STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

(L303)

PROJECT NAME: OFFSITE INVESTIGATION
PROJECT NO.: 2583
CLIENT: OXYCHEM
LOCATION: NEAR LINDE ENTRANCE

HOLE DESIGNATION: BH12-92
DATE COMPLETED: SEPTMBER 15, 1992
DRILLING METHOD: 4 1/4" ID HSA
CRA SUPERVISOR: K. LYNCH

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEVATION ft AMSL	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE STATE	SAMPLE 'N' VALUE
	Brown SAND, some silt, little clay, trace coal, dry to moist			1SS		7
2.5	Black and brown SILT, some gravel, concrete, dry to moist (2.0 to 4.0 ft BGS)	-2.0		2SS		4
	Same, with some red brick (4.0 to 6.0 ft BGS)		8"ø BOREHOLE			
5.0				3SS		6
	Same, with some sand, trace concrete and red brick (6.0 to 8.0 ft BGS)			4SS		15
7.5	Same, with little clay, no brick or concrete, moist (8.0 to 9.5 ft BGS)		CEMENT/ BENTONITE GROUT	5SS		12
10.0	Light gray SAND, trace red brick and angular gravel, moist to wet	-9.5 -9.8		6SS		11
	Gray angular GRAVEL, little to some sand, moist to wet (9.8 to 13.5 ft BGS)					
12.5	Same, except wet (13.5 to 14.0 ft BGS)			7SS		16
15.0	Gray fine SAND, little gravel, wet	-14.0 -14.4		8SS		>100
	Red brown SILT, some clay, dry to moist	-14.7				
	END OF HOLE @ 14.7 FT. BGS					
	NOTES:					
	1. Moved 1 ft west, augered to 14.0 ft BGS (BH12A-92). – 14.0 to 14.6 ft BGS; 8A-SS Gray GRAVEL, little silt and clay, wet			8A-SS		50/1"
	2. Moved 0.6 ft further west, augered to 14.0 ft BGS (BH12B-92) – 14.0 to 14.6 ft BGS; 8B-SS Gray GRAVEL, little silt and clay, wet			8B-SS		50/1"
	3. Moved 1 ft further west, augered to 14.0 ft BGS (BH12C-92) – 14.0 to 14.6 ft BGS; 8C-SS No recovery			8C-SS		50/1"
	4. Moved 7 ft north, augered to 14.0 ft BGS (BH12D-92) – 14.0 to 14.7 ft BGS; 8D-SS Red brown SILT, some clay, little sand, trace gravel			8D-SS		50/1"
	5. Moved 6 ft west, augered to 14.0 ft BGS (BH12E-92). – 14.0 to 14.7 ft BGS; 8E-SS No recovery					
	6. Moved onto center line of pipe, augered to 14.0 ft BGS (BH12F-92). – 14.0 to 14.5 ft BGS; 8F-SS Red brown SILT, gray concrete or slag, white marble, no dolostone					
	7. At completion boreholes were backfilled with cement/bentonite grout to ground surface.					

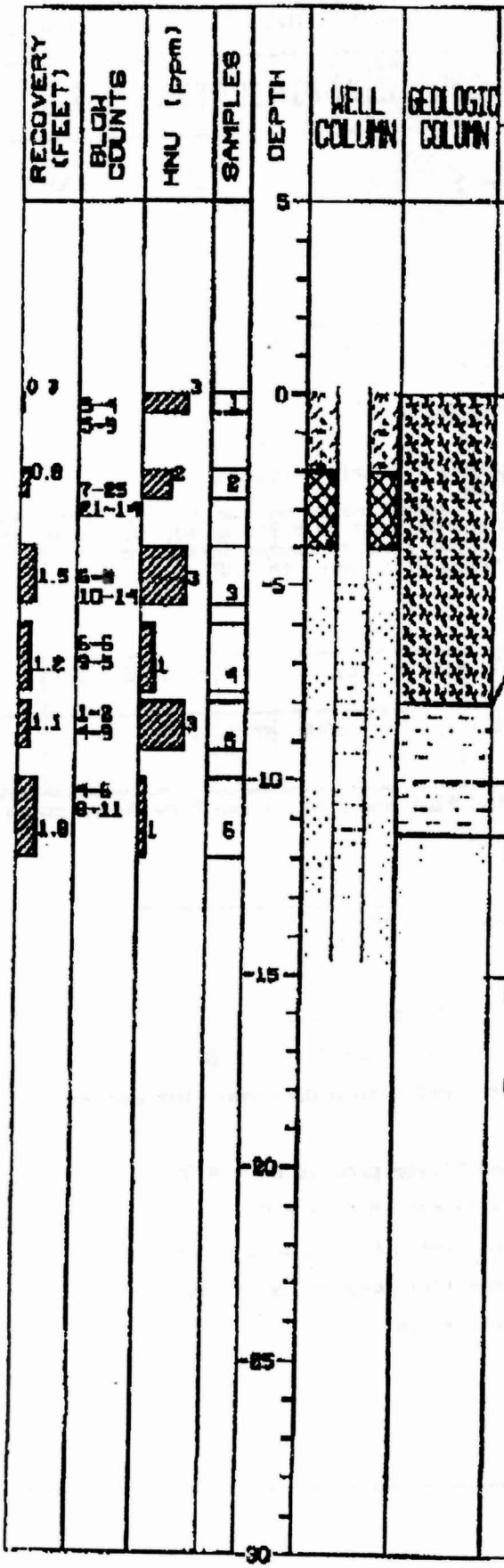
NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS ⬭ WATER FOUND ▽ STATIC WATER LEVEL ▼

SUBSURFACE AND WELL CONSTRUCTION LOG

MW-1

(page 1 of 1)



SOIL CLASSIFICATION

Gray fine to coarse Gravel, little fine to coarse Sand, loose (FILL).

-Brown Silt, some Clay, little fine Gravel, moist compact
-seam of brick fragments, trace fine Gravel, Clay
-grades to brown Silt, little fine Sand, trace fine Gravel to 4.7'
-seam of dark brown to black fine Sand, some Silt to 4.9'
-seam of brown Silt, some Clay to 5.5'
-brown to black Silt and fine Sand, moist, medium stiff

Dark brown to black SILT, little fine Sand, trace Clay, moist, medium stiff.
- seam of mottled green to brown Silt, some Clay
- seam of brown fine Sand and Silt.

Brown mottled SILT, some fine Sand, wet, firm.

Brown fine SAND, little Silt, wet, firm.

Boring terminated at 15.0'.

MONITORING WELL CONSTRUCTION DETAILS

2 inch diameter PVC riser 5.0' - 0.2'

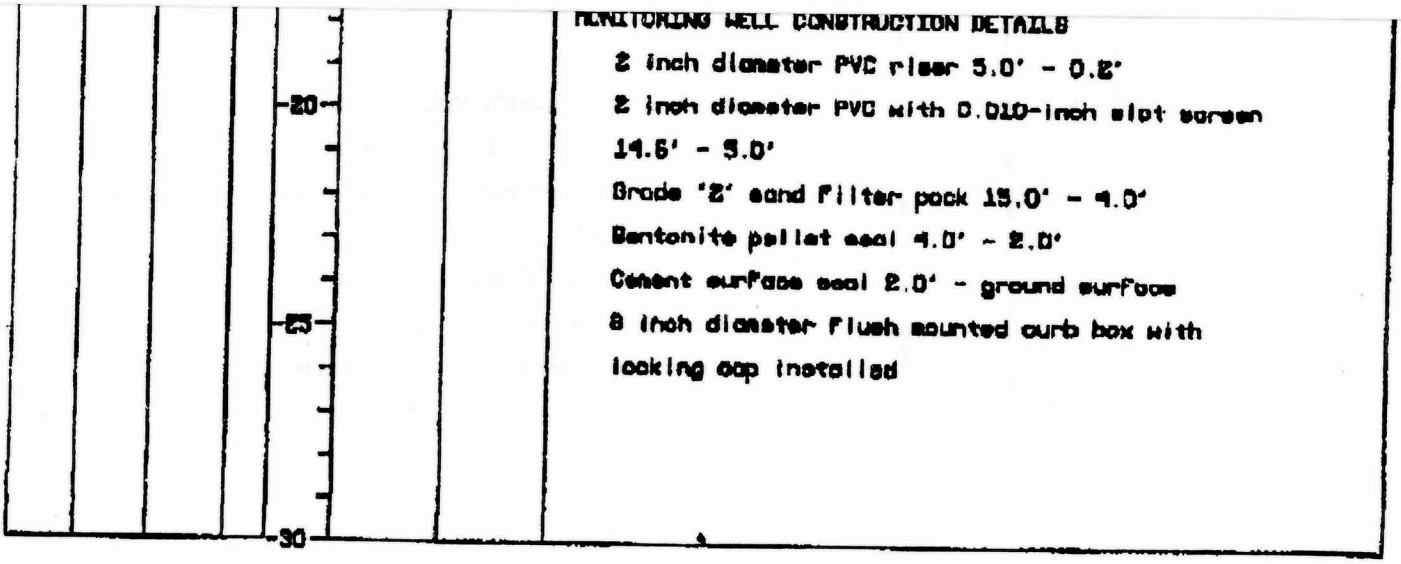
2 inch diameter PVC with 0.010-inch slot screen 14.5' - 5.0'

Grade '2' sand filter pack 15.0' - 4.0'

Bentonite pellet seal 4.0' - 2.0'

Cement surface seal 2.0' - ground surface

8 inch diameter flush mounted curb box with locking cap installed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MONITORING WELL CONSTRUCTION DETAILS
2 inch diameter PVC riser 5.0' - 0.2'
2 inch diameter PVC with 0.010-inch slot screen
14.6' - 5.0'
Grade '2' sand filter pack 15.0' - 4.0'
Bentonite pellet seal 4.0' - 2.0'
Cement surface seal 2.0' - ground surface
8 inch diameter flush mounted curb box with
locking cap installed

APPENDIX B

INJECTION TEST RESULTS

TABLE B1 - OW652
TABLE B2 - OW653
TABLE B3 - OW657
TABLE B4 - OW658
TABLE B5 - OW659

TABLE B1

OW652 - HYDRAULIC CONDUCTIVITIES

Depth Below Ground Surface (ft)	*Depth Below Top of Rock (ft)*	*Hydraulic * Conductivity (cm/sec)*	*Waterbearing*	*Depth to Static Water Level (ft. BGS)*	*Date*
20.5 - 32.5	3.0 - 15.0	4.4E-03 - 8.5E-03	Yes	9.7	09/12/91
32.5 - 47.5	15.0 - 30.0	1.3E-03 - 3.7E-03	Yes	10.4	09/13/91
47.5 - 60.5	30.0 - 43.0	3.1E-03 - 7.8E-03	Yes	11.9	09/16/91
67.3 - 82.3	50.4 - 65.4	1.0E-03 - 4.7E-03	Yes	18.3	01/28/93
82.3 - 97.3	65.4 - 80.4	4.0E-03	Yes	18.3	01/27/93
97.3 - 112.3	80.4 - 95.4	1.3E-03 - 2.3E-03	Yes	18.3	01/27/93
112.3 - 127.3	95.4 - 110.4	1.3E-03 - 3.8E-03	Yes	18.3	01/27/93

<u>Notes:</u>

* Hydraulic conductivity calculated assuming R/ro = 10.

1. Bedrock interval from 61.0' to 67.3' BGS not tested. A positive seal with packer could not be achieved to prevent flowby.
2. Bedrock interval from 127.3' to 130.7' BGS not tested. The bottom packer was inadvertently not disconnected during the lower injection test.

TABLE B2

OW653 - HYDRAULIC CONDUCTIVITIES

Depth Below Ground Surface (ft)	*Depth Below Top of Rock (ft)*	*Hydraulic * Conductivity (cm/sec)*	*Waterbearing*	*Depth to Static Water Level (ft. BGS)*	*Date*
24.1 - 40.2	2.3 - 18.4	4.5E-03 - 6.7E-03	Yes	14.0	09/06/91
40.2 - 55.2	18.4 - 33.4	8.4E-06 - 2.0E-05	No	15.9	09/09/91
55.2 - 70.2	33.4 - 48.4	7.8E-06 - 1.6E-05	No	16.6	09/10/91
71.0 - 85.6	47.5 - 62.1	3.6E-05 - 5.7E-05	Yes	21.6	02/04/93
77.0 - 92.0	53.5 - 68.5	5.4E-05 - 8.9E-05	Yes	20.9	02/04/93
92.0 - 107.0	68.5 - 83.5	2.5E-05 - 5.1E-05	Yes	21.3	02/04/93
107.0 - 122.0	83.5 - 98.5	5.8E-02 - 1.1E-01	Yes	21.7	02/04/93
122.0 - 140.5	98.5 - 117.5	9.7E-07 - 2.4E-06	No	22.5	02/03/93

Note:

* Hydraulic conductivity calculated assuming R/ro = 10.

TABLE B3

OW657 - HYDRAULIC CONDUCTIVITIES

Depth Below Ground Surface (ft)	*Depth Below Top of Rock (ft)*	*Hydraulic * Conductivity (cm/sec)*	*Waterbearing*	*Depth to Static Water Level (ft. BGS)*	*Date*
22.1 - 37.1	4.2 - 19.2	6.8E-03 - 1.7E-02	Yes	20.0	02/17/93
37.1 - 52.1	19.2 - 34.2	1.9E-02 - 3.6E-01	Yes	19.3	02/17/93
52.1 - 67.1	34.2 - 49.2	3.4E-03 - 8.7E-03	Yes	19.5	02/17/93
67.1 - 82.1	49.2 - 64.2	4.3E-03 - 3.2E-02	Yes	19.5	02/17/93
82.1 - 97.1	64.2 - 79.2	4.2E-03 - 6.9E-03	Yes	22.2	02/16/93
97.1 - 112.1	79.2 - 94.2	8.2E-03 - 3.9E-02	Yes	22.2	02/16/93
112.1 - 130.5	94.2 - 112.6	5.4E-03 - 1.9E-02	Yes	20.0	02/15/93

Note:

* Hydraulic conductivity calculated assuming R/ro = 10.

TABLE B4

OW658 - HYDRAULIC CONDUCTIVITIES

Depth Below Ground Surface (ft)	*Depth Below Top of Rock (ft)*	*Hydraulic * Conductivity (cm/sec)*	*Waterbearing*	*Depth to Static Water Level (ft. BGS)*	*Date*
22.7 - 37.7	4.2 - 19.2	Note (1)	Yes	22.0	03/02/93
37.7 - 52.7	19.2 - 34.2	3.5E-05 - 6.3E-05	No	22.0	03/02/93
52.7 - 67.7	34.2 - 49.2	8.5E-05 - 1.9E-04	Yes	22.5	03/01/93
67.7 - 82.7	49.2 - 64.2	3.5E-04 - 4.7E-03	Yes	22.5	03/01/93
82.7 - 97.7	64.2 - 79.2	1.8E-04 - 5.2E-04	Yes	22.0	02/26/93
97.7 - 112.7	79.2 - 94.2	8.6E-03 - 1.7E-02	Yes	22.0	02/26/93
112.7 - 131.1	94.2 - 112.6	4.5E-05 - 1.2E-04	Yes	22.0	02/26/93

Notes:

* Hydraulic conductivity calculated assuming R/ro = 10.

1. Test valves acquired during testing of the upper interval were not considered valid; regardless the volume of water lost during injection testing reflects the presence of a water bearing interval.
2. The interval from 18.5 to 22.7 feet below ground surface was not tested.

TABLE B5

OW659 - HYDRAULIC CONDUCTIVITIES

Depth Below Ground Surface (ft)	*Depth Below Top of Rock (ft)*	*Hydraulic * Conductivity (cm/sec)*	*Waterbearing*	*Depth to Static Water Level (ft. BGS)*	*Date*
21.4 - 36.4	1.4 - 16.4	5.8E-04 - 6.4E-04	Yes	19.0	03/10/93
36.4 - 51.4	16.4 - 31.4	2.4E-04 - 4.0E-04	Yes	19.0	03/10/93
51.4 - 66.4	31.4 - 46.4	2.0E-05 - 3.3E-05	No	19.0	03/10/93
66.4 - 81.4	46.4 - 61.4	5.8E-03 - 6.2E-03	Yes	19.0	03/10/93
81.4 - 96.4	61.4 - 76.4	6.8E-04 - 9.4E-04	Yes	19.5	03/09/93
96.4 - 111.4	76.4 - 91.4	8.4E-03 - 1.2E-02	Yes	19.5	03/09/93
111.4 - 129.8	91.4 - 109.8	4.4E-04 - 6.9E-04	Yes	19.5	03/09/93

Notes:

* Hydraulic conductivity calculated assuming R/ro = 10.

APPENDIX C

STRATIGRAPHIC DATABASE • OSI PHASE 1/PHASE 2

TABLE C1 - STRATIGRAPHIC DATA
TABLE C2 - OVERBURDEN THICKNESS
TABLE C3 - BEDROCK STRATIGRAPHIC THICKNESS
TABLE C4 - BEDROCK MONITORING INTERVALS

TABLE D1

OSI - PHASE 2 - ROUND 1 ANALYTICAL DATA
MAY 1993
OSI PROGRAM - PHASE 2
OCCIDENTAL CHEMICAL CORPORATION

Sample Descripton:			*PASNY 139*	*BH11D-92*	*MW-3*	*MW-2*
Compounds/Analytes	*Units*	*Detection Level*	*05/11/93*	*05/12/93*	*05/12/93*	*05/11/93*
Phosphorus, Total Soluble	µg P/L	10	ND	13	ND	14
Arsenic	µg/L	19	ND 23	ND 23	ND	ND
Mercury	µg/L	0.2	ND	ND	ND	ND
Lead	µg/L	16	ND	35	41	ND
Toluene	µg/L	1	2	ND	ND	ND
2-Chlorotoluene	µg/L	1	480	6	ND	ND
4-Chlorotoluene	µg/L	1	ND	1	ND	ND
2,4-/2,5-Dichlorotoluene	µg/L	1	ND	ND	ND	ND
2,6-Dichlorotoluene	µg/L	1	ND	ND	ND	ND
2,3-/3,4-Dichlorotoluene	µg/L	1	ND	ND	ND	ND
2,3,6-Trichlorotoluene	µg/L	1	ND	ND	ND	ND
2,4,5-Trichlorotoluene	µg/L	1	ND	ND	ND	ND
Benzene	µg/L	1	5J	15	ND	ND
Chlorobenzene	µg/L	1	ND	9	ND	ND
1,2-Dichlorobenzene	µg/L	1	ND	3	ND	ND
1,3-Dichlorobenzene	µg/L	1	ND	12	ND	ND
1,4-Dichlorobenzene	µg/L	1	ND	17	ND	ND
1,2,3-Trichlorobenzene	µg/L	1	ND	1	ND	ND
1,2,4-Trichlorobenzene	µg/L	1	ND	5	ND	ND
1,2,3,4-Tetrachlorobenzene	µg/L	1	ND	4	ND	ND
1,2,4,5-Tetrachlorobenzene	µg/L	1	ND	2	ND	ND
Hexachlorobenzene	µg/L	1	ND	ND	ND	ND
Trichloroethylene	µg/L	1	430	3	3	ND
Tetrachloroethylene	µg/L	1	61J	4	ND	7
2-Chlorobenzotrifluoride	µg/L	1	ND	ND	ND	ND
4-Chlorobenzotrifluoride	µg/L	1	4	5	ND	ND
2,4-Dichlorobenzotrifluoride	µg/L	1	ND	1	ND	ND
3,4-Dichlorobenzotrifluoride	µg/L	1	ND	2	ND	ND
Hexachlorobutadiene	µg/L	1	ND	ND	ND	ND
Hexachlorocyclopentadiene	µg/L	1	ND	ND	ND	ND
Octachlorocyclopentene	µg/L	1	ND	ND	ND	ND
Perchloropentacyclodecane (Mirex)	µg/L	1	ND	ND	ND	ND
2,4,5-Trichlorophenol	µg/L	10	ND	ND	ND	ND
a-Hexachlorocyclohexane	µg/L	1	ND	ND	ND	ND
b-Hexachlorocyclohexane	µg/L	1	ND	ND	ND	ND
g-Hexachlorocyclohexane	µg/L	1	ND	ND	ND	ND
d-Hexachlorocyclohexane	µg/L	1	ND	ND	ND	ND
Benzoic acid	µg/L	100	ND	ND	ND	ND
2-Chlorobenzoic acid	µg/L	30	ND	ND	ND	ND
3-Chlorobenzoic acid	µg/L	30	ND	ND	ND	ND
4-Chlorobenzoic acid	µg/L	30	ND	ND	ND	ND
Chlorobenzoic acids, total	µg/L	90	ND	ND	ND	ND
Chlorendic acid	µg/L	250	ND	ND	ND	ND
Total Organic Carbon (TOC)	mg/L	1	ND 3	ND 6	ND 6	ND 3
Total Organic Halides (TOX)	µg/L	50	R	R	R	R

Notes:

ND Not detected at or above the detection level shown in the column entitled "Detection Level". Where detection levels vary, the detection level is shown with the respective analyses.

NA Not Available.

J Associated result is estimated.

R Result was rejected.

TABLE C1

STRATIGRAPHIC DATABASE
OFF-SITE INVESTIGATION PROGRAM - PHASE 2

Well/BH #	*Ground Elevation (Ft. AMSL)*	*Grid Co-ordinates North (Feet)*	*East (Feet)*	*Depth to Alluvium (Feet)*	*Elev. of Alluvium (Ft. AMSL)*	*Depth to Clay (Feet)*	*Elevation of Clay (Ft. AMSL)*	*Depth to Till (Feet)*	*Elevation of Till (Ft. AMSL)*	*Depth to Bedrock (Feet)*	*Elevation of Bedrock (Ft. AMSL)*	*NAPL/Sheen Depth Observed (Feet)*
OW652C	570.12	2250.79	-2257.25	1.9	568.2	7.9	562.2	10.5	559.6	14.3	555.8	NO
OW653C	573.85	2668.46	-772.31	10.6	563.3	14.4	559.5	17.5	556.4	20.9	553.0	NO
OW657D	572.09	2100.30	-2640.70	4.6	567.5	10.0	562.1	15.0	557.1	18.0	554.1	NO
OW658D	571.05	2596.00	-1764.60	4.0	567.1	11.5	559.6	14.0	557.1	17.4	553.6	NO
OW659D	570.23	2530.50	-1343.70	1.5	568.7	8.0	562.2	13.1	557.1	20.3	549.9	NO
BH11D-92	570.93	2375.2	-2341.1	4.0	566.9	6.0	564.9	14.3	556.6	16.8	554.1	NO

Notes:

NO -Not Observed
AMSL -Above Mean Sea Level

TABLE C2

OVERBURDEN STRATIGRAPHIC THICKNESS
OFF-SITE INVESTIGATION PROGRAM - PHASE 2

Well/BH #	*Ground Elev. (Ft. AMSL)*	*Grid Co-ordinates North (Feet)*	*East (Feet)*	*Thickness of Fill (Feet)*	*Thickness of Alluv. (Feet)*	*Thickness of Clay (Feet)*	*Thickness of Till (Feet)*	*Thickness of Conf. Layer (Feet)*
OW652C	570.15	2250.79	-2257.25	1.9	6.0	2.6	3.8	6.4
OW653C	573.80	2668.46	-772.31	10.5	3.8	3.1	3.4	6.5
OW657D	572.09	2100.30	-2640.70	4.6	5.4	5.0	3.0	8.0
OW658D	571.05	2596.00	-1764.60	3.9	7.5	2.5	3.5	7.0
OW659D	570.23	2530.50	-1343.70	1.5	6.5	5.1	7.2	12.3
BH11D-92	570.93	2375.20	-2341.10	4.0	2.0	8.3	2.5	10.8

Notes:

AMSL -Above Mean Sea Level

TABLE C3

BEDROCK STRATIGRAPHIC THICKNESS
OFF-SITE INVESTIGATION PROGRAM - PHASE 2

Well/BH #	*Ground Elevation (Ft. AMSL)*	*Grid Co-ordinates North (Feet)*	*Grid Co-ordinates East (Feet)*	*Depth to Bedrock (Feet)*	*Elev. of Bedrock (Ft. AMSL)*	*Depth to Eramosa (Feet)*	*Elev. of Eramosa (Ft. AMSL)*	*Depth to Goat Island (Feet)*	*Elev. of Goat Island (Ft. AMSL)*	*Depth to Gasport (Feet)*	*Elev. of Gasport (Ft. AMSL)*	*Depth to Decew (Feet)*	*Elev. of Decew (Ft. AMSL)*	*Depth to Rochester (Feet)*	*Elev. of Rochester (Ft. AMSL)*	*Bottom of Well (Feet)*	*Elev. of Bottom (Ft. AMSL)*
OW652C	570.35	2274.10	-2264.90	17.7	552.7	98.6	471.8	113.2	457.2	126.6	443.8	--	--	--	--	131.2	439.2
OW653C	574.05	2668.46	-772.31	24.4	549.7	104.5	469.6	123.3	450.8	136.6	437.5	--	--	--	--	140.8	433.3
OW657D	572.09	2100.3	-2640.7	18	554.09	95.99	476.1	115.99	456.1	128.59	443.5	--	--	--	--	131.99	440.1
OW658D	571.05	2596	-1764.6	17.5	553.55	97.55	473.5	117.25	453.8	128.75	442.3	--	--	--	--	130.95	440.1
OW659D	570.23	2530.5	-1343.7	20.3	549.93	99.63	470.6	117.33	452.9	128.33	441.9	--	--	--	--	130.53	439.7
BH11D-92	570.93	2375.2	-2341.1	16.8	554.1	--	--	--	--	--	--	--	--	--	--	26.9	544

Notes:

-- -Bottom of well elevation above the unit.

TABLE C4

BEDROCK MONITORING INTERVALS
OFF-SITE INVESTIGATION PROGRAM - PHASE 2

Well/BH #	*Ground Elevation (Ft. AMSL)*	*Grid Co-ordinates North (Feet)*	*East (Feet)*	*Depth to Bedrock (Feet)*	*Elev. of Bedrock (Ft. AMSL)*	*Montored Interval (Ft. BGS)*	*Monitored Interval (Ft. AMSL)*	*Monitored Unit*
OW652B	570.76	2298.1	-2273.5	16.7	554.06	96.96 - 126.96	473.8 - 443.8	Oak Orchard/Eramosa/Goat Island/Gasport
OW652C	570.35	2274.1	-2264.9	16.9	553.45	60.95 - 92.95	509.4 - 477.4	Oak Orchard
OW653B	573.39	2642.4	-817	23.5	549.89	97.99 - 121.99	475.4 - 451.4	Oak Orchard/Eramosa
OW653C	574.05	2653.7	-795.8	23.2	550.85	71 - 96	503.05 - 478.05	Oak Orchard
OW657B	570.45	2148	-2665.9	15	555.45	97.1 - 130.5	473.35 - 439.95	Eramosa/Goat Island/Gasport
OW657C	570.78	2126.4	-2655.1	16	554.78	67.1 - 95.1	503.68 - 475.68	Oak Orchard
OW657D	572.09	2100.3	-2640.7	17.99	554.1	18.5 - 64.5	553.59 - 507.59	Oak Orchard
OW658B	570.85	2615.8	-1720	17.5	553.35	97.5 - 31	473.35 - 539.85	Eramosa/Goat Island/Gasport
OW658C	570.91	2605.6	-1743.3	17.5	553.41	68 - 95.1	502.91 - 475.81	Oak Orchard
OW658D	571.05	2596	-1764.6	17.45	553.6	18.5 - 65	552.55 - 506.05	Oak Orchard
OW659B	570.38	2569.9	-1363.1	20	550.38	96.4 - 130	473.98 - 440.38	Oak Orchard/Eramosa/Goat Island/Gasport
OW659C	570.33	2551.8	-1353.8	20	550.33	66.4 - 94.5	503.93 - 475.83	Oak Orchard
OW659D	570.23	2530.5	-1343.7	20.33	549.9	20.5 - 64.4	549.73 - 505.83	Oak Orchard
BH11D-92	570.93	2375.2	-2341.1	16.8	554.1	17.8 - 26.9	553.1 - 544.0	Oak Orchard

Notes:

AMSL -Above Mean Sea Level
BGS -Below Ground Surface

APPENDIX D

ANALYTICAL RESULTS

- **BEDROCK AND OVERBURDEN GROUNDWATER ANALYSIS**

TABLE D1

OSI - PHASE 2 - ROUND 1 ANALYTICAL DATA
MAY 1993
OSI PROGRAM - PHASE 2
OCCIDENTAL CHEMICAL CORPORATION

Sample Descripton:			*OW650D*	*OW660*	*OW652B*	*OW652C*	*OW652D*	*OW653B*
		Detection	*05/11/93*	*Dup.*	*05/06/93*	*05/06/93*	*05/06/93*	*05/13/93*
Compounds/Analytes	*Units*	*Level*						
Phosphorus, Total Soluble	µg P/L	10	ND	ND	42	ND	ND	30
Arsenic	µg/L	19	ND 30	ND	ND 30	ND 30	ND 30	ND
Mercury	µg/L	0.2	3.1	ND	ND	ND	2	ND
Lead	µg/L	16	ND	38	ND 4	ND 4	ND 4	ND
Toluene	µg/L	1	ND	ND	ND	ND	2	2
2-Chlorotoluene	µg/L	1	ND	ND	ND	15	42	54
4-Chlorotoluene	µg/L	1	ND	ND	ND	ND	2	ND
2,4-/2,5-Dichlorotoluene	µg/L	1	ND	ND	ND	ND	ND	ND
2,6-Dichlorotoluene	µg/L	1	ND	ND	ND	ND	ND	ND
2,3-/3,4-Dichlorotoluene	µg/L	1	ND	ND	ND	ND	ND	ND
2,3,6-Trichlorotoluene	µg/L	1	ND	ND	ND	ND	ND	ND
2,4,5-Trichlorotoluene	µg/L	1	ND	ND	ND	ND	ND	ND
Benzene	µg/L	1	ND	ND	5	26	ND	190
Chlorobenzene	µg/L	1	ND	ND	ND	5	95	170
1,2-Dichlorobenzene	µg/L	1	1	2	ND	1	8	3
1,3-Dichlorobenzene	µg/L	1	ND	ND	3	14	27	10
1,4-Dichlorobenzene	µg/L	1	ND	ND	2	6	24	9
1,2,3-Trichlorobenzene	µg/L	1	ND	ND	ND	1	ND	ND
1,2,4-Trichlorobenzene	µg/L	1	2J	1J	ND	3J	1J	ND
1,2,3,4-Tetrachlorobenzene	µg/L	1	ND	ND	ND	ND	ND	ND
1,2,4,5-Tetrachlorobenzene	µg/L	1	ND	ND	ND	ND	ND	ND
Hexachlorobenzene	µg/L	1	ND	ND	ND	ND	ND	ND
Trichloroethylene	µg/L	1	2	2	ND	54J	21J	ND
Tetrachloroethylene	µg/L	1	1	1	1J	7J	1J	ND
2-Chlorobenzotrifluoride	µg/L	1	ND	ND	ND	ND	ND	ND
4-Chlorobenzotrifluoride	µg/L	1	ND	ND	2	14	1	24
2,4-Dichlorobenzotrifluoride	µg/L	1	ND	ND	ND	ND	ND	ND
3,4-Dichlorobenzotrifluoride	µg/L	1	ND	ND	ND	ND	ND	1
Hexachlorobutadiene	µg/L	1	ND	ND	ND	ND	ND	ND
Hexachlorocyclopentadiene	µg/L	1	ND	ND	ND	ND	ND	ND
Octachlorocyclopentene	µg/L	1	ND	ND	ND	ND	ND	ND
Perchloropentacyclodecane (Mirex)	µg/L	1	ND	ND	ND	ND	ND	ND
2,4,5-Trichlorophenol	µg/L	10	ND	ND	ND	ND	ND	ND
a-Hexachlorocyclohexane	µg/L	1	ND	ND	ND	ND	ND	ND
b-Hexachlorocyclohexane	µg/L	1	ND	ND	ND	ND	ND	ND
g-Hexachlorocyclohexane	µg/L	1	ND	ND	ND	ND	ND	ND
d-Hexachlorocyclohexane	µg/L	1	ND	ND	ND	ND	ND	ND
Benzoic acid	µg/L	100	ND	ND	ND	ND	ND	ND
2-Chlorobenzoic acid	µg/L	30	ND	ND	ND	ND	ND	ND
3-Chlorobenzoic acid	µg/L	30	ND	ND	ND	ND	ND	ND
4-Chlorobenzoic acid	µg/L	30	ND	ND	ND	ND	ND	ND
Chlorobenzoic acids, total	µg/L	90	ND	ND	ND	ND	ND	ND
Chlorendic acid	µg/L	250	ND	ND	ND	ND	ND	ND
Total Organic Carbon (TOC)	mg/L	1	ND 5	ND 4	ND 6	ND 3	ND 6	NA
Total Organic Halides (TOX)	µg/L	50	R	R	R	R	R	R

Notes:

ND Not detected at or above the detection level shown in the column entitled "Detection Level". Where detection levels vary, the detection level is shown with the respective analyses.

NA Not Available.

J Associated result is estimated.

R Result was rejected.

TABLE D1

OSI - PHASE 2 - ROUND 1 ANALYTICAL DATA
MAY 1993
OSI PROGRAM - PHASE 2
OCCIDENTAL CHEMICAL CORPORATION

Sample Descripton:			*OW653C*	*OW653D*	*OW657B*	*OW657C*	*OW657D*
Compounds/Analytes	*Units*	*Detection Level*	*05/15/93*	*05/14/93*	*05/06/93*	*05/06/93*	*05/05/93*
Phosphorus, Total Soluble	µg P/L	10	12	100	14	ND	22
Arsenic	µg/L	19	ND22	ND22	ND 23	ND 23	ND 23
Mercury	µg/L	0.2	ND	ND	ND	ND	ND
Lead	µg/L	16	ND21	ND21	ND 30	ND 30	ND 30
Toluene	µg/L	1	2	2	ND	ND	ND
2-Chlorotoluene	µg/L	1	1	480	ND	ND	8
4-Chlorotoluene	µg/L	1	ND	ND	ND	ND	ND
2,4-/2,5-Dichlorotoluene	µg/L	1	ND	55	2	ND	ND
2,6-Dichlorotoluene	µg/L	1	ND	7	ND	ND	ND
2,3-/3,4-Dichlorotoluene	µg/L	1	ND	1	ND	ND	ND
2,3,6-Trichlorotoluene	µg/L	1	ND	ND	ND	ND	ND
2,4,5-Trichlorotoluene	µg/L	1	ND	ND	ND	ND	ND
Benzene	µg/L	1	10	16J	2	ND	2
Chlorobenzene	µg/L	1	ND	250	ND	ND	2
1,2-Dichlorobenzene	µg/L	1	ND	4	ND	ND	ND
1,3-Dichlorobenzene	µg/L	1	ND	24	ND	ND	2
1,4-Dichlorobenzene	µg/L	1	ND	52	8	ND	2
1,2,3-Trichlorobenzene	µg/L	1	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	µg/L	1	ND	ND	ND	ND	ND
1,2,3,4-Tetrachlorobenzene	µg/L	1	ND	ND	ND	ND	ND
1,2,4,5-Tetrachlorobenzene	µg/L	1	ND	ND	ND	ND	ND
Hexachlorobenzene	µg/L	1	ND	ND	ND	ND	ND
Trichloroethylene	µg/L	1	ND	ND	70	810	130
Tetrachloroethylene	µg/L	1	ND	ND	10	59	25
2-Chlorobenzotrifluoride	µg/L	1	ND	1	ND	ND	ND
4-Chlorobenzotrifluoride	µg/L	1	ND	97	2	ND	ND
2,4-Dichlorobenzotrifluoride	µg/L	1	ND	ND	ND	ND	ND
3,4-Dichlorobenzotrifluoride	µg/L	1	ND	4	ND	ND	ND
Hexachlorobutadiene	µg/L	1	ND	ND	ND	ND	ND
Hexachlorocyclopentadiene	µg/L	1	ND	ND	ND	ND	ND
Octachlorocyclopentene	µg/L	1	ND	ND	ND	ND	ND
Perchloropentacyclodecane (Mirex)	µg/L	1	ND	ND	ND	ND	ND
2,4,5-Trichlorophenol	µg/L	10	ND	ND	ND	ND	ND
a-Hexachlorocyclohexane	µg/L	1	ND	ND	ND	ND	ND
b-Hexachlorocyclohexane	µg/L	1	ND	ND	ND	ND	ND
g-Hexachlorocyclohexane	µg/L	1	2	ND	ND	ND	ND
d-Hexachlorocyclohexane	µg/L	1	ND	ND	ND	ND	ND
Benzoic acid	µg/L	100	ND	ND	ND	ND	ND
2-Chlorobenzoic acid	µg/L	30	ND	ND	ND	ND	ND
3-Chlorobenzoic acid	µg/L	30	ND	ND	ND	ND	ND
4-Chlorobenzoic acid	µg/L	30	ND	ND	ND	ND	ND
Chlorobenzoic acids, total	µg/L	90	ND	ND	ND	ND	ND
Chlorendic acid	µg/L	250	ND	ND	ND	ND	ND
Total Organic Carbon (TOC)	mg/L	1	ND 5	ND 3	ND 4	ND 3	ND 3
Total Organic Halides (TOX)	µg/L	50	R	R	R	R	R

Notes:

ND Not detected at or above the detection level shown in the column entitled "Detection Level". Where detection levels vary, the detection level is shown with the respective analyses.

NA Not Available.

J Associated result is estimated.

R Result was rejected.

TABLE D1

OSI - PHASE 2 - ROUND 1 ANALYTICAL DATA
MAY 1993
OSI PROGRAM - PHASE 2
OCCIDENTAL CHEMICAL CORPORATION

Sample Descripton:			*OW658B*	*OW658C*	*OW658D*	*OW659B*	*OW659C*	*OW659D*
Compounds/Analytes	*Units*	*Detection Level*	*05/10/1993*	*05/10/1993*	*05/10/1993*	*05/05/93*	*05/05/93*	*05/08/93*
Phosphorus, Total Soluble	µg P/L	10	ND	ND	ND	ND	19	ND
Arsenic	µg/L	19	ND 23	ND	ND	ND 23	ND 23	ND 23
Mercury	µg/L	0.2	ND	ND	ND	0.7	ND	ND
Lead	µg/L	16	ND 30	ND	ND	ND 30	ND 30	150
Toluene	µg/L	1	ND	2	2	3	4	ND
2-Chlorotoluene	µg/L	1	5	240	180	320	240	32
4-Chlorotoluene	µg/L	1	ND	47	15	4	ND	ND
2,4-/2,5-Dichlorotoluene	µg/L	1	ND	15	19	10	10	3
2,6-Dichlorotoluene	µg/L	1	ND	3	2	1	1	ND
2,3-/3,4-Dichlorotoluene	µg/L	1	ND	4	2	ND	ND	1
2,3,6-Trichlorotoluene	µg/L	1	ND	ND	ND	ND	ND	ND
2,4,5-Trichlorotoluene	µg/L	1	ND	ND	ND	ND	ND	ND
Benzene	µg/L	1	10J	840	960	1200	21	4
Chlorobenzene	µg/L	1	10	540	620	1600	290	86
1,2-Dichlorobenzene	µg/L	1	ND	43	69	77	8	1
1,3-Dichlorobenzene	µg/L	1	4	120	360	480	130	7
1,4-Dichlorobenzene	µg/L	1	3	98	210	410	80	6
1,2,3-Trichlorobenzene	µg/L	1	ND	ND	ND	ND	ND	3
1,2,4-Trichlorobenzene	µg/L	1	ND	ND	ND	ND	ND	9J
1,2,3,4-Tetrachlorobenzene	µg/L	1	ND	ND	ND	ND	ND	36
1,2,4,5-Tetrachlorobenzene	µg/L	1	ND	ND	ND	ND	ND	5
Hexachlorobenzene	µg/L	1	ND	ND2	ND	ND	ND	ND
Trichloroethylene	µg/L	1	22	ND	13	ND	ND	ND
Tetrachloroethylene	µg/L	1	8	ND	3	ND	ND	3J
2-Chlorobenzotrifluoride	µg/L	1	ND	5	ND	ND	ND	ND
4-Chlorobenzotrifluoride	µg/L	1	4	3	51	61	65	1
2,4-Dichlorobenzotrifluoride	µg/L	1	ND	ND	ND	3	ND	ND
3,4-Dichlorobenzotrifluoride	µg/L	1	ND	ND	ND	ND	ND	ND
Hexachlorobutadiene	µg/L	1	ND	ND	ND	ND	ND	3
Hexachlorocyclopentadiene	µg/L	1	ND	ND	ND	ND	ND	ND
Octachlorocyclopentene	µg/L	1	ND	ND	ND	ND	ND	1
Perchloropentacyclodecane (Mirex)	µg/L	1	ND	ND	ND	ND	ND	ND
2,4,5-Trichlorophenol	µg/L	10	ND	ND	ND	ND	ND	ND
a-Hexachlorocyclohexane	µg/L	1	ND	ND	4	ND	ND	ND
b-Hexachlorocyclohexane	µg/L	1	ND	ND	ND	ND	ND	ND
g-Hexachlorocyclohexane	µg/L	1	ND	ND	ND	ND	ND	ND
d-Hexachlorocyclohexane	µg/L	1	ND	ND	ND	ND	ND	ND
Benzoic acid	µg/L	100	ND	ND	ND	ND	ND	ND
2-Chlorobenzoic acid	µg/L	30	ND	ND	ND	ND	ND	ND
3-Chlorobenzoic acid	µg/L	30	ND	ND	ND	ND	ND	ND
4-Chlorobenzoic acid	µg/L	30	ND	ND	ND	ND	ND	ND
Chlorobenzoic acids, total	µg/L	90	ND	ND	ND	ND	ND	ND
Chlorendic acid	µg/L	250	ND	ND	ND	ND	ND	ND
Total Organic Carbon (TOC)	mg/L	1	ND 6	ND 4	8	12	18	ND 3
Total Organic Halides (TOX)	µg/L	50	R	R	R	R	R	R

Notes:

ND Not detected at or above the detection level shown in the column entitled "Detection Level". Where detection levels vary, the detection level is shown with the respective analyses.

NA Not Available.

J Associated result is estimated.

R Result was rejected.