467-07	#7a Darigold Well 2	Calcium (Method 215.1)	14		mg/L	1	5/07/92
9205467-07	#7a Darigold Well 2	Chloride (Method 300.0)	4		mg/L	1	5/07/92
9205467-07	#7a Darigold Well 2	Magnesium (Method 242.1)	4.2		mg/L	0	5/07/92
9205467-07	#7a Darigold Well 2	Nitrate + Nitrite as N	1.4		mg/L	0	5/07/92
9205467-07	#7a Darigold Well 2	Potassium (Method 258.1)	1.1		mg/L	0	5/07/92
9205467-07	#7a Darigold Well 2	Sodium (Method 273.1)	6.2		mg/L	0	5/07/92
9205467-07	#7a Darigold Well 2	Specific Conductance	130		Micromhos/cm	5	5/07/92
9205467-07	#7a Darigold Well 2	Sulfate as SO4 (300.0)	7		mg/L	1	5/07/92
9205467-07	#7a Darigold Well 2	Total Dissolved Solids	85		mg/L	2	5/07/92
9205467-07	#7a Darigold Well 2	Turbidity	.5	U	NTU	1	5/07/92
9304086-12	Duplicate	Alkalinity,Bicarb,CaCO3	66.		mg/L	0	4/01/93
9304086-12	Duplicate	Anion/Cation Balance	1.63/1.70		meq/L	0	4/01/93
9304086-12	Duplicate	Antimony (Method 7041)	3.	U	ug/L	3	4/01/93
9304086-12	Duplicate	Arsenic (Method 7061)	5.	U	ug/L	5	4/01/93

AB ID	CLIENT ID	PARAMETER	RESULT	RESULT FLAG	UNITS	PQL	SAMPLING DATE
304086-12	Duplicate	Beryllium (Method 6010)	1.	U	ug/L	1	4/01/93
304086-12	Duplicate	Cadmium (Method 6010)	1.	U	ug/L	1	4/01/93
304086-12	Duplicate	Calcium (Method 215.1)	17.		mg/L	0	4/01/93
304086-12	Duplicate	Chloride (Method 300.0)	3.		mg/L	1	4/01/93
304086-12	Duplicate	Chromium (Method 6010)	1.	U	ug/L	10	4/01/93
304086-12	Duplicate	Copper (Method 6010)	1.	U	ug/L	2	4/01/93
304086-12	Duplicate	Iron (Method 236.1)	1.8		mg/L	0	4/01/93
304086-12	Duplicate	Lead (Method 6010)	5.	U	ug/L	5	4/01/93
304086-12	Duplicate	Magnesium (Method 242.1)	4.7		mg/L	0	4/01/93
304086-12	Duplicate	Manganese (Method 243.1)	0.083		mg/L	0	4/01/93
304086-12	Duplicate	Mercury (Method 7470)	0.2	U	ug/L	0	4/01/93
304086-12	Duplicate	Nickel (Method 6010)	2.	U	ug/L	2	4/01/93
304086-12	Duplicate	Nitrate as N (300.0)	1.2		mg/L	0	4/01/93
304086-12	Duplicate	Potassium (Method 258.1)	1.2		mg/L	0	4/01/93
304086-12	Duplicate	Selenium (Method 7741)	5.	U	ug/L	5	4/01/93
304086-12	Duplicate	Silver (Method 6010)	1.	U	ug/L	1	4/01/93
304086-12	Duplicate	Sodium (Method 273.1)	10.		mg/L	0	4/01/93
304086-12	Duplicate	Sulfate as SO4 (300.0)	7.		mg/L	1	4/01/93
304086-12	Duplicate	Thallium (Method 7841)	2.	U	ug/L	2	4/01/93
304086-12	Duplicate	Turbidity	7.1		NTU	1	4/01/93
304086-12	Duplicate	Zinc (Method 6010)	5.		ug/L	1	4/01/93
		Specific Conductance	200		Micromhos/cm		5/07/92
205467-05	#5 Lakeside Well 3	Alkalinity,Bicarb,CaCO3	80		mg/L	0	5/07/92
205467-05	#5 Lakeside Well 3	Alkalinity,Carb as CaCO3	0		mg/L	0	5/07/92
205467-05	#5 Lakeside Well 3	Calcium (Method 215.1)	22		mg/L	1	5/07/92
205467-05	#5 Lakeside Well 3	Chloride (Method 300.0)	4		mg/L	1	5/07/92
205467-05	#5 Lakeside Well 3	Magnesium (Method 242.1)	6.7		mg/L	0	5/07/92
205467-05	#5 Lakeside Well 3	Nitrate + Nitrite as N	1.1		mg/L	0	5/07/92
205467-05	#5 Lakeside Well 3	Potassium (Method 258.1)	1.7		mg/L	0	5/07/92
205467-05	#5 Lakeside Well 3	Sodium (Method 273.1)	9.5		mg/L	0	5/07/92
205467-05	#5 Lakeside Well 3	Specific Conductance	200		Micromhos/cm	5	5/07/92
205467-05	#5 Lakeside Well 3	Sulfate as SO4 (300.0)	11		mg/L	1	5/07/92
205467-05	#5 Lakeside Well 3	Total Dissolved Solids	110		mg/L	2	5/07/92
205467-05	#5 Lakeside Well 3	Turbidity	.5	U	NTU	1	5/07/92
		Dissolved Oxygen			mg/L		10/13/92
		Specific Conductance	176		Micromhos/cm		10/13/92
		Temperature	11.9		Degrees Celc		10/13/92
		pH	6.87		Std. Units		10/13/92
210752-04	#13 SPWSD Lakeside	Alkalinity,Bicarb,CaCO3	60.		mg/L	0	10/13/92
210752-04	#13 SPWSD Lakeside	Anion/Cation Balance	1.78/2.03		meq/L		10/13/92
210752-04	#13 SPWSD Lakeside	Antimony (Method 7041)	3.0	U	ug/L	3	10/13/92
210752-04	#13 SPWSD Lakeside	Arsenic (Method 7061)	5.	U	ug/L	5	10/13/92
210752-04	#13 SPWSD Lakeside	Beryllium (Method 6010)	1.	U	ug/L	1	10/13/92
210752-04	#13 SPWSD Lakeside	Cadmium (Method 6010)	1.	U	ug/L	1	10/13/92
210752-04	#13 SPWSD Lakeside	Calcium (Method 215.1)	18.		mg/L	1	10/13/92
210752-04	#13 SPWSD Lakeside	Chloride (Method 300.0)	4.		mg/L	1	10/13/92
210752-04	#13 SPWSD Lakeside	Chromium (Method 6010)	2.		ug/L	1	10/13/92

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210752-04	#13 SPWSD Lakeside	Copper (Method 6010)	4.		ug/L	1	10/13/92
0752-04	#13 SPWSD Lakeside	Iron (Method 236.1)	0.05	U	mg/L	0	10/13/92
0752-04	#13 SPWSD Lakeside	Lead (Method 6010)	5.	U	ug/L	5	10/13/92
210752-04	#13 SPWSD Lakeside	Magnesium (Method 242.1)	9.7		mg/L	0	10/13/92
0752-04	#13 SPWSD Lakeside	Manganese (Method 243.1)	0.003		mg/L	0	10/13/92
0752-04	#13 SPWSD Lakeside	Mercury (Method 7470)	1.	U	ug/L	1	10/13/92
210752-04	#13 SPWSD Lakeside	Nickel (Method 6010)	2.	U	ug/L	2	10/13/92
0752-04	#13 SPWSD Lakeside	Nitrate as N (300.0)	0.7		mg/L	0	10/13/92
0752-04	#13 SPWSD Lakeside	Potassium (Method 258.1)	1.2		mg/L	0	10/13/92
210752-04	#13 SPWSD Lakeside	Selenium (Method 7741)	5.	U	ug/L	5	10/13/92
210752-04	#13 SPWSD Lakeside	Silver (Method 6010)	1.	U	ug/L	1	10/13/92
0752-04	#13 SPWSD Lakeside	Sodium (Method 273.1)	6.9		mg/L	0	10/13/92
0752-04	#13 SPWSD Lakeside	Sulfate as SO4 (300.0)	20.		mg/L	1	10/13/92
210752-04	#13 SPWSD Lakeside	Thallium (Method 7841)	2.0	U	ug/L	2	10/13/92
0752-04	#13 SPWSD Lakeside	Turbidity	0.5	U	NTU	1	10/13/92
0752-04	#13 SPWSD Lakeside	Zinc (Method 6010)	18.		ug/L	1	10/13/92
		Specific Conductance	230		Micromhos/cm		5/06/92
5467-01	#1 SPWSD 7-1.1	Alkalinity,Bicarb,CaCO3	110		mg/L	0	5/06/92
5467-01	#1 SPWSD 7-1.1	Alkalinity,Carb as CaCO3	0		mg/L	0	5/06/92
205467-01	#1 SPWSD 7-1.1	Antimony (Method 7041)	10	U	ug/L	10	5/06/92
205467-01	#1 SPWSD 7-1.1	Arsenic (Method 7061)	5	U	ug/L	5	5/06/92
5467-01	#1 SPWSD 7-1.1	Beryllium (Method 6010)	1	U	ug/L	1	5/06/92
5467-01	#1 SPWSD 7-1.1	Cadmium (Method 6010)	1	U	ug/L	1	5/06/92
205467-01	#1 SPWSD 7-1.1	Calcium (Method 215.1)	27		mg/L	1	5/06/92
5467-01	#1 SPWSD 7-1.1	Chloride (Method 300.0)	5		mg/L	1	5/06/92
5467-01	#1 SPWSD 7-1.1	Chromium (Method 6010)	1		ug/L	1	5/06/92
205467-01	#1 SPWSD 7-1.1	Copper (Method 6010)	1	U	ug/L	1	5/06/92
205467-01	#1 SPWSD 7-1.1	Lead (Method 6010)	5	U	ug/L	5	5/06/92
5467-01	#1 SPWSD 7-1.1	Magnesium (Method 242.1)	9.1		mg/L	0	5/06/92
205467-01	#1 SPWSD 7-1.1	Mercury (Method 7470)	1	U	ug/L	1	5/06/92
205467-01	#1 SPWSD 7-1.1	Nickel (Method 6010)	2	U	ug/L	2	5/06/92
5467-01	#1 SPWSD 7-1.1	Nitrate + Nitrite as N	.073		mg/L	0	5/06/92
5467-01	#1 SPWSD 7-1.1	Potassium (Method 258.1)	1.3		mg/L	0	5/06/92
205467-01	#1 SPWSD 7-1.1	Selenium (Method 7741)	5	U	ug/L	5	5/06/92
5467-01	#1 SPWSD 7-1.1	Silver (Method 6010)	1	U	ug/L	1	5/06/92
5467-01	#1 SPWSD 7-1.1	Sodium (Method 273.1)	8.9		mg/L	0	5/06/92
205467-01	#1 SPWSD 7-1.1	Specific Conductance	230		Micromhos/cm	5	5/06/92
205467-01	#1 SPWSD 7-1.1	Sulfate as SO4 (300.0)	10		mg/L	1	5/06/92
5467-01	#1 SPWSD 7-1.1	Thallium (Method 7841)	2	U	ug/L	2	5/06/92
205467-01	#1 SPWSD 7-1.1	Total Dissolved Solids	210		mg/L	2	5/06/92
205467-01	#1 SPWSD 7-1.1	Turbidity	24		NTU	1	5/06/92
5467-01	#1 SPWSD 7-1.1	Zinc (Method 6010)	180		ug/L	1	5/06/92
		Dissolved Oxygen	.1		mg/L		4/01/93
		Specific Conductance	248		Micromhos/cm		4/01/93
		Temperature	14.2		Degrees Celc		4/01/93
		pH	6.8		Std. Units		4/01/93
304086-03	#3 SP 7-1	Antimony (Method 7041)	3.	U	ug/L	3	4/01/93

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9304086-03	#3 SP 7-1	Arsenic (Method 7061)	5.	U	ug/L	5	4/01/93
9304086-03	#3 SP 7-1	Beryllium (Method 6010)	1.	U	ug/L	1	4/01/93
9304086-03	#3 SP 7-1	Cadmium (Method 6010)	1.	U	ug/L	1	4/01/93
9304086-03	#3 SP 7-1	Chromium (Method 6010)	1.	U	ug/L	10	4/01/93
9304086-03	#3 SP 7-1	Copper (Method 6010)	2.		ug/L	2	4/01/93
9304086-03	#3 SP 7-1	Lead (Method 6010)	5.	U	ug/L	5	4/01/93
9304086-03	#3 SP 7-1	Mercury (Method 7470)	0.2	U	ug/L	0	4/01/93
9304086-03	#3 SP 7-1	Nickel (Method 6010)	3.		ug/L	2	4/01/93
9304086-03	#3 SP 7-1	Selenium (Method 7741)	5.	U	ug/L	5	4/01/93
9304086-03	#3 SP 7-1	Silver (Method 6010)	1.	U	ug/L	1	4/01/93
9304086-03	#3 SP 7-1	Thallium (Method 7841)	2.	U	ug/L	2	4/01/93
9304086-03	#3 SP 7-1	Zinc (Method 6010)	280.		ug/L	1	4/01/93
		Specific Conductance	190		Micromhos/cm		5/08/92
9205467-13	#13 SPWSD 7-1.2	Alkalinity,Bicarb,CaCO3	80		mg/L	0	5/08/92
9205467-13	#13 SPWSD 7-1.2	Alkalinity,Carb as CaCO3	0		mg/L	0	5/08/92
9205467-13	#13 SPWSD 7-1.2	Calcium (Method 215.1)	18		mg/L	1	5/08/92
9205467-13	#13 SPWSD 7-1.2	Chloride (Method 300.0)	4		mg/L	1	5/08/92
9205467-13	#13 SPWSD 7-1.2	Magnesium (Method 242.1)	7.2		mg/L	0	5/08/92
9205467-13	#13 SPWSD 7-1.2	Nitrate + Nitrite as N	1.1		mg/L	0	5/08/92
9205467-13	#13 SPWSD 7-1.2	Potassium (Method 258.1)	1.4		mg/L	0	5/08/92
9205467-13	#13 SPWSD 7-1.2	Sodium (Method 273.1)	8.5		mg/L	0	5/08/92
9205467-13	#13 SPWSD 7-1.2	Specific Conductance	190		Micromhos/cm	5	5/08/92
9205467-13	#13 SPWSD 7-1.2	Sulfate as SO4 (300.0)	8		mg/L	1	5/08/92
9205467-13	#13 SPWSD 7-1.2	Total Dissolved Solids	110		mg/L	2	5/08/92
		Specific Conductance	150		Micromhos/cm		5/08/92
9205467-11	#12 SPWSD VT-1.1	Alkalinity,Bicarb,CaCO3	54		mg/L	0	5/08/92
9205467-11	#12 SPWSD VT-1.1	Alkalinity,Carb as CaCO3	0		mg/L	0	5/08/92
9205467-11	#12 SPWSD VT-1.1	Antimony (Method 7041)	10	U	ug/L	10	5/08/92
9205467-11	#12 SPWSD VT-1.1	Arsenic (Method 7061)	5	U	ug/L	5	5/08/92
9205467-11	#12 SPWSD VT-1.1	Beryllium (Method 6010)	1	U	ug/L	1	5/08/92
9205467-11	#12 SPWSD VT-1.1	Cadmium (Method 6010)	1	U	ug/L	1	5/08/92
9205467-11	#12 SPWSD VT-1.1	Calcium (Method 215.1)	16		mg/L	1	5/08/92
9205467-11	#12 SPWSD VT-1.1	Chloride (Method 300.0)	5		mg/L	1	5/08/92
9205467-11	#12 SPWSD VT-1.1	Chromium (Method 6010)	2		ug/L	1	5/08/92
9205467-11	#12 SPWSD VT-1.1	Copper (Method 6010)	1		ug/L	1	5/08/92
9205467-11	#12 SPWSD VT-1.1	Lead (Method 6010)	5	U	ug/L	5	5/08/92
9205467-11	#12 SPWSD VT-1.1	Magnesium (Method 242.1)	4.6		mg/L	0	5/08/92
9205467-11	#12 SPWSD VT-1.1	Mercury (Method 7470)	1	U	ug/L	1	5/08/92
9205467-11	#12 SPWSD VT-1.1	Nickel (Method 6010)	2	U	ug/L	2	5/08/92
9205467-11	#12 SPWSD VT-1.1	Nitrate + Nitrite as N	1.4		mg/L	0	5/08/92
9205467-11	#12 SPWSD VT-1.1	Potassium (Method 258.1)	1.2		mg/L	0	5/08/92
9205467-11	#12 SPWSD VT-1.1	Selenium (Method 7741)	5	U	ug/L	5	5/08/92
9205467-11	#12 SPWSD VT-1.1	Silver (Method 6010)	1	U	ug/L	1	5/08/92
9205467-11	#12 SPWSD VT-1.1	Sodium (Method 273.1)	10		mg/L	0	5/08/92
9205467-11	#12 SPWSD VT-1.1	Specific Conductance	150		Micromhos/cm	5	5/08/92
9205467-11	#12 SPWSD VT-1.1	Sulfate as SO4 (300.0)	8		mg/L	1	5/08/92
9205467-11	#12 SPWSD VT-1.1	Thallium (Method 7841)	2	U	ug/L	2	5/08/92

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205467-11	#12 SPWSD VT-1.1	Total Dissolved Solids	89		mg/L	2	5/08/92
5467-11	#12 SPWSD VT-1.1	Turbidity	4.3		NTU	1	5/08/92
5467-11	#12 SPWSD VT-1.1	Zinc (Method 6010)	3		ug/L	1	5/08/92
205467-12	#12 SPWSD VT-1.1 (Diss.)	Antimony (Method 7041)	11		ug/L	10	5/08/92
5467-12	#12 SPWSD VT-1.1 (Diss.)	Arsenic (Method 7061)	5	U	ug/L	5	5/08/92
5467-12	#12 SPWSD VT-1.1 (Diss.)	Beryllium (Method 6010)	1	U	ug/L	1	5/08/92
205467-12	#12 SPWSD VT-1.1 (Diss.)	Cadmium (Method 6010)	1	U	ug/L	1	5/08/92
5467-12	#12 SPWSD VT-1.1 (Diss.)	Chromium (Method 6010)	1		ug/L	1	5/08/92
5467-12	#12 SPWSD VT-1.1 (Diss.)	Copper (Method 6010)	1	U	ug/L	1	5/08/92
205467-12	#12 SPWSD VT-1.1 (Diss.)	Lead (Method 6010)	5	U	ug/L	5	5/08/92
205467-12	#12 SPWSD VT-1.1 (Diss.)	Mercury (Method 7470)	1	U	ug/L	1	5/08/92
5467-12	#12 SPWSD VT-1.1 (Diss.)	Nickel (Method 6010)	2	U	ug/L	2	5/08/92
5467-12	#12 SPWSD VT-1.1 (Diss.)	Selenium (Method 7741)	5	U	ug/L	5	5/08/92
205467-12	#12 SPWSD VT-1.1 (Diss.)	Silver (Method 6010)	1	U	ug/L	1	5/08/92
5467-12	#12 SPWSD VT-1.1 (Diss.)	Thallium (Method 7841)	2	U	ug/L	2	5/08/92
5467-12	#12 SPWSD VT-1.1 (Diss.)	Zinc (Method 6010)	5		ug/L	1	5/08/92
		Dissolved Oxygen			mg/L		10/13/92
		Specific Conductance	140		Micromhos/cm		10/13/92
		Temperature	11.7		Degrees Celc		10/13/92
		pH	6.48		Std. Units		10/13/92
210752-06	#9 SPWSD VT-1.1	Alkalinity,Bicarb,CaCO3	50.		mg/L	0	10/13/92
0752-06	#9 SPWSD VT-1.1	Anion/Cation Balance	1.38/1.50		meq/L		10/13/92
0752-06	#9 SPWSD VT-1.1	Calcium (Method 215.1)	12.		mg/L	1	10/13/92
210752-06	#9 SPWSD VT-1.1	Chloride (Method 300.0)	4.		mg/L	1	10/13/92
0752-06	#9 SPWSD VT-1.1	Iron (Method 236.1)	0.41		mg/L	0	10/13/92
0752-06	#9 SPWSD VT-1.1	Magnesium (Method 242.1)	4.8		mg/L	0	10/13/92
210752-06	#9 SPWSD VT-1.1	Manganese (Method 243.1)	0.009		mg/L	0	10/13/92
0752-06	#9 SPWSD VT-1.1	Nitrate as N (300.0)	1.4		mg/L	0	10/13/92
0752-06	#9 SPWSD VT-1.1	Potassium (Method 258.1)	1.2		mg/L	0	10/13/92
210752-06	#9 SPWSD VT-1.1	Sodium (Method 273.1)	11.		mg/L	0	10/13/92
210752-06	#9 SPWSD VT-1.1	Sulfate as SO4 (300.0)	8.		mg/L	1	10/13/92
0752-06	#9 SPWSD VT-1.1	Turbidity	4.4		NTU	1	10/13/92
		Dissolved Oxygen	2.7		mg/L		4/01/93
		Specific Conductance	156		Micromhos/cm		4/01/93
		Temperature	11.9		Degrees Celc		4/01/93
		pH	6.47		Std. Units		4/01/93
304086-06	#6 VT-1.1	Antimony (Method 7041)	3.	U	ug/L	3	4/01/93
4086-06	#6 VT-1.1	Arsenic (Method 7061)	5.	U	ug/L	5	4/01/93
4086-06	#6 VT-1.1	Beryllium (Method 6010)	1.	U	ug/L	1	4/01/93
304086-06	#6 VT-1.1	Cadmium (Method 6010)	1.	U	ug/L	1	4/01/93
304086-06	#6 VT-1.1	Chromium (Method 6010)	1.		ug/L	10	4/01/93
4086-06	#6 VT-1.1	Copper (Method 6010)	1.		ug/L	2	4/01/93
4086-06	#6 VT-1.1	Lead (Method 6010)	5.	U	ug/L	5	4/01/93
304086-06	#6 VT-1.1	Mercury (Method 7470)	0.2	U	ug/L	0	4/01/93
4086-06	#6 VT-1.1	Nickel (Method 6010)	2.	U	ug/L	2	4/01/93
4086-06	#6 VT-1.1	Selenium (Method 7741)	5.	U	ug/L	5	4/01/93
304086-06	#6 VT-1.1	Silver (Method 6010)	1.	U	ug/L	1	4/01/93

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304086-06	#6 VT-1.1	Thallium (Method 7841)	2.	U	ug/L	2	4/01/93
304086-06	#6 VT-1.1	Zinc (Method 6010)	3.		ug/L	1	4/01/93
		Specific Conductance	150		Micromhos/cm		5/08/92
205467-10	#10 SPWSD VT-1.3	Alkalinity,Bicarb,CaCO3	60		mg/L	0	5/08/92
205467-10	#10 SPWSD VT-1.3	Alkalinity,Carb as CaCO3	0		mg/L	0	5/08/92
205467-10	#10 SPWSD VT-1.3	Calcium (Method 215.1)	16		mg/L	1	5/08/92
205467-10	#10 SPWSD VT-1.3	Chloride (Method 300.0)	4		mg/L	1	5/08/92
205467-10	#10 SPWSD VT-1.3	Magnesium (Method 242.1)	5		mg/L	0	5/08/92
205467-10	#10 SPWSD VT-1.3	Nitrate + Nitrite as N	.82		mg/L	0	5/08/92
205467-10	#10 SPWSD VT-1.3	Potassium (Method 258.1)	1.2		mg/L	0	5/08/92
205467-10	#10 SPWSD VT-1.3	Sodium (Method 273.1)	7		mg/L	0	5/08/92
205467-10	#10 SPWSD VT-1.3	Specific Conductance	150		Micromhos/cm	5	5/08/92
205467-10	#10 SPWSD VT-1.3	Sulfate as SO4 (300.0)	7		mg/L	1	5/08/92
205467-10	#10 SPWSD VT-1.3	Total Dissolved Solids	84		mg/L	2	5/08/92
205467-10	#10 SPWSD VT-1.3	Turbidity	.5	U	NTU	1	5/08/92
		Specific Conductance	290		Micromhos/cm		5/07/92
205467-06	SPWSD VT-2.1	Alkalinity,Bicarb,CaCO3	150		mg/L	0	5/07/92
205467-06	SPWSD VT-2.1	Alkalinity,Carb as CaCO3	0		mg/L	0	5/07/92
205467-06	SPWSD VT-2.1	Antimony (Method 7041)	10	U	ug/L	10	5/07/92
205467-06	SPWSD VT-2.1	Arsenic (Method 7061)	5	U	ug/L	5	5/07/92
205467-06	SPWSD VT-2.1	Beryllium (Method 6010)	1	U	ug/L	1	5/07/92
205467-06	SPWSD VT-2.1	Cadmium (Method 6010)	1	U	ug/L	1	5/07/92
205467-06	SPWSD VT-2.1	Calcium (Method 215.1)	32		mg/L	1	5/07/92
205467-06	SPWSD VT-2.1	Chloride (Method 300.0)	2		mg/L	1	5/07/92
205467-06	SPWSD VT-2.1	Chromium (Method 6010)	1		ug/L	1	5/07/92
205467-06	SPWSD VT-2.1	Copper (Method 6010)	3		ug/L	1	5/07/92
205467-06	SPWSD VT-2.1	Lead (Method 6010)	5	U	ug/L	5	5/07/92
205467-06	SPWSD VT-2.1	Magnesium (Method 242.1)	13		mg/L	0	5/07/92
205467-06	SPWSD VT-2.1	Mercury (Method 7470)	1	U	ug/L	1	5/07/92
205467-06	SPWSD VT-2.1	Nickel (Method 6010)	2	U	ug/L	2	5/07/92
205467-06	SPWSD VT-2.1	Nitrate + Nitrite as N	.022		mg/L	0	5/07/92
205467-06	SPWSD VT-2.1	Potassium (Method 258.1)	1.7		mg/L	0	5/07/92
205467-06	SPWSD VT-2.1	Selenium (Method 7741)	5	U	ug/L	5	5/07/92
205467-06	SPWSD VT-2.1	Silver (Method 6010)	1	U	ug/L	1	5/07/92
205467-06	SPWSD VT-2.1	Sodium (Method 273.1)	7.7		mg/L	0	5/07/92
205467-06	SPWSD VT-2.1	Specific Conductance	290		Micromhos/cm	5	5/07/92
205467-06	SPWSD VT-2.1	Sulfate as SO4 (300.0)	1	U	mg/L	1	5/07/92
205467-06	SPWSD VT-2.1	Thallium (Method 7841)	2	U	ug/L	2	5/07/92
205467-06	SPWSD VT-2.1	Total Dissolved Solids	170		mg/L	2	5/07/92
205467-06	SPWSD VT-2.1	Turbidity	69		NTU	1	5/07/92
205467-06	SPWSD VT-2.1	Zinc (Method 6010)	110		ug/L	1	5/07/92
		Dissolved Oxygen			mg/L		10/13/92
		Specific Conductance	167		Micromhos/cm		10/13/92
		Temperature	10.2		Degrees Celc		10/13/92
		pH	7.72		Std. Units		10/13/92
210752-07	#6 SPWSD VT-2.2	Alkalinity,Bicarb,CaCO3	80.		mg/L	0	10/13/92
210752-07	#6 SPWSD VT-2.2	Anion/Cation Balance	1.68/1.98		meq/L		10/13/92

[redacted] ID	CLIENT ID	PARAMETER	RESULT	RESULT FLAG	UNITS	PQL	SAMPLING DATE
[redacted]0752-07	#6 SPWSD VT-2.2	Calcium (Method 215.1)	12.		mg/L	1	10/13/92
[redacted]0752-07	#6 SPWSD VT-2.2	Chloride (Method 300.0)	3.		mg/L	1	10/13/92
[redacted]0752-07	#6 SPWSD VT-2.2	Iron (Method 236.1)	16.		mg/L	0	10/13/92
9210752-07	#6 SPWSD VT-2.2	Magnesium (Method 242.1)	13.		mg/L	0	10/13/92
[redacted]0752-07	#6 SPWSD VT-2.2	Manganese (Method 243.1)	0.33		mg/L	0	10/13/92
[redacted]0752-07	#6 SPWSD VT-2.2	Nitrate as N (300.0)	0.2	U	mg/L	0	10/13/92
9210752-07	#6 SPWSD VT-2.2	Potassium (Method 258.1)	1.7		mg/L	0	10/13/92
[redacted]0752-07	#6 SPWSD VT-2.2	Sodium (Method 273.1)	6.1		mg/L	0	10/13/92
[redacted]0752-07	#6 SPWSD VT-2.2	Sulfate as SO4 (300.0)	1.	U	mg/L	1	10/13/92
9210752-07	#6 SPWSD VT-2.2	Turbidity	160.		NTU	1	10/13/92
[redacted]		Dissolved Oxygen	.7		mg/L		4/01/93
		Specific Conductance	152		Micromhos/cm		4/01/93
		Temperature	11.1		Degrees Celc		4/01/93
		pH	6.91		Std. Units		4/01/93
[redacted]04086-01	#1 VT-2.2	Alkalinity,Bicarb,CaCO3	80.		mg/L	0	4/01/93
[redacted]04086-01	#1 VT-2.2	Anion/Cation Balance	1.71/2.06		meq/L	0	4/01/93
9304086-01	#1 VT-2.2	Antimony (Method 7041)	3.	U	ug/L	3	4/01/93
[redacted]04086-01	#1 VT-2.2	Arsenic (Method 7061)	5.	U	ug/L	5	4/01/93
[redacted]04086-01	#1 VT-2.2	Beryllium (Method 6010)	1.	U	ug/L	1	4/01/93
9304086-01	#1 VT-2.2	Cadmium (Method 6010)	1.	U	ug/L	1	4/01/93
[redacted]04086-01	#1 VT-2.2	Calcium (Method 215.1)	17.		mg/L	0	4/01/93
[redacted]04086-01	#1 VT-2.2	Chloride (Method 300.0)	4.		mg/L	1	4/01/93
[redacted]04086-01	#1 VT-2.2	Chromium (Method 6010)	10.		ug/L	10	4/01/93
9304086-01	#1 VT-2.2	Copper (Method 6010)	11.		ug/L	2	4/01/93
[redacted]04086-01	#1 VT-2.2	Iron (Method 236.1)	6.4		mg/L	0	4/01/93
[redacted]04086-01	#1 VT-2.2	Lead (Method 6010)	6.		ug/L	5	4/01/93
9304086-01	#1 VT-2.2	Magnesium (Method 242.1)	9.9		mg/L	0	4/01/93
[redacted]04086-01	#1 VT-2.2	Manganese (Method 243.1)	0.22		mg/L	0	4/01/93
[redacted]04086-01	#1 VT-2.2	Mercury (Method 7470)	0.2	U	ug/L	0	4/01/93
9304086-01	#1 VT-2.2	Nickel (Method 6010)	16.		ug/L	2	4/01/93
[redacted]04086-01	#1 VT-2.2	Nitrate as N (300.0)	0.2	U	mg/L	0	4/01/93
[redacted]04086-01	#1 VT-2.2	Potassium (Method 258.1)	1.4		mg/L	0	4/01/93
[redacted]04086-01	#1 VT-2.2	Selenium (Method 7741)	5.	U	ug/L	5	4/01/93
9304086-01	#1 VT-2.2	Silver (Method 6010)	1.	U	ug/L	1	4/01/93
[redacted]04086-01	#1 VT-2.2	Sodium (Method 273.1)	8.4		mg/L	0	4/01/93
[redacted]04086-01	#1 VT-2.2	Sulfate as SO4 (300.0)	1.	U	mg/L	1	4/01/93
9304086-01	#1 VT-2.2	Thallium (Method 7841)	2.	U	ug/L	2	4/01/93
[redacted]04086-01	#1 VT-2.2	Turbidity	8.2		NTU	1	4/01/93
[redacted]04086-01	#1 VT-2.2	Zinc (Method 6010)	1500.		ug/L	1	4/01/93
		Specific Conductance	160		Micromhos/cm		5/07/92
[redacted]205467-04	#4 SPWSD VT-2.3	Alkalinity,Bicarb,CaCO3	64		mg/L	0	5/07/92
[redacted]205467-04	#4 SPWSD VT-2.3	Alkalinity,Carb as CaCO3	0		mg/L	0	5/07/92
[redacted]205467-04	#4 SPWSD VT-2.3	Calcium (Method 215.1)	15		mg/L	1	5/07/92
9205467-04	#4 SPWSD VT-2.3	Chloride (Method 300.0)	4		mg/L	1	5/07/92
[redacted]205467-04	#4 SPWSD VT-2.3	Magnesium (Method 242.1)	7.4		mg/L	0	5/07/92
[redacted]205467-04	#4 SPWSD VT-2.3	Nitrate + Nitrite as N	.54		mg/L	0	5/07/92
9205467-04	#4 SPWSD VT-2.3	Potassium (Method 258.1)	1.2		mg/L	0	5/07/92

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205467-04	#4 SPWSD VT-2.3	Sodium (Method 273.1)	5.8		mg/L	0	5/07/92
205467-04	#4 SPWSD VT-2.3	Specific Conductance	160		Micromhos/cm	5	5/07/92
205467-04	#4 SPWSD VT-2.3	Sulfate as SO4 (300.0)	8		mg/L	1	5/07/92
205467-04	#4 SPWSD VT-2.3	Total Dissolved Solids	90		mg/L	2	5/07/92
205467-04	#4 SPWSD VT-2.3	Turbidity	5.7		NTU	1	5/07/92
		Dissolved Oxygen	5		mg/L		4/01/93
		Specific Conductance	157		Micromhos/cm		4/01/93
		Temperature	11.6		Degrees Celc		4/01/93
		pH	7.4		Std. Units		4/01/93
304086-05	#5 VT-3	Alkalinity,Bicarb,CaCO3	50.		mg/L	0	4/01/93
304086-05	#5 VT-3	Anion/Cation Balance	1.32/1.68		meq/L	0	4/01/93
304086-05	#5 VT-3	Antimony (Method 7041)	3.	U	ug/L	3	4/01/93
304086-05	#5 VT-3	Arsenic (Method 7061)	5.	U	ug/L	5	4/01/93
304086-05	#5 VT-3	Beryllium (Method 6010)	1.	U	ug/L	1	4/01/93
304086-05	#5 VT-3	Cadmium (Method 6010)	1.	U	ug/L	1	4/01/93
304086-05	#5 VT-3	Calcium (Method 215.1)	17.		mg/L	0	4/01/93
304086-05	#5 VT-3	Chloride (Method 300.0)	3.		mg/L	1	4/01/93
304086-05	#5 VT-3	Chromium (Method 6010)	1.	U	ug/L	10	4/01/93
304086-05	#5 VT-3	Copper (Method 6010)	1.		ug/L	2	4/01/93
304086-05	#5 VT-3	Iron (Method 236.1)	1.8		mg/L	0	4/01/93
304086-05	#5 VT-3	Lead (Method 6010)	5.	U	ug/L	5	4/01/93
304086-05	#5 VT-3	Magnesium (Method 242.1)	4.4		mg/L	0	4/01/93
304086-05	#5 VT-3	Manganese (Method 243.1)	0.081		mg/L	0	4/01/93
304086-05	#5 VT-3	Mercury (Method 7470)	0.2	U	ug/L	0	4/01/93
304086-05	#5 VT-3	Nickel (Method 6010)	2.	U	ug/L	2	4/01/93
304086-05	#5 VT-3	Nitrate as N (300.0)	1.2		mg/L	0	4/01/93
304086-05	#5 VT-3	Potassium (Method 258.1)	1.2		mg/L	0	4/01/93
304086-05	#5 VT-3	Selenium (Method 7741)	5.	U	ug/L	5	4/01/93
304086-05	#5 VT-3	Silver (Method 6010)	1.	U	ug/L	1	4/01/93
304086-05	#5 VT-3	Sodium (Method 273.1)	10.		mg/L	0	4/01/93
304086-05	#5 VT-3	Sulfate as SO4 (300.0)	7.		mg/L	1	4/01/93
304086-05	#5 VT-3	Thallium (Method 7841)	2.	U	ug/L	2	4/01/93
304086-05	#5 VT-3	Turbidity	8.5		NTU	1	4/01/93
304086-05	#5 VT-3	Zinc (Method 6010)	4.		ug/L	1	4/01/93
		Specific Conductance	160		Micromhos/cm		5/07/92
205467-09	#9 SPWSD VT-5.1	Alkalinity,Bicarb,CaCO3	52		mg/L	0	5/07/92
205467-09	#9 SPWSD VT-5.1	Alkalinity,Carb as CaCO3	0		mg/L	0	5/07/92
205467-09	#9 SPWSD VT-5.1	Antimony (Method 7041)	12		ug/L	10	5/07/92
205467-09	#9 SPWSD VT-5.1	Arsenic (Method 7061)	5	U	ug/L	5	5/07/92
205467-09	#9 SPWSD VT-5.1	Beryllium (Method 6010)	1	U	ug/L	1	5/07/92
205467-09	#9 SPWSD VT-5.1	Cadmium (Method 6010)	1	U	ug/L	1	5/07/92
205467-09	#9 SPWSD VT-5.1	Calcium (Method 215.1)	16		mg/L	1	5/07/92
205467-09	#9 SPWSD VT-5.1	Chloride (Method 300.0)	4		mg/L	1	5/07/92
205467-09	#9 SPWSD VT-5.1	Chromium (Method 6010)	2		ug/L	1	5/07/92
205467-09	#9 SPWSD VT-5.1	Copper (Method 6010)	1	U	ug/L	1	5/07/92
205467-09	#9 SPWSD VT-5.1	Lead (Method 6010)	5	U	ug/L	5	5/07/92
205467-09	#9 SPWSD VT-5.1	Magnesium (Method 242.1)	6.2		mg/L	0	5/07/92

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9205467-09	#9 SPWSD VT-5.1	Mercury (Method 7470)	1	U	ug/L	1	5/07/92
9205467-09	#9 SPWSD VT-5.1	Nickel (Method 6010)	2	U	ug/L	2	5/07/92
9205467-09	#9 SPWSD VT-5.1	Nitrate + Nitrite as N	1		mg/L	0	5/07/92
9205467-09	#9 SPWSD VT-5.1	Potassium (Method 258.1)	1.4		mg/L	0	5/07/92
9205467-09	#9 SPWSD VT-5.1	Selenium (Method 7741)	5	U	ug/L	5	5/07/92
9205467-09	#9 SPWSD VT-5.1	Silver (Method 6010)	1	U	ug/L	1	5/07/92
9205467-09	#9 SPWSD VT-5.1	Sodium (Method 273.1)	6.8		mg/L	0	5/07/92
9205467-09	#9 SPWSD VT-5.1	Specific Conductance	160		Micromhos/cm	5	5/07/92
9205467-09	#9 SPWSD VT-5.1	Sulfate as SO4 (300.0)	14		mg/L	1	5/07/92
9205467-09	#9 SPWSD VT-5.1	Thallium (Method 7841)	2	U	ug/L	2	5/07/92
9205467-09	#9 SPWSD VT-5.1	Total Dissolved Solids	91		mg/L	2	5/07/92
9205467-09	#9 SPWSD VT-5.1	Turbidity	4.3		NTU	1	5/07/92
9205467-09	#9 SPWSD VT-5.1	Zinc (Method 6010)	2		ug/L	1	5/07/92
		Dissolved Oxygen			mg/L		10/13/92
		Specific Conductance	154		Micromhos/cm		10/13/92
		Temperature	11.9		Degrees Celc		10/13/92
		pH	7.08		Std. Units		10/13/92
9210752-08	#7 SPWSD VT-5.1	Alkalinity,Bicarb,CaCO3	50.		mg/L	0	10/13/92
9210752-08	#7 SPWSD VT-5.1	Anion/Cation Balance	1.52/1.59		meq/L		10/13/92
9210752-08	#7 SPWSD VT-5.1	Calcium (Method 215.1)	12.		mg/L	1	10/13/92
9210752-08	#7 SPWSD VT-5.1	Chloride (Method 300.0)	5.		mg/L	1	10/13/92
9210752-08	#7 SPWSD VT-5.1	Iron (Method 236.1)	0.23		mg/L	0	10/13/92
9210752-08	#7 SPWSD VT-5.1	Magnesium (Method 242.1)	8.5		mg/L	0	10/13/92
9210752-08	#7 SPWSD VT-5.1	Manganese (Method 243.1)	0.010		mg/L	0	10/13/92
9210752-08	#7 SPWSD VT-5.1	Nitrate as N (300.0)	1.0		mg/L	0	10/13/92
9210752-08	#7 SPWSD VT-5.1	Potassium (Method 258.1)	1.2		mg/L	0	10/13/92
9210752-08	#7 SPWSD VT-5.1	Sodium (Method 273.1)	6.1		mg/L	0	10/13/92
9210752-08	#7 SPWSD VT-5.1	Sulfate as SO4 (300.0)	15.		mg/L	1	10/13/92
9210752-08	#7 SPWSD VT-5.1	Turbidity	3.0		NTU	1	10/13/92
		Dissolved Oxygen	3.7		mg/L		4/01/93
		Specific Conductance	147		Micromhos/cm		4/01/93
		Temperature	11.7		Degrees Celc		4/01/93
		pH	7.09		Std. Units		4/01/93
9304086-04	#4 VT-5.1	Alkalinity,Bicarb,CaCO3	46.		mg/L	0	4/01/93
9304086-04	#4 VT-5.1	Anion/Cation Balance	1.43/1.45		meq/L	0	4/01/93
9304086-04	#4 VT-5.1	Antimony (Method 7041)	3.	U	ug/L	3	4/01/93
9304086-04	#4 VT-5.1	Arsenic (Method 7061)	5.	U	ug/L	5	4/01/93
9304086-04	#4 VT-5.1	Beryllium (Method 6010)	1.	U	ug/L	1	4/01/93
9304086-04	#4 VT-5.1	Cadmium (Method 6010)	1.	U	ug/L	1	4/01/93
9304086-04	#4 VT-5.1	Calcium (Method 215.1)	15.		mg/L	0	4/01/93
9304086-04	#4 VT-5.1	Chloride (Method 300.0)	5.		mg/L	1	4/01/93
9304086-04	#4 VT-5.1	Chromium (Method 6010)	2.		ug/L	10	4/01/93
9304086-04	#4 VT-5.1	Copper (Method 6010)	1.	U	ug/L	2	4/01/93
9304086-04	#4 VT-5.1	Iron (Method 236.1)	0.08		mg/L	0	4/01/93
9304086-04	#4 VT-5.1	Lead (Method 6010)	5.	U	ug/L	5	4/01/93
9304086-04	#4 VT-5.1	Magnesium (Method 242.1)	4.7		mg/L	0	4/01/93
9304086-04	#4 VT-5.1	Manganese (Method 243.1)	0.004		mg/L	0	4/01/93

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9304086-04	#4 VT-5.1	Mercury (Method 7470)	0.2	U	ug/L	0	4/01/93
9304086-04	#4 VT-5.1	Nickel (Method 6010)	2.	U	ug/L	2	4/01/93
9304086-04	#4 VT-5.1	Nitrate as N (300.0)	1.1		mg/L	0	4/01/93
9304086-04	#4 VT-5.1	Potassium (Method 258.1)	1.0		mg/L	0	4/01/93
9304086-04	#4 VT-5.1	Selenium (Method 7741)	5.	U	ug/L	5	4/01/93
9304086-04	#4 VT-5.1	Silver (Method 6010)	1.	U	ug/L	1	4/01/93
9304086-04	#4 VT-5.1	Sodium (Method 273.1)	6.7		mg/L	0	4/01/93
9304086-04	#4 VT-5.1	Sulfate as SO4 (300.0)	14.		mg/L	1	4/01/93
9304086-04	#4 VT-5.1	Thallium (Method 7841)	2.	U	ug/L	2	4/01/93
9304086-04	#4 VT-5.1	Turbidity	1.0		NTU	1	4/01/93
9304086-04	#4 VT-5.1	Zinc (Method 6010)	2.		ug/L	1	4/01/93
		Dissolved Oxygen			mg/L		10/13/92
		Specific Conductance	162		Micromhos/cm		10/13/92
		Temperature	11.6		Degrees Celc		10/13/92
		pH	6.91		Std. Units		10/13/92
9210752-09	#8 SPWSD VT-5.2	Alkalinity,Bicarb,CaCO3	62.		mg/L	0	10/13/92
9210752-09	#8 SPWSD VT-5.2	Anion/Cation Balance	1.64/1.80		meq/L		10/13/92
9210752-09	#8 SPWSD VT-5.2	Calcium (Method 215.1)	13.		mg/L	1	10/13/92
9210752-09	#8 SPWSD VT-5.2	Chloride (Method 300.0)	4.		mg/L	1	10/13/92
9210752-09	#8 SPWSD VT-5.2	Iron (Method 236.1)	0.22		mg/L	0	10/13/92
9210752-09	#8 SPWSD VT-5.2	Magnesium (Method 242.1)	8.8		mg/L	0	10/13/92
9210752-09	#8 SPWSD VT-5.2	Manganese (Method 243.1)	0.010		mg/L	0	10/13/92
9210752-09	#8 SPWSD VT-5.2	Nitrate as N (300.0)	0.9		mg/L	0	10/13/92
9210752-09	#8 SPWSD VT-5.2	Potassium (Method 258.1)	1.2		mg/L	0	10/13/92
9210752-09	#8 SPWSD VT-5.2	Sodium (Method 273.1)	9.0		mg/L	0	10/13/92
9210752-09	#8 SPWSD VT-5.2	Sulfate as SO4 (300.0)	11.		mg/L	1	10/13/92
9210752-09	#8 SPWSD VT-5.2	Turbidity	1.8		NTU	1	10/13/92
		Specific Conductance	150		Micromhos/cm		5/07/92
9205467-03	#3 SPWSD VT-6.2	Alkalinity,Bicarb,CaCO3	74		mg/L	0	5/07/92
9205467-03	#3 SPWSD VT-6.2	Alkalinity,Carb as CaCO3	0		mg/L	0	5/07/92
9205467-03	#3 SPWSD VT-6.2	Calcium (Method 215.1)	16		mg/L	1	5/07/92
9205467-03	#3 SPWSD VT-6.2	Chloride (Method 300.0)	4		mg/L	1	5/07/92
9205467-03	#3 SPWSD VT-6.2	Magnesium (Method 242.1)	6.3		mg/L	0	5/07/92
9205467-03	#3 SPWSD VT-6.2	Nitrate + Nitrite as N	.01	U	mg/L	0	5/07/92
9205467-03	#3 SPWSD VT-6.2	Potassium (Method 258.1)	3.8		mg/L	0	5/07/92
9205467-03	#3 SPWSD VT-6.2	Sodium (Method 273.1)	6.7		mg/L	0	5/07/92
9205467-03	#3 SPWSD VT-6.2	Specific Conductance	150		Micromhos/cm	5	5/07/92
9205467-03	#3 SPWSD VT-6.2	Sulfate as SO4 (300.0)	1	U	mg/L	1	5/07/92
9205467-03	#3 SPWSD VT-6.2	Total Dissolved Solids	93		mg/L	2	5/07/92
9205467-03	#3 SPWSD VT-6.2	Turbidity	17		NTU	1	5/07/92
		Dissolved Oxygen			mg/L		10/13/92
		Specific Conductance	163		Micromhos/cm		10/13/92
		Temperature	10.6		Degrees Celc		10/13/92
		pH	7.68		Std. Units		10/13/92
9210752-05	#10 SPWSD VT-7.4	Alkalinity,Bicarb,CaCO3	74.		mg/L	0	10/13/92
9210752-05	#10 SPWSD VT-7.4	Anion/Cation Balance	1.66/1.57		meq/L		10/13/92
9210752-05	#10 SPWSD VT-7.4	Antimony (Method 7041)	3.0	U	ug/L	3	10/13/92

[redacted]ID	CLIENT ID	PARAMETER	RESULT	RESULT FLAG	UNITS	PQL	SAMPLING DATE
[redacted]752-05	#10 SPWSD VT-7.4	Arsenic (Method 7061)	5.		ug/L	5	10/13/92
[redacted]752-05	#10 SPWSD VT-7.4	Beryllium (Method 6010)	1.	U	ug/L	1	10/13/92
210752-05	#10 SPWSD VT-7.4	Cadmium (Method 6010)	1.	U	ug/L	1	10/13/92
[redacted]752-05	#10 SPWSD VT-7.4	Calcium (Method 215.1)	17.		mg/L	1	10/13/92
[redacted]752-05	#10 SPWSD VT-7.4	Chloride (Method 300.0)	2.		mg/L	1	10/13/92
210752-05	#10 SPWSD VT-7.4	Chromium (Method 6010)	2.		ug/L	1	10/13/92
210752-05	#10 SPWSD VT-7.4	Copper (Method 6010)	1.	U	ug/L	1	10/13/92
[redacted]752-05	#10 SPWSD VT-7.4	Iron (Method 236.1)	0.09		mg/L	0	10/13/92
[redacted]752-05	#10 SPWSD VT-7.4	Lead (Method 6010)	5.	U	ug/L	5	10/13/92
210752-05	#10 SPWSD VT-7.4	Magnesium (Method 242.1)	3.3		mg/L	0	10/13/92
[redacted]752-05	#10 SPWSD VT-7.4	Manganese (Method 243.1)	0.035		mg/L	0	10/13/92
[redacted]752-05	#10 SPWSD VT-7.4	Mercury (Method 7470)	1.	U	ug/L	1	10/13/92
210752-05	#10 SPWSD VT-7.4	Nickel (Method 6010)	2.	U	ug/L	2	10/13/92
[redacted]752-05	#10 SPWSD VT-7.4	Nitrate as N (300.0)	0.2	U	mg/L	0	10/13/92
[redacted]752-05	#10 SPWSD VT-7.4	Potassium (Method 258.1)	1.2		mg/L	0	10/13/92
210752-05	#10 SPWSD VT-7.4	Selenium (Method 7741)	5.	U	ug/L	5	10/13/92
210752-05	#10 SPWSD VT-7.4	Silver (Method 6010)	4.	U	ug/L	1	10/13/92
[redacted]752-05	#10 SPWSD VT-7.4	Sodium (Method 273.1)	9.7		mg/L	0	10/13/92
[redacted]752-05	#10 SPWSD VT-7.4	Sulfate as SO4 (300.0)	6.		mg/L	1	10/13/92
210752-05	#10 SPWSD VT-7.4	Thallium (Method 7841)	2.0	U	ug/L	2	10/13/92
[redacted]752-05	#10 SPWSD VT-7.4	Turbidity	0.8		NTU	1	10/13/92
[redacted]752-05	#10 SPWSD VT-7.4	Zinc (Method 6010)	13.		ug/L	1	10/13/92
		Specific Conductance	130		Micromhos/cm		5/06/92
[redacted]5467-02	#2 SPWSD VT-8.1	Alkalinity,Bicarb,CaCO3	48		mg/L	0	5/06/92
[redacted]5467-02	#2 SPWSD VT-8.1	Alkalinity,Carb as CaCO3	0		mg/L	0	5/06/92
205467-02	#2 SPWSD VT-8.1	Antimony (Method 7041)	15		ug/L	10	5/06/92
205467-02	#2 SPWSD VT-8.1	Arsenic (Method 7061)	5	U	ug/L	5	5/06/92
[redacted]5467-02	#2 SPWSD VT-8.1	Beryllium (Method 6010)	1	U	ug/L	1	5/06/92
[redacted]5467-02	#2 SPWSD VT-8.1	Cadmium (Method 6010)	1	U	ug/L	1	5/06/92
205467-02	#2 SPWSD VT-8.1	Calcium (Method 215.1)	14		mg/L	1	5/06/92
[redacted]5467-02	#2 SPWSD VT-8.1	Chloride (Method 300.0)	4		mg/L	1	5/06/92
[redacted]5467-02	#2 SPWSD VT-8.1	Chromium (Method 6010)	1		ug/L	1	5/06/92
205467-02	#2 SPWSD VT-8.1	Copper (Method 6010)	1	U	ug/L	1	5/06/92
[redacted]5467-02	#2 SPWSD VT-8.1	Lead (Method 6010)	5	U	ug/L	5	5/06/92
[redacted]5467-02	#2 SPWSD VT-8.1	Magnesium (Method 242.1)	3.6		mg/L	0	5/06/92
205467-02	#2 SPWSD VT-8.1	Mercury (Method 7470)	1	U	ug/L	1	5/06/92
205467-02	#2 SPWSD VT-8.1	Nickel (Method 6010)	2	U	ug/L	2	5/06/92
[redacted]5467-02	#2 SPWSD VT-8.1	Nitrate + Nitrite as N	.73		mg/L	0	5/06/92
[redacted]5467-02	#2 SPWSD VT-8.1	Potassium (Method 258.1)	1.2		mg/L	0	5/06/92
205467-02	#2 SPWSD VT-8.1	Selenium (Method 7741)	5	U	ug/L	5	5/06/92
[redacted]5467-02	#2 SPWSD VT-8.1	Silver (Method 6010)	1	U	ug/L	1	5/06/92
[redacted]5467-02	#2 SPWSD VT-8.1	Sodium (Method 273.1)	7.1		mg/L	0	5/06/92
205467-02	#2 SPWSD VT-8.1	Specific Conductance	130		Micromhos/cm	5	5/06/92
[redacted]5467-02	#2 SPWSD VT-8.1	Sulfate as SO4 (300.0)	6		mg/L	1	5/06/92
[redacted]5467-02	#2 SPWSD VT-8.1	Thallium (Method 7841)	2	U	ug/L	2	5/06/92
205467-02	#2 SPWSD VT-8.1	Total Dissolved Solids	70		mg/L	2	5/06/92
205467-02	#2 SPWSD VT-8.1	Turbidity	1.5		NTU	1	5/06/92

[redacted]

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205467-02	#2 SPWSD VT-8.1	Zinc (Method 6010)	3		ug/L	1	5/06/92
		Dissolved Oxygen	.6		mg/L		10/12/92
		Specific Conductance	129		Micromhos/cm		10/12/92
		Temperature	11.9		Degrees Celc		10/12/92
		pH	6.64		Std. Units		10/12/92
210752-02	#11 SPWSD VT-8.1	Alkalinity,Bicarb,CaCO3	50.		mg/L	0	10/12/92
210752-02	#11 SPWSD VT-8.1	Anion/Cation Balance	1.29/1.15		meq/L		10/12/92
210752-02	#11 SPWSD VT-8.1	Calcium (Method 215.1)	10.		mg/L	1	10/12/92
210752-02	#11 SPWSD VT-8.1	Chloride (Method 300.0)	4.		mg/L	1	10/12/92
210752-02	#11 SPWSD VT-8.1	Iron (Method 236.1)	0.11		mg/L	0	10/12/92
210752-02	#11 SPWSD VT-8.1	Magnesium (Method 242.1)	4.1		mg/L	0	10/12/92
210752-02	#11 SPWSD VT-8.1	Manganese (Method 243.1)	0.004		mg/L	0	10/12/92
210752-02	#11 SPWSD VT-8.1	Nitrate as N (300.0)	0.7		mg/L	0	10/12/92
210752-02	#11 SPWSD VT-8.1	Potassium (Method 258.1)	1.0		mg/L	0	10/12/92
210752-02	#11 SPWSD VT-8.1	Sodium (Method 273.1)	6.6		mg/L	0	10/12/92
210752-02	#11 SPWSD VT-8.1	Sulfate as SO4 (300.0)	6.		mg/L	1	10/12/92
210752-02	#11 SPWSD VT-8.1	Turbidity	0.9		NTU	1	10/12/92
		Dissolved Oxygen			mg/L		10/12/92
		Specific Conductance	165		Micromhos/cm		10/12/92
		Temperature	11.8		Degrees Celc		10/12/92
		pH	8.26		Std. Units		10/12/92
210752-03	#12 SPWSD VT-8.4	Alkalinity,Bicarb,CaCO3	78.		mg/L	0	10/12/92
210752-03	#12 SPWSD VT-8.4	Anion/Cation Balance	1.79/1.50		meq/L		10/12/92
210752-03	#12 SPWSD VT-8.4	Calcium (Method 215.1)	17.		mg/L	1	10/12/92
210752-03	#12 SPWSD VT-8.4	Chloride (Method 300.0)	6.		mg/L	1	10/12/92
210752-03	#12 SPWSD VT-8.4	Iron (Method 236.1)	0.14		mg/L	0	10/12/92
210752-03	#12 SPWSD VT-8.4	Magnesium (Method 242.1)	1.7		mg/L	0	10/12/92
210752-03	#12 SPWSD VT-8.4	Manganese (Method 243.1)	0.036		mg/L	0	10/12/92
210752-03	#12 SPWSD VT-8.4	Nitrate as N (300.0)	0.2	U	mg/L	0	10/12/92
210752-03	#12 SPWSD VT-8.4	Potassium (Method 258.1)	1.3		mg/L	0	10/12/92
210752-03	#12 SPWSD VT-8.4	Sodium (Method 273.1)	11.		mg/L	0	10/12/92
210752-03	#12 SPWSD VT-8.4	Sulfate as SO4 (300.0)	3.		mg/L	1	10/12/92
210752-03	#12 SPWSD VT-8.4	Turbidity	2.1		NTU	1	10/12/92
		Dissolved Oxygen	1.2		mg/L		10/12/92
		Specific Conductance	142		Micromhos/cm		10/12/92
		Temperature	10.2		Degrees Celc		10/12/92
		pH	8.76		Std. Units		10/12/92
210752-01	#1 SPWSD WHP-1	Alkalinity,Bicarb,CaCO3	62.		mg/L	0	10/12/92
210752-01	#1 SPWSD WHP-1	Anion/Cation Balance	1.41/1.29		meq/L		10/12/92
210752-01	#1 SPWSD WHP-1	Antimony (Method 7041)	3.0	U	ug/L	3	10/12/92
210752-01	#1 SPWSD WHP-1	Arsenic (Method 7061)	9.		ug/L	5	10/12/92
210752-01	#1 SPWSD WHP-1	Beryllium (Method 6010)	1.	U	ug/L	1	10/12/92
210752-01	#1 SPWSD WHP-1	Cadmium (Method 6010)	1.	U	ug/L	1	10/12/92
210752-01	#1 SPWSD WHP-1	Calcium (Method 215.1)	11.		mg/L	1	10/12/92
210752-01	#1 SPWSD WHP-1	Chloride (Method 300.0)	4.		mg/L	1	10/12/92
210752-01	#1 SPWSD WHP-1	Chromium (Method 6010)	1.		ug/L	1	10/12/92
210752-01	#1 SPWSD WHP-1	Copper (Method 6010)	1.		ug/L	1	10/12/92

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9210752-01	#1 SPWSD WHP-1	Iron (Method 236.1)	0.11		mg/L	0	10/12/92
210752-01	#1 SPWSD WHP-1	Lead (Method 6010)	5.	U	ug/L	5	10/12/92
9210752-01	#1 SPWSD WHP-1	Magnesium (Method 242.1)	2.3		mg/L	0	10/12/92
9210752-01	#1 SPWSD WHP-1	Manganese (Method 243.1)	0.017		mg/L	0	10/12/92
210752-01	#1 SPWSD WHP-1	Mercury (Method 7470)	1.	U	ug/L	1	10/12/92
210752-01	#1 SPWSD WHP-1	Nickel (Method 6010)	2.	U	ug/L	2	10/12/92
9210752-01	#1 SPWSD WHP-1	Nitrate as N (300.0)	0.2	U	mg/L	0	10/12/92
210752-01	#1 SPWSD WHP-1	Potassium (Method 258.1)	1.1		mg/L	0	10/12/92
210752-01	#1 SPWSD WHP-1	Selenium (Method 7741)	5.	U	ug/L	5	10/12/92
9210752-01	#1 SPWSD WHP-1	Silver (Method 6010)	1.	U	ug/L	1	10/12/92
9210752-01	#1 SPWSD WHP-1	Sodium (Method 273.1)	12.		mg/L	0	10/12/92
210752-01	#1 SPWSD WHP-1	Sulfate as SO4 (300.0)	3.		mg/L	1	10/12/92
9210752-01	#1 SPWSD WHP-1	Thallium (Method 7841)	2.0	U	ug/L	2	10/12/92
9210752-01	#1 SPWSD WHP-1	Turbidity	0.6		NTU	1	10/12/92
210752-01	#1 SPWSD WHP-1	Zinc (Method 6010)	15.		ug/L	1	10/12/92
		Dissolved Oxygen			mg/L		4/01/93
		Specific Conductance	104		Micromhos/cm		4/01/93
		Temperature	11.4		Degrees Celc		4/01/93
		pH	8.54		Std. Units		4/01/93
9304086-11	#11 WH-1	Alkalinity,Bicarb,CaCO3	62.		mg/L	0	4/01/93
9304086-11	#11 WH-1	Anion/Cation Balance	1.39/1.29		meq/L	0	4/01/93
304086-11	#11 WH-1	Calcium (Method 215.1)	13.		mg/L	0	4/01/93
9304086-11	#11 WH-1	Chloride (Method 300.0)	3.		mg/L	1	4/01/93
9304086-11	#11 WH-1	Iron (Method 236.1)	0.05	U	mg/L	0	4/01/93
304086-11	#11 WH-1	Magnesium (Method 242.1)	1.7		mg/L	0	4/01/93
304086-11	#11 WH-1	Manganese (Method 243.1)	0.020		mg/L	0	4/01/93
9304086-11	#11 WH-1	Nitrate as N (300.0)	0.2	U	mg/L	0	4/01/93
304086-11	#11 WH-1	Potassium (Method 258.1)	0.97		mg/L	0	4/01/93
304086-11	#11 WH-1	Sodium (Method 273.1)	11.		mg/L	0	4/01/93
9304086-11	#11 WH-1	Sulfate as SO4 (300.0)	3.		mg/L	1	4/01/93
9304086-11	#11 WH-1	Turbidity	0.5	U	NTU	1	4/01/93
		Dissolved Oxygen			mg/L		10/13/92
		Specific Conductance	219		Micromhos/cm		10/13/92
		Temperature	15.9		Degrees Celc		10/13/92
		pH	6.57		Std. Units		10/13/92
210752-11	#2 SPWSD WHP-2.1	Alkalinity,Bicarb,CaCO3	76.		mg/L	0	10/13/92
9210752-11	#2 SPWSD WHP-2.1	Anion/Cation Balance	2.06/1.99		meq/L		10/13/92
210752-11	#2 SPWSD WHP-2.1	Antimony (Method 7041)	3.0	U	ug/L	3	10/13/92
210752-11	#2 SPWSD WHP-2.1	Arsenic (Method 7061)	5.	U	ug/L	5	10/13/92
9210752-11	#2 SPWSD WHP-2.1	Beryllium (Method 6010)	1.	U	ug/L	1	10/13/92
9210752-11	#2 SPWSD WHP-2.1	Cadmium (Method 6010)	1.	U	ug/L	1	10/13/92
210752-11	#2 SPWSD WHP-2.1	Calcium (Method 215.1)	16.		mg/L	1	10/13/92
9210752-11	#2 SPWSD WHP-2.1	Chloride (Method 300.0)	8.		mg/L	1	10/13/92
9210752-11	#2 SPWSD WHP-2.1	Chromium (Method 6010)	5.		ug/L	1	10/13/92
210752-11	#2 SPWSD WHP-2.1	Copper (Method 6010)	5.		ug/L	1	10/13/92
210752-11	#2 SPWSD WHP-2.1	Iron (Method 236.1)	2.3		mg/L	0	10/13/92
9210752-11	#2 SPWSD WHP-2.1	Lead (Method 6010)	5.	U	ug/L	5	10/13/92

\B ID	CLIENT ID	PARAMETER	RESULT	RESULT FLAG	UNITS	PQL	SAMPLING DATE
?10752-11	#2 SPWSD WHP-2.1	Magnesium (Method 242.1)	7.4		mg/L	0	10/13/92
?10752-11	#2 SPWSD WHP-2.1	Manganese (Method 243.1)	0.045		mg/L	0	10/13/92
?10752-11	#2 SPWSD WHP-2.1	Mercury (Method 7470)	1.	U	ug/L	1	10/13/92
?10752-11	#2 SPWSD WHP-2.1	Nickel (Method 6010)	3.		ug/L	2	10/13/92
?10752-11	#2 SPWSD WHP-2.1	Nitrate as N (300.0)	1.2		mg/L	0	10/13/92
?10752-11	#2 SPWSD WHP-2.1	Potassium (Method 258.1)	2.2		mg/L	0	10/13/92
?10752-11	#2 SPWSD WHP-2.1	Selenium (Method 7741)	5.	U	ug/L	5	10/13/92
?10752-11	#2 SPWSD WHP-2.1	Silver (Method 6010)	4.	U	ug/L	1	10/13/92
?10752-11	#2 SPWSD WHP-2.1	Sodium (Method 273.1)	12.		mg/L	0	10/13/92
?10752-11	#2 SPWSD WHP-2.1	Sulfate as SO4 (300.0)	11.		mg/L	1	10/13/92
?10752-11	#2 SPWSD WHP-2.1	Thallium (Method 7841)	2.0	U	ug/L	2	10/13/92
?10752-11	#2 SPWSD WHP-2.1	Turbidity	20.		NTU	1	10/13/92
?10752-11	#2 SPWSD WHP-2.1	Zinc (Method 6010)	8.		ug/L	1	10/13/92
		Dissolved Oxygen	1.2		mg/L		4/01/93
		Specific Conductance	197		Micromhos/cm		4/01/93
		Temperature	13.9		Degrees Celc		4/01/93
		pH	6.48		Std. Units		4/01/93
;04086-10	#10 WH-2.1	Antimony (Method 7041)	3.	U	ug/L	3	4/01/93
;04086-10	#10 WH-2.1	Arsenic (Method 7061)	5.	U	ug/L	5	4/01/93
;04086-10	#10 WH-2.1	Beryllium (Method 6010)	1.	U	ug/L	1	4/01/93
;04086-10	#10 WH-2.1	Cadmium (Method 6010)	1.	U	ug/L	1	4/01/93
;04086-10	#10 WH-2.1	Chromium (Method 6010)	2.		ug/L	10	4/01/93
;04086-10	#10 WH-2.1	Copper (Method 6010)	2.		ug/L	2	4/01/93
;04086-10	#10 WH-2.1	Lead (Method 6010)	5.	U	ug/L	5	4/01/93
;04086-10	#10 WH-2.1	Mercury (Method 7470)	0.2	U	ug/L	0	4/01/93
;04086-10	#10 WH-2.1	Nickel (Method 6010)	2.	U	ug/L	2	4/01/93
;04086-10	#10 WH-2.1	Selenium (Method 7741)	5.	U	ug/L	5	4/01/93
;04086-10	#10 WH-2.1	Silver (Method 6010)	1.	U	ug/L	1	4/01/93
;04086-10	#10 WH-2.1	Thallium (Method 7841)	2.	U	ug/L	2	4/01/93
;04086-10	#10 WH-2.1	Zinc (Method 6010)	3.		ug/L	1	4/01/93
		Dissolved Oxygen			mg/L		10/13/92
		Specific Conductance	149		Micromhos/cm		10/13/92
		Temperature	15.2		Degrees Celc		10/13/92
		pH	7.04		Std. Units		10/13/92
?10752-12	#3 SPWSD WHP-2.2	Alkalinity,Bicarb,CaCO3	66.		mg/L	0	10/13/92
?10752-12	#3 SPWSD WHP-2.2	Anion/Cation Balance	1.56/1.43		meq/L		10/13/92
?10752-12	#3 SPWSD WHP-2.2	Calcium (Method 215.1)	12.		mg/L	1	10/13/92
?10752-12	#3 SPWSD WHP-2.2	Chloride (Method 300.0)	5.		mg/L	1	10/13/92
?10752-12	#3 SPWSD WHP-2.2	Iron (Method 236.1)	0.17		mg/L	0	10/13/92
?10752-12	#3 SPWSD WHP-2.2	Magnesium (Method 242.1)	6.4		mg/L	0	10/13/92
?10752-12	#3 SPWSD WHP-2.2	Manganese (Method 243.1)	0.13		mg/L	0	10/13/92
?10752-12	#3 SPWSD WHP-2.2	Nitrate as N (300.0)	0.2	U	mg/L	0	10/13/92
?10752-12	#3 SPWSD WHP-2.2	Potassium (Method 258.1)	0.90		mg/L	0	10/13/92
?10752-12	#3 SPWSD WHP-2.2	Sodium (Method 273.1)	6.4		mg/L	0	10/13/92
?10752-12	#3 SPWSD WHP-2.2	Sulfate as SO4 (300.0)	5.		mg/L	1	10/13/92
?10752-12	#3 SPWSD WHP-2.2	Turbidity	1.0		NTU	1	10/13/92
		Dissolved Oxygen	1.1		mg/L		4/01/93

[redacted] ID	CLIENT ID	PARAMETER	RESULT	RESULT FLAG	UNITS	PQL	SAMPLING DATE
		Specific Conductance	164		Micromhos/cm		4/01/93
		Temperature	13.2		Degrees Celc		4/01/93
		pH	7.13		Std. Units		4/01/93
		Dissolved Oxygen			mg/L		10/13/92
		Specific Conductance	207		Micromhos/cm		10/13/92
		Temperature	14.3		Degrees Celc		10/13/92
		pH	7.07		Std. Units		10/13/92
[redacted]10752-13	#4 SPWSD WHP 3.1	Alkalinity,Bicarb,CaCO3	92.		mg/L	0	10/13/92
[redacted]10752-13	#4 SPWSD WHP 3.1	Anion/Cation Balance	2.17/2.03		meq/L		10/13/92
9210752-13	#4 SPWSD WHP 3.1	Antimony (Method 7041)	3.0	U	ug/L	3	10/13/92
[redacted]10752-13	#4 SPWSD WHP 3.1	Arsenic (Method 7061)	5.	U	ug/L	5	10/13/92
[redacted]10752-13	#4 SPWSD WHP 3.1	Beryllium (Method 6010)	1.	U	ug/L	1	10/13/92
9210752-13	#4 SPWSD WHP 3.1	Cadmium (Method 6010)	1.	U	ug/L	1	10/13/92
9210752-13	#4 SPWSD WHP 3.1	Calcium (Method 215.1)	18.		mg/L	1	10/13/92
[redacted]10752-13	#4 SPWSD WHP 3.1	Chloride (Method 300.0)	6.		mg/L	1	10/13/92
[redacted]10752-13	#4 SPWSD WHP 3.1	Chromium (Method 6010)	2.		ug/L	1	10/13/92
9210752-13	#4 SPWSD WHP 3.1	Copper (Method 6010)	2.		ug/L	1	10/13/92
[redacted]10752-13	#4 SPWSD WHP 3.1	Iron (Method 236.1)	0.96		mg/L	0	10/13/92
[redacted]10752-13	#4 SPWSD WHP 3.1	Lead (Method 6010)	5.	U	ug/L	5	10/13/92
9210752-13	#4 SPWSD WHP 3.1	Magnesium (Method 242.1)	9.1		mg/L	0	10/13/92
[redacted]10752-13	#4 SPWSD WHP 3.1	Manganese (Method 243.1)	0.037		mg/L	0	10/13/92
[redacted]10752-13	#4 SPWSD WHP 3.1	Mercury (Method 7470)	1.	U	ug/L	1	10/13/92
9210752-13	#4 SPWSD WHP 3.1	Nickel (Method 6010)	2.	U	ug/L	2	10/13/92
9210752-13	#4 SPWSD WHP 3.1	Nitrate as N (300.0)	0.3		mg/L	0	10/13/92
[redacted]10752-13	#4 SPWSD WHP 3.1	Potassium (Method 258.1)	1.2		mg/L	0	10/13/92
[redacted]10752-13	#4 SPWSD WHP 3.1	Selenium (Method 7741)	5.	U	ug/L	5	10/13/92
9210752-13	#4 SPWSD WHP 3.1	Silver (Method 6010)	1.	U	ug/L	1	10/13/92
[redacted]10752-13	#4 SPWSD WHP 3.1	Sodium (Method 273.1)	8.0		mg/L	0	10/13/92
[redacted]10752-13	#4 SPWSD WHP 3.1	Sulfate as SO4 (300.0)	7.		mg/L	1	10/13/92
9210752-13	#4 SPWSD WHP 3.1	Thallium (Method 7841)	2.0	U	ug/L	2	10/13/92
[redacted]10752-13	#4 SPWSD WHP 3.1	Turbidity	9.9		NTU	1	10/13/92
[redacted]10752-13	#4 SPWSD WHP 3.1	Zinc (Method 6010)	9.		ug/L	1	10/13/92
		Dissolved Oxygen	.4		mg/L		4/01/93
		Specific Conductance	210		Micromhos/cm		4/01/93
		Temperature	13.8		Degrees Celc		4/01/93
		pH	6.7		Std. Units		4/01/93
9304086-08	#8 WH-3.1	Antimony (Method 7041)	3.	U	ug/L	3	4/01/93
[redacted]304086-08	#8 WH-3.1	Arsenic (Method 7061)	5.	U	ug/L	5	4/01/93
[redacted]304086-08	#8 WH-3.1	Beryllium (Method 6010)	1.	U	ug/L	1	4/01/93
9304086-08	#8 WH-3.1	Cadmium (Method 6010)	1.	U	ug/L	1	4/01/93
[redacted]304086-08	#8 WH-3.1	Chromium (Method 6010)	2.		ug/L	10	4/01/93
[redacted]304086-08	#8 WH-3.1	Copper (Method 6010)	1.	U	ug/L	2	4/01/93
9304086-08	#8 WH-3.1	Lead (Method 6010)	5.	U	ug/L	5	4/01/93
9304086-08	#8 WH-3.1	Mercury (Method 7470)	0.2	U	ug/L	0	4/01/93
[redacted]304086-08	#8 WH-3.1	Nickel (Method 6010)	2.	U	ug/L	2	4/01/93
[redacted]304086-08	#8 WH-3.1	Selenium (Method 7741)	5.	U	ug/L	5	4/01/93
9304086-08	#8 WH-3.1	Silver (Method 6010)	1.	U	ug/L	1	4/01/93

LAB ID	CLIENT ID	PARAMETER	RESULT	RESULT FLAG	UNITS	PQL	SAMPLING DATE
9304086-08	#8 WH-3.1	Thallium (Method 7841)	2.1		ug/L	2	4/01/93
9304086-08	#8 WH-3.1	Zinc (Method 6010)	2.		ug/L	1	4/01/93
		Dissolved Oxygen			mg/L		10/13/92
		Specific Conductance	152		Micromhos/cm		10/13/92
		Temperature	12.3		Degrees Celc		10/13/92
		pH	6.9		Std. Units		10/13/92
9210752-14	#5 SPWSD WHP 3.2	Alkalinity,Bicarb,CaCO3	58.		mg/L	0	10/13/92
9210752-14	#5 SPWSD WHP 3.2	Anion/Cation Balance	1.50/1.29		meq/L		10/13/92
9210752-14	#5 SPWSD WHP 3.2	Calcium (Method 215.1)	12.		mg/L	1	10/13/92
9210752-14	#5 SPWSD WHP 3.2	Chloride (Method 300.0)	3.		mg/L	1	10/13/92
9210752-14	#5 SPWSD WHP 3.2	Iron (Method 236.1)	0.07		mg/L	0	10/13/92
9210752-14	#5 SPWSD WHP 3.2	Magnesium (Method 242.1)	4.7		mg/L	0	10/13/92
9210752-14	#5 SPWSD WHP 3.2	Manganese (Method 243.1)	0.004		mg/L	0	10/13/92
9210752-14	#5 SPWSD WHP 3.2	Nitrate as N (300.0)	1.3		mg/L	0	10/13/92
9210752-14	#5 SPWSD WHP 3.2	Potassium (Method 258.1)	0.85		mg/L	0	10/13/92
9210752-14	#5 SPWSD WHP 3.2	Sodium (Method 273.1)	6.6		mg/L	0	10/13/92
9210752-14	#5 SPWSD WHP 3.2	Sulfate as SO4 (300.0)	8.		mg/L	1	10/13/92
9210752-14	#5 SPWSD WHP 3.2	Turbidity	1.0		NTU	1	10/13/92
		Dissolved Oxygen	1.9		mg/L		4/01/93
		Specific Conductance	148		Micromhos/cm		4/01/93
		Temperature	12.2		Degrees Celc		4/01/93
		pH	6.96		Std. Units		4/01/93

LAB ID	CLIENT ID	PARAMETER	RESULT	RESULT FLAG	UNITS	PQL	SAMPLING DATE	WELL NAME
[redacted]04086-03	#3 SP 7-1	2,4-D	1.90	U	ug/L	1.90	4/01/93	SP7-1
9304086-03	#3 SP 7-1	2,4-DB	.41	U	ug/L	.41	4/01/93	SP7-1
9304086-03	#3 SP 7-1	2,4,5-T	.85	U	ug/L	.85	4/01/93	SP7-1
[redacted]04086-03	#3 SP 7-1	2,4,5-TP	.11	U	ug/L	.11	4/01/93	SP7-1
9304086-03	#3 SP 7-1	Dalapon	6.10	U	ug/L	6.10	4/01/93	SP7-1
9304086-03	#3 SP 7-1	Dicamba	.78	U	ug/L	.78	4/01/93	SP7-1
[redacted]04086-03	#3 SP 7-1	Dichloroprop	1.80	U	ug/L	1.80	4/01/93	SP7-1
[redacted]04086-03	#3 SP 7-1	Dinoseb	.05	U	ug/L	.05	4/01/93	SP7-1
9304086-03	#3 SP 7-1	MCPA	210.00	U	ug/L	210.00	4/01/93	SP7-1
[redacted]04086-03	#3 SP 7-1	MCPP	270.00	U	ug/L	270.00	4/01/93	SP7-1
[redacted]04086-04	#4 VT-5.1	2,4-D	1.90	U	ug/L	1.90	4/01/93	SPVT5-1
9304086-04	#4 VT-5.1	2,4-DB	.41	U	ug/L	.41	4/01/93	SPVT5-1
9304086-04	#4 VT-5.1	2,4,5-T	.85	U	ug/L	.85	4/01/93	SPVT5-1
[redacted]04086-04	#4 VT-5.1	2,4,5-TP	.11	U	ug/L	.11	4/01/93	SPVT5-1
9304086-04	#4 VT-5.1	Dalapon	6.10	U	ug/L	6.10	4/01/93	SPVT5-1
9304086-04	#4 VT-5.1	Dicamba	.78	U	ug/L	.78	4/01/93	SPVT5-1
[redacted]04086-04	#4 VT-5.1	Dichloroprop	1.80	U	ug/L	1.80	4/01/93	SPVT5-1
[redacted]04086-04	#4 VT-5.1	Dinoseb	.05	U	ug/L	.05	4/01/93	SPVT5-1
9304086-04	#4 VT-5.1	MCPA	210.00	U	ug/L	210.00	4/01/93	SPVT5-1
[redacted]04086-04	#4 VT-5.1	MCPP	270.00	U	ug/L	270.00	4/01/93	SPVT5-1
[redacted]04086-05	#5 VT-3	2,4-D	1.90	U	ug/L	1.90	4/01/93	SPVT3
9304086-05	#5 VT-3	2,4-DB	.41	U	ug/L	.41	4/01/93	SPVT3
9304086-05	#5 VT-3	2,4,5-T	.85	U	ug/L	.85	4/01/93	SPVT3
[redacted]04086-05	#5 VT-3	2,4,5-TP	.11	U	ug/L	.11	4/01/93	SPVT3
9304086-05	#5 VT-3	Dalapon	6.10	U	ug/L	6.10	4/01/93	SPVT3
9304086-05	#5 VT-3	Dicamba	.78	U	ug/L	.78	4/01/93	SPVT3
[redacted]04086-05	#5 VT-3	Dichloroprop	1.80	U	ug/L	1.80	4/01/93	SPVT3
[redacted]04086-05	#5 VT-3	Dinoseb	.05	U	ug/L	.05	4/01/93	SPVT3
9304086-05	#5 VT-3	MCPA	210.00	U	ug/L	210.00	4/01/93	SPVT3
[redacted]04086-05	#5 VT-3	MCPP	270.00	U	ug/L	270.00	4/01/93	SPVT3
[redacted]04086-06	#6 VT-1.1	2,4-D	1.90	U	ug/L	1.90	4/01/93	SPVT1-1
9304086-06	#6 VT-1.1	2,4-DB	.41	U	ug/L	.41	4/01/93	SPVT1-1
9304086-06	#6 VT-1.1	2,4,5-T	.85	U	ug/L	.85	4/01/93	SPVT1-1
[redacted]04086-06	#6 VT-1.1	2,4,5-TP	.11	U	ug/L	.11	4/01/93	SPVT1-1
9304086-06	#6 VT-1.1	Dalapon	6.10	U	ug/L	6.10	4/01/93	SPVT1-1
9304086-06	#6 VT-1.1	Dicamba	.78	U	ug/L	.78	4/01/93	SPVT1-1
[redacted]04086-06	#6 VT-1.1	Dichloroprop	1.80	U	ug/L	1.80	4/01/93	SPVT1-1
[redacted]04086-06	#6 VT-1.1	Dinoseb	.05	U	ug/L	.05	4/01/93	SPVT1-1
9304086-06	#6 VT-1.1	MCPA	210.00	U	ug/L	210.00	4/01/93	SPVT1-1
[redacted]04086-06	#6 VT-1.1	MCPP	270.00	U	ug/L	270.00	4/01/93	SPVT1-1
[redacted]04086-08	#8 WH-3.1	2,4-D	1.90	U	ug/L	1.90	4/01/93	WH3-1
9304086-08	#8 WH-3.1	2,4-DB	.41	U	ug/L	.41	4/01/93	WH3-1
9304086-08	#8 WH-3.1	2,4,5-T	.85	U	ug/L	.85	4/01/93	WH3-1
[redacted]04086-08	#8 WH-3.1	2,4,5-TP	.11	U	ug/L	.11	4/01/93	WH3-1
9304086-08	#8 WH-3.1	Dalapon	6.10	U	ug/L	6.10	4/01/93	WH3-1
9304086-08	#8 WH-3.1	Dicamba	.78	U	ug/L	.78	4/01/93	WH3-1

.AB ID	CLIENT ID	PARAMETER	RESULT	RESULT FLAG	UNITS	PQL	SAMPLING DATE	WELL NAME
?304086-08	#8 WH-3.1	Dichloroprop	1.80	U	ug/L	1.80	4/01/93	WH3-1
?304086-08	#8 WH-3.1	Dinoseb	.05	U	ug/L	.05	4/01/93	WH3-1
?304086-08	#8 WH-3.1	MCPA	210.00	U	ug/L	210.00	4/01/93	WH3-1
?304086-08	#8 WH-3.1	MCPP	270.00	U	ug/L	270.00	4/01/93	WH3-1
?304086-10	#10 WH-2.1	2,4-D	1.90	U	ug/L	1.90	4/01/93	WH2-1
?304086-10	#10 WH-2.1	2,4-DB	.41	U	ug/L	.41	4/01/93	WH2-1
?304086-10	#10 WH-2.1	2,4,5-T	.85	U	ug/L	.85	4/01/93	WH2-1
?304086-10	#10 WH-2.1	2,4,5-TP	.11	U	ug/L	.11	4/01/93	WH2-1
?304086-10	#10 WH-2.1	Dalapon	6.10	U	ug/L	6.10	4/01/93	WH2-1
?304086-10	#10 WH-2.1	Dicamba	.78	U	ug/L	.78	4/01/93	WH2-1
?304086-10	#10 WH-2.1	Dichloroprop	1.80	U	ug/L	1.80	4/01/93	WH2-1
?304086-10	#10 WH-2.1	Dinoseb	.05	U	ug/L	.05	4/01/93	WH2-1
?304086-10	#10 WH-2.1	MCPA	210.00	U	ug/L	210.00	4/01/93	WH2-1
?304086-10	#10 WH-2.1	MCPP	270.00	U	ug/L	270.00	4/01/93	WH2-1
?304086-12	Duplicate	2,4-D	1.90	U	ug/L	1.90	4/01/93	DUP-HERB
?304086-12	Duplicate	2,4-DB	.41	U	ug/L	.41	4/01/93	DUP-HERB
?304086-12	Duplicate	2,4,5-T	.85	U	ug/L	.85	4/01/93	DUP-HERB
?304086-12	Duplicate	2,4,5-TP	.11	U	ug/L	.11	4/01/93	DUP-HERB
?304086-12	Duplicate	Dalapon	6.10	U	ug/L	6.10	4/01/93	DUP-HERB
?304086-12	Duplicate	Dicamba	.78	U	ug/L	.78	4/01/93	DUP-HERB
?304086-12	Duplicate	Dichloroprop	1.80	U	ug/L	1.80	4/01/93	DUP-HERB
?304086-12	Duplicate	Dinoseb	.05	U	ug/L	.05	4/01/93	DUP-HERB
?304086-12	Duplicate	MCPA	210.00	U	ug/L	210.00	4/01/93	DUP-HERB
?304086-12	Duplicate	MCPP	270.00	U	ug/L	270.00	4/01/93	DUP-HERB

LAB ID	CLIENT ID	PARAMETER	RESULT	RESULT FLAG	UNITS	PQL	SAMPLING DATE	WELL
9304086-03	#3 SP 7-1	Alpha-BHC	.05	U	ug/L	.05	4/01/93	SP7-
9304086-03	#3 SP 7-1	Beta-BHC	.05	U	ug/L	.05	4/01/93	SP7-
9304086-03	#3 SP 7-1	Delta-BHC	.05	U	ug/L	.05	4/01/93	SP7-
9304086-03	#3 SP 7-1	Gamma-BHC	.05	U	ug/L	.05	4/01/93	SP7-
9304086-03	#3 SP 7-1	Heptachlor	.05	U	ug/L	.05	4/01/93	SP7-
9304086-03	#3 SP 7-1	Aldrin	.05	U	ug/L	.05	4/01/93	SP7-
9304086-03	#3 SP 7-1	Heptachlor Epoxide	.05	U	ug/L	.05	4/01/93	SP7-
9304086-03	#3 SP 7-1	Endosulfan I	.05	U	ug/L	.05	4/01/93	SP7-
9304086-03	#3 SP 7-1	Dieldrin	.10	U	ug/L	.10	4/01/93	SP7-
9304086-03	#3 SP 7-1	4,4'-DDE	.10	U	ug/L	.10	4/01/93	SP7-
9304086-03	#3 SP 7-1	Endrin	.10	U	ug/L	.10	4/01/93	SP7-
9304086-03	#3 SP 7-1	Endosulfan II	.10	U	ug/L	.10	4/01/93	SP7-
9304086-03	#3 SP 7-1	4,4'-DDD	.10	U	ug/L	.10	4/01/93	SP7-
9304086-03	#3 SP 7-1	Endosulfan Sulfate	.10	U	ug/L	.10	4/01/93	SP7-
9304086-03	#3 SP 7-1	4,4'-DDT	.10	U	ug/L	.10	4/01/93	SP7-
9304086-03	#3 SP 7-1	Methoxychlor	.50	U	ug/L	.50	4/01/93	SP7-
9304086-03	#3 SP 7-1	Endrin Aldehyde	.10	U	ug/L	.10	4/01/93	SP7-
9304086-03	#3 SP 7-1	Chlordane	.50	U	ug/L	.50	4/01/93	SP7-
9304086-03	#3 SP 7-1	Toxaphene	5.00	U	ug/L	5.00	4/01/93	SP7-
9304086-03	#3 SP 7-1	Aroclor-1016	1.00	U	ug/L	1.00	4/01/93	SP7-
9304086-03	#3 SP 7-1	Aroclor-1221	2.00	U	ug/L	2.00	4/01/93	SP7-
9304086-03	#3 SP 7-1	Aroclor-1232	1.00	U	ug/L	1.00	4/01/93	SP7-
9304086-03	#3 SP 7-1	Aroclor-1242	1.00	U	ug/L	1.00	4/01/93	SP7-
9304086-03	#3 SP 7-1	Aroclor-1248	1.00	U	ug/L	1.00	4/01/93	SP7-
9304086-03	#3 SP 7-1	Aroclor-1254	1.00	U	ug/L	1.00	4/01/93	SP7-
9304086-03	#3 SP 7-1	Aroclor-1260	1.00	U	ug/L	1.00	4/01/93	SP7-
9304086-04	#4 VT-5.1	Alpha-BHC	.05	U	ug/L	.05	4/01/93	SPVT
9304086-04	#4 VT-5.1	Beta-BHC	.05	U	ug/L	.05	4/01/93	SPVT
9304086-04	#4 VT-5.1	Delta-BHC	.05	U	ug/L	.05	4/01/93	SPVT
9304086-04	#4 VT-5.1	Gamma-BHC	.05	U	ug/L	.05	4/01/93	SPVT
9304086-04	#4 VT-5.1	Heptachlor	.05	U	ug/L	.05	4/01/93	SPVT
9304086-04	#4 VT-5.1	Aldrin	.05	U	ug/L	.05	4/01/93	SPVT
9304086-04	#4 VT-5.1	Heptachlor Epoxide	.05	U	ug/L	.05	4/01/93	SPVT
9304086-04	#4 VT-5.1	Endosulfan I	.05	U	ug/L	.05	4/01/93	SPVT
9304086-04	#4 VT-5.1	Dieldrin	.10	U	ug/L	.10	4/01/93	SPVT
9304086-04	#4 VT-5.1	4,4'-DDE	.10	U	ug/L	.10	4/01/93	SPVT
9304086-04	#4 VT-5.1	Endrin	.10	U	ug/L	.10	4/01/93	SPVT
9304086-04	#4 VT-5.1	Endosulfan II	.10	U	ug/L	.10	4/01/93	SPVT
9304086-04	#4 VT-5.1	4,4'-DDD	.10	U	ug/L	.10	4/01/93	SPVT
9304086-04	#4 VT-5.1	Endosulfan Sulfate	.10	U	ug/L	.10	4/01/93	SPVT
9304086-04	#4 VT-5.1	4,4'-DDT	.10	U	ug/L	.10	4/01/93	SPVT
9304086-04	#4 VT-5.1	Methoxychlor	.50	U	ug/L	.50	4/01/93	SPVT
9304086-04	#4 VT-5.1	Endrin Aldehyde	.10	U	ug/L	.10	4/01/93	SPVT
9304086-04	#4 VT-5.1	Chlordane	.50	U	ug/L	.50	4/01/93	SPVT
9304086-04	#4 VT-5.1	Toxaphene	5.00	U	ug/L	5.00	4/01/93	SPVT
9304086-04	#4 VT-5.1	Aroclor-1016	1.00	U	ug/L	1.00	4/01/93	SPVT

AB ID	CLIENT ID	PARAMETER	RESULT	RESULT FLAG	UNITS	PQL	SAMPLING DATE	WELL
304086-04	#4 VT-5.1	Aroclor-1221	2.00	U	ug/L	2.00	4/01/93	SPVT
304086-04	#4 VT-5.1	Aroclor-1232	1.00	U	ug/L	1.00	4/01/93	SPVT
304086-04	#4 VT-5.1	Aroclor-1242	1.00	U	ug/L	1.00	4/01/93	SPVT
304086-04	#4 VT-5.1	Aroclor-1248	1.00	U	ug/L	1.00	4/01/93	SPVT
304086-04	#4 VT-5.1	Aroclor-1254	1.00	U	ug/L	1.00	4/01/93	SPVT
304086-04	#4 VT-5.1	Aroclor-1260	1.00	U	ug/L	1.00	4/01/93	SPVT
304086-05	#5 VT-3	Alpha-BHC	.05	U	ug/L	.05	4/01/93	SPVT
304086-05	#5 VT-3	Beta-BHC	.05	U	ug/L	.05	4/01/93	SPVT
304086-05	#5 VT-3	Delta-BHC	.05	U	ug/L	.05	4/01/93	SPVT
304086-05	#5 VT-3	Gamma-BHC	.05	U	ug/L	.05	4/01/93	SPVT
304086-05	#5 VT-3	Heptachlor	.05	U	ug/L	.05	4/01/93	SPVT
304086-05	#5 VT-3	Aldrin	.05	U	ug/L	.05	4/01/93	SPVT
304086-05	#5 VT-3	Heptachlor Epoxide	.05	U	ug/L	.05	4/01/93	SPVT
304086-05	#5 VT-3	Endosulfan I	.05	U	ug/L	.05	4/01/93	SPVT
304086-05	#5 VT-3	Dieldrin	.10	U	ug/L	.10	4/01/93	SPVT
304086-05	#5 VT-3	4,4'-DDE	.10	U	ug/L	.10	4/01/93	SPVT
304086-05	#5 VT-3	Endrin	.10	U	ug/L	.10	4/01/93	SPVT
304086-05	#5 VT-3	Endosulfan II	.10	U	ug/L	.10	4/01/93	SPVT
304086-05	#5 VT-3	4,4'-DDD	.10	U	ug/L	.10	4/01/93	SPVT
304086-05	#5 VT-3	Endosulfan Sulfate	.10	U	ug/L	.10	4/01/93	SPVT
304086-05	#5 VT-3	4,4'-DDT	.10	U	ug/L	.10	4/01/93	SPVT
304086-05	#5 VT-3	Methoxychlor	.50	U	ug/L	.50	4/01/93	SPVT
304086-05	#5 VT-3	Endrin Aldehyde	.10	U	ug/L	.10	4/01/93	SPVT
304086-05	#5 VT-3	Chlordane	.50	U	ug/L	.50	4/01/93	SPVT
304086-05	#5 VT-3	Toxaphene	5.00	U	ug/L	5.00	4/01/93	SPVT
304086-05	#5 VT-3	Aroclor-1016	1.00	U	ug/L	1.00	4/01/93	SPVT
304086-05	#5 VT-3	Aroclor-1221	2.00	U	ug/L	2.00	4/01/93	SPVT
304086-05	#5 VT-3	Aroclor-1232	1.00	U	ug/L	1.00	4/01/93	SPVT
304086-05	#5 VT-3	Aroclor-1242	1.00	U	ug/L	1.00	4/01/93	SPVT
304086-05	#5 VT-3	Aroclor-1248	1.00	U	ug/L	1.00	4/01/93	SPVT
304086-05	#5 VT-3	Aroclor-1254	1.00	U	ug/L	1.00	4/01/93	SPVT
304086-05	#5 VT-3	Aroclor-1260	1.00	U	ug/L	1.00	4/01/93	SPVT
304086-06	#6 VT-1.1	Alpha-BHC	.05	U	ug/L	.05	4/01/93	SPVT
304086-06	#6 VT-1.1	Beta-BHC	.05	U	ug/L	.05	4/01/93	SPVT
304086-06	#6 VT-1.1	Delta-BHC	.05	U	ug/L	.05	4/01/93	SPVT
304086-06	#6 VT-1.1	Gamma-BHC	.05	U	ug/L	.05	4/01/93	SPVT
304086-06	#6 VT-1.1	Heptachlor	.05	U	ug/L	.05	4/01/93	SPVT
304086-06	#6 VT-1.1	Aldrin	.05	U	ug/L	.05	4/01/93	SPVT
304086-06	#6 VT-1.1	Heptachlor Epoxide	.05	U	ug/L	.05	4/01/93	SPVT
304086-06	#6 VT-1.1	Endosulfan I	.05	U	ug/L	.05	4/01/93	SPVT
304086-06	#6 VT-1.1	Dieldrin	.10	U	ug/L	.10	4/01/93	SPVT
304086-06	#6 VT-1.1	4,4'-DDE	.10	U	ug/L	.10	4/01/93	SPVT
304086-06	#6 VT-1.1	Endrin	.10	U	ug/L	.10	4/01/93	SPVT
304086-06	#6 VT-1.1	Endosulfan II	.10	U	ug/L	.10	4/01/93	SPVT
304086-06	#6 VT-1.1	4,4'-DDD	.10	U	ug/L	.10	4/01/93	SPVT
304086-06	#6 VT-1.1	Endosulfan Sulfate	.10	U	ug/L	.10	4/01/93	SPVT
304086-06	#6 VT-1.1	4,4'-DDT	.10	U	ug/L	.10	4/01/93	SPVT

B ID	CLIENT ID	PARAMETER	RESULT	RESULT FLAG	UNITS	PQL	SAMPLING DATE	WELL
04086-06	#6 VT-1.1	Methoxychlor	.50	U	ug/L	.50	4/01/93	SPVT
04086-06	#6 VT-1.1	Endrin Aldehyde	.10	U	ug/L	.10	4/01/93	SPVT
9304086-06	#6 VT-1.1	Chlordane	.50	U	ug/L	.50	4/01/93	SPVT
9304086-06	#6 VT-1.1	Toxaphene	5.00	U	ug/L	5.00	4/01/93	SPVT
04086-06	#6 VT-1.1	Aroclor-1016	1.00	U	ug/L	1.00	4/01/93	SPVT
04086-06	#6 VT-1.1	Aroclor-1221	2.00	U	ug/L	2.00	4/01/93	SPVT
9304086-06	#6 VT-1.1	Aroclor-1232	1.00	U	ug/L	1.00	4/01/93	SPVT
04086-06	#6 VT-1.1	Aroclor-1242	1.00	U	ug/L	1.00	4/01/93	SPVT
04086-06	#6 VT-1.1	Aroclor-1248	1.00	U	ug/L	1.00	4/01/93	SPVT
9304086-06	#6 VT-1.1	Aroclor-1254	1.00	U	ug/L	1.00	4/01/93	SPVT
04086-06	#6 VT-1.1	Aroclor-1260	1.00	U	ug/L	1.00	4/01/93	SPVT
04086-08	#8 WH-3.1	Alpha-BHC	.05	U	ug/L	.05	4/01/93	WH3-
9304086-08	#8 WH-3.1	Beta-BHC	.05	U	ug/L	.05	4/01/93	WH3-
9304086-08	#8 WH-3.1	Delta-BHC	.05	U	ug/L	.05	4/01/93	WH3-
04086-08	#8 WH-3.1	Gamma-BHC	.05	U	ug/L	.05	4/01/93	WH3-
04086-08	#8 WH-3.1	Heptachlor	.05	U	ug/L	.05	4/01/93	WH3-
9304086-08	#8 WH-3.1	Aldrin	.05	U	ug/L	.05	4/01/93	WH3-
04086-08	#8 WH-3.1	Heptachlor Epoxide	.05	U	ug/L	.05	4/01/93	WH3-
04086-08	#8 WH-3.1	Endosulfan I	.05	U	ug/L	.05	4/01/93	WH3-
9304086-08	#8 WH-3.1	Dieldrin	.10	U	ug/L	.10	4/01/93	WH3-
04086-08	#8 WH-3.1	4,4'-DDE	.10	U	ug/L	.10	4/01/93	WH3-
04086-08	#8 WH-3.1	Endrin	.10	U	ug/L	.10	4/01/93	WH3-
9304086-08	#8 WH-3.1	Endosulfan II	.10	U	ug/L	.10	4/01/93	WH3-
9304086-08	#8 WH-3.1	4,4'-DDD	.10	U	ug/L	.10	4/01/93	WH3-
04086-08	#8 WH-3.1	Endosulfan Sulfate	.10	U	ug/L	.10	4/01/93	WH3-
04086-08	#8 WH-3.1	4,4'-DDT	.10	U	ug/L	.10	4/01/93	WH3-
9304086-08	#8 WH-3.1	Methoxychlor	.50	U	ug/L	.50	4/01/93	WH3-
04086-08	#8 WH-3.1	Endrin Aldehyde	.10	U	ug/L	.10	4/01/93	WH3-
04086-08	#8 WH-3.1	Chlordane	.50	U	ug/L	.50	4/01/93	WH3-
9304086-08	#8 WH-3.1	Toxaphene	5.00	U	ug/L	5.00	4/01/93	WH3-
04086-08	#8 WH-3.1	Aroclor-1016	1.00	U	ug/L	1.00	4/01/93	WH3-
04086-08	#8 WH-3.1	Aroclor-1221	2.00	U	ug/L	2.00	4/01/93	WH3-
9304086-08	#8 WH-3.1	Aroclor-1232	1.00	U	ug/L	1.00	4/01/93	WH3-
9304086-08	#8 WH-3.1	Aroclor-1242	1.00	U	ug/L	1.00	4/01/93	WH3-
04086-08	#8 WH-3.1	Aroclor-1248	1.00	U	ug/L	1.00	4/01/93	WH3-
04086-08	#8 WH-3.1	Aroclor-1254	1.00	U	ug/L	1.00	4/01/93	WH3-
9304086-08	#8 WH-3.1	Aroclor-1260	1.00	U	ug/L	1.00	4/01/93	WH3-
04086-10	#10 WH-2.1	Alpha-BHC	.05	U	ug/L	.05	4/01/93	WH2-
04086-10	#10 WH-2.1	Beta-BHC	.05	U	ug/L	.05	4/01/93	WH2-
9304086-10	#10 WH-2.1	Delta-BHC	.05	U	ug/L	.05	4/01/93	WH2-
04086-10	#10 WH-2.1	Gamma-BHC	.05	U	ug/L	.05	4/01/93	WH2-
04086-10	#10 WH-2.1	Heptachlor	.05	U	ug/L	.05	4/01/93	WH2-
9304086-10	#10 WH-2.1	Aldrin	.05	U	ug/L	.05	4/01/93	WH2-
9304086-10	#10 WH-2.1	Heptachlor Epoxide	.05	U	ug/L	.05	4/01/93	WH2-
04086-10	#10 WH-2.1	Endosulfan I	.05	U	ug/L	.05	4/01/93	WH2-
04086-10	#10 WH-2.1	Dieldrin	.10	U	ug/L	.10	4/01/93	WH2-
9304086-10	#10 WH-2.1	4,4'-DDE	.10	U	ug/L	.10	4/01/93	WH2-

LAB ID	CLIENT ID	PARAMETER	RESULT	RESULT FLAG	UNITS	PQL	SAMPLING DATE	WELL
9304086-10	#10 WH-2.1	Endrin	.10	U	ug/L	.10	4/01/93	WH2-
9304086-10	#10 WH-2.1	Endosulfan II	.10	U	ug/L	.10	4/01/93	WH2-
9304086-10	#10 WH-2.1	4,4'-DDD	.10	U	ug/L	.10	4/01/93	WH2-
9304086-10	#10 WH-2.1	Endosulfan Sulfate	.10	U	ug/L	.10	4/01/93	WH2-
9304086-10	#10 WH-2.1	4,4'-DDT	.10	U	ug/L	.10	4/01/93	WH2-
9304086-10	#10 WH-2.1	Methoxychlor	.50	U	ug/L	.50	4/01/93	WH2-
9304086-10	#10 WH-2.1	Endrin Aldehyde	.10	U	ug/L	.10	4/01/93	WH2-
9304086-10	#10 WH-2.1	Chlordane	.50	U	ug/L	.50	4/01/93	WH2-
9304086-10	#10 WH-2.1	Toxaphene	5.00	U	ug/L	5.00	4/01/93	WH2-
9304086-10	#10 WH-2.1	Aroclor-1016	1.00	U	ug/L	1.00	4/01/93	WH2-
9304086-10	#10 WH-2.1	Aroclor-1221	2.00	U	ug/L	2.00	4/01/93	WH2-
9304086-10	#10 WH-2.1	Aroclor-1232	1.00	U	ug/L	1.00	4/01/93	WH2-
9304086-10	#10 WH-2.1	Aroclor-1242	1.00	U	ug/L	1.00	4/01/93	WH2-
9304086-10	#10 WH-2.1	Aroclor-1248	1.00	U	ug/L	1.00	4/01/93	WH2-
9304086-10	#10 WH-2.1	Aroclor-1254	1.00	U	ug/L	1.00	4/01/93	WH2-
9304086-10	#10 WH-2.1	Aroclor-1260	1.00	U	ug/L	1.00	4/01/93	WH2-
9304086-12	Duplicate	Alpha-BHC	.05	U	ug/L	.05	4/01/93	DUP-
9304086-12	Duplicate	Beta-BHC	.05	U	ug/L	.05	4/01/93	DUP-
9304086-12	Duplicate	Delta-BHC	.05	U	ug/L	.05	4/01/93	DUP-
9304086-12	Duplicate	Gamma-BHC	.05	U	ug/L	.05	4/01/93	DUP-
9304086-12	Duplicate	Heptachlor	.05	U	ug/L	.05	4/01/93	DUP-
9304086-12	Duplicate	Aldrin	.05	U	ug/L	.05	4/01/93	DUP-
9304086-12	Duplicate	Heptachlor Epoxide	.05	U	ug/L	.05	4/01/93	DUP-
9304086-12	Duplicate	Endosulfan I	.05	U	ug/L	.05	4/01/93	DUP-
9304086-12	Duplicate	Dieldrin	.10	U	ug/L	.10	4/01/93	DUP-
9304086-12	Duplicate	4,4'-DDE	.10	U	ug/L	.10	4/01/93	DUP-
9304086-12	Duplicate	Endrin	.10	U	ug/L	.10	4/01/93	DUP-
9304086-12	Duplicate	Endosulfan II	.10	U	ug/L	.10	4/01/93	DUP-
9304086-12	Duplicate	4,4'-DDD	.10	U	ug/L	.10	4/01/93	DUP-
9304086-12	Duplicate	Endosulfan Sulfate	.10	U	ug/L	.10	4/01/93	DUP-
9304086-12	Duplicate	4,4'-DDT	.10	U	ug/L	.10	4/01/93	DUP-
9304086-12	Duplicate	Methoxychlor	.50	U	ug/L	.50	4/01/93	DUP-
9304086-12	Duplicate	Endrin Aldehyde	.10	U	ug/L	.10	4/01/93	DUP-
9304086-12	Duplicate	Chlordane	.50	U	ug/L	.50	4/01/93	DUP-
9304086-12	Duplicate	Toxaphene	5.00	U	ug/L	5.00	4/01/93	DUP-
9304086-12	Duplicate	Aroclor-1016	1.00	U	ug/L	1.00	4/01/93	DUP-
9304086-12	Duplicate	Aroclor-1221	2.00	U	ug/L	2.00	4/01/93	DUP-
9304086-12	Duplicate	Aroclor-1232	1.00	U	ug/L	1.00	4/01/93	DUP-
9304086-12	Duplicate	Aroclor-1242	1.00	U	ug/L	1.00	4/01/93	DUP-
9304086-12	Duplicate	Aroclor-1248	1.00	U	ug/L	1.00	4/01/93	DUP-
9304086-12	Duplicate	Aroclor-1254	1.00	U	ug/L	1.00	4/01/93	DUP-
9304086-12	Duplicate	Aroclor-1260	1.00	U	ug/L	1.00	4/01/93	DUP-
9205467-01	#1 SPWSD 7-1.1	Alpha-BHC	.05	U	ug/L	.05	5/06/92	SP7-
9205467-01	#1 SPWSD 7-1.1	Beta-BHC	.05	U	ug/L	.05	5/06/92	SP7-
9205467-01	#1 SPWSD 7-1.1	Delta-BHC	.05	U	ug/L	.05	5/06/92	SP7-
9205467-01	#1 SPWSD 7-1.1	Gamma-BHC	.05	U	ug/L	.05	5/06/92	SP7-
9205467-01	#1 SPWSD 7-1.1	Heptachlor	.05	U	ug/L	.05	5/06/92	SP7-

B ID	CLIENT ID	PARAMETER	RESULT	RESULT FLAG	UNITS	PQL	SAMPLING DATE	WELL
205467-01	#1 SPWSD 7-1.1	Aldrin	.05	U	ug/L	.05	5/06/92	SP7-
05467-01	#1 SPWSD 7-1.1	Heptachlor Epoxide	.05	U	ug/L	.05	5/06/92	SP7-
205467-01	#1 SPWSD 7-1.1	Endosulfan I	.05	U	ug/L	.05	5/06/92	SP7-
205467-01	#1 SPWSD 7-1.1	Dieldrin	.10	U	ug/L	.10	5/06/92	SP7-
05467-01	#1 SPWSD 7-1.1	4,4'-DDE	.10	U	ug/L	.10	5/06/92	SP7-
05467-01	#1 SPWSD 7-1.1	Endrin	.10	U	ug/L	.10	5/06/92	SP7-
205467-01	#1 SPWSD 7-1.1	Endosulfan II	.10	U	ug/L	.10	5/06/92	SP7-
05467-01	#1 SPWSD 7-1.1	4,4'-DDD	.10	U	ug/L	.10	5/06/92	SP7-
05467-01	#1 SPWSD 7-1.1	Endosulfan Sulfate	.10	U	ug/L	.10	5/06/92	SP7-
205467-01	#1 SPWSD 7-1.1	4,4'-DDT	.10	U	ug/L	.10	5/06/92	SP7-
205467-01	#1 SPWSD 7-1.1	Methoxychlor	.50	U	ug/L	.50	5/06/92	SP7-
05467-01	#1 SPWSD 7-1.1	Endrin Aldehyde	.10	U	ug/L	.10	5/06/92	SP7-
205467-01	#1 SPWSD 7-1.1	Chlordane	0.00	U	ug/L	0.00	5/06/92	SP7-
205467-01	#1 SPWSD 7-1.1	Toxaphene	5.00	U	ug/L	5.00	5/06/92	SP7-
05467-01	#1 SPWSD 7-1.1	Aroclor-1016	1.00	U	ug/L	1.00	5/06/92	SP7-
05467-01	#1 SPWSD 7-1.1	Aroclor-1221	2.00	U	ug/L	2.00	5/06/92	SP7-
205467-01	#1 SPWSD 7-1.1	Aroclor-1232	1.00	U	ug/L	1.00	5/06/92	SP7-
05467-01	#1 SPWSD 7-1.1	Aroclor-1242	1.00	U	ug/L	1.00	5/06/92	SP7-
05467-01	#1 SPWSD 7-1.1	Aroclor-1248	1.00	U	ug/L	1.00	5/06/92	SP7-
205467-01	#1 SPWSD 7-1.1	Aroclor-1254	1.00	U	ug/L	1.00	5/06/92	SP7-
205467-01	#1 SPWSD 7-1.1	Aroclor-1260	1.00	U	ug/L	1.00	5/06/92	SP7-
05467-06	SPWSD VT-2.1	Alpha-BHC	.05	U	ug/L	.05	5/07/92	SPVT
205467-06	SPWSD VT-2.1	Beta-BHC	.05	U	ug/L	.05	5/07/92	SPVT
205467-06	SPWSD VT-2.1	Delta-BHC	.05	U	ug/L	.05	5/07/92	SPVT
05467-06	SPWSD VT-2.1	Gamma-BHC	.05	U	ug/L	.05	5/07/92	SPVT
05467-06	SPWSD VT-2.1	Heptachlor	.05	U	ug/L	.05	5/07/92	SPVT
205467-06	SPWSD VT-2.1	Aldrin	.05	U	ug/L	.05	5/07/92	SPVT
05467-06	SPWSD VT-2.1	Heptachlor Epoxide	.05	U	ug/L	.05	5/07/92	SPVT
05467-06	SPWSD VT-2.1	Endosulfan I	.05	U	ug/L	.05	5/07/92	SPVT
205467-06	SPWSD VT-2.1	Dieldrin	.10	U	ug/L	.10	5/07/92	SPVT
05467-06	SPWSD VT-2.1	4,4'-DDE	.10	U	ug/L	.10	5/07/92	SPVT
05467-06	SPWSD VT-2.1	Endrin	.10	U	ug/L	.10	5/07/92	SPVT
205467-06	SPWSD VT-2.1	Endosulfan II	.10	U	ug/L	.10	5/07/92	SPVT
205467-06	SPWSD VT-2.1	4,4'-DDD	.10	U	ug/L	.10	5/07/92	SPVT
05467-06	SPWSD VT-2.1	Endosulfan Sulfate	.10	U	ug/L	.10	5/07/92	SPVT
05467-06	SPWSD VT-2.1	4,4'-DDT	.10	U	ug/L	.10	5/07/92	SPVT
205467-06	SPWSD VT-2.1	Methoxychlor	.50	U	ug/L	.50	5/07/92	SPVT
05467-06	SPWSD VT-2.1	Endrin Aldehyde	.10	U	ug/L	.10	5/07/92	SPVT
05467-06	SPWSD VT-2.1	Chlordane	0.00	U	ug/L	0.00	5/07/92	SPVT
205467-06	SPWSD VT-2.1	Toxaphene	5.00	U	ug/L	5.00	5/07/92	SPVT
205467-06	SPWSD VT-2.1	Aroclor-1016	1.00	U	ug/L	1.00	5/07/92	SPVT
05467-06	SPWSD VT-2.1	Aroclor-1221	2.00	U	ug/L	2.00	5/07/92	SPVT
205467-06	SPWSD VT-2.1	Aroclor-1232	1.00	U	ug/L	1.00	5/07/92	SPVT
205467-06	SPWSD VT-2.1	Aroclor-1242	1.00	U	ug/L	1.00	5/07/92	SPVT
05467-06	SPWSD VT-2.1	Aroclor-1248	1.00	U	ug/L	1.00	5/07/92	SPVT
05467-06	SPWSD VT-2.1	Aroclor-1254	1.00	U	ug/L	1.00	5/07/92	SPVT
205467-06	SPWSD VT-2.1	Aroclor-1260	1.00	U	ug/L	1.00	5/07/92	SPVT

LAB ID	CLIENT ID	PARAMETER	RESULT	RESULT FLAG	UNITS	PQL	SAMPLING DATE	WELL
9205467-09	#9 SPWSD VT-5.1	Alpha-BHC	.05	U	ug/L	.05	5/07/92	SPVT
9205467-09	#9 SPWSD VT-5.1	Beta-BHC	.05	U	ug/L	.05	5/07/92	SPVT
9205467-09	#9 SPWSD VT-5.1	Delta-BHC	.05	U	ug/L	.05	5/07/92	SPVT
9205467-09	#9 SPWSD VT-5.1	Gamma-BHC	.05	U	ug/L	.05	5/07/92	SPVT
9205467-09	#9 SPWSD VT-5.1	Heptachlor	.05	U	ug/L	.05	5/07/92	SPVT
9205467-09	#9 SPWSD VT-5.1	Aldrin	.05	U	ug/L	.05	5/07/92	SPVT
9205467-09	#9 SPWSD VT-5.1	Heptachlor Epoxide	.05	U	ug/L	.05	5/07/92	SPVT
9205467-09	#9 SPWSD VT-5.1	Endosulfan I	.05	U	ug/L	.05	5/07/92	SPVT
9205467-09	#9 SPWSD VT-5.1	Dieldrin	.10	U	ug/L	.10	5/07/92	SPVT
9205467-09	#9 SPWSD VT-5.1	4,4'-DDE	.10	U	ug/L	.10	5/07/92	SPVT
9205467-09	#9 SPWSD VT-5.1	Endrin	.10	U	ug/L	.10	5/07/92	SPVT
9205467-09	#9 SPWSD VT-5.1	Endosulfan II	.10	U	ug/L	.10	5/07/92	SPVT
9205467-09	#9 SPWSD VT-5.1	4,4'-DDD	.10	U	ug/L	.10	5/07/92	SPVT
9205467-09	#9 SPWSD VT-5.1	Endosulfan Sulfate	.10	U	ug/L	.10	5/07/92	SPVT
9205467-09	#9 SPWSD VT-5.1	4,4'-DDT	.10	U	ug/L	.10	5/07/92	SPVT
9205467-09	#9 SPWSD VT-5.1	Methoxychlor	.50	U	ug/L	.50	5/07/92	SPVT
9205467-09	#9 SPWSD VT-5.1	Endrin Aldehyde	.10	U	ug/L	.10	5/07/92	SPVT
9205467-09	#9 SPWSD VT-5.1	Chlordane	0.00	U	ug/L	0.00	5/07/92	SPVT
9205467-09	#9 SPWSD VT-5.1	Toxaphene	5.00	U	ug/L	5.00	5/07/92	SPVT
9205467-09	#9 SPWSD VT-5.1	Aroclor-1016	1.00	U	ug/L	1.00	5/07/92	SPVT
9205467-09	#9 SPWSD VT-5.1	Aroclor-1221	2.00	U	ug/L	2.00	5/07/92	SPVT
9205467-09	#9 SPWSD VT-5.1	Aroclor-1232	1.00	U	ug/L	1.00	5/07/92	SPVT
9205467-09	#9 SPWSD VT-5.1	Aroclor-1242	1.00	U	ug/L	1.00	5/07/92	SPVT
9205467-09	#9 SPWSD VT-5.1	Aroclor-1248	1.00	U	ug/L	1.00	5/07/92	SPVT
9205467-09	#9 SPWSD VT-5.1	Aroclor-1254	1.00	U	ug/L	1.00	5/07/92	SPVT
9205467-09	#9 SPWSD VT-5.1	Aroclor-1260	1.00	U	ug/L	1.00	5/07/92	SPVT
9205467-11	#12 SPWSD VT-1.1	Alpha-BHC	.05	U	ug/L	.05	5/08/92	SPVT
9205467-11	#12 SPWSD VT-1.1	Beta-BHC	.05	U	ug/L	.05	5/08/92	SPVT
9205467-11	#12 SPWSD VT-1.1	Delta-BHC	.05	U	ug/L	.05	5/08/92	SPVT
9205467-11	#12 SPWSD VT-1.1	Gamma-BHC	.05	U	ug/L	.05	5/08/92	SPVT
9205467-11	#12 SPWSD VT-1.1	Heptachlor	.05	U	ug/L	.05	5/08/92	SPVT
9205467-11	#12 SPWSD VT-1.1	Aldrin	.05	U	ug/L	.05	5/08/92	SPVT
9205467-11	#12 SPWSD VT-1.1	Heptachlor Epoxide	.05	U	ug/L	.05	5/08/92	SPVT
9205467-11	#12 SPWSD VT-1.1	Endosulfan I	.05	U	ug/L	.05	5/08/92	SPVT
9205467-11	#12 SPWSD VT-1.1	Dieldrin	.10	U	ug/L	.10	5/08/92	SPVT
9205467-11	#12 SPWSD VT-1.1	4,4'-DDE	.10	U	ug/L	.10	5/08/92	SPVT
9205467-11	#12 SPWSD VT-1.1	Endrin	.10	U	ug/L	.10	5/08/92	SPVT
9205467-11	#12 SPWSD VT-1.1	Endosulfan II	.10	U	ug/L	.10	5/08/92	SPVT
9205467-11	#12 SPWSD VT-1.1	4,4'-DDD	.10	U	ug/L	.10	5/08/92	SPVT
9205467-11	#12 SPWSD VT-1.1	Endosulfan Sulfate	.10	U	ug/L	.10	5/08/92	SPVT
9205467-11	#12 SPWSD VT-1.1	4,4'-DDT	.10	U	ug/L	.10	5/08/92	SPVT
9205467-11	#12 SPWSD VT-1.1	Methoxychlor	.50	U	ug/L	.50	5/08/92	SPVT
9205467-11	#12 SPWSD VT-1.1	Endrin Aldehyde	.10	U	ug/L	.10	5/08/92	SPVT
9205467-11	#12 SPWSD VT-1.1	Chlordane	0.00	U	ug/L	0.00	5/08/92	SPVT
9205467-11	#12 SPWSD VT-1.1	Toxaphene	5.00	U	ug/L	5.00	5/08/92	SPVT
9205467-11	#12 SPWSD VT-1.1	Aroclor-1016	1.00	U	ug/L	1.00	5/08/92	SPVT
9205467-11	#12 SPWSD VT-1.1	Aroclor-1221	2.00	U	ug/L	2.00	5/08/92	SPVT

[redacted] ID	CLIENT ID	PARAMETER	RESULT	RESULT FLAG	UNITS	PQL	SAMPLING DATE	WELL
[redacted]5467-11	#12 SPWSD VT-1.1	Aroclor-1232	1.00	U	ug/L	1.00	5/08/92	SPVT
[redacted]5467-11	#12 SPWSD VT-1.1	Aroclor-1242	1.00	U	ug/L	1.00	5/08/92	SPVT
205467-11	#12 SPWSD VT-1.1	Aroclor-1248	1.00	U	ug/L	1.00	5/08/92	SPVT
205467-11	#12 SPWSD VT-1.1	Aroclor-1254	1.00	U	ug/L	1.00	5/08/92	SPVT
[redacted]5467-11	#12 SPWSD VT-1.1	Aroclor-1260	1.00	U	ug/L	1.00	5/08/92	SPVT
[redacted]0752-01	#1 SPWSD WHP-1	Alpha-BHC	.05	U	ug/L	.05	10/12/92	WH1
210752-01	#1 SPWSD WHP-1	Beta-BHC	.05	U	ug/L	.05	10/12/92	WH1
[redacted]0752-01	#1 SPWSD WHP-1	Delta-BHC	.05	U	ug/L	.05	10/12/92	WH1
[redacted]0752-01	#1 SPWSD WHP-1	Gamma-BHC	.05	U	ug/L	.05	10/12/92	WH1
210752-01	#1 SPWSD WHP-1	Heptachlor	.05	U	ug/L	.05	10/12/92	WH1
[redacted]0752-01	#1 SPWSD WHP-1	Aldrin	.05	U	ug/L	.05	10/12/92	WH1
[redacted]0752-01	#1 SPWSD WHP-1	Heptachlor Epoxide	.05	U	ug/L	.05	10/12/92	WH1
210752-01	#1 SPWSD WHP-1	Endosulfan I	.05	U	ug/L	.05	10/12/92	WH1
210752-01	#1 SPWSD WHP-1	Dieldrin	.10	U	ug/L	.10	10/12/92	WH1
[redacted]0752-01	#1 SPWSD WHP-1	4,4'-DDE	.10	U	ug/L	.10	10/12/92	WH1
[redacted]0752-01	#1 SPWSD WHP-1	Endrin	.10	U	ug/L	.10	10/12/92	WH1
210752-01	#1 SPWSD WHP-1	Endosulfan II	.10	U	ug/L	.10	10/12/92	WH1
[redacted]0752-01	#1 SPWSD WHP-1	4,4'-DDD	.10	U	ug/L	.10	10/12/92	WH1
[redacted]0752-01	#1 SPWSD WHP-1	Endosulfan Sulfate	.10	U	ug/L	.10	10/12/92	WH1
210752-01	#1 SPWSD WHP-1	4,4'-DDT	.10	U	ug/L	.10	10/12/92	WH1
[redacted]0752-01	#1 SPWSD WHP-1	Methoxychlor	.50	U	ug/L	.50	10/12/92	WH1
[redacted]0752-01	#1 SPWSD WHP-1	Endrin Aldehyde	.10	U	ug/L	.10	10/12/92	WH1
210752-01	#1 SPWSD WHP-1	Chlordane	.50	U	ug/L	.50	10/12/92	WH1
210752-01	#1 SPWSD WHP-1	Toxaphene	5.00	U	ug/L	5.00	10/12/92	WH1
[redacted]0752-01	#1 SPWSD WHP-1	Aroclor-1016	1.00	U	ug/L	1.00	10/12/92	WH1
[redacted]0752-01	#1 SPWSD WHP-1	Aroclor-1221	2.00	U	ug/L	2.00	10/12/92	WH1
210752-01	#1 SPWSD WHP-1	Aroclor-1232	1.00	U	ug/L	1.00	10/12/92	WH1
[redacted]0752-01	#1 SPWSD WHP-1	Aroclor-1242	1.00	U	ug/L	1.00	10/12/92	WH1
[redacted]0752-01	#1 SPWSD WHP-1	Aroclor-1248	1.00	U	ug/L	1.00	10/12/92	WH1
210752-01	#1 SPWSD WHP-1	Aroclor-1254	1.00	U	ug/L	1.00	10/12/92	WH1
[redacted]0752-01	#1 SPWSD WHP-1	Aroclor-1260	1.00	U	ug/L	1.00	10/12/92	WH1
[redacted]0752-11	#2 SPWSD WHP-2.1	Alpha-BHC	.05	U	ug/L	.05	10/13/92	WH2-
210752-11	#2 SPWSD WHP-2.1	Beta-BHC	.05	U	ug/L	.05	10/13/92	WH2-
210752-11	#2 SPWSD WHP-2.1	Delta-BHC	.05	U	ug/L	.05	10/13/92	WH2-
[redacted]10752-11	#2 SPWSD WHP-2.1	Gamma-BHC	.05	U	ug/L	.05	10/13/92	WH2-
[redacted]10752-11	#2 SPWSD WHP-2.1	Heptachlor	.05	U	ug/L	.05	10/13/92	WH2-
210752-11	#2 SPWSD WHP-2.1	Aldrin	.05	U	ug/L	.05	10/13/92	WH2-
[redacted]10752-11	#2 SPWSD WHP-2.1	Heptachlor Epoxide	.05	U	ug/L	.05	10/13/92	WH2-
[redacted]10752-11	#2 SPWSD WHP-2.1	Endosulfan I	.05	U	ug/L	.05	10/13/92	WH2-
210752-11	#2 SPWSD WHP-2.1	Dieldrin	.10	U	ug/L	.10	10/13/92	WH2-
[redacted]10752-11	#2 SPWSD WHP-2.1	4,4'-DDE	.10	U	ug/L	.10	10/13/92	WH2-
[redacted]10752-11	#2 SPWSD WHP-2.1	Endrin	.10	U	ug/L	.10	10/13/92	WH2-
210752-11	#2 SPWSD WHP-2.1	Endosulfan II	.10	U	ug/L	.10	10/13/92	WH2-
210752-11	#2 SPWSD WHP-2.1	4,4'-DDD	.10	U	ug/L	.10	10/13/92	WH2-
[redacted]10752-11	#2 SPWSD WHP-2.1	Endosulfan Sulfate	.10	U	ug/L	.10	10/13/92	WH2-
[redacted]10752-11	#2 SPWSD WHP-2.1	4,4'-DDT	.10	U	ug/L	.10	10/13/92	WH2-
210752-11	#2 SPWSD WHP-2.1	Methoxychlor	.50	U	ug/L	.50	10/13/92	WH2-

AB ID	CLIENT ID	PARAMETER	RESULT	RESULT FLAG	UNITS	PQL	SAMPLING DATE	WELL
210752-11	#2 SPWSD WHP-2.1	Endrin Aldehyde	.10	U	ug/L	.10	10/13/92	WH2-
210752-11	#2 SPWSD WHP-2.1	Chlordane	.50	U	ug/L	.50	10/13/92	WH2-
210752-11	#2 SPWSD WHP-2.1	Toxaphene	5.00	U	ug/L	5.00	10/13/92	WH2-
210752-11	#2 SPWSD WHP-2.1	Aroclor-1016	1.00	U	ug/L	1.00	10/13/92	WH2-
210752-11	#2 SPWSD WHP-2.1	Aroclor-1221	2.00	U	ug/L	2.00	10/13/92	WH2-
210752-11	#2 SPWSD WHP-2.1	Aroclor-1232	1.00	U	ug/L	1.00	10/13/92	WH2-
210752-11	#2 SPWSD WHP-2.1	Aroclor-1242	1.00	U	ug/L	1.00	10/13/92	WH2-
210752-11	#2 SPWSD WHP-2.1	Aroclor-1248	1.00	U	ug/L	1.00	10/13/92	WH2-
210752-11	#2 SPWSD WHP-2.1	Aroclor-1254	1.00	U	ug/L	1.00	10/13/92	WH2-
210752-11	#2 SPWSD WHP-2.1	Aroclor-1260	1.00	U	ug/L	1.00	10/13/92	WH2-
210752-13	#4 SPWSD WHP 3.1	Alpha-BHC	.05	U	ug/L	.05	10/13/92	WH3-
210752-13	#4 SPWSD WHP 3.1	Beta-BHC	.05	U	ug/L	.05	10/13/92	WH3-
210752-13	#4 SPWSD WHP 3.1	Delta-BHC	.05	U	ug/L	.05	10/13/92	WH3-
210752-13	#4 SPWSD WHP 3.1	Gamma-BHC	.05	U	ug/L	.05	10/13/92	WH3-
210752-13	#4 SPWSD WHP 3.1	Heptachlor	.05	U	ug/L	.05	10/13/92	WH3-
210752-13	#4 SPWSD WHP 3.1	Aldrin	.05	U	ug/L	.05	10/13/92	WH3-
210752-13	#4 SPWSD WHP 3.1	Heptachlor Epoxide	.05	U	ug/L	.05	10/13/92	WH3-
210752-13	#4 SPWSD WHP 3.1	Endosulfan I	.05	U	ug/L	.05	10/13/92	WH3-
210752-13	#4 SPWSD WHP 3.1	Dieldrin	.10	U	ug/L	.10	10/13/92	WH3-
210752-13	#4 SPWSD WHP 3.1	4,4'-DDE	.10	U	ug/L	.10	10/13/92	WH3-
210752-13	#4 SPWSD WHP 3.1	Endrin	.10	U	ug/L	.10	10/13/92	WH3-
210752-13	#4 SPWSD WHP 3.1	Endosulfan II	.10	U	ug/L	.10	10/13/92	WH3-
210752-13	#4 SPWSD WHP 3.1	4,4'-DDD	.10	U	ug/L	.10	10/13/92	WH3-
210752-13	#4 SPWSD WHP 3.1	Endosulfan Sulfate	.10	U	ug/L	.10	10/13/92	WH3-
210752-13	#4 SPWSD WHP 3.1	4,4'-DDT	.10	U	ug/L	.10	10/13/92	WH3-
210752-13	#4 SPWSD WHP 3.1	Methoxychlor	.50	U	ug/L	.50	10/13/92	WH3-
210752-13	#4 SPWSD WHP 3.1	Endrin Aldehyde	.10	U	ug/L	.10	10/13/92	WH3-
210752-13	#4 SPWSD WHP 3.1	Chlordane	.50	U	ug/L	.50	10/13/92	WH3-
210752-13	#4 SPWSD WHP 3.1	Toxaphene	5.00	U	ug/L	5.00	10/13/92	WH3-
210752-13	#4 SPWSD WHP 3.1	Aroclor-1016	1.00	U	ug/L	1.00	10/13/92	WH3-
210752-13	#4 SPWSD WHP 3.1	Aroclor-1221	2.00	U	ug/L	2.00	10/13/92	WH3-
210752-13	#4 SPWSD WHP 3.1	Aroclor-1232	1.00	U	ug/L	1.00	10/13/92	WH3-
210752-13	#4 SPWSD WHP 3.1	Aroclor-1242	1.00	U	ug/L	1.00	10/13/92	WH3-
210752-13	#4 SPWSD WHP 3.1	Aroclor-1248	1.00	U	ug/L	1.00	10/13/92	WH3-
210752-13	#4 SPWSD WHP 3.1	Aroclor-1254	1.00	U	ug/L	1.00	10/13/92	WH3-
210752-13	#4 SPWSD WHP 3.1	Aroclor-1260	1.00	U	ug/L	1.00	10/13/92	WH3-

LAB ID	CLIENT ID	PARAMETER	RESULT	FLAG	UNITS	PQL	SAMPLING DATE	WELL NAME
4086-01	#1 VT-2.2	Dichlorodifluoromethane	.30	U	ug/L	.30	4/01/93	SPVT2-2
304086-01	#1 VT-2.2	Chloromethane	.20	U	ug/L	.20	4/01/93	SPVT2-2
04086-01	#1 VT-2.2	Vinyl chloride	.30	U	ug/L	.30	4/01/93	SPVT2-2
04086-01	#1 VT-2.2	Bromomethane	.20	U	ug/L	.20	4/01/93	SPVT2-2
304086-01	#1 VT-2.2	Chloroethane	.20	U	ug/L	.20	4/01/93	SPVT2-2
304086-01	#1 VT-2.2	Trichlorofluoromethane	.20	U	ug/L	.20	4/01/93	SPVT2-2
04086-01	#1 VT-2.2	1,1-Dichloroethylene	.20	U	ug/L	.20	4/01/93	SPVT2-2
04086-01	#1 VT-2.2	Methylene chloride	.20	U	ug/L	.20	4/01/93	SPVT2-2
9304086-01	#1 VT-2.2	trans-1,2-Dichloroethylene	.10	U	ug/L	.10	4/01/93	SPVT2-2
04086-01	#1 VT-2.2	1,1-Dichloroethane	.10	U	ug/L	.10	4/01/93	SPVT2-2
04086-01	#1 VT-2.2	2,2-Dichloropropane	.40	U	ug/L	.40	4/01/93	SPVT2-2
9304086-01	#1 VT-2.2	cis-1,2-Dichloroethylene	.10	U	ug/L	.10	4/01/93	SPVT2-2
04086-01	#1 VT-2.2	Bromochloromethane	.10	U	ug/L	.10	4/01/93	SPVT2-2
04086-01	#1 VT-2.2	Chloroform	.10	U	ug/L	.10	4/01/93	SPVT2-2
304086-01	#1 VT-2.2	1,1,1-Trichloroethane	.20	U	ug/L	.20	4/01/93	SPVT2-2
9304086-01	#1 VT-2.2	Carbon tetrachloride	.20	U	ug/L	.20	4/01/93	SPVT2-2
04086-01	#1 VT-2.2	1,1-Dichloropropylene	.20	U	ug/L	.20	4/01/93	SPVT2-2
04086-01	#1 VT-2.2	Benzene	.10	U	ug/L	.10	4/01/93	SPVT2-2
9304086-01	#1 VT-2.2	1,2-Dichloroethane	.30	U	ug/L	.30	4/01/93	SPVT2-2
04086-01	#1 VT-2.2	Trichloroethylene	.10	U	ug/L	.10	4/01/93	SPVT2-2
04086-01	#1 VT-2.2	1,2-Dichloropropane	.40	U	ug/L	.40	4/01/93	SPVT2-2
9304086-01	#1 VT-2.2	Dibromomethane	.50	U	ug/L	.50	4/01/93	SPVT2-2
04086-01	#1 VT-2.2	Bromodichloromethane	.30	U	ug/L	.30	4/01/93	SPVT2-2
04086-01	#1 VT-2.2	cis-1,3-Dichloropropylene	.20	U	ug/L	.20	4/01/93	SPVT2-2
304086-01	#1 VT-2.2	Toluene	.20	U	ug/L	.20	4/01/93	SPVT2-2
9304086-01	#1 VT-2.2	trans-1,3-Dichloropropylene	.10	U	ug/L	.10	4/01/93	SPVT2-2
04086-01	#1 VT-2.2	1,1,2-Trichloroethane	.10	U	ug/L	.10	4/01/93	SPVT2-2
04086-01	#1 VT-2.2	Tetrachloroethylene	.20	U	ug/L	.20	4/01/93	SPVT2-2
9304086-01	#1 VT-2.2	1,3-Dichloropropane	.10	U	ug/L	.10	4/01/93	SPVT2-2
04086-01	#1 VT-2.2	Chlorodibromomethane	.30	U	ug/L	.30	4/01/93	SPVT2-2
04086-01	#1 VT-2.2	Ethylene dibromide	.10	U	ug/L	.10	4/01/93	SPVT2-2
9304086-01	#1 VT-2.2	Chlorobenzene	.10	U	ug/L	.10	4/01/93	SPVT2-2
04086-01	#1 VT-2.2	1,1,1,2-Tetrachloroethane	.20	U	ug/L	.20	4/01/93	SPVT2-2
04086-01	#1 VT-2.2	Ethylbenzene	.20	U	ug/L	.20	4/01/93	SPVT2-2
9304086-01	#1 VT-2.2	m+p-Xylene	.40	U	ug/L	.40	4/01/93	SPVT2-2
9304086-01	#1 VT-2.2	o-Xylene	.10	U	ug/L	.10	4/01/93	SPVT2-2
04086-01	#1 VT-2.2	Styrene	.10	U	ug/L	.10	4/01/93	SPVT2-2
04086-01	#1 VT-2.2	Bromoform	.50	U	ug/L	.50	4/01/93	SPVT2-2
9304086-01	#1 VT-2.2	Isopropylbenzene	.20	U	ug/L	.20	4/01/93	SPVT2-2
04086-01	#1 VT-2.2	Bromobenzene	.20	U	ug/L	.20	4/01/93	SPVT2-2
304086-01	#1 VT-2.2	1,2,3-Trichloropropane	.20	U	ug/L	.20	4/01/93	SPVT2-2
9304086-01	#1 VT-2.2	1,1,2,2-Tetrachloroethane	.20	U	ug/L	.20	4/01/93	SPVT2-2
9304086-01	#1 VT-2.2	n-Propylbenzene	.20	U	ug/L	.20	4/01/93	SPVT2-2
304086-01	#1 VT-2.2	2-Chlorotoluene	.20	U	ug/L	.20	4/01/93	SPVT2-2
9304086-01	#1 VT-2.2	4-Chlorotoluene	.20	U	ug/L	.20	4/01/93	SPVT2-2
9304086-01	#1 VT-2.2	1,3,5-Trimethylbenzene	.30	U	ug/L	.30	4/01/93	SPVT2-2

LAB ID	CLIENT ID	PARAMETER	RESULT	FLAG	UNITS	PQL	SAMPLING DATE	WELL NAME
9304086-01	#1 VT-2.2	tert-Butylbenzene	.20	U	ug/L	.20	4/01/93	SPVT2-2
9304086-01	#1 VT-2.2	1,2,4-Trimethylbenzene	.30	U	ug/L	.30	4/01/93	SPVT2-2
9304086-01	#1 VT-2.2	sec-Butylbenzene	.20	U	ug/L	.20	4/01/93	SPVT2-2
9304086-01	#1 VT-2.2	1,3-Dichlorobenzene (m)	.20	U	ug/L	.20	4/01/93	SPVT2-2
9304086-01	#1 VT-2.2	1,4-Dichlorobenzene (p)	.20	U	ug/L	.20	4/01/93	SPVT2-2
9304086-01	#1 VT-2.2	4-Isopropyltoluene	.20	U	ug/L	.20	4/01/93	SPVT2-2
9304086-01	#1 VT-2.2	1,2-Dichlorobenzene (o)	.20	U	ug/L	.20	4/01/93	SPVT2-2
9304086-01	#1 VT-2.2	n-Butylbenzene	.30	U	ug/L	.30	4/01/93	SPVT2-2
9304086-01	#1 VT-2.2	1,2-Dibromo-3-chloropropane	.80	U	ug/L	.80	4/01/93	SPVT2-2
9304086-01	#1 VT-2.2	1,2,4-Trichlorobenzene	.30	U	ug/L	.30	4/01/93	SPVT2-2
9304086-01	#1 VT-2.2	Naphthalene	.20	U	ug/L	.20	4/01/93	SPVT2-2
9304086-01	#1 VT-2.2	Hexachlorobutadiene	.50	U	ug/L	.50	4/01/93	SPVT2-2
9304086-01	#1 VT-2.2	1,2,3-Trichlorobenzene	.40	U	ug/L	.40	4/01/93	SPVT2-2
9304086-02	#2 SP-7	Dichlorodifluoromethane	.30	U	ug/L	.30	4/01/93	SP7
9304086-02	#2 SP-7	Chloromethane	.20	U	ug/L	.20	4/01/93	SP7
9304086-02	#2 SP-7	Vinyl chloride	.30	U	ug/L	.30	4/01/93	SP7
9304086-02	#2 SP-7	Bromomethane	.20	U	ug/L	.20	4/01/93	SP7
9304086-02	#2 SP-7	Chloroethane	.20	U	ug/L	.20	4/01/93	SP7
9304086-02	#2 SP-7	Trichlorofluoromethane	.20	U	ug/L	.20	4/01/93	SP7
9304086-02	#2 SP-7	1,1-Dichloroethylene	.20	U	ug/L	.20	4/01/93	SP7
9304086-02	#2 SP-7	Methylene chloride	.20	U	ug/L	.20	4/01/93	SP7
9304086-02	#2 SP-7	trans-1,2-Dichloroethylene	.10	U	ug/L	.10	4/01/93	SP7
9304086-02	#2 SP-7	1,1-Dichloroethane	.10	U	ug/L	.10	4/01/93	SP7
9304086-02	#2 SP-7	2,2-Dichloropropane	.40	U	ug/L	.40	4/01/93	SP7
9304086-02	#2 SP-7	cis-1,2-Dichloroethylene	.10	U	ug/L	.10	4/01/93	SP7
9304086-02	#2 SP-7	Bromochloromethane	.10	U	ug/L	.10	4/01/93	SP7
9304086-02	#2 SP-7	Chloroform	.10	U	ug/L	.10	4/01/93	SP7
9304086-02	#2 SP-7	1,1,1-Trichloroethane	.20	U	ug/L	.20	4/01/93	SP7
9304086-02	#2 SP-7	Carbon tetrachloride	.20	U	ug/L	.20	4/01/93	SP7
9304086-02	#2 SP-7	1,1-Dichloropropylene	.20	U	ug/L	.20	4/01/93	SP7
9304086-02	#2 SP-7	Benzene	.10	U	ug/L	.10	4/01/93	SP7
9304086-02	#2 SP-7	1,2-Dichloroethane	.30	U	ug/L	.30	4/01/93	SP7
9304086-02	#2 SP-7	Trichloroethylene	.10	U	ug/L	.10	4/01/93	SP7
9304086-02	#2 SP-7	1,2-Dichloropropane	.40	U	ug/L	.40	4/01/93	SP7
9304086-02	#2 SP-7	Dibromomethane	.50	U	ug/L	.50	4/01/93	SP7
9304086-02	#2 SP-7	Bromodichloromethane	.30	U	ug/L	.30	4/01/93	SP7
9304086-02	#2 SP-7	cis-1,3-Dichloropropylene	.20	U	ug/L	.20	4/01/93	SP7
9304086-02	#2 SP-7	Toluene	.20	U	ug/L	.20	4/01/93	SP7
9304086-02	#2 SP-7	trans-1,3-Dichloropropylene	.10	U	ug/L	.10	4/01/93	SP7
9304086-02	#2 SP-7	1,1,2-Trichloroethane	.10	U	ug/L	.10	4/01/93	SP7
9304086-02	#2 SP-7	Tetrachloroethylene	.20	U	ug/L	.20	4/01/93	SP7
9304086-02	#2 SP-7	1,3-Dichloropropane	.10	U	ug/L	.10	4/01/93	SP7
9304086-02	#2 SP-7	Chlorodibromomethane	.30	U	ug/L	.30	4/01/93	SP7
9304086-02	#2 SP-7	Ethylene dibromide	.10	U	ug/L	.10	4/01/93	SP7
9304086-02	#2 SP-7	Chlorobenzene	.10	U	ug/L	.10	4/01/93	SP7
9304086-02	#2 SP-7	1,1,1,2-Tetrachloroethane	.20	U	ug/L	.20	4/01/93	SP7
9304086-02	#2 SP-7	Ethylbenzene	.20	U	ug/L	.20	4/01/93	SP7

[redacted] ID	CLIENT ID	PARAMETER	RESULT	FLAG	UNITS	PQL	SAMPLING DATE	WELL NAME
[redacted]086-02	#2 SP-7	m+p-Xylene	.40	U	ug/L	.40	4/01/93	SP7
[redacted]086-02	#2 SP-7	o-Xylene	.10	U	ug/L	.10	4/01/93	SP7
304086-02	#2 SP-7	Styrene	.10	U	ug/L	.10	4/01/93	SP7
304086-02	#2 SP-7	Bromoform	.50	U	ug/L	.50	4/01/93	SP7
[redacted]086-02	#2 SP-7	Isopropylbenzene	.20	U	ug/L	.20	4/01/93	SP7
[redacted]4086-02	#2 SP-7	Bromobenzene	.20	U	ug/L	.20	4/01/93	SP7
304086-02	#2 SP-7	1,2,3-Trichloropropane	.20	U	ug/L	.20	4/01/93	SP7
[redacted]086-02	#2 SP-7	1,1,2,2-Tetrachloroethane	.20	U	ug/L	.20	4/01/93	SP7
[redacted]4086-02	#2 SP-7	n-Propylbenzene	.20	U	ug/L	.20	4/01/93	SP7
304086-02	#2 SP-7	2-Chlorotoluene	.20	U	ug/L	.20	4/01/93	SP7
[redacted]4086-02	#2 SP-7	4-Chlorotoluene	.20	U	ug/L	.20	4/01/93	SP7
[redacted]4086-02	#2 SP-7	1,3,5-Trimethylbenzene	.30	U	ug/L	.30	4/01/93	SP7
304086-02	#2 SP-7	tert-Butylbenzene	.20	U	ug/L	.20	4/01/93	SP7
304086-02	#2 SP-7	1,2,4-Trimethylbenzene	.30	U	ug/L	.30	4/01/93	SP7
[redacted]4086-02	#2 SP-7	sec-Butylbenzene	.20	U	ug/L	.20	4/01/93	SP7
[redacted]4086-02	#2 SP-7	1,3-Dichlorobenzene (m)	.20	U	ug/L	.20	4/01/93	SP7
304086-02	#2 SP-7	1,4-Dichlorobenzene (p)	.20	U	ug/L	.20	4/01/93	SP7
[redacted]4086-02	#2 SP-7	4-Isopropyltoluene	.20	U	ug/L	.20	4/01/93	SP7
[redacted]4086-02	#2 SP-7	1,2-Dichlorobenzene (o)	.20	U	ug/L	.20	4/01/93	SP7
304086-02	#2 SP-7	n-Butylbenzene	.30	U	ug/L	.30	4/01/93	SP7
[redacted]4086-02	#2 SP-7	1,2-Dibromo-3-chloropropane	.80	U	ug/L	.80	4/01/93	SP7
[redacted]4086-02	#2 SP-7	1,2,4-Trichlorobenzene	.30	U	ug/L	.30	4/01/93	SP7
304086-02	#2 SP-7	Naphthalene	.20	U	ug/L	.20	4/01/93	SP7
304086-02	#2 SP-7	Hexachlorobutadiene	.50	U	ug/L	.50	4/01/93	SP7
[redacted]4086-02	#2 SP-7	1,2,3-Trichlorobenzene	.40	U	ug/L	.40	4/01/93	SP7
[redacted]4086-03	#3 SP 7-1	Dichlorodifluoromethane	.30	U	ug/L	.30	4/01/93	SP7-1
304086-03	#3 SP 7-1	Chloromethane	.20	U	ug/L	.20	4/01/93	SP7-1
[redacted]4086-03	#3 SP 7-1	Vinyl chloride	.30	U	ug/L	.30	4/01/93	SP7-1
[redacted]4086-03	#3 SP 7-1	Bromomethane	.20	U	ug/L	.20	4/01/93	SP7-1
304086-03	#3 SP 7-1	Chloroethane	.20	U	ug/L	.20	4/01/93	SP7-1
[redacted]4086-03	#3 SP 7-1	Trichlorofluoromethane	.20	U	ug/L	.20	4/01/93	SP7-1
[redacted]4086-03	#3 SP 7-1	1,1-Dichloroethylene	.20	U	ug/L	.20	4/01/93	SP7-1
304086-03	#3 SP 7-1	Methylene chloride	.20	U	ug/L	.20	4/01/93	SP7-1
304086-03	#3 SP 7-1	trans-1,2-Dichloroethylene	.10	U	ug/L	.10	4/01/93	SP7-1
[redacted]4086-03	#3 SP 7-1	1,1-Dichloroethane	.10	U	ug/L	.10	4/01/93	SP7-1
[redacted]4086-03	#3 SP 7-1	2,2-Dichloropropane	.40	U	ug/L	.40	4/01/93	SP7-1
304086-03	#3 SP 7-1	cis-1,2-Dichloroethylene	.10	U	ug/L	.10	4/01/93	SP7-1
[redacted]4086-03	#3 SP 7-1	Bromochloromethane	.10	U	ug/L	.10	4/01/93	SP7-1
[redacted]4086-03	#3 SP 7-1	Chloroform	.10	U	ug/L	.10	4/01/93	SP7-1
304086-03	#3 SP 7-1	1,1,1-Trichloroethane	.20	U	ug/L	.20	4/01/93	SP7-1
[redacted]4086-03	#3 SP 7-1	Carbon tetrachloride	.20	U	ug/L	.20	4/01/93	SP7-1
[redacted]4086-03	#3 SP 7-1	1,1-Dichloropropylene	.20	U	ug/L	.20	4/01/93	SP7-1
304086-03	#3 SP 7-1	Benzene	.10	U	ug/L	.10	4/01/93	SP7-1
304086-03	#3 SP 7-1	1,2-Dichloroethane	.30	U	ug/L	.30	4/01/93	SP7-1
[redacted]4086-03	#3 SP 7-1	Trichloroethylene	.10	U	ug/L	.10	4/01/93	SP7-1
[redacted]4086-03	#3 SP 7-1	1,2-Dichloropropane	.40	U	ug/L	.40	4/01/93	SP7-1
304086-03	#3 SP 7-1	Dibromomethane	.50	U	ug/L	.50	4/01/93	SP7-1

LAB ID	CLIENT ID	PARAMETER	RESULT	FLAG	UNITS	PQL	SAMPLING DATE	WELL NAME
9304086-03	#3 SP 7-1	Bromodichloromethane	.30	U	ug/L	.30	4/01/93	SP7-1
9304086-03	#3 SP 7-1	cis-1,3-Dichloropropylene	.20	U	ug/L	.20	4/01/93	SP7-1
9304086-03	#3 SP 7-1	Toluene	.20	U	ug/L	.20	4/01/93	SP7-1
9304086-03	#3 SP 7-1	trans-1,3-Dichloropropylene	.10	U	ug/L	.10	4/01/93	SP7-1
9304086-03	#3 SP 7-1	1,1,2-Trichloroethane	.10	U	ug/L	.10	4/01/93	SP7-1
9304086-03	#3 SP 7-1	Tetrachloroethylene	.20	U	ug/L	.20	4/01/93	SP7-1
9304086-03	#3 SP 7-1	1,3-Dichloropropane	.10	U	ug/L	.10	4/01/93	SP7-1
9304086-03	#3 SP 7-1	Chlorodibromomethane	.30	U	ug/L	.30	4/01/93	SP7-1
9304086-03	#3 SP 7-1	Ethylene dibromide	.10	U	ug/L	.10	4/01/93	SP7-1
9304086-03	#3 SP 7-1	Chlorobenzene	.10	U	ug/L	.10	4/01/93	SP7-1
9304086-03	#3 SP 7-1	1,1,1,2-Tetrachloroethane	.20	U	ug/L	.20	4/01/93	SP7-1
9304086-03	#3 SP 7-1	Ethylbenzene	.20	U	ug/L	.20	4/01/93	SP7-1
9304086-03	#3 SP 7-1	m+p-Xylene	.40	U	ug/L	.40	4/01/93	SP7-1
9304086-03	#3 SP 7-1	o-Xylene	.10	U	ug/L	.10	4/01/93	SP7-1
9304086-03	#3 SP 7-1	Styrene	.10	U	ug/L	.10	4/01/93	SP7-1
9304086-03	#3 SP 7-1	Bromoform	.50	U	ug/L	.50	4/01/93	SP7-1
9304086-03	#3 SP 7-1	Isopropylbenzene	.20	U	ug/L	.20	4/01/93	SP7-1
9304086-03	#3 SP 7-1	Bromobenzene	.20	U	ug/L	.20	4/01/93	SP7-1
9304086-03	#3 SP 7-1	1,2,3-Trichloropropane	.20	U	ug/L	.20	4/01/93	SP7-1
9304086-03	#3 SP 7-1	1,1,2,2-Tetrachloroethane	.20	U	ug/L	.20	4/01/93	SP7-1
9304086-03	#3 SP 7-1	n-Propylbenzene	.20	U	ug/L	.20	4/01/93	SP7-1
9304086-03	#3 SP 7-1	2-Chlorotoluene	.20	U	ug/L	.20	4/01/93	SP7-1
9304086-03	#3 SP 7-1	4-Chlorotoluene	.20	U	ug/L	.20	4/01/93	SP7-1
9304086-03	#3 SP 7-1	1,3,5-Trimethylbenzene	.30	U	ug/L	.30	4/01/93	SP7-1
9304086-03	#3 SP 7-1	tert-Butylbenzene	.20	U	ug/L	.20	4/01/93	SP7-1
9304086-03	#3 SP 7-1	1,2,4-Trimethylbenzene	.30	U	ug/L	.30	4/01/93	SP7-1
9304086-03	#3 SP 7-1	sec-Butylbenzene	.20	U	ug/L	.20	4/01/93	SP7-1
9304086-03	#3 SP 7-1	1,3-Dichlorobenzene (m)	.20	U	ug/L	.20	4/01/93	SP7-1
9304086-03	#3 SP 7-1	1,4-Dichlorobenzene (p)	.20	U	ug/L	.20	4/01/93	SP7-1
9304086-03	#3 SP 7-1	4-Isopropyltoluene	.20	U	ug/L	.20	4/01/93	SP7-1
9304086-03	#3 SP 7-1	1,2-Dichlorobenzene (o)	.20	U	ug/L	.20	4/01/93	SP7-1
9304086-03	#3 SP 7-1	n-Butylbenzene	.30	U	ug/L	.30	4/01/93	SP7-1
9304086-03	#3 SP 7-1	1,2-Dibromo-3-chloropropane	.80	U	ug/L	.80	4/01/93	SP7-1
9304086-03	#3 SP 7-1	1,2,4-Trichlorobenzene	.30	U	ug/L	.30	4/01/93	SP7-1
9304086-03	#3 SP 7-1	Naphthalene	.20	U	ug/L	.20	4/01/93	SP7-1
9304086-03	#3 SP 7-1	Hexachlorobutadiene	.50	U	ug/L	.50	4/01/93	SP7-1
9304086-03	#3 SP 7-1	1,2,3-Trichlorobenzene	.40	U	ug/L	.40	4/01/93	SP7-1
9304086-04	#4 VT-5.1	Dichlorodifluoromethane	.30	U	ug/L	.30	4/01/93	SPVT5-1
9304086-04	#4 VT-5.1	Chloromethane	.20	U	ug/L	.20	4/01/93	SPVT5-1
9304086-04	#4 VT-5.1	Vinyl chloride	.30	U	ug/L	.30	4/01/93	SPVT5-1
9304086-04	#4 VT-5.1	Bromomethane	.20	U	ug/L	.20	4/01/93	SPVT5-1
9304086-04	#4 VT-5.1	Chloroethane	.20	U	ug/L	.20	4/01/93	SPVT5-1
9304086-04	#4 VT-5.1	Trichlorofluoromethane	.20	U	ug/L	.20	4/01/93	SPVT5-1
9304086-04	#4 VT-5.1	1,1-Dichloroethylene	.20	U	ug/L	.20	4/01/93	SPVT5-1
9304086-04	#4 VT-5.1	Methylene chloride	.20	U	ug/L	.20	4/01/93	SPVT5-1
9304086-04	#4 VT-5.1	trans-1,2-Dichloroethylene	.10	U	ug/L	.10	4/01/93	SPVT5-1
9304086-04	#4 VT-5.1	1,1-Dichloroethane	.10	U	ug/L	.10	4/01/93	SPVT5-1

B ID	CLIENT ID	PARAMETER	RESULT	FLAG	UNITS	PQL	SAMPLING DATE	WELL NAME
9304086-04	#4 VT-5.1	2,2-Dichloropropane	.40	U	ug/L	.40	4/01/93	SPVT5-1
04086-04	#4 VT-5.1	cis-1,2-Dichloroethylene	.10	U	ug/L	.10	4/01/93	SPVT5-1
04086-04	#4 VT-5.1	Bromochloromethane	.10	U	ug/L	.10	4/01/93	SPVT5-1
9304086-04	#4 VT-5.1	Chloroform	.10	U	ug/L	.10	4/01/93	SPVT5-1
04086-04	#4 VT-5.1	1,1,1-Trichloroethane	1.30		ug/L	.20	4/01/93	SPVT5-1
04086-04	#4 VT-5.1	Carbon tetrachloride	.20	U	ug/L	.20	4/01/93	SPVT5-1
9304086-04	#4 VT-5.1	1,1-Dichloropropylene	.20	U	ug/L	.20	4/01/93	SPVT5-1
9304086-04	#4 VT-5.1	Benzene	.10	U	ug/L	.10	4/01/93	SPVT5-1
04086-04	#4 VT-5.1	1,2-Dichloroethane	.30	U	ug/L	.30	4/01/93	SPVT5-1
9304086-04	#4 VT-5.1	Trichloroethylene	.10	U	ug/L	.10	4/01/93	SPVT5-1
9304086-04	#4 VT-5.1	1,2-Dichloropropane	.40	U	ug/L	.40	4/01/93	SPVT5-1
04086-04	#4 VT-5.1	Dibromomethane	.50	U	ug/L	.50	4/01/93	SPVT5-1
04086-04	#4 VT-5.1	Bromodichloromethane	.30	U	ug/L	.30	4/01/93	SPVT5-1
9304086-04	#4 VT-5.1	cis-1,3-Dichloropropylene	.20	U	ug/L	.20	4/01/93	SPVT5-1
04086-04	#4 VT-5.1	Toluene	.20	U	ug/L	.20	4/01/93	SPVT5-1
04086-04	#4 VT-5.1	trans-1,3-Dichloropropylene	.10	U	ug/L	.10	4/01/93	SPVT5-1
9304086-04	#4 VT-5.1	1,1,2-Trichloroethane	.10	U	ug/L	.10	4/01/93	SPVT5-1
9304086-04	#4 VT-5.1	Tetrachloroethylene	.20	U	ug/L	.20	4/01/93	SPVT5-1
04086-04	#4 VT-5.1	1,3-Dichloropropane	.10	U	ug/L	.10	4/01/93	SPVT5-1
9304086-04	#4 VT-5.1	Chlorodibromomethane	.30	U	ug/L	.30	4/01/93	SPVT5-1
9304086-04	#4 VT-5.1	Ethylene dibromide	.10	U	ug/L	.10	4/01/93	SPVT5-1
04086-04	#4 VT-5.1	Chlorobenzene	.10	U	ug/L	.10	4/01/93	SPVT5-1
04086-04	#4 VT-5.1	1,1,1,2-Tetrachloroethane	.20	U	ug/L	.20	4/01/93	SPVT5-1
9304086-04	#4 VT-5.1	Ethylbenzene	.20	U	ug/L	.20	4/01/93	SPVT5-1
304086-04	#4 VT-5.1	m+p-Xylene	.40	U	ug/L	.40	4/01/93	SPVT5-1
04086-04	#4 VT-5.1	o-Xylene	.10	U	ug/L	.10	4/01/93	SPVT5-1
9304086-04	#4 VT-5.1	Styrene	.10	U	ug/L	.10	4/01/93	SPVT5-1
9304086-04	#4 VT-5.1	Bromoform	.50	U	ug/L	.50	4/01/93	SPVT5-1
04086-04	#4 VT-5.1	Isopropylbenzene	.20	U	ug/L	.20	4/01/93	SPVT5-1
304086-04	#4 VT-5.1	Bromobenzene	.20	U	ug/L	.20	4/01/93	SPVT5-1
9304086-04	#4 VT-5.1	1,2,3-Trichloropropane	.20	U	ug/L	.20	4/01/93	SPVT5-1
304086-04	#4 VT-5.1	1,1,2,2-Tetrachloroethane	.20	U	ug/L	.20	4/01/93	SPVT5-1
304086-04	#4 VT-5.1	n-Propylbenzene	.20	U	ug/L	.20	4/01/93	SPVT5-1
9304086-04	#4 VT-5.1	2-Chlorotoluene	.20	U	ug/L	.20	4/01/93	SPVT5-1
304086-04	#4 VT-5.1	4-Chlorotoluene	.20	U	ug/L	.20	4/01/93	SPVT5-1
304086-04	#4 VT-5.1	1,3,5-Trimethylbenzene	.30	U	ug/L	.30	4/01/93	SPVT5-1
9304086-04	#4 VT-5.1	tert-Butylbenzene	.20	U	ug/L	.20	4/01/93	SPVT5-1
9304086-04	#4 VT-5.1	1,2,4-Trimethylbenzene	.30	U	ug/L	.30	4/01/93	SPVT5-1
304086-04	#4 VT-5.1	sec-Butylbenzene	.20	U	ug/L	.20	4/01/93	SPVT5-1
304086-04	#4 VT-5.1	1,3-Dichlorobenzene (m)	.20	U	ug/L	.20	4/01/93	SPVT5-1
9304086-04	#4 VT-5.1	1,4-Dichlorobenzene (p)	.20	U	ug/L	.20	4/01/93	SPVT5-1
304086-04	#4 VT-5.1	4-Isopropyltoluene	.20	U	ug/L	.20	4/01/93	SPVT5-1
304086-04	#4 VT-5.1	1,2-Dichlorobenzene (o)	.20	U	ug/L	.20	4/01/93	SPVT5-1
9304086-04	#4 VT-5.1	n-Butylbenzene	.30	U	ug/L	.30	4/01/93	SPVT5-1
304086-04	#4 VT-5.1	1,2-Dibromo-3-chloropropane	.80	U	ug/L	.80	4/01/93	SPVT5-1
304086-04	#4 VT-5.1	1,2,4-Trichlorobenzene	.30	U	ug/L	.30	4/01/93	SPVT5-1
9304086-04	#4 VT-5.1	Naphthalene	.20	U	ug/L	.20	4/01/93	SPVT5-1

AB ID	CLIENT ID	PARAMETER	RESULT	FLAG	UNITS	PQL	SAMPLING DATE	WELL NAME
304086-04	#4 VT-5.1	Hexachlorobutadiene	.50	U	ug/L	.50	4/01/93	SPVT5-1
304086-04	#4 VT-5.1	1,2,3-Trichlorobenzene	.40	U	ug/L	.40	4/01/93	SPVT5-1
304086-05	#5 VT-3	Dichlorodifluoromethane	.30	U	ug/L	.30	4/01/93	SPVT3
304086-05	#5 VT-3	Chloromethane	.20	U	ug/L	.20	4/01/93	SPVT3
304086-05	#5 VT-3	Vinyl chloride	.30	U	ug/L	.30	4/01/93	SPVT3
304086-05	#5 VT-3	Bromomethane	.20	U	ug/L	.20	4/01/93	SPVT3
304086-05	#5 VT-3	Chloroethane	.20	U	ug/L	.20	4/01/93	SPVT3
304086-05	#5 VT-3	Trichlorofluoromethane	.20	U	ug/L	.20	4/01/93	SPVT3
304086-05	#5 VT-3	1,1-Dichloroethylene	.20	U	ug/L	.20	4/01/93	SPVT3
304086-05	#5 VT-3	Methylene chloride	.20	U	ug/L	.20	4/01/93	SPVT3
304086-05	#5 VT-3	trans-1,2-Dichloroethylene	.10	U	ug/L	.10	4/01/93	SPVT3
304086-05	#5 VT-3	1,1-Dichloroethane	.10	U	ug/L	.10	4/01/93	SPVT3
304086-05	#5 VT-3	2,2-Dichloropropane	.40	U	ug/L	.40	4/01/93	SPVT3
304086-05	#5 VT-3	cis-1,2-Dichloroethylene	.10	U	ug/L	.10	4/01/93	SPVT3
304086-05	#5 VT-3	Bromochloromethane	.10	U	ug/L	.10	4/01/93	SPVT3
304086-05	#5 VT-3	Chloroform	.10	U	ug/L	.10	4/01/93	SPVT3
304086-05	#5 VT-3	1,1,1-Trichloroethane	.20	U	ug/L	.20	4/01/93	SPVT3
304086-05	#5 VT-3	Carbon tetrachloride	.20	U	ug/L	.20	4/01/93	SPVT3
304086-05	#5 VT-3	1,1-Dichloropropylene	.20	U	ug/L	.20	4/01/93	SPVT3
304086-05	#5 VT-3	Benzene	.10	U	ug/L	.10	4/01/93	SPVT3
304086-05	#5 VT-3	1,2-Dichloroethane	.30	U	ug/L	.30	4/01/93	SPVT3
304086-05	#5 VT-3	Trichloroethylene	.10	U	ug/L	.10	4/01/93	SPVT3
304086-05	#5 VT-3	1,2-Dichloropropane	.40	U	ug/L	.40	4/01/93	SPVT3
304086-05	#5 VT-3	Dibromomethane	.50	U	ug/L	.50	4/01/93	SPVT3
304086-05	#5 VT-3	Bromodichloromethane	.30	U	ug/L	.30	4/01/93	SPVT3
304086-05	#5 VT-3	cis-1,3-Dichloropropylene	.20	U	ug/L	.20	4/01/93	SPVT3
304086-05	#5 VT-3	Toluene	.20	U	ug/L	.20	4/01/93	SPVT3
304086-05	#5 VT-3	trans-1,3-Dichloropropylene	.10	U	ug/L	.10	4/01/93	SPVT3
304086-05	#5 VT-3	1,1,2-Trichloroethane	.10	U	ug/L	.10	4/01/93	SPVT3
304086-05	#5 VT-3	Tetrachloroethylene	.20	U	ug/L	.20	4/01/93	SPVT3
304086-05	#5 VT-3	1,3-Dichloropropane	.10	U	ug/L	.10	4/01/93	SPVT3
304086-05	#5 VT-3	Chlorodibromomethane	.30	U	ug/L	.30	4/01/93	SPVT3
304086-05	#5 VT-3	Ethylene dibromide	.10	U	ug/L	.10	4/01/93	SPVT3
304086-05	#5 VT-3	Chlorobenzene	.10	U	ug/L	.10	4/01/93	SPVT3
304086-05	#5 VT-3	1,1,1,2-Tetrachloroethane	.20	U	ug/L	.20	4/01/93	SPVT3
304086-05	#5 VT-3	Ethylbenzene	.20	U	ug/L	.20	4/01/93	SPVT3
304086-05	#5 VT-3	m+p-Xylene	.40	U	ug/L	.40	4/01/93	SPVT3
304086-05	#5 VT-3	o-Xylene	.10	U	ug/L	.10	4/01/93	SPVT3
304086-05	#5 VT-3	Styrene	.10	U	ug/L	.10	4/01/93	SPVT3
304086-05	#5 VT-3	Bromoform	.50	U	ug/L	.50	4/01/93	SPVT3
304086-05	#5 VT-3	Isopropylbenzene	.20	U	ug/L	.20	4/01/93	SPVT3
304086-05	#5 VT-3	Bromobenzene	.20	U	ug/L	.20	4/01/93	SPVT3
304086-05	#5 VT-3	1,2,3-Trichloropropane	.20	U	ug/L	.20	4/01/93	SPVT3
304086-05	#5 VT-3	1,1,2,2-Tetrachloroethane	.20	U	ug/L	.20	4/01/93	SPVT3
304086-05	#5 VT-3	n-Propylbenzene	.20	U	ug/L	.20	4/01/93	SPVT3
304086-05	#5 VT-3	2-Chlorotoluene	.20	U	ug/L	.20	4/01/93	SPVT3
304086-05	#5 VT-3	4-Chlorotoluene	.20	U	ug/L	.20	4/01/93	SPVT3

[redacted]B ID	CLIENT ID	PARAMETER	RESULT	FLAG	UNITS	PQL	SAMPLING DATE	WELL NAME
9304086-05	#5 VT-3	1,3,5-Trimethylbenzene	.30	U	ug/L	.30	4/01/93	SPVT3
[redacted]04086-05	#5 VT-3	tert-Butylbenzene	.20	U	ug/L	.20	4/01/93	SPVT3
9304086-05	#5 VT-3	1,2,4-Trimethylbenzene	.30	U	ug/L	.30	4/01/93	SPVT3
9304086-05	#5 VT-3	sec-Butylbenzene	.20	U	ug/L	.20	4/01/93	SPVT3
[redacted]04086-05	#5 VT-3	1,3-Dichlorobenzene (m)	.20	U	ug/L	.20	4/01/93	SPVT3
[redacted]04086-05	#5 VT-3	1,4-Dichlorobenzene (p)	.20	U	ug/L	.20	4/01/93	SPVT3
9304086-05	#5 VT-3	4-Isopropyltoluene	.20	U	ug/L	.20	4/01/93	SPVT3
[redacted]04086-05	#5 VT-3	1,2-Dichlorobenzene (o)	.20	U	ug/L	.20	4/01/93	SPVT3
[redacted]04086-05	#5 VT-3	n-Butylbenzene	.30	U	ug/L	.30	4/01/93	SPVT3
9304086-05	#5 VT-3	1,2-Dibromo-3-chloropropane	.80	U	ug/L	.80	4/01/93	SPVT3
9304086-05	#5 VT-3	1,2,4-Trichlorobenzene	.30	U	ug/L	.30	4/01/93	SPVT3
[redacted]04086-05	#5 VT-3	Naphthalene	.20	U	ug/L	.20	4/01/93	SPVT3
9304086-05	#5 VT-3	Hexachlorobutadiene	.50	U	ug/L	.50	4/01/93	SPVT3
9304086-05	#5 VT-3	1,2,3-Trichlorobenzene	.40	U	ug/L	.40	4/01/93	SPVT3
[redacted]04086-06	#6 VT-1.1	Dichlorodifluoromethane	.30	U	ug/L	.30	4/01/93	SPVT1-1
[redacted]04086-06	#6 VT-1.1	Chloromethane	.20	U	ug/L	.20	4/01/93	SPVT1-1
9304086-06	#6 VT-1.1	Vinyl chloride	.30	U	ug/L	.30	4/01/93	SPVT1-1
[redacted]04086-06	#6 VT-1.1	Bromomethane	.20	U	ug/L	.20	4/01/93	SPVT1-1
[redacted]04086-06	#6 VT-1.1	Chloroethane	.20	U	ug/L	.20	4/01/93	SPVT1-1
9304086-06	#6 VT-1.1	Trichlorofluoromethane	.20	U	ug/L	.20	4/01/93	SPVT1-1
9304086-06	#6 VT-1.1	1,1-Dichloroethylene	.20	U	ug/L	.20	4/01/93	SPVT1-1
[redacted]04086-06	#6 VT-1.1	Methylene chloride	.20	U	ug/L	.20	4/01/93	SPVT1-1
9304086-06	#6 VT-1.1	trans-1,2-Dichloroethylene	.10	U	ug/L	.10	4/01/93	SPVT1-1
9304086-06	#6 VT-1.1	1,1-Dichloroethane	.10	U	ug/L	.10	4/01/93	SPVT1-1
[redacted]04086-06	#6 VT-1.1	2,2-Dichloropropane	.40	U	ug/L	.40	4/01/93	SPVT1-1
[redacted]04086-06	#6 VT-1.1	cis-1,2-Dichloroethylene	.10	U	ug/L	.10	4/01/93	SPVT1-1
9304086-06	#6 VT-1.1	Bromochloromethane	.10	U	ug/L	.10	4/01/93	SPVT1-1
[redacted]04086-06	#6 VT-1.1	Chloroform	.10	U	ug/L	.10	4/01/93	SPVT1-1
[redacted]04086-06	#6 VT-1.1	1,1,1-Trichloroethane	.20	U	ug/L	.20	4/01/93	SPVT1-1
9304086-06	#6 VT-1.1	Carbon tetrachloride	.20	U	ug/L	.20	4/01/93	SPVT1-1
9304086-06	#6 VT-1.1	1,1-Dichloropropylene	.20	U	ug/L	.20	4/01/93	SPVT1-1
[redacted]04086-06	#6 VT-1.1	Benzene	.10	U	ug/L	.10	4/01/93	SPVT1-1
9304086-06	#6 VT-1.1	1,2-Dichloroethane	.30	U	ug/L	.30	4/01/93	SPVT1-1
9304086-06	#6 VT-1.1	Trichloroethylene	.10	U	ug/L	.10	4/01/93	SPVT1-1
[redacted]04086-06	#6 VT-1.1	1,2-Dichloropropane	.40	U	ug/L	.40	4/01/93	SPVT1-1
[redacted]04086-06	#6 VT-1.1	Dibromomethane	.50	U	ug/L	.50	4/01/93	SPVT1-1
9304086-06	#6 VT-1.1	Bromodichloromethane	.30	U	ug/L	.30	4/01/93	SPVT1-1
[redacted]04086-06	#6 VT-1.1	cis-1,3-Dichloropropylene	.20	U	ug/L	.20	4/01/93	SPVT1-1
[redacted]04086-06	#6 VT-1.1	Toluene	.20	U	ug/L	.20	4/01/93	SPVT1-1
9304086-06	#6 VT-1.1	trans-1,3-Dichloropropylene	.10	U	ug/L	.10	4/01/93	SPVT1-1
9304086-06	#6 VT-1.1	1,1,2-Trichloroethane	.10	U	ug/L	.10	4/01/93	SPVT1-1
[redacted]04086-06	#6 VT-1.1	Tetrachloroethylene	.20	U	ug/L	.20	4/01/93	SPVT1-1
9304086-06	#6 VT-1.1	1,3-Dichloropropane	.10	U	ug/L	.10	4/01/93	SPVT1-1
9304086-06	#6 VT-1.1	Chlorodibromomethane	.30	U	ug/L	.30	4/01/93	SPVT1-1
[redacted]04086-06	#6 VT-1.1	Ethylene dibromide	.10	U	ug/L	.10	4/01/93	SPVT1-1
[redacted]04086-06	#6 VT-1.1	Chlorobenzene	.10	U	ug/L	.10	4/01/93	SPVT1-1
9304086-06	#6 VT-1.1	1,1,1,2-Tetrachloroethane	.20	U	ug/L	.20	4/01/93	SPVT1-1

LAB ID	CLIENT ID	PARAMETER	RESULT	FLAG	UNITS	PQL	SAMPLING DATE	WELL NAME
9304086-06	#6 VT-1.1	Ethylbenzene	.20	U	ug/L	.20	4/01/93	SPVT1-1
9304086-06	#6 VT-1.1	m+p-Xylene	.40	U	ug/L	.40	4/01/93	SPVT1-1
9304086-06	#6 VT-1.1	o-Xylene	.10	U	ug/L	.10	4/01/93	SPVT1-1
9304086-06	#6 VT-1.1	Styrene	.10	U	ug/L	.10	4/01/93	SPVT1-1
9304086-06	#6 VT-1.1	Bromoform	.50	U	ug/L	.50	4/01/93	SPVT1-1
9304086-06	#6 VT-1.1	Isopropylbenzene	.20	U	ug/L	.20	4/01/93	SPVT1-1
9304086-06	#6 VT-1.1	Bromobenzene	.20	U	ug/L	.20	4/01/93	SPVT1-1
9304086-06	#6 VT-1.1	1,2,3-Trichloropropane	.20	U	ug/L	.20	4/01/93	SPVT1-1
9304086-06	#6 VT-1.1	1,1,2,2-Tetrachloroethane	.20	U	ug/L	.20	4/01/93	SPVT1-1
9304086-06	#6 VT-1.1	n-Propylbenzene	.20	U	ug/L	.20	4/01/93	SPVT1-1
9304086-06	#6 VT-1.1	2-Chlorotoluene	.20	U	ug/L	.20	4/01/93	SPVT1-1
9304086-06	#6 VT-1.1	4-Chlorotoluene	.20	U	ug/L	.20	4/01/93	SPVT1-1
9304086-06	#6 VT-1.1	1,3,5-Trimethylbenzene	.30	U	ug/L	.30	4/01/93	SPVT1-1
9304086-06	#6 VT-1.1	tert-Butylbenzene	.20	U	ug/L	.20	4/01/93	SPVT1-1
9304086-06	#6 VT-1.1	1,2,4-Trimethylbenzene	.30	U	ug/L	.30	4/01/93	SPVT1-1
9304086-06	#6 VT-1.1	sec-Butylbenzene	.20	U	ug/L	.20	4/01/93	SPVT1-1
9304086-06	#6 VT-1.1	1,3-Dichlorobenzene (m)	.20	U	ug/L	.20	4/01/93	SPVT1-1
9304086-06	#6 VT-1.1	1,4-Dichlorobenzene (p)	.20	U	ug/L	.20	4/01/93	SPVT1-1
9304086-06	#6 VT-1.1	4-Isopropyltoluene	.20	U	ug/L	.20	4/01/93	SPVT1-1
9304086-06	#6 VT-1.1	1,2-Dichlorobenzene (o)	.20	U	ug/L	.20	4/01/93	SPVT1-1
9304086-06	#6 VT-1.1	n-Butylbenzene	.30	U	ug/L	.30	4/01/93	SPVT1-1
9304086-06	#6 VT-1.1	1,2-Dibromo-3-chloropropane	.80	U	ug/L	.80	4/01/93	SPVT1-1
9304086-06	#6 VT-1.1	1,2,4-Trichlorobenzene	.30	U	ug/L	.30	4/01/93	SPVT1-1
9304086-06	#6 VT-1.1	Naphthalene	.20	U	ug/L	.20	4/01/93	SPVT1-1
9304086-06	#6 VT-1.1	Hexachlorobutadiene	.50	U	ug/L	.50	4/01/93	SPVT1-1
9304086-06	#6 VT-1.1	1,2,3-Trichlorobenzene	.40	U	ug/L	.40	4/01/93	SPVT1-1
9304086-07	#7 WH-3.2	Dichlorodifluoromethane	.30	U	ug/L	.30	4/01/93	WH3-2
9304086-07	#7 WH-3.2	Chloromethane	.20	U	ug/L	.20	4/01/93	WH3-2
9304086-07	#7 WH-3.2	Vinyl chloride	.30	U	ug/L	.30	4/01/93	WH3-2
9304086-07	#7 WH-3.2	Bromomethane	.20	U	ug/L	.20	4/01/93	WH3-2
9304086-07	#7 WH-3.2	Chloroethane	.20	U	ug/L	.20	4/01/93	WH3-2
9304086-07	#7 WH-3.2	Trichlorofluoromethane	.20	U	ug/L	.20	4/01/93	WH3-2
9304086-07	#7 WH-3.2	1,1-Dichloroethylene	.20	U	ug/L	.20	4/01/93	WH3-2
9304086-07	#7 WH-3.2	Methylene chloride	.20	U	ug/L	.20	4/01/93	WH3-2
9304086-07	#7 WH-3.2	trans-1,2-Dichloroethylene	.10	U	ug/L	.10	4/01/93	WH3-2
9304086-07	#7 WH-3.2	1,1-Dichloroethane	.10	U	ug/L	.10	4/01/93	WH3-2
9304086-07	#7 WH-3.2	2,2-Dichloropropane	.40	U	ug/L	.40	4/01/93	WH3-2
9304086-07	#7 WH-3.2	cis-1,2-Dichloroethylene	.10	U	ug/L	.10	4/01/93	WH3-2
9304086-07	#7 WH-3.2	Bromochloromethane	.10	U	ug/L	.10	4/01/93	WH3-2
9304086-07	#7 WH-3.2	Chloroform	.10	U	ug/L	.10	4/01/93	WH3-2
9304086-07	#7 WH-3.2	1,1,1-Trichloroethane	.20	U	ug/L	.20	4/01/93	WH3-2
9304086-07	#7 WH-3.2	Carbon tetrachloride	.20	U	ug/L	.20	4/01/93	WH3-2
9304086-07	#7 WH-3.2	1,1-Dichloropropylene	.20	U	ug/L	.20	4/01/93	WH3-2
9304086-07	#7 WH-3.2	Benzene	.10	U	ug/L	.10	4/01/93	WH3-2
9304086-07	#7 WH-3.2	1,2-Dichloroethane	.30	U	ug/L	.30	4/01/93	WH3-2
9304086-07	#7 WH-3.2	Trichloroethylene	.10	U	ug/L	.10	4/01/93	WH3-2
9304086-07	#7 WH-3.2	1,2-Dichloropropane	.40	U	ug/L	.40	4/01/93	WH3-2

[redacted] ID	CLIENT ID	PARAMETER	RESULT	FLAG	UNITS	PQL	SAMPLING DATE	WELL NAME
[redacted]4086-07	#7 WH-3.2	Dibromomethane	.50	U	ug/L	.50	4/01/93	WH3-2
[redacted]4086-07	#7 WH-3.2	Bromodichloromethane	.30	U	ug/L	.30	4/01/93	WH3-2
304086-07	#7 WH-3.2	cis-1,3-Dichloropropylene	.20	U	ug/L	.20	4/01/93	WH3-2
9304086-07	#7 WH-3.2	Toluene	.20	U	ug/L	.20	4/01/93	WH3-2
[redacted]4086-07	#7 WH-3.2	trans-1,3-Dichloropropylene	.10	U	ug/L	.10	4/01/93	WH3-2
[redacted]4086-07	#7 WH-3.2	1,1,2-Trichloroethane	.10	U	ug/L	.10	4/01/93	WH3-2
9304086-07	#7 WH-3.2	Tetrachloroethylene	.20	U	ug/L	.20	4/01/93	WH3-2
[redacted]4086-07	#7 WH-3.2	1,3-Dichloropropane	.10	U	ug/L	.10	4/01/93	WH3-2
[redacted]4086-07	#7 WH-3.2	Chlorodibromomethane	.30	U	ug/L	.30	4/01/93	WH3-2
9304086-07	#7 WH-3.2	Ethylene dibromide	.10	U	ug/L	.10	4/01/93	WH3-2
[redacted]4086-07	#7 WH-3.2	Chlorobenzene	.10	U	ug/L	.10	4/01/93	WH3-2
[redacted]4086-07	#7 WH-3.2	1,1,1,2-Tetrachloroethane	.20	U	ug/L	.20	4/01/93	WH3-2
9304086-07	#7 WH-3.2	Ethylbenzene	.20	U	ug/L	.20	4/01/93	WH3-2
9304086-07	#7 WH-3.2	m+p-Xylene	.40	U	ug/L	.40	4/01/93	WH3-2
[redacted]4086-07	#7 WH-3.2	o-Xylene	.10	U	ug/L	.10	4/01/93	WH3-2
[redacted]4086-07	#7 WH-3.2	Styrene	.10	U	ug/L	.10	4/01/93	WH3-2
9304086-07	#7 WH-3.2	Bromoform	.50	U	ug/L	.50	4/01/93	WH3-2
[redacted]4086-07	#7 WH-3.2	Isopropylbenzene	.20	U	ug/L	.20	4/01/93	WH3-2
[redacted]4086-07	#7 WH-3.2	Bromobenzene	.20	U	ug/L	.20	4/01/93	WH3-2
9304086-07	#7 WH-3.2	1,2,3-Trichloropropane	.20	U	ug/L	.20	4/01/93	WH3-2
[redacted]04086-07	#7 WH-3.2	1,1,2,2-Tetrachloroethane	.20	U	ug/L	.20	4/01/93	WH3-2
[redacted]04086-07	#7 WH-3.2	n-Propylbenzene	.20	U	ug/L	.20	4/01/93	WH3-2
9304086-07	#7 WH-3.2	2-Chlorotoluene	.20	U	ug/L	.20	4/01/93	WH3-2
9304086-07	#7 WH-3.2	4-Chlorotoluene	.20	U	ug/L	.20	4/01/93	WH3-2
[redacted]04086-07	#7 WH-3.2	1,3,5-Trimethylbenzene	.30	U	ug/L	.30	4/01/93	WH3-2
[redacted]04086-07	#7 WH-3.2	tert-Butylbenzene	.20	U	ug/L	.20	4/01/93	WH3-2
9304086-07	#7 WH-3.2	1,2,4-Trimethylbenzene	.30	U	ug/L	.30	4/01/93	WH3-2
[redacted]04086-07	#7 WH-3.2	sec-Butylbenzene	.20	U	ug/L	.20	4/01/93	WH3-2
[redacted]04086-07	#7 WH-3.2	1,3-Dichlorobenzene (m)	.20	U	ug/L	.20	4/01/93	WH3-2
9304086-07	#7 WH-3.2	1,4-Dichlorobenzene (p)	.20	U	ug/L	.20	4/01/93	WH3-2
[redacted]04086-07	#7 WH-3.2	4-Isopropyltoluene	.20	U	ug/L	.20	4/01/93	WH3-2
[redacted]04086-07	#7 WH-3.2	1,2-Dichlorobenzene (o)	.20	U	ug/L	.20	4/01/93	WH3-2
9304086-07	#7 WH-3.2	n-Butylbenzene	.30	U	ug/L	.30	4/01/93	WH3-2
9304086-07	#7 WH-3.2	1,2-Dibromo-3-chloropropane	.80	U	ug/L	.80	4/01/93	WH3-2
[redacted]04086-07	#7 WH-3.2	1,2,4-Trichlorobenzene	.30	U	ug/L	.30	4/01/93	WH3-2
[redacted]04086-07	#7 WH-3.2	Naphthalene	.20	U	ug/L	.20	4/01/93	WH3-2
9304086-07	#7 WH-3.2	Hexachlorobutadiene	.50	U	ug/L	.50	4/01/93	WH3-2
[redacted]04086-07	#7 WH-3.2	1,2,3-Trichlorobenzene	.40	U	ug/L	.40	4/01/93	WH3-2
[redacted]04086-08	#8 WH-3.1	Dichlorodifluoromethane	.30	U	ug/L	.30	4/01/93	WH3-1
9304086-08	#8 WH-3.1	Chloromethane	.20	U	ug/L	.20	4/01/93	WH3-1
9304086-08	#8 WH-3.1	Vinyl chloride	.30	U	ug/L	.30	4/01/93	WH3-1
[redacted]04086-08	#8 WH-3.1	Bromomethane	.20	U	ug/L	.20	4/01/93	WH3-1
9304086-08	#8 WH-3.1	Chloroethane	.20	U	ug/L	.20	4/01/93	WH3-1
9304086-08	#8 WH-3.1	Trichlorofluoromethane	.20	U	ug/L	.20	4/01/93	WH3-1
[redacted]04086-08	#8 WH-3.1	1,1-Dichloroethylene	.20	U	ug/L	.20	4/01/93	WH3-1
[redacted]04086-08	#8 WH-3.1	Methylene chloride	.20	U	ug/L	.20	4/01/93	WH3-1
9304086-08	#8 WH-3.1	trans-1,2-Dichloroethylene	.10	U	ug/L	.10	4/01/93	WH3-1

LAB ID	CLIENT ID	PARAMETER	RESULT	FLAG	UNITS	PQL	SAMPLING DATE	WELL NAME
9304086-08	#8 WH-3.1	1,1-Dichloroethane	.10	U	ug/L	.10	4/01/93	WH3-1
9304086-08	#8 WH-3.1	2,2-Dichloropropane	.40	U	ug/L	.40	4/01/93	WH3-1
9304086-08	#8 WH-3.1	cis-1,2-Dichloroethylene	.10	U	ug/L	.10	4/01/93	WH3-1
9304086-08	#8 WH-3.1	Bromochloromethane	.10	U	ug/L	.10	4/01/93	WH3-1
9304086-08	#8 WH-3.1	Chloroform	.10	U	ug/L	.10	4/01/93	WH3-1
9304086-08	#8 WH-3.1	1,1,1-Trichloroethane	.20	U	ug/L	.20	4/01/93	WH3-1
9304086-08	#8 WH-3.1	Carbon tetrachloride	.20	U	ug/L	.20	4/01/93	WH3-1
9304086-08	#8 WH-3.1	1,1-Dichloropropylene	.20	U	ug/L	.20	4/01/93	WH3-1
9304086-08	#8 WH-3.1	Benzene	.10	U	ug/L	.10	4/01/93	WH3-1
9304086-08	#8 WH-3.1	1,2-Dichloroethane	.30	U	ug/L	.30	4/01/93	WH3-1
9304086-08	#8 WH-3.1	Trichloroethylene	.10	U	ug/L	.10	4/01/93	WH3-1
9304086-08	#8 WH-3.1	1,2-Dichloropropane	.40	U	ug/L	.40	4/01/93	WH3-1
9304086-08	#8 WH-3.1	Dibromomethane	.50	U	ug/L	.50	4/01/93	WH3-1
9304086-08	#8 WH-3.1	Bromodichloromethane	.30	U	ug/L	.30	4/01/93	WH3-1
9304086-08	#8 WH-3.1	cis-1,3-Dichloropropylene	.20	U	ug/L	.20	4/01/93	WH3-1
9304086-08	#8 WH-3.1	Toluene	.20	U	ug/L	.20	4/01/93	WH3-1
9304086-08	#8 WH-3.1	trans-1,3-Dichloropropylene	.10	U	ug/L	.10	4/01/93	WH3-1
9304086-08	#8 WH-3.1	1,1,2-Trichloroethane	.10	U	ug/L	.10	4/01/93	WH3-1
9304086-08	#8 WH-3.1	Tetrachloroethylene	.20	U	ug/L	.20	4/01/93	WH3-1
9304086-08	#8 WH-3.1	1,3-Dichloropropane	.10	U	ug/L	.10	4/01/93	WH3-1
9304086-08	#8 WH-3.1	Chlorodibromomethane	.30	U	ug/L	.30	4/01/93	WH3-1
9304086-08	#8 WH-3.1	Ethylene dibromide	.10	U	ug/L	.10	4/01/93	WH3-1
9304086-08	#8 WH-3.1	Chlorobenzene	.10	U	ug/L	.10	4/01/93	WH3-1
9304086-08	#8 WH-3.1	1,1,1,2-Tetrachloroethane	.20	U	ug/L	.20	4/01/93	WH3-1
9304086-08	#8 WH-3.1	Ethylbenzene	.20	U	ug/L	.20	4/01/93	WH3-1
9304086-08	#8 WH-3.1	m+p-Xylene	.40	U	ug/L	.40	4/01/93	WH3-1
9304086-08	#8 WH-3.1	o-Xylene	.10	U	ug/L	.10	4/01/93	WH3-1
9304086-08	#8 WH-3.1	Styrene	.10	U	ug/L	.10	4/01/93	WH3-1
9304086-08	#8 WH-3.1	Bromoform	.50	U	ug/L	.50	4/01/93	WH3-1
9304086-08	#8 WH-3.1	Isopropylbenzene	.20	U	ug/L	.20	4/01/93	WH3-1
9304086-08	#8 WH-3.1	Bromobenzene	.20	U	ug/L	.20	4/01/93	WH3-1
9304086-08	#8 WH-3.1	1,2,3-Trichloropropane	.20	U	ug/L	.20	4/01/93	WH3-1
9304086-08	#8 WH-3.1	1,1,2,2-Tetrachloroethane	.20	U	ug/L	.20	4/01/93	WH3-1
9304086-08	#8 WH-3.1	n-Propylbenzene	.20	U	ug/L	.20	4/01/93	WH3-1
9304086-08	#8 WH-3.1	2-Chlorotoluene	.20	U	ug/L	.20	4/01/93	WH3-1
9304086-08	#8 WH-3.1	4-Chlorotoluene	.20	U	ug/L	.20	4/01/93	WH3-1
9304086-08	#8 WH-3.1	1,3,5-Trimethylbenzene	.30	U	ug/L	.30	4/01/93	WH3-1
9304086-08	#8 WH-3.1	tert-Butylbenzene	.20	U	ug/L	.20	4/01/93	WH3-1
9304086-08	#8 WH-3.1	1,2,4-Trimethylbenzene	.30	U	ug/L	.30	4/01/93	WH3-1
9304086-08	#8 WH-3.1	sec-Butylbenzene	.20	U	ug/L	.20	4/01/93	WH3-1
9304086-08	#8 WH-3.1	1,3-Dichlorobenzene (m)	.20	U	ug/L	.20	4/01/93	WH3-1
9304086-08	#8 WH-3.1	1,4-Dichlorobenzene (p)	.20	U	ug/L	.20	4/01/93	WH3-1
9304086-08	#8 WH-3.1	4-Isopropyltoluene	.20	U	ug/L	.20	4/01/93	WH3-1
9304086-08	#8 WH-3.1	1,2-Dichlorobenzene (o)	.20	U	ug/L	.20	4/01/93	WH3-1
9304086-08	#8 WH-3.1	n-Butylbenzene	.30	U	ug/L	.30	4/01/93	WH3-1
9304086-08	#8 WH-3.1	1,2-Dibromo-3-chloropropane	.80	U	ug/L	.80	4/01/93	WH3-1
9304086-08	#8 WH-3.1	1,2,4-Trichlorobenzene	.30	U	ug/L	.30	4/01/93	WH3-1

[redacted] ID	CLIENT ID	PARAMETER	RESULT	FLAG	UNITS	PQL	SAMPLING DATE	WELL NAME
[redacted]4086-08	#8 WH-3.1	Naphthalene	.20	U	ug/L	.20	4/01/93	WH3-1
[redacted]4086-08	#8 WH-3.1	Hexachlorobutadiene	.50	U	ug/L	.50	4/01/93	WH3-1
9304086-08	#8 WH-3.1	1,2,3-Trichlorobenzene	.40	U	ug/L	.40	4/01/93	WH3-1
9304086-09	#9 WH-2.2	Dichlorodifluoromethane	.30	U	ug/L	.30	4/01/93	WH2-2
[redacted]4086-09	#9 WH-2.2	Chloromethane	.20	U	ug/L	.20	4/01/93	WH2-2
[redacted]4086-09	#9 WH-2.2	Vinyl chloride	.30	U	ug/L	.30	4/01/93	WH2-2
9304086-09	#9 WH-2.2	Bromomethane	.20	U	ug/L	.20	4/01/93	WH2-2
[redacted]4086-09	#9 WH-2.2	Chloroethane	.20	U	ug/L	.20	4/01/93	WH2-2
[redacted]4086-09	#9 WH-2.2	Trichlorofluoromethane	.20	U	ug/L	.20	4/01/93	WH2-2
9304086-09	#9 WH-2.2	1,1-Dichloroethylene	.20	U	ug/L	.20	4/01/93	WH2-2
[redacted]4086-09	#9 WH-2.2	Methylene chloride	.20	U	ug/L	.20	4/01/93	WH2-2
[redacted]4086-09	#9 WH-2.2	trans-1,2-Dichloroethylene	.10	U	ug/L	.10	4/01/93	WH2-2
9304086-09	#9 WH-2.2	1,1-Dichloroethane	.10	U	ug/L	.10	4/01/93	WH2-2
9304086-09	#9 WH-2.2	2,2-Dichloropropane	.40	U	ug/L	.40	4/01/93	WH2-2
[redacted]4086-09	#9 WH-2.2	cis-1,2-Dichloroethylene	.10	U	ug/L	.10	4/01/93	WH2-2
[redacted]4086-09	#9 WH-2.2	Bromochloromethane	.10	U	ug/L	.10	4/01/93	WH2-2
9304086-09	#9 WH-2.2	Chloroform	.10	U	ug/L	.10	4/01/93	WH2-2
[redacted]4086-09	#9 WH-2.2	1,1,1-Trichloroethane	.20	U	ug/L	.20	4/01/93	WH2-2
[redacted]4086-09	#9 WH-2.2	Carbon tetrachloride	.20	U	ug/L	.20	4/01/93	WH2-2
9304086-09	#9 WH-2.2	1,1-Dichloropropylene	.20	U	ug/L	.20	4/01/93	WH2-2
[redacted]4086-09	#9 WH-2.2	Benzene	.10	U	ug/L	.10	4/01/93	WH2-2
[redacted]4086-09	#9 WH-2.2	1,2-Dichloroethane	.30	U	ug/L	.30	4/01/93	WH2-2
9304086-09	#9 WH-2.2	Trichloroethylene	.10	U	ug/L	.10	4/01/93	WH2-2
9304086-09	#9 WH-2.2	1,2-Dichloropropane	.40	U	ug/L	.40	4/01/93	WH2-2
[redacted]4086-09	#9 WH-2.2	Dibromomethane	.50	U	ug/L	.50	4/01/93	WH2-2
[redacted]4086-09	#9 WH-2.2	Bromodichloromethane	.30	U	ug/L	.30	4/01/93	WH2-2
9304086-09	#9 WH-2.2	cis-1,3-Dichloropropylene	.20	U	ug/L	.20	4/01/93	WH2-2
[redacted]4086-09	#9 WH-2.2	Toluene	.20	U	ug/L	.20	4/01/93	WH2-2
[redacted]4086-09	#9 WH-2.2	trans-1,3-Dichloropropylene	.10	U	ug/L	.10	4/01/93	WH2-2
9304086-09	#9 WH-2.2	1,1,2-Trichloroethane	.10	U	ug/L	.10	4/01/93	WH2-2
[redacted]4086-09	#9 WH-2.2	Tetrachloroethylene	.20	U	ug/L	.20	4/01/93	WH2-2
[redacted]4086-09	#9 WH-2.2	1,3-Dichloropropane	.10	U	ug/L	.10	4/01/93	WH2-2
9304086-09	#9 WH-2.2	Chlorodibromomethane	.30	U	ug/L	.30	4/01/93	WH2-2
9304086-09	#9 WH-2.2	Ethylene dibromide	.10	U	ug/L	.10	4/01/93	WH2-2
[redacted]4086-09	#9 WH-2.2	Chlorobenzene	.10	U	ug/L	.10	4/01/93	WH2-2
[redacted]4086-09	#9 WH-2.2	1,1,1,2-Tetrachloroethane	.20	U	ug/L	.20	4/01/93	WH2-2
9304086-09	#9 WH-2.2	Ethylbenzene	.20	U	ug/L	.20	4/01/93	WH2-2
[redacted]4086-09	#9 WH-2.2	m+p-Xylene	.40	U	ug/L	.40	4/01/93	WH2-2
[redacted]4086-09	#9 WH-2.2	o-Xylene	.10	U	ug/L	.10	4/01/93	WH2-2
9304086-09	#9 WH-2.2	Styrene	.10	U	ug/L	.10	4/01/93	WH2-2
[redacted]4086-09	#9 WH-2.2	Bromoform	.50	U	ug/L	.50	4/01/93	WH2-2
[redacted]4086-09	#9 WH-2.2	Isopropylbenzene	.20	U	ug/L	.20	4/01/93	WH2-2
9304086-09	#9 WH-2.2	Bromobenzene	.20	U	ug/L	.20	4/01/93	WH2-2
9304086-09	#9 WH-2.2	1,2,3-Trichloropropane	.20	U	ug/L	.20	4/01/93	WH2-2
[redacted]4086-09	#9 WH-2.2	1,1,2,2-Tetrachloroethane	.20	U	ug/L	.20	4/01/93	WH2-2
[redacted]4086-09	#9 WH-2.2	n-Propylbenzene	.20	U	ug/L	.20	4/01/93	WH2-2
9304086-09	#9 WH-2.2	2-Chlorotoluene	.20	U	ug/L	.20	4/01/93	WH2-2

\B ID	CLIENT ID	PARAMETER	RESULT	FLAG	UNITS	PQL	SAMPLING DATE	WELL NAME
;04086-09	#9 WH-2.2	4-Chlorotoluene	.20	U	ug/L	.20	4/01/93	WH2-2
;04086-09	#9 WH-2.2	1,3,5-Trimethylbenzene	.30	U	ug/L	.30	4/01/93	WH2-2
;04086-09	#9 WH-2.2	tert-Butylbenzene	.20	U	ug/L	.20	4/01/93	WH2-2
;04086-09	#9 WH-2.2	1,2,4-Trimethylbenzene	.30	U	ug/L	.30	4/01/93	WH2-2
;04086-09	#9 WH-2.2	sec-Butylbenzene	.20	U	ug/L	.20	4/01/93	WH2-2
;04086-09	#9 WH-2.2	1,3-Dichlorobenzene (m)	.20	U	ug/L	.20	4/01/93	WH2-2
;04086-09	#9 WH-2.2	1,4-Dichlorobenzene (p)	.20	U	ug/L	.20	4/01/93	WH2-2
;04086-09	#9 WH-2.2	4-Isopropyltoluene	.20	U	ug/L	.20	4/01/93	WH2-2
;04086-09	#9 WH-2.2	1,2-Dichlorobenzene (o)	.20	U	ug/L	.20	4/01/93	WH2-2
;04086-09	#9 WH-2.2	n-Butylbenzene	.30	U	ug/L	.30	4/01/93	WH2-2
;04086-09	#9 WH-2.2	1,2-Dibromo-3-chloropropane	.80	U	ug/L	.80	4/01/93	WH2-2
;04086-09	#9 WH-2.2	1,2,4-Trichlorobenzene	.30	U	ug/L	.30	4/01/93	WH2-2
;04086-09	#9 WH-2.2	Naphthalene	.20	U	ug/L	.20	4/01/93	WH2-2
;04086-09	#9 WH-2.2	Hexachlorobutadiene	.50	U	ug/L	.50	4/01/93	WH2-2
;04086-09	#9 WH-2.2	1,2,3-Trichlorobenzene	.40	U	ug/L	.40	4/01/93	WH2-2
;04086-10	#10 WH-2.1	Dichlorodifluoromethane	.30	U	ug/L	.30	4/01/93	WH2-1
;04086-10	#10 WH-2.1	Chloromethane	.20	U	ug/L	.20	4/01/93	WH2-1
;04086-10	#10 WH-2.1	Vinyl chloride	.30	U	ug/L	.30	4/01/93	WH2-1
;04086-10	#10 WH-2.1	Bromomethane	.20	U	ug/L	.20	4/01/93	WH2-1
;04086-10	#10 WH-2.1	Chloroethane	.20	U	ug/L	.20	4/01/93	WH2-1
;04086-10	#10 WH-2.1	Trichlorofluoromethane	.20	U	ug/L	.20	4/01/93	WH2-1
;04086-10	#10 WH-2.1	1,1-Dichloroethylene	.20	U	ug/L	.20	4/01/93	WH2-1
;04086-10	#10 WH-2.1	Methylene chloride	.20	U	ug/L	.20	4/01/93	WH2-1
;04086-10	#10 WH-2.1	trans-1,2-Dichloroethylene	.10	U	ug/L	.10	4/01/93	WH2-1
;04086-10	#10 WH-2.1	1,1-Dichloroethane	.10	U	ug/L	.10	4/01/93	WH2-1
;04086-10	#10 WH-2.1	2,2-Dichloropropane	.40	U	ug/L	.40	4/01/93	WH2-1
;04086-10	#10 WH-2.1	cis-1,2-Dichloroethylene	.10	U	ug/L	.10	4/01/93	WH2-1
;04086-10	#10 WH-2.1	Bromochloromethane	.10	U	ug/L	.10	4/01/93	WH2-1
;04086-10	#10 WH-2.1	Chloroform	.10	U	ug/L	.10	4/01/93	WH2-1
;04086-10	#10 WH-2.1	1,1,1-Trichloroethane	.20	U	ug/L	.20	4/01/93	WH2-1
;04086-10	#10 WH-2.1	Carbon tetrachloride	.20	U	ug/L	.20	4/01/93	WH2-1
;04086-10	#10 WH-2.1	1,1-Dichloropropylene	.20	U	ug/L	.20	4/01/93	WH2-1
;04086-10	#10 WH-2.1	Benzene	.10	U	ug/L	.10	4/01/93	WH2-1
;04086-10	#10 WH-2.1	1,2-Dichloroethane	.30	U	ug/L	.30	4/01/93	WH2-1
;04086-10	#10 WH-2.1	Trichloroethylene	.10	U	ug/L	.10	4/01/93	WH2-1
;04086-10	#10 WH-2.1	1,2-Dichloropropane	.40	U	ug/L	.40	4/01/93	WH2-1
;04086-10	#10 WH-2.1	Dibromomethane	.50	U	ug/L	.50	4/01/93	WH2-1
;04086-10	#10 WH-2.1	Bromodichloromethane	.30	U	ug/L	.30	4/01/93	WH2-1
;04086-10	#10 WH-2.1	cis-1,3-Dichloropropylene	.20	U	ug/L	.20	4/01/93	WH2-1
;04086-10	#10 WH-2.1	Toluene	.20	U	ug/L	.20	4/01/93	WH2-1
;04086-10	#10 WH-2.1	trans-1,3-Dichloropropylene	.10	U	ug/L	.10	4/01/93	WH2-1
;04086-10	#10 WH-2.1	1,1,2-Trichloroethane	.10	U	ug/L	.10	4/01/93	WH2-1
;04086-10	#10 WH-2.1	Tetrachloroethylene	.20	U	ug/L	.20	4/01/93	WH2-1
;04086-10	#10 WH-2.1	1,3-Dichloropropane	.10	U	ug/L	.10	4/01/93	WH2-1
;04086-10	#10 WH-2.1	Chlorodibromomethane	.30	U	ug/L	.30	4/01/93	WH2-1
;04086-10	#10 WH-2.1	Ethylene dibromide	.10	U	ug/L	.10	4/01/93	WH2-1
;04086-10	#10 WH-2.1	Chlorobenzene	.10	U	ug/L	.10	4/01/93	WH2-1

ID	CLIENT ID	PARAMETER	RESULT	FLAG	UNITS	PQL	SAMPLING DATE	WELL NAME
4086-10	#10 WH-2.1	1,1,1,2-Tetrachloroethane	.20	U	ug/L	.20	4/01/93	WH2-1
4086-10	#10 WH-2.1	Ethylbenzene	.20	U	ug/L	.20	4/01/93	WH2-1
9304086-10	#10 WH-2.1	m+p-Xylene	.40	U	ug/L	.40	4/01/93	WH2-1
9304086-10	#10 WH-2.1	o-Xylene	.10	U	ug/L	.10	4/01/93	WH2-1
4086-10	#10 WH-2.1	Styrene	.10	U	ug/L	.10	4/01/93	WH2-1
04086-10	#10 WH-2.1	Bromoform	.50	U	ug/L	.50	4/01/93	WH2-1
9304086-10	#10 WH-2.1	Isopropylbenzene	.20	U	ug/L	.20	4/01/93	WH2-1
4086-10	#10 WH-2.1	Bromobenzene	.20	U	ug/L	.20	4/01/93	WH2-1
4086-10	#10 WH-2.1	1,2,3-Trichloropropane	.20	U	ug/L	.20	4/01/93	WH2-1
9304086-10	#10 WH-2.1	1,1,2,2-Tetrachloroethane	.20	U	ug/L	.20	4/01/93	WH2-1
4086-10	#10 WH-2.1	n-Propylbenzene	.20	U	ug/L	.20	4/01/93	WH2-1
4086-10	#10 WH-2.1	2-Chlorotoluene	.20	U	ug/L	.20	4/01/93	WH2-1
9304086-10	#10 WH-2.1	4-Chlorotoluene	.20	U	ug/L	.20	4/01/93	WH2-1
9304086-10	#10 WH-2.1	1,3,5-Trimethylbenzene	.30	U	ug/L	.30	4/01/93	WH2-1
04086-10	#10 WH-2.1	tert-Butylbenzene	.20	U	ug/L	.20	4/01/93	WH2-1
04086-10	#10 WH-2.1	1,2,4-Trimethylbenzene	.30	U	ug/L	.30	4/01/93	WH2-1
9304086-10	#10 WH-2.1	sec-Butylbenzene	.20	U	ug/L	.20	4/01/93	WH2-1
04086-10	#10 WH-2.1	1,3-Dichlorobenzene (m)	.20	U	ug/L	.20	4/01/93	WH2-1
04086-10	#10 WH-2.1	1,4-Dichlorobenzene (p)	.20	U	ug/L	.20	4/01/93	WH2-1
9304086-10	#10 WH-2.1	4-Isopropyltoluene	.20	U	ug/L	.20	4/01/93	WH2-1
04086-10	#10 WH-2.1	1,2-Dichlorobenzene (o)	.20	U	ug/L	.20	4/01/93	WH2-1
04086-10	#10 WH-2.1	n-Butylbenzene	.30	U	ug/L	.30	4/01/93	WH2-1
9304086-10	#10 WH-2.1	1,2-Dibromo-3-chloropropane	.80	U	ug/L	.80	4/01/93	WH2-1
9304086-10	#10 WH-2.1	1,2,4-Trichlorobenzene	.30	U	ug/L	.30	4/01/93	WH2-1
04086-10	#10 WH-2.1	Naphthalene	.20	U	ug/L	.20	4/01/93	WH2-1
04086-10	#10 WH-2.1	Hexachlorobutadiene	.50	U	ug/L	.50	4/01/93	WH2-1
9304086-10	#10 WH-2.1	1,2,3-Trichlorobenzene	.40	U	ug/L	.40	4/01/93	WH2-1
04086-12	Duplicate	Dichlorodifluoromethane	.30	U	ug/L	.30	4/01/93	DUP524
04086-12	Duplicate	Chloromethane	.20	U	ug/L	.20	4/01/93	DUP524
9304086-12	Duplicate	Vinyl chloride	.30	U	ug/L	.30	4/01/93	DUP524
04086-12	Duplicate	Bromomethane	.20	U	ug/L	.20	4/01/93	DUP524
04086-12	Duplicate	Chloroethane	.20	U	ug/L	.20	4/01/93	DUP524
9304086-12	Duplicate	Trichlorofluoromethane	.20	U	ug/L	.20	4/01/93	DUP524
9304086-12	Duplicate	1,1-Dichloroethylene	.20	U	ug/L	.20	4/01/93	DUP524
04086-12	Duplicate	Methylene chloride	.20	U	ug/L	.20	4/01/93	DUP524
04086-12	Duplicate	trans-1,2-Dichloroethylene	.10	U	ug/L	.10	4/01/93	DUP524
9304086-12	Duplicate	1,1-Dichloroethane	.10	U	ug/L	.10	4/01/93	DUP524
04086-12	Duplicate	2,2-Dichloropropane	.40	U	ug/L	.40	4/01/93	DUP524
04086-12	Duplicate	cis-1,2-Dichloroethylene	.10	U	ug/L	.10	4/01/93	DUP524
9304086-12	Duplicate	Bromochloromethane	.10	U	ug/L	.10	4/01/93	DUP524
9304086-12	Duplicate	Chloroform	.10	U	ug/L	.10	4/01/93	DUP524
04086-12	Duplicate	1,1,1-Trichloroethane	.20	U	ug/L	.20	4/01/93	DUP524
9304086-12	Duplicate	Carbon tetrachloride	.20	U	ug/L	.20	4/01/93	DUP524
9304086-12	Duplicate	1,1-Dichloropropylene	.20	U	ug/L	.20	4/01/93	DUP524
04086-12	Duplicate	Benzene	.10	U	ug/L	.10	4/01/93	DUP524
04086-12	Duplicate	1,2-Dichloroethane	.30	U	ug/L	.30	4/01/93	DUP524
9304086-12	Duplicate	Trichloroethylene	.10	U	ug/L	.10	4/01/93	DUP524

AB ID	CLIENT ID	PARAMETER	RESULT	FLAG	UNITS	PQL	SAMPLING DATE	WELL NAME
304086-12	Duplicate	1,2-Dichloropropane	.40	U	ug/L	.40	4/01/93	DUP524
304086-12	Duplicate	Dibromomethane	.50	U	ug/L	.50	4/01/93	DUP524
304086-12	Duplicate	Bromodichloromethane	.30	U	ug/L	.30	4/01/93	DUP524
304086-12	Duplicate	cis-1,3-Dichloropropylene	.20	U	ug/L	.20	4/01/93	DUP524
304086-12	Duplicate	Toluene	.20	U	ug/L	.20	4/01/93	DUP524
304086-12	Duplicate	trans-1,3-Dichloropropylene	.10	U	ug/L	.10	4/01/93	DUP524
304086-12	Duplicate	1,1,2-Trichloroethane	.10	U	ug/L	.10	4/01/93	DUP524
304086-12	Duplicate	Tetrachloroethylene	.20	U	ug/L	.20	4/01/93	DUP524
304086-12	Duplicate	1,3-Dichloropropane	.10	U	ug/L	.10	4/01/93	DUP524
304086-12	Duplicate	Chlorodibromomethane	.30	U	ug/L	.30	4/01/93	DUP524
304086-12	Duplicate	Ethylene dibromide	.10	U	ug/L	.10	4/01/93	DUP524
304086-12	Duplicate	Chlorobenzene	.10	U	ug/L	.10	4/01/93	DUP524
304086-12	Duplicate	1,1,1,2-Tetrachloroethane	.20	U	ug/L	.20	4/01/93	DUP524
304086-12	Duplicate	Ethylbenzene	.20	U	ug/L	.20	4/01/93	DUP524
304086-12	Duplicate	m+p-Xylene	.40	U	ug/L	.40	4/01/93	DUP524
304086-12	Duplicate	o-Xylene	.10	U	ug/L	.10	4/01/93	DUP524
304086-12	Duplicate	Styrene	.10	U	ug/L	.10	4/01/93	DUP524
304086-12	Duplicate	Bromoform	.50	U	ug/L	.50	4/01/93	DUP524
304086-12	Duplicate	Isopropylbenzene	.20	U	ug/L	.20	4/01/93	DUP524
304086-12	Duplicate	Bromobenzene	.20	U	ug/L	.20	4/01/93	DUP524
304086-12	Duplicate	1,2,3-Trichloropropane	.20	U	ug/L	.20	4/01/93	DUP524
304086-12	Duplicate	1,1,2,2-Tetrachloroethane	.20	U	ug/L	.20	4/01/93	DUP524
304086-12	Duplicate	n-Propylbenzene	.20	U	ug/L	.20	4/01/93	DUP524
304086-12	Duplicate	2-Chlorotoluene	.20	U	ug/L	.20	4/01/93	DUP524
304086-12	Duplicate	4-Chlorotoluene	.20	U	ug/L	.20	4/01/93	DUP524
304086-12	Duplicate	1,3,5-Trimethylbenzene	.30	U	ug/L	.30	4/01/93	DUP524
304086-12	Duplicate	tert-Butylbenzene	.20	U	ug/L	.20	4/01/93	DUP524
304086-12	Duplicate	1,2,4-Trimethylbenzene	.30	U	ug/L	.30	4/01/93	DUP524
304086-12	Duplicate	sec-Butylbenzene	.20	U	ug/L	.20	4/01/93	DUP524
304086-12	Duplicate	1,3-Dichlorobenzene (m)	.20	U	ug/L	.20	4/01/93	DUP524
304086-12	Duplicate	1,4-Dichlorobenzene (p)	.20	U	ug/L	.20	4/01/93	DUP524
304086-12	Duplicate	4-Isopropyltoluene	.20	U	ug/L	.20	4/01/93	DUP524
304086-12	Duplicate	1,2-Dichlorobenzene (o)	.20	U	ug/L	.20	4/01/93	DUP524
304086-12	Duplicate	n-Butylbenzene	.30	U	ug/L	.30	4/01/93	DUP524
304086-12	Duplicate	1,2-Dibromo-3-chloropropane	.80	U	ug/L	.80	4/01/93	DUP524
304086-12	Duplicate	1,2,4-Trichlorobenzene	.30	U	ug/L	.30	4/01/93	DUP524
304086-12	Duplicate	Naphthalene	.20	U	ug/L	.20	4/01/93	DUP524
304086-12	Duplicate	Hexachlorobutadiene	.50	U	ug/L	.50	4/01/93	DUP524
304086-12	Duplicate	1,2,3-Trichlorobenzene	.40	U	ug/L	.40	4/01/93	DUP524
304086-13	Trip Blank	Dichlorodifluoromethane	.30	U	ug/L	.30	4/01/93	TB524-3
304086-13	Trip Blank	Chloromethane	.20	U	ug/L	.20	4/01/93	TB524-3
304086-13	Trip Blank	Vinyl chloride	.30	U	ug/L	.30	4/01/93	TB524-3
304086-13	Trip Blank	Bromomethane	.20	U	ug/L	.20	4/01/93	TB524-3
304086-13	Trip Blank	Chloroethane	.20	U	ug/L	.20	4/01/93	TB524-3
304086-13	Trip Blank	Trichlorofluoromethane	.20	U	ug/L	.20	4/01/93	TB524-3
304086-13	Trip Blank	1,1-Dichloroethylene	.20	U	ug/L	.20	4/01/93	TB524-3
304086-13	Trip Blank	Methylene chloride	.20	U	ug/L	.20	4/01/93	TB524-3

[redacted] ID	CLIENT ID	PARAMETER	RESULT	FLAG	UNITS	PQL	SAMPLING DATE	WELL NAME
304086-13	Trip Blank	trans-1,2-Dichloroethylene	.10	U	ug/L	.10	4/01/93	TB524-3
[redacted]4086-13	Trip Blank	1,1-Dichloroethane	.10	U	ug/L	.10	4/01/93	TB524-3
304086-13	Trip Blank	2,2-Dichloropropane	.40	U	ug/L	.40	4/01/93	TB524-3
304086-13	Trip Blank	cis-1,2-Dichloroethylene	.10	U	ug/L	.10	4/01/93	TB524-3
[redacted]4086-13	Trip Blank	Bromochloromethane	.10	U	ug/L	.10	4/01/93	TB524-3
[redacted]4086-13	Trip Blank	Chloroform	.10	U	ug/L	.10	4/01/93	TB524-3
304086-13	Trip Blank	1,1,1-Trichloroethane	.20	U	ug/L	.20	4/01/93	TB524-3
[redacted]4086-13	Trip Blank	Carbon tetrachloride	.20	U	ug/L	.20	4/01/93	TB524-3
[redacted]4086-13	Trip Blank	1,1-Dichloropropylene	.20	U	ug/L	.20	4/01/93	TB524-3
304086-13	Trip Blank	Benzene	.10	U	ug/L	.10	4/01/93	TB524-3
304086-13	Trip Blank	1,2-Dichloroethane	.30	U	ug/L	.30	4/01/93	TB524-3
[redacted]4086-13	Trip Blank	Trichloroethylene	.10	U	ug/L	.10	4/01/93	TB524-3
304086-13	Trip Blank	1,2-Dichloropropane	.40	U	ug/L	.40	4/01/93	TB524-3
304086-13	Trip Blank	Dibromomethane	.50	U	ug/L	.50	4/01/93	TB524-3
[redacted]4086-13	Trip Blank	Bromodichloromethane	.30	U	ug/L	.30	4/01/93	TB524-3
[redacted]4086-13	Trip Blank	cis-1,3-Dichloropropylene	.20	U	ug/L	.20	4/01/93	TB524-3
304086-13	Trip Blank	Toluene	.20	U	ug/L	.20	4/01/93	TB524-3
[redacted]4086-13	Trip Blank	trans-1,3-Dichloropropylene	.10	U	ug/L	.10	4/01/93	TB524-3
[redacted]4086-13	Trip Blank	1,1,2-Trichloroethane	.10	U	ug/L	.10	4/01/93	TB524-3
304086-13	Trip Blank	Tetrachloroethylene	.20	U	ug/L	.20	4/01/93	TB524-3
304086-13	Trip Blank	1,3-Dichloropropane	.10	U	ug/L	.10	4/01/93	TB524-3
[redacted]4086-13	Trip Blank	Chlorodibromomethane	.30	U	ug/L	.30	4/01/93	TB524-3
304086-13	Trip Blank	Ethylene dibromide	.10	U	ug/L	.10	4/01/93	TB524-3
304086-13	Trip Blank	Chlorobenzene	.10	U	ug/L	.10	4/01/93	TB524-3
[redacted]4086-13	Trip Blank	1,1,1,2-Tetrachloroethane	.20	U	ug/L	.20	4/01/93	TB524-3
[redacted]4086-13	Trip Blank	Ethylbenzene	.20	U	ug/L	.20	4/01/93	TB524-3
304086-13	Trip Blank	m+p-Xylene	.40	U	ug/L	.40	4/01/93	TB524-3
[redacted]4086-13	Trip Blank	o-Xylene	.10	U	ug/L	.10	4/01/93	TB524-3
[redacted]4086-13	Trip Blank	Styrene	.10	U	ug/L	.10	4/01/93	TB524-3
304086-13	Trip Blank	Bromoform	.50	U	ug/L	.50	4/01/93	TB524-3
304086-13	Trip Blank	Isopropylbenzene	.20	U	ug/L	.20	4/01/93	TB524-3
[redacted]4086-13	Trip Blank	Bromobenzene	.20	U	ug/L	.20	4/01/93	TB524-3
304086-13	Trip Blank	1,2,3-Trichloropropane	.20	U	ug/L	.20	4/01/93	TB524-3
304086-13	Trip Blank	1,1,2,2-Tetrachloroethane	.20	U	ug/L	.20	4/01/93	TB524-3
[redacted]4086-13	Trip Blank	n-Propylbenzene	.20	U	ug/L	.20	4/01/93	TB524-3
[redacted]4086-13	Trip Blank	2-Chlorotoluene	.20	U	ug/L	.20	4/01/93	TB524-3
304086-13	Trip Blank	4-Chlorotoluene	.20	U	ug/L	.20	4/01/93	TB524-3
[redacted]4086-13	Trip Blank	1,3,5-Trimethylbenzene	.30	U	ug/L	.30	4/01/93	TB524-3
[redacted]4086-13	Trip Blank	tert-Butylbenzene	.20	U	ug/L	.20	4/01/93	TB524-3
304086-13	Trip Blank	1,2,4-Trimethylbenzene	.30	U	ug/L	.30	4/01/93	TB524-3
304086-13	Trip Blank	sec-Butylbenzene	.20	U	ug/L	.20	4/01/93	TB524-3
[redacted]4086-13	Trip Blank	1,3-Dichlorobenzene (m)	.20	U	ug/L	.20	4/01/93	TB524-3
304086-13	Trip Blank	1,4-Dichlorobenzene (p)	.20	U	ug/L	.20	4/01/93	TB524-3
304086-13	Trip Blank	4-Isopropyltoluene	.20	U	ug/L	.20	4/01/93	TB524-3
[redacted]4086-13	Trip Blank	1,2-Dichlorobenzene (o)	.20	U	ug/L	.20	4/01/93	TB524-3
[redacted]4086-13	Trip Blank	n-Butylbenzene	.30	U	ug/L	.30	4/01/93	TB524-3
304086-13	Trip Blank	1,2-Dibromo-3-chloropropane	.80	U	ug/L	.80	4/01/93	TB524-3

.AB ID	CLIENT ID	PARAMETER	RESULT	FLAG	UNITS	PQL	SAMPLING DATE	WELL NAME
?304086-13	Trip Blank	1,2,4-Trichlorobenzene	.30	U	ug/L	.30	4/01/93	TB524-3
?304086-13	Trip Blank	Naphthalene	.20	U	ug/L	.20	4/01/93	TB524-3
?304086-13	Trip Blank	Hexachlorobutadiene	.50	U	ug/L	.50	4/01/93	TB524-3
?304086-13	Trip Blank	1,2,3-Trichlorobenzene	.40	U	ug/L	.40	4/01/93	TB524-3
?205467-02	#2 SPWSD VT-8.1	Dichlorodifluoromethane	.30	U	ug/L	.30	5/06/92	SPVT8-1
?205467-02	#2 SPWSD VT-8.1	Chloromethane	.20	U	ug/L	.20	5/06/92	SPVT8-1
?205467-02	#2 SPWSD VT-8.1	Vinyl chloride	.30	U	ug/L	.30	5/06/92	SPVT8-1
?205467-02	#2 SPWSD VT-8.1	Bromomethane	.20	U	ug/L	.20	5/06/92	SPVT8-1
?205467-02	#2 SPWSD VT-8.1	Chloroethane	.20	U	ug/L	.20	5/06/92	SPVT8-1
?205467-02	#2 SPWSD VT-8.1	Trichlorofluoromethane	.20	U	ug/L	.20	5/06/92	SPVT8-1
?205467-02	#2 SPWSD VT-8.1	1,1-Dichloroethylene	.20	U	ug/L	.20	5/06/92	SPVT8-1
?205467-02	#2 SPWSD VT-8.1	Methylene chloride	.20	U	ug/L	.20	5/06/92	SPVT8-1
?205467-02	#2 SPWSD VT-8.1	trans-1,2-Dichloroethylene	.10	U	ug/L	.10	5/06/92	SPVT8-1
?205467-02	#2 SPWSD VT-8.1	1,1-Dichloroethane	.10	U	ug/L	.10	5/06/92	SPVT8-1
?205467-02	#2 SPWSD VT-8.1	2,2-Dichloropropane	.40	U	ug/L	.40	5/06/92	SPVT8-1
?205467-02	#2 SPWSD VT-8.1	cis-1,2-Dichloroethylene	.10	U	ug/L	.10	5/06/92	SPVT8-1
?205467-02	#2 SPWSD VT-8.1	Bromochloromethane	.10	U	ug/L	.10	5/06/92	SPVT8-1
?205467-02	#2 SPWSD VT-8.1	Chloroform	.10	U	ug/L	.10	5/06/92	SPVT8-1
?205467-02	#2 SPWSD VT-8.1	1,1,1-Trichloroethane	.20	U	ug/L	.20	5/06/92	SPVT8-1
?205467-02	#2 SPWSD VT-8.1	Carbon tetrachloride	.20	U	ug/L	.20	5/06/92	SPVT8-1
?205467-02	#2 SPWSD VT-8.1	1,1-Dichloropropylene	.20	U	ug/L	.20	5/06/92	SPVT8-1
?205467-02	#2 SPWSD VT-8.1	Benzene	.10	U	ug/L	.10	5/06/92	SPVT8-1
?205467-02	#2 SPWSD VT-8.1	1,2-Dichloroethane	.30	U	ug/L	.30	5/06/92	SPVT8-1
?205467-02	#2 SPWSD VT-8.1	Trichloroethylene	.10	U	ug/L	.10	5/06/92	SPVT8-1
?205467-02	#2 SPWSD VT-8.1	1,2-Dichloropropane	.40	U	ug/L	.40	5/06/92	SPVT8-1
?205467-02	#2 SPWSD VT-8.1	Dibromomethane	.50	U	ug/L	.50	5/06/92	SPVT8-1
?205467-02	#2 SPWSD VT-8.1	Bromodichloromethane	.30	U	ug/L	.30	5/06/92	SPVT8-1
?205467-02	#2 SPWSD VT-8.1	cis-1,3-Dichloropropylene	.20	U	ug/L	.20	5/06/92	SPVT8-1
?205467-02	#2 SPWSD VT-8.1	Toluene	.20	U	ug/L	.20	5/06/92	SPVT8-1
?205467-02	#2 SPWSD VT-8.1	trans-1,3-Dichloropropylene	.10	U	ug/L	.10	5/06/92	SPVT8-1
?205467-02	#2 SPWSD VT-8.1	1,1,2-Trichloroethane	.10	U	ug/L	.10	5/06/92	SPVT8-1
?205467-02	#2 SPWSD VT-8.1	Tetrachloroethylene	.20	U	ug/L	.20	5/06/92	SPVT8-1
?205467-02	#2 SPWSD VT-8.1	1,3-Dichloropropane	.10	U	ug/L	.10	5/06/92	SPVT8-1
?205467-02	#2 SPWSD VT-8.1	Chlorodibromomethane	.30	U	ug/L	.30	5/06/92	SPVT8-1
?205467-02	#2 SPWSD VT-8.1	Ethylene dibromide	.10	U	ug/L	.10	5/06/92	SPVT8-1
?205467-02	#2 SPWSD VT-8.1	Chlorobenzene	.10	U	ug/L	.10	5/06/92	SPVT8-1
?205467-02	#2 SPWSD VT-8.1	1,1,1,2-Tetrachloroethane	.20	U	ug/L	.20	5/06/92	SPVT8-1
?205467-02	#2 SPWSD VT-8.1	Ethylbenzene	.20	U	ug/L	.20	5/06/92	SPVT8-1
?205467-02	#2 SPWSD VT-8.1	m+p-Xylene	.40	U	ug/L	.40	5/06/92	SPVT8-1
?205467-02	#2 SPWSD VT-8.1	o-Xylene	.10	U	ug/L	.10	5/06/92	SPVT8-1
?205467-02	#2 SPWSD VT-8.1	Styrene	.10	U	ug/L	.10	5/06/92	SPVT8-1
?205467-02	#2 SPWSD VT-8.1	Bromoform	.50	U	ug/L	.50	5/06/92	SPVT8-1
?205467-02	#2 SPWSD VT-8.1	Isopropylbenzene	.20	U	ug/L	.20	5/06/92	SPVT8-1
?205467-02	#2 SPWSD VT-8.1	Bromobenzene	.20	U	ug/L	.20	5/06/92	SPVT8-1
?205467-02	#2 SPWSD VT-8.1	1,2,3-Trichloropropane	.20	U	ug/L	.20	5/06/92	SPVT8-1
?205467-02	#2 SPWSD VT-8.1	1,1,2,2-Tetrachloroethane	.20	U	ug/L	.20	5/06/92	SPVT8-1
?205467-02	#2 SPWSD VT-8.1	n-Propylbenzene	.20	U	ug/L	.20	5/06/92	SPVT8-1

[redacted] ID	CLIENT ID	PARAMETER	RESULT	FLAG	UNITS	PQL	SAMPLING DATE	WELL NAME
9205467-02	#2 SPWSD VT-8.1	2-Chlorotoluene	.20	U	ug/L	.20	5/06/92	SPVT8-1
[redacted]05467-02	#2 SPWSD VT-8.1	4-Chlorotoluene	.20	U	ug/L	.20	5/06/92	SPVT8-1
[redacted]05467-02	#2 SPWSD VT-8.1	1,3,5-Trimethylbenzene	.30	U	ug/L	.30	5/06/92	SPVT8-1
9205467-02	#2 SPWSD VT-8.1	tert-Butylbenzene	.20	U	ug/L	.20	5/06/92	SPVT8-1
[redacted]05467-02	#2 SPWSD VT-8.1	1,2,4-Trimethylbenzene	.30	U	ug/L	.30	5/06/92	SPVT8-1
[redacted]05467-02	#2 SPWSD VT-8.1	sec-Butylbenzene	.20	U	ug/L	.20	5/06/92	SPVT8-1
9205467-02	#2 SPWSD VT-8.1	1,3-Dichlorobenzene (m)	.20	U	ug/L	.20	5/06/92	SPVT8-1
[redacted]05467-02	#2 SPWSD VT-8.1	1,4-Dichlorobenzene (p)	.20	U	ug/L	.20	5/06/92	SPVT8-1
[redacted]05467-02	#2 SPWSD VT-8.1	4-Isopropyltoluene	.20	U	ug/L	.20	5/06/92	SPVT8-1
9205467-02	#2 SPWSD VT-8.1	1,2-Dichlorobenzene (o)	.20	U	ug/L	.20	5/06/92	SPVT8-1
9205467-02	#2 SPWSD VT-8.1	n-Butylbenzene	.30	U	ug/L	.30	5/06/92	SPVT8-1
[redacted]05467-02	#2 SPWSD VT-8.1	1,2-Dibromo-3-chloropropane	.80	U	ug/L	.80	5/06/92	SPVT8-1
[redacted]05467-02	#2 SPWSD VT-8.1	1,2,4-Trichlorobenzene	.30	U	ug/L	.30	5/06/92	SPVT8-1
9205467-02	#2 SPWSD VT-8.1	Naphthalene	.20	U	ug/L	.20	5/06/92	SPVT8-1
[redacted]05467-02	#2 SPWSD VT-8.1	Hexachlorobutadiene	.50	U	ug/L	.50	5/06/92	SPVT8-1
[redacted]05467-02	#2 SPWSD VT-8.1	1,2,3-Trichlorobenzene	.40	U	ug/L	.40	5/06/92	SPVT8-1
9205467-06	SPWSD VT-2.1	Dichlorodifluoromethane	.30	U	ug/L	.30	5/07/92	SPVT2-1
[redacted]05467-06	SPWSD VT-2.1	Chloromethane	.20	U	ug/L	.20	5/07/92	SPVT2-1
[redacted]05467-06	SPWSD VT-2.1	Vinyl chloride	.30	U	ug/L	.30	5/07/92	SPVT2-1
9205467-06	SPWSD VT-2.1	Bromomethane	.20	U	ug/L	.20	5/07/92	SPVT2-1
9205467-06	SPWSD VT-2.1	Chloroethane	.20	U	ug/L	.20	5/07/92	SPVT2-1
[redacted]05467-06	SPWSD VT-2.1	Trichlorofluoromethane	.20	U	ug/L	.20	5/07/92	SPVT2-1
[redacted]05467-06	SPWSD VT-2.1	1,1-Dichloroethylene	.20	U	ug/L	.20	5/07/92	SPVT2-1
9205467-06	SPWSD VT-2.1	Methylene chloride	.20	U	ug/L	.20	5/07/92	SPVT2-1
[redacted]05467-06	SPWSD VT-2.1	trans-1,2-Dichloroethylene	.10	U	ug/L	.10	5/07/92	SPVT2-1
[redacted]05467-06	SPWSD VT-2.1	1,1-Dichloroethane	.10	U	ug/L	.10	5/07/92	SPVT2-1
9205467-06	SPWSD VT-2.1	2,2-Dichloropropane	.40	U	ug/L	.40	5/07/92	SPVT2-1
[redacted]05467-06	SPWSD VT-2.1	cis-1,2-Dichloroethylene	.10	U	ug/L	.10	5/07/92	SPVT2-1
[redacted]05467-06	SPWSD VT-2.1	Bromochloromethane	.10	U	ug/L	.10	5/07/92	SPVT2-1
9205467-06	SPWSD VT-2.1	Chloroform	.10	U	ug/L	.10	5/07/92	SPVT2-1
9205467-06	SPWSD VT-2.1	1,1,1-Trichloroethane	.20	U	ug/L	.20	5/07/92	SPVT2-1
[redacted]05467-06	SPWSD VT-2.1	Carbon tetrachloride	.20	U	ug/L	.20	5/07/92	SPVT2-1
[redacted]05467-06	SPWSD VT-2.1	1,1-Dichloropropylene	.20	U	ug/L	.20	5/07/92	SPVT2-1
9205467-06	SPWSD VT-2.1	Benzene	.10	U	ug/L	.10	5/07/92	SPVT2-1
[redacted]05467-06	SPWSD VT-2.1	1,2-Dichloroethane	.30	U	ug/L	.30	5/07/92	SPVT2-1
[redacted]05467-06	SPWSD VT-2.1	Trichloroethylene	.10	U	ug/L	.10	5/07/92	SPVT2-1
9205467-06	SPWSD VT-2.1	1,2-Dichloropropane	.40	U	ug/L	.40	5/07/92	SPVT2-1
[redacted]05467-06	SPWSD VT-2.1	Dibromomethane	.50	U	ug/L	.50	5/07/92	SPVT2-1
[redacted]05467-06	SPWSD VT-2.1	Bromodichloromethane	.30	U	ug/L	.30	5/07/92	SPVT2-1
9205467-06	SPWSD VT-2.1	cis-1,3-Dichloropropylene	.20	U	ug/L	.20	5/07/92	SPVT2-1
9205467-06	SPWSD VT-2.1	Toluene	.20	U	ug/L	.20	5/07/92	SPVT2-1
[redacted]05467-06	SPWSD VT-2.1	trans-1,3-Dichloropropylene	.10	U	ug/L	.10	5/07/92	SPVT2-1
[redacted]05467-06	SPWSD VT-2.1	1,1,2-Trichloroethane	.10	U	ug/L	.10	5/07/92	SPVT2-1
9205467-06	SPWSD VT-2.1	Tetrachloroethylene	.20	U	ug/L	.20	5/07/92	SPVT2-1
[redacted]05467-06	SPWSD VT-2.1	1,3-Dichloropropane	.10	U	ug/L	.10	5/07/92	SPVT2-1
[redacted]05467-06	SPWSD VT-2.1	Chlorodibromomethane	.30	U	ug/L	.30	5/07/92	SPVT2-1
9205467-06	SPWSD VT-2.1	Ethylene dibromide	.10	U	ug/L	.10	5/07/92	SPVT2-1

B ID	CLIENT ID	PARAMETER	RESULT	FLAG	UNITS	PQL	SAMPLING DATE	WELL NAME
205467-06	SPWSD VT-2.1	Chlorobenzene	.10	U	ug/L	.10	5/07/92	SPVT2-1
205467-06	SPWSD VT-2.1	1,1,1,2-Tetrachloroethane	.20	U	ug/L	.20	5/07/92	SPVT2-1
205467-06	SPWSD VT-2.1	Ethylbenzene	.20	U	ug/L	.20	5/07/92	SPVT2-1
205467-06	SPWSD VT-2.1	m+p-Xylene	.40	U	ug/L	.40	5/07/92	SPVT2-1
205467-06	SPWSD VT-2.1	o-Xylene	.10	U	ug/L	.10	5/07/92	SPVT2-1
205467-06	SPWSD VT-2.1	Styrene	.10	U	ug/L	.10	5/07/92	SPVT2-1
205467-06	SPWSD VT-2.1	Bromoform	.50	U	ug/L	.50	5/07/92	SPVT2-1
205467-06	SPWSD VT-2.1	Isopropylbenzene	.20	U	ug/L	.20	5/07/92	SPVT2-1
205467-06	SPWSD VT-2.1	Bromobenzene	.20	U	ug/L	.20	5/07/92	SPVT2-1
205467-06	SPWSD VT-2.1	1,2,3-Trichloropropane	.20	U	ug/L	.20	5/07/92	SPVT2-1
205467-06	SPWSD VT-2.1	1,1,2,2-Tetrachloroethane	.20	U	ug/L	.20	5/07/92	SPVT2-1
205467-06	SPWSD VT-2.1	n-Propylbenzene	.20	U	ug/L	.20	5/07/92	SPVT2-1
205467-06	SPWSD VT-2.1	2-Chlorotoluene	.20	U	ug/L	.20	5/07/92	SPVT2-1
205467-06	SPWSD VT-2.1	4-Chlorotoluene	.20	U	ug/L	.20	5/07/92	SPVT2-1
205467-06	SPWSD VT-2.1	1,3,5-Trimethylbenzene	.30	U	ug/L	.30	5/07/92	SPVT2-1
205467-06	SPWSD VT-2.1	tert-Butylbenzene	.20	U	ug/L	.20	5/07/92	SPVT2-1
205467-06	SPWSD VT-2.1	1,2,4-Trimethylbenzene	.30	U	ug/L	.30	5/07/92	SPVT2-1
205467-06	SPWSD VT-2.1	sec-Butylbenzene	.20	U	ug/L	.20	5/07/92	SPVT2-1
205467-06	SPWSD VT-2.1	1,3-Dichlorobenzene (m)	.20	U	ug/L	.20	5/07/92	SPVT2-1
205467-06	SPWSD VT-2.1	1,4-Dichlorobenzene (p)	.20	U	ug/L	.20	5/07/92	SPVT2-1
205467-06	SPWSD VT-2.1	4-Isopropyltoluene	.20	U	ug/L	.20	5/07/92	SPVT2-1
205467-06	SPWSD VT-2.1	1,2-Dichlorobenzene (o)	.20	U	ug/L	.20	5/07/92	SPVT2-1
205467-06	SPWSD VT-2.1	n-Butylbenzene	.30	U	ug/L	.30	5/07/92	SPVT2-1
205467-06	SPWSD VT-2.1	1,2-Dibromo-3-chloropropane	.80	U	ug/L	.80	5/07/92	SPVT2-1
205467-06	SPWSD VT-2.1	1,2,4-Trichlorobenzene	.30	U	ug/L	.30	5/07/92	SPVT2-1
205467-06	SPWSD VT-2.1	Naphthalene	.20	U	ug/L	.20	5/07/92	SPVT2-1
205467-06	SPWSD VT-2.1	Hexachlorobutadiene	.50	U	ug/L	.50	5/07/92	SPVT2-1
205467-06	SPWSD VT-2.1	1,2,3-Trichlorobenzene	.40	U	ug/L	.40	5/07/92	SPVT2-1
205467-09	#9 SPWSD VT-5.1	Dichlorodifluoromethane	.30	U	ug/L	.30	5/07/92	SPVT5-1
205467-09	#9 SPWSD VT-5.1	Chloromethane	.20	U	ug/L	.20	5/07/92	SPVT5-1
205467-09	#9 SPWSD VT-5.1	Vinyl chloride	.30	U	ug/L	.30	5/07/92	SPVT5-1
205467-09	#9 SPWSD VT-5.1	Bromomethane	.20	U	ug/L	.20	5/07/92	SPVT5-1
205467-09	#9 SPWSD VT-5.1	Chloroethane	.20	U	ug/L	.20	5/07/92	SPVT5-1
205467-09	#9 SPWSD VT-5.1	Trichlorofluoromethane	.20	U	ug/L	.20	5/07/92	SPVT5-1
205467-09	#9 SPWSD VT-5.1	1,1-Dichloroethylene	.20	U	ug/L	.20	5/07/92	SPVT5-1
205467-09	#9 SPWSD VT-5.1	Methylene chloride	.20	U	ug/L	.20	5/07/92	SPVT5-1
205467-09	#9 SPWSD VT-5.1	trans-1,2-Dichloroethylene	.10	U	ug/L	.10	5/07/92	SPVT5-1
205467-09	#9 SPWSD VT-5.1	1,1-Dichloroethane	.10	U	ug/L	.10	5/07/92	SPVT5-1
205467-09	#9 SPWSD VT-5.1	2,2-Dichloropropane	.40	U	ug/L	.40	5/07/92	SPVT5-1
205467-09	#9 SPWSD VT-5.1	cis-1,2-Dichloroethylene	.10	U	ug/L	.10	5/07/92	SPVT5-1
205467-09	#9 SPWSD VT-5.1	Bromochloromethane	.10	U	ug/L	.10	5/07/92	SPVT5-1
205467-09	#9 SPWSD VT-5.1	Chloroform	.10	U	ug/L	.10	5/07/92	SPVT5-1
205467-09	#9 SPWSD VT-5.1	1,1,1-Trichloroethane	.70		ug/L	.20	5/07/92	SPVT5-1
205467-09	#9 SPWSD VT-5.1	Carbon tetrachloride	.20	U	ug/L	.20	5/07/92	SPVT5-1
205467-09	#9 SPWSD VT-5.1	1,1-Dichloropropylene	.20	U	ug/L	.20	5/07/92	SPVT5-1
205467-09	#9 SPWSD VT-5.1	Benzene	.10	U	ug/L	.10	5/07/92	SPVT5-1
205467-09	#9 SPWSD VT-5.1	1,2-Dichloroethane	.30	U	ug/L	.30	5/07/92	SPVT5-1

ID	CLIENT ID	PARAMETER	RESULT	FLAG	UNITS	PQL	SAMPLING DATE	WELL NAME
5467-09	#9 SPWSD VT-5.1	Trichloroethylene	.10	U	ug/L	.10	5/07/92	SPVT5-1
5467-09	#9 SPWSD VT-5.1	1,2-Dichloropropane	.40	U	ug/L	.40	5/07/92	SPVT5-1
205467-09	#9 SPWSD VT-5.1	Dibromomethane	.50	U	ug/L	.50	5/07/92	SPVT5-1
205467-09	#9 SPWSD VT-5.1	Bromodichloromethane	.30	U	ug/L	.30	5/07/92	SPVT5-1
5467-09	#9 SPWSD VT-5.1	cis-1,3-Dichloropropylene	.20	U	ug/L	.20	5/07/92	SPVT5-1
205467-09	#9 SPWSD VT-5.1	Toluene	.20	U	ug/L	.20	5/07/92	SPVT5-1
205467-09	#9 SPWSD VT-5.1	trans-1,3-Dichloropropylene	.10	U	ug/L	.10	5/07/92	SPVT5-1
5467-09	#9 SPWSD VT-5.1	1,1,2-Trichloroethane	.10	U	ug/L	.10	5/07/92	SPVT5-1
5467-09	#9 SPWSD VT-5.1	Tetrachloroethylene	.20	U	ug/L	.20	5/07/92	SPVT5-1
205467-09	#9 SPWSD VT-5.1	1,3-Dichloropropane	.10	U	ug/L	.10	5/07/92	SPVT5-1
5467-09	#9 SPWSD VT-5.1	Chlorodibromomethane	.30	U	ug/L	.30	5/07/92	SPVT5-1
5467-09	#9 SPWSD VT-5.1	Ethylene dibromide	.10	U	ug/L	.10	5/07/92	SPVT5-1
205467-09	#9 SPWSD VT-5.1	Chlorobenzene	.10	U	ug/L	.10	5/07/92	SPVT5-1
205467-09	#9 SPWSD VT-5.1	1,1,1,2-Tetrachloroethane	.20	U	ug/L	.20	5/07/92	SPVT5-1
5467-09	#9 SPWSD VT-5.1	Ethylbenzene	.20	U	ug/L	.20	5/07/92	SPVT5-1
205467-09	#9 SPWSD VT-5.1	m+p-Xylene	.40	U	ug/L	.40	5/07/92	SPVT5-1
205467-09	#9 SPWSD VT-5.1	o-Xylene	.10	U	ug/L	.10	5/07/92	SPVT5-1
5467-09	#9 SPWSD VT-5.1	Styrene	.10	U	ug/L	.10	5/07/92	SPVT5-1
5467-09	#9 SPWSD VT-5.1	Bromoform	.50	U	ug/L	.50	5/07/92	SPVT5-1
205467-09	#9 SPWSD VT-5.1	Isopropylbenzene	.20	U	ug/L	.20	5/07/92	SPVT5-1
5467-09	#9 SPWSD VT-5.1	Bromobenzene	.20	U	ug/L	.20	5/07/92	SPVT5-1
5467-09	#9 SPWSD VT-5.1	1,2,3-Trichloropropane	.20	U	ug/L	.20	5/07/92	SPVT5-1
205467-09	#9 SPWSD VT-5.1	1,1,2,2-Tetrachloroethane	.20	U	ug/L	.20	5/07/92	SPVT5-1
205467-09	#9 SPWSD VT-5.1	n-Propylbenzene	.20	U	ug/L	.20	5/07/92	SPVT5-1
5467-09	#9 SPWSD VT-5.1	2-Chlorotoluene	.20	U	ug/L	.20	5/07/92	SPVT5-1
5467-09	#9 SPWSD VT-5.1	4-Chlorotoluene	.20	U	ug/L	.20	5/07/92	SPVT5-1
205467-09	#9 SPWSD VT-5.1	1,3,5-Trimethylbenzene	.30	U	ug/L	.30	5/07/92	SPVT5-1
5467-09	#9 SPWSD VT-5.1	tert-Butylbenzene	.20	U	ug/L	.20	5/07/92	SPVT5-1
5467-09	#9 SPWSD VT-5.1	1,2,4-Trimethylbenzene	.30	U	ug/L	.30	5/07/92	SPVT5-1
205467-09	#9 SPWSD VT-5.1	sec-Butylbenzene	.20	U	ug/L	.20	5/07/92	SPVT5-1
5467-09	#9 SPWSD VT-5.1	1,3-Dichlorobenzene (m)	.20	U	ug/L	.20	5/07/92	SPVT5-1
5467-09	#9 SPWSD VT-5.1	1,4-Dichlorobenzene (p)	.20	U	ug/L	.20	5/07/92	SPVT5-1
205467-09	#9 SPWSD VT-5.1	4-Isopropyltoluene	.20	U	ug/L	.20	5/07/92	SPVT5-1
205467-09	#9 SPWSD VT-5.1	1,2-Dichlorobenzene (o)	.20	U	ug/L	.20	5/07/92	SPVT5-1
5467-09	#9 SPWSD VT-5.1	n-Butylbenzene	.30	U	ug/L	.30	5/07/92	SPVT5-1
05467-09	#9 SPWSD VT-5.1	1,2-Dibromo-3-chloropropane	.80	U	ug/L	.80	5/07/92	SPVT5-1
205467-09	#9 SPWSD VT-5.1	1,2,4-Trichlorobenzene	.30	U	ug/L	.30	5/07/92	SPVT5-1
5467-09	#9 SPWSD VT-5.1	Naphthalene	.20	U	ug/L	.20	5/07/92	SPVT5-1
5467-09	#9 SPWSD VT-5.1	Hexachlorobutadiene	.50	U	ug/L	.50	5/07/92	SPVT5-1
205467-09	#9 SPWSD VT-5.1	1,2,3-Trichlorobenzene	.40	U	ug/L	.40	5/07/92	SPVT5-1
5467-11	#12 SPWSD VT-1.1	Dichlorodifluoromethane	.30	U	ug/L	.30	5/08/92	SPVT1-1
5467-11	#12 SPWSD VT-1.1	Chloromethane	.20	U	ug/L	.20	5/08/92	SPVT1-1
205467-11	#12 SPWSD VT-1.1	Vinyl chloride	.30	U	ug/L	.30	5/08/92	SPVT1-1
205467-11	#12 SPWSD VT-1.1	Bromomethane	.20	U	ug/L	.20	5/08/92	SPVT1-1
5467-11	#12 SPWSD VT-1.1	Chloroethane	.20	U	ug/L	.20	5/08/92	SPVT1-1
05467-11	#12 SPWSD VT-1.1	Trichlorofluoromethane	.20	U	ug/L	.20	5/08/92	SPVT1-1
205467-11	#12 SPWSD VT-1.1	1,1-Dichloroethylene	.20	U	ug/L	.20	5/08/92	SPVT1-1

LAB ID	CLIENT ID	PARAMETER	RESULT	FLAG	UNITS	PQL	SAMPLING DATE	WELL NAME
9205467-11	#12 SPWSD VT-1.1	Methylene chloride	.20	U	ug/L	.20	5/08/92	SPVT1-1
9205467-11	#12 SPWSD VT-1.1	trans-1,2-Dichloroethylene	.10	U	ug/L	.10	5/08/92	SPVT1-1
9205467-11	#12 SPWSD VT-1.1	1,1-Dichloroethane	.10	U	ug/L	.10	5/08/92	SPVT1-1
9205467-11	#12 SPWSD VT-1.1	2,2-Dichloropropane	.40	U	ug/L	.40	5/08/92	SPVT1-1
9205467-11	#12 SPWSD VT-1.1	cis-1,2-Dichloroethylene	.10	U	ug/L	.10	5/08/92	SPVT1-1
9205467-11	#12 SPWSD VT-1.1	Bromochloromethane	.10	U	ug/L	.10	5/08/92	SPVT1-1
9205467-11	#12 SPWSD VT-1.1	Chloroform	.10	U	ug/L	.10	5/08/92	SPVT1-1
9205467-11	#12 SPWSD VT-1.1	1,1,1-Trichloroethane	.20	U	ug/L	.20	5/08/92	SPVT1-1
9205467-11	#12 SPWSD VT-1.1	Carbon tetrachloride	.20	U	ug/L	.20	5/08/92	SPVT1-1
9205467-11	#12 SPWSD VT-1.1	1,1-Dichloropropylene	.20	U	ug/L	.20	5/08/92	SPVT1-1
9205467-11	#12 SPWSD VT-1.1	Benzene	.10	U	ug/L	.10	5/08/92	SPVT1-1
9205467-11	#12 SPWSD VT-1.1	1,2-Dichloroethane	.30	U	ug/L	.30	5/08/92	SPVT1-1
9205467-11	#12 SPWSD VT-1.1	Trichloroethylene	.10	U	ug/L	.10	5/08/92	SPVT1-1
9205467-11	#12 SPWSD VT-1.1	1,2-Dichloropropane	.40	U	ug/L	.40	5/08/92	SPVT1-1
9205467-11	#12 SPWSD VT-1.1	Dibromomethane	.50	U	ug/L	.50	5/08/92	SPVT1-1
9205467-11	#12 SPWSD VT-1.1	Bromodichloromethane	.30	U	ug/L	.30	5/08/92	SPVT1-1
9205467-11	#12 SPWSD VT-1.1	cis-1,3-Dichloropropylene	.20	U	ug/L	.20	5/08/92	SPVT1-1
9205467-11	#12 SPWSD VT-1.1	Toluene	.20	U	ug/L	.20	5/08/92	SPVT1-1
9205467-11	#12 SPWSD VT-1.1	trans-1,3-Dichloropropylene	.10	U	ug/L	.10	5/08/92	SPVT1-1
9205467-11	#12 SPWSD VT-1.1	1,1,2-Trichloroethane	.10	U	ug/L	.10	5/08/92	SPVT1-1
9205467-11	#12 SPWSD VT-1.1	Tetrachloroethylene	.20	U	ug/L	.20	5/08/92	SPVT1-1
9205467-11	#12 SPWSD VT-1.1	1,3-Dichloropropane	.10	U	ug/L	.10	5/08/92	SPVT1-1
9205467-11	#12 SPWSD VT-1.1	Chlorodibromomethane	.30	U	ug/L	.30	5/08/92	SPVT1-1
9205467-11	#12 SPWSD VT-1.1	Ethylene dibromide	.10	U	ug/L	.10	5/08/92	SPVT1-1
9205467-11	#12 SPWSD VT-1.1	Chlorobenzene	.10	U	ug/L	.10	5/08/92	SPVT1-1
9205467-11	#12 SPWSD VT-1.1	1,1,1,2-Tetrachloroethane	.20	U	ug/L	.20	5/08/92	SPVT1-1
9205467-11	#12 SPWSD VT-1.1	Ethylbenzene	.20	U	ug/L	.20	5/08/92	SPVT1-1
9205467-11	#12 SPWSD VT-1.1	m+p-Xylene	.40	U	ug/L	.40	5/08/92	SPVT1-1
9205467-11	#12 SPWSD VT-1.1	o-Xylene	.10	U	ug/L	.10	5/08/92	SPVT1-1
9205467-11	#12 SPWSD VT-1.1	Styrene	.10	U	ug/L	.10	5/08/92	SPVT1-1
9205467-11	#12 SPWSD VT-1.1	Bromoform	.50	U	ug/L	.50	5/08/92	SPVT1-1
9205467-11	#12 SPWSD VT-1.1	Isopropylbenzene	.20	U	ug/L	.20	5/08/92	SPVT1-1
9205467-11	#12 SPWSD VT-1.1	Bromobenzene	.20	U	ug/L	.20	5/08/92	SPVT1-1
9205467-11	#12 SPWSD VT-1.1	1,2,3-Trichloropropane	.20	U	ug/L	.20	5/08/92	SPVT1-1
9205467-11	#12 SPWSD VT-1.1	1,1,2,2-Tetrachloroethane	.20	U	ug/L	.20	5/08/92	SPVT1-1
9205467-11	#12 SPWSD VT-1.1	n-Propylbenzene	.20	U	ug/L	.20	5/08/92	SPVT1-1
9205467-11	#12 SPWSD VT-1.1	2-Chlorotoluene	.20	U	ug/L	.20	5/08/92	SPVT1-1
9205467-11	#12 SPWSD VT-1.1	4-Chlorotoluene	.20	U	ug/L	.20	5/08/92	SPVT1-1
9205467-11	#12 SPWSD VT-1.1	1,3,5-Trimethylbenzene	.30	U	ug/L	.30	5/08/92	SPVT1-1
9205467-11	#12 SPWSD VT-1.1	tert-Butylbenzene	.20	U	ug/L	.20	5/08/92	SPVT1-1
9205467-11	#12 SPWSD VT-1.1	1,2,4-Trimethylbenzene	.30	U	ug/L	.30	5/08/92	SPVT1-1
9205467-11	#12 SPWSD VT-1.1	sec-Butylbenzene	.20	U	ug/L	.20	5/08/92	SPVT1-1
9205467-11	#12 SPWSD VT-1.1	1,3-Dichlorobenzene (m)	.20	U	ug/L	.20	5/08/92	SPVT1-1
9205467-11	#12 SPWSD VT-1.1	1,4-Dichlorobenzene (p)	.20	U	ug/L	.20	5/08/92	SPVT1-1
9205467-11	#12 SPWSD VT-1.1	4-Isopropyltoluene	.20	U	ug/L	.20	5/08/92	SPVT1-1
9205467-11	#12 SPWSD VT-1.1	1,2-Dichlorobenzene (o)	.20	U	ug/L	.20	5/08/92	SPVT1-1
9205467-11	#12 SPWSD VT-1.1	n-Butylbenzene	.30	U	ug/L	.30	5/08/92	SPVT1-1

[redacted]ID	CLIENT ID	PARAMETER	RESULT	FLAG	UNITS	PQL	SAMPLING DATE	WELL NAME
[redacted]5467-11	#12 SPWSD VT-1.1	1,2-Dibromo-3-chloropropane	.80	U	ug/L	.80	5/08/92	SPVT1-1
[redacted]467-11	#12 SPWSD VT-1.1	1,2,4-Trichlorobenzene	.30	U	ug/L	.30	5/08/92	SPVT1-1
205467-11	#12 SPWSD VT-1.1	Naphthalene	.20	U	ug/L	.20	5/08/92	SPVT1-1
205467-11	#12 SPWSD VT-1.1	Hexachlorobutadiene	.50	U	ug/L	.50	5/08/92	SPVT1-1
[redacted]467-11	#12 SPWSD VT-1.1	1,2,3-Trichlorobenzene	.40	U	ug/L	.40	5/08/92	SPVT1-1
[redacted]467-14	Trip Blank	Dichlorodifluoromethane	.30	U	ug/L	.30	5/08/92	TB524-1
205467-14	Trip Blank	Chloromethane	.20	U	ug/L	.20	5/08/92	TB524-1
[redacted]467-14	Trip Blank	Vinyl chloride	.30	U	ug/L	.30	5/08/92	TB524-1
[redacted]467-14	Trip Blank	Bromomethane	.20	U	ug/L	.20	5/08/92	TB524-1
205467-14	Trip Blank	Chloroethane	.20	U	ug/L	.20	5/08/92	TB524-1
[redacted]5467-14	Trip Blank	Trichlorofluoromethane	.20	U	ug/L	.20	5/08/92	TB524-1
[redacted]467-14	Trip Blank	1,1-Dichloroethylene	.20	U	ug/L	.20	5/08/92	TB524-1
[redacted]5467-14	Trip Blank	Methylene chloride	.20	U	ug/L	.20	5/08/92	TB524-1
205467-14	Trip Blank	trans-1,2-Dichloroethylene	.10	U	ug/L	.10	5/08/92	TB524-1
[redacted]467-14	Trip Blank	1,1-Dichloroethane	.10	U	ug/L	.10	5/08/92	TB524-1
[redacted]467-14	Trip Blank	2,2-Dichloropropane	.40	U	ug/L	.40	5/08/92	TB524-1
205467-14	Trip Blank	cis-1,2-Dichloroethylene	.10	U	ug/L	.10	5/08/92	TB524-1
[redacted]467-14	Trip Blank	Bromochloromethane	.10	U	ug/L	.10	5/08/92	TB524-1
[redacted]467-14	Trip Blank	Chloroform	.10	U	ug/L	.10	5/08/92	TB524-1
205467-14	Trip Blank	1,1,1-Trichloroethane	2.20		ug/L	.20	5/08/92	TB524-1
[redacted]5467-14	Trip Blank	Carbon tetrachloride	.20	U	ug/L	.20	5/08/92	TB524-1
[redacted]5467-14	Trip Blank	1,1-Dichloropropylene	.20	U	ug/L	.20	5/08/92	TB524-1
[redacted]5467-14	Trip Blank	Benzene	.10	U	ug/L	.10	5/08/92	TB524-1
205467-14	Trip Blank	1,2-Dichloroethane	.30	U	ug/L	.30	5/08/92	TB524-1
[redacted]5467-14	Trip Blank	Trichloroethylene	.10	U	ug/L	.10	5/08/92	TB524-1
[redacted]5467-14	Trip Blank	1,2-Dichloropropane	.40	U	ug/L	.40	5/08/92	TB524-1
205467-14	Trip Blank	Dibromomethane	.50	U	ug/L	.50	5/08/92	TB524-1
[redacted]5467-14	Trip Blank	Bromodichloromethane	.30	U	ug/L	.30	5/08/92	TB524-1
[redacted]5467-14	Trip Blank	cis-1,3-Dichloropropylene	.20	U	ug/L	.20	5/08/92	TB524-1
205467-14	Trip Blank	Toluene	.20	U	ug/L	.20	5/08/92	TB524-1
[redacted]5467-14	Trip Blank	trans-1,3-Dichloropropylene	.10	U	ug/L	.10	5/08/92	TB524-1
[redacted]5467-14	Trip Blank	1,1,2-Trichloroethane	.10	U	ug/L	.10	5/08/92	TB524-1
[redacted]5467-14	Trip Blank	Tetrachloroethylene	.20	U	ug/L	.20	5/08/92	TB524-1
205467-14	Trip Blank	1,3-Dichloropropane	.10	U	ug/L	.10	5/08/92	TB524-1
[redacted]5467-14	Trip Blank	Chlorodibromomethane	.30	U	ug/L	.30	5/08/92	TB524-1
[redacted]5467-14	Trip Blank	Ethylene dibromide	.10	U	ug/L	.10	5/08/92	TB524-1
205467-14	Trip Blank	Chlorobenzene	.10	U	ug/L	.10	5/08/92	TB524-1
[redacted]5467-14	Trip Blank	1,1,1,2-Tetrachloroethane	.20	U	ug/L	.20	5/08/92	TB524-1
[redacted]5467-14	Trip Blank	Ethylbenzene	.20	U	ug/L	.20	5/08/92	TB524-1
205467-14	Trip Blank	m+p-Xylene	.40	U	ug/L	.40	5/08/92	TB524-1
[redacted]5467-14	Trip Blank	o-Xylene	.10	U	ug/L	.10	5/08/92	TB524-1
[redacted]5467-14	Trip Blank	Styrene	.10	U	ug/L	.10	5/08/92	TB524-1
[redacted]5467-14	Trip Blank	Bromoform	.50	U	ug/L	.50	5/08/92	TB524-1
205467-14	Trip Blank	Isopropylbenzene	.20	U	ug/L	.20	5/08/92	TB524-1
[redacted]5467-14	Trip Blank	Bromobenzene	.20	U	ug/L	.20	5/08/92	TB524-1
[redacted]5467-14	Trip Blank	1,2,3-Trichloropropane	.20	U	ug/L	.20	5/08/92	TB524-1
205467-14	Trip Blank	1,1,2,2-Tetrachloroethane	.20	U	ug/L	.20	5/08/92	TB524-1

LAB ID	CLIENT ID	PARAMETER	RESULT	FLAG	UNITS	PQL	SAMPLING DATE	WELL NAME
9205467-14	Trip Blank	n-Propylbenzene	.20	U	ug/L	.20	5/08/92	TB524-1
9205467-14	Trip Blank	2-Chlorotoluene	.20	U	ug/L	.20	5/08/92	TB524-1
9205467-14	Trip Blank	4-Chlorotoluene	.20	U	ug/L	.20	5/08/92	TB524-1
9205467-14	Trip Blank	1,3,5-Trimethylbenzene	.30	U	ug/L	.30	5/08/92	TB524-1
9205467-14	Trip Blank	tert-Butylbenzene	.20	U	ug/L	.20	5/08/92	TB524-1
9205467-14	Trip Blank	1,2,4-Trimethylbenzene	.30	U	ug/L	.30	5/08/92	TB524-1
9205467-14	Trip Blank	sec-Butylbenzene	.20	U	ug/L	.20	5/08/92	TB524-1
9205467-14	Trip Blank	1,3-Dichlorobenzene (m)	.20	U	ug/L	.20	5/08/92	TB524-1
9205467-14	Trip Blank	1,4-Dichlorobenzene (p)	.20	U	ug/L	.20	5/08/92	TB524-1
9205467-14	Trip Blank	4-Isopropyltoluene	.20	U	ug/L	.20	5/08/92	TB524-1
9205467-14	Trip Blank	1,2-Dichlorobenzene (o)	.20	U	ug/L	.20	5/08/92	TB524-1
9205467-14	Trip Blank	n-Butylbenzene	.30	U	ug/L	.30	5/08/92	TB524-1
9205467-14	Trip Blank	1,2-Dibromo-3-chloropropane	.80	U	ug/L	.80	5/08/92	TB524-1
9205467-14	Trip Blank	1,2,4-Trichlorobenzene	.30	U	ug/L	.30	5/08/92	TB524-1
9205467-14	Trip Blank	Naphthalene	.20	U	ug/L	.20	5/08/92	TB524-1
9205467-14	Trip Blank	Hexachlorobutadiene	.50	U	ug/L	.50	5/08/92	TB524-1
9205467-14	Trip Blank	1,2,3-Trichlorobenzene	.40	U	ug/L	.40	5/08/92	TB524-1
9210752-01	#1 SPWSD WHP-1	Dichlorodifluoromethane	.30	U	ug/L	.30	10/12/92	WH1
9210752-01	#1 SPWSD WHP-1	Chloromethane	.20	U	ug/L	.20	10/12/92	WH1
9210752-01	#1 SPWSD WHP-1	Vinyl chloride	.30	U	ug/L	.30	10/12/92	WH1
9210752-01	#1 SPWSD WHP-1	Bromomethane	.20	U	ug/L	.20	10/12/92	WH1
9210752-01	#1 SPWSD WHP-1	Chloroethane	.20	U	ug/L	.20	10/12/92	WH1
9210752-01	#1 SPWSD WHP-1	Trichlorofluoromethane	.20	U	ug/L	.20	10/12/92	WH1
9210752-01	#1 SPWSD WHP-1	1,1-Dichloroethylene	.20	U	ug/L	.20	10/12/92	WH1
9210752-01	#1 SPWSD WHP-1	Methylene chloride	.20	U	ug/L	.20	10/12/92	WH1
9210752-01	#1 SPWSD WHP-1	trans-1,2-Dichloroethylene	.10	U	ug/L	.10	10/12/92	WH1
9210752-01	#1 SPWSD WHP-1	1,1-Dichloroethane	.10	U	ug/L	.10	10/12/92	WH1
9210752-01	#1 SPWSD WHP-1	2,2-Dichloropropane	.40	U	ug/L	.40	10/12/92	WH1
9210752-01	#1 SPWSD WHP-1	cis-1,2-Dichloroethylene	.10	U	ug/L	.10	10/12/92	WH1
9210752-01	#1 SPWSD WHP-1	Bromochloromethane	.10	U	ug/L	.10	10/12/92	WH1
9210752-01	#1 SPWSD WHP-1	Chloroform	.10	U	ug/L	.10	10/12/92	WH1
9210752-01	#1 SPWSD WHP-1	1,1,1-Trichloroethane	.20	U	ug/L	.20	10/12/92	WH1
9210752-01	#1 SPWSD WHP-1	Carbon tetrachloride	.20	U	ug/L	.20	10/12/92	WH1
9210752-01	#1 SPWSD WHP-1	1,1-Dichloropropylene	.20	U	ug/L	.20	10/12/92	WH1
9210752-01	#1 SPWSD WHP-1	Benzene	.10	U	ug/L	.10	10/12/92	WH1
9210752-01	#1 SPWSD WHP-1	1,2-Dichloroethane	.30	U	ug/L	.30	10/12/92	WH1
9210752-01	#1 SPWSD WHP-1	Trichloroethylene	.10	U	ug/L	.10	10/12/92	WH1
9210752-01	#1 SPWSD WHP-1	1,2-Dichloropropane	.40	U	ug/L	.40	10/12/92	WH1
9210752-01	#1 SPWSD WHP-1	Dibromomethane	.50	U	ug/L	.50	10/12/92	WH1
9210752-01	#1 SPWSD WHP-1	Bromodichloromethane	.30	U	ug/L	.30	10/12/92	WH1
9210752-01	#1 SPWSD WHP-1	cis-1,3-Dichloropropylene	.20	U	ug/L	.20	10/12/92	WH1
9210752-01	#1 SPWSD WHP-1	Toluene	.20	U	ug/L	.20	10/12/92	WH1
9210752-01	#1 SPWSD WHP-1	trans-1,3-Dichloropropylene	.10	U	ug/L	.10	10/12/92	WH1
9210752-01	#1 SPWSD WHP-1	1,1,2-Trichloroethane	.10	U	ug/L	.10	10/12/92	WH1
9210752-01	#1 SPWSD WHP-1	Tetrachloroethylene	.20	U	ug/L	.20	10/12/92	WH1
9210752-01	#1 SPWSD WHP-1	1,3-Dichloropropane	.10	U	ug/L	.10	10/12/92	WH1
9210752-01	#1 SPWSD WHP-1	Chlorodibromomethane	.30	U	ug/L	.30	10/12/92	WH1

[redacted] ID	CLIENT ID	PARAMETER	RESULT	FLAG	UNITS	PQL	SAMPLING DATE	WELL NAME
9210752-01	#1 SPWSD WHP-1	Ethylene dibromide	.10	U	ug/L	.10	10/12/92	WH1
[redacted]0752-01	#1 SPWSD WHP-1	Chlorobenzene	.10	U	ug/L	.10	10/12/92	WH1
9210752-01	#1 SPWSD WHP-1	1,1,1,2-Tetrachloroethane	.20	U	ug/L	.20	10/12/92	WH1
9210752-01	#1 SPWSD WHP-1	Ethylbenzene	.20	U	ug/L	.20	10/12/92	WH1
[redacted]0752-01	#1 SPWSD WHP-1	m+p-Xylene	.40	U	ug/L	.40	10/12/92	WH1
[redacted]10752-01	#1 SPWSD WHP-1	o-Xylene	.10	U	ug/L	.10	10/12/92	WH1
9210752-01	#1 SPWSD WHP-1	Styrene	.10	U	ug/L	.10	10/12/92	WH1
[redacted]10752-01	#1 SPWSD WHP-1	Bromoform	.50	U	ug/L	.50	10/12/92	WH1
[redacted]10752-01	#1 SPWSD WHP-1	Isopropylbenzene	.20	U	ug/L	.20	10/12/92	WH1
9210752-01	#1 SPWSD WHP-1	Bromobenzene	.20	U	ug/L	.20	10/12/92	WH1
9210752-01	#1 SPWSD WHP-1	1,2,3-Trichloropropane	.20	U	ug/L	.20	10/12/92	WH1
[redacted]10752-01	#1 SPWSD WHP-1	1,1,2,2-Tetrachloroethane	.20	U	ug/L	.20	10/12/92	WH1
9210752-01	#1 SPWSD WHP-1	n-Propylbenzene	.20	U	ug/L	.20	10/12/92	WH1
9210752-01	#1 SPWSD WHP-1	2-Chlorotoluene	.20	U	ug/L	.20	10/12/92	WH1
[redacted]10752-01	#1 SPWSD WHP-1	4-Chlorotoluene	.20	U	ug/L	.20	10/12/92	WH1
[redacted]10752-01	#1 SPWSD WHP-1	1,3,5-Trimethylbenzene	.30	U	ug/L	.30	10/12/92	WH1
9210752-01	#1 SPWSD WHP-1	tert-Butylbenzene	.20	U	ug/L	.20	10/12/92	WH1
[redacted]10752-01	#1 SPWSD WHP-1	1,2,4-Trimethylbenzene	.30	U	ug/L	.30	10/12/92	WH1
[redacted]10752-01	#1 SPWSD WHP-1	sec-Butylbenzene	.20	U	ug/L	.20	10/12/92	WH1
9210752-01	#1 SPWSD WHP-1	1,3-Dichlorobenzene (m)	.20	U	ug/L	.20	10/12/92	WH1
9210752-01	#1 SPWSD WHP-1	1,4-Dichlorobenzene (p)	.20	U	ug/L	.20	10/12/92	WH1
[redacted]10752-01	#1 SPWSD WHP-1	4-Isopropyltoluene	.20	U	ug/L	.20	10/12/92	WH1
9210752-01	#1 SPWSD WHP-1	1,2-Dichlorobenzene (o)	.20	U	ug/L	.20	10/12/92	WH1
9210752-01	#1 SPWSD WHP-1	n-Butylbenzene	.30	U	ug/L	.30	10/12/92	WH1
[redacted]10752-01	#1 SPWSD WHP-1	1,2-Dibromo-3-chloropropane	.80	U	ug/L	.80	10/12/92	WH1
[redacted]10752-01	#1 SPWSD WHP-1	1,2,4-Trichlorobenzene	.30	U	ug/L	.30	10/12/92	WH1
9210752-01	#1 SPWSD WHP-1	Naphthalene	.20	U	ug/L	.20	10/12/92	WH1
[redacted]10752-01	#1 SPWSD WHP-1	Hexachlorobutadiene	.50	U	ug/L	.50	10/12/92	WH1
[redacted]10752-01	#1 SPWSD WHP-1	1,2,3-Trichlorobenzene	.40	U	ug/L	.40	10/12/92	WH1
9210752-03	#12 SPWSD VT-8.4	Dichlorodifluoromethane	.30	U	ug/L	.30	10/12/92	SPVT8-4
9210752-03	#12 SPWSD VT-8.4	Chloromethane	.20	U	ug/L	.20	10/12/92	SPVT8-4
[redacted]10752-03	#12 SPWSD VT-8.4	Vinyl chloride	.30	U	ug/L	.30	10/12/92	SPVT8-4
9210752-03	#12 SPWSD VT-8.4	Bromomethane	.20	U	ug/L	.20	10/12/92	SPVT8-4
9210752-03	#12 SPWSD VT-8.4	Chloroethane	.20	U	ug/L	.20	10/12/92	SPVT8-4
[redacted]10752-03	#12 SPWSD VT-8.4	Trichlorofluoromethane	.20	U	ug/L	.20	10/12/92	SPVT8-4
[redacted]10752-03	#12 SPWSD VT-8.4	1,1-Dichloroethylene	.20	U	ug/L	.20	10/12/92	SPVT8-4
9210752-03	#12 SPWSD VT-8.4	Methylene chloride	.20	U	ug/L	.20	10/12/92	SPVT8-4
[redacted]10752-03	#12 SPWSD VT-8.4	trans-1,2-Dichloroethylene	.10	U	ug/L	.10	10/12/92	SPVT8-4
[redacted]10752-03	#12 SPWSD VT-8.4	1,1-Dichloroethane	.10	U	ug/L	.10	10/12/92	SPVT8-4
9210752-03	#12 SPWSD VT-8.4	2,2-Dichloropropane	.40	U	ug/L	.40	10/12/92	SPVT8-4
9210752-03	#12 SPWSD VT-8.4	cis-1,2-Dichloroethylene	.10	U	ug/L	.10	10/12/92	SPVT8-4
[redacted]10752-03	#12 SPWSD VT-8.4	Bromochloromethane	.10	U	ug/L	.10	10/12/92	SPVT8-4
9210752-03	#12 SPWSD VT-8.4	Chloroform	1.00		ug/L	.10	10/12/92	SPVT8-4
9210752-03	#12 SPWSD VT-8.4	1,1,1-Trichloroethane	.20	U	ug/L	.20	10/12/92	SPVT8-4
[redacted]10752-03	#12 SPWSD VT-8.4	Carbon tetrachloride	.20	U	ug/L	.20	10/12/92	SPVT8-4
[redacted]10752-03	#12 SPWSD VT-8.4	1,1-Dichloropropylene	.20	U	ug/L	.20	10/12/92	SPVT8-4
9210752-03	#12 SPWSD VT-8.4	Benzene	.10	U	ug/L	.10	10/12/92	SPVT8-4

AB ID	CLIENT ID	PARAMETER	RESULT	FLAG	UNITS	PQL	SAMPLING DATE	WELL NAME
210752-03	#12 SPWSD VT-8.4	1,2-Dichloroethane	.30	U	ug/L	.30	10/12/92	SPVT8-4
210752-03	#12 SPWSD VT-8.4	Trichloroethylene	.10	U	ug/L	.10	10/12/92	SPVT8-4
210752-03	#12 SPWSD VT-8.4	1,2-Dichloropropane	.40	U	ug/L	.40	10/12/92	SPVT8-4
210752-03	#12 SPWSD VT-8.4	Dibromomethane	.50	U	ug/L	.50	10/12/92	SPVT8-4
210752-03	#12 SPWSD VT-8.4	Bromodichloromethane	.30	U	ug/L	.30	10/12/92	SPVT8-4
210752-03	#12 SPWSD VT-8.4	cis-1,3-Dichloropropylene	.20	U	ug/L	.20	10/12/92	SPVT8-4
210752-03	#12 SPWSD VT-8.4	Toluene	.20	U	ug/L	.20	10/12/92	SPVT8-4
210752-03	#12 SPWSD VT-8.4	trans-1,3-Dichloropropylene	.10	U	ug/L	.10	10/12/92	SPVT8-4
210752-03	#12 SPWSD VT-8.4	1,1,2-Trichloroethane	.10	U	ug/L	.10	10/12/92	SPVT8-4
210752-03	#12 SPWSD VT-8.4	Tetrachloroethylene	.20	U	ug/L	.20	10/12/92	SPVT8-4
210752-03	#12 SPWSD VT-8.4	1,3-Dichloropropane	.10	U	ug/L	.10	10/12/92	SPVT8-4
210752-03	#12 SPWSD VT-8.4	Chlorodibromomethane	.30	U	ug/L	.30	10/12/92	SPVT8-4
210752-03	#12 SPWSD VT-8.4	Ethylene dibromide	.10	U	ug/L	.10	10/12/92	SPVT8-4
210752-03	#12 SPWSD VT-8.4	Chlorobenzene	.10	U	ug/L	.10	10/12/92	SPVT8-4
210752-03	#12 SPWSD VT-8.4	1,1,1,2-Tetrachloroethane	.20	U	ug/L	.20	10/12/92	SPVT8-4
210752-03	#12 SPWSD VT-8.4	Ethylbenzene	.20	U	ug/L	.20	10/12/92	SPVT8-4
210752-03	#12 SPWSD VT-8.4	m+p-Xylene	1.20		ug/L	.40	10/12/92	SPVT8-4
210752-03	#12 SPWSD VT-8.4	o-Xylene	2.00		ug/L	.10	10/12/92	SPVT8-4
210752-03	#12 SPWSD VT-8.4	Styrene	.10	U	ug/L	.10	10/12/92	SPVT8-4
210752-03	#12 SPWSD VT-8.4	Bromoform	.50	U	ug/L	.50	10/12/92	SPVT8-4
210752-03	#12 SPWSD VT-8.4	Isopropylbenzene	.20	U	ug/L	.20	10/12/92	SPVT8-4
210752-03	#12 SPWSD VT-8.4	Bromobenzene	.20	U	ug/L	.20	10/12/92	SPVT8-4
210752-03	#12 SPWSD VT-8.4	1,2,3-Trichloropropane	.20	U	ug/L	.20	10/12/92	SPVT8-4
210752-03	#12 SPWSD VT-8.4	1,1,2,2-Tetrachloroethane	.20	U	ug/L	.20	10/12/92	SPVT8-4
210752-03	#12 SPWSD VT-8.4	n-Propylbenzene	.20	U	ug/L	.20	10/12/92	SPVT8-4
210752-03	#12 SPWSD VT-8.4	2-Chlorotoluene	.20	U	ug/L	.20	10/12/92	SPVT8-4
210752-03	#12 SPWSD VT-8.4	4-Chlorotoluene	.20	U	ug/L	.20	10/12/92	SPVT8-4
210752-03	#12 SPWSD VT-8.4	1,3,5-Trimethylbenzene	1.60		ug/L	.30	10/12/92	SPVT8-4
210752-03	#12 SPWSD VT-8.4	tert-Butylbenzene	.20	U	ug/L	.20	10/12/92	SPVT8-4
210752-03	#12 SPWSD VT-8.4	1,2,4-Trimethylbenzene	3.90		ug/L	.30	10/12/92	SPVT8-4
210752-03	#12 SPWSD VT-8.4	sec-Butylbenzene	.20	U	ug/L	.20	10/12/92	SPVT8-4
210752-03	#12 SPWSD VT-8.4	1,3-Dichlorobenzene (m)	.20	U	ug/L	.20	10/12/92	SPVT8-4
210752-03	#12 SPWSD VT-8.4	1,4-Dichlorobenzene (p)	.20	U	ug/L	.20	10/12/92	SPVT8-4
210752-03	#12 SPWSD VT-8.4	4-Isopropyltoluene	.20	U	ug/L	.20	10/12/92	SPVT8-4
210752-03	#12 SPWSD VT-8.4	1,2-Dichlorobenzene (o)	.20	U	ug/L	.20	10/12/92	SPVT8-4
210752-03	#12 SPWSD VT-8.4	n-Butylbenzene	.30	U	ug/L	.30	10/12/92	SPVT8-4
210752-03	#12 SPWSD VT-8.4	1,2-Dibromo-3-chloropropane	.80	U	ug/L	.80	10/12/92	SPVT8-4
210752-03	#12 SPWSD VT-8.4	1,2,4-Trichlorobenzene	.30	U	ug/L	.30	10/12/92	SPVT8-4
210752-03	#12 SPWSD VT-8.4	Naphthalene	.20	U	ug/L	.20	10/12/92	SPVT8-4
210752-03	#12 SPWSD VT-8.4	Hexachlorobutadiene	.50	U	ug/L	.50	10/12/92	SPVT8-4
210752-03	#12 SPWSD VT-8.4	1,2,3-Trichlorobenzene	.40	U	ug/L	.40	10/12/92	SPVT8-4
210752-08	#7 SPWSD VT-5.1	Dichlorodifluoromethane	.30	U	ug/L	.30	10/13/92	SPVT5-1
210752-08	#7 SPWSD VT-5.1	Chloromethane	.20	U	ug/L	.20	10/13/92	SPVT5-1
210752-08	#7 SPWSD VT-5.1	Vinyl chloride	.30	U	ug/L	.30	10/13/92	SPVT5-1
210752-08	#7 SPWSD VT-5.1	Bromomethane	.20	U	ug/L	.20	10/13/92	SPVT5-1
210752-08	#7 SPWSD VT-5.1	Chloroethane	.20	U	ug/L	.20	10/13/92	SPVT5-1
210752-08	#7 SPWSD VT-5.1	Trichlorofluoromethane	.20	U	ug/L	.20	10/13/92	SPVT5-1

B ID	CLIENT ID	PARAMETER	RESULT	FLAG	UNITS	PQL	SAMPLING DATE	WELL NAME
10752-08	#7 SPWSD VT-5.1	1,1-Dichloroethylene	.20	U	ug/L	.20	10/13/92	SPVT5-1
10752-08	#7 SPWSD VT-5.1	Methylene chloride	.20	U	ug/L	.20	10/13/92	SPVT5-1
9210752-08	#7 SPWSD VT-5.1	trans-1,2-Dichloroethylene	.10	U	ug/L	.10	10/13/92	SPVT5-1
9210752-08	#7 SPWSD VT-5.1	1,1-Dichloroethane	.10	U	ug/L	.10	10/13/92	SPVT5-1
10752-08	#7 SPWSD VT-5.1	2,2-Dichloropropane	.40	U	ug/L	.40	10/13/92	SPVT5-1
10752-08	#7 SPWSD VT-5.1	cis-1,2-Dichloroethylene	.10	U	ug/L	.10	10/13/92	SPVT5-1
9210752-08	#7 SPWSD VT-5.1	Bromochloromethane	.10	U	ug/L	.10	10/13/92	SPVT5-1
10752-08	#7 SPWSD VT-5.1	Chloroform	.10	U	ug/L	.10	10/13/92	SPVT5-1
10752-08	#7 SPWSD VT-5.1	1,1,1-Trichloroethane	1.20		ug/L	.20	10/13/92	SPVT5-1
9210752-08	#7 SPWSD VT-5.1	Carbon tetrachloride	.20	U	ug/L	.20	10/13/92	SPVT5-1
10752-08	#7 SPWSD VT-5.1	1,1-Dichloropropylene	.20	U	ug/L	.20	10/13/92	SPVT5-1
10752-08	#7 SPWSD VT-5.1	Benzene	.10	U	ug/L	.10	10/13/92	SPVT5-1
9210752-08	#7 SPWSD VT-5.1	1,2-Dichloroethane	.30	U	ug/L	.30	10/13/92	SPVT5-1
9210752-08	#7 SPWSD VT-5.1	Trichloroethylene	.10	U	ug/L	.10	10/13/92	SPVT5-1
10752-08	#7 SPWSD VT-5.1	1,2-Dichloropropane	.40	U	ug/L	.40	10/13/92	SPVT5-1
10752-08	#7 SPWSD VT-5.1	Dibromomethane	.50	U	ug/L	.50	10/13/92	SPVT5-1
9210752-08	#7 SPWSD VT-5.1	Bromodichloromethane	.30	U	ug/L	.30	10/13/92	SPVT5-1
10752-08	#7 SPWSD VT-5.1	cis-1,3-Dichloropropylene	.20	U	ug/L	.20	10/13/92	SPVT5-1
10752-08	#7 SPWSD VT-5.1	Toluene	.20	U	ug/L	.20	10/13/92	SPVT5-1
9210752-08	#7 SPWSD VT-5.1	trans-1,3-Dichloropropylene	.10	U	ug/L	.10	10/13/92	SPVT5-1
10752-08	#7 SPWSD VT-5.1	1,1,2-Trichloroethane	.10	U	ug/L	.10	10/13/92	SPVT5-1
10752-08	#7 SPWSD VT-5.1	Tetrachloroethylene	.20	U	ug/L	.20	10/13/92	SPVT5-1
9210752-08	#7 SPWSD VT-5.1	1,3-Dichloropropane	.10	U	ug/L	.10	10/13/92	SPVT5-1
9210752-08	#7 SPWSD VT-5.1	Chlorodibromomethane	.30	U	ug/L	.30	10/13/92	SPVT5-1
10752-08	#7 SPWSD VT-5.1	Ethylene dibromide	.10	U	ug/L	.10	10/13/92	SPVT5-1
10752-08	#7 SPWSD VT-5.1	Chlorobenzene	.10	U	ug/L	.10	10/13/92	SPVT5-1
9210752-08	#7 SPWSD VT-5.1	1,1,1,2-Tetrachloroethane	.20	U	ug/L	.20	10/13/92	SPVT5-1
210752-08	#7 SPWSD VT-5.1	Ethylbenzene	.20	U	ug/L	.20	10/13/92	SPVT5-1
10752-08	#7 SPWSD VT-5.1	m+p-Xylene	.40	U	ug/L	.40	10/13/92	SPVT5-1
9210752-08	#7 SPWSD VT-5.1	o-Xylene	.10	U	ug/L	.10	10/13/92	SPVT5-1
10752-08	#7 SPWSD VT-5.1	Styrene	.10	U	ug/L	.10	10/13/92	SPVT5-1
10752-08	#7 SPWSD VT-5.1	Bromoform	.50	U	ug/L	.50	10/13/92	SPVT5-1
9210752-08	#7 SPWSD VT-5.1	Isopropylbenzene	.20	U	ug/L	.20	10/13/92	SPVT5-1
9210752-08	#7 SPWSD VT-5.1	Bromobenzene	.20	U	ug/L	.20	10/13/92	SPVT5-1
10752-08	#7 SPWSD VT-5.1	1,2,3-Trichloropropane	.20	U	ug/L	.20	10/13/92	SPVT5-1
210752-08	#7 SPWSD VT-5.1	1,1,2,2-Tetrachloroethane	.20	U	ug/L	.20	10/13/92	SPVT5-1
9210752-08	#7 SPWSD VT-5.1	n-Propylbenzene	.20	U	ug/L	.20	10/13/92	SPVT5-1
210752-08	#7 SPWSD VT-5.1	2-Chlorotoluene	.20	U	ug/L	.20	10/13/92	SPVT5-1
210752-08	#7 SPWSD VT-5.1	4-Chlorotoluene	.20	U	ug/L	.20	10/13/92	SPVT5-1
9210752-08	#7 SPWSD VT-5.1	1,3,5-Trimethylbenzene	.30	U	ug/L	.30	10/13/92	SPVT5-1
9210752-08	#7 SPWSD VT-5.1	tert-Butylbenzene	.20	U	ug/L	.20	10/13/92	SPVT5-1
210752-08	#7 SPWSD VT-5.1	1,2,4-Trimethylbenzene	.30	U	ug/L	.30	10/13/92	SPVT5-1
9210752-08	#7 SPWSD VT-5.1	sec-Butylbenzene	.20	U	ug/L	.20	10/13/92	SPVT5-1
9210752-08	#7 SPWSD VT-5.1	1,3-Dichlorobenzene (m)	.20	U	ug/L	.20	10/13/92	SPVT5-1
210752-08	#7 SPWSD VT-5.1	1,4-Dichlorobenzene (p)	.20	U	ug/L	.20	10/13/92	SPVT5-1
210752-08	#7 SPWSD VT-5.1	4-Isopropyltoluene	.20	U	ug/L	.20	10/13/92	SPVT5-1
9210752-08	#7 SPWSD VT-5.1	1,2-Dichlorobenzene (o)	.20	U	ug/L	.20	10/13/92	SPVT5-1

AB ID	CLIENT ID	PARAMETER	RESULT	FLAG	UNITS	PQL	SAMPLING DATE	WELL NAME
210752-08	#7 SPWSD VT-5.1	n-Butylbenzene	.30	U	ug/L	.30	10/13/92	SPVT5-1
210752-08	#7 SPWSD VT-5.1	1,2-Dibromo-3-chloropropane	.80	U	ug/L	.80	10/13/92	SPVT5-1
210752-08	#7 SPWSD VT-5.1	1,2,4-Trichlorobenzene	.30	U	ug/L	.30	10/13/92	SPVT5-1
210752-08	#7 SPWSD VT-5.1	Naphthalene	.20	U	ug/L	.20	10/13/92	SPVT5-1
210752-08	#7 SPWSD VT-5.1	Hexachlorobutadiene	.50	U	ug/L	.50	10/13/92	SPVT5-1
210752-08	#7 SPWSD VT-5.1	1,2,3-Trichlorobenzene	.40	U	ug/L	.40	10/13/92	SPVT5-1
210752-11	#2 SPWSD WHP-2.1	Dichlorodifluoromethane	.30	U	ug/L	.30	10/13/92	WH2-1
210752-11	#2 SPWSD WHP-2.1	Chloromethane	.20	U	ug/L	.20	10/13/92	WH2-1
210752-11	#2 SPWSD WHP-2.1	Vinyl chloride	.30	U	ug/L	.30	10/13/92	WH2-1
210752-11	#2 SPWSD WHP-2.1	Bromomethane	.20	U	ug/L	.20	10/13/92	WH2-1
210752-11	#2 SPWSD WHP-2.1	Chloroethane	.20	U	ug/L	.20	10/13/92	WH2-1
210752-11	#2 SPWSD WHP-2.1	Trichlorofluoromethane	.20	U	ug/L	.20	10/13/92	WH2-1
210752-11	#2 SPWSD WHP-2.1	1,1-Dichloroethylene	.20	U	ug/L	.20	10/13/92	WH2-1
210752-11	#2 SPWSD WHP-2.1	Methylene chloride	.20	U	ug/L	.20	10/13/92	WH2-1
210752-11	#2 SPWSD WHP-2.1	trans-1,2-Dichloroethylene	.10	U	ug/L	.10	10/13/92	WH2-1
210752-11	#2 SPWSD WHP-2.1	1,1-Dichloroethane	.10	U	ug/L	.10	10/13/92	WH2-1
210752-11	#2 SPWSD WHP-2.1	2,2-Dichloropropane	.40	U	ug/L	.40	10/13/92	WH2-1
210752-11	#2 SPWSD WHP-2.1	cis-1,2-Dichloroethylene	.10	U	ug/L	.10	10/13/92	WH2-1
210752-11	#2 SPWSD WHP-2.1	Bromochloromethane	.10	U	ug/L	.10	10/13/92	WH2-1
210752-11	#2 SPWSD WHP-2.1	Chloroform	.10	U	ug/L	.10	10/13/92	WH2-1
210752-11	#2 SPWSD WHP-2.1	1,1,1-Trichloroethane	.20	U	ug/L	.20	10/13/92	WH2-1
210752-11	#2 SPWSD WHP-2.1	Carbon tetrachloride	.20	U	ug/L	.20	10/13/92	WH2-1
210752-11	#2 SPWSD WHP-2.1	1,1-Dichloropropylene	.20	U	ug/L	.20	10/13/92	WH2-1
210752-11	#2 SPWSD WHP-2.1	Benzene	.10	U	ug/L	.10	10/13/92	WH2-1
210752-11	#2 SPWSD WHP-2.1	1,2-Dichloroethane	.30	U	ug/L	.30	10/13/92	WH2-1
210752-11	#2 SPWSD WHP-2.1	Trichloroethylene	.10	U	ug/L	.10	10/13/92	WH2-1
210752-11	#2 SPWSD WHP-2.1	1,2-Dichloropropane	.40	U	ug/L	.40	10/13/92	WH2-1
210752-11	#2 SPWSD WHP-2.1	Dibromomethane	.50	U	ug/L	.50	10/13/92	WH2-1
210752-11	#2 SPWSD WHP-2.1	Bromodichloromethane	.30	U	ug/L	.30	10/13/92	WH2-1
210752-11	#2 SPWSD WHP-2.1	cis-1,3-Dichloropropylene	.20	U	ug/L	.20	10/13/92	WH2-1
210752-11	#2 SPWSD WHP-2.1	Toluene	.20	U	ug/L	.20	10/13/92	WH2-1
210752-11	#2 SPWSD WHP-2.1	trans-1,3-Dichloropropylene	.10	U	ug/L	.10	10/13/92	WH2-1
210752-11	#2 SPWSD WHP-2.1	1,1,2-Trichloroethane	.10	U	ug/L	.10	10/13/92	WH2-1
210752-11	#2 SPWSD WHP-2.1	Tetrachloroethylene	.20	U	ug/L	.20	10/13/92	WH2-1
210752-11	#2 SPWSD WHP-2.1	1,3-Dichloropropane	.10	U	ug/L	.10	10/13/92	WH2-1
210752-11	#2 SPWSD WHP-2.1	Chlorodibromomethane	.30	U	ug/L	.30	10/13/92	WH2-1
210752-11	#2 SPWSD WHP-2.1	Ethylene dibromide	.10	U	ug/L	.10	10/13/92	WH2-1
210752-11	#2 SPWSD WHP-2.1	Chlorobenzene	.10	U	ug/L	.10	10/13/92	WH2-1
210752-11	#2 SPWSD WHP-2.1	1,1,1,2-Tetrachloroethane	.20	U	ug/L	.20	10/13/92	WH2-1
210752-11	#2 SPWSD WHP-2.1	Ethylbenzene	.20	U	ug/L	.20	10/13/92	WH2-1
210752-11	#2 SPWSD WHP-2.1	m+p-Xylene	.40	U	ug/L	.40	10/13/92	WH2-1
210752-11	#2 SPWSD WHP-2.1	o-Xylene	.10	U	ug/L	.10	10/13/92	WH2-1
210752-11	#2 SPWSD WHP-2.1	Styrene	.10	U	ug/L	.10	10/13/92	WH2-1
210752-11	#2 SPWSD WHP-2.1	Bromoform	.50	U	ug/L	.50	10/13/92	WH2-1
210752-11	#2 SPWSD WHP-2.1	Isopropylbenzene	.20	U	ug/L	.20	10/13/92	WH2-1
210752-11	#2 SPWSD WHP-2.1	Bromobenzene	.20	U	ug/L	.20	10/13/92	WH2-1
210752-11	#2 SPWSD WHP-2.1	1,2,3-Trichloropropane	.20	U	ug/L	.20	10/13/92	WH2-1

B ID	CLIENT ID	PARAMETER	RESULT	FLAG	UNITS	PQL	SAMPLING DATE	WELL NAME
9210752-11	#2 SPWSD WHP-2.1	1,1,2,2-Tetrachloroethane	.20	U	ug/L	.20	10/13/92	WH2-1
10752-11	#2 SPWSD WHP-2.1	n-Propylbenzene	.20	U	ug/L	.20	10/13/92	WH2-1
9210752-11	#2 SPWSD WHP-2.1	2-Chlorotoluene	.20	U	ug/L	.20	10/13/92	WH2-1
9210752-11	#2 SPWSD WHP-2.1	4-Chlorotoluene	.20	U	ug/L	.20	10/13/92	WH2-1
10752-11	#2 SPWSD WHP-2.1	1,3,5-Trimethylbenzene	.30	U	ug/L	.30	10/13/92	WH2-1
10752-11	#2 SPWSD WHP-2.1	tert-Butylbenzene	.20	U	ug/L	.20	10/13/92	WH2-1
9210752-11	#2 SPWSD WHP-2.1	1,2,4-Trimethylbenzene	.30	U	ug/L	.30	10/13/92	WH2-1
10752-11	#2 SPWSD WHP-2.1	sec-Butylbenzene	.20	U	ug/L	.20	10/13/92	WH2-1
10752-11	#2 SPWSD WHP-2.1	1,3-Dichlorobenzene (m)	.20	U	ug/L	.20	10/13/92	WH2-1
9210752-11	#2 SPWSD WHP-2.1	1,4-Dichlorobenzene (p)	.20	U	ug/L	.20	10/13/92	WH2-1
9210752-11	#2 SPWSD WHP-2.1	4-Isopropyltoluene	.20	U	ug/L	.20	10/13/92	WH2-1
10752-11	#2 SPWSD WHP-2.1	1,2-Dichlorobenzene (o)	.20	U	ug/L	.20	10/13/92	WH2-1
9210752-11	#2 SPWSD WHP-2.1	n-Butylbenzene	.30	U	ug/L	.30	10/13/92	WH2-1
9210752-11	#2 SPWSD WHP-2.1	1,2-Dibromo-3-chloropropane	.80	U	ug/L	.80	10/13/92	WH2-1
10752-11	#2 SPWSD WHP-2.1	1,2,4-Trichlorobenzene	.30	U	ug/L	.30	10/13/92	WH2-1
10752-11	#2 SPWSD WHP-2.1	Naphthalene	.20	U	ug/L	.20	10/13/92	WH2-1
9210752-11	#2 SPWSD WHP-2.1	Hexachlorobutadiene	.50	U	ug/L	.50	10/13/92	WH2-1
10752-11	#2 SPWSD WHP-2.1	1,2,3-Trichlorobenzene	.40	U	ug/L	.40	10/13/92	WH2-1
10752-13	#4 SPWSD WHP 3.1	Dichlorodifluoromethane	.30	U	ug/L	.30	10/13/92	WH3-1
9210752-13	#4 SPWSD WHP 3.1	Chloromethane	.20	U	ug/L	.20	10/13/92	WH3-1
9210752-13	#4 SPWSD WHP 3.1	Vinyl chloride	.30	U	ug/L	.30	10/13/92	WH3-1
10752-13	#4 SPWSD WHP 3.1	Bromomethane	.20	U	ug/L	.20	10/13/92	WH3-1
9210752-13	#4 SPWSD WHP 3.1	Chloroethane	.20	U	ug/L	.20	10/13/92	WH3-1
9210752-13	#4 SPWSD WHP 3.1	Trichlorofluoromethane	.20	U	ug/L	.20	10/13/92	WH3-1
10752-13	#4 SPWSD WHP 3.1	1,1-Dichloroethylene	.20	U	ug/L	.20	10/13/92	WH3-1
10752-13	#4 SPWSD WHP 3.1	Methylene chloride	.20	U	ug/L	.20	10/13/92	WH3-1
9210752-13	#4 SPWSD WHP 3.1	trans-1,2-Dichloroethylene	.10	U	ug/L	.10	10/13/92	WH3-1
10752-13	#4 SPWSD WHP 3.1	1,1-Dichloroethane	.10	U	ug/L	.10	10/13/92	WH3-1
10752-13	#4 SPWSD WHP 3.1	2,2-Dichloropropane	.40	U	ug/L	.40	10/13/92	WH3-1
9210752-13	#4 SPWSD WHP 3.1	cis-1,2-Dichloroethylene	.10	U	ug/L	.10	10/13/92	WH3-1
9210752-13	#4 SPWSD WHP 3.1	Bromochloromethane	.10	U	ug/L	.10	10/13/92	WH3-1
10752-13	#4 SPWSD WHP 3.1	Chloroform	.10	U	ug/L	.10	10/13/92	WH3-1
9210752-13	#4 SPWSD WHP 3.1	1,1,1-Trichloroethane	.20	U	ug/L	.20	10/13/92	WH3-1
9210752-13	#4 SPWSD WHP 3.1	Carbon tetrachloride	.20	U	ug/L	.20	10/13/92	WH3-1
10752-13	#4 SPWSD WHP 3.1	1,1-Dichloropropylene	.20	U	ug/L	.20	10/13/92	WH3-1
10752-13	#4 SPWSD WHP 3.1	Benzene	.10	U	ug/L	.10	10/13/92	WH3-1
9210752-13	#4 SPWSD WHP 3.1	1,2-Dichloroethane	.30	U	ug/L	.30	10/13/92	WH3-1
10752-13	#4 SPWSD WHP 3.1	Trichloroethylene	.10	U	ug/L	.10	10/13/92	WH3-1
10752-13	#4 SPWSD WHP 3.1	1,2-Dichloropropane	.40	U	ug/L	.40	10/13/92	WH3-1
9210752-13	#4 SPWSD WHP 3.1	Dibromomethane	.50	U	ug/L	.50	10/13/92	WH3-1
9210752-13	#4 SPWSD WHP 3.1	Bromodichloromethane	.30	U	ug/L	.30	10/13/92	WH3-1
10752-13	#4 SPWSD WHP 3.1	cis-1,3-Dichloropropylene	.20	U	ug/L	.20	10/13/92	WH3-1
9210752-13	#4 SPWSD WHP 3.1	Toluene	.20	U	ug/L	.20	10/13/92	WH3-1
9210752-13	#4 SPWSD WHP 3.1	trans-1,3-Dichloropropylene	.10	U	ug/L	.10	10/13/92	WH3-1
10752-13	#4 SPWSD WHP 3.1	1,1,2-Trichloroethane	.10	U	ug/L	.10	10/13/92	WH3-1
10752-13	#4 SPWSD WHP 3.1	Tetrachloroethylene	.20	U	ug/L	.20	10/13/92	WH3-1
9210752-13	#4 SPWSD WHP 3.1	1,3-Dichloropropane	.10	U	ug/L	.10	10/13/92	WH3-1

LAB ID	CLIENT ID	PARAMETER	RESULT	FLAG	UNITS	PQL	SAMPLING DATE	WELL NAME
9210752-13	#4 SPWSD WHP 3.1	Chlorodibromomethane	.30	U	ug/L	.30	10/13/92	WH3-1
9210752-13	#4 SPWSD WHP 3.1	Ethylene dibromide	.10	U	ug/L	.10	10/13/92	WH3-1
9210752-13	#4 SPWSD WHP 3.1	Chlorobenzene	.10	U	ug/L	.10	10/13/92	WH3-1
9210752-13	#4 SPWSD WHP 3.1	1,1,1,2-Tetrachloroethane	.20	U	ug/L	.20	10/13/92	WH3-1
9210752-13	#4 SPWSD WHP 3.1	Ethylbenzene	.20	U	ug/L	.20	10/13/92	WH3-1
9210752-13	#4 SPWSD WHP 3.1	m+p-Xylene	.40	U	ug/L	.40	10/13/92	WH3-1
9210752-13	#4 SPWSD WHP 3.1	o-Xylene	.10	U	ug/L	.10	10/13/92	WH3-1
9210752-13	#4 SPWSD WHP 3.1	Styrene	.10	U	ug/L	.10	10/13/92	WH3-1
9210752-13	#4 SPWSD WHP 3.1	Bromoform	.50	U	ug/L	.50	10/13/92	WH3-1
9210752-13	#4 SPWSD WHP 3.1	Isopropylbenzene	.20	U	ug/L	.20	10/13/92	WH3-1
9210752-13	#4 SPWSD WHP 3.1	Bromobenzene	.20	U	ug/L	.20	10/13/92	WH3-1
9210752-13	#4 SPWSD WHP 3.1	1,2,3-Trichloropropane	.20	U	ug/L	.20	10/13/92	WH3-1
9210752-13	#4 SPWSD WHP 3.1	1,1,2,2-Tetrachloroethane	.20	U	ug/L	.20	10/13/92	WH3-1
9210752-13	#4 SPWSD WHP 3.1	n-Propylbenzene	.20	U	ug/L	.20	10/13/92	WH3-1
9210752-13	#4 SPWSD WHP 3.1	2-Chlorotoluene	.20	U	ug/L	.20	10/13/92	WH3-1
9210752-13	#4 SPWSD WHP 3.1	4-Chlorotoluene	.20	U	ug/L	.20	10/13/92	WH3-1
9210752-13	#4 SPWSD WHP 3.1	1,3,5-Trimethylbenzene	.30	U	ug/L	.30	10/13/92	WH3-1
9210752-13	#4 SPWSD WHP 3.1	tert-Butylbenzene	.20	U	ug/L	.20	10/13/92	WH3-1
9210752-13	#4 SPWSD WHP 3.1	1,2,4-Trimethylbenzene	.30	U	ug/L	.30	10/13/92	WH3-1
9210752-13	#4 SPWSD WHP 3.1	sec-Butylbenzene	.20	U	ug/L	.20	10/13/92	WH3-1
9210752-13	#4 SPWSD WHP 3.1	1,3-Dichlorobenzene (m)	.20	U	ug/L	.20	10/13/92	WH3-1
9210752-13	#4 SPWSD WHP 3.1	1,4-Dichlorobenzene (p)	.20	U	ug/L	.20	10/13/92	WH3-1
9210752-13	#4 SPWSD WHP 3.1	4-Isopropyltoluene	.20	U	ug/L	.20	10/13/92	WH3-1
9210752-13	#4 SPWSD WHP 3.1	1,2-Dichlorobenzene (o)	.20	U	ug/L	.20	10/13/92	WH3-1
9210752-13	#4 SPWSD WHP 3.1	n-Butylbenzene	.30	U	ug/L	.30	10/13/92	WH3-1
9210752-13	#4 SPWSD WHP 3.1	1,2-Dibromo-3-chloropropane	.80	U	ug/L	.80	10/13/92	WH3-1
9210752-13	#4 SPWSD WHP 3.1	1,2,4-Trichlorobenzene	.30	U	ug/L	.30	10/13/92	WH3-1
9210752-13	#4 SPWSD WHP 3.1	Naphthalene	.20	U	ug/L	.20	10/13/92	WH3-1
9210752-13	#4 SPWSD WHP 3.1	Hexachlorobutadiene	.50	U	ug/L	.50	10/13/92	WH3-1
9210752-13	#4 SPWSD WHP 3.1	1,2,3-Trichlorobenzene	.40	U	ug/L	.40	10/13/92	WH3-1

TABLE 1. SUMMARY OF GROUND WATER MONITORING DATA THROUGH AUGUST 26, 1992
ARCO SERVICE STATION NO. 4468
ISSAQUAH, WASHINGTON

Well ID	Collection Date	Notes	TPH as Gasoline (mg/L)	TPH as Diesel (mg/L)	TPH as Motor Oil (mg/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	Ethylene Dibromide (ug/L)	Total Lead (ug/L)	Dissolved Lead (ug/L)
MW-1	20-Apr-90		20	NA	NA	1100	370 J	330 J	920	0.17	NA	3 U
	18-May-90		12	1 U	NA	2200	67	480	920	NA	NA	NA
	02-Nov-90	(1)	1 UJ	5 J	NA	120 J	0.5 J	15 J	1.8 J	0.02 U	NA	NA
	14-Dec-90		4	1 U	NA	1300	510	260	650	0.67	NA	NA
	13-Feb-91		25	NA	NA	3300	1800	800	2100	3.6 J	NA	NA
	09-May-91	(3)	23	NA	NA	5100	1500	1020	3300	NA	21	NA
	09-May-91	(4)	17	NA	NA	4400	1400	900	2600	NA	20.3	NA
	12-Jun-91		19.8	NA	NA	4370	927	909	2760	NA	NA	NA
	09-Jul-91		19.7	NA	NA	4360	714	829	2270	0.05 UJ	41	NA
	06-Aug-91		20.8	NA	NA	4750	500	930	2150	NA	24	NA
	04-Sep-91		9.75	NA	NA	2690	49	379	439	NA	14	NA
	08-Oct-91		6.1	NA	NA	1800	27	438	521	NA	NA	NA
	21-Nov-91		1.8	NA	NA	321	3	92	67	NA	NA	NA
	13-Dec-91		1.78	NA	NA	244	1	75	30	NA	NA	NA
	17-Jan-92		4.9	NA	NA	730	22	330	390	NA	NA	NA
	21-Feb-92		4.27	NA	NA	600	22	255	586	NA	11	NA
	28-Apr-92		0.39	NA	NA	880	48	295	394	NA	11	NA
	10-Jul-92		NA	NA	NA	1000	12	421	391	NA	NA	NA
	13-Jul-92		NA	NA	NA	900	5	310	270	NA	NA	NA
	15-Jul-92		NA	NA	NA	1200	49	397	488	NA	NA	NA
	17-Jul-92		NA	NA	NA	1300	28	403	413	NA	NA	NA
	20-Jul-92		NA	NA	NA	1200	54	411	542	NA	NA	NA
	26-Aug-92		3.37	NA	NA	1000	7	385	301	NA	NA	NA
MW-2	20-Apr-90		39	NA	NA	470	250 U	710	3300	0.1 U	NA	4.4
	18-May-90		23	1 U	NA	450	50 U	660	2000	NA	NA	NA
	02-Nov-90	(1)	13 J	1 UJ	NA	110 J	5 UJ	54 J	89 J	NA	NA	7
	14-Dec-90		8	6	NA	2800	190	570	1000	NA	NA	12
	13-Feb-91		14	NA	NA	1900	710	310	810	NA	NA	4.4
	09-May-91	(3)	28	NA	NA	5400	3500	760	3700	NA	17	NA
	09-May-91	(4)	28	NA	NA	5500	3800	700	3800	NA	20.6	NA
	12-Jun-91		9.45	NA	NA	1610	121	370	813	NA	NA	NA
	09-Jul-91		7.06	NA	NA	814	22	258	822	0.05 UJ	15	NA
	07-Aug-91		5.80	NA	NA	261	3	158	196	NA	12	NA
	04-Sep-91		4.41	NA	NA	108	1 U	101	87	NA	10	NA
	09-Oct-91		1.82	NA	NA	2.7	2	52	33	NA	NA	NA
	21-Nov-91		2.14	NA	NA	37.1	20	42	107	NA	NA	NA
	21-Nov-91	(DUP)	2.14	NA	NA	37.1	20	42	107	NA	NA	NA
	13-Dec-91		0.14	NA	NA	4.2	8	2	22	NA	NA	NA
	17-Jan-92		0.9	NA	NA	25	0.87	21	80	NA	NA	NA
	21-Feb-92		0.45	NA	NA	9.8	1 U	6	32	NA	10	NA
	28-Apr-92		1.72	NA	NA	13.6	3	37	61	NA	NA	NA
	26-Aug-92		0.38	NA	NA	0.5 U	1 U	7	2	NA	NA	NA

(Notes on last page)

TABLE 1. SUMMARY OF GROUND WATER MONITORING DATA THROUGH AUGUST 28, 1992
ARCO SERVICE STATION NO. 4468
ISSAQUAH, WASHINGTON

Well ID	Collection Date	Notes	TPH as Gasoline (mg/L)	TPH as Diesel (mg/L)	TPH as Motor Oil (mg/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	Ethylene Dibromide (ug/L)	Total Lead (ug/L)	Dissolved Lead (ug/L)
MW-3	20-Apr-90		0.039	NA	NA	0.5 U	0.5 U	0.5 U	0.5 U	0.1 U	NA	3 U
	18-May-90		1 U	1 U	NA	0.5 U	0.5 U	0.5 U	0.5 U	NA	NA	NA
	02-Nov-90	(1)	1 UJ	1 UJ	NA	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	NA	NA	NA
	14-Dec-90		1 U	1 U	NA	2.4	0.6	0.5 U	0.5 U	NA	NA	NA
	13-Feb-91		0.023	NA	NA	0.5 U	1.4	0.5	2.5	NA	NA	NA
	09-May-91	(3)	0.05 U	NA	NA	0.5 U	2	1 U	4	NA	NA	NA
	09-May-91	(4)	0.021	NA	NA	0.5	2.9	0.7	4.3	NA	NA	NA
	12-Jun-91		0.05 U	NA	NA	0.8	3	1 U	7	NA	NA	NA
	09-Jul-91		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	0.05 U	2 U	NA
	07-Aug-91		0.05 U	NA	NA	0.5 U	1 U	1 U	2	NA	23	NA
	03-Sep-91		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	4	NA
	08-Oct-91		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	NA	NA
	21-Nov-91		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	NA	NA
	13-Dec-91		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	NA	NA
	17-Jan-92		0.05 U	NA	NA	0.5 U	0.5 U	0.5 U	0.5 U	NA	NA	NA
	21-Feb-92		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	2 U	NA
	28-Apr-92		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	2 U	NA
	25-Aug-92		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	NA	NA
MW-4	20-Apr-90		100	NA	NA	690 J	4400	2100	15000	0.1 U	NA	9.5
	18-May-90		50	1 U	NA	810	3700	1800	12000	NA	NA	NA
	02-Nov-90	(1)	51 J	1 UJ	NA	66 J	100 J	130 J	730 J	NA	NA	96
	14-Dec-90	(2)	73	10	NA	15000	9900	1400	8800	NA	NA	60
MW-5	25-Jun-90		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	NA	NA	NA
	02-Nov-90	(1)	1 UJ	1 UJ	NA	1 J	0.5 UJ	0.5 UJ	0.5 UJ	NA	NA	NA
	13-Feb-91		0.12	NA	NA	3.5	21	5.2	23	NA	NA	NA
	09-May-91	(3)	0.5	NA	NA	68.1	108	24	107	NA	NA	NA
	09-May-91	(4)	0.45	NA	NA	82	110	24	100	NA	NA	NA
	12-Jun-91		0.42	NA	NA	70.3	84	15	80	NA	NA	NA
	09-Jul-91		1.75	NA	NA	256	343	52	288	0.05 UJ	3	NA
	08-Aug-91		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	2 U	NA
	04-Sep-91		0.05 U	NA	NA	5.4	1	1	2	0.05 U	2 U	NA
	04-Sep-91	(DUP)	0.05 U	NA	NA	10.1	2	2	4	0.05 U	2 U	NA
	08-Oct-91		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	NA	NA
	21-Nov-91		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	NA	NA
	13-Dec-91		0.05 U	NA	NA	0.9	1 U	1 U	1 U	NA	NA	NA
	17-Jan-92		0.05 U	NA	NA	8.0	1.3	2.8	8.5	NA	NA	NA
	21-Feb-92		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	2 U	NA
	28-Apr-92		0.05 U	NA	NA	0.6	2	1	7	NA	NA	NA
	28-Aug-92		0.05 U	NA	NA	0.5 U	1 U	1 U	1	NA	NA	NA

(Notes on last page)

TABLE 1. SUMMARY OF GROUND WATER MONITORING DATA THROUGH AUGUST 26, 1992
ARCO SERVICE STATION NO. 4468
ISSAQUAH, WASHINGTON

Well ID	Collection Date	Notes	TPH as Gasoline (mg/L)	TPH as Diesel (mg/L)	TPH as Motor Oil (mg/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	Ethylene Dibromide (ug/L)	Total Lead (ug/L)	Dissolved Lead (ug/L)
MW-6	03-Oct-90		0.02 U	NA	NA	0.5 U	0.5 U	0.5 U	1 U	NA	NA	NA
	05-Nov-90		1 U	NA	NA	0.5 U	0.8	0.5 U	0.5 U	NA	NA	NA
	12-Feb-91		0.037	NA	NA	0.8	4.9	1.1	5.8	NA	NA	NA
	08-May-91	(3)	0.05 U	NA	NA	1.3	5	1 U	5	NA	NA	NA
	08-May-91	(4)	0.03	NA	NA	1.5	5.9	1	5.1	NA	NA	NA
	13-May-91		0.05 U	NA	NA	0.5 U	3	1 U	4	NA	NA	NA
	20-May-91		0.05 U	NA	NA	0.8	7	1	10	NA	NA	NA
	28-May-91		0.05 U	NA	NA	0.5 U	2	1 U	5	NA	NA	NA
	04-Jun-91		0.05 U	NA	NA	0.5 U	2	1 U	3	NA	NA	NA
	12-Jun-91		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	NA	NA
	18-Jun-91		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	NA	NA
	24-Jun-91		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	NA	NA
	01-Jul-91		0.05	NA	NA	0.8	3	1 U	5	0.05 U	3	NA
	08-Jul-91		0.085	NA	NA	2.4	11	1	14	0.05 UJ	2 U	NA
	22-Jul-91		0.05 U	NA	NA	0.9	1	1	2	0.05 U	2	NA
	06-Aug-91		0.05 U	NA	NA	0.5 U	1	1 U	2	NA	4	NA
	20-Aug-91		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	2 U	NA
	03-Sep-91		0.05 U	NA	NA	1.0	5	1 U	4	NA	2	NA
	03-Sep-91	(DUP)	0.05 U	NA	NA	1.1	5	1 U	4	NA	2 U	NA
	16-Sep-91		0.05 U	NA	NA	1.1	4	2	4	NA	NA	NA
	07-Oct-91		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	NA	NA
	07-Oct-91	(DUP)	0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	NA	NA
	14-Nov-91		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	NA	NA
	12-Dec-91		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	NA	NA
	16-Jan-92		0.05 U	NA	NA	0.5 U	0.5 U	0.5 U	0.5 U	NA	NA	NA
	20-Feb-92		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	2 U	NA
	27-Apr-92		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	NA	NA
	25-Aug-92		0.05 U	NA	NA	1.4	5	1	8	NA	NA	NA
MW-7	05-Nov-90		1 U	1 U	NA	0.5 U	0.8	0.5 U	0.7	NA	NA	NA
	12-Feb-91		0.055	NA	NA	0.7	7.2	1.9	9.7	NA	NA	NA
	08-May-91	(3)	0.05 U	NA	NA	0.5 U	2	1 U	2	NA	NA	NA
	08-May-91	(4)	0.02 U	NA	NA	0.5 U	2.4	0.6	3.2	NA	NA	NA
	13-May-91		0.05 U	NA	NA	0.5 U	2	1 U	4	NA	NA	NA
	20-May-91		0.05 U	NA	NA	1.5	6	1	8	NA	NA	NA
	28-May-91		0.05 U	NA	NA	0.6	4	1 U	8	NA	NA	NA
	04-Jun-91		0.05 U	NA	NA	0.5 U	3	1 U	5	NA	NA	NA
	12-Jun-91		0.05 U	NA	NA	1.2	5	1 U	8	NA	NA	NA
	18-Jun-91		0.05 U	NA	NA	0.9	4	1 U	8	NA	NA	NA
	24-Jun-91		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	NA	NA
	01-Jul-91		0.05 U	NA	NA	0.5 U	2	1 U	3	0.05 U	2 U	NA
	08-Jul-91		0.05 U	NA	NA	0.5 U	1	1 U	2	0.05 UJ	2 U	NA
	22-Jul-91		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	0.05 U	3	NA
	06-Aug-91		0.067	NA	NA	1.9	15	3	12	NA	2	NA
	20-Aug-91		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	2 U	NA
	03-Sep-91		0.05 U	NA	NA	1.2	6	1 U	4	NA	2 U	NA
	03-Sep-91	(DUP)	0.05 U	NA	NA	0.8	4	1 U	3	NA	2 U	NA
	16-Sep-91		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	NA	NA
	16-Sep-91	(DUP)	0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	NA	NA
	07-Oct-91		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	NA	NA
	14-Nov-91		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	NA	NA
	12-Dec-91		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	NA	NA
	16-Jan-92		0.05 U	NA	NA	0.5 U	0.5 U	0.5 U	0.5 U	NA	NA	NA
	20-Feb-92		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	2 U	NA
	27-Apr-92		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	NA	NA
	25-Aug-92		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	NA	NA

(Notes on last page)

TABLE 1. SUMMARY OF GROUND WATER MONITORING DATA THROUGH AUGUST 26, 1992
ARCO SERVICE STATION NO. 4488
ISSAQUAH, WASHINGTON

Well ID	Collection Date	Notes	TPH as Gasoline (mg/L)	TPH as Diesel (mg/L)	TPH as Motor Oil (mg/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	Ethylene Dibromide (ug/L)	Total Lead (ug/L)	Dissolved Lead (ug/L)
MW-8	05-Nov-90		1 U	1 U	NA	0.5 U	0.5 U	0.5 U	0.5 U	NA	NA	NA
	12-Feb-91		0.02 U	NA	NA	0.5 U	0.5 U	0.5 U	1 U	NA	NA	NA
	08-May-91	(3)	0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	NA	NA
	08-May-91	(4)	0.02 U	NA	NA	0.5 U	0.5 U	0.5 U	1 U	NA	NA	NA
	13-May-91		0.05 U	NA	NA	0.5 U	4	1	8	NA	NA	NA
	20-May-91		0.05 U	NA	NA	1	0.5 U	0.5 U	2	NA	NA	NA
	28-May-91		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	NA	NA
	04-Jun-91		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	NA	NA
	12-Jun-91		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	NA	NA
	18-Jun-91		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	NA	NA
	24-Jun-91		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	NA	NA
	01-Jul-91		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	0.05 U	11	NA
	08-Jul-91		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	0.05 UJ	26	NA
	22-Jul-91		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	0.05 U	15	NA
	06-Aug-91		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	34	NA
	20-Aug-91		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	124	NA
	03-Sep-91		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	24	NA
	18-Sep-91		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	31	NA
	07-Oct-91		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	NA	NA
	14-Nov-91		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	NA	NA
	12-Dec-91		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	NA	NA
	16-Jan-92		0.05 U	NA	NA	0.5 U	0.5 U	0.5 U	0.5 U	NA	NA	NA
	20-Feb-92		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	22	NA
	27-Apr-92		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	22	NA
	10-Jul-92		NA	NA	NA	0.5 U	1 U	1 U	1 U	NA	NA	NA
	20-Jul-92		NA	NA	NA	0.5 U	1 U	1 U	1 U	NA	NA	NA
	25-Aug-92		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	NA	NA
MW-9	09-Oct-90		0.05 U	NA	NA	1 U	1 U	1 U	2 U	NA	NA	NA
	05-Nov-90		1 U	1 U	NA	0.5 U	0.5 U	0.5 U	0.5 U	NA	NA	NA
	12-Feb-91		0.047	NA	NA	0.8	5	1.4	6.9	NA	NA	NA
	08-May-91	(3)	0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	NA	NA
	08-May-91	(4)	0.02 U	NA	NA	0.5 U	0.5 U	0.5 U	1 U	NA	NA	NA
	13-May-91		0.05 U	NA	NA	0.5	4	1 U	4	NA	NA	NA
	20-May-91		0.05 U	NA	NA	1.8	1 U	1 U	2	NA	NA	NA
	28-May-91		0.05 U	NA	NA	0.6	2	1 U	5	NA	NA	NA
	04-Jun-91		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	NA	NA
	12-Jun-91		0.05 U	NA	NA	0.8	1 U	1 U	2	NA	NA	NA
	18-Jun-91		0.05 U	NA	NA	0.8	2	1 U	3	NA	NA	NA
	24-Jun-91		0.05 U	NA	NA	0.5 U	1 U	1 U	1	NA	NA	NA
	01-Jul-91		0.05 U	NA	NA	0.6	3	1 U	5	0.05 U	2 U	NA
	08-Jul-91		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	0.05 UJ	2 U	NA
	22-Jul-91		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	0.05 U	4	NA
	06-Aug-91		0.114	NA	NA	5.5	29	4	20	NA	2 U	NA
	20-Aug-91		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	2 U	NA
	03-Sep-91		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	2 U	NA
	18-Sep-91		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	NA	NA
	18-Sep-91	(DUP)	0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	NA	NA
	07-Oct-91		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	NA	NA
	14-Nov-91		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	NA	NA
	12-Dec-91		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	NA	NA
	16-Jan-92		0.05 U	NA	NA	0.5 U	0.5 U	0.5 U	0.5 U	NA	NA	NA
	20-Feb-92		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	2 U	NA
	27-Apr-92		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	NA	NA
	10-Jul-92		NA	NA	NA	0.5 U	1 U	1 U	1 U	NA	NA	NA
	20-Jul-92		NA	NA	NA	0.5 U	1 U	1 U	1 U	NA	NA	NA
	26-Aug-92		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	NA	NA

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TABLE 1. SUMMARY OF GROUND WATER MONITORING DATA THROUGH AUGUST 26, 1992
ARCO SERVICE STATION NO. 4486
ISSAQUAH, WASHINGTON

Well ID	Collection Date	Notes	TPH as Gasoline (mg/L)	TPH as Diesel (mg/L)	TPH as Motor Oil (mg/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	Ethylene Dibromide (ug/L)	Total Lead (ug/L)	Dissolved Lead (ug/L)
MW-10	05-Nov-90		1 U	1 U	NA	0.5 U	0.5 U	0.5 U	0.6	NA	NA	NA
	12-Feb-91		0.02 U	NA	NA	0.5 U	0.5 U	0.5 U	1 U	NA	NA	NA
	06-May-91	(3)	0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	NA	NA
	06-May-91	(4)	0.02 U	NA	NA	0.5 U	0.5 U	0.5 U	1 U	NA	NA	NA
	13-May-91		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	NA	NA
	20-May-91		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	NA	NA
	28-May-91		0.05 U	NA	NA	0.5 U	1 U	1 U	2	NA	NA	NA
	04-Jun-91		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	NA	NA
	12-Jun-91		0.05 U	NA	NA	1.1	2	2	6	NA	NA	NA
	18-Jun-91		0.05 U	NA	NA	0.5 U	1 U	1 U	2	NA	NA	NA
	24-Jun-91		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	NA	NA
	01-Jul-91		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	0.05 U	15	NA
	08-Jul-91		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	0.05 UJ	12	NA
	22-Jul-91		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	0.05 U	5	NA
	06-Aug-91		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	84	NA
	20-Aug-91		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	70	NA
	03-Sep-91		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	23	NA
	16-Sep-91		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	44	NA
	07-Oct-91		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	NA	NA
	14-Nov-91		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	NA	NA
	12-Dec-91		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	NA	NA
	16-Jan-92		0.05 U	NA	NA	0.5 U	0.5 U	0.5 U	0.5 U	NA	NA	NA
	20-Feb-92		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	3	NA
	27-Apr-92		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	NA	NA
	26-Aug-92		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	NA	NA
MW-11	12-Oct-90		0.05 U	NA	NA	1 U	1 U	1 U	2 U	NA	NA	NA
	05-Nov-90		1 U	1 U	NA	0.5 U	0.5 U	0.5 U	0.5	NA	NA	NA
	12-Feb-91		0.02 U	NA	NA	0.5 U	0.5	0.5 U	1 U	NA	NA	NA
	06-May-91	(3)	0.05 U	NA	NA	0.7	4	1 U	4	NA	NA	NA
	06-May-91	(4)	0.043	NA	NA	0.8	4.2	0.7	4	NA	NA	NA
	13-May-91		0.05 U	NA	NA	0.5 U	1	1 U	2	NA	NA	NA
	20-May-91		0.05 U	NA	NA	0.5 U	2	1 U	3	NA	NA	NA
	28-May-91		0.05 U	NA	NA	0.7	3	1 U	8	NA	NA	NA
	04-Jun-91		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	NA	NA
	12-Jun-91		0.05 U	NA	NA	1.5	1	1 U	3	NA	NA	NA
	18-Jun-91		0.28	NA	NA	0.8	3	1 U	6	NA	NA	NA
	24-Jun-91		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	NA	NA
	01-Jul-91		0.05 U	NA	NA	0.9	4	1 U	6	0.05 U	2 U	NA
	08-Jul-91		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	0.05 UJ	2 U	NA
	22-Jul-91		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	0.05 U	2 U	NA
	06-Aug-91		0.08	NA	NA	2.8	17	3	15	NA	2 U	NA
	21-Aug-91		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	2 U	NA
	03-Sep-91		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	2 U	NA
	16-Sep-91		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	NA	NA
	07-Oct-91		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	NA	NA
	14-Nov-91		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	NA	NA
	12-Dec-91		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	NA	NA
	16-Jan-92		0.05 U	NA	NA	0.5 U	0.5 U	0.5 U	0.5 U	NA	NA	NA
	20-Feb-92		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	2 U	NA
	27-Apr-92		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	NA	NA
	26-Aug-92		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	NA	NA

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TABLE 1. SUMMARY OF GROUND WATER MONITORING DATA THROUGH AUGUST 28, 1992
ARCO SERVICE STATION NO. 4488
ISSAQUAH, WASHINGTON

Well ID	Collection Date	Notes	TPH as Gasoline (mg/L)	TPH as Diesel (mg/L)	TPH as Motor Oil (mg/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	Ethylene Dibromide (ug/L)	Total Lead (ug/L)	Dissolved Lead (ug/L)
MW-12	05-Nov-90		1 U	1 U	NA	0.5 U	0.5 U	0.5 U	0.7	NA	NA	NA
	12-Feb-91		0.02 U	NA	NA	0.5 U	1.4	0.5 U	1.9	NA	NA	NA
	08-May-91	(3)	0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	NA	NA
	08-May-91	(4)	0.032	NA	NA	0.5 U	0.5 U	0.5 U	1 U	NA	NA	NA
	13-May-91		0.05 U	NA	NA	0.5 U	2	1 U	3	NA	NA	NA
	20-May-91		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	NA	NA
	28-May-91		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	NA	NA
	04-Jun-91		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	NA	NA
	12-Jun-91		0.05 U	NA	NA	0.5 U	1 U	1 U	1	NA	NA	NA
	18-Jun-91		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	NA	NA
	24-Jun-91		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	NA	NA
	01-Jul-91		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	0.05 U	18	NA
	08-Jul-91		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	0.05 UJ	2 U	NA
	22-Jul-91		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	0.05 U	12	NA
	06-Aug-91		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	83	NA
	21-Aug-91		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	108	NA
	03-Sep-91		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	20	NA
	18-Sep-91		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	34	NA
	07-Oct-91		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	NA	NA
	14-Nov-91		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	NA	NA
	12-Dec-91		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	NA	NA
	18-Jan-92		0.05 U	NA	NA	0.5 U	0.5 U	0.5 U	0.5 U	NA	NA	NA
	20-Feb-92		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	2 U	NA
	27-Apr-92		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	NA	NA
	28-Aug-92		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	NA	NA
MW-13	30-Nov-90		4	NA	NA	1200	440	75	360	NA	NA	NA
	12-Feb-91		0.033	NA	NA	3.8	2.2	0.8	3.3	NA	NA	NA
	09-May-91	(3)	0.12	NA	NA	4.3	19	5	27	NA	NA	NA
	09-May-91	(4)	0.098	NA	NA	4.3	19	8.4	28	NA	NA	NA
	12-Jun-91		0.05 U	NA	NA	0.5 U	1	1 U	1	NA	NA	NA
	09-Jul-91		0.05 U	NA	NA	0.8	2	1 U	2	0.05 J	34	NA
	07-Aug-91		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	82	NA
	04-Sep-91		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	27	NA
	07-Oct-91		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	NA	NA
	21-Nov-91		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	NA	NA
	13-Dec-91		0.1	NA	NA	0.8	15	1 U	31	NA	NA	NA
	18-Jan-92		0.05 U	NA	NA	0.5 U	0.5 U	0.5 U	0.5 U	NA	NA	NA
	21-Feb-92		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	2	NA
	27-Apr-92		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	NA	NA
	28-Aug-92		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	NA	NA

(Notes on last page)

TABLE 1. SUMMARY OF GROUND WATER MONITORING DATA THROUGH AUGUST 26, 1992
ARCO SERVICE STATION NO. 4486
ISSAQUAH, WASHINGTON

Well ID	Collection Date	Notes	TPH as Gasoline (mg/L)	TPH as Diesel (mg/L)	TPH as Motor Oil (mg/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	Ethylene Dibromide (ug/L)	Total Lead (ug/L)	Dissolved Lead (ug/L)
MW-14	12-Feb-91		110	NA	NA	5000	20000	4500	17000	NA	NA	NA
	09-May-91	(3)	91	NA	NA	8200	19000	3900	20000	NA	NA	NA
	09-May-91	(4)	88	NA	NA	8100	21000	4100	20000	NA	NA	NA
	12-Jun-91		71.9	NA	NA	5060	15200	3300	16500	NA	NA	NA
	09-Jul-91		87	NA	NA	4800	18100	3500	18400	3.27 J	36	NA
	07-Aug-91		16.4	NA	NA	1120	1630	661	2890	NA	53	NA
	04-Sep-91		3.15	NA	NA	149	11	96	315	0.19	11	NA
	04-Sep-91	(DUP)	3.16	NA	NA	150	11	99	328	0.18	13	NA
	08-Oct-91		5.87	NA	NA	233	10	201	431	NA	NA	NA
	08-Oct-91	(DUP)	4.9	NA	NA	200	8	160	390	NA	NA	NA
	21-Nov-91		1.8	NA	NA	47.9	6	56	94	NA	NA	NA
	21-Nov-91	(DUP)	1.8	NA	NA	48.5	5	55	88	NA	NA	NA
	12-Dec-91		1.74	NA	NA	93.1	3	32	206	NA	NA	NA
	12-Dec-91	(DUP)	1.63	NA	NA	88.5	3	31	206	NA	NA	NA
	17-Jan-92		8.6	NA	NA	180	290	140	1800	NA	NA	NA
	21-Feb-92		3.89	NA	NA	94.8	16	52	470	NA	15	NA
	28-Apr-92		23	NA	NA	270	1000	380	3600	NA	NA	NA
	10-Jul-92		NA	NA	NA	16.1	2	15	30	NA	NA	NA
	13-Jul-92		NA	NA	NA	6.3	1	7	15	NA	NA	NA
	15-Jul-92		NA	NA	NA	28.2	26	45	224	NA	NA	NA
	17-Jul-92		NA	NA	NA	6.9	2	11	27	NA	NA	NA
	20-Jul-92		NA	NA	NA	31	21	51	143	NA	NA	NA
	26-Aug-92		0.77	NA	NA	32.3	13	34	81	NA	NA	NA
MW-15	21-Aug-91		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	0.05 U	27	NA
	03-Sep-91		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	6	NA
	07-Oct-91		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	NA	NA
	21-Nov-91		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	NA	NA
	12-Dec-91		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	NA	NA
	16-Jan-92		0.05 U	NA	NA	0.5 U	0.5 U	0.5 U	0.5 U	NA	NA	NA
	21-Feb-92		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	2	NA
	28-Apr-92		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	2	NA
	25-Aug-92		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	NA	NA
MW-16	21-Aug-91		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	0.05 U	13	NA
	03-Sep-91		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	12	NA
MW-17	21-Aug-91		6.2	NA	NA	1400	38	15	930	0.05 U	54	NA
	08-Oct-91		3.3	NA	NA	812	6	110	779	NA	NA	NA

(Notes on last page)

TABLE 1. SUMMARY OF GROUND WATER MONITORING DATA THROUGH AUGUST 28, 1992
ARCO SERVICE STATION NO. 4488
ISSAQUAH, WASHINGTON

Well ID	Collection Date	Notes	TPH as Gasoline (mg/L)	TPH as Diesel (mg/L)	TPH as Motor Oil (mg/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	Ethylene Dibromide (ug/L)	Total Lead (ug/L)	Dissolved Lead (ug/L)
MW-18	21-Aug-91		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	0.05 U	2 U	NA
	04-Sep-91		0.05 U	NA	NA	0.5 U	1	1 U	1 U	NA	2 U	NA
	08-Oct-91		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	NA	NA
	21-Nov-91		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	NA	NA
	13-Dec-91		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	NA	NA
	17-Jan-92		0.05 U	NA	NA	0.5 U	0.92	0.5 U	0.60	NA	NA	NA
	20-Feb-92		0.05 U	NA	NA	1.8	1 U	1 U	1 U	NA	2 U	NA
	28-Apr-92		0.05 U	NA	NA	1.8	1 U	1 U	1 U	NA	NA	NA
	10-Jul-92		NA	NA	NA	0.5 U	1 U	1 U	1 U	NA	NA	NA
	20-Jul-92		NA	NA	NA	0.5 U	1 U	1 U	1 U	NA	NA	NA
	26-Aug-92		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	NA	NA
MW-19	21-Aug-91		2.7	NA	NA	600	1 U	15	95	0.05 U	48	NA
	04-Sep-91		0.05 U	NA	NA	0.5 U	1	1 U	1 U	NA	20	NA
	08-Oct-91		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	NA	NA
	21-Nov-91		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	NA	NA
	13-Dec-91		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	NA	NA
	17-Jan-92		0.05 U	NA	NA	0.5 U	0.5 U	0.5 U	0.5 U	NA	NA	NA
	20-Feb-92		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	6	NA
	28-Apr-92		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	NA	NA
	10-Jul-92		NA	NA	NA	0.5 U	1 U	1 U	1 U	NA	NA	NA
	20-Jul-92		NA	NA	NA	0.5 U	1 U	1 U	1 U	NA	NA	NA
	26-Aug-92		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	NA	NA
MW-20	21-Aug-91		0.05 U	NA	NA	0.9	1 U	1 U	2 U	0.05 U	2 U	NA
	03-Sep-91		0.05 U	NA	NA	0.5 U	3	1 U	2	NA	2 U	NA
	08-Oct-91		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	NA	NA
	21-Nov-91		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	NA	NA
	12-Dec-91		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	NA	NA
	16-Jan-92		0.05 U	NA	NA	0.5 U	0.5 U	0.5 U	0.5 U	NA	NA	NA
	21-Feb-92		0.05 U	NA	NA	0.9	1 U	1 U	1 U	NA	2 U	NA
	28-Apr-92		0.05 U	NA	NA	1.4	3	2	4	NA	NA	NA
	25-Aug-92		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	NA	NA
MW-21	21-Aug-91		0.24	NA	NA	150	1 U	1 U	1 U	0.05 U	38	NA
	03-Sep-91		0.39	NA	NA	223	1 U	1 U	1 U	NA	14	NA
	08-Oct-91		0.15	NA	NA	68.5	1 U	1 U	1 U	NA	NA	NA
	21-Nov-91		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	NA	NA
	12-Dec-91		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	NA	NA
	16-Jan-92		0.05 U	NA	NA	0.5 U	0.5 U	0.5 U	0.5 U	NA	NA	NA
	21-Feb-92		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	6	NA
	28-Apr-92		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	NA	NA
	25-Aug-92		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	NA	NA

(Notes on last page)

TABLE 1. SUMMARY OF GROUND WATER MONITORING DATA THROUGH AUGUST 26, 1992
ARCO SERVICE STATION NO. 4466
ISSAQUAH, WASHINGTON

Well ID	Collection Date	Notes	TPH as Gasoline (mg/L)	TPH as Diesel (mg/L)	TPH as Motor Oil (mg/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	Ethylene Dibromide (ug/L)	Total Lead (ug/L)	Dissolved Lead (ug/L)
Equipment Blank	16-Sep-91		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	NA	NA
	05-Oct-91		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	NA	NA
	21-Nov-91		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	NA	NA
	13-Dec-91		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	NA	NA
	17-Jan-92		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	NA	NA
	21-Feb-92		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	2 U	NA
	28-Apr-92		0.05 U	NA	NA	0.5 U	1 U	1 U	1 U	NA	NA	NA
Storage Tank	07-Aug-91		0.57	NA	NA	83.3	71	17	85	NA	NA	NA
	13-Dec-91		0.05 U	NA	NA	3.8	1 U	1	2	NA	NA	NA
	26-Aug-92		0.05 U	NA	NA	9.4	1 U	4	5	NA	NA	NA
Ecology Cleanup Level (5)			1.0	1.0	1.0	5.0	40	30	20	0.01	5.0	NA
Metro Discharge Limits (6)			NA	NA	NA	130	1500	1400	NA	NA	3000	NA

(1) Values noted with J are estimated because sample holding times were exceeded by the laboratory.
(2) Well was destroyed during UST replacement activities.
(3) Results are from split samples sent to Columbia Analytical Services.
(4) Results are from split samples sent to Pacific Northwest Environmental Laboratory, Inc.
(5) Washington State Department of Ecology, Cleanup Standards Amendment to Model Toxics Control Act Cleanup regulation, adopted January 28, 1991, effective February 28, 1991.
(6) Instantaneous maximum effluent limitations, Metro Discharge Permit No. 7814.

TPH Total petroleum hydrocarbons
mg/L Milligrams per liter
ug/L Micrograms per liter
U Compound not detected at given detection limit.
J Estimated value
NA Not applicable or not available

Analyses were performed by Analytical Technologies, Inc. of Renton, Washington; Pacific Northwest Environmental Laboratories of Redmond, Washington; or Columbia Analytical Services of Bothell, Washington using the following analytical methods:

TPH: modified Method 8015
BTEX: Method 8020
Ethylene Dibromide: Method 504
Dissolved Lead: Method 7421
Total Lead: Method 7421

G:\4466\WA1385A\GWQDATA.WQ1

:RISTINE O. GREGOIRE
Director

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
Northwest Regional Office, 3190 - 160th Ave S.E. • Bellevue, Washington 98008-5452 • (206) 649-7000

September 10, 1991

Victor Salemann
City of Issaquah
Public Works Dept.
PO Box 1307
Issaquah, WA 98027-1307

Re: Issaquah Groundwater Sampling of July 1991

Dear Mr. Salemann:

During July 1991, the Department of Ecology (Ecology) sampled groundwater wells in the City of Issaquah to determine what areas may have been affected by releases of gasoline. Eleven wells were sampled by Ecology: two wells were private wells (Darigold-1 & Zetec-1); three wells were monitoring wells at a vacant lot (Virginia Mason MW 1-3); five wells were monitoring wells at gasoline stations (Mobil-MW 4 and Texaco-MW 2-5); and one well was a recovery well at a gasoline station (Texaco-RW-1). The chemical analysis conducted on these groundwater samples were as follows: TPH by Modified EPA Method 8015 (Purge & Trap); Volatiles by Method 624/8240; Ethylenedibromide Analysis; and Total Lead by 7421 (total digestible method).

Enclosed is a data summary which incorporates both the results of Ecology's sampling, and sampling conducted by consultants at additional monitoring wells at Chevron and Mobil. The Seattle-King County Health Department (SKCHD) assisted Ecology during one day of sampling. I have attached the volatile analysis for Mobil MW-4 and additional Total Lead analysis from Chevron. Available maps showing monitoring well locations are attached. Well logs are available at our office if you would like to come in and review them.

Ethylenedibromide (EDB) was not detected in any sample. Gasoline contamination was only detected at Mobil and Texaco. Both are conducting independent cleanup actions under the Model Toxics Control Act (MTCA), while keeping Ecology informed of their actions. Tetrachloroethene was detected in Mobil MW-4 and Darigold, however, it is below the MTCA cleanup standards of 5 ppb. Carbon Disulfide was detected in V-Mason MW-3 at 14 ppb and in Mobil MW-4 at 1.3 ppb.

The Total Lead detected ranged from 6 ppb to 70 ppb. The levels of lead do not appear to correlate with the gasoline contamination. The Virginia Mason Wells had total lead ranging from 19 ppb to 50 ppb and there is no gasoline detected in these wells and no known past contamination.

SAMPLE LOCATIONS:
- Mobil at 30 W. Sunset Way
- Texaco (former Gull) at 15 E. Sunset Way
- Virginia Mason (future building) at 80 - 110 NW Gilman Blvd.
- Darigold at 611 N. Front St.
- Zetec at 1370 NW Mall
- Chevron at 25 NW Gilman Blvd.

SAMPLING DATES:
- 01/17/90 - Rittenhouse-Zeman & Assoc. collected samples for Mobil MW-2 & MW-3
- 04/11/91 - EA Engineering, Science, and Technology collected samples for Chevron MWs
- 07/03/91 - Ecology and SKCHD collected samples for V-Mason MWs, Darigold, Zetec, and Mobil MW-4
- 07/08/91 - Applied Geotechnology Inc. collected BETX samples for Texaco MWs
  Ecology collected TPH, EDB, and Total Lead for Texaco MWs

If you have any questions, please contact me at (206) 649-7257, or Mike Gallagher (206) 649-7054.

Sincerely,

Annette M. Petrie

Annette Petrie
Site Inspector
Toxics Cleanup Program

Enclosures

cc: Mike Gallagher, Ecology
Mike Rundlett, Ecology
Bill Lasby, Seattle-King County Health Dept.
Moe Batra, WA St. Dept. of Health
Ron Little, Sammamish Plateau Water & Sewer Dist.
John Houck, Carr/Assoc. Inc.
Copies to property owners: Mobil, Texaco, Virginia Mason, Darigold, Zetec, Chevron

September 10, 1991

Issaquah Groundwater Wells
Laboratory Analysis Results
Data Summary

	mg/L TPH	ug/L Benzene	ug/L Toluene	ug/L Ethyl-Benzene	ug/L Total Xylenes	ug/L Total Lead	ug/L Tetrachloroethene	ug/L Carbon Disulfide
MOBIL-MW-2	24.0	1050	7280	1080	1610	N/A	N/A	N/A
MOBIL-MW-3	19.5	492	932	912	6800	N/A	N/A	N/A
MOBIL-MW-4	2.3	3.8 J	2.2 J	1.0 u	37	24	0.7 NJ	1.3 NJ
TEXACO-RW-1	1 u	0.6	0.5 u	0.5 u	1.6	6	N/A	N/A
TEXACO-MW-2	3.3 J	34	100	200	590	17	N/A	N/A
TEXACO-MW-3	1 u	0.5 u	0.5 u	0.5 u	0.5 u	12	N/A	N/A
TEXACO-MW-4	1 u	0.5 u	0.5 u	0.5 u	0. 5 u	70	N/A	N/A
TEXACO-MW-5	1 u	0.5 u	0.5 u	0.5 u	0.5 u	46	N/A	N/A
V-MASON-MW-1	1 u	1.0 u	1.0 u	1.0 u	2.0 u	50	1.0 u	1.0 u
V-MASON-MW-2	1 u	1.0 u	1.0 u	1.0 u	2.0 u	36	1.0 u	1.0 u
V-MASON-MW-3	1 u	1.0 u	1.0 u	1.0 u	2.0 u	19	1.0 u	14
DARIGOLD-1	1 u	1.0 u	1.0 u	1.0 u	2.0 u	6	1.8 J	1.0 u
ZETEC-1	1 u	1.0 u	1.0 u	1.0 u	2.0 u	6 u	1.0 u	1.0 u
CHEVRON MW-1	0.5 u	0.5 u	0.5 u	0.5 u	0.5 u	19	N/A	N/A
CHEVRON MW-2	0.5 u	0.5 u	0.5 u	0.5 u	0.5 u	16	N/A	N/A
CHEVRON MW-3	0.5 u	0.5 u	0.5 u	0.5 u	0.5 u	2.7	N/A	N/A

DATA QUALIFER DEFINITIONS

U - The analyte wa not detected at or above the reported result.
J - The analyte was positively identified. The associated numerical result is an estimate.
NJ - There is presumptive evidence that the analyte is present. The associated numerical value is an estimate.

EDB Samples

ANALYTICAL
RESOURCES
INCORPORATED

Analytical
Chemists &
Consultants

333 Ninth Ave. North
Seattle, WA 98109-5187
(206) 621-6490
(206) 621-7523 (FAX)

ORGANICS ANALYSIS DATA SHEET
Ethylenedibromide Analysis

QC Report: 8627-WDOE
Project: Issaquah Wells

Matrix: Waters

Date Received: 07/11/91

Data Release Authorized

Report prepared: 07/31/91 MAC:K/kas

Reported in ppb (µg/L)

Sample #:	Method Blank	288020	288020	288020	288021	288022	288023	288024
ARI Lab ID:	*0715MB*	*8627A*	*8627Ams*	*8627Amsd*	*8627B*	*8627C*	*8627D2*	*8627E*
Date Extracted:	*07/15/91*	*07/15/91*	*07/15/91*	*07/15/91*	*07/15/91*	*07/15/91*	*07/17/91*	*07/15/91*
Date Analyzed:	*07/16/91*	*07/16/91*	*07/16/91*	*07/16/91*	*07/16/91*	*07/16/91*	*07/19/91*	*07/16/91*
Vol. Extracted:	*40 ml*	*40 ml*	*40 ml*	*40 ml*	*40 ml*	*40 ml*	*40 ml*	*40 ml*
Final Vol.:	*2.0 ml*	*2.0 ml*	*2.0 ml*	*2.0 ml*	*2.0 ml*	*2.0 ml*	*2.0 ml*	*2.0 ml*
Dilution:	*1:1*	*1:1*	*1:1*	*1:1*	*1:1*	*1:1*	*1:1*	*1:1*
EDB	*0.03 U*	*0.03 U*	-	-	*0.03 U*	*0.03 U*	*0.03 U*	*0.03 U*
*Surrogate %Rec**	*82.7%*	*72.5%*	*85.2%*	*84.7%*	*87.5%*	*80.1%*	*81.0%*	*64.9%*

Sample #:	288025	288000	288001	288002	288003	288004	Method Blank
ARI Lab ID:	*8627F*	*8627G*	*8627H2*	*8627I*	*8627J*	*8627K*	*0717MB*
Date Extracted:	*07/15/91*	*07/15/91*	*07/17/91*	*07/15/91*	*07/15/91*	*07/15/91*	*07/17/91*
Date Analyzed:	*07/16/91*	*07/16/91*	*07/19/91*	*07/16/91*	*07/17/91*	*07/19/91*	*07/19/91*
Vol. Extracted:	*40 ml*	*40 ml*	*40 ml*	*40 ml*	*40 ml*	*40 ml*	*40 ml*
Final Vol.:	*2.0 ml*	*2.0 ml*	*2.0 ml*	*2.0 ml*	*2.0 ml*	*2.0 ml*	*2.0 ml*
Dilution:	*1:1*	*1:1*	*1:1*	*1:1*	*1:1*	*1:1*	*1:1*
EDB	*0.03 U*	*0.03 U*	*0.03 U*	*0.03 U*	*0.03 U*	*0.03 U*	*0.03 U*
*Surrogate %Rec**	*64.0%*	*75.8%*	*82.6%*	*69.8%*	*73.7%*	*71.9%*	*77.3%*

U Indicates compound was analyzed for but not detected at the given detection limit.

NR Indicates compound not reported due to chromatographic interference and/or dilution.

* Surrogate is Bromoform.

X Indicates a value above the linear range of the detector. Dilution required.

.01 ppb MTCA EDB

Table 2. Total lead concentrations in groundwater samples collected 15 May 1991 at Chevron SS9-5399, Issaquah, WA. See Figure 1 for sampling locations; laboratory reports attached.

		Total lead (in ppm) by EPA 7421	
Sample	Well	NCA[a]	ATI[b]
MW1	EAMW1	0.017	ND
MW2	EAMW2	0.081	0.049
MW2-1[c]	EAMW2	0.019	0.014
MW3	EAMW3	0.012	0.034
Trip Blank	---	ND	ND

[a] Detection Limit: 0.001 ppm
[b] Detection Limit: 0.005 ppm
[c] Duplicate sample
Values in bold typeface exceed MTCA Method A cleanup levels: lead = 0.005 ppm

Chevron - Additional Lead Samples

Mobil-Y Well

ANALYTICAL
RESOURCES
INCORPORATED

Analytical
Chemists &
Consultants

333 Ninth Ave. North
Seattle, WA 98109-5187
(206) 621-6490
(206) 621-7523 (FAX)

ORGANICS ANALYSIS DATA SHEET
Volatiles by Method 624/8240

Sample No: 288025

Lab ID: 8627-F
Matrix: Waters

QC Report No: 8627-WDOE
Project No: Issaquah Wells
VTSR: 07/11/91

Data Release Authorized: [signature]
Report prepared 07/31/91 - MAC:C PAT

Amount Purged: 5 mls
Instrument: FINN 5
Conc/Dil: 1 to 1
Date Analyzed: 07/18/91
pH: NA

CAS Number		µg/L	CAS Number		µg/L
74-87-3	Chloromethane	5.0 U	78-87-5	1,2-Dichloropropane	1.0 U
74-83-9	Bromomethane	3.0 U	10061-02-6	Trans-1,3-Dichloropropene	1.0 U
75-01-4	Vinyl Chloride	3.0 U	79-01-6	Trichloroethene	1.0 U
75-00-3	Chloroethane	3.0 U	124-48-1	Dibromochloromethane	1.0 U
75-09-2	**Methylene Chloride** 3 UJ	~~2.9 MB~~	79-00-5	1,1,2-Trichloroethane	1.0 U
67-64-1	**Acetone** 19 NJ	~~19 M~~	71-43-2	**Benzene**	3.8 J
75-15-0	**Carbon Disulfide** 1.3 NJ	~~1.3 M~~	10061-01-5	cis-1,3-Dichloropropene	1.0 U
75-35-4	1,1-Dichloroethene	2.0 U	110-75-8	2-Chloroethylvinylether	1.0 U
75-34-3	1,1-Dichloroethane	1.0 U	75-25-2	Bromoform	1.0 U
156-60-5	Trans-1,2-Dichloroethene	1.0 U	108-10-1	4-Methyl-2-Pentanone	2.0 U
156-59-2	**Cis-1,2-Dichloroethene**	3.7 J	591-78-6	2-Hexanone	4.0 U
67-66-3	Chloroform	1.0 U	127-18-4	**Tetrachloroethene**	0.7 ~~M~~ NJ
107-06-2	1,2-Dichloroethane	1.0 U	79-34-5	1,1,2,2-Tetrachloroethane	1.0 U
78-93-3	2-Butanone	7.5 U	108-88-3	**Toluene**	2.2 J
71-55-6	1,1,1-Trichloroethane	1.0 U	108-90-7	Chlorobenzene	1.0 U
56-23-5	Carbon Tetrachloride	1.0 U	100-41-4	Ethylbenzene	1.0 U
108-05-4	Vinyl Acetate	1.0 U	100-42-5	Styrene	1.0 U
75-27-4	Bromodichloromethane	1.0 U	1330-20-7	**Total Xylenes**	37
75-69-4	Trichlorofluoromethane	1.0 U	1,1,2-Trichloro-1,2,2-trifluoroethane		5.0 U

Surrogate Recoveries

d8-Toluene	102%
Bromofluorobenzene	88.7%
d4-1,2-Dichloroethane	95.2%

Data Reporting Qualifiers

Value If the result is a value greater than or equal to the detection limit, report the value.

U Indicates compound was analyzed for but not detected at the given detection limit.

J Indicates an estimated value when result is less than specified detection limit.

NR Analysis not required.

B This flag is used when the analyte is found in the blank as well as a sample. Indicates possible/probable blank contamination.

K This flag is used when quantitated value falls above the limit of the calibration curve and dilution should be run.

M Indicates an estimated value of analyte found and confirmed by analyst but with low spectral match parameters.

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
Post Office Box 307 • Manchester, Washington 98353-0346 • (206) 895-4740

Project Officer:	Annette Petrie
Project:	Issaquah Wells
Lab Sample Numbers:	288000-288004
	288020-288025
From:	Janet Hyre

Sample Holding times
All analyses were performed within the specified holding times for metals analysis.

Quality Control
The samples were analyzed twice. The first time the samples were analyzed, there was no problem with the analysis but no continuing calibration was performed. I called the project officer, Annette Petrie, and asked whether this project requires rigorous QA/QC. She answered that it would, and the samples were re-analyzed with continuing calibration. Results are reported from the second analysis, which includes an appropriate continuing calibration performed during the analytical run.

The detection limit for sample number 288021 has been raised to <0.006 mg/L because 0.005 mg/L of lead was found in one blank. The result for this blank is not noted on the final report. Although the raw data does not indicate detectable lead in this sample it is inappropriate to report a "less-than" sample value at the same level as one of the blanks.

The result of analysis of an ERA standard is acceptable. Matrix spikes analyzed at the same time are acceptable. The results can be used without qualifiers.

SOUND ANALYTICAL SERVICES, INC.

SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206)922-2310 - FAX (206)922-5047

Report To: WA State Dept. of Ecology   Date: July 17, 1991
Revised: July 26, 1991

Report On: Analysis of Water   Lab No.: 18624

IDENTIFICATION:
Samples Received on 07-11-91
Project: J5A13/J5E03 Issaquah Wells/Bethel Wells

ANALYSIS:

Lab Sample No.		Client ID		Revised: Total Lead*, mg/l
1	TEX-5	288000		0.046
2	TEX-4	288001		0.070
3	TEX-R ~~[illegible]~~	288002		0.006
4	TEX-3	288003		0.012
5	TEX-2	288004		0.017
6	Darigold	288020		0.006
7	ZETEC	288021		< ~~0.005~~ < 0.006 jh 8/91
8	MASON 3	288022		0.019
9	MASON 2	288023		0.036
10	MASON 1	288024		0.050
11	~~[illegible]~~	288025	MOBIL-4	0.024
12	Kitsap Co. ~~[illegible]~~ Bethel Wells	288111	~~[illegible]~~	0.012

* by GFAA

SOUND ANALYTICAL SERVICES

STAN P. PALMQUIST

SOUND ANALYTICAL SERVICES, INC.

SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206) 922-2310 - FAX (206) 922-5047

QUALITY CONTROL REPORT

Lab No: 18624 (Revised) (1)
Date: July 26, 1991
Client: WA State Dept. of Ecology

Client ID: 288000
Matrix: Water
Units: mg/l

MATRIX SPIKES

Compound	Spiked Sample Result (SSR)	Sample Result (SR)	Spike Added (SA)	%R*
Total Metals:				
Lead	0.057	0.046	0.010	110

% R * = percent recovery
= [(SSR - SR) / SA] x 100

MATRIX SPIKE DUPLICATE

Compound	Matrix Spike(S)	Matrix Spike Duplicate (D)	RPD *
Total Metals:			
Lead	0.057	0.056	3.5

RPD * = Relative Percent Difference
= [(S - D) / ((S + D) /2)] x 100

Continued . . . . . .

SOUND ANALYTICAL SERVICES, INC.

TOTAL METALS STANDARDS

Origin of standard: Environmental Resource Associates
Units:

Compound	Result (R)	True Value (TV)	% Difference
Lead	0.032	0.030	6.5

% Difference - Sample/Standard x 100

STANDARDS

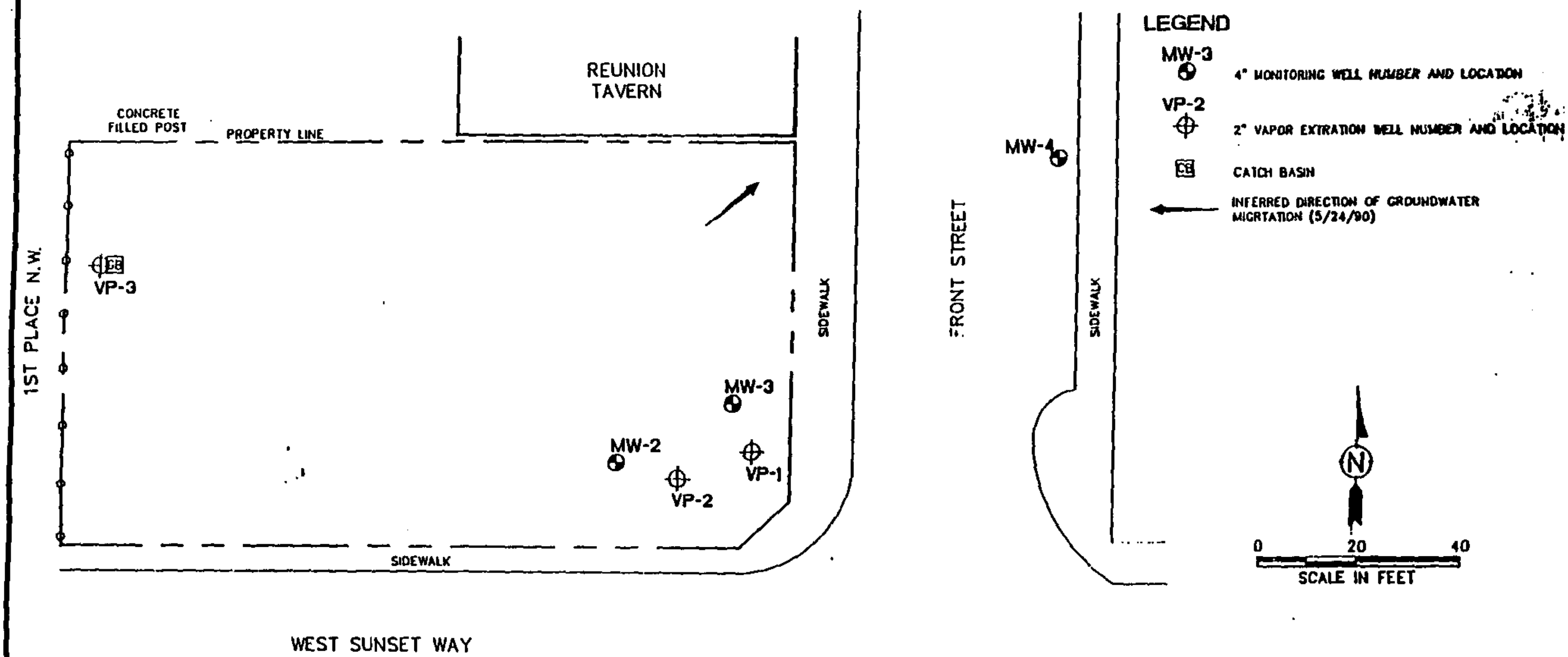
Origin of standard: Total Metals Method Blank
Units:

Compound	Result
Lead	< 0.005

DISCUSSION

Lab No. 18624 was revised to incorporate a 30 ppb ccc and blank. Samples were prepared over using the total digestible method. Lead was run on GFAA. Spikes were pre-spikes.

Because of the difference in the results of your Client ID 288024 & 288025, they were recheck by the operator.



FORMER MOBIL SERVICE STATION No. 10-D8R
ISSAQUAH, WASHINGTON

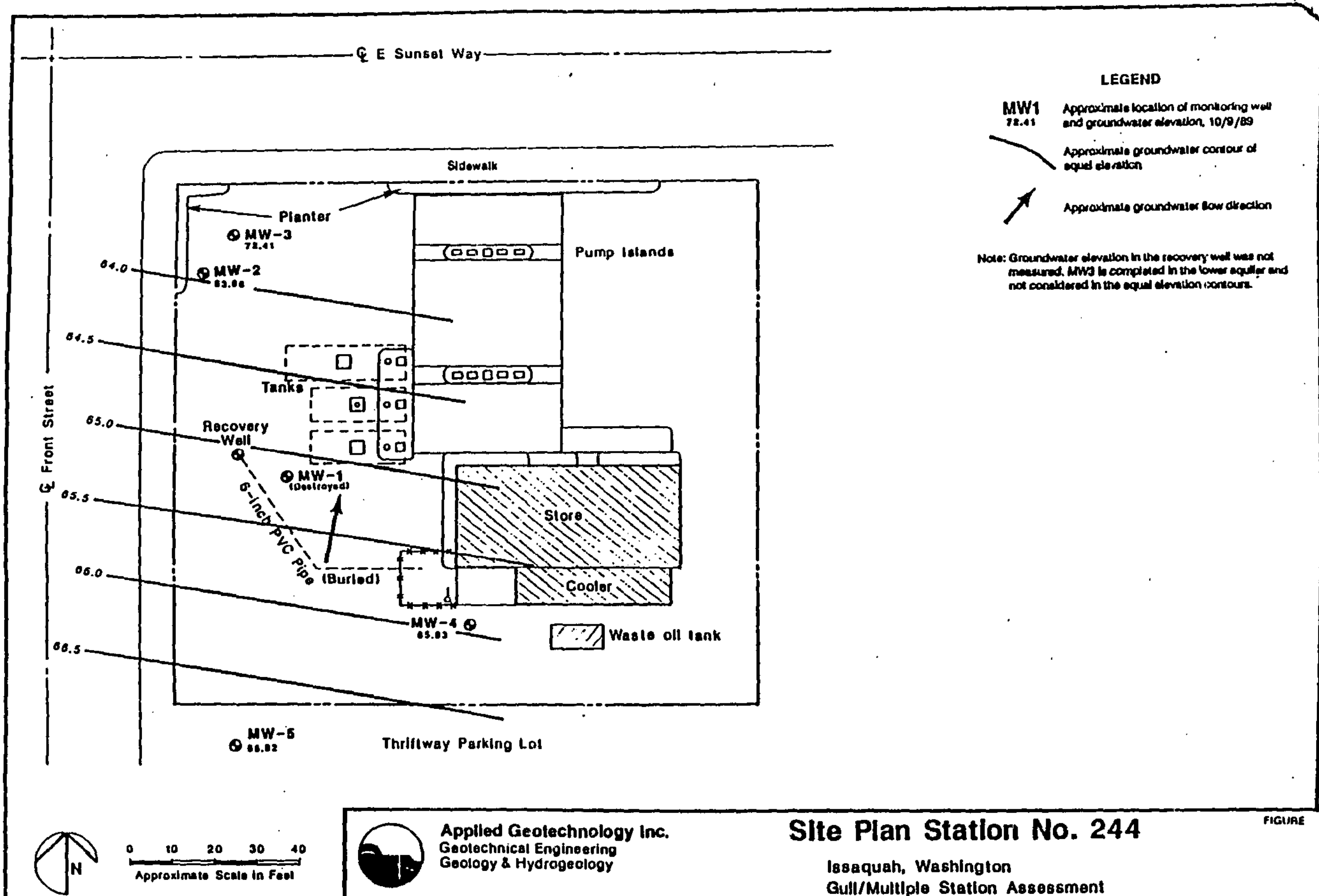
SITE AND EXPLORATION PLAN

FIGURE 2

W.O. W-5391-3
BY TJP
DATE AUG 1991
SCALE 1"=20'

RITTENHOUSE-ZEMAN & ASSOCIATES, INC.
Geotechnical & Environmental Consultants
1400 140th Avenue N.E.
Bellevue, WA 98005

RZA



Reference: "General Arrangement, Service Station 244" by H.E. Schmidt, Inc., 1981.

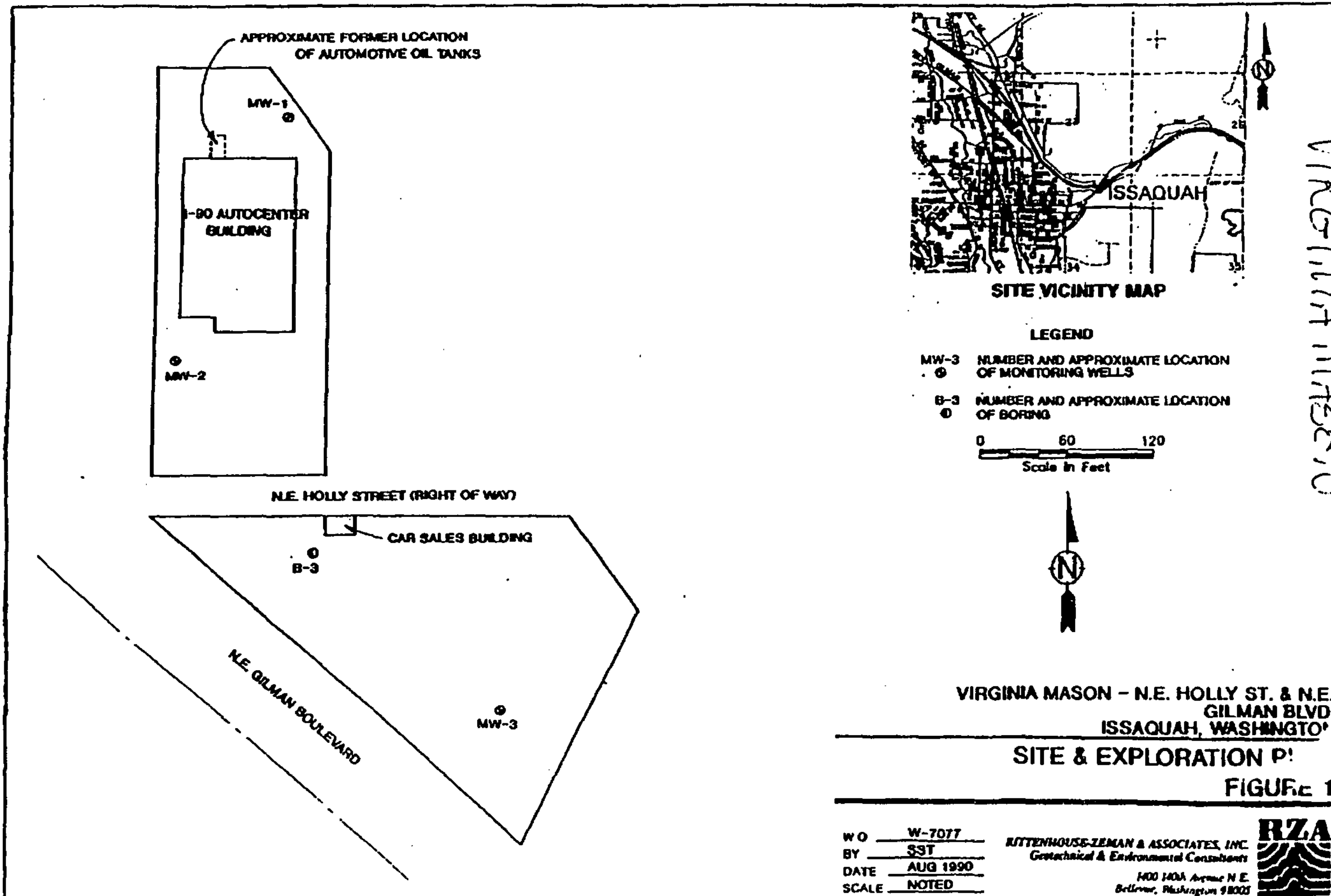
Applied Geotechnology Inc.
Geotechnical Engineering
Geology & Hydrogeology

Site Plan Station No. 244

Issaquah, Washington
Gull/Multiple Station Assessment

FIGURE

JOB NUMBER	DRAWN	APPROVED	DATE	REVISED	DATE
15,256.003/15,256.037	KER	CWS	1 Nov 87	ECR	25 October 89


APPROXIMATE FORMER LOCATION OF AUTOMOTIVE OIL TANKS
MW-1
I-90 AUTOCENTER BUILDING
MW-2
N.E. HOLLY STREET (RIGHT OF WAY)
CAR SALES BUILDING
B-3
MW-3
N.E. GILMAN BOULEVARD
ISSAQUAH
SITE VICINITY MAP
LEGEND
MW-3 NUMBER AND APPROXIMATE LOCATION OF MONITORING WELLS
B-3 NUMBER AND APPROXIMATE LOCATION OF BORING
0 60 120
Scale in Feet
N
VIRGINIA MASON – N.E. HOLLY ST. & N.E. GILMAN BLVD.
ISSAQUAH, WASHINGTO
SITE & EXPLORATION P
FIGURE 1
W O W-7077
BY SST
DATE AUG 1990
SCALE NOTED
RITTENHOUSE-ZEMAN & ASSOCIATES, INC.
Geotechnical & Environmental Consultants
1400 140th Avenue N.E.
Bellevue, Washington 98005
RZA

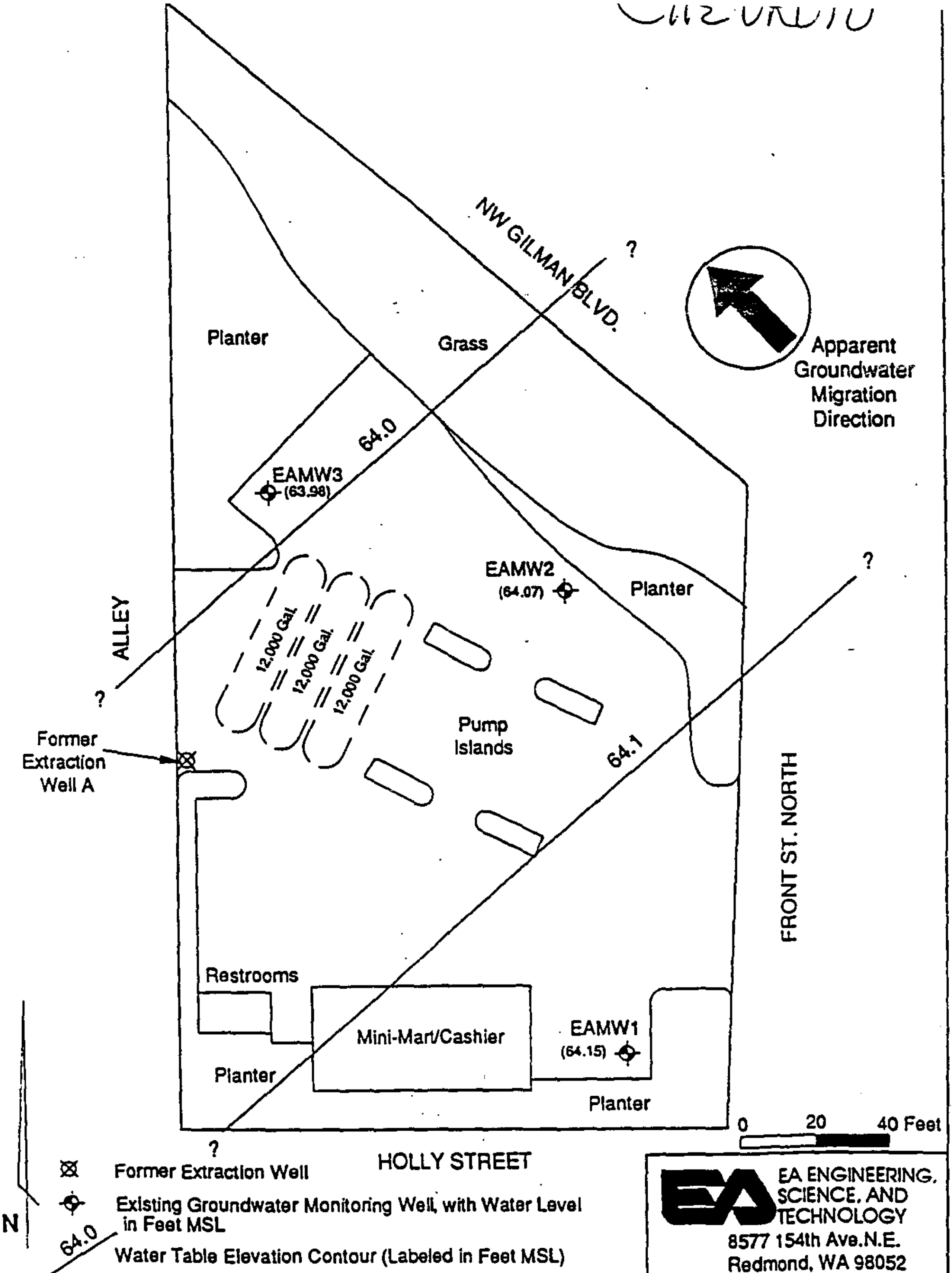
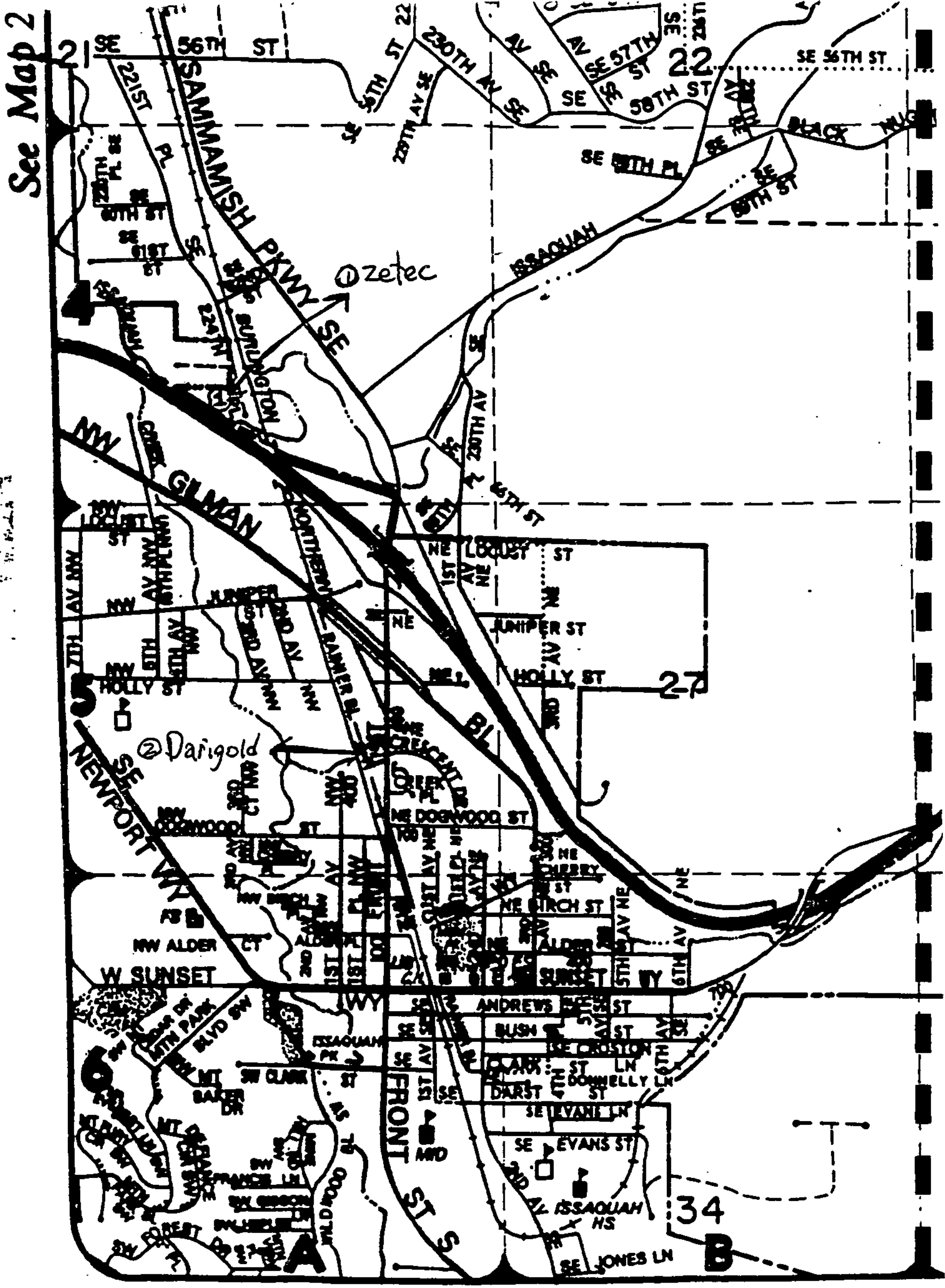


Figure 2. Water Table Beneath Chevron SS 9-5399, Issaquah, Washington, 11 April, 1991.

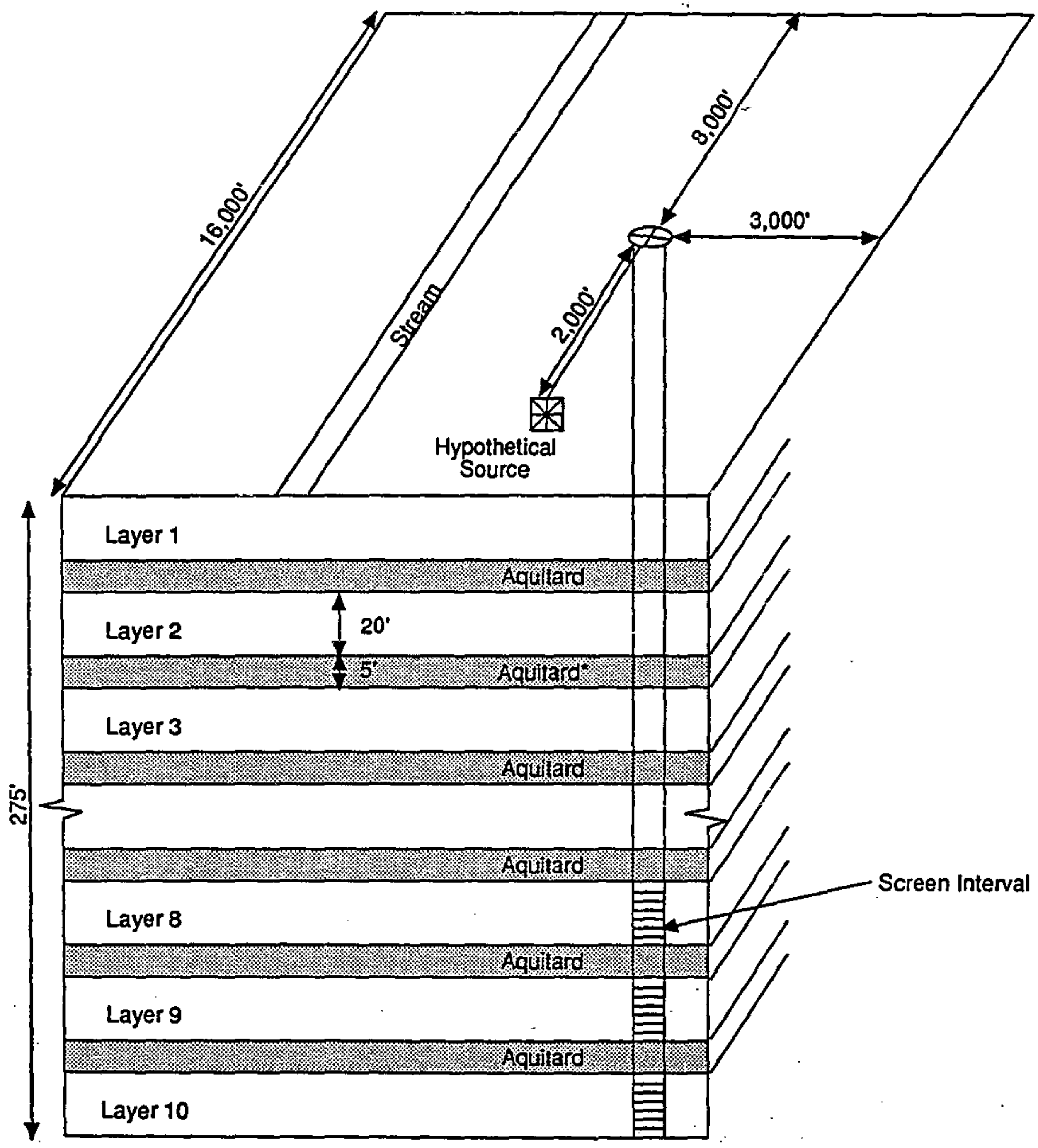


See Map 2
SE 56TH ST
SAMMAMISH PKWY SE
230TH AV SE
SE 57TH ST
SE 58TH ST
SE 56TH ST
BLACK NUGGET
ISSAQUAH
① zetec
BURLINGTON
NW GILMAN
NE LOCUST ST
NW LOCUST ST
JUNIPER ST
NE JUNIPER ST
NW HOLLY ST
NE HOLLY ST
BL
② Darigold
SE NEWPORT WY
NE DOGWOOD ST
NW DOGWOOD ST
CRESCENT DR
NE BIRCH ST
NW ALDER CT
NE ALDER ST
W SUNSET WY
SUNSET WY
SE ANDREWS ST
SE BUSH ST
SE CROSTON LN
SE CLARK ST
SW CLARK ST
SE DONNELLY LN
SE DARST ST
SE EVANS LN
SE EVANS ST
MT BAKER DR
FRONT ST S
WILDWOOD BL
ISSAQUAH HS
SE JONES LN
21
22
27
34
4
5
6
A
B

Appendix G

APPENDIX G

MODFLOW/MODPATH MODELING



Layers 1-10	Hydraulic Conductivity (K_h) 100 to 350 ft/d
Aquitards	Hydraulic Conductivity (K_v) 1 to 10,000 lower than K_n
*	Extent varied from 100 to 5,000 feet
Stream	Conductance = 0.02 ft/day when present

FIGURE **G-1**
MODFLOW/MODPATH MODEL CONFIGURATION
SPWSD/PREPARE PLAN/WA

PROJECT NO. 913-1252.009 DRAWING NO. 45799 DATE 6/8/93 DRAWN BY TK

Golder Associates

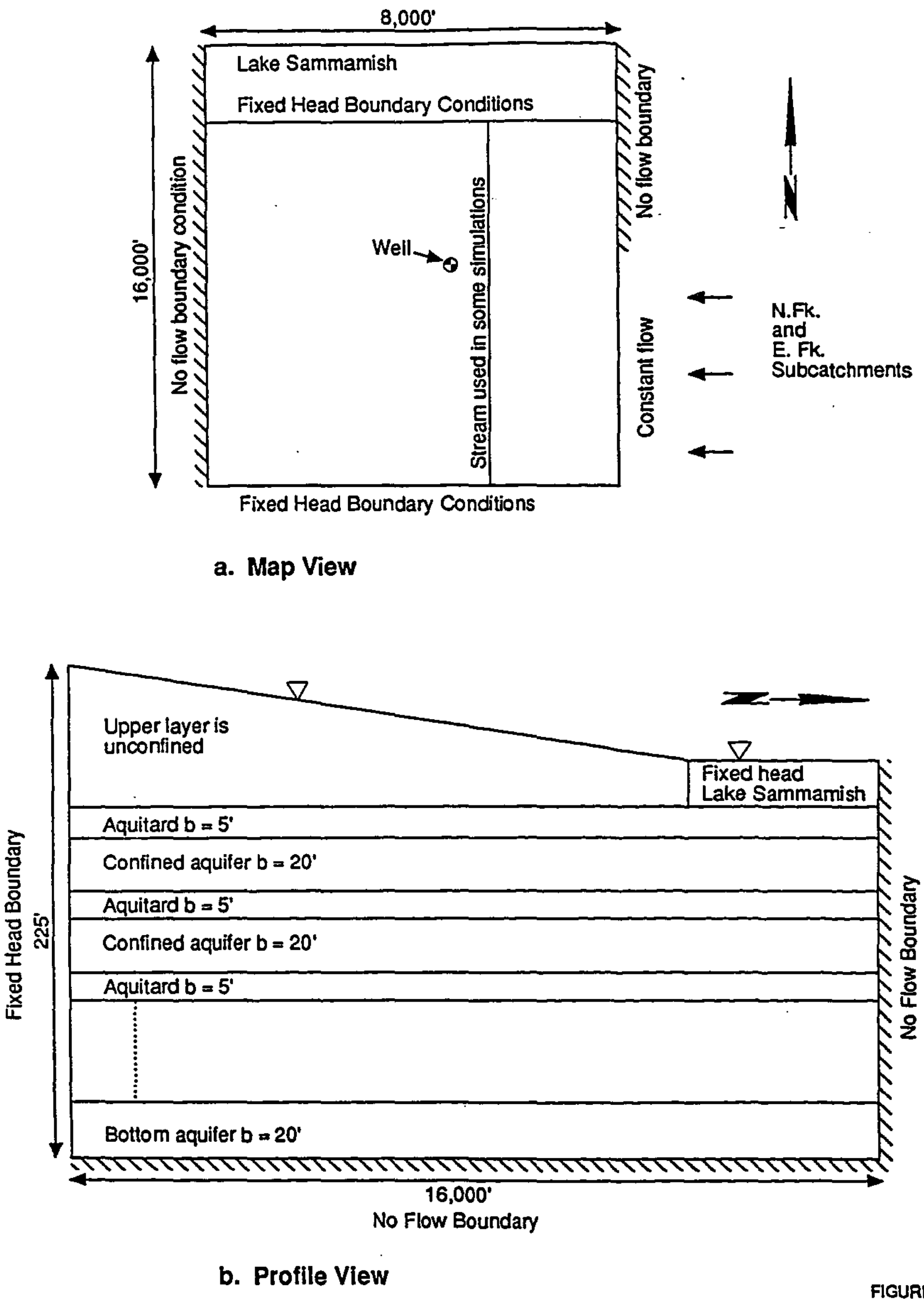


FIGURE **G-2**

MODFLOW/MODPATH MODEL CONFIGURATION AND BOUNDARY CONDITIONS

SPWSD/PREPARE PLAN/WA

PROJECT NO. 913-1252.009 DRAWING NO. 45800 DATE 6/10/93 DRAWN BY TK

Golder Associates

MODFLOW/MODPATH					
Sensitivity Analysis					
	See Figure For Explanation of Model Configruration				
					% Capture of
		K h	Anisotropy	K v	Upgradient Release
	Sensitivity Run 1	(ft/day)		(ft/day)	
	Bulk Anisotropy				
		100	10	10	100%
		100	100	1	100%
		100	1000	0.1	100%
		100	10000	0.01	14%
		350	10	35	100%
		350	100	3.5	71%
		350	1000	0.35	0%
		350	10000	0.035	0%
	Sensitivity Run 2	K h	K v Aquitard	Extent	% Capture of
	Aquitard Continuity	(ft/day)	(ft/day)	(ft)	Upgradient Release
	Kh = 10* K v except	100	0.01	320	54%
	At aquitard	100	0.01	1000	29%
		100	0.01	5000	14%
	Kh = 10* K v except	350	0.35	320	14%
	At aquitard	350	0.35	1000	2%
		350	0.35	5000	0%
					Min. Travel
	Sensitivity Run 3	K h	Anisotropy	Stream Cond.	Time to well
	Stream Infiltration	(ft/day)		(ft/day)	(yr)
		100	100	0.02	1.37
		100	100	None	1.25
		350	100	0.02	0.69
		350	100	None	0.66

Appendix H

APPENDIX H

FLOWPATH MODELING RESULTS AND CAPTURE ZONE DELINEATIONS

TABLE H-1

MODELING RESULTS ASSUMING PROJECTED FUTURE GROUNDWATER WITHDRAWLS*

Run	Model Description	Hydraulic Conductivity		Boundary Conditions		Const. Head Lake Sammamish (ft msl)	Gap Area (ft msl)	Results Flux Through Gap (cfs)	Flux to Lake Sammamish (cfs)
		North-Western Valley (ft/day)	Central-Southern Valley (ft/day)	Const. Flux West + Southwest (cfs)	East (cfs)				
CASE4A	High Water-Level Model	200	300	7.3	9.7	25	150	5.3	4.0
CASE4B	Low Water-Level Model	200	300	7.3	9.7	25	140	5.3	0.6

*Assumed Future Pumping Rates:

- COI 1/2 - 2,150 gpm
- COI 4/5 - 2,220 gpm
- Lakeside - 220 gpm
- SP 7/8 - 1,735 gpm
- SP 9 - 1,945 gpm

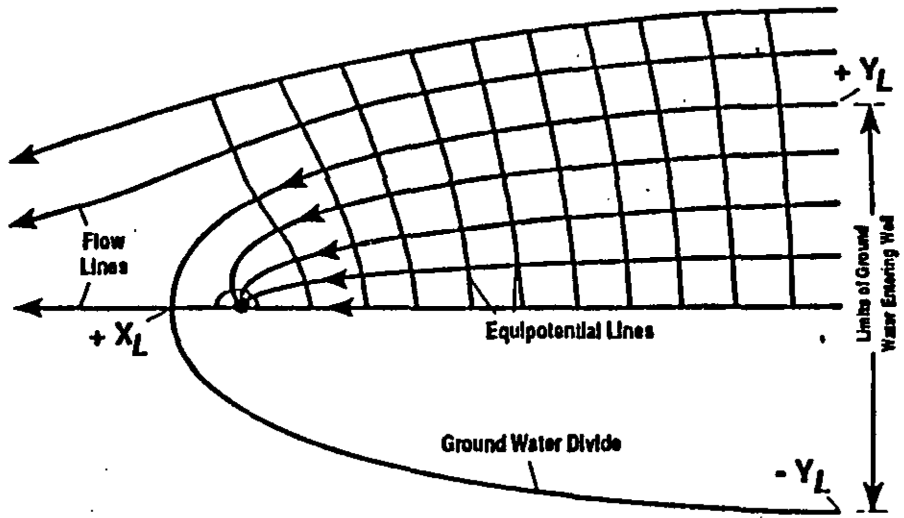
TABLE H-2

ESTIMATED VERTICAL TRAVEL TIME OUTSIDE MODEL DOMAIN

Flux	Gradient	Area[3] (ft^2)	Vertical Hydraulic Conductivity (ft/d)	Velocity[4] (ft/d)	Travel Time[5] (yr)
4.1[1]	0.2	2.2×10^6	0.8	0.2	5.4
13.9[2]	0.2	2.2×10^6	2.7	0.6	1.8

(1) Minimum flux - case 1B.
(2) Maximum flux - case 3A.
(3) Assumed zone of contribution is 2 miles wide, through a 200-foot flow tube.
(4) Assumed porosity is 0.25.
(5) Assumed path length of 400 vertical feet.

UNIFORM FLOW ANALYTICAL MODEL



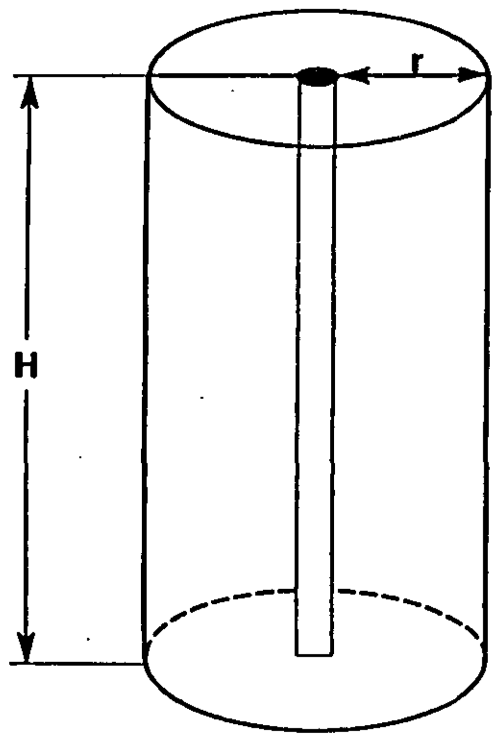
$$X_L = -\frac{Q}{2 \pi K b i}$$ Distance to Down-Gradient Null Point

$$Y_L = \pm \frac{Q}{2 K b i}$$ Boundary Limit

Where:

Q = Well Pumping Rate
K = Hydraulic Conductivity
b = Saturated Thickness
i = Hydraulic Gradient
π = 3.1416

VOLUMETRIC FLOW EQUATION



$$r = \sqrt{\frac{Q\,t}{\pi\, n\, H}}$$

Where:
Q = Pumping Rate of Well

n = Aquifer Porosity = 0.2
H = Open Interval or Length of Well Screen
t = Travel Time to Well

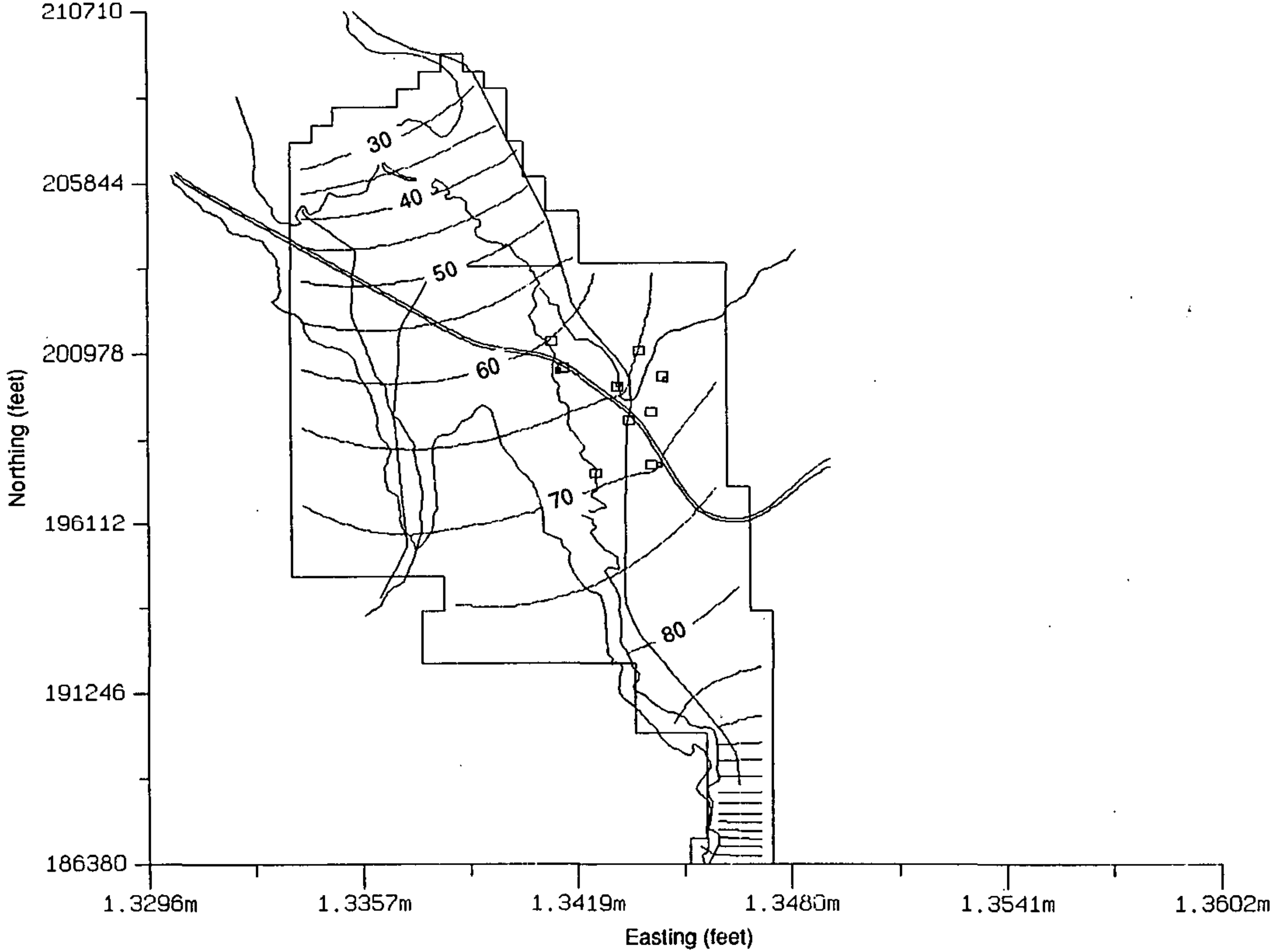


FIGURE **H-1a**

CASE 1A: GROUND WATER ELEVATIONS

SAMMAMISH/PREPARE PLAN/WA

PROJECT NO. 913 1252.009 DRAWING NO. 45539 DATE 5/5/93 DRAWN BY CW

Golder Associates

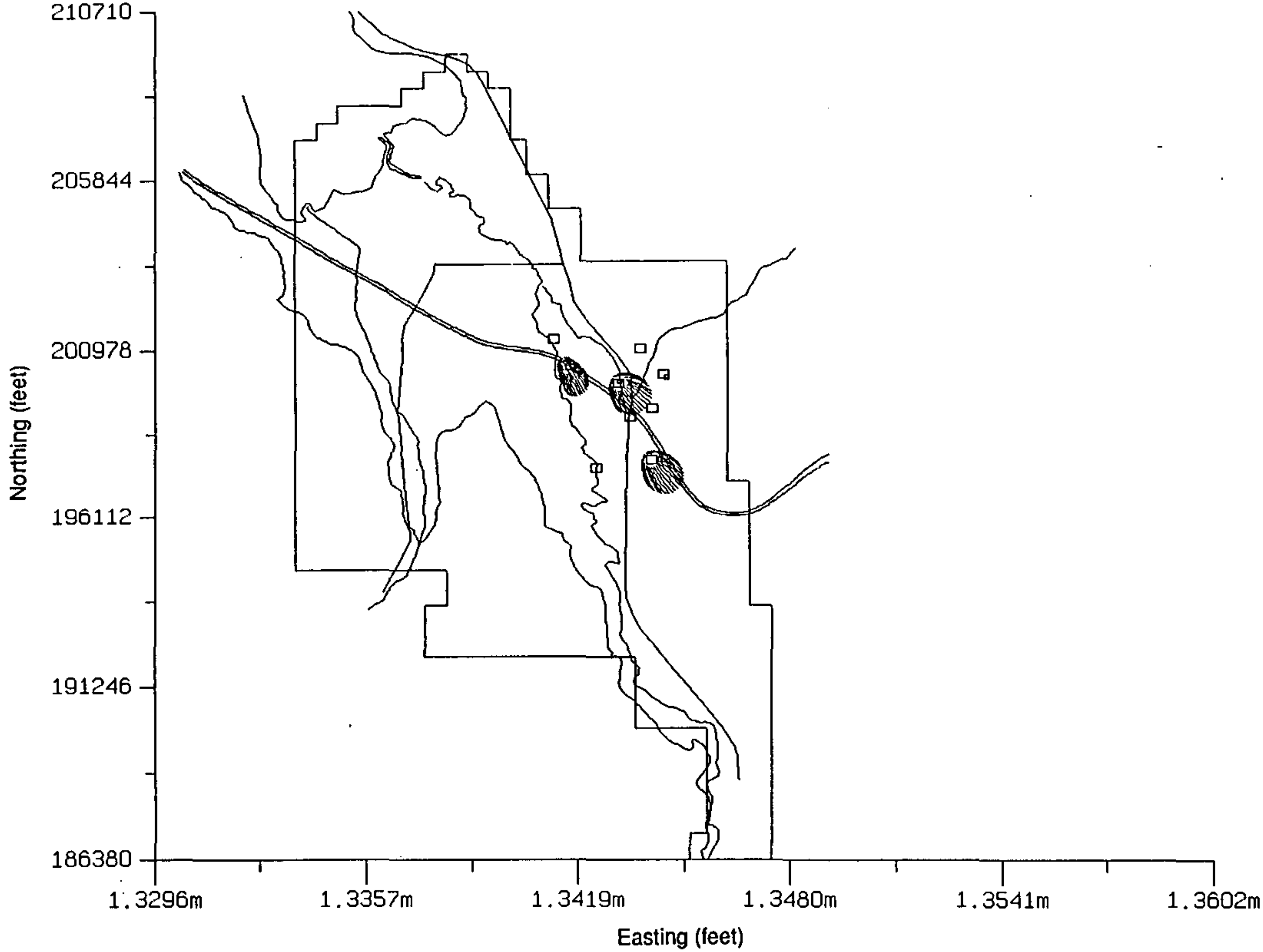


FIGURE **H-1b**

CASE 1A: 1-YEAR CAPTURE ZONE

SAMMAMISH/PREPARE PLAN/WA

PROJECT NO. 913 1252.009 DRAWING NO. 45540 DATE 5/5/93 DRAWN BY CW

Golder Associates

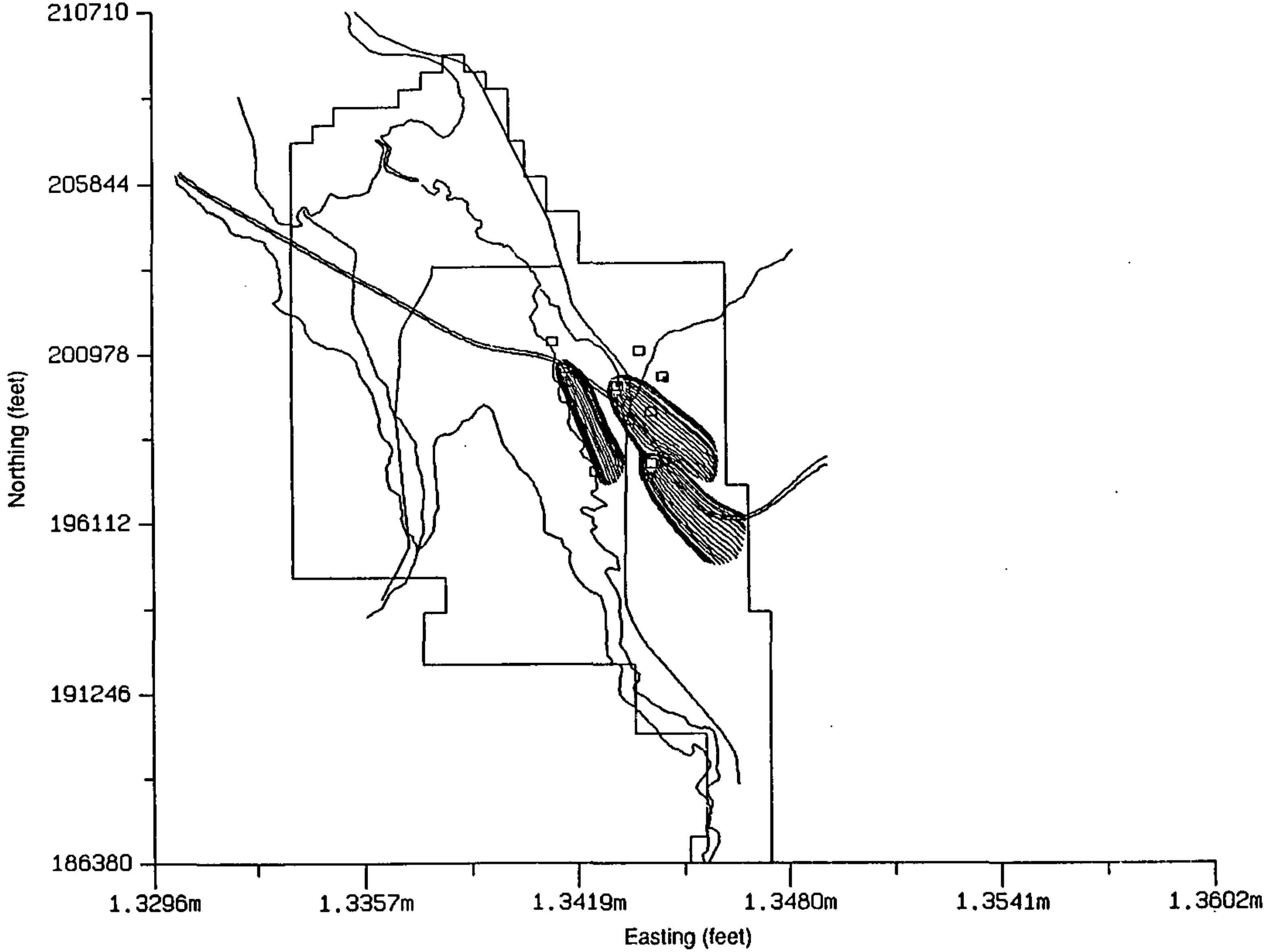


FIGURE **H-1c**

CASE 1A: 5-YEAR CAPTURE ZONE

SAMMAMISH/PREPARE PLAN/WA

PROJECT NO. 913 1252.009 DRAWING NO. 45541 DATE 5/5/93 DRAWN BY CW

Golder Associates

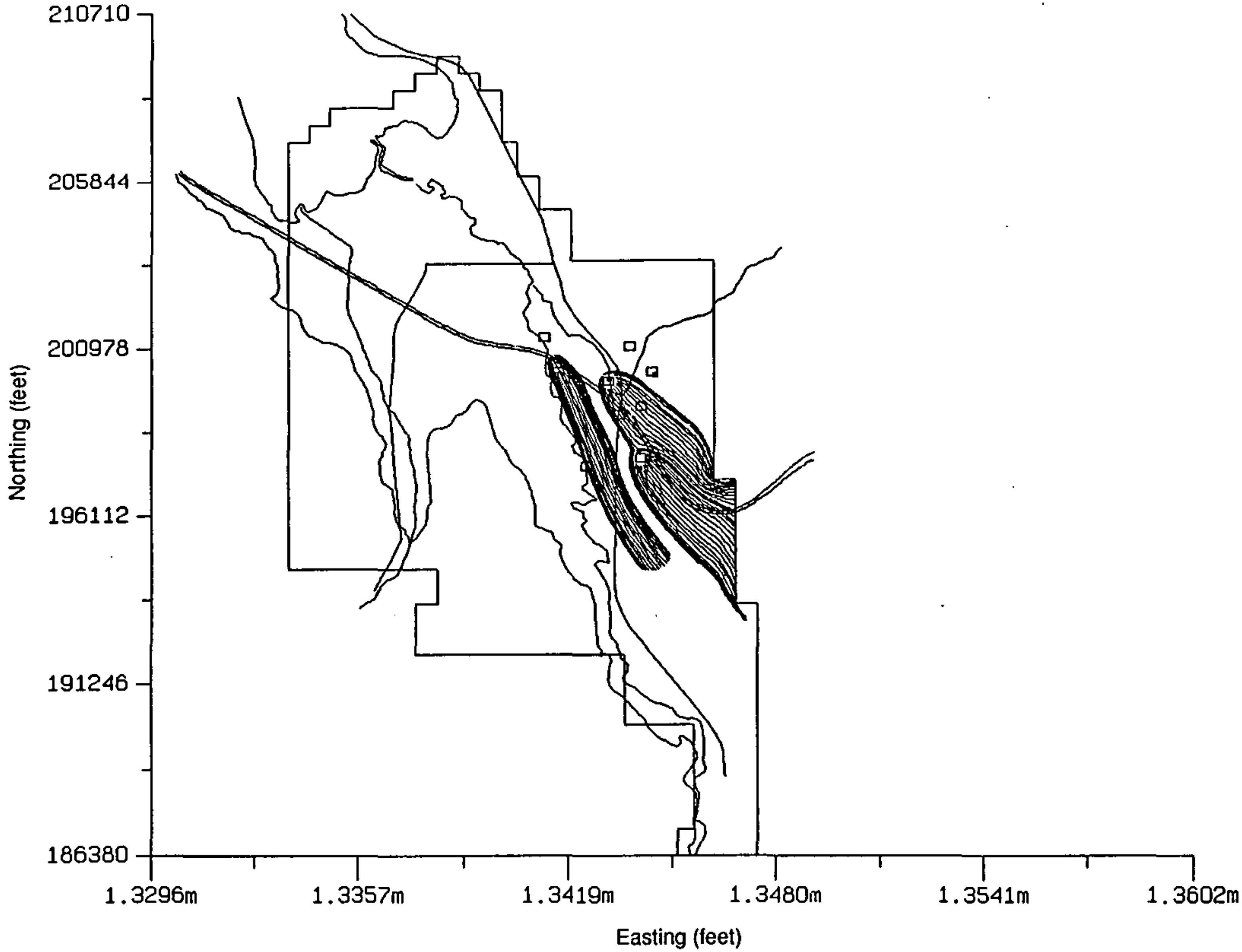


FIGURE **H-1d**

CASE 1A: 10-YEAR CAPTURE ZONE

SAMMAMISH/PREPARE PLAN/WA

PROJECT NO. 913 1252.009 DRAWING NO. 45542 DATE 5/5/93 DRAWN BY CW

Golder Associates

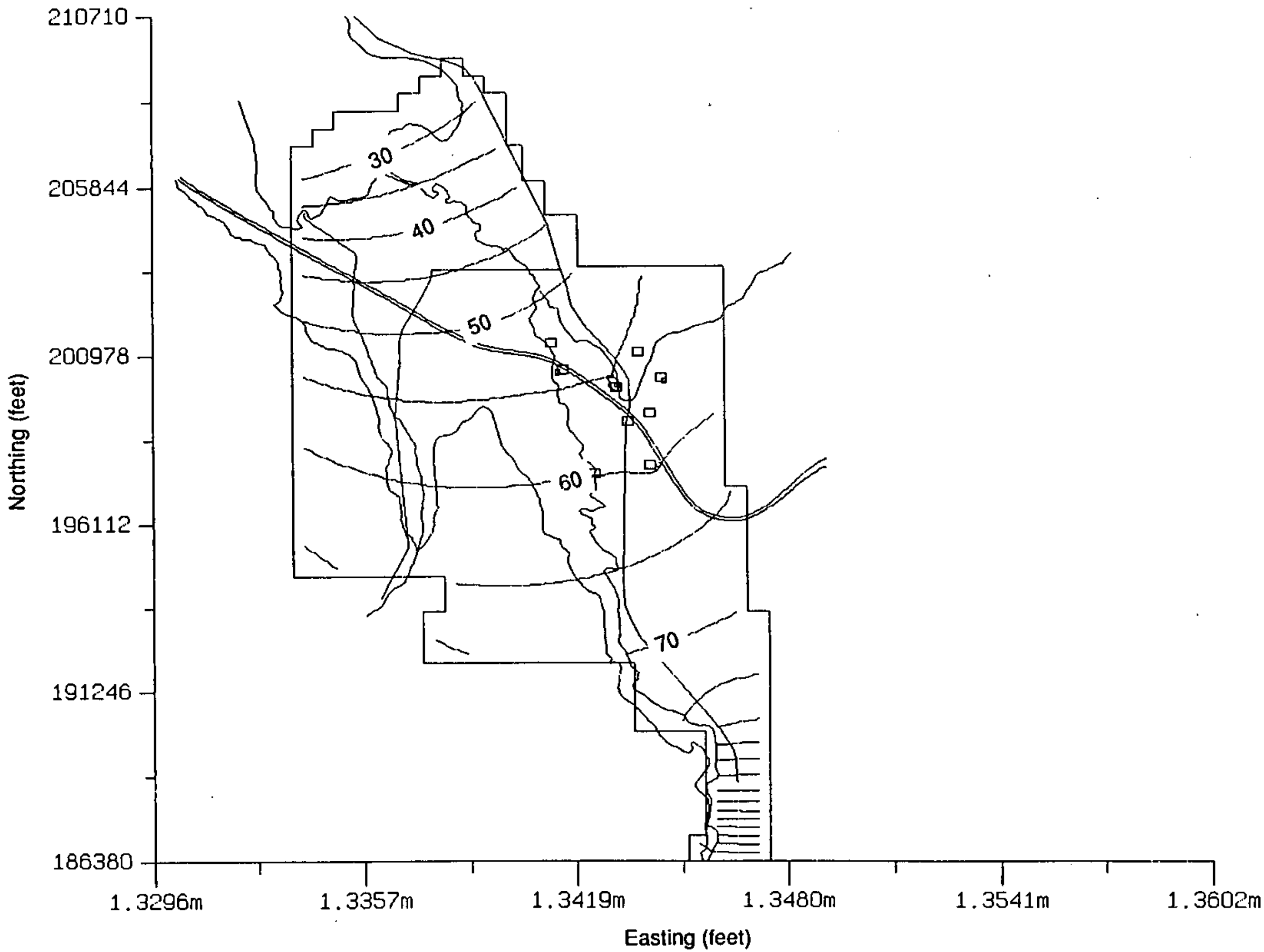


FIGURE **H-2a**

CASE 1B: GROUND WATER ELEVATIONS

SAMMAMISH/PREPARE PLAN/WA

PROJECT NO. 913 1252.009 DRAWING NO. 45543 DATE 5/5/93 DRAWN BY CW

Golder Associates

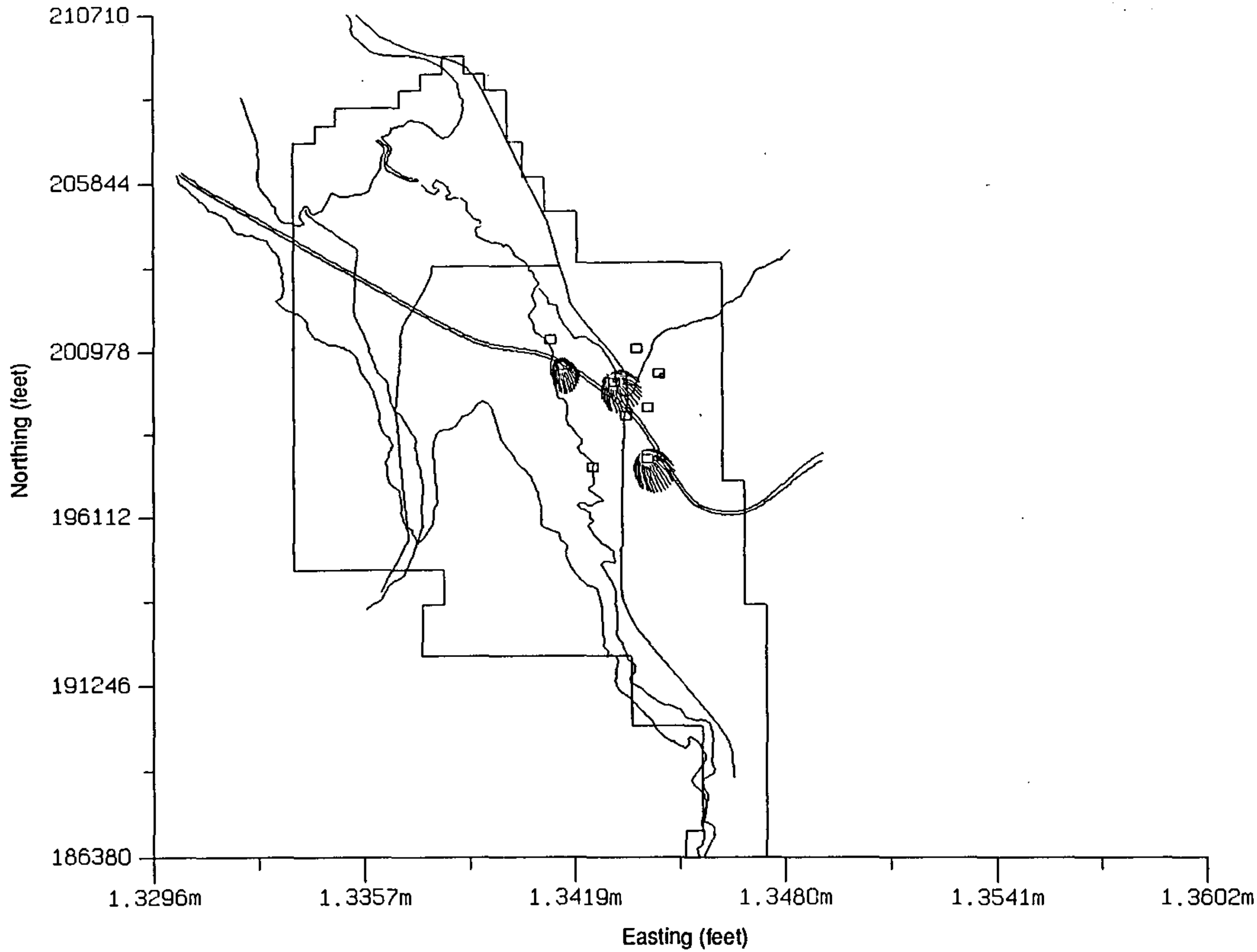


FIGURE **H-2b**

CASE 1B: 1-YEAR CAPTURE ZONE

SAMMAMISH/PREPARE PLAN/WA

PROJECT NO. 913 1252.009 DRAWING NO. 45544 DATE 5/5/93 DRAWN BY CW

Golder Associates

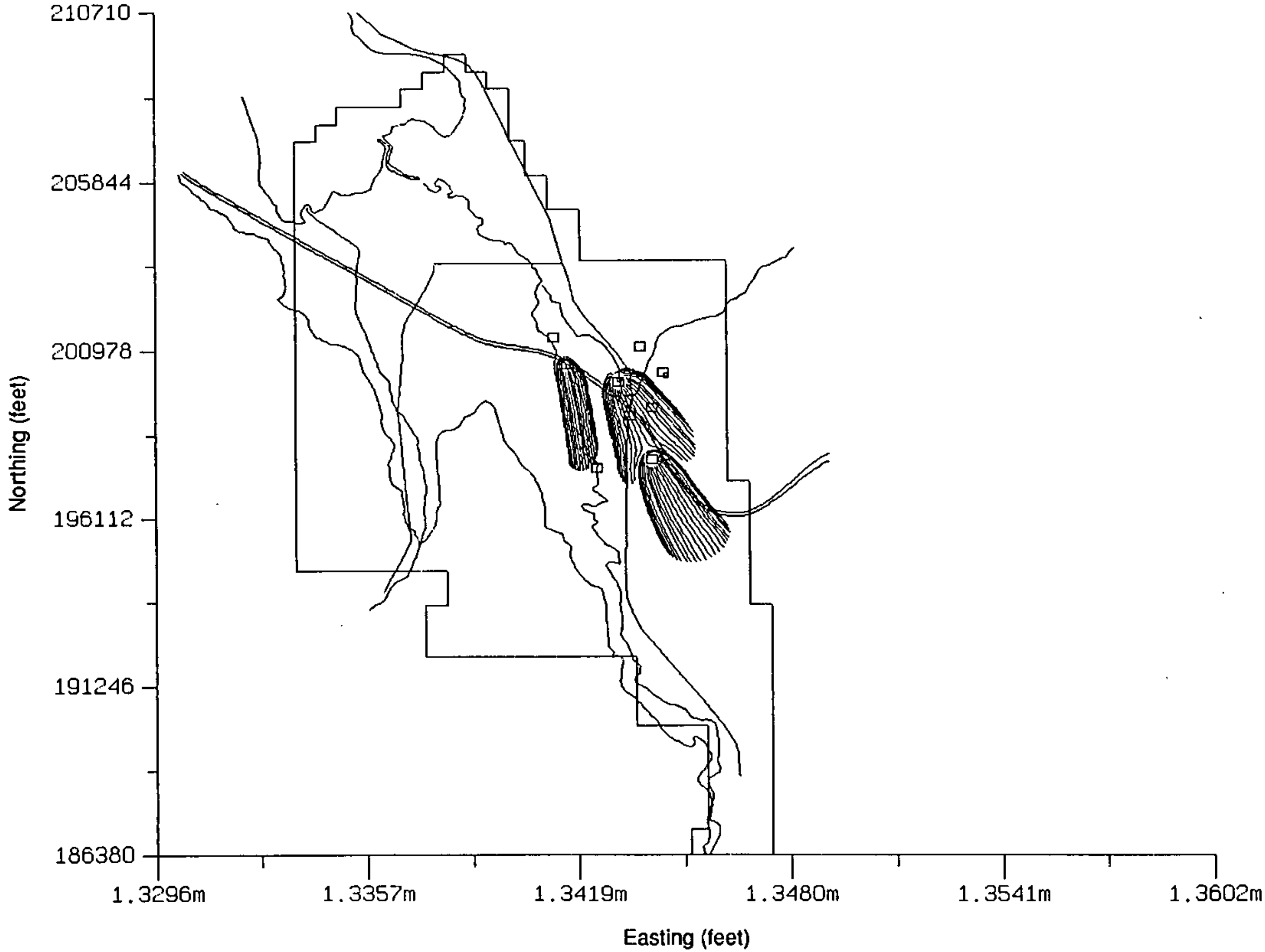


FIGURE **H-2c**

CASE 1B: 5-YEAR CAPTURE ZONE

SAMMAMISH/PREPARE PLAN/WA

PROJECT NO. 913 1252.009 DRAWING NO. 45545 DATE 5/5/93 DRAWN BY CW

Golder Associates

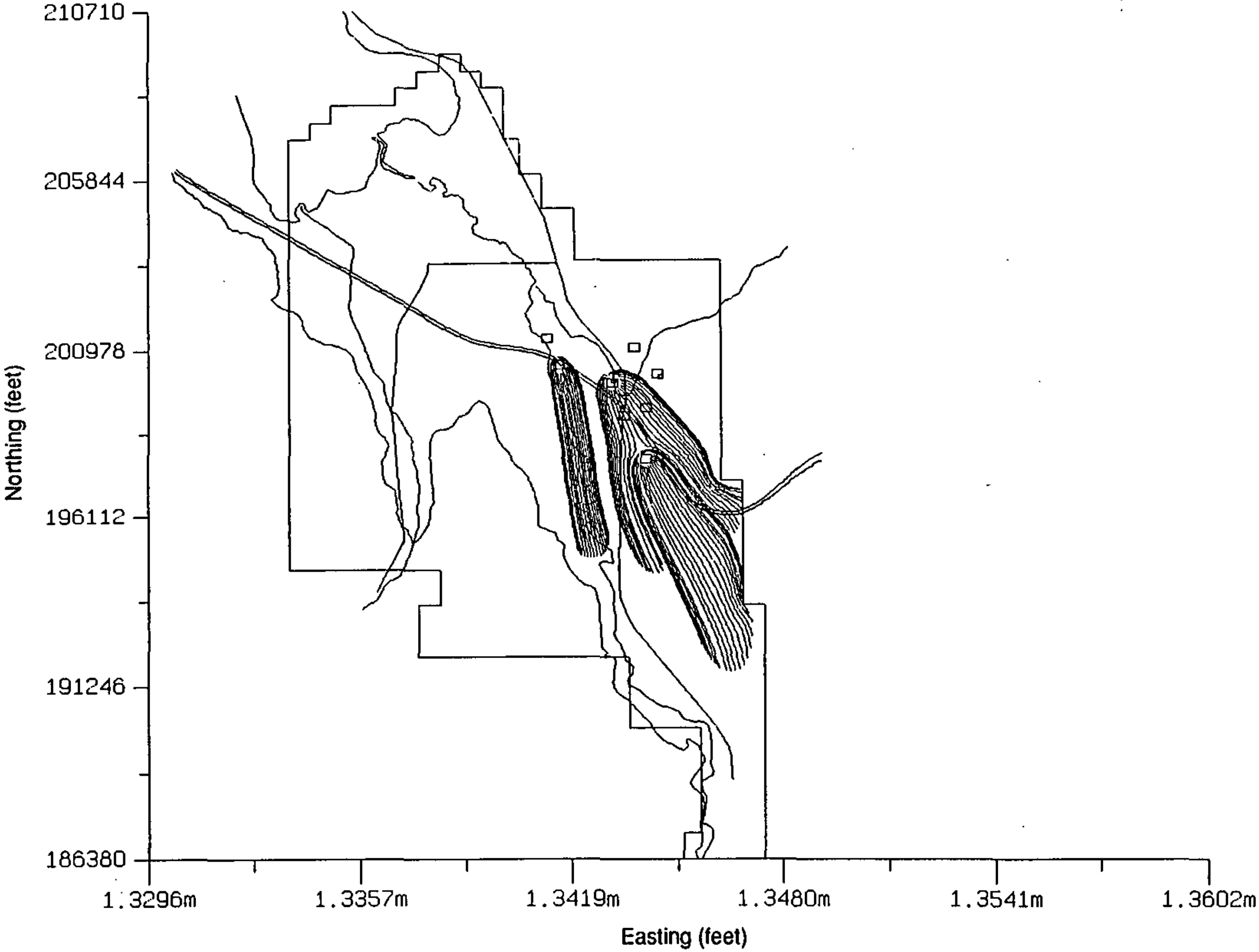


FIGURE **H-2d**
CASE 1B: 10-YEAR CAPTURE ZONE
SAMMAMISH/PREPARE PLAN/WA

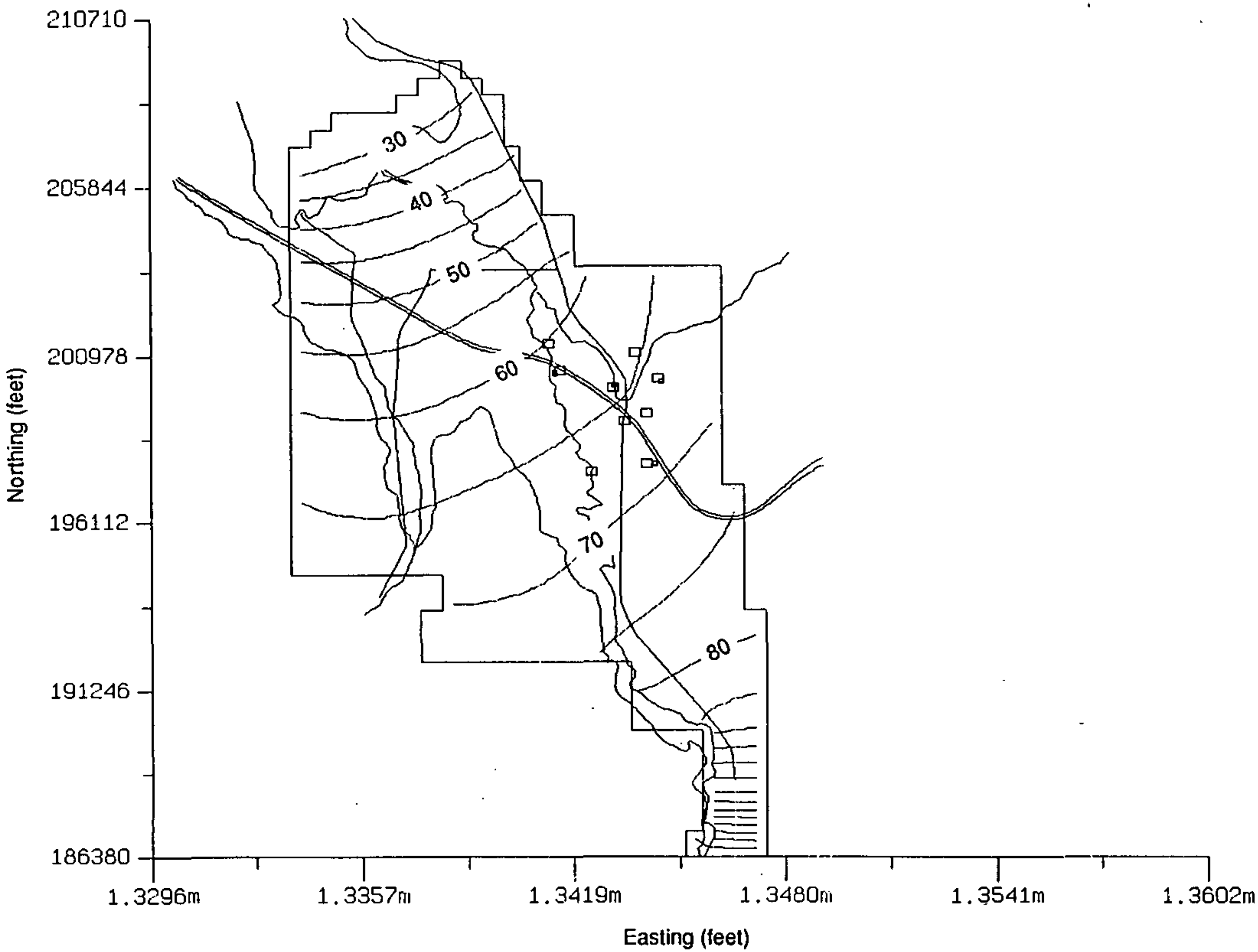


FIGURE **H-3a**

CASE 2A: GROUND WATER ELEVATIONS

SAMMAMISH/PREPARE PLAN/WA

PROJECT NO. 913 1252.009 DRAWING NO. 45547 DATE 5/5/93 DRAWN BY CW

Golder Associates

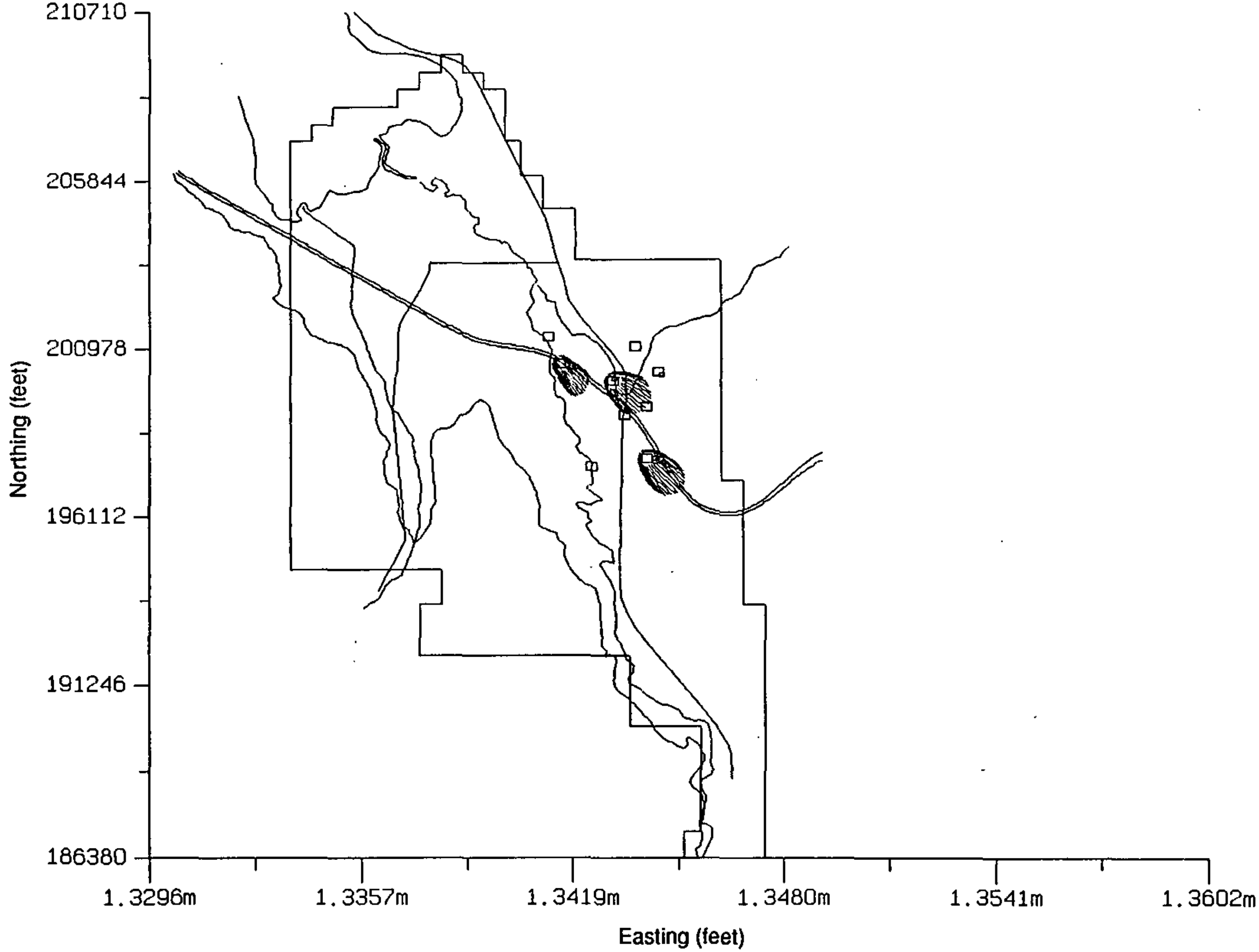


FIGURE **H-3b**

CASE 2A: 1-YEAR CAPTURE ZONE

SAMMAMISH/PREPARE PLAN/WA

PROJECT NO. 913 1252.009 DRAWING NO. 45548 DATE 5/5/93 DRAWN BY CW

Golder Associates

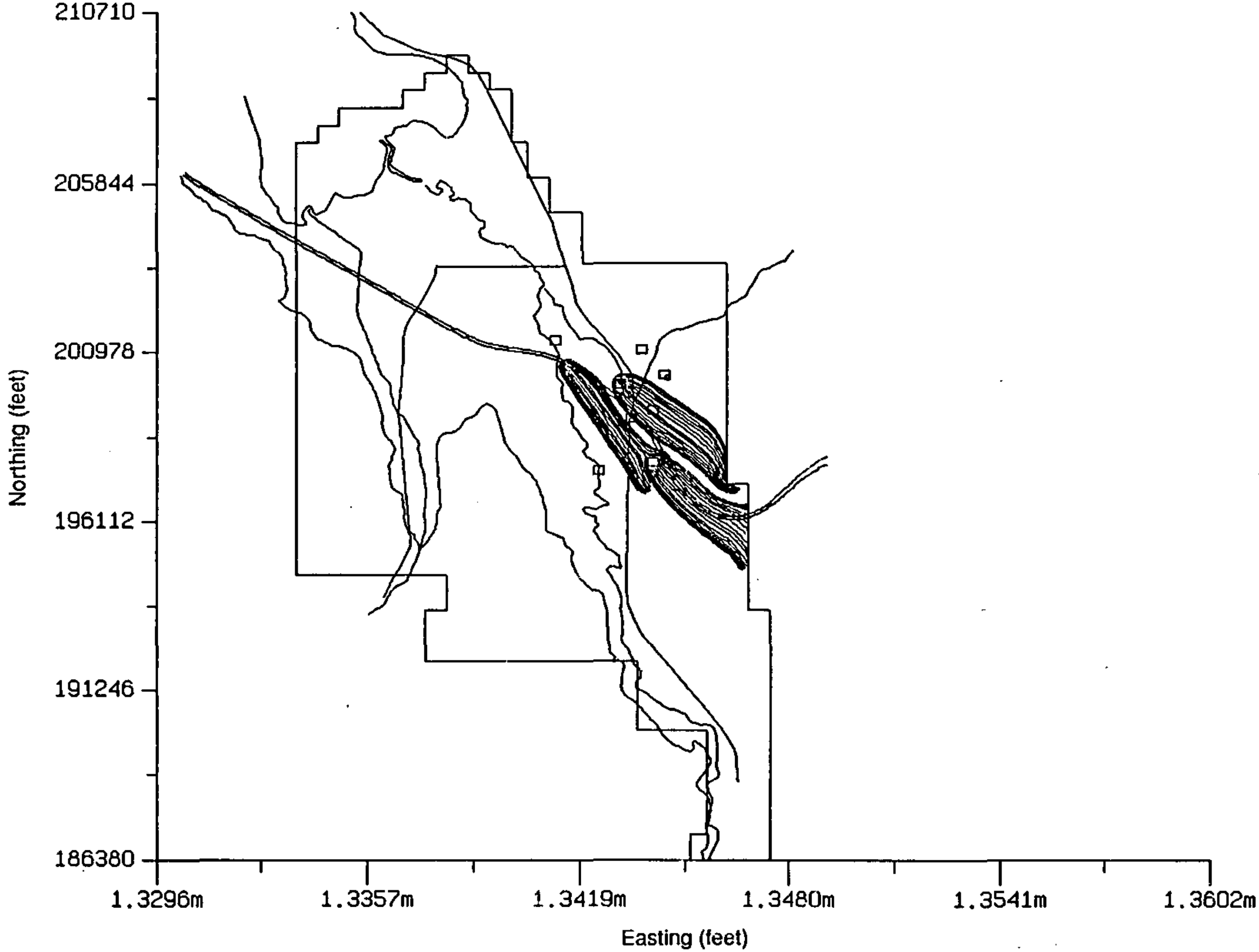


FIGURE **H-3c**
CASE 2A: 5-YEAR CAPTURE ZONE
SAMMAMISH/PREPARE PLAN/WA

PROJECT NO. 913 1252.009 DRAWING NO. 45549 DATE 5/5/93 DRAWN BY CW

Golder Associates

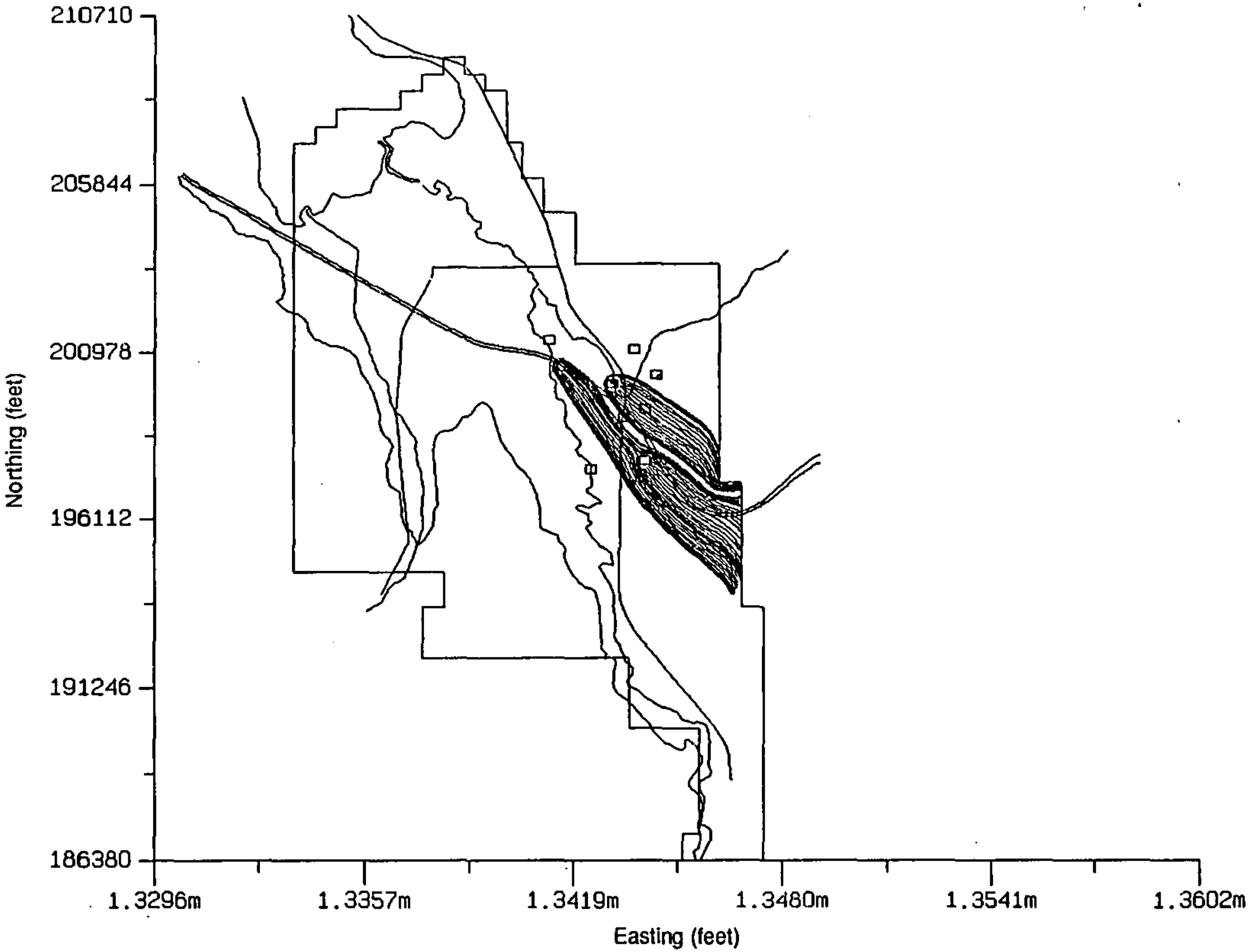


FIGURE **H-3d**

CASE 2A: 10-YEAR CAPTURE ZONE

SAMMAMISH/PREPARE PLAN/WA

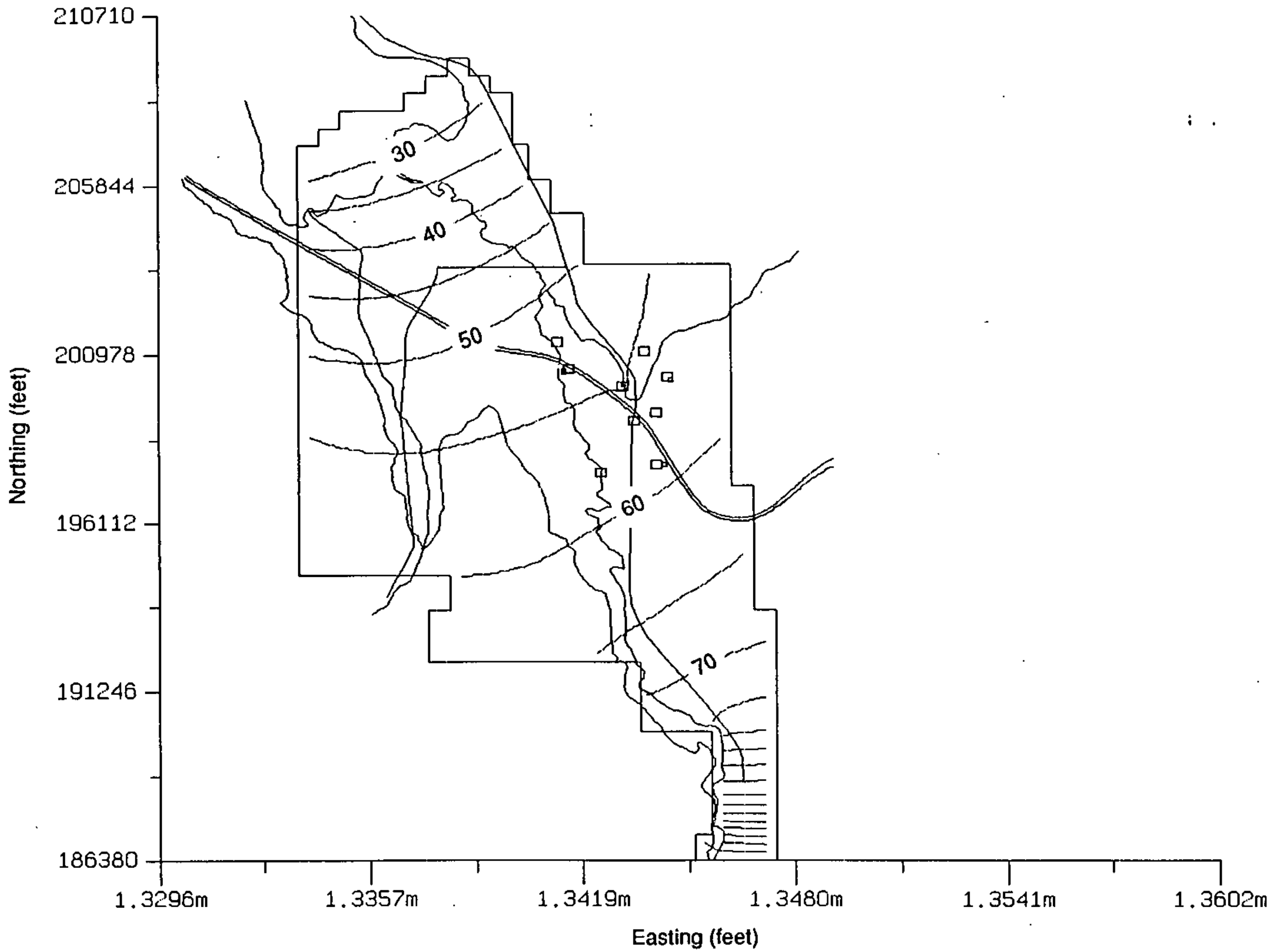


FIGURE **H-4a**

CASE 2B: GROUND WATER ELEVATIONS

SAMMAMISH/PREPARE PLAN/WA

PROJECT NO. 913 1252.009 DRAWING NO. 45551 DATE 5/5/93 DRAWN BY CW

Golder Associates

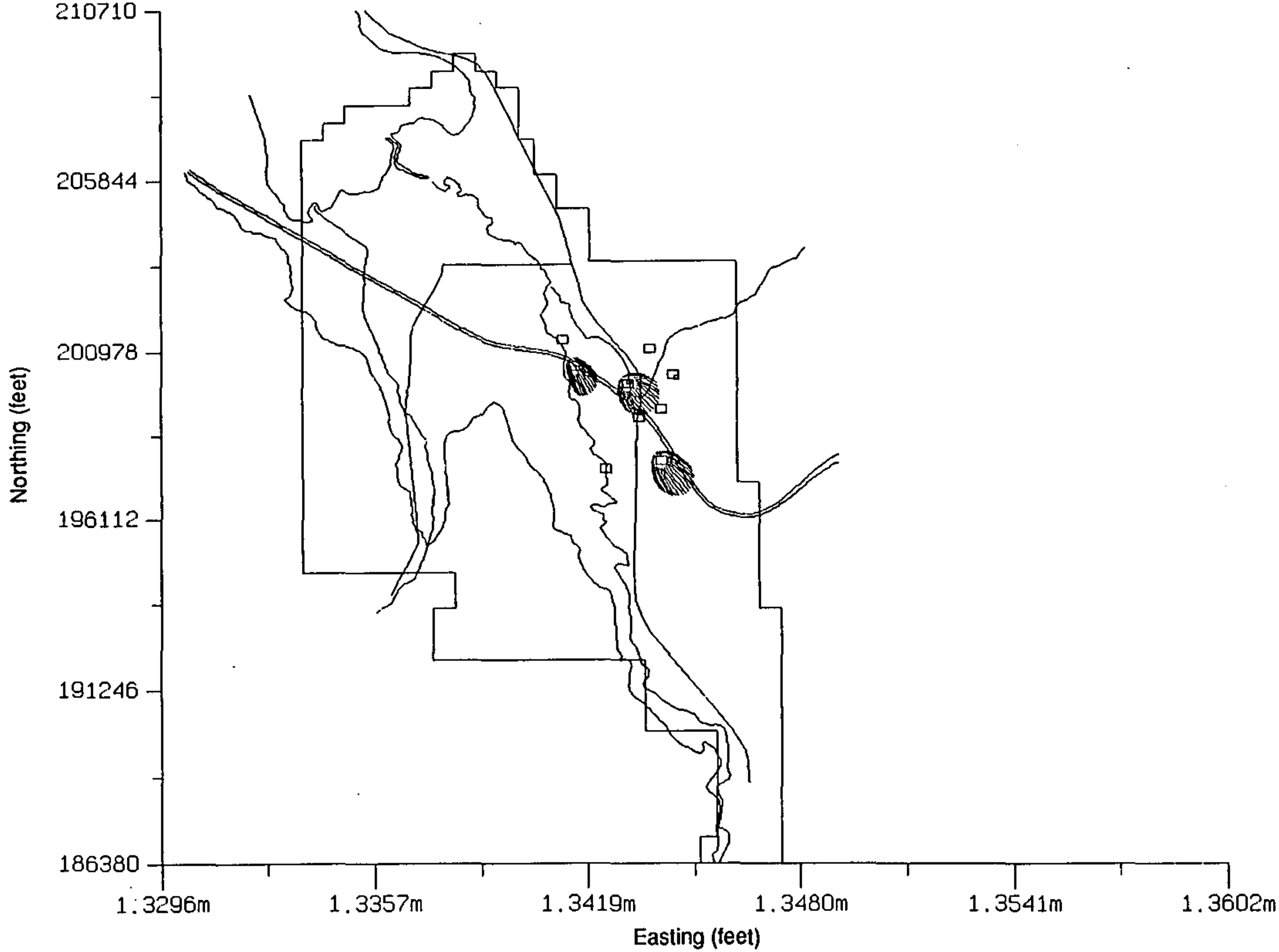


FIGURE **H-4b**

CASE 2B: 2-YEAR CAPTURE ZONE

SAMMAMISH/PREPARE PLAN/WA

PROJECT NO. 913 1252.009 DRAWING NO. 45552 DATE 5/5/93 DRAWN BY CW

Golder Associates

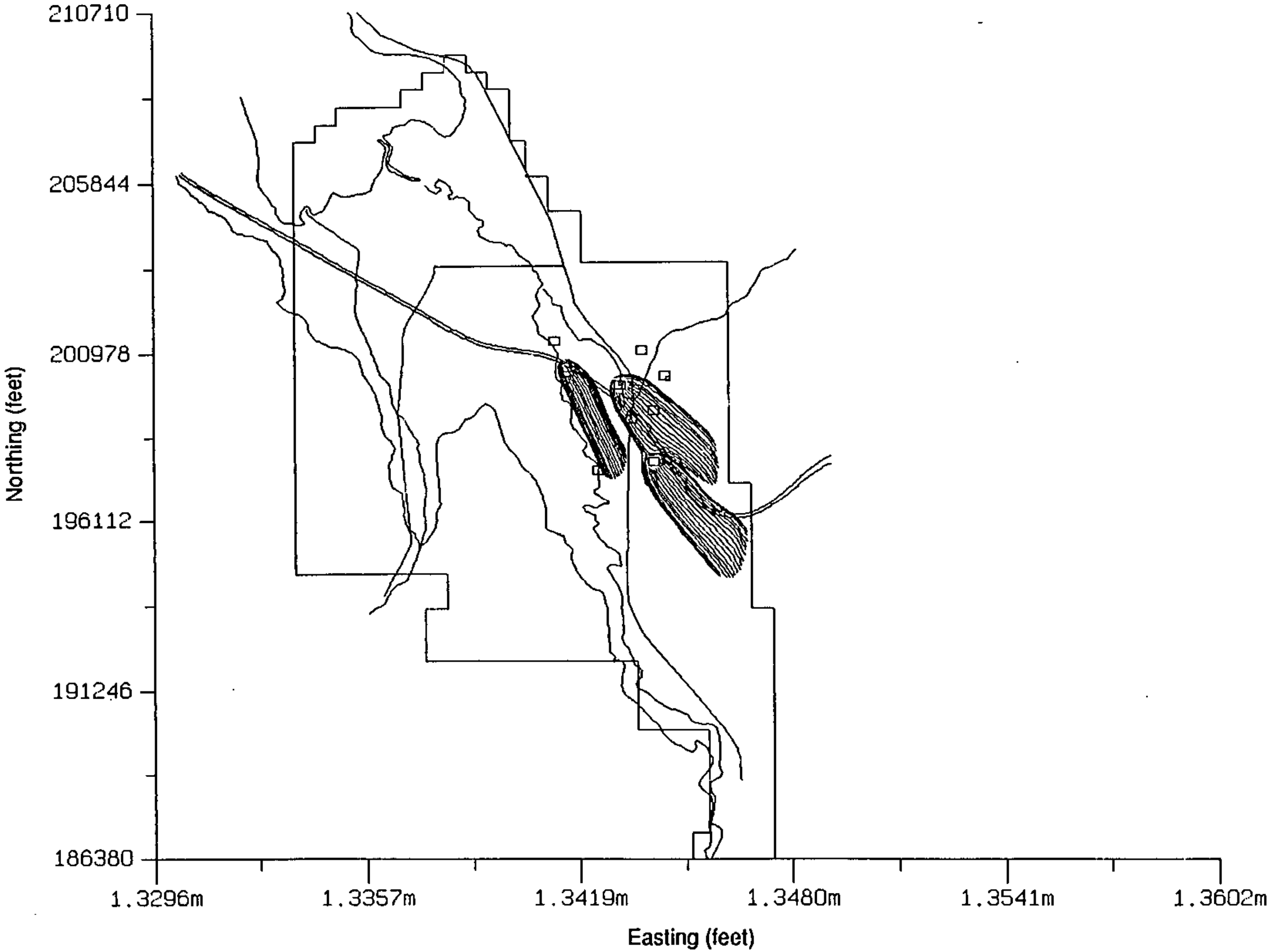


FIGURE **H-4c**

CASE 2B: 5-YEAR CAPTURE ZONE

SAMMAMISH/PREPARE PLAN/WA

PROJECT NO. 913 1252.009 DRAWING NO. 45553 DATE 5/5/93 DRAWN BY CW

Golder Associates

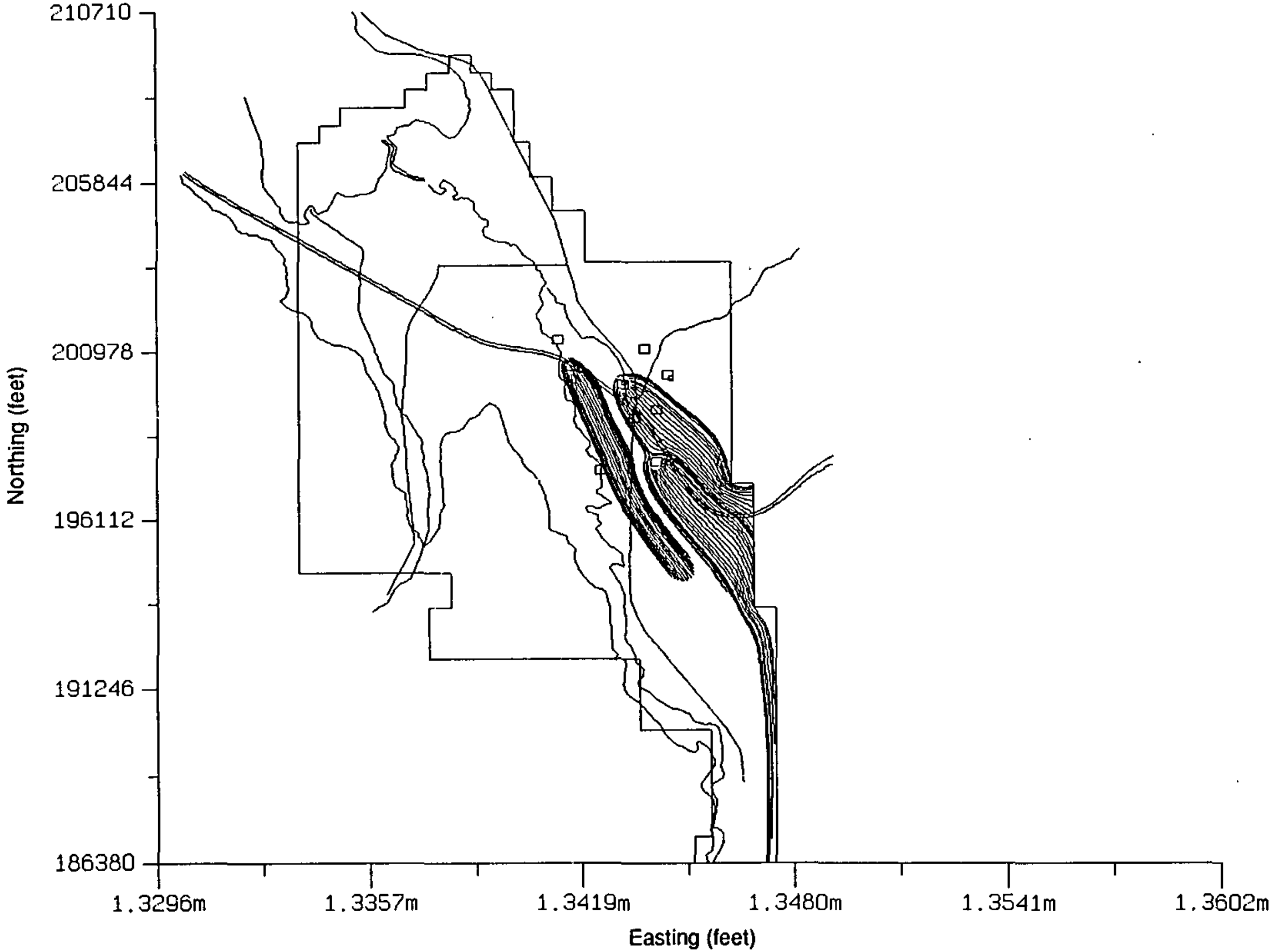


FIGURE **H-4d**

CASE 2B: 10-YEAR CAPTURE ZONE

SAMMAMISH/PREPARE PLAN/WA

PROJECT NO. 913 1252.009 DRAWING NO. 45554 DATE 5/5/93 DRAWN BY CW

Golder Associates

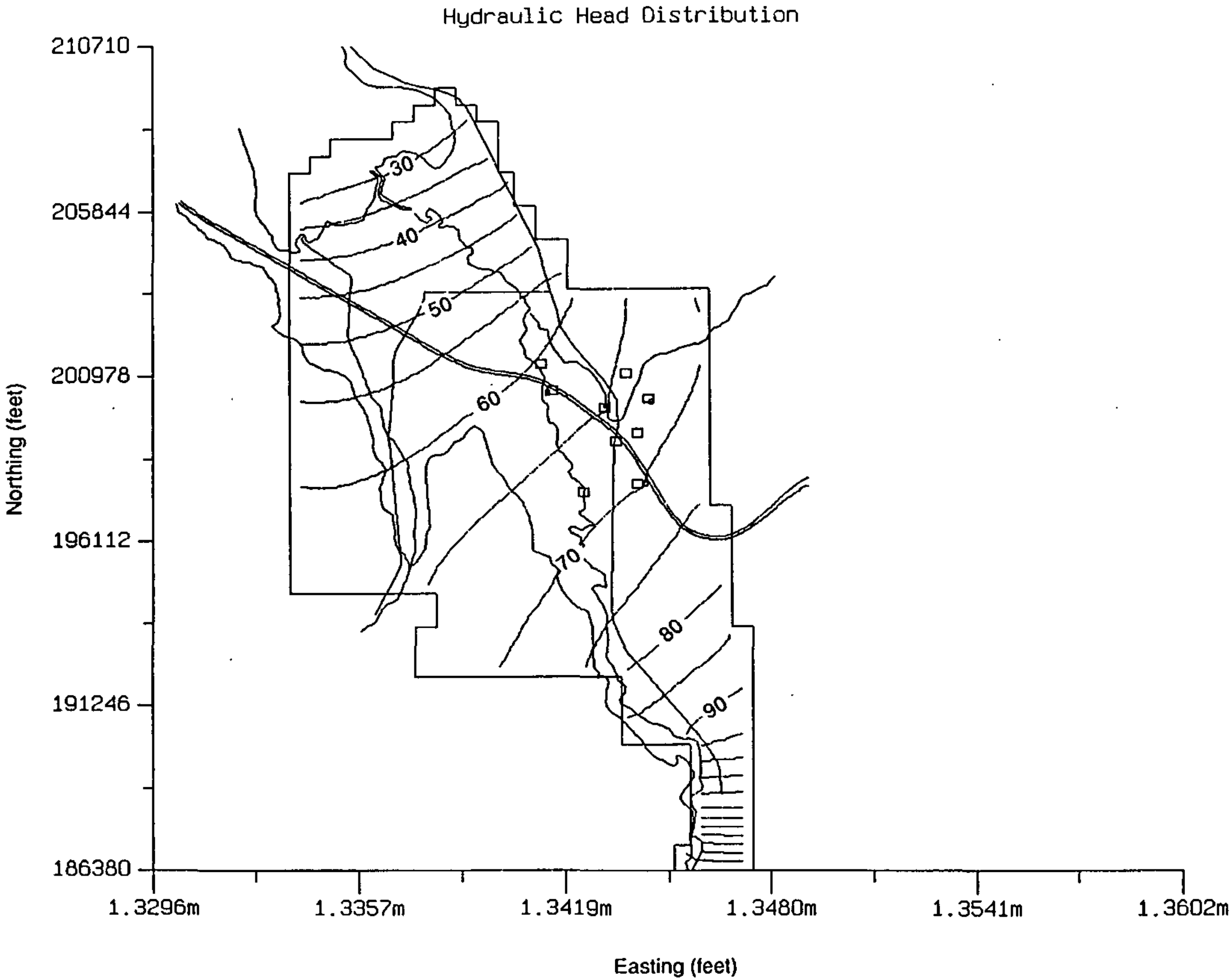


FIGURE **H-5a**

CASE 3A: GROUNDWATER ELEVATIONS

SAMMAMISH/WELLHEAD/WA

PROJECT NO. 913 1252. DRAWING NO. 46502 DATE 10/21/93 DRAWN BY TB

Golder Associates

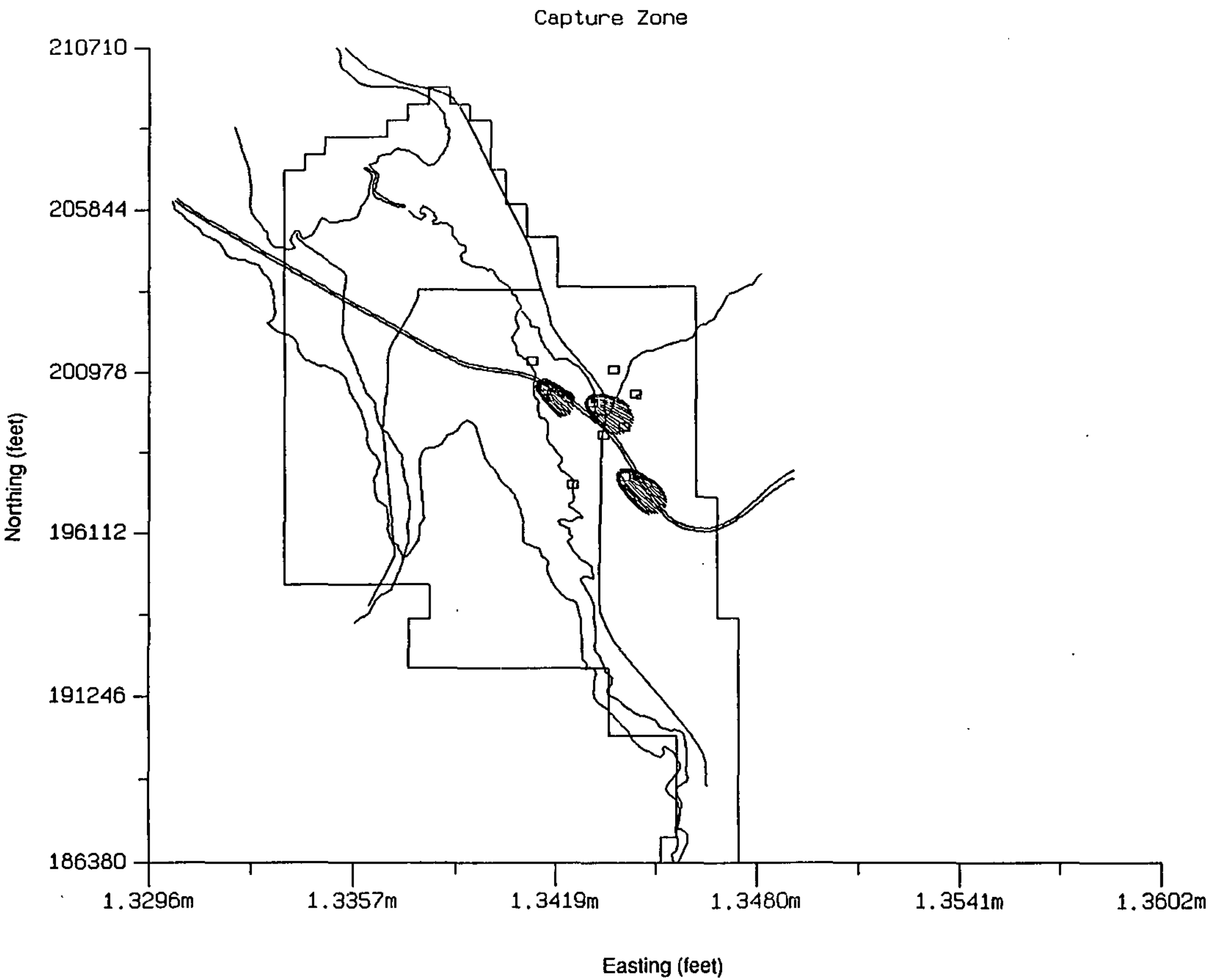


FIGURE **H-5b**

CASE 3A: 1-YEAR CAPTURE ZONE

SAMMAMISH/PREPARE PLAN /WA

PROJECT NO. 913 1252.900 DRAWING NO. 46503 DATE 10/21/93 DRAWN BY TB

Golder Associates

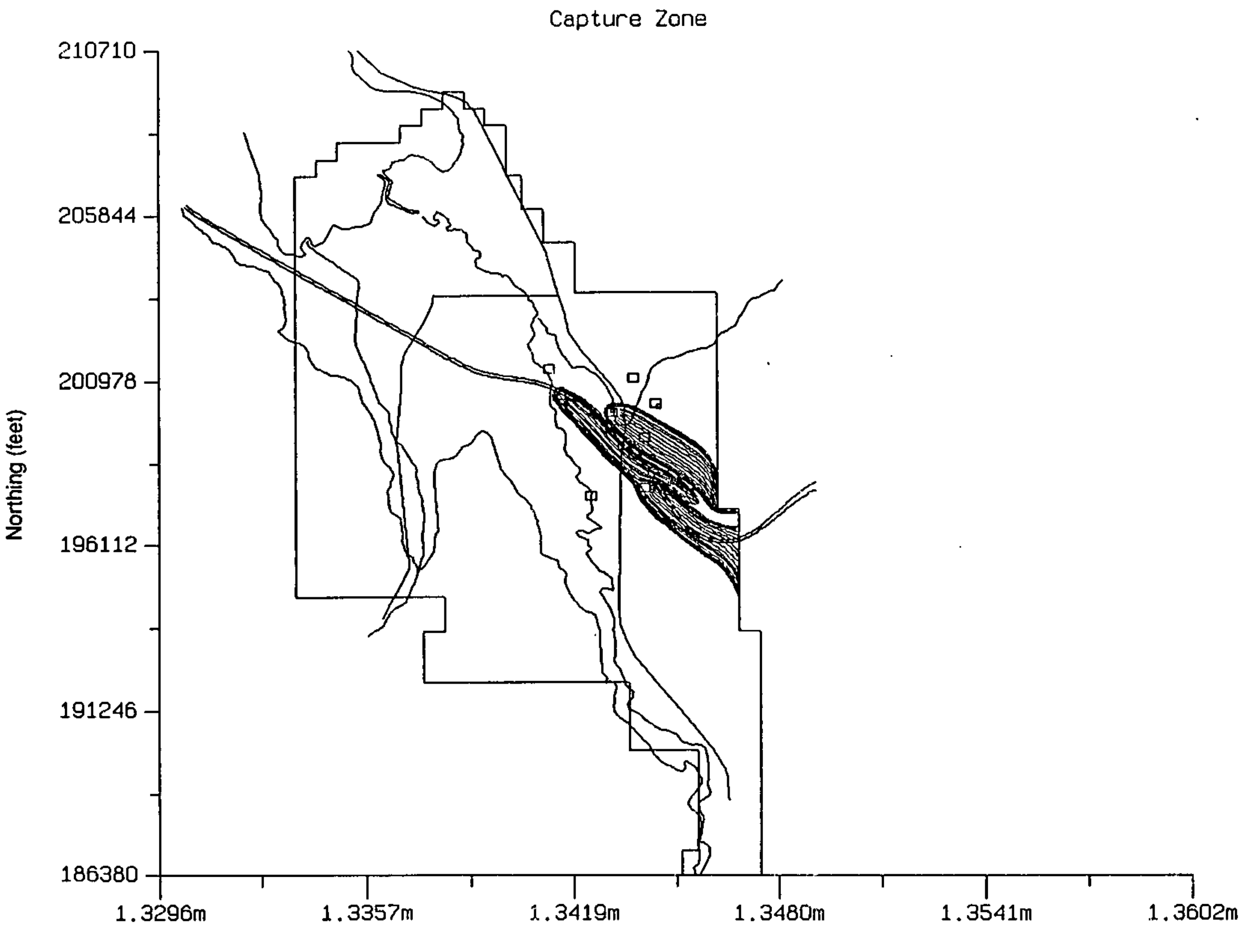


FIGURE **H-5c**

CASE 3A: 5-YEAR CAPTURE ZONE

SAMMAMISH/PREPARE PLAN /WA

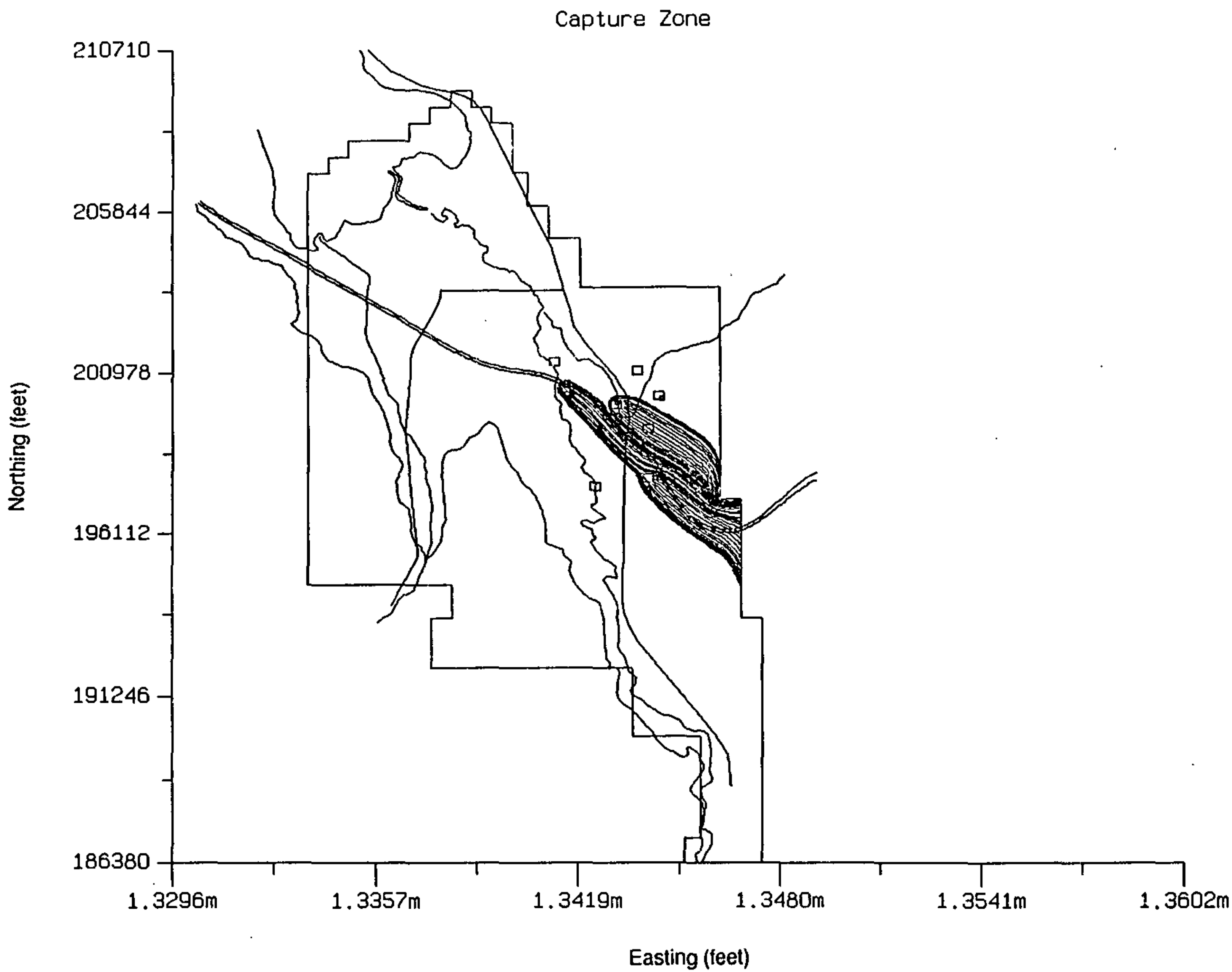


FIGURE **H-5d**

CASE 3A: 10-YEAR CAPTURE ZONE

SAMMAMISH/PREPARE PLAN /WA

PROJECT NO. 913 1252.900 DRAWING NO. 46505 DATE 10/21/93 DRAWN BY TB

Golder Associates

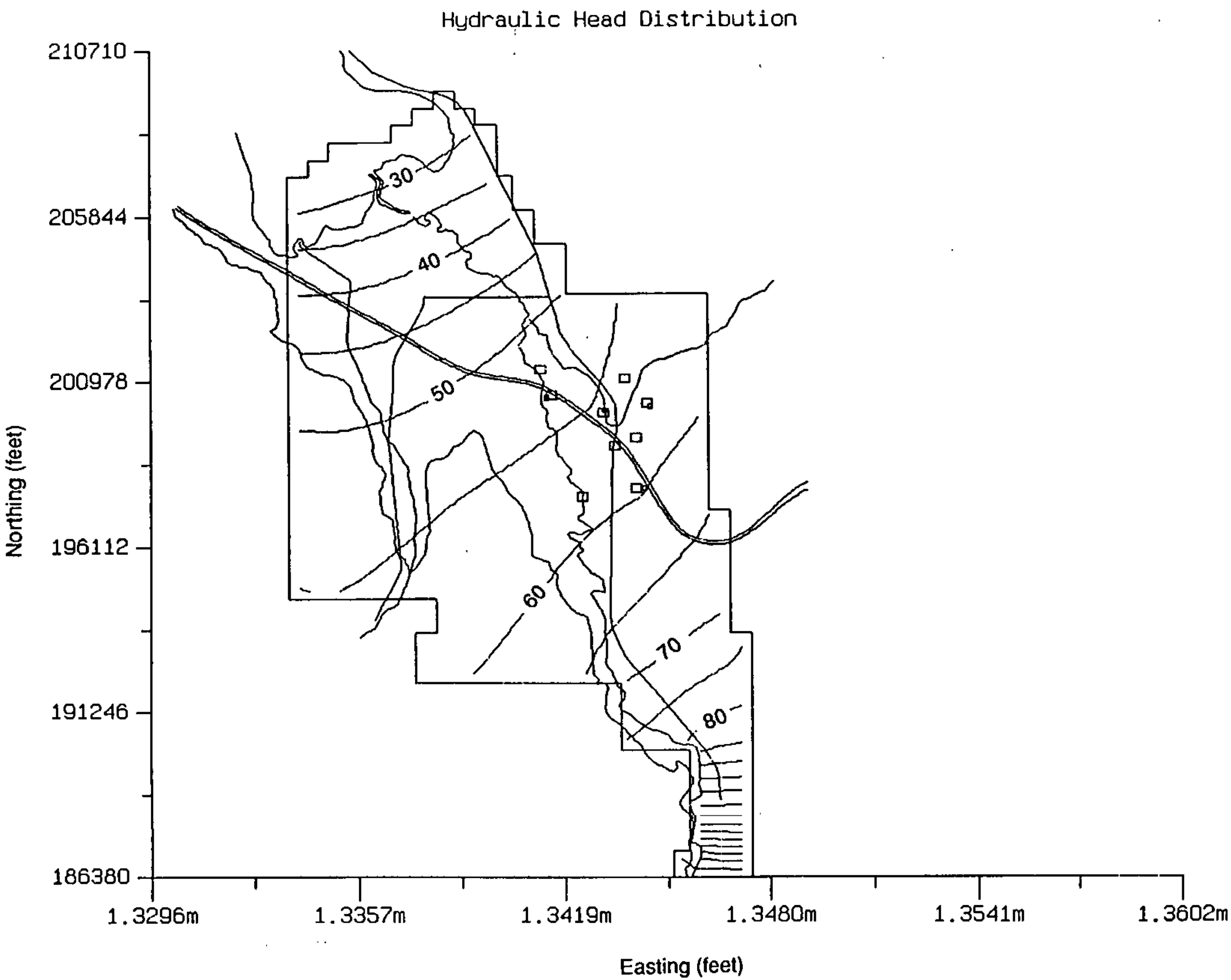


FIGURE **H-6a**

CASE 3B: GROUNDWATER ELEVATIONS

SAMMAMISH/WELLHEAD/WA

PROJECT NO. 913 1252. DRAWING NO. 46506 DATE 10/21/93 DRAWN BY TB

Golder Associates

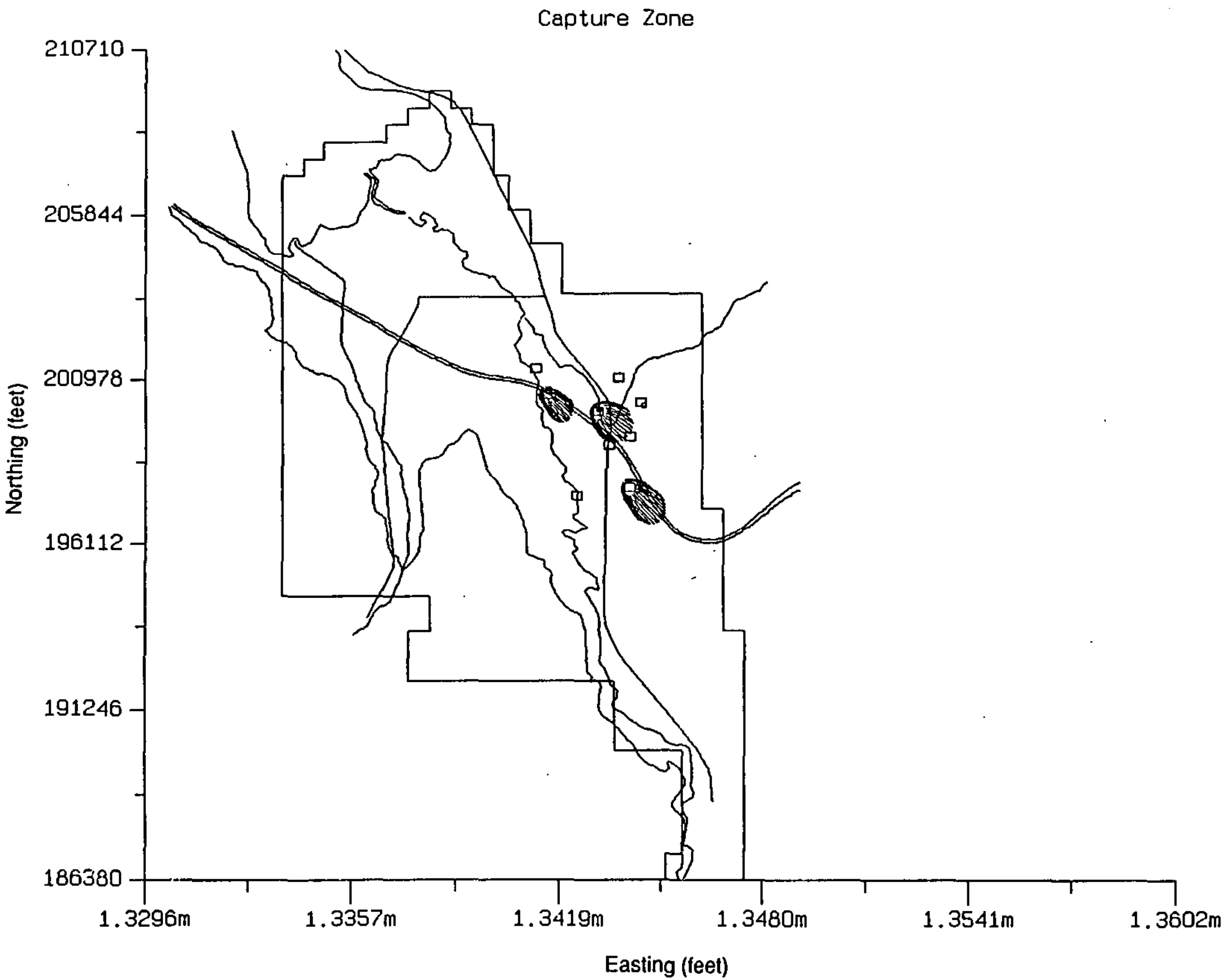


FIGURE **H-6b**

CASE 3B: 1-YEAR CAPTURE ZONE

SAMMAMISH/PREPARE PLAN /WA

PROJECT NO. 913 1252.900 DRAWING NO. 46507 DATE 10/21/93 DRAWN BY TB

Golder Associates

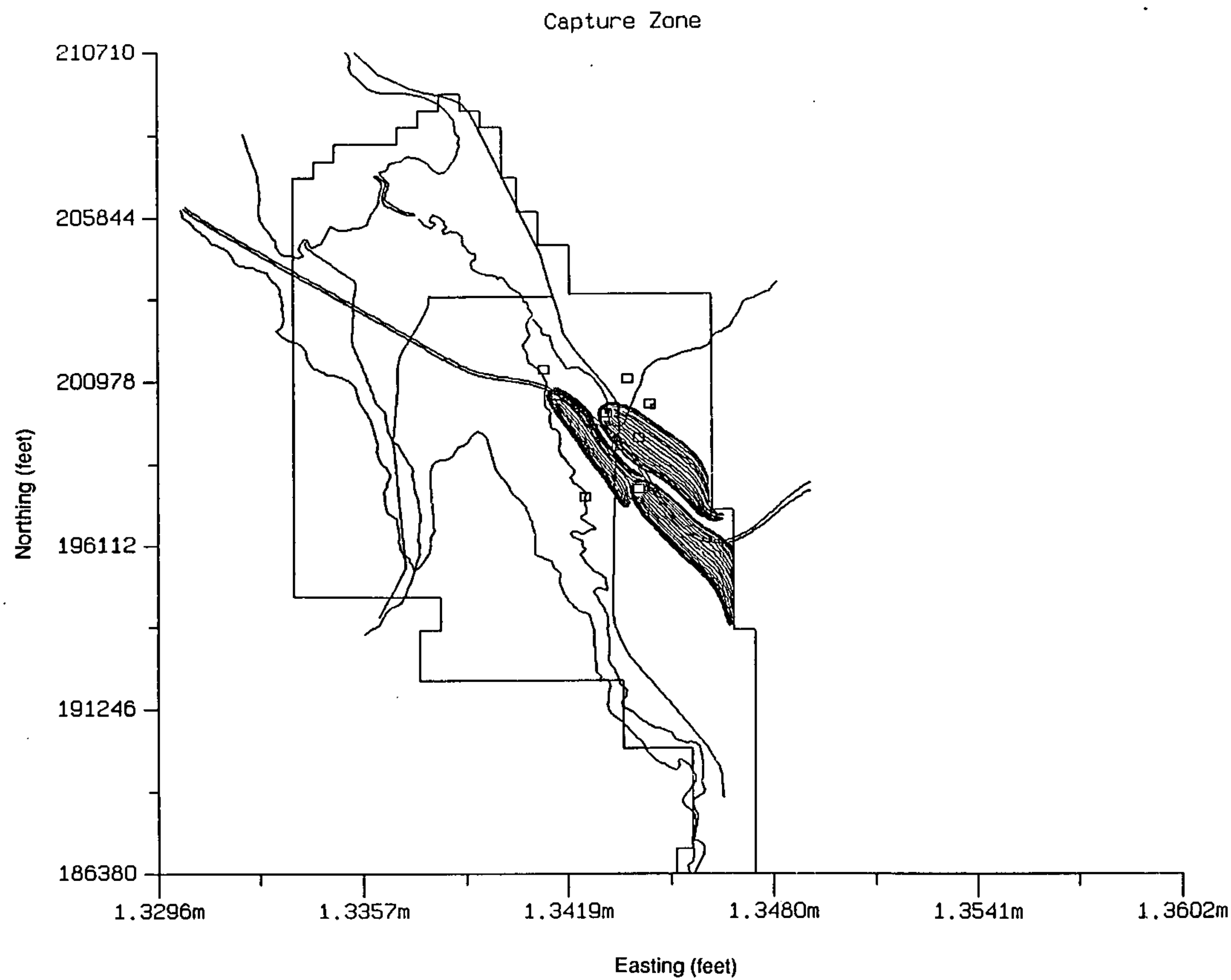


FIGURE **H-6c**

CASE 3B: 5-YEAR CAPTURE ZONE

SAMMAMISH/PREPARE PLAN /WA

PROJECT NO. 913 1252.900 DRAWING NO. 46508 DATE 10/21/93 DRAWN BY TB

Golder Associates

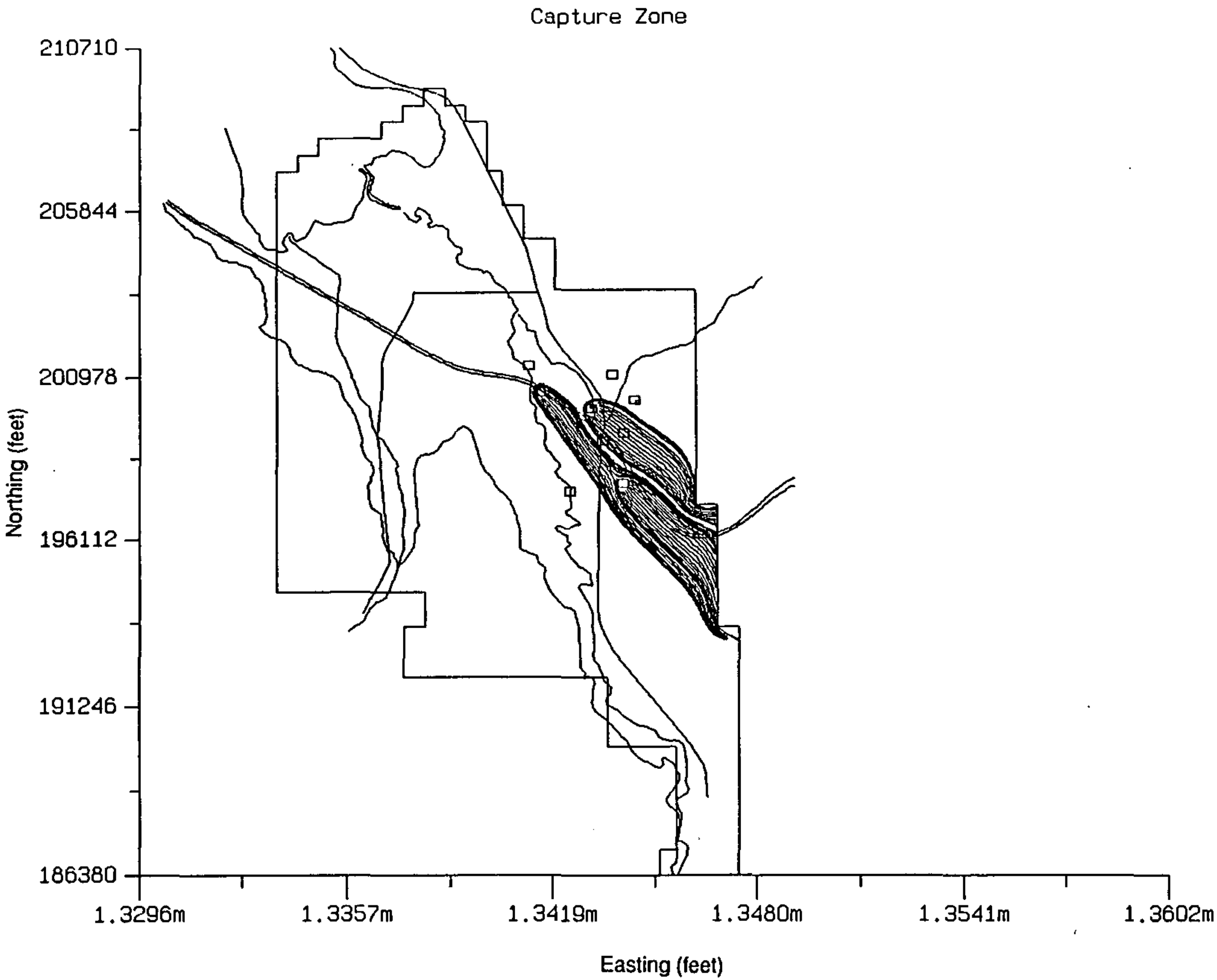


FIGURE **H-6d**

CASE 3B: 10-YEAR CAPTURE ZONE

SAMMAMISH/PREPARE PLAN /WA

PROJECT NO. 913 1252.900 DRAWING NO. 46509 DATE 10/21/93 DRAWN BY TB

Golder Associates

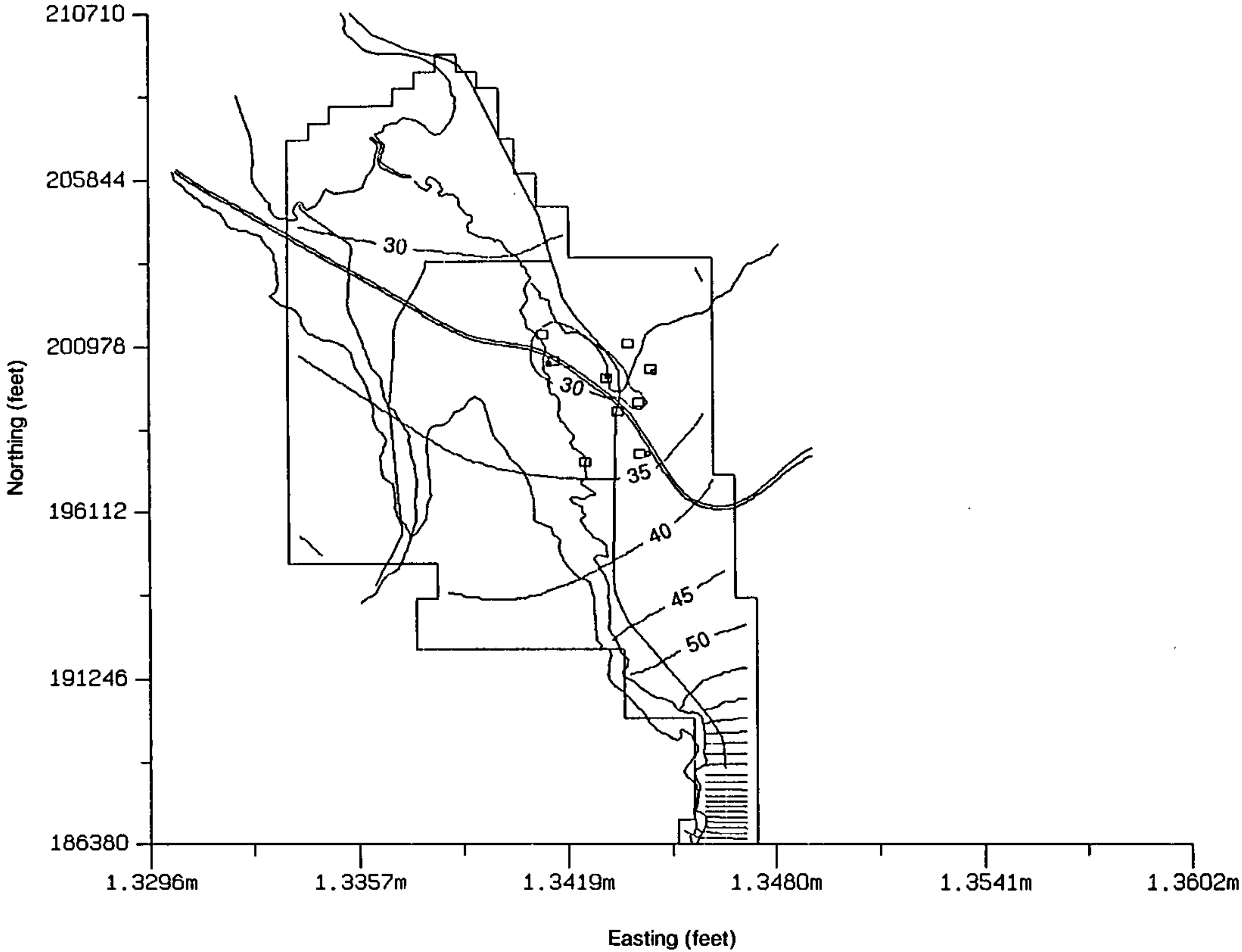


FIGURE **H-7a**

CASE 4A: GROUND WATER ELEVATIONS

SAMMAMISH/PREPARE PLAN/WA

PROJECT NO. 913 1252.009 DRAWING NO. 46510 DATE 6/7/93 DRAWN BY CW

Golder Associates

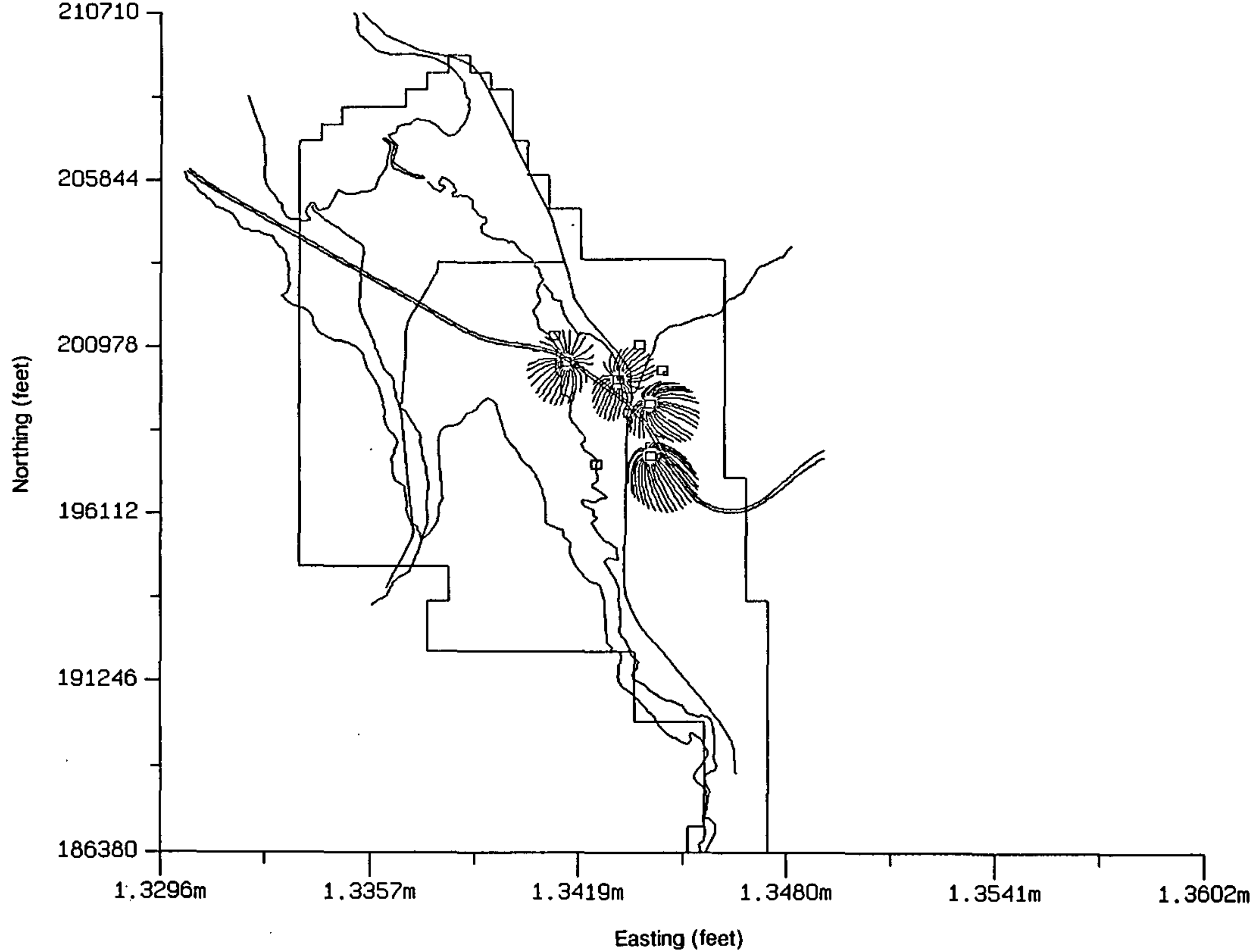


FIGURE **H-7b**

CASE 4A: 1-YEAR CAPTURE ZONE

SAMMAMISH/PREPARE PLAN/WA

PROJECT NO. 913 1252.009 DRAWING NO. 46511 DATE 6/7/93 DRAWN BY CW

Golder Associates

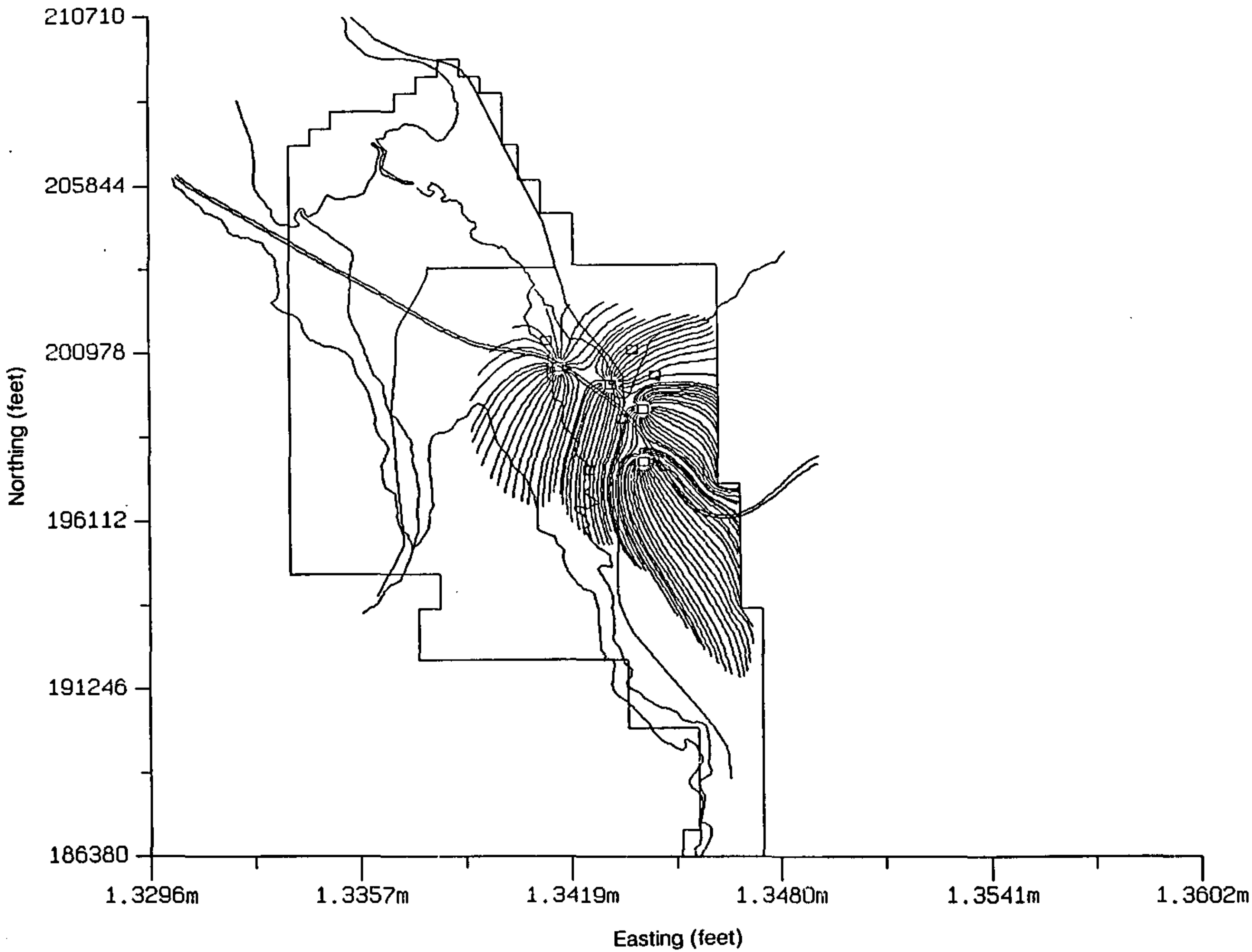


FIGURE **H-7c**

CASE 4A: 5-YEAR CAPTURE ZONE

SAMMAMISH/PREPARE PLAN/WA

PROJECT NO. 913 1252.009 DRAWING NO. 46512 DATE 6/7/93 DRAWN BY CW

Golder Associates

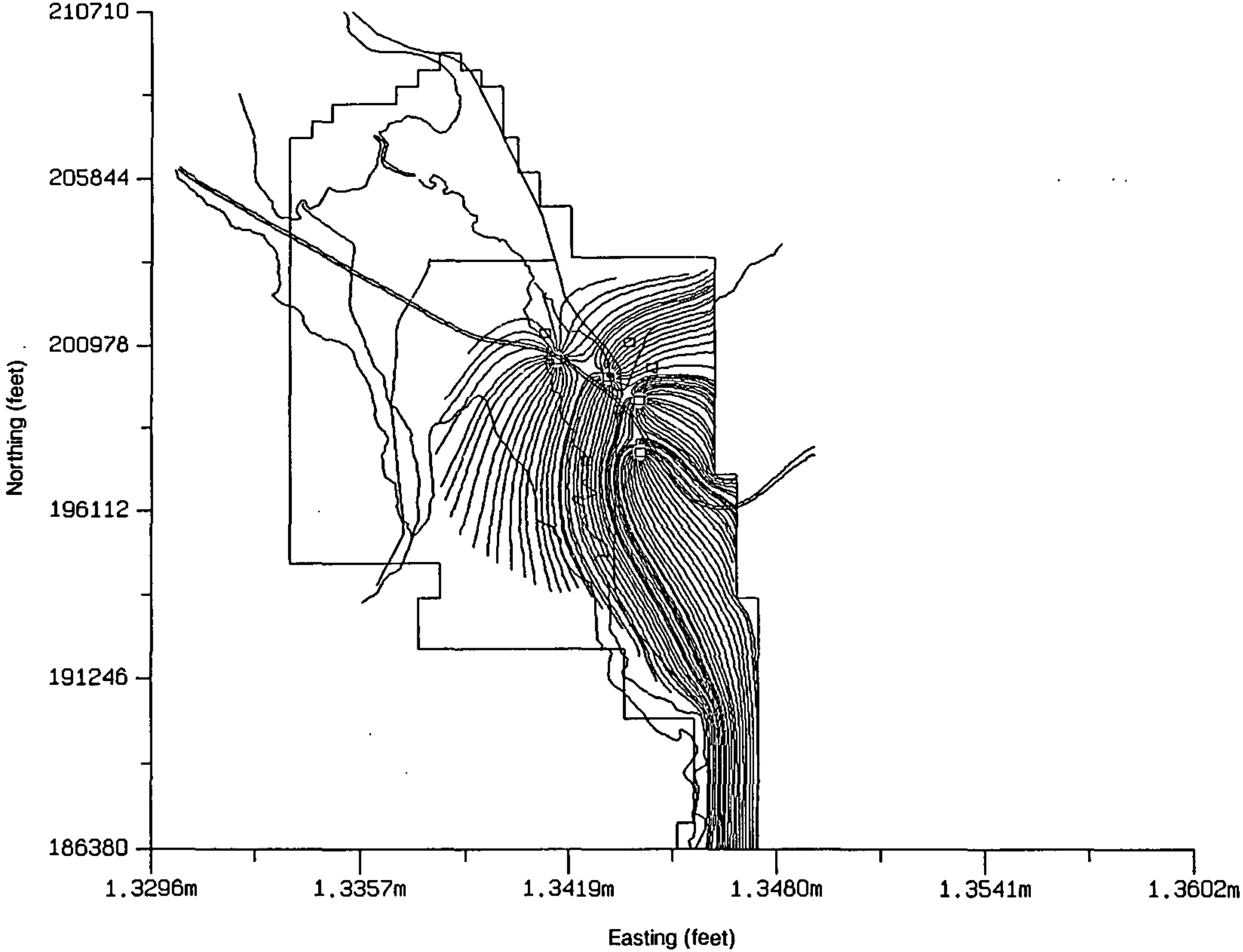


FIGURE **H-7d**

CASE 4A: 10-YEAR CAPTURE ZONE

SAMMAMISH/PREPARE PLAN/WA

PROJECT NO. 913 1252.009 DRAWING NO. 46513 DATE 6/7/93 DRAWN BY CW

Golder Associates

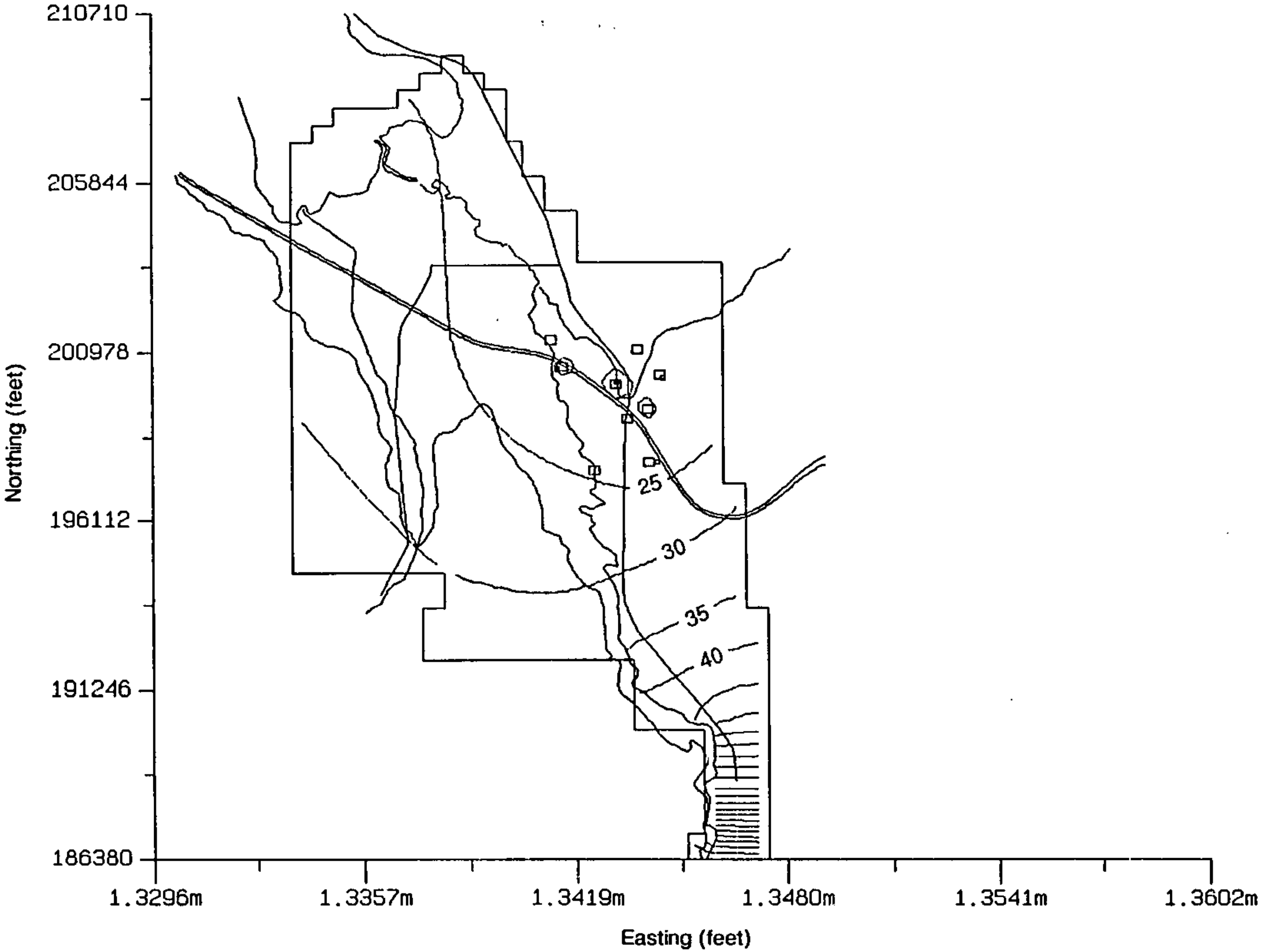


FIGURE **H-8a**

CASE 4B: GROUND WATER ELEVATIONS

SAMMAMISH/PREPARE PLAN/WA

PROJECT NO. 913 1252.009 DRAWING NO. 46514 DATE 6/7/93 DRAWN BY CW

Golder Associates

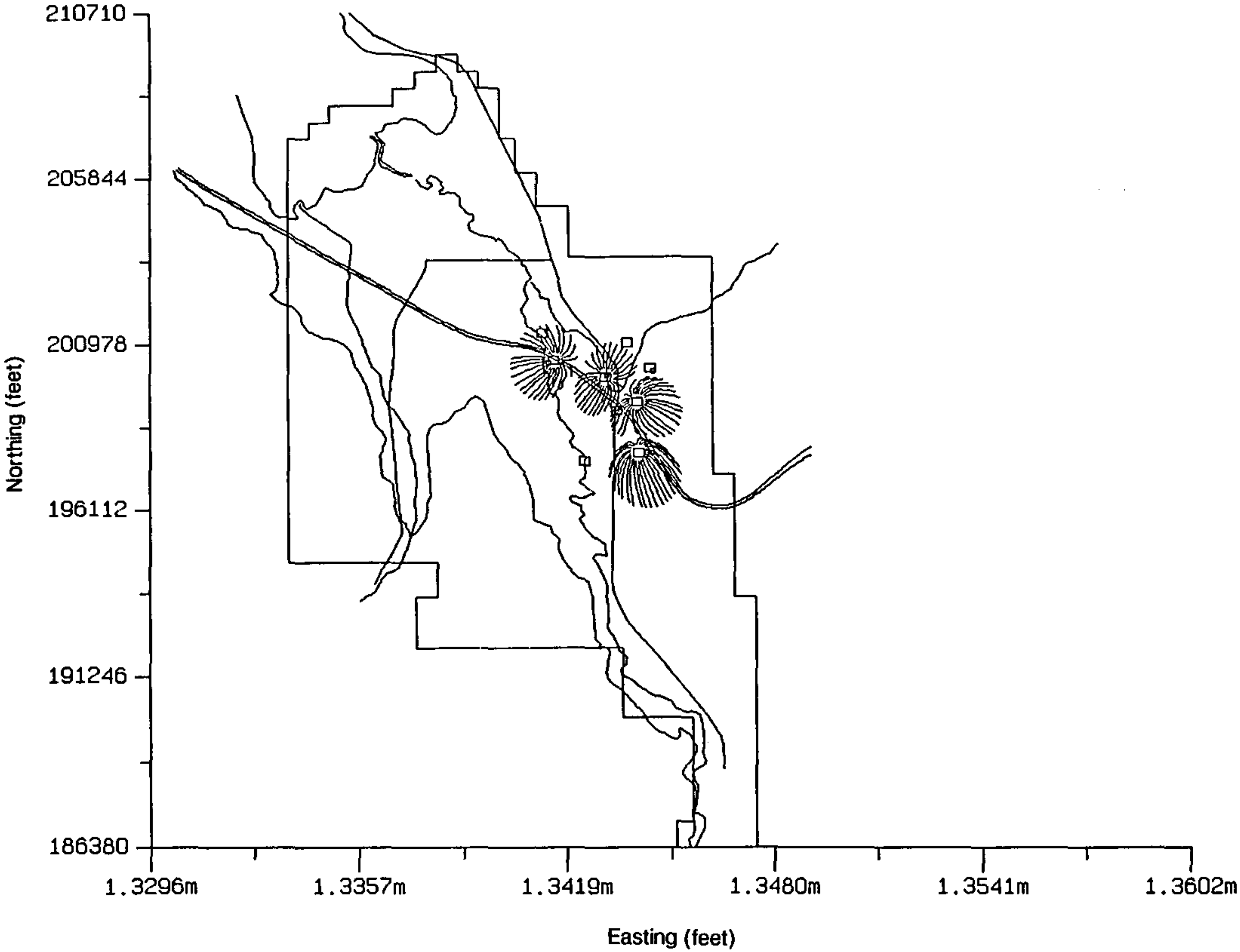


FIGURE **H-8b**

CASE 4B: 1-YEAR CAPTURE ZONE

SAMMAMISH/PREPARE PLAN/WA

PROJECT NO. 913 1252.009 DRAWING NO. 46515 DATE 6/7/93 DRAWN BY CW

Golder Associates

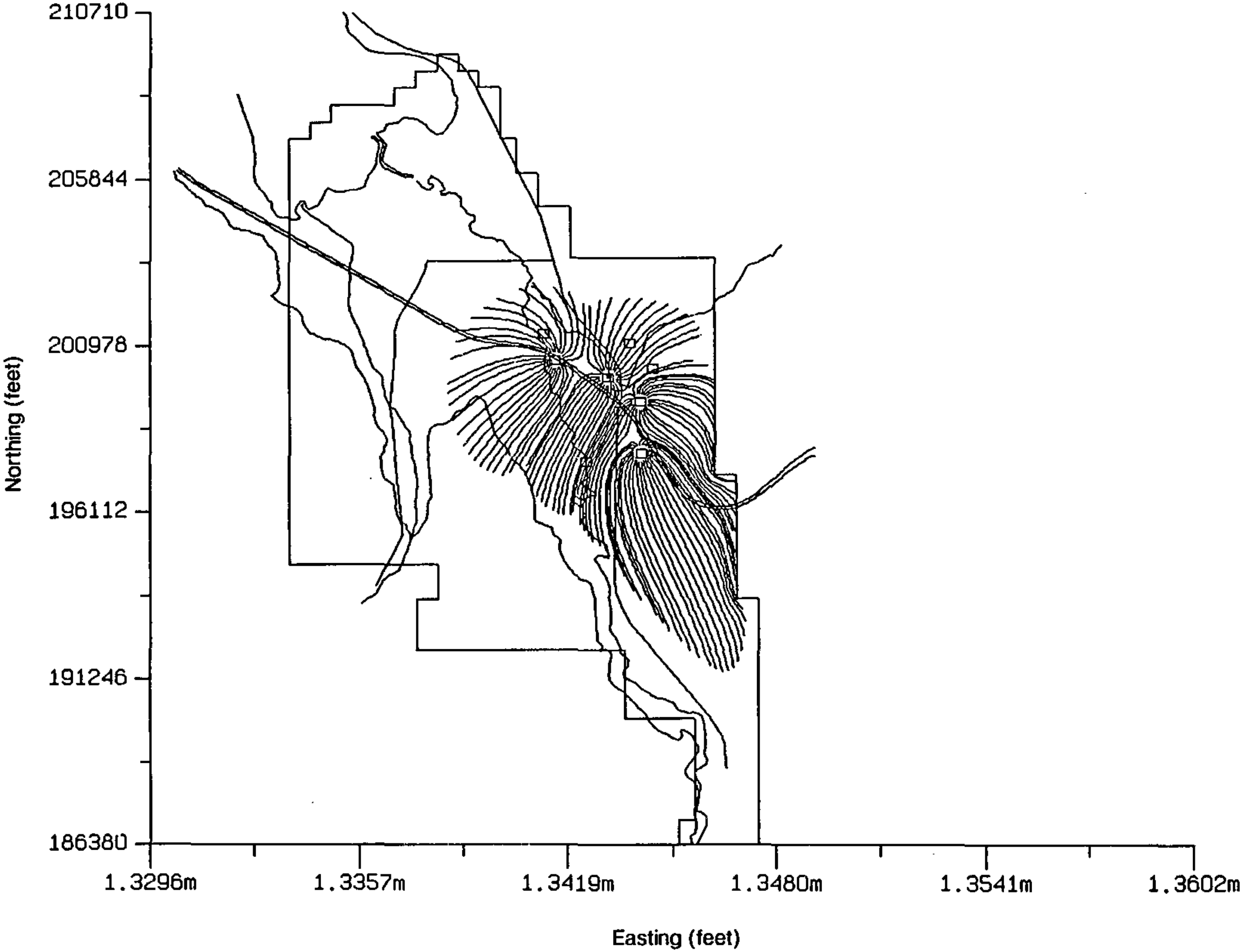


FIGURE **H-8c**
CASE 4B: 5-YEAR CAPTURE ZONE
SAMMAMISH/PREPARE PLAN/WA

PROJECT NO. 913 1252.009 DRAWING NO. 46516 DATE 6/7/93 DRAWN BY CW

Golder Associates

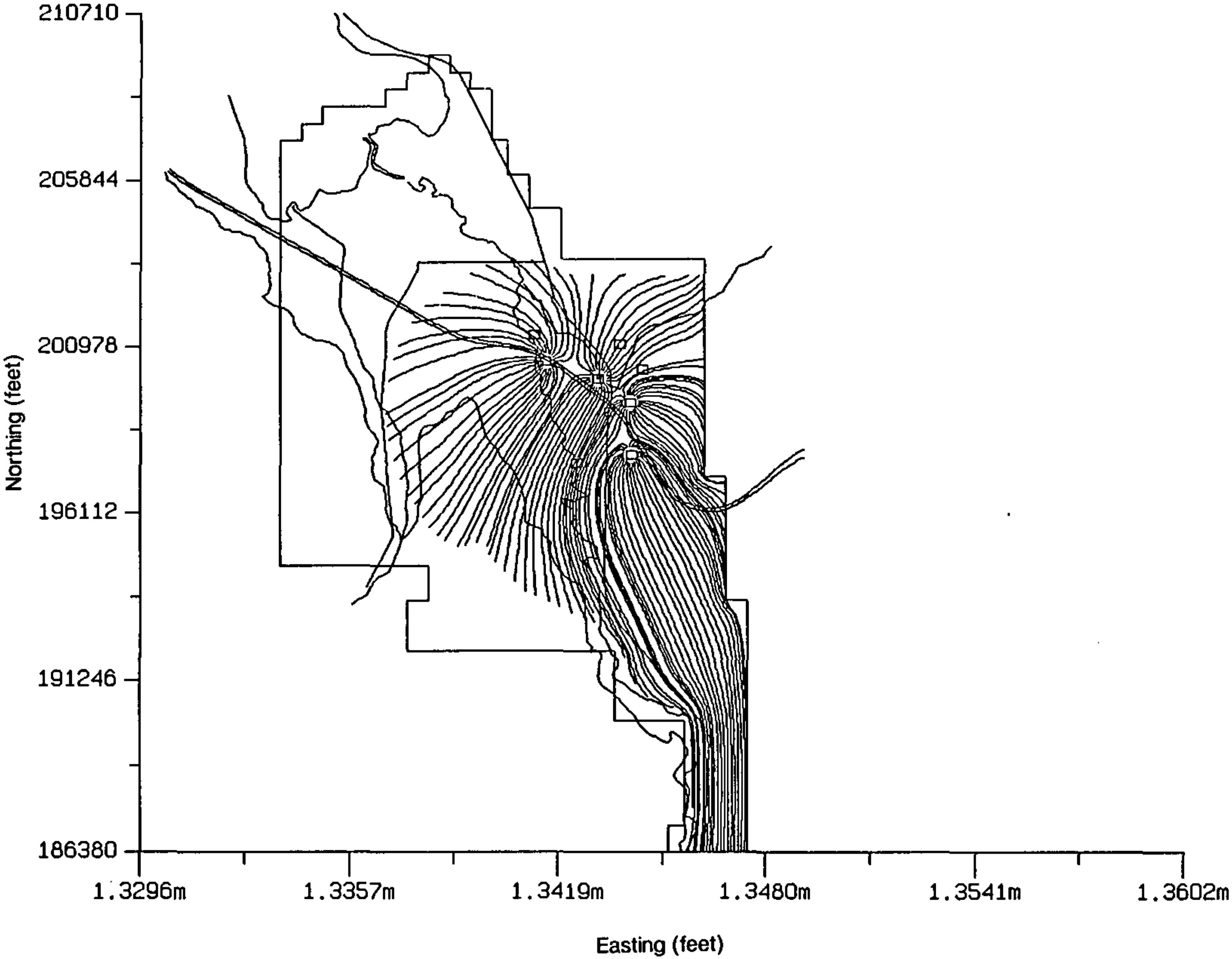


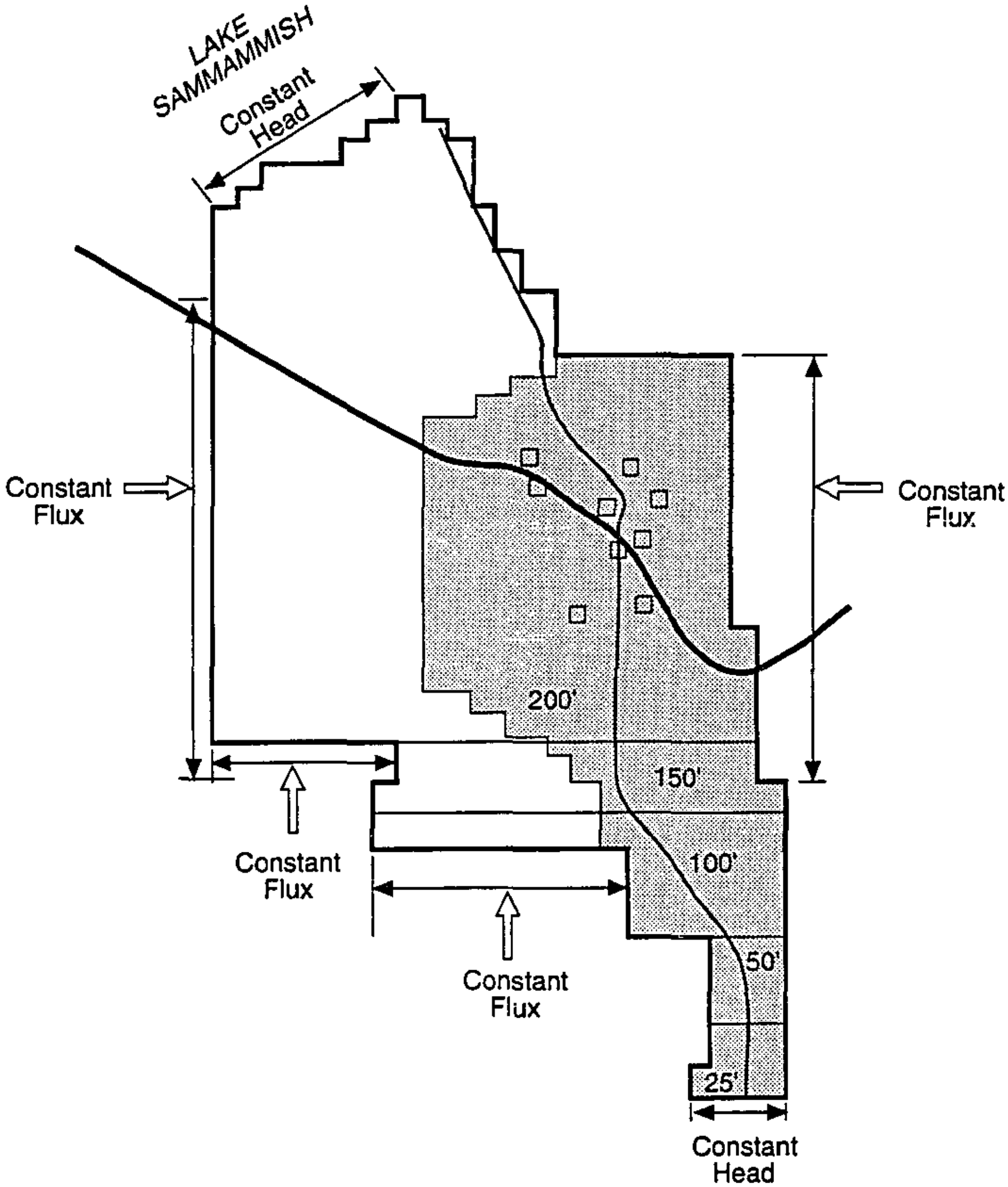
FIGURE **H-8d**

CASE 4B: 10-YEAR CAPTURE ZONE

SAMMAMISH/PREPARE PLAN/WA

PROJECT NO. 913 1252.009 DRAWING NO. 46517 DATE 6/7/93 DRAWN BY CW

Golder Associates



EXPLANATION

— 200', 150', 100', 50', 25' - Aquifer Thickness

— For Case 2, K = 300 ft^2/d in shaded area, and 200 ft^2/d elsewhere

— For Case 1, K = 200 ft^2/d throughout domain

— Unmarked boundaries are no-flow boundaries

— Porosity = 0.25

— ☐ Wells included in the model

FIGURE **H-9**

FLOWPATH MODEL CONFIGURATION

SAMMAMMISH/PREPARE PLAN/WA

Appendix I

APPENDIX I

CONTAMINANT HYDROGEOLOGIC DATA AND WATER QUALITY STANDARDS

Constituent	Sorption Coefficient (l/kg)	etardatio Factor	Solubility (mg/l)	Travel Time 1000 feet (years)	Source
Aluminum	1500	9.25E+03	1.00E+00	12673	I
Antimony	45	2.79E+02	9.99E+99	382	H
Arsenic	0	1.00E+00	9.99E+99	1.37	B
Barium	50	3.09E+02	1.00E+00	424	B
Beryllium	1	7.17E+00	1.00E+00	9.82	C
Cadmium	6.5	4.11E+01	2.50E+01	56.3	I
Calcium	4	2.57E+01	9.99E+99	35.2	I
Chromium	0	1.00E+00	9.99E+99	1.37	B
Cobalt	0.15	1.93E+00	2.50E+01	2.64	G
Copper	15	9.35E+01	2.50E+01	128.1	B
Iron	20	1.24E+02	1.00E+00	170.3	B
Lead	30	1.86E+02	1.00E+00	254.8	B
Magnesium	4.5	2.88E+01	2.50E+01	39.4	I
Manganese	20	1.24E+02	1.00E+00	170.3	B
Mercury	0	1.00E+00	1.00E+00	1.37	C
Nickel	15	9.35E+01	1.00E+00	128.1	B
Potassium	5.5	3.49E+01	9.99E+99	47.8	I
Selenium	0	1.00E+00	1.00E+00	1.37	B
Silver	20	1.24E+02	1.00E+00	170.3	B
Sodium	3	1.95E+01	9.99E+99	26.71	B
Thallium	1500	9.25E+03	1.00E+00	12673	I
Vanadium	1000	6.17E+03	2.50E+01	8449	I
Zinc	15	9.35E+01	2.50E+01	128.1	B
Ammonia	0	1.00E+00	8.99E+05	1.37	
Chloride	0	1.00E+00	9.99E+99	1.37	B
Fluoride	0	1.00E+00	2.50E+01	1.37	B
Nitrite	0	1.00E+00	9.99E+99	1.37	B
Nitrate	0	1.00E+00	9.99E+99	1.37	B
Phosphate	0	1.00E+00	9.99E+99	1.37	
Sulfate	0	1.00E+00	9.99E+99	1.37	B

A-Montgomery & Wellon (1990)
B-Seme & Wood (1988)
C-Dragun (1988)
D-Ames & Seme (1991)
E-Buckmaster (1992)
F-Howard (1990a,b)
G-Cantrell & Seme (1992)
H-Sheppard & Thubault (1990)
I-Baes et al. (1984)

R=1+(Pb*Kd/n)
=R, Retardation factor
1.85 =Pb, Bulk dry density (kg/l)
cell =Kd, Sorption Coefficient (l/kg)
0.3 =n, porosity

T=xRn/Ki
=R, Retardation factor
22250.4 =K, Hydraulic Conductivity (m/yr)
0.2 =n, porosity
304.8 =x, travel distance (m) (1000feet x 0.3048m/ft)
0.002 =i, hydraulic gradient

Constituent	Sorption Coefficient (l/kg)	Retardation Factor	Solubility (mg/l)	Travel Time 1000 feet (years)	Source
Acenaphthene	0.18	2.67E+00	3.47E+00	3.7	A
Anthracene	160	1.48E+03	7.50E-02	2029	A
Benzene	0.49	5.53E+00	1.80E+03	7.6	A
Benzo (a) Anthracene	13800	1.28E+05	1.00E-02	174864	A
Benzo (a) Pyrene	3980	3.68E+04	3.00E-03	50433	A
Benzoic Acid	0	1.00E+00	3.40E+03	1.4	F
bis (2-ethylhexyl) phthalate	58	5.38E+02	4.00E-01	736	D
Butylbenzylphthalate	0.68	7.29E+00	2.70E+00	10.0	F
Carbon disulfide	0.63	6.83E+00	2.10E+03	9.4	F
Chloroform	0	1.00E+00	7.95E+03	1.4	F
Chrysene	2450	2.27E+04	1.50E-03	31046	A
Dibenzofuran	81.3	7.53E+02	1.00E+01	1032	A
Diethylphthalate	0.69	7.38E+00	1.08E+03	10.1	A
Di-n-Butylphthalate	110	1.02E+03	1.12E+01	1395	D
Ethylbenzene	0.95	9.79E+00	2.08E+02	13.4	A
Fluoranthene	416.9	3.86E+03	2.65E-01	5284	A
Fluorene	50.1	4.64E+02	1.69E+00	636	A
N-Nitrosodiphenylamine	5.75	5.42E+01	3.51E+01	74.2	A
Naphthalene	5.5	5.19E+01	3.00E+01	71.1	A
PCB	263	2.43E+03	3.70E-01	3334	C
Pentachlorophenol	8.91	8.34E+01	5.00E+00	114.3	A
Phenanthrene	52.5	4.87E+02	1.15E+00	667	A
Pyrene	457	4.23E+03	1.60E-01	5792	A
Tetrachloroethylene	1.0	1.03E+01	2.00E+02	14.0	D
Toluene	1.15	1.16E+01	5.35E+02	15.9	A
Trichloroethylene	0.074	1.68E+00	1.10E+03	2.3	F
Vinyl Chloride	0.004	1.04E+00	2.76E+03	1.4	F
m-Xylene	15.8	1.47E+02	1.73E+02	202	A
o-Xylene	1.28	1.28E+01	2.04E+02	17.6	A
p-Xylene	2.04	1.99E+01	2.00E+02	27.2	A
1-2-Dichloroethylene	0.49	5.53E+00	3.50E+03	7.6	F
2-Methylnaphthalene	85	7.87E+02	2.46E+01	1078	C
4-Chloroaniline	0.95	9.79E+00	3.80E+03	13.4	A
4-Methylphenol	0.49	5.53E+00	2.40E+04	7.6	A
4,4'-DDE	10000	9.25E+04	6.50E-02	126714	A
1,1,1-Trichloroethane	1.04	1.06E+01	4.40E+03	15	A

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F-Howard (1990a,b)
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$R=1+(Pb*Kd/n)$

=R, Retardation factor

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$T=xRn/Ki$

=R, Retardation factor
22250.4 =K, Hydraulic Conductivity (m/yr)
0.2 =n, porosity
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0.002 =i, hydraulic gradient

APPENDIX 6. COLUMBIA RIVER ESTUARY RESOURCE SENSITIVITY RANKINGS BY SEASON

Grid-Cell #	FINAL (Sp,Su,F,W)	HUMAN USE (Sp,Su,F,W)	BIRD (Sp,Su,F,W)	MAMMAL (Sp,Su,F,W)	FISH (Sp,Su,F,W)	HABITAT (Sp,Su,F,W)	INVERT (Sp,Su,F,W)
1242	2222	1111	1111	2222	1111	1111	1111
1243	2222	1111	1111	2222	1111	1111	1111
1244	2222	1111	1111	2222	1111	1111	1111
1245	5544	2222	5544	2222	1111	2222	1111
1246	4444	4444	4422	1111	1111	1111	1111
1247	4444	4444	4422	1111	1111	1111	1111
1248	4422	1111	4422	1111	1111	1111	1111
1249	4422	1111	4422	1111	1111	1111	1111
1250	4422	1111	4422	1111	1111	1111	1111
1251	5555	1111	4422	1111	1111	5555	1111
1252	5555	1111	4422	1111	1111	5555	1111
1253	5555	1111	4422	1111	1111	5555	1111
1254	4422	1111	4422	1111	1111	1111	1111

[Statutory Authority: Chapter 90.48 RCW. 92-10-005 (Order 91-13), § 173-183-920, filed 4/23/92, effective 5/24/92.]

Chapter 173-200 WAC
WATER QUALITY STANDARDS FOR GROUND WATERS OF THE STATE OF WASHINGTON

WAC 173-200-010 Introduction. (1) This chapter implements chapter 90.48 RCW, the Water Pollution Control Act and chapter 90.54 RCW, the Water Resources Act of 1971.

(2) This chapter applies to all ground waters of the state that occur in a saturated zone or stratum beneath the surface of land or below a surface water body.

(3) This chapter shall not apply to:

(a) Contaminant concentrations found in saturated soils where those contaminants are chemicals or nutrients that have been applied at agronomic rates for agricultural purposes if those contaminants will not cause pollution of any ground waters below the root zone.

(b) Contaminant concentrations found in saturated soils where those contaminants are constituents that have been applied at approved rates and under approved methods of land treatment if those contaminants will not cause pollution of any ground waters below the root zone.

(c) Clean up actions approved by the department under the Model Toxics Control Act, chapter 70.105D RCW, or approved by the United States Environmental Protection Agency under the Comprehensive Environmental Response Compensation and Liability Act, 42 U.S.C. 9601 et seq. Ground water cleanup standards for such sites shall be developed under WAC 173-340-720.

(4) The goal of this chapter is to maintain the highest quality of the state's ground waters and protect existing and future beneficial uses of the ground water through the reduction or elimination of the discharge of contaminants to the state's ground waters.

(5) To implement this goal, this chapter establishes ground water quality standards which, together with the state's technology-based treatment requirements, provide for the protection of the environment and human health and protection of existing and future beneficial uses of ground waters.

[Statutory Authority: RCW 90.48.035. 90-22-023, § 173-200-010, filed 10/31/90, effective 12/1/90.]

WAC 173-200-020 Definitions. As used in this chapter:

(1) "Activity" means any site, area, facility, structure, vehicle, installation, or discharge which may produce pollution.

(2) "Artificial ground water" means ground water that has been put in place through means, such as irrigation, other than natural recharge.

(3) "Background water quality" means the concentrations of chemical, physical, biological, or radiological constituents, or other characteristics in or of ground water at a particular point in time and upgradient of an activity that have not been affected by that activity.

(4) "Beneficial uses" means uses of waters of the state which include but are not limited to use for domestic, stock watering, industrial, commercial, agricultural, irrigation, mining, fish and wildlife maintenance and enhancement, recreation, generation of electric power and preservation of environmental and aesthetic values, and all other uses compatible with the enjoyment of the public waters of the state.

(5) "Best management practices" or "BMPs" mean schedules of activities, prohibitions of practices, maintenance of procedures, and other management practices, to prevent or reduce the pollution of ground waters of the state. BMPs also include treatment requirements, operating procedures and practices to control plant site runoff, spillage or leaks, sludge or water disposal, or drainage from raw material storage.

(6) "Carcinogen" means any substance or agent that produces or tends to produce cancer in humans. For implementation of this chapter, the term carcinogen will apply to all substances on the United States Environmental Protection Agency Integrated Risk Information System, IRIS data base, of A (known human) and B1 and B2 (probable human) carcinogens for which IRIS listed an oral slope factor.

(7) "Contaminant" means any chemical, physical, biological, or radiological substance that does not occur naturally in ground water or that occurs at concentrations greater than those in the natural levels.

(8) "Criteria" means numerical values or narrative standards that represent the maximum allowable contaminant concentrations in the ground water.

(9) "Department" means the Washington state department of ecology.

(10) "Early warning value" means a concentration set in accordance with WAC 173-200-070 that is a percentage of a ground water quality enforcement limit.

(11) "Enforcement limit" means the value assigned to any contaminant for the purposes of regulating that contaminant.

(12) "Ground water" means water in a saturated zone or stratum beneath the surface of land or below a surface water body.

(13) "Human-caused pollution" means pollution resulting from human activity.

(14) "Isolated ground water" means ground water fully separated from other ground waters by an impermeable layer of rock or strata.

(15) "Maximum contaminant level" or "MCL" means the maximum concentration of a contaminant in water established by the Environmental Protection Agency under the Federal Safe Drinking Water Act (42 U.S.C. 300f et seq.) and published in 40 C.F.R. 141 as presently promulgated or as subsequently amended or repromulgated.

(16) "Maximum contaminant level goal" or "MCLG" means the maximum concentration of a contaminant established by the Environmental Protection Agency under the Federal Safe Drinking Water Act (42 U.S.C. 300f et seq.) and published in 40 C.F.R. 141 as presently promulgated or subsequently amended or repromulgated, for which no known or anticipated adverse effects on human health occur including an adequate margin of safety.

(17) "Natural ground water quality" means ground water quality that was present before any human-caused pollution.

(18) "Naturally nonpotable ground water" means ground water that is unsuitable for drinking water because of natural ground water quality and for which current treatment methods are considered unreasonable and impractical.

(19) "Permit" means a department authorization, license, or equivalent control document issued to a facility, activity, or entity authorized to treat, store, dispose, or discharge materials or wastes. This includes, but is not limited to, state waste discharge permits issued pursuant to chapter 173-216 WAC, permits for dangerous waste management facilities issued pursuant to chapter 173-303 WAC, and permits for ground water withdrawal issued pursuant to chapter 90.44 RCW.

(20) "Person" means any political subdivision, government agency, municipality, industry, public or private corporation, partnership, association, firm, individual, or any other entity whatsoever.

(21) "Point of compliance" means the location, set in accordance with WAC 173-200-060, where the ground water quality enforcement limit shall not be exceeded.

(22) "Pollution" means such contamination, or other alteration of the physical, chemical or biological properties, of any waters of the state, including change in temperature, taste, color, turbidity, or odor of the waters, or such discharge of any liquid, gaseous, solid, radioactive, or other substance into any waters of the state as will or is likely to create a nuisance or render such waters harmful, detrimental or injurious to the public health, safety or welfare, or to domestic, commercial, industrial, agricultural, recreational, or other legitimate beneficial uses, or to livestock, wild animals, birds, fish, or other aquatic life.

(23) "Practical quantification level" or "PQL" means the lowest concentration of a substance that can be reliably achieved within specific limits of precision, accuracy, representativeness, completeness, and comparability during routine laboratory operating conditions.

(24) "Root zone" means the zone that extends from the surface of the soil to the depth of the lowest root and is specific to a species of plant, group of plants, or crop.

(25) "Saturated zone" means the zone below the water table in which all interstices are filled with water.

(26) "Seasonal ground water" means ground water that exists for a temporary period of the year and is usually associated with a particular activity or phenomenon.

(27) "State waste discharge permit" means a permit issued in accordance with the state waste discharge permit program, chapter 173-216 WAC.

[Statutory Authority: RCW 90.48.035. 90-22-023, § 173-200-020, filed 10/31/90, effective 12/1/90.]

WAC 173-200-030 Antidegradation policy. (1) The antidegradation policy of the state of Washington, is generally guided by chapter 90.48 RCW, the Water Pollution Control Act, and chapter 90.54 RCW, the Water Resources Act of 1971. The goal of this policy is to ensure the purity of the state's ground waters and to protect the natural environment.

(2) The antidegradation policy is as follows:

(a) Existing and future beneficial uses shall be maintained and protected and degradation of ground water quality that would interfere with or become injurious to beneficial uses shall not be allowed.

(b) Degradation shall not be allowed of high quality ground waters constituting an outstanding national or state resource, such as waters of national and state parks and wildlife refuges, and waters of exceptional recreational or ecological significance.

(c) Whenever ground waters are of a higher quality than the criteria assigned for said waters, the existing water quality shall be protected, and contaminants that will reduce the existing quality thereof shall not be allowed to enter such waters, except in those instances where it can be demonstrated to the department's satisfaction that:

(i) An overriding consideration of the public interest will be served; and

(ii) All contaminants proposed for entry into said ground waters shall be provided with all known, available, and reasonable methods of prevention, control, and treatment prior to entry.

[Statutory Authority: RCW 90.48.035. 90-22-023, § 173-200-030, filed 10/31/90, effective 12/1/90.]

WAC 173-200-040 Criteria. (1) Ground waters in the state of Washington support many different beneficial uses. The purpose of these criteria is to establish maximum contaminant concentrations for the protection of a variety of beneficial uses of Washington's ground water.

(a) Drinking water is the beneficial use generally requiring the highest quality of ground water.

(b) Providing protection to the level of drinking water standards will protect a great variety of existing and future beneficial uses.

(c) Some ground waters of the state support environmental systems with existing and future beneficial uses requiring more stringent protection than that provided by human health based criteria. These ground waters and dependent uses will be protected by either or both of the following:

(i) Designation of an area and its associated ground water as a special protection area in accordance with WAC 173-200-090.

(ii) Establishment of enforcement limits as close to the natural ground water quality as possible for activities that may adversely affect those ground waters in accordance with WAC 173-200-050.

(d) The use of criteria based on drinking water quality shall in no way be interpreted to mean that all ground waters are used for drinking water or that all ground waters are presently suitable for drinking water.

(2) The following criteria shall apply to all ground waters in the state of Washington:

(a) Ground water concentrations shall not exceed the criteria listed in Table 1, except as described in WAC 173-200-050 (3)(b).

(b) For the primary and secondary contaminants and radionuclides listed in Table 1, the criteria shall be the most stringent concentration of the following and those listed in Table 1:

(i) Maximum contaminant level goals;

(ii) Maximum contaminant levels; and

(iii) State maximum contaminant levels published in chapter 248-54 WAC as presently promulgated or subsequently amended or repromulgated.

The criteria for primary and secondary contaminants and radionuclide contaminants in Table 1 shall be amended as the federal and state rules are amended and without amendment of this chapter.

(c) For carcinogens listed in Table 1, the criteria are the concentrations that are anticipated to result in a total incremental human cancer risk of less than 1 in 1,000,000, and were estimated using the following equation and standard exposure assumptions:

$$\text{Ground Water Criteria (ug/l)} = \frac{\text{RISK x BW x LIFE x UCF}}{\text{CPF x DWIR x DUR}}$$

Where:

RISK = Human cancer risk level (1 in 1,000,000)
BW = Body Weight (70 kg)
LIFE = Lifetime (70 years)
UCF = Unit conversion factor (1,000 ug/mg)
CPF = Cancer potency factor as published in the IRIS data base (1/mg/kg/day)
DWIR = Drinking water ingestion rate (2.0 liters/day)
DUR = Duration of exposure (30 years)

For volatile carcinogens, inhalation exposure from showering was incorporated into the criteria by doubling the drinking water ingestion rate.

(3) For contaminants for which no numeric criteria have been established, enforcement limits shall be established in accordance with WAC 173-200-050.

TABLE 1
GROUND WATER QUALITY CRITERIA

CONTAMINANT	CRITERION	
I. PRIMARY AND SECONDARY CONTAMINANTS AND RADIONUCLIDES		
A. PRIMARY CONTAMINANTS		
Barium*	1.0	milligrams/liter (mg/l)
Cadmium*	0.01	mg/l
Chromium*	0.05	mg/l
Lead*	0.05	mg/l
Mercury*	0.002	mg/l
Selenium*	0.01	mg/l
Silver*	0.05	mg/l
Fluoride	4	mg/l
Nitrate (as N)	10	mg/l
Endrin	0.0002	mg/l
Methoxychlor	0.1	mg/l
1,1,1-Trichloroethane	0.20	mg/l
2-4 D	0.10	mg/l
2,4,5-TP Silvex	0.01	mg/l
Total Coliform Bacteria	1/100	ml
B. SECONDARY CONTAMINANTS		
Copper*	1.0	mg/l
Iron*	0.30	mg/l
Manganese*	0.05	mg/l
Zinc*	5.0	mg/l
Chloride	250	mg/l
Sulfate	250	mg/l
Total Dissolved Solids	500	mg/l
Foaming Agents	0.5	mg/l
pH	6.5-8.5	
Corrosivity	noncorrosive	
Color	15 color units	
Odor	3 threshold odor units	
C. RADIONUCLIDES		
Gross Alpha Particle Activity	15	pico Curie/liter (pCi/l)
Gross Beta Particle Radioactivity		
Gross Beta Activity	50	pCi/l
Tritium	20,000	pCi/l
Strontium-90	8	pCi/l

Radium 226 & 228	5	pCi/l
Radium -226	3	pCi/l

II. CARCINOGENS

Acrylamide	0.02	micrograms/ liter ug/l
Acrylonitrile	0.07	ug/l
Aldrin	0.005	ug/l
Aniline	14	ug/l
Aramite	3	ug/l
Arsenic*	0.05	(ug/l)
Azobenzene	0.7	ug/l
Benzene	1.0	ug/l
Benzidine	0.0004	ug/l
Benzo(a)pyrene	0.008	ug/l
Benzotrichloride	0.007	ug/l
Benzyl chloride	0.5	ug/l
Bis(chloroethyl)ether	0.07	ug/l
Bis(chloromethyl)ether	0.0004	ug/l
Bis(2-ethylhexyl) phthalate	6.0	ug/l
Bromodichloromethane	0.3	ug/l
Bromoform	5	ug/l
Carbazole	5	ug/l
Carbon tetrachloride	0.3	ug/l
Chlordane	0.06	ug/l
Chlorodibromomethane	0.5	ug/l
Chloroform	7.0	ug/l
4 Chloro-2-methyl aniline	0.1	ug/l
4 Chloro-2-methyl analine hydrochloride	0.2	ug/l
o-Chloronitrobenzene	3	ug/l
p-Chloronitrobenzene	5	ug/l
Chlorthalonil	30	ug/l
Diallate	1	ug/l
DDT (includes DDE and DDD)	0.3	ug/l
1,2 Dibromoethane	0.001	ug/l
1,4 Dichlorobenzene	4	ug/l
3,3' Dichlorobenzidine	0.2	ug/l
1,1 Dichloroethane	1.0	ug/l
1,2 Dichloroethane (ethylene chloride)	0.5	ug/l
1,2 Dichloropropane	0.6	ug/l
1,3 Dichloropropene	0.2	ug/l
Dichlorvos	0.3	ug/l
Dieldrin	0.005	ug/l
3,3' Dimethoxybenzidine	6	ug/l
3,3 Dimethylbenzidine	0.007	
1,2 Dimethylhydrazine	60	ug/l
2,4 Dinitrotoluene	0.1	ug/l
2,6 Dinitrotoluene	0.1	ug/l
1,4 Dioxane	7.0	ug/l
1,2 Diphenylhydrazine	0.09	ug/l
Direct Black 38	0.009	ug/l
Direct Blue 6	0.009	ug/l
Direct Brown 95	0.009	ug/l
Epichlorohydrin	8	ug/l
Ethyl acrylate	2	ug/l
Ethylene dibromide	0.001	ug/l
Ethylene thiourea	2	ug/l
Folpet	20	ug/l
Furazolidone	0.02	ug/l
Furium	0.002	ug/l
Furmecyclox	3	ug/l
Heptachlor	0.02	ug/l
Heptachlor Epoxide	0.009	ug/l
Hexachlorobenzene	0.05	ug/l
Hexachlorocyclohexane (alpha)	0.001	ug/l
Hexachlorocyclohexane (technical)	0.05	ug/l
Hexachlorodibenzo-p-dioxin, mix	0.00001	ug/l
Hydrazine/Hydrazine sulfate	0.03	ug/l
Lindane	0.06	ug/l
2 Methoxy-5-nitroaniline	2	ug/l
2 Methylaniline	0.2	ug/l
2 Methylaniline hydrochloride	0.5	ug/l
4,4' Methylene bis(N,N'-dimethyl) aniline	2	ug/l
Methylene chloride (dichloromethane)	5	ug/l
Mirex	0.05	ug/l
Nitrofurazone	0.06	ug/l
N-Nitrosodiethanolamine	0.03	ug/l
N-Nitrosodiethylamine	0.0005	ug/l
N-Nitrosodimethylamine	0.002	ug/l
N-Nitrosodiphenylamine	17	ug/l
N-Nitroso-di-n-propylamine	0.01	ug/l
N-Nitrosopyrrolidine	0.04	ug/l
N-Nitroso-di-n-butylamine	0.02	ug/l
N-Nitroso-N-methylethylamine	0.004	ug/l
PAH	0.01	ug/l
PBBs	0.01	ug/l
PCBs	0.01	ug/l
o-Phenylenediamine	0.005	ug/l
Propylene oxide	0.01	ug/l
2,3,7,8-Tetrachlorodibenzo-p-dioxin	0.0000006	ug/l
Tetrachloroethylene (perchloroethylene)	0.8	ug/l
p,α,α,α-Tetrachlorotoluene	0.004	ug/l
2,4 Toluenediamine	0.002	ug/l
o-Toluidine	0.2	ug/l
Toxaphene	0.08	ug/l
Trichloroethylene	3	ug/l
2,4,6-Trichlorophenol	4	ug/l
Trimethyl phosphate	2	ug/l
Vinyl chloride	0.02	ug/l

*metals are measured as total metals

[Statutory Authority: RCW 90.48.035. 90-22-023, § 173-200-040, filed 10/31/90, effective 12/1/90.]

WAC 173-200-050 Enforcement limit. (1) An enforcement limit is a value assigned to any contaminant for the purposes of regulating that contaminant to protect existing ground water quality and to prevent ground water pollution.

(2) Enforcement limits shall be defined on a case-by-case basis and shall be met at the point of compliance as defined in WAC 173-200-060. When the point of compliance is established at or in close proximity to the property boundary, enforcement limits shall be established sufficiently below criteria to provide an adequate margin of safety to ensure pollution does not extend beyond the property boundary.

(3) All enforcement limits shall, at a minimum, be based on all known, available, and reasonable methods of prevention, control, and treatment.

(a) The department shall consider all of the following in establishing enforcement limits:

(i) The antidegradation policy;

(ii) Establishment of an enforcement limit as near the natural ground water quality as practical;

(iii) Overall protection of human health and the environment;

(iv) Whether the potentially affected area has been designated as a special protection area;

(v) Protection of existing and future beneficial uses;

(vi) Effects of the presence of multiple chemicals, multiple exposure pathways in accordance with subsection (5) of this section, and toxicity of individual contaminants;

(vii) Federal, state, tribal, and local land use plans, policies, or ordinances including wellhead protection programs;

(viii) Pollution of other media such as soils or surface waters; and

(ix) Any other considerations the department deems pertinent to achieve the objectives of this chapter.

(b) Where a criterion is established for a given contaminant, the enforcement limit shall not exceed the criterion except as follows:

(i) When the natural ground water quality for a contaminant exceeds the criterion, the enforcement limit for that contaminant shall be equal to the natural level.

(ii) When the background ground water quality exceeds a criterion, the enforcement limit at the point of compliance shall not exceed the background ground water quality for that criterion. Enforcement limits based on elevated background ground water quality shall in no way be construed to allow continued pollution of the receiving ground water.

(iii) When a criterion is less than the practical quantification level, the enforcement limit shall be established in an alternate location to provide a realistic estimate that the criterion shall not be exceeded in the ground water. Evaluation for such enforcement limits shall be performed in accordance with WAC 173-200-080(5).

(iv) When naturally nonpotable ground water exceeds a secondary contaminant criterion, an enforcement limit for a secondary contaminant may exceed a criterion when it can be demonstrated to the department's satisfaction that:

(A) The environment is protected;

(B) Human health is protected in consultation with the Washington state department of health;

(C) Existing and future beneficial uses are not harmed; and

(D) All known, available, and reasonable methods of prevention, control, and treatment will not result in concentrations less than the secondary contaminant criteria.

(v) Enforcement limits may exceed criteria in isolated artificial or seasonal ground waters when all of the following conditions exist:

(A) The isolated artificial or seasonal ground waters are of insufficient quantity for use as a drinking water source;

(B) Established enforcement limits will not cause harm to existing and future beneficial uses including support of seasonal wetlands;

(C) Accumulation of contaminants will not cause adverse acute or chronic effects to human health as determined in consultation with the Washington state department of health;

(D) Accumulation of contaminants will not cause adverse acute or chronic effects to the environment.

(vi) In rare circumstances the department may allow an enforcement limit to exceed a criterion for an activity for a period not to exceed five years without reconsideration of the evidence presented in subitems (A), (B), and (C) of this subdivision, and if all of the following conditions are met:

(A) The permit holder or responsible person demonstrates to the department's satisfaction that an enforcement limit that exceeds a criterion is necessary to provide greater benefit to the environment as a whole and to protect other media such as air, surface water, soil, or sediments;

(B) The activity has been demonstrated to be in the overriding public interest of human health and the environment;

(C) The department selects, from a variety of control technologies available for reducing and eliminating contamination from each potentially affected media, the technologies that minimize impacts to all affected media; and

(D) The action has been approved by the director of the department or his/her designee.

(4) Where a criterion is not established for a contaminant, the enforcement limit in ground water shall not exceed the practical quantification level except:

(a) Where there is evidence that a lower concentration would better protect human health and the environment (based on published health advisories, risk assessments, and other available information), the department shall establish a more stringent enforcement limit;

(b) If clear and convincing evidence can be provided to the department that an alternative concentration will provide protection to human health and the environment, the department may establish an enforcement limit higher than the practical quantification level.

Protection of human health shall be determined in consultation with the Washington state department of health.

(5) For multiple contaminants and multiple routes of exposure, enforcement limits shall be addressed as follows:

(a) Estimated doses of individual contaminants from one or more routes of exposure are assumed to be additive unless evidence is available to suggest otherwise.

(b) Adverse effects of multiple contaminants with similar types of toxic responses are assumed to be additive unless evidence is available to suggest otherwise.

(c) Human cancer risks associated with multiple carcinogens are assumed to be additive unless evidence is available to suggest otherwise and shall not exceed a total incremental human cancer risk of 1 in 1,000,000.

(6) The enforcement limit for a specific activity may be established through, but not limited to the following mechanisms: A state administrative rule, a state waste discharge permit, other department permit, or administrative order.

(7) The ground water quality at the point of compliance for an activity may temporarily exceed an enforcement limit while the activity is under an enforceable schedule of compliance.

[Statutory Authority: RCW 90.48.035. 90-22-023, § 173-200-050, filed 10/31/90, effective 12/1/90.]

WAC 173-200-060 Point of compliance. (1) The point of compliance is the location where the enforcement limit, set in accordance with WAC 173-200-050, shall be measured and shall not be exceeded.

(a) The department shall establish the point of compliance for an activity. The point of compliance shall be established in the ground water as near the source as technically, hydrogeologically, and geographically feasible.

(b) Compliance with the enforcement limits shall be maintained throughout the site from the uppermost level of the saturated zone extending vertically to the lowest depth that could potentially be affected by an activity.

(2) An alternative point of compliance, established at a location some distance from the source up to but not exceeding the property boundary, may be approved by the department as follows:

(a) An alternative point of compliance may be approved in the following situations:

(i) When all known, available, and reasonable methods of prevention, control, and treatment result in an exceedance of the criteria at the point of compliance.

(ii) When a point of compliance is defined in another state administrative rule including, but not limited to, Minimum functional standards for solid waste handling (chapter 173-304 WAC), Dangerous waste regulations (chapter 173-303 WAC), and Uranium and/or thorium mill operation and stabilization of mill tailing piles (chapter 402-52 WAC).

(b) In determining an alternative point of compliance, the department shall consider, at a minimum, the following factors:

(i) Effectiveness of all known, available, and reasonable methods of prevention, control, and treatment;

(ii) The contaminant volume, type, mobility, and characteristics;

(iii) Design and life span of the activity;

(iv) Existing and anticipated land and ground water uses; and

(v) Remedial options if an enforcement level is exceeded at the point of compliance.

(3) The department recognizes that evaluation of the impact of an activity at the designated point of compliance may be impractical, and the department may allow evaluation of that activity at some other point, in accordance with WAC 173-200-100 and 173-200-080(5).

[Statutory Authority: RCW 90.48.035. 90-22-023, § 173-200-060, filed 10/31/90, effective 12/1/90.]

WAC 173-200-070 Early warning value. (1) The purpose of an early warning value is to provide early detection of increasing contaminant concentrations that may approach or exceed enforcement limits.

(2) Whenever an enforcement limit is established above background ground water quality, an early warning value may be established, as appropriate.

(3) An early warning value shall be required when an alternative point of compliance is established unless technical constraints would prohibit establishment of an early warning value.

(4) An early warning value shall be established as a percentage of the enforcement limit upon consideration by the department of factors including, but not limited to, the following:

(a) The enforcement limit relative to background ground water quality;

(b) The availability, reliability, and reasonableness of analytical methods;

(c) The chemical, physical, and biological characteristics of the contaminants;

(d) The reliability of all known, available, and reasonable methods of prevention, control, and treatment;

(e) The anticipated increases in contaminant levels at the point of compliance; and

(f) The potential harm to existing and future beneficial uses.

(5) It shall not be considered a violation of these rules when contaminants are detected in concentrations exceeding an early warning value, but not exceeding an enforcement limit, unless there is failure to notify the department or respond as required in accordance with subsection (6) of this section.

(6) The following procedures apply when a contaminant is detected at a point of compliance or an alternative point of compliance and an early warning value is attained or exceeded.

(a) The permit holder or responsible person shall notify the department, in writing, within ten calendar days from detection of the early warning value, that the early warning value has been attained or exceeded. The notification shall contain, at a minimum, the following information:

(i) The concentrations of contaminants that attained or exceeded early warning values;

(ii) Concentrations of other contaminants monitored;

(iii) The location(s) and date(s) sampled; and

(iv) Concentrations of contaminants determined during previous sampling events.

(b) When notification is received, the department may require the permit holder or responsible person to perform one or more of the following:

(i) Take no action.

(ii) Resample to verify results.

(iii) Increase monitoring or modify the monitoring plan or evaluation procedures.

(iv) Develop and implement a trend analysis to determine the likelihood of exceeding the enforcement limit.

(v) Prepare and submit a report documenting the changes in ground water quality and discuss and propose alternative methods of operation that will reduce impacts to ground water.

(vi) Take such actions as the department deems necessary, if the department determines that there is a likelihood of exceeding an enforcement limit at the point of compliance.

[Statutory Authority: RCW 90.48.035. 90-22-023, § 173-200-070, filed 10/31/90, effective 12/1/90.]

WAC 173-200-080 Evaluation. (1) The purpose of this section is to establish minimum requirements for evaluating the impacts of an activity on the ground water quality to determine compliance with this chapter.

(2) If the department determines a potential to pollute the ground water exists, the department shall request a permit holder or responsible person to prepare and submit for departmental approval a ground water quality evaluation program for its activity. Each evaluation program shall be based on soil and hydrogeologic characteristics and be capable of assessing impacts on ground water at the point of compliance.

(3) A ground water evaluation program approved by the department may include, but not be limited to, any of the following:

(a) Ground water monitoring for a specific activity;

(b) Ground water monitoring at selected sites for a group of activities;

(c) Monitoring of the vadose zone;

(d) Evaluation and monitoring of effluent quality;

(e) Evaluation within a treatment process;

(f) Evaluation of management practices.

(4) In the evaluation program the permit holder or responsible person shall include information on the following:

(a) The chemical, physical, and biological characteristics of the contaminants;

(b) The availability and adequacy of analytical methods;

(c) The complexity and capability of assessing the hydrogeologic system;

(d) The reliability of all known, available, and reasonable methods of prevention, control, and treatment;

(e) The location of the point or points of compliance or alternative point of compliance; and

(f) Such other information that the department deems necessary to achieve the objectives of this chapter.

(5) When it is impractical to evaluate the impact of an activity at the designated point of compliance, for example when a criterion is less than the practical quantification limit, evaluation shall be designed and performed at an alternate location to provide a realistic estimate of conditions in the ground water at a point of compliance.

(6) These evaluation requirements pertain to activities that are not already covered by state regulation which have specific monitoring requirements such as chapter 173-303 WAC, Dangerous waste regulations, chapter 173-304 WAC, Minimum functional standards for solid waste handling, and chapter 402-52 WAC, Uranium and/or thorium mill operation and stabilization of mill tailing piles.

(7) For those activities for which the department has not issued permits and that have the potential to pollute the ground water, evaluation shall be conducted according to the following:

(a) Evaluation procedures shall be included in department guidelines, policies, and best management practices to ensure that an adequate determination of compliance with this chapter can be made;

(b) For those activities regulated by other agencies but not regulated by department rule, the department will pursue evaluation of the activity through a memorandum of understanding with the regulating agency.

[Statutory Authority: RCW 90.48.035. 90-22-023, § 173-200-080, filed 10/31/90, effective 12/1/90.]

WAC 173-200-090 Special protection areas. (1) The purpose of a special protection area is to identify and designate ground waters that require special consideration or increased protection because of one or more unique characteristics.

(2) The unique characteristics of a special protection area shall be considered by the department when regulating activities, developing regulations, guidelines, and policies, and when prioritizing department resources for ground water quality protection programs.

(3) The characteristics to guide designation of a special protection area shall include, but not be limited to, the following:

(a) Ground waters that support a beneficial use or an ecological system requiring more stringent criteria than drinking water standards;

(b) Ground waters, including, but not limited to, recharge areas and wellhead protection areas, that are vulnerable to pollution because of hydrogeologic characteristics; and

(c) Sole source aquifer status by federal designation.

(4) Special protection areas may be proposed for designation at any time by the department upon its own initiative or at the request of a federal agency, another state agency, an Indian tribe, or local government.

(a) The requestor of designation shall provide sufficient information for the department to determine if the proposed designation is in the best interest of the public. This information shall include, but not be limited to:

(i) A rationale for the proposed designation;

(ii) Supporting data for the proposed designation;

(iii) A description of the proposed area including geographic and hydrologic boundaries;

(iv) Documentation of coordination with affected state and local agencies, tribes, and water user groups; and

(v) Such other information as the department deems necessary.

(b) In coordination with the department, the initiator of the request for designation shall hold at least one public meeting and take written comment for the purpose of receiving comments from the public, affected local, state and federal agencies, tribes, and other persons. Documentation of the public review process and comments received shall be submitted to the department.

(c) The department shall review the request for designation, provide written notification to all affected local, state and federal governments, and tribes, and hold at least one public hearing within the county or counties containing the proposed special protection area.

(5) The department shall designate said ground waters as a special protection area if the department determines:

(a) The special protection area contains one or more of the characteristics described in subsection (2) of this section; and

(b) Such a designation is in the public interest.

[Statutory Authority: RCW 90.48.035. 90-22-023, § 173-200-090, filed 10/31/90, effective 12/1/90.]

WAC 173-200-100 Implementation and enforcement. (1) The requirements of this chapter shall be met for all ground waters to meet the requirements of this chapter at all places and at all times.

(2) No person shall engage in any activity that violates or causes the violation of this chapter.

(3) This chapter shall be enforced through all legal, equitable, and other methods available to the department including, but not limited to: Issuance of state waste discharge permits, other departmental permits, regulatory orders, court actions, review and approval of plans and specifications, evaluation of compliance with all known, available, and reasonable methods of prevention, control, and treatment of a waste prior to discharge, and pursuit of memoranda of understanding between the department and other regulatory agencies.

(4) Permits issued or reissued by the department shall be conditioned in such a manner as to authorize only activities that will not cause violations of this chapter.

(a) Any applicant for any departmental permit shall evaluate the potential impact of its proposed activity on the ground water quality.

(b) For reissued permits, the permit holder shall evaluate the impacts of its activities on ground water quality, and, if necessary to achieve compliance with ground water quality enforcement limits, determine a department approved schedule of compliance.

(5) For permit holders in compliance with the terms and conditions of a department permit and whose activity violates this chapter, the department is electing, from among the enforcement mechanisms available to it for the enforcement of WAC 173-200-040 and 173-200-050, to precede any civil or criminal penalty with a compliance order or permit modification.

(6) The department shall pursue memoranda of understanding with other state agencies to develop policies and rules that will require all known, available, and reasonable methods of prevention, control, and treatment to achieve compliance with this chapter. Departmental orders, memoranda of understanding, and best management practices shall be modified by the department whenever an activity authorized by such orders or BMPs or pursuant to such memoranda of understanding violates this chapter.

(7) The department shall pursue memoranda of understanding with other state agencies, federal agencies, and tribal authorities to coordinate ground water management activities.

(8) For persons whose activity violates this chapter but is in compliance with best management practices adopted by rule in chapter 248-96 WAC, WAC 173-304-300(4), RCW 15.58.150 (2)(c), WAC 16-228-180(1), or 16-228-185, the department is electing, from among the enforcement mechanisms available to it for the enforcement of WAC 173-200-040 and 173-200-050, to precede any civil or criminal penalty with a compliance order.

(9) When a distinction cannot be made among ground water, surface water, or sediments the applicable standard shall depend on which beneficial use is or could be adversely affected. If beneficial uses of more than one resource are affected, the most restrictive standard shall apply.

(10) The department shall give due consideration to the precision and accuracy of sampling and analytical methods used when determining compliance with this chapter.

(11) The analytical testing methods for determining compliance with this chapter shall be approved in writing by the department prior to the performance of analyses.

[Statutory Authority: RCW 90.48.035. 90-22-023, § 173-200-100, filed 10/31/90, effective 12/1/90.]

Chapter 173-201A WAC

WATER QUALITY STANDARDS FOR SURFACE WATERS OF THE STATE OF WASHINGTON

WAC 173-201A-010 Introduction. (1) The purpose of this chapter is to establish water quality standards for surface waters of the state of Washington consistent with public health and public enjoyment thereof, and the propagation and protection of fish, shellfish, and wildlife, pursuant to the provisions of chapter 90.48 RCW and the policies and purposes thereof.

(2) This chapter shall be reviewed periodically by the department and appropriate revisions shall be undertaken.

(3) The water use and quality criteria set forth in WAC 173-201A-030 through 173-201A-140 are established in conformance with present and potential water uses of the surface waters of the state of Washington and in consideration of the natural water quality potential and limitations of the same. Compliance with the surface water quality standards of the state of Washington require compliance with chapter 173-201A WAC, Water quality standards for surface waters of the state of Washington, and chapter 173-204 WAC, Sediment management standards.

[Statutory Authority: Chapter 90.48 RCW. 92-24-037 (Order 92-29), § 173-201A-010, filed 11/25/92, effective 12/26/92.]

WAC 173-201A-020 Definitions. The following definitions are intended to facilitate the use of chapter 173-201A WAC:

"Acute conditions" are changes in the physical, chemical, or biologic environment which are expected or demonstrated to result in injury or death to an organism as a result of short-term exposure to the substance or detrimental environmental condition.

"AKART" is an acronym for "all known, available, and reasonable methods of prevention, control, and treatment." AKART shall represent the most current methodology that can be reasonably required for preventing, controlling, or abating the pollutants associated with a discharge. The concept of AKART applies to both point and nonpoint sources of pollution. The term "best management practices," typically applied to nonpoint source pollution controls is considered a subset of the AKART requirement. "The Stormwater Management Manual for the Puget Sound Basin" (1992), may be used as a guideline, to the extent appropriate for developing best management practices to apply AKART for storm water discharges.

"Background conditions" means the biological, chemical, and physical conditions of a water body, outside the area of influence of the discharge under consideration. Background sampling locations in an enforcement action would be upgradient or outside the area of influence of the discharge. If several discharges to any water body exist, and enforcement action is being taken for possible violations to the standards, background sampling would be undertaken immediately upgradient from each discharge. When assessing backgroun

SAFE DRINKING WATER ACT: STATUTORY REQUIREMENT FOR WELLHEAD PROTECTION

"Sec. 1428. STATE PROGRAMS TO ESTABLISH WELLHEAD PROTECTION AREAS

"(a) State Programs. -- The Governor or Governor's designee of each State shall, within 3 years of the date of enactment of the Safe Drinking Water Act Amendments of 1986, adopt and submit to the Administrator a State program to protect wellhead areas within their jurisdiction from contaminants which may have any adverse affect on the health of persons. Each State program under this section shall, at a minimum --

"(1) specify the duties of State agencies, local governmental entities, and public water supply systems with respect to the development and implementation of programs required by this section;

"(2) for each wellhead, determine the wellhead protection area as defined in subsection (e) based on all reasonably available hydrogeologic information on ground water flow, recharge and discharge and other information the State deems necessary to adequately determine the wellhead protection area;

"(3) identify within each wellhead protection area all potential anthropogenic sources of contaminants which may have any adverse effect on the health of persons;

"(4) describe a program that contains, as appropriate, technical assistance, financial assistance, implementation of control measures, education, training, and demonstration projects to protect the water supply within wellhead protection areas from such contaminants;

"(5) include contingency plans for the location and provision of alternate drinking water supplies for each public water system in the event of well or wellfield contamination by such contaminants; and

"(6) include a requirement that consideration be given to all potential sources of such contaminants within the expected wellhead area of a new water well which serves a public water supply system.

"(b) Public Participation. -- To the maximum extent possible, each State shall establish procedures, including but not limited to the establishment of technical and citizens' advisory committees, to encourage the public to participate in developing the protection program for wellhead areas. Such procedures shall include notice and opportunity for public hearing on the State program before it is submitted to the Administrator.

"(c) Disapproval. --

"(1) In General. -- If, in the judgement of the Administrator, a State program (or portion thereof, including the definition of a wellhead protection area), is not adequate to protect public water systems as required by this section, the Administrator shall disapprove such program (or portion thereof). A State program developed pursuant to subsection (a) shall be deemed to be adequate unless the Administrator determines, within 9 months of the receipt of a State program, that such program (or portion thereof) is inadequate for the purpose of protecting public water systems as required by this section from contaminants that may have any adverse effect on the health of persons. If the Administrator determines that a proposed State program (or any portion thereof) is inadequate, the Administrator shall submit a written statement of the reasons for such determination to the Governor of the State.

"(2) Modification and Resubmission. -- Within 6 months after receipt of the Administrator's written notice under paragraph (1) that any proposed State program (or portion thereof) is inadequate, the Governor or Governor's designee, shall modify the program based upon the recommendations of the Administrator and resubmit the modified program to the Administrator.

"(d) Federal Assistance. -- After the date 3 years after the enactment of this section, no State shall receive funds authorized to be appropriated under this section except for the purpose of implementing the program and requirements of paragraphs (4) and (6) of subsection (a).

"(e) Definition of Wellhead Protection Area. -- As used in this section, the term 'wellhead protection area' means the surface and subsurface area surrounding a water well or wellfield, supplying a public water system, through which contaminants are reasonably likely to move toward and reach such water well or wellfield. The extent of a wellhead protection area, within a State, necessary to provide protection from contaminants which may have any adverse effect on the health of persons is to be determined by the State in the program submitted under subsection (a). Not later than one year after the enactment of the Safe Drinking Water Act Amendments of 1986, the Administrator shall issue technical guidance which States may use in making such determinations. Such guidance may reflect such factors such factors as the radius of influence around a well or wellfield, the depth of drawdown of the water table by such well or wellfield at any given point, the time or rate of travel of various contaminants in various hydrologic conditions, distance from the well or wellfield, or other factors affecting the likelihood of contaminants reaching the well or wellfield, taking into account available engineering pump tests or comparable data, field reconnaissance, topographic information, and the geology of the formation in which the well or wellfield is located.

"(f) Prohibitions. --

"(1) Activities Under Other Laws. -- No funds authorized to be appropriated under this section may be used to support activities authorized by the Federal Water Pollution Control Act, the Solid Waste Disposal Act, the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, or other sections of this Act.

"(2) Individual Sources. -- No funds authorized to be appropriated under this section may be used to bring individual sources of contamination into compliance.

"(g) Implementation. -- Each State shall make every reasonable effort to implement the State wellhead area protection program under this section within 2 years of submitting the program to the Administrator. Each State shall submit to the Administrator a biennial status report describing the State's progress in implementing the program. Such report shall include amendments to the State program for water wells sited during the biennial period.

"(h) Federal Agencies. -- Each department, agency, and instrumentality of the executive, legislative, and judicial branches of the Federal Government having jurisdiction over any potential source of contaminants identified by a State program pursuant to the provisions of subsection (a)(3) shall be subject to and comply with all requirements of the State program developed according to subsection (a)(4) applicable to such potential source of contaminants, both substantive and procedural, in the same manner, and to the same extent, as any other person is subject to such requirements, including payment of reasonable charges and fees. The President may exempt any potential source under the jurisdiction of any department, agency, or instrumentality in the executive branch if the President determines it to be in the paramount interest of the United States to do so. No such exemption shall be granted due to the lack of an appropriation unless the President shall have specifically requested such appropriation as part of the budgetary process and the Congress shall have failed to make available such requested appropriations.

"(i) Additional Requirement. --

"(1) In General. -- In addition to the provisions of subsection (a) of this section. States in which there are more than 2,500 active wells at which annular injection is used as of January 1, 1986, shall include in their State program a certification that a State program exists and is being adequately enforced that provides protection from contaminants which may have any adverse effect on the health of persons and which are associated with the annular injection or surface disposal of brines associated with oil and gas production.

"(2) Definition. - For purposes of this subsection, the term 'annular injection' means the reinjection of brines associated with the production of oil or gas between the production and surface casings of a conventional oil or gas producing well.

"(3) Review. -- The Administrator shall conduct a review of each program certified under this subsection.

"(4) Disapproval. -- If a State fails to include the certification required by this subsection or if in the judgement of the Administrator the State program certified under this subsection is not being adequately enforced, the Administrator shall disapprove the State program submitted under subsection (a) of this section.

"(j) Coordination With Other Laws. -- Nothing in this section shall authorize or require any department, agency, or other instrumentality of the Federal Government or State or local government to apportion, allocate or otherwise regulate the withdrawal or beneficial use of ground or surface waters, so as to abrogate or modify any existing rights to water established pursuant to State or Federal law, including interstate compacts."

Appendix J

APPENDIX J

UST AND CHEMICAL HANDLER DATABASE

No.	Address	Owner	Owner history	Telephone	Contaminant Type
1	11107 234th Ave SE	Issaquah Earth Station		281-7800	LNAPL
2	1403 W Lake Sammamish	ARCO 6162		391-6877	LNAPL
3	14331 Issaquah-Hobart Rd SE	Tiger Mtn Country Store		392-2265	LNAPL
4	145 NE Gilman Blvd.	Grange Supply Inc.		392-6469	LNAPL
5	14919 Issaquah-Hobart Road	J.R. Hayes & Sons Inc.		392-5722	LNAPL
6	15 East Sunset Way	Texaco	(Sunset Texaco)	392-7250	LNAPL
7	1505 Newport Way	Issaquah Soc 070866		242-7234	LNAPL;
8	1510 228th Ave SE	King Cty Water Ditrist No.82		392-6256	LNAPL
9	1605 NW Gilman Blvd.	REFVEM Investment Corp.	Gilman's Texaco (formerly Shell Station)	392-7452	LNAPL
10	1740 NW Maple	Fedderly Marion Frt Lines Inc.		746-5444	LNAPL
11	175 Newport Way NW	King Cty Fire District 10		392-3433	LNAPL
12	20500 SE 56th St.	Maintenance Shops			LNAPL;
13	22121 SE 56th St.	Brown Bear Car Wash Issaquah		557-0418	LNAPL
14	22433 SE 56th	Reda Transportation		624-9972	LNAPL
15	212 Front St. N	Issaquah Feed & Service		392-5121	LNAPL
16	23240 SE 74	Issaquah/Closed		392-5121	LNAPL
17	25 NW Gilman Blvd	Chevron 95399		392-3020	LNAPL;
18	25201 SE 24th St.	Beaver Lake Park		296-4242	LNAPL
19	29726 SE Preston Way	Transportation Preston Shop		455-7116	LNAPL
20	30 W Sunset Way	1006R/Former Mobil/"U"		392-3057	LNAPL;
21	3302 E Lake Sammamish Parkway SE	The Southland Corp.		392-5260	LNAPL
22	3725 Providence Pt. Dr. SE	Marianwood Extended Health Services		391-2800	LNAPL
23	400 1st Ave. SE	Issaquah Middle School		392-0780	LNAPL
24	4221 228th SE	Lutheran Bible Institute		392-0400	LNAPL
25	500 2nd Ave SE	Clark Elementary		392-0780	LNAPL
26	5210 E LK Sammamish Pkwy SE	Henry Bacon Building Materials		340-8000	LNAPL
27	524 10th Ave NW	Issaquah CDO 070131		242-7423	LNAPL
28	55 NW Gilman Blvd	Issaquah BP		392-3300	LNAPL
29	611 Front St	Darigold Inc.		392-6463	LNAPL
30	6210 E Lake Sammamish Pkwy SE	Reid Sand and Gravel Inc.		747-1234	LNAPL
31	6401 228th Ave SE	Issaquah Co 070584		242-7234	LNAPL

No.	Address	Owner	Owner history	Telephone	Contaminant Type
32	6420 E Lake Sammamish Pkwy SE	Northern Lights Auto/Tire Center (Unocal 76)		392-9250	LNAPL;
33	6600 230th SE	Lakeside Sand & Gravel Co. Inc.		746-5660	LNAPL;
34	800 Front St. N	ARCO 4466 (Harold J Ruby)		392-5707	LNAPL;
35	802 2nd Ave SE	Bus Garage		392-0780	LNAPL
36	805 2nd Ave SE	Transportation		392-0780	LNAPL
37	825 Front St N	Issaquah Texaco		391-3340	LNAPL
38	lat 47 29 20 N long 121 56 44 W	Issaquah Microwave Print 458		467-3346	LNAPL
39	SE Qtr Sec 25 T24N R5E	Nike Site		392-0780	LNAPL

UNDERGROUND STORAGE TANK DATABASE

Owner	Total Tanks	Total Volume (gal)	Current Tanks	Current Volume (gal)	Tank Age	Reported Release	Remedial Investigation	Tanks Removed	Groundwater Contamination	Soil Contamination	Status
Issaquah Earth Station	4	4400	2	2200	13	N	U	U	U	U	
ARCO 6162	3		3	60000	19	N	U	U	U	U	
Tiger Mtn Country Store	4		4	80000	10	N	U	U	U	U	
Grange Supply Inc.	11	114000	7	70000	19	Y	Y	Y	U	U	Completed
J.R. Hayes & Sons Inc.	1		1	1100	14	N	U	U	U	U	
Texaco	3		3	50000	6	Y	Y	U	Y	Y	Monitoring
Issaquah Soc 070866	3		3	21000	12	N	U	U	U	U	
King Cty Water Ditrist No.82	2		2	2200	14	N	U	U	U	U	
REFVEM Investment Corp.	3		3	50000	20	Y	Y	U	U	Y	Assessing
Fedderly Marion Frt Lines Inc.	5	23300	2	11100	27	Y	Y	U	U	Y	Ongoing
King Cty Fire District 10	4		4	4400	10	N	U	U	U	U	
Maintenance Shops	3		3	?	7	N	U	U	U	U	
Brown Bear Car Wash Issaquah	4		5	60000	0	Y	Y	U	U	Y	NA
Reda Transportation	1		1	20000	5	N	U	U	U	U	
Issaquah Feed & Service	4	4400	0	0	NA	Y	Y	Y	N	N	Tested Clean
Issaquah/Closed	3	3300	0	0	NA	Y	Y	Y	U	U	Completed
Chevron 95399	9	103300	3	60000	2	Y	Y	Y	U	Y	Completed
Beaver Lake Park	1	1100	0	0	NA	Y	Y	Y	U	Y	Ongoing
Transportation Preston Shop	3		3	?	1	Y	Y	Y	U	Y	Assessing
10D6R/Former Mobil/"U"	7	51100	4?	30000?	41	Y	Y	Y	Y	U	Ongoing
The Southland Corp.	3		3	60000	7	N	U	U	U	U	
Marianwood Extended Health Services	1		1	1100	6	N	U	U	U	U	
Issaquah Middle School	3	31100	2	30000	36	N	U	U	U	U	
Lutheran Bible Institute	4	4400	1	2200	31	N	U	U	U	U	
Clark Elementary	2	2200	1	1100+	36	N	U	U	U	U	
Henry Bacon Building Materials	3	60000	0	0	NA	N	U	Y	U	U	
Issaquah CDO 070131	1		1	1100	44	N	U	U	U	U	
Issaquah BP	11	162200	7?	82200?	24	Y	Y	Y	Y	U	Assessing
Darigold Inc.	4	60000+	3	60000	31	N	U	U	U	U	
Reid Sand and Gravel Inc.	4	4400+	0	0	NA	N	U	Y	U	U	
Issaquah Co 070584	1		1	?	16	N	U	U	U	U	

Owner	Total Tanks	Total Volume (gal)	Current Tanks	Current Volume (gal)	Tank Age	Reported Release	Remedial Investigation	Tanks Removed	Groundwater Contamination	Soil Contamination	Status
Northern Lights Auto/Tire Center (Unocal 76)	3		3	41100	4	N	U	U	U	U	
Lakeside Sand & Gravel Co. Inc.	7	63300	5	61100	14	N	U	U	U	U	
ARCO 4466 (Harold J Ruby)	10	122200	5	81100	2	Y	Y	Y	Y	Y	Ongoing
Bus Garage	2	11100	0	0	NA	Y	Y	Y	U	U	Completed
Transportation	3		3	60000	1	U	Y	N	U	U	
Issaquah Texaco	4		4	80000	9	N	U	U	U	U	
Issaquah Microwave Print 458	1		1	?	22	N	U	U	U	U	
Nike Site	2	?	0	0	NA	N	U	U	U	U	

Owner	Source History
Issaquah Earth Station	Unknown; Four operational tanks
ARCO 6162	Unknown; Three operational tanks
Tiger Mtn Country Store	Unknown; Four operational tanks
Grange Supply Inc.	4 leaking UST removed; 7 operational tanks
J.R. Hayes & Sons Inc.	Unknown; One operational tank
Texaco	Past Releases; Three operational tanks; soil and gw contamination
Issaquah Soc 070866	Unknown; Three operational tanks
King Cty Water Ditrist No.82	Unknown; Two operational tanks
REFVEM Investment Corp.	Impact Assessment; Three operational tanks; soil contamination
Fedderly Marion Frt Lines Inc.	Closure in progress on 3 of 5 tanks (tanks removed 11/91);Past releases;2 operational tanks;Soil and pos. gw contamination
King Cty Fire District 10	Four operational tanks
Maintenance Shops	Three operational tanks
Brown Bear Car Wash Issaquah	Past Releases from previous owner; Four operational tanks; landfarmed soil
Reda Transportation	One operational tank
Issaquah Feed & Service	All (4) tanks taken out of service; Soils tested below 200ppm tph
Issaquah/Closed	All (3) tanks taken out of service
Chevron 95399	Six UST's removed; Leaking tank removed 2/90; Past releases; Three operational tanks; 300 CY contaminated to cedar hills
Beaver Lake Park	Tank removed 2/8/91; Soil contamination; Overexcavated soil; Disposal at Cedar Hills
Transportation Preston Shop	Three operational tanks
10D6R/Former Mobil/"U"	Two tanks removed; GW contamination 1PPM Benzene; Pump testing; Five tanks unresloved
The Southland Corp.	Three operational tanks
Marianwood Extended Health Services	One operational tank
Issaquah Middle School	One tank closed in place; Two operational tanks
Lutheran Bible Institute	2 tanks closed in place; One tank temp. out of service; One operational tank
Clark Elementary	One tank closed in place; One operational tank
Henry Bacon Building Materials	All (3) tanks removed
Issaquah CDO 070131	One operational tank
Issaquah BP	Four tanks removed; Two tanks unresolved; Five operational tanks; gw contamination; one leak detected well B above levels
Darigold Inc.	One tank closed in place; Three opertional tanks
Reid Sand and Gravel Inc.	All (4) tanks removed
Issaquah Co 070584	One operational tank

Owner	Source History
Northern Lights Auto/Tire Center (Unocal 76)	Three operational tanks
Lakeside Sand & Gravel Co. Inc.	Two tanks closed in place; Five operational tanks
ARCO 4466 (Harold J Ruby)	Five tanks removed (January-February 1991); Five operational tanks; Soil and gw contamination; VES; PMP& TRT
Bus Garage	Two tanks closed in place (6/91?); 6800PPM; Possible GW contamination
Transportation	Three operational tanks
Issaquah Texaco	Four operational tanks
Issaquah Microwave Print 458	One operational tank
Nike Site	Three tanks closed in place

Owner	Northing	Easting
Issaquah Earth Station		
ARCO 6162	203647.61	1337511.13
Tiger Mtn Country Store	175270.03	1345634.13
Grange Supply Inc.	197827.56	1343828.63
J.R. Hayes & Sons Inc.	173247.38	1346957.75
Texaco	195613.02	1343320.75
Issaquah Soc 070866	199785.34	1337295.75
King Cty Water Ditrist No.82		
REFVEM Investment Corp.	201380.55	1336940.25
Fedderly Marion Frt Lines Inc.	200718.63	1336584.50
King Cty Fire District 10	196742.17	1341318.75
Maintenance Shops	203581.42	1342310.00
Brown Bear Car Wash Issaquah	203657.59	1341093.38
Reda Transportation	203581.42	1341855.00
Issaquah Feed & Service	196502.02	1343316.13
Issaquah/Closed	198660.75	1344968.13
Chevron 95399	198497.19	1343146.75
Beaver Lake Park	Outside LIV	
Transportation Preston Shop		
10D6R/Former Mobil/"U"	195758.48	1343080.63
The Southland Corp.	Outside LIV	
Marianwood Extended Health Services		
Issaquah Middle School	194442.52	1343629.00
Lutheran Bible Institute	Outside LIV	
Clark Elementary	193897.77	1344604.75
Henry Bacon Building Materials	205085.20	1341317.00
Issaquah CDO 070131	197641.30	1339030.00
Issaquah BP	198655.89	1342998.50
Darigold Inc.	197893.83	1343110.13
Reid Sand and Gravel Inc.	202303.20	1342267.25
Issaquah Co 070584		

Owner	Northing	Easting
Northern Lights Auto/Tire Center (Unocal 76)	200879.36	1343217.13
Lakeside Sand & Gravel Co. Inc.	199549.16	1344396.75
ARCO 4466 (Harold J Ruby)	198682.05	1343343.75
Bus Garage	192681.06	1344611.88
Transportation	192221.30	1344643.25
Issaquah Texaco	198858.17	1343190.38
Issaquah Microwave Print 458		
Nike Site		

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ddress	Owner	Remedial Investigation	Groundwater Contamination	Soil Contamination
34[illegible] NE Gilman Blvd.	Grange Supply Inc.	Y	U	U
35 East Sunset Way	Texaco	Y	Y	Y
16[illegible] NW Gilman Blvd.	REFVEM Investment Crop.	Y	U	Y
17[illegible] NW Maple	Fedderly Marion Frt Lines Inc.	Y	U	Y
212 Front St. N	Issaquah Feed & Service	Y	N	N
22[illegible]1 SE 56th St.	Brown Bear Car Wash Issaquah	Y	U	Y
25[illegible]W Gilman Blvd	Chevron 95399	Y	U	Y
25201 SE 24th St.	Beaver Lake Park	Y	U	Y
50 W Sunset Way	10D6R/Former Mobil/"U"	Y	Y	U
55[illegible]W Gilman Blvd	Issaquah BP	Y	U	U
30[illegible] Front St. N	ARCO 4466 (Harold J Ruby)	Y	Y	Y
302 2nd Ave SE	Bus Garage	Y	U	U
30[illegible] 2nd Ave SE	Transportation	Y	U	U

Company name	Address	Phone	Chemical name	Quantity
Captain's Cleaners	1025 NW Gilman Blvd.	391-3643	Solvent (Perchloroethene)	50 Gallons
Daniel's Cleaners	730-C NW Gilman Blvd.	312-9888	Solvent (Perchloroethene)	50 Gallons
Dirk's Dry Clean	240 NW Gilman Blvd.	392-3200	Solvent (Perchloroethene)	50 Gallons
Dryclean USA	3048 Iss-Pine Lk. Rd.	392-7252	Solvent (Perchloroethene)	50 Gallons
Drycleaning Doctor	660 NW Gilman Blvd.		Solvent (Perchloroethene)	50 Gallons
Pine Lake Cleaners	2830 228th Ave. SE	392-1450	Solvent (Perchloroethene)	50 Gallons
Stone Cleaners	5614 E. Lk. Samm. SE	392-8954	Solvent (Perchloroethene)	50 Gallons

CHEMICAL HANDLERS

No.	Company name	Address	Phone
1	Auto Works	1590 NW Mall	392-4568
2	Captain's Cleaners	1025 NW Gilman Blvd.	391-3643
3	Circuit Partners	1575 NW Mall	455-5006
4	Daniel's Cleaners	730-C NW Gilman Blvd.	312-9888
5	Darigold	611 Front Street	362-6463
6	Dirk's Dry Clean	240 NW Gilman Blvd.	392-3200
7	Dryclean USA	3048 Iss-Pine Lk. Rd.	392-7252
8	Drycleaning Doctor	660 NW Gilman Blvd.	
9	Firestone	1270 NW Gilman Blvd.	392-9844
10	Gilman Autobody	220 NE Gilman Blvd.	392-0101
11	Grange Supply	145 NE Gilman Blvd.	362-6469
12	Issaquah Feed	232 Front St. N	392-5121
13	Lakeside	1500 19th Ave N.W.	
14	Pine Lake Cleaners	2830 228th Ave. SE	392-1450
15	Precision Tune	90 NW Gilman Blvd.	391-2292
16	Stone Cleaners	5614 E. Lk. Samm. SE	392-8954

Company name	Chemical name	Quantity
Darigold	Sodium Hydroxide	
Darigold	Anhydrous Chlorine	
Darigold	Anhydrous Ammonia	
Darigold	Diesel No. 2	
Grange Supply	Diesel	3 Tanks Below Ground
Grange Supply	Fuel Oil (Kerosene)	Tanks Below Ground
Grange Supply	Antifreeze	Tanks Above Ground
Grange Supply	Parts Cleaner - Solvent	55 Gallon Drum
Grange Supply	Gasoline	3 Tanks Below Ground
Grange Supply	Ethanol (10% mix of gas)	Bulk
Circuit Partners	Hydrochloric Acid (3%)	55 Gallons
Circuit Partners	Isopropanol (>99%)	355 LBs.
Circuit Partners	Potassium Permanganate (95%)	100 LBs.
Circuit Partners	Sodium Hypochlorite (10%)	20 Gallons
Circuit Partners	Hydrogen Peroxide (50%)	500 LBs.
Circuit Partners	Potassium Permanganate (98%)	100 LBs.
Circuit Partners	Nitric Acid (40%)	55 Gallons
Circuit Partners	Hydrogen Peroxide	55 Gallons
Circuit Partners	Ammonium Hydrogen Fluoride	
Circuit Partners	Hydrogen Peroxide (10%)	55 Gallons
Circuit Partners	Ammonium chloride (10-25%)	440 Gallons
Circuit Partners	Ammonium Hydroxide (20-40%)	
Circuit Partners	Ammonium Chloride (15-25%)	110 Gallons
Circuit Partners	Copper Chloride (15-30%)	
Circuit Partners	Ammonium Hydroxide (1-5%)	
Circuit Partners	Sodium Hydroxide (40%)	700 Lbs.
Circuit Partners	Sodium Borohydride (12%)	
Circuit Partners	Sodium Chlorite (25%)	20 Gallons
Circuit Partners	Sodium Hydroxide (10%)	20 Gallons
Circuit Partners	Monethanol Amine	55 Gallons
Circuit Partners	Methyl Alcohol (5%)	
Circuit Partners	Sulfuric Acid (2%)	20 Gallon
Circuit Partners	Sulfuric Acid (15%)	8 Gallons
Circuit Partners	Sodium Carbonate (100%)	250 LBs.
Circuit Partners	Sodium Hydroxide (50%)	1000 LBs.
Circuit Partners	Nitric Acid (40%)	55 Gallons
Circuit Partners	Sulfamic Acid	
Circuit Partners	Hydrofluoric Acid (5%)	55 Gallons
Circuit Partners	Stannous Fluoborate (50%)	200 LBs.
Circuit Partners	Sulfamic Acid (100%)	50 Lbs.
Circuit Partners	Sulfuric Acid (93-99%)	800 Lbs.
Circuit Partners	Thiourea (50%)	100 LBs.
Circuit Partners	Stannous Chloride (9%)	
Circuit Partners	Sodium Hypophosphite (11%)	
Circuit Partners	Sodium Hydroxide (50%)	5 Gallons
Circuit Partners	Dihydrazine Sulfate (30%)	10 Gallons

Company name	Chemical name	Quantity
Circuit Partners	Fluoboric Acid (50%)	5 Gallons
Circuit Partners	Hydroxylamine Sulfate (30%)	20 Gallons
Circuit Partners	Fluoboric Acid	4 Gallons
Circuit Partners	Fluoboric Acid	600 Lbs.
Circuit Partners	Formaldehyde (40%)	500 Gallons
Circuit Partners	Methanol (20%)	
Circuit Partners	Polyoxypropylene Glycol (90%)	55 Gallons
Circuit Partners	Lead Fluoborate (29%)	70 LBS.
Circuit Partners	Bisulfate (90%)	400 LBS.
Circuit Partners	Inorganic Fluorides (10%)	
Circuit Partners	Hydrochloric Acid (10%)	25 Gallons
Circuit Partners	Ferric Chloride (25%)	
Circuit Partners	Diethylene Glycol	
Circuit Partners	Monobutyl Ether	
Circuit Partners	Fluoboric Acid (10%)	20 Gallons
Circuit Partners	Hydrochloric Acid (9%)	4 Gallons
Circuit Partners	Stannous Chloride (15%)	
Circuit Partners	Sodium Bisulfate (15%)	100 Gallons
Circuit Partners	Monoethanol Amine (40%)	6 Gallons
Circuit Partners	Triethanol Amine (10%)	
Circuit Partners	Cupric Sulfate (15%)	55 Gallons
Circuit Partners	Hydrochloric Acid (3%)	55 Gallons
Circuit Partners	Isopropanol (50%)	
Circuit Partners	Copper	80 Gallons
Circuit Partners	(Dissolved) (5%)	
Circuit Partners	EDTA (20%)	70 Gallons
Circuit Partners	EDTA (25%)	10 Gallons
Circuit Partners	Sodium Hydroxide (50%)	5 Gallons
Circuit Partners	Glycol Ethers (75%)	10 Gallons
Circuit Partners	Citrate Complex	25 LBS
Circuit Partners	Wear Organic	25 LBs.
Circuit Partners	Acid Salts	
Circuit Partners	Cobalt	1 Gallon
Circuit Partners	Organic Complex	
Circuit Partners	Monopotassium	25 Gallons
Circuit Partners	Phosphate (100%)	
Circuit Partners	Nickel Chloride (100%)	50 LBs.
Circuit Partners	Nickel Sulfamate (52%)	5 Gallons
Circuit Partners	Sodium Saccharin (7-13%)	4 Gallons
Circuit Partners	Formaldeyde (<0.17)	
Circuit Partners	Butylcello Solve	10 Gallons
Circuit Partners	Actate (10%)	
Circuit Partners	Fuel Oil No. 1 (20%)	
Lakeside	Waste Oil Tank	5000 Gallons
Lakeside	Oxygen	5 Bottles
Lakeside	Acetylene	5 Bottles
Lakeside	Solvent	50 - 55 Gallons

Company name	Chemical name	Quantity
Lakeside	Nitrogen	2 Bottles
Lakeside	Carbon Monoxide	1 Bottle
Lakeside	30 Weight Oil	1000 Gallons
Lakeside	Hydraulic Oil	1000 Gallons
Lakeside	Miscellaneous Oil & Lubing Grease	500 Gallons
Auto Works	Engine Oil	300 Gallons
Auto Works	Waste Oil	300 Gallons
Auto Works	Anti-freeze	150 Gallons
Dirk's Dry Clean	Solvent (Perchloroethene)	50 Gallons
Captain's Cleaners	Solvent (Perchloroethene)	50 Gallons
Daniel's Cleaners	Solvent (Perchloroethene)	50 Gallons
Dryclean USA	Solvent (Perchloroethene)	50 Gallons
Pine Lake Cleaners	Solvent (Perchloroethene)	50 Gallons
Stone Cleaners	Solvent (Perchloroethene)	50 Gallons
Drycleaning Doctor	Solvent (Perchloroethene)	50 Gallons
Firestone	Waste Oil	300 Gallons
Gilman Autobody	Paints, Thinners	55 Gallons
Issaquah Feed	Waste Oil	55 Gallons
Precision Tune	Engine Oil	700 Gallons
Precision Tune	Waste Oil	500 Gallons

RECEIVED
APR 28 1992
Golder Associates

ISSAQUAH TANK LIST
Department of Ecology
April 24, 1992

site name	site address	phone #	tank#	status	age	size	substance
ISSAQUAH EARTH STATION	11107 234TH AVE SE	2062817800	4	CLOSED IN PLACE	13	111-1100 GALLONS	UNLEADED GASOLINE
			3	CLOSED IN PLACE	13	111-1100 GALLONS	UNLEADED GASOLINE
			2	OPERATIONAL	8	111-1100 GALLONS	DIESEL FUEL
			1	OPERATIONAL	13	111-1100 GALLONS	DIESEL FUEL
ARCO 6162	1403 W LAKE SAMMISH	2063916877	3	OPERATIONAL	19	10000-19999 GALLONS	UNLEADED GASOLINE
			2	OPERATIONAL	19	10000-19999 GALLONS	UNLEADED GASOLINE
			1	OPERATIONAL	19	10000-19999 GALLONS	LEADED GASOLINE
TIGER MOUNTIAN COUNTRY STORE #60	14331 ISSAQUAH-HOGART RD SE	2063922265	4	OPERATIONAL	10	10000-19999 GALLONS	DIESEL FUEL
			3	OPERATIONAL	10	10000-19999 GALLONS	UNLEADED GASOLINE
			2	OPERATIONAL	10	10000-19999 GALLONS	UNLEADED GASOLINE
			1	OPERATIONAL	10	10000-19999 GALLONS	LEADED GASOLINE
GRANGE SUPPLY INC.	145 NE GILMAN BLVD	2063926469	UL-1	OPERATIONAL	19		UNLEADED GASOLINE
			S-1	OPERATIONAL	19		KEROSENE
			R-1	OPERATIONAL	19		LEADED GASOLINE
			K-1	OPERATIONAL	19	5000-9999 GALLONS	KEROSENE
			D-3	OPERATIONAL	19	5000-9999 GALLONS	DIESEL FUEL
			D-2	OPERATIONAL	19		DIESEL FUEL
			D-1	OPERATIONAL	19		DIESEL FUEL
			D-4	REMOVED	24	111-1100 GALLONS	KEROSENE
			5-3	REMOVED	24	111-1100 GALLONS	
			5-2	REMOVED	24	111-1100 GALLONS	KEROSENE
			5-1	REMOVED	24	111-1100 GALLONS	
J R HAYES & SONS, INC	14919 ISSAQUAH-HOBART ROAD	2063925722	1	OPERATIONAL	14	111-1100 GALLONS	LEADED GASOLINE
TEXACO STATION	15 EAST SUNSET WAY	2063927250	2	OPERATIONAL	6	10000-19999 GALLONS	LEADED GASOLINE
			4	OPERATIONAL	6	10000-19999 GALLONS	UNLEADED GASOLINE
			1	OPERATIONAL	6	5000-9999 GALLONS	UNLEADED GASOLINE
ISSAQUAH SOC 070866	1505 NEWPORT WAY	5032427234	3	OPERATIONAL	12	111-1100 GALLONS	USED OIL/WASTE OIL
			2	OPERATIONAL	12	5000-9999 GALLONS	UNLEADED GASOLINE
			1	OPERATIONAL	12	5000-9999 GALLONS	UNLEADED GASOLINE
KING COUNTY WATER DISTRICT NO. 8 2	1510 228TH AVE SE	2063926256	2	OPERATIONAL	14	111-1100 GALLONS	DIESEL FUEL
			1	OPERATIONAL	14	111-1100 GALLONS	UNLEADED GASOLINE
REFVEM INVESTMENT CORP	1605 NW GILMAN BLVD	2063927452	3	OPERATIONAL	20	5000-9999 GALLONS	UNLEADED GASOLINE
			2	OPERATIONAL	20	10000-19999 GALLONS	UNLEADED GASOLINE
			1	OPERATIONAL	20	10000-19999 GALLONS	LEADED GASOLINE
FEDDERLY MARION FRT LINES INC	1740 NW MAPLE	2067465444	5	CLOSURE IN PROCESS	6		UNLEADED GASOLINE
			4	EXEMPT	27	111-1100 GALLONS	DIESEL FUEL
			3	CLOSURE IN PROCESS	27		DIESEL FUEL

ISSAQUAH TANK LIST
Department of Ecology
April 24, 1992

site name	site address	phone #	tank#	status	age	size	substance
			2	CLOSURE IN PROCESS	27	5000-9999 GALLONS	DIESEL FUEL
			1	OPERATIONAL	27	5000-9999 GALLONS	DIESEL FUEL
KING COUNTY FIRE DISTRICT 10	175 NEWPORT WAY NW	2063923433	4	OPERATIONAL	9	111-1100 GALLONS	USED OIL/WASTE OIL
			3	OPERATIONAL	10		DIESEL FUEL
			2	OPERATIONAL	10		UNLEADED GASOLINE
			1	OPERATIONAL	10		LEADED GASOLINE
MAINTENANCE SHOPS	20500 SE 56TH ST		#3	OPERATIONAL	7		USED OIL/WASTE OIL
			#2	OPERATIONAL	7		DIESEL FUEL
			#1	OPERATIONAL	7		UNLEADED GASOLINE
BROWN BEAR CAR WASH ISSAQUAH	22121 SE 56TH STREET	2065570418		OPERATIONAL	0	10000-19999 GALLONS	UNLEADED GASOLINE
				OPERATIONAL	0	5000-9999 GALLONS	LEADED GASOLINE
				OPERATIONAL	0	5000-9999 GALLONS	DIESEL FUEL
				OPERATIONAL	0	10000-19999 GALLONS	UNLEADED GASOLINE
REDA TRANSPORTATION	22433 SE 56TH	2066249972	1	OPERATIONAL	5	10000-19999 GALLONS	DIESEL FUEL
ISSAQUAH FEED & SERVICE	232 FRONT ST NO	2063923089	4	CLOSED IN PLACE	19		UNLEADED GASOLINE
			3	REMOVED	24	111-1100 GALLONS	UNLEADED GASOLINE
			2	REMOVED	24	111-1100 GALLONS	UNLEADED GASOLINE
			1	REMOVED	24		LEADED GASOLINE
ISSAQUAH/CLOSED	23240 SE 74	2063925121	7593	REMOVED	31	111-1100 GALLONS	DIESEL FUEL
			7592	REMOVED	31	111-1100 GALLONS	DIESEL FUEL
			7591	REMOVED	31	111-1100 GALLONS	UNLEADED GASOLINE
CHEVRON 95399	25 NW GILMAN BLVD	2063923020	6	REMOVED	31	111-1100 GALLONS	USED OIL/WASTE OIL
			5	REMOVED	31	111-1100 GALLONS	DIESEL FUEL
			4	REMOVED	14		USED OIL/WASTE OIL
			3R	OPERATIONAL	2	10000-19999 GALLONS	UNLEADED GASOLINE
			3	REMOVED	14	10000-19999 GALLONS	LEADED GASOLINE
			2R	OPERATIONAL	2	10000-19999 GALLONS	LEADED GASOLINE
			2	REMOVED	14	5000-9999 GALLONS	UNLEADED GASOLINE
			1R	OPERATIONAL	2	10000-19999 GALLONS	UNLEADED GASOLINE
			1	REMOVED	14	5000-9999 GALLONS	UNLEADED GASOLINE
BEAVER LAKE PARK	25201 S E 24TH STREET	2062964242	1	REMOVED	28	111-1100 GALLONS	UNLEADED GASOLINE
TRANSPORTATION PRESTON SHOP	29726 SE PRESTON WAY	2064557116		OPERATIONAL	1		DIESEL FUEL
				OPERATIONAL	1		DIESEL FUEL
				OPERATIONAL	1		UNLEADED GASOLINE
10D6R/FORMER MOBIL/"U"	30 WEST SUNSET WAY	2063923057	7	REMOVED	28	111-1100 GALLONS	USED OIL/WASTE OIL
			6	REMOVED	41		UNLEADED GASOLINE

ISSAQUAH TANK LIST
Department of Ecology
April 24, 1992

site name	site address	phone #	tank#	status	age	size	substance
			5	UNRESOLVED	37		UNLEADED GASOLINE
			4	UNRESOLVED	41	5000-9999 GALLONS	LEADED GASOLINE
			3	UNRESOLVED	30		LEADED GASOLINE
			2	UNRESOLVED	21	5000-9999 GALLONS	UNLEADED GASOLINE
			1	UNRESOLVED	10	5000-9999 GALLONS	UNLEADED GASOLINE
THE SOUTHLAND CORP. 2332-26056	3302 E LAKE SAMMAMISH PARKWAY SE	2063925260	SNL	OPERATIONAL	7	10000-19999 GALLONS	UNLEADED GASOLINE
			REGO	OPERATIONAL	7	10000-19999 GALLONS	LEADED GASOLINE
			NOL	OPERATIONAL	7	10000-19999 GALLONS	UNLEADED GASOLINE
MARIANWOOD EXTENDED HEALTH SERVI CES	3725 PROVIDENCE PT. DR. SE	2063912800	1	OPERATIONAL	6	111-1100 GALLONS	DIESEL FUEL
ISSAQUAH MIDDLE SCHOOL	400 1ST AVE SE	2063920780	3	EXEMPT	36	10000-19999 GALLONS	HEATING FUEL
			2	CLOSED IN PLACE	36	111-1100 GALLONS	DIESEL FUEL
			1	EXEMPT	31	5000-9999 GALLONS	HEATING FUEL
LUTHERAN BIBLE INSTITUTE	4221 228TH SE	2063920400	4	CLOSED IN PLACE	20	111-1100 GALLONS	UNLEADED GASOLINE
			3	CLOSED IN PLACE	20		LEADED GASOLINE
			2	TEMP OUT OF SVC.	7	111-1100 GALLONS	DIESEL FUEL
			1	OPERATIONAL	31		
CLARK ELEMENTARY	500 2ND AVE SE	2063920780	2	CLOSED IN PLACE	36	111-1100 GALLONS	DIESEL FUEL
			1	EXEMPT	36		DIESEL FUEL
HENRY BACON BUILDING MATERIALS,	5210 E. LK SAMMAMISH PKWY SE	2063408000	3	REMOVED	19		LEADED GASOLINE
			2	REMOVED	19		UNLEADED GASOLINE
			1	REMOVED	19	10000-19999 GALLONS	DIESEL FUEL
ISSAQUAH CDO 070131	524 10TH AVE N	5032427423	1	OPERATIONAL	44	111-1100 GALLONS	
ISSAQUAH BP	55 N W GILMAN BLVD	2063923300	TWO	OPERATIONAL	5	10000-19999 GALLONS	
			ONE	OPERATIONAL	5	10000-19999 GALLONS	
			9	REMOVED	24	10000-19999 GALLONS	DIESEL FUEL
			8	REMOVED	24	10000-19999 GALLONS	DIESEL FUEL
			7	UNRESOLVED	24	111-1100 GALLONS	DIESEL FUEL
			6	UNRESOLVED	24	111-1100 GALLONS	DIESEL FUEL
			5	OPERATIONAL	14	10000-19999 GALLONS	LEADED GASOLINE
			4	OPERATIONAL	14	10000-19999 GALLONS	DIESEL FUEL
			24	UNLEADED GASOLINE			
			2	REMOVED	24		UNLEADED GASOLINE
			1	REMOVED	24		UNLEADED GASOLINE

ISSAQUAH TANK LIST
Department of Ecology
April 24, 1992

site name	site address	phone #	tank#	status	age	size	substance
DARIGOLD INC	611 FRONT ST	2063926463	4	CLOSED IN PLACE	36		
			3	OPERATIONAL	31	10000-19999 GALLONS	DIESEL FUEL
			2	OPERATIONAL	24	10000-19999 GALLONS	DIESEL FUEL
			1	OPERATIONAL	24	10000-19999 GALLONS	DIESEL FUEL
REID SAND AND GRAVEL, INC.	6210 E LAKE SAMMAMISH PKWY S.E.	2067471234	3	REMOVED	19	111-1100 GALLONS	DIESEL FUEL
			4	REMOVED	19	111-1100 GALLONS	DIESEL FUEL
			2	REMOVED	19		UNLEADED GASOLINE
			1	REMOVED	19		DIESEL FUEL
ISSAQUAH CO 070584	6401 228TH AVE SE	5032427234	1-POWER	OPERATIONAL	16		KEROSENE
7340	6420 E LAKE SAMMAMISH PARKWAY SE	2063929250	2	OPERATIONAL	4	10000-19999 GALLONS	LEADED GASOLINE
			3	OPERATIONAL	4	111-1100 GALLONS	USED OIL/WASTE OIL
			1	OPERATIONAL	4	10000-19999 GALLONS	UNLEADED GASOLINE
LAKESIDE SAND & GRAVEL CO INC	6600 230TH SE	2067465660	TWO	OPERATIONAL	4	10000-19999 GALLONS	
			THREE	OPERATIONAL	4	5000-9999 GALLONS	
			ONE	OPERATIONAL	4	10000-19999 GALLONS	
			FOUR	OPERATIONAL	5	5000-9999 GALLONS	
			3	CLOSED IN PLACE	14	111-1100 GALLONS	LEADED GASOLINE
			2	CLOSED IN PLACE	14		USED OIL/WASTE OIL
			1	EXEMPT	14	111-1100 GALLONS	LEADED GASOLINE
HAROLD J RUBY ARCO 4466	800 FRONT STREET NORTH	2063925707	USED-OIL	OPERATIONAL	2	111-1100 GALLONS	USED OIL/WASTE OIL
			UNLEAD 3	OPERATIONAL	1	10000-19999 GALLONS	UNLEADED GASOLINE
			UNLEAD 2	OPERATIONAL	1	10000-19999 GALLONS	UNLEADED GASOLINE
			SUPER 4	OPERATIONAL	1	10000-19999 GALLONS	UNLEADED GASOLINE
			REGULAR 1	OPERATIONAL	1	10000-19999 GALLONS	LEADED GASOLINE
			5	REMOVED	24	111-1100 GALLONS	USED OIL/WASTE OIL
			4	REMOVED	19	5000-9999 GALLONS	LEADED GASOLINE
			3	REMOVED	24	5000-9999 GALLONS	UNLEADED GASOLINE
			2	REMOVED	24	5000-9999 GALLONS	UNLEADED GASOLINE
			1	REMOVED	24	5000-9999 GALLONS	UNLEADED GASOLINE
BUS GARAGE	802 2ND AVE S	2063920780	2	CLOSED IN PLACE	36	5000-9999 GALLONS	HEATING FUEL
			1	CLOSED IN PLACE	36	111-1100 GALLONS	DIESEL FUEL
TRANSPORTATION	805 2ND AVENUE S.E.	2063920780	7	OPERATIONAL	1	10000-19999 GALLONS	LEADED GASOLINE
			6	OPERATIONAL	1	10000-19999 GALLONS	DIESEL FUEL
			5	OPERATIONAL	1	10000-19999 GALLONS	UNLEADED GASOLINE
BETHEL CLARK	825 FRONT STREET NORTH	2063923400	4	OPERATIONAL	9	10000-19999 GALLONS	DIESEL FUEL
			3	OPERATIONAL	9	10000-19999 GALLONS	UNLEADED GASOLINE
			2	OPERATIONAL	9	10000-19999 GALLONS	UNLEADED GASOLINE
			1	OPERATIONAL	9	10000-19999 GALLONS	LEADED GASOLINE

ISSAQUAH TANK LIST
Department of Ecology
April 24, 1992

site name	site address	phone #	tank#	status	age	size	substance
ISSAQUAH MICROWAVE PRINT 458	LAT 47 29 20N LONG 121 56 44W	2064673346	ISS-1	OPERATIONAL	22		DIESEL FUEL
NIKE SITE	SE QTR SEC 25 T24N R5E WM KING-COUNTY	2063920780	3B	CLOSED IN PLACE	36		
			2K	CLOSED IN PLACE	36		
			1K	CLOSED IN PLACE	36		

148 records listed.

Washington State
Department of Transportation
Duane Berentson
Secretary of Transportation

Planning, Research and
Public Transportation Division
Transportation Data Office
318 East State Avenue
P.O. Box 47380
Olympia, WA 98504-7380

(206) 753-1375 / Fax (206) 586-5855

June 19, 1992

Mr. Ken Brettmann
Golder and Associates
4104 148th Ave. N.E.
Redmond, WA 98052

SR 90/900 Accident Data

Dear Mr. Brettmann:

In response to your June 16 request, we have enclosed histories and summaries of all reported accidents occurring during the period from January 1, 1980 to January 31, 1992 on each of the following highways and milepost locations:

- SR 90 MP 15.30 to 20.26, Tibbets Creek to High Point Way
- SR 900 MP 17.41 to 21.64, May Valley Rd. to Jct. SR 90

In addition, we have enclosed accident rates during the period from January 1, 1980 to December 31, 1991 for each of the above sections along with rates for accidents involving fuel spillage or fire. Please note that there were no reported accidents on either highway where the presence of hazardous material was indicated.

Because of lack of available data, we are able to provide the percentage large trucks constitute of the total traffic volume for only a limited number of locations (See enclosed table). If we may be of further assistance, please contact Mr. Brian Limotti at 753-2935.

Sincerely,

JAMES P. TOOHEY
Assistant Secretary
Transit, Research, and
Intermodal Planning

By: DAVID R. THOMPSON, PE, PLS
Manager, Transportation Data Office

JPT/DRT:mf
Enclosures

ccwe: Miguel Gavino, District 1

SR: 90 TIBBETS CREEK TO HIGH POINT WAY

FROM MP: 15.30 TO MP: 20.26 LENGTH: 4.96 MILES

	1980	1981	1982	1983	1984	1985
NUMBER OF ACCIDENTS	28	26	27	29	35	57
ANNUAL AVERAGE DAILY TRAFFIC	21,850	25,750	26,300	28,450	24,000	24,950
NUMBER OF DAYS	365	365	365	365	365	365
ACCIDENT RATE PER MVM*	0.7	0.6	0.6	0.6	0.8	1.3

*Million Vehicle Miles

PREPARED BY WASHINGTON STATE DEPARTMENT OF TRANSPORTATION
TRANSIT, RESEARCH AND INTERMODAL PLANNING DIVISION
ACCIDENT DATA BRANCH

SR: 90	TIBBETS CREEK TO HIGH POINT WAY		
FROM MP: 15.30	TO MP: 20.26	LENGTH: 4.96 MILES	

	1986	1987	1988	1989	1990	1991
NUMBER OF ACCIDENTS	47	80	71	80	71	66
ANNUAL AVERAGE DAILY TRAFFIC	27,350	28,350	31,000	31,900	33,000	36,300
NUMBER OF DAYS	365	365	365	365	365	365
ACCIDENT RATE PER MVM*	0.9	1.6	1.3	1.4	1.2	1.0

*Million Vehicle Miles

PREPARED BY WASHINGTON STATE DEPARTMENT OF TRANSPORTATION
TRANSIT, RESEARCH AND INTERMODAL PLANNING DIVISION
ACCIDENT DATA BRANCH

Avg's for period 1986-1991

Avg. # accidents - 72 (yearly)

Avg. daily traffic - 33,000

1 accident per 167,545 vehicles
approx. 1 / 5.07 days

approx. 16 % of vehicles are large trucks

18-Jun-92

SR:	90	TIBBETS CREEK TO HIGH POINT WAY-FUEL SPILLAGE ACCIDENTS				
FROM MP:	15.30	TO MP:	20.26	LENGTH:	4.96 MILES	

	1980	1981	1982	1983	1984	1985
NUMBER OF ACCIDENTS	0	0	0	1	0	0
ANNUAL AVERAGE DAILY TRAFFIC	21,850	25,750	26,300	28,450	24,000	24,950
NUMBER OF DAYS	365	365	365	365	365	365
ACCIDENT RATE PER MVM*	0.0	0.0	0.0	0.0	0.0	0.0

*Million Vehicle Miles

PREPARED BY WASHINGTON STATE DEPARTMENT OF TRANSPORTATION
TRANSIT, RESEARCH AND INTERMODAL PLANNING DIVISION
ACCIDENT DATA BRANCH

SR: 90 TIBBETS CREEK TO HIGH POINT WAY–FUEL SPILLAGE ACCIDENTS

FROM MP: 15.30 ***TO MP:*** 20.26 ***LENGTH:*** 4.96 MILES

	1986	1987	1988	1989	1990	1991
NUMBER OF ACCIDENTS	0	0	0	1	2	0
ANNUAL AVERAGE DAILY TRAFFIC	27,350	28,350	31,000	31,900	33,000	36,300
NUMBER OF DAYS	365	365	365	365	365	365
ACCIDENT RATE PER MVM*	0.0	0.0	0.0	0.0	0.0	0.0

*Million Vehicle Miles

PREPARED BY WASHINGTON STATE DEPARTMENT OF TRANSPORTATION
TRANSIT, RESEARCH AND INTERMODAL PLANNING DIVISION
ACCIDENT DATA BRANCH

Fuel spillage 1980–1991
4 events

approx 1 fuel spillage per 30,952,000 vehicles
~ 1 spillage per 31 million vehicles

03–Jun–92

SR 90 MP 15.30 TO 20.26
TIBBETS CREEK TO HIGH POINT WAY
LARGE TRUCK PERCENTAGE

LOCATION	TRUCK PERCENT	YEAR
MP 15.37	11.5	1985
MP 16.54	6.1	1988
MP 19.85	12.6	1986

Avg. ~ 10 % large trucks

SR 900 MP 17.41 TO 21.64
MAY VALLEY RD. TO JCT. SR 90
LARGE TRUCK PERCENTAGE

LOCATION	TRUCK PERCENT	YEAR
MP 17.41	2.5	1989
MP 17.42	2.5	1989
MP 20.83	2.5	1989
MP 21.10	4.2	1989
MP 21.51	4.2	1986
MP 21.64	4.2	1986

19-Jun-92 Prepared By: WSDOT, TRIP, ACCIDENT DATA BRANCH

SAMMAMISH PLATEAU

SINCE 1948

WATER AND SEWER DISTRICT

April 30, 1993

TO:	**Bob Anderson**
FROM:	Sue Tucker Sue
SUBJECT:	WELLHEAD PROTECTION PROGRAM

RECEIVED
MAY 1 - 1993
Golder Associates

Bob, finally I have enclosed the Screening Interview Sheets you have been patiently waiting for. Let me know if there is anything else I can do for you.

1510 - 228th Ave. S.E. • Issaquah, Washington 98027 • 392-6256 • 883-9333 • Fax 391-5389

LOWER ISSAQUAH VALLEY WELLHEAD PROTECTION PLAN
PRELIMINARY SOURCE INVENTORY/SCREENING INTERVIEW

DATE: 1/26/93 - 128

Name: Auto Repair & Towing
Address: 6003 221st PL SE
ISSAQUAH
Telephone: 392-6003
Person Contacted: BETHEL CLARKE

RECEIVED
APR 16 1993
Golder Associates

Four simple questions for preliminary screening of potential contaminant sources in Lower Issaquah Valley

1.) Are hazardous chemical used or stored at your business? No

Examples: Solvents, oils, paints, fertilizers, pesticides,

2.) If so, approximately how much is used/stored on a yearly basis (gallons/year)? N/A

3.) If more than 50 gallons/year is used/stored, what specific chemicals or compounds are involved? N/A

4.) How long have chemicals been used/stored onsite? N/A

If all four questions were answered, additional information may be requested at a later date.

Interview Completed by: Sue Tucker

LOWER ISSAQUAH VALLEY WELLHEAD PROTECTION PLAN
PRELIMINARY SOURCE INVENTORY/SCREENING INTERVIEW

DATE: 1/26/93

Name: Auto Works
Address: 1590 NW Mall
Issaquah Wa.
Telephone: 392-4568

Person Contacted: Terry

Four simple questions for preliminary screening of potential contaminant sources in Lower Issaquah Valley

1.) Are hazardous chemical used or stored at your business? Yes

Examples: Solvents, oils, paints, fertilizers, pesticides, Engine Oil
Anti FREEZE

2.) If so, approximately how much is used/stored on a yearly basis (gallons/year)?
- 300 gallons - motor oil
300 gallon drum - waste oil
150 gallons Anti freeze

3.) If more than 50 gallons/year is used/stored, what specific chemicals or compounds are involved?
300 oil
300 waste oil
150 anti freeze

4.) How long have chemicals been used/stored onsite?

If all four questions were answered, additional information may be requested at a later date.

Interview Completed by: Sue Tucker

LOWER ISSAQUAH VALLEY WELLHEAD PROTECTION PLAN
PRELIMINARY SOURCE INVENTORY/SCREENING INTERVIEW

DATE: 1/26/93

Name: AZEROTH, INC
Address: 405 Gilman Blvd
ISSAQUAH
Telephone: 392-4941
Person Contacted: Kurt

Four simple questions for preliminary screening of potential contaminant sources in Lower Issaquah Valley

1.) Are hazardous chemical used or stored at your business? No

Examples: Solvents, oils, paints, fertilizers, pesticides,

2.) If so, approximately how much is used/stored on a yearly basis (gallons/year)? N/a

3.) If more than 50 gallons/year is used/stored, what specific chemicals or compounds are involved? N/A

4.) How long have chemicals been used/stored onsite? N/A

If all four questions were answered, additional information may be requested at a later date.

Interview Completed by: [signature]

Cleaning supplies under sink for household cleaners only

LOWER ISSAQUAH VALLEY WELLHEAD PROTECTION PLAN
PRELIMINARY SOURCE INVENTORY/SCREENING INTERVIEW

DATE: 4/26/93

Name: Bakes Malibu Boats
Address: 60 NW. Gilman Blvd
Issaquah Wa.
Telephone: 392-7599
Person Contacted: Karen

Four simple questions for preliminary screening of potential contaminant sources in Lower Issaquah Valley

1.) Are hazardous chemical used or stored at your business? No

Examples: Solvents, oils, paints, fertilizers, pesticides,

2.) If so, approximately how much is used/stored on a yearly basis (gallons/year)? N/A

3.) If more than 50 gallons/year is used/stored, what specific chemicals or compounds are involved? N/A

4.) How long have chemicals been used/stored onsite? N/A

Very very small cans of oil, + cleaning supplies

If all four questions were answered, additional information may be requested at a later date.

Interview Completed by: Sue Jacobs

LOWER ISSAQUAH VALLEY WELLHEAD PROTECTION PLAN
PRELIMINARY SOURCE INVENTORY/SCREENING INTERVIEW

DATE: 1/26/93

Name: Bartels + Stout
Address: 2005 NW Gilman Rd #110
Issaquah
Telephone: Y 392-6610
Person Contacted: Olga

Four simple questions for preliminary screening of potential contaminant sources in Lower Issaquah Valley

1.) Are hazardous chemical used or stored at your business? —

Examples: Solvents, oils, paints, fertilizers, pesticides,

Very small quantities of cleaning solvent [illegible]

2.) If so, approximately how much is used/stored on a yearly basis (gallons/year)? —

—

3.) If more than 50 gallons/year is used/stored, what specific chemicals or compounds are involved?

4.) How long have chemicals been used/stored onsite? —

If all four questions were answered, additional information may be requested at a later date.

Small quantities of cleaning supplies [illegible]

Interview Completed by: [illegible]

LOWER ISSAQUAH VALLEY WELLHEAD PROTECTION PLAN
PRELIMINARY SOURCE INVENTORY/SCREENING INTERVIEW

DATE: 1/26/93

Name: Bell-Fair Aluminum
Address: 1480 19th Ave NW
Issaquah
Telephone: (392- 5757
Person Contacted: Marty

Four simple questions for preliminary screening of potential contaminant sources in Lower Issaquah Valley

1.) Are hazardous chemical used or stored at your business? ________

Examples: Solvents, oils, paints, fertilizers, pesticides,
cutting fluid
paint thinner

2.) If so, approximately how much is used/stored on a yearly basis (gallons/year)? ______
- Gallon containers

3.) If more than 50 gallons/year is used/stored, what specific chemicals or compounds are involved?

4.) How long have chemicals been used/stored onsite? __________

If all four questions were answered, additional information may be requested at a later date.

Interview Completed by: Sue Tucker

LOWER ISSAQUAH VALLEY WELLHEAD PROTECTION PLAN
PRELIMINARY SOURCE INVENTORY/SCREENING INTERVIEW

DATE: 7/26/93

Name: Big O Tires
Address: 60 NW Gilman Blvd
Issaquah WA
Telephone: 391-1161
Person Contacted: Kurt

Four simple questions for preliminary screening of potential contaminant sources in Lower Issaquah Valley

1.) Are hazardous chemical used or stored at your business? Yes

Examples: Solvents, oils, paints, fertilizers, pesticides,
Motor oils,

2.) If so, approximately how much is used/stored on a yearly basis (gallons/year)?
less than 50 gallons

3.) If more than 50 gallons/year is used/stored, what specific chemicals or compounds are involved?

4.) How long have chemicals been used/stored onsite?

If all four questions were answered, additional information may be requested at a later date.

Interview Completed by: Sue Tucker

LOWER ISSAQUAH VALLEY WELLHEAD PROTECTION PLAN
PRELIMINARY SOURCE INVENTORY/SCREENING INTERVIEW

DATE: 1/26/93

Name: Bakamus Truck Repair
Address: 1500 19th Ave NW
Issaquah
Telephone: 392-1268

Person Contacted: — Telephone no longer working.

Four simple questions for preliminary screening of potential contaminant sources in Lower Issaquah Valley

1.) Are hazardous chemical used or stored at your business? ________

Examples: Solvents, oils, paints, fertilizers, pesticides,

2.) If so, approximately how much is used/stored on a yearly basis (gallons/year)? _______

3.) If more than 50 gallons/year is used/stored, what specific chemicals or compounds are involved?

4.) How long have chemicals been used/stored onsite? ____________

If all four questions were answered, additional information may be requested at a later date.

Interview Completed by: Sue Tucker

LOWER ISSAQUAH VALLEY WELLHEAD PROTECTION PLAN
PRELIMINARY SOURCE INVENTORY/SCREENING INTERVIEW

DATE: 7/26/93

Name: Bob's Camera Mfg.
Address: 1510 NW Mall St.
Issaquah
Telephone: 392-1641 — no longer in service

Person Contacted: ____________________

Four simple questions for preliminary screening of potential contaminant sources in Lower Issaquah Valley

1.) Are hazardous chemical used or stored at your business? ________

Examples: Solvents, oils, paints, fertilizers, pesticides,

2.) If so, approximately how much is used/stored on a yearly basis (gallons/year)? ________

3.) If more than 50 gallons/year is used/stored, what specific chemicals or compounds are involved?

4.) How long have chemicals been used/stored onsite? ____________

If all four questions were answered, additional information may be requested at a later date.

Interview Completed by: ____________

LOWER ISSAQUAH VALLEY WELLHEAD PROTECTION PLAN
PRELIMINARY SOURCE INVENTORY/SCREENING INTERVIEW

DATE: 1/26/93

Name: Cambelco Inc.
Address: 375 NW Gilman Blvd.
Issaquah WA.
Telephone: 746-6952

Person Contacted:

No Chemicals / no longer in [illegible]

Four simple questions for preliminary screening of potential contaminant sources in Lower Issaquah Valley

1.) Are hazardous chemical used or stored at your business? ________

Examples: Solvents, oils, paints, fertilizers, pesticides,

2.) If so, approximately how much is used/stored on a yearly basis (gallons/year)? ________

3.) If more than 50 gallons/year is used/stored, what specific chemicals or compounds are involved?

4.) How long have chemicals been used/stored onsite? ________

If all four questions were answered, additional information may be requested at a later date.

Interview Completed by: [signature]

LOWER ISSAQUAH VALLEY WELLHEAD PROTECTION PLAN
PRELIMINARY SOURCE INVENTORY/SCREENING INTERVIEW

DATE: 1/26/93

Name: Captains Cleaners
Address: 1025 Gilman Blvd
Issaquah
Telephone: 391-3643
Person Contacted: Myung

Four simple questions for preliminary screening of potential contaminant sources in Lower Issaquah Valley

1.) Are hazardous chemical used or stored at your business? No

Examples: Solvents, oils, paints, fertilizers, pesticides,
Soaps, starches

2.) If so, approximately how much is used/stored on a yearly basis (gallons/year)? —

3.) If more than 50 gallons/year is used/stored, what specific chemicals or compounds are involved?

4.) How long have chemicals been used/stored onsite? —

If all four questions were answered, additional information may be requested at a later date.

Interview Completed by: Sue Tucker

c/o

LOWER ISSAQUAH VALLEY WELLHEAD PROTECTION PLAN
PRELIMINARY SOURCE INVENTORY/SCREENING INTERVIEW

DATE: 7/26/93

Name: Bostik Inc.
Address: 405 NW Gilman Blvd. #204
Issaquah
Telephone: 341-4331
Person Contacted: George

Four simple questions for preliminary screening of potential contaminant sources in Lower Issaquah Valley

1.) Are hazardous chemical used or stored at your business? no

Examples: Solvents, oils, paints, fertilizers, pesticides,

2.) If so, approximately how much is used/stored on a yearly basis (gallons/year)? ________

3.) If more than 50 gallons/year is used/stored, what specific chemicals or compounds are involved?

4.) How long have chemicals been used/stored onsite? ____________

If all four questions were answered, additional information may be requested at a later date.

A one man office

Interview Completed by: Jim Tuckett

LOWER ISSAQUAH VALLEY WELLHEAD PROTECTION PLAN
PRELIMINARY SOURCE INVENTORY/SCREENING INTERVIEW

DATE: 7/26/93

Name: Busch Collison
Address: 790 E Sunset Way
Issaquah WA. 98027
Telephone: 392-6561
Person Contacted: Jim Busch

Four simple questions for preliminary screening of potential contaminant sources in Lower Issaquah Valley

1.) Are hazardous chemical used or stored at your business? ________

Examples: Solvents, oils, paints, fertilizers, pesticides,

cleaners

2.) If so, approximately how much is used/stored on a yearly basis (gallons/year)? ______

15 gallons

3.) If more than 50 gallons/year is used/stored, what specific chemicals or compounds are involved?

4.) How long have chemicals been used/stored onsite? ____________

If all four questions were answered, additional information may be requested at a later date.

Interview Completed by: Sue Tucker

LOWER ISSAQUAH VALLEY WELLHEAD PROTECTION PLAN
PRELIMINARY SOURCE INVENTORY/SCREENING INTERVIEW

DATE: 7/28/93

Name: Casey's Car Care
Address: 1895 NW Poplar Way
Issaquah, Wa. 98027
Telephone: 1. 392-2285
Person Contacted: Casey

Four simple questions for preliminary screening of potential contaminant sources in Lower Issaquah Valley

1.) Are hazardous chemical used or stored at your business?

Examples: Solvents, oils, paints, fertilizers, pesticides, small qty's of cleaner — mobile business

2.) If so, approximately how much is used/stored on a yearly basis (gallons/year)? n/a

3.) If more than 50 gallons/year is used/stored, what specific chemicals or compounds are involved? n/a

4.) How long have chemicals been used/stored onsite?

Min. 25.⁰⁰ - fee for once a year dump of any oil

If all four questions were answered, additional information may be requested at a later date.

Interview Completed by: Sue Tucker

LOWER ISSAQUAH VALLEY WELLHEAD PROTECTION PLAN
PRELIMINARY SOURCE INVENTORY/SCREENING INTERVIEW

DATE: 1/28/93

Name: Circuit Partners
Address: 1575 NW Mall St.
Issaquah
Telephone: " 455-5006

Person Contacted: Bill Hughes, Chemical Engineer

Four simple questions for preliminary screening of potential contaminant sources in Lower Issaquah Valley

1.) Are hazardous chemical used or stored at your business? Yes

Examples: Solvents, oils, paints, fertilizers, pesticides,

2.) If so, approximately how much is used/stored on a yearly basis (gallons/year)? ________

3.) If more than 50 gallons/year is used/stored, what specific chemicals or compounds are involved?

Circuit Partners has filed an inventory with the City of Issaquah for the Hazardous Waste Material they keep on hand.

4.) How long have chemicals been used/stored onsite? ____________

If all four questions were answered, additional information may be requested at a later date.

Interview Completed by: Sue Tacher

LOWER ISSAQUAH VALLEY WELLHEAD PROTECTION PLAN
PRELIMINARY SOURCE INVENTORY/SCREENING INTERVIEW

DATE: 4/26/93
r/a.

Name: All Star Distrib.
Address: 1045 12th Ave NW
Iss.
Telephone: 557-9445

Person Contacted:____________________

Four simple questions for preliminary screening of potential contaminant sources in Lower Issaquah Valley

1.) Are hazardous chemical used or stored at your business? No

Examples: Solvents, oils, paints, fertilizers, pesticides,

2.) If so, approximately how much is used/stored on a yearly basis (gallons/year)? _______

3.) If more than 50 gallons/year is used/stored, what specific chemicals or compounds are involved?

4.) How long have chemicals been used/stored onsite? ____________

If all four questions were answered, additional information may be requested at a later date.

Interview Completed by: Sue [signature]

LOWER ISSAQUAH VALLEY WELLHEAD PROTECTION PLAN
PRELIMINARY SOURCE INVENTORY/SCREENING INTERVIEW

DATE: 9/26/93

Name: AMTHE CLEEPOR.
Address: 1145 12th AVE NW.

Telephone: 391-7429
Person Contacted: Ben Adair -

Four simple questions for preliminary screening of potential contaminant sources in Lower Issaquah Valley

1.) Are hazardous chemical used or stored at your business? YES,

Examples: Solvents, oils, paints, fertilizers, pesticides, but only in quantities of pint size at most

2.) If so, approximately how much is used/stored on a yearly basis (gallons/year)? ______

and used so quickly — could not

3.) If more than 50 gallons/year is used/stored, what specific chemicals or compounds are involved?

total up to 25 gallons a year on all chemicals used —

4.) How long have chemicals been used/stored onsite? ______

If all four questions were answered, additional information may be requested at a later date.

Interview Completed by: Lin Tucker

LOWER ISSAQUAH VALLEY WELLHEAD PROTECTION PLAN
PRELIMINARY SOURCE INVENTORY/SCREENING INTERVIEW

DATE: 4/20/93

Name: Clampitts Cleaners
Address: 1480 NW Gilman Blvd
[illegible]
Telephone: 392-7818
Person Contacted: Dolores Coulter

Pick up and [illegible] [illegible] [illegible]
[illegible] [illegible]

Four simple questions for preliminary screening of potential contaminant sources in Lower Issaquah Valley

1.) Are hazardous chemical used or stored at your business? No

Examples: Solvents, oils, paints, fertilizers, pesticides,

2.) If so, approximately how much is used/stored on a yearly basis (gallons/year)? ______

3.) If more than 50 gallons/year is used/stored, what specific chemicals or compounds are involved?

4.) How long have chemicals been used/stored onsite? ______

If all four questions were answered, additional information may be requested at a later date.

Interview Completed by: [illegible signature]

LOWER ISSAQUAH VALLEY WELLHEAD PROTECTION PLAN
PRELIMINARY SOURCE INVENTORY/SCREENING INTERVIEW

DATE: 4/20/93

Name: Dick's [illegible]
Address: [illegible] NW Gilman [illegible]
[illegible]

Telephone: 392-[illegible]

Person Contacted: Dick

Four simple questions for preliminary screening of potential contaminant sources in Lower Issaquah Valley

1.) Are hazardous chemical used or stored at your business? [illegible]

Examples: Solvents, oils, paints, fertilizers, pesticides,

2.) If so, approximately how much is used/stored on a yearly basis (gallons/year)?
[illegible]

3.) If more than 50 gallons/year is used/stored, what specific chemicals or compounds are involved? [illegible]

4.) How long have chemicals been used/stored onsite?

If all four questions were answered, additional information may be requested at a later date.

Interview Completed by: [illegible]

LOWER ISSAQUAH VALLEY WELLHEAD PROTECTION PLAN
PRELIMINARY SOURCE INVENTORY/SCREENING INTERVIEW

DATE: 4/20/95

Name: Dick Dozer
Address: 35 [illegible]
Issaquah
Telephone: 392-1706
Person Contacted: [illegible]

Four simple questions for preliminary screening of potential contaminant sources in Lower Issaquah Valley

1.) Are hazardous chemical used or stored at your business? No

Examples: Solvents, oils, paints, fertilizers, pesticides,

2.) If so, approximately how much is used/stored on a yearly basis (gallons/year)? ________

3.) If more than 50 gallons/year is used/stored, what specific chemicals or compounds are involved?

4.) How long have chemicals been used/stored onsite? ____________

If all four questions were answered, additional information may be requested at a later date.

Interview Completed by: [illegible signature]

LOWER ISSAQUAH VALLEY WELLHEAD PROTECTION PLAN
PRELIMINARY SOURCE INVENTORY/SCREENING INTERVIEW

DATE: [illegible]

Name: Dowing on Business [illegible]
Address: 300 N [illegible]

Telephone: 392-0400 [illegible]

Person Contacted: Steve

Software company — no [illegible]

Four simple questions for preliminary screening of potential contaminant sources in Lower Issaquah Valley

1.) Are hazardous chemical used or stored at your business? No

Examples: Solvents, oils, paints, fertilizers, pesticides,

2.) If so, approximately how much is used/stored on a yearly basis (gallons/year)? ________ —

3.) If more than 50 gallons/year is used/stored, what specific chemicals or compounds are involved?

4.) How long have chemicals been used/stored onsite? ____________

If all four questions were answered, additional information may be requested at a later date.

Interview Completed by: [illegible]

LOWER ISSAQUAH VALLEY WELLHEAD PROTECTION PLAN
PRELIMINARY SOURCE INVENTORY/SCREENING INTERVIEW

DATE: 4/23/93

Name: [illegible]
Address: 140 E [illegible]

Telephone: 392-[illegible]

Person Contacted: [illegible]

[illegible]

Four simple questions for preliminary screening of potential contaminant sources in Lower Issaquah Valley

1.) Are hazardous chemical used or stored at your business? N/A

Examples: Solvents, oils, paints, fertilizers, pesticides,

2.) If so, approximately how much is used/stored on a yearly basis (gallons/year)? ______ –

3.) If more than 50 gallons/year is used/stored, what specific chemicals or compounds are involved?

4.) How long have chemicals been used/stored onsite? ______

If all four questions were answered, additional information may be requested at a later date.

Interview Completed by Sue Tucker

LOWER ISSAQUAH VALLEY WELLHEAD PROTECTION PLAN
PRELIMINARY SOURCE INVENTORY/SCREENING INTERVIEW

DATE: 4/27/93

Name: Firestone Mastercare
Address: 1270 NW Gilman Blvd

Telephone: 392-9844

Person Contacted: Gary Sinclair

300 gallon container picked up when full —

Four simple questions for preliminary screening of potential contaminant sources in Lower Issaquah Valley

1.) Are hazardous chemical used or stored at your business? ________

Examples: Solvents, oils, paints, fertilizers, pesticides, Waste oil -

Inland Technology solvents

2.) If so, approximately how much is used/stored on a yearly basis (gallons/year)? ________

3.) If more than 50 gallons/year is used/stored, what specific chemicals or compounds are involved?

4.) How long have chemicals been used/stored onsite? ____________

If all four questions were answered, additional information may be requested at a later date.

Interview Completed by: Sue Tucker

LOWER ISSAQUAH VALLEY WELLHEAD PROTECTION PLAN
PRELIMINARY SOURCE INVENTORY/SCREENING INTERVIEW

DATE: 4/27/93

Name: Hintofts Service
Address: 540 E Sunset Way
Iss
Telephone: 392-6444
Person Contacted: Velma

Four simple questions for preliminary screening of potential contaminant sources in Lower Issaquah Valley

1.) Are hazardous chemical used or stored at your business? Yes?

Examples: Solvents, oils, paints, fertilizers, pesticides, Embalming Fluid

2.) If so, approximately how much is used/stored on a yearly basis (gallons/year)?

- Very little - purchased an [illegible]

3.) If more than 50 gallons/year is used/stored, what specific chemicals or compounds are involved?

4.) How long have chemicals been used/stored onsite?

If all four questions were answered, additional information may be requested at a later date.

Interview Completed by: Sue Tucker

LOWER ISSAQUAH VALLEY WELLHEAD PROTECTION PLAN
PRELIMINARY SOURCE INVENTORY/SCREENING INTERVIEW

DATE: 4/27/93

Name: Gilman Autobody
Address: 220 NE Gilman Blvd

Telephone: 392-0101

Person Contacted: Karen

Environmental Tech picks up paint/paint thinner when 55 gallon drum is full

Four simple questions for preliminary screening of potential contaminant sources in Lower Issaquah Valley

1.) Are hazardous chemical used or stored at your business? Yes

Examples: Solvents, oils, paints, fertilizers, pesticides, Paints, Paint Thinner

2.) If so, approximately how much is used/stored on a yearly basis (gallons/year)?

\- 55 gallons drums

3.) If more than 50 gallons/year is used/stored, what specific chemicals or compounds are involved?

[illegible]

4.) How long have chemicals been used/stored onsite? STORED on site until 55 gallon drum is full

If all four questions were answered, additional information may be requested at a later date.

Interview Completed by: Sue Tucker

LOWER ISSAQUAH VALLEY WELLHEAD PROTECTION PLAN
PRELIMINARY SOURCE INVENTORY/SCREENING INTERVIEW

DATE: 4/27/95

Name: HBD Painting
Address: 14970 258th Ave SE

Telephone: 392-7302

Person Contacted: ______________________

— Disconnected —

Four simple questions for preliminary screening of potential contaminant sources in Lower Issaquah Valley

1.) Are hazardous chemical used or stored at your business? ________

Examples: Solvents, oils, paints, fertilizers, pesticides,

2.) If so, approximately how much is used/stored on a yearly basis (gallons/year)? ________

3.) If more than 50 gallons/year is used/stored, what specific chemicals or compounds are involved?

4.) How long have chemicals been used/stored onsite? ____________

If all four questions were answered, additional information may be requested at a later date.

Interview Completed by: Sue Tucker

LOWER ISSAQUAH VALLEY WELLHEAD PROTECTION PLAN
PRELIMINARY SOURCE INVENTORY/SCREENING INTERVIEW

DATE: 4/27/93

Name: INTERNATIONAL FURNACE
Address: 1085 12th AVE NW
ISS
Telephone: 557-9620
Person Contacted: Larry Morgan

Four simple questions for preliminary screening of potential contaminant sources in Lower Issaquah Valley

1.) Are hazardous chemical used or stored at your business? No

Examples: Solvents, oils, paints, fertilizers, pesticides,

2.) If so, approximately how much is used/stored on a yearly basis (gallons/year)? ______
—

3.) If more than 50 gallons/year is used/stored, what specific chemicals or compounds are involved?

4.) How long have chemicals been used/stored onsite? ____________

If all four questions were answered, additional information may be requested at a later date.

Interview Completed by: Sue Tucker

LOWER ISSAQUAH VALLEY WELLHEAD PROTECTION PLAN
PRELIMINARY SOURCE INVENTORY/SCREENING INTERVIEW

DATE: 4/27/93

Name: Issaquah Auto Parts
Address: 20 4?? Ave NW
N.W.
Telephone: 392-756?
Person Contacted: - David

Four simple questions for preliminary screening of potential contaminant sources in Lower Issaquah Valley

1.) Are hazardous chemical used or stored at your business? Yes - for resale

Examples: Solvents, oils, paints, fertilizers, pesticides,

5 gal - oil [illegible]

2.) If so, approximately how much is used/stored on a yearly basis (gallons/year)?

[illegible] qty [illegible]

largest qty [illegible] 5 gallon —

3.) If more than 50 gallons/year is used/stored, what specific chemicals or compounds are involved? for resale

4.) How long have chemicals been used/stored onsite? __________

If all four questions were answered, additional information may be requested at a later date.

Interview Completed by: [illegible]

LOWER ISSAQUAH VALLEY WELLHEAD PROTECTION PLAN
PRELIMINARY SOURCE INVENTORY/SCREENING INTERVIEW

DATE: 4/27/93

Name: Issaquah Cleaners
Address: 50 W Front St

Telephone: 391-4115

Person Contacted: Mrs. King

Four simple questions for preliminary screening of potential contaminant sources in Lower Issaquah Valley

1.) Are hazardous chemical used or stored at your business? No

Examples: Solvents, oils, paints, fertilizers, pesticides, Sends clothes out to be cleaned

2.) If so, approximately how much is used/stored on a yearly basis (gallons/year)? —

3.) If more than 50 gallons/year is used/stored, what specific chemicals or compounds are involved?

4.) How long have chemicals been used/stored onsite?

If all four questions were answered, additional information may be requested at a later date.

Interview Completed by: Sue Tinley

LOWER ISSAQUAH VALLEY WELLHEAD PROTECTION PLAN
PRELIMINARY SOURCE INVENTORY/SCREENING INTERVIEW

DATE: 1/5/93

Name: Issaquah Feed & Service
Address: 232 Front St N.
Iss.
Telephone: 392-3088
Person Contacted: Don Magnuson

Four simple questions for preliminary screening of potential contaminant sources in Lower Issaquah Valley

1.) Are hazardous chemical used or stored at your business? Yes

Examples: Solvents, oils, paints, fertilizers, pesticides, - Kerosene (gallons)
55 waste oil

2.) If so, approximately how much is used/stored on a yearly basis (gallons/year)?
–

3.) If more than 50 gallons/year is used/stored, what specific chemicals or compounds are involved?

4.) How long have chemicals been used/stored onsite?
55 gallon drum waste oil picked up when full

If all four questions were answered, additional information may be requested at a later date.

Interview Completed by: Sue Tucker

LOWER ISSAQUAH VALLEY WELLHEAD PROTECTION PLAN
PRELIMINARY SOURCE INVENTORY/SCREENING INTERVIEW

DATE: 4/28/93

Name: Precision Tune / JR Car Care
Address: 90 NW Gilman

Telephone: 391-2292

Person Contacted: Paul

Basement Tanks

Four simple questions for preliminary screening of potential contaminant sources in Lower Issaquah Valley

1.) Are hazardous chemical used or stored at your business? Yes

Examples: Solvents, oils, paints, fertilizers, pesticides, motor oil, waste oil

2.) If so, approximately how much is used/stored on a yearly basis (gallons/year)?

–
700 – motor oil
500 – waste oil — Spencer Inviron

3.) If more than 50 gallons/year is used/stored, what specific chemicals or compounds are involved?

700 gal. – motor oil kept in Basement of building
500 gal. waste oil kept in Basement of building picked up when full by Spencer Inviron.

4.) How long have chemicals been used/stored onsite?

If all four questions were answered, additional information may be requested at a later date.

Interview Completed by: Sue Tucker

LOWER ISSAQUAH VALLEY WELLHEAD PROTECTION PLAN
PRELIMINARY SOURCE INVENTORY/SCREENING INTERVIEW

DATE: 4/28/93

Name: Preservative Paint Co.
Address: 705 NW Gilman

Telephone: 391-2733

Person Contacted: Bill

Four simple questions for preliminary screening of potential contaminant sources in Lower Issaquah Valley

1.) Are hazardous chemical used or stored at your business? Yes

Examples: Solvents, oils, paints, fertilizers, pesticides, Paints for RESALE Only

2.) If so, approximately how much is used/stored on a yearly basis (gallons/year)? —

3.) If more than 50 gallons/year is used/stored, what specific chemicals or compounds are involved?

4.) How long have chemicals been used/stored onsite? ____________

If all four questions were answered, additional information may be requested at a later date.

Interview Completed by: Sue Tucker

LOWER ISSAQUAH VALLEY WELLHEAD PROTECTION PLAN
PRELIMINARY SOURCE INVENTORY/SCREENING INTERVIEW

DATE: 4/28/93

Name: JMC Print Inc.
Address: 3507 221st Ave SE
Issaquah
Telephone: 391-0488

Person Contacted:

Located on the Pine Lake Plateau.

Four simple questions for preliminary screening of potential contaminant sources in Lower Issaquah Valley

1.) Are hazardous chemical used or stored at your business? No

Examples: Solvents, oils, paints, fertilizers, pesticides,

2.) If so, approximately how much is used/stored on a yearly basis (gallons/year)? ______

3.) If more than 50 gallons/year is used/stored, what specific chemicals or compounds are involved?

4.) How long have chemicals been used/stored onsite? ______

If all four questions were answered, additional information may be requested at a later date.

Interview Completed by: Sue Tucker

LOWER ISSAQUAH VALLEY WELLHEAD PROTECTION PLAN
PRELIMINARY SOURCE INVENTORY/SCREENING INTERVIEW

DATE: 4/28/93

Name: Key Auto Parts
Address: 145 NW Gilman Blvd.
Telephone: 392-9578
Person Contacted: ____________________

n/A

Four simple questions for preliminary screening of potential contaminant sources in Lower Issaquah Valley

1.) Are hazardous chemical used or stored at your business? ________

Examples: Solvents, oils, paints, fertilizers, pesticides,

2.) If so, approximately how much is used/stored on a yearly basis (gallons/year)? ________

3.) If more than 50 gallons/year is used/stored, what specific chemicals or compounds are involved?

4.) How long have chemicals been used/stored onsite? ____________

If all four questions were answered, additional information may be requested at a later date.

Interview Completed by: Sue Tucker

LOWER ISSAQUAH VALLEY WELLHEAD PROTECTION PLAN
PRELIMINARY SOURCE INVENTORY/SCREENING INTERVIEW

DATE: 4/28/93

Name: Kyle Development Co
Address: 361 NE Gilman

Telephone: 391-1170

Person Contacted: John

Four simple questions for preliminary screening of potential contaminant sources in Lower Issaquah Valley

1.) Are hazardous chemical used or stored at your business? No

Examples: Solvents, oils, paints, fertilizers, pesticides, Caffeine

2.) If so, approximately how much is used/stored on a yearly basis (gallons/year)? —

3.) If more than 50 gallons/year is used/stored, what specific chemicals or compounds are involved?

4.) How long have chemicals been used/stored onsite?

If all four questions were answered, additional information may be requested at a later date.

Interview Completed by: Sue Tucker

LOWER ISSAQUAH VALLEY WELLHEAD PROTECTION PLAN
PRELIMINARY SOURCE INVENTORY/SCREENING INTERVIEW

DATE: 4/28/93

Name: Miller Roofing Ent.
Address: 16437 - SE Hobart Rd

Telephone: 226 - 4178

Person Contacted: Rick Miller

Four simple questions for preliminary screening of potential contaminant sources in Lower Issaquah Valley

1.) Are hazardous chemical used or stored at your business? No

Examples: Solvents, oils, paints, fertilizers, pesticides,

2.) If so, approximately how much is used/stored on a yearly basis (gallons/year)? ______ –

3.) If more than 50 gallons/year is used/stored, what specific chemicals or compounds are involved?

4.) How long have chemicals been used/stored onsite? ____________

If all four questions were answered, additional information may be requested at a later date.

Interview Completed by: Sue Tucker

LOWER ISSAQUAH VALLEY WELLHEAD PROTECTION PLAN
PRELIMINARY SOURCE INVENTORY/SCREENING INTERVIEW

DATE: 4/28

Name: MSDS Inc
Address: 290 E Sunset Way

Telephone: 392-6561

Person Contacted: ____________

now Busch Collison

Four simple questions for preliminary screening of potential contaminant sources in Lower Issaquah Valley

1.) Are hazardous chemical used or stored at your business? ________

Examples: Solvents, oils, paints, fertilizers, pesticides,

2.) If so, approximately how much is used/stored on a yearly basis (gallons/year)? ________

3.) If more than 50 gallons/year is used/stored, what specific chemicals or compounds are involved?

4.) How long have chemicals been used/stored onsite? ____________

If all four questions were answered, additional information may be requested at a later date.

Interview Completed by: Sue Tucker

LOWER ISSAQUAH VALLEY WELLHEAD PROTECTION PLAN
PRELIMINARY SOURCE INVENTORY/SCREENING INTERVIEW

DATE: 4/28/93

Name: Issaquah Press
Address: 45 Front St.
Issaquah
Telephone: 392-6434
Person Contacted: Ann

Printing done in Seattle

Four simple questions for preliminary screening of potential contaminant sources in Lower Issaquah Valley

1.) Are hazardous chemical used or stored at your business? No

Examples: Solvents, oils, paints, fertilizers, pesticides,

2.) If so, approximately how much is used/stored on a yearly basis (gallons/year)? ______

3.) If more than 50 gallons/year is used/stored, what specific chemicals or compounds are involved?

4.) How long have chemicals been used/stored onsite? ______

If all four questions were answered, additional information may be requested at a later date.

Interview Completed by: Sue Tucker

LOWER ISSAQUAH VALLEY WELLHEAD PROTECTION PLAN
PRELIMINARY SOURCE INVENTORY/SCREENING INTERVIEW

DATE: 4/28/93

Name: Overlake Cleaners
Address: 485 Front St.

Telephone: 392-5880

Person Contacted: Yung

Send clothes out to clean

Four simple questions for preliminary screening of potential contaminant sources in Lower Issaquah Valley

1.) Are hazardous chemical used or stored at your business? No

Examples: Solvents, oils, paints, fertilizers, pesticides,

2.) If so, approximately how much is used/stored on a yearly basis (gallons/year)? ______

3.) If more than 50 gallons/year is used/stored, what specific chemicals or compounds are involved?

4.) How long have chemicals been used/stored onsite? ____________

If all four questions were answered, additional information may be requested at a later date.

Interview Completed by: Sue Tucker

LOWER ISSAQUAH VALLEY WELLHEAD PROTECTION PLAN
PRELIMINARY SOURCE INVENTORY/SCREENING INTERVIEW

DATE: 4/28/93

Name: Parker Paint Mfg
Address: 1145 Gilman Blvd
Issaquah
Telephone: 391-5376
Person Contacted: John

Four simple questions for preliminary screening of potential contaminant sources in Lower Issaquah Valley

1.) Are hazardous chemical used or stored at your business? Yes

Examples: Solvents, oils, paints, fertilizers, pesticides, paints — for resale

2.) If so, approximately how much is used/stored on a yearly basis (gallons/year)? ______

3.) If more than 50 gallons/year is used/stored, what specific chemicals or compounds are involved?

4.) How long have chemicals been used/stored onsite? ______

If all four questions were answered, additional information may be requested at a later date.

Interview Completed by: Sue Tucker

LOWER ISSAQUAH VALLEY WELLHEAD PROTECTION PLAN
PRELIMINARY SOURCE INVENTORY/SCREENING INTERVIEW

DATE: 4/29/93

Name: That Muffler & Brake
Address: 60 NW Gilman

Telephone: 391-2421

Person Contacted: Craig Wilder

Four simple questions for preliminary screening of potential contaminant sources in Lower Issaquah Valley

1.) Are hazardous chemical used or stored at your business? No

Examples: Solvents, oils, paints, fertilizers, pesticides, Brake Fluid, solvent

2.) If so, approximately how much is used/stored on a yearly basis (gallons/year)? _______ –

3.) If more than 50 gallons/year is used/stored, what specific chemicals or compounds are involved?

4.) How long have chemicals been used/stored onsite? ____________
small cans of brake fluid, cleaning solvent

If all four questions were answered, additional information may be requested at a later date.

Interview Completed by: Sue Tucker

LOWER ISSAQUAH VALLEY WELLHEAD PROTECTION PLAN
PRELIMINARY SOURCE INVENTORY/SCREENING INTERVIEW

DATE: 4/29/93 w/cb

Name: Rodda Paint Co
Address: 635 NW Gilman Blvd

Telephone: 392-7511

Person Contacted: Nancy/Terry

Four simple questions for preliminary screening of potential contaminant sources in Lower Issaquah Valley

1.) Are hazardous chemical used or stored at your business? Yes

Examples: Solvents, oils, paints, fertilizers, pesticides,

2.) If so, approximately how much is used/stored on a yearly basis (gallons/year)?
- Paint — largest container 5 gallons for Resale only

3.) If more than 50 gallons/year is used/stored, what specific chemicals or compounds are involved?

4.) How long have chemicals been used/stored onsite?

If all four questions were answered, additional information may be requested at a later date.

Interview Completed by: Sue Tucker

LOWER ISSAQUAH VALLEY WELLHEAD PROTECTION PLAN
PRELIMINARY SOURCE INVENTORY/SCREENING INTERVIEW

DATE: 4/29/93

Name: Super Rent
Address: 1705 SE Newport Way

Telephone: 885-0505

Person Contacted:

No longer in Issaquah

Four simple questions for preliminary screening of potential contaminant sources in Lower Issaquah Valley

1.) Are hazardous chemical used or stored at your business? ________

Examples: Solvents, oils, paints, fertilizers, pesticides,

2.) If so, approximately how much is used/stored on a yearly basis (gallons/year)? ________

3.) If more than 50 gallons/year is used/stored, what specific chemicals or compounds are involved?

4.) How long have chemicals been used/stored onsite? ________

If all four questions were answered, additional information may be requested at a later date.

Interview Completed by: Sue Tucker

LOWER ISSAQUAH VALLEY WELLHEAD PROTECTION PLAN
PRELIMINARY SOURCE INVENTORY/SCREENING INTERVIEW

DATE: 4/29/93

Name: Tek-Mation Products
Address: 740 Newport Way
Telephone: 392-0335
Person Contacted: Don

Four simple questions for preliminary screening of potential contaminant sources in Lower Issaquah Valley

1.) Are hazardous chemical used or stored at your business? No

Examples: Solvents, oils, paints, fertilizers, pesticides,

2.) If so, approximately how much is used/stored on a yearly basis (gallons/year)? ________

3.) If more than 50 gallons/year is used/stored, what specific chemicals or compounds are involved?

4.) How long have chemicals been used/stored onsite? ____________

If all four questions were answered, additional information may be requested at a later date.

Interview Completed by: Sue Tucker

LOWER ISSAQUAH VALLEY WELLHEAD PROTECTION PLAN
PRELIMINARY SOURCE INVENTORY/SCREENING INTERVIEW

DATE: 4/29/93

Name: Issaquah Veterinary
Address: 795 1st Ave NW
Issaquah Wn.
Telephone:
Person Contacted: Gwen 392-6211

Four simple questions for preliminary screening of potential contaminant sources in Lower Issaquah Valley

1.) Are hazardous chemical used or stored at your business? No

Examples: Solvents, oils, paints, fertilizers, pesticides,

2.) If so, approximately how much is used/stored on a yearly basis (gallons/year)? ______

3.) If more than 50 gallons/year is used/stored, what specific chemicals or compounds are involved?

4.) How long have chemicals been used/stored onsite? ______

If all four questions were answered, additional information may be requested at a later date.

Interview Completed by: Sue Tucker

LOWER ISSAQUAH VALLEY WELLHEAD PROTECTION PLAN
PRELIMINARY SOURCE INVENTORY/SCREENING INTERVIEW

DATE: 4/29/93

Name: Wisdm Corporation
Address: 545 Rainier Blvd. North
Seattle
Telephone: 391-9685
Person Contacted: Vicki

Four simple questions for preliminary screening of potential contaminant sources in Lower Issaquah Valley

1.) Are hazardous chemical used or stored at your business? No

Examples: Solvents, oils, paints, fertilizers, pesticides,

2.) If so, approximately how much is used/stored on a yearly basis (gallons/year)? ______
—

3.) If more than 50 gallons/year is used/stored, what specific chemicals or compounds are involved?

4.) How long have chemicals been used/stored onsite? ______

If all four questions were answered, additional information may be requested at a later date.

Just an office — office supplies only.

Interview Completed by: Sue Tuck

LOWER ISSAQUAH VALLEY WELLHEAD PROTECTION PLAN
PRELIMINARY SOURCE INVENTORY/SCREENING INTERVIEW

DATE: 4/29/93

Name: Gault & Company
Address: 545 Rainier Blvd
Iss.
Telephone: 622-9189
Person Contacted: Joe

Four simple questions for preliminary screening of potential contaminant sources in Lower Issaquah Valley

1.) Are hazardous chemical used or stored at your business? No

Examples: Solvents, oils, paints, fertilizers, pesticides,

2.) If so, approximately how much is used/stored on a yearly basis (gallons/year)? ______
—

3.) If more than 50 gallons/year is used/stored, what specific chemicals or compounds are involved?

4.) How long have chemicals been used/stored onsite? ______

If all four questions were answered, additional information may be requested at a later date.

Interview Completed by: Sue Tucker

LOWER ISSAQUAH VALLEY WELLHEAD PROTECTION PLAN
PRELIMINARY SOURCE INVENTORY/SCREENING INTERVIEW

DATE: 4/29/93

Name: M+L Machine Inc.
Address: 1125 12th Ave NW
NW.
Telephone: 391-0491
Person Contacted: ______________________

no longer in service

Four simple questions for preliminary screening of potential contaminant sources in Lower Issaquah Valley

1.) Are hazardous chemical used or stored at your business? __________

Examples: Solvents, oils, paints, fertilizers, pesticides,

2.) If so, approximately how much is used/stored on a yearly basis (gallons/year)? ________

3.) If more than 50 gallons/year is used/stored, what specific chemicals or compounds are involved?

4.) How long have chemicals been used/stored onsite? ______________

If all four questions were answered, additional information may be requested at a later date.

Interview Completed by: Sue Tucker

LOWER ISSAQUAH VALLEY WELLHEAD PROTECTION PLAN
PRELIMINARY SOURCE INVENTORY/SCREENING INTERVIEW

DATE: 4/29

Name: Minuteman Press
Address: 1420 NW Gilman

Telephone: 391 4950

Person Contacted: Tony

Four simple questions for preliminary screening of potential contaminant sources in Lower Issaquah Valley

1.) Are hazardous chemical used or stored at your business? No

Examples: Solvents, oils, paints, fertilizers, pesticides,

2.) If so, approximately how much is used/stored on a yearly basis (gallons/year)? —

3.) If more than 50 gallons/year is used/stored, what specific chemicals or compounds are involved?

4.) How long have chemicals been used/stored onsite?

If all four questions were answered, additional information may be requested at a later date.

Interview Completed by: Sue Tucker

LOWER ISSAQUAH VALLEY WELLHEAD PROTECTION PLAN
PRELIMINARY SOURCE INVENTORY/SCREENING INTERVIEW

DATE: 4/29/93

Name: Wes's Automotive Repair
Address: 240 Mt. Pilchuck Ave.
Iss.
Telephone: 392 - 9810

Person Contacted: ____________________

No longer in Business at this number

Four simple questions for preliminary screening of potential contaminant sources in Lower Issaquah Valley

1.) Are hazardous chemical used or stored at your business? ________

Examples: Solvents, oils, paints, fertilizers, pesticides,

2.) If so, approximately how much is used/stored on a yearly basis (gallons/year)? ________

3.) If more than 50 gallons/year is used/stored, what specific chemicals or compounds are involved?

4.) How long have chemicals been used/stored onsite? ____________

If all four questions were answered, additional information may be requested at a later date.

Interview Completed by: Sue Tucker

Golder Associates

TELECON/ CONTACT MEMORANDUM

☐ Personal Visit
☐ Telephone: ☐ Incoming ☒ Outgoing

ROUTE TO:
Files
☐ Project
☐ Business Development
☐ Mailing List

Company Name: Anderson Plumbing & Heating
Address: 17611 SE 60th

Job No. 913-1252

Person: Mr. Anderson
Telephone: 392-7501
Job/subject: contaminant source inventory

Date: 10/30/92
Time: 1:40

Remarks:
No chemicals stored.

Action/Next Contact:

BY: [signature]

Golder Associates

TELECON/ CONTACT MEMORANDUM

☐ Personal Visit
☐ Telephone: ☐ Incoming ☒ Outgoing

ROUTE TO:
Files
☐ Project
☐ Business Development
☐ Mailing List

Company Name: AMTAE Corporation
Address: 1145 12th Ave NW #C4B

Job No. 913-1252

Person: Ben Adair
Date: 10/22/92
Telephone: 391-7429
Job/subject: contaminant source inventory
Time: 1:35

Remarks:

Developer	5 gal/yr	reclaimed
fixer	5 gal/yr	
isopropyl alcohol	10 gal/yr	drain disposal

Action/Next Contact:

BY: [signature]

Golder Associates

TELECON/ CONTACT MEMORANDUM

☐ Personal Visit
☐ Telephone: ☐ Incoming ☑ Outgoing

ROUTE TO:
Files
☐ Project
☐ Business Development
☐ Mailing List

Company Name: Aladdin Pre-cast
Address: 765 7th Ave NW

Job No. 913-1252

Person: Larry Thomas
Telephone: 392-4050
Job/subject: contaminant source inventory

Date: 10/23/92
Time: 11:55

Remarks:
No chemicals stored.
Water is used for cast release.
~~Currently working at~~
Bussiness location is the same as home address.

chemicals present would be normal household items.

Action/Next Contact:

BY: [signature]

Golder Associates

TELECON/ CONTACT MEMORANDUM

☐ Personal Visit
☐ Telephone: ☐ Incoming ☒ Outgoing

ROUTE TO:
Files
☐ Project
☐ Business Development
☐ Mailing List

Company Name: A & V Printing
Address: 1495 NW Gilman Blvd Suite 14

Job No. 913-1252

Person: Rick Lainsley
Telephone: 392-4449

Date: 10/22/92

Job/subject: contaminant source information

Time: 11:00

Remarks:

quick wash (solvents)	5 gal	20 gal/yr
rubber rejuvenator (solvents)	1 gal	5 gal/yr
developer	5 gal	10 gal/yr
fixer	5 gal	10 gal/yr

Disposal program for developer & fixer
solvents evaporate

Action/Next Contact:

BY: [signature]

Golder Associates

TELECON/ CONTACT MEMORANDUM

☐ Personal Visit
☐ Telephone: ☐ Incoming ☐ Outgoing

ROUTE TO:
Files
☐ Project
☐ Business Development
☐ Mailing List

Company Name: A painting company
Address:

Job No. 913-1252

Person: Steve
Telephone: 342-7106
Job/subject: Contaminant source information

Date: 10/22/92 10/26
Time: 11:34 1:00pm

Remarks:
Left a message to return call.

10/26 Steve Returned call

Approximately 20 gals of leftover paint stored throughout the year.

Action/Next Contact:

BY: G. Hbr

Golder Associates

TELECON/ CONTACT MEMORANDUM

☐ Personal Visit
☐ Telephone: ☐ Incoming ☐ Outgoing

ROUTE TO:
Files
☐ Project
☐ Business Development
☐ Mailing List

Company Name: Advent Auto Service
Address:

Job No. 913-1252
Person:
Telephone: 888-4081
Date: 10/23/92
Job/subject: contaminant source inventory
Time: 11:46

Remarks:
Left a message to return call.

No contact

Action/Next Contact:

BY: [signature]

Golder Associates

TELECON/ CONTACT MEMORANDUM

- ☐ Personal Visit
- ☐ Telephone: ☐ Incoming ☐ Outgoing

ROUTE TO:
Files
- ☐ Project
- ☐ Business Development
- ☐ Mailing List

Company Name: Ace House Cleaners
Address:

Job No. 913-1252
Person:
Date: 10/22/92
Telephone: 342-0348
Job/subject: contaminant source inventory
Time: 11:40

Remarks:
Left a message to return call

1st Contact

Action/Next Contact:

BY: J. Fisher

Golder Associates

TELECON/ CONTACT MEMORANDUM

☐ Personal Visit
☐ Telephone: ☐ Incoming ☒ Outgoing

ROUTE TO:
Files
☐ Project
☐ Business Development
☐ Mailing List

Company Name: Anderson's Advance Roofing, Inc.
Address:

Job No. 913-1252

Person:
Date: 10/22/92
Telephone: 222-6569
Job/subject: contaminant source inventory
Time: 1:45

Remarks:
No Answer.

Action/Next Contact:

BY: J. Helton

Golder Associates

TELECON/ CONTACT MEMORANDUM

- [ ] Personal Visit
- [x] Telephone: [x] Incoming [x] Outgoing

ROUTE TO:
Files
- [ ] Project
- [ ] Business Development
- [ ] Mailing List

Company Name: Daniel's Drycleaning
Address: Issaquah

Job No. 913-1252

Person: Daniel
Telephone: 392-9888
Job/subject: Sammamish

Date: 5/5/93
Time: 2:30

Remarks: Called to inquire ~~of~~ of solvent used & quantities. He called back. Informed me that he used 50-100 gallons of perchloroethene in his operation as do the following cleaners: Captains
Dirk's
Dryclean USA
Pine Lake
Stone
Drycleaning Doctor.

Action/Next Contact:

BY: S. Schildt

Appendix K

APPENDIX K

CONTAMINANT LOADING ANALYSIS

Eqtn: Cw = (L1+L2+..+Ln)/Vw

Where:
Cw = Concentration in well (mg/L)
Vw = Volume of well water (liters)
L1+L2+..+Ln = Contaminant load for individual sources (mg/L)

Method: Risk-based analysis – using LOTUS 123 @RISK software

Assumption: Triangular distribution assumed for all parameters, including infiltration quantities and source concentrations. Statistics for variables (minumum, maximum, mean, and expected value) are shown on tables.

NITRATE CONCENTRATION- COI-1/2, COI-4/5, AND SP-7/8 - ESTIMATION OF PRESENT LOAD

Model Parameters:

Total Pumping Rate:	3.57	cfs	8,732,718	L/d	Action Level:	5	mg/L (half of MCL)
Total Area:	1897.4	acres			Critical Load:	43,663,590	mg/d
Septic System Area:	0.0	acres					
Annual Precipitation:	50	in					

Source	Description	Portion of Prec. as Infiltrated Runoff (1) Min	Max	Mean	Expect	Area (acres)	Volume (L/d)	Nitrate Concentration (2) Min	Max	Mean	Expected	Load (mg/d)
Storm Runoff	Transportation	0%	10%	5%	5%	61.2	43,068	0.200	1.000	0.600	0.600	25,841
	Vacant/Undeveloped*	5%	20%	13%	13%	1503.6	2,646,086	0.200	1.000	0.600	0.600	1,587,652
	Munic. Facil./Public Util.	0%	15%	8%	8%	29.9	31,552	0.200	1.000	0.600	0.600	18,931
	Office/Prof/Commerc/Retail	0%	15%	8%	8%	86.1	90,943	0.200	1.000	0.600	0.600	54,566
	Single/Multi/Duplex	5%	15%	10%	10%	187.6	264,063	0.200	1.000	0.600	0.600	158,438
	Parks/Private Open	5%	20%	13%	13%	29.0	50,959	0.200	1.000	0.600	0.600	30,575

Total Infil. Storm Water Volume 3,126,671 L/d Predicted Contam. Load: 1,876,002 mg/d

Source	Description	Portion of Fertilized Land (1) Min	Max	Mean	Expect	Total Area (acres)	Fert. Area (acres)	Nitrate Applic. (lbs/1,000 ft^2/yr) (3a) Min	Max	Mean	Expected	Portion of Nitrate Leached to Watertable (3b) Min	Max	Mean	Expect	Load (mg/d)
Fertilizer Applic.	Transportation	0%	0%	0%	0%	61.2	0.0	2.000	4.000	3.000	3.000	10.0%	60.0%	35.0%	35.0%	0
	Vacant/Undeveloped*	0%	0%	0%	0%	1503.6	0.0	2.000	4.000	3.000	3.000	10.0%	60.0%	35.0%	35.0%	0
	Munic. Facil./Public Util.	0%	20%	10%	10%	29.9	3.0	2.000	4.000	3.000	3.000	10.0%	60.0%	35.0%	35.0%	485,286
	Office/Prof/Commerc/Retail	0%	20%	10%	10%	86.1	8.6	2.000	4.000	3.000	3.000	10.0%	60.0%	35.0%	35.0%	1,398,768
	Single/Multi/Duplex	0%	20%	10%	10%	187.6	18.8	2.000	4.000	3.000	3.000	10.0%	60.0%	35.0%	35.0%	3,046,111
	Parks/Private Open	0%	20%	10%	10%	29.0	2.9	2.000	4.000	3.000	3.000	10.0%	60.0%	35.0%	35.0%	470,273

Predicted Contam. Load: 5,400,437 mg/d

Source	Description	Flow (gal/day per person or unit) (3c) Min	Max	Mean	Expect	Area (acres)	# of Units	Persons/ Unit	Volume (L/d)	Potential Nitrate Conc. (mg/L) (3c) Min	Max	Mean	Expected	Load (mg/d)
Septic-Grand Ridge Dev	1/2 acre Housing	50	70	60	60	0	0	2.5	0	30	40	35	35	0
	1 acre Housing	50	70	60	60	0	0	2.5	0	30	40	35	35	0
	5 acre Housing	50	70	60	60	0	0	2.5	0	30	40	35	35	0

Predicted Contam. Load: 0 mg/d

PREDICTED NITRATE CONC. IN WELL(S): 0.8 mg/L PERCENT OF CRITICAL: 16.7

PREDICTED TOTAL LOAD 2656 kg/yr

* Includes possible lower Grande Ridge and Lake Tradition development.

(1) Data determined from this study or otherwise best guess.

(2) Golder Associates, 1992. Draft Report City of Portland, OR Drainage Sump Study, Table 2-2; Issaquah Creek Basin Current/Future Conditions and Source Identification Report, Table 9.5.

(3a,b,c) Frimpter, H. et al, 1990. A Mass-Balance Nitrate Model for Predicting the Effects of Land Use on Groundwater Quality. U.S. Geological Survey OFR 88-493

(3a) Appendix A, Table 7A and Section 8; (3b) Appendix A, Section 9; (3c) Appendix A, Table 1A.

Eqtn: Cw = (L1+L2+..+Ln)/Vw

Where: Cw = Concentration in well (mg/L)
Vw = Volume of well water (liters)
L1+L2+..+Ln = Contaminant load for individual sources (mg/L)

Method: Risk-based analysis - using LOTUS 123 @RISK software

Assumption Triangular distribution assumed for all parameters, including infiltration quantities and source concentrations. Statistics for variables (minumum, maximum, mean, and expected value) are shown on tables.

NITRATE CONCENTRATION- COI-1/2, COI-4/5, AND SP-7/8 - ESTIMATION OF FUTURE LOAD (1-ACRE LOT DEVELOPMENT)

Model Parameters:

Total Pumping Rate:	3.57 cfs	8,732,718 L/d	Action Level:	5 mg/L (half of MCL)
Total Area:	1897.4 acres		Critical Load:	43,663,590 mg/d
Septic System Area:	1,180.0 acres			
Annual Precipitation:	50 in			

Source	Description	Portion of Prec. as Infiltrated Runoff (1) Min	Max	Mean	Expect	Area (acres)	Volume (L/d)	Nitrate Concentration (2) Min	Max	Mean	Expected	Load (mg/d)
Storm	Transportation	0%	10%	5%	5%	61.2	43,068	0.200	1.000	0.600	0.600	25,841
Runoff	Vacant/Undeveloped	5%	20%	13%	13%	323.6	569,532	0.200	1.000	0.600	0.600	341,719
	Munic. Facil./Public Util.	0%	15%	8%	8%	29.9	31,552	0.200	1.000	0.600	0.600	18,931
	Office/Prof/Commerc/Retail	0%	15%	8%	8%	86.1	90,943	0.200	1.000	0.600	0.600	54,566
	Single/Multi/Duplex*	5%	15%	10%	10%	1367.6	1,925,306	0.200	1.000	0.600	0.600	1,155,184
	Parks/Private Open	5%	20%	13%	13%	29.0	50,959	0.200	1.000	0.600	0.600	30,575

Total Infil. Storm Water Volume 2,711,360 L/d Predicted Contam. Load: 1,626,816 mg/d

Source	Description	Portion of Fertilized Land (1) Min	Max	Mean	Expect	Total Area (acres)	Fert. Area (acres)	Nitrate Applic. (lbs/1,000 ft^2/yr) (3a) Min	Max	Mean	Expected	Portion of Nitrate Leached to Watertable (3b) Min	Max	Mean	Expect	Load (mg/d)
Fertilizer	Transportation	0%	0%	0%	0%	61.2	0.0	2.000	4.000	3.000	3.000	10.0%	60.0%	35.0%	35.0%	0
Applic.	Vacant/Undeveloped	0%	0%	0%	0%	323.6	0.0	2.000	4.000	3.000	3.000	10.0%	60.0%	35.0%	35.0%	0
	Munic. Facil./Public Util.	0%	20%	10%	10%	29.9	3.0	2.000	4.000	3.000	3.000	10.0%	60.0%	35.0%	35.0%	485,286
	Office/Prof/Commerc/Retail	0%	20%	10%	10%	86.1	8.6	2.000	4.000	3.000	3.000	10.0%	60.0%	35.0%	35.0%	1,398,768
	Single/Multi/Duplex*	5%	20%	10%	12%	1367.6	159.5	2.000	4.000	3.000	3.000	10.0%	60.0%	35.0%	35.0%	25,911,031
	Parks/Private Open	0%	20%	10%	10%	29.0	2.9	2.000	4.000	3.000	3.000	10.0%	60.0%	35.0%	35.0%	470,273

Total acres=1385 new lawns Predicted Contam. Load: 28,265,358 mg/d

Source	Description	Flow (gal/day per person or unit) (3c) Min	Max	Mean	Expect	Area (acres)	# of Units	Persons/Unit	Volume (L/d)	Potential Nitrate Conc. (mg/L) (3c) Min	Max	Mean	Expected	Load (mg/d)
Septic-	1/2 acre Housing	50	70	60	60	0	0	2.5	0	30	40	35	35	0
Grand	1 acre Housing	50	70	60	60	1180	1180	2.5	669,945	30	40	35	35	23,448,075
Ridge Dev	5 acre Housing	50	70	60	60	0	0	2.5	0	30	40	35	35	0

Predicted Contam. Load: 23,448,075 mg/d

PREDICTED NITRATE CONC. IN WELL(S): 6.1 mg/L PERCENT OF CRITICAL: 122.2
PREDICTED TOTAL LOAD 19469 kg/yr

* Includes possible lower Grande Ridge and Lake Tradition development.
(1) Data determined from this study or otherwise best guess.
(2) Golder Associates, 1992. Draft Report City of Portand, OR Drainage Sump Study, Table 2-2; Issaquah Creek Basin Current/Future Conditions and Source Identification Report, Table 9.5.
(3a,b,c) Frimpter, H. et al, 1990. A Mass-Balance Nitrate Model for Predicting the Effects of Land Use on Groundwater Quality. U.S. Geological Survey OFR 88-493
(3a) Appendix A, Table 7A and Section 8; (3b) Appendix A, Section 9; (3c) Appendix A, Table 1A.

Eqtn: Cw = (L1+L2+..+Ln)/Vw

Where: Cw = Concentration in well (mg/L)
Vw = Volume of well water (liters)
L1+L2+..+Ln = Contaminant load for individual sources (mg/L)

Method: Risk-based analysis – using LOTUS 123 @RISK software

Assumption Triangular distribution assumed for all parameters, including infiltration quantities and source concentrations. Statistics for variables (minumum, maximum, mean, and expected value) are shown on tables.

NITRATE CONCENTRATION- COI-1/2, COI-4/5, AND SP-7/8 - ESTIMATION OF FUTURE LOAD (5-ACRE LOT DEVELOPMENT)

Model Parameters:

Total Pumping Rate:	3.57 cfs	8,732,718 L/d		Action Level:	5	mg/L (half of MCL)
Total Area:	1897.4 acres			Critical Load:	43,663,590	mg/d
Septic System Area:	1,180.0 acres					
Annual Precipitation:	50 in					

Source	Description	Portion of Prec. as Infiltrated Runoff (1)				Area	Volume	Nitrate Concentration (2)				Load
		Min	Max	Mean	Expect	(acres)	(L/d)	Min	Max	Mean	Expected	(mg/d)
Storm	Transportation	0%	10%	5%	5%	61.2	43,068	0.200	1.000	0.600	0.600	25,841
Runoff	Vacant/Undeveloped	5%	20%	13%	13%	323.6	569,532	0.200	1.000	0.600	0.600	341,719
	Munic. Facil./Public Util.	0%	15%	8%	8%	29.9	31,552	0.200	1.000	0.600	0.600	18,931
	Office/Prof/Commerc/Retail	0%	15%	8%	8%	86.1	90,943	0.200	1.000	0.600	0.600	54,566
	Single/Multi/Duplex*	5%	15%	10%	10%	1367.6	1,925,306	0.200	1.000	0.600	0.600	1,155,184
	Parks/Private Open	5%	20%	13%	13%	29.0	50,959	0.200	1.000	0.600	0.600	30,575

Total Infil. Storm Water Volume 2,711,360 L/d Predicted Contam. Load: 1,626,816 mg/d

Source	Description	Portion of Fertilized Land (1)				Total Area	Fert. Area	Nitrate Applic. (lbs/1,000 ft^2/yr) (3a)				Portion of Nitrate Leached to Watertable (3b)				Load
		Min	Max	Mean	Expect	(acres)	(acres)	Min	Max	Mean	Expected	Min	Max	Mean	Expect	(mg/d)
Fertilizer	Transportation	0%	0%	0%	0%	61.2	0.0	2.000	4.000	3.000	3.000	10.0%	60.0%	35.0%	35.0%	0
Applic.	Vacant/Undeveloped	0%	0%	0%	0%	323.6	0.0	2.000	4.000	3.000	3.000	10.0%	60.0%	35.0%	35.0%	0
	Munic. Facil./Public Util.	0%	20%	10%	10%	29.9	3.0	2.000	4.000	3.000	3.000	10.0%	60.0%	35.0%	35.0%	485,286
	Office/Prof/Commerc/Retail	0%	20%	10%	10%	86.1	8.6	2.000	4.000	3.000	3.000	10.0%	60.0%	35.0%	35.0%	1,398,768
	Single/Multi/Duplex*	0%	14%	7%	7%	1367.6	95.7	2.000	4.000	3.000	3.000	10.0%	60.0%	35.0%	35.0%	15,546,619
	Parks/Private Open	0%	20%	10%	10%	29.0	2.9	2.000	4.000	3.000	3.000	10.0%	60.0%	35.0%	35.0%	470,273

Predicted Contam. Load: 17,900,946 mg/d

Source	Description	Flow (gal/day per person or unit) (3c)				Area	# of	Persons/	Volume	Potential Nitrate Conc. (mg/L) (3c)				Load
		Min	Max	Mean	Expect	(acres)	Units	Unit	(L/d)	Min	Max	Mean	Expected	(mg/d)
Septic–	1/2 acre Housing	50	70	60	60	0	0	2.5	0	30	40	35	35	0
Grand	1 acre Housing	50	70	60	60	0	0	2.5	0	30	40	35	35	0
Ridge Dev	5 acre Housing	50	70	60	60	1180	236	2.5	133,989	30	40	35	35	4,689,615

Predicted Contam. Load: 4,689,615 mg/d

PREDICTED NITRATE CONC. IN WELL(S): 2.8 mg/L PERCENT OF CRITICAL: 55.5
PREDICICTED TOTAL LOAD (Kg/y 8839 kg/yr

* Includes possible lower Grande Ridge and Lake Tradition development.

(1) Data determined from this study or otherwise best guess.

(2) Golder Associates, 1992. Draft Report City of Portand, OR Drainage Sump Study, Table 2–2; Issaquah Creek Basin Current/Future Conditions and Source Identification Report, Table 9.5.

(3a,b,c) Frimpter, H. et al, 1990. A Mass–Balance Nitrate Model for Predicting the Effects of Land Use on Groundwater Quality. U.S. Geological Survey OFR 88–493

(3a) Appendix A, Table 7A and Section 8; (3b) Appendix A, Section 9; (3c) Appendix A, Table 1A.

Source Loading - Dilution Accounting Approach

Eqtn: Cw = (L1+L2+..+Ln)/Vw

Where: Cw = Concentration in well (mg/L)

Vw = Volume of well water (liters)

L1+L2+..+Ln = Contaminant load for individual sources (mg/L)

Method: Risk-based analysis - using LOTUS 123 @RISK software

Assumption Triangular distribution assumed for all parameters, including infiltration quantities and source concentrations. Statistics for variables (minumum, maximum, mean, and expected value) are shown on tables.

LEAD CONCENTRATION- COI-1/2, COI-4/5, AND SP-7/8 - ESTIMATION OF PRESENT LOAD

Model Parameters:

Total Pumping Rate:	3.57 cfs	8,732,718 L/d	Action Level:	0.025	mg/L (half of MCL)
Total Area:	1897.4 acres		Critical Load:	218,318	mg/d
Annual Precipitation:	50 in				

		Portion of Prec. as Infiltrated Runoff (1)				Area	Volume	Total Lead Concentration (2)				Load
Source	Description	Min	Max	Mean	Expect	(acres)	(L/d)	Min	Max	Mean	Expected	(mg/d)
Storm Runoff	Transportation	0%	10%	5%	5%	61.2	43,068	0.010	0.400	0.200	0.203	8,757
	Vacant/Undeveloped*	5%	20%	13%	13%	1503.6	2,646,086	0.001	0.050	0.025	0.025	67,034
	Munic. Facil./Public Util.	0%	15%	8%	8%	29.9	31,552	0.050	0.200	0.100	0.117	3,681
	Office/Prof/Commerc/Retail	0%	15%	8%	8%	86.1	90,943	0.050	0.200	0.100	0.117	10,610
	Single/Multi/Duplex	0%	15%	10%	8%	187.6	220,053	0.010	0.200	0.100	0.103	22,739
	Parks/Private Open	5%	20%	13%	13%	29.0	50,959	0.001	0.050	0.025	0.025	1,291

Total Infil. Storm Water Volume 3,082,660 L/d   Predicted Contam. Load: 114,112 mg/d

PREDICTED LEAD CONC. IN WELL: 0.0131 mg/L ESTIMATED PERCENT OF CRITICAL: 52.3

PREDICTED LOAD 41.65 kg/yr

Detection Limit 0.005 mg/L

* Includes possible lower Grand Ridge and Lake Tradition development

(1) Data determined from this study or otherwise best guess.

(2) Golder Associates, 1992. Draft Report City of Portland, OR Drainage Sump Study, Table 3-4.

Source Loading – Dilution Accounting Approach

Eqtn: Cw = (L1+L2+..+Ln)/Vw

Where: Cw = Concentration in well (mg/L)
Vw = Volume of well water (liters)
L1+L2+..+Ln = Contaminant load for individual sources (mg/L)

Method: Risk-based analysis – using LOTUS 123 @RISK software

Assumption Triangular distribution assumed for all parameters, including infiltration quantities and source concentrations. Statistics for variables (minumum, maximum, mean, and expected value) are shown on tables.

LEAD CONCENTRATION- COI-1/2, COI-4/5, AND SP-7/8 – ESTIMATION OF FUTURE LOAD

Model Parameters:

Total Pumping Rate:	3.57	cfs	8,732,718 L/d	Action Level:	0.025	mg/L (half of MCL)
Total Area:	1915.4	acres		Critical Load:	218,318	mg/d
Annual Precipitation:	50	in				

Source	Description	Portion of Prec. as Infiltrated Runoff (1) Min	Max	Mean	Expect	Area (acres)	Volume (L/d)	Total Lead Concentration (2) Min	Max	Mean	Expected	Load (mg/d)
Storm	Transportation	0%	10%	5%	5%	79.2	55,738	0.010	0.400	0.200	0.203	11,333
Runoff	Vacant/Undeveloped	5%	20%	13%	13%	323.6	569,532	0.001	0.050	0.025	0.025	14,428
	Munic. Facil./Public Util.	0%	15%	8%	8%	29.9	31,552	0.050	0.200	0.100	0.117	3,681
	Office/Prof/Commerc/Retail	0%	15%	8%	8%	86.1	90,943	0.050	0.200	0.100	0.117	10,610
	Single/Multi/Duplex*	0%	15%	10%	8%	1367.6	1,604,422	0.010	0.200	0.100	0.103	165,790
	Parks/Private Open	5%	20%	13%	13%	29.0	50,959	0.001	0.050	0.025	0.025	1,291

Total Infil. Storm Water Volume 2,403,146 L/d Predicted Contam. Load: 207,134 mg/d

PREDICTED LEAD CONC. IN WELL: 0.0237 mg/L ESTIMATED PERCENT OF CRITICAL: 94.9

PREDICTED LOAD 75.60 kg/yr

Detection Limit 0.005 mg/L

* Includes possible lower Grand Ridge and Lake Tradition development

(1) Data determined from this study or otherwise best guess.

(2) Golder Associates, 1992. Draft Report City of Portland, OR Drainage Sump Study, Table 3-4.

Source Loading - Dilution Accounting Approach

Eqtn: Cw = (Co*Vc*1/2^(t/t½))/Vw

Where:
- Cw = Concentration in well
- Co = Source Concentration
- Vc = Source Volume
- t½ = Degradation half life in days (Howard P.H., et al, 1991 Handbook of Environmental Degradation Rates)
- Vw = Well Pumping Volume
- t = Travel time to well

R = Retardation (R = 1+(Kd*Pb/n), where Kd = Koc*foc)).
Koc values from Howard P.H. Handbook of Environmental Fate and Exposure Data for Organic Chemicals.

Method: Risk-based analysis - using LOTUS 123 @RISK software

Assumption Triangular distribution assumed for all parameters, including infiltration quantities and source concentrations. Statistics for variables (minumum, maximum, mean, and expected value) are shown on tables.

THEORETICAL MINIMUM RELEASE QUANTITIES RESULTING IN WELL CONTAMINATION: PCE

Model Parameters:

Total Pumping Rate(SP-7/8): 1.55 cfs 3,791,516 L/d

Assumed Aquifer Characteristics:

Organic Content (foc):	0.002	
Porosity (n):	0.25	
Bulk Soil Density (Pb):	1.65	g/cm^3
Thickness:	200	ft

PCE Characteristics:

	Min	Max	Mean	Expected	
t½:	360	720	540	540	days
Koc:	200	1700	300	733	ml/g
Kd:				1.47	ml/g
Retardation:				10.68	
Assumed PCE Concentration:				100.00%	
Specific Gravity (PCE):				1.6227	
Action Level:				2.5	ug/L (half of MCL)
Critical Load:				9,479	mg/d

GW Travel Time (days)	Equiv. Contam. Trav. Time (days)	Equiv. Source Load (mg/d)	Critical PCE Vol.* (gal/year)
0	0	9.5E+03	0.563
30	320	9.8E+03	0.580
60	641	1.0E+04	0.596
180	1,922	1.1E+04	0.668
365	3,898	1.3E+04	0.795
720	7,690	1.9E+04	1.112
1,800	19,224	5.2E+04	3.088

* Critical PCE load is the quantity of PCE disolved in groundwater at the specified travel time away from the pumping well.
This is not equivalent to the spill quantity, because in many cases only a portion of any given spill will reach the water table.

Source Loading – Dilution Accounting Approach

Eqtn: Cw = (Co*Vc*1/2^(t/t½))/Vw

Where:
- Cw = Concentration in well
- Co = Source Concentration
- Vc = Source Volume
- t½ = Degradation half life in days (Howard P.H., et al, 1991 Handbook of Environmental Degradation Rates)
- Vw = Well Pumping Volume
- t = Travel time to well

R = Retardation (R = 1+(Kd*Pb/n), where Kd = Koc*foc)).
Koc values from Howard P.H. Handbook of Environmental Fate and Exposure Data for Organic Chemicals.

Method: Risk-based analysis – using LOTUS 123 @RISK software

Assumption Triangular distribution assumed for all parameters, including infiltration quantities and source concentrations. Statistics for variables (minumum, maximum, mean, and expected value) are shown on tables.

THEORETICAL MINIMUM RELEASE QUANTITIES RESULTING IN WELL CONTAMINATION: BENZENE (GASOLINE)

Model Parameters:

Total Pumping Rate(SP	1.55	cfs	3,791,516	L/d

Assumed Aquifer Characteristics:

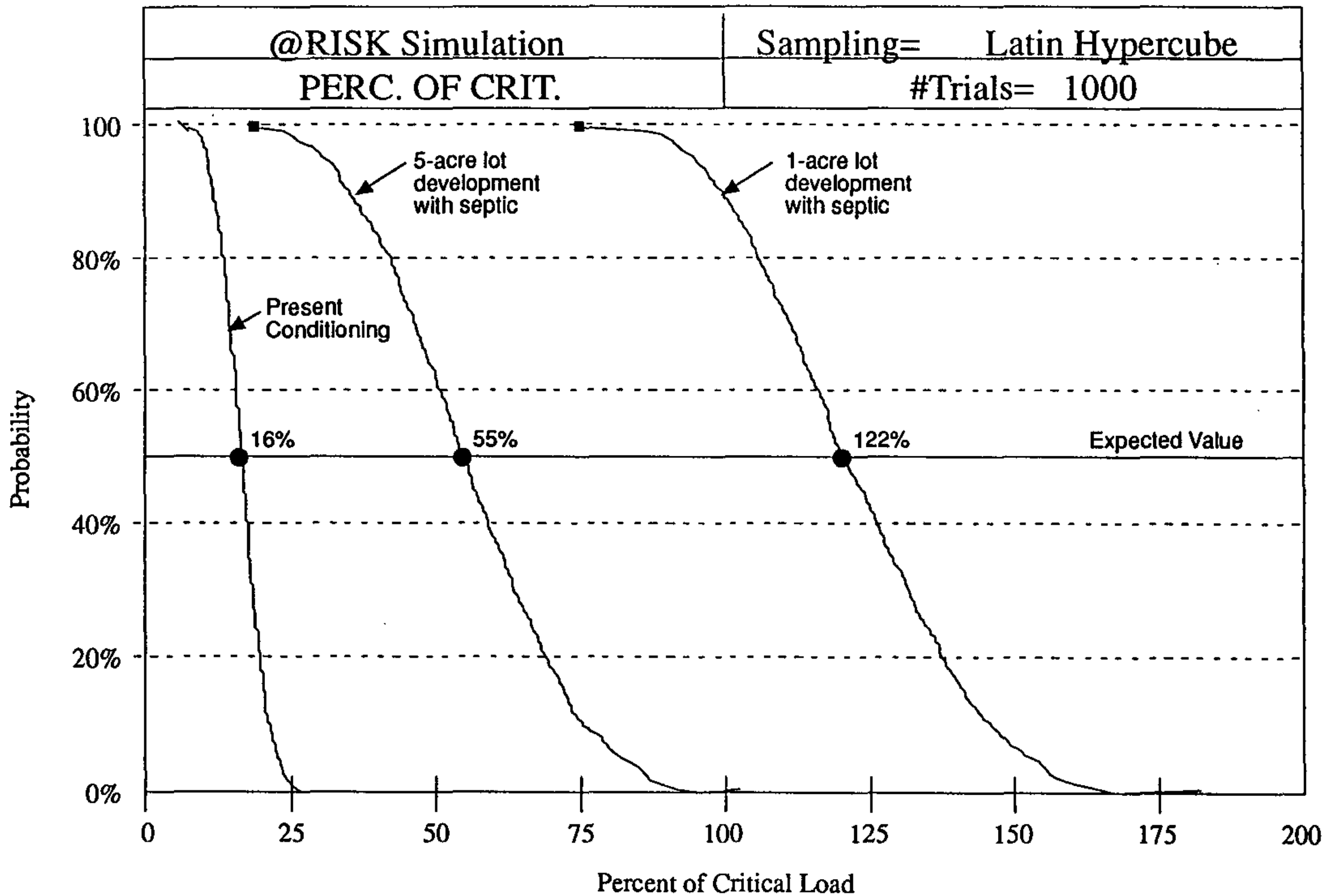
Organic Content (foc):	0.002	
Porosity (n):	0.25	
Bulk Soil Density (Pb):	1.65	g/cm^3
Thickness:	200	ft

Benzene Characteristics:

	Min	Max	Mean	Expected	
t½:	10	720	365	365	days
Koc:	30	145	87.5	88	ml/g
Kd:				0.175	ml/g
Retardation:				2.16	
Benzene Conc. in Gasoline:				0.76%	(Fresh gasoline)
Specific Gravity (Gasoline):				0.75	
Action Level:				2.5	ug/L (half of MCL)
Critical Load:				9,479	mg/d

GW Travel Time (days)	Equiv. Contam. Trav. Time (days)	Critical Source Load (mg/d)	Equiv. Critical Gasoline* (gal/year)
0	0	9,479	160
30	65	15,819	268
60	129	26,399	447
180	388	204,768	3,464
365	787	4,817,709	81,507
720	1552	2,064,376,142	34,925,365

* Critical gasoline load is the quantity of gasoline disolved in groundwater at the specified travel time away from the pumping well. This is not equivalent to the spill quantity, because in many cases only a portion of any given spill will reach the water table.



Critical Load of nitrate is estimated to be 24 kg/day, which produces an estimated nitrate concentration of 5 mg/L or 1/2 the MCL.

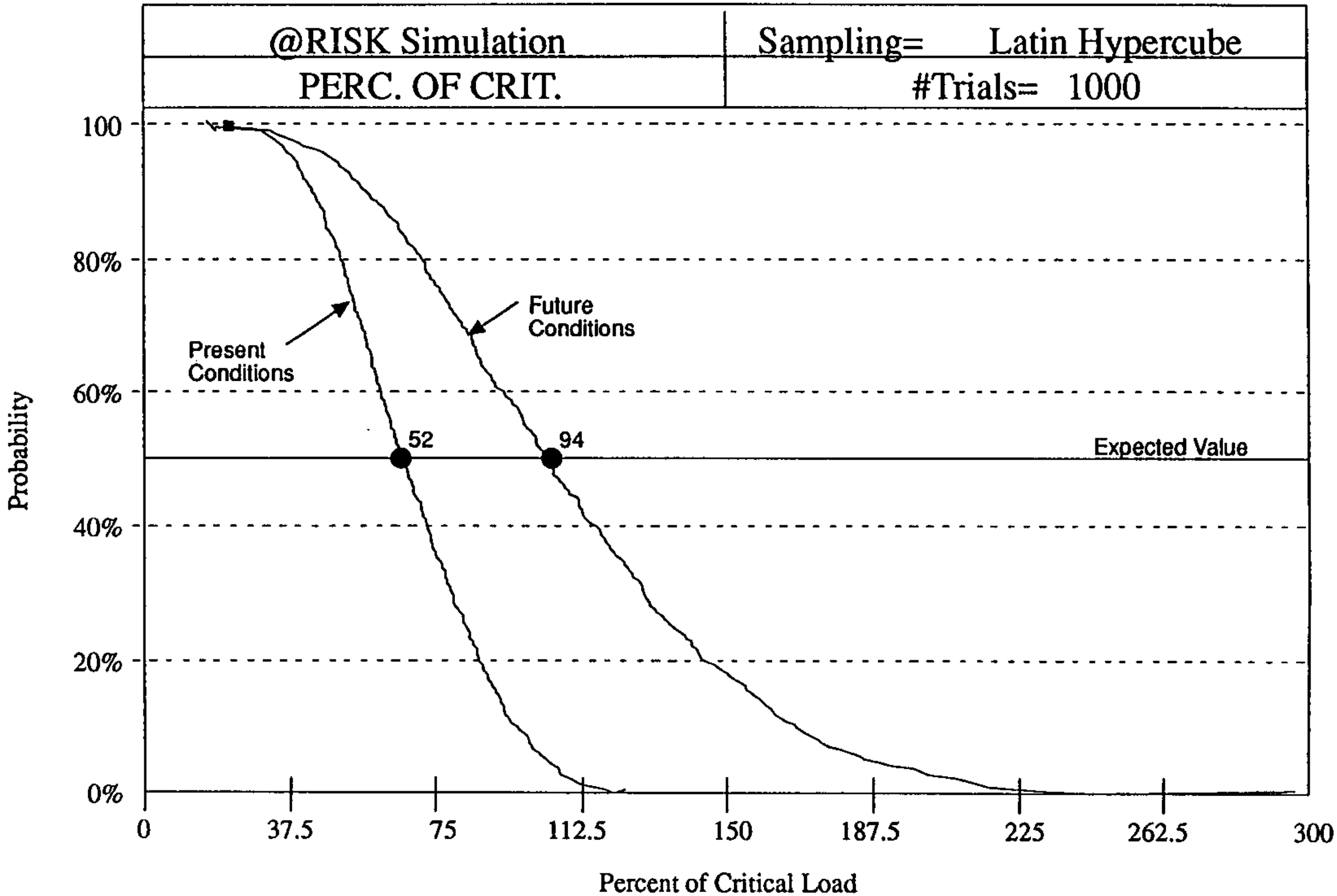
FIGURE **K-1**

PROBABILITY DISTRIBUTION OF ESTIMATED NITRATE LOADS TO LIV AQUIFER

SAMMAMISH/WELLHEAD/WA

PROJECT NO. 913 1252.009 DRAWING NO. 47622 DATE 11/10/93 DRAWN BY CB

Golder Associates



Critical Load of lead is estimated to be 0.6 kg/day, which produces an estimated lead concentration of 0.025 mg/L or 1/2 the MCL.

FIGURE **K-2**

PROBABILITY DISTRIBUTION OF ESTIMATED LEAD LOADS TO LIV AQUIFER

SAMMAMISH/WELLHEAD/WA

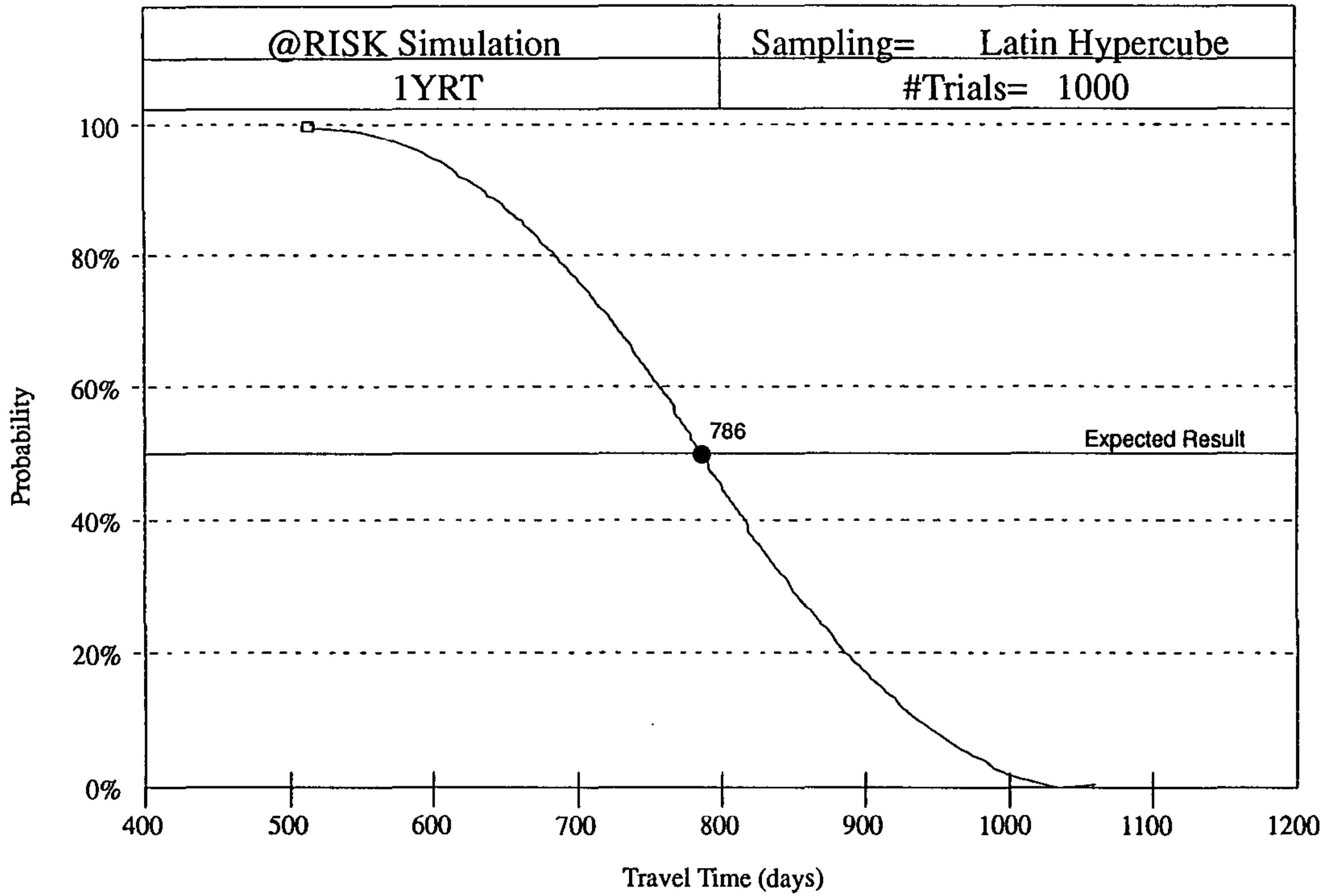


FIGURE **K-3**
PROBABILITY DISTRIBUTION OF TRAVEL TIMES FOR BENZENE WITHIN A 1-YEAR WHPA
SAMMAMISH/WELLHEAD/WA

PROJECT NO. 913 1252.009 DRAWING NO. 47624 DATE 11/10/93 DRAWN BY CB

Golder Associates

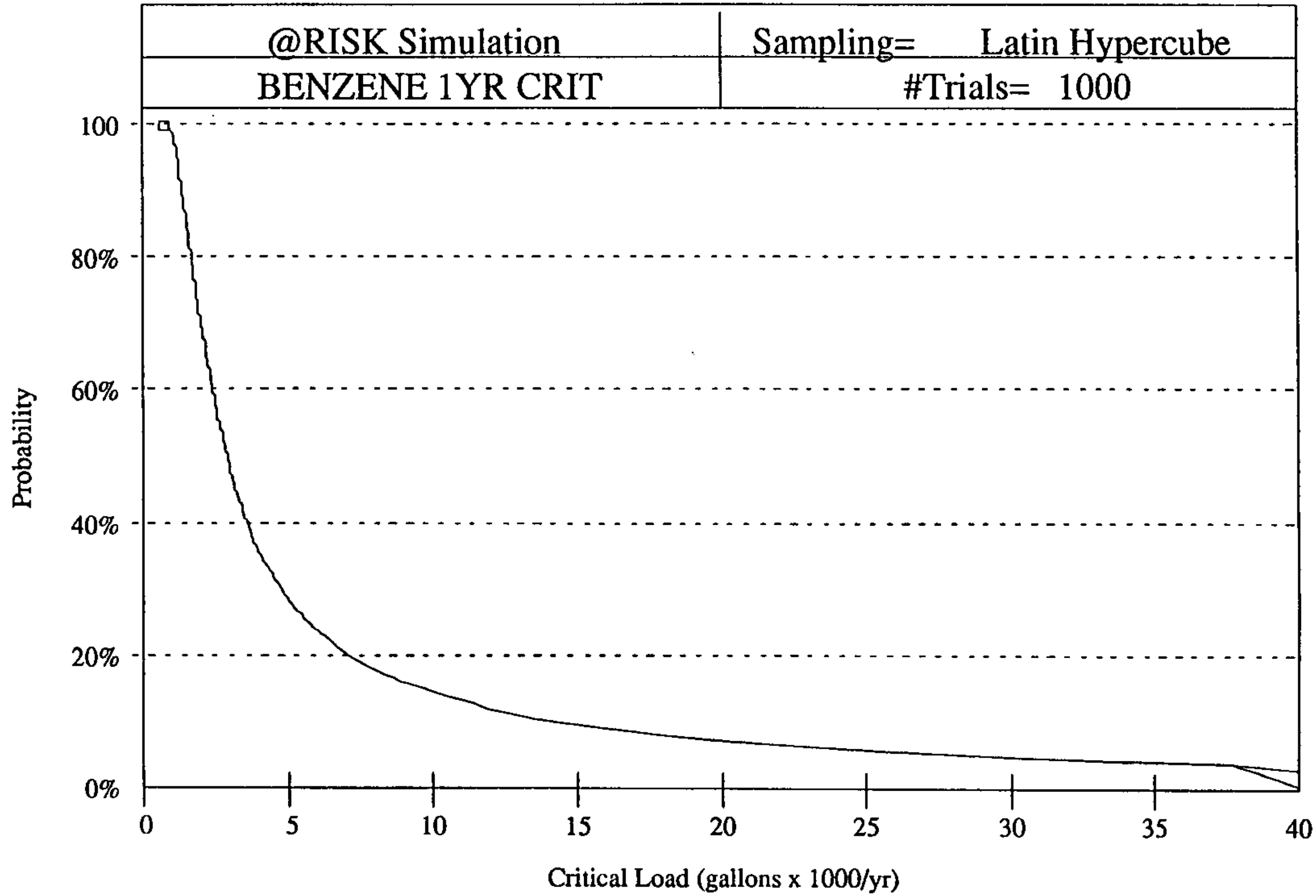


FIGURE **K-4**

PROBABILITY DISTRIBUTION OF CRITICAL BENZENE LOADS WITHIN A 1-YEAR WHPA

SAMMAMISH/WELLHEAD/WA

PROJECT NO. 913 1252.009 DRAWING NO. 47625 DATE 11/10/93 DRAWN BY CB

Golder Associates

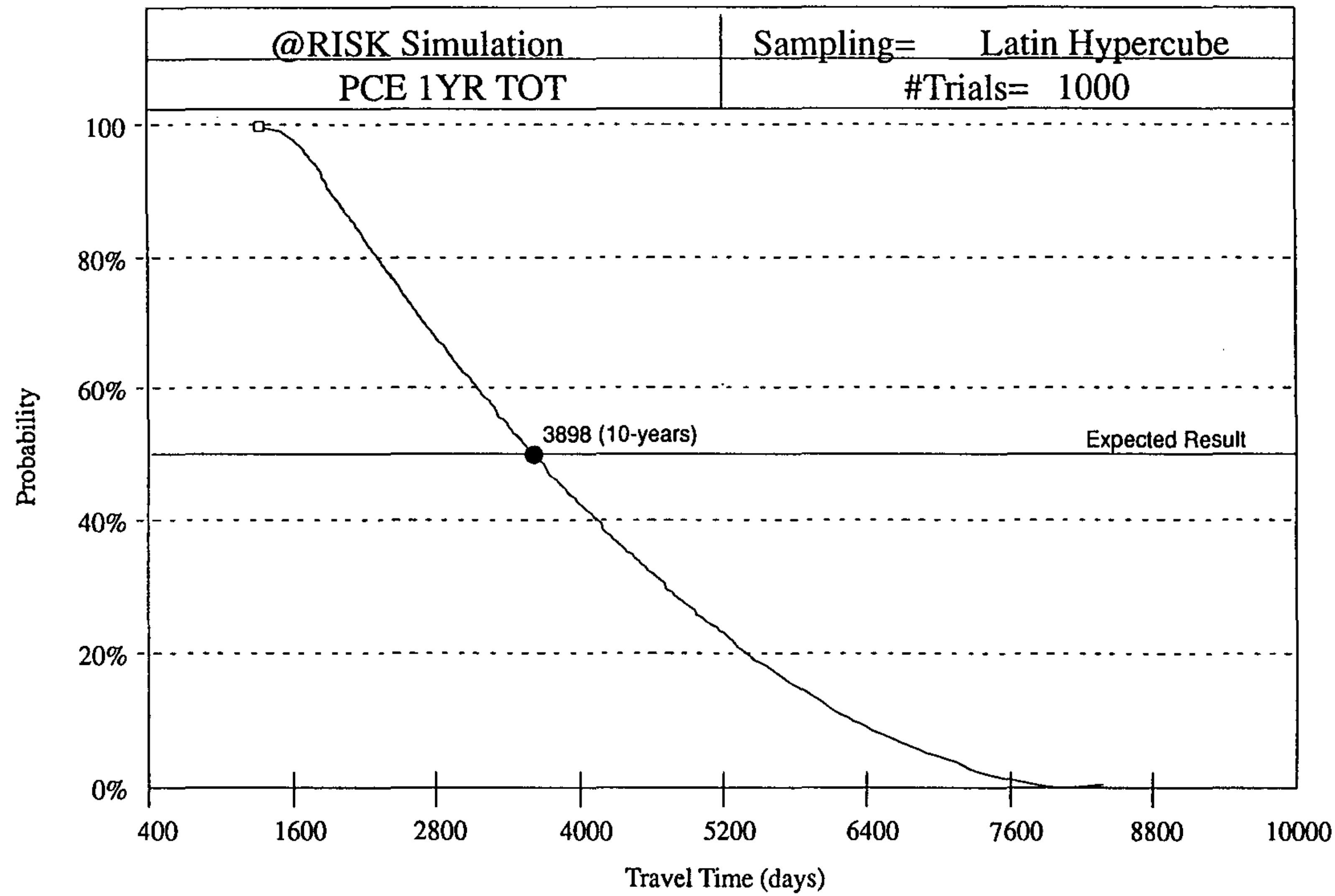


FIGURE **K-5**

PROBABILITY DISTRIBUTION OF TRAVEL TIMES FOR PCE WITHIN A 1-YEAR WHPA

SAMMAMISH/WELLHEAD/WA

PROJECT NO. 913 1252.009 DRAWING NO. 47626 DATE 11/10/93 DRAWN BY CB

Golder Associates

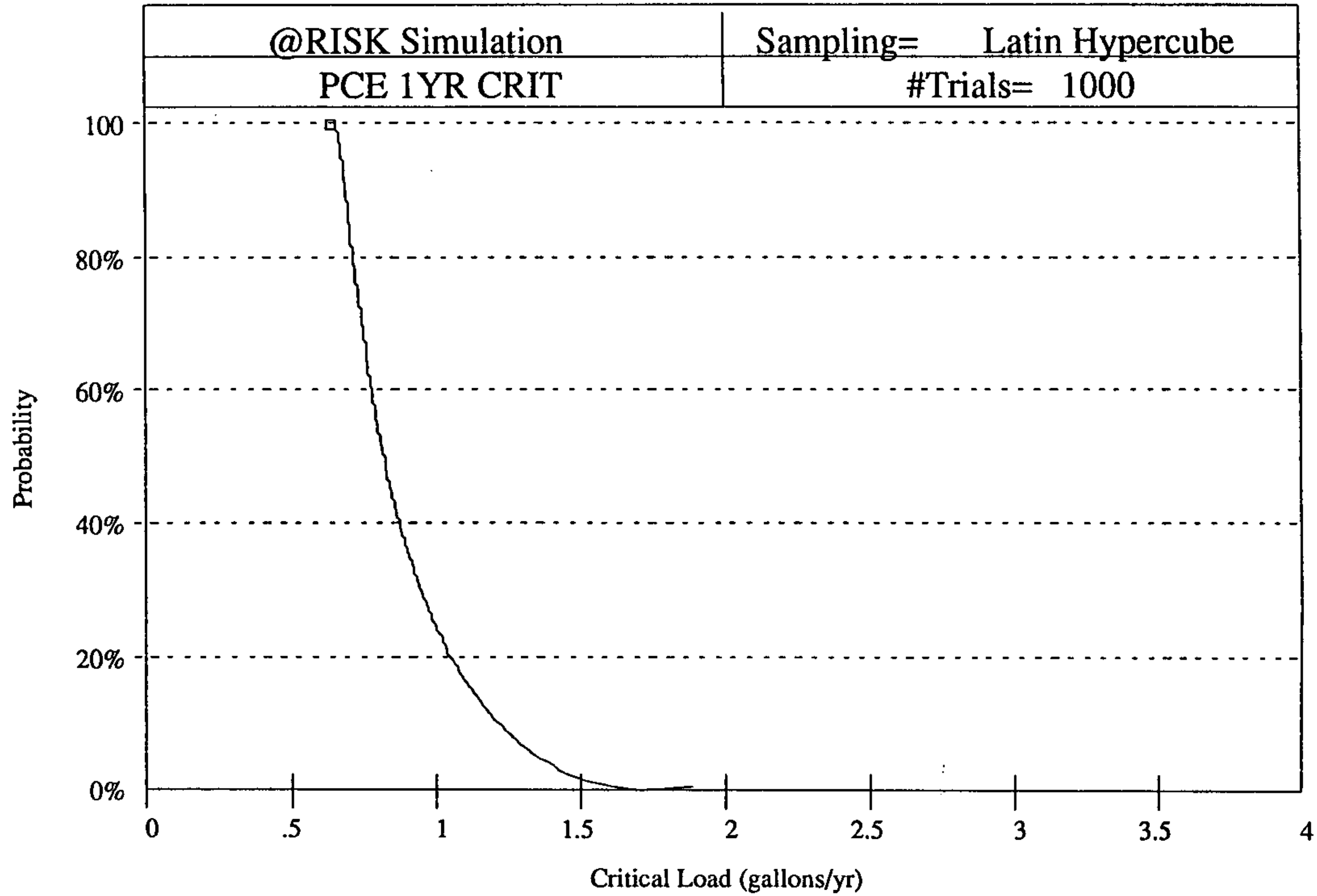


FIGURE **K-6**

PROBABILITY DISTRIBUTION OF CRITICAL PCE LOADS WITHIN A 1-YEAR WHPA

SAMMAMISH/WELLHEAD/WA

PROJECT NO. 913 1252.009 DRAWING NO. 47627 DATE 11/10/93 DRAWN BY CB

Golder Associates

Appendix L

APPENDIX L

EPA CONTAMINANT RISK ANALYSIS

TECHNICAL APPENDIX A: ASSUMPTIONS AND LIMITATIONS OF THE PRIORITY SETTING APPROACH

The Priority Setting Approach incorporates many assumptions. This appendix discusses the major assumptions regarding aquifer physical properties, zone of contribution, potential contamination sources, toxicity of contaminants or contaminant mixtures, and dense and light non-aqueous phase liquids. It also provides a summary of the effects on the risk scores if these assumptions vary from actual field settings.

Aquifer Physical Properties

The theoretical basis of this Approach's transport component includes two elements: (1) the Darcy flow law to describe the movement of contaminants from the source to the aquifer in the unsaturated zone and (2) an analytical two-dimensional transport model (developed by Wilson and Miller) to describe the movement of contaminants in the saturated zone from directly below the source to the wellhead.

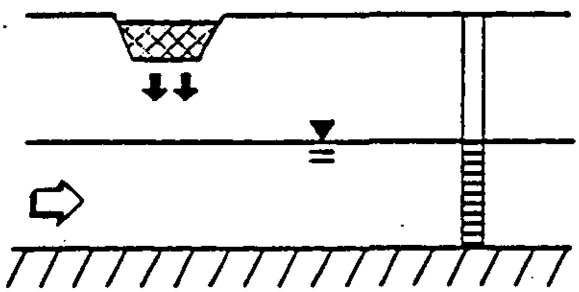
Several basic hydrogeologic settings can be reasonably evaluated using the Priority Setting Approach, as presented in Exhibit A-1. In Setting 1, contamination from the source is released into an unconfined (water table) aquifer and is intercepted by a well in the same aquifer. In Setting 2, contamination results from the failure in a confined aquifer of the casing of a Class I, II, or III injection well. This contamination is then intercepted by a well drawing water from the same confined aquifer. Setting 3 involves a contamination source in a recharge zone for a confined aquifer that is in direct hydraulic connection with the ground surface. This situation occurs if the confining layer is relatively thin or absent in the recharge zone. In Setting 4, the aquifer is overlain by a fine-grained clay that serves as a confining layer. In wells that penetrate the confining layer into the aquifer, the water level rises above the aquifer. This water level reflects the potentiometric surface of the aquifer. In this case, users should be careful to use the distance from the source to the top of the confined aquifer, and not to the potentiometric surface, as the depth to aquifer when completing the Wellhead Datasheet.

This Approach is designed to evaluate potential sources of contamination in a single aquifer-single well system. To evaluate a composite hydrogeologic setting using this Approach, each aquifer and its associated contamination sources must be considered separately.

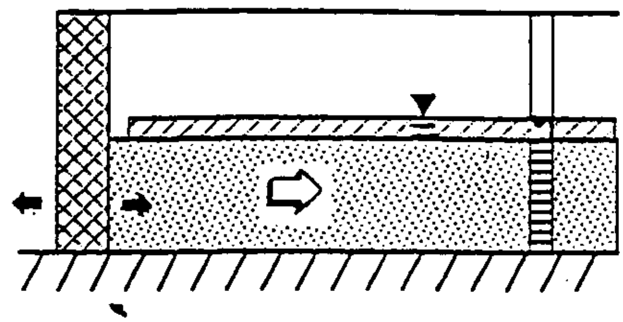
Exhibit A-1

Hydrogeologic Settings that Can Be Evaluated with the Priority Setting Approach

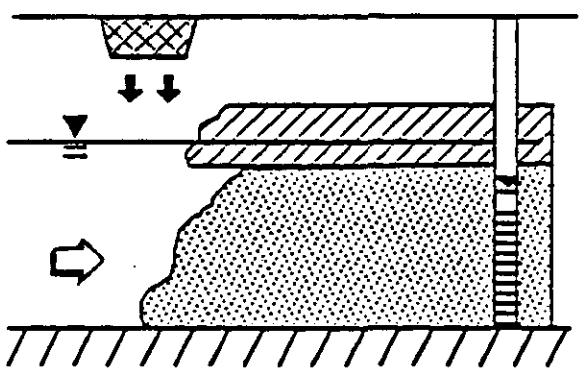
Setting 1. Surface Contamination Source-Unconfined (Water Table) Aquifer



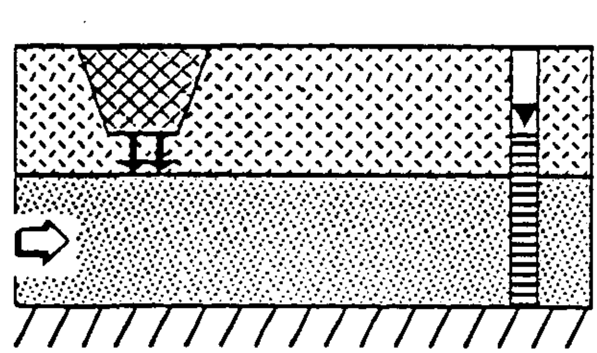
Setting 2. Deep Source-Confined Aquifer

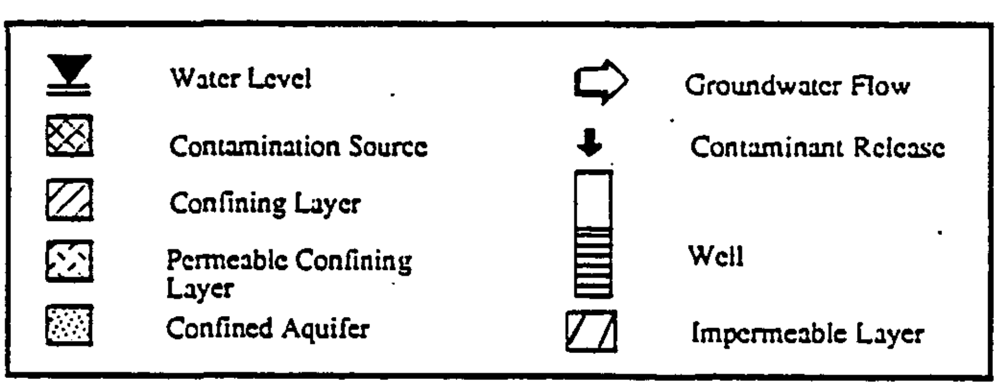


Setting 3. Surface Source in Recharge Area- Confined Aquifer



Setting 4. Surface Source-Confined Aquifer





This Approach assumes homogeneity and isotropy of the hydrogeologic system within the WHPA. In particular, it assumes that the hydrogeologic parameters are uniform throughout the WHPA,[1] that uniform and steady flow prevails, and that the aquifer is of infinite extent. This implies that the thickness and flow rate in the unsaturated and saturated zones are constant. Moreover, the flow velocity in the aquifer is assumed to reflect both the effects of the regional hydraulic gradient and pumping stresses, and is set to an average constant for the entire WHPA.

This Approach provides default hydraulic conductivity values as a function of the type of material (e.g., sand or clay); these defaults do not vary between the saturated and unsaturated zones. Default flow velocities are based upon a unit hydraulic gradient and an average porosity of 0.3. This requires that the effect of drawdown near the well in an unconfined aquifer be relatively small compared to the saturated thickness. Consequently, it is assumed that pumping rates are not so excessive so as to completely dewater even a fine-grained aquifer. If the user does not know the pumping rate in an aquifer consisting primarily of sand, then he or she should select the appropriate ground-water velocity score from Table W.4. Finally, it is assumed that wells fully penetrate the aquifer.

Zone of Contribution

WHPAs can be delineated using a variety of techniques ranging from simple, somewhat arbitrary graphical techniques to complicated methods based upon analytic or numerical modeling. In practice, the WHPA boundary may coincide with a ground-water divide, lithologic boundary, or even a jurisdictional border. This Approach assumes that the boundaries of a WHPA are contained within the zone of contribution, as described in the Office of Ground Water and Drinking Water's "Delineation of Wellhead Protection Areas." Depending on how the WHPA has been delineated, there may exist contamination sources in the zone of contribution that are not located inside the WHPA. If you know of such sources, you may want to evaluate them in addition to sources located inside the WHPA.

[1] The Darcy flow law and Wilson and Miller model consider the following major parameters: vertical distance from the contamination source to the top of the aquifer, unsaturated hydraulic conductivity, longitudinal distance from the contamination source to the wellhead, aquifer flow velocity, porosity, and transverse dispersivity (a measure of how fast contamination spreads in the direction perpendicular to the prevailing ground-water direction).

Contamination Sources

The Priority Setting Approach also makes assumptions about the physical and chemical characteristics of the sources of potential contamination. For example, it is assumed that the contamination is in the form of an aqueous solution having the same density and viscosity as water. It is further assumed that constituent concentrations do not vary with time. The transport model considers each source as a point source and assumes that concentrations do not vary in the vertical dimension. Retardation coefficients and biodegradation rates are also assumed to be constants that are not affected by concentration or by mixture with other constituents. Leakage from a contamination source is assumed to influence neither the shape of the water table nor the prevailing ground-water velocity. Finally, this Approach assumes that the contamination at the wellhead is not diluted from capture of "clean water" during pumping.

Toxicity of the Contaminant

Toxicity of the contaminant indicates the potential health hazard posed by ingesting the contaminant. The Toxicity scores are based on established dose-response relationships obtained from EPA's Integrated Risk Information System (IRIS) or from the RASH database (only for a few contaminants). Using these dose-response relationships, a "critical dose" is defined for each contaminant, which represents the dose at which health risks become of concern.

Because carcinogens and non-carcinogens act differently on the body, the critical dose is defined differently for each of them (note that the Priority Setting Approach does not address microbiological contaminants). For non-carcinogens, the critical dose is defined as the EPA-defined oral reference dose (RfD), which is the threshold exposure level at which health effects begin to occur. For carcinogens, it is generally assumed that no threshold levels exist because any level can cause cancer. Therefore, for carcinogens, the critical dose is defined as the dose that increases the risk of cancer by 10^{-5} over background levels; i.e., an excess cancer risk of 1 in 100,000. This Approach converts these critical doses into critical concentrations (in milligrams per liter of drinking water) using standard Office of Ground Water and Drinking Water assumptions (i.e., two liters consumed per day over a 70-year lifetime exposure period).

Toxicity of the contaminant is defined as the decimal logarithm of the inverse of the critical concentration in mg/l. Thus, the Toxicity Score T has units of $\log_{10}(1/(mg/l))$. You read the Toxicity score T directly from a concentration scoring graph (end of Form S.1) or a table (Form S.2).

Because the health risks posed by carcinogens and non-carcinogens are very different, as are the methods used to define these risks, many users may prefer to track them separately. If you choose to produce only one screening and ranking of all sources, then you can consider both carcinogens and non-carcinogens together. In this case, the Priority Setting Approach has a built-in formula for comparing carcinogenic and non-carcinogenic risks. As discussed previously, this Approach implicitly equates a 10^{-5} lifetime cancer risk to a lifetime exposure to the reference dose (RfD) for non-carcinogens. You can alter this assumption to reflect different policy calls. For example, you can choose to equate a 10^{-6} lifetime cancer risk to a lifetime exposure to the reference dose (RfD) for non-carcinogens. In this case, you should add a 1 to all the risk scores for carcinogenic contaminants as computed in Task V, Step 1. If you choose to equate a 10^{-4} lifetime cancer risk to a lifetime exposure to the reference dose (RfD) for non-carcinogens, then you should subtract a 1 from all the risk scores for carcinogenic contaminants.

Dense and Light Non-Aqueous Phase Liquids (DNAPLs and LNAPLs)

Dense non-aqueous phase liquids (DNAPLs), also known as sinkers, and light non-aqueous phase liquids (LNAPLs), also known as floaters, are ground-water contaminants that are relatively insoluble in water and have densities greater than and less than water, respectively. Due to their density and limited solubility in water, DNAPLs and LNAPLs can pose special risks to ground-water quality. If released in large quantities, these liquids can migrate vertically under the influence of gravity (i.e., sink to the bottom of the saturated zone if a DNAPL or float on the water table if an LNAPL) and act as a highly concentrated, long-term source of contamination.

The Priority Setting Approach allows you to recognize DNAPLs and LNAPLs in two stages. First, contaminant Form S.1 notes those contaminants that are potential DNAPLs or LNAPLs (see Task II, Step 5). Second, this Approach provides a rule of thumb for determining whether a potential DNAPL or LNAPL will act as a true DNAPL or LNAPL based on the quantity of the contaminant released. Specifically, a potential DNAPL or LNAPL will act as a true DNAPL or LNAPL if the Quantity score for that contaminant is greater than or equal to 3; that is, if the contaminant is released at an annual rate of 1,000 kg per year or more (see Task III, Step 6).

The Transport Worksheet does not model the fate and transport phenomena specific to DNAPLs and LNAPLs. These liquids follow different transport patterns from other common contaminants because they are denser or lighter and more or less viscous than water. As a result, they tend to sink to the impervious base of the saturated zone (for DNAPLs) or float on top of the water table (for LNAPLs). For example, because DNAPLs tend to move along impervious layers of soils or rock, they will move away from a drinking water well if the impervious layer is tilted away from the well. In this case, the Priority Setting Approach will overestimate the risk posed by a DNAPL. Because of the complexity of the transport phenomena involved, however, this Approach does not provide guidance on whether the Risk scores will be over-estimated or under-estimated in the case of DNAPLs or LNAPLs.

Therefore, this Approach does not apply to potential DNAPLs or LNAPLs with a Quantity score of 3 or more.

NOTE: DNAPLS and LNAPLs can be a serious threat to wellheads and are extremely difficult to remove from the water supply once contamination occurs. If you believe a DNAPL or LNAPL is present in the water supply or threatens a wellhead, you should pay special consideration to this threat.

Validity of the Risk Estimates Under Field Conditions that Diverge from the Priority Setting Approach Assumptions

Exhibit A-2 presents a summary explanation of the effects on the accuracy of the Risk scores if you diverge from the assumptions summarized in this appendix. The first column lists field conditions that differ from the conditions assumed in this Approach. The second column notes the effects on the risk estimates as a result of diverging from the model conditions.

For example, this Approach assumes that contaminants flow in a straight line between a source and a well. If a source is not directly upgradient, the contaminant flow path will most likely not be a straight line. In this Approach, such sources are called "off-center" sources. The Priority Setting Approach over-estimates the risks posed by an off-center source because it underestimates the travel time of the contaminants from such sources. Note that in some instances, it is not possible to say whether the Priority Setting Approach will overestimate or underestimate risks. For example, for DNAPLs or LNAPLs, it may overestimate or underestimate risks depending on a number of factors not modeled in this Approach (see the discussion above on DNAPLs and LNAPLs).

Exhibit A-2

Validity of the Risk Estimates Under
Field Conditions that Diverge from the Priority Setting Approach's Assumptions

Field Condition	Effect of Field Condition Upon Accuracy of Risk Estimate
Non-uniform aquifer thickness	Overestimate/Underestimate - depends on downgradient trend
Spike release at source	Overestimate/Underestimate - depends on distance to source and flow velocity
Seasonal pumping cycle	Overestimate
Areal source	Overestimate/Underestimate - depends on relative proximity of source to wellhead
Dense non-aqueous phase liquids (DNAPLs)	Overestimate/Underestimate - depends on density, viscosity, quantity, and surface tension of contaminant
Light non-aqueous phase liquids (LNAPLs)	Overestimate/Underestimate - depends on density, viscosity, quantity, and surface tension of contaminant
Partial penetration of well	Overestimate
Contaminant dispersion in unsaturated zone	Overestimate
Dilution at wellhead	Overestimate
Off-center source	Overestimate
Anisotropy	Overestimate/Underestimate - depends on relative position of source and well

TECHNICAL APPENDIX B: CONCEPTUAL OVERVIEW OF THE PRIORITY SETTING APPROACH

The Priority Setting Approach is a simple tool that allows the manager of a WHPA to assess the risks posed by potential sources of wellhead contamination. This appendix presents a general overview of the Approach's framework, describes the two components of risk in this Approach, and reviews how risk is computed as a function of these two risk components.

Overview of the Priority Setting Approach's Framework

The Priority Setting Approach is applied through a set of step-by-step worksheets. The user is led through a series of simple computations to calculate the risk posed by each potential contamination source within a WHPA. This section describes how this Approach emulates a human health risk assessment using simple, yet meaningful additive risk scores.

The Priority Setting Approach Emulates a Conventional Human Health Risk Assessment

The Priority Setting Approach is based on a simplified version of a conventional human health risk assessment. A conventional human health risk assessment generally answers two basic questions: (1) what is the frequency/duration of the exposure to a substance? and (2) what is the degree of toxicity of the substance? For the purposes of this Approach, the exposure and toxicity coefficients equate to: (1) What is the probability that something will go wrong? and (2) What are the consequences in the event something does go wrong?

This Approach considers two components of risk. <u>For a given contaminant or contaminant mixture present at a potential contamination source</u>, the user estimates a Risk score as the sum of two risk components:

(1) Likelihood of well contamination; that is, the likelihood that the contaminant will be released from that source and will reach the well within a specified period of time.

(2) Severity of well contamination; that is, the potential health hazard from drinking water drawn from the well that has been polluted by that

contaminant, taking into account contaminant dilution and dispersion between the source and the wellhead.

The Overall Risk score for a given source of potential contamination is the highest of the Risk scores associated with each contaminant or contaminant mixture present at the source.

Scoring Is Based on Logarithmic Conversion of Natural Units

The algorithms used in this Approach reflect the "natural units" of each risk parameter. For example, contaminant releases are expressed as mass released per unit of time (kg/yr), while contaminant concentrations are measured as mass unit per unit volume of water (kg/m^3). In addition, the risk parameters are functionally related within this Approach in the same manner that they are in a conventional human health risk assessment. The reliance on natural units of measurement and natural functional relationships ensures that the scores are non-arbitrary. That is, each variable is assigned its natural "weight" in terms of its contribution to the final Risk score.

The functional products of a conventional risk assessment are generally derived by multiplying several individual parameters to determine risk assessments. To ensure relative ease of use of this Approach without compromising on the rigor of a conventional risk assessment, the Priority Setting Approach assumes a conversion of the basic product (derived risk values) using the decimal logarithmic function. As a result, individual parameters generally are summed rather than multiplied to obtain risk scores.

The implicit use of decimal logarithmic conversion is best illustrated by the following example. The quantity of contaminant released annually (in kg/yr) is equal to the product of the volume of "waste" released annually (in m^3/yr = 1,000 l/yr) times the contaminant concentration in waste (in kg/m^3 = 1,000 ppm = 1,000 mg/l). Using the decimal logarithmic conversion, the Quantity score ($\log_{10}(kg/yr)$) is computed as the sum of the Volume score ($\log_{10}(m^3/yr)$) plus the Concentration score (in $\log_{10}(kg/m^3)$). That is, if 1 million liters of a solution containing benzene at a concentration of 1,000 ppm are released annually, then the Quantity score is equal to 3: i.e., 3 for the Volume score (i.e., $\log_{10}(1{,}000\ m^3/yr)$) plus 0 for the Concentration score (i.e., $\log_{10}(1 kg/m^3)$), which means that 1,000 kilograms of benzene are released annually).

Likelihood of Well Contamination

Likelihood of well contamination gives the probability that a source contaminant will reach the well within a user-specified time horizon, referred to as the Planning Period. As described in this section, for a given contaminant or contaminant mixture at a given source of potential contamination, Likelihood of well contamination is the sum of two partial risk scores: the Likelihood of release at the source and the Likelihood that the contaminant will reach the well.

Likelihood of Release at the Source (L_1)

Likelihood of release at the source (L_1) reflects the likelihood of an average-sized release of a contaminant from a source. L_1 is a function of the source type and is based on engineering failure analyses that account for the type of potential contamination source (e.g., landfills versus tanks). It is also a function of design characteristics (e.g., number and type of liners at a landfill) and operating status (e.g., age), as appropriate. For example, the L_1 values for tanks are a function of tank design (one of 12 designs in the Priority Setting Approach) and tank age, and are derived from the Hazardous Tank Failure Model (ref. 12).

To derive the L_1 score, refer to the tables in the Source Worksheets, which provide the L_1 score as a function of input parameters such as the age, design, and status of a specific source. Higher values of L_1 indicate a greater likelihood of release. For example, an L_1 score of 0 corresponds to a probability of 1 (i.e., 100 percent chance of release), while an L_1 score of -3.5 corresponds to a lower probability of 0.0032.

Likelihood that the Contaminant Released Will Reach the Well (L_2)

This partial risk score reflects the probability that the contaminant will reach the well within the Planning Period, assuming that the contaminant is released from the source starting from day one in the source's lifetime. The Transport Worksheet derives the Likelihood of reaching the well (L_2) by comparing (1) the time of travel of the contamihant from the source to the well, to (2) the sum of the source age plus the Planning Period.

For simplification, the L_2 score is approximated as the sum of two scores: L_U for the unsaturated zone and L_S for the saturated zone. The L_U score is based on the time of travel of the contaminant through the unsaturated zone in comparison to the Planning Period. Likewise, the L_S score is based on the time of travel through the saturated zone to the well in comparison to the Planning Period.

For a given contaminant, the time of travel through the unsaturated zone (TOT_U) is given by Darcy's law as a function of the depth to the aquifer, the hydraulic conductivity of the unsaturated zone, and the contaminant mobility. If all parameters could be estimated with precision, the question "will the released contaminant cross the unsaturated zone within the Planning Period?" could be answered simply "yes" or "no." That is, the probability that the contaminant will cross the unsaturated zone within the Planning Period is either zero (i.e., $L_U = -\infty$) if TOT_U is less than the Planning Period, or one (i.e., $L_U = 0$) if TOT_U is greater than or equal to the Planning Period. In this Approach, however, input parameters are estimated within ranges, and functional relationships are only approximations of the fate and transport phenomena taking place. Due to this uncertainty, this Approach computes a probability that is between zero and one, that is, a likelihood L_U that is between $-\infty$ and 0.

Likewise, for a given contaminant, the time of travel through the saturated zone (TOT_s) is a function of the distance from the source to the well, ground-water velocity, and the contaminant mobility. Because of the uncertainty and variability of these input parameters and, therefore, of the functional relationship to compute TOT_s, this Approach computes a probability between zero and one (i.e., likelihood L_s between $-\infty$ and 0) that the contaminant will cross the saturated zone to the well within the Planning Period.

You read the values of L_U and L_s from tables as a function of the above-mentioned input parameters. Then compute the Likelihood that the contaminant will reach the well (L_2) by summing L_U and L_s. Bypass the calculations of L_U and L_s and set the L_2 score equal to 0 if the source discharges directly to a conduit system (e.g., abandoned utility network) that provides a short-cut to the well for the released contaminant. L_2 values are less than or equal to 0, with higher values (approaching zero) indicating higher probabilities that the contaminant will reach the well if released.

Deriving the Likelihood of Well Contamination (L)

For a given contaminant present at a given source, the well will be contaminated within the Planning Period *if and only if* the contaminant is released from the source and reaches the well within the Planning Period. Thus, the probability of well contamination is equal to the probability of release from the source multiplied by the probability that the contaminant will reach the well within the Planning Period. Taking the decimal logarithm of these probabilities, the Likelihood of well contamination (L) is the sum of the Likelihood of release of the contaminant at the source (L_1) plus the Likelihood that the contaminant will reach the well within the planning period (L_2):

Likelihood of well contamination score (L)	=	Likelihood of release score (L_1)	+	Likelihood of reaching the well score (L_2)

The Likelihood of well contamination (L) is less than or equal to 0. The higher the value of L (i.e., the closer L is to 0), the higher the likelihood that the contaminant will be released and reach the well within the specified Planning Period.

Severity of Well Contamination

For a given contaminant or contaminant mixture at a potential source of contamination, Severity of well contamination (S) reflects the potential health hazard from drinking water from a well that has been polluted by that contaminant. As discussed in this section, Severity of well contamination (S) is the sum of three partial risk scores: the Quantity (Q) of contaminant released annually at the source, Attenuation (A) due to transport from the source to the well, and the Toxicity (T) of the contaminant.

Quantity Released at the Source (Q)

Quantity released at the source (Q) is the expected mass of contaminant or contaminant mixture released annually from a given source of potential contamination. The expected quantity of contaminant released annually (in kg/yr) is equal to the product of the annual expected volume of "waste" released (m^3/yr) times the contaminant concentration in the waste (in kg/m^3). Applying the logarithmic conversion, you compute the Quantity released score (Q) (in $\log_{10}$(kg/yr)) by adding the Volume score (represents the volume of "waste" released, in $\log_{10}$(m^3/yr)) and the Concentration score (represents the contaminant concentration in waste, in $\log_{10}$(kg/m^3)).[1]

The Source Worksheets provide tables for determining the Volume score as a function of input parameters such as facility type and size, as appropriate. You either determine the Concentration score from a graph provided in Contaminant Form S.1 as a function of the contaminant concentration (if known), or read the default, contaminant-specific Concentration score applicable to the source from Form S.2.[2] The resulting scores for Q generally range from -1 to 5, with the latter representing the largest theoretical contaminant mass release.

Attenuation Due to Transport (A)

Attenuation due to transport (A) reflects the dilution and decay of the contaminant released due to transport from the source to the well. Attenuation is defined as the contaminant concentration at the wellhead per unit of contaminant released annually at the source. Therefore, Attenuation due to transport has units of $\log_{10}$((mg/l)/(kg/yr)). Note that the Attenuation score actually reflects the lack of attenuation of the contaminant; i.e., the higher the Attenuation score, the lesser the dilution and decay of the contaminant.

The Transport Worksheet calculates the Attenuation score (A) as the sum of two Attenuation scores: one for the unsaturated zone, A_U, and one for the saturated zone, A_S. The unsaturated zone attenuation score (A_U) is a function of the unsaturated zone hydraulic conductivity, the contaminant persistence and mobility (as provided in the contaminant forms), and the depth to aquifer. It measures the ratio of the quantity of contaminant leaving the unsaturated zone to enter the saturated zone divided by the quantity of contaminant entering the unsaturated zone after being released from the source. Thus, the unsaturated zone attenuation score (A_U) has units of $\log_{10}$((kg/yr)/(kg/yr)); i.e., it is dimensionless.

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[1] This is true for all sources except agrichemical applications, where the "Volume" score is in $\log_{10}$ (hectares) and the "Concentration" score is in $\log_{10}$ (kg/hectare/yr).

[2] The Contaminant Concentration Scoring Graph in Form S.1 simply converts the contaminant concentration from kg/m^3 to a Concentration score in decimal logarithm.

The saturated zone Attenuation score (A_s) is a function of ground-water velocity, the contaminant persistence and mobility, the type of material in the saturated zone, and the distance from the source to the well. Using the Wilson and Miller equation to model the fate and transport of contaminants in the saturated zone, this Approach provides the saturated zone Attenuation score (A_s) in units of $\log_{10}((mg/l)/(kg/yr))$.

You derive the Attenuation score (A) by working through a series of tables that factor in the relevant parameters described above. The resulting Attenuation score is generally less than 0, with higher values of the Attenuation score indicating higher contaminant concentration at the well per unit of mass released at the source. The Attenuation score thus reflects the lack of attenuation from the source to wellhead.

Toxicity of the Contaminant (T)

Toxicity of the contaminant (T) indicates the potential health hazard posed by ingesting the contaminant. The Toxicity scores (T) are based on established dose-response relationships obtained from EPA's Integrated Risk Information System (IRIS) or from the RASH database (only for a few contaminants). Using these dose-response relationships, the Priority Setting Approach defines a "critical dose" for each contaminant. The critical dose is defined as the oral reference dose (RfD) for non-carcinogens and the dose corresponding to an excess lifetime risk of 10^{-5} (1 in 100,000) for carcinogens. This Approach converts these critical doses into critical concentrations (in mg/liter of drinking water) using standard Office of Ground Water and Drinking Water assumptions (i.e., two liters consumed per day over a 70-year lifetime exposure period).

Toxicity of the contaminant (T) is defined as the decimal logarithm of the inverse of the critical concentration. Thus, Toxicity (T) has units of $\log_{10}(1/(mg/l))$. You read the Toxicity score (T) directly from a simple table (in either Contaminant Form S.1 or in Form S.2). Toxicity scores (T) range from -2.4 to 3.8, with higher scores (e.g., 3.8) indicating more toxic contaminants.

Deriving the Severity of Well Contamination (S)

For a given contaminant or contaminant mixture at a given source of potential contamination, Severity of well contamination (S) is the sum of Quantity released at the source (Q), Attenuation due to transport (A), and Toxicity of the contaminant (T):

Severity score (S)	=	Quantity score (Q)	+	Attenuation score (A)	+	Toxicity score (T)

where

S is Severity of well contamination score, dimensionless

Q is Quantity released at the source, in $\log_{10}$(kg/yr)

A is Attenuation due to transport, in $\log_{10}$[(mg/l)/(kg/yr)]

T is Toxicity of the contaminant in $\log_{10}$[1/(mg/l)].

The term (Q+A) represents the contaminant concentration at the well. Adding the term T to the term (Q+A) is equivalent to dividing the contaminant concentration at the well by the contaminant's critical concentration in drinking water. Thus, the Severity of well contamination score (S) indicates the estimated number of times the contaminant concentration at the well will vary from the contaminant's critical concentration in drinking water. For example, a Severity of well contamination score (S) of 0 means that the contaminant concentration at the well is estimated to be equal to the critical concentration. If the Severity score (S) is equal to 1, the contaminant concentration at the well is one order of magnitude (i.e., ten times) higher than the critical concentration. Conversely, a Severity score (S) of -1 indicates a contaminant concentration at the well that is one order of magnitude less than the critical concentration. The Severity scores (S) derived from the calculations can be either negative or positive, with higher values indicating greater contamination severity.

Risk of Well Contamination

This section describes how the Likelihood score (L) and Severity score (S) of well contamination are combined to derive a Risk score (R) of well contamination for each contaminant or contaminant mixture present at a given source. It then describes how the contaminant-specific Risk scores are aggregated to derive an Overall Risk score for each potential source of contamination. The difference between the Risk score (R) and the Overall Risk score is that the Overall Risk score is <u>source-specific</u>, whereas the Risk score is <u>contaminant-specific</u>.

Risk of Well Contamination Posed by a Contaminant (R)

For a given source of potential contamination, the Risk of well contamination (R) posed by a given contaminant or contaminant mixture is equal to the sum of the Likelihood of well contamination (L) and the Severity of well contamination (S):

Risk score (R) = Likelihood score (L) + Severity score (S)

In natural units, the risk of well contamination posed by a given contaminant is the product of the probability of well contamination, times the severity of well contamination. For example, if a contaminant at a potential source has a Risk score of -1, then this contaminant is <u>expected</u> to contaminate the well at a concentration equal to one tenth its critical concentration in drinking water.

Risk of Well Contamination Posed by a Source

The Overall Risk of well contamination posed by a given source is equal to the highest of the Risk scores (R) of well contamination posed by individual contaminant mixtures present at the source. For example, if a source has two contaminants A and B with individual Risk scores equal to -2 and -0.5, then this source has an Overall Risk score of -0.5.

You can also determine the Risk Level (i.e., Low, Medium, or High) posed by a potential source of contamination as a function of its Overall Risk score. If the Overall Risk score is less than -4, then the source poses a Low level of risk. If the Overall Risk score is greater than 0, then the source poses a High risk level. If the source has an Overall Risk score between -4 and 0, then it poses a Medium risk of well contamination. In this case, the contaminant is expected to contaminate the well with a concentration of between 1/10,000th its critical concentration and its critical concentration.

Plotting Contaminants and Sources on the Risk Matrix

The Risk Matrix allows you to visualize the risks posed by either individual contaminants or contaminant mixtures at a source or the Overall Risks posed by individual sources within the WHPA. You will plot individual contaminants and the sources based on their Likelihood (L) and Severity (S) scores. Sources of contamination are plotted based on the Likelihood (L) and Severity (S) scores of the contaminant with the highest Risk score (R).

The Risk Matrix is divided into three regions corresponding to the three Risk Levels: Low, Medium, and High. The lines separating two adjacent regions in the matrix represent equal Risk scores (as the Likelihood score (L) goes down, the Severity score (S) goes up by an equal amount to maintain the Risk score (Risk = L + S)).

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Sheet	Reference Number
Source Datasheets and Source Worksheets	5, 8, 10-13, 16, 19-21, 25, 26, 35, 37, 39, 41, 54, 59, 63
Wellhead Datasheet	59
Contaminant Forms	1, 9, 12, 14, 15, 21-29, 31-33, 40, 42, 46, 48-54, 59-63, 70, 72

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ACRONYMS, SYMBOLS, AND DEFINITIONS

ACRONYMS

DNAPL	dense non-aqueous phase liquid
IRIS	Integrated Risk Information System (an EPA toxicity database)
LNAPL	light non-aqueous phase liquid
SWDA	Safe Water Drinking Act
TOT	time-of-travel (of a chemical released in the wellhead area)
WD	used in this manual to mean the Wellhead Datasheet
WHPA	Wellhead Protection Area

SYMBOLS

A	Attenuation of the contaminant due to transport
A_S	Attenuation of the contaminant in the saturated zone
A_U	Attenuation of the contaminant in the unsaturated zone
L	Likelihood of well contamination
L_1	Likelihood of contaminant release at the source
L_2	Likelihood of reaching the well if contaminant release occurs
L_S	Likelihood of transport through the saturated zone
L_U	Likelihood of transport through the unsaturated zone to the saturated zone
Q	Quantity of contaminant expected to be released at the source
S	Severity of potential well contamination
T	Toxicity of the contaminant

DEFINITIONS[1]

Anisotropy - the condition of having different properties when measured along axes in different directions. See its antonym - **Isotropy**.

Aquifer - a formation, group of formations, or part of a formation that contains sufficient saturated permeable material to yield significant quantities of water to wells and springs.

Attenuation - to reduce, weaken, dilute, or lessen in severity, value, or amount such as the attenuation of contaminants as they migrate from a particular source. In the context of the Priority Setting Approach, the Attenuation score actually reflects the lack of attenuation of the contaminant; i.e., the higher the Attenuation score, the lesser the dilution and decay of the contaminant.

Cone of Depression - A depression of the potentiometric surface in the shape of an inverted cone that develops around a well which is being pumped.

Confined aquifer - an aquifer bounded above and below by confining units of distinctly lower permeability than that of the aquifer itself.

Contaminant - an undesirable substance not normally present or an unusually high concentration of a naturally occurring substance in water or soil.

Contamination - the addition to water of contaminants, preventing the use or reducing the usability of the water. Sometimes considered synonymous with pollution.

Darcy's law - an empirical law that states that the velocity of flow through a porous medium is directly proportional to the hydraulic gradient under certain assumptions.

Drainage well - a well installed to drain surface water, storm water, or treated waste water into underground strata.

Flow, steady - a characteristics of a flow system where the magnitude and direction of specific discharge are constant in time at any point.

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Flow, unsteady - a characteristics of a flow system where the magnitude and/or direction of specific discharge changes with time.

Ground water - that part of the subsurface water that is in the saturated zone.

Ground-water flow - the movement of water in the zone of saturation.

Ground-water recharge - the process of water addition to the unsaturated zone or the volume of water added by this process.

Ground-water velocity - see velocity, interstitial.

Heterogeneity - a characteristics of a medium in which material properties vary from point to point.

Homogeneity - a characteristic of a medium in which material properties are identical everywhere.

Hydraulic conductivity - the volume of water that will move through a medium in a unit of time under a unit hydraulic gradient through a unit area measured perpendicular to the direction of flow. See also unsaturated flow.

Hydraulic gradient - slope of the water table or potentiometric surface.

Hydrogeology - the science dealing with the occurrence of groundwater, its utilization, and its functions.

Hydrologic properties - those properties of a rock that govern the entrance of water and the capacity to hold, transmit, and deliver water, such as porosity, effective porosity, specific retention, permeability, and the directions of maximum and minimum permeabilities.

Impermeable - a characteristic of some geologic material that limits its ability to transmit significant quantities of water under the head differences ordinarily found in the subsurface.

Infiltration - the downward entry of water into the soil or rock. **Net infiltration** - the amount of rain, melting snow, or surface water, minus evaporation and plant transpiration, that enters into the soil or rock.

Injection well - a well into which fluids are being injected. The different kinds of injection wells are:

> Class I: Wells used to inject liquid hazardous wastes or dispose of industrial and municipal waste waters beneath the lower-most underground source of drinking water (USDW).
>
> Class II: Wells used to dispose of fluids associated with the production of oil and natural gas (hydrocarbons), to inject fluids for enhanced oil recovery, or for the storage of liquid hydrocarbons.
>
> Class III: Wells used to inject fluids for the extraction of minerals (i.e., solution mining).
>
> Class IV: Wells used to dispose of hazardous or radioactive wastes into or above a USDW. The USEPA has banned the use of these wells.
>
> Class V: Wells not included in the other classes and generally used to inject nonhazardous fluid into or above a USDW.

Isotropy - the condition in which the property or properties of interest are the same when measured along axes in any direction.

Non-point source - a source originating over broad areas, such as areas of fertilizer and pesticide application and leaking sewer systems, rather than from discrete points.

Permeability - the property of a porous medium to transmit fluids under an hydraulic gradient.

Point source - any discernable, confined, or discrete conveyance from which contaminants are or may be discharged, including, but not limited to, any pipe, ditch, channel, tunnel, conduit, well, container, rolling stock, or concentrated animal feeding operation.

Porosity, effective - the ratio, usually expressed as a percentage, of the total volume of voids available for fluid transmission to the total volume of the porous medium.

Potentiometric surface - an imaginary surface representing the static head of groundwater and defined by the level to which water will rise in a tightly cased well.

Pumping rate - the rate at which ground water is pumped from an aquifer.

Recharge area - an area in which water reaches the zone of saturation by surface infiltration.

Reference dose - for non-carcinogens, the exposure threshold above which health effects begin to occur.

Retardation factor - the ratio of the average linear velocity of ground water to the velocity of the retarded constituent.

Saturated zone - that part of the earth's crust beneath the regional water table in which all voids, large and small, are filled with water under pressure greater than atmospheric.

Solubility - the total amount of solute species that will remain indefinitely in a solution maintained at constant temperature and pressure in contact with the solid crystals from which the solutes were derived.

Transport - conveyance of solutes and particulates in the unsaturated or saturated zone.

Unconfined aquifer - an aquifer that has a water table.

Unconfined ground water - water in an aquifer that has a water table.

Unsaturated flow - the movement of water in a porous medium in which the pore spaces are not filled to capacity with water.

Unsaturated zone - the zone between the land surface and the regional water table. Generally, water in this zone is under less than atmospheric pressure, and some of the voids may contain air or other gases at atmospheric pressure.

Utility chase - a trench or channel used to house water, gas, electricity, or sewer lines, or other such underground utility lines.

Velocity, average interstitial - the average rate of ground-water flow in interstices expressed as the product of hydraulic conductivity and hydraulic gradient divided by the effective porosity.

Water table - upper surface of a zone of saturation, where the body of ground water is not confined by an overlying impermeable zone.

Well - a bored, drilled, or driven shaft, or a dug hole, whose depth is greater than the largest surface dimension.

Wellfield - one or more wells in the same general area containing a distribution system.

Wellhead - the portion of a well that extends above ground.

Wellhead Protection Area - the surface and subsurface area surrounding a water well or wellfield, supplying a public water system through which contaminants are likely to move toward and reach such well or wellfield.

Zone of contribution - all areas that recharge or contribute water to a well or well field.

TABLE L-1

EPA RANKING RESULTS

Source ID	Well	Contaminant Source	L1	Q2	T	L2	A	Likelihood	Severity	Risk
T	All	Benzene Spill	-2.3	-1.6	2.0	-0.9	-12.4	-3.9	-12	-15.9
T	All	Carbon Tetrachloride Spill	-3	3.1	2.5	-0.9	-12.4	-3.9	-6.8	-10.7
T	All	Chromium Spill	-3.0	2.7	-1.2	0	-2.8	-3	-1.3	-4.3
T	All	Sulfuric Acid Spill	-3.0	4.4	-1.2	-2.8	-2.8	-3	0.4	-2.6
T	All	VOC Mix Spill	-3	4.3	-0.2	-0.9	-12.4	-3.9	-8.3	-12.2
CH-6	COI 1/2	Dirk's Drycleaning	-2.3	-2	0.5	-100	-24.5	-102.3	-26	-128.3
CH-10	COI 1/2	Gilman Autobody	-2.3	-2.2	1.3	-0.9	-0.6	-3.2	-1.5	-4.7
CH-11	COI 1/2	Grange Supply Inc.	-2.3	1.3	2.5	-0.9	-4.5	-3.2	-0.7	-3.9
UST-4	COI 1/2	Grange Supply Inc.	-0.1	-0.7	2.0	-0.9	-102.2	-1	-100.9	-101.9
UST-15	COI 1/2	Issaquah Feed and Service	N/A	N/A	2.0	-0.3	-103.4	-3.2	-13.9	-17.1
UST-17 UST-28 UST-34 UST-37	COI 4/5	Chevron 95399 Issaquah BP Arco 4466 Issaquah Texaco	-0.6	-0.7	2	-100	-103.4	-100.6	-102.1	-202.7
UST-29	COI 4/5	Darigold	0	-1.9	2	-100	-103.4	-100	-103.3	-203.3
CH-8	COI 4/5	Drycleaning Doctor	-2.3	-2	0.5	-0.9	-4.5	-3.2	-6	-9.2
CH-12	COI 4/5	Issaquah Feed and Service	-2.3	-4.7	3.7	-0.3	-3.1	-2.6	-4.1	-6.7
UST-29	COI 4/5	Issaquah Feed and Service	N/A	-2.8	2	-100		-100	-103.4	-203.4
CH-15	COI 4/5	Precision Tune	-2.3	-3.7	3.7	0	-2.9	-4.6	-2.9	-7.5
UST-17 UST-28 UST-33 UST-34 UST-37	SP 7/8	Chevron 95399 Issaquah BP Lakeside Sand and Gravel Arco 4466 Issaquah Texaco	-0.4	-0.7	2	-100	-103.4	-100.4	-102.1	-202.5
UST-15	SP 7/8	Darigold	0	-1.9	2	-100	-103.4	-100	-103.3	-203.3
CH-6	SP 7/8	Dirks Dry Cleaning	-2.3	-2.0	0.5	-0.9	-12.4	-0.3	-101.4	-101.7
CH12	SP 7/8	Issaquah Feed and Service	-2.3	-4.7	3.7	-0.3	-3.1	-2.6	-4.1	-6.7
UST-16 UST-4	SP 7/8	Issaquah/Closed Grange Supply Inc.	0.1	-0.7	2	-100	-103.4	-99.9	-102.1	-202
CH-15	SP 7/8	Precision Tune	-2.3	-3.7	3.7	0	-2.9	-2.3	-2.9	-5.2

UST = Underground Storage Tank L1 = Likelihood
CH = Chemical Handler Q = Quantity
T = Transportation T = Toxicity
A = Attenuation during transport L2 = Likelihood to well

Appendix M

APPENDIX M

EXAMPLE PUBLIC INVOLVEMENT MATERIALS

PUBLIC INVOLVEMENT APPENDIX

The following educational publications and resources have been prepared by state and local agencies and neighboring communities and may be of value to the Wellhead Protection Administrator. Copies of examples of workshop materials and volunteer programs are included, as well as the Edmonds "Educational Magazine", which is a model for the proposed "WHP Educational Magazine".

Publications:

Publication List from EPA Ground-Water Protection Division

Guidance for Remediation of Releases from Underground Storage Tanks from Washington State Department of Ecology, Toxics Cleanup Program, 91-30.

Farm A Syst, Washington State University Cooperative Extension.

Issue Papers from Seattle-King County Department of Public Health, 1992

- Underground Storage Tank Management
- Groundwater Quality and Quantity Issues
- On-Site Sewage Disposal System, Water Quality Issues
- Leaking Sewer Pipes and Groundwater Concerns
- Groundwater Quality and Solid Waste Landfills
- Longterm Monitoring
- Groundwater Quality and Use of Pesticides and Fertilizers
- Groundwater Quantity Issues
- Hazardous Materials and Groundwater Protection in King County

Ranking of Puget Sound Watersheds for the Control of Nonpoint Source Pollution: An Evaluation Report, July 1990.

Publicly Financed Voluntary Initiatives for Public Involvement and Education as a Natural Resource Management Tool, James S. Long, Washington State University, PSWQA, 1991.

Analyzing Impacts of Extension Programs by Claude F. Bennett, U.S. Department of Agriculture, 1976.

Retrospective Evaluation of the 1987-89 PIE Fund Projects (Puget Sound Water Quality Authority), Dr. Jim Long, WSU, 1990.

Stream Team Guidebook, City of Bellevue, 1988.

Basic Principles of Onsite Sewage, Washington Department of Health, 1991.

Environmental Services Directory for Washington State, 1992

Issaquah Creek Valley Ground Water Management Area Slide Presentation by Seattle-King County Department of Public Health, 1992.

Kitsap County Environmental Education Resource Guide, Kitsap County Department of Public Works and other local and state agencies, 1992.

Volunteers and the Environment, How-To Manual for Groundwater Protection Projects, by Lillian Smith Madarchik with the Retired Senior Volunteer Program in El Paso Texas and the Texas Water Commission, 1992.

King County Household Hazardous Waste Survey, Decision Data Inc., December 1992.

Groundwater and the Rural Homeowner, USGS, by Roger Waller, 1988.

Water Quality Guide, Recommended Pollution Control Practices for Homeowners and Small Farm Operators, King County Conservation District and WA DOE.

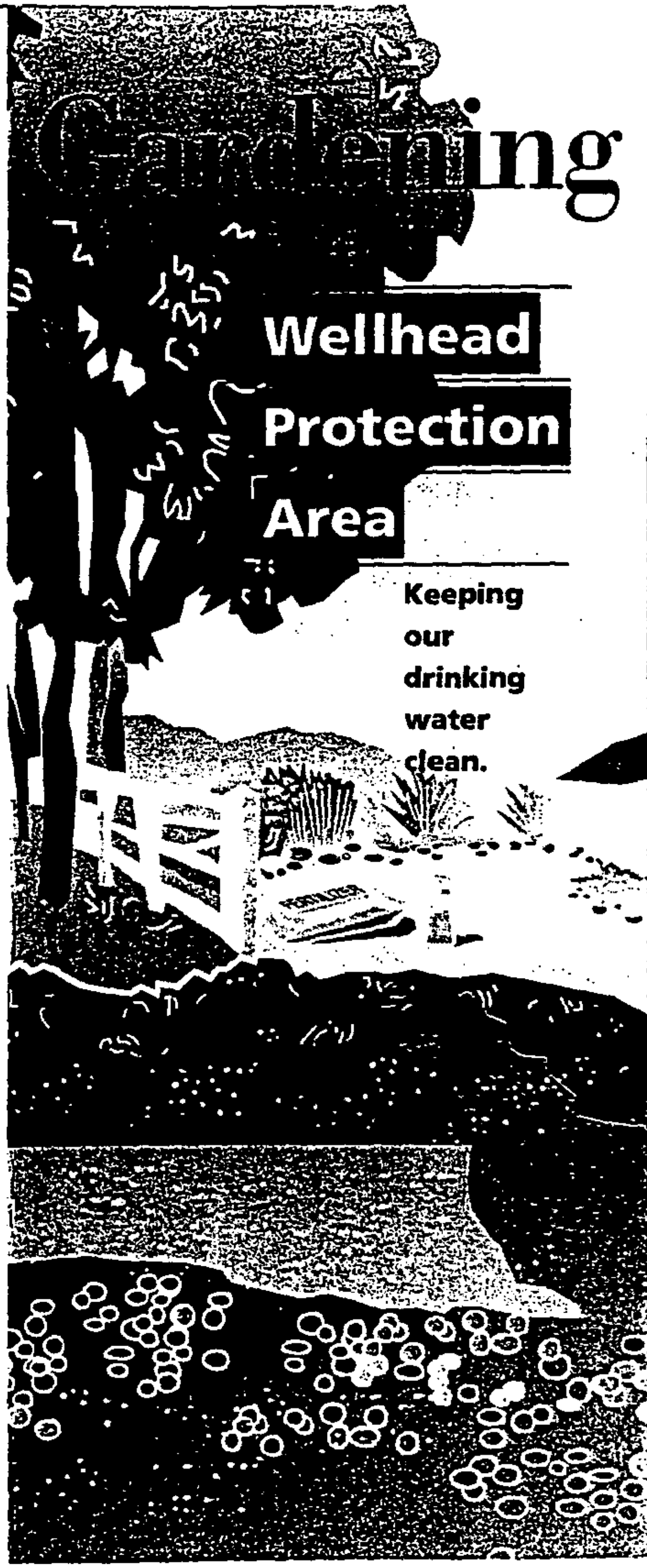
PUBLIC INVOLVEMENT APPENDIX

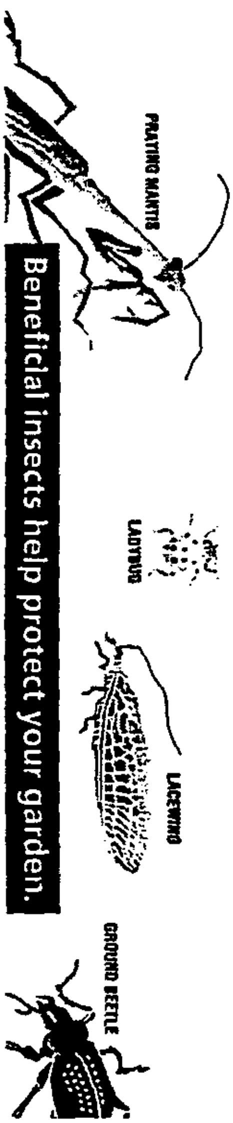
Sample Materials from Bellevue, Olympia, Seattle-King County Health, EPA, Washington Department of Health, Washington Department of Ecology, Bremerton-Kitsap County Health District, City of Edmonds Wastewater Treatment Facility, Kitsap County Public Works

Gardening

Wellhead Protection Area

Keeping our drinking water clean.





Beneficial insects help protect your garden.

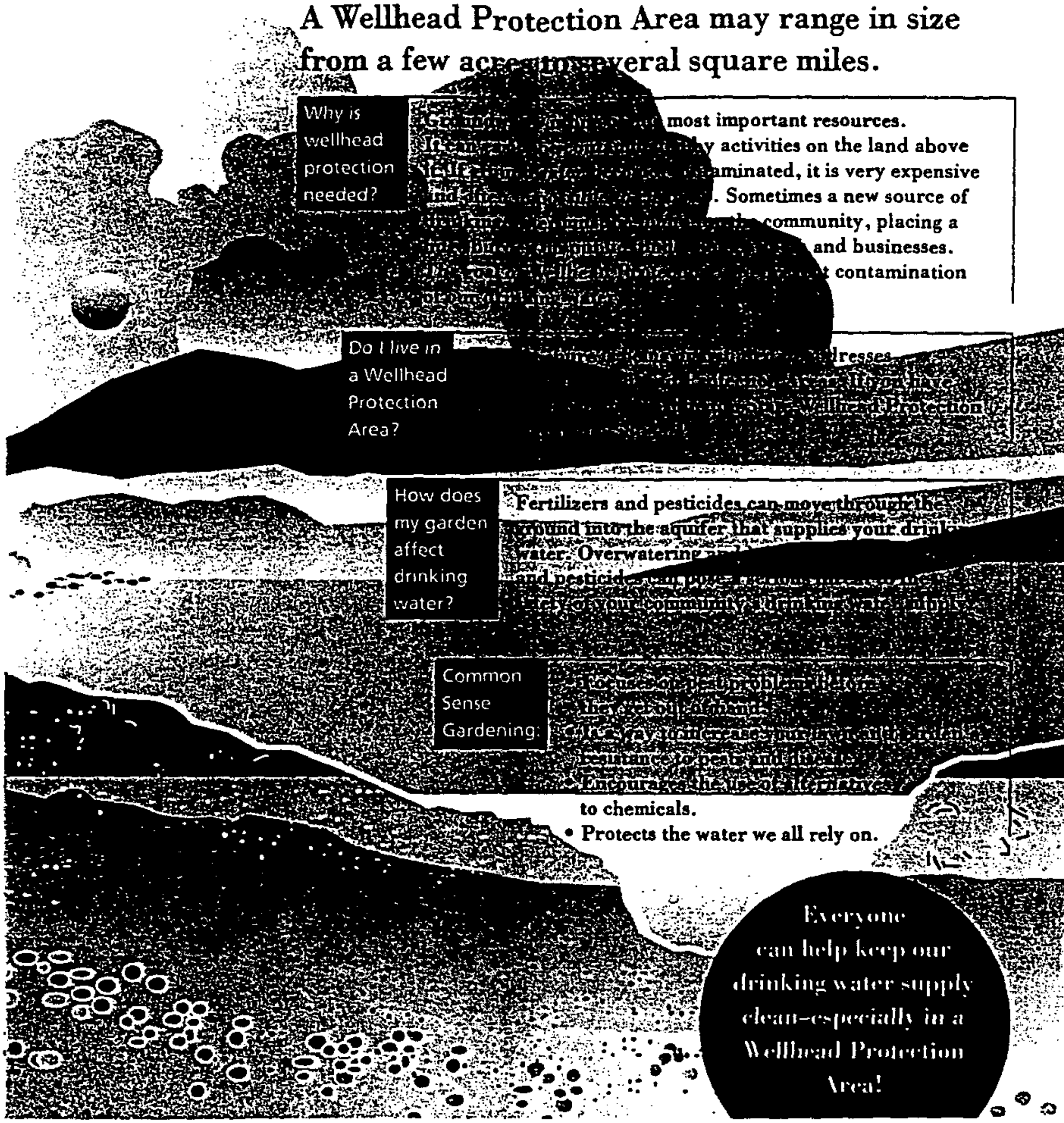
Funding for this brochure was provided by the U.S. Federal Environmental Protection Agency Region 10's Air and Toxics Division.

Washington State Department of
Health
Division of Drinking Water

DOH Pub #331-006

What is a Wellhead Protection Area?

It is the area managed by a community to protect its public drinking water supply wells. A Wellhead Protection Area may range in size from a few ac[illegible]veral square miles.



Why is wellhead protection needed?

[illegible] most important resources. [illegible] activities on the land above [illegible]aminated, it is very expensive [illegible]. Sometimes a new source of [illegible] community, placing a [illegible] and businesses. [illegible] contamination [illegible]

Do I live in a Wellhead Protection Area?

[illegible]

How does my garden affect drinking water?

Fertilizers and pesticides can move through the ground into the aquifer that supplies your drin[illegible] water. Overwatering [illegible] and pesticides [illegible]

Common Sense Gardening:

- [illegible]
- [illegible]
- [illegible]
- [illegible] to chemicals.
- Protects the water we all rely on.

Everyone can help keep our drinking water supply clean–especially in a Wellhead Protection Area!

DO

erti… g to what the plants actually require. Time fertilizer applications accordingly.

- Keep soil healthy. Compost provides organic nutrients.
- Choose locally adapted, disease-resistant plants.
- Weed by hand. Use mulch to control weeds.
- Use alternatives to chemical products, or the least toxic option, whenever possible.
- Be cautious. If you use fertilizers or pesticides, read labels carefully and follow directions exactly.
- Buy only the amount of chemical products you can use.

Basic steps in Common Sense Gardening:

Identify the pests in your lawn and garden.

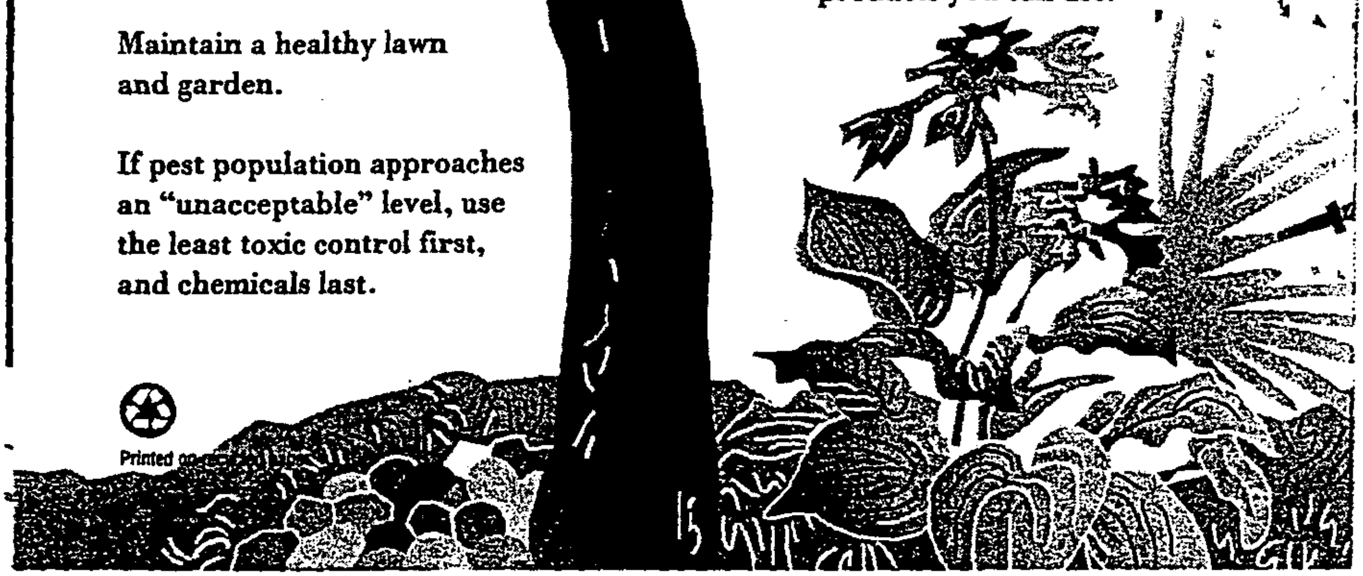
Learn their habits.

Decide what level of damage is acceptable to you.

Monitor pests carefully.

Maintain a healthy lawn and garden.

If pest population approaches an "unacceptable" level, use the least toxic control first, and chemicals last.

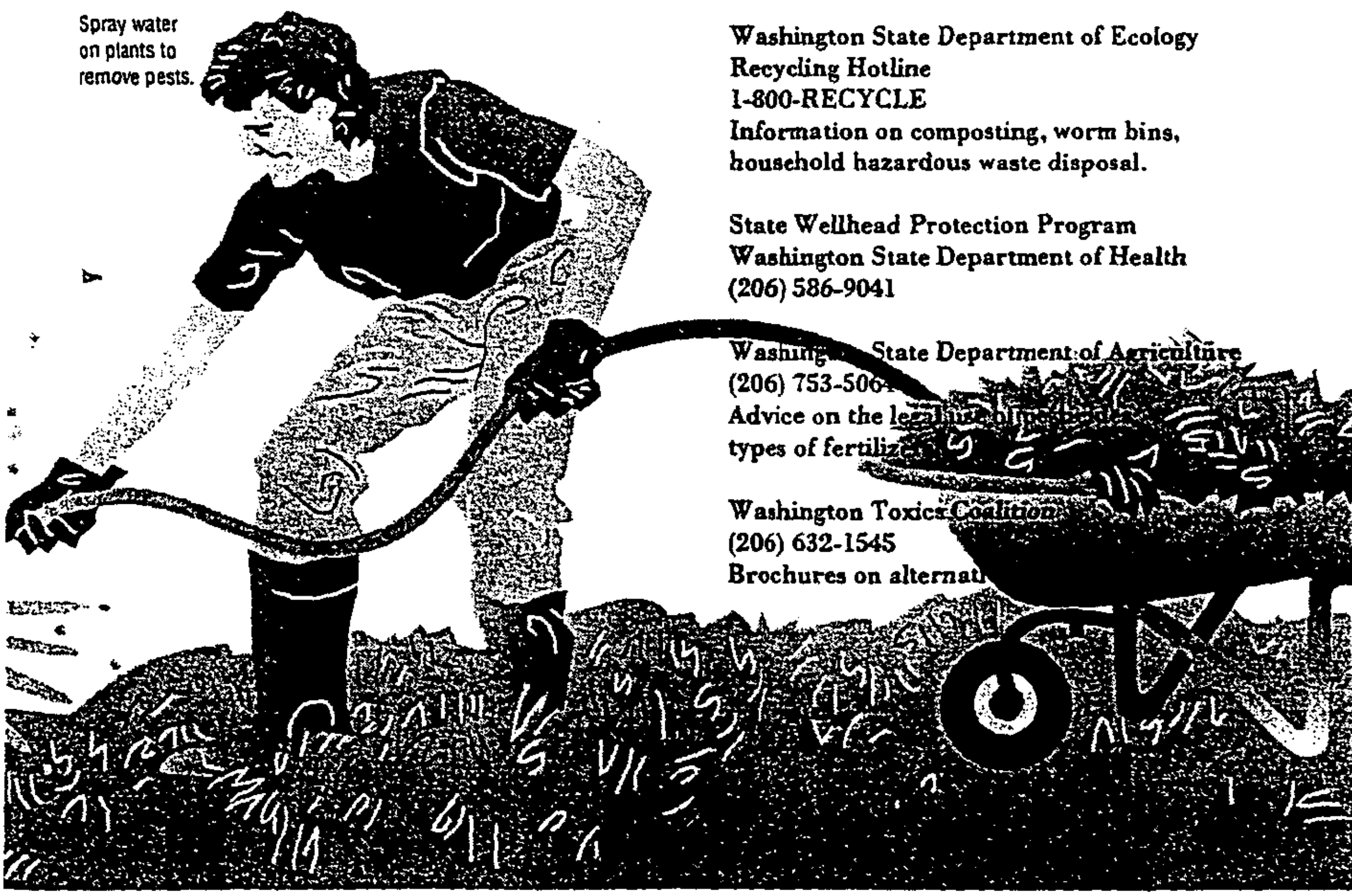


Printed on recycled paper

Don't

- Overwater. Excess water can wash pesticides and fertilizers into the ground water.
- Overfertilize. Have your soil tested; the results will tell you if you need to apply fertilizer.
- Apply pesticides when it is windy or raining.
- Store excess quantity or dispose of chemicals at home. Contact your local household hazardous waste collection center for details.

Spray water on plants to remove pests.



Contacts

WSU/King County Cooperative Extension
Master Gardener Program
(206) 296-3440
Gardening information, presentations, proper use of pesticides, fertilizers.

Hazards Line/Household
Pesticide Collection
King County Department of Health
(206) 296-4692
Disposal of household hazardous wastes.

Seattle-King County Health Department
(206) 296-4932 (north county)
(206) 296-4708 (south county)
Information on drinking water systems, water conservation, rainwater collection for irrigation.

Washington State Department of Ecology
Recycling Hotline
1-800-RECYCLE
Information on composting, worm bins, household hazardous waste disposal.

State Wellhead Protection Program
Washington State Department of Health
(206) 586-9041

Washington State Department of Agriculture
(206) 753-506[illegible]
Advice on the le[illegible]
types of fertiliz[illegible]

Washington Toxics Coalition
(206) 632-1545
Brochures on alternat[illegible]

DEPARTMENT OF SOCIAL & HEALTH SERVICES
DIVISION OF HEALTH

TOXIC SUBSTANCES FACT SHEET

UNDERGROUND STORAGE TANKS

State of Washington DATE: November, 1988

INTRODUCTION

The purpose of this fact sheet is to discuss the potential public health effects associated with the leaking of petroleum fuels from underground storage tanks (USTs).

There are approximately 34,000 underground storage tanks in Washington State. Stored in these tanks are numerous substances including:

* Gasoline
* Fuel oil
* Diesel
* Pesticides
* Kerosene
* Aviation fuel

Over 90 percent of these tanks are used to store petroleum or petroleum fuels. Up to 35 percent of the USTs in the nation are leaking according to various national estimates. Leaks can originate from the tank itself or the associated piping. In 1987, the Washington State Department of Ecology (WDOE) conservatively estimated that over a thousand tanks were leaking in Washington.

USTs may be located at:

* Airports
* Service stations
* Convenience stores
* Industrial and manufacturing sites
* Farms
* Schools
* Federal, state, county and city garages
* Other residential and commercial sites

The UST characteristics most commonly associated with leaking are:

* Over 15 years old
* Single-walled construction
* No leak detection system
* No internal or external protection against corrosion
* No cathodic protection against corrosion.

example, is composed of over 100 different chemical compounds. The aromatic hydrocarbons that are generally used as indicators of gasoline are benzene, toluene, xylene and ethylbenzene (BTX&E). Other compounds that may be present in petroleum fuels include organic lead, ethylene dibromide and methyl tertiary-butyl ether. Many products used around the home contain petroleum distillates, which are essentially the same as other petroleum products.

Potential pathways of human exposure to petroleum fuels from leaking USTs are usually limited to:

* Inhalation of fumes that enter buildings from contaminated soils and/or ground water next to or beneath buildings
* Ingestion or use of contaminated drinking water

The effects of breathing, eating, or otherwise coming in contact with any chemical substance can be influenced by an individual's age, sex, and general health, as well as the concentration and length of time exposed to the chemical. Exposure and health effects are generally described as acute or chronic.

Acute Exposure:

An acute exposure is one that occurs over a relatively short period of time and may or may not result in health effects, depending upon the chemical and the exposure concentration. An acute health effect would be one that would be experienced during or shortly following exposure, such as nausea or respiratory irritation.

Not all people experience the same effects from exposure to petroleum products. Some people are affected more severely than others. The most common first indicator of exposure is odor. Adverse acute health effects are not likely to occur when petroleum fumes are below the odor threshold. At low concentrations petroleum can cause headaches, irritation of the eyes, nose, throat and lungs, and can produce skin dryness and irritation. At higher exposure concentrations symptoms may include dizziness, a feeling of drunkenness, drowsiness, nausea, fatigue, confusion, and sleep disturbance. Mild liver and kidney damage may occur at this level of exposure. At very high exposure concentrations numbness, convulsions, coma, and death may occur. Most human studies have shown that serious acute health effects are not produced, even at very high exposure concentrations, if exposure is discontinued.

Chronic Exposure:

A chronic exposure is one that occurs over an extended period of time, such as weeks, months or years, and may or may not result

(1) part per million (ppm) and a short-term occupational exposure limit (STEL) of 5 ppm of benzene for workers. They also have adopted an 8-hour TWA exposure limit of 500 ppm for petroleum distillates (naphtha).

The Washington State Department of Labor and Industries has adopted standards for occupational exposure to benzene and gasoline. The benzene standard is the same as OSHA's (1 ppm 8-hour TWA). The gasoline exposure standard is adopted from the American Conference of Governmental Industrial Hygienists recommended standard of 300 ppm.

The National Institute for Occupational Safety and Health (NIOSH) has adopted a recommended exposure limit of 100 mg/m^3 10-hour TWA for kerosene and 350 mg/m^3 for all other petroleum distillates. NIOSH's recommended exposure limit for benzene is 0.1 ppm, 8-hour TWA, and a 1 ppm 15 minute ceiling limit.

Indoor air concentrations of benzene are affected by various activities in and around the home. Benzene is produced as a by-product of combustion and may be contained in petroleum derived solvents and household chemicals. The most significant source of benzene in the home is cigarette smoking. Average indoor air concentrations of benzene have been found to be in the range of 0.003 to 0.16 ppm, with homes of smokers containing concentrations of benzene 30-50 percent higher than homes of non-smokers.

Indoor air concentrations of benzene after cleanup actions should not exceed pre-existing ambient air levels.

FOR FURTHER INFORMATION OR ASSISTANCE

The odor of petroleum in water, especially from the hot water tap, is detectable at very low levels (0.25-5 ppm). This odor of petroleum, or a solvent-type odor, in water or air will probably be the first indication of potential contamination originating from a leaking underground storage tank. If the odor or taste of petroleum is detected in drinking water, it is recommended it not be used for any purpose and an alternate water source be found. If petroleum contamination is suspected, it should be confirmed through laboratory analysis.

If the suspected contamination is in a private individual well, contact the local health department regarding sampling and corrective alternatives. If the suspected contamination is in a public water system the nearest Regional Drinking Water Operations office of the Department of Social and Health Services

Washington State Department of Social and Health Services:

Toxic Substances Section, (206) 586-4501

Southwest Drinking Water Operations, (206) 753-4152
(Clark, Cowlitz, Lewis, Skamania, Thurston, Wahkiakum, Clallam, Grays Harbor, Jefferson, Kitsap, Mason and Pacific Counties)

Northwest Drinking Water Operations, (206) 464-7670
(Island, King, Skagit, Kittitas, Pierce, San Juan, Snohomish and Whatcom)

Eastern Drinking Water Operations, (509) 456-3115
(All counties east of the Cascades except Skamania)

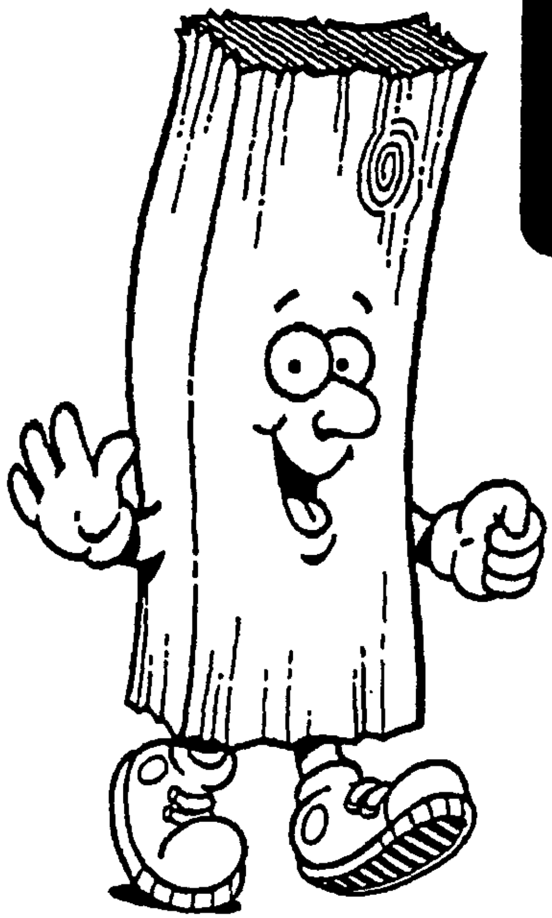
Washington State Department of Labor and Industries: (206) 753-6341

FOR ADDITIONAL COPIES OF THIS FACT SHEET, CONTACT DSHS, TOXIC SUBSTANCES SECTION, (206) 586-4501.

Washington State Department of Social & Health Services

OFFICE OF ENVIRONMENTAL HEALTH PROGRAMS

Mail Stop LD-11
Olympia, Washington 98504



Save Money
on Disposal Costs of Construction and Demolition Debris (CDL)

Don't just throw it away! Recycle drywall, concrete, asphalt, clean wood, timbers, metal, plastic buckets and many other items.

Local recycling alternatives are too many to list . . . for your copy of the choices, call: 388-3425 or 1-800-562-4367, extension 3425.

Snohomish County
Public Works
Solid Waste Management

Construction and demolition debris is also accepted at Snohomish County's three transfer stations at regular rates. *(Some special and hard-to-handle wastes may be turned away or charged a higher rate; if in doubt, call the number listed above.)*

North County Transfer Station	Everett Transfer Station	Southwest Transfer Station
19600-63rd Ave NE, Arlington	2902-36th Street, Everett	21311-61st Pl W, Mtlake Terrace
Mon-Fri 7 am - 7 pm	Mon-Fri 7 am - 9 am 4 pm - 9 pm*	Mon-Fri 7 am - 9 am 4 pm - 9 pm*
Sat & Sun 8 am - 4:30 pm	Sat & Sun 8 am - 4:30 pm	Sat & Sun 8 am - 4:30 pm
(No CDL in containers over 44 cubic yards)	*(No vehicles over 1-ton pickup with uncompacted waste)*	*(No CDL in containers over 30 cubic yards)*
	**other times reserved for credit customers with mechanical unloading trucks or landscapers/ yard businesses with yard debris only*	**other times reserved for credit customers with mechanical unloading trucks or landscapers/ yard businesses with yard debris only*

Please keep our county clean . . . don't dump or bury illegally!

This paper is recycled and recyclable - 8/92

[redacted]

Snohomish County
Public Works
Solid Waste Management
388-3425

Please call individual facilities to determine services offered and to make arrangements. For additional help, contact Snohomish County Public Works Solid Waste Management at 388-3425.

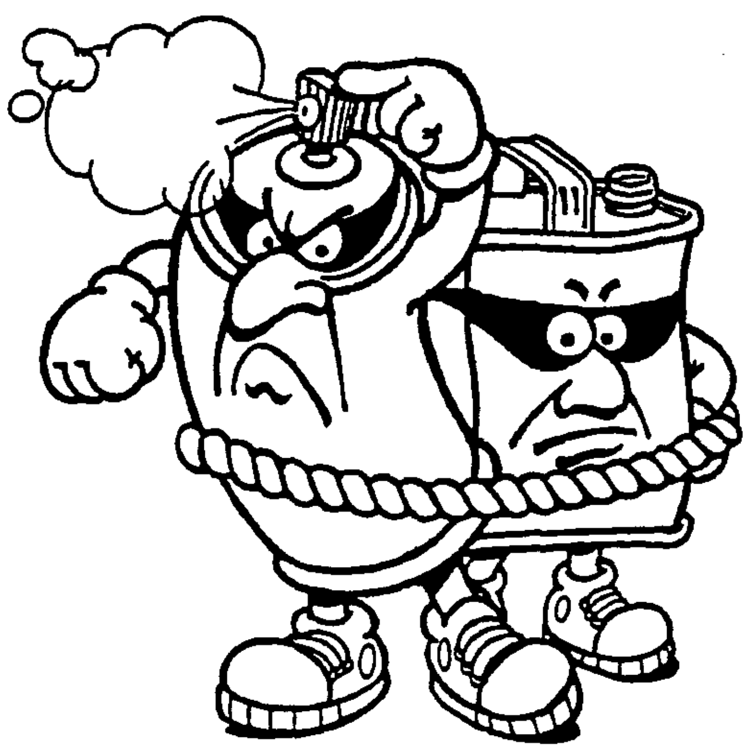
This list serves to present available disposal alternatives. It is only a partial listing and, by providing it to you, Snohomish County is not recommending these companies over any others.

[redacted]

- **Chempro - Burlington Environmental**
  2203 Airport Way S, Seattle 98134 (243-6776)
- **Chemical Waste Management**
  19002-72nd Ave South, Kent (1-800-962-4987)
- **Clean Care Corporation**
  1707 Alexander Ave, Tacoma 98401
  (1-800-282-8128 or 627-3925)
- **N.W. Enviro Service Inc.**
  P.O. Box 24443, Seattle 98124 (622-1090)
- **Olympus Environmental, Inc.**
  25636-74th South, Kent 98032 (854-5094)
- **Safety Kleen Corporation**
  6303-212th SW, Lynnwood 98036 (775-7030)
- **Sol-Pro, Inc.**
  3401 Lincoln Ave, Tacoma 98421 (627-4822)
- **Spencer Environmental Services**
  P.O. Box 1321, Sumner 98390-0270 (467-7988)

[redacted]

- **American Environmental Management Corporation**
  14102 NE 189th, Woodinville 98072
  (1-800-637-7939 or 485-7100)
- **Kleenwell Biomedical Waste**
  7800 Des Moines Memorial Drive, Seattle
  (433-0715)
- **Rubatino Refuse Disposal**
  2812 Hoyt, P.O. Box 1029, Everett 98206
  (259-0044)
- **Sureway Incinerator**
  54 South Dawson, Seattle 98134
  (1-800-762-8882 or 762-9999)



WASTE INFORMATION NETWORK

WIN: Providing businesses with information and options for sound waste management

We realize that the environment is important to you.

Reducing the amount of waste your company generates and improving your waste management practices not only protect the environment and your health, **they save you money, minimize your liabilities and enhance your public image.**

"WIN has made a tremendous difference by 'connecting' with small business owners and helping them to improve their hazardous waste management practices."
Gary Smith, Executive Director
Independent Business Association

Who we are

Waste Information Network involves private businesses, public agencies and other groups in resolving waste management concerns together.

WIN grew out of a common need shared by businesses and agencies to work cooperatively in shaping decisions.

WIN helps small businesses meet their environmental responsibilities while meeting their bottom line.

Puget Sound WIN members represent King, Kitsap, Mason, Pierce, Skagit, Snohomish and Thurston counties.

What we do

WIN is a people network. We share resources and information: We collaborate to provide accurate, up-to-date, useful information on business waste.

WIN breaks down barriers to better waste management. We work with agencies to develop practical, consistent regulatory information for small businesses.

WIN offers options. We'll help you figure out what your alternatives are and how to put them to work.

How businesses can benefit

Improved waste management practices. Business representatives who have attended our annual Waste Information Expo consistently say they expect to improve waste management as a result of WIN programs.

Improved communication. WIN creates a nonthreatening forum for discussing waste issues from different perspectives.

"WIN and the Waste Information Expo provide an excellent forum for the business and regulatory communities to interact on environmental concerns in open dialogue."
Gordon Lindstrom
Gelfel Group, Ltd.

NEW LAWS, NEW PLANS AND NEW SERVICES

THE FACT SHEET

Local Hazardous Waste Management Program

Hazardous Waste in King County

We all use chemicals that can harm the environment. For decades, regulators have focused on the "big guys," companies that generate large quantities of hazardous waste. That is changing.

New laws make everyone responsible for managing hazardous waste, from householders who use paint and slug bait to small businesses with left-over solvent, ink and wood finish.

Hazardous chemicals pose real threats to people and the environment...cancer, nerve damage, polluted drinking water. These chemicals don't belong down the drain or in the dumpster. In King County, 30,000 businesses and 1.5 million people produce small quantities of hazardous waste. Taken together, these small quantities create big problems.

This brochure describes King County's hazardous waste management laws, fees and programs and explains how local agencies can help you manage waste more safely.

GOVERNMENT AGENCIES: WHO DOES WHAT?

Federal, state and local authorities share responsibility for protecting the environment. As a typical King County business or householder, you will deal mostly with city, county and state authorities.

The state Department of Ecology regulates businesses that produce more than 220 lbs. (or half a 55-gal. drum) of hazardous waste a month. Known as "regulated generators," these businesses must get an official

LOCAL HAZARDOUS WASTE MANAGEMENT PROGRAM

JUNE 1992

Hazardous Materials/Waste Information Resources

Mr. Scott Rappleye
Bremerton Fire Department
817 Pacific Avenue
Bremerton, WA 98310
(206) 478-5380

Mr. Pat Mahaney
Department of Labor and Industries
1305 Tacoma Ave S Rm 305
Tacoma, WA 98402-1988
(206) 596-3918

Ms. Gretchen Olsen
Mr. Tim Wise
Kitsap County Public Works
Solid Waste Division
614 Division
Port Orchard, WA 98366
(206) 895-3931

Mr. Dave Misco
Washington Department of Ecology
North West Regional Office
Solid and Hazardous Waste Program
3190 160th Ave SE
Bellevue, WA 98008-5452
(206) 649-7000

Puget Sound Air Pollution Control Authority
200 West Mercer Suite 205
Seattle, WA 98119-3958
1-800-552-3565

Puget Sound Water Quality Authority
1-800-54-SOUND

Ms. Hali Rich
Bremerton-Kitsap County Health District
109 Austin Drive
Bremerton, WA 98312
(206) 478-5285

Identifying Hazardous Waste

Businesses in the printing industry generate several different types of waste. It is the responsibility of each business to determine whether their waste is regulated as hazardous or non-hazardous. In general, a hazardous waste is any discarded material which, if improperly managed or disposed of, may pose a threat to human health or the environment. Under the Resource Conservation and Recovery Act, a waste is considered hazardous if it is specifically listed in the regulations (40 CFR Part 261) or possesses one of the following characteristics:

- Ignitability,
- Corrosivity,
- Reactivity,
- TCLP Toxicity.

Under the Dangerous Waste Regulations, depending on the level of hazard posed, a waste may be designated as a Dangerous Waste (DW) or an Extremely Hazardous Waste (EHW). The latter of the two wastes are regulated more stringently. Details on the designation of DWs and EHWs can be found in the Washington Dangerous Waste regulations or in the Guide for Hazardous Waste Generators.

A waste may also be regulated as a DW if it meets any of the criteria for designating the waste as toxic, persistent, or carcinogenic. Tests should be conducted if it is unclear whether or not a waste meets any of the above characteristics or criteria.

Characteristics of Hazardous Waste

Ignitable: Substances that combust at a temperature less that 140 degrees Fahrenheit are considered ignitable (flammable). They can be liquids, solids, flammable gases or oxidizers.

Corrosive: Corrosive wastes are acidic (pH less than or equal to 2), alkaline (pH greater than or equal to 12.5) or corrode steel at a rate greater than 0.25 inches per year. These wastes can dissolve most materials; specialized containers are necessary to resist corrosion. Corrosives may dissolve the skin and lungs and extreme care must be used when handling them. Some film and plate processing solutions, such as dichromate bleaches, have pH values that deem them corrosive.

Reactive: Reactive wastes are very unstable and readily, rapidly or violently change when mixed with or exposed to water, heat, pressure or other materials. These wastes, especially cyanide or sulfide compounds, may generate toxic gases under mildly acidic or alkaline conditions. Chromic acids, perchlorates and peroxides are common reactive substances. Wastes produced from reactive substances are hazardous because they may

Washington Regulations	Fully Regulated Generators	Medium Quantity Generators	Small Quantity Generators
Transport	• Follow DOT regs for packaging, labeling, marking and placarding • Use HW manifest • Use transporters and TSD facilities with State/EPA ID #'s • File andy necessary exception reports • Ship wastes within 90 days	• Same as other fully regulated generator except: -Ship wastes within 180 days (270 if TSD is located more than 200 miles away)	• No manifest required • Use licensed hazardous solid waste facility with prior approval
Waste Minimization	• Certify on each manifest that you have a waste minimization program in-place • Annual reports require documentation of waste minimization efforts	• Certify on each manifest that you have a waste minimization program in-place • Annual reports require documentation of waste minimization efforts	• No requirement
Training	• Each employee who handles dangerous waste must be thoroughly trained in: -regulatory compliance; -emergency response; -emergency equipment	• Employee must be familiar with proper waste handling and emergency procedures	• No requirement
Emergency Response	• Contingency Plan • Preparedness and Prevention requirements • Incident reports to Ecology • Emergency procedures	• Emergency procedures • Preparedness and Prevention requirements	• No requirement
Reporting	• Exception reports (file within 45 days) • Annual reports	• Exception reports (file within 45 days) • Annual reports	• No requirement
Recordkeeping	• Manifests (3 years) • Exception reports (3yrs) • Test results/sample analyses (3 yrs) • Training documentation • Inspection logs • Annual report (3 yrs)	• Manifests (3 yrs) • Exception reports (3 yrs) • Test results / Sample analysis(3 yrs) • Inspection logs	• No requirement

Subject Index

Accidental Exposure or Poisoning
- Poison Control Center

Accumulating Hazardous Wastes
- Department of Ecology Regional Offices - Hazardous Waste Specialists

Annual Reporting
- Department of Ecology - Hazardous Waste Information and Planning

Air Quality Requirements
- Department of Ecology - Air Program for State Air Regulations
- U.S. Environmental Protection Agency - Region 10 for Federal Air Regulations

Community Right-to-Know
- Department of Ecology - Hazardous Substance Information Hotline
- Dept. of Community Development - State Emergency Response Commission
- Division of Emergency Management - 24-Hour, Statewide Spill Hotline

Container Management
- Department of Ecology Regional Offices - Hazardous Waste Specialists
- Container manufacturers/distributors

Dangerous Waste Regulations
- Department of Ecology - Solid and Hazardous Waste Program

Emergency Planning
- Department of Ecology Regional Offices - Hazardous Waste Specialists
- Regional air pollution control authorities
- Local emergency personnel (e.g., fire department, hospitals)

EPA/State Identification Numbers
- Department of Ecology - Hazardous Waste Information and Planning
- U.S. Environmental Protection Agency - Region 10 Office in Seattle

Fire and Building Codes
- International Conference of Building Officials - Uniform Fire / Building Codes

Hazardous Waste Facility Permits
- Department of Ecology Regional Offices - Hazardous Waste Specialists
- Department of Ecology - Hazardous Waste Permits Section

Hazardous Waste Manifests
- Department of Ecology Regional Offices - Hazardous Waste Specialists
- Your waste hauler or waste management facility
- Ness Press & Design, Olympia, WA
- Labelmaster, Chicago, IL

Labeling
- See the Yellow Pages under "Safety Equipment"

Moderate Risk Waste
- Department of Ecology Regional Offices - Hazardous Waste Specialists
- Your trade association or others in the same business
- Your county Moderate Risk Waste Coordinator

Pesticide Application
- Department of Ecology Regional Offices - Hazardous Waste Specialists
- Department of Agriculture
- Washington State University - Cooperative Extension Service
- Your trade association or others in the same business

Preventive Maintenance
- Department of Ecology Regional Offices - Hazardous Waste Specialists
- Your trade association or others in the same business

RCRA
- U.S. Environmental Protection Agency - Region 10 Office in Seattle

Recordkeeping
- Department of Ecology Regional Offices - Hazardous Waste Specialists

Sewering of Hazardous Waste
- Your local sewer utility & Ecology's Hazardous Waste Information & Planning

Small Quantity Generator Requirements
- Department of Ecology Regional Offices - Hazardous Waste Specialists
- Your trade association or others in the same business
- Your county Moderate Risk Waste Coordinator

Spill Reporting
- Department of Ecology Regional Offices- Hazardous Waste Specialists
- U.S. Environmental Protection Agency - Region 10 Office in Seattle
- Regional air pollution control authorities
- Local emergency management authorities

Washington State Department of Ecology

91-12

Printed on Recycled Paper Using Soy-Based Inks

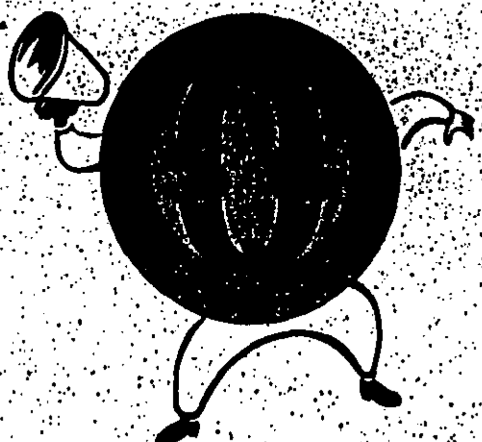
SQG Hotline

Shop Visits

IMEX:
Industrial
Materials
Exchange

Printed
Materials
& Library

Small business practices make a big difference!



Local Hazardous Waste
Management Program

If you are a small business, hazardous waste laws apply to you. You cannot put hazardous waste in the dumpster or pour it down the drain. *Small Quantity Generators*, or SQGs, must be as careful with their waste as large industries.

So, what does a small shop do with leftover solvent? How does the SQG get rid of a little used paint? How does the small guy handle another set of regulations?

Many SQGs are confused. To help them out, local agencies have set up a number of new hazardous waste services.

If you are an SQG you have already paid for these services. Use them!

SQG Hotline

206/296-3976
M-F, 9 to noon, 1 to 4 pm
Seattle-King County Health Department

Is my waste hazardous? What are my options? How do regulations apply to my business? **Call for quick answers, referrals and fact sheets.**

Shop Visits

206/689-3090
M-F, 9 am to 4 pm
Metro

Visiting consultants come to your business with information on reducing waste, using less hazardous products and complying with regulations. **Call to request a visit.**

IMEX: Industrial Materials Exchange

206/296-4899
M-F, 9 am to 4 pm
Seattle-King County Health Department

A free service helps those who need materials find those who want to get rid of them. Both save money. **Call to order a catalog or place a free listing.**

Printed Materials and Library

206/689-3051
M-F, 9 am to 4 pm
Metro

Need a fact sheet on your industry? A copy of regulations? An article on the latest technology? **Order materials by phone or visit the library in person.**

Printed with soya-based inks on paper with 100% postconsumer content. June 1992.

STREAM TEAM
Storm and Surface Water Utility 455-7846
P.O. Box 90012 • Bellevue, Washington • 98009 9012

June 7, 1991

Sarah Barton
P.O. Box 10063
Winslow, WA 98110

Dear Sarah,

Thank you for your interest in the Stream Team Program! The Stream Team is operated under the City of Bellevue Storm and Surface Water Utility (SSWU). It is a three tier program consisting of an educational element, a volunteer monitoring element, and a stream habitat enhancement element.

Enclosed are brochures, which give an overview of the Stream Team program and the SSWU; copies of the Stream Team newsletter *News Splash*; and a list of workshop videotapes which are available for loan. In addition to the videotapes, there are informational packets available for several of the workshops.

I have also included the first edition of the Stream Team Guidebook, the second edition is available for a $10.00 charge. The only difference between the two editions is that the second includes the Coal Creek basin, not just the Kelsey Creek basin. If you would like to order the second edition, just complete and return the enclosed form.

If you want more information or have any questions please feel free to contact me at 637-5200.

Best wishes,

Deborah Dahling-Baker

Deborah Dahling-Baker
Stream Team Coordinator

Storm and Surface Water Utility 455-7846
P.O. Box 90012 • Bellevue, Washington • 98009 9012

STREAM TEAM PROGRAM SUMMARY

The City of Bellevue Storm and Surface Water Utility (SSWU) established the Stream Team Program to involve residents and businesses in monitoring, surveying, and enhancing the stream systems in their community and to establish a network between streamside residents and other watershed residents. These efforts provide information, increase awareness, and initiate changes that will protect the quality of our streams, wetlands, lakes and Puget Sound.

Kelsey and Coal Creeks
The Stream Team Program has established five Stream Teams within the Kelsey Creek watershed and one in the Coal Creek watershed. In the Kelsey Creek system, each team represents a business or residential area and is coordinated with the help of a volunteer "captain" (similar to the crime watch block captain approach). Coal Creek Stream Team activities are coordinated through the seven member Coal Creek Coordinating Committee. A member of the committee volunteers to be a "project leader" for each project initiated by the committee.

Program Elements
The Stream Team program includes recruiting, training and supervising volunteers, as well as providing appropriate agencies with information gathered by volunteers. The City of Bellevue and other resource management and enforcement agencies (e.g., Washington Departments of Fisheries, Wildlife, and Ecology) will use the information to assist in attaining water quality compliance, documenting stream habitat changes and rainfall/stream flow relationships, and establishing migration limits of fish and wildlife. The general areas of education, training and information collection include: water quality, urban fishery resources, urban flood control, stream habitat evaluation, wetlands and wildlife, and revegetation and stream improvement techniques. The following summarizes the 1990-1991 educational and training workshops, including the associated volunteer activity.

Workshop series
Stream Bugs and Water Quality (July 1990): Volunteers learn the importance of aquatic insects in the stream ecosystem and how insect presence or absence aids in determining water quality. Also covered are the actions to take in the event of pollution incidents, fish/wildlife kills, and turbidity problems. The SSWU provides aquatic insect samplers to volunteers. Insect samples are sorted and identified by volunteers to help evaluate water quality conditions.

Urban Salmon and You (September 1990): Volunteers learn about the "homing" instinct of salmon which leads adults to return to their birth stream to spawn. The habitat requirements and urban impacts on salmon habitat are also presented. Volunteers are trained how to identify salmon, both adults and fry, and record the information. Information gathered helps determine stream areas utilized by certain species, and the time frame of migration. Volunteers are also invited to participate in a salmon rearing project. During the first part of January, egg tubes are placed and monitored in both Kelsey and Coal Creeks.

NEWS Splash

Salmon Watch Workshop Update

Fifty people attended the Salmon Watch Workshop on September 14th. They learned about the life cycle of salmon, the economic and environmental value of salmon, and how to identify the five species of Pacific Northwest salmon (coho, chinook, sockeye, chum and pink).

Presenter: Gino Lucchetti

Gino Lucchetti, Field Studies Coordinator with the Tulalip Dept. of Fisheries, encouraged volunteers to "think globally but act locally." He explained that what we do to propagate salmon in Bellevue's streams has far-reaching affects — as far as Alaska and California — because of the amazing migratory pattern of salmon.

A slide presentation by Chas. Gowan, Aquatic Biologist with Hosey and Associates, explained the life cycle of salmon and their habitat requirements. Salmon are anadromous meaning they are reared in freshwater, migrate to salt water and migrate back to freshwater to spawn in their stream of origin and die. However, exactly how salmon find their way back to their birth place remains a mystery. A panel discussion following the lectures afforded insight into current research which indicates that their homing techniques include scent, radar, and geographic and celestial navigation.

Bob Furstenberg, Biologist for King County Surface Water Management, demonstrated how to identify salmon. He said that some sockeye may enter Bellevue streams mid-September through October. Chinook and coho are the primary species observed in the Kelsey Creek watershed. Chinook, the largest species, migrate late September through mid-November. Coho migrate late October through early January.

The second portion of the workshop involved hands-on participation at mini-learning stations staffed by the presenters. Participants examined food sources (insects) for fish, learned how to tell the age of fish by counting the rings on a magnified fish scale or earbone (otolith), and identified colored photos of salmon using a key. Mark Plunkett, Marine Education Specialist with the Seattle Aquarium, assisted with the salmon identification. The Seattle Aquarium provided a display on the life cycle of salmon with preserved samples of eggs, alevins, parr and smolt.

Presenters from left: Chas. Gowan, Bob Furstenburg, Gino Luchetti and Sarah Hubbard-Gray.

If you observe salmon in a stream near you, call Sheila Tilander at 453-4858 to report the information and to receive a fish tally sheet for recording your observations.

Storm Drain Stenciling Update

Thank you for responding to our plea for help. Many groups have called to volunteer to stencil storm drains with "DUMP NO WASTE, DRAINS TO STREAM."

A new Stream Team recruit, Peter Visco on the Richards Creek Team, set out on his own armed with stencil, wire brush, spray paint, gloves and safety vest. At last count he had stenciled 31 storm drains. Peter's concern for the environment also motivated him to volunteer last summer for the Idaho Forest Service working as a Trail Crew member. Building and maintaining trails kept him busy but also provided practical knowledge to add to his scholastic pursuits. Peter is presently working toward a Bachelor of Science degree in Forest Resource Management.

Following Peter's lead, Girl Scout Troop #314 stenciled 43 storm drains in less than 2 hours. Troop co-leaders Sara Holland and Marie Vieth supervised scouts Mahji Hall, Kallie Harris, Betsy Holland, Candice Lindeman, Carisa Sheckler and Anne Valaas on their community service project. Last year these young volunteers distributed water conservation kits for the Bellevue Water and Sewer Utility.

Others who responded include Ross Toivonen, Director of Youth Services for St. Andrews Lutheran Church. Ross stenciled 13 "practice" drains and plans to supervise 6th-8th graders as they stencil storm drains in the Robinswood area. Co-leaders Tobiatha Tucker and Molly Binder and their 3rd grade Camp Fire Girls will stencil the Cherry Crest/Compton Green area.

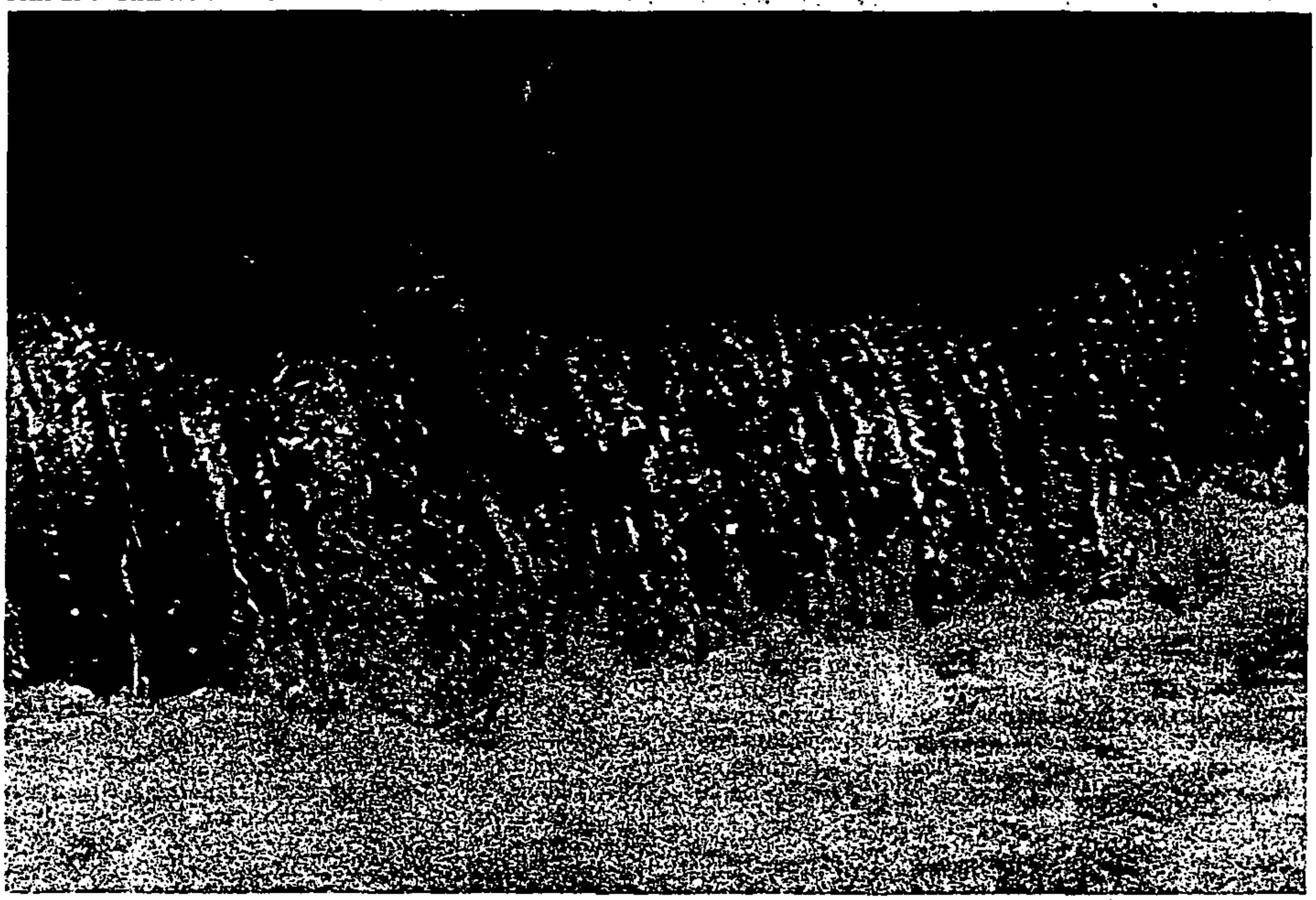
If you or your organization/group want to join in the fun and help protect our water resources, call 453-4858 to schedule a stenciling date.

Mercer Slough Team Happenings

Linda Lane, Captain

Ten members of the Mercer Slough Team met at the Mercer Slough fish ladder on September 28th. Ron Kranz, Natural Resources Manager for David Evans and Associates, explained how the fish ladder was designed to accommodate the water level fluctuation and the correlation to Lake Washington's water table. The design enables fish to climb the ladder and enter the elevated culvert to continue their journey up Kelsey Creek and its tributaries.

From there Ron took us on a nature walk within Bellefield Office Park to observe erosion along the banks of Mercer Slough. We discussed what types of rushes, grasses, and shrubs are native to the immediate area and what type of native vegetation we would like to plant this spring in order to offset the current erosion problems. The existing vegetation hosts a variety of wildlife — we observed ravens, blue herons, ducks, geese, and a common flicker, but no salmon as of yet. It was a beautiful fall evening and, all in all, a very educational get-together.



Mercer Slough fish ladder.

BUSINESS BIO

Representatives from BIOMED, INC., a Bellevue research laboratory company, attended the Stream Team Salmon Watch Workshop and left with enthusiasm for the program and a desire to get involved. A meeting shortly thereafter determined how BIOMED's resources could benefit the program.

BIOMED brings 17 years of analytical and biochemical research to the program. Recognized as the leading manufacturer of fish vaccines, BIOMED also specializes in water quality analyses, classification of hazardous industrial waste and toxicity testing.

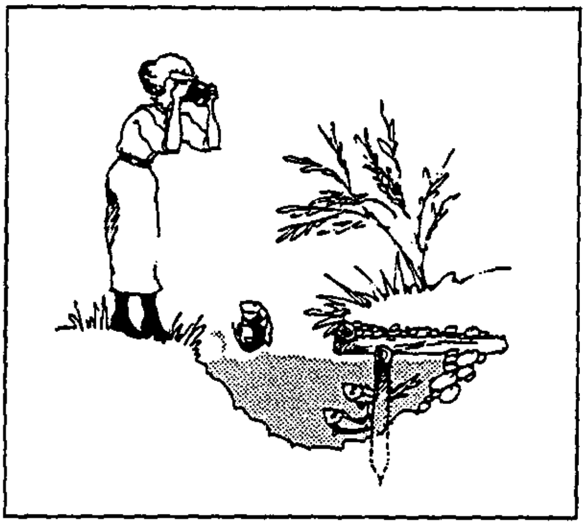
With these capabilities and interests, BIOMED has volunteered to analyze water quality samples for turbidity, pH and conductivity as their contribution to the Spill Watch activities. In addition, they offered to assist in the Classroom/Community Salmon rearing program that involves eleven Bellevue schools. BIOMED will analyze water samples and diagnose fish diseases if problems arise in classroom aquariums, and provide vaccines for the more than 40,000 fry that will be released in the streams next spring.

Other businesses that have contributed to the Stream Team Program through enthusiastic employees include David Evans and Associates, Hosey and Associates, and Ott Engineering, Inc. Their efforts and expertise strengthen the program and add diversity. If you and/or your business would like to get involved, call 453-4858 for more information.

Upcoming Events

HABITAT EVALUATION WORKSHOP — Thursday, November 17, 7-9 p.m., North Bellevue Community Senior Center, 4063 148th Avenue NE, Bellevue. The free Stream Team Workshop will cover the relation between plants, animals, soil and water, and focus on how physical alterations (e.g., rockeries, culverts, landscaping) affect stream corridor habitat. Volunteers can use this knowledge to gather information to help determine what types of physical alterations to stream channels and streambanks positively affect fish and wildlife habitat. Speakers: Alan Johnson, Aquatic Scientist, Resource Planning Associates; Gayle Kreitman, Regional Habitat Manager, Washington Department of Fisheries; Sarah Hubbard-Gray, Program Coordinator, City of Bellevue Storm & Surface Water Utility. For more information call Sarah or Sheila at 453-4858.

CUTTHROAT AND WILDLIFE WATCH — January, 1989. The free Stream Team Workshop will cover the habitat requirements of cutthroat trout and wildlife (e.g., birds, mammals, reptiles), and identification of cutthroat and various types of wildlife. The importance and role of wetlands will also be discussed. Volunteers will learn how to observe and record spawning, migration, and stream areas used by cutthroat trout (February to April spawning) and wildlife. The information will help determine habitat quality and the number and variety of fish and wildlife in the Kelsey Creek watershed. It will also identify areas that are critical and sensitive in relation to spawning, usage and migration that may require improvements or protection. For more information, call Sarah or Sheila at 453-4858.



REVEGETATION AND STREAM IMPROVEMENTS — March 1989. The free Stream Team Workshop will focus on the importance of native streamside vegetation and the impacts of altering vegetation or the physical characteristics of the stream channel. Topics will include: appropriate tools, native plants, and materials to use when maintaining yards and working around streams; streambank and channel stabilization techniques; fishery habitat improvement techniques; and how to create a streamside or backyard wildlife sanctuary. For more information, call Sarah or Sheila at 453-4858.

FISHERIES ENGINEERING

Bob King, Hydraulic Engineer, Ott Engineering

Fisheries Engineering, as the name implies, involves fish and engineered solutions to challenges fish encounter.

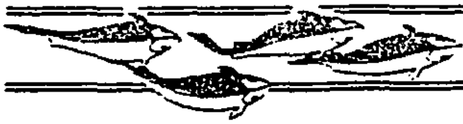
One of the most interesting Fisheries Engineering tasks is to provide passage for fish past a barrier. Barriers in streams and rivers include waterfalls and severe rapids (natural), dams, and misaligned culverts under roads (manmade). There are a variety of methods for providing passage including weir construction, fish ladders, elevators, and trap and haul facilities. Passage facilities accommodate the strength and endurance of upstream migrant fish and their need for rest areas.

Weir construction is most appropriate at natural and road culvert barriers. Weirs can be constructed of logs, rock, gabions (rock in wire baskets), or concrete. Weirs can also be created by blasting and may be accompanied by concrete repair work to form an acceptable series of pools and small falls (each less than 1 foot high).

Fish ladders are used at both natural and manmade barriers. Fish ladders have evolved over time and there are now a number of ladder types in common use. Jumping ladders are no longer constructed because they tire fish and may cause injury to fish. Ladders are designed to provide resting areas and acceptable water velocities. They are also designed to be self-cleaning. Ladders are expensive to construct and other options to correct certain passage problems often become more attractive.

Elevators are just what the name implies. Fish are collected, loaded into an elevator, raised to a higher elevation, and released above the barrier. Trap and haul facilities collect fish, load them into a truck for transport around the barrier, and release fish above the barrier. Fish are never manually handled with either elevators or trap and haul facilities. Extra care must be taken in the design of elevators and trap and haul facilities to protect fish during catchment, transport, and release since the facilities are small and usually made of hard materials.

You can view some of these fishery engineering solutions in Bellevue. The series of weirs just north of NE 8th Street and just east of 132nd Avenue NE provides fish passage into upper Kelsey Creek. Just south of NE 40th Street and east of 140th Avenue NE is a fish ladder, constructed by volunteers, that provides fish passage into upper Valley Creek.



SCARLET DEATH

Samuel Thatcher Hubbard, Sr.

The Scarlet Sockeyes move inexorably up the river
Bleeding their life from cells behind their gills—
    moving upward.
An intimate part of death itself swimming up
    the river.

The clean water holds these red, lissome, power-wasting
    bodies
By the thousands scraping across the gravel, full
    of abundant pink life.

What do they know of this sad end?
Does each share with a companion the thrill of
    wanted death?
They fight against death lurking from without
    to be able to die from within.

But there is glory in their death
Their red bellies pointed to the sky,
The joy of a completed cycle of life,
A usefulness even in death
To feed living creatures a pre-winter bounty
For the long fast.

How different from man who in death is a task.

VOLUME 2 November 1988
EDITORS: Sheila Tilander & Sarah Hubbard-Gray
GRAPHICS: Ted Van Dyken/Phyllis Hall/Trisha Milne
PRINTERS: Roselle Ciummo/Rick Mounts

Metro's Community Action Grant Program

Municipality of Metropolitan Seattle (Metro) has an on-going Community Action Grant Program that provides small grants to community groups in the Seattle-King County area. The purpose is "to encourage and facilitate grassroots community action in support of clean water goals." Eight projects were funded in 1987. As a result, hundreds of pounds of debris have been removed from local waters, salmon have been restocked and habitat restored. Application deadline for Round 1 is January 31, 1989. For more information, write: Kristi Silver, Metro—Water Resources, MS-81, 821 2nd Avenue, Seattle, WA 98104, or call 684-1229.

Stream Team News is a cooperative effort published by the City of Bellevue Storm and Surface Water Utility and made available through The Public Involvement Education Project, financed by proceeds from the Washington State Centennial Clean Water fund, and administered by the Puget Sound Water Quality Authority.

Mailing List Add/Drop

If you know of anyone who would like to be added to the *Stream Team* mailing list, or if you would like your name removed from our mailing list, please call the Storm and Surface Water Utility, 453-4858.

City of Bellevue

Storm and Surface Water Utility
11511 Main Street
PO Box 90012
Bellevue, Washington 98009-9012

BULK RATE
THIRD CLASS
U.S. POSTAGE
PAID
BELLEVUE, WA
PERMIT NO. 61

CITY STREAMS

Guidelines for Survival

Our city streams are in trouble. Some are dead and many that run through Washington's most populated areas will die soon if we don't do something now! Streams flowing through urban areas are unique and valuable to the surrounding community. Streams, and the stream bank, provide living and feeding areas for fish and wildlife otherwise excluded from urban areas. They provide a unique opportunity for recreation and natural open space. The stream environment provides an outdoor classroom for young and old alike. And, of course, a beautiful natural stream increases property values.

Bulk Rate
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Permit No. 61

City of Bellevue
Storm & Surface Water Utility
P.O. Box 90012
Bellevue, WA 98009-9012

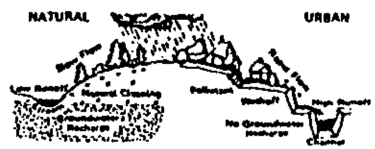
WORKING FOR WATER QUALITY

Prepared by the Washington State Department of Ecology. Funded in-part by the U.S. Environmental Protection Agency.

Although many urban streams are small, they are important for a variety of water uses. Networks of small streams provide spawning and rearing grounds for salmon and trout. They also provide larger downstream rivers, lakes, and estuaries with a constant supply of clean water.

Streamside areas are important to life in and around the stream. Small streams are shaped by streamside trees falling into and becoming embedded in the channel. Trees and low bushes shade the stream and keep water temperature suitable for fish. Streamside vegetation hanging over the channel provides cover and food sources for fish.

Urbanization causes water "quality" and water "quantity" impacts on stream water. Impervious surfaces such as streets and rooftops turn rain which was once absorbed into the ground, into fast flowing storm water runoff. Stream channels are scoured, and habitat destroyed.



The quality of urban storm water runoff is usually poor. Diverse and dangerous pollutants enter streams untreated.

There is still hope! Unfold this brochure and you will see a list of "Stream Care Do's and Don'ts." Practice them yourself and make sure your friends and neighbors do also. If everyone works together, our city streams can be kept alive and healthy.

FOR MORE INFORMATION CONTACT YOUR CITY HALL OR THE FOLLOWING AGENCIES:

*City of Bellevue		
Storm & Surface Water Utility	455-7846	24 hr. emergency response for flooding and pollution spills
Storm & Surface Water Utility	453-4895	Stream Enhancement
Permit Center	462-2034	Clearing & Grading Permits
*Department of Ecology (Redmond)	867-7000	Water Pollution, Oil Spills
*Department of Fisheries (Seattle)	545-6582	Hydraulic Permit Applications
*Department of Fisheries (Olympia)	753-6850	Salmon Habitat Management/Hydraulic Permit Applications
*Department of Wildlife (Mill Creek)	775-1311	Hydraulic Permit Applications
*Department of Wildlife	1-800-562-5626	Fish and Game Violations 24-hour Hotline
*Department of Fisheries Patrol	753-6585	Salmon, Shellfish, Bottomfish Violations

STREAM CARE GUIDELINES

DO	DO NOT	WHY?
— Leave native vegetation alongside streams. Trees and shrubs shade the stream, and provide leaf litter which forms the base of the aquatic food web (leaves — insects — fish — humans).	— "Landscape" the streamside. — Remove overhanging trees or shrubs from streambanks.	— Streamside vegetation provides food and shelter for wildlife. Snags are important for birds such as woodpeckers. — Root systems stabilize streambanks, guarding against erosion.
— Leave the streambanks and channel in their natural, unaltered condition as much as possible. — Obtain a Hydraulics Project Approval (a permit) from either the department of Fisheries or Game before doing work within the high water line.	— Remove embedded logs from the stream. — Cross the stream with motorbikes or other vehicles. — Place riprap or fill on streambanks, or [illegible] — Dig, dredge, or reconstruct the stream channel without a permit.	— Streamside trees die and fall into the stream, become embedded and form pools, important to fish habitat. — Heavy equipment in the stream can ruin spawning gravel, destroy fish habitat, and damage streambanks.
— Use garden and lawn chemicals sparingly and with care. Follow disposal instructions carefully.	— Spray streamside vegetation, or deposit chemical-laden garden refuse near water. — Overwater and cause chemicals to wash off your garden.	— Some chemicals (fertilizer) promote algae and weed growth in streams and lakes. — Some chemicals (pesticides, herbicides) are toxic to people and fish.
— Recycle crankcase oil. — Keep your exhaust clean to reduce exhaust fallout. — Keep antifreeze [illegible] water drains. — Direct soapsuds onto absorbent ground, such as lawns.	— Allow auto-related pollutants to run off of your driveway, and enter storm water drains (which drain into streams untreated). — Allow cleanup and construction wastewater from mortar and paving, painting, etc. to enter storm sewers or roadside ditches.	— Dangerous pollutants such as oil and antifreeze, wash off driveways and roads and enter streams untreated. — Dumping waste oil, gasoline, solvents, and degreasers into sewers or streams is illegal and dangerous!
— Take precautions to avoid excessive runoff when clearing land. — Follow erosion-control guidelines and regulations. — Reestablish vegetation as soon as possible.	— Disturb erodible soils during the rainy season. — Allow sediment-laden runoff to enter a stream.	— Construction sites are a major source of sediment, which can ruin spawning gravel and kill fish. — The responsible party may be subject to expensive penalties and the cost of replacing damaged resources.
— Restrict livestock use in the streamside area. — Keep pets away from streams.	— Allow banks to be trampled or denuded. — Allow animals to use the stream as a bath or toilet.	— Harmful fecal bacteria from animal wastes can cause serious water quality problems. — Bank trampling causes sedimentation and destroys native vegetation.
— Remove litter (lawn clippings, trash, etc.) and junk from the stream vicinity.	— Tolerate litterbugs who degrade our public resources.	— Litter and junk in the stream can cause water quality problems, and endanger fish, wildlife and recreationists. — All litter is an eyesore.
— Support legislation which benefits water quality (wastewater management, erosion control, etc.). Work with local planners to preserve our streams.	— Be apathetic or uninformed.	— Increasing urbanization requires innovative regulations and water quality control programs. Our cities can grow and our streams can live.

DO DO NOT WHY?

STREAM TEAM
OLYMPIA • LACEY • TUMWATER
THURSTON COUNTY

Project UPDATES

Spring 1993

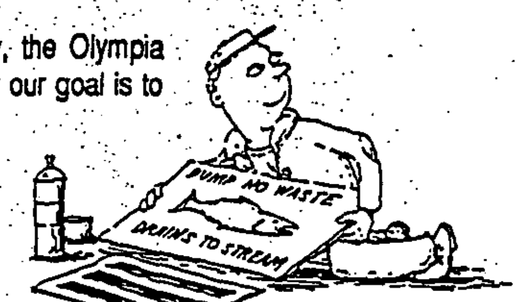
Get Your Feet Wet This Summer

CAPTAINS NETWORKING MEETING June 29 will be the next quarterly captains' meeting. All captains and those interested in becoming Stream Team captains are welcome to join. These meetings allow greater coordination and participation among volunteers. This meeting will address leadership skills, promote 1993's Storm Drain Stencilling Campaign, and, as always, be open to your questions and ideas. The year's remaining meetings are scheduled for September 28 and December 28. Call 753-8598 (24-hour #) for more information.

NOW AVAILABLE ON VIDEO! An EPA Streamwalk training video is now available. This concise and informative video brings the training to life by "walking" you through the EPA Streamwalk data sheet. In just over 20 minutes you'll get an informative overview and refresher course that emphasizes the importance of water quality monitoring, and provides practical advice about how to use the Streamwalk checklist. The video also gives some information about stream ecology in the process. Call 753-8598 (24-hour number) or 753-8490 to check out a copy.

HOW DO WE RATE? Stream Team is currently beginning the process of developing a data management system that (we hope) will allow comprehensive, accessible evaluations of stream integrity. The system will include Streamwalk, fish watching, wildlife sighting, macroinvertebrate, and water quality information. We will also be able to track volunteer participation and evaluate program strengths and weaknesses. A brief look at Streamwalk results shows that Percival Creek and Moxlie Creek have been monitored the most, while McLane, Mission, and Ellis Creeks rank the "healthiest". In our next newsletter issue we'll talk about the total number of volunteers and Streamwalks they have completed. Keep up the good work Stream Teamers!

OLYMPIA ACTION PROJECT: STORM DRAIN STENCILING In May, the Olympia Stream Team kicked off our Storm Drain Stencilling Campaign; this year our goal is to stencil 300 drains. This educational activity reminds citizens that oil or other pollutants dumped into storm drains enter our streams, lakes, wetlands, and Puget Sound untreated. Such pollution damages fish and wildlife habitat and affects the water we drink and play in. We provide all equipment necessary for this fun, safe project. Join the action by calling the Olympia Stream Team Hotline 753-8598 (24-hour number) or 753-8498, and get your friends and neighbors stencilling today!



Volunteers: Our Greatest Natural Resources

STREAM TEAM FEATURE ARTICLE

MAKING A BIG SPLASH
By Janet Franks, Stream Team Volunteer

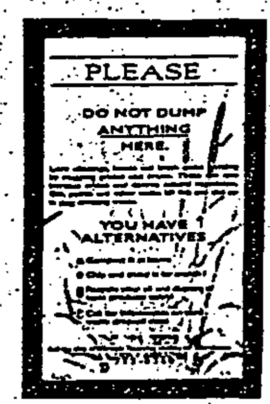
On April 17th Janet Franks and eight other stream Team volunteers rafted down the Nisqually River, honoring their 1992 "Team of the Year" status. Dave and Zak Denning from The Evergreen State College guided the rafts, while Bill and Ed Salminen from the Nisqually Indian Tribe shared their expertise about the river. "We started in the river about 10:30 am and finished about 1:30 pm. Our guide Dave was very informative and Bill Thomas was too. Dave told us about the water and the way it flows."

The three-hour trip featured first-hand learning about the diversity of river life: water cycles, fish and wildlife. "We saw a yew tree, and a beautiful deep green plant similar to horsetail rush with long, green asparagus-like single pikes connecting into a joint. We also saw a bald eagle in a cottonwood, several merganser ducks, and two blue herons. Bill Thomas was telling us that twenty different varieties of fish live in the Nisqually River. He was saying that the creeks flowing into the Nisqually are about half their normal levels because of two years of drought conditions."

The volunteers are looking forward to seeing photos from the trip, and doing it again in the future. We were glad to reward some of our many dedicated Stream Team members.

STREAM TEAM OF THE QUARTER Wa-He-Lut School's sixth and seventh grade class has been a part of the McAllister Creek Stream Team since March, 1992. Sue Schumacher and her students are involved in salmon counting at McAllister Springs and Streamwalk monitoring. 1992/93 students were **Johnnie Davis, Bridget Eagle Speaker, Robin Lenoir, David Christensen, Kenny Bigman, Elysha Brooks, and Sarah Daniels.** A special thanks to Sue and her class for their consistant monitoring efforts on McAllister Creek!

JOBS WELL DONE Other congratulatory remarks go out to 24 volunteers who helped clean up Schneider Creek on April 24, removing enough rusted scrap metal to fill a ten-yard dumpster. Undaunted by the rain, these volunteers improved the ravine habitat, and deserve hearty thanks. Four of them even returned several weeks later to help canvass the neighborhood with composting information and install new, educational "No Dumping" signs that stress recycling alternatives.



St. Peter's Hospital Environmental Action Committee installed stream-crossing signs on Woodard Creek, reminding us that streams and fish can be found in urban parts of Olympia and that we need to be aware of this water resource. Thanks St. Peter's employees!

...Coming To A Stream Near You!

OLYMPIA STREAM TEAM NEWS This year Stream Team will have its first Neighborhood Networking Meetings. We'd like you to meet your neighbors and fellow volunteers, the people who share a common concern for your local watershed. Once we've met each other, we can become a powerful, organized force as well as a friendly community. These meetings will be excellent opportunities to join in the planning and protection of our streams and wetlands. We need your ideas, so bring them and meet your volunteer neighbors! The first productive and fun Neighborhood Networking Meeting was held for Schneider Creek on June 7; next are Percival Creek (July 27), Indian/ Moxlie (August 30), and Mission Creek (October 25).

LACEY STREAM TEAM NEWS The Lacey Stream Team is preparing to implement recommendations made in the Woodland Creek/Lake Lois Enhancement Plan. Part of this effort is a volunteer water quality monitoring program. Some Stream Team members will test Woodland Creek for pH, dissolved oxygen, fecal coliform bacteria, total suspended solids, conductivity, and temperature. Other volunteers will monitor macroinvertebrates at the same test sites to get a complete water quality picture. Monitoring will be done quarterly on a designated Saturday, with the first monitoring event scheduled for July 17.

The results from the monitoring will be used by the City of Lacey for future management of this valuable resource. Water quality monitoring training is available. If you would like to get involved in this exciting program, call Jared Burbidge, Lacey Stream Team Coordinator (438-2687) to sign up!

THURSTON COUNTY STREAM TEAM NEWS The Chambers Creek Stream Team is looking forward to its second round of Streamwalk monitoring June 12, and a summer aquatic insect investigation is in the planning stages for Stream Team Members and their families.

Eaton Creek's Stream Team planted willows and other riparian plants along an eroded bank near Yelm Highway. The plants will help stabilize the bank and provide fish habitat in Eaton Creek. Joe St. John's class of sixth graders from Evergreen Forest Elementary spent a morning planting shrubs and trees along another section of Eaton Creek to provide a wildlife habitat area. A Streamwalk training session will be held June 19 and a Streamwalk is scheduled for July 24. A canoe clean-up of McAllister will be held on July 10.

Several groups have stencilled storm drains in the County. Homes around Wilderness, Lake Forest, Sweet Briar, River Lea, Conifer Village, The Farm, Glenmore, Henderson Heights, and Hewitt Lake have been stencilled by a variety of groups including Camp Fire, Girl Scouts, and the Church of Latter Day Saints. Call Susie Vanderburg at 754-4681 for more information on upcoming events.

IT'S A MATTER OF TIME... July 20 is circled with a big red marker on Olympia Stream Team Coordinator Wendy Burt's calendar. If all goes according to the schedule (and Wendy meets her deadlines) she'll be bringing a new life to the Northwest. Wendy will spend a couple months this summer with her new baby, and then return for half-days in the fall. Don't worry, though, the office won't be unattended. There will be a replacement through her leave, and Dave Giglio, Olympia Stream Team Intern, will continue to provide volunteer support.

A SENSE OF PLACE Jana Dean has written a brief collection of delightful stories under the title Sound Wisdom: Stories of Place. These engaging folktales are set right here in Puget Sound, drawing heavily from local Native American oral traditions. Virtues such as humility, listening, and courage are explored in these educational tales. Call Jana at 754-5869 for ordering information.

EDITORS:
Wendy Burt, Stream Team Coordinator
Dave Giglio, Public Involvement Intern
City of Olympia Public Works Department, Water Resources Program.

STREAM TEAM MISSION:
To involve citizens in the protection and enhancement of water resources through monitoring activities and action projects along streams, lakes, and wetlands in Thurston County.

STREAM TEAM INQUIRES:
In Olympia: City of Olympia Water Resources Program, P.O. Box 1967, Olympia, WA 98507 Attn: Stream Team (206)753-8598 (24-hour number).
In Lacey: City of Lacey Water Resources Program, P.O. Box B, Lacey WA 98503, Attn: Stream Team. (206)754-4681.
In Thurston County: Thurston County Storm and Surface Water Management Program, 2000 Lakeridge Drive S.W., Olympia WA 98502, Attn: Stream Team. (206)754-4681.

Stream Team efforts in Olympia are funded by Storm and Surface Water Utility Revenue. Lacey and Thurston County Stream Teams are partially funded by grants from the Washington State Department of Ecology, Centennial Clean Water Fund.

City of LACEY THURSTON COUNTY City of OLYMPIA ECOLOGY

Printed on recycled paper - please recycle!

STREAM TEAM

City of Olympia
Public Works Department
Water Resources Program
P.O. Box 1967
Olympia, WA 98507

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Sarah Barton
P.O. Box 10063
Bainbridge WA 98110

Join the Team - The Future Belongs to All of Us!

THE THIRD 1993 WORKSHOP IS ON AQUATIC INSECTS

Sarah Barton
P.O. Box 10063
Bainbridge WA 98110

STREAMTEAM
OLYMPIA • LACEY • TUMWATER
THURSTON COUNTY
Post Office Box "B" Lacey, WA 98503-0987

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ALL NEW

1993

Get Your Feet Wet Too.

THE THIRD 1993 WORKSHOP IS ON BUGS!

ALL NEW

Mayflies To Midges
Macroinvertebrates Of Streams Workshop

Aquatic bugs play an important role in the eco-system of our rivers, streams, and lakes. Not only are they vital to the food web that sustains life, they are also an important indicator of water quality. This workshop will allow you to learn more about the creepy critters that inhabit our surface waters.

Rob Plotnokoff of the Department of Ecology will present information on the life cycles of aquatic insects, as well as their role in the aquatic ecosystem. Rob will give examples of the type of equipment he uses to collect and identify bugs, and will address the importance of monitoring programs that emphasize chemical, physical, *and* biological parameters. You will also be treated to a presentation by the South Sound Fly Fishers and a fly tying demonstration. Don't miss this fun and informative workshop!

Facts

Did you know...

- Leaves that fall into a stream are devoured by aquatic insects that spend most of their lives in water. They change their form, grow wings, and emerge from water only during spring and summer when they mate.
- Mayflies appear in fossil records 270 million years old and are some of the oldest winged aquatic insects.
- There are approximately 625 species of mayflies, 425 species of dragon and damsel flies, and over 91,000 species of aquatic, semi-aquatic, and terrestrial insects in North America.
- Dozens of volunteers are monitoring our local streams for aquatic insects and you can too. Come to this workshop to find our how you can get involved..

Videos

All videos may be checked out on a two day basis at no charge. For video information call: Wendy Burt ▸ City of Olympia, Water Resources Program ▸ 753-8598 ▸ (24 hour number)

1 THE FUTURE BELONGS TO US

If you are attending your first workshop this 12 minute video is a "must see". A refreshing and educational alternative to T.V., this video has important

WHEN:
Thursday, May 20, 1993

TIME:
7:00 p.m. to 9:00 p.m.

WHERE:
Thurston County Courthouse
Building I - Room 152
2000 Lakeridge Drive, S.W.
Olympia

Registration is not required for Stream Team workshops.

For more information about Stream Teams call one of the staff contacts below

City of Olympia Water Resources Program
▸ Wendy Burt
753-8598
- *24 hour number* -

City of Lacey Water Resources Program
▸ Jared Burbidge
438-2687

Thurston County Storm and Surface Water Management Program

Water Quality QUARTERLY

Spring 1991

Published by the Thurston County Office of Water Quality and Resource Management

Pump your septic system!

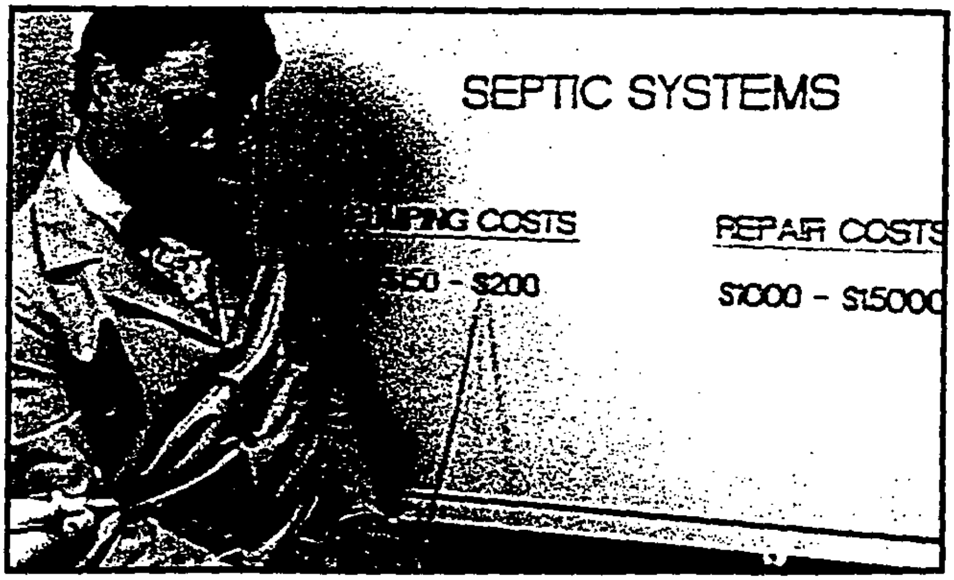
Commercial highlights septic system maintenance

You are absentmindedly watching the news on CNN when a nerdy-looking character in a lab coat appears on-screen, enthusiastically urging you to "pump your septic system!"

For those who may have missed it, select cable television channels in Thurston County recently debuted a 30-second commercial that uses a bit of humor while encouraging residents to properly maintain their septic systems.

This message is brought to you by the Thurston County Health

Continued on page two



Water quality at home is the focus in April campaign

April is "Clean Water Begins at Home" month in Thurston County, and the message is: Do Your Part!

Thurston County and the cities of Lacey and Olympia are proclaiming April as "Clean Water Begins at Home" month to emphasize the important role citizens play in protecting our water resources.

In addition to participating in a number of special events during April, an active "Clean Water Begins at Home" educational campaign is planned for the month of April.

Some of the highlights include:

- Public service announcements aired locally will offer practical tips on household hazardous waste, composting, lawn and garden care and alternatives to disposable diapers.
- Youth groups will distribute litter bags and "Clean Water Begins at Home" information in local neighborhoods.
- The Children's Hands On Museum has scheduled a "Water Day" celebration on April 20.
- The City of Olympia is planning a "Sustainable City" celebration April 20 at the Olympia Center.

Do your part! For information on specific activities and events, contact the Thurston County Office of Water Quality, 754-4111.

Inside

Special growth management section

THURSTON COUNTY

Make the most of your public hearing testimony

Citizen participation is critical in growth management planning, ground water planning, and for a variety of other plans scheduled to be completed in the next year.

Public meetings, workshops and hearings are scheduled to provide citizens with opportunities to comment on complex issues. Make the most of these opportunities by:

- Preparing ahead of time. Get copies of draft plans or reports and review them thoroughly.
- Learning more about the plan or issue being addressed. Arrange for a speaker to address a group, or make an appointment with someone who can answer your questions. Staff members working on plans, studies and reports, as well as members of various citizen committee, are usually available to share their knowledge.
- If there is more than one public hearing scheduled on an issue, attending the first one to learn more and plan to speak at the second.
- Writing letters and calling. If you cannot attend a public hearing, your opinions and suggestions are still important.

For more information on who to call or where to write, call Marie Cameron, Growth Management and Community Relations Coordinator, at 754-4111.

Utility rate reductions available for schools in Olympia

Schools in the City of Olympia can receive up to 75 percent off a portion of their stormwater utility bill by establishing some type of water quality or water resource curriculum in classrooms.

The types of curriculum may vary, and the City of Olympia is anxious to hear from schools that want to establish some sort of program or think they might qualify. Call Liz Hoenig, Public Involvement Coordinator, City of Olympia Water Resources Program at 753-8314 for more information.

Water Quality QUARTERLY

Published by the Thurston County Office of Water Quality and Resource Management.

Director: Linda Hoffman
Editor: Janice L. Keller-Saul

The Water Quality Quarterly was created to help keep people abreast of the work being done in addressing local water concerns, to stimulate discussion and to provide information on what you can do to protect and enhance our water resources.

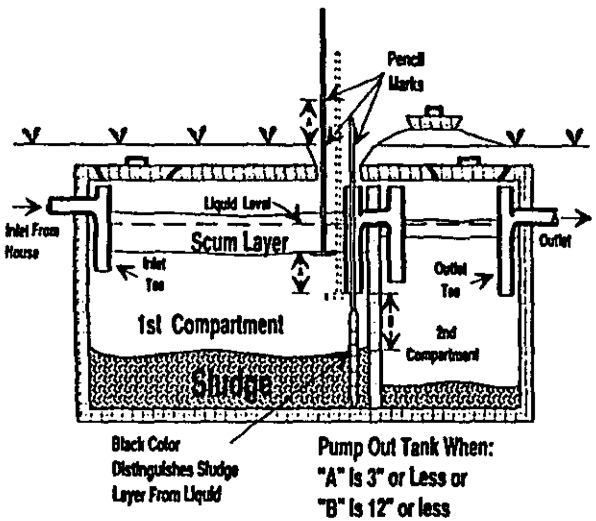
Please address correspondence to:

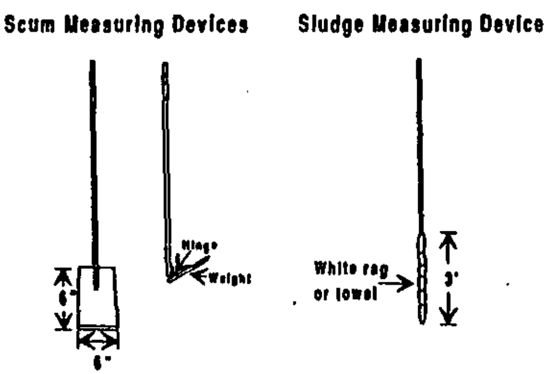
Water Quality Quarterly
Thurston County Office of Water Quality and Resource Management
2000 Lakeridge Dr. SW
Olympia, WA 98502-6045

Printed on recycled paper

THURSTON COUNTY

Inspecting Your Septic Tank





Washington State Department of Health

DOH Pub 334-016 (3/91)

Measuring the Scum Level

This procedure is for determining the distance between the bottom of the scum layer and the bottom of the outlet baffle or tee.

1. Establish a convenient reference point, such as a stick layed on the ground across the hole.
2. Attach a 6 inch square board to the bottom of a stick at least 6 feet long.
3. At the outlet end of your tank's first compartment, carefully push the stick through the scum layer to find the bottom of the baffle or tee.
4. Mark your stick at the reference point to indicate the bottom of the baffle or tee.
5. Raise the stick until you feel or see the stick contact the bottom of the scum layer.
6. Mark your stick again at the reference point to indicate the bottom of the sludge.
7. If the two pencil marks are 3 inches or less apart the tank needs to be pumped out. If the top of the scum is within 1 inch of the top of the outlet baffle the tank needs to be pumped.
8. Lay stick aside for later comparison with sludge level stick.

Measuring the Sludge Level

This procedure is for determining the distance from the bottom of the outlet baffle or tee to the top of the sludge layer.

1. Wrap 3 feet of a white rag or old toweling around the bottom of a stick at least 6 feet long and fasten it with tape or string.
2. Carefully lower the stick to the bottom of the first compartment. To avoid pushing it through the scum layer, lower the stick behind the outlet baffle or through the outlet tee.
3. Hold the stick in the tank for a few minutes to allow sludge particles to adhere to the towel. Mark the stick at the reference point to indicate the bottom of the tank.
4. Remove the stick carefully and note a distinct dark stain on the towel representing the sludge layer.
5. Lay the stick beside the scum stick. Line up the top pencil marks.
6. Measure the distance from the bottom of the scum stick to the top of the dark stain on the sludge stick.
7. If the distance is 12 inches or less, your tank needs to be pumped.

Additional Information

More information is available from the following Department of Health publications:

Water Saving Guidelines, DSHS [illegible]

Septic Tank System for Your Home, DSHS 22-45A 11/83

On-Site Sewage System Regulations, DOH 334-106A WAC 246-272

These are available from your county health agency or by writing to:

Washington State Department of Health
Office of Community Environmental Health
Mail Stop LD-11
Olympia, WA 98504

Other sources of information include your:

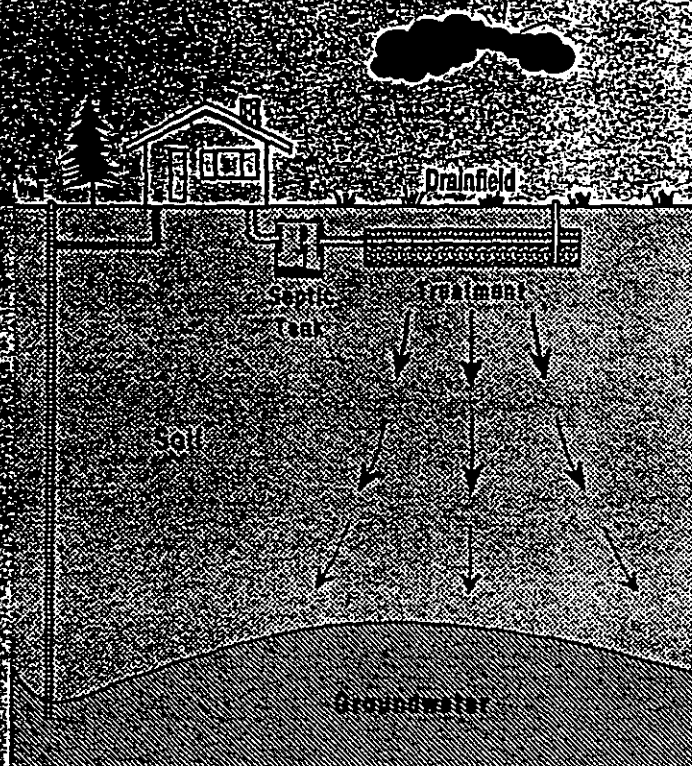
Local Health Agency
Soil Conservation Service Office
Cooperative Extension Office

Your Health Agency

Health

DOH Pub 334-009 (1/91)

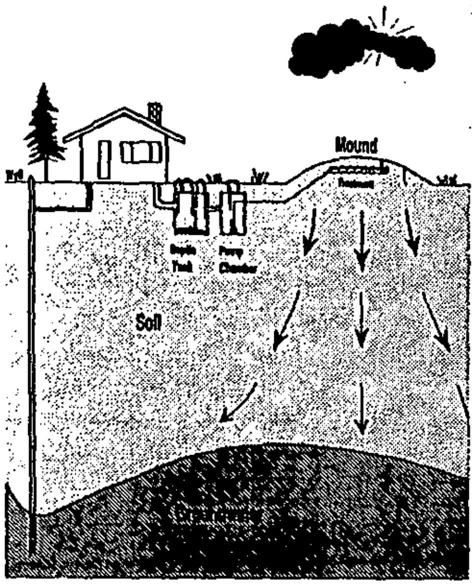
Understanding And Caring For Your Septic Tank System



WASHINGTON STATE
DEPARTMENT OF HEALTH

WASHINGTON STATE UNIVERSITY
COOPERATIVE EXTENSION SERVICE

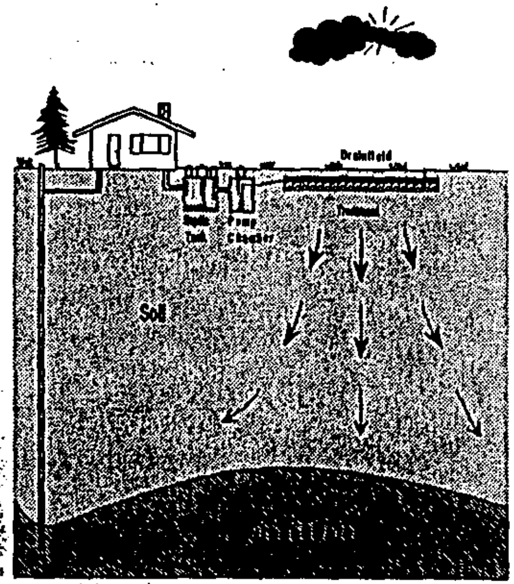
Understanding And Caring For Your Mound System



WASHINGTON STATE
DEPARTMENT OF HEALTH

WASHINGTON STATE UNIVERSITY
COOPERATIVE EXTENSION SERVICE

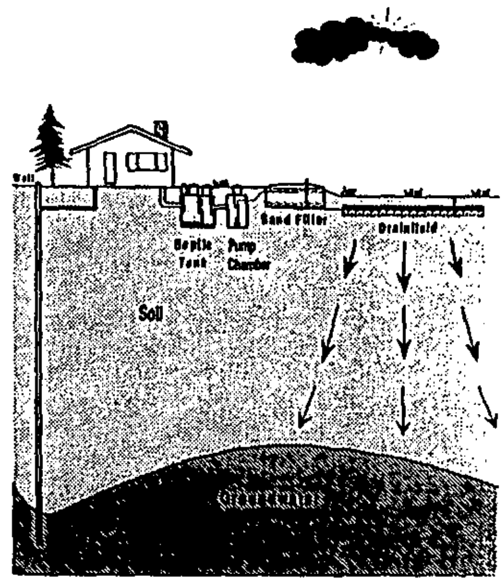
Understanding And Caring For Your Pressure Distribution System



WASHINGTON STATE
DEPARTMENT OF HEALTH

WASHINGTON STATE UNIVERSITY
COOPERATIVE EXTENSION SERVICE

Understanding And Caring For Your Sand Filter System



WASHINGTON STATE
DEPARTMENT OF HEALTH

WASHINGTON STATE UNIVERSITY
COOPERATIVE EXTENSION SERVICE

WHERE CAN YOU GO FOR HELP?

Personal Safety

Keep the phone number of your nearest Poison Control Center handy in case of actual or suspected poisonings. Use Mr. Yuk stickers (available from Poison Control Centers) if you have small children.

Recycling

To find out the locations nearest you for recycling waste oil and car batteries (and many non-hazardous items), call Ecology's Recycling Hotline,

1-800-RECYCLE

Household Hazardous Waste

For other questions regarding how to manage household hazardous waste and for information about collection programs, please call Ecology's Hazardous Substance Information Hotline.

1-800-633-7585

FOR MORE INFORMATION

The following materials are available from the Department of Ecology's Hazardous Substance Information and Education Office:

Pamphlets

Household Chemicals — The Hidden Hazards

Hazardous Wastes From Homes

Asbestos Facts for Householders

How to Recycle Used Motor Oil

The Used Oil Problem

Home Safe Home

Household Hazardous Waste Wheel

Visual Materials

Household Hazardous Waste: A Little Goes a Long Way (slide show and video)

The Difference Is You (slides with script)

Hazardous Waste: Helping Small Business Understand the Law (slide show and video)

Common Sense Pest Control for Home and Garden (slide show)

Illustrations by Tim Schlender

Washington Department of Ecology
Hazardous Substance Information and Education Office
Mail Stop PV-11
Olympia, WA 98504-8711

1-800-633-7585

11/87

HOUSEHOLD HAZARDOUS WASTE

A Little Goes A Long Way

AROUND THE SOUND

Department of Health releases shellfish inventory

The state Department of Health has revised the *Annual Inventory of Commercial and Recreational Shellfish Areas in Puget Sound*. This year's inventory differs from previous editions with its computerized maps created on the GIS (Geographic Information System) and loose-leaf format. Health officials anticipate that the changes will make the inventory easier to use and simpler to update in the future.

The maps provide detailed information on growing area classifications in Washington. A limited supply is available from the Department of Health for local planning agencies, tribes, watershed management committees and other resource groups. For information, contact Derry Suther at (206) 664-0143.

Interim cleanup starts at Cascade Pole

Cleanup work that will help protect Puget Sound's Budd Inlet from hazardous waste contamination is underway at the Cascade Pole/Port of Olympia site on Olympia's waterfront, according to the Department of Ecology.

Workers will be driving a 350-foot-long steel wall into the soil near the shoreline to help prevent migration of contaminants from the site into the Sound. In some places, about 10 feet of contaminated oil has collected below the surface of the site. For information, contact Charles Pitz, Ecology Site Manager, (206) 586-5559.

1992 year of success for Tacoma's Clover Creek

Close to 150 people gathered in late November to see the Department of Fisheries and a group of youngsters release 65 adult Coho salmon into Clover Creek in Tacoma.

"I don't know when salmon were last seen spawning in Clover Creek, but it may well have been over 50 years ago," said Al Schmauder, facilitator for the efforts.

This event celebrated the success of projects conducted during the year to restore the water flow in the creek. Students, land owners, businesses, service organizations and utilities worked together to restore stream banks, remove blockages, stop leaks, remove trash and plant trees. For information, contact Al Schmauder, (206) 596-8222.

Thurston County to provide loans for on-site septic repair

Thurston County has established an On-site Sewage Financial Assistance Program to help county citizens who have failing septic tank-drainfield systems. This low-interest loan program is designed to help reduce the number of failing systems and, thereby, reduce their impact on ground and surface water quality.

According to Dave Lenning, with the Thurston County Environmental Health Division, the loan program is intended to help those with existing, failing systems who would be subject to enforcement action if repairs were not made. Loan interest rates range between five and eight percent, and income limitations are the only restricting factors as to who can apply. For information, contact Debra Baker, (206) 786-5455.

Centennial Clean Water Fund applications accepted through February 26

It's the time of year again to apply for Centennial Clean Water Fund grants. The application period runs through February 26.

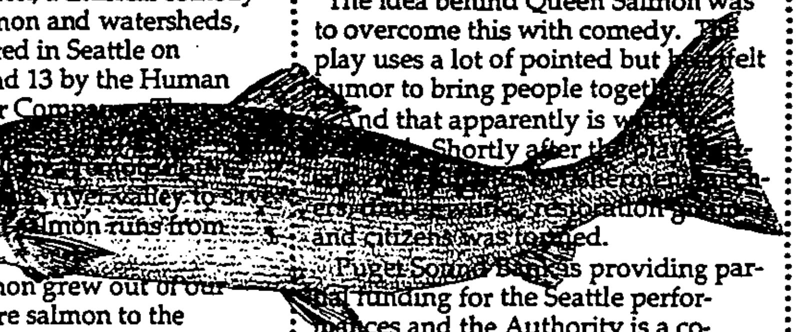
Approximately $39 million is available this year. An additional $168,813 in federal 205(j)(1) Water Quality Management Planning Grant money is also available.

For an application packet, call Tammy Riddell at (206) 459-6838/SCAN 585-6838. For information, contact Dan Filip at (206) 459-6061/SCAN 585-6061.

&

Biologically Explicit Comedy Unites Friends and Foes

Queen Salmon, a musical comedy about salmon and watersheds, will be presented in Seattle on February 12 and 13 by the Human Nature Theater Company. The pro[illegible] duction sh[illegible] effort[illegible] western California river valley to save their once great salmon runs from extinction.



"Queen Salmon grew out of our efforts to restore salmon to the Mattole River watershed in California," said David Simpson, the play's author and a Mattole watershed resident. The performers are residents of the watershed, many of them drawn from ranks of people directly involved in the hands-on work of restoration.

"The Mattole Valley has been devastated by more than 50 years of logging. The polarization and conflict which this caused in our community had become extreme," said Simpson. "The idea behind Queen Salmon was to overcome this with comedy. The play uses a lot of pointed but heartfelt humor to bring people together. And that apparently is w[illegible] [illegible] Shortly after the play [illegible] [illegible] ers, timber [illegible] restoration [illegible] and citizens was formed.

Puget Sound Bank is providing partial funding for the Seattle performances and the Authority is a co-sponsor.

Queen Salmon will be performed at the Washington Hall Performance Gallery in Seattle on February 12 and February 13 at 8:00 p.m. For tickets, contact Wall of Sound in Seattle at (206) 441-9880 or Red and Black Books in Seattle at (206) 322-7323.

Authority Outreach Staff Here to Help

Outreach staff at the Authority are assigned to counties and cities around the Sound. The purpose is to provide information and assistance to local governments to help to better protect water quality in Puget Sound.

Outreachers also strive to understand local concerns regarding water quality and Puget Sound issues, and work to incorporate those concerns into state policies.

Staff are available to make presentations on nonpoint pollution, stormwater, shellfish and other Plan-related issues to city and county councils, tribes, businesses, planning commissions and community groups.

Below are the outreach staff contacts for the Puget Sound counties:

WHATCOM	Chris Prescott
SKAGIT	Stuart Glasoe
SAN JUAN	Tim Ransom
ISLAND	Tim Ransom
SNOHOMISH	Ginny Broadhurst
KING	Gretchen Hanna Vallana Piccolo
KITSAP	Betsy Peabody Steve Tilley
PIERCE	Kathy Minsch
THURSTON	Susanne Hindle
MASON	Krag Unsoeld
JEFFERSON	Bob Steelquist
CLALLAM	Bob Steelquist

You can reach outreach staff at 1-800-54-SOUND or (206) 493-9300.

Proposed Increase in Septic System Lot Size Under Review

After several years of study, the Department of Health has proposed a number of changes to the state's on-site sewage regulations designed to better protect water quality.

Among the revisions is a controversial increase in the minimum acreage for an on-site sewage system to one acre, an increase of 350 percent in some cases. The change is proposed to comply with the Department of Ecology's new groundwater standards.

According to Karen Van Dusen, Director of Community Environmental Health Program for the Department of Health, real estate interests are concerned that the one-acre minimum is too much in some cases, while environmental interests do not feel that increasing the lot size is an effective way to control water pollution from on-site sewage systems.

"Now we're meeting with Ecology to try and come up with other ways to ensure that nitrates, phosphates and chemicals don't make their way into the groundwater," said Van Dusen. "Our goal is to make sure that nothing reaches groundwater that is of concern. We're trying to protect public health."

Other changes of concern include a proposal to reduce the horizontal setback from marine waters from 100 feet to 50 feet. The Authority has requested that Health not make this change because it may not provide Puget Sound waters enough protection from improperly sited or failing systems. However, Health noted that this change would not have a large effect on marine waters because the department also plans to increase vertical separation to a minimum of three feet to ensure adequate treatment.

The Authority is also concerned that the new regulations should require stronger and more comprehensive on-site operation and maintenance programs, including regular inspections.

The Department of Health hopes to have a revised draft ready by April.

For More Information

- HAZARDS LINE 296-4692.
- SQG HOTLINE (for information on disposal of small quantities of hazardous waste generated by businesses) 296-3976.
- Poison Center at Children's Orthopedic Hospital: 526-2121 or 1-800-732-6985.
- Washington State Department of Ecology Recycling information line: 1-800-RECYCLE.
- Hazardous Substance Hotline: 1-800-633-7585. King County Cooperative Extension Service call 296-3900. You can talk to a Master Gardener by calling 296-3440. You can listen to recorded to information by calling 296-DIAL.
- Washington Toxics Coalition 632-1545. It has fact sheets on alternatives to pesticides and toxic household products and will answer questions.
- Check your local library or bookstore for information on non-toxic products, integrated pest management, and other safe alternatives to household hazardous products.

Printed on recycled paper
November 1993

This brochure is a product of the Local Hazardous Waste Management Program

King County Solid Waste Division

HOUSEHOLD HAZARDOUS PRODUCTS

- SAFE USE
- RE-USE
- REDUCTION
- SAFE DISPOSAL

Sorting It Out Together

What's all the Fuss About Household Hazardous Products?

Many household products contain hazardous chemicals which can harm our environment and our health when used improperly. When we throw them away, the risks aren't gone. If washed down the drain, hazardous products can disrupt your septic system, or—if you have sewer service—flow through the sewage treatment plant into Puget Sound. If dumped into storm drains, they may go directly into streams, lakes, and Puget Sound.

Each year an estimated 24 million pounds of household hazardous waste end up in Washington State landfills, where the chemicals can threaten the groundwater and endanger waste handlers.

How Do I Know If a Product is Hazardous?

Check the label. Look for the words caution, warning, danger, poison, corrosive, caustic, volatile, flammable, explosive, or carcinogenic. If you're not sure, call the HAZARDS LINE.

If I Need to Use Hazardous Products, How Can I Use Them Safely?

- Always read labels carefully. If directions are unclear, contact the manufacturer or dealer before using.
- Use only what is needed. Twice as much doesn't mean twice the results.
- Follow the manufacturer's directions.
- Avoid mixing different products unless the product label says it's safe to do so. Mixing can cause explosive or poisonous chemical reactions, or contaminate materials that could otherwise be recycled or re-used.
- Always use hazardous products in well ventilated areas. Wear protective gloves, eyewear, or respirators whenever warranted. Many products have dangerous fumes that can burn your skin or irritate your eyes, nose and throat.
- Keep unused products in their original containers so you'll have the directions and can check the contents in case of an accidental poisoning.
- Store out of reach of children and pets.
- Try to buy the least toxic products available.
- Keep the Poison Center number handy: 526-2121 or 1-800-732-6985.

How Can I Reduce, Re-Use or Recycle Hazardous Products?

Here are some general tips on reducing your use of hazardous products. For more detailed ideas on safer alternatives, call the HAZARDS LINE or see the resource list on the back of this brochure for other sources of information.

- Learn about the many safe alternatives to common household products, and be prepared to use a little more elbow grease. Call agencies listed on the back of this brochure for more information.
- Buy only what you need so you won't have to dispose of hazardous waste.
- Use up products you buy.
- If you can't use them up, give the left-overs (safely packaged) to someone who can.
- Recycle them if possible. Call the HAZARDS LINE if you aren't sure whether they're recyclable or where to take them.
- Avoid aerosol products.
- Use less toxic products when possible.

Safe Disposal—There's No Charge But It's Not Free

We don't charge a fee at the point of collection, because we want to encourage people to bring in polluting and toxic substances. But Seattle and King County residents do pay for the safe disposal of household hazardous waste through their garbage and sewer bills. The cost for providing household hazardous waste collection services currently averages $78 per vehicle.

You might be interested in the cost of safe disposal for some common products:

- A gallon of oil-based paint costs $6.25 for safe disposal. In an average year, we collect 71,000 gallons from King County residents.
- A gallon of latex paint costs $4.90 for safe disposal. We collect 30,000 gallons a year.
- A gallon of solvent costs $3.20 for safe disposal. We collect nearly 20,000 gallons a year.
- A pound of aerosol cleaners, pesticides, or paints costs $6.74 for safe disposal. We collect over 17,000 pounds a year.

You can see that being careful about household hazardous waste saves money along with protecting the environment and your health.

Please take the hazardous waste you can't reduce, re-use, or recycle to a hazardous waste facility.

King County residents have a number of options for safe disposal of household hazardous waste. Facilities are open to residents of any incorporated or unincorporated area in the county:

- **King County Wastemobile**
  The Wastemobile visits about 24 locations around the county each year, collecting residential hazardous waste. Watch your local newspaper for dates when it will be near you, or call the HAZARDS LINE for a schedule.
- **Seattle South Haz Shed** (located at 8100–2nd Avenue South, near the South Transfer Station)
  The Haz Shed also collects only residential hazardous waste. Call the HAZARDS LINE for days and hours of operation.
- **Used Oil Collection Sites**
  Used oil collection tanks will soon be available in several suburban cities and unincorporated areas of King County. The City of Seattle already has several sites. Call the HAZARDS LINE for the location nearest to you.
- **Private businesses** also offer household hazardous waste and used oil collection. Call 1-800-RECYCLE or the HAZARDS LINE for a location near you.

Checklist of Materials Accepted at Household Hazardous Waste Collection Facilities

- Drain cleaner
- Oven cleaner
- Toilet cleaner
- Metal cleaner
- Rug cleaner
- Spot remover
- Bleach
- Ammonia
- Pool chemicals
- Corrosive chemicals
- Acids
- Moth crystals
- Photo chemicals
- Pesticides
- Herbicides
- Flea products
- Paint, varnish, stain
- Brush cleaner
- Paint thinner
- Paint remover
- Solvents
- Rust remover
- Wood preservative
- Gasoline
- Used motor oil*
- Transmission oil
- Gear oil
- Antifreeze
- Brake fluid
- Kerosene
- White gas
- BBQ lighter fluid

If you're using environmentally friendly brands of these products, you can put leftovers in the trash instead of bringing them to the Wastemobile.

**Remember not to mix motor oil with other automotive products.*

Items Not Accepted

- Household batteries
- Biological waste
- Empty aerosol cans
- Empty paint cans or paint brushes
- Any other empty containers
- Business or commercial hazardous waste
- Radioactive material
- Fluorescent light bulbs
- Incandescent light bulbs
- Oil filters
- Explosives
- Asbestos

Call the HAZARDS LINE for safe disposal alternatives.

EDMONDS

EDMONDS, WASHINGTON DECEMBER, 1988

BROCHURE PRODUCED BY

SARAH BARTON

Secondary Wastewater Treatment Plant

THE INSIDE STORY

THE INSIDE STORY

CREDITS

Plant Owner
City of Edmonds
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Larry S. Naughten
Edmonds City Council
Stephen Dwyer, Jo-Anne Jaech, (Lloyd Ostrom), Bill Kasper, Laura Hall, Jack Wilson, John Nordquist, Roger Hertrich
Community Services Director
Peter Hahn
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Administrative Services Director
Art Housler
Participating Agencies
City of Mountlake Terrace
Olympic View Water and Sewer District
Town of Woodway
City of Lynnwood
Ronald Sewer District
Citizen's Advisory Committee for Edmonds Secondary Treatment
Edmonds Art Commission
Edmonds Architectural Design Board

Financial Assistance
Department of Ecology state grant
EPA federal grant
Design Engineer
CWC-HDR, Inc.

Cover: Perspective view of public area. Photograph of 1/25 scale model of wastewater treatment plant looking southeast from Dayton Street and SR 104.

CONTENTS

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Special Collections, University of Washington Libraries; Seattle Aquarium; Linda McCrystal; City of Edmonds; Valdis Zarins; Edmonds Museum; The Edmonds Paper; CWC-HDR, Inc.; Arden Enterprises; Chris J. Roberts

WHY
is the treatment plant where it is?

Edmonds treats its sewage near the heart of the city—at the junction of two of its busiest highways. It was not always located on a well-travelled path, but was originally just on the downhill route to Puget Sound. In 1977 the state constructed a new limited access freeway on the west property line, and in 1981 the modern Harbor Square mall was constructed. Sewage treatment was suddenly at the front door of this growing community.

In 1985, legal and practical requirements for more treatment forced the city to plan for major plant improvements. In response to the federal Clean Water Act, the Washington state Department of Ecology issued an order to provide secondary treatment. The cost of the proposed facilities was breathtaking, if no help were to come from the state or federal government. The significance of the project stimulated thinking that spending that much money could also result in relocation of the plant, or the diversion of its flow to Seattle Metro. Locating the facility and mitigating its impacts proved to be core issues in the planning process.

In 1985, Culp, Wesner, Culp Engineers (CWC) began preparation of a plan to provide secondary treatment for Edmonds and surrounding communities. They started by reviewing earlier studies and even considered the option of diverting all the flow to Seattle Metro in order to eliminate the need for a local plant. This option proved to be neither politically nor financially achievable. CWC found that the existing site was less expensive and more practical than other locations. It would cause less community disruption and require no legal battles to acquire property. Most importantly, location of the plant at the existing site would shortcut potential delays and make it possible to meet the compliance date of April 1, 1991. The City Council continued to question the desirability and practicality of locating a wastewater treatment plant in the middle of a residential and commercial area of a waterfront city having a strong base in tourism. One City Council member described the situation as "having a toilet in your living room."

Another site was suggested on Pine Street which was less than 2000 feet south of the existing site, but which would remove the the potentially offensive utility from the community's doorstep. Ultimately, the issue of location was settled by mail surveys and a huge public turnout at a special public meeting unanimously supporting the existing site. Even adjacent property owners preferred the utility to high density residential or commercial development which might increase traffic and block ocean views of the Sound.

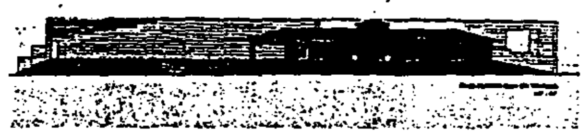
A Citizen's Advisory Committee was appointed by the Mayor to provide input to the design team.

The best of two worlds, the city will be enhanced aesthetically and functionally.

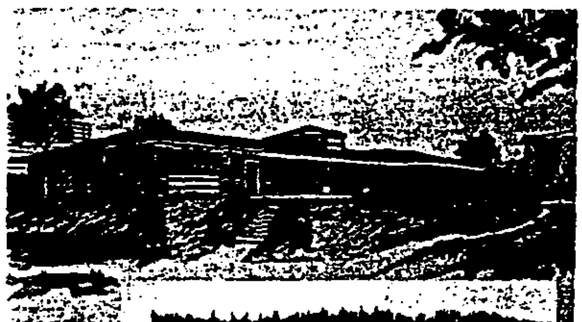
Edmonds City Council members who approved the Secondary Wastewater Treatment Facility in 1987. Left to right: Jack Wilson, Lloyd Ostrom, John Nordquist, Stephen Dwyer, Jo-Anne Jaech, Mayor Larry S. Naughten, Laura Hall.

Recognizing the impacts of the plant at this central location, special attention was given to appearance, noise, odor and construction disruption. A Citizen's Advisory Committee, representing citizens, businesses and the main participating agencies, was appointed by the Mayor to provide planning input to the design team. This practical group felt that if the plant had to be built, it should be done right. Attention to the needs of the community up front did not have to add much to the overall facility cost. The Arts Commission also contributed to the design and held a competition for a key water feature at the corner of Dayton and SR 104. The design modifications initiated by these groups added less than 1% to the overall project cost and made a significant difference to the public perception of the facility.

The end result will be ready in 1991. All potentially offensive areas will be enclosed and all gas byproducts will be treated to remove most odors. Sludge byproducts will be burned, just as they are now. More emission control equipment will be used so that the current steam plume will be usually invisible. Noise will be reduced by enclosing and acoustically treating all areas of motion and noise production. Although much of the facility will be covered, the site will be inviting with paths and public plazas and landscaping. A sheltered area or pergola on the cover above the final clarifier provides a vantage point for pedestrians to rest between the waterfront and downtown. The surfaces of the buildings and walls will be treated with grooves and stepped blue tiles, to reduce the apparent massiveness. Roof lines will be clean and free from random vents and industrial equipment. The northwest corner will feature a waterwork by artist Valdis Zarins.



Clearly, this project offers the best of all worlds. The city will be enhanced aesthetically and functionally. The secondary treatment facility will be a good neighbor and a useful utility. The health of Puget Sound and its residents will be maintained.

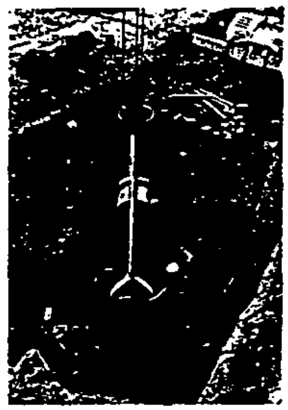


FROM WOODEN TROUGHS TO MILES OF SEWER PIPES

In 1865, when Seattle had a population of 3000, the Board of Public Works built wood-lined troughs to transport sewage to Elliott Bay. After an epidemic of typhoid fever and diphtheria in 1875, planning was begun to lay sewer pipe under the roads.

Almost everybody contributes to the wastewater discharge of cities. Even households on septic systems use public sewage systems at work, school and away from home. Material pumped out of septic tanks is also disposed of at sewage treatment plants.

Until 1950 the sewage treatment systems built along Puget Sound consisted of pipes to collect effluent from homes which was then transported and discharged without treatment directly to a waterbody. The underlying thought was that "dilution is the solution to pollution." Because the volume of the sewage was small compared to the volume of water in Puget Sound, it was assumed that there was little impact. As population grew in the Puget Sound basin, the impacts of sewage disposal became more apparent. Primary treatment plants were built to remove some of the pollutants before discharge to the Sound.

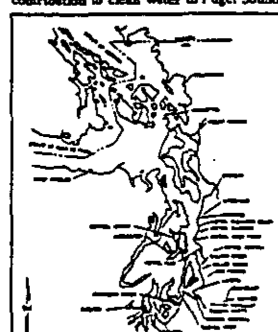


The City of Edmonds built its original primary treatment plant on the existing site in 1957. It was expanded in 1959 after entering into agreements with Mountlake Terrace and the Ronald Sewer District for joint processing of sewage. In 1967, another major plant expansion took place when the service area within Edmonds expanded to serve about 76,000 people. The design capacity of the plant was 7.0 million gallons per day.

The Federal Water Pollution Control Act of 1972 required all municipal plants in existence in 1977 to install secondary treatment. Secondary treatment involves aerating and growing bacteria to biologically treat the wastewater and removes about 85-95 percent of conventional pollutants. In 1977, the regulation was amended to allow waivers for treatment plants that discharge into marine waters. Many Puget Sound cities applied for these waivers. After 5 years of fighting for exemption, the City of Edmonds and all other communities were ordered by the Department of Ecology under the Clean Water Act to provide secondary treatment in order to protect water quality.

There are approximately 110 municipal treatment plants in the Puget Sound basin, and of these, 25 are still using primary treatment. Thirteen of these plants are expected to achieve secondary treatment by the end of 1989 including Des Moines, Hartstene, Lakota, Langley, Manchester, Mukilteo, Penn Cove, Port Townsend, Southwest Suburban Sewer District, Steilacoom and Tacoma. The remaining 12 plants (including those at Anacortes, Bellingham, Edmonds, Lynnwood, Metro, Port Angeles, Skagit County and Tacoma) are expected to achieve secondary treatment by the early 1990's with the exception of West Point in 1996.

The City of Edmonds expects to spend about $34 million to complete its 9.1 million gallon per day secondary treatment facility by 1991. It will be able to serve about 101,000 people. This will increase the average sewer bill from about $7 now to about $18 monthly by 1990. The City of Edmonds held two hearings and sent a mailout to all ratepayers as part of its continuing public education program. Comparable sewer rates in the Puget Sound area range from $15 to $25 monthly. Secondary treatment will make a major contribution to clean water in Puget Sound.



MAJOR SECONDARY TREATMENT PLANT LOCATIONS IN PUGET SOUND

Secondary treatment removes pollutants but . . .

The good news is that treatment of the Edmonds area sewage provides cleaner water in Puget Sound. But the major consequence of removing more material from the water is that you end up with more sludge for disposal. Sludge is the semi-solid matter that settles out in the treatment process. Right now, Edmonds removes about 800 tons of sludge per year with primary treatment. With secondary treatment, the sludge production will increase to 1500 tons per year at today's population. At ultimate plant capacity with increased population the sludge output will be 2700 tons per year.

. . . here comes the sludge!

Where all this sludge goes—or should go—is a growing concern. In the 1960's, Metro treated the sewage, settled out the sludge and dumped it right in the Sound. This method is still used in New York and in British Columbia. There are several other options for sludge management including landfilling, incineration, composting and forest fertilization. Thus, depending on your point of view, sludge is a growing problem or a growing resource in Washington.

Treating sludge as a resource demands a considerable degree of care. Because sludge comes from human waste, it contains microorganisms that can cause disease. In addition, sludge may contain toxic substances including heavy metals and toxic organics put into sewage systems at residences, commercial operations and industrial plants. For example, cadmium is a heavy metal used in a number of industrial processes that often finds its way into urban sewer systems. Cadmium can cause serious kidney damage in humans.

Analysis of the sludge in Edmonds shows very small concentrations of hazardous materials. Edmonds investigated every known sludge disposal scheme. After rejections from nearby county health officials for land disposal, the only remaining practical option was incineration and ash disposal in a landfill. Incineration evaporates the moisture from the sludge and burns the organic material. The remains are about 8 percent of the original volume and are hauled away as ash. The incinerator exhaust must comply with EPA regulations and the Puget Sound Air Quality Authority. The exhaust will pass through scrubbers which clean the exhaust and cool it. The final exhaust will be clean and invisible except during high humidity, when a vapor plume may be visible.

THE SIGHTS OF PROGRESS

The wastewater treatment plant project is on a confined site. The structures will literally fill the property from boundary to boundary leaving little space for the contractor to set up and to stage construction activities. Action will be intense and busy. There will be disruption to the community, but many efforts have been made to anticipate and minimize the problems.

What will the site look like during construction?

The contractor will build an 8-foot high wooden fence along Dayton Street and along SR 104 for security purposes and to block the view from passing traffic. The Arts Commission will work with the Centennial Committe and school children to design a mural focusing on clean water and the environment.

What action will we see around the site?

In the beginning, the contractor will build the barrier and begin to construct the facilities along Second Avenue. In mid-1989, he will construct a pipe across SR 104 to Dayton Street near the bank. Other disruption to traffic will be noticeable at Second and Dayton where the inlet sewers will be rerouted. Alder Street will be affected by the construction of two sewers, one from Metro and one from Mountlake Terrace, as well as a water line. Also at this time, a connection pipe to the outfall or underwater discharge pipe will be constructed in the beach area near the fishing pier. Then the off-site activity will diminish, other than the removal of excess earth and debris from the site.

What about construction access and traffic?

Concrete and other materials will be imported to the site. Typically, there will be 15-20 trucks per day coming to and leaving the site. On some days, there may be as many as 50 trucks. About 50,000 cubic yards of earth will be excavated. Usually there will be about 80 construction workers present. They are all required to park somewhere other than on city streets, but their coming to work and going home may cause minor traffic delays.

The contractor's main access is along SR 104, where he will construct an entry near the south portion of the site. This will keep heavy truck traffic off the city streets. If he decides to use the highway right-of-way on the west side of SR 104, he will set up a traffic-control person to guide traffic crossing SR 104. He will probably use the ferry car-loading lane for construction deliveries.

All of Second Avenue will be closed to traffic during the plant construction. Traffic access to the residences on Alder and Second Avenue will be maintained.

What precautions will be taken?

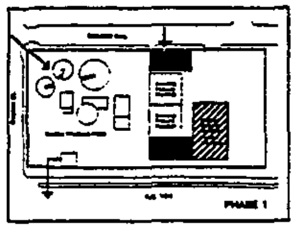
Noise and dust will be produced, but there are limits set on the contractor by city ordinance to restrict noise and length of construction activity. All engines will have residential grade mufflers. In addition, the City of Edmonds will continue its intensive public education program to let adjacent residents and ratepayers know what is going on through utility bill stuffers, door hangers, and newspaper ads and articles.

Juggling to build *as treatment continues*

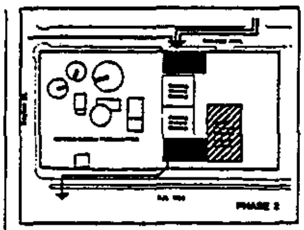
Edmonds must treat sewage throughout the construction period. Considering that the existing plant process units now occupy most of the site, and that the future process unit will fill the entire site, construction will be a stepped-removal of the old to make way for the new. When finished, only two concrete basins from the existing plant will be a part of the new facility.

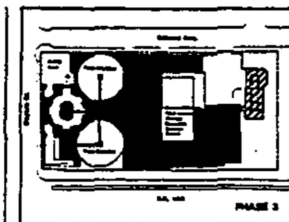
The destruct-construct sequence must be carefully planned so there is always adequate treatment and the contractor does not build himself into a corner. The existing plant is a complex jumble of units which were built over several years. Although awkward for day-to-day operation, this diversity is advantageous for the construction process.

First, a new pumping station will be constructed to lift all the sewage high enough to let it reach the highest basin on the site, and a third basin will be built to replace others that will be removed (Phase 1). Before these new facilities are used, careful scheduling of construction of incoming and outgoing pipelines is necessary. The existing outgoing sewer is arranged to allow backup of rainfall runoff if the storm sewer becomes full. In the future, that interconnection will no longer be available. This intertie allows the contractor to work on new connections to the outgoing sewer while the sewage flows through the storm sewer. After the contractor completes the connection to the outgoing sewer, there will be no way to discharge sewage from the process units on the north end of the plant, so they will be abandoned. At this time they will be demolished to make way for the new plant elements.



When the existing plant is demolished, the old sludge processing components will also be demolished (Phase 2). But the new sludge handling components will not be ready yet. Until the new incineration is complete, sludge will be hauled to Metro's Renton Sewage Treatment Plant. When the new incinerator is complete, it will be used. Meanwhile the secondary treatment units will continue to be constructed. The operation control building will be delayed until the last, because it sits in the main construction accessway (Phase 3). When the operation control building construction begins, all construction access will be routed along Dayton to Second Avenue. By 1990, all permits for the underwater segment of the outfall should be available.





All of the process components will be completed by April 1991. While the contractor proceeds with the landscaping, the operation control building and all other nonfunctional construction, startup and performance demonstration tests will be conducted to prove the new plant does what it is supposed to do. By fall of 1992, the entire plant will be complete and the City of Edmonds will have completed its largest and most complex public works project ever.

What actually happens inside?

Sewage treatment processes include physical, chemical and biological processes to remove and stabilize the pollutants from the water. The purified water must meet stringent quality standards before discharge to Puget Sound.

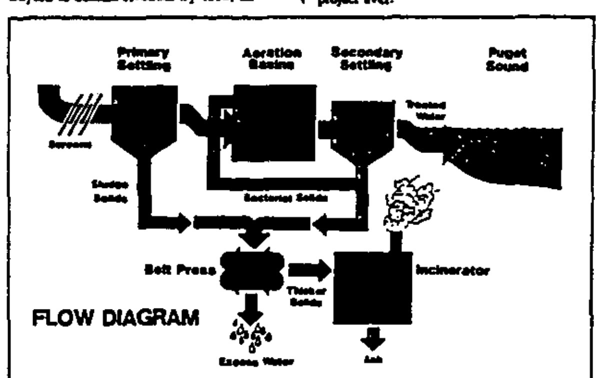
1 First, coarse debris is removed from the sewage to minimize maintenance of plant process equipment. Then the sewage enters settling basins where most of the sewage solids settle out. About one-third of the organics are removed in this primary step.

2 The clarified sewage is further processed in an aerated basin where large quantities of common soil bacteria are grown to remove the remaining biodegradable organics. High efficiency porous-stone diffusers are used to supply organics to the bacteria.

3 The bacteria are removed in a second settling basin and the treated water is disinfected with chlorine before discharge to the underwater pipe in Puget Sound. The underwater pipe or outfall is specially designed to jet-mix the treated water with the salt water of the Sound.

4 The solids removed in the two settling basins are processed to concentrate the solids and remove excess water by adding special polymers and squeezing the solids between two cloth sheets (belt press).

5 The dewatered sludge is then burned in a fluid-bed incinerator. The ash is cooled with water and stored in a large dumpster before hauling to a landfill.



DOLLARS & CENTS

for Edmonds' largest capital project ever

The wastewater treatment plant construction project is expensive. The cost to plan the construction, design the facilities, construct the plant and to coordinate and administer all the players necessary is $34 million. The largest portion of the cost is the construction, representing 75% of the total project cost.

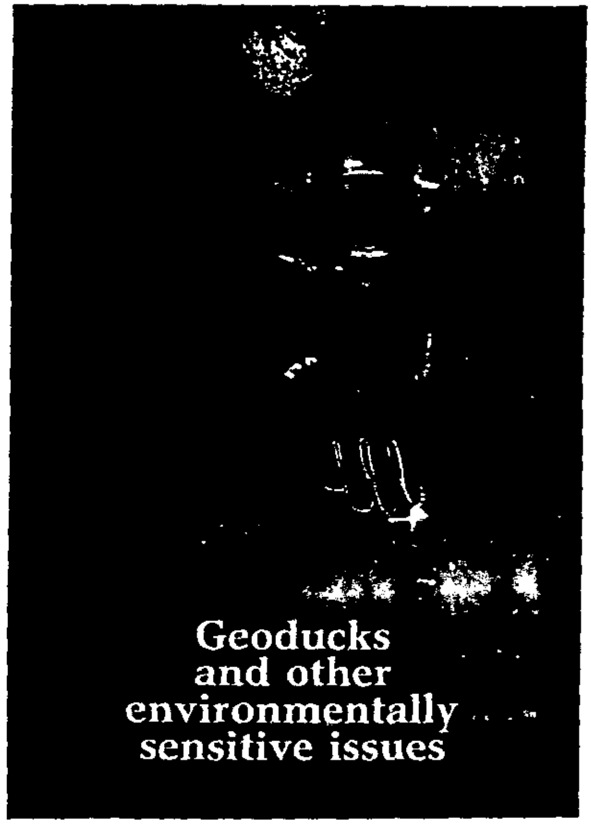
But the construction cost is not the only cost. The cost to operate and maintain the new plant each year is expected to be $1,440,000, up from the present $500,000. Most of this increase is due to increased staffing and energy consumption.

Fortunately, the city obtained portions of the dwindling supply of government subsidies for this project. The state of Washington's Department of Ecology provided $1,520,000 in grants and EPA will reimburse the city for about 45% of the construction phase costs. The remaining capital costs and all of the operating costs must be financed locally. The City of Edmonds will finance its share by 20-year bonds sold in September of 1988 at a favorable interest rate due to the city's strong financial position.

There are five other agencies participating in the capital costs as well as the ongoing costs of the treatment facility. They are Mountlake Terrace, Ronald Sewer District, Lynnwood, Woodway, and Olympic View Water District. The sharing of the capital costs by each of the users is in proportion to the capacity each plans to use. Edmonds' share of the capacity is 50.78 percent. The total local share of the capital costs is about $23,000,000, which makes the Edmonds share about $11,500,000. Edmonds paid part of these costs from reserves. The remaining costs are to be financed from customer sewer service charge revenues. An average customer will pay $18.10 per month. Without the grant funds, a typical customer would have paid over $22.00 per month.

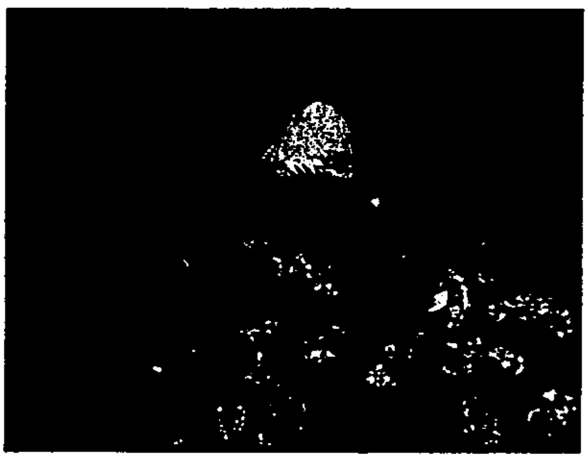
QUESTION:

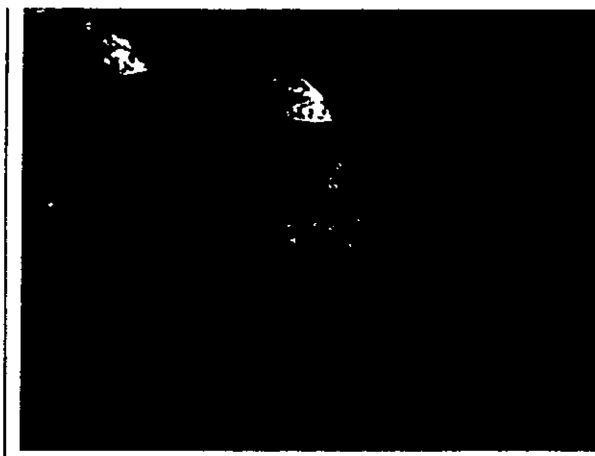
What do wetlands, geoducks and scuba divers have to do with wastewater treatment?



ANSWER:

They were all the focus of studies and mitigation measures designed to minimize the environmental and recreational impacts of the treatment plant and its outfall to Puget Sound.





Wetlands are highly productive ecological systems which are becoming increasingly scarce due to encroaching development. These areas are rich in aquatic insects, small mammals, amphibians and a variety of birds including red-winged blackbirds, mallards, teals, virginia rails, swallows, fly catchers, long-billed marsh wrens and yellow-rumped warblers. Marshes also attract raptors such as eagles and hawks which feed on the smaller animals.

Wetlands are fragile systems whose protection is mandated by state and federal law. Consequently, much attention was paid to preserving the 30-acre portion of the Edmonds marsh which adjoins the southern edge of the treatment plant site. During the planning stage, a study of the marsh was conducted which identified a number of mitigation measures that have been incorporated into the final project. These include prohibiting any construction activity within the marsh, keeping all permanent facilities at least 33 feet away, minimizing stormwater and sediment runoff, and making sure that construction dewatering activities do not dry out portions of the marsh. At the completion of the project, the southern portion of the site will be landscaped with wetland-compatible plants to create a parklike buffer between the treatment plant and the marsh.

Environmental concerns also extended to Puget Sound, where a new underwater outfall or pipe will be constructed to supplement the capacity of the existing outfall. In the long term, the impacts of this project will be very beneficial as a higher quality water will be discharged to the Sound and greater dilution and mixing of the effluent will be achieved by using two pipelines. However, there were a number of environmental and recreational issues that had to be addressed to minimize potential adverse impacts from construction activities.

The first concern was that the new outfall would pass through an experimental, artificial reef that had been installed to enhance habitat for aquatic creatures. This facility, which is of interest to local fisheries and scuba divers, consists of tires configured in a variety of geometric arrangements. The best route for the outfall was selected by a biologist who surveyed the reef and marked a course that would not disrupt any productive areas. He also developed recommendations for relocating any tire structures that might be encountered during construction.

A second environmental concern, raised by the Washington Department of Fisheries, was the impact of the outfall construction on geoducks. Geoducks are large edible clams that live about 30 inches or more below the sand's surface. They are the largest bivalves in Puget Sound, averaging three to six pounds. State regulations required Edmonds to inventory the geoduck population and to pay for geoducks damaged or disrupted by installation of the new outfall pipe. A survey of the outfall route estimated that 375 geoducks might be damaged by the project, which will cost the City a mitigation fee of $138 under the state's formula. The survey also found that the proposed outfall route had the least impact on eel grass, an important aquatic habitat.

Careful attention to environmental issues has enhanced the value of the project for Puget Sound and the Edmonds community.

Hazardous Waste:

More common than you think.

It's time to get serious about hazardous waste.

Hazardous wastes are not just radioactive drums stored at Hanford. They are wastes your business or organization may generate every day.... spent solvents, ink sludges, heavy metals.

Hazardous wastes pose real threats to real people... cancer, nerve damage, polluted drinking water. They don't belong down the drain or in the dumpster.

That's why hazardous waste regulations exist. They are important. It's time to get serious about hazardous waste.

More reasons?

- ✔ You are legally and financially responsible for the proper handling of your wastes.
- ✔ You'll maintain your ability to get insurance or bank loans by correctly managing your wastes.
- ✔ You will be protecting yourself and others from serious illnesses and injury.
- ✔ You minimize the chances of not being able to sell your property because of contamination.
- ✔ You may save money in the long run by finding ways to reduce or recycle your wastes.
- ✔ You will be joining other businesses that believe Washington State stands for quality products and services and a clean, healthy environment.

Today, an important part of doing business includes determining if you generate hazardous waste. The citizens of Washington State are relying on your business to handle hazardous wastes in a safe manner.

The Department of Ecology (Ecology) wants to help you understand and comply with the law. We're here to answer your questions. This Fact Sheet will start you off in the right direction.

WASHINGTON STATE DEPARTMENT OF ECOLOGY

Do you generate hazardous waste?

If your business is listed in the following table, you probably generate hazardous waste.

To be absolutely sure, you can talk with a Hazardous Waste Specialist at the nearest Department of Ecology regional office. Ask them if there is a Hazardous Waste Do's and Don'ts Fact Sheet for your particular industry.

Common Hazardous Wastes

Business (or Organization)	Acids/Bases	Cyanide Wastes	Dry Cleaning Wastes	Formaldehyde	Heavy Metals	Ignitable Wastes	Ink Sludges	Lead-acid Batteries	Pesticides	Preserving Agents	Reactives	Spent Solvents	Plating Wastes
Automotive Repair	✔	✔			✔	✔		✔				✔	
Building Cleaning and Maintenance	✔											✔	
Chemical Manufacturers	✔	✔			✔	✔					✔	✔	
Cleaning Agents and Cosmetics	✔				✔	✔			✔			✔	
Construction	✔					✔						✔	
Dry Cleaning			✔									✔	
Educational and Vocational Shops	✔								✔		✔	✔	
Electroplating	✔	✔			✔	✔					✔	✔	✔
Equipment Repair	✔					✔						✔	
Formulators	✔	✔			✔	✔			✔		✔	✔	
Funeral Services				✔						✔		✔	
Furniture/Wood Manufacturing and Refinishing						✔						✔	
Laboratories	✔			✔	✔	✔			✔	✔	✔	✔	
Motor Freight Terminals & RR Transportation	✔	✔			✔	✔		✔				✔	
Pesticide Application					✔				✔			✔	
Photofinishing				✔	✔							✔	
Printing and Graphic Arts	✔				✔		✔					✔	✔
Wood Preserving									✔	✔			

Even small amounts of hazardous waste are regulated!

All businesses must identify their hazardous wastes (regardless of how little they produce) and determine what they must do under the law. The more hazardous waste you generate, the more requirements you have under the state's Dangerous Waste Regulations (Chapter 173-303 WAC).

For a quick summary of the regulations for hazardous waste generators, large or small, ask the nearest Ecology regional office for a copy of the **Hazardous Waste Generator Checklist**.

Hazardous wastes fall into many cagetories!

Some wastes are specifically listed in the Dangerous Waste Regulations as hazardous. Other wastes may be regulated because they exhibit certain hazardous waste characteristics (ignitability, corrosivity, reactivity, toxicity) or because they are waste mixtures which meet the criteria of toxicity, persistence or carcinogenicity. Even unused chemical products can be hazardous wastes if you decide to dispose of them.

	Description	Examples
Listed Wastes		
Discarded Chemical Products	An unused, discarded, pure substance that has only one active ingredient, if listed on the Discarded Chemical Products List.	• many pesticides • formaldehyde • unrinsed containers
Dangerous Waste Sources	Hazardous wastes from specific industry sources (such as plating) and generic activities (such as degreasing operations) are listed in the Dangerous Waste Sources List.	• spent solvents used in degreasing • plating wastes • many wastewater treatment sludges
Characteristic Wastes		
Ignitable	Liquids with a flash point less than 140° F, solids that are capable of causing a fire (through friction, absorption of moisture, or spontaneous chemical change), or any ignitable compressed gas.	• spent solvents • solvent still bottoms • ignitable paint wastes • dry cleaning wastes • waste inks containing flammable solvents
Corrosive	Substances with a pH less than or equal to 2, or greater than or equal to 12.5. Liquids that corrode steel at a rate greater than 0.25 inches per year are also considered corrosive.	• acid from lead-acid batteries • plating wastes • waste sodium hydroxide granules
Reactive	Substances that are very unstable and rapidly, or violently change when mixed with or exposed to water, heat, pressure, or other materials. These substances, especially cyanide or sulfide compounds, may generate toxic gases under mildly acidic or alkaline conditions.	• chromic acids • cyanide wastes • perchlorates • peroxides
Toxicity	Wastes which, after testing through the Toxicity Characteristic Leaching Procedure (TCLP) by a professional laboratory, are found to contain high concentrations of certain pesticides, organic chemicals or heavy metals.	• photographic processing wastes (containing silver) • ink sludges • discarded pesticide products • paint sludge from the recycling of spent solvents
Criteria Wastes		
Toxic	Contains chemical constituents that are toxic to fish and other animals.	• paint booth wash water • oil and transmission fluid • asphalt
Persistent	Contains organic compounds, usually with fluorine, chlorine, bromine or iodine, that are persistent in the environment.	• metal cutting oil • methylene chloride and 1,1,1 trichloroethane
Carcinogenic	Contains substances that are known or suspected to cause cancer.	• oil with PCBs • polyurethane resins

Why not reduce and recycle your wastes?

Waste reduction and recycling techniques work for all types and sizes of businesses. Emphasizing waste reduction and recycling in your business can help you:

- ✔ Avoid costly waste transportation and disposal costs,
- ✔ Reduce regulatory requirements resulting from waste generation,
- ✔ Reduce operation costs by using less raw materials,
- ✔ Improve workplace safety and health conditions, and
- ✔ Improve the quality of our environment.

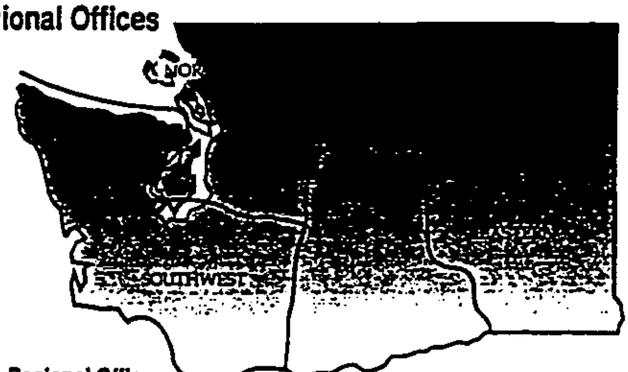
For more information on waste reduction and recycling techniques, call Ecology's Waste Reduction Information Line toll-free at **1-800-RECYCLE**.

Take the next step!

If you think your business generates hazardous waste, contact your nearest Ecology regional office to request other information that will help you understand and comply with hazardous waste regulations:

- ➥ **Hazardous Waste Do's and Don'ts Fact Sheets** for certain industries, with practical advice for handling different wastes,
- ➥ **Hazardous Waste Generator Checklist** for a quick summary of your legal responsibilities as a generator of hazardous waste,
- ➥ **Checklist Fact Sheets** that describe each section of the Hazardous Waste Generator Checklist in more detail,
- ➥ **Services Directory** to help you find waste haulers, laboratories, recyclers and other services,
- ➥ **Glossary** of key terms,
- ➥ **Subject Index** that provides you with references and contacts for many of your hazardous waste questions,
- ➥ **Guide for Hazardous Waste Generators**, and
- ➥ **Dangerous Waste Regulations** (Chapter 173-303 WAC).

Department of Ecology Regional Offices



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12a

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e this Fact Sheet identifies some of the wastes and esses covered by the generator requirements of the gerous Waste Regulations (Chapter 173-303 WAC), it not replace them. Always refer to the regulations selves for more detail or call a hazardous waste ialist at your nearest Ecology regional office.

1 Identify your waste and generator requirements.

I didn't realize I could be generating hazardous waste!

You're not alone! Many businesses, educational institutions and municipalities of all sizes generate hazardous waste on a regular basis but don't realize it. If hazardous wastes are not identified and managed according to state and federal regulations, the results could be employee injuries, environmental damage, and financial ruin for your business. This Checklist Fact Sheet will help you determine if you are a generator of hazardous waste subject to Washington's Dangerous Waste Regulations (Chapter 173-303 WAC).

True or False?

This section highlights some common misconceptions about what is and is not a waste. In general, a waste is any material you intend to discard or burn (unless it's a fuel).

- It's not my waste because I lease/rent the parts cleaner and cleaning compound. The company supplying the original material or the recycler who returns clean product to me is responsible for the waste.

  FALSE. The generator of a hazardous waste is the person whose actions or business operations cause the clean material to become contaminated and unusable for its intended purpose.

- It's not my waste because someone else dumped it on my property or a previous owner or renter left waste behind.

  FALSE. If the waste is on your property, you are responsible for ensuring that it is properly handled and disposed of. You cannot neglect it and expect someone else to handle the problem.

- It really isn't a waste because I recycle the material on my premises with my own recycling equipment.

  FALSE. The material has been rendered unusable until recycling makes it usable again. During the time it is considered a waste (prior to recycling), you must determine if it is a dangerous waste, and if so, handle it according to the regulations.

What do I need to do?

✔ Determine whether any of your wastes have been designated as "hazardous" wastes.

➡ Answer the questions in Part A of this Fact Sheet.

✔ Determine what your generator requirements are by calculating how much hazardous waste you generate per month and/or accumulate on the premises at any one time.

➡ Answer the questions in Part B of this Fact Sheet.

WASHINGTON STATE DEPARTMENT OF ECOLOGY

PART A: Do you have hazardous wastes?

Answer either "yes" or "no" to all questions in the left margin for each of your wastes. Don't skip any questions on the following pages, even if you find your waste in one of the categories. Examples of hazardous wastes in each category are provided in tables under each question.

Keep track of the following information for each of your wastes:

- **Dangerous Waste Number:** important for filing reports; there may be more than one number per waste,
- **Designation:** DW (Dangerous Waste) or EHW (Extremely Hazardous Waste), and
- **Quantity Exclusion Limit:** the QEL is used to determine the extent of your regulatory requirements, as you'll see in Part B of this Fact Sheet.

Note: The footnotes referenced on the following pages are found on the last page.

Is your waste on the Discarded Chemical Products List?

Examples

- Unused or unwanted products with one active ingredient that you plan to discard, such as acetone or xylene
- Contaminated soil, water, or absorbent from the cleanup of a spill of one of these products
- Many pesticide containers that haven't been triple-rinsed

Definition

Your waste is a hazardous, discarded chemical product if it is found on the list in the regulations (Chapter 173-303-9903 WAC) and you discard or intend to discard your waste.

Dangerous Waste Number, Designation, and QEL

- Dangerous Waste Numbers vary (see the table below for examples and the regulations for a complete list)
- Designation is DW (or EHW[1])
- QEL is 220 pounds (or 2.2 pounds[1])

Discarded Chemical Product Examples

Business (or Organization)	Acetone	Arsenic pentoxide	Carbon tetrachloride	Chlordane	Formaldehyde	Methyl ethyl ketone	Methylene chloride	Methyl parathion	Perchloroethylene	1,1,1-Trichloroethane	Trichloroethylene	Toluene	Xylene
Automotive Repair			✔			✔				✔	✔	✔	
Cleaning Agents and Cosmetics	✔					✔	✔			✔	✔	✔	✔
Construction	✔					✔					✔	✔	✔
Dry Cleaning									✔				
Educational and Vocational Shops	✔		✔			✔	✔			✔	✔	✔	✔
Electroplating	✔		✔			✔	✔			✔	✔		
Formulators	✔	✔		✔		✔		✔	✔		✔	✔	✔
Furniture/Wood Manufacturing & Refinishing	✔					✔	✔					✔	
Laboratories	✔		✔		✔	✔	✔					✔	✔
Pesticide Application		✔		✔				✔	✔				
Printing and Graphic Arts							✔			✔	✔		
Dangerous Waste Number	U002	P011	U211	U036	U122	U159	U080	P071	U210	U226	U228	U220	U239

Is your waste on the Dangerous Waste Sources List?

Examples

- Spent solvents and still bottoms such as:
  - PERC (Perchloroethylene) dry cleaning solvent
  - TCE (Trichloroethylene) used for parts/equipment cleaning
  - Some waste inks from printing operations
- Wastewater treatment sludges from electroplating operations

Definition

Your waste is a listed dangerous waste source if it is found on the list in the regulations (Chapter 173-303-9904 WAC).

Dangerous Waste Number, Designation, and QEL

- Dangerous Waste Numbers vary (see the table below for examples and the regulations for a complete list)
- Designation is DW (or EHW[1])
- QEL is 220 pounds (or 2.2 pounds[1])

Dangerous Waste Source Examples

Business (or Organization)	Spent acetone	Spent carbon tetrachloride	Spent chlorinated fluorocarbons	Spent ethyl benzene	Ink formulation washes/sludges	Spent methyl ethyl ketone	Spent methylene chloride	Pentachlorophenol wastewater sludge	Spent perchloroethylene	Spent 1,1,1-Trichloroethane	Spent trichloroethylene	Spent toluene	Spent xylene
Automotive Repair	✔	✔		✔		✔	✔			✔	✔	✔	✔
Chemical Manufacturers	✔					✔	✔			✔	✔	✔	✔
Cleaning Agents and Cosmetics							✔			✔		✔	✔
Construction	✔	✔				✔	✔				✔	✔	✔
Dry Cleaning									✔				
Educational and Vocational Shops	✔	✔				✔	✔			✔	✔	✔	✔
Electroplating	✔	✔				✔	✔			✔	✔		
Formulators	✔				✔	✔	✔				✔	✔	✔
Funeral Services			✔										
Furniture/Wood Manufacturing & Refinishing	✔	✔				✔	✔					✔	
Laboratories	✔	✔	✔			✔	✔					✔	✔
Motor Freight Terminals & RR Transportation		✔				✔				✔		✔	
Pesticide Application		✔						✔					✔
Photofinishing											✔		
Printing and Graphic Arts		✔			✔		✔			✔	✔		
Wood Preserving								✔					
Dangerous Waste Number	F003	F001	F001	F003	K086	F005	F001, F002	K001	F001, F002	F001, F002	F001, F002	F005	F003

Is your waste ignitable?

Examples

- Waste solvents and still bottoms from the recovery of these solvents such as degreasers, paint thinners, and alcohols
- Unused paint
- Rags used with certain solvents

Definition

Your waste is an **ignitable** hazardous waste if it is:

- a liquid with a flashpoint of less than 140°F,
- not a liquid and is capable of causing a fire through friction, absorption of moisture, or spontaneous chemical changes,
- an ignitable compressed gas, or
- an oxidizer.

Dangerous Waste Number, Designation, and QEL

- Dangerous Waste Number is D001
- Designation is DW
- QEL is 220 pounds

Ignitable Waste Examples

Business (or Organization)	Butyl alcohol	Ethyl alcohol	Ignitable alcohols	Ignitable degreasers	Ignitable enamel reducers	Isopropyl alcohol	Kerosene	Mineral spirits	Naphtha	Paints	Petroleum distillates	Stoddard solvent	White spirits
Automotive Repair			✔	✔	✔			✔	✔	✔	✔		✔
Chemical Manufacturers		✔					✔						✔
Cleaning Agents and Cosmetics		✔	✔	✔		✔					✔		✔
Construction							✔	✔					
Dry Cleaning												✔	
Educational and Vocational Shops									✔	✔		✔	
Electroplating	✔			✔			✔						✔
Formulators		✔				✔			✔				
Furniture/Wood Manufacutring and Refinishing		✔					✔						✔
Laboratories		✔	✔			✔							
Motor Freight Terminals & RR Transportation				✔							✔		✔
Pesticide Application		✔				✔							
Printing and Graphic Arts		✔				✔							
Dangerous Waste Number	D001 for all ignitable wastes												

Is your waste corrosive?

Examples

- Rust removers
- Etching bath wastes from printing operations
- Electroplating solutions
- Sulfuric acid from spent lead acid batteries

Definition

Your waste is a corrosive hazardous waste if it is:

- aqueous (water-like) with a pH of less than or equal to 2.0 or greater than or equal to 12.5 (pH measures the acidity or alkalinity of a substance),
- a liquid that easily corrodes steel, or
- a solid which, when mixed with an equal weight of water, results in a solution with a pH of less than or equal to 2.0 or greater than or equal to 12.5.

Dangerous Waste Number, Designation and QEL

- Dangerous Waste Number is D002
- Designation is DW
- QEL is 220 pounds

Corrosive Waste Examples

Business (or Organization)	Acetic acid	Ammonium hydroxide	Chromic acid	Hydrobromic acid	Hydrochloric acid	Hydrofluoric acid	Naval jelly	Nitric acid	Perchloric acid	Phosphoric acid	Potassium hydroxide	Sodium hydroxide	Sulfuric acid
Automotive Repair					✔		✔			✔	✔	✔	✔
Chemical Manufacturers		✔	✔	✔	✔			✔		✔	✔	✔	✔
Cleaning Agents and Cosmetics		✔	✔	✔	✔	✔		✔		✔	✔	✔	✔
Construction		✔		✔	✔	✔		✔		✔	✔	✔	✔
Educational and Vocational Shops		✔	✔	✔	✔	✔		✔		✔	✔	✔	✔
Electroplating		✔	✔	✔	✔	✔		✔		✔	✔	✔	✔
Formulators		✔	✔	✔	✔	✔		✔		✔	✔	✔	✔
Laboratories	✔	✔						✔	✔		✔	✔	✔
Motor Freight Terminals & RR Transportation		✔	✔	✔	✔	✔		✔		✔	✔	✔	✔
Printing and Graphic Arts		✔	✔					✔		✔	✔	✔	✔
Dangerous Waste Number	D002 for all Corrosive Wastes												

Is your waste reactive?

Examples
- Ferricyanide bleaching wastes from photofinishing
- Waste inks containing cyanide
- Cyanide solutions used in electroplating
- Crystallized picric acid

Definition
Your waste is reactive hazardous waste if it:
- is normally unstable and readily undergoes violent change without detonating (the extremely rapid decomposition of an explosive material),
- reacts violently, forms potentially explosive mixtures, or generates toxic gases, vapors, or fumes that pose a threat to human health when mixed with water, or
- is a cyanide or sulfide bearing waste.

Dangerous Waste Number, Designation, and QEL
- Dangerous Waste Number is D003
- Designation is DW
- QEL is 220 pounds

Reactive Waste Examples

Business (or Organization)	Chromic acid	Cyanides	Hypochlorites	Lithium batteries	Organic peroxides	Perchlorates	Permanganates	Potassium ferricyanide	Sulfides
Chemical Manufacturers	✔		✔		✔	✔	✔		✔
Electroplating	✔	✔	✔	✔	✔	✔	✔	✔	✔
Formulators			✔		✔	✔	✔		✔
Laboratories	✔	✔	✔	✔	✔	✔	✔	✔	✔
Photofinishing		✔							
Military Establishments				✔					
Dangerous Waste Number	D003 for all Reactive Wastes								

Is your waste hazardous under the Toxicity Characteristic Leaching Procedure (TCLP)?

Examples
- Rinsewater from the cleaning of application equipment used for TCLP pesticides
- Photoprocessing wastewaters containing silver and cadmium
- Lead dross from spent lead-acid batteries
- Printing ink sludges containing chromium or lead

Definition

Your waste is a **toxicity characteristic** hazardous waste if:
- the waste is tested by a qualified laboratory using the Toxicity Characteristic Leaching Procedure (TCLP), and
- one or more of 39 toxic constituents is found in the leachate, and
- the concentration of the toxic constituent is at or above the regulatory level for that constituent.

Dangerous Waste Number, Designation, and QEL
- Dangerous Waste Numbers are found in the Toxicity Characteristics List in the regulations (see the table below for examples and the regulations for a complete list)
- Designation is DW (or EHW[1])
- QEL is 220 pounds.

Toxicity Characteristic Waste Examples

Business (or Organization)	Arsenic	Benzene	Cadmium	Chromium	Carbon tetrachloride	Chloroform	Creosol	Heptachlor	Lead	Mercury	Pentachlorophenol	Silver	2,4 D
Automotive Repair		✔	✔	✔					✔				
Chemical Manufacturers	✔	✔	✔	✔	✔				✔	✔		✔	
Cleaning Agents and Cosmetics								✔					✔
Educational and Vocational Shops		✔	✔	✔	✔	✔			✔				
Electroplating		✔	✔	✔	✔	✔			✔	✔		✔	
Formulators	✔	✔			✔	✔		✔			✔		✔
Furniture/Wood Manufacturing and Refinishing		✔			✔	✔	✔				✔		
Laboratories		✔			✔	✔				✔			
Motor Freight Terminals & RR Transportation		✔		✔	✔	✔			✔				
Pesticide Application	✔	✔		✔	✔			✔					✔
Photofinishing			✔	✔					✔			✔	
Printing and Graphic Arts			✔	✔					✔				
Wood Preserving	✔						✔				✔		
Dangerous Waste Number	D004	D018	D006	D007	D019	D022	D026	D031	D008	D009	D037	D011	D017

Is your waste a criteria waste that is toxic, persistent or carcinogenic?

Examples
- Used antifreeze containing ethylene glycol, water, and additives
- Waste paint mixtures
- Used motor oil contaminated with solvent or carburetor cleaner

Definition
Your waste mixture is a criteria waste if it hasn't been designated as hazardous waste under any of the earlier questions, and after testing by a qualified laboratory[2] you find:
- it falls into a toxic category,
- it contains chemicals that are persistent in the environment,
- it is carcinogenic.

Dangerous Waste Number, Designation, and QEL
- Dangerous Waste Number is:
  - WT01 or WT02 for a toxic mixture,
  - WP01 or WP02 for a persistent mixture,
  - WC01 or WC02 for a carcinogenic mixture.
- Designation is DW (or EHW[1]) depending on the concentration
- QEL is 220 pounds.

Mixture Waste Examples

Business (or Organization)	Used Antifreeze	Contaminated Motor Oil	Paint Booth Washwater	Epoxy Resins	Metal Cutting Oil	Oil with Freon Isopropyl	Chemotherapy Wastes	Oil with PCBs	Polyurethane Resins
Automotive Repair	✔	✔	✔	✔		✔			
Construction	✔	✔	✔					✔	
Educational and Vocational Shops	✔	✔	✔	✔	✔				
Electroplating			✔						
Furniture/Wood Manufacturing and Refinishing			✔	✔					✔
Motor Freight Terminals & RR Transportation	✔	✔	✔						
Pesticide Application		✔							
Laboratories							✔		
Hospitals							✔	✔	
Dangerous Waste Number	WT02	WT02	WT02	WT02	WP02	WP02	WC02	WC02	WC02
	Toxic	Toxic	Toxic	Toxic	Persistent	Persistent	Carcinogenic	Carcinogenic	Carcinogenic

Did you answer "no" to all the questions in Part A?

This waste is probably not regulated as hazardous. But check the regulations and consult with hazardous waste staff at the Department of Ecology to be absolutely sure. Hazardous waste transporters and operators of waste management facilities will often help their customers identify hazardous wastes. Your trade association may be another source of information. Because the Dangerous Waste Regulations are complex, we encourage you to ask for help in this very important first step of waste management.

PART B: What are your generator requirements?

The more waste you generate or accumulate, the more regulatory requirements you must follow. Discover if you are a **regulated generator** (subject to most if not all generator requirements) or if you are a **small quantity generator** (subject to far fewer requirements) by answering all Part B questions below.

Do you have any wastes with a QEL of 220 pounds?

➥ What is the total amount you generate per month of all wastes with a QEL of 220 pounds?

= ________

220 lb.= roughly 

➥ What is the maximum amount on-site at any one time of all wastes with a QEL of 220 pounds?

= ________

If either of these totals exceed 220 pounds, you do **not** qualify for the reduced set of requirements for small quantity generators. **You are a regulated generator.**

Do you have any wastes with a QEL of 2.2 pounds?

➥ What is the total amount you generate per month of all wastes with a QEL of 2.2 pounds?

= ________

2.2 lb.= roughly 

➥ What is the maximum amount on-site at any one time of all wastes with a QEL of 2.2 pounds?

= ________

If either of these totals exceed 2.2 pounds, you do **not** qualify for the reduced set of requirements for small quantity generators. **You are a regulated generator.**

What are your responsibilities?

Small Quantity Generator

✔ Identify your hazardous wastes and keep track of how much you generate or accumulate on the premises each month.

✔ Ensure that your hazardous wastes are treated, recycled, or disposed of on the premises, or off-site (Checklist Fact Sheet 8) at a facility approved in your Local Moderate Risk Waste Plan, such as a:
- permitted hazardous waste facility,
- municipal or industrial solid waste facility, with local health department approval, or
- legitimate recycler.

Call your county's solid waste or planning department for details.

✔ If you have obtained a generator EPA/State Identification Number (Checklist Fact Sheet 2), file an annual report with Ecology (Checklist Fact Sheet 3).

If you don't follow these 3 steps, you become subject to the requirements of a regulated generator (see below).

Regulated Generator

✔ Identify your hazardous wastes (this Checklist Fact Sheet)

✔ Obtain a generator identification number (Checklist Fact Sheet 2)

✔ Report annually (Checklist Fact Sheet 3)

✔ Perform preventive maintenance (Checklist Fact Sheet 4)

✔ Properly accumulate hazardous waste (Checklist Fact Sheet 5)

✔ Plan for emergencies (Checklist Fact Sheet 6)

✔ Use proper containers and manage them correctly (Checklist Fact Sheet 7)

✔ Arrange for proper transportation and disposal (Checklist Fact Sheet 8)

✔ Manifest shipments of hazardous waste (Checklist Fact Sheet 9)

✔ Keep records of hazardous waste activities (Checklist Fact Sheet 10)

Footnotes

[1]EHW (Extremely Hazardous Waste) poses a greater threat to human health and the environment than DW (Dangerous Waste). EHW is restricted from land disposal and may have a QEL of 2.2 pounds instead of 220 pounds. Most businesses generate DW and not EHW, but pesticide applicators and generators with concentrated solvent wastes should pay special attention to this category. If you are not sure if your waste is DW or EHW, or if the QEL is 220 pounds or 2.2 pounds, call a hazardous waste specialist at your nearest Ecology regional office.

[2]If you know some of the components of your waste mixture and their concentrations, it is possible to determine if it is a hazardous waste without testing. Contact the nearest Ecology regional office for assistance.

2 Obtain an EPA/State Identification Number.

What is an EPA/State Identification Number?

It wasn't that long ago when we disposed of our hazardous wastes with the rest of our trash. Then we noticed the fish kills, the odors in our drinking water and the abandoned waste drums on vacant lots.

A system of federal, state and local hazardous waste regulations now helps to prevent these problems. This is done, in part, by requiring all hazardous waste generators, transporters, and management facilities to identify themselves as members of the "system".

You get into the system by notifying the Department of Ecology (Ecology) of your hazardous waste activities so that they can issue you a site-specific EPA/State Identification (ID) Number.

Why is it important?

For one thing, it's the law. You are required to determine if your wastes are hazardous, and, depending on the type and amount of hazardous waste, comply with state and federal requirements by obtaining an EPA/State ID Number.

Another reason is that many hazardous waste haulers and management facilities won't accept your wastes if you don't have an ID Number, even if you're a small quantity generator and technically don't require one.

Last but not least, when you enter the system, you join other businesses and organizations in a program designed to protect human health and the environment.

Who needs one?

You need to get an EPA/State ID Number if you:

- ✔ generate per month or accumulate on-site at any time more than 220 pounds of hazardous waste,
- ✔ transport hazardous waste,
- ✔ own or operate a hazardous waste treatment, storage or disposal facility, or
- ✔ recycle hazardous waste.

It is illegal to offer hazardous waste to a transporter or waste management facility which does not have an EPA/State ID Number.

You will also need to obtain an ID Number even if you generate, transport or manage hazardous waste for a "one-time only" occurrence. You can withdraw the ID Number after the waste has been properly managed under the system.

Washington State Department of Ecology

To obtain an Identification Number for the first time:

- ☐ Request a copy of Form 2 "Notification of Dangerous Waste Activities" (as shown below) and instructions for its completion from the nearest Ecology regional office. Keep an unused original in your files and fill out photocopies so that you always have a blank form on hand.
- ☐ Complete one Form 2 for each individual site you own or operate that is involved in hazardous waste activities. Remember, the ID Number is assigned for the waste activities at the location you indicate on the form. **You cannot use one number for multiple locations.**
- ☐ Submit Form 2 to Ecology address listed at the top of the form. Your site-specific EPA/State ID Number should arrive within six weeks[1].

To report any changes:

- ☐ Submit a revised Form 2 to Ecology whenever there are changes to the company name, mailing address, ownership, physical location (you will need a new number), or type of dangerous waste activity (for example, you notified as a generator and now want to transport wastes as well).

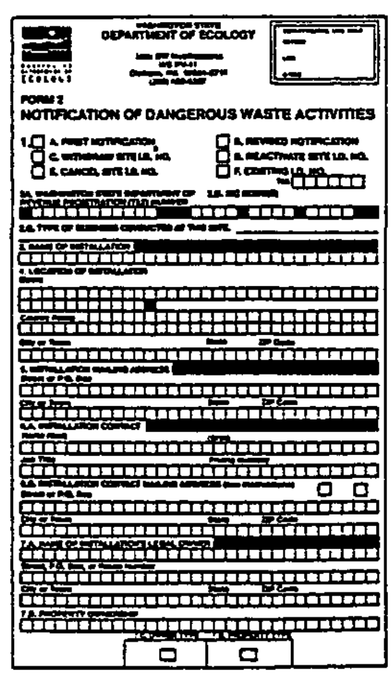
If your business location changes:

- ☐ You must cancel the current ID Number and request a new number for the new location (if you will still be handling hazardous wastes) by completing two separate Form 2's. You must also complete an Annual Report Form 4 for the year you request a cancellation (see Checklist Fact Sheet 3). Your new site-specific ID Number should arrive within six weeks[1].

If you are staying at the same location but no longer handle hazardous waste:

- ☐ You can request that your ID Number be withdrawn by completing Form 2 and checking the appropriate box on the front page. Don't forget to complete an Annual Report Form 4 for the year you request a withdrawal[2] (see Checklist Fact Sheet 3).

  If you need to use the number again at some later date, you must first notify Ecology by completing Form 2 and checking the appropriate box on the front page.



[1] Don't transport or dispose of your wastes until you receive your Identification Number.

[2] Annual reports are mailed out in January of each year. Wait until January 31st to receive your annual reporting package (due March 1st) or call (206) 459-6387 to request a reporting package for early submittal.

91-12j

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While this Fact Sheet summarizes the notification requirements under the Dangerous Waste Regulations (Chapter 173-303 WAC), it does not replace them. Always refer to the regulations themselves for more detail or call a hazardous waste specialist at your nearest Ecology regional office.

Spokane	(509) 456-2926
Tumwater	(206) 753-2353
Bellevue	(206) 649-7000
Yakima	(509) 575-2490

This is Checklist Fact Sheet 2 in a series of 10.

3 Report annually.

What's an annual report?

Hazardous waste generators are required to complete and submit a "Generator Annual Dangerous Waste Report" (or Form 4) by March 1 of each year. You use this report to summarize your hazardous waste activities for the previous calendar year, including generation, accumulation, on-site recycling or other management practices.

The Department of Ecology reviews this information and prepares it's own annual report of hazardous waste activities for the entire state of Washington. The reports help answer the following questions:

✔ How much waste is generated in Washington?
✔ Which businesses generate waste and where are they located?
✔ What types of wastes are generated?
✔ Where does it all go and how is it managed?

Why is it important?

The information you report to Ecology helps to ensure that hazardous wastes are being properly managed and to plan for our future hazardous waste management needs. It's also an efficient way to monitor your hazardous waste inventory in order to keep management costs down.

Who needs to report?

If your business generates enough hazardous waste to be regulated under the Dangerous Waste Regulations (Chapter 173-303 WAC), then you must complete an annual report each year.

This includes:

✔ Generators that have submitted a Form 2 to cancel or withdraw their EPA/State Identification Number (see Checklist Fact Sheet 2) and are filing their last annual report;

✔ Businesses that have an Identification Number but did not generate, store or remove hazardous wastes from the premises during the reporting year;

✔ Businesses that have an Identification Number but generate "exempt" wastes only (ask a Hazardous Waste Specialist at Ecology if your wastes are "exempt");

✔ Small Quantity Generators (typically generating per month, or accumulating at any time, less than 220 pounds of hazardous waste) that have obtained an Identification Number; and

✔ All Regulated Generators (typically generating per month, or accumulating at any time, greater than 220 pounds of hazardous waste).

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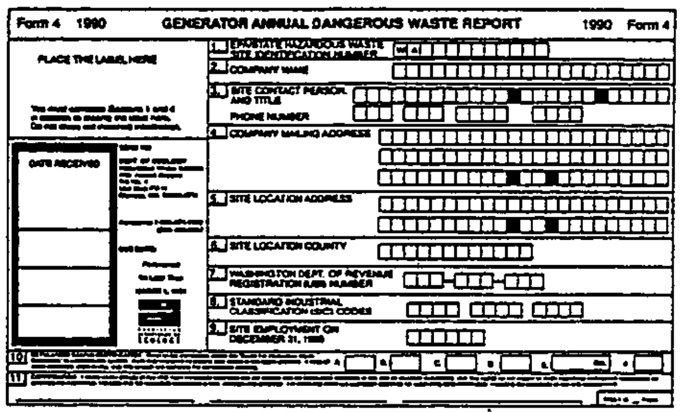
What goes on the report?

Think of the annual report as a summary of the year's hazardous waste inventory where you record the following information:

- ✔ Your EPA/State Identification Number and other business information,
- ✔ the transporters and waste management facilities you used (along with their EPA/State Identification Numbers),
- ✔ the dates and document numbers of all manifested waste shipments (see Checklist Fact Sheet 9), and
- ✔ a description and the amount of each hazardous waste shipped off-site or still remaining on-site.

Just how much of the form you need to complete depends on your hazardous waste activities. The more you generate, the more you need to complete. **If you recycle your wastes on the premises, you will need to report on this activity as well.**


Form 4 1990 GENERATOR ANNUAL DANGEROUS WASTE REPORT 1990 Form 4

PLACE THE LABEL HERE

DATE RECEIVED

1. EPA/STATE HAZARDOUS WASTE SITE IDENTIFICATION NUMBER
2. COMPANY NAME
3. SITE CONTACT PERSON AND TITLE
PHONE NUMBER
4. COMPANY MAILING ADDRESS
5. SITE LOCATION ADDRESS
6. SITE LOCATION COUNTY
7. WASHINGTON DEPT. OF REVENUE REGISTRATION NUMBER
8. STANDARD INDUSTRIAL CLASSIFICATION (SIC) CODES
9. SITE EMPLOYMENT ON DECEMBER 31, 1990
10.
11.

How to report.

- ☐ Get an EPA/State Identification number, if you need one and haven't already done so, by completing and submitting a "Notification of Dangerous Waste Activities" Form 2 to the Department of Ecology (see Checklist Fact Sheet 2).

  All notifiers will automatically receive the Generator Annual Dangerous Waste Report (Form 4) and instructions for completing it at the beginning of the calendar year. If you do not receive your annual report package by January 31st, contact Ecology's Annual Reporting Hotline (1-800-874-2022), available from January through March.

- ☐ Complete the report for the previous calendar year and submit it to the Department of Ecology by March 1st.

  Additional assistance is available through Ecology's Annual Reporting Hotline. Hazardous Waste Specialists can help you with your questions and send you the Guide for Hazardous Waste Generators which goes into even more detail on completing the report.

- ☐ Maintain a copy of each annual report in your files for at least 5 years.

91-12k

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While this Fact Sheet summarizes the annual reporting requirements under the Dangerous Waste Regulations (Chapter 173-303 WAC), it does not replace them. Always refer to the regulations themselves for more detail or call a hazardous waste specialist at your nearest Ecology regional office.

Spokane	(509) 456-2926
Tumwater	(206) 753-2353
Bellevue	(206) 649-7000
Yakima	(509) 575-2490

This is Checklist Fact Sheet 3 in a series of 10.

4 Perform preventive maintenance.

Preventive maintenance makes sense.

Accidents happen. Hazardous waste spills, fires and explosions can result in serious injuries, significant property damage and expensive clean-up costs. That's why the Dangerous Waste Regulations (Chapter 173-303 WAC) require that you pay special attention to the way you handle your hazardous wastes.

You need to make sure your business facility is designed, constructed, maintained and operated in a manner which reduces the possibility of a hazardous waste accident.

This means taking a fresh look at each of your hazardous waste activities, on a regular basis, and saying "What if?" What if, for example, the cover for the spent solvent container is not replaced after adding the last batch of solvent wastes?

✔ Could the spent solvent be evaporating into the work area, creating a health concern to employees?

✔ What would happen if someone bumped into the open container?

You can and must take steps to reduce the odds of a hazardous waste accident happening at your business.

Do you have the required equipment?

❑ Keep the following emergency equipment on hand and accessible to employees, unless you can demonstrate that it is not necessary:

✔ an internal communications or alarm system that signals an emergency for employees;

✔ a phone, hand-held 2-way radio or other device to call local police departments, fire departments or emergency response teams;

✔ portable fire extinguishers and other fire control equipment;

✔ spill control equipment;

✔ equipment cleaning and decontamination after the emergency, and

✔ enough water at an adequate pressure to supply any sprinkler or water spray systems.

Is there enough aisle space?

One of the most common reasons for a relatively minor hazardous waste incident turning into a major emergency is that access to and from the area is blocked.

❑ Maintain enough aisle space throughout your operation so that employees can get out and emergency personnel and equipment can get in.

Have you made arrangements with local authorities?

It's important to identify and work with local authorities **before** an accident occurs so that everyone who may be involved in responding to the emergency is prepared.

- ☐ Prepare a simple letter for the police, fire departments and emergency response teams with the following information:
  - ✔ layout of your building(s) and property, and places where employees would normally be working,
  - ✔ hazards and characteristics of the dangerous waste(s) you have on the premises, and
  - ✔ entrances and possible evacuation routes.
- ☐ Provide local hospitals with a written description of the:
  - ✔ characteristics of dangerous wastes on the premises, and
  - ✔ types of illnesses and injuries that could result from fires, explosions or spills at your business.
- ☐ Document any arrangements and keep them on file. If state or local authorities decline to enter into these kinds of arrangements with you, keep a record of this, too.

Do you regularly review your preventive maintenance program?

The last thing you want to do is set up a great preventive maintenance program and then have it fail because your spill kit was empty or the hospital wasn't informed of the hazards of a new waste. Do you review your preventive maintenance program regularly?

- ☐ Develop and follow a written schedule for inspecting all:
  - ✔ monitoring equipment,
  - ✔ safety and emergency equipment,
  - ✔ security devices, and
  - ✔ operating and structural equipment.
- ☐ Record the following information in an inspection log:
  - ✔ the date and time of the inspection,
  - ✔ name and signature of the inspector,
  - ✔ notes on your observations, and
  - ✔ the date and description of any repairs taken (fix any problems noted on an inspection as soon as possible).
- ☐ Conduct a yearly review of the areas where you store ignitable or reactive wastes accompanied by a:
  - ✔ professional person familiar with the Uniform Fire Code, or
  - ✔ local, state or federal fire marshal.
- ☐ Test and maintain your emergency equipment regularly to make sure that it works properly in an emergency.
- ☐ Review your arrangements with local authorities to keep them up to date.

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While this Fact Sheet summarizes the preventive maintenance requirements under the Dangerous Waste Regulations, (Chapter 173-303 WAC) it does not replace them. Always refer to the regulations themselves for more detail or call a hazardous waste specialist at your nearest Ecology regional office.

Spokane	(509) 456-2926
Tumwater	(206) 753-2353
Bellevue	(206) 649-7000
Yakima	(509) 575-2490

This is Checklist Fact Sheet 4 in a series of 10.

5 Properly accumulate hazardous waste.

What you need to know about accumulating hazardous wastes.

Most hazardous waste generators need to accumulate their waste for some period of time while they collect enough for an off-site shipment or on-site recycling. However, if you accumulate your wastes on-site for too long, you may need to get a Dangerous Waste Storage Permit from the Department of Ecology. That can take a few years and you will face many more requirements under the Dangerous Waste Regulations (Chapter 173-303 WAC).

Follow the checklist below to find out what Ecology means by "too long" and what you need to do to properly accumulate hazardous waste.

Before you accumulate any wastes...

- ❑ Establish a hazardous waste **accumulation area** in a secure place within your facility.

  Accumulation areas should be well marked and restricted to as few people as possible to avoid accidental damage to containers. You may want to consider a special storage cabinet for your ignitable wastes. Check with your local fire department for other safety ideas.

- ❑ If your accumulation area was constructed after September 30, 1986, you must have a **containment system**, such as a diked, concrete area, that is capable of holding leaks and spills.

  Your containment system should be able to hold 10 percent of the total volume of all containers with liquid wastes, or the volume of the largest container, whichever is greater.

- ❑ Establish **satellite accumulation areas**, if necessary.

  A satellite accumulation area is a location at or near any point of generation of a hazardous waste where:
  - the waste is initially accumulated (up to 55 gallons), and
  - there is someone monitoring the area.

  For example, you accumulate waste antifreeze in a 55-gallon drum near the service bays of your automotive repair shop (a satellite accumulation area) and move the drum when it's full to the storage room which has a spill containment system (your accumulation area).

As soon as you generate a hazardous waste...

- ☐ Place it in an appropriate container that is clearly marked with the words "Dangerous Waste" or "Hazardous Waste".

  There are numerous safety supply companies that sell labels for this purpose. See Checklist Fact Sheet 7 for a more detailed discussion of your container management responsibilities.

- ☐ Mark each container with a label or sign that identifies the waste's major risk(s) so it is clearly visible to employees, emergency response personnel and the public.

  Some generators use the National Fire Protection Association (NFPA) labeling system for their wastes. A four-color, diamond-shaped label is filled in with the appropriate code for health, fire, instability, and special hazards.

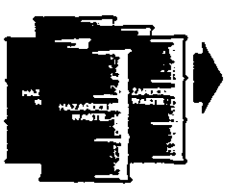
To avoid the need for a storage permit...

- ☐ Mark the accumulation start date on each waste container.

  The accumulation period begins on the date that:
  - you accumulate more than 55 gallons in a satellite accumulation area, or
  - you first generate the waste and put it into a container in your accumulation area.

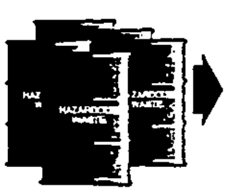
- ☐ Do not accumulate your wastes for too long. Make sure you ship your waste to a facility or manage it on-site in a facility which has a dangerous waste permit. . .

Less than 5 drums...



. . . within **180 days** from the date it was first generated, if you generate less than 2,200 pounds (but more than 220 pounds) of hazardous waste per month and never accumulate more than 2,200 pounds on the premises.

More than 5 drums...



. . . within **90 days** from the date it was first generated, if you generate more than 2,200 pounds of hazardous waste per month or accumulate more than 2,200 pounds on the premises.

- ☐ Comply with the requirements on the following Checklist Fact Sheets which are available from the nearest Ecology regional office:

  - Checklist Fact Sheet 4 — Perform preventive maintenance.
  - Checklist Fact Sheet 6 — Plan for emergencies.
  - Checklist Fact Sheet 7 — Use proper containers and manage them correctly.

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hile this Fact Sheet summarizes the accumulation re-
irements under the Dangerous Waste Regulations (Chap-
r 173-303 WAC), it does not replace them. Always refer to
e regulations themselves for more detail or call a hazard-
s waste specialist at your nearest Ecology regional office.

ookane	(509) 456-2926
umwater	(206) 753-2353
ellevue	(206) 649-7000
akima	(509) 575-2490

his is Checklist Fact Sheet 5 in a series of 10.

6 Plan for emergencies.

Are you prepared for a hazardous waste emergency?

Do your employees know how to protect themselves in the event of a hazardous waste spill? Have you designated an emergency coordinator who is on the premises or on call at all times? If not, you may be putting your employees, neighbors, business, and the environment at risk.

Thinking ahead and planning for emergencies, as required under the Dangerous Waste Regulations (Chapter 173-303 WAC), can help you prevent a small hazardous waste spill from turning into a dangerous and expensive contamination problem.

Here's how to begin.

Make sure that you're not generating any more hazardous waste than you absolutely must. It's worth it to find ways to generate less. Businesses that generate less than 220 pounds per month typically don't need to comply with the emergency planning requirements on this Checklist Fact Sheet. If you generate or accumulate hazardous waste in quantities larger than this:

❑ Designate an emergency coordinator.

At all times, there must be at least one employee on the premises or on call (able to respond to an emergency at the facility within a short period of time) who is responsible for coordinating all emergency response measures.

It's also a good idea to have at least one back-up emergency coordinator.

❑ Make sure the emergency coordinator is familiar with the:

- ✔ operations and activities at your site,
- ✔ location and hazardous properties of all the wastes you handle,
- ✔ location of all records,
- ✔ layout of your facility (inside and outside), and
- ✔ agreements you have made with state or local authorities and outside emergency response contractors for their assistance (see Checklist Fact Sheet 4).

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Don't forget your employees.

- ❑ Educate your employees on the proper waste handling and emergency procedures that are relevant to their job responsibilities.

  This means that a person who packages hazardous wastes for shipment should receive a more comprehensive training program than the bookkeeper who occasionally walks through the hazardous waste accumulation area.

- ❑ If you generate per month, or accumulate at any time, more than 2,200 pounds of hazardous waste, you must also comply with the training requirements in Table 1.

  Smaller generators can use Table 1 as a guide for developing their own employee training programs.

Table 1: Additional Training Requirements for Generators of 2,200 Pounds or More.

Include the following topics in your training program:

- the capabilities and proper use of emergency equipment including communications and alarm systems,
- how to respond to fires, explosions, spills, releases to air, and ground water contamination incidents,
- procedures for using, inspecting, repairing and replacing your emergency equipment (and monitoring equipment, such as temperature or pressure indicators, if you have any),
- the details of any automatic waste feed cut-off systems, and
- steps for the shut-down of operations.

Provide annual refresher training for employees.

Prepare and follow a written training plan which includes:

- a listing of the job title, job description and name of the employee filling each position that relates to hazardous waste management in your business,
- a written description of the type and amount of both introductory and refresher training you require for each position, and
- records documenting that your employees have received and completed the required training. (Keep training records for your current personnel until you stop operating, and for former employees for at least three years).

You'll need a plan of action.

2,200 pounds is approximately five full, 55-gallon drums.

- ❑ Prepare and post near all phones and intercoms, an emergency directory containing:
  - ✔ the name and telephone number (office and home) of the emergency coordinator and his or her backups,
  - ✔ a description and the location of emergency equipment, such as fire extinguishers, spill control materials and an alarm system,
  - ✔ the telephone number of the fire department, unless you have a direct alarm.

  If you generate per month, or accumulate at any time, more than 2,200 pounds of hazardous waste, you should put this information into your contingency plan (described below) in addition to posting it.

- ❑ If you generate per month, or accumulate at any time, more than 2,200 pounds of hazardous waste, you must prepare a written contingency plan covering the topics outlined in Table 2.

- ❑ Develop emergency procedures for responding to hazardous waste fires, explosions, spills and releases to the air.

  Review Table 3 which contains a summary of the emergency procedures required by the Dangerous Waste Regulations. You'll notice that there are more emergency procedures for generators of greater than 2,200 pounds per month than for generators of less than 2,200 pounds. Adapt these procedures to your waste activities and waste types so that you and your employees are prepared to handle potential emergencies quickly and safely.

Table 2: Written Contingency Plans for Generators of 2,200 Pounds or More.

Your written contingency plan must include:

- a description of actions employees will take in an emergency;
- a description of any arrangements you have made with local police and fire departments, hospitals, contractors and state or local emergency response teams to coordinate emergency services (see Fact Sheet 4),
- your emergency directory, with the primary emergency coordinator clearly identified,
- an up-to-date list of emergency equipment on the premises, and
- an evacuation plan for your employees that describes evacuation routes, alternate routes, and the signal you will use to begin evacuation.

Table 3: Required Emergency Procedures.

For Generators of Less than 2,200 Pounds

During an emergency, the Emergency Coordinator must:

- ❑ In the event of a fire, call the fire department or attempt to extinguish the fire.
- ❑ In the event of a spill, contain the flow of the spill as much as possible, cleanup the waste and any contaminated materials as soon as practicable, and call the nearest Ecology regional office.
- ❑ If a fire, explosion or other release could threaten human health outside your business or could reach streams, lakes or ground water, call the nearest Ecology regional office and the National Response Center (1-800-424-8802) with the following information:
  - ✔ Your name, address and EPA/State Identification Number (see Checklist Fact Sheet 2),
  - ✔ Date, time and type of incident,
  - ✔ Amount and type of hazardous waste involved in the incident,
  - ✔ Extent of any injuries, and
  - ✔ Estimate of the amount of recovered materials and how you have managed these wastes.

For Generators of 2,200 Pounds or More

During an emergency, the Emergency Coordinator must:

- ❑ Activate internal alarms to notify employees.
- ❑ Call state or local agencies if their help is needed.
- ❑ Identify the released material's character (Is it flammable?), exact source, amount and the area it covers.
- ❑ Assess the possible hazards to human health and the environment.
- ❑ Call local authorities if evacuation of local areas may be advisable.
- ❑ Call the nearest Department of Ecology regional office and the National Response Center (1-800-424-8802) and give them the following information:
  - ✔ name and telephone number of the caller,
  - ✔ name and address of the business or organization,
  - ✔ time and type of hazardous waste incident,
  - ✔ name and amount of the material(s) involved
  - ✔ extent of any injuries, and
  - ✔ possible hazards to human health or the environment beyond your property.
- ❑ Take steps to control the incident such as stopping equipment, removing or isolating containers and collecting any released material.
- ❑ If appropriate, monitor for leaks, pressure buildup, gas generation or ruptures while you're handling the incident.
- ❑ Immediately after the emergency:
  - ✔ Properly manage the recovered waste and contaminated materials (soil, water, rags, clothing), and
  - ✔ Make sure that emergency equipment is cleaned and fit for use.
- ❑ Call the nearest Ecology regional office and appropriate local authorities before resuming operations in the affected areas of your business.

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While this Fact Sheet summarizes the emergency planning requirements under the Dangerous Waste Regulations (Chapter 173-303 WAC), it does not replace them. Always refer to the regulations themselves for more detail or call a hazardous waste specialist at your nearest Ecology regional office.

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This is Checklist Fact Sheet 6 in a series of 10.

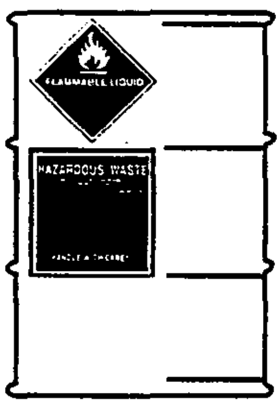
7 Use proper containers and manage them correctly.

Why is it important?

The potential hazards of a waste do not go away when it's put into a container. Many chemical leaks and work-related injuries are linked to improper or unsafe container management.

The container management sections of the Dangerous Waste Regulations (Chapter 173-303) spell out the requirements for handling waste containers in a safe and responsible manner.

What is container management?



- ❑ Make sure you and your employees know how to open, handle or store each type of waste container so as not to rupture it or cause it to leak.

- ❑ Keep all hazardous waste containers closed unless you are adding or removing waste.

  This will help reduce the evaporation of some of the more volatile wastes (evaporation of hazardous waste is illegal) and minimize the potential for spills. If you need to add waste frequently, you may want to consider using a funnel with a lid.

- ❑ Keep incompatible wastes in separate areas of your operation.

  You can protect them from each other by using a dike, berm, or wall and by having separate containment systems that collect any spills of the wastes.

- ❑ Maintain **at least 30 inches** of space between rows of waste containers and don't let a row get bigger than 2 drums wide.

- ❑ Label each waste container with information on the major risk(s) associated with the waste inside (such as "Ignitable" or "Toxic") so that it's clearly visible to employees, emergency response personnel, and the public.

  When you transfer a hazardous waste from one container to another, make sure you put a label on the new container and remove the label from the old one (unless you will use it to hold hazardous waste soon after).

  Also, make sure that the old container is legally "empty" if not used again. This means the container is drained so that there is less than one inch of waste or less than one percent of the total capacity of the container.

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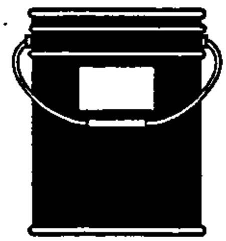
Do your waste containers measure up?



Make sure you consider the inside and outside "environment" of a container before you select and use it. Is the container made of a material that is compatible with the waste you want to put inside? Do you regularly check your waste containers at least once a week for leaks, rust or other defects?

- ☐ Use the container that best protects your waste, your workers, and the environment.

  An important thing to remember here is that not all containers are alike. Choose a container for accumulating your waste that is made of a compatible material. Use polyethylene drums for corrosive wastes (strong acids and bases) rather than metal containers.

- ☐ Store your containers of ignitable and reactive wastes (see Checklist Fact Sheet 1) according to the Uniform Fire Code. Call your local fire department or the Department of Ecology for information on the Uniform Fire Code.

- ☐ Do not put incompatible wastes in the same container.

  You should also avoid putting a hazardous waste in a container that used to hold an incompatible material unless it has been thoroughly washed. Adding a spent acid (e.g. sulfuric acid) to a container that used to hold a spent caustic material (e.g. sodium hydroxide) could result in the production of extreme heat or a violent reaction.

Keep an eye on those containers.

- ☐ Inspect your container storage areas at least once a week.

  - ✔ Inspect each container to see that the labels are not obscured, removed or unreadable.
  - ✔ Look for leaking containers and for deterioration of containers or your containment system.

  If you find a container that has severe rusting or is leaking, transfer the waste in the container to a container that is in good condition. Make sure you immediately notify Ecology and appropriate local authorities if you discover any spill, regardless of quantity.

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While this Fact Sheet summarizes the container management requirements under the Dangerous Waste Regulations (Chapter 173-303 WAC), it does not replace them. Always refer to the regulations themselves for more detail or call a hazardous waste specialist at your nearest Ecology regional office.

Spokane	(509) 456-2926
Tumwater	(206) 753-2353
Bellevue	(206) 649-7000
Yakima	(509) 575-2490

This is Checklist Fact Sheet 7 in a series of 10.

8 Arrange for proper transportation and disposal.

Before you send your hazardous waste away.....

There are a few things you should know. The goal of the Dangerous Waste Regulations (Chapter 173-303 WAC) is to ensure that we manage our hazardous wastes in a manner that protects our health and environment. As a generator of hazardous waste, you have responsibilities under these regulations for the safe transportation and disposal of your wastes.

You should carefully consider your options for managing hazardous wastes. Waste reduction and recycling are preferable to disposal because they reduce the potential for environmental damage and they minimize your liability for future problems associated with your wastes.

What is legal?

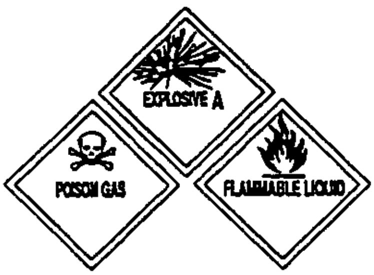
In addition to the Department of Ecology (Ecology), your trade association, waste haulers and management facilities can help you understand your regulatory obligations and choose the best waste management options. **When you seek outside help, make sure the source is reliable and legitimate.** Cost shouldn't be the only consideration. The generator of waste is liable for its proper management, even after the waste is picked up.

- ☐ **Regulated generators** typically generate per month or accumulate at <u>any time</u> more than 220 pounds of hazardous waste (more than one half of a 55-gallon drum). Regulated generators must hire a waste transporter that has an EPA/State Identification Number (see Checklist Fact Sheet 2).
- ☐ Regulated generators must make sure their hazardous wastes are handled at:
  - ✔ a treatment, storage or disposal (TSD) facility which has a permit or is operating under "interim-status" while the permit application is reviewed, or
  - ✔ a facility which legitimately recycles or reclaims hazardous wastes.
- ☐ **Small quantity generators** never generate per month or accumulate on the premises more than 220 pounds of hazardous waste (or about one half of a 55-gallon drum). Small quantity generators can send their wastes to a facility approved by their Local Moderate Risk Waste Plan, such as a:
  - ✔ permitted hazardous waste facility,
  - ✔ municipal or industrial solid waste facility, with local health department approval, or
  - ✔ legitimate recycler.

Call your county's solid waste or planning department for details.

WASHINGTON STATE DEPARTMENT OF ECOLOGY

Wrapping it up.



- ❑ Before you offer your hazardous waste for transport off the premises, you must package, label, mark, and placard the shipment according to the U.S. Department of Transportation's Hazardous Material Regulations (49 CFR Parts 172, 173, 178, and 179). The transporter and/or facility you select can usually help you choose the required:

  - ✔ **package or container** for safe transport of the waste;
  - ✔ diamond-shaped **label** which identifies the hazardous properties of the waste (e.g., flammable liquid, explosives);
  - ✔ **marking**, including the proper shipping name and number of the waste; and
  - ✔ large, diamond-shaped **placards** for the outside of the transportation vehicle which identify the hazardous characteristics of the cargo.

- ❑ Mark each package or container holding 110 gallons of waste or less with your name and address, the Manifest Document Number (see Checklist Fact Sheet 9), and the following words:

> HAZARDOUS WASTE
> State and federal law prohibits improper disposal. If found, contact the nearest police or public safety authority, and the Washington State Department of Ecology or the United States Environmental Protection Agency.

- ❑ Don't forget to complete a **Uniform Hazardous Waste Manifest** if you are a regulated generator (see Checklist Fact Sheet 9).

Decisions, decisions.

Now that you know the legal requirements for managing hazardous waste, you'll need to decide what makes sense for each of your wastes. **Disposal is not the only, or the best option.** Some of your wastes may be recyclable, such as solvents and spent lead-acid batteries. And recycling can save you money.

The ideal, of course is not to generate the waste in the first place. **Waste reduction** can be as simple as keeping hazardous and non-hazardous wastes segregated because when they are mixed, you create a larger volume of hazardous waste. You can get other waste reduction tips by calling Ecology's Waste Reduction hotline toll-free at **1-800-RECYCLE.**

- ❑ Talk with your trade association, others in the same business, and Hazardous Waste Specialists at Ecology about the legal waste management methods that are best for your wastes.

- ❑ Request a copy of the Washington State **Hazardous Waste Services Directory** from Ecology for information on hazardous waste facilities, transporters, consultants and testing laboratories.

91-12p

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While this Fact Sheet summarizes the transportation and disposal requirements under the Dangerous Waste Regulations (Chapter 173-303 WAC), it does not replace them. Always refer to the regulations themselves for more detail or call a hazardous waste specialist at your nearest Ecology regional office.

Spokane	(509) 456-2926
Tumwater	(206) 753-2353
Bellevue	(206) 649-7000
Yakima	(509) 575-2490

This is Checklist Fact Sheet 8 in a series of 10.

9 Manifest shipments of hazardous waste.

What is a Hazardous Waste Manifest?

A manifest is defined as a list or record of the cargo being transported. The Uniform Hazardous Waste Manifest form travels with a shipment of hazardous waste from the site where it is generated to it's ultimate resting place.

Why is it important?

Manifests are important because we don't value our wastes as much as our raw materials or products. And that's gotten us into trouble in the past. We paid more attention to getting the shipment of product to the customer than to getting the hazardous waste to a proper disposal site. We know now that a lot of those wastes didn't make it to the right place.

To prevent this problem, the Dangerous Waste Regulations (Chapter 173-303 WAC) require the use of a manifest form to track hazardous waste from "cradle-to-grave". It helps you, as the generator, document that the waste you sent off-site was transported by a licensed hauler and accepted by a permitted hazardous waste facility.

How does it work?

Before you offer your hazardous waste for transport off the premises, you must prepare a Uniform Hazardous Waste Manifest as required by the Dangerous Waste Regulations.

- ❑ Obtain copies of, and instructions for, the Uniform Hazardous Waste Manifest Form.

  This is Form 8700-22 from the U.S. Environmental Protection Agency (EPA). Large shipments may require the continuation sheet, Form 8700-22A. You can purchase copies from safety supply companies or ask your waste hauler (see the Services Directory).

  If you're shipping your waste out of state, check to see if you need to use that state's hazardous waste shipping manifest.

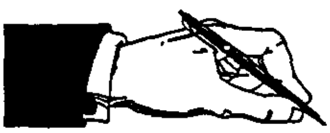
  Make sure you get a form with enough copies. You'll need two copies for yourself (one when the waste is picked up, and one returned by the facility), one for each transporter, and one for the facility.

- ❑ Prepare the manifest form according to the instructions in federal and state regulations so that it includes the following information:

  - ✔ your EPA/State ID Number (see Checklist Fact Sheet 2),
  - ✔ your name, mailing address and emergency phone number,

WASHINGTON STATE DEPARTMENT OF ECOLOGY

- ✔ the company name, EPA/State ID Number and phone number of the transporter(s),
- ✔ the name, site address, phone number, and EPA/State ID Number of the hazardous waste facility designated to receive the waste,
- ✔ an alternate receiving facility,
- ✔ the U.S. Department of Transportation shipping name, hazard class and identification number for each waste (your transporter or facility operator can usually help you with this),
- ✔ the Dangerous Waste Number(s) (e.g., F001) for each waste,
- ✔ a description of type and number of containers for each waste,
- ✔ the total quantity of each waste, and
- ✔ any special handling instructions.



- ❑ Sign and date the manifest form by hand and have the transporter do the same when the waste is picked up for shipment.
- ❑ Retain one of the signed copies and give the rest to the transporter to take with the shipment.

  When the transporter delivers the waste to the facility you have chosen, the facility representative signs each copy of the manifest, accepting the waste. The transporter takes a copy, the facility keeps a copy, and the facility sends you the last copy. This closes the "loop" and lets you know that the waste made it to its destination.

- ❑ If your waste is restricted from land disposal, complete a land disposal restriction certificate and attach it to the manifest (contact the nearest Department of Ecology regional office for more information on this subject).

What if you don't get the last signed copy?

- ❑ Contact the transporter(s) and/or facility if you have not received the last, signed copy of the manifest form within 35 days of the shipment date. Try to find out where your waste is and why you have not yet received the signed copy.
- ❑ Submit an **exception report** to Ecology if you have not received the last copy of the manifest within 45 days of the shipment date. The report, which you should keep for at least five years, must include the following:
  - ✔ a copy of the manifest for which you do not have a copy signed by the facility, and
  - ✔ a cover letter explaining the steps you took to find out what happened to your waste shipment and the results.

91-12q

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While this Fact Sheet summarizes the manifesting requirements under the Dangerous Waste Regulations (Chapter 173-303 WAC), it does not replace them. Always refer to the regulations themselves for more detail or call a hazardous waste specialist at your nearest Ecology regional office.

Spokane	(509) 456-2926
Tumwater	(206) 753-2353
Bellevue	(206) 649-7000
Yakima	(509) 575-2490

This is Checklist Fact Sheet 9 in a series of 10.

Exception Reports

- ❑ Keep a copy of each exception report you send to the Department of Ecology for a minimum of five years.

If you don't receive a signed manifest from the designated facility for your hazardous waste shipment within 45 days from the date it was picked up by the transporter, you must submit an exception report to Ecology. This report should include:

- ✔ a copy of the manifest with the missing signature, and
- ✔ a letter explaining the efforts you've made to find your wastes.

Land Disposal Restriction Certifications

- ❑ Keep a copy of each Land Disposal Restriction Certification for a minimum of five years.

Some hazardous wastes are restricted from land disposal unless they meet specific treatment standards. If you send your waste for land disposal, you must prepare and sign a certification which states that either your waste is not restricted from land disposal or that it meets the treatment standards outlined in the regulations. Contact your nearest Ecology regional office for more information on this requirement.

Inspection Records

- ❑ Keep a copy of your inspection log on the premises and available for review by Ecology staff for as long as you are in business.

As a hazardous waste generator, you're required to conduct various inspections at your facility (see Checklist Fact Sheet 4). Make sure you also note any hazardous waste spills or leaks in the log, including the date and time you notified Ecology of the spill.

Results from Laboratory Tests

- ❑ Keep the results of any waste analyses or tests you do on your wastes for as long as you are in business. This may be to determine if they are hazardous or to see if they meet the treatment standards for land disposal

On-Site Recycling Records

- ❑ If you recycle hazardous wastes on your premises, it's important to keep a monthly recycling log for as long as you recycle, so that you can be accurate on your annual report and verify if you are a small quantity generator or regulated generator (see Checklist Fact Sheet 1).

The recycling log should include:

- ✔ the dates you recycled the material;
- ✔ the amount of original material used;
- ✔ the amount of sludge or residue left from the recycling process; and
- ✔ the amount of "make-up" material used to compensate for loss during the recycling process.

1-

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is Fact Sheet summarizes the recordkeeping re- nts under the Dangerous Waste Regulations (Chap- 303 WAC), it does not replace them. Always refer to regulations themselves for more detail or call a hazard- s waste specialist at your nearest Ecology regional office.

ok	(509) 456-2926
er	(206) 753-2353
llevue	(206) 649-7000
kima	(509) 575-2490

is hecklist Fact Sheet 10 in a series of 10.

10 Keep records of hazardous waste activity.

The paperwork <u>is</u> important!

Nobody likes paperwork, but there are good reasons for the recordkeeping requirements of the Dangerous Waste Regulations (Chapter 173-303 WAC). Keeping track of the types and amounts of hazardous wastes generated and where these wastes are going will help prevent environmental contamination. It's also an important part of doing business because it helps you monitor your waste management costs and identify recycling or waste reduction opportunities.

What types of records must I keep?

There are a number of reports, forms and other written information that you prepare or collect as a generator of hazardous waste. A summary of the records that you must keep on the premises is presented below.

Notification Reports

- ❑ Keep all Form 2's and related correspondence in your files for as long as you are in business.

  If you generate, transport, treat, store or dispose of hazardous waste, you must have an EPA/State Identification Number. You get this number by submitting a **Form 2, Notification of Dangerous Waste Activities** (see Checklist Fact Sheet 2). You also use this form to update the Department of Ecology (Ecology) whenever there are changes in your hazardous waste activities.

Annual Reports

- ❑ Keep a copy of each Form 4 that you prepare and submit to Ecology for a minimum of five years.

  The **Generator Annual Dangerous Waste Report, or Form 4,** is an annual summary of your hazardous waste activities that you submit to Ecology by March 1 of the following year (see Checklist Fact Sheet 3).

Shipping Manifests

- ❑ Keep a copy of each manifest you send with a waste shipment <u>and</u> the signed manifest sent back to you from the hazardous waste facility for a minimum of five years.

  If you ship your wastes off-site for storage, treatment or disposal, you are required to complete a **Uniform Hazardous Waste Manifest (Form 8700-22)** which accompanies the waste to a designated hazardous waste management facility (see Checklist Fact Sheet 9). The owner or operator of the facility signs the manifest and sends it back to you for your files.

Washington State Department of Ecology

Glossary

✓**accumulate** - to temporarily store hazardous waste at your place of business for a limited amount of time (180 days if you typically generate between 220 and 2200 pounds of waste per month, 90 days if more).

✓**acutely hazardous waste** - certain "listed" hazardous wastes or discarded chemical products that are very dangerous and strictly regulated in quantities of more than 2.2 pounds.

✓**annual report** - a yearly summary of your hazardous waste activities submitted to Ecology by March 1 of each year. Required of businesses with EPA/state ID numbers.

✓**batch** - an amount of waste which is generated less frequently than once a month.

✓**carcinogenic** - known or suspected of causing cancer in humans or animals. For example: benzene or formaldehyde (see criteria wastes).

✓**characteristics of hazardous wastes** - there are four characteristics that can cause a waste to be hazardous: ignitability, corrosivity, reactivity and toxicity.

✓**community right-to-know** - Title III of the Superfund Amendments and Reauthorization Act (SARA) establishes requirements for government and industry regarding emergency response planning and everyone's right to know about hazardous chemicals in their community. Many hazardous waste generators have requirements under community right-to-know.

✓**corrosive** - a solid or liquid that is a strong acid (pH less than 2), such as battery acid, or a strong caustic (pH greater than 12.5), like drain cleaner (see characteristics).

✓**criteria wastes** - wastes that are hazardous in Washington State because they are toxic, persistent in the environment, or carcinogenic.

✓**dangerous waste sources** - specific and generic operations that create dangerous wastes that are "listed" in the Dangerous Waste Regulations, Chapter 173-303-9904.

✓**dangerous waste** - same thing as the federal term "hazardous waste" but with additional "Washington only" wastes, such as criteria wastes. Generators typically become regulated under the Dangerous Waste Regulations when more than 220 pounds are generated per month or accumulated on site at any one time.

WASHINGTON STATE DEPARTMENT OF ECOLOGY

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✓**Dangerous Waste Regulations, Chapter 173-303 WAC** - regulations that implement the state's Hazardous Waste Management Act and parts of the federal Resource Conservation and Recovery Act (RCRA).

✓**designate** - the act of determining whether your wastes are hazardous and if so, why (i.e., are they "listed" wastes, characteristic wastes, etc?).

✓**discarded chemical products** - pure, unused products that you intend to dispose of that are regulated as hazardous waste (for example many pesticides). See the list in the Dangerous Waste Regulations, Chapter 173-303-9903.

✓**empty** - containers are legally empty when less than one inch of waste remains on the bottom or the volume of waste remaining is less than one percent of the container's total capacity.

✓**EPA/State ID number** - a unique, 12-character number assigned to generators, transporters and treatment, storage and disposal (TSD) facilities. Required for regulated generators and recommended for small quantity generators.

✓**extremely hazardous waste** - "EHWs" are those dangerous wastes that are especially dangerous to the environment and require greater control. Many solvents are EHWs. EHWs cannot be land disposed.

✓**generator** - the person, businesses or institution that actually produces a hazardous waste. Liability for proper management follows generators from "cradle to grave," from point of generation to final destination.

✓**hazardous waste** - the term used by EPA to identify those solid wastes with properties that could pose dangers to human health and the environment (for example, spent solvents, ink sludges, cyanide wastes, etc.).

✓**ignitable** - liquid wastes with a flashpoint of less than 140°F, such as paint thinner or waste easily capable of causing a fire, such as dirty shop rags (see characteristics).

✓**land disposal restriction** - restricts extremely hazardous wastes (EHW), such as dry cleaner PERC, from land disposal in order to encourage more favorable management options such as waste reduction, recycling, or treatment.

✓**listed wastes** - these are regulated hazardous wastes that are listed in the Dangerous Waste Regulations, Chapter 173-303-9903 and 9904. Checking the "lists" is the first step in designating your waste.

✓**manifest** - a shipping document you fill out that accompanies your hazardous waste from point of generation to final destination. Required of all but small quantity generators.

✓**moderate risk waste** - hazardous waste that is exempt from most state and federal regulations because it is generated in households, or by businesses in quantities typically less than 220 pounds per month (or about one-half of a 55-gallon drum). Such businesses are known as "small quantity generators."

✓**MSDS** - manufacturers are required by law to provide Material Safety Data Sheets on all products they manufacture and sell. They provide information which is useful in evaluating a waste to determine if it is hazardous.

✓**notify** - state and federal regulations require you to notify Ecology if the amount of hazardous waste you generate per month or batch or accumulate on-site at any one time is more than 220 pounds (or 2.2 pounds for some extremely hazardous wastes). 220 pounds is roughly one-half of a 55-gallon drum. You can satisfy this requirement by requesting and completing a Form 2 from Ecology.

✓**permit-by-rule** - businesses that wish to treat wastes on-site to make them less hazardous and/or discharge such wastes to the sewer, must notify Ecology by filling out Form 2 and get written permission from their sewer utility.

✓**persistent** - containing greater than the allowable concentrations of certain hydrocarbons. For example: metal cutting oil, oil with freon (see criteria wastes).

✓**QEL** - Quantity Exclusion Limits are used to distinguish whether a hazardous waste is subject only to the small quantity generator requirements or the more stringent regulated generator requirements. The most common QEL is 220 pounds per month or batch (or about one-half of a 55-gallon drum). The QEL for some wastes is 2.2 pounds (or about a quart).

✓**RCRA** - the Resource Conservation and Recovery Act is federal legislation passed in 1976 that initiated regulation of hazardous wastes. Washington State implements parts of RCRA through its Dangerous Waste Regulations.

✓**reactive** - a substance that is very unstable, such as metallic sodium, or capable of detonation, such as explosives or picric acid crystals (see characteristics).

✓**regulated generator** - typically a business that generates per month or accumulates at any one time more than 220 pounds of hazardous waste (see QEL). Generators of more than 2200 pounds per month have more requirements than generators of between 220 and 2200 pounds.

✓**small quantity generator** - a business (auto repair, printing, etc) or institution (park, school, etc.) that always generates per month or accumulates at any one time less than 220 pounds of hazardous waste. Small quantity generators are subject to far fewer requirements (see QEL).

✓**solid waste** - any material that you no longer use which you either throw away, recycle or store temporarily until you have accumulated enough to recycle or dispose of it economically.

✓**toxic characteristic waste** - a substance is toxic if it is poisonous or harmful to plant or animal life. Examples: used antifreeze, paint booth washwater (see criteria wastes).

✓**TCLP** - the test used to determine if a waste is hazardous under the characteristic of toxicity. The Toxicity Characteristic Leaching Procedure (TCLP) checks for high concentrations of certain heavy metals, organic chemicals and pesticides (see characteristics).

✓**TSD** - Treatment, Storage and Disposal facilities are the final destination of hazardous wastes. All TSDs must be permitted and have EPA/state ID numbers.

✓**triple-rinse** - rinsing a container three times in order to ensure that it's legally empty. Applies to pesticides and acutely hazardous wastes. Rinse water should be reused in a manner consistent with the original intended purpose.

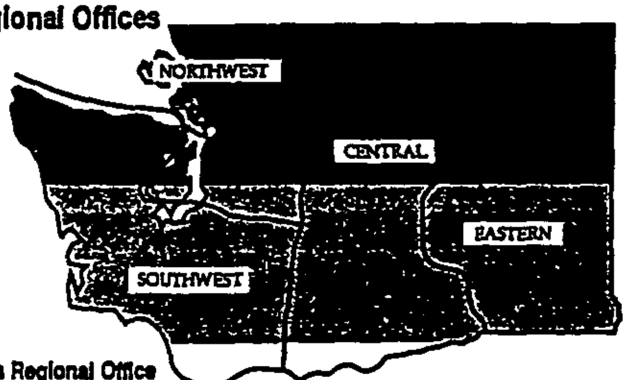
✓**worker right-to-know** - The Department of Labor and Industries administers worker right-to-know. The rules require all Washington state employers to inform and train employees about hazardous chemicals in the workplace.

Take the next step!

If you think your business generates hazardous waste, contact your nearest Ecology regional office to request other information that will help you understand and comply with hazardous waste regulations:

- Hazardous Waste Generator Checklist for a quick summary of your legal responsibilities as a generator of hazardous waste,
- Checklist Fact Sheets that describe each section of the Hazardous Waste Generator Checklist in more detail,
- Services Directory to help you find waste haulers, laboratories, recyclers and other services,
- Subject Index that provides you with references and contacts for many of your hazardous waste questions,
- Guide for Hazardous Waste Generators, and
- Dangerous Waste Regulations (Chapter 173-303 WAC).

Department of Ecology Regional Offices



Southwest Regional Office
7272 Cleanwater Lane
Mail Stop LU-11
Olympia, WA 98504-6811
(206) 753-2353

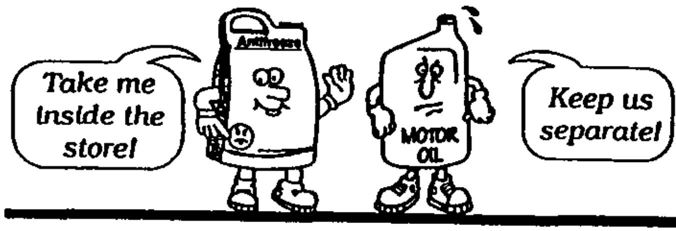
Northwest Regional Office
3190 160th Avenue SE
Bellevue, WA 98008
(206) 649-7000

Central Regional Office
106 S. Sixth Avenue
Yakima, WA 98902-3387
(509) 575-2490

Eastern Regional Office
North 4601 Monroe, Suite 100
Spokane, WA 99205-1295
(509) 456-2926

Snohomish County

Collection Sites for Antifreeze *or* Motor Oil



NORTH COUNTY

Antifreeze | Motor Oil

Al's Auto Supply
1090 State Street, Marysville
Mon-Sat 8 am - 9 pm
Sunday 9 am - 7 pm

Good for You Texaco
3315-172nd St NE, Arlington
Mon-Sun 4 am - 12 am

North Co. Recycling & Transfer Station
19600-63rd Ave NE, Arlington
Mon-Fri 7 am - 7 pm
Sat & Sun 8 am - 4:30 pm

Oso Drop Box
30022-203rd Ave NE, Arlington
Sat & Sun 9:30 am - 4:30 pm

Schuck's Automotive
1105 State Ave, Marysville
Mon-Sat 8 am - 9 pm
Sunday 8 am - 7 pm

Tulalip Tribes Marina
7411 Tulalip Bay Rd, Marysville
Mon-Sun 7 am - 8 pm

Warm Beach Fire Station
18902 Marine Dr, Marysville
Mon-Sun 24 hrs/day

SOUTH COUNTY

Antifreeze | Motor Oil

Al's Auto Supply
22804-100th Ave W, Edmonds
18129 Bothell Way NE, Bothell
19915 Hwy 99, Lynnwood
Mon-Sat 8 am - 9 pm
Sunday 9 am - 7 pm

Schuck's Automotive
19825 Hwy 99, Lynnwood
16706 Hwy 99, Lynnwood
20609 Bothell-Evt Hwy SE, Bothell
Mon-Sat 8 am - 9 pm
Sunday 8 am - 7 pm

Southwest Recycling & Transfer Station
21311-61st Pl W, Mountlake Terrace
Mon-Fri 7 am - 9 am & 4 pm - 9 pm
Sat & Sun 8 am - 4:30 pm

CENTRAL COUNTY

Antifreeze | Motor Oil

Al's Auto Supply
6308 Evergreen Way, Everett
1932 Broadway, Everett
11010-19th Ave SE, Everett
Mon-Sat 8 am - 9 pm
Sunday 9 am - 7 pm

Everett Recycling & Transfer Station
2902-36th Street, Everett
Mon-Fri 7 am - 9 am & 4 pm - 9 pm
Sat & Sun 8 am - 4:30 pm

Schuck's Automotive
7003 Evergreen Way, Everett
1510 Broadway, Everett
11020-19th Ave SE, Everett
Mon-Sat 8 am - 9 pm
Sunday 9 am - 7 pm

EAST COUNTY

Antifreeze	Motor Oil	Location
	●	Al's Auto Supply 1105 Ave D, Snohomish Mon-Sat 8 am - 9 pm Sunday 9 am - 7 pm
	●	Gold Bar Drop Box 42819 Hwy 2, Gold Bar Tue & Sat 9:30 am - 4:30 pm
	●	Granite Falls Drop Box 7526 Menzel Lk Rd, Granite Falls Sunday 9:30 am - 4:30 pm Mon & Fri 9:30 am - 4:30 pm
	●	Lake Roesiger Drop Box 19619 Dubuque Rd, Snohomish Tue & Sat 9:30 am - 4:30 pm
	●	Monroe Drop Box 19235-144th St SE, Monroe Daily 9:30 am - 4:30 pm
	●	Monroe Texaco Hwy 2 & Lewis Street, Monroe Mon-Sun 24 hrs.
●		Schuck's Automotive 19579 Hwy 2, Monroe Mon-Sat 8 am - 9 pm Sunday 8 am - 7 pm
	●	Sultan Drop Box 33014 Cemetery Rd, Sultan Sunday 9:30 am - 4:30 pm Mon & Fri 9:30 - 4:30 pm
●	●	Texaco Express Lube 510 Second Ave, Snohomish Mon-Sat 8 am - 6 pm

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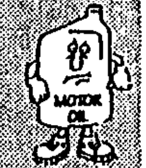
Recycle Your Used Antifreeze or Motor Oil Free!



Please follow these easy instructions:

Drain your oil or antifreeze **SEPARATELY** into sealable, reuseable containers.

Keep it pure - don't mix in other fluids, like gasoline, solvents or brake fluid. Contaminated motor oil or antifreeze can't be recycled. Keep other products for household hazardous waste collection days or call us for disposal options.

Take your used oil or antifreeze to the nearest collection facility (see locations and hours on next page - not all locations take both). Motor oil is collected outside at Schuck's and Texaco locations and inside at Al's Auto Supply locations (Al's limits oil to 5 quarts per person).

Antifreeze is collected INSIDE all the stores indicated because it's poisonous and spills are a serious threat to pets and children. Ask a sales clerk for assistance.

Take your container home to use again. Easy to use, reuseable containers designed for this purpose are available at automotive retail outlets. Disposal of containers is not available at collection sites.

Be sure to keep antifreeze out of reach of children.

Snohomish County
Public Works
Solid Waste Management
388-3425

What To Do If You Find a Leak or Spill

If you, as the owner or operator of an underground storage tank, are aware of a leak or spill of petroleum or other hazardous substances, *you must report the release and meet certain federal and state requirements.* This brochure outlines your responsibilities. For more information, contact the nearest office of the state Department of Ecology (Ecology). The numbers for the Ecology offices appear on the map in this brochure.

Within 24 hours:

- Notify the nearest Ecology office immediately.
- Remove enough liquid from the tank to prevent further leaking or spilling.
- Eliminate or reduce fire, explosion or vapor hazards.
- Visually inspect the area. Prevent contamination from spreading.
- *Do not* wash the substance into storm sewers, creeks or anything else that may lead to surface or ground water.

As soon as possible

but no more than 20 days after confirming a release:

- Investigate for "free product" (for instance, petroleum found floating on water).
- Continue monitoring. Reduce any additional safety hazards posed by free product or vapors which may have moved into nearby structures such as basements or sewers.
- Reduce the threat to human health and the environment posed by contaminated soils. Soils should be covered while stored, and treated or disposed of appropriately.
- Sample for hazardous substances in the areas where they are most likely to be found. This includes ground water if there is a possibility of contamination.
- Test samples for substances likely to be found. If gasoline has been released, samples must be tested, at a minimum, for total petroleum hydrocarbons, benzene, toluene, ethylbenzene and xylene. If leaded gasoline is present, samples must also be tested for lead.
- If samples meet cleanup standards, or if contamination is very limited, an Ecology inspector may determine the site does not require further action.

As soon as possible

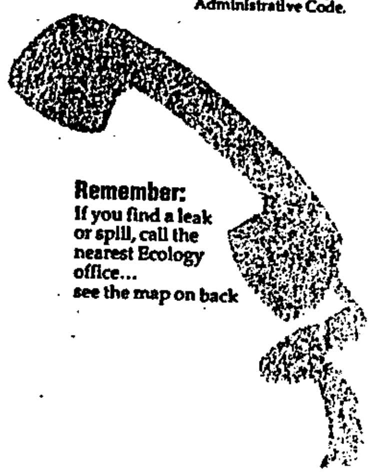
- Remove free product in an appropriate way to the maximum extent possible.
- Conduct a remedial investigation/feasibility study (RI/FS) to provide detailed site information and cleanup alternatives if there is evidence of ground water contamination, if free product is present, or if required by Ecology.
- Ensure that cleanup actions comply with state cleanup standards. These standards specify the levels of contamination that can be safely left in soil or ground water. Where it is not possible to meet these cleanup levels, an Ecology investigator may be able to help you find other ways of adequately protecting human health and the environment.

These Reports are Required

- An initial report must be made within 24 hours of finding a leak or spill.
- A Status Report is required within 20 days of confirming a release.
- A Site Characterization Report is required within 90 days of confirming a release.
- A Final Cleanup Report is required within 90 days of completing cleanup action.

It's The Law

The Model Toxics Control Act (MTCA) is a citizen mandate to clean up hazardous waste sites. Many of these sites are leaking underground storage tanks. The regulations that implement MTCA and outline what owners and operators must do to meet state and federal regulations can be found in Chapter 173-340 of Washington Administrative Code.

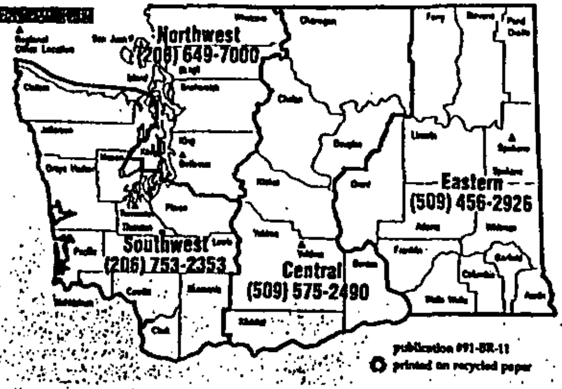


Remember:
If you find a leak or spill, call the nearest Ecology office...
see the map on back

Who To Contact...

To report a leaking underground storage tank, or to request technical or financial assistance for a cleanup, contact the Ecology regional office for the site. For more information regarding the regulations, contact

Department of Ecology,
Mail Stop PV-11,
Olympia, WA 98504
(206) 438-3000,
or call the Toxics Cleanup Program at 1-800-458-0920.



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Regulations at a Glance...

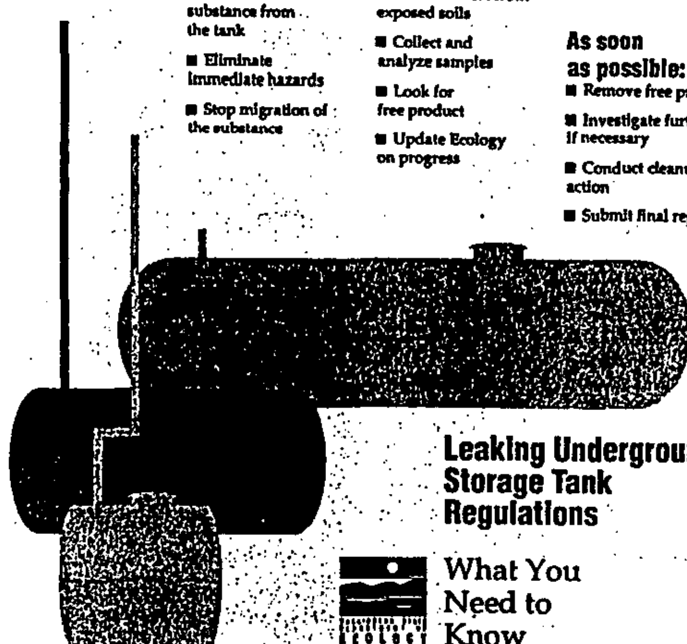
After confirming a release from an underground storage tank, you must:

Within 24 hours:
- Call the Ecology regional office
- Remove the substance from the tank
- Eliminate immediate hazards
- Stop migration of the substance

Within 20 days:
- Monitor and reduce fire and safety hazards
- Reduce threat from exposed soils
- Collect and analyze samples
- Look for free product
- Update Ecology on progress

Within 90 days:
- Submit a written site characterization report

As soon as possible:
- Remove free product
- Investigate further if necessary
- Conduct cleanup action
- Submit final report



Leaking Underground Storage Tank Regulations

What You Need to Know

ECOLOGY

CLEAN TEXAS 2000

ENVIRONMENTAL PARTNERSHIPS

Clean Texas 2000 is a statewide pollution-prevention program sponsored by Governor Ann Richards and the Texas Water Commission. The program's goal is to reduce pollution across the state. All Texans are invited to join this effort as partners in Clean Texas 2000.

CLEAN TEXAS 2000 GOALS

- To reduce hazardous waste and toxic release generation in the state by 50 percent or more by the year 2000.
- To reduce solid waste in landfills by 50 percent by the year 2000.
- To educate all Texans about what they can do to improve and preserve our environment.

ACCOMPLISHING THE GOALS THROUGH PARTNERSHIPS

Businesses, industries, local governments, schools, civic organizations and citizens are invited to work together as partners to achieve the goals of CLEAN TEXAS 2000.

The Texas Water Commission serves as a clearinghouse for project ideas and for bringing partners together with complimentary resources. An example of an effective partnership might be a group of businesses working with a local government and an environmental group to conduct a household hazardous waste collection day in the community.

HOW TO BECOME A CLEAN TEXAS 2000 PARTNER

Every Texan who writes to us outlining at least one environmental project will be considered an official partner. Projects may be currently underway, already completed or in the planning stage. Simply fill out the enclosed application form (one form per project) and return it to CLEAN TEXAS 2000, P. O. Box 13087, Austin, Texas 78711.

New Partners will be welcomed into the program by a letter from the Texas Water Commissioners and will receive the CLEAN TEXAS 2000 newsletter. Businesses, schools, cities and civic groups who send in an application form will be mentioned in the newsletter as new partners.

CLEAN TEXAS 2000 PROGRAMS

CLEAN INDUSTRIES 2000

To meet the 50 percent reduction goal for hazardous waste and toxic releases, industries are being recruited to become members of CLEAN INDUSTRIES 2000. Membership in the CLEAN INDUSTRIES 2000 program is reserved for those regulated industrial facilities or plants that commit to do the following:

- Reduce the amount of hazardous wastes and/or emissions tracked by the Toxic Release Inventory Program by at least 50 percent by the year 2000.
- Implement an internal program for environmental review

ENVIRONMENTAL TRADE FAIR

Each spring, in conjunction with the annual Governor's Awards Banquet for Environmental Excellence, CLEAN TEXAS 2000 will host an Environmental Trade Fair, showcasing various environmental efforts from across the state and offering more than 170 educational sessions for the regulated community.

FOR MORE INFORMATION

For more information about CLEAN TEXAS 2000, the Environmental Trade Fair or to receive the CLEAN TEXAS 2000 quarterly newsletter, please call 1-800-64-TEXAS or 512-463-8144, or write us at CLEAN TEXAS 2000, P. O. Box 13087, Austin, Texas 78711.

Free materials on a variety of environmental subjects can be obtained by calling 1-800-64-TEXAS.

TAKE CARE OF TEXAS.

(It's the only one we've got.)

CLEAN TEXAS 2000

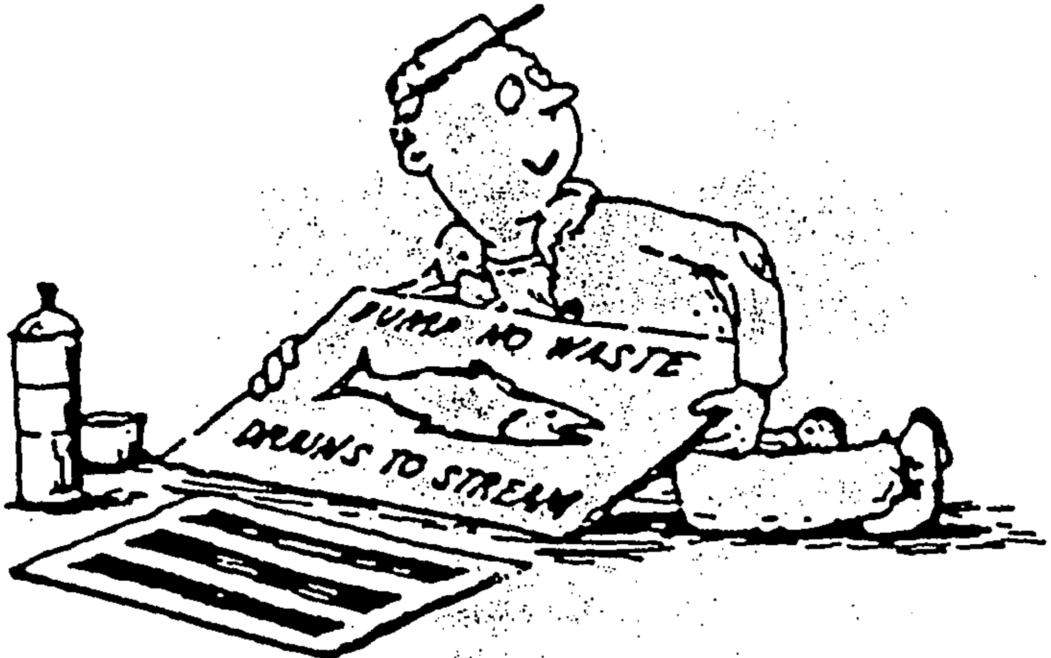
Texas Water Commission
P.O. Box 13087
Austin, Texas 78711

Clean Texas 2000 is a statewide environmental partnership program. Every business, industry, local government, organization and citizen is invited to become a partner. To find out how you can help, call 1-800-64-TEXAS.

BULK RATE
U.S. POSTAGE
PAID
PERMIT NO. 1967
AUSTIN, TEXAS

Spread the word about clean water

HELP US STENCIL STORM DRAINS!



We'll have a "grate" time!

WHAT: Storm drain stenciling in residential neighborhoods throughout Thurston County. These messages remind your neighbors not to dump hazardous chemicals in or near them.

WHO: Any group with a few hours of time - Girl Scouts, Boy Scouts, neighborhood associations, anyone can join the fun!

WHEN: At your convenience.

WHERE: Neighborhoods in Thurston County, City of Olympia and City of Lacey. For traffic safety reasons, we will be stencilling within residential subdivisions only.

HOW: All materials, training and safety gear provided. In Thurston County, call 754-4111. In Olympia, call Liz Hoenig at 753-8314. In Lacey, call Maureen Knutson at 491-5600.

THURSTON COUNTY City of OLYMPIA LACEY ECOLOGY

The Problem: Every year hazardous chemicals, pesticides, paints, used motor oil, etc. are poured down storm drains. These wastes are carried into the nearest stream, lake or the Puget Sound — directly into fish habitats or sometimes drinking water. Every day, human and wildlife use of creeks, ponds and shorelines is endangered by improper disposal of household hazardous wastes.

The Solution: Apply stencils next to storm drain grates in your community. The next person ready to pour waste down a storm drain will get the message!

DUMP NO WASTE

DRAINS TO STREAM

How Can You Participate?

Call for Permission

A. In Bellevue, call the City of Bellevue Storm and Surface Water Utility at 451-4476. They will provide you with equipment, maps and more information.

B. In unincorporated King County contact Laird O'Rollins, King County Department of Public Works, Surface Water Management at 296-6586.

C. Outside of Washington or in other cities, call Laura Arnow at the Washington State Department of Ecology at (206) 459-7586.

D. Storm drains on private property (e.g. business and apartment parking lots) require permission of the property owner.

* If children will be helping to apply the stencils, special care should be given to site selection for traffic reasons.

Stenciling Storm Drains In Bellevue

WHEN

Do not apply the stencil when it is raining! Wait for dry weather and dry pavement. It defeats the purpose to have wet paint rinsed down the storm drain.

WHERE

Stencils are placed on the downhill side of the storm drains. This way the water is not flowning over the painted area and leaves and debris won't cover the message. Stenciling the sidewalk is discouraged due to the slick nature of painted surfaces which are dangerous to pedestrians.

HOW

A. Lay the stencil flat overnight if it needs to be straightened.

B. Scrub the area with a wire brush so the surface is free of dirt.

C. Lay the stencil flat.

D. Using white traffic zone paint, spray in a zig zag motion. Be careful not to use too much paint, it may run under the stencil.

E. If possible, use a utility sink or a drain that empties into a sewer system to wash the paint off the stencil after you are done using it. This will help to prolong the life of the stencil. (Be sure not to dump the wash water down a storm drain!)

* Be sure to return all equipment, including used stencils, to Bellevue's Storm and Surface Water Utility.

THANK YOU FOR HELPING TO IMPROVE WATER QUALITY IN WASHINGTON!

More information on back.

KEEP OUR STREAMS CLEAN!

STORM DRAIN STENCILING IN BELLEVUE

For Information:

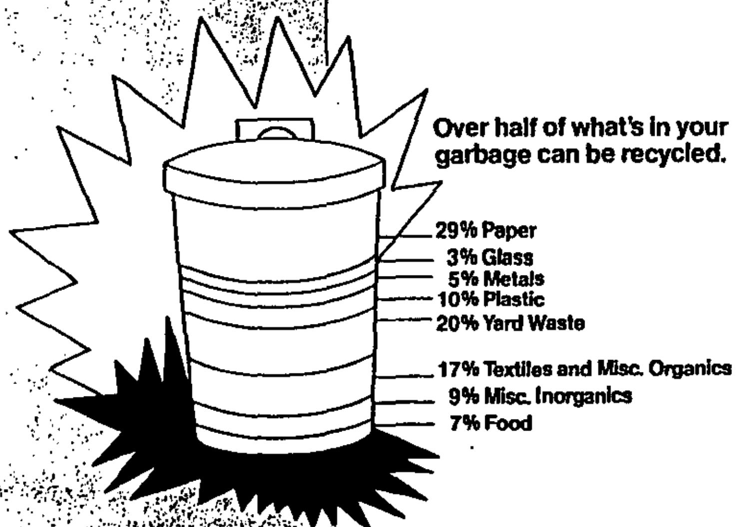
On where to recycle used oil, call the City of Bellevue Storm and Surface Water Utility at 451-4476 or the Dept. of Ecology's toll-free recycling hotline at 1-800-RECYCLE.

For the safe disposal of hazardous substances, call the City of Bellevue Storm and Surface Water at 451-4476, King County's Hazards Line at 296-4692 or Ecology's Hazardous Substance Information Office Hotline at 1-800-633-7585.

City of Bellevue
Storm and Surface Water Utility

CUT WASTE

King County is making it easier than ever for you to cut waste. The best way to do that is to cut down on the garbage you put into your can. Do you know what goes into the average household garbage can? Here's an idea:



Starting this summer, you'll have another way to help cut wastes. King County residents in urban unincorporated areas will get home collection of recyclables — including yard waste!

King County's goal of 65% waste reduction by the year 2000 depends on you. Household waste reduction, residential recycling and yard waste collection are going to help us reach that goal.

And face it, garbage rates are going up! That's because it's very expensive to landfill our garbage. Our present landfill won't last forever. And the costs of acquiring a new, environmentally sound landfill are substantial.

Recycling is a more economical and ecologically wise alternative. Separating recyclable materials from garbage not only keeps things out of the landfill, it also preserves valuable natural resources by reusing discarded materials. The same thing is true when you recycle yard waste — it becomes great compost ready to use again in your yard and garden.

You'll end up paying less for your garbage than you would pay if you didn't separate it. So now is the time to start.

HOW TO START

YOUR RECYCLING & YARD WASTE COLLECTION

If you're currently on garbage collection service

Your garbage company will notify you by mail. Recycling service either will be provided automatically or you will be asked to use a sign-up system. It depends on your garbage company.

To receive a yard waste container for collection service, you will need to sign up. Your garbage company will be contacting you if they haven't already.

If you're NOT on garbage collection service

Call the company serving your neighborhood and ask how to start recycling and yard waste services. The map inside this brochure shows which company serves your area. A list of the garbage companies and their telephone numbers is located next to the map.

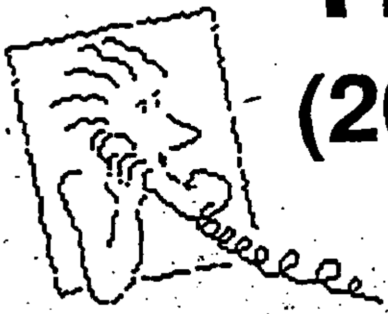
You can sign up for residential recycling and/or yard waste service. You will be billed separately for these services.

If you live in an incorporated area of the county, contact the recycling coordinator for your city to find out about how you can recycle.

Remember!
King County can help you get started reducing waste with:

HOUSEHOLD RECYCLING COLLECTION
HOUSEHOLD YARD WASTE COLLECTION

The Hazards Line



(206) 296-4692

Do you have questions about:
- household hazardous products
  (leftover paints, pesticides, thinners, leftover chemicals, old oil, etc.)
- indoor air pollution

Call the Health Department's HAZARDS LINE!

Professional environmental health staff can provide referrals to recognized experts at the federal, state, or local level, as well as the private sector. Information can be provided to unique or complicated questions such as spills of hazardous materials or household hazardous wastes.

Q. "What can I do to reduce the amount of household hazardous waste I have?"

A. Proper disposal of household (and industrial) chemical products is expensive. Before you take your household hazardous wastes to a collection facility, consider these options:

<u>"Use It Up", if it is at all possible.</u>
This includes giving it away to a friend or neighbor if the paint, cleaner, etc. is still useable. And next time around, buy only what you need and use the least toxic product available.

Q. "Aside from calling the **HAZARDS LINE**, how can I find out where to take my household hazardous waste?"

A. Information on household hazardous waste disposal is often published in local community newspapers. There are programs for both Seattle and King County residents. Also, check your water, sewage, and garbage bills for information.

Q. "What is the King County Waste Mobile?"

A. The Waste Mobile is a mobile collection facility which visits specific sites throughout the year. It collects household hazardous waste free of charge and is open to all King County and Seattle residents.

Q. "What do I do with household hazardous waste if I live in the City of Seattle?"

A. Currently, the South Park Transfer Station located at 2nd Avenue South and South Kenyon Street, accepts HHW free of charge, Thursday-Saturday, 10:00 am - 4:00 pm. It is open to all Seattle and King County residents.

Seattle-King County
Department of Public Health
Central Environmental Health
172 - 20th Avenue, Seattle WA 98122

United States
Environmental Protection
Agency

Office
Public
Washington

September 198

EPA

Protecting Our Ground Water

What Is a storm drain?

A storm drain is a system that collects and carries rainwater from streets, parking lots and roof tops and, in almost all cases, discharges it untreated into our lakes, rivers, creeks, streams and Puget Sound.

Are you pouring water quality down the drain?

Keeping a car's engine running smoothly requires regular maintenance, such as changing the motor oil. But how are you disposing of auto waste?

Dumping a few gallons of used motor oil down a storm drain may not seem like a big problem, but those gallons add up. Each year Washington residents dump 2.25 million gallons of used motor oil into storm drains that eventually empty into creeks, streams, rivers, lakes and Puget Sound.

In fact, any substance that ends up on streets and washes down into storm drains--from dirt to soap suds from a car wash to used motor oil--empties into nearby waterways.

Used motor oil is also the largest single source of oil pollution (more than 40 percent) in our nation's water bodies. The used oil is often dumped down storm drains, poured on the ground or put in the garbage and sent off to landfills.

As a result, our lakes are polluted, and many aquatic plants and animals are harmed or killed. That's why proper disposal of auto waste and other waste is so important, and why storm drains are not places to dump anything.

Improper disposal of auto and other waste--even in small amounts--is harmful to our health and environment.

Dumping used motor oil, antifreeze and other waste down the street, curb or gutter drains--called storm drains--pollutes watersheds, Puget Sound and underground water supplies. It doesn't take much to cause a lot of damage. One pint of oil, for example, can produce a one-acre slick on the water.

Improper disposal of used oil is also a crime. It is against state and federal laws to pollute the environment. Violators can be fined.

Waste does not magically get treated or disappear.

There are two common myths about storm drains: (1) that waste dumped down the curb, catch basins or gutters are somehow magically treated before they reach the environment, and (2) that water bodies can magically absorb used motor oil, antifreeze and other auto waste dumped down storm drains.

In fact, all storm drains connect to the nearest body of water with no treatment whatsoever.

Waste oil has the greatest environmental impact of all

automotive products because of its insolubility and persistence and its volumes that are improperly dumped. Oil sticks to everything--from beach sand to bird feathers. It floats on and pollutes our waterways.

Antifreeze is poisonous in its concentrated form and has a sweet taste that attracts animals. Many pets and other wildlife die after drinking from puddles of antifreeze.

Soap suds from washing your car, paint rinse-water, pet waste and pesticides all can cause problems if they end up going down a storm drain.

Here's how you can make a difference.

Used motor oil. It can be recycled into good-as-new lubrication oil because it never loses its lubricating properties. It can also be reprocessed into fuel oil. Call the state's 24-hour toll-free Recycle Hotline, 1-800-RECYCLE, for locations in your neighborhood where you can bring used oil for proper handling.

Antifreeze. Small amounts from single-family residences can be poured down sinks or toilets if they are connected to a central sewerage system. Never pour antifreeze down a storm drain or into a septic tank system. Call the Seattle-King County Department of Public Health's Hazards Line, 296-4692, for further disposal information.

Keep everything out of storm drains except for the rainwater that they are designed to collect. Don't put anything down a storm drain that you wouldn't want to drink or swim in.

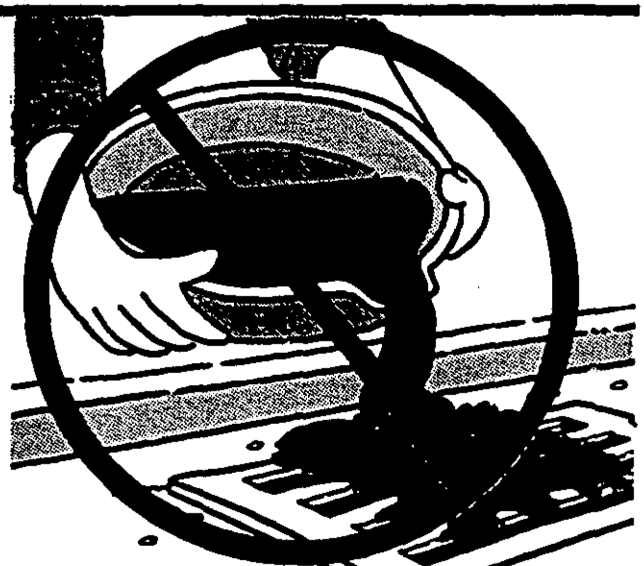
Clean water doesn't just happen. It's your investment...a sound investment.

Spanish Translation

INAPROPIADA ESTRUCTURA PARA EL DRENAGE DEL ACEITE Y OTROS DESHECHOS—AUN CUANDO SEAN CANTIDADES MINIMAS—SON PERJUDICIALES PARA NUESTRA SALUD Y MEDIO AMBIENTE. TIRAR EL ACEITE USADO DE LOS MOTORES, SOLUCION INCONGELABLE, Y OTROS DESHECHOS EN LA CALLE, CURBAS O DRENAGES—LLAMADOS DRENAGES DE AGUAS FLUVIALES—CONTAMINA EL AGUA. ES CONTRA LA LEY FEDERAL Y ESTATAL DE CONTAMINAR EL MEDIO AMBIENTE EN QUE VIVIMOS.

VIOLADORES PODRAN SER MULTADOS. NO TIRE BASURAS EN DRENAGES Y LUJARES QUE USTED MISMO PUEDA USAR O CONTAMINAR EL AGUA QUE USTED PUEDA TOMAR.

Are You Pouring Water Quality Down The Drain?



What you put down a storm drain can hurt the environment

METRO

Clean Water A Sound Investment

Copies of this brochure are available on request by calling 684-1233.

If you are interested in reprinting this material, please call Metro's communications division at 684-1162.

Printed on recycled paper

December 1989

King County Solid Waste Division
400 Yesler Building, 6th Floor
Seattle, WA 98104
Hazards Line (206) 296-4692
Sorting It Out Together

WASTE CATEGORIES | Pesticides
CHEMICAL PRODUCTS | Botanicals
HAZARDOUS INGREDIENTS* | ▲
HAZARD PROPERTIES• | toxic
WASTE MANAGEMENT□ | ☑

HOUSEHOLD HAZARDOUS WASTE WHEEL®

Pesticides — Household Insecticides
Pesticides — Fungicides — captan, folpet, anilazine, copper/zinc compounds
[redacted] — Mi[redacted] spirits, glycol ethers, ketones, toluene, xylene
[redacted] — creosote, magnesium [redacted] petroleum distillates, chlorinated phenols (e.g. PCP)
Pai[redacted] — Acetone, xylene, alcohol, toluene, methylene chloride
Thinners and Turpentine — Alcohol, acetone, esters, ketones, turpentine, petroleum distillates
Rust Proofing Coatings — Methylene Chloride, Petroleum distillates, toluene, xylene, some pigments
Latex or Water Based Paints — Ethylene glycol, glycol ethers, phenyl mercuric acetate, some pigments, resins
Enamel or Oil Based Paints — Aliphatic and aromatic hydrocarbons, mineral spirits, some pigments
Pesticides — Herbicides — 2,4-D, glyphosate, prometon
Pesticides — Mouse and Rat Poisons — brodifacoum, coumarins (e.g. warfarin), strychnine
Pesticides — Roach and Ant Killers — organo-phosphates, carbamates, pyrethrins
Pesticides — Flea Collars and Sprays — carbamates, pyrethrins, organo-phosphates
Pesticides — Organo-phosphates — ⊡
Pesticides — Chlorinated Hydrocarbons — ■

HOUSEHOLD HAZARDOUS WASTE WHEEL®

If the products/chemicals are ingested, telephone your local fire or police station to connect you with your state or regional poison information center.

•HAZARD PROPERTIES

The hazards for each household hazardous waste were evaluated after careful scrutiny of the chemical reference literature. A quantitative rating system was not developed because the *concentrations* and the quantity of chemicals in a product must be known before a definitive health hazard can be determined.

Health hazard ratings listed on the wheel are therefore qualitative ratings that provide to potential household disposers only a general "awareness" of the physical or biological hazards associated with each waste. Please note that many chemicals are toxic when swallowed in sufficient quantities.

*** HAZARDOUS INGREDIENTS**

Some of the chemicals that may be found in each household product are listed. However, in the case of pesticides, symbols were used to identify major pesticide groups. These include:

- ● — Lead Arsenate, Calcium Arsenate, Monosodium Methane Arsenate (MSMA), Paris Green**
- ▲ — Pyrethrins, Rotenone, Nicotine
- ★ — Carbaryl, Aldicarb, Carbofuran, Propoxur
- ■ — Aldrin, Endrin, Heptachlor, Chlordane, Dicofol, Lindane, Kepone**, Dieldrin**, DDT**
- ⊡ — Parathion, Malathion, Diazinon-r, Dichlorvos (DDVP), Chlorpyrifos

While some of the paints and pesticides may be restricted in use, suspended, or cancelled, they have been included because many people still have these products in their possession. (**-These pesticides were discontinued over 10 years ago.)

□WASTE MANAGEMENT

Consumers are responsible for wise environmental management and disposal of household hazardous wastes. Certain household wastes should be brought to community household hazardous waste collection days for proper disposal. If a collection program is not available in your town, decisions must be made concerning household waste storage and disposal.

The wheel provides citizens with information concerning proper waste management. For each household waste found on the wheel, a symbol identifies preferred waste management options: to recycle, fully use and discard, store wastes until a collection day is organized in your community, or special instructions.

(R) Recycle your wastes. Bring to a service station, reclamation center or household hazardous waste collection. Partially used useful products (e.g. paints) may be exchanged.

Fully use these products so that no waste remains except minimal residual attached to the container. The container may then be disposed of at the municipal landfill. In rare circumstances when these products are not completely used, the waste should be stored according to the directions listed below in the storage section.

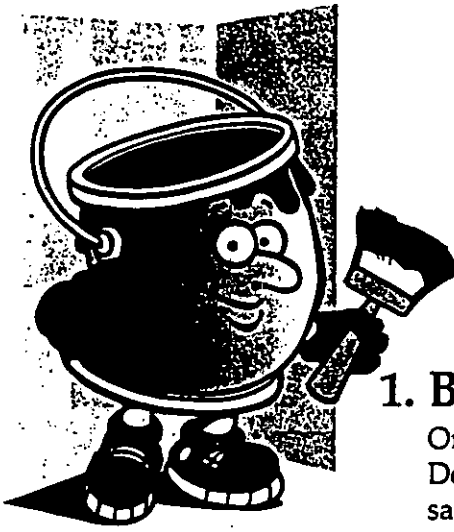
☑ These wastes should be safely stored until a hazardous waste program is organized in your community. Fully spent currently-available pesticide containers may, however, be triple rinsed and the rinsewater reused according to the instructions on the label.

☆ 1—Waste can be disposed of at some wastewater treatment plants where bacteria can detoxify the chemical. (Call your local treatment plant). Do not pour on the ground or into septic tank.

☆ 2—Keep in tightly closed jar and allow contaminants to settle out. Strain the thinner through a fine mesh sieve; re-use the liquid. The concentrated contaminants should be stored and taken to a collection day.

☆ 3—*Fully* use these products. Air dry latex paints and discard container in trash.

Round 11



FIVE WAYS WE CAN PAINT OURSELVES OUT OF A CORNER

1. Buy only what you need.

One gallon of paint usually will cover 300 to 400 square feet. Don't buy a gallon when a quart will do the job. A paint salesperson can help you figure out how much you need.

2. Use it all up.

Use the extra for touch-up jobs or small projects, or put an extra coat of paint on.

3. Give it away.

Someone you know may be able to use up your leftover paint. Check with friends and neighbors. Also, many theater groups, artists, churches, shelters and housing rehab groups might have a use for your leftover paint - but call them first to make sure they want it!

4. Mix your leftovers together.

You can mix leftover latex paints together to use as a base coat or primer. This paint is perfect for jobs that won't show.

5. Dry it out.

Dry out your paint by putting the open can in a well-ventilated place, away from kids or pets. Or, brush leftover paint on wood or cardboard and then throw those pieces away when they're dry. Do these methods safely - follow arson safety rules.

Empty paint cans and dried out paint MAY be disposed of as garbage. Just make sure to leave the lids off the paint cans so the garbage collectors can see that there's no liquid in them.

AS A LAST RESORT...

Take your paint to a household hazardous waste disposal facility. Call for the location and hours most convenient for you:
Hazards Line, 296-4692
or, in Seattle,
Solid Waste Utility, 684-7600

A service of the
Seattle-King County Local Hazardous
Waste Management Plan

For Seattle residents, this material can be made available upon request to accommodate people with disabilities.
233-7913 (TDD)
Translation services are available by calling 684-7600.

Printed on recycled paper with vegetable based ink

11/92

NO, PAINT DOES NOT BELONG IN THE GARBAGE

It costs the City up to $6 to dispose of a gallon of paint properly...