



OCCIDENTAL CHEMICAL CORPORATION

**Durez Division
North Tonawanda, N. Y.**

REMEDIAL INVESTIGATION REPORT

FOR THE

INLET

(DUREZ SITE)

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Volume 2: Appendices

Prepared by

Dunn Geoscience Corporation

August 1990

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APPENDICES

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APPENDIX A

Commonly Used Terms and Abbreviations

Commonly Used Terms and Abbreviations

A	Alluvium, alluvial deposits
APL	Aqueous phase liquid, miscible
AWL	Average water level
Bleb	Immobile, globular residue observed in archived sample jars
DCB	Dichlorobenzene
DNAPL	Distinct, dense, sinking, immiscible non-aqueous phase liquid
Durez	OCC's Durez Plant in North Tonawanda
GLC	Glacio-lacustrine clay
HCB	Hexachlorobenzene
IGLD	International Great Lakes Datum
Inlet	Submerged outfall area of PCF; aka PCF Outlet Cove
Isopach	Thickness
Inlet Perimeter	Land area around the Inlet which, with the Inlet, comprises the study area
LNAPL	Distinct, light, floating, immiscible non-aqueous phase liquid
LWL	Lockport Water Line; unpressurized, raw water intake
MCB	Monochlorobenzene
MG/KG	Milligrams per kilogram, parts per million
MG/L	Milligram Per liter, parts per million
MP	Measuring point
MSL	Mean sea level, USGS 1929 datum
UG/G	Micrograms per gram, parts per million
UG/KG	Micrograms per kilogram, parts per billion
UG/L	Micrograms per liter, parts per billion
NA	Not analyzed
NAPL	Distinct, visible, immiscible non-aqueous phase liquid
NCHD	Niagara County Health Department
ND	Not detected
NTWL	North Tonawanda Water Line; pressurized, treated water
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
OCC	Occidental Chemical Corporation
Ooze	Submerged Soft Sediment
Outlet Cove	Aka Inlet
P5CB	Pentachlorobenzene
PCF	Pettit Creek Flume
PCJ	Stipulation and Partial Consent Judgment
RAA	Durez Remedial Alternatives Assessment
River	Little Niagara River
SCF	Silt-clay fill
SG	Staff gauge for measuring River water level
SS	Soft Sediment
T	Glacial till
TCB	Trichlorobenzene
TCDD	Tetrachlorodibenzo-p-dioxin
TECB	Tetrachlorobenzene
USACOE	United States Army Corps of Engineers
USGS	United States Geological Survey

APPENDIX B

Inlet History

APPENDIX B

HISTORY OF THE INLET

1.0 Objectives

The objective of the Inlet history is to provide a knowledge base for the remedial investigations of the Inlet and to support our understanding of the field observations and locations of chemistry.

Specific objectives include the following:

First, to determine the history of the Inlet and Pettit Creek as it became the PCF, discharging into the Inlet.

Second, to determine the adjacent land use, focusing particularly on heavy industrial use and the locations of junk yards during the last 100 years.

Third, to locate design and construction information for the LWL, constructed between 1907 and 1910.

2.0 Scope

The study area included the Lockport Water Line right of way and the area bounded by River Road to the east, the river shoreline to the west, the vacated Tonawanda Iron Works property to the north and the vacated junkyard to the south (now a marina). The scope of the historical study included a review of available maps and aerial photographs, local newspapers and town proceedings and other historical books and summaries. These were located at university and town libraries, town halls, historic societies and the New York State Archives.

3.0 Pettit Creek

The earliest map by Browning (1837) shows that the mouth of Pettit Creek was bordered by marshland, identified on this map as "Rich Bottom Land" (see Figure B-1). The creek meandered through lowlands until it emptied into the Little Niagara River. The area immediately surrounding Pettit Creek was sparsely populated (Browning 1837)

In 1889, a boat house was located along Pettit Creek's south-central bank, just east of the mouth (Sanborn 1889). (It is estimated that the boat house was situated at the approximate location of boring I-27). The creek had widened since 1837 and the south shore of the creek extended slightly south of the boat house, then westward to the Little Niagara River. Boating activities may have required channel maintenance that affected the depth of the water near the boat house. (Sanborn, 1889; Hopkins 1893, Hague 1906). The boat house locally may have altered surface water flow, erosion, and sedimentation patterns.

By 1908, Pettit Creek was channelized throughout the city of North Tonawanda and was identified as a "'State Ditch'" (New Century Map 1908) (see Figure B-2). The State Ditch was probably used for flood control and to dispose of industrial and municipal wastes (Mr. Dittmar, Town Historian, Jan. 1990).

By 1910, the cove-like shape of the Inlet appeared on the Sanborn map for the first time (see Figure B-3). The origin of the cove shape is attributed to the construction activities of the Lockport Water Line (see section 7.0). Maps and aerial photographs post-dating 1910 show that the flow of the creek through the Inlet changed directions many times, sometimes forming islands in the Inlet's central portions.

In 1927-28 a concrete box culvert was installed along the bed of the State Ditch (Pettit Creek) during development of the North Tonawanda storm sewer system. This box culvert became known as the Pettit Creek Flume. Interpretations of a series of aerial photographs provided the information below.

In 1927, the discharge from the PCF entered the northeast corner of the Inlet. Water flowed southwesterly across the Inlet, along the southern bank and branched into the River at two locations near the south shore. A small island formed between the channels just east of the point of confluence with the Niagara River. Elongate depressions in the Inlet fill may be the erosional scars of these channels.

In 1938, flow from the PCF entered the Inlet and divided immediately into a northern and southern branch. The northern branch appeared to be the major branch. It flowed closely to a newly constructed building or dock at the mouth of the Inlet (estimated at the approximate location of Inlet sediment depth probe 24), and then was diverted southward by the timber piles at the north side of the mouth. This flow pattern continued through at least 1951, forcing the

water to discharge to the south into the River. By 1966, the piles were submerged and poorly defined in aerial photographs.

In 1938, the southern branch flowed along the southern bank, apparently through the boat house, and into the River. The flow of water steadily decreased in this southern channel until 1951, when it appeared to be dry and the boat house was no longer present.

It appears as if the southwestern end of the PCF in 1938 was an open box channel without a roof. What is believed to be water could be observed for an approximately 50-foot distance upstream from the Inlet. Apparently, the southwestern end of the PCF was uncovered and not enclosed until about 1942.

By 1942, a large island formed in the central portion of the Inlet as a result of the PCF branching and then joining again before it entered the River.

The portion of the Inlet covered by water appeared to increase in 1966. By 1978, water discharging from the outfall spread laterally immediately, resulting in the largest surface area of Inlet water observed in the aerial photographs during this study. Possible explanations for the observed variation in Inlet water levels may include weather and seasonal effects and river flow controls.

4.0 Adjacent Land Use

The development of North Tonawanda was heavily influenced by the excellent shipping facilities which resulted from the regional convergence of the Erie Canal, the Great Lakes, and extensive railroad and trolley services. The lumber industry was well established by 1878 all along the shores of North Tonawanda, and flourished for 30 years. By the turn of the century, when cheap electric power was abundant, the iron and steel business dominated the area. (Warner 1947, Urban (no date)).

Adjoining Pettit Creek directly to the south were large lumber yards and extensive boat docks (Sanborn 1886, 1889, 1893) served by several railroads which came right down to the docks. The dock outline can be seen in Figures B-2 and B-3. Remains of the timber piling from the docks can be seen along the shoreline today, marking the edge of modern fill emplacement. Abundant wood encountered during drilling near the mouth of the Inlet may be associated with these docks.

Tonawanda Iron Works was well established on the north shore of Pettit Creek by 1893 (Hopkins). Throughout its history, pig iron was the only product produced (N.Tona. Cent. Mag. 1965). An expansive range of buildings, roadways, storage areas, docks and railroad lines throughout the property provided evidence of great activity near the banks of Pettit Creek.

The Tonawanda Iron Works Company was modernized and rebuilt in 1958 and again in 1964. However, by 1974 the entire company had been dissolved and all buildings were demolished. Evidence of this previous land use is apparent in the slag, cinders and debris observed in soil samples from boreholes made during the Inlet investigation. The site remained vacant until recently when several storage structures were constructed.

5.0 North Tonawanda Water Line

The North Tonawanda Water Line is a 24-inch flexible-joint cast -iron pipe that was installed around 1897 - 1904. The Sanborn Map of 1910 shows that the southern boundary of the Inlet was in close proximity to the North Tonawanda Water Line (see Figure B-3).

6.0 Lockport Water Line

In 1906, the City of Lockport sought to locate a pure source of drinking water. An independent consulting engineer highly recommended the Niagara River as a first choice, because of its size and purity (except for some minor sewage contamination from Lake Erie) (Hague 1906).

A proposal to construct Lockport's water line from the Niagara River was approved by the N.Y. State Water Supply Commission at Albany. Work was to commence in April of 1907. Two contractors were selected, one for the land construction of the water pipe and one for the underwater construction and pump house. (Proceedings - Common Council 1906).

The entire project was fraught with delays and problems due to difficulties encountered during construction and in obtaining right-of-way through North Tonawanda and on Tonawanda Island. (Lockport Union-Sun, The Evening News 1907-1908).

Before construction began, the intake crib in Niagara River had to be relocated slightly downstream in order to avoid obstruction of the active port where ships turn after navigating on the Erie Canal (Proceedings-Common Council 1906).

Construction of the intake pipe in the River channel began August 16, 1907. A trench was dug into the bed of the Niagara River. Dredging began on the main shore side of the stream (The Evening News 1907). This is assumed to mean that dredging began at the mouth of Pettit Creek, probably widening the mouth in the process. Available photographs show the use of a large steam shovel mounted on a barge to excavate the pipe trench in the river .

The excavated material encountered by the dredging company was not specifically described, with the exception of a claim for "extra work" caused by "rock and hard pan excavation" in the River. (Proceedings - Common Council 1908) (This is interpreted to be till, which is estimated to be 30-50 feet thick under the river bottom). A nearby 24-inch diameter water pipe, installed a few years before 1908 along a water crossing a short distance south of the NTWL, encountered "clay and clay mixed with gravel and small cobbles, a kind of hardpan" on the river bottom. In order to maintain the required 23-foot depth of water over the top of this nearby pipe, the pipe trench was dredged 8 to 9 feet into the river bottom to make proper allowance for the pipe and the possible silting up of the trench prior to pipe placement in the river bottom ("Laying a Submerged Water-Pipe at North Tonawanda, N.Y.").

During construction of the LWL, it was discovered that it would be necessary to strengthen about 600 feet of the 48-inch diameter pipe as it passed by the north edge of Tonawanda Island and the main shore (Inlet), where "heavy" fill, interpreted as clay, was to be placed over the pipe. This was done by riveting 3 inch by 3 inch angles to the pipe at intervals of about 12 feet (Proceedings - Common Council 1907).

Work in the River progressed rapidly throughout the winter months of 1907-08. In January of 1908, the intake crib had been sunk and only 200 feet of trench remained to be excavated.

In July of 1908, the work on the intake was halted again, this time by the Federal Government. The pipe which was already laid, was at least 6-inches too high. The required depth of the top of this pipe was at least 24 feet below the water surface. This requirement was subsequently met by substituting smaller cradles (Lockport Union Sun 1908) to support the pipe.

By mid-summer of 1908, the laying of the intake elbow, 2,600 feet from shore, was not yet completed. The elbow of the intake pipe weighed 9 tons, and had to be installed totally underwater, with the assistance of a diver. (Lockport Union Sun 1908).

The dredging company refused to complete the final stage of the pipeline until a settlement was made for their claim against Lockport, due to over two years of costly delays in construction. The elbow described above, was kept "hostage" on a scow in the middle of the River. the dredging company also held back refilling the trench on Tonawanda Island and on restoring the River front at the site of the pumping station. (Proceedings - Common Council 1908, 1909).

Finally, on December 2, 1908, the City of Lockport offered a settlement, which was accepted by the dredging company. However, damage to the surrounding properties caused by the disgruntled dredging company during its excavations was never fully repaired. (Lockport Union-Sun 1908)

A point of interest during the current Inlet investigation was the damage to the shoreline at the Tonawanda Iron Works property that occurred during LWL construction. A piece of dock that was torn out during the dredging operations there was replaced satisfactorily. However, the excavated southwesterly corner of the Iron Works property, inside the dock line, was never refilled. A payment was made by the dredging company to the Iron Works company, in lieu of repair, and the dredging company agreed to dredge out dirt which was deposited in front of the Iron Works docks. (Proceedings - Common Council 1909). These actions were major contributors to the widening and deepening of the mouth of the Pettit Creek to form the Inlet.

The water pumps for the new Lockport water line started on January 8, 1909. The standpipe in Lockport, 13 miles away, was filled on January 11, 1909. After careful testing and minor repairs, the water was turned into the mains on February 3, 1909.

It is noted that the "Intake Pipe" shown on the 1910 Sanborn map (Figure B-3), is not located at the known position of the LWL.

The City of Lockport replaced the original pump station in 1966 with a new structure situated near the original buildings. The new pump station was designed so that its wet well (also called the "pump well," "screen well" and "suction pit") intersected the original LWL, a portion of which was cut away at the new wet well. Minor regrading was done at the east edge of the Inlet area during station construction.

A 1.2-inch thick, 40-inch (nominal) diameter polyethylene liner pipe was installed inside the Lockport Water Line in 1977. The annular space between the liner and iron pipe was grouted. An approximately 8-foot long extension was added to the wet well end of the liner in 1979 to

compensate for thermally induced shrinkage of the liner away from its connection at the pump station. The LWL continues to operate today.

7.0 Inlet "Cove"

The cove-like shape of the Inlet most likely developed as a result of the widening of the mouth of Pettit Creek by the dredging and incomplete backfilling operations of the LWL construction between 1907-1909 (Proceedings - Common Council 1909). As described in Section 6.0, the Sanborn map of 1910 clearly shows the Inlet's cove-like shape for the first time.

The 1927 aerial photograph shows that the Inlet was a broad depression, with freshly exposed soil and poorly defined banks. Grass appeared to grow in the Inlet on the interchannel islands, and near the PCF until at least 1951.

The location of the northern bank of the Inlet apparently has changed very little since 1927. The easternmost bank extended almost to the fence enclosing the LWL pumping station, where a steep embankment existing until 1966. The southern bank shifted in two ways. From 1927 through 1951, the bank extended south of the boat house, making the Inlet widest along the south-central side. By 1958, filling or regrading occurred here, narrowing the Inlet. The recent investigation soil borings in this area have confirmed the presence of approximately four feet of recent fill that buries the Inlet sediments.

A fence bordering the Tonawanda Iron Works plant was observed along the Inlet's entire northern bank in 1927. By 1938, the eastern half of the fence, i.e. east of the PCF outfall area, had been removed. The fence was repositioned by 1942, and extended east to the LWL pump house west fence. The Inlet's north fence appears to have remained in this location to the present time, marking the southern boundary for fill which was apparently added to the property north of the fence.

By 1966, the mouth of the Inlet appeared to have widened to its fullest extent due to the erosion or removal of material at the southern point of the Inlet where the Inlet and River meet.

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INTERVIEW

Mr. Dittmar, Town Historian. Telephone conversation, Jan. 1990.

MAPS

Aerial Photographs - Areas showing North Tonawanda and Tonawanda Island, N.Y.
Stereographic black and white images for the years 1927, 1938, 1942, 1951, 1958, 1966, 1972, and 1978.

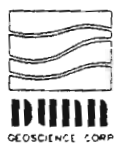
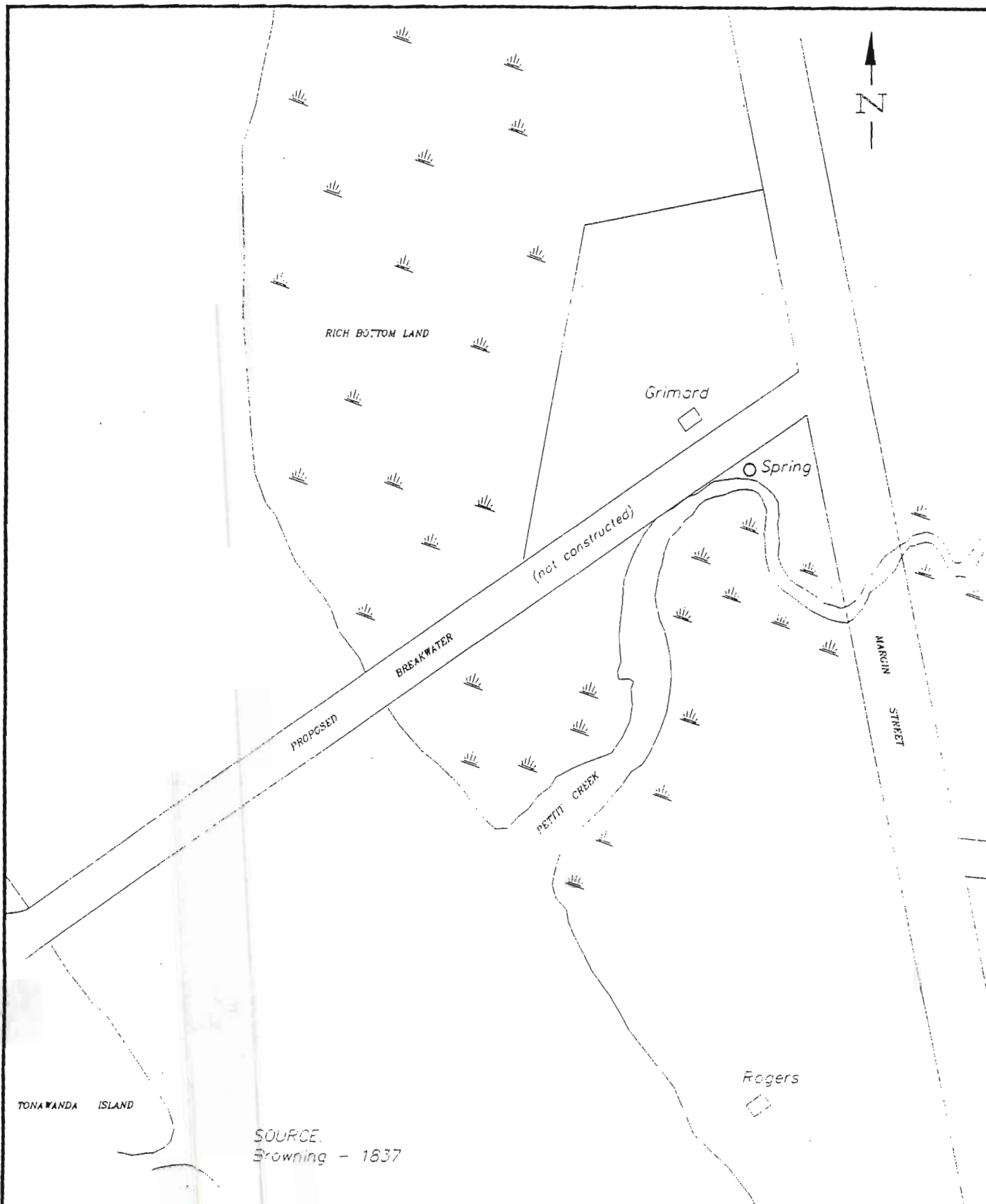
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Sanborn Fire Insurance Maps, Areas showing Tonawanda Island to end of Wheatfield Street in North Tonawanda, N. Y., (obtained from Sanborn Map Co.), Sanborn Map Company. 1886, 1889, 1893, 1910, and 1951.



DUNN GEOSCIENCE CORPORATION
12 Metro Park Road
Albany, NY 12205

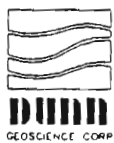
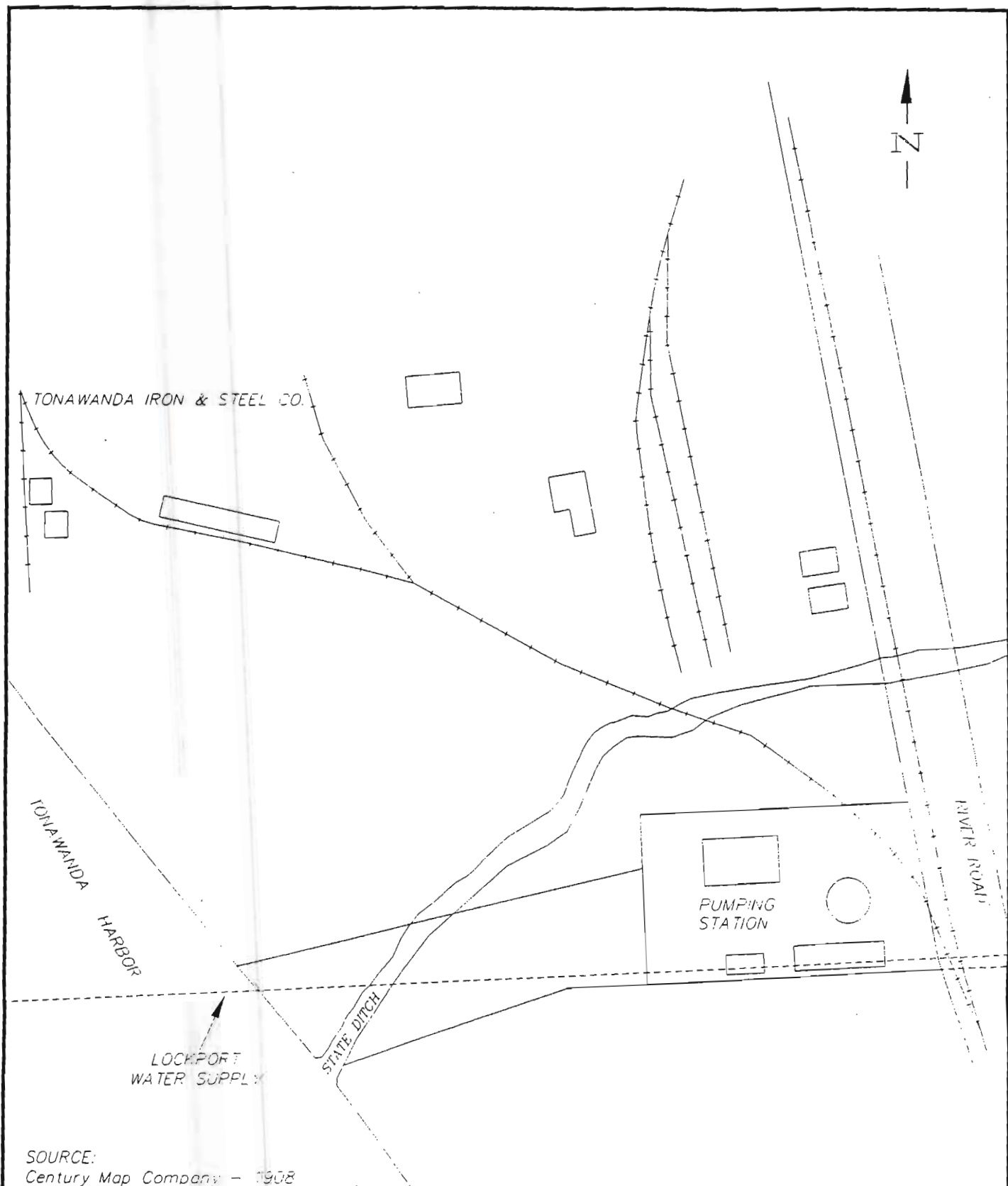
HISTORIC INLET MAP - 1837
OCCIDENTAL CHEMICAL CORP.
DUREZ DIVISION

PROJECT NO 00595-01165

DATE July 1990

SCALE NOT TO SCALE

FIGURE NO **B-1**



DUNN GEOSCIENCE CORPORATION
12 Metro Park Road
Albany, NY 12205

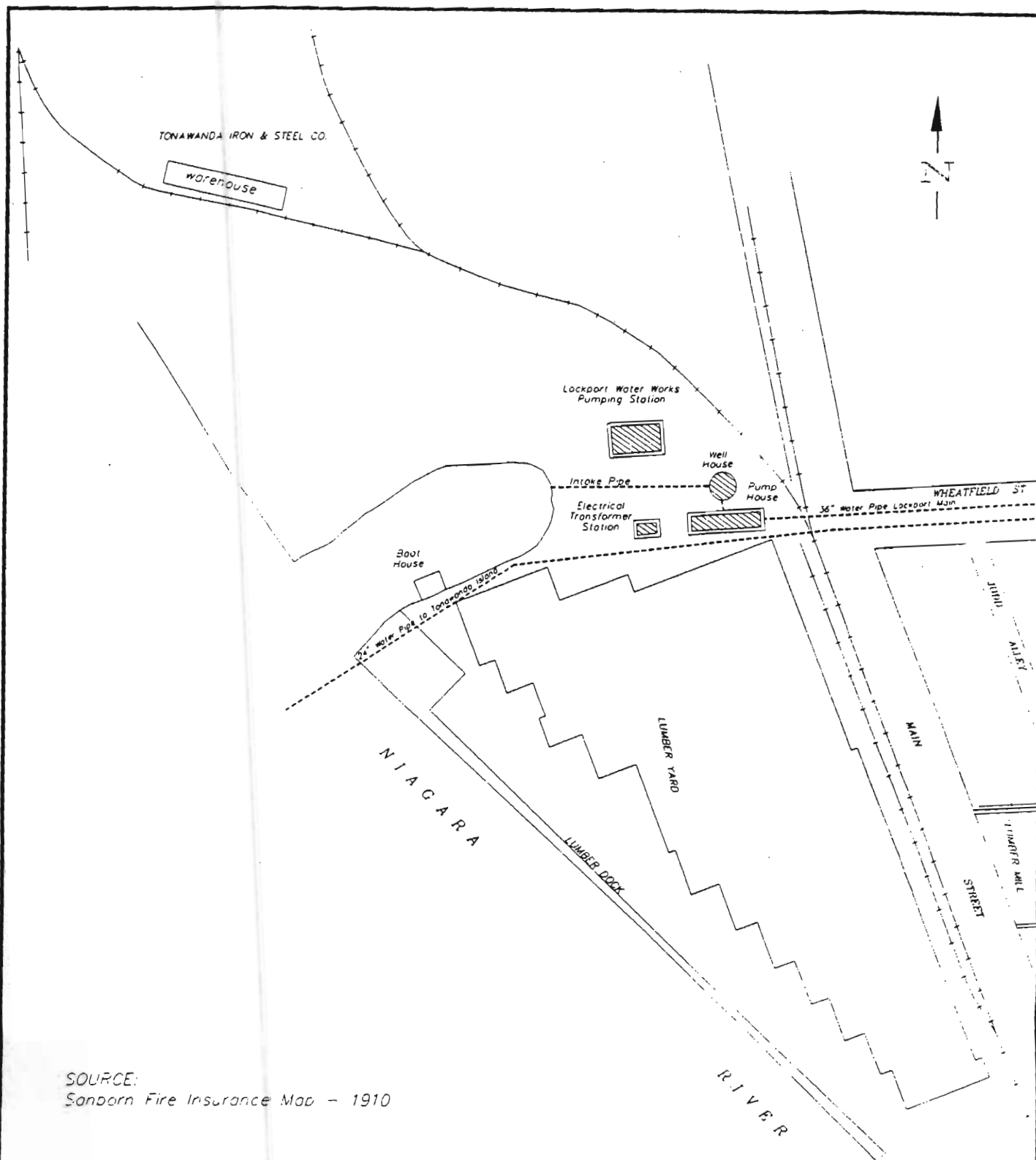
HISTORIC INLET MAP - 1908
OCCIDENTAL CHEMICAL CORP
DUREZ DIVISION

PROJECT NO. 00595-01155

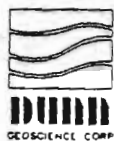
DATE July 1990

SCALE NOT TO SCALE

FIGURE NO. **B-2**



SOURCE:
Sanborn Fire Insurance Map - 1910



DUNN GEOSCIENCE CORPORATION
12 Metro Park Road
Albany, NY 12205

HISTORIC INLET MAP - 1910
OCCIDENTAL CHEMICAL CORP.
DUREZ DIVISION

PROJECT NO. 00595-01165

DATE July 1990

SCALE NOT TO SCALE

FIGURE NO. **B-3**

APPENDIX C

Climatological Data

(National Oceanic and Atmospheric Administration, 1987)

1987

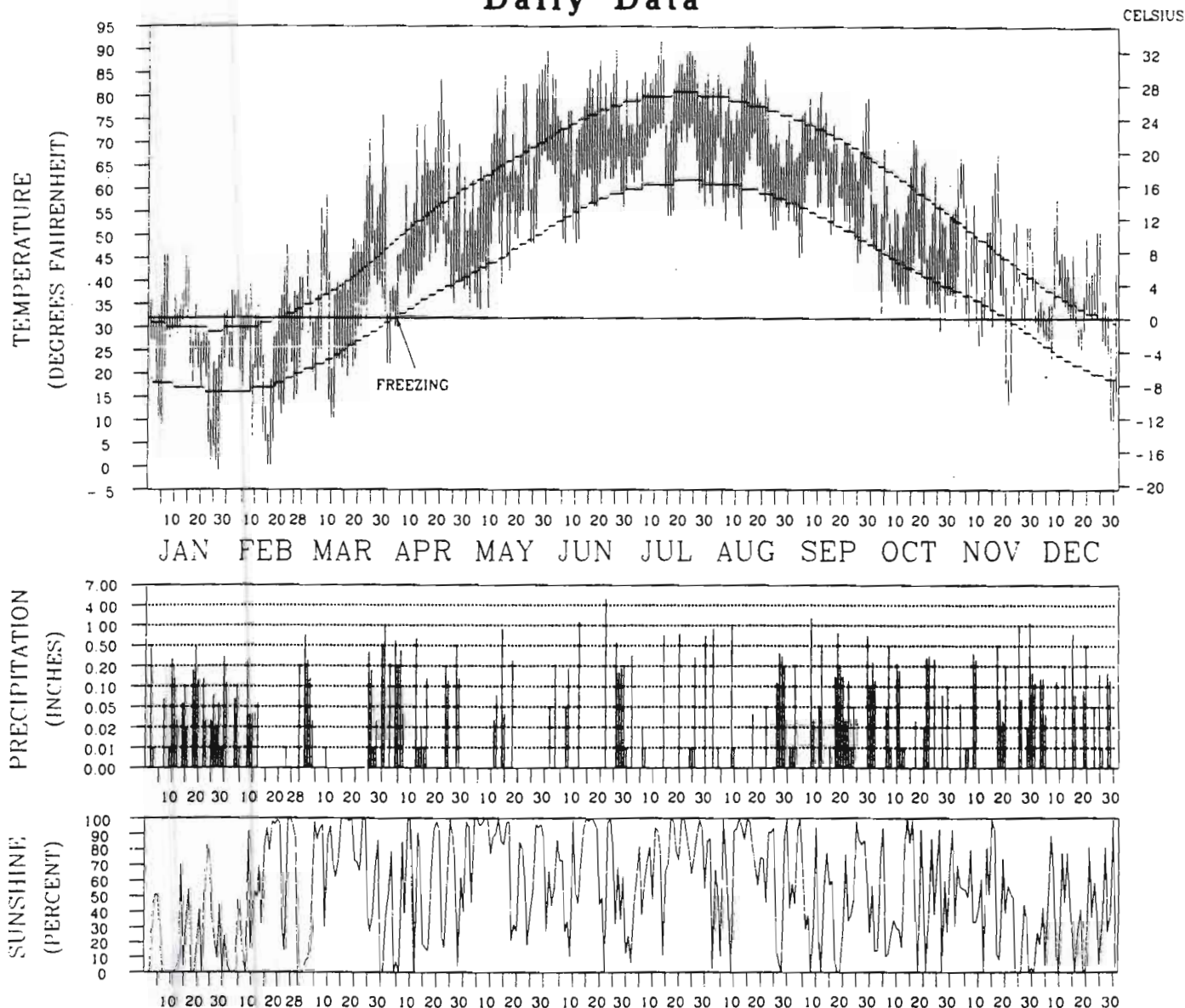
LOCAL CLIMATOLOGICAL DATA

ANNUAL SUMMARY WITH COMPARATIVE DATA

BUFFALO, NEW YORK



Daily Data



TEMPERATURE DEPICTS NORMAL MAXIMUM, NORMAL MINIMUM AND ACTUAL DAILY HIGH AND LOW VALUES (FAHRENHEIT)
 PRECIPITATION IS MEASURED IN INCHES. SCALE IS NON-LINEAR
 SUNSHINE IS PERCENT OF THE POSSIBLE SUNSHINE

I CERTIFY THAT THIS IS AN OFFICIAL PUBLICATION OF THE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION, AND IS COMPILED FROM RECORDS ON FILE AT THE NATIONAL CLIMATIC DATA CENTER, ASHEVILLE, NORTH CAROLINA, 28801

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CLIMATIC DATA CENTER
ASHEVILLE NORTH CAROLINA

Kenneth D. Wadsworth
 DIRECTOR
 NATIONAL CLIMATIC DATA CENTER

METEOROLOGICAL DATA FOR 1987

BUFFALO, NEW YORK

LATITUDE: 42°56' N LONGITUDE: 78°44' W ELEVATION: FT. GRND 705 BARO 715 TIME ZONE: EASTERN WBAN: 14733

	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEP	OCT	NOV	DEC	YEAR
TEMPERATURE °F:													
Averages													
-Daily Maximum	32.1	32.9	47.6	58.9	70.7	78.2	82.6	77.9	71.4	56.1	49.4	39.6	58.1
-Daily Minimum	20.0	17.1	27.8	41.0	50.2	59.6	65.8	59.9	55.3	39.6	35.5	29.0	41.7
-Monthly	26.1	25.0	37.7	50.0	60.5	68.9	74.2	68.9	63.4	47.9	42.5	34.3	50.0
-Monthly Dewpt.	19.6	16.8	26.0	39.2	46.3	57.0	63.6	57.4	55.2	38.0	33.1	26.5	39.9
Extremes													
-Highest	46	48	77	84	90	90	92	92	81	71	68	58	92
-Date	14	22	29	20	30	25	12	15	11	16	17	9	AUG 15
-Lowest	-2	0	10	22	33	48	54	51	44	29	13	8	-2
-Date	27	16	11	1	5	10	16	25	25	26	21	30	JAN 27
DEGREE DAYS BASE 65 °F:													
Heating	1199	1115	837	447	213	28	3	25	91	527	665	948	6098
Cooling	0	0	0	4	79	151	298	152	49	0	0	0	733
% OF POSSIBLE SUNSHINE													
	24	54	65	54	76	63	71	65	50	49	42	37	56
AVG. SKY COVER (tenths)													
Sunrise - Sunset	8.6	7.0	5.9	7.0	5.7	6.3	5.6	5.8	7.1	6.9	8.5	8.9	6.9
Midnight - Midnight	8.5	6.6	5.8	6.9	5.5	6.2	5.6	5.6	6.7	6.6	8.2	9.0	6.8
NUMBER OF DAYS:													
Sunrise to Sunset													
-Clear	1	7	10	7	9	8	7	9	6	5	0	0	69
-Partly Cloudy	5	4	7	6	9	6	17	10	6	10	6	6	92
-Cloudy	25	17	14	17	13	16	7	12	18	16	24	25	204
Precipitation													
.01 inches or more	22	9	11	14	5	11	9	11	17	16	14	15	154
Snow, Ice pellets													
1.0 inches or more	10	3	2	1	0	0	0	0	0	0	0	4	20
Thunderstorms	1	0	1	1	1	10	7	2	6	1	2	1	33
Heavy Fog, visibility													
1/4 mile or less	0	0	1	0	0	0	0	0	4	0	0	0	5
Temperature °F													
-Maximum													
90° and above	0	0	0	0	1	1	2	3	0	0	0	0	7
32° and below	17	9	3	0	0	0	0	0	0	0	2	5	36
-Minimum													
32° and below	30	28	20	3	0	0	0	0	0	1	11	21	114
0° and below	1	2	0	0	0	0	0	0	0	0	0	0	3
AVG. STATION PRESS. (mb)													
	987.8	993.9	992.6	988.3	992.9	988.5	990.7	991.2	990.2	992.9	993.2	989.0	990.9
RELATIVE HUMIDITY (%)													
Hour 01	77	77	74	81	73	79	82	78	87	80	75	78	78
Hour 07	81	79	79	82	74	78	82	78	88	81	76	78	80
Hour 13 (Local Time)	73	62	54	59	51	53	61	57	63	58	63	68	60
Hour 19	78	69	65	67	56	60	64	64	76	73	71	74	68
PRECIPITATION (inches):													
Water Equivalent													
-Total	2.90	0.85	3.66	3.40	1.35	8.36	3.09	3.38	5.32	2.62	4.44	2.78	42.15
-Greatest (24 hrs)	0.53	0.33	1.55	0.79	0.96	5.01	0.81	1.27	2.15	0.50	1.51	0.88	5.01
-Date	2-3	8-9	30-31	4-5	14-15	22	20	9-10	8-9	7	29	15-16	JUN 22
Snow, Ice pellets													
-Total	28.5	7.7	10.8	2.0	0.0	0.0	0.0	0.0	0.0	1	0.9	9.8	59.7
-Greatest (24 hrs)	5.3	4.7	7.9	1.3	0.0	0.0	0.0	0.0	0.0	1	0.7	3.4	7.9
-Date	2-3	8-9	31	4						22	20	28-29	MAR 31
WIND:													
Resultant													
-Direction (!!!)	261	281	282	093	231	237	232	236	229	238	248	253	245
-Speed (mph)	5.8	3.1	1.5	0.5	5.0	5.1	5.7	2.9	2.7	5.7	5.0	7.5	4.0
Average Speed (mph)	11.9	10.2	10.4	11.3	11.0	10.2	10.1	9.8	8.3	10.2	12.2	13.6	10.8
Fastest Mile													
-Direction (!!!)	H	NW	SW	SW	H	H	SW	H	S	SW	SW	SW	S
-Speed (mph)	35	32	32	37	34	28	24	27	42	27	34	40	42
-Date	23	12	2	29	14	27	24	31	29	24	17	16	SEP 29
Peak Gust													
-Direction (!!!)	H	SW	SW	H	SW	SW	SW	H	S	SW	SW	SW	S
-Speed (mph)	46	43	47	53	49	40	31	38	62	43	45	61	62
-Date	23	8	2	29	9	8	24	31	29	24	4	16	SEP 29

(!!!) See Reference Notes on Page 6B
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NORMALS, MEANS, AND EXTREMES

BUFFALO, NEW YORK

LATITUDE: 42°56'N	LONGITUDE: 78°44'W	ELEVATION: FT. GRND	705 BARO	715	TIME ZONE: EASTERN	WBAN: 14733							
(a)	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEP	OCT	NOV	DEC	YEAR
TEMPERATURE °F:													
Normals													
-Daily Maximum	30.0	31.4	40.4	54.4	65.9	75.6	80.2	78.2	71.4	60.2	47.0	35.0	55.8
-Daily Minimum	17.0	17.5	25.6	36.3	46.3	56.4	61.2	59.6	52.7	42.7	33.6	22.5	39.3
-Monthly	23.5	24.5	33.0	45.4	56.1	66.0	70.7	68.9	62.1	51.5	40.3	28.8	47.6
Extremes													
-Record Highest	44	72	65	81	88	90	95	94	99	98	87	80	99
-Year	1950	1981	1945	1986	1987	1957	1968	1948	1953	1951	1961	1982	AUG 1948
-Record Lowest	44	-16	-20	-7	12	26	35	43	38	32	20	9	-20
-Year	1982	1961	1984	1982	1947	1945	1945	1982	1963	1965	1971	1980	FEB 1961
NORMAL DEGREE DAYS:													
Heating (base 65°F)	1287	1134	992	588	294	53	9	25	130	423	741	1122	6798
Cooling (base 65°F)	0	0	0	0	18	83	186	146	43	0	0	0	476
% OF POSSIBLE SUNSHINE	44	31	38	46	52	58	65	68	64	58	50	29	49
MEAN SKY COVER (tenths)	44	8.5	8.2	7.6	7.1	6.7	6.2	6.0	6.2	6.4	6.7	8.3	7.2
Sunrise - Sunset													
MEAN NUMBER OF DAYS:													
Sunrise to Sunset													
-Clear	44	1.4	2.1	3.8	5.0	5.7	6.3	6.9	6.8	6.4	6.5	2.0	54.1
-Partly Cloudy	44	6.2	5.5	7.5	8.0	9.7	11.4	13.0	11.8	9.8	8.3	5.5	102.7
-Cloudy	44	23.5	20.7	19.7	17.0	15.7	12.3	11.0	12.4	13.8	16.2	22.5	208.5
Precipitation													
.01 inches or more	44	20.2	16.8	16.1	14.3	12.3	10.4	9.9	10.6	11.0	11.5	15.9	168.6
Snow, Ice pellets													
1.0 inches or more	44	7.5	5.4	3.7	1.0	0.4	0.0	0.0	0.0	0.1	3.1	6.0	26.9
Thunderstorms	44	0.2	0.2	1.3	2.4	2.9	5.2	5.7	6.1	3.8	1.5	1.1	30.7
Heavy Fog Visibility													
1/4 mile or less	44	1.6	1.8	2.5	2.3	2.4	1.3	0.9	0.9	1.1	1.4	1.3	18.7
Temperature °F													
-Maximum													
90° and above	27	0.0	0.0	0.0	0.1	0.6	1.2	0.4	0.4	0.4	0.0	0.0	2.3
32° and below	27	18.4	15.7	7.2	0.7	0.0	0.0	0.0	0.0	0.0	0.0	2.0	56.1
-Minimum													
32° and below	27	28.9	25.7	24.1	10.6	0.7	0.0	0.0	0.0	0.4	3.3	14.0	133.0
0° and below	27	2.4	1.6	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	4.8
AVG. STATION PRESS. (mb)	15	989.9	991.4	989.7	989.0	989.0	989.3	990.2	991.7	992.1	992.7	991.4	990.6
RELATIVE HUMIDITY (%)													
Hour 01	27	78	79	78	75	76	79	80	83	83	80	79	79
Hour 07	27	79	80	80	77	75	77	78	83	84	82	81	80
Hour 13 (Local Time)	27	73	70	66	58	55	56	55	58	60	60	69	63
Hour 19	27	77	75	73	64	62	61	60	67	72	73	77	70
PRECIPITATION (inches):													
Water Equivalent													
-Normal		3.02	2.40	2.97	3.06	2.89	2.72	2.96	4.16	3.37	2.93	3.62	37.52
-Maximum Monthly	44	6.88	5.80	5.59	5.90	6.39	8.36	6.43	10.67	8.99	9.13	9.75	10.67
-Year	1982	1960	1976	1961	1953	1987	1963	1977	1977	1954	1985	1977	AUG 1977
-Minimum Monthly	44	1.03	0.81	1.20	1.27	1.21	0.11	0.99	1.10	0.77	0.30	1.44	0.11
-Year	1946	1968	1967	1946	1965	1955	1972	1948	1964	1963	1944	1943	JUN 1955
-Maximum in 24 hrs	44	2.57	2.31	2.14	1.71	3.52	5.01	3.38	3.88	4.94	3.49	2.51	5.01
-Year	1982	1954	1954	1977	1986	1987	1963	1963	1979	1945	1949	1945	JUN 1987
Snow, Ice pellets													
-Maximum Monthly	44	68.3	54.2	29.2	15.0	2.0	1		1	3.1	31.3	68.4	68.4
-Year	1977	1958	1959	1975	1945	1980			1956	1972	1976	1985	DEC 1985
-Maximum in 24 hrs	44	25.3	19.4	15.8	6.8	2.0	1		1	2.5	19.9	24.3	25.3
-Year	1982	1984	1954	1975	1945	1980			1956	1972	1955	1945	JAN 1982
WIND:													
Mean Speed (mph)	48	14.3	13.7	13.4	12.8	11.5	11.0	10.4	9.8	10.4	11.1	12.7	12.0
Prevailing Direction through 1963		WSW	SW	SW	SW	SW	SW	SW	SW	S	S	S	WSW
Fastest Mile													
-Direction (!!!)	41	SW	SW	W	W	SW	NW	NW	SW	SW	SW	SW	SW
-Speed (MPH)	41	91	70	68	67	63	56	59	56	59	63	66	60
-Year		1950	1946	1959	1957	1950	1954	1953	1944	1954	1954	1948	1945
Peak Gust													
-Direction (!!!)	4	SW	SW	W	W	SW	W	SW	W	S	NW	W	SW
-Speed (mph)	4	71	51	72	74	55	47	41	52	62	53	61	66
-Date		1985	1985	1986	1985	1984	1985	1985	1986	1987	1986	1985	1985

(!!!) See Reference Notes on Page 6B.
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PRECIPITATION (inches)

BUFFALO, NEW YORK

YEAR	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEP	OCT	NOV	DEC	ANNUAL
1958	3.81	4.78	1.36	3.95	1.79	2.91	1.49	3.16	4.59	1.40	3.49	1.66	34.39
1959	6.47	3.45	3.87	3.21	2.10	1.94	1.98	4.78	2.52	4.93	3.58	3.98	42.81
1960	3.90	5.80	2.35	2.34	4.05	2.48	1.89	3.75	1.20	1.89	2.94	2.57	35.16
1961	1.41	2.63	2.59	5.90	3.01	3.66	3.02	4.03	2.53	2.41	3.30	2.62	37.11
1962	2.78	2.65	1.23	2.25	2.36	2.80	1.89	3.00	3.14	1.90	1.78	2.77	28.55
1963	1.51	1.03	2.19	2.77	2.22	0.61	6.43	8.04	1.20	0.30	5.07	1.83	33.20
1964	2.12	1.09	3.72	3.36	2.91	1.55	2.57	5.02	0.77	1.89	2.09	2.58	29.67
1965	3.27	2.99	1.97	1.99	1.21	1.50	3.69	4.12	2.37	5.07	4.69	2.60	35.47
1966	3.74	2.11	2.78	2.06	1.36	1.97	4.92	3.60	2.65	0.93	4.50	2.25	32.87
1967	1.18	1.39	1.20	2.60	3.69	2.50	1.57	4.04	6.36	4.78	3.13	2.16	34.60
1968	2.18	0.81	2.67	1.78	3.30	4.45	1.19	5.33	5.63	3.03	4.47	3.42	38.26
1969	3.85	0.97	1.62	4.16	3.75	3.51	3.83	2.48	2.04	2.77	4.09	3.09	36.16
1970	2.06	1.74	1.72	2.54	2.87	2.55	4.02	2.01	4.55	4.20	3.20	3.25	34.71
1971	1.46	3.03	2.07	1.48	1.56	4.25	4.50	4.43	1.88	1.57	3.07	3.61	32.91
1972	2.17	3.44	3.99	2.99	3.64	6.06	0.99	4.19	3.06	2.96	4.28	3.86	41.63
1973	2.03	1.98	3.27	3.56	2.99	1.68	3.68	2.98	1.44	4.27	4.07	4.89	36.84
1974	2.44	2.19	3.19	3.15	3.36	3.86	1.80	3.64	2.42	1.75	5.38	3.13	36.31
1975	2.11	2.93	2.92	1.86	3.31	3.65	2.34	8.49	2.44	1.13	2.77	4.58	38.53
1976	3.19	3.43	5.59	4.01	4.70	3.36	5.65	1.65	5.39	3.61	2.11	3.83	46.52
1977	3.38	1.59	2.42	3.60	1.39	2.79	3.64	10.67	8.99	2.61	4.45	8.02	53.55
1978	6.29	1.36	1.72	1.84	3.95	2.42	1.48	3.51	4.40	3.72	1.55	3.50	35.74
1979	5.43	2.03	2.48	3.16	1.63	2.18	3.51	6.26	5.61	3.88	4.14	3.43	43.74
1980	1.97	1.08	4.05	2.43	1.60	5.82	3.55	3.58	4.53	4.69	2.36	2.65	38.31
1981	1.11	3.50	1.70	3.09	2.56	3.68	5.05	3.13	4.24	3.31	2.22	2.87	36.46
1982	6.88	1.28	2.64	2.33	3.66	3.14	1.50	4.62	3.37	2.06	6.31	3.32	41.11
1983	1.44	1.30	3.20	2.55	3.28	2.99	2.01	3.51	2.11	4.62	5.19	7.30	39.50
1984	1.54	3.59	1.77	2.53	4.67	6.86	1.37	4.16	3.73	0.87	2.66	3.67	37.42
1985	4.27	3.34	4.42	1.33	3.46	3.21	1.81	4.63	1.20	3.73	9.75	4.85	46.00
1986	2.31	2.60	1.95	3.33	4.42	4.15	2.82	2.73	3.88	4.34	3.11	4.02	39.66
1987	2.90	0.85	3.66	3.40	1.35	8.36	3.09	3.38	5.32	2.62	4.44	2.78	42.15
Record													
Mean	3.10	2.67	2.76	2.69	2.89	2.89	2.90	3.24	3.08	3.05	3.32	3.28	35.87

See Reference Notes on Page 6B.
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AVERAGE TEMPERATURE (deg. F)

BUFFALO, NEW YORK

YEAR	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEP	OCT	NOV	DEC	ANNUAL
1958	25.1	20.4	34.5	48.2	54.0	61.9	71.3	68.9	62.1	52.2	41.8	22.3	46.9
1959	22.3	24.2	31.0	46.0	60.2	66.8	72.8	74.8	66.8	52.6	38.6	32.3	49.1
1960	26.5	27.2	24.1	48.4	58.1	65.8	69.1	69.0	64.3	50.6	42.8	21.6	47.3
1961	18.5	26.5	34.2	39.8	53.1	63.4	69.7	69.6	68.6	54.5	40.8	29.7	47.4
1962	22.6	21.3	32.5	44.9	60.9	64.9	68.2	68.1	58.6	51.5	37.1	25.1	46.3
1963	18.9	18.8	35.4	44.2	52.9	66.7	70.2	64.3	57.1	57.1	43.6	23.4	46.1
1964	29.3	23.5	34.0	46.9	59.2	65.7	73.1	64.9	60.9	48.1	42.1	29.5	48.1
1965	23.6	25.8	30.0	41.2	59.6	64.3	67.6	67.8	63.5	47.8	40.0	34.3	47.1
1966	20.4	24.9	34.7	43.3	52.2	67.4	71.4	68.5	58.7	48.8	41.5	28.6	46.7
1967	29.8	20.6	30.9	46.1	50.1	72.5	71.2	68.1	60.7	51.9	36.3	33.0	47.6
1968	19.9	20.7	35.7	49.2	53.4	64.8	71.2	69.4	66.1	53.5	40.7	26.8	47.6
1969	25.0	24.6	30.9	46.8	54.4	64.4	70.5	71.2	62.2	51.0	39.1	24.8	47.1
1970	17.6	24.8	30.1	46.9	57.3	66.0	71.0	70.2	64.0	54.5	41.6	27.4	47.6
1971	20.9	27.0	29.8	41.8	54.5	67.6	68.7	67.8	65.4	58.7	39.1	33.5	47.9
1972	25.5	22.0	30.1	41.1	59.1	62.6	71.0	67.7	62.8	46.2	36.0	30.8	46.3
1973	27.6	22.9	42.4	46.9	54.5	68.2	72.3	71.8	61.7	54.3	40.8	29.0	49.4
1974	27.1	22.3	33.0	46.2	53.1	65.6	69.9	69.9	59.6	49.2	40.2	31.7	47.3
1975	30.1	29.1	30.8	39.3	62.1	68.0	72.3	69.7	58.3	53.1	46.9	28.3	49.0
1976	19.7	31.8	37.2	46.5	53.4	68.4	67.8	67.5	60.1	46.3	34.1	22.0	46.3
1977	13.8	24.6	39.8	47.0	60.3	64.4	72.0	68.1	62.6	49.6	43.3	27.9	47.8
1978	20.4	15.5	28.2	42.5	57.4	65.1	70.4	70.3	60.8	49.5	40.4	30.4	45.9
1979	20.5	14.9	38.2	44.3	56.9	66.5	71.3	67.5	61.9	50.7	43.5	33.4	47.5
1980	25.8	21.2	31.8	46.1	58.1	61.9	71.7	72.6	62.4	48.7	39.4	25.3	47.1
1981	19.3	32.9	33.9	47.2	56.4	66.2	71.8	70.0	60.9	48.2	40.4	29.0	48.0
1982	17.2	23.2	32.5	41.6	61.0	62.2	71.8	65.0	61.6	52.6	43.0	37.5	47.5
1983	27.0	29.6	36.7	43.6	53.9	67.6	74.2	71.2	63.7	51.7	40.8	22.7	48.6
1984	20.4	33.8	27.1	47.7	52.9	67.8	70.3	70.3	58.5	53.2	39.0	35.6	48.1
1985	21.1	24.8	35.6	49.5	59.5	62.7	69.7	69.2	64.2	52.5	42.0	25.6	48.0
1986	25.5	24.5	36.2	47.8	59.7	64.1	71.1	67.9	61.8	50.9	37.7	32.4	48.3
1987	26.1	25.0	37.7	50.0	60.5	68.9	74.2	68.9	63.4	47.9	42.5	34.3	50.0
Record													
Mean	24.7	24.6	32.5	43.6	54.9	64.8	70.4	68.9	62.5	51.6	40.0	29.6	47.4
Max	31.1	31.5	39.8	51.8	63.5	72.5	78.2	76.9	70.5	59.1	46.3	35.4	54.7
Min	18.3	17.6	25.3	35.4	46.3	57.0	62.6	60.9	54.4	44.1	33.8	23.7	40.0

See Reference Notes on Page 6B.
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HEATING DEGREE DAYS Base 65 deg. F

BUFFALO, NEW YORK

SEASON	JULY	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1958-59	2	19	124	395	687	1318	1317	1134	1050	562	216	63	6887
1959-60	1	1	111	388	784	1004	1188	1088	1258	494	235	48	6600
* 1960-61	16	10	77	441	660	1339	1435	1072	952	749	385	90	7226
1961-62	30	17	76	323	722	1089	1310	1216	1002	609	195	66	6655
1962-63	9	26	213	415	832	1231	1420	1288	907	618	370	57	7386
1963-64	20	72	240	241	635	1282	1099	1198	955	535	204	98	6579
1964-65	5	68	176	518	680	1097	1277	1092	1080	706	186	100	6985
1965-66	23	46	122	525	742	942	1374	1114	931	648	401	68	6936
1966-67	7	19	199	495	700	1124	1086	1239	1047	560	457	4	6937
1967-68	12	26	162	403	853	985	1393	1281	901	469	352	84	6921
1968-69	11	29	58	374	722	1180	1233	1125	1052	540	325	102	6751
1969-70	13	16	147	433	769	1240	1459	1121	1076	552	255	66	7147
1970-71	6	6	93	328	695	1161	1361	1057	1085	691	327	36	6846
1971-72	11	29	87	202	771	971	1218	1237	1070	707	187	112	6602
1972-73	16	33	113	574	860	1054	1152	1173	696	542	318	24	6555
1973-74	2	14	171	326	720	1107	1167	1187	989	553	365	51	6652
1974-75	2	0	187	483	738	1024	1077	1001	1053	764	175	32	6536
1975-76	3	15	197	368	535	1134	1400	958	853	557	358	40	6418
1976-77	15	35	180	573	921	1328	1580	1123	775	544	207	90	7371
1977-78	5	40	110	473	646	1146	1376	1378	1130	670	282	81	7337
1978-79	14	3	154	472	732	1067	1371	1400	823	619	285	65	7005
1979-80	16	35	134	455	636	973	1208	1265	1022	559	240	142	6685
1980-81	2	0	128	498	759	1224	1411	895	956	527	269	33	6702
1981-82	6	11	170	514	732	1108	1476	1163	1002	698	147	95	7122
1982-83	4	65	140	382	656	848	1172	987	868	636	342	71	6171
1983-84	5	10	125	418	722	1304	1378	899	1167	519	385	35	6967
1984-85	11	22	210	360	774	905	1354	1120	902	476	196	95	6425
1985-86	8	12	114	378	685	1215	1215	1128	885	519	197	80	6436
1986-87	4	42	137	430	811	1003	1199	1115	837	447	213	28	6266
1987-88	3	25	91	527	665	948							

See Reference Notes on Page 6B.
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COOLING DEGREE DAYS Base 65 deg. F

BUFFALO, NEW YORK

YEAR	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEP	OCT	NOV	DEC	TOTAL
1969	0	0	0	0	1	88	192	212	69	6	0	0	568
1970	0	0	0	16	21	108	197	173	72	12	0	0	599
1971	0	0	0	0	9	119	136	122	107	15	0	0	508
1972	0	0	0	0	12	48	210	123	57	0	0	0	450
1973	0	0	0	6	2	126	233	230	78	3	0	0	678
1974	0	0	0	0	7	71	163	158	29	0	0	0	428
1975	0	0	0	0	90	129	238	171	3	3	0	0	634
1976	0	0	0	8	7	149	109	119	40	0	0	0	432
1977	0	0	0	12	68	78	228	142	45	0	1	0	574
1978	0	0	0	0	52	91	189	173	35	0	0	0	540
1979	0	0	0	6	40	118	217	120	49	20	0	0	570
1980	0	0	0	0	32	56	217	242	58	0	0	0	607
1981	0	0	0	2	13	78	225	173	55	0	0	0	546
1982	0	0	0	3	31	18	221	74	45	2	0	2	396
1983	0	0	0	0	5	157	300	214	90	15	0	0	781
1984	0	0	0	5	16	123	183	193	23	1	0	0	544
1985	0	0	0	18	32	32	161	151	96	0	1	0	491
1986	0	0	0	7	38	60	200	137	46	0	0	0	488
1987	0	0	0	4	79	151	298	152	49	0	0	0	733

See Reference Notes on Page 6B.
Page 5B

SNOWFALL (inches)

BUFFALO, NEW YORK

SEASON	JULY	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1958-59	0.0	0.0	0.0	0.0	13.5	19.0	38.4	14.0	29.2	0.4	T	0.0	114.5
1959-60	0.0	0.0	0.0	T	12.2	14.2	18.3	49.5	19.5	1.9	T	0.0	115.6
1960-61	0.0	0.0	0.0	1.0	15.9	31.9	23.5	11.9	5.1	13.1	T	0.0	102.4
1961-62	0.0	0.0	0.0	T	5.6	30.2	26.2	28.2	6.7	4.5	0.0	0.0	101.4
1962-63	0.0	0.0	0.0	2.0	2.5	30.2	31.5	15.5	7.7	0.3	0.1	0.0	89.8
1963-64	0.0	0.0	0.0	0.0	3.1	24.0	13.7	14.6	12.8	3.3	0.0	0.0	71.5
1964-65	0.0	0.0	0.0	T	5.4	15.2	19.2	9.4	17.5	4.2	0.0	0.0	70.9
1965-66	0.0	0.0	0.0	1.2	12.2	7.0	48.0	15.2	11.4	3.2	0.1	0.0	98.3
1966-67	0.0	0.0	0.0	0.0	10.0	12.1	11.6	19.8	10.8	0.6	1.2	0.0	66.1
1967-68	0.0	0.0	0.0	T	19.7	10.4	19.1	11.7	10.6	0.1	0.0	0.0	71.6
1968-69	0.0	0.0	0.0	T	11.6	11.7	31.2	12.8	8.0	3.1	0.0	0.0	78.4
1969-70	0.0	0.0	0.0	1.0	22.1	23.4	38.0	21.9	12.6	1.5	T	0.0	120.5
1970-71	0.0	0.0	0.0	0.0	2.6	32.3	17.2	19.4	22.6	2.9	0.0	0.0	97.0
1971-72	0.0	0.0	0.0	0.0	18.7	12.9	27.6	31.4	14.1	5.2	0.0	0.0	109.9
1972-73	0.0	0.0	0.0	3.1	18.9	19.8	9.9	16.1	8.5	2.4	0.1	0.0	78.8
1973-74	0.0	0.0	0.0	0.0	3.0	23.1	19.7	22.8	12.9	7.1	0.1	0.0	88.7
1974-75	0.0	0.0	0.0	T	22.1	23.6	11.0	16.3	7.6	15.0	0.0	0.0	95.6
1975-76	0.0	0.0	0.0	T	5.5	27.3	21.6	8.3	17.3	2.5	T	0.0	82.5
1976-77	0.0	0.0	0.0	0.2	31.3	60.7	68.3	22.7	13.5	2.2	0.5	0.0	199.4
1977-78	0.0	0.0	0.0	T	15.0	53.4	56.5	21.7	5.8	1.8	0.1	0.0	154.3
1978-79	0.0	0.0	0.0	T	3.0	10.1	42.6	28.3	4.6	8.7	0.0	0.0	97.3
1979-80	0.0	0.0	0.0	T	12.6	19.7	10.2	11.7	13.9	0.3	T	T	68.4
1980-81	0.0	0.0	0.0	T	6.7	21.6	14.4	5.0	13.2	T	0.0	0.0	60.9
1981-82	0.0	0.0	0.0	T	1.8	24.8	53.2	12.7	9.0	10.9	0.0	0.0	112.4
1982-83	0.0	0.0	0.0	0.0	15.8	12.9	9.0	5.5	6.9	2.3	T	0.0	52.4
1983-84	0.0	0.0	0.0	T	17.7	52.0	13.4	32.5	16.0	0.9	T	0.0	132.5
1984-85	0.0	0.0	0.0	0.0	1.4	11.2	65.9	20.9	6.3	1.5	0.0	0.0	107.2
1985-86	0.0	0.0	0.0	0.0	5.2	68.4	17.3	17.3	4.8	1.7	T	0.0	114.7
1986-87	0.0	0.0	0.0	0.0	13.7	4.8	28.5	7.7	10.8	2.0	0.0	0.0	67.5
1987-88	0.0	0.0	0.0	T	0.9	9.8							
Record Mean	0.0	0.0	T	0.2	12.0	22.9	24.8	17.7	11.5	3.1	0.1	T	92.4

See Reference Notes on Page 6B.
Page 6A

REFERENCE NOTES

BUFFALO, NEW YORK

GENERAL

T - TRACE AMOUNT.

BLANK ENTRIES DENOTE MISSING/UNREPORTED DATA.

INDICATES A STATION OR INSTRUMENT RELOCATION.

SEE STATION LOCATION TABLE ON PAGE 6.

EXCEPTIONS

PAGES 4A, 4B, 6A

RECORD MEANS ARE THROUGH THE CURRENT YEAR,
BEGINNING IN 1874 FOR TEMPERATURE

1871 FOR PRECIPITATION

1944 FOR SNOWFALL

SPECIFIC

PAGE 2

PM - INCLUDES LAST DAY OF PREVIOUS MONTH

PAGE 3

1a) - LENGTH OF RECORD IN YEARS, ALTHOUGH
INDIVIDUAL MONTHS MAY BE MISSING.

* LESS THAN .05

NORMALS - BASED ON THE 1951-1980 RECORD PERIOD.

EXTREMES - DATES ARE THE MOST RECENT OCCURRENCE

WIND DIR. - NUMERALS SHOW TENS OF DEGREES CLOCKWISE

FROM TRUE NORTH. "00" INDICATES CALM.

RESULTANT DIRECTIONS ARE GIVEN TO WHOLE DEGREES.

PAGE 4B

MAX AND MIN ARE LONG TERM MEAN DAILY MAXIMUM

AND MEAN DAILY MINIMUM TEMPERATURES.

BUFFALO, NEW YORK

The country surrounding Buffalo is comparatively low and level to the west. To the east and south the land is gently rolling, rising to pronounced hills within 12 to 18 miles, and to 1,000 feet above the level of Lake Erie about 35 miles south-southeast of the city. An escarpment of 50 to 100 feet lies east-west 1-1/2 miles to the north. The eastern end of Lake Erie is 9 miles to the west-southwest, while Lake Ontario lies 25 miles to the north, the two being connected by the Niagara River, which flows north-northwestward from the end of Lake Erie.

Buffalo is located near the mean position of the polar front. Its weather is varied and changeable, characteristic of the latitude. Wide seasonal swings of temperature from hot to cold are tempered appreciably by the proximity of Lakes Erie and Ontario. Lake Erie lies to the southwest, the direction of the prevailing wind. Wind flow throughout the year is somewhat higher due to this exposure. The vigorous interplay of warm and cold air masses during the winter and early spring months causes one or more windstorms. Precipitation is moderate and fairly evenly divided throughout the twelve months.

The spring season is more cloudy and cooler than points not affected by the cold lake. Spring growth of vegetation is retarded, protecting it from late spring frosts. With heavy winter ice accumulations in the lake, typical spring conditions are delayed until late May or early June.

Summer comes suddenly in mid-June. Lake breezes temper the extreme heat of the summer season. Temperatures of 90 degrees and above are infrequent. There is more summer sunshine here than in any other section of the state. Due to the stabilizing effects of Lake Erie, thunderstorms are relatively infrequent. Most of them are caused by frontal action. To the north and south of the city thunderstorms occur more often.

Autumn has long, dry periods and is frost free usually until mid-October. Cloudiness increases in November, continuing mostly cloudy throughout the winter and early spring. Snow flurries off the lake begin in mid-November or early December. Outbreaks of Arctic air in December and throughout the winter months produce locally heavy snowfalls from the lake. At the same time, temperatures of well below zero over Canada and the midwest are raised 10 to 30 degrees in crossing the lakes. Only on rare occasions do polar air masses drop southward from eastern Hudson Bay across Lake Ontario without appreciable warming.

STATION LOCATION

BUFFALO, NEW YORK

Location	Occupied from	Occupied to	Airline distance and direction from previous location	Latitude North	Longitude West	Elevation above										Automatic Observing Equipment	Remarks
						Sea level	Ground										
							Ground at temperature site	Wind instruments	Extreme thermometers	Psychrometer	Sunshine Switch	Tipping bucket rain gage	Weighting rain gage	8" rain gage	Hygrothermometer		
CITY																	
Downtown Buffalo Main and Seneca Streets	11/1/70	3/24/71	NA	42° 53'	78° 53'	610	68	53						66			
Brown Building Main and Seneca Streets	3/25/71	8/30/71	NA	42° 53'	78° 53'	610	68	34						62			
Weed Block Main and Swan Streets	8/31/71	6/21/73	500 ft. W	42° 53'	78° 53'	616	72	58						68		Thermometer exposed in window shelter until 6/20/73. Large instrument shelter on roof beginning 6/21/73.	
Weed Block Main and Swan Streets	6/21/73	11/1/81	NA	42° 53'	78° 53'	616	83	72						67			
White Building Main and Swan Streets	11/1/81	11/1/83	NA	42° 53'	78° 53'	616	113	107						98			
Board of Trade Building Seneca and Pearl Streets	11/1/83	5/1/87	650 ft. SW	42° 53'	78° 53'	608	108	100	100					108		8/1/86, whirling psychrometer first used. 5/1/87, Standard Hazen instrument shelter first used.	
Downtown Buffalo Board of Trade Building Seneca and Pearl Streets	5/1/87	10/7/95	NA	42° 53'	78° 53'	608	108	103	103					93			
Downtown Buffalo Board of Trade Building Seneca and Pearl Streets	10/7/95	2/28/96	NA	42° 53'	78° 53'	608	123	118	118					108			
Quaranty (Prudential) Bldg. Church and Pearl Streets	3/1/96	2/13/13	825 ft. W	42° 53'	78° 53'	612	206	178	178					160		13th Floor. Tower used for anemometer and wind vane.	
New York Telephone Bldg. Church & Franklin Streets	2/13/13	6/30/43	175 ft. W	42° 53'	78° 53'	604	280	247	247			238		238		Consolidated at airport.	
AIRPORT																	
Buffalo Airport Administration Building	7/12/29	11/18/39	NA	42° 56'	78° 44'	702	58	19	19					a16		a - Installed 1936.	
Buffalo Airport Administration Building	11/18/39	8/22/60	750 ft. ESE	42° 56'	78° 44'	893	96 d20	34	34	NA bUnk	NA b32	NA b4 c32		32	NA	NA	b - Installed 7/1/43. c - Effective 7/27/53. d - Moved to field site 8/24/59.
Wea. Bur. Observatory ↑ Greater Buffalo International Airport	8/23/60	Present	0.4 mi. NE	42° 58'	78° 44'	703	20 f33 g33	5	5	33	5	5	4	NA e4 h4	NA	NA	e - Commissioned 2000' WNW of thermometer site 10/23/63. f - Raised 5/18/77. g - Moved 2400' E 7/17/81. h - Type change 10/23/85.

WEA. SVC CONTRACT MET.
Observatory eff. 10/1/80.

SUBSCRIPTION:

Price and ordering information available through: National Climatic Data Center, Federal Building, Asheville, North Carolina 28801

USCOMM-NOAA-ASHEVILLE, N.C. - 715

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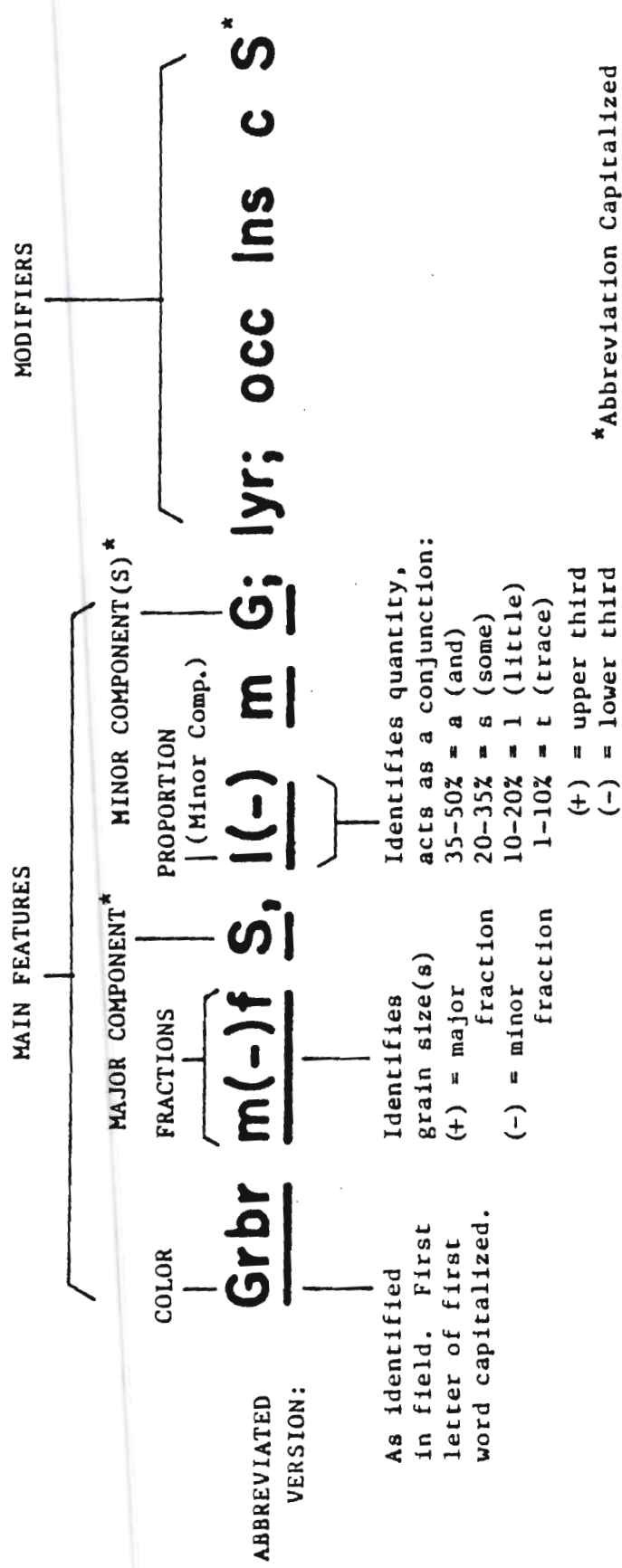
DUNN GEOSCIENCE CORP
12 METRO PARK RD
ALBANY, NY

12205

APPENDIX D

Boring Logs

MODIFIED BURMISTER SYSTEM



REVISED **Gray brown medium (-) to fine SAND, little (-) medium Gravel;**
VERSION: **layered; occasional lens coarse Sand (SP).**

UNIFIED SOIL CLASSIFICATION:**
Adequate for a generalized stratum description.

Dunn Geoscience Corporation uses a modified BURMISTER SYSTEM for detailed identification of soil components, fractions, and proportions. The UNIFIED SOIL CLASSIFICATION,** based upon field data, is also presented.

Important Features of the Modified Burmister
System used by Dunn Geoscience Corporation

The following is a summarized outline designating important features of the Modified Burmister Soil Classification System which is utilized by Dunn Geoscience Corporation. This outline is intended to assist those unfamiliar with this system, and aid in the interpretation of Test Boring Log Data.

I. If the DOMINANT COMPONENT represents:

A. MORE THAN 50% of the sample

1. the abbreviated and written forms of that component are CAPITALIZED.

B. LESS THAN 50% of the sample

1. Sand is described FIRST, even if it is not the most abundant component.
2. ONLY the abbreviation and the FIRST LETTER of the written form of that component are capitalized.

II. If SAND is the DOMINANT COMPONENT:

Sand is described FIRST followed by a comma, followed next by the proper adjective defining proportion and the description of the COMPONENT WHICH PASSES THE #200 SIEVE. A comma, adjective of proportion and description for the gravel component follow next.

III. If GRAVEL OR THE COMPONENT PASSING THE #200 SIEVE is the DOMINANT COMPONENT AND represents OVER 50% of the sample:

That component is described FIRST, followed by the adjective of proportion FOR ALL REMAINING COMPONENTS followed by a comma. The Sand description is written NEXT, followed by a comma and the adjective of proportion describing the remaining component (based upon the WHOLE sample). The description for the remaining component is written next.

IV. IF LESS THAN 10% of a SPECIFIC COMPONENT is coarse, medium or fine (c,m,f), that fraction is omitted from the description.

V. Descriptions of materials passing the #200 sieve are derived from the field identification of plasticity.

VISUAL IDENTIFICATION OF SAMPLES

The samples were identified in accordance with the American Society for Engineering Education System of Definition.

I. Definition of Soil Components and Fractions

Material	Symbol	Fraction	Sieve Size	Definition
Boulders	Bldr	—	9" +	Material retained on 9" sieve.
Cobbles	Cbl	—	3" to 9"	Material passing the 9" sieve and retained on the 3" sieve.
Gravel	G	coarse (c) medium (m) fine (f)	1" to 3" $\frac{3}{8}$ " to 1" No. 10 to $\frac{3}{8}$ "	Material passing the 3" sieve and retained on the No. 10 sieve.
Sand	S	coarse (c) medium (m) fine (f)	No. 30 to No. 10 No. 60 to No. 30 No. 200 to No. 60	Material passing the No. 10 sieve and retained on the No. 200 sieve.
Silt	\$	—	Passing No. 200 (0.074 mm)	Material passing the No. 200 sieve that is non-plastic in character and exhibits little or no strength when air dried.

Organic Silt (O\$)

Material passing the No. 200 sieve which exhibits plastic properties within a certain range of moisture content, and exhibits fine granular and organic characteristics.

		Plasticity	Plasticity Index	
Clayey SILT	Cy\$	Slight (SI)	1 to 5	Clay-Soil Material passing the No. 200 sieve which can be made to exhibit plasticity and clay qualities within a certain range of moisture content, and which exhibits considerable strength when air-dried.
SILT & CLAY	\$&C	Low (L)	5 to 10	
CLAY & SILT	C&\$	Medium (M)	10 to 20	
Silty CLAY	\$yC	High (H)	20 to 40	
CLAY	C	Very High (VH)	40 plus	

II. Definition of Component Proportions

Component	Written	Proportions	Symbol	Percentage Range by Weight *
Principal	CAPITALS	—		50 or more
Minor	Lower Case	and some little trace	a. s. l. t.	35 to 50 20 to 35 10 to 20 1 to 10

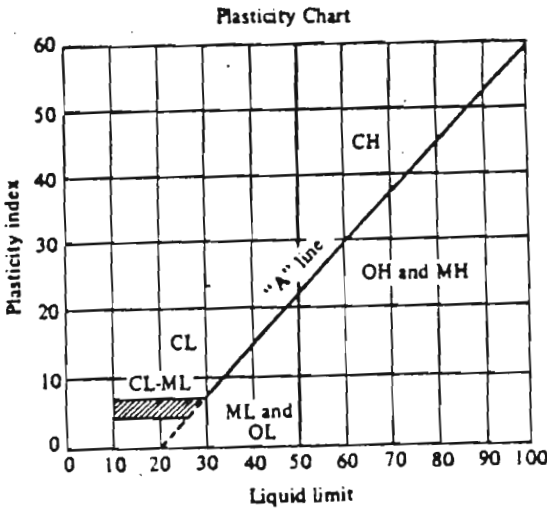
* Minus sign (—) lower limit, plus sign (+) upper limit, no sign middle range.

III. Glossary of Modifying Abbreviations

Category	Symbol	Term	Symbol	Term	Symbol	Term
A. Borings	U/D	Undisturbed	B	Exploratory	A	Auger
B. Samples	C	Casing	L	Lost	U	Undisturbed
	D	Denison	S	Spoon	W	Wash
	O.E.	Open End				
C. Colors	bk	black	gn	green	wh	white
	bl	blue	or	orange	yw	yellow
	br	brown	rd	red	dk	dark
	gr	gray	tn	tan	lt	light
D. Organic Soils	dec	decayed	o	organic	veg	vegetation
	dec'g	decaying	rts	roots	pt	peat
	lig	lignite	ts	topsoil		
E. Rocks	LS	Limestone	rk	rock	Shst	Schist
	Gns	Gneiss	SS	Sandstone	Sh	Shale
F. Fill and Miscellaneous Materials	bldr (s)	boulder (s)	cbl (s)	cobble(s)	gls	glass
	brk (s)	brick (s)	wd	wood	misc	miscellaneous
	cndr (s)	cinder (s)	dbr	debris	rbl	rubble
G. Miscellaneous Terms	do	ditto	pp	pocket	ref	refusal
	el, El	elevation		penetrometer	sm	small
	fgmt (s)	fragment(s)	P. I.	Plasticity Index	W. L.	water level
	frqt	frequent			W. H.	weight of hammer
	lrg	large	P	pushed	W. R.	weight of rods
	mtld	mottled		pressed		
	no rec	no recovery	pc (s)	piece (s)		
	pen	penetration	rec or R	recovered		
H. Stratified Soils	alt	alternating				
	thk	thick				
	thn	thin				
	w	with				
	prt	parting				
	seam	seam				
	lyr	layer				
	stra	stratum				
	vvd c	varved Clay				
	pkt	pocket				
	lms	lens				
	occ	occasional				
	freq	frequent				

- 0 to 1/16" thickness
- 1/16 to 1/2" thickness
- 1/2 to 12" thickness
- greater than 12" thickness
- alternating seams or layers of sand, silt and clay
- small, erratic deposit, usually less than 1 foot
- lenticular deposit
- one or less per foot of thickness
- more than one per foot of thickness

UNIFIED SOIL CLASSIFICATION SYSTEM. (ASTM D-2487)

Major Divisions		Group Symbols	Typical Names		Laboratory Classification Criteria		
Coarse-grained soils (More than half of material is larger than No. 200 sieve size)							
	Gravels (More than half of coarse fraction is larger than No. 4 sieve size)	Clean gravels (Little or no fines)	GW	Well-graded gravels, gravel-sand mixtures, little or no fines	$C_u = \frac{D_{60}}{D_{10}}$ greater than 4; $C_c = \frac{(D_{30})^2}{D_{10} \times D_{60}}$ between 1 and 3		
			GP	Poorly graded gravels, gravel-sand mixtures, little or no fines	Not meeting all gradation requirements for GW		
		Gravels with fines (Appreciable amount of fines)	GM ^a	d	Silty gravels, gravel-sand-silt mixtures	Atterberg limits below "A" line or P.I. less than 4	Above "A" line with P.I. between 4 and 7 are <i>borderline</i> cases requiring use of dual symbols
				u			
	GC	Clayey gravels, gravel-sand-clay mixtures	Atterberg limits below "A" line with P.I. greater than 7				
		Sands (More than half of coarse fraction is smaller than No. 4 sieve size)		Clean sands (Little or no fines)	SW	Well-graded sands, gravelly sands, little or no fines	
	SP		Poorly graded sands, gravelly sands, little or no fines		Not meeting all gradation requirements for SW		
		Sands with fines (Appreciable amount of fines)	SM ^a	d	Silty sands, sand-silt mixtures	Atterberg limits above "A" line or P.I. less than 4	Limits plotting in hatched zone with P.I. between 4 and 7 are <i>borderline</i> cases requiring use of dual symbols
	u						
	SC	Clayey sands, sand-clay mixtures	Atterberg limits above "A" line with P.I. greater than 7				
Fine-grained soils (More than half material is smaller than No. 200 sieve)							
	Silts and clays (Liquid limit less than 50)	ML	Inorganic silts and very fine sands, rock flour, silty or clayey fine sands, or clayey silts with slight plasticity				
		CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays				
		OL	Organic silts and organic silty clays of low plasticity				
	Silts and clays (Liquid limit greater than 50)	MH	Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts				
		CH	Inorganic clays of high plasticity, fat clays				
		OH	Organic clays of medium to high plasticity, organic silts				
	Highly organic soils	Pr	Peat and other highly organic soils				

^aDivision of GM and SM groups into subdivisions of d and u are for roads and airfields only. Subdivision is based on Atterberg limits; suffix d used when L.L. is 28 or less and the P.I. is 6 or less, the suffix u used when L.L. is greater than 28.

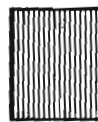
^bBorderline classifications, used for soils possessing characteristics of two groups, are designated by combinations of group symbols. For example: GW-GC, well-graded gravel-sand mixture with clay binder.

LEGEND

LEGEND

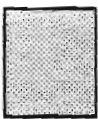
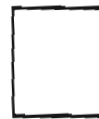
INLET PERIMETER

(MW-, SB-, and I- Series)

Symbol	Stratigraphic Unit	Predominant Texture
	Soft Sediment	Silt
	Fill	Undifferentiated
	Alluvium	Silt & Sand-Upper Sand & Gravel-Lower
	Glacio-Lacustrine	Clay
	Till	Clay & Silt
	Bedrock	Shale

INLET

(IW-, and WL- Series)

Symbol	Stratigraphic Unit	Predominant Texture
	Fill	Silt
	Soft Sediment	Silt
	Fill	Silt-Clay
	Bedding	Silt & Sand
	Alluvium	Sand & Gravel
	Glacio-Lacustrine	Clay
	Till	Clay & Silt
	LWL	

Durez Inlet Investigation

Hand Auger Logs

HA - Series

Dunn Geoscience Corporation Albany, NY (518) 458-1313		Test Boring Log			Boring No. HA-I-2	
PROJECT: Inlet Investigation - Task 3					Sheet 1 of 1	
CLIENT: Occidental - Durez					Job No. 24-595-3-1165	
DRILLING CONTRACTOR:					Meas. Pt. Elev.	
PURPOSE: Subsurface Investigation					Ground Elev. 569.1	
DRILLING METHOD: Hand Auger		SAMPLE	CORE	CASING	Datum MSL	
DRILL RIG TYPE:		TYPE			Date Started: 7/10/89	
GROUNDWATER DEPTH:		DIAM.			Date Finished: 7/10/89	
MEAS. PT.:		WEIGHT				Driller:
DATE OF MEAS.:		FALL				Inspector: M. Ralbovsky

Depth (Feet)	Sample Number	Blow Count	Unified Classification	GRAPHIC LOG	GEOLOGIC DESCRIPTION	REMARKS
		Hand Auger				
	S-1	↓			Dark brown clayey SILT little, fine Sand. - organics, roots (FILL) - slag	WET HNU=Bkgd (Bkgd=0.2 ppm)
2		↓			2.0'	
					End of Boring Total depth = 2.0'	
5						
10						

Dunn Geoscience Corporation Albany, NY (518) 458-1313			Test Boring Log			Boring No. HA-I-3	
PROJECT: Inlet Investigation - Task 3						Sheet 1 of 1	
CLIENT: Occidental - Durez						Job No. 24-595-3-1165	
DRILLING CONTRACTOR:						Meas. Pt. Elev.	
PURPOSE: Subsurface Investigation						Ground Elev. 567.7	
DRILLING METHOD: Hand Auger			SAMPLE	CORE	CASING	Datum MSL	
DRILL RIG TYPE:		TYPE				Date Started: 7/10/89	
GROUNDWATER DEPTH:		DIAM.				Date Finished: 7/10/89	
MEAS. PT.:		WEIGHT				Driller:	
DATE OF MEAS.:		FALL				Inspector: M. Ralbovsky	
Depth (Feet)	Sample Number	Blow Count	Unified Classif- ication	GRAPHIC LOG	GEOLOGIC DESCRIPTION		REMARKS
0.95'	S-1	Hand Auger ↓			Brown clayey SILT some. fine Sand, trace medium to fine gravel. - roots (LACUSTRINE) 0.95'		Moist HNU=Bkgd (Bkgd=0.2 ppm)
					End of Boring Total depth = 0.95'		
5							
10							

DUREZ INLET INVESTIGATION

Inlet Borings

I - Series
(Task 3)

DUNN GEOSCIENCE CORPORATION LATHAM, NEW YORK (518) 783-8102					TEST BORING LOG			BORING NO.						
PROJECT					Occidental Chemical Corporation Durez Technical Negotiations			Inlet-1 (Revised 9-12-89)						
CLIENT					Whiteman, Osterman & Hanna			SHEET 1 OF 3						
DRILLING CONTRACTOR					Empire Soils Investigation			JOB NO. 24-348-11-0412						
PURPOSE								ELEVATION 569.1'						
GROUNDWATER					CASING	SAMPLE	CORE	DATUM MSL						
DATE	TIME	DEPTH	CASING	TYPE	HSA	S.Spoon	NA	DATE STARTED 3/1/88						
3/1/88	1:00	5.0'	12.0'	DIAMETER	4 1/2 I.D.	2" O.D.	NA	DATE FINISHED 3/2/88						
3/2/88	8:15	3.2'	10.0'	WEIGHT		140#	NA	DRILLER P. Bennett						
				FALL		30"	NA	INSPECTOR T. Heins						
DEPTH FT.	CASING BLOWS	SAMPLE NUMBER	BLOWS ON SAMPLE SPOON PER 6"	UNIFIED CLASSI- FICATION	GRAPHIC LOG	IDENTIFICATION		REMARKS						
1		S-1	20			Brown SAND, some Silt, some Gravel, contains green slag pieces (Fill)		Rec.=0.4' Moist Frozen						
			7											
			14											
			8											
2		S-2	4					do. Contains pockets of rust colored sand		Rec.=1.2' Moist H-Nu = 0.8 PPM				
			9											
			9											
			4											
3		S-3	2							do. Sample saturated with oil		Rec.=1.5' Wet H-Nu = 32 PPM *Chemical Odor		
			3											
			5											
			8											
4		S-4	10									Grey coarse-fine SAND, trace Gravel, trace Silt, chemical odor noticed		Rec.=1.2' Wet H-Nu=15 PPM rock fragments noted in lower 6" of sample *Odor
			22											
			47											
			60											
5		S-5	22	Gr cmf(+)S, t\$, tG		Rec.=0.3' Wet H-Nu=5.0 PPM N=41 Dense *Odor								
			19											
			22											
			21											
6								6.0'						
7														
8														
9														
10														

DUNN GEOSCIENCE CORPORATION LATHAM, NEW YORK				TEST BORING LOG		BORING NO. Inlet-1 (Revised 9-12-89)	
PROJECT Occidental Chemical Corporation Durez Technical Negotiations				SHEET 2 OF 3			
CLIENT Whiteman, Osterman & Hanna				JOB NO. 24-348-11-0412			
DEPTH FT.	CASING BLOWS	SAMPLE NO.	BLOWS ON SAMPLE SPOON- PER 6"	UNIFIED CLASS- FICATION	GRAPHIC LOG	IDENTIFICATION	REMARKS
10			14			Grades to coarse - fine SAND, some Gravel	Rec.=1.4' Wet N=15 H-Nu=3.4 PPM M. Dense *Black blebs, Odor
		S-6	12				
11			3				
			2				
12						Gr c(+)mfS, 1(+)mfG	Rec.=1.0' Wet N=9 Loose H-Nu=1.0 PPM
		S-7	1				
13			1				
			8				
14			17			Grey coarse-fine SAND, trace Gravel (Alluvium)	Rec.=1.3' Wet N=42 Dense H-Nu=5.0 PPM
		S-8	17				
15			26				
			16				
16			16			do.	Rec.=1.0' Wet N=7 H-Nu=1.2 PPM Loose
		S-9	4				
17			1				
			6				
18			21			Grey coarse (+)-fine SAND, and Gravel	Rec.=1.2' Wet N=57 V. Dense H-Nu=10.8 PPM
		S-10	27				
19			21				
			36				
20			42			Grey Coarse (+)-fine SAND, and Gravel, trace Silt	Rec.=1.5' Wet N=8 Loose H-Nu=15.4 PPM
		S-11	12				
21			5				
			3				
22			3			Brown Silty CLAY, little Sand, trace Gravel	

DUNN GEOSCIENCE CORPORATION LATHAM, NEW YORK				TEST BORING LOG		BORING NO. Inlet-1 (Revised 9-12-89)			
PROJECT Occidental Chemical Corporation Durez Technical Negotiations				SHEET 3 OF 3		JOB NO. 24-348-11-0412			
CLIENT Whiteman, Osterman & Hanna									
DEPTH FT.	CASING BLOWS	SAMPLE NO.	BLOWS ON SAMPLE SPOON PER 6"	UNIFIED CLASSI- FICATION	GRAPHIC LOG	IDENTIFICATION	REMARKS		
23		S-12	WH			do. (Glacio-lacustrine)	Rec.=0.2' Wet V. Soft N=1 H-Nu=0.8 PPM		
			WH						
			1						
24		S-13	1			WR	do.	Rec.=2.0' Wet N=1 V. Soft H-Nu=0.0 PPM	
									WH
									1
25		S-14				1	do. Contains medium-fine sand lense at 27.5 feet	Rec.=2.0' Wet N=5 Soft H-Nu=0.0 PPM	
									1
									1
26		S-15	1			3	28.0'	Rec.=0.4' Wet N=19 Stiff H-Nu=1.2 PPM	
			2						7
			3						12
27		T-16	3			Pushed	(Till)	Shelby tube Rec.=1.6'	
28		S-17				24	do. *NOTE: Blebs & odor notice in sample jars on 9/12/89.	Rec.=1.6' Wet N=43 Hard H-Nu=0.0 PPM	
									21
29						22	34.0'		
30							End of boring Total depth = 34.0'		

DUNN GEOSCIENCE CORPORATION LATHAM, NEW YORK (518) 783-8102					TEST BORING LOG			BORING NO. Inlet-1a	
PROJECT Occidental Chemical Corporation Durez Technical Negotiations									
CLIENT Whiteman, Osterman & Hanna								SHEET 1 OF 1	
DRILLING CONTRACTOR Empire Soils Investigations, Inc.								JOB NO. 24-348-11-0412	
PURPOSE Soil Chemical Analysis								ELEVATION 569.2'	
GROUNDWATER					CASING	SAMPLE	CORE	DATUM MSL	
DATE	TIME	DEPTH	CASING	TYPE	HSA	S.Spoon	NA	DATE STARTED 3/11/88	
				DIAMETER	2½"ID	2"OD	NA	DATE FINISHED 3/11/88	
				WEIGHT		140#	NA	DRILLER P. Bennett	
				FALL		30"	NA	INSPECTOR T. Heins	
DEPTH FT.	CASING BLOWS	SAMPLE NUMBER	BLOWS ON SAMPLE SPOON PER 6"	UNIFIED CLASSI- FICATION	GRAPHIC LOG	IDENTIFICATION		REMARKS	
1						(Fill)		Augered 0-3 feet	
2									
3									
4									
5									
		S-1	31			Black f - c SAND, trace Gravel, trace Silt, contains oil		Rec.: 0.3' Wet	
4			4						
			5						
			8						
5						5.0'		H-Nu=4.5 PPM	
						End of boring Total depth = 5.0'			
						NOTE: S-1 was driven twice to obtain a greater sample volume for analysis. Recovery on second attempt was 0.8 feet.			
10									

DUNN GEOSCIENCE CORPORATION LATHAM, NEW YORK (518) 783-8102						TEST BORING LOG			BORING NO. Inlet-2			
PROJECT Occidental Chemical Corporation Durez Technical Negotiations						(Revised 9-12-89)						
CLIENT Whiteman, Osterman & Hanna						SHEET 1 OF 2						
DRILLING CONTRACTOR Empire Soils Investigations, Inc.						JOB NO. 24-348-11-0412						
PURPOSE						ELEVATION 569.0'						
GROUNDWATER						CASING	SAMPLE	CORE	DATUM MSL			
DATE	TIME	DEPTH	CASING	TYPE		HSA	S.Spoon	NA	DATE STARTED 3/10/88			
3/10/88	3:15	dry	14.0'	DIAMETER	4 1/2" I.D. 0.7' O.D.		2"OD	NA	DATE FINISHED 3/10/88			
3/11/88	8:30	3.7'	4.0'	WEIGHT		NA	140#	NA	DRILLER P. Bennett			
				FALL		NA	30"		INSPECTOR T. Heins			
DEPTH FT.	CASING BLOWS	SAMPLE NUMBER	BLOWS ON SAMPLE SPOON PER 6"	UNIFIED CLASSI- FICATION	GRAPHIC LOG	IDENTIFICATION			REMARKS			
1		S-1	4			Brown Sand, some SILT, contains brick fragments and roots (topsoil/fill)			Rec.: 0.6' Moist			
			9									
			4									
2			2								H-Nu=0.2 PPM	
			3			3.0'			Rec.: 1.2' Moist			
3		S-2	1								H-Nu=3.5 PPM	
			2			Black SAND and SILT, trace Gravel, oil stained						
4			2									
			1			do., oil stained (SOFT SEDIMENT)			Rec.: 0.9' Wet			
5		S-3	3								N=4	
			1								V. Loose	
6			3								H-Nu=4.1 PPM	
			1			Bl SAND and silt, trace Gravel - possible soft sediment			Rec.: 1.3' Wet			
7		S-4	1/1.00 ft								H-Nu=1.0 PPM	
									N=1			
8			1								V. Loose	
			WR			do., f-c sand layer at 9.0~0.3' thick			Rec.: 1.5'			
9		S-5	WH								H-Nu=1.2 PPM	
			3								N=3	
10			2						V. Loose			

DUNN GEOSCIENCE CORPORATION LATHAM, NEW YORK					TEST BORING LOG		BORING NO. Inlet-2 (Revised 9-12-89)		
PROJECT Occidental Chemical Corporation							SHEET 2 OF 2		
CLIENT Whiteman Osterman & Hanna							JOB NO. 24-348-11-0412		
DEPTH FT.	CASING BLOWS	SAMPLE NO.	BLOWS ON SAMPLE SPOON PER 6"	UNIFIED CLASSI- FICATION	GRAPHIC LOG	IDENTIFICATION	REMARKS		
10		S-6	1	CH		do., becomes grey (SOFT SEDIMENT) 12.0'	Rec.: 1.2' H-Nu= 40 PPM Wet V. Loose N=4		
11			3						
			1						
12			2						
		S-7	1			(Alluvium) do. - piece of metal 13.5'	Rec.: 2.0' H-Nu=40 PPM M. Dense N=11		
13			4						
			7						
14			1						
		S-8	WH			Brown Silty Clay, trace fine Sand (Glacio-lacustrine) 18.0'	Rec.: 2.0' Wet H-Nu=1.0 PPM N=2 Soft		
15			WH						
			2						
16			2						
		S-9	WR			do. 18.0'	Rec.: 2.0' H-Nu=0.8 PPM N=3 Soft Wet		
17			1						
			2						
18			1						
								End of boring Total depth = 18.0'	

LATHAM, NEW YORK (518) 783-8102				TEST BORING LOG			BORING NO. Inlet 3	
PROJECT Occidental Chemical Corporation Durez Technical Negotiations								
CLIENT Whiteman, Osterman & Hanna				SHEET 1 OF 7				
DRILLING CONTRACTOR Empire Soils Investigations, Inc.				JOB NO. 24-348-11-0412				
PURPOSE				ELEVATION 569.0'				
GROUNDWATER				CASING	SAMPLE	CORE	DATUM MSL	
DATE	TIME	DEPTH	CASING	TYPE	HSA Flush Joint	S. Spoon	NA	DATE STARTED 3/4/88
3/4/88	12:45	dry	12.0'	DIAMETER	9 1/4" ID 0.7" OD	2" OD	NA	DATE FINISHED 3/9/88
3/7/88	8:25	29.0'	34.0'	WEIGHT	140#	140#	NA	DRILLER P. Bennett
3/8/88	8:15	6.0'	44.0'	FALL	30"	30"	NA	INSPECTOR T. Heins
3/9/88	8:30	3.0'	47.0'					
DEPTH FT.	CASING BLOWS	SAMPLE NUMBER	BLOWS ON SAMPLE SPOON PER 6"	UNIFIED CLASSI- FICATION	GRAPHIC LOG	IDENTIFICATION		REMARKS
1		S-1	5			Brown SAND, and Clayey Silt, trace Gravel, containing Grey slag fragments		Rec.: 1.2' Top 6" frozen Moist H-Nu=1.2 PPM
			6					
			7					
			7					
2		S-2	9			(Fill) Contains wood fragments		Rec.: 1.6' Wet H-Nu= 32 PPM
			4					
			3					
			3					
3		S-3	3			do., oil stained		Rec.: 1.5' Wet H-Nu=3.0 PPM
			4					
			2					
			1					
4		S-4	WH			(SOFT SEDIMENT)		Rec.: 1.4' Wet N=1 V. Soft H-Nu=5.3 PPM
			WH					
			1					
			1					
5		S-5	1	Brown Silty CLAY, little Sand		Rec.: 0 N=1 V. Soft		
			1					
			WH					
			WH					
6			1	(FILL)				
			1					
			WH					
			WH					
7			1					
			1					
			WH					
			WH					
8			1					
			1					
			WH					
			WH					
9			1					
			1					
			WH					
			WH					
10			1					
			1					
			WH					
			WH					

DUNN GEOSCIENCE CORPORATION LATHAM, NEW YORK				TEST BORING LOG		BORING NO. Inlet 3 (Revised 9-12-89)	
PROJECT Occidental Chemical Corporation Durez Technical Negotiations				SHEET 2 OF 7			
CLIENT Whiteman, Osterman & Hanna				JOB NO. 24-348-11-0412			
DEPTH FT.	CASING BLOWS	SAMPLE NO.	BLOWS ON SAMPLE SPOON, PER 6"	UNIFIED CLASS- IFICATION	GRAPHIC LOG	IDENTIFICATION	REMARKS
10			1			do., contains wood fragments	Rec.: 0.3' Wet N=2 V. Soft H-Nu=58 PPM
11		S-6	1			(FILL)	
			1			SCF	
12			2				
			WH			do.	Rec.: 2.0' Wet N=2 V. Soft H-Nu=2.0 PPM *Black bleb, Odor
13		S-7	WH			- metal ring	
			2				
14			2				14.0
			WR			Brown Silty CLAY, little Sand (Glacio-lacustrine)	Rec.: 2.0' Wet N=0 V. Soft H-Nu=0.9 PPM
15		S-8	WH				
			WH				
16			2				
			PUSHED				Shelby tube Rec.: 2.1'
17		T-9					
18			✓				
			WH			do., becomes varved	Rec.: 2.0' Wet N=0 V. Soft H-Nu=0.2 PPM
19		S-10	WH				
			WH				
20			WH				
			WR			Brown Silty CLAY; varved	Rec.: 2.0' Wet N=0 V. Soft PP=0 H-Nu=0.1 PPM
21		S-11	WR				
			WH				
22			WH				

DUNN GEOSCIENCE CORPORATION LATHAM, NEW YORK				TEST BORING LOG		BORING NO. Inlet-3 (Revised 9-12-89)		
PROJECT Occidental Chemical Corporation Durez Technical Negotiations				SHEET 3 OF 7				
CLIENT Whiteman, Osterman & Hanna				JOB NO. 24-348-11-0412				
DEPTH FT.	CASING BLOWS	SAMPLE NO.	BLOWS ON SAMPLE SPOON PER 6"	UNIFIED CLASSI- FICATION	GRAPHIC LOG	IDENTIFICATION	REMARKS	
22			WR					
23		S-12	WR			Silt layer ~0.01 feet thick at 23.51'	Rec.: 2.0' Wet N=0 V. Soft H-Nu=0.1 PPM	
			WH					
24			2					
25		S-13	WR			do.	Rec.: 2.0' Wet N=0 V. Soft H-Nu=0.1 PPM	
			WH					
26			1					
27		S-14	WH			do. <i>El. 542</i> 27.0'	Rec.: 1.6' Wet N=3 Soft H-Nu=0.2 PPM	
			1					
			2					
28			2			Brown CLAY and SILT, some f (+) to m Sand		
29		S-15	4				do. (Till)	Rec.: 0 N=9
			5					
30			7			do.		
31		S-16	4					Rec.: 1.9' Wet N=9 Stiff H-Nu=0.0 PPM
			5					
32			4			do., some f-c Sand, trace Gravel		
			7					
33		S-17	5				driller over- augered	
			8					
34			10				Rec.: 1.3' Wet N=18 V. Stiff H-Nu=0.0 PPM	

DUNN GEOSCIENCE CORPORATION LATHAM, NEW YORK				TEST BORING LOG		BORING NO. Inlet-3 (Revised 9-12-89)		
PROJECT Occidental Chemical Corporation Durez Technical Negotiations				SHEET 4 OF 7				
CLIENT Whiteman, Osterman and Hanna				JOB NO. 24-348-11-0412				
DEPTH FT.	CASING BLOWS	SAMPLE NO.	BLOWS ON SAMPLE SPOON PER 6"	UNIFIED CLASSI- FICATION	GRAPHIC LOG	IDENTIFICATION	REMARKS	
35		S-18	2			do.	Rec.: 2.0' Wet N=11 Stiff H-Nu=2.2 PPM	
			5					
			6					
36			10					
			13			Brown SILT & CLAY, some Sand, little Gravel	Rec.: 0.8' Wet N=34 Hard H-Nu=0.0 PPM	
37	S-19	13						
		21						
38			34					
			17			(Till)	Rec.: 0.6' Wet N=21 V. Stiff H-Nu=0.0 PPM	
39	S-20	10						
		11	do.					
		11						
40			7					
			8			do.	Rec.: 1.3' Wet N=17 V. Stiff H-Nu=0.0 PPM	
41	S-21	9						
		9						
42			1					
			4			Brown SILT & CLAY, some Sand, little Gravel	Rec.: 0.8' Wet N=12 Stiff H-Nu=0.8 PPM	
43	S-22	8						
		4						
44								
45								
46								

DUNN GEOSCIENCE CORPORATION LATHAM, NEW YORK				TEST BORING LOG		BORING NO. Inlet-3 (Revised 9-12-89)	
PROJECT Occidental Chemical Corporation Durez Technical Negotiations				SHEET 5 OF 7			
CLIENT Whiteman, Osterman & Hanna				JOB NO. 24-348-11-0412			
DEPTH FT.	CASING BLOWS	SAMPLE NO.	BLOWS ON SAMPLE SPOON PER 6"	UNIFIED CLASSI- FICATION	GRAPHIC LOG	IDENTIFICATION	REMARKS
46							
47							
			14				
			19				
48		S-23	10			Grey f (+) to m SAND, trace \$ilt	Rec.: 1.2' Wet N=29 M. Dense H-Nu=0.0 PPM
			7				
49							
50						50.5'	
51							
52			51				
			75			Gr mf(+)S, s\$, s(+)mf(+)G - angular (Till)	Rec.: 1.5' Wet N=177 V. Dense H-Nu=0.0 PPM
53		S-24	102				
54							
55							
56							
57			24				
			70				
58		S-25	93			do.	Rec.: 1.5' Wet N=163 V. Dense H-Nu=0.0 PPM

DUNN GEOSCIENCE CORPORATION LATHAM, NEW YORK				TEST BORING LOG		BORING NO. Inlet-3 (Revised 9-12-89)	
PROJECT Occidental Chemical Corporation Durez Technical Negotiations				SHEET 6 OF 7			
CLIENT Whiteman, Osterman and Hanna				JOB NO. 24-348-11-0412			
DEPTH FT.	CASING BLOWS	SAMPLE NO.	BLOWS ON SAMPLE SPOON PER 6"	UNIFIED CLASSI- FICATION	GRAPHIC LOG	IDENTIFICATION	REMARKS
59							
60							
61							
62							
63		S-26	31			do.	Rec.: 1.6' Wet N=108 V. Dense H-Nu=0.2 PPM
			51				
			57				
64			102			(Till)	
65							
66							
67							
68		S-27	43			Gr mf(+)Gs, cmfS, 1\$	Rec.: 1.7' Wet N=105 V. Dense H-Nu= 0.2 PPM
			52				
			53				
69			50				
70							

DUNN GEOSCIENCE CORPORATION LATHAM, NEW YORK						TEST BORING LOG	BORING NO. Inlet-3 (Revised 9-12-89)	
PROJECT Occidental Chemical Corporation Durez Technical Negotiations						SHEET 7 OF 7		
CLIENT Whiteman, Osterman & Hanna						JOB NO. 24-348-11-0412		
DEPTH FT.	CASING BLOWS	SAMPLE NO.	BLOWS ON SAMPLE SPOON PER 6"	UNITED CLASSI- FICATION	GRAPHIC LOG	IDENTIFICATION		REMARKS
71						(Till)		
72								
73								
74								
75						74.0'		
						Rock (see Notes 4 and 5)		
						75.0'		
						End of boring Total depth = 75.0'		
76						Notes:		
						1. Hollow stem augered to 34 feet.		
						2. Installed 3" ID casing to 38 feet		
77						3. Open hole 28-75 feet advanced by triconing and held open with drilling mud.		
78						4. Top of rock inferred based on the rate tricone advancement and cuttings.		
79						5. Attempted to take a sample at 75 feet. The hole had caved in to ~ 71 feet preventing sampling.		
80						*NOTE: Blebs & odor noticed in sample jars 9/12/89.		

DUNN GEOSCIENCE CORPORATION LATHAM, NEW YORK (518) 783-8102					TEST BORING LOG			BORING NO. Inlet-4 (Revised 9-12-89)	
PROJECT Occidental Chemical Corporation Durez Technical Negotiations									
CLIENT Whiteman, Osterman & Hanna					SHEET 1 OF 4				
DRILLING CONTRACTOR Empire Soils Investigations, Inc.					JOB NO. 24-348-11-0412				
PURPOSE					ELEVATION 571.3'				
GROUNDWATER					CASING	SAMPLE	CORE	DATUM MSL	
DATE	TIME	DEPTH	CASING	TYPE	HSA	S.Spoon	NA	DATE STARTED 2/29/88	
2/29/88	12:00	9.8'	28'	DIAMETER	4 1/4" ID	2" OD	NA	DATE FINISHED 2/29/88	
2/29/88	1:08	7.8'	28'	WEIGHT		140#	NA	DRILLER P. Bennett	
				FALL		30"	NA	INSPECTOR T. Heins	
DEPTH FT.	CASING BLOWS	SAMPLE NUMBER	BLOWS ON SAMPLE SPOON PER 6"	UNIFIED CLASSI- FICATION	GRAPHIC LOG	IDENTIFICATION		REMARKS	
1		S-1	33			Brown SAND, little Silt, little Gravel, contains rust colored sand pockets and slag (Fill)		Rec.: 1.5' Moist H-Nu=0.0 PPM	
			83						
			10						
2			12			do.		Rec.: 1.5' Moist H-Nu=0.0 PPM	
			13						
3		S-2	11			slag		Rec.: 0.5' Wet H-Nu=1.0 PPM *Black blebs	
			3						
			3						
4		S-3	2			slag		Rec.: 0.5' Wet H-Nu=0.2 PPM	
			3						
			4						
5			2	Dk br cmfS, 1\$, lmfG		Rec.: 0.5' H-Nu=0.0 PPM			
			2						
			27						
6		S-4	16	9.5'					
			2						
			3						
7		S-5	2						
			4						
			7						
8			7						
			7						
9			7						
10			7						

DUNN GEOSCIENCE CORPORATION LATHAM, NEW YORK				TEST BORING LOG		BORING NO. Inlet-4 (Revised 9-12-89)	
PROJECT Occidental Chemical Corporation Durez Technical Negotiations				SHEET 2 OF 4			
CLIENT Whiteman, Osterman & Hanna				JOB NO. 24-348-11-0412			
DEPTH FT.	CASING BLOWS	SAMPLE NO.	BLOWS ON SAMPLE SPOON PER 6"	UNIFIED CLASSI- FICATION	GRAPHIC LOG	IDENTIFICATION	REMARKS
11		S-6	2			Grey SAND, little Gravel, trace \$ILT (Alluvium)	Rec.: 1.0' Wet N=10 H-Nu=0.2 PPM M. Dense
			4				
			6				
12			7				
			12				
13		S-7	22			do., f-c (+) Sand, some Gravel, trace \$ilt	Rec.: 1.3' Wet N=74 Driller notes rock fragments in spoon shoe
			52				
14			33				
			57				
15		S-8	20			Gr cmf(+)S, t\$, smfG	Rec.: 1.5' Wet N=40 Dense H-Nu=0.0 PPM
			20				
16			15				
			20				
17		S-9	22			do.	Rec.: 1.8' Wet N=49 Dense H-Nu=0.0 PPM
			27				
18			19				
			15				
19		S-10	13			do.	Rec.: 1.4' Wet N=21 M. Dense H-Nu=0.0 PPM
			8				
20			10				
			12				
21		S-11	15			Grey, f to c (+) SAND, some Gravel, trace \$ilt	Rec.: 1.1' Wet N=36 H-Nu= 0.0 PPM Dense
			21				
22			10				

DUNN GEOSCIENCE CORPORATION LATHAM, NEW YORK				TEST BORING LOG		BORING NO. Inlet-4 (Revised 9-12-89)		
PROJECT Occidental Chemical Corporation Durez Technical Negotiations				SHEET 3 OF 4				
CLIENT Whiteman, Osterman & Hanna				JOB NO. 24-348-11-0412				
DEPTH FT.	CASING BLOWS	SAMPLE NO.	BLOWS ON SAMPLE SPOON PER 6"	UNIFIED CLASSI- FICATION	GRAPHIC LOG	IDENTIFICATION	REMARKS	
23		S-12	7			do., contains frequent pieces of wood	Rec.: 1.0' Wet N=17 H-Nu=1.2 PPM M. Dense	
			9					
			8					
24			9			do., contains wood fragments	Rec.: 1.2' Wet N=4 H-Nu=5.0 PPM Loose	
			2					
25		S-13	2					
			2					
			2					
26			2					
			20					
27		S-14	27			do.	Rec.: 1.8' Wet N=53 V. Dense H-Nu=18.5 PPM *No Odor	
			26					
			35					
28			15			(Alluvium)	Rec.: 2.0' Wet N=59 V. Dense H-Nu=94 PPM	
			27					
			32					
29		S-15	33					do.
			20					
			27					
30			27					do.
			30					
			15					
31		S-16	5			do.	Rec.: 2.0' Wet N=15 M. Dense H-Nu=640 PPM *Black blebs, strong odor	
			7					
			8					
32			9					
33		S-17						

DUNN GEOSCIENCE CORPORATION LATHAM, NEW YORK						TEST BORING LOG	BORING NO. Inlet-4 (Revised 9-12-89)
PROJECT Occidental Chemical Corporation Durez Technical Negotiations						SHEET 4 OF 4	
CLIENT Whiteman, Osterman & Hanna						JOB NO. 24-348-11-0412	
DEPTH FT.	CASING BLOWS	SAMPLE NO.	BLOWS ON SAMPLE SPOON PER 6"	UNIFIED CLASSI- FICATION	GRAPHIC LOG	IDENTIFICATION	REMARKS
35		S-18	5			35.0'	Rec.: 0.5' Wet N=11 Stiff H-Nu=310 PPM
			5				
			6				
			7				
36		S-19	26			(Till)	Rec.: 0.6' Wet N=20 V. Stiff H-Nu=60 PPM
			10				
			10				
			10				
37		S-20	5			40.0'	Rec.:? Wet N=12 Stiff H-Nu=18 PPM
			6				
			6				
			7				
38						End of boring Total depth = 40.0'	
39						*NOTE: Blebs & odor noticed in sample jars on 9/12/89.	
40							
41							
42							

DUNN GEOSCIENCE CORPORATION LATHAM, NEW YORK (518) 783-8102					TEST BORING LOG			BORING NO. Inlet-5	
PROJECT Occidental Chemical Corporation Durez Technical Negotiations								(Revised 9-12-89)	
CLIENT Whiteman, Osterman & Hanna								SHEET 1 OF 3	
DRILLING CONTRACTOR Empire Soils Investigations, Inc.								JOB NO. 24-348-11-0412	
PURPOSE								ELEVATION 571.8'	
GROUNDWATER					CASING	SAMPLE	CORE	DATUM MSL	
DATE	TIME	DEPTH	CASING	TYPE	HSA	S.Spoon	NA	DATE STARTED	2/25/88
2/26/88	12:50	8.0'	14.0'	DIAMETER	4 1/4" ID	2" OD	NA	DATE FINISHED	2/26/88
2/26/88	2:25	23.0'	24.0'	WEIGHT		140#	NA	DRILLER	P. Bennett
				FALL		30"	NA	INSPECTOR	T. Heins
DEPTH FT.	CASING BLOWS	SAMPLE NUMBER	BLOWS ON SAMPLE SPOON PER 6"	UNIFIED CLASSI- FICATION	GRAPHIC LOG	IDENTIFICATION		REMARKS	
1		S-1	16			Grey-black SAND, and f to m Gravel, contains zones of red (slag fill)		Rec.: 1.0' Moist	
			17						
			33						
			50/.01						
2		S-2	30			do.		Rec.: 1.4' Wet	
			13						
			11						
			29						
3		S-3	3			Br cmfS, l\$, scmfG - slag		Rec.: 0.9' Wet *Black blebs	
			7						
			2						
			3						
4		S-4	3			Grey f (+) - m SAND, and \$ilt contains frequent pockets of black medium sand, contains tan zones		Rec.: 1.4' Wet N=6 Loose	
			3						
			3						
			3						
5		S-5	2	do., little \$ilt		Rec.: 1.3' Wet N=5 Loose			
			3						
			2						
			2						
6			2	(Alluvium)					
			3						
			2						
			2						
7			2						
			3						
			2						
			2						
8			2						
			3						
			2						
			2						
9			2						
			3						
			2						
			2						
10			2						
			3						
			2						
			2						

DUNN GEOSCIENCE CORPORATION LATHAM, NEW YORK						TEST BORING LOG	BORING NO. Inlet-5 (Revised 9-12-89)
PROJECT Occidental Chemical Corporation Durez Technical Negotiations						SHEET 2 OF 3	
CLIENT Whiteman, Osterman & Hanna						JOB NO. 24-348-11-0412	
DEPTH FT.	CASING BLOWS	SAMPLE NO.	BLOWS ON SAMPLE SPOON PER 6"	UNIFIED CLASSI- FICATION	GRAPHIC LOG	IDENTIFICATION	REMARKS
11		S-6	1			do.	Rec.: 1.7' Wet N=4 Loose
			2				
			2				
12			3				
13		S-7	1			do., Grey m-f SAND, trace silt, trace f, Gravel	Wet N=8 Loose Wet
			2				
			6				
14			5			(Alluvium)	
15		S-8	2			do.	See Note 1 Rec.: 1.1' N=6 Loose Wet
			3				
			3				
16			4				
17		S-9	1			do.	Rec.: 1.0' Wet N=4 Loose
			1				
			3				
18			3				
19		S-10	1			contains frequent layers of wood fragments	Rec.: 1.8' Wet N=9 Loose
			1				
			8				
20			17				
21		S-11	4			Grey SAND, some Gravel, contains frequent layers of wood fragments	Rec.: 1.7' Wet N=23 M. Dense
			11				
			12				
22			16			22.0'	

[illegible]

DUNN GEOSCIENCE CORPORATION LATHAM, NEW YORK (518) 783-8102					TEST BORING LOG		BORING NO. Inlet-6	
PROJECT Occidental Chemical Corporation Durez Technical Negotiations					(Revised 9-12-89)			
CLIENT Whiteman, Osterman & Hanna					SHEET 1 OF 2			
DRILLING CONTRACTOR Empire Soils Investigations, Inc.					JOB NO. 24-348-11-0412			
PURPOSE					ELEVATION 570.1'			
GROUNDWATER					CASING	SAMPLE	CORE	DATUM MSL
DATE	TIME	DEPTH	CASING	TYPE				DATE STARTED 3/2/88
3/2/88	4:00	4.5'	8.0'	DIAMETER				DATE FINISHED 3/3/88
3/3/88	8:05	dry	16.0'	WEIGHT				DRILLER P. Bennett
				FALL				INSPECTOR T. Heins

DEPTH FT.	CASING BLOWS	SAMPLE NUMBER	BLOWS ON SAMPLE SPOON PER 6"	UNIFIED CLASSI- FICATION	GRAPHIC LOG	IDENTIFICATION	REMARKS	
1		S-1	2			Brown SAND, little Silt, trace Gravel, contains frequent zones of white and grey slag and rust colored sand. (Fill)	Rec.: 1.3' Moist H-Nu=6.0 PPM	
			3					
			3					
			4					
2		S-2	2			do.	5.0'	Rec.: 1.4' Moist H-Nu=1.6 PPM
			3					
			3					
			2					
3		S-3	3			do.	5.0'	Rec.: 0.2' Wet H-Nu=0.9 PPM
			4					
			6					
			5					
4		S-4	2			do. (Alluvium)	5.0'	Rec.: 1.7' Wet N=4 Loose H-Nu=2.0 PPM
			1					
			3					
			2					
5		S-5	1	do., f to c SAND, little Silt, trace Gravel	5.0'	Rec.: 1.6' Wet N=13 Loose H-Nu=2.4 PPM		
			6					
			7					
			20					
10								

DUNN GEOSCIENCE CORPORATION LATHAM, NEW YORK						TEST BORING LOG		BORING NO. Inlet-6 (Revised 9-12-89)	
PROJECT Occidental Chemical Corporation Durez Technical Negotiations						SHEET 2 OF 2			
CLIENT Whiteman, Osterman & Hanna						JOB NO. 24-348-11-0412			
DEPTH FT.	CASING BLOWS	SAMPLE NO.	BLOWS ON SAMPLE SPOON PER 6"	UNIFIED CLASSI- FICATION	GRAPHIC LOG	IDENTIFICATION		REMARKS	
11		S-6	1			Gr cmfS, t\$, lmfG (Alluvium)		Rec.: 1.5' Wet N=7 Loose H-Nu=0.0 PPM	
			3						
			4						
12			4			do.		13.0'	
			WR						
13		S-7	WR			Brown Silty CLAY, little Sand, trace Gravel		Rec.: 0.5' Wet N=0 V. Soft H-Nu=0.0 PPM	
			WH						
			WH						
14			WH			do.		Rec.: 2.0 Wet N=2 V. Soft H-Nu=0.0 PPM	
			1						
15		S-8	1			do.		Rec.: 2.0 Wet N=1 V. Soft H-Nu=0.0 PPM	
			1						
			1						
16			WH			do.		18.0'	
			WH						
17		S-9	1			End of boring Total depth = 18.0'			
			1						
			1						
18									
19									
20									



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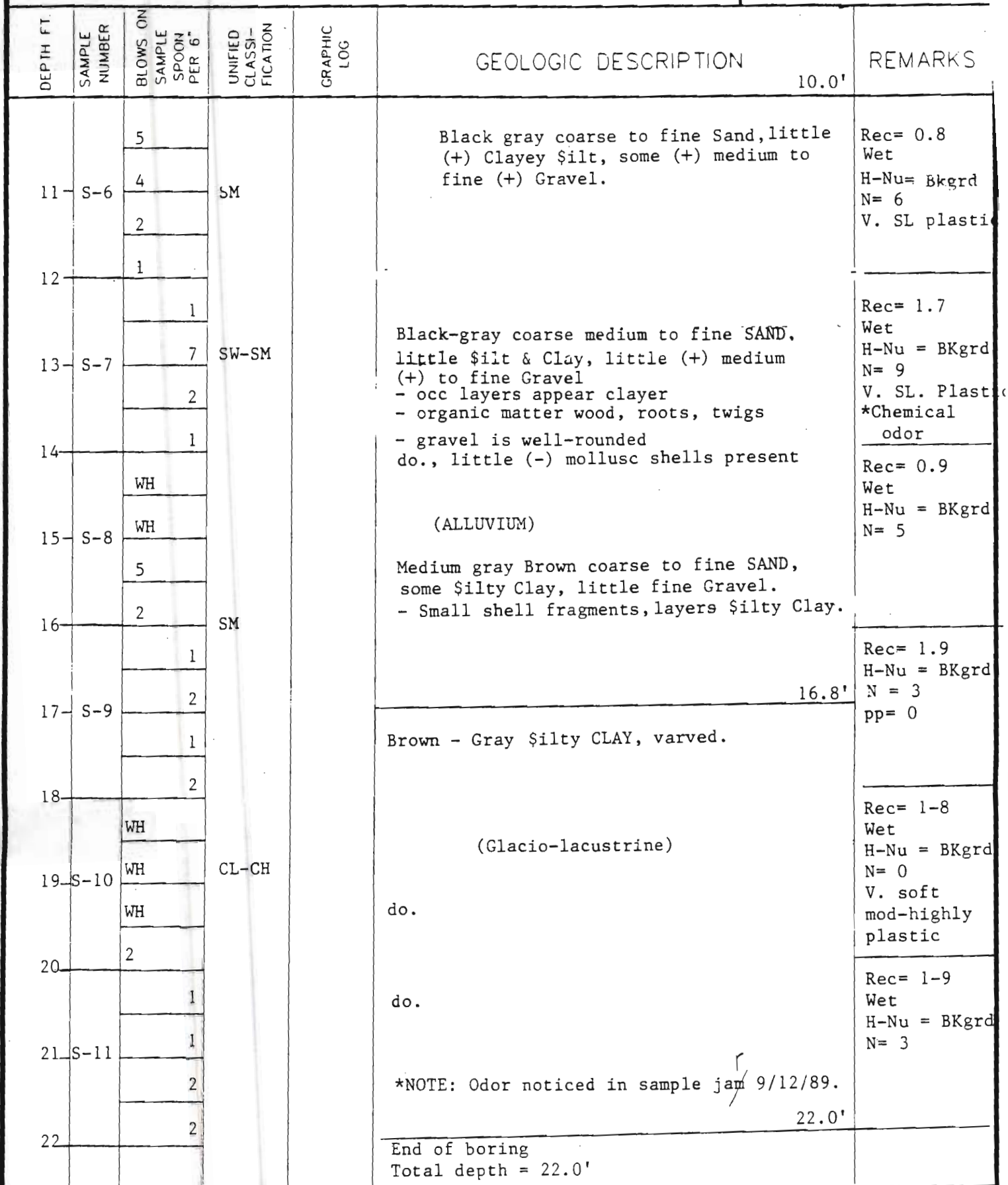
TEST BORING LOG

BORING No.

Inlet 7

PROJECT	Task 3: Inlet Investigation					SHEET 1 OF 2
CLIENT	Whitman, Osterman & Hanna					JOB No. 348-11-0412
DRILLING CONTRACTOR	Empire Soils Investigation, Inc.					MEAS. PT. ELEV.
PURPOSE	Subsurface Investigation					GROUND ELEV. 569.8'
DRILLING METHOD	H. S. A.	SAMPLE	CORE	CASING	DATUM	MSL
DRILL RIG TYPE	CME-75	TYPE	S.S.	N/A	H.S.A.	DATE STARTED 9/9/88
GROUNDWATER DEPTH		DIA.	2"	N/A	4 3/4" ID	DATE FINISHED 9/9/88
MEASURING POINT		WEIGHT	140 #			DRILLER K. Swinnich
DATE OF MEASUREMENT		FALL	30"			INSPECTOR T. Jordan

DEPTH FT	SAMPLE NUMBER	BLOWS ON SAMPLE SPOON PER 6"	UNIFIED CLASSIFICATION	GRAPHIC LOG	GEOLOGIC DESCRIPTION	REMARKS		
1	S-1	5	ML		BLK \$&C, trace fine Sand (Topsoil) 0.4"	Rec= 1.85 dry H-Nu = 1.2 ppm		
		8			Brown - Orange Clayey \$ILT, . . Some interbedded fine (+) - medium Sand - mottled - trace organic matter-roots	Rec= 0.9 Moist H-NU = BKgrd N= 11 pp= 1.75 TSF		
		8						
		7						
2		6	ML		Orange brown & black Clayey \$ilt little (-), fine Sand. - mottled - possibly laminated however disturbed - organic fibrous	Rec= 1.25 Wet H- Nu = BKgrd N= 4		
3	S-2	6						
		5						
		6						
4		2	ML		do., mottled (FILL)	No Rec. N= 10		
5	S-3	2						
		2						
		2						
6		11	ML		Orange - gray coarse to fine SAND, Some Clayey \$ilt, little medium to fine (+) Gravel. Red fine Sandstone rock fragment in tip of spoon. - Similar appearance to above, except granular	Rec= 0.2 Wet H-Nu = BKgrd. N= 9 V. sl. plastic - gritty		
7	S-4	5						
		5						
		5						
8		WH	ML					
9	S-5	4						
		5						
		8						
10								



DUNN GEOSCIENCE CORPORATION LATHAM, NEW YORK (518) 783-8102					TEST BORING LOG			BORING NO. Inlet-8	
PROJECT Occidental Chemical Corporation Durez Technical Negotiations					(Revised 9-12-89)				
CLIENT Whiteman, Osterman and Hanna					SHEET 1 OF 3				
DRILLING CONTRACTOR Empire Soils Investigations					JOB NO. 24-348-11-0412				
PURPOSE					ELEVATION 570.4'				
GROUNDWATER					CASING	SAMPLE	CORE	DATUM MSL	
DATE	TIME	DEPTH	CASING	TYPE	HSA	S.Spoon	NA	DATE STARTED 3/15/88	
3/15/88	10:50	17.2	34.0	DIAMETER	4 1/2" ID	2" OD	NA	DATE FINISHED 3/15/88	
				WEIGHT	NA	140#	NA	DRILLER P. Bennett	
				FALL	NA	30"	NA	INSPECTOR T. Heins	
DEPTH FT.	CASING BLOWS	SAMPLE NUMBER	BLOWS ON SAMPLE SPOON PER 6"	UNIFIED CLASSI- FICATION	GRAPHIC LOG	IDENTIFICATION		REMARKS	
1		S-1	5			Dark Brown SAND, some Silt, sample contains a piece of Silty CLAY 0.2' thick		Rec.: 0.5' moist HNu=0.4 PPM	
			5						
			3						
			5						
2		S-2	3			do., contains white chalk-like fragments (Fill)		Rec.: 0.3' moist HNu=0.2 PPM	
			3						
			5						
			3						
5		S-3	WR			Grey f-m SAND, some Silt contains wood fragments		Rec.: 1.3' wet N=5 loose HNu=1.0 PPM	
			3						
			2						
			1						
7		S-4	4			do., Gravel fragment noted in sample shoe		Rec.: 1.1' wet N=63 HNu=0.6 PPM	
			21						
			42						
			3						
9		S-5	2			Grey f(+)-c SAND, some Silt, trace Gravel, contains wood fragments (Alluvium)		Rec.: 1.5' wet N=7 loose HNu=0.0 PPM	
			3						
			4						
			2						
10									

DUNN GEOSCIENCE CORPORATION LATHAM, NEW YORK				TEST BORING LOG		BORING NO. Inlet-8 (Revised 9-12-89)	
PROJECT OCC Durez Technical Negotiations						SHEET 2 OF 3	
CLIENT Whiteman, Osterman & Hanna						JOB NO. 24-348-11-0412	
DEPTH FT.	CASING BLOWS	SAMPLE NO.	BLOWS ON SAMPLE SPOON- PER 6"	UNIFIED CLASSI- FICATION	GRAPHIC LOG	IDENTIFICATION	REMARKS
10			1			do.	Rec.: 1.4' wet N=2 v. loose H _{Nu} =0.0 PPM
11		S-6	1				
			1				
12			1				
			1				
13		S-7	1			do.	Rec.: 1.6' wet N=2 v. loose H _{Nu} =0.0 PPM
			1				
14			1				
			WR			do.	Rec.: 1.8' wet N=2 v. loose H _{Nu} =0.2 PPM
15		S-8	1			(Alluvium)	
			1				
16			1				
			WR			do.	Rec.: 1.4' wet N=1 v. loose H _{Nu} =0.2 PPM
17		S-9	WH				
			1				
			2				
18			1			do.	Rec.: 1.5' wet N=4 loose H _{Nu} =0.0 PPM
19		S-10	1				
			3				
20			6				
			4			Grey coarse to fine SAND, some silt, trace Gravel trace Gravel, contains trace wood fragments	Rec.: 1.3' wet N=9 loose H _{Nu} =3.0 PPM
21		S-11	4				
			5				
22			6				

DUNN GEOSCIENCE CORPORATION LATHAM, NEW YORK				TEST BORING LOG		BORING NO. Inlet-8 (Revised 9-12-89)	
PROJECT OCC Durez Technical Negotiations						SHEET 3 OF 3	
CLIENT Whiteman, Osterman and Hanna						JOB NO. 24-348-09-0006	
DEPTH FT.	CASING BLOWS	SAMPLE NO.	BLOWS ON SAMPLE SPOON- PER 6"	UNIFIED CLASSI- FICATION	GRAPHIC LOG	IDENTIFICATION	REMARKS
22			5			do.	Rec.: 1.4' wet N=17 m. dense HNU=3.0 PPM
23		S-12	7				
			10				
24			14				
			10			Grey coarse to fine SAND, and Gravel	Rec.: 1.5' wet N=26 dense HNU=5.0 PPM
25		S-13	12			some \$ilt, contains trace wood	
			14			fragments. Note rainbow colored	
26			22			sheen on sample	
			11			do.	Rec.: 1.6' wet N=53 v. dense HNU=4.0 PPM
27		S-14	21				
			32				
28			12			28.0'	
			WR			Brown \$ilty CLAY, trace Sand	Rec.: 0.2' wet N=0 v. soft HNU=0.0 PPM
29		S-15	WH			(Glacio-lacustrine)	
			WH				
30			2			30.0'	
			3			Brown SAND, and Clay & \$ilt, trace	Rec.: 1.8' wet N=13 stiff HNU=0.0 PPM
31		S-16	6			Gravel	
			7			(Till)	
32			9				
			4			do.	Rec.: 1.2' wet N=11 v. stiff HNU=0.0 PPM
33		S-17	5				
			6				
34			9			34.0'	
						End of boring Total depth = 34.0'	



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TEST BORING LOG

BORING No. Inlet -9
(Revised 9-12-89)

PROJECT	Task 3: Inlet Investigation				SHEET 1 OF 4
CLIENT	Whitman, Osterman & Hanna				JOB No. 348-11-0412
DRILLING CONTRACTOR	Empire Soils Investigation, Inc.				MEAS. PT. ELEV.
PURPOSE	Subsurface Investigation				GROUND ELEV. 573.7
DRILLING METHOD	H.S.A.	SAMPLE	CORE	CASING	DATUM MSL
DRILL RIG TYPE	CME-75	TYPE	S.S.	N/A	H.S.A.
GROUNDWATER DEPTH	19.0'	DIA.	2"	N/A	4 1/2" ID
MEASURING POINT	Grade	WEIGHT	140 #		DRILLER K. Swinnich
DATE OF MEASUREMENT	9/15/88	FALL	30"		INSPECTOR Ptasznik/Jordan

DEPTH FT.	SAMPLE NUMBER	BLOWS ON SAMPLE SPOON PER 6"	UNIFIED CLASSIFICATION	GRAPHIC LOG	GEOLOGIC DESCRIPTION	REMARKS
1	S-1	6	SW		Brown coarse to fine SAND, some (-) medium to fine Gravel	Rec= 1.0' Dry H-Nu = BKgrd.
		7			----- 1.6'	--non plastic
		7	SW		Brown gray fine coarse SAND, little (-) Silt, some coarse to fine Gravel.	
2		10				
		15				Rec.= 1.3' Dry H-Nu = BKgrd.
3	S-2	15			- gravel is dominantly slag.	
		32			(FILL)	non plastic
4		30				
	S-3	17	SW		Gray brown coarse to fine SAND, Some medium to fine (+) Gravel, little (+) Clayey Silt.	Rec. = 1.1' Moist H-Nu = 60 ppm
5		5			- similar to above	
		5			- gravel size smaller, dominantly slag.	
6		3	CH-CL		- frequent layers of clayey Silt organic	(50 ppm in Annulus)
		6			Red brown Silty CLAY little, fine (+) to coarse Sand, trace fine - medium Gravel	Rec, = 0.3' Moist - Wet H-Nu = 40
7	S-4	5				
		3	CH-CL			
8		3				
		6			(FILL)	Rec. = 0.6' Wet H-Nu = 12 ppm (35 ppm in Annulus)
9	S-5	5	GW		Gray brown coarse to fine gravel some (-), coarse to fine Sand, little (+) Clayey Silt	*Black blebs
		6				
10		7				



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TEST BORING LOG

BORING No. Inlet-9
(Revised 9-12-89)

PROJECT Task 3: Inlet Investigation

SHEET 2 OF 4

CLIENT Whitman, Osterman & Hanna

JOB No. 348-11-0412

DEPTH FT.	SAMPLE NUMBER	BLOWS ON SAMPLE SPOON PER 6"	UNIFIED CLASSIFICATION	GRAPHIC LOG	GEOLOGIC DESCRIPTION	REMARKS
		4			do.	Rec. = 1.1 Wet
		6				H-Nu=4.5ppm
11	S-6	11	SM		Brown gray coarse to fine (+) Sand, and Silt & Clay, trace fine Gravel.	N= 17 Sl. plastic
		7				
12		3			- Silt & clay appears in gritty plastic layers	Rec. = 1.3 Wet
		3	SW-SM		Medium - light gray coarse to fine SAND, some coarse to fine Gravel, little Silt & Clay	H-Nu=BKgs. N= 11
		8			- similar to above, coarser sand, more gravel, less silt & clay.	V. Sl plastic
14		12				
		4				Rec. = 1.0 Wet
		11				H-Nu=6.0ppm
15	S-8	11	SW-SM		Med brown coarse to fine SAND, little coarse medium to fine Gravel, little (-) Silt & Clay	N= 22 non plastic
		11				V. Sl plastic
		10				*Black blebs
16		11			(ALLUVIUM)	
		18			- Similar to above	Rec. = 1.6 Wet
		22			- Well rounded gravel	H-Nu=5.0ppm
17	S-9	22			do.	N= 40 *Black blebs
		6				
18		9			Med-light gray coarse-medium (+) to fine SAND, little (-) Clayey Silt, little (-) Gravel.	Rec = 1.6 Wet
		5				H-Nu=72ppm
19	S-10	5	SW-SM		- Similar to above, less gravel, coarse Sand, less cohesive.	N= 10 Non plastic
		5				
		10				
20		5				No Rec
		5				
21		5				
		5				
22		5				



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TEST BORING LOG

BORING No. Inlet-9

PROJECT Task 3: Inlet Investigation

SHEET 3 OF 4

CLIENT Whiteman, Osterman & Hanna

JOB No. 348-11-0412

DEPTH FT	SAMPLE NUMBER	BLOWS ON SAMPLE SPOON PER 6"	UNIFIED CLASSIFICATION	GRAPHIC LOG	GEOLOGIC DESCRIPTION	REMARKS
23	S-11	3 4 6	SW-SM		Med Grey medium to fine (+) SAND, trace (+) Clayey Silt, little medium to fine Gravel. - similar to above, again less gravel, less Clayey Silt.	Rec.=1.7 Wet H-Nu=5.0ppm N=10 Non-plastic
24		9				
25	S-12	5 7 11	SW		Med Grey-brown coarse to fine SAND, trace Clayey Silt, little medium to fine Gravel.	Rec.=1.6 Wet H-Nu=3.0ppm N=18
26		17			- subrounded gravel. - one 1/16 inch thick blue clay seam.	
27	S-13	12 22 28	SW		Med Grey-brown coarse-medium to fine (+) SAND, trace Clayey Silt, little coarse to fine Gravel.	Rec.=2.0 Wet H-Nu=18.5ppm PP=3.5TSF N=50
28		12				
29	S-14	5 9 5	SW		do.	Rec.=2.0 Wet H-Nu=Bkgd. N=14
30		12				
31	S-15	9 12 15	SW		do.	Rec.=2.0 Wet H-Nu=9.0ppm N=27
32		19				
33		Augered				No Rec.
34						

DUNN GEOSCIENCE CORPORATION LATHAM, NEW YORK (518) 783-8102					TEST BORING LOG			BORING NO. Inlet-10 (Revised 9-12-89)	
PROJECT Occidental Chemical Corporation Durez Technical Investigations									
CLIENT Whiteman, Osterman & Hanna								SHEET 1 OF 3	
DRILLING CONTRACTOR Empire Soils Investigations, Inc.								JOB NO. 24-348-11-0412	
PURPOSE								ELEVATION 570.2'	
GROUNDWATER					CASING	SAMPLE	CORE	DATUM MSL	
DATE	TIME	DEPTH	CASING	TYPE	HSA	S.Spoon		DATE STARTED	3/11/88
3/14/88	9:15	4.7'	14.0'	DIAMETER	4 1/2" ID	2" OD		DATE FINISHED	3/11/88
				WEIGHT		140#		DRILLER	P. Bennett
				FALL		30"		INSPECTOR	T. Heins

DEPTH FT.	CASING BLOWS	SAMPLE NUMBER	BLOWS ON SAMPLE SPOON PER 6"	UNIFIED CLASSI- FICATION	GRAPHIC LOG	IDENTIFICATION	REMARKS		
1		S-1	1			Red-brown \$ILT and SAND, little Gravel	Rec.: 1.5' Moist H-Nu=0.0 PPM		
			1						
			1						
1									
2			1			do., Grey SAND and \$ILT, trace Gravel			
3		S-2	1			(Fill)			Rec.: 2.0' Moist H-Nu=0.0 PPM
			2						
			2						
4			3			do.		5.0'	Rec.: 0
5		S-3	2			Grey SAND, some \$ILT	Rec.: 1.8' Wet N=5 Loose H-Nu=0.0 PPM		
			4						
			3						
3									
6						(Alluvium)			
7		S-4	1			do., f (+) to c SAND, some \$ILT			Rec.: 0.9' Wet N=2 V. loose H-Nu=0.0 PPM
			2						
			3						
8			1						
9		S-5	1						
			1						
			1						
10			1						

DUNN GEOSCIENCE CORPORATION LATHAM, NEW YORK				TEST BORING LOG		BORING NO. Inlet-10 (Revised 9-12-89)	
PROJECT Occidental Chemical Corporation Durez Technical Negotiations				SHEET 2 OF 3			
CLIENT Whiteman, Osterman & Hanna				JOB NO 24-348-11-0412			
DEPTH FT.	CASING BLOWS	SAMPLE NO.	BLOWS ON SAMPLE SPOON." PER 6"	UNIFIED CLASSI- FICATION	GRAPHIC LOG	IDENTIFICATION	REMARKS
11		S-6	1			do.	Rec.: 0.9' Wet N=2 V. loose H-Nu=0.2 PPM
			1				
			1				
			1				
12		S-7	WR			do. f(+)c SAND, little silt, little Gravel	Rec.: 1.5' Wet N=23 M. Dense H-Nu=0.0 PPM
			5				
			18				
			13				
15		S-8	10			do.	Rec.: 0.9' Wet N=16 M. Dense H-Nu=0.2 PPM
			7				
			9				
			11				
17		S-9	10			do., contains wood fragments	Rec.: 1.5' Wet N=32 Dense H-Nu= 0.1 PPM
			15				
			17				
			29				
19		S-10	1			Brown Silty CLAY, trace Sand (Glacio-lacustrine)	Rec.: 1.1' Wet N=3 V. soft H-Nu=0.0 PPM
			2				
			1				
			1				
21		S-11	WR			Brown Silty CLAY, trace Sand	Rec.: 1.1' Wet N=0 V. Soft H-Nu=0.0 PPM
			WH/1				
			2				

BORING NO. Inlet-10
(Revised 9-12-89)

SHEET 3 OF 3

JCB NO 24-348-11-0412

[illegible]



Dunn Geoscience Corp.
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TEST BORING LOG

BORING No. Inlet-11

PROJECT Task 3: Inlet Investigation

SHEET 1 OF 3

CLIENT Whiteman, Osterman & Hanna

JOB No. 348-11-0412

DRILLING CONTRACTOR Empire Soils Investigation, Inc.

MEAS. PT. ELEV.

PURPOSE Subsurface Investigation

GROUND ELEV. 571.3'

DRILLING METHOD HSA

SAMPLE

CORE

CASING

DATUM MSL

DRILL RIG TYPE CME-75

TYPE

SS

N/A

HSA

DATE STARTED 9/13/88

GROUNDWATER DEPTH 9.0

DIA.

2"

N/A

4 1/2" ID

DATE FINISHED 9/13/88

MEASURING POINT Grade

WEIGHT

140#

DRILLER K. Swinnich

DATE OF MEASUREMENT 9/14/88

FALL

30"

INSPECTOR T. Jordan

DEPTH FT.	SAMPLE NUMBER	BLOWS ON SAMPLE SPOON PER 6"	UNIFIED CLASSIFICATION	GRAPHIC LOG	GEOLOGIC DESCRIPTION	REMARKS
1			SW-SM		Brown-grey coarse to fine SAND, little Silt, some medium to fine (+) Gravel. - approximately half of gravel is coke. - approximately half (+) of Sand is slag.	Difficult auger penetration - v. sl. cohesive
2	S-1					
3						
4						
5	S-2	7	CL		Brown Black Clay & Silt trace, fine SAND. (FILL)	Rec=1.1 Moist-WET HNU=4.0 ppm mod plastic
6		2				
		5				
		6				
		9				
7	S-3	6			Brown fine SAND, some (+) Clayey Silt.	Rec=1.6 Wet HNU=2.5 ppm N=12 Not plastic
		6				
		5				
8						
		2				
9	S-4	1	SM		Brown fine SAND, little (+) Silt. Silt. - organic, leafy matter (trace).	Rec=2.0 WET v. sl. plastic HNU=20 ppm (10.5 ppm in annulus) N=2
		1				
10		1				



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TEST BORING LOG

BORING No.
Inlet-11

PROJECT Task 3: Inlet Investigation

SHEET 2 OF 3

CLIENT Whiteman, Osterman & Hanna

JOB No. 348-11-0412

DEPTH FT.	SAMPLE NUMBER	BLOWS ON SAMPLE SPOON PER 6"	UNIFIED CLASSIFICATION	GRAPHIC LOG	GEOLOGIC DESCRIPTION	REMARKS
11	S-5	1/1.0' 4	SM		Brown medium to fine (+) SAND, little (+) Silt, little fine Gravel. - trace organics - oily brown sheen	Rec=0.4 WET HNU=25 ppm N=4.5 V sl plastic
12		4			(ALLUVIUM)	
13	S-6	4 5 4	SM		Brown fine Sand, some (-) Silt, trace (+) fine Gravel. - similar to above, less gravel, less oily sheen	Rec=1.2 WET HNU=7.0 ppm N=9 sl plastic
14		4				
15	S-7	1/1.0' 1/1.0'	SW-SM		Grey brown fine SAND, Little Silt. - similar to above, no gravel. - ~10% organics, wood	Rec=1.7 WET HNU=70 ppm N=1 v sl plastic
16						
17	S-8	1 2 2	SM		Grey brown fine SAND, some Clayey Silt. trace (-) fine Gravel. - less organic - higher silty Clay content	Rec=1.8 WET HNU=35 ppm N=3 sl plastic
18		2				
19	S-9	1/1.0'	SM		do; trace wood fragments	Rec=1.4 WET HNU=85 ppm N=3.5
20		3 5				
21	S-10	WH WH 7	SW		Brown fine-coarse SAND, trace (+) Silt, little fine Gravel.	Rec=1.2 WET HNU=9 ppm N=7
22		3				



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TEST BORING LOG

BORING No.
Inlet-11

PROJECT Task 3: Inlet Investigation

SHEET 3 OF 3

CLIENT Whiteman, Osterman & Hanna

JOB No. 348-11-0412

DEPTH FT	SAMPLE NUMBER	BLOWS ON SAMPLE SPOON PER 6"	UNIFIED CLASSIFICATION	GRAPHIC LOG	GEOLOGIC DESCRIPTION	REMARKS
23	S-11	6	SW-SM		Grey brown coarse to fine (+) SAND, trace (+) Silt, little (+) fine Gravel.	Rec=1.7 WET HNU=4.0 ppm N=39 v dense
		17				
		22				
		25				
24						Rec=1.9 Wet HNU=Bkgd N=6
		10				
		5				
25	S-12	1			Brown Red Silty CLAY trace, fine Sand	25.1
		3				
26		1	CH		do.	Rec=1.3 wet HNU=Bkgd N=3
		1				
		2				
27	S-13	2				No Recovery
28		1	CH		(Glacio-lacustrine)	
		2				
		3				
		3				
29						30.0'
30					End of boring Total depth = 30.0'	



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TEST BORING LOG

BORING No.
Inlet 12

PROJECT Task 3: Inlet Investigation

SHEET 1 OF 2

CLIENT Whiteman, Osterman & Hanna

JOB No. 348-11-0412

DRILLING CONTRACTOR Empire Soils Investigations, Inc.

MEAS. PT. ELEV.

PURPOSE Subsurface Investigations

GROUND ELEV. 572.2'

DRILLING METHOD HSA

SAMPLE

CORE

CASING

DATUM MSL

DRILL RIG TYPE CME-75

TYPE

SS

N/A

HSA

DATE STARTED 9/13/88

GROUNDWATER DEPTH

DIA.

2"

N/A

4 1/2" ID

DATE FINISHED 9/13/88

MEASURING POINT

WEIGHT

140#

DRILLER K. Swinnich

DATE OF MEASUREMENT

FALL

30"

INSPECTOR Ptasznik/Jordan

DEPTH FT.	SAMPLE NUMBER	BLOWS ON SAMPLE SPOON PER 6"	UNIFIED CLASSIFICATION	GRAPHIC LOG	GEOLOGIC DESCRIPTION	REMARKS
1	S-1	67 100/5"	SW		Gray coarse (+) to medium SAND, some fine Gravel. - Gravel is slag (FILL)	Rec=.5 Dry HNU=Bkgd
2	S-2	100/1"	SW			No Recovery
3	S-3	6			do.	Rec=0.8 Moist
4		5	ML		Red Brown Clayey SILT	HNU=5.0 ppm
5	S-4	3 4	SW-SM		Brown coarse to fine (+) SAND, little (+) fine Gravel, little Silt. (ALLUVIUM)	Rec=1.5 Moist-WET HNU=7.0 ppm N=7
6		5				
7	S-5	10 9 7			do.	Rec=1.6 WET HNU=48.0 ppm N=16
8		7			Gray Silty CLAY trace, fine Sand.	
9	S-6	5 6 9	CH		(Glacio-lacustrine)	Rec=1.6 WET HNU=Bkgd (38 ppm in annulus) N=15
10		10			do.	

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TEST BORING LOG

BORING No.
Inlet 12

PROJECT Task 3: Inlet Investigation

SHEET 2 OF 2

CLIENT Whiteman, Osterman & Hanna

JOB No. 348-11-0412

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TEST BORING LOG

BORING No. Inlet-13
(Revised 9-12-89)

PROJECT Task 3: Inlet Investigation

SHEET 1 OF 4

CLIENT Whiteman, Osterman & Hanna

JOB No. 348-11-0412

DRILLING CONTRACTOR Empire Soils Investigation, Inc.

MEAS. PT. ELEV

PURPOSE Subsurface Investigation

GROUND ELEV. 573.1'

DRILLING METHOD HSA

SAMPLE

CORE

CASING

DATUM MSL

DRILL RIG TYPE CME-75

TYPE

SS

N/A

HSA

DATE STARTED 9/15/88

GROUNDWATER DEPTH

DIA.

2"

N/A

4 1/4" ID

DATE FINISHED 9/15/88

MEASURING POINT

WEIGHT

140#

DRILLER K. Swinnich

DATE OF MEASUREMENT

FALL

30"

INSPECTOR Ptaszniak/Jordan

DEPTH FT.	SAMPLE NUMBER	BLOWS ON SAMPLE SPOON PER 6"	UNIFIED CLASSIFICATION	GRAPHIC LOG	GEOLOGIC DESCRIPTION	REMARKS
1	S-1	5	SW-SM		Brown medium to fine (+) SAND, some (+) Silt and Clay, trace (+) fine Gravel. - slag, coke fragments (FILL)	Rec=1.3 Dry HNU=Bkgd non plastic, to sl plastic
		5				
		7				
2		7				
		10	SM		----- 2.3' Black fine SAND, some silt, trace fine Gravel, trace cement fragments. (FILL)	Rec=1.3 Moist HNU=8.0 ppm (Bkgd in Annulus)
3	S-2	12				
		10				
4		100/2"				
		15	SW		----- 4.1' Grey & brown coarse (+) to fine Sand, little (-) Silt, and (-) coarse to fine Gravel. - gray slag is gravel component	Rec=1.4 Moist-WET HNU=28 ppm non plastic dense to v dense
5	S-3	18				
		15				
6		7				
		5	SW		do. (FILL)	Rec=0.7 WET HNU=90 ppm
7	S-4	2				
		6				
		4				
8		2			do., Black tar noted in tip of spoon	Rec=1.2 WET HNU=0.6 ppm *Black blebs, odor
9	S-5	5				
		3				
10		2				



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TEST BORING LOG

BORING No. Inlet-13
(Revised 9-12-89)

PROJECT Task 3: Inlet Investigation

SHEET 2 OF 4

CLIENT Whiteman, Osterman & Hanna

JOB No. 348-11-0412

DEPTH FT	SAMPLE NUMBER	BLOWS ON SAMPLE SPOON PER 6"	UNIFIED CLASSIFICATION	GRAPHIC LOG	GEOLOGIC DESCRIPTION	REMARKS
11	S-6	2 1 1	SW		Brown coarse (+) to fine SAND, some fine Gravel. - Slag fragments (trace (+)) (FILL)	Rec= WET HNU=18 ppm
12		1			do	Rec= WET HNU=4.0 (10 ppm in Annulus)
13	S-7	2 8				13.1'
14		5	SW-SM		Black Brown coarse to fine (+) SAND, little Silt.	*Black blebs, no odor
15	S-8	4 3 3	SW-SM		(ALLUVIUM) do.	Rec= WET HNU=7.0 ppm N=6 *Black blebs, slight odor
16		2				
17	S-9	1 1 1	SW-SM		Gray coarse to fine (+) SAND, little Silt, trace fine Gravel.	Rec= WET HNU=45 N=2
18						
19	S-10	WH WH 1	SW-SM		do., trace wood fragments	Rec= WET HNU=1.5 ppm N=1
20		1				
21	S-11	WH WH 1	SW-SM		do., trace wood fragments	Rec= WET HNU=7.0 ppm N=1
22		2				



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TEST BORING LOG

BORING No. Inlet-13

PROJECT Task 3: Inlet Investigation

SHEET 3 OF 4

CLIENT Whiteman, Osterman & Hanna

JOB No. 348-11-0412

DEPTH FT	SAMPLE NUMBER	BLOWS ON SAMPLE SPOON PER 6"	UNIFIED CLASSIFICATION	GRAPHIC LOG	GEOLOGIC DESCRIPTION	REMARKS
23	S-12	2	SM		Black-grey coarse - medium fine SAND, little (+) Silt & Clay, trace med to fine Gravel - Little amount of organic matter: wood, leafy material - v similar to above	Rec=1.4 WET HNU=bkgd N=14 sl plastic
		4				
		10				
24		12				
		WR				No Recovery N=3
25		WR				
		3				
		3				
26		Auger			Note: Several feet of sand washing up inside augers	No Recovery
27						
28						No Recovery
29						
						No Recovery N=9
30		↓				
		WR				
31		WR				
		9				No Recovery
32		10				
		Auger				
33						
34		↓				

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TEST BORING LOG

BORING No. Inlet-13

PROJECT Task 3: Inlet Investigation

SHEET 4 CF 4

CLIENT Whiteman, Osterman & Hanna

JOB No.348-11-0412

DEPTH FT	SAMPLE NUMBER	BLOWS ON SAMPLE FOOT PER 6"	UNIFIED CLASSIFICATION	GRAPHIC LOG	GEOLOGIC DESCRIPTION	REMARKS
35	S-13	2 3 5			do.	Rec=1.6 Wet HNU=200 ppm N = 8
36		6				35.9'
37	S-14	8 7 8	CH		Brown red Silty CLAY trace, fine Sand (Till)	Rec=0.9 Wet HNU=25 N = 15
38		10				
39	S-15	18 20 24			do.	Rec=1.5 Wet HNU=40 ppm at 38.0' Bkgd @ 40' N = 44
40		18				40.0'
					End of boring Total depth = 40.0'	
					*NOTE: Blebs & odor noticed in sample jars on 9-12-89.	



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TEST BORING LOG

BORING No.
Inlet 14

PROJECT Task 3: Inlet Investigation

SHEET 1 OF 2

CLIENT Whiteman, Osterman & Hanna

JOB No. 348-11-0412

DRILLING CONTRACTOR Empire Soils Investigation, Inc.

MEAS. PT. ELEV.

PURPOSE Subsurface Investigation

GROUND ELEV. 573.6'

DRILLING METHOD HSA

SAMPLE

CORE

CASING

DATUM MSL

DRILL RIG TYPE CME-75

TYPE

SS

N/A

HSA

DATE STARTED 9/13/88

GROUNDWATER DEPTH

DIA.

2"

N/A

4 1/2" ID

DATE FINISHED 9/13/88

MEASURING POINT

WEIGHT

140#

DRILLER K. Swinnich

DATE OF MEASUREMENT

FALL

30"

INSPECTOR Ptasznik/Jordan

DEPTH FT.	SAMPLE NUMBER	BLOWS ON SAMPLE SPOON PER 6"	UNIFIED CLASSIFICATION	GRAPHIC LOG	GEOLOGIC DESCRIPTION	REMARKS
	S-1	4 100/4"	SW-SM		Dk Brown coarse to fine SAND, little (+) Silt, little (+) med-fine Gravel - 20% organic, fibrous - one fragment metal - light grey fragments of slag (FILL)	Rec=0.3 Dry-Damp HNU=30 ppm non-plastic
		Auger ↓				No Recovery Hard augering Slag/Cement brought up on auger flights
5	S-2	40 9 6 3	SW		Lt Grey coarse (+) to fine Sand, and cmf (+) Gravel, trace (+) Silt. - Slag fragments mixed with Soil. 5.5'	Rec=0.8 Moist HNU=35 ppm
	S-3	4 5 8 10	SW		Brown tan fine (+) coarse SAND, trace Silt, little fine Gravel. (ALLUVIUM)	Rec=1.1 Moist-WET HNU=9.0 ppm N=13 non-plastic
	S-4	4 3 3 3	SW-SM		Brown tan fine (+) medium SAND, little (+) Silt	Rec=1.5 WET HNU=35 ppm N=6 PP=1.5 TSF v sl plastic
10						



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TEST BORING LOG

BORING No.
Inlet 14

PROJECT Task 3: Inlet Investigation

SHEET 2 OF 2

CLIENT Whiteman, Osterman & Hanna

JOB No. 348-11-0412

DEPTH FT	SAMPLE NUMBER	BLOWS ON SAMPLE SPOON PER 6"	UNIFIED CLASSIFICATION	GRAPHIC LOG	GEOLOGIC DESCRIPTION	REMARKS
12	S-5	1	SM		Brown tan fine SAND, some (-) \$ilt, little fine Gravel. - similar to above, siltier	Rec=1.4 WET HNU=25 ppm N=3 pp=0.0TSF v sl Plastic
		1				
		2				
		3				
14	S-6	1	SW-SM		Grey medium to fine (+) SAND, little \$ilt	Rec=2.0 WET HNU=35 ppm N=6 PP=0.0TSF
		3				
		3				
		3				
16	S-7	1/2.0'	CL		Brown red \$ilty CLAY. (Glacio-Lacustrine)	Rec=2.0 WET HNU=5.0 ppm mod plastic
18	S-8	1/1.0'	CL		do.	Rec=2.0 WET HNU=15 ppm (5 ppm in Annulus) N=1
		1				
		1				
20	S-9	1	CL		do.	Rec=2.0 WET HNU=bkgd N=2
		1				
		1				
		2				
					End of boring Total depth = 20.0'	



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TEST BORING LOG

BORING No. Inlet 15

PROJECT Task 3: Inlet Investigation

SHEET 1 OF 2

CLIENT Whiteman, Osterman & Hanna

JOB No. 348-11-0412

DRILLING CONTRACTOR Empire Soils Investigation, Inc.

MEAS. PT. ELEV.

PURPOSE Subsurface Investigation

GROUND ELEV. 569.2'

DRILLING METHOD H.S.A

SAMPLE

CORE

CASING

DATUM

MSL

DRILL RIG TYPE CME-75

TYPE

SS

N/A

H.S.A

DATE STARTED 9/12/88

GROUNDWATER DEPTH dry

DIA.

2"

N/A

4 1/2" ID

DATE FINISHED 9/12/88

MEASURING POINT

WEIGHT

140#

DRILLER K. Swinnich

DATE OF MEASUREMENT 9/12/88

FALL

30"

INSPECTOR T. Jordan

DEPTH FT.	SAMPLE NUMBER	BLOWS ON SAMPLE SPOON PER 6"	UNIFIED CLASSIFICATION	GRAPHIC LOG	GEOLOGIC DESCRIPTION	REMARKS
	S-1	6 12 9 6			(FILL)	Rec.=0.9 Moist H-Nu=Bkgd. Non plastic
	S-2	100/4"			Med-dk brown cmf (+) SAND, little (+) Silt, little (-) mf (+) Gravel. 25% organics: roots, twigs, grass, coal 10% brick and slag (FILL)	No Rec. H-Nu=3.0ppm in Annulus
5	S-3	WH			Dark Brown fine (+) - medium SAND, some Clayey Silt.	Rec.=0.6 Moist/wet H-Nu=30ppm
	S-4	1 2 1 1			(SOFT SEDIMENT) Brown black Clayey SILT little, Sand.	Rec.=0.9 Wet H-Nu=150ppm (7ppm in Annulus)
	S-5	WR WR 2 2			do.	Rec.=1.6 Wet H-Nu=50ppm
10					Red brown Silty CLAY (FILL)	9.5 S C F

PROJECT Task 3: Inlet Investigation

SHEET 2 OF 2

CLIENT Whiteman, Osterman & Hanna

JOB No. 348-11-0412

[illegible]



Dunn Geoscience Corp.
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TEST BORING LOG

BORING No. Inlet 16

PROJECT Task 3: Inlet Investigation						SHEET 1 OF 3
CLIENT Whiteman, Osterman & Hanna						JOB No. 348-11-0412
DRILLING CONTRACTOR Empire Soils Investigations, Inc.						MEAS. PT. ELEV.
PURPOSE Subsurface Investigations						GROUND ELEV. 569.9'
DRILLING METHOD H.S.A.			SAMPLE	CORE	CASING	DATUM MSL
DRILL RIG TYPE CME - 75		TYPE	SS	N/A	H.S.A	DATE STARTED 9/9/88
GROUNDWATER DEPTH		DIA.	2"	N/A	4 1/2" ID	DATE FINISHED 9/9/88
MEASURING POINT		WEIGHT	140#			DRILLER R. Swinnich
DATE OF MEASUREMENT		FALL	30"			INSPECTOR T. Jordan

DEPTH FT.	SAMPLE NUMBER	BLOWS ON SAMPLE SPOON PER 6"	UNIFIED CLASSIFICATION	GRAPHIC LOG	GEOLOGIC DESCRIPTION	REMARKS
1	S-1	10	SM		Dark brown fine (+) medium SAND, some Silt, little coarse to fine Gravel - gravel is cement and brick fragments - organic, roots, twigs	Rec=0.6 dry H-Nu=1.0ppm
		15				
		24				
2		30	SM		do. - medium brown about 30% brick and concrete fragments - gravel sized. (FILL)	Rec=0.6 dry H-Nu=0.6ppm
		12				
		4				
3	S-3	5	ML		Dark and med Grey Clayey SILT some (+), medium to fine (+) SAND - trace amounts of brick fragments do. - trace amounts organic, fibrous	Rec=0.75 moist/wet H-Nu=1.6ppm
		5				
		3				
5	S-3	1	SW - SM		Dark Brown SAND, trace (+) fine Gravel (FILL) Brown coarse to fine Sand, and fine Gravel	Rec=0.85 Wet H-Nu=0.4ppm
		1				
		2				
6		9	SW - SM		Brown coarse to fine SAND and fine Gravel little Silt, trace brick fgmts.	Rec=0.25 Wet H-Nu=Bkgrd
		30				
		100/3"				
8		10	SW - SM		Brown coarse to fine SAND and fine Gravel little Silt, trace brick fgmts.	Rec=0.25 Wet H-Nu=Bkgrd
		5				
		2				
9	S-5	2	SW - SM		Brown coarse to fine SAND and fine Gravel little Silt, trace brick fgmts.	Rec=0.25 Wet H-Nu=Bkgrd
		2				
10			SW - SM			



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TEST BORING LOG

BORING No. Inlet-16

PROJECT Task 3: Inlet Remediation

SHEET 2 OF 3

CLIENT Whiteman, Osterman & Hanna

JOB No. 348-11-412

DEPTH FT.	SAMPLE NUMBER	BLOWS ON SAMPLE SPOON PER 6"	UNIFIED CLASSIFICATION	GRAPHIC LOG	GEOLOGIC DESCRIPTION	REMARKS
		1			do.	Rec=1.0
					10.6'	Wet
11	S-6	4			Med Grey brown fine (+) medium SAND, some medium to fine (+) Gravel, little \$ilt	H-Nu=Bkgrd
		1	SW-SM			N=5
						V.Sl-plastic
12		1			Brown coarse (+) to fine SAND, trace \$ilt, and fine Gravel.	
		10	SW			Rec=2.0
						Wet
13	S-7	21			Brown medium to fine SAND, little (-) \$ilt. - organic, wood fragments	H-Nu=0.8ppm
		24	SW-SM			N=45
						PP=0
14		13				
		9			Brown coarse to fine (+) SAND, trace (+) \$ilt, trace wood fragments.	Rec=0.85
15	S-6	5	SW			Wet
		4				H-Nu=0.4ppm
					(ALLUVIUM)	N=9
16		15				Wood Frgmt Sample Taken
		21			do., medium Gravel lodged in Spoon tip	Rec=1.2
						Wet
17	S-9	15	SW			H-Nu=Bkgrd
		17				N=32
		15				
18					Brown coarse (+) to fine SAND, little fine Gravel	Rec=2.0
		4				Wet
19	S-10	2	SW			H-Nu=0.6
		2				N=4
						PP=0
20		3				19.8'
					Red-Brown \$ilty CLAY trace (+), coarse to fine Sand, trace (-) fine Gravel.	Rec=2.0
		WH				Wet
21	S-11	WH				H-Nu=Bkgrd
		WH	CH		(Glacio-Lacustrine)	N=0
						mod-highly plastic
22		2				v.soft

Dunn Geoscience Corp.
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TEST BORING LOG

BORING No. Inlet-16

PROJECT	Task 3: Inlet Remediation
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SHEET 3 OF 3

CLIENT Whiteman, Osterman & Hanna

JOB No. 348-11-0412

DEPTH FT	SAMPLE NUMBER	BLOWS ON SAMPLE SPOON PER 6"	UNIFIED CLASSIFICATION	GRAPHIC LOG	GEOLOGIC DESCRIPTION	REMARKS
23	S-12	WH 1 1 2			Red brown Silty CLAY trace, coarse to fine Sand. (Glacio-lacustrine) 24.0'	Rec=2.0 Wet V. soft H-Nu=Bkgrd N=2 mod-highly plastic
24					End of boring Total depth = 24.0'	



Dunn Geoscience Corp.
Albany, NY 12205 (518)458-1313

TEST BORING LOG

BORING No. Inlet 17

PROJECT Task 3: Inlet Investigation

SHEET 1 OF 1

CLIENT Whiteman, Osterman & Hanna

JOB No. 348-11-0412

DRILLING CONTRACTOR Empire Soils Investigation, Inc.

MEAS. PT. ELEV.

PURPOSE Subsurface Investigation

GROUND ELEV. 571.4'

DRILLING METHOD H.S.A

SAMPLE

CORE

CASING

DATUM

MSL

DRILL RIG TYPE CME-75

TYPE

SS

N/A

H.S.A

DATE STARTED 9/17/88

GROUNDWATER DEPTH dry

DIA.

2"

N/A

4 1/2 ID

DATE FINISHED 9/12/88

MEASURING POINT

WEIGHT

140#

DRILLER K. Swinnich

DATE OF MEASUREMENT 9/12/88

FALL

30"

INSPECTOR T. Jordan

DEPTH FT.	SAMPLE NUMBER	BLOWS ON SAMPLE SPOON PER 6"	UNIFIED CLASSIFICATION	GRAPHIC LOG	GEOLOGIC DESCRIPTION	REMARKS
1	S-1	10	ML		Brown Clayey Silt trace (+), coarse to fine Sand, trace cement fragments.	Rec=1.8 dry
		12			1.0'	H-Nu=Bkgd.
		17	ML		Light Brown Clayey Silt some, medium to fine (+) Sand.	
2		17				
		12				
3	S-2	9	ML		(FILL)	Rec=1.5 dry sl plastic H-Nu=3.0ppm N=18 PP=2.0TSF
		9				
4		10				
		16				
5	S-3	9			do., little fine Gravel	Rec=1.9 dry
		17			Red Brown Silty CLAY trace, fine Sand	H-Nu=40ppm N=26
		20			do.	
		15	CH			Rec=1.9 Damp. V. stiff mod to highly plastic H-Nu=2.0ppm (50ppm in Annulus) N=52 PP=4.0TSF
	S-4	20				
		32			(Glacio-lacustrine)	
		22				
		9				
	S-5	12	CH		do.	Rec=1.4 Damp-moist H-Nu=30ppm (40ppm in Annulus) N=32
		20				
		20				
10					End of boring	10.0'
					Total depth = 10.0'	



Dunn Geoscience Corp.
Albany, NY 12205 (518)458-1313

TEST BORING LOG

BORING No. Inlet 18

PROJECT Task 3: Inlet Investigation

SHEET 1 OF 2

CLIENT Whiteman, Osterman & Hanna

JOB No. 348-11-0412

DRILLING CONTRACTOR Empire Soils Investigation, Inc.

MEAS. PT. ELEV

PURPOSE Subsurface Investigation

GROUND ELEV. 569.7'

DRILLING METHOD H.S.A

SAMPLE

CORE

CASING

DATUM MSL

DRILL RIG TYPE CME-75

TYPE

SS

N/A

H.S.A

DATE STARTED 9/12/88

GROUNDWATER DEPTH 9.0'

DIA.

2"

N/A

4 1/2" ID

DATE FINISHED 9/12/88

MEASURING POINT Grade

WEIGHT

140#

DRILLER K. Swinnich

DATE OF MEASUREMENT 9/12/88

FALL

30"

INSPECTOR T. Jordan

DEPTH FT.	SAMPLE NUMBER	BLOWS ON SAMPLE SPOON PER 6"	UNIFIED CLASSIFICATION	GRAPHIC LOG	GEOLOGIC DESCRIPTION	REMARKS
5	S-1	20	SM		Brown coarse to fine (+) SAND, some Silt, little (-) fine Gravel. - 10% organics - 15% brick fragments	Rec=1.4 dry H-Nu=Bkgrd - sl.plastic - v.dense top
		18				
		7				
		5				
	S-2	3			(FILL)	No Rec
		5				
		3				
		5				
	S-3	8	SW		Med Grey brown fine (+)-coarse SAND, little fine Gravel. - 15% slag fragments	Rec=0.4 Wet H-Nu=Bkgrd
		17				
		15				
		8				
	S-4	9	GW		Med Grey brown fine Gravel, some (+) coarse (+) to fine Sand, little Silt - 15% organics, wood fragments	Rec=1.3 Wet H-Nu=Bkgrd - non plastic
		8				
		9				
		22				
S-5	1	SW	Brown coarse to fine SAND, trace fine Gravel. - 15% Mollusc Shells	Rec=1.7 Wet H-Nu=18ppm N=7		
	2					
	5					
	18					
10					8.8'	



Dunn Geoscience Corp.
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TEST BORING LOG

BORING No. Inlet 18

PROJECT Task 3: Inlet Investigation

SHEET 2 OF 2

CLIENT Whiteman, Osterman & Hanna

JOB No. 348-11-0412

DEPTH FT	SAMPLE NUMBER	BLOWS ON SAMPLE SPOON PER 6"	UNIFIED CLASSIFICATION	GRAPHIC LOG	GEOLOGIC DESCRIPTION	REMARKS
11	S-6	3	SW		Brown coarse to fine SAND, trace (+) \$ilt, some (+) fine Gravel. (ALLUVIUM)	Rec=1.0 Wet H-Nu=Bkgd (6ppm in Annulus) N=31
		9				
		22				
12		20				
		18	SW		Brown medium to fine SAND, trace (+) \$ilt, some (-) fine Gravel.	Rec=1.3 Wet H-Nu=1.5 (3.0 in Annulus) N=10
13	S-7	4				
		6				
14		6				
		3	CH		Brown red \$ilty CLAY trace, fine SAND (Glacio-lacustrine)	Rec=1.3 Wet H-Nu=2.0ppm N=21
15	S-8	17				
		4				
16		3				
		1	CH		do.	Rec=1.4 Wet H-Nu=Bkgd N=3 V.soft mod-highly plastic
17	S-9	2				
		1				
18		2				
		2	CH		do.	Rec=2.0 Wet H-Nu=Bkgd N=2 v.soft
19	S-10	1				
		1				
20		2				
					End of boring Total depth = 20.0'	



Dunn Geoscience Corp.
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TEST BORING LOG

BORING No. Inlet 19

PROJECT	Task 3: Inlet Investigation					SHEET 1 OF 2
CLIENT	Whiteman, Osterman & Hanna					JOB No. 348-11-0412
DRILLING CONTRACTOR	Empire Soils Investigations, Inc.					MEAS. PT. ELEV.
PURPOSE	Subsurface Investigation					GROUND ELEV. 571.0'
DRILLING METHOD	HSA	SAMPLE	CORE	CASING	DATUM	MSL
DRILL RIG TYPE	CME-75	TYPE	SS	N/A	HSA	DATE STARTED 9/12/88
GROUNDWATER DEPTH		DIA.	2"	N/A	4 1/2" ID	DATE FINISHED 9/12/88
MEASURING POINT		WEIGHT	140#			DRILLER K. Swinnich
DATE OF MEASUREMENT		FALL	30"			INSPECTOR J. Ptaszik

DEPTH FT.	SAMPLE NUMBER	BLOWS ON SAMPLE SPOON PER 6"	UNIFIED CLASSIFICATION	GRAPHIC LOG	GEOLOGIC DESCRIPTION	REMARKS
	S-1	5	MH		Brown SILT and CLAY some, Sand, little (-) fine Gravel, (FILL) - gravel is concrete fragments ----- 1.3'	Rec=1.5 Dry H-Nu=Bkgd Sl.plastic V.stiff
		10				
		11				
		15				
	S-2	9	ML		Brown Clayey Silt some, fine Sand. do., trace wood fragments (FILL) do., trace Wood Fragments	Rec=1.7 Moist H-Nu=Bkgd PP=2.75TSF
		8				
		8				
		8				
5	S-3	5	ML			Rec=0.6 Moist H-Nu=Bkgd
		4				
		2				
6		2				
	S-4	5	CH-CL		do. ----- 7.3'	Rec=0.6 Wet H-Nu=4.0ppm
7		11				
		5				
8		2			Gray Silty CLAY little, Sand, little (-) medium Gravel. - organics - mottled	
	S-5	1	ML		----- 8.7'	Rec=1.1 Wet H-Nu=8.0ppm (9.0ppm in Annulus)
9		3				
		3				
10		1			Gray Clayey Silt some, Sand	



Dunn Geoscience Corp.
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TEST BORING LOG

BORING No.
Inlet 19

PROJECT Task 3: Inlet Investigation

SHEET 2 OF 2

CLIENT Whiteman, Osterman & Hanna

JOB No. 348-11-0412

DEPTH FT.	SAMPLE NUMBER	BLOWS ON SAMPLE SPOON PER 6"	UNIFIED CLASSIFICATION	GRAPHIC LOG	GEOLOGIC DESCRIPTION	REMARKS
11	S-6	2 4 4	GW-GM		Med Grey brown medium to fine (+) Gravel some, coarse (+) to fine SAND, little Clayey Silt. - trace organics	Rec=0.3 WET sl plastic HNU=Bkgd (50 ppm in Annulus) N=8
12		3				
13	S-7	6 4 3	SW-SM		Gray medium to fine SAND, little Silt, little fine Gravel. (ALLUVIUM)	Rec=2.0 WET HNU=5.0 ppm N=7 sl plastic
14		5				
15	S-8	6 2	SM		Gray medium to fine SAND, little (+) Clayey Silt, little medium to fine Gravel. - similar to above	Rec=1.5 WET HNU=Bkgd N=8 sl plastic
16		2				
17	S-9	2 2 2	CH		Brown Red Silty CLAY do. (Glacio-lacustrine)	Rec=1.5 WET HNU=Bkgd N=4 Soft
18		2				
19	S-10	2 2	CH		do.	Rec=1.1 WET HNU=0.5 ppm N=4 Soft
20		2				
					End of boring Total depth = 20.0'	



Dunn Geoscience Corp.
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TEST BORING LOG

BORING No. Inlet 20

PROJECT	Task 3: Inlet Investigation					SHEET 1 OF 2
CLIENT	Whiteman, Osterman & Hanna					JOB No. 348-11-0412
DRILLING CONTRACTOR	Empire Soils Investigations, Inc.					MEAS. PT. ELEV.
PURPOSE	Subsurface Investigation					GROUND ELEV. 572.9
DRILLING METHOD	HSA	SAMPLE	CORE	CASING	DATUM	MSL
DRILL RIG TYPE	CME-75	TYPE	SS	N/A	HSA	DATE STARTED 9/13/88
GROUNDWATER DEPTH		DIA.	2"	N/A	4 1/2" ID	DATE FINISHED 9/13/88
MEASURING POINT		WEIGHT	140#			DRILLER Swinnich
DATE OF MEASUREMENT		FALL	30"			INSPECTOR J. Ptaszniak

DEPTH FT	SAMPLE NUMBER	BLOWS ON SAMPLE SPOON PER 6"	UNIFIED CLASSIFICATION	GRAPHIC LOG	GEOLOGIC DESCRIPTION	REMARKS
	S-1	3 4 9 100/4"	SW-SM		Dark Brown coarse (+) to fine SAND, little (+) Silt, - organic fibrous material ~20% 1.0'	Rec=1.4 Moist HNU=Bkgd
		Auger			Gray Slag Fragments (FILL)	No Recovery Hard Augering Slag/Cement on auger flights
5	S-2	9 100/3"	SW-SM		Med Brown coarse (+) to fine SAND, little (+) Silt, little (+) Gravel. - gravel is grey slag - one fragment rusted iron	Rec=0.3 Moist HNU=Bkgd non-plastic
6						
7	S-3	4 2 2	SW-SM		Brown, black & gray coarse to fine Sand, little Silt, and (-) coarse to fine Gravel. - Gravel is concrete or slag - Organic, fibrous material 10% coke fragments 8.0'	Rec=0.4 WET HNU=Bkgd non-plastic
8		3				
	S-4	1 1 1 1	CH		Brown Red Silty CLAY trace, Sand, trace fine Gravel.	Rec=1.1 WET HNU=Bkgd N=2 mod plastic, v soft
10						

Dunn Geoscience Corp.
Albany, NY 12205 (518)458-1313

TEST BORING LOG

BORING No. Inlet

PROJECT	Task 3: Inlet Investigation
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SHEET 2 OF 2

CLIENT Whiteman, Osterman & Hanna

JOB No. 348-11-0412

[illegible]

Dunn Geoscience Corporation Albany, NY (518) 458-1313		Test Boring Log			Boring No. I-21 (Revised 9/12/89)	
PROJECT: Inlet Investigation - Task 3					Sheet 1 of 6	
CLIENT: Occidental Chemical Corporation					Job No. 595-03-1165	
DRILLING CONTRACTOR: Empire Soils Investigations, Inc.					Meas. Pt. Elev.	
PURPOSE: Subsurface Investigation					Ground Elev. 573.7	
DRILLING METHOD: Hollow Stem Auger		SAMPLE	CORE	CASING	Datum MSL	
DRILL RIG TYPE: CME-75		TYPE	SS	N/A	HSA	Date Started: 6/21/89
GROUNDWATER DEPTH:		DIAM.	2" OD	N/A	4-1/4" ID	Date Finished: 6/23/89
MEAS. PT.:		WEIGHT	140#	Driller: R. Kephart		
DATE OF MEAS.:		FALL	30"	Inspector: J. Ptaznik/ M. Raibovsky		

Depth (Feet)	Sample Number	Blow Count	Unified Classif- ication	GRAPHIC LOG	GEOLOGIC DESCRIPTION	REMARKS
2	S-1	6			Dk br br cmf S - oxidized chunks - concrete pieces - slag content (40%)	Rec=0.8' Moist HNU=Bkgd (Bkgd=0.3 ppm)
		72/0.2				
		Auger				
		↓				
4	S-2	5			Slag - crumbly - concrete pieces - dark red staining, occasional - some cmf Sand	Rec=0.9' Moist HNU=Negative deflection
		16				
		8				
		8				
5	S-3	16			Slag - some fine Sand (FILL)	Rec=0.0 HNU
		4				
		4				
		3				
6	S-4	4			Slag - concrete pieces - some fine Sand	Rec=0.5' WET HNU=Bkgd
		3				
		2				
		2				
10	S-5	1	Slag - broken concrete pieces - some fine Sand	Rec=0.4' WET HNU=1.5 ppm * Black bleb		
		4				
		10				
		6				
10					10.0'	

Dunn Geoscience Corporation Albany, NY (518) 458-1313				Test Boring Log		Boring No. I-21
PROJECT: Inlet Investigation - Task 3					Sheet 2 of 6	
CLIENT: Occidental Chemical Corporation					Job No. 595-03-1165	
Depth (Feet)	Sample Number	Blow Counts	Unified Classif- ication	Visual Log Description	Geologic Description	Remarks
12	S-6	4			Dk gr br Cy\$ s(+), fS - white fragments (Alluvium)	Rec=0.7' WET HNU=Bkgd
		1				
		1				
		1				
14	S-7	16			Dk gr br c(-)mf(+)S, l(+)\$, t mfG - subangular - slag in top of spoon	Rec=1.5' WET HNU=Bkgd
		23				
		6				
		2				
16	S-8	1			Dk gr m(-)f(+)S, l(+) \$ (Alluvium)	Rec=1.0' WET HNU=Bkgd
		1				
		3				
		3				
18	S-9	4			Dk gr m(-)f(+)S, l \$ - calcareous fragments	Rec=1.1' WET HNU=1.0 ppm
		5				
		6				
		8				
20	S-10	3			<u>Dark gray coarse medium fine</u> <u>SAND, little Silt, little fine gravel.</u> (ALLUVIUM) - wood fragments	Rec=1.5' WET HNU=Bkgd
		4				
		5				
		4				
22	S-11	1			Dk gr cmfS, t\$, t fG - rounded - calcareous fragments	Rec=1.8' WET HNU=Bkgd.
		5				
		6				
		9				
24	S-12	4			Dk gr c(+)mf S, t(-) fG - subangular - wood fragments - cleanly washed - calcareous fragments	Rec=2.0' WET HNU=Bkgd (Bkgd=0.4 ppm) 5.0' wash in augers
		5				
		7				
		7				
24	S-13	6			Dk gr c(+)mf S, t \$	Rec=1.5' WET
		8				

Dunn Geoscience Corporation Albany, NY (518) 458-1313				Test Boring Log		Boring No. I-21 (Revised 9/12/89)
PROJECT: Inlet Investigation - Task 3					Sheet 3 of 6	
CLIENT: Occidental Chemical Corporation					Job No. 595-03-1165	
Depth (Feet)	Sample Number	Blow Counts	Unified Classif- ication	Visual Log Description	Geologic Description	Remarks
26	S-13	9			Dk gr f G s(+), cmf S - subangular - compacted	HNU=Bkgd Flush augers to 26.0'
		6				
28	S-14	13				Rec=0.8' WET HNU=Bkgd
		19				
		14				
		9				
30	S-15	9				Rec=1.2' WET HNU=Bkgd * Slight Odor
		13				
		14				
		23				
32	S-16	5				Rec=1.4' WET HNU=Bkgd
		12				
		36				
		6				
34	S-17A	2				Rec=1.0' WET HNU=0.5 ppm
		2				
36	S-17B	3				
		4				
38	S-18	2				Rec=1.4' WET HNU=Bkgd (Bkgd=0.6 ppm) pp <0.25
		3				
		4				
		9				
40	S-19	7				Rec=0.0 0.9' wash in augers
		7				
		8				
		9				
42	S-20	1				Rec=1.8' WET HNU=1.0 ppm pp <0.25
		5				
		6				
		9				

Dunn Geoscience Corporation Albany, NY (518) 458-1313				Test Boring Log		Boring No. I-21
PROJECT: Inlet Investigation - Task 3					Sheet 4 of 6	
CLIENT: Occidental Chemical Corporation					Job No. 595-03-1165	
Depth (Feet)	Sample Number	Blow Counts	Unified Classification	Visual Log Description	Geologic Description	Remarks
42	S-21	2			Rd br \$yC l, f S, t mfG - subangular Gravel	Rec=0.6' WET HNU=Bkgd pp <0.25
		↓				
		3				
		5				
44	S-22	8			Rd \$yC s(-), gr f S, l(-)m(-)fG - varved - angular Gravel	Rec=1.7' WET HNU=Bkgd (Bkgd=0.7 ppm)
		8				
		6				
		7				
44		Auger			Note: Standard sampling from 45.0'	Rec=1.8' WET HNU=Bkgd Note: 1.5' sample
45		↓				
46	S-23	6				
		6				
		7				
47					Rd br \$yC t, fS, t(-)fG - pockets of cleanly washed sand within the clay - angular Gravel - wash sand in spoon	
50	S-24	4			Rd br \$yCl(-), fS, t f G - occasional varves	Rec=1.9' WET HNU=Bkgd pp <0.25
		4				
		4				
		2				
52						Driller notes difficult auger penetration at 54.0'.
					54.0'	
55						

Dunn Geoscience Corporation Albany, NY (518) 458-1313				Test Boring Log		Boring No. I-21
PROJECT: Inlet Investigation - Task 3					Sheet 5 of 6	
CLIENT: Occidental Chemical Corporation					Job No. 595-03-1165	
Depth (Feet)	Sample Number	Blow Counts	Unified Classif- ication	Visual Log Description	Geologic Description	Remarks
57	S-25A	29			Br rd \$&C l(+), fS, l fG - angular	Rec=2.0' WET HNU=Bkgd Note: sample A and B of same geologic unit.
		35				
	S-25B	55				
		39				
60	S-26				Gr C&\$ a, fS, t(-) mfG - sand layers - varved	Rec=1.5' WET HNU=Bkgd
		7				
		9				
		10				
62		12			<u>Gray brown SILT and CLAY</u> <u>little, fine sand, little fine Gravel.</u> (TILL)	
65	S-27	12			Gr dk br \$&C a, f G - sand layers - varved	Rec=1.1' WET HNU=Bkgd (Bkgd=0.8 ppm)
		26				
		28				
		24				
67					Auger Refusal @ 69.7' See page 6 for description of bedrock	Rec=0.5' WET HNU=Bkgd
70	S-28	100/0.3'			Total depth @ 70.0'	

Dunn Geoscience Corporation Albany, NY (518) 458-1313		Test Boring Log			Boring No. 1-22 (Revised 9/12/89)	
PROJECT: Inlet Investigation - Task 3					Sheet 1 of 4	
CLIENT: Occidental Chemical Corporation					Job No. 595-03-1165	
DRILLING CONTRACTOR: Empire Soils Investigations, Inc.					Meas. Pt. Elev.	
PURPOSE: Subsurface Investigation					Ground Elev. 573.7	
DRILLING METHOD: Hollow Stem Auger		SAMPLE	CORE	CASING	Datum MSL	
DRILL RIG TYPE: CME-45	TYPE	SS	N/A	HSA	Date Started: 6/16/89	
GROUNDWATER DEPTH:	DIAM.	2" OD	N/A	4-1/4" ID	Date Finished: 6/16/89	
MEAS. PT.:	WEIGHT	140#			Driller: D. Madden	
DATE OF MEAS.:	FALL	30"			Inspector: J. Ptaznik/ M. Raibovsky	

Depth (Feet)	Sample Number	Blow Count	Unified Classif- ication	GRAPHIC LOG	GEOLOGIC DESCRIPTION	REMARKS
2	S-1	16			Or br gr wh slag - oxidized impurities - trace fine sand	Rec=1.5' Moist HNU=Bkgd (Bkgd=0.8 ppm) * Black blebs, odor
		5				
		4				
		39				
4	S-2	11			Gr br wh or slag - trace clayey silt - oxidized pieces	Rec=0.6' Moist HNU=-5.4 ppm
		100/0.3'				
5	S-3	9			Dk gr lt gr br slag - trace fine sand <u>Dark and light gray brown slag</u> - trace fine Sand (FILL)	Rec=0.3' Moist HNU=0.8 ppm (Bkgd=0.6 ppm)
		8				
		5				
		8				
6	S-4	7			Dk gr lt gr br slag - trace fine Sand	Rec=0.7' Moist HNU=Bkgd * Black blebs, odor
		3				
		4				
		5				
8	S-5	6	No Recovery	Rec=0.0 Water running out of spoon upon retrieval.		
		5				
		5				
		4				
10						10.0'

Dunn Geoscience Corporation Albany, NY (518) 458-1313				Test Boring Log		Boring No. I-22
PROJECT: Inlet Investigation - Task 3					Sheet 2 of 4	
CLIENT: Occidental Chemical Corporation					Job No. 595-03-1165	
Depth (Feet)	Sample Number	Blow Counts	Unified Classif- ication	Visual Log Description	Geologic Description	Remarks
12	S-6	2			Dk gr br fS, a\$, tC, t fG - white fragments, carry down from slag - organics, roots	Rec=1.7' WET HNU=3.0 ppm
		2				
		3				
		5				
14	S-7	7			Dk gr br mf(+)S, t(+) \$	Rec=2.0' WET HNU=Bkgd
		7				
		9				
		12				
16	S-8	4			Dk gr br cmf(+)S, l(-)\$ - white fragments in top of spoon - homogeneous	Rec=2.0' WET HNU=3.4 ppm
		4				
		3				
		2				
18	S-9	2			Dk gr br cmfS, l(-) t \$ - homogeneous - white fragments insitu	Rec=1.2' WET HNU=3.8 ppm Boring flushed with water.
		2				
		3				
		10				
20	S-10	8			Dk gr br cmf S, l(-)\$ - homogeneous	Rec=1.2' WET HNU=1.2 ppm
		9				
		9				
		11				
22	S-11	5			<u>Dark gray brown coarse to fine SAND, little (-) Silt, trace fine gravel.</u> (ALLUVIUM)	Rec=0.9' WET HNU=Bkgd
		7				
		9				
		11				
24	S-12	7			Dk gr c(+)mf S, t \$ - homogeneous - calcareous fragments	Rec=1.1' WET HNU=Bkgd
		9				
		11				
		12				
24	S-13	6			Dk gr c(+)mfS, t \$ -homogeneous - calcareous fragments	Rec=1.8' WET HNU=Bkgd
		7				

Dunn Geoscience Corporation				Test Boring Log		Boring No. I-22
Albany, NY (518) 458-1313						
PROJECT: Inlet Investigation - Task 3						Sheet 3 of 4
CLIENT: Occidental Chemical Corporation						Job No. 595-03-1165
Depth (Feet)	Sample Number	Blow Counts	Unified Classification	Visual Log Description	Geologic Description	Remarks
26	S-13	10			Dk gr c(+) mfS, t fG - subangular	Rec=2.0' WET HNU=Bkgd
		14				
S-14	13					
	12					
	12					
	12					
28	S-15	8			Dk gr c(+) mfS, l(-)fG - fibrous organic layer - calcareous fragments - rounded to subangular	Rec=1.8' WET HNU=Bkgd
		9				
		11				
		13				
30	S-16	13			Dk gr br c(+) mfS, s(-)mf(+) G - subangular - calcareous fragments	Rec=2.0' WET HNU=Bkgd
		17				
		16				
		20				
32	S-17	7			Dk gr br c(+) mfS, t\$, sm(-)f(+) G - subangular - some sand washing into spoon	Rec=2.0' WET HNU=Bkgd
		19				
		23				
		100/0.4				
34	S-18A	3			Dk gr br c(+) mfS, l(+) mfG - white fragments	Rec=1.4' WET HNU=500 ppm
		4				
	S-18B	4			Rd br \$yC l, fS, t mfG - clay lens - defined contact - angular	
8		36.0'				
36	S-19	2			Dk gr cmfS, t \$yC - calcareous fragments	Rec=1.2' WET HNU=70 ppm
		3				
		4				
		3				
38	S-20	1			Rd br \$yC l, fS, t fG - subrounded gravel	Rec=0.9' WET HNU=20 ppm
		2				
		3				
		5				

Dunn Geoscience Corporation Albany, NY (518) 458-1313				Test Boring Log		Boring No. I-22 (Revised 9/12/89)
PROJECT: Inlet Investigation - Task 3						Sheet 4 of 4
CLIENT: Occidental Chemical Corporation						Job No. 595-03-1165
Depth (Feet)	Sample Number	Blow Counts	Unified Classif- ication	Visual Log Description	Geologic Description	Remarks
42	S-21	3			Red brown Silty CLAY little, fine sand, trace fine Gravel. (TILL)	REC=0.7' WET pp=0.4 HNU=12 ppm
		3				
		4				
		6				
44	S-22	3			Rd br \$yC t(-), fG	Rec=0.4' WET pp<0.25 HNU=Bkgd
		4				
		5				
		7				
44					End of Boring Total depth = 44.0' W.L. = 16.1' Casing=42.0' Bentonite slurry to 28.0' * Note: Blebs and odor noticed in sample jars on 9/12/89.	

Dunn Geoscience Corporation Albany, NY (518) 458-1313		Test Boring Log			Boring No. 1-23
PROJECT: Inlet Investigation - Task 3					Sheet 1 of 4
CLIENT: Occidental Chemical Corporation					Job No. 595-03-1165
DRILLING CONTRACTOR: Empire Soils Investigations, Inc.					Meas. Pt. Elev.
PURPOSE: Subsurface Investigation					Ground Elev. 573.6
DRILLING METHOD: Hollow Stem Auger		SAMPLE	CORE	CASING	Datum MSL
DRILL RIG TYPE: CME-55D/45B		TYPE	SS	N/A	HSA
GROUNDWATER DEPTH:		DIAM.	2" OD	N/A	4-1/4" ID
MEAS. PT.:		WEIGHT	140#	Driller: D. Beitz/ D. Madden	
DATE OF MEAS.:		FALL	30"	Inspector: J. Ptaznik/ M. Ralbovsky	

Depth (Feet)	Sample Number	Blow Count	Unified Classification	GRAPHIC LOG	GEOLOGIC DESCRIPTION	REMARKS
2	S-1	7	SP		Br bk mf(+)S, s Cy\$, l fG - fractured rock - brick fragments	Rec=1.0' Moist HNU=Bkgd (Bkgd=0.4 ppm)
		8				
		7				
		10				
4	S-2	17	SP		Dk br rd or cmf S, l(+)\$, s(-)fG - slag <u>Brown red coarse to fine SAND.</u> <u>little Silt. little fine gravel.</u> (FILL)	Rec=1.5' Moist HNU=9.0 ppm
		12				
		15				
		17				
5	S-3	20	SP		Br cmf S - fractured slag - chunks white, light gray	Rec=1.0' Moist HNU=25.0 ppm
		12				
		13				
		5				
6	S-4	9	SP		Br cmf S - fractured slag	Rec=0.7' WET HNU=2.5 ppm
		4				
		5				
		8				
8	S-5	2	SP		Br cmf S, l(-) fG	Rec=0.3' WET HNU=12.0 ppm
		3				
		3				
		3				
10						

Dunn Geoscience Corporation Albany, NY (518) 458-1313				Test Boring Log		Boring No. I-23
PROJECT: Inlet Investigation - Task 3					Sheet 2 of 4	
CLIENT: Occidental Chemical Corporation					Job No. 595-03-1165	
Depth (Feet)	Sample Number	Blow Counts	Unified Classif- ication	Visual Log Description	Geologic Description	Remarks
12	S-6	2	GM		Gr br Cy\$ s, fS, t(-)fG - bark	Rec=0.5' WET HNU=7.0 ppm
		3				
		3				
		3				
14	S-7	2	GM		Gr br Cy\$ a(+), m(-)fS, l(-)fG - roots, organics	Rec=2.0' WET HNU=15.0 ppm
		2				
		2				
		3				
16	S-8	3	SP		Dk gr cmf S, s(+)Cy\$, t(-)m(-)fG - subangular - organics - washed sand	Rec=1.4' WET HNU=Bkgd
		3				
		3				
		4				
18	S-9	2	SP/SM		Dk gr cmf S, t(-)\$ - cleanly washed - occ lens \$yC	Rec=2.0' WET HNU=0.8 ppm Chlorinated river water added to create artificial head.
		6				
		5				
		1				
20	S-10	4	SP/SM		Dk gr c(-)mf(+)S, t(-)\$	Rec=1.2' WET HNU=Bkgd
		5				
		3				
		5				
22	S-11	2	SP/SM		Dk gr mf S, l(\$ - calcareous fragments	Rec=1.2' WET HNU=Bkgd Water added.
		3				
		4				
		4				
24	S-12	3	SP/SM		Dk gr mf S, l(-)\$ - calcareous fragments <u>Dark gray medium to fine SAND,</u> <u>trace Silt. some medium to fine</u> <u>gravel.</u> (ALLUVIUM)	Rec=1.8' WET HNU=Bkgd
		4				
		7				
		6				
24	S-13	Free Fall WR	SP/SM		Dk gr mf S, l(-)Cy\$ - wood fragments	Rec=1.3' WET
		▼				

Dunn Geoscience Corporation				Test Boring Log		Boring No. I-23 (Revised 9/12/89)		
PROJECT: Inlet Investigation - Task 3						Sheet 3 of 4		
CLIENT: Occidental Chemical Corporation						Job No. 595-03-1165		
Depth (Feet)	Sample Number	Blow Counts	Unified Classif- ication	Visual Log Description	Geologic Description	Remarks		
26	S-13	2	SP/SM		Dk gr cmf S, t \$ - wood fragments	HNU=Bkgd Water added.		
		3				Rec=2.0' WET HNU=Bkgd		
S-14	4	SP/SM					Dk gr cmf S, l(-)\$ - wood fragments stop drilling 6/9/89	Rec=1.3' WET HNU=Bkgd Water added.
	7							
	8							
28	S-15		8	SP	Gr br cmf S, t\$, a m(-)fG - fine gravel rounded - clay pocket	Rec=2.0' WET HNU=Bkgd (Bkgd=1.2 ppm)		
		2						
		4						
6								
30	S-16	9	SP	Gr br cmf S, t(-)\$, s m(-)f(+)G - subangular - gravel slightly cemented	Rec=2.0' WET HNU=9.0 ppm Odor			
		13						
		13						
26								
32	S-17	30	SP	Gr br cmf S, t\$, a(+)mf(+)G - rounded to subrounded	Rec=1.5' WET HNU=450 ppm * Numerous black blebs strong odor			
		41						
		39						
36								
34	S-18	50	SP	Gr br cmf S, l(+) \$ * Black blebs, strong odor	Rec=1.7' WET HNU=650 ppm above clay HNU=250 ppm in clay			
		26						
		12						
8								
36	S-19A	8	SM	Rd br \$yC				
		5						
	S-19B	5	CH	Rd br \$yC t, fS - sand washing in augers <u>Red brown Silty CLAY trace, fine Sand.</u> (GLACIO-LACUSTRINE)	Rec=0.7' WET HNU=6.0 ppm pp<0.25			
		6						
38	S-20	11	CH					
		6						
		4						
5								
		6						

Dunn Geoscience Corporation Albany, NY (518) 458-1313				Test Boring Log		Boring No. I-23 (Revised 9/12/89)	
PROJECT: Inlet Investigation - Task 3						Sheet 4 of 4	
CLIENT: Occidental Chemical Corporation						Job No. 595-03-1165	
Depth (Feet)	Sample Number	Blow Counts	Unified Classif- ication	Visual Log Description	Geologic Description	Remarks	
42	S-21	5	CH		40.5' Rd br \$yCt, fS - sand washing in spoon	Rec=0.2' WET HNU=4.0 ppm pp<0.25	
		10					
		13					
		9					
44	S-22	10	CH		Rd br \$yCl, fS, t fG (TILL)	Rec=1.7' WET HNU=12.0 ppm Brbk globules on water	
		10					
		10					
		10					
46	T-1	Push			Shelby tube - no recovery	Pressure gauge on rig inoperative	
48	T-2	Push			Shelby tube - recovery <0.3'		
48					48.0' End of Boring Total Depth = 48.0' Bentonite slurry tremmied to 36.0'	Notes: Brown black oily globules between auger joints. Blebs and odor noticed in sample jars on 9/12/89.	

Dunn Geoscience Corporation Albany, NY (518) 458-1313		Test Boring Log			Boring No. I-24 (Revised 7/26/90)	
PROJECT: Inlet Investigation - Task 3					Sheet 1 of 1	
CLIENT: Occidental Chemical Corporation					Job No. 595-03-1165	
DRILLING CONTRACTOR: Empire Soils Investigations, Inc.					Meas. Pt. Elev.	
PURPOSE: Subsurface Investigation					Ground Elev. 566.5	
DRILLING METHOD: Hollow Stem Auger		SAMPLE	CORE	CASING	Datum MSL	
DRILL RIG TYPE: CME-55D	TYPE	SS	N/A	HSA	Date Started: 6/5/89	
GROUNDWATER DEPTH:	DIAM.	2" OD	N/A	4-1/4" ID	Date Finished: 6/5/89	
MEAS. PT.:	WEIGHT	140#			Driller: D. Beitz	
DATE OF MEAS.:	FALL	30"			Inspector: J. Ptaznik/ M. Raibovsky	

Depth (Feet)	Sample Number	Blow Count	Unified Classification	GRAPHIC LOG	GEOLOGIC DESCRIPTION	REMARKS
1	S-1	1	ML		Bk \$ a, S - black staining - organics, roots - wood fgmts <u>Black SILT and Sand.</u> (SOFT SEDIMENT)	Rec=0.2' WET HNU=Bkgd Slight odor
		1				
2	S-2A	1	ML		Bk \$ a, fS - black staining	Rec=1.6' WET HNU=3.0 ppm Odor
		3				
3	S-2B	3			Rd br \$yC	
		3				
4	S-3	3	CH		Rd br \$yC <u>Red brown Silty CLAY.</u> (FILL)	Rec=2.0' WET pp=0.75, 1.5, 1.7 HNU=Bkgd
		4				
5	S-4	5	CH		Rd br \$yC - red streaks of clay	Rec=1.6' WET pp<0.25 HNU=Bkgd
		5				
6		6				
		5				
7		6				
		5				
8		5			End of Boring at 8.0' Total Depth = 8.0'	
9						
10						

Dunn Geoscience Corporation Albany, NY (518) 458-1313		Test Boring Log				Boring No. I-25 (Revised 7/26/90)
PROJECT: Inlet Investigation - Task 3					Sheet 1 of 2	
CLIENT: Occidental Chemical Corporation					Job No. 595-03-1165	
DRILLING CONTRACTOR: Empire Soils Investigations, Inc.					Meas. Pt. Elev.	
PURPOSE: Subsurface Investigation					Ground Elev. 568.3	
DRILLING METHOD: Hollow Stem Auger		SAMPLE	CORE	CASING	Datum MSL	
DRILL RIG TYPE: CME-55D	TYPE	SS	N/A	HSA	Date Started: 6/7/89	
GROUNDWATER DEPTH:	DIAM.	2" OD	N/A	4-1/4" ID	Date Finished: 6/7/89	
MEAS. PT.:	WEIGHT	140#			Driller: D. Beitz	
DATE OF MEAS.:	FALL	30"			Inspector: J. Ptaznik/ M. Ralbovsky	

Depth (Feet)	Sample Number	Blow Count	Unified Classification	GRAPHIC LOG	GEOLOGIC DESCRIPTION	REMARKS
2	S-1	2	ML		Bk br \$s, fS, l(-)m(-)fG - org, roots, trace slag (FILL) 2.0'	Rec=0.6' Damp HNU=Bkgd (Bkgd=0.4 ppm)
		5				
		5				
		4				
4	S-2	8	ML		Bk gr Cy\$ s, fS, t fG - org.	Rec=0.5' WET HNU=40 ppm
		4				
		2				
		1				
5	S-3	1	CL		Bk gr Cy\$ l, fS, t fG - fine sand seams - oxidized - micaceous flakes	Rec=1.3' Moist HNU=3.0 ppm
		3				
		1				
6	S-4	3	CL		Black gray clayey SILT little, fine sand, trace medium to fine gravel. - possible soft sediment (SOFT SEDIMENT)	Rec=0.6' WET HNU=4.0 ppm Odor
		2				
		2				
		2				
8	S-5	1	ML		Bk gr \$ a, fS, l C, t fG	Rec=1.2' WET HNU=6.0 ppm Odor
		1				
		1				
		1				
10						

Dunn Geoscience Corporation Albany, NY (518) 458-1313				Test Boring Log		Boring No. 1-25	
PROJECT: Inlet Investigation - Task 3						Sheet 2 of 2	
CLIENT: Occidental Chemical Corporation						Job No. 595-03-1165	
Depth (Feet)	Sample Number	Blow Counts	Unified Classif- ication	Visual Log Description	Geologic Description	Remarks	
12	S-6A	WOH	CH		Bk \$ a, fS	Rec=1.2' WET HNU=1.0 ppm	
					10.6'		
S-6B		Rd br \$yC					
14		WOH			Rd br \$yC	Rec=1.6' WET HNU=1.0 ppm	
	S-7				<u>Red brown Silty CLAY.</u> (FILL)	14.0'	
16							
	S-8	2			Rd br \$yC	Rec=0.3' WET HNU=Bkgd pp=1.0	
		2			(GLACIO-LACUSTRINE)		
		2					
18							
	S-9	WOH	Rd br \$yC	Rec=0.2' WET HNU=Bkgd pp=0.8			
		1		18.0'			
		3					
				End of Boring at 18.0' Total Depth = 18.0' Depth to water ~13.1' Casing = 20.0'			

Dunn Geoscience Corporation Albany, NY (518) 458-1313		Test Boring Log			Boring No. 1-26 (Revised 7/26/90)	
PROJECT: Inlet Investigation - Task 3					Sheet 1 of 2	
CLIENT: Occidental Chemical Corporation					Job No. 595-03-1165	
DRILLING CONTRACTOR: Empire Soils Investigations, Inc.					Meas. Pt. Elev.	
PURPOSE: Subsurface Investigation					Ground Elev. 569.9	
DRILLING METHOD: Hollow Stem Auger		SAMPLE	CORE	CASING	Datum MSL	
DRILL RIG TYPE: CME-55D	TYPE	SS	N/A	HSA	Date Started: 6/7/89	
GROUNDWATER DEPTH:	DIAM.	2" OD	N/A	4-1/4" ID	Date Finished: 6/7/89	
MEAS. PT.:	WEIGHT	140#			Driller: D. Beitz	
DATE OF MEAS.:	FALL	30"			Inspector: J. Ptaznik/ M. Ralbovsky	
Depth (Feet)	Sample Number	Blow Count	Unified Classif- ication	GRAPHIC LOG	GEOLOGIC DESCRIPTION	REMARKS
2	S-1	2	ML		Or br Cy\$ l, fS - mottled coloring	Rec=1.4' Moist HNU=Bkgd (Bkgd=0.5 ppm)
		7				
		5				
		5				
4	S-2	5	ML		Or br Cy\$ s, m(-)f(+)S - roots	Rec=1.6' Moist to WET HNU=Bkgd
		7				
		7				
		6				
5	S-3	WOH	ML		Br gr bk \$yC t, fS - 2 fibrous organic layers <u>Brown orange gray black Clayey Silt little, fine Sand.</u> (FILL)	Rec=1.5' WET HNU=Bkgd
6	S-4A	WOH	CL		Grbk \$yC t, fS	Rec=1.6' WET HNU=1.2 ppm
		1				
7	S-4B	2			Br tn bk cmf S, s Cy\$, l(-)fG	
		5				
8	S-5	10	SM		Gr br mf S, s \$, s m(+)fG - subrounded to subangular - homogeneous - wood fragments (ALLUVIUM)	Rec=1.1' WET HNU=2.5 ppm 8-10' rocky augering
		10				
		6				
		3				
10						

Dunn Geoscience Corporation Albany, NY (518) 458-1313				Test Boring Log		Boring No. 1-26 (Revised 7/26/90)
PROJECT: Inlet Investigation - Task 3					Sheet 2 of 2	
CLIENT: Occidental Chemical Corporation					Job No. 595-03-1165	
Depth (Feet)	Sample Number	Blow Counts	Unified Classif- ication	Visual Log Description	Geologic Description	Remarks
12	S-6	1	SM		Gr m(-)f(+)S, s(+)Cy\$, l(-)m(-)fG - subangular <u>Gray brown medium fine SAND,</u> <u>some clayey Silt, little fine gravel.</u>	Rec=1.2' WET HNU=1.0 ppm
		2				
		2				
		1				
14	S-7	5	SW		Gr cmf S, t \$, m(-)fG - layered - relatively clean, washed - subrounded to rounded - quartz gravel composition (ALLUVIUM)	Rec=2.0' WET HNU=7.0 ppm
		9				
		10				
		14				
16	S-8A	10	CH		Gr cmf S, t \$, m(-)fG - mollusk shells - subrounded to rounded	Rec=2.0' WET HNU=Bkgd pp<0.25
		8				
	S-8B	2			Rd br \$yC - varved - soft S-9 sample lost. <u>Red brown Silty CLAY trace,</u> <u>fine Sand.</u> (GLACIO-LACUSTRINE)	Sample lost.
		2				
18	S-9	2			Rd br \$yC t, fS - fine sand in bedding planes	Rec=2.0' WET HNU=Bkgd pp<0.25
		1				
		2				
		1				
20	S-10	WOH	CH		Rd br \$yC t, fS - varved - trace fine sand in bedding planes	Rec=2.0' WET HNU=1.6 ppm
		WOH				
		2				
		2				
22	S-11	WOH	CH		Shelby Tube	Rec=2.3' pp<0.25 HNU=Bkgd
		WOH				
		WOH				
		1				
24	T-1	Push			End of Boring Total Depth = 24.0' Water Level = 17.5' Casing = 22.0'	

Dunn Geoscience Corporation Albany, NY (518) 458-1313		Test Boring Log			Boring No. 1-27 (Revised 7/26/90)	
PROJECT: Inlet Investigation - Task 3					Sheet 1 of 2	
CLIENT: Occidental Chemical Corporation					Job No. 595-03-1165	
DRILLING CONTRACTOR: Empire Soils Investigations, Inc.					Meas. Pt. Elev.	
PURPOSE: Subsurface Investigation					Ground Elev. 569.5	
DRILLING METHOD: Hollow Stem Auger		SAMPLE	CORE	CASING	Datum MSL	
DRILL RIG TYPE: CME-55D		TYPE	SS	N/A	HSA	Date Started: 6/8/89
GROUNDWATER DEPTH:		DIAM.	2" OD	N/A	4-1/4" ID	Date Finished: 6/8/89
MEAS. PT.:		WEIGHT	140#	Driller: D. Beitz		
DATE OF MEAS.:		FALL	30"	Inspector: J. Ptaznik/ M. Raibovsky		

Depth (Feet)	Sample Number	Blow Count	Unified Classification	GRAPHIC LOG	GEOLOGIC DESCRIPTION	REMARKS
2	S-1	2			Bk mf S, a \$, t(-) fG - organics, bark - brick, slag - granular (FILL)	Rec=0.8' Moist HNU=Bkgd (Bkgd=0.2 ppm)
		1				
		1				
		3				
4	S-2	4			Bk m(-)fS, a \$, t m(-)fG - brick slag - concrete fragments	Rec=0.5' WET HNU=Bkgd
		3				
		1				
		1				4.0'
5	S-3	1			Bk br tn Cy\$ t(+), fS - roots, bark	Rec=1.3' WET HNU=200 ppm
		1			<u>Black (stained) Clayey SILT some (+), fine Sand.</u>	
		1				
6	S-4A	1			Bk stained \$ s, fS, l(-)fG - possible soft sediment	Rec=2.0' WET HNU=105 ppm
		1				
8	S-4B	4			(SOFT SEDIMENT)	
		3				
		8				
10	S-5	8			Dk gr Cy\$ a, fS, t(-)fG - organics - interbedded sand and gravel <u>Dark gray medium to fine SAND.</u> <u>little Clayey Silt, trace (-) fine Gravel.</u> - micaceous flakes ~1mm	Rec=1.6' WET HNU=210 ppm
		3				
		1				
		1				

Dunn Geoscience Corporation Albany, NY (518) 458-1313				Test Boring Log		Boring No. 1-27 (Revised 7/26/90)
PROJECT: Inlet Investigation - Task 3					Sheet 2 of 2	
CLIENT: Occidental Chemical Corporation					Job No. 595-03-1165	
Depth (Feet)	Sample Number	Blow Counts	Unified Classif- ication	Visual Log Description	Geologic Description	Remarks
12	S-6A	2			Blk stained mf S, t(-)fG - org 10.6'	Rec=1.3' WET HNU=525 ppm pp <0.25
		2				
	S-6B	1			Rd br \$yC <u>Red brown Silty CLAY.</u>	Rec=0.5' WET HNU=520 ppm pp <0.25
		1				
14	S-7	1			Clay lens Rd br \$yC (FILL) <i>SCF</i> 14.0'	Rec=1.2' WET HNU=480 ppm Black/brown globules on water in spoon
		1				
		1				
		4				
16	S-8	7			<u>Gray brown coarse to fine (+) SAND, and Silt, some medium (-) to fine gravel.</u> - minute shell fragments (ALLUVIUM) 16.6'	Rec=1.8' WET HNU=60 ppm
		12				
		9				
		5				
18	S-9A	1			Rd br \$yC <u>Red brown Silty CLAY.</u> (GLACIO-LACUSTRINE)	Rec=2.0' WET HNU=50.0 ppm pp<0.25 Sheen on water in spoon
		1				
	S-9B	1				
		1				
20	S-10	WR			Shelby Tube @ 300 lbs.	Rec=2.1' pp<0.25 HNU - head space top tube 140 ppm Clay bottom 5.0 ppm
		WR				
		1				
		1				
22	T-11	Push			Total Depth = 22.0 Depth to water ~12.0' Casing = 22.0' Grouted to surface	

Dunn Geoscience Corporation Albany, NY (518) 458-1313		Test Boring Log				Boring No. 1-28
PROJECT: Inlet Investigation - Task 3					Sheet 1 of 4	
CLIENT: Occidental Chemical Corporation					Job No. 595-03-1165	
DRILLING CONTRACTOR: Empire Soils Investigations, Inc.					Meas. Pt. Elev.	
PURPOSE: Subsurface Investigation					Ground Elev. 573.9	
DRILLING METHOD: Hollow Stem Auger		SAMPLE	CORE	CASING	Datum MSL	
DRILL RIG TYPE: CME-75	TYPE	SS	N/A	HSA	Date Started: 6/26/89	
GROUNDWATER DEPTH:	DIAM.	2" OD	N/A	4-1/4" ID	Date Finished: 6/27/89	
MEAS. PT.:	WEIGHT	140#				Driller: R. Kephart
DATE OF MEAS.:	FALL	30"				Inspector: M. Ralbovsky

Depth (Feet)	Sample Number	Blow Count	Unified Classification	GRAPHIC LOG	GEOLOGIC DESCRIPTION	REMARKS
2	S-1	5			Br cmf S, l(-)Cy\$, t fG - slag - organics, roots	Rec=0.5' Dry HNU=0.8 ppm (Bkgd=0.4)
		5				
		4				
		5				
	S-2	11			Slag - dkbr S&\$ - oxidized pieces	Rec=1.0' Moist HNU=1.2 ppm
		51				
		23				
		10				
5	S-3	7			<u>Brown fine SAND, little (+)</u> <u>Clayey Silt.</u> - slag - oxidized pieces	Rec=0.3' Moist HNU=Bkgd
		6				
		5				
		9				
6	S-4	4			Slag	Rec=0.1' Moist HNU=0.6 ppm
		8				
		4				
		5				
8	S-5	5			cobble blocked spoon	Rec=0.0
		4				
		5				
		7				
10						

Dunn Geoscience Corporation Albany, NY (518) 458-1313				Test Boring Log		Boring No. I-28
PROJECT: Inlet Investigation - Task 3					Sheet 2 of 4	
CLIENT: Occidental Chemical Corporation					Job No. 595-03-1165	
Depth (Feet)	Sample Number	Blow Counts	Unified Classif- ication	Visual Log Description	Geologic Description	Remarks
12	S-6	4			Dk gr f S, t Cy\$, t(-)fG - angular	Rec=1.3' WET HNU=Bkgd
		2				
		2				
		4				
14	S-7	4			Dk gr mf(+)S, t(-)Cy\$ - oxidized layer	Rec=2.0' WET HNU=Bkgd
		5				
		6				
		12				
16	S-8	5			Dk gr cmf(+)S, t \$	Rec=1.6' WET HNU=Bkgd
		2				
		2				
		4				
18	S-9	1			Dk gr cmf S, t fG - angular (Alluvium)	Rec=1.9' WET HNU=Bkgd
		4				
		7				
		6				
20	S-10	3			Dk gr cmf S, t(-)fG - angular - calcareous fragments	Rec=1.6' WET HNU=Bkgd
		6				
		6				
		10				
22	S-11	1			Dk gr cmf S	Rec=2.0' WET HNU=Bkgd
		3				
		3				
		4				
24	S-12	WR			Dk gr cmf S - washed - pocket of organics, roots	Rec=2.0' WET HNU=Bkgd
		WR				
		4				
		5				
24	S-13	---			Dk gr cmf S, t fG - angular	Rec=1.3' WET

Dunn Geoscience Corporation				Test Boring Log		Boring No. 1-28			
PROJECT: Inlet Investigation - Task 3						Sheet 3 of 4			
CLIENT: Occidental Chemical Corporation						Job No. 595-03-1165			
Depth (Feet)	Sample Number	Blow Counts	Unified Classification	Visual Log Description	Geologic Description	Remarks			
26	S-13	2			- cleanly washed - homogeneous	HNU=Bkgd			
		3							
28	S-14	---			Dk gr cmf S, t \$, l mf(+)G - angular to subrounded - washed - wood fragments	Rec=1.8' WET HNU=Bkgd			
		2							
		9							
		15							
30	S-15	---			<u>Dark gray coarse medium fine SAND; trace fine gravel.</u> - subangular - washed (ALLUVIUM) - wood fragments	Rec=2.0' WET HNU=Bkgd			
		7/0.3'							
		29							
		50							
32	S-16	---			Dk gr cmf S, t \$, l mfG - subangular - washed - calcareous fragments	Rec=1.9' WET HNU=Bkgd			
		3/0.2'							
		22							
		30							
34	S-17A	10			Dk gr cmf S, l \$, l mf(+)G - angular - calcareous fragments	Rec=2.0' WET HNU=Bkgd			
		15							
36	S-17B	6			33.8' Rd br Cy\$ s, mf S, t fG - subangular - defined contact Rd br Cy\$ a, f S, l fG - angular - interbedded sand layers	Rec=2.0' WET HNU=Bkgd			
		11							
	38	S-18					3	Rd br Cy\$ l, f S, t fG - angular - interbedded sand seam	Rec=0.8' WET HNU=Bkgd
							3		
6									
8									
40	S-19	4			<u>Red brown Silt and CLAY trace.</u> <u>fine gravel.</u> - angular (TILL)	Rec=0.9 WET HNU=Bkgd			
		6							
		6							
		6							
42	S-20	---							
		2							
		6							
		8							

Dunn Geoscience Corporation Albany, NY (518) 458-1313				Test Boring Log		Boring No. I-28
PROJECT: Inlet Investigation - Task 3						Sheet 4 of 4
CLIENT: Occidental Chemical Corporation						Job No. 595-03-1165
Depth (Feet)	Sample Number	Blow Counts	Unified Classif- ication	Visual Log Description	Geologic Description	Remarks
42	T-1	Push			Shelby Tube @ 250 lbs. No recovery	Rec=0.0
		▼				
44	T-2	Push			Shelby tube @ 250 lbs. No recovery	Rec=0.0
		▼				
44					End of boring Total depth = 44.0' Casing = 42.0'	

Dunn Geoscience Corporation Albany, NY (518) 458-1313		Test Boring Log			Boring No. I-29
PROJECT: Inlet Investigation - Task 3					Sheet 1 of 2
CLIENT: Occidental Chemical Corporation					Job No. 595-03-1165
DRILLING CONTRACTOR: Empire Soils Investigations, Inc.					Meas. Pt. Elev.
PURPOSE: Subsurface Investigation					Ground Elev. 571.4
DRILLING METHOD: Hollow Stem Auger		SAMPLE	CORE	CASING	Datum MSL
DRILL RIG TYPE: CME-55D	TYPE	SS	N/A	HSA	Date Started: 6/27/89
GROUNDWATER DEPTH:	DIAM.	2" OD	N/A	4-1/4" ID	Date Finished: 6/27/89
MEAS. PT.:	WEIGHT	140#			Driller: R. Kephart
DATE OF MEAS.:	FALL	30"			Inspector: M. Ralbovsky

Depth (Feet)	Sample Number	Blow Count	Unified Classification	GRAPHIC LOG	GEOLOGIC DESCRIPTION	REMARKS
2	S-1	6			Br dk br Cy\$ s, f S - slag - wood fragments - organics, roots <u>Brown tan Clayey SILT some fine Sand.</u> (FILL)	Rec=0.9' Moist HNU=2.0 ppm (Bkgd=0.6 ppm)
		8				
		10				
		10				
4	S-2	7			Tn br Cy\$ s, f S - oxidized pieces - interbedded sand seams - organics	Rec=1.6' Moist HNU=0.8 ppm
		7				
		6				
		6				
5	S-3	4			Br \$yC - frequent varves - interbedded sand seams and partings	Rec=1.8' Moist HNU=0.8 ppm pp=2.25, 2.25, 2.0
		4				
		7				
		17				
6	S-4	12			Br \$yC - frequent varves - interbedded sand seams and partings	Rec=2.0' Moist HNU=Bkgd pp=3.8, 4.0, 3.8
		18				
		25				
		30				
8	S-5	9			<u>Brown Silty CLAY</u> - frequent varves (GLACIO-LACUSTRINE)	Rec=1.5' Moist HNU=Bkgd pp=4.5, 4.5, 4.3
		17				
		25				
		30				
10						

Dunn Geoscience Corporation Albany, NY (518) 458-1313		Test Boring Log			Boring No. I-30 (Revised 9/12/89)
PROJECT: Inlet Investigation - Task 3					Sheet 1 of 3
CLIENT: Occidental Chemical Corporation					Job No. 595-03-1165
DRILLING CONTRACTOR: Empire Soils Investigations, Inc.					Meas. Pt. Elev.
PURPOSE: Subsurface Investigation					Ground Elev. 566.0
DRILLING METHOD: Hollow Stem Auger		SAMPLE	CORE	CASING	Datum MSL
DRILL RIG TYPE: CME-55D	TYPE	SS	N/A	HSA	Date Started: 7/5/89
GROUNDWATER DEPTH:	DIAM.	2" OD	N/A	4-1/4" ID	Date Finished: 7/6/89
MEAS. PT.:	WEIGHT	140#			Driller: D. Beitz
DATE OF MEAS.:	FALL	30"			Inspector: M. Ralbovsky

Depth (Feet)	Sample Number	Blow Count	Unified Classif- ication	GRAPHIC LOG	GEOLOGIC DESCRIPTION	REMARKS
2	S-1	5			Slag - concrete pieces - coarse sand - piece of brick	Rec=1.0' WET HNU=Bkgd (Bkgd=0.1 ppm)
		8				
		11				
		3				
4	S-2	3			Gr br mfG s, mf S, l \$ - slag	Rec=1.0' WET HNU=0.4 ppm
		9				
		3				
		1				
5	S-3	2			Slag - wood frags - gravel (FILL) Gr cmf S, l \$ - gravel, angular - slag	Rec=1.1' WET HNU=0.4 ppm
		1				
		6				
		7				
6	S-4	1			Wood - dark brown silt - little gravel - calcareous fragments	Rec=1.1' WET HNU=0.4 ppm
		1				
		1				
		2				
8	S-5	2	Gr br cmf G s(+), cmf S, t(-)\$ - piece of brick - slag	Rec=1.3' WET HNU=Bkgd		
		61				
		20				
		13				
10						

Dunn Geoscience Corporation				Test Boring Log		Boring No. I-30
PROJECT: Inlet Investigation - Task 3						Sheet 2 of 3
CLIENT: Occidental Chemical Corporation						Job No. 595-03-1165
Depth (Feet)	Sample Number	Blow Counts	Unified Classification	Visual Log Description	Geologic Description	Remarks
12	S-6	3			Dk gr cmf S, t(-)\$, a m(-)f G - angular to subrounded - calcareous fragments	Rec=1.1' WET HNU=Bkgd
		14				
		16				
		8				
14	S-7	7			Dk gr c(-)mf(+) S, l\$, s(+)m (-)f G - angular to subangular - calcareous fragments	Rec=2.0' WET HNU=Bkgd
		10				
		8				
		17				
16	S-8	6			Dk gr mfG s, c(-)fS - angular to subrounded	Rec=0.6' WET HNU=Bkgd
		8				
		13				
		5				
18	S-9	11			Gr br cmf S, t(-)\$, l fG - subangular - calcareous fragments	Rec=2.0' WET HNU=Bkgd
		16				
		13				
		30				
20	S-10	22			Gr c(+)mf(-) S, a(+)fG - angular to rounded - wood fragments - calcareous fragments	Rec=1.7' WET HNU=Bkgd
		33				
		30				
		22				
22	S-11	---			Gr br cmfS, a(+)m(-)f(+)G - angular to rounded - calcareous fragments <u>Dark gray coarse to fine SAND, and medium to fine gravel, trace Silt. (ALLUVIUM)</u>	Rec=1.5' WET HNU=Bkgd Wash augers to remove plug - lost 0.5' of spoon
		2				
		8				
		10				
24	S-12A	9			Gr br rd cmf S, l fG - angular - calcareous fragments	Rec=2.0' WET HNU=Bkgd
		3				
	S-12B	3			Rd br C&\$ t, fG - angular - occ varves - defined contact	
		3				
24	S-13	1				Rec=1.4' WET
		2				

Dunn Geoscience Corporation Albany, NY (518) 458-1313				Test Boring Log		Boring No. I-30	
PROJECT: Inlet Investigation - Task 3						Sheet 3 of 3	
CLIENT: Occidental Chemical Corporation						Job No. 595-03-1165	
Depth (Feet)	Sample Number	Blow Counts	Unified Classif- ication	Visual Log Description	Geologic Description	Remarks	
26	S-13	2			<u>Red brown Silty CLAY trace (+), fine gravel.</u> (GLACIO-LACUSTRINE)	HNU=Bkgd	
		4				26.5'	Rec=2.0' WET HNU=Bkgd
	S-14	7			Rd br \$yCt(+), t fG - angular (TILL)		
		10					
		16					
28	T-1	15			Shelby tube @ 100 lbs.	Rec=1.8' HNU=Bkgd	
		Push					
30					30.0'	End of Boring Total Depth = 30.0' Water Level ~1.0' Casing = 28.0'	

DUREZ INLET INVESTIGATION

Inlet Water Boring Logs
IW - series
(Task 4)

Dunn Geoscience Corporation Albany, NY (518) 458-1313		Test Boring Log			Boring No. IW-1	
PROJECT: Inlet Investigation					Sheet 1 of 3	
CLIENT: Occidental Chemical Corporation					Job No. 595-3-1165	
DRILLING CONTRACTOR: Pennsylvania Drilling Company					Meas. Pt. Elev.	
PURPOSE: Subsurface Investigation					Ground Elev. ~564.51'	
DRILLING METHOD: Driven Casing		SAMPLE	CORE	CASING	Datum MSL	
DRILL RIG TYPE: Penn Drill 12B	TYPE	SS	NA	Steel	Date Started: 11/13/89	
GROUNDWATER DEPTH:	DIAM.	2" OD	NA	8"/6"/3"	Date Finished: 11/15/89	
MEAS. PT.:	WEIGHT	140#			Driller: Jim Lang	
DATE OF MEAS.:	FALL	30"			Inspector: D. Rowlinson/ M. Palleschi	

Depth (Feet)	Sample Number	Blow Count	Unified Classification	GRAPHIC LOG	GEOLOGIC DESCRIPTION	REMARKS
1		Driven			8" casing to 6.5'	8" casing 1.5'
					6" casing to 7.0'	Below soft sediment
					Soft sediment probed to determine thickness (3 times)	6" casing 2.0'
					Average = 4.7'	below soft sediment
3						8", 6" casing annulus filled with bentonite pellets and bentonite slurry.
5						
7						
	S-1	WOH	CH		<u>Brown Red SILTY CLAY.</u> (FILL)	Rec=1.3' WET pp=0 HNU=Bkgd 8 ppm on shoe break
					Br rd gr \$yC - red varving - 1st 6" wood plug pushed/split	
9						
	S-2	WOR	CH		Br rd gr \$yC - red mottling	Rec=1.1' WET
		8	ML		- dk gr \$ t, fS, in tip of shoe	HNU=Bkgd pp=0.6
10						

Dunn Geoscience Corporation Albany, NY (518) 458-1313				Test Boring Log		Boring No. IW-1
PROJECT: Inlet Investigation					Sheet 2 of 3	
CLIENT: Occidental Chemical Corporation					Job No. 595-3-1165	
Depth (Feet)	Sample Number	Blow Counts	Unified Classification	Graphic Log	Geologic Description	Remarks
10		8	GP		Gray coarse to fine GRAVEL some coarse medium fine Sand, trace Silt.	10 ppm in shoe break N=16
		9				
11	S-3	4			Gr m(+) f G (slag)	Rec=.1' WET HNU=Bkgd 2 ppm on wash water N=6
		3			(ALLUVIUM)	
		3			FILL?	
		3				
13	S-4	10	SP		Gr m(-) f(+) S, t \$	Rec=0 Rec 2nd try=.1' WET HNU=Bkgd N=34
		17				
		17				
		20				
15	S-5	20	GW		Gr c(-)mf G l(+), c(-)mf S, t \$	Rec=1.4' WET HNU=5 ppm N=41
		20				
		21				
		19				
17	S-6	10	SW		Gr c(+) mf S, t \$, a m(-)f G 17.4'	Rec=1.1' WET HNU=200 ppm N=12
		6			Block of wood 17.9'	
		6			Gr c(+)mf S, t \$, s(+) cm(-)f(-) G - odor	
		20				
19	S-7	26	GW		Gr mf G s, cmf S, t \$ - subangular to subrounded	Rec=1.7' WET HNU=120 ppm N=40
		19				
		21				
		22				
21	S-8	6	GP		Gr mf(+) G s, cmf S, t \$ - strong odor	Rec=0.4' WET HNU=250 ppm N=12
		4				
		8				
		8				
23	S-9	22	SW		Gr c(-)mf S, t \$, a mf G - subangular 23.5'	Rec=0.8' WET HNU=30 ppm pp<0.25 N=9
		7			Br rd \$ & C l(+), mf G - sheen present above \$&C	
		2	CL		- subangular to angular	
25		3				

Dunn Geoscience Corporation Albany, NY (518) 458-1313				Test Boring Log		Boring No. IW-1
PROJECT: Inlet Investigation						Sheet 3 of 3
CLIENT: Occidental Chemical Corporation						Job No. 595-3-1165
Depth (Feet)	Sample Number	Blow Counts	Unified Classification	Graphic Log	Geologic Description	Remarks
25	U-10	Pushed	CL		Shelby Tube - no pressure gauge	Rec=1.4' HNU=2 ppm
27	S-11	2	CL		Br rd \$ & C s, mf G <u>Brown red SILT & CLAY little medium fine Gravel.</u> (TILL)	Rec=0.8' WET HNU=Bkgd pp<0.25 N=8
		2				
		6				
		6				
29	S-12	5	CL		Br rd \$ & C l, m(+)f G	Rec=0.8' HNU=Bkgd pp=0.5 N=10
		4				
		6				
		6				
31					31.0'	
					End of Boring Total Depth of Hole = 31.0' 3" casing to 24.0' Grouted to surface	

Dunn Geoscience Corporation Albany, NY (518) 458-1313		Test Boring Log			Boring No. IW-2
PROJECT: Inlet Investigation					Sheet 1 of 3
CLIENT: Occidental Chemical Corporation					Job No. 595-3-1165
DRILLING CONTRACTOR: Pennsylvania Drilling Company					Meas. Pt. Elev.
PURPOSE: Subsurface Investigation					Ground Elev. ~560.61'
DRILLING METHOD: Driven Casing		SAMPLE	CORE	CASING	Datum MSL
DRILL RIG TYPE: Penn Drill 12B		TYPE	SS	NA	Steel
GROUNDWATER DEPTH:		DIAM.	3" OD	NA	8"/6"/4"
MEAS. PT.:		WEIGHT	140#	Driller: Jim Lang	
DATE OF MEAS.:		FALL	30"	Inspector: D. Rowlinson	

Depth (Feet)	Sample Number	Blow Count	Unified Classification	GRAPHIC LOG	GEOLOGIC DESCRIPTION	REMARKS
1		Driven			8" Casing to 5.5'	8" casing 1.5" Below soft sediment 6" casing 2.0' below Bentonite pellets Bentonite slurry fill annulus between 8" and 6" casing
					6" casing to 6.0'	
					Soft sediment probed to determine thickness (three times) Average = 3.9'	
3						
					~3.9'	
5						
6					<u>Brown red SILTY CLAY.</u> (FILL)	
7	S-1	5 1 1	CH		Br rd gr \$yC - t(-) soft sed in top of sample - rd mottling - duct tape	Rec=1.4' WET HNU=Bkgd pp<0.25 N=2
8	S-2A	WOR WOR	CH		Br rd gr \$yC - rd mottling	Rec=1.5' WET HNU=Bkgd pp<0.25 N=3
9	S-2B	3			Rd br gr \$&C s(+), c S, s c(+), mf G 9.0'	
10	S-3	WOH 1	OH		Bk gr \$ - wood/decaying wood	Rec=1.3' HNU=Bkgd WET N=3

Dunn Geoscience Corporation				Test Boring Log		Boring No. IW-2
Albany, NY (518) 458-1313						
PROJECT: Inlet Investigation						Sheet 2 of 3
CLIENT: Occidental Chemical Corporation						Job No. 595-3-1165
Depth (Feet)	Sample Number	Blow Counts	Unified Classif- ication	Graphic Log	Geologic Description	Remarks
10		2	OH		Bk gr \$ - wood/decayed wood - shells	Rec=1.3' WET HNU=Bkgd N=2
11	S-4	WOH 1				
12		1				
13	S-5	WOH 1 3	OH		Bk gr \$ - wood/decayed wood - shells (FILL) Flushed with roller bit cuttings dk gr \$ & S 15.0' Gr cmf S, a c(+)mf G - calcareous frag 15.5' Gr rd br f G s, c(+)m S - subrounded gravel Gr br c(+) mf S, l f G <u>Gray brown coarse (+) mf SAND, little medium fine Gravel, (ALLUVIUM)</u> Gr br c(+) mf S, l f G 18.5' Gr br mf G s, c(+)mf S, t \$ - graded bedding cS to m G 19.0' Gr br c(-)mf S, l mf G - wood frag - calcareous frag 19.5'	Rec=1.2' WET HNU=Bkgd N=4 Rec=0 2nd=0 Rec=0 2nd=1.0' WET HNU=Bkgd N=6 Rec=0 2nd=0.2' WET HNU=Bkgd N=8 Rec=1.4' WET HNU=Bkgd N=42 Rec=0 2nd=0
14						
15	S-6A	4				
16	S-6B	2 4				
17	S-7	WOH 4 4				
18	S-8A	48 21				
19	S-8B	21				
20						
21						
22	S-9	5 4 4				
23	S-10	8 7 7				
24						
25	U-11					

Dunn Geoscience Corporation Albany, NY (518) 458-1313		Test Boring Log			Boring No. IW-3
PROJECT: Inlet Investigation					Sheet 1 of 3
CLIENT: Occidental Chemical Corporation					Job No. 595-3-1165
DRILLING CONTRACTOR: Pennsylvania Drilling Company					Meas. Pt. Elev.
PURPOSE: Subsurface Investigation					Ground Elev. ~564.44'
DRILLING METHOD: Driven Casing		SAMPLE	CORE	CASING	Datum MSL
DRILL RIG TYPE: Penn Drill 12B	TYPE	SS	NA	Steel	Date Started: 11/7/89
GROUNDWATER DEPTH:	DIAM.	2" OD	NA	8"/6"/3"	Date Finished: 11/8/89
MEAS. PT.:	WEIGHT	140#	Driller: Jim Lang Inspectors: D. Rowlinson M. Ralbovsky		
DATE OF MEAS.:	FALL	30"			

Depth (Feet)	Sample Number	Blow Count	Unified Classification	GRAPHIC LOG	GEOLOGIC DESCRIPTION	REMARKS
		Driven			Drive 8" casing to 9.5'	8" casing 1.5' below soft sediment
					Drive 6" casing to 10.0'	6" casing 2.0' below soft sediment
					Soft sediment probed to determine depth (2 times) average = 8.0'	Annulus between 6", 8" casing filled with bentonite slurry
2						
4						
5						
6						
8						
10						

Dunn Geoscience Corporation				Test Boring Log		Boring No. IW-3
Albany, NY (518) 458-1313						
PROJECT: Inlet Investigation						Sheet 2 of 3
CLIENT: Occidental Chemical Corporation						Job No. 595-3-1165
Depth (Feet)	Sample Number	Blow Counts	Unified Classification	Graphic Log	Geologic Description	Remarks
12	S-1	2	CH		Br gr rd \$yC - red streaks - soft sediment in first 0.3' of sample - HNU=80 ppm - some bentonite in sample - split plug pushed out 10.0-10.5'	Rec=1.1' WET HNU=Bkgd Bkgd=0.2 ppm pp<0.2 N=0
		WOH				
		WOH				
14	S-2	WOR	CH		Br gr rd \$yC - red streaks - slight bit of soft sediment in first 0.1' of sample	Rec=0.8' WET HNU=10 ppm; decreasing with depth pp<0.25 N=0
16	S-3	WOR	CH/CL		Br gr rd \$yC t, fS, t(-) mf(+) G - piece of soft sediment in spoon - flush and brush 3" casing	Rec=1.6' WET HNU=Bkgd Bkgd=1.0 ppm pp<0.25 N=0
18	S-4	WOH	CH	16.7' LWL	Br rd \$yC - no sediment <u>Brown red SILTY CLAY little, fine Sand, trace medium fine gravel.</u> (FILL)	Rec=2.0' WET HNU=Bkgd pp<0.25 N=0
20	S-5	WOH	CH		Br rd \$yC t(-), f G - rounded	Rec=2.0' WET HNU=Bkgd pp<0.25 N=0
22	S-6	WOH	CH	20.7' LWL Invert	Br rd gr \$yC t, m(+)f G - rounded - \$&C lyr - sand at tip of spoon shoe	Rec=2.0' WET HNU=Bkgd pp<0.25 N=0
24	S-7a	WOH	CH		Br rd \$yC l, f G - subangular	Rec=2.0' WET HNU=Bkgd pp<0.25 N=10
24	S-7b	2	SM		Dk gr br m(-)f S, s(+) \$ - no odor/decayed wood fibers <u>Dark gray coarse medium fine SAND and SILT. (BEDDING)</u> Dk gr \$ t, mf(+) S	Rec=2.0' WET pp<0.25
		8				
24	S-8a	13				Rec=2.0' WET pp<0.25
	S-8b	7	OH			
					Note: *	

Dunn Geoscience Corporation Albany, NY (518) 458-1313				Test Boring Log		Boring No. IW-3
PROJECT: Inlet Investigation					Sheet 3 of 3	
CLIENT: Occidental Chemical Corporation					Job No. 595-3-1165	
Depth (Feet)	Sample Number	Blow Counts	Unified Classif- ication	Graphic Log	Geologic Description	Remarks
26	S-8c	6	SP		Br gr cm(+) S, s mf G	HNU=Bkgd
		9	CL		25.7' 26.0' Br rd \$ & C a, c(+)m G	pp=<0.25 N=13
28	S-9	10	CL		Br rd \$ & C a, fS, a(-) mf(+) G - angular	Rec=0.8' WET HNU=Bkgd
		28				pp<0.25
		9			<u>Brown red SILT AND CLAY some</u> <u>(+) coarse to fine Sand. some (-)</u> <u>coarse to fine Gravel.</u>	N=37
		10			(TILL)	
30	S-10	WOR	CL		Br rd \$ & C a, cmf S, a(-) mf(+) G - angular	Rec=0.7' WET HNU=Bkgd
		5				pp<0.25
		7				N=12
32	S-11	8	CL		Br rd \$ & C a(+), cmf S, s(+) cmf(+) G	Rec=0.9' WET HNU=Bkgd
		16			- angular	pp<0.25
		7			- cobble blocked spoon	N=27
		20			- hole flushed to 32.0'	
34	S-12	7	CL		S-12 Br rd \$ & C s, cmf S, s(-) cmf G	S-12 Rec=0.7' WET
		11			- poor recovery	HNU=Bkgd pp<0.25
		13			- hole collapse-resample same interval	S-13 Rec=1.4' 2nd try
34	S-13	14	CL		S-13 Br rd \$ & C s, cmf S, s(-) cmf G	WET HNU=Bkgd
		17			34.0'	N=24
					End of Boring Total Depth = 34.0' Casing (3") = 31.7' Boring grouted to surface	
					* Note - Refers to sample S-8b - sheen on water - calcareous fragments - subangular	

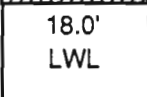
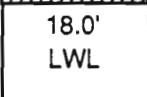
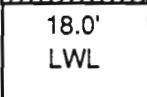
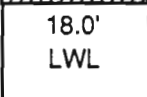
Dunn Geoscience Corporation Albany, NY (518) 458-1313		Test Boring Log			Boring No. IW-4
PROJECT: Inlet Investigation					Sheet 1 of 2
CLIENT: Occidental Chemical Corporation					Job No. 595-3-1165
DRILLING CONTRACTOR: Pennsylvania Drilling Company					Meas. Pt. Elev.
PURPOSE: Subsurface Investigation					Ground Elev. 561.89'
DRILLING METHOD: Driven Casing		SAMPLE	CORE	CASING	Datum MSL
DRILL RIG TYPE: Penn Drill 12B		TYPE	SS	NA	Steel
GROUNDWATER DEPTH:		DIAM.	2" OD	NA	8" / 6" / 3"
MEAS. PT.:		WEIGHT	140#	Driller: Jim Lang	
DATE OF MEAS.:		FALL	30"	Inspector: D. Rowlinson/ M. Ralbovsky	

Depth (Feet)	Sample Number	Blow Count	Unified Classif- ication	GRAPHIC LOG	GEOLOGIC DESCRIPTION	REMARKS
1		Driven			8" casing to 2.5'; 6" casing to 3.0' Soft sediment probed to determine depth (4 times) Average = 0.8' ~0.8'	8" casing 1.7' below soft sediment 6" casing 2.2' below soft sediment
3						8", 6" casing annulus filled w/bentonite pellets and bentonite slurry.
	S-1	7 7 5 5	CH		Br rd \$yC - soft sediment on sample - push 3" casing to 5.0' and flush	Rec=0.2' WET HNU=Bkgd Bkgd=0.2 ppm pp<0.25 N=12
5	S-2A	WOH 1	CH		<u>Brown red SILTY CLAY.</u> (FILL)	Rec=2.0' WET HNU=5 ppm (in sand) Bkgd in clay pp<0.25 N=3
	S-2B	2 2	SW CH		<u>Dark gray coarse (+) to fine SAND.</u> (ALLUVIUM)	
7	S-3	WOR WOH 2 2	CH CH CH		Br rd \$yC Br rd \$yC Gr \$yC (GLACIO-LACUSTRINE)	Rec=2.0' WET HNU=Bkgd pp<0.25 N=2
9	S-4	WOR WOH	CH		Gr \$yC	Rec=2.0' WET HNU=Bkgd pp<0.25 N=0
10						

Dunn Geoscience Corporation Albany, NY (518) 458-1313				Test Boring Log		Boring No. IW-4	
PROJECT: Inlet Investigation						Sheet 2 of 2	
CLIENT: Occidental Chemical Corporation						Job No. 595-3-1165	
Depth (Feet)	Sample Number	Blow Counts	Unified Classif- ication	Graphic Log	Geologic Description	Remarks	
11	S-4	WOH					
		WOH					
	S-5	WOR	CH		Gr \$yC ----- 12.0'	Rec=2.0'	
		WOH				WET	
		WOH				HNU=Bkgd	
		2				pp<0.25 N=0	
13	S-6	WOR	CH		Rd br \$yC - freq varves - freq silt seams	Rec=2.0'	
		WOH				WET	
		1				HNU=Bkgd	
		2				pp<0.25 N=1	
15	S-7	WOR	CH		Rd br \$yC - occ varves - occ silt seam	Rec=2.0'	
		WOH				WET	
		WOH				HNU=Bkgd	
		3				pp<0.25 N=0	
17	S-8	WOR	CH		<u>Red brown gray SILTY CLAY</u> (GLACIO-LACUSTRINE) Rd br \$yC - mottled red streaks 19.0'	Rec=2.0'	
		WOH				WET	
		WOH				HNU=Bkgd	
		2				pp<0.25 N=0	
19					Bottom of hole Total Depth = 19.0' Casing (3") = 17.0' Grouted to surface		
				</			

Dunn Geoscience Corporation Albany, NY (518) 458-1313		Test Boring Log			Boring No. IW-5
PROJECT: Inlet Investigation					Sheet 1 of 3
CLIENT: Occidental Chemical Corporation					Job No. 595-3-1165
DRILLING CONTRACTOR: Pennsylvania Drilling Company					Meas. Pt. Elev.
PURPOSE: Subsurface Investigation					Ground Elev. 565.74'
DRILLING METHOD: Driven Casing		SAMPLE	CORE	CASING	Datum MSL
DRILL RIG TYPE: Penn Drill 12B	TYPE	SS	NA	Steel	Date Started: 11/01/89
GROUNDWATER DEPTH:	DIAM.	2" OD	NA	8"/6"/3"	Date Finished: 11/03/89
MEAS. PT.:	WEIGHT	140#			Driller: Jim Lang
DATE OF MEAS.:	FALL	30"			Inspector: D. Rowlinson M. Ralbovsky

Depth (Feet)	Sample Number	Blow Count	Unified Classif- ication	GRAPHIC LOG	GEOLOGIC DESCRIPTION	REMARKS
		Driven			Drive 8" casing to 10.9'	8" casing 1.5' below soft sediment
					Drive 6" casing to 11.5'	6" casing 2.1' below soft sediment
2					Soft sediment probed first to determine depth (2 times) Average = 9.4'	Bentonite pellets, bentonite slurry fill in annulus between 8" and 6" casing.
4						
5						
6						
8						
10						

Dunn Geoscience Corporation				Test Boring Log		Boring No. IW-5
Albany, NY (518) 458-1313						
PROJECT: Inlet Investigation					Sheet 2 of 3	
CLIENT: Occidental Chemical Corporation					Job No. 595-3-1165	
Depth (Feet)	Sample Number	Blow Counts	Unified Classif- ication	Graphic Log	Geologic Description	Remarks
11.5	S-1	Driven	CH		<u>Brown red SILTY CLAY trace (-), fine gravel.</u> (FILL) Br gr rd \$yC - chunk gr br \$yC, stiff, varved seems out of place	Rec=1.1' WET HNU=1.0 ppm Bkgd=0.3 ppm pp<0.25 N=1
		2				
		1/1.0'				
13.5	S-2	WOH	CH		Br gr rd \$yC - red streaks, banding	Rec=1.5' WET HNU=Bkgd 2 ppm in 3" casing pp<0.25 N=0
15.5	S-3	WOH	CH		Br rd \$yC t(-), f G - gravel rounded - piece of wood (~ 1mm) - occasional varves	Rec=2.0' WET HNU=Bkgd 2 ppm on shoe break pp<0.25 N=0
17.5	S-4A	1	CL		Br rd \$yC t, f S, t(-) f G - sample disturbed	Rec=1.8' WET HNU=Bkgd 15 ppm on shoe break pp<0.25 N=4
		2				
		2				
19.5	S-4B	3	CH		Br rd \$yC - freq varves	Rec=1.2' WET HNU=Bkgd 7 ppm on shoe break pp=<0.25 N=5
		1				
		2				
21.5	S-5	3	CH		Br rd \$yC - mottled red streaks - 2 pieces rounded gravel	Rec=1.9' WET HNU=6 ppm 65 ppm on shoe break pp<0.25 N=5
		2				
		2				
23.5	S-6A	WOH	CH		Br rd \$yC t, f G - mottled red streaks	Rec=1.7' WET HNU=110 ppm pp<0.25
		2				
		3				
25	S-6B	5	SP		Br gr mf(+) S - odor - wood fibers	
25	S-7A	11	CL		Rd br gr \$&C s, mf(+) S, l(+) f G	
25	S-7B	16	SW		Gr br cm(+)f S, t(+) f G - piece of wood	
		14				

DUNN GEOSCIENCE CORPORATION

Dunn Geoscience Corporation				Test Boring Log		Boring No. IW-6
Albany, NY (518) 458-1313						
PROJECT: Inlet Investigation						Sheet 2 of 2
CLIENT: Occidental Chemical Corporation						Job No. 595-3-1165
Depth (Feet)	Sample Number	Blow Counts	Unified Classif- ication	Graphic Log	Geologic Description	Remarks
11	S-3B	7	SM		Gr m(-) f S, l \$ - wood frag/calc shells	HNU=Bkgd N=20
		13			Gr c(-)mf(+) G a, c(+)mf S - calc frag; subrndd G; - c G contact w/clay	Rec=0.8' WET
12	S-4	21	GP		Gray coarse medium fine (+) SAND and coarse medium fine Gravel. trace Silt. (ALLUVIUM)	HNU=Bkgd N=17
		9			Gr br cmf (+) G s, cm S - calc frag; shells	13.0'
14	S-5a	1	CH		Br gr \$yC - red streaks	Rec=1.3' WET HNU=Bkgd pp<.25 N=4
		2			Br gr \$yC - varves (red)	Rec=1.5' WET HNU=Bkgd pp<.25; N=4
16	S-5b	2	CH		Shelby Tube No pressure gauge Brown red SILTY CLAY. (GLACIO-LACUSTRINE)	Rec=1.5' WET HNU=Bkgd pp<.25 N=0
		3				17.5'
18	S-6	2	CH			
		2				
16	U-7	Push				
18					End of boring Total Depth of hole 17.5' 4" casing to 15.5' Grouted to surface	
						
						
						
						
						
						
						
						
						
						
						
						
						
						
						
						
						
						
						
						
						
						
						
						
						
						
						
						
						
						
						
						
						
						
						
						
						
						
						

DUREZ INLET INVESTIGATION

Monitoring Well Boring Logs
MW - series
(Task 3)

Dunn Geoscience Corporation Albany, NY (518) 458-1313		Test Boring Log			Boring No. MW-1S	
PROJECT: Inlet Investigation					Sheet 1 of 2	
CLIENT: Occidental Chemical Corporation					Job No. 00595-01165	
DRILLING CONTRACTOR: Pennsylvania Drilling Company					Meas. Pt. Elev. 573.10'	
PURPOSE: Subsurface Investigation					Ground Elev. 573.4'	
DRILLING METHOD: Hollow Stem Auger		SAMPLE	CORE	CASING	Datum MSL	
DRILL RIG TYPE: Mobile 61	TYPE	NA	NA	HSA	Date Started: 11/15/89	
GROUNDWATER DEPTH:	DIAM.	NA	NA	4-1/4" ID	Date Finished: 11/15/89	
MEAS. PT.:	WEIGHT	NA			Driller: H. Dykes, Jr.	
DATE OF MEAS.:	FALL	NA			Inspector: M. Raibovsky	
Depth (Feet)	Sample Number	Blow Count	Unified Classif- ication	GRAPHIC LOG	GEOLOGIC DESCRIPTION	REMARKS
		Auger			Auger to 12.0', see Boring Log MW-11 for sample description	
2						
4						
5						
6						
8						
10						

Dunn Geoscience Corporation Albany, NY (518) 458-1313				Test Boring Log		Boring No. MW-1S
PROJECT: Inlet Investigation						Sheet 2 of 2
CLIENT: Occidental Chemical Corporation						Job No. 00595-01165
Depth (Feet)	Sample Number	Blow Counts	Unified Classif- ication	Graphic Log	Geologic Description	Remarks
12		▼			12.0'	
					End of Boring Total Depth = 12.0' Water Level ~ 8.3' Casing to 12.0'	

Dunn Geoscience Corporation Albany, NY (518) 458-1313		Test Boring Log			Boring No. MW-11
PROJECT: Inlet Investigation					Sheet 1 of 4
CLIENT: Occidental Chemical Corporation					Job No. 00595-01165
DRILLING CONTRACTOR: Pennsylvania Drilling Company					Meas. Pt. Elev. 572.62'
PURPOSE: Subsurface Investigation					Ground Elev. 573.3'
DRILLING METHOD: Hollow Stem Auger		SAMPLE	CORE	CASING	Datum MSL
DRILL RIG TYPE: Mobile 61	TYPE	SS	NA	HSA	Date Started: 11/14/89
GROUNDWATER DEPTH:	DIAM.	2" OD	NA	4-1/4" ID	Date Finished: 11/15/89
MEAS. PT.:	WEIGHT	140#			Driller: H. Dykes, Jr.
DATE OF MEAS.:	FALL	30"			Inspector: M. Ralbovsky

Depth (Feet)	Sample Number	Blow Count	Unified Classification	GRAPHIC LOG	GEOLOGIC DESCRIPTION	REMARKS		
2	S-1	3	SW		Br gr or cmf S, s cmf G - slag - pieces of brick - metallic flakes	Rec=0.7' Moist HNU=Bkgd Bkgd=0.3 ppm N=55		
		8						
		47						
		50						
4	S-2	4	SW		Br wh rd or cmf S, s cmf G - slag, cinders - pieces of brick	Rec=1.0' Moist HNU=Bkgd N=16		
		9						
		7						
		4						
5	S-3	2	SW		Br dk rd cmf S, l cmf G - slag, cinders - pieces of brick	Rec=0.3' Moist HNU=Bkgd N=5		
		3						
		2						
		2						
6	S-4	1	SW		Dk rd br wh cmf S, t f G - slag Brown: dark red white orange coarse to fine SAND, little (+) coarse to fine gravel (FILL)	Rec=0.2' WET HNU=Bkgd N=5		
		4						
		1						
		2						
8	S-5A	4	SW-SM		Dk rd br wh or cmf S, l(+) mf G - slag - oxidized pieces	Rec=1.1' WET HNU=Bkgd Water level ~ 8.0' N=11		
		7						
	S-5B	4						Dk gr mf(+) S, t \$
		2						
10								

Dunn Geoscience Corporation Albany, NY (518) 458-1313				Test Boring Log		Boring No. MW-11	
PROJECT: Inlet Investigation						Sheet 2 of 4	
CLIENT: Occidental Chemical Corporation						Job No. 00595-01165	
Depth (Feet)	Sample Number	Blow Counts	Unified Classif- ication	Graphic Log	Geologic Description	Remarks	
12	S-6	3	SP-SM		Dk gr mf(+) S, s \$	Rec=1.1' WET HNU=Bkgd N=6	
		3					
		3					
		2					
14	S-7	1	SP-SM		Dk gr mf(+) S, l(+) \$ - pieces of wood	REC=1.4' WET HNU=Bkgd N=2	
		1					
		1					
		2					
16	S-8	WR	SP-SM		Dk gr mf(+) S, l \$ - piece of wood - plant fibres	REC=1.5' WET HNU=Bkgd	
		WH					
		WH					
		1					
18	S-9	2	SP-SM	Dk gr mf(+) S, l(+) \$	Rec=1.5' WET HNU=Bkgd N=11		
		5					
		6					
		8					
20	S-10	WH	SP-SM	Dk gr mf(+) S, s \$	REC=1.5' WET HNU=Bkgd N=7		
		3					
		4					
		8					
22	S-11	1	SW	Dk gr br c(+) mf S	Rec=2.0' WET HNU=Bkgd N=7		
		3					
		4					
		6					
24	S-12	3	SW	Dk gr mf S - piece of wood	Rec=2.0' WET HNU=Bkgd N=12		
		4					
		8					
		12					

Dunn Geoscience Corporation				Test Boring Log		Boring No. MW-11
Albany, NY (518) 458-1313						
PROJECT: Inlet Investigation						Sheet 3 of 4
CLIENT: Occidental Chemical Corporation						Job No. 00595-01165
Depth (Feet)	Sample Number	Blow Counts	Unified Classification	Graphic Log	Geologic Description	Remarks
24	S-13	1	SW		Dk gr c(-) mf S - calcareous fragments	Rec = 2.0' WET HNU=Bkgd N=9
		3				
		6				
		8				
26	S-14	3	SW		Dk gr cmf S, t(-) f G - calcareous fragments - gravel rounded (ALLUVIUM)	Rec = 2.0' WET HNU=Bkgd N=12
		3				
		9				
		14				
28	S-15A	3	SW		Dk gr cmf S - calcareous fragments	Rec=2.0' WET HNU=Bkgd N=38
		13				
	S-15B	25	GW-SW		Gr lt gr br rd c(+) mfG s, c(+) mf S - subangular to rounded	
		27				
30	S-16	10	GW-SW		Br lt gr rd gn cmf G s, c(+) mf S - angular to subrounded - piece of green shale - calcareous fragments	Rec=2.0' WET HNU=Bkgd N=31
		15				
		16				
		12				
32	S-17	3	SW-GW	Br dk gr cmf S, s(+) cmf G - angular to rounded	Rec=1.0' WET HNU=Bkgd N=5	
		3				
		2				
		4				
34	S-18	1	CL		Rd br \$ & C l, f G - angular <u>Red brown Silt and CLAY little (+) medium fine gravel</u> (TILL)	Rec=0.3' WET HNU=Bkgd N=7
		3				
		4				
		5				
36	S-19	1	CL		Rd br \$ & C s, mf G - angular to rounded	REC=1.5' WET HNU=Bkgd N=8
		3				
		5				
		9				
38						

Dunn Geoscience Corporation Albany, NY (518) 458-1313		Test Boring Log			Boring No. MW-1D
PROJECT: Inlet Investigation					Sheet 1 of 5
CLIENT: Occidental Chemical Corporation					Job No. 00595-01165
DRILLING CONTRACTOR: Pennsylvania Drilling Company					Meas. Pt. Elev. 572.83'
PURPOSE: Subsurface Investigation					Ground Elev. 573.56'
DRILLING METHOD: Hollow Stem Auger		SAMPLE	CORE	CASING	Datum MSL
DRILL RIG TYPE: Mobile 61	TYPE	SS	NA	Steel	Date Started: 1/29/90
GROUNDWATER DEPTH:	DIAM.	2" OD	NA	6"/4"	Date Finished: 1/31/90
MEAS. PT.:	WEIGHT	140#			Driller: H. Dykes, Jr.
DATE OF MEAS.:	FALL	30"			Inspector: M. Ralbovsky D. Rowlinson

Depth (Feet)	Sample Number	Blow Count	Unified Classif- ication	GRAPHIC LOG	GEOLOGIC DESCRIPTION	REMARKS
1		Auger			Augered 34.0' and drove S-1; withdrew augers (8" OD - 4-1/4" ID) and drove 6" steel casing to 37.5', 2.0' in clay; 4-1/4" ID steel casing driven 0.5' in clay with wood plug. Bentonite slurry tremmied before 4-1/4" ID casing driven. Refer to MW-1I for continuous sampling from 0.0' to 34.0'. (FILL)	
3						
5						
7						
9					8.8' (inferred)	
10				(ALLUVIUM)		

Dunn Geoscience Corporation Albany, NY (518) 458-1313			Test Boring Log		Boring No. MW-1D	
PROJECT: Inlet Investigation					Sheet 2 of 5	
CLIENT: Occidental Chemical Corporation					Job No. 00595-01165	
Depth (Feet)	Sample Number	Blow Counts	Unified Classif- ication	Graphic Log	Geologic Description	Remarks
10		Auger				
12						
14						
16						
18						
20						
22						
24						
		 				

Dunn Geoscience Corporation				Test Boring Log		Boring No. MW-1D
Albany, NY (518) 458-1313						
PROJECT: Inlet Investigation						Sheet 4 of 5
CLIENT: Occidental Chemical Corporation						Job No. 00595-01165
Depth (Feet)	Sample Number	Blow Counts	Unified Classification	Graphic Log	Geologic Description	Remarks
38	S-2	3	CL		Br rd \$ & C l, mf G	Rec=0.9'
		2			(TILL)	WET
		3				HNU=Bkgd (0.2 ppm)
		5				pp<0.25
40	S-3	5	CL		Br rd \$ & C l, mf G	Rec=1.0'
		4			- subrounded	WET
		5				HNU=Bkgd
		7				pp<0.25
42	S-4	2	CL		Br rd \$ & C l, f G	Rec=0.6'
		8			- possible c G blocking spoon	WET
		8			- faint odor when spoon opened	HNU=Bkgd
		10				pp<0.25
44	S-5	2	CL		Br rd \$ & C s, mf(+) G	Rec=1.3'
		4			- subrounded	WET
		5				HNU=Bkgd
		9				pp=0.5
46	S-6	3	CL		Br rd gr \$ & C l, f G	Rec=1.9'
		8				WET
		8				HNU=Bkgd
		7			CH	pp<0.25
48	S-7	2	CH		Br rd \$yC	Rec=2.0'
		2				WET
		3			CL	HNU=Bkgd
		3				pp<0.25
50	S-8	4	CH		Br \$yC	Rec=0.0
		4				WET
		5				HNU=Bkgd
		4				pp<0.25
52						N=9

[illegible]

Dunn Geoscience Corporation Albany, NY (518) 458-1313		Test Boring Log			Boring No. MW-2S	
PROJECT: Inlet Investigation					Sheet 1 of 2	
CLIENT: Occidental Chemical Corporation					Job No. 00595-01165	
DRILLING CONTRACTOR: Pennsylvania Drilling Company					Meas. Pt. Elev. 573.15'	
PURPOSE: Subsurface Investigation					Ground Elev. 573.38'	
DRILLING METHOD: Hollow Stem Auger		SAMPLE	CORE	CASING	Datum MSL	
DRILL RIG TYPE: Mobile 61	TYPE	SS	NA	HSA	Date Started: 12/5/89	
GROUNDWATER DEPTH:	DIAM.	2" OD	NA	4-1/4" ID	Date Finished: 12/5/89	
MEAS. PT.:	WEIGHT	140#			Driller: H. Dykes, Jr.	
DATE OF MEAS.:	FALL	30"			Inspector: M. Ralbovsky	

Depth (Feet)	Sample Number	Blow Count	Unified Classification	GRAPHIC LOG	GEOLOGIC DESCRIPTION	REMARKS
		Auger			Auger to 10.0'--see Boring Log MW-2D for sample description	
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						

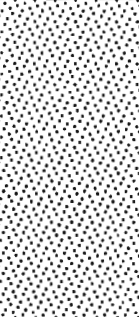
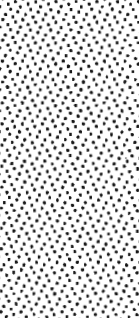
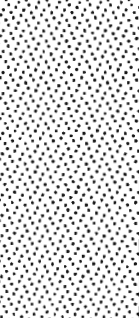
Dunn Geoscience Corporation Albany, NY (518) 458-1313		Test Boring Log			Boring No. MW-21
PROJECT: Inlet Investigation					Sheet 1 of 3
CLIENT: Occidental Chemical Corporation					Job No. 00595-01165
DRILLING CONTRACTOR: Pennsylvania Drilling Company					Meas. Pt. Elev. 573.53'
PURPOSE: Subsurface Investigation					Ground Elev. 573.6'
DRILLING METHOD: Hollow Stem Auger		SAMPLE	CORE	CASING	Datum MSL
DRILL RIG TYPE: Mobile 61	TYPE	SS	NA	HSA	Date Started: 12/4/89
GROUNDWATER DEPTH:	DIAM.	2" OD	NA	4-1/4" ID	Date Finished: 12/4/89
MEAS. PT.:	WEIGHT	140#			Driller: H. Dykes, Jr.
DATE OF MEAS.:	FALL	30"			Inspector: J. Jones M. Ralbovsky

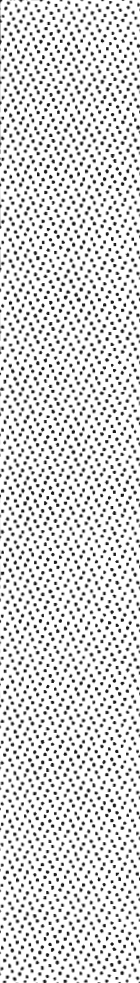
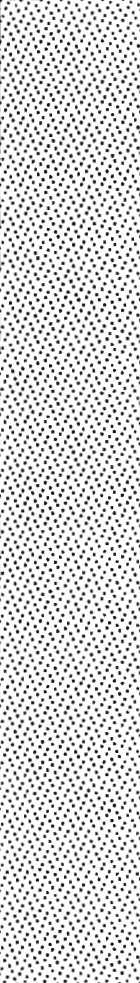
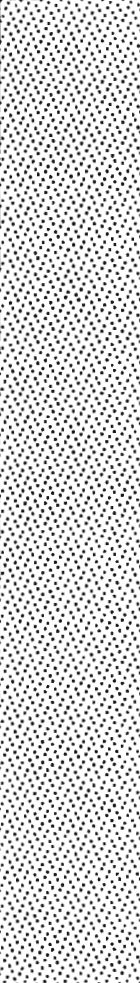
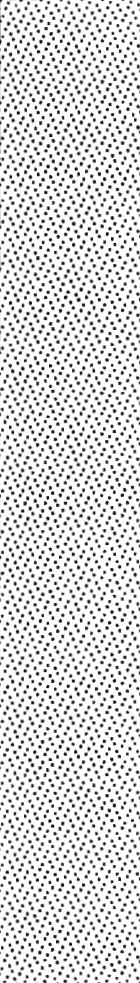
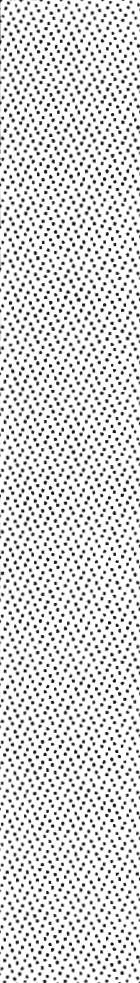
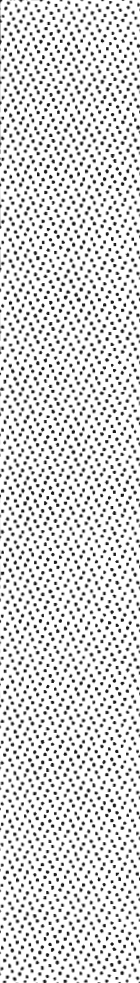
Depth (Feet)	Sample Number	Blow Count	Unified Classif- ication	GRAPHIC LOG	GEOLOGIC DESCRIPTION	REMARKS
		Auger			Auger to 34.0'--see Boring Log MW-2D for sample description	
2						
4						
5						
6						
8						
10						

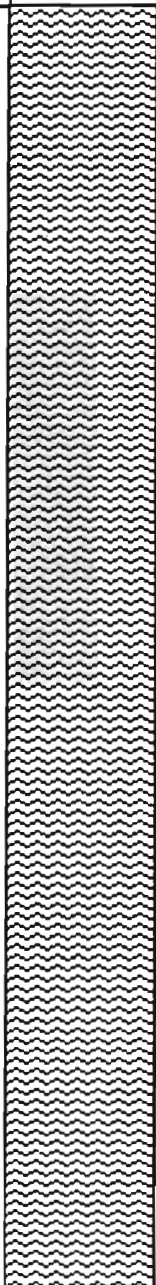
Dunn Geoscience Corporation Albany, NY (518) 458-1313			Test Boring Log		Boring No. MW-2I	
PROJECT: Inlet Investigation					Sheet 3 of 3	
CLIENT: Occidental Chemical Corporation					Job No. 00595-01165	
Depth (Feet)	Sample Number	Blow Counts	Unified Classif- ication	Graphic Log	Geologic Description	Remarks
24		Auger				
26						
28						
30						
32						
34	S-1	1	CL		Red brown Silt & CLAY little medium to fine Gravel. - angular (TILL)	Rec=1.0' H NU=Bkgd (Bkgd=0.2 ppm)
35					End of Boring Total Depth = 34.9' Casing to 34.9'	WET

Dunn Geoscience Corporation Albany, NY (518) 458-1313		Test Boring Log			Boring No. MW-2D
PROJECT: Inlet Investigation					Sheet 1 of 4
CLIENT: Occidental Chemical Corporation					Job No. 00595-01165
DRILLING CONTRACTOR: Pennsylvania Drilling Company					Meas. Pt. Elev. 572.89'
PURPOSE: Subsurface Investigation					Ground Elev. 573.4'
DRILLING METHOD: Hollow Stem Auger		SAMPLE	CORE	CASING	Datum MSL
DRILL RIG TYPE: Mobile 61	TYPE	SS	NA	HSA	Date Started: 11/29/89
GROUNDWATER DEPTH:	DIAM.	2" OD	NA	4-1/4" ID	Date Finished: 11./30/89
MEAS. PT.:	WEIGHT	140#			Driller: H. Dykes, Jr.
DATE OF MEAS.:	FALL	30"			Inspector: M. Ralbovsky

Depth (Feet)	Sample Number	Blow Count	Unified Classification	GRAPHIC LOG	GEOLOGIC DESCRIPTION	REMARKS
2	S-1	2			Dk br gr wh or bl slag, concrete pieces, oxidized pieces	Rec=0.6' Dry HNU=Bkgd (Bkgd=0.2 ppm) N=51
		38				
		13				
		6				
4	S-2	8			Bk br or metallic slag, \$ilt (FILL)	Rec=1.1' Moist HNU=Bkgd N=23
		15				
		8				
		19				
5	S-3	20			Dk br gr rd or slag, s\$ - oxidized pieces	Rec=1.0' Moist HNU=Bkgd N=47
		41				
		6				
		6				
6	S-4	1			Dk br rd gr slag - silty fill	Rec=0.6' Moist HNU=Bkgd N=4
		1				
		3				
		5				
8	S-5	1	No recovery, slag chunk blocked spoon	Rec=0.0 N=3		
		2				
		1				
		4				
10						

Dunn Geoscience Corporation				Test Boring Log		Boring No. MW-2D
Albany, NY (518) 458-1313						
PROJECT: Inlet Investigation						Sheet 2 of 4
CLIENT: Occidental Chemical Corporation						Job No. 00595-01165
Depth (Feet)	Sample Number	Blow Counts	Unified Classification	Graphic Log	Geologic Description	Remarks
12	S-6	1	SW-GW		Dark brown black red SLAG pieces, Silt fill (FILL)	Rec=1.0' WET HNU=0.6 ppm Odor N=4
		2				
		2				
		2				
14	S-7	3	SW-SM		Gr br cmf S, t \$, a cmf G - slag Gr mf(+) S, l \$	Rec=1.4' WET HNU=Bkgd N=12 Odor
		8				
		4				
		3				
16	S-8	1	SW		Gr br cmf(+) S, t \$, t mf G - subrounded (ALLUVIUM)	Rec=1.6' WET HNU=Bkgd N=2
		1				
		1				
		3				
18	S-9	1	SW-GW		Gr br cmf S, s(-) mf(+) G - angular to subrounded - calcareous fragment - chunk of wood in spoon shoe	Rec=0.9' WET HNU=Bkgd N=4
		2				
		2				
		1				
20	S-10	WR	SW-GW		Dk gr br mf S, t(+) \$, l f G - lt gr fS, \$ pocket - wood, plant fibres	Rec=1.7' WET HNU=Bkgd N=1/1.0'
		1/1.0'				
		1				
		1				
22	S-11	WH	SW-GW		Dk gr br mf(+) S, l \$, t f G - lt br \$ pocket - br rd \$ pocket - pieces of wood	Rec=1.7' WET HNU=Bkgd N=1/1.0'
		1/1.0'				
		2				
		2				
24	S-12	WR	SW-GW		Br gr cmf S, t(+) m f G - subangular to rounded - numerous calcareous fragments	Rec=0.9' WET HNU=Bkgd N=0
		WR				
		WH				
		1				

Dunn Geoscience Corporation				Test Boring Log		Boring No. MW-2D
Albany, NY (518) 458-1313						
PROJECT: Inlet Investigation						Sheet 3 of 4
CLIENT: Occidental Chemical Corporation						Job No. 00595-01165
Depth (Feet)	Sample Number	Blow Counts	Unified Classification	Graphic Log	Geologic Description	Remarks
24	S-13	Auger	SW-GW		Augers sank to 26' while cleaning borehole for 24-26' interval, sample disturbed ∴ none taken	
26	S-14	6	SW-GW		<u>Brown gray coarse to fine SAND,</u> <u>trace medium fine Gravel</u> (ALLUVIUM)	Rec=2.0' WET HNU=Bkgd N=20
		16				
		4				
		5				
28	S-15	4	SW-GW		Br gr c(+) mf S, t mf G - angular - calcareous fragments	Rec=2.0' WET HNU=Bkgd N=7
		3				
		4				
		5				
30	S-16	5	SW-GW		Br gr c(+) mf S, s mf(+) G - subangular to rounded	Rec=2.0' WET HNU=12 ppm @ 31.7' N=10
		4				
		6				
		10				
32	S-17A	8	SW-GW		Br gr c(+) mf S, a cm(+) f G - rounded - calcareous fragments	Rec=2.0' WET HNU=11 ppm N=23
		18				
	S-17B	5	SW-GW			
		5				
34	S-18	2	CL		Rd br C & \$ l, f S, t(+) f G - angular to subrounded Rd br C & \$ l, mf G - angular (TILL)	Rec=0.4' WET HNU=Bkgd pp<0.25 N=6
		2				
		4				
		7				
36	S-19	1	CL		Rd br C & \$ l, m(+) f G - angular	Rec=0.4" WET HNU=Bkgd pp<0.25 N=6
		2				
		4				
		5				
38						

Dunn Geoscience Corporation				Test Boring Log		Boring No. MW-2D
Albany, NY (518) 458-1313						
PROJECT: Inlet Investigation						Sheet 4 of 4
CLIENT: Occidental Chemical Corporation						Job No. 00595-01165
Depth (Feet)	Sample Number	Blow Counts	Unified Classification	Graphic Log	Geologic Description	Remarks
38	S-20	1	CL		Rd br C & \$ s, cmf G - angular	Rec=1.3' WET HNU=Bkgd pp<0.25 N=5
		2				
		3				
		4				
40	S-21	1	CL		Rd br \$ & C l(+), mf G - angular	Rec=1.2' WET HNU=Bkgd pp<0.25 N=5
		2				
		3				
		5				
42	U-22	Push			Push Shelby Tube @ 300 psi	Rec=2.0' HNU=Bkgd pp=0.5, 0.75, 1.0
44	S-23	3	CL		<u>Red brown SILT & CLAY some coarse (+) to fine Gravel</u> (TILL)	Rec=1.3' WET HNU=Bkgd pp=0.5 N=27
		10				
		17				
		12				
46	S-24	WH	CL		Rd br \$ & C l, mf G - angular	Rec=0.6' WET HNU=Bkgd pp<0.25 N=8
		3				
		5				
		8				
48	S-25	WR	CL		Rd br C & \$	Rec=2.0' WET HNU=Bkgd pp<0.25 N=0
		WR				
		WR				
		1				
50						50.5'
					End of Boring Total Depth = 50.5' Casing to 50.5' Water Level 10.0'	

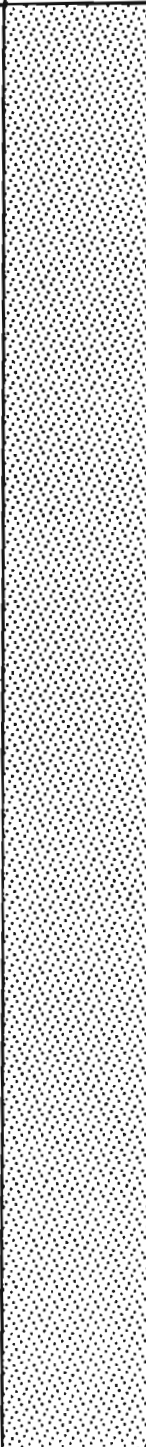
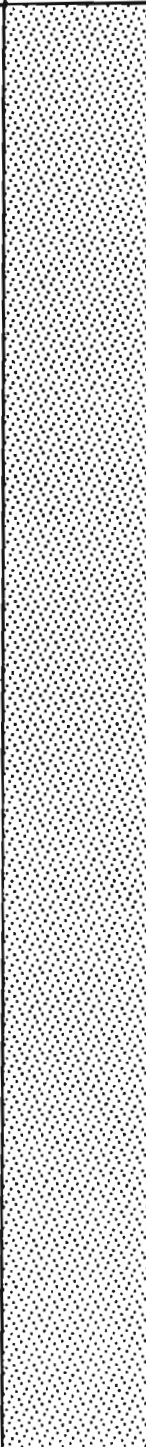
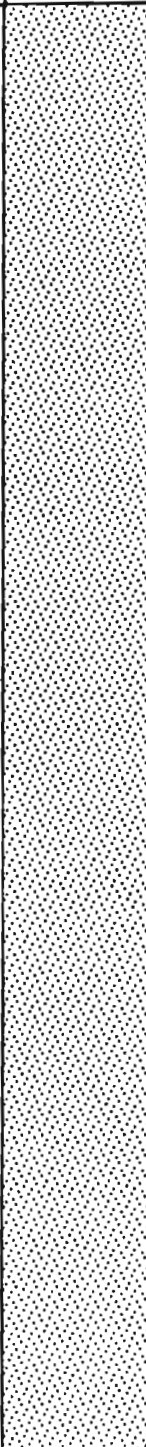
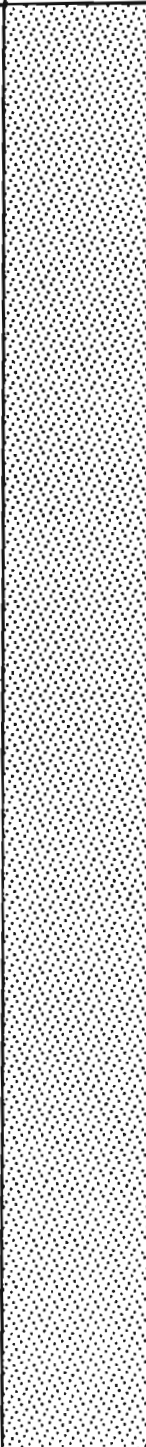
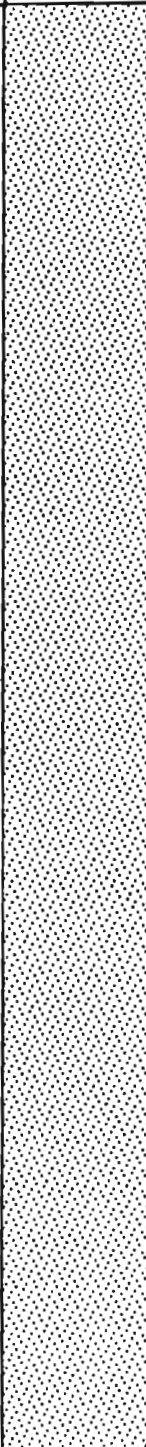
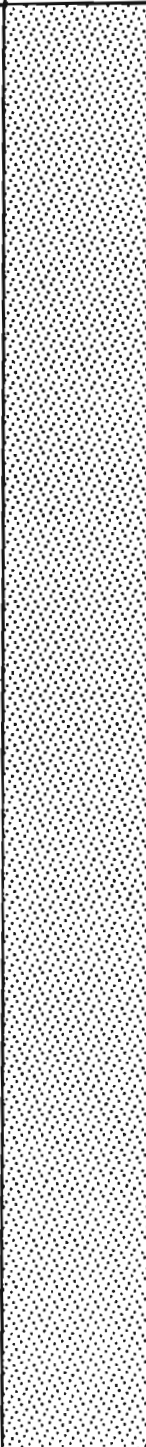
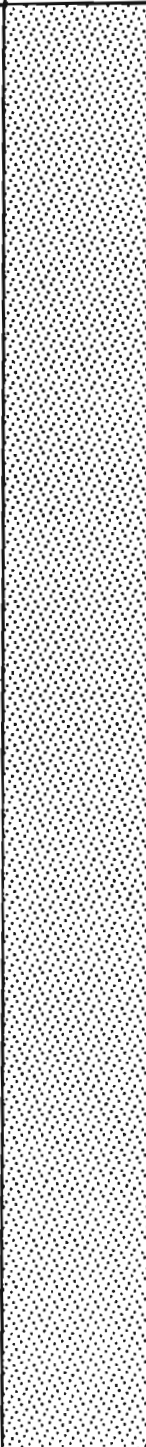
Dunn Geoscience Corporation Albany, NY (518) 458-1313		Test Boring Log			Boring No. MW-3I
PROJECT: Inlet Investigation					Sheet 1 of 3
CLIENT: Occidental Chemical Corporation					Job No. 00595-01165
DRILLING CONTRACTOR: Pennsylvania Drilling Company					Meas. Pt. Elev. 573.21'
PURPOSE: Subsurface Investigation					Ground Elev. 573.5'
DRILLING METHOD: Hollow Stem Auger		SAMPLE	CORE	CASING	Datum MSL
DRILL RIG TYPE: Mobile 61	TYPE	SS	NA	HSA	Date Started: 11/28/89
GROUNDWATER DEPTH:	DIAM.	2" OD	NA	4-1/4" ID	Date Finished: 11/28/89
MEAS. PT.:	WEIGHT	140#			Driller: H. Dykes, Jr.
DATE OF MEAS.:	FALL	30"			Inspector: M. Ralbovsky

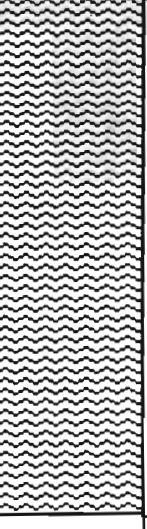
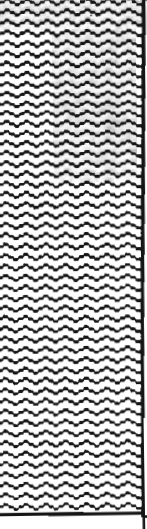
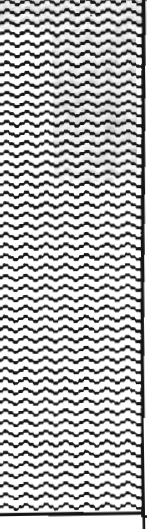
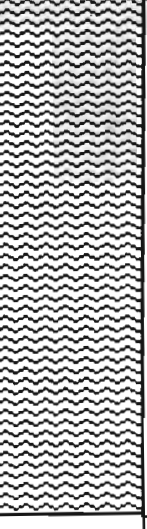
Depth (Feet)	Sample Number	Blow Count	Unified Classif- ication	GRAPHIC LOG	GEOLOGIC DESCRIPTION	REMARKS
		Auger			Auger to 25.5'--see Boring Log MW-3D for sample description	
2						
4						
5						
6						
8						
10						

Dunn Geoscience Corporation Albany, NY (518) 458-1313			Test Boring Log		Boring No. MW-31	
PROJECT: Inlet Investigation					Sheet 2 of 3	
CLIENT: Occidental Chemical Corporation					Job No. 00595-01165	
Depth (Feet)	Sample Number	Blow Counts	Unified Classif- ication	Graphic Log	Geologic Description	Remarks
		Auger				
12						
14						
16						
18						
20						
22						
24						

Dunn Geoscience Corporation Albany, NY (518) 458-1313		Test Boring Log			Boring No. MW-3D	
PROJECT: Inlet Investigation					Sheet 1 of 3	
CLIENT: Occidental Chemical Corporation					Job No. 00595-01165	
DRILLING CONTRACTOR: Pennsylvania Drilling Company					Meas. Pt. Elev. 573.22'	
PURPOSE: Subsurface Investigation					Ground Elev. 573.6'	
DRILLING METHOD: Hollow Stem Auger		SAMPLE	CORE	CASING	Datum MSL	
DRILL RIG TYPE: Mobile 61	TYPE	SS	NA	HSA	Date Started: 11/27/89	
GROUNDWATER DEPTH:	DIAM.	2" OD	NA	4-1/4" ID	Date Finished: 11/27/89	
MEAS. PT.:	WEIGHT	140#			Driller: H. Dykes, Jr.	
DATE OF MEAS.:	FALL	30"			Inspector: M. Ralbovsky	

Depth (Feet)	Sample Number	Blow Count	Unified Classification	GRAPHIC LOG	GEOLOGIC DESCRIPTION	REMARKS	
2	S-1	2	CL		Red, black slag - some cinders - little silt	Rec=1.1' Dry HNU=Bkgd (Bkgd=0.4ppm)	
		3					
		50/0.4'					
4	S-2	50/0.4'				Gray black, red slag - cinders - trace silt	Rec=1.0' Dry HNU=Bkgd
5	S-3	17				Black gray slag - cinders <u>Gray, black, red SLAG</u> (FILL)	Rec=1.3' Moist HNU=Bkgd N=48
		25					
		23					
		22					
6	S-4	17		Gray black slag - cinders	Rec=0.4' WET HNU=Bkgd N=50		
		22					
		28					
		48					
8	S-5	1	SP		Gr \$ & C t, f S Gr mf(+) S, t \$ - wood fragments (ALLUVIUM)	Rec=1.7' WET HNU=Bkgd N=7	
		3					
		4					
		5					
		10					

Dunn Geoscience Corporation				Test Boring Log		Boring No. MW-3D		
PROJECT: Inlet Investigation						Sheet 2 of 3		
CLIENT: Occidental Chemical Corporation						Job No. 00595-01165		
Depth (Feet)	Sample Number	Blow Counts	Unified Classification	Graphic Log	Geologic Description	Remarks		
10	S-6	1	SP		Gr mf(+) S, t \$	Rec=1.7' WET HNU=Bkgd N=6		
		3						
		3						
		3						
12	S-7	1	SP			<u>Gray medium fine (+) SAND,</u> <u>trace Silt</u> - wood fragments - calcareous fragments (ALLUVIUM)	Rec=1.3' WET HNU=Bkgd N=3	
		2						
		1						
		2						
14	S-8	2	SP				Gr mf(+) S, t \$ - wood fragments	Rec=1.4' WET HNU=Bkgd N=7
		3						
		4						
		4						
16	S-9	2	SP				Gr mf(+) S, t \$ - wood fragments - shell fragments	Rec=1.3' WET HNU=Bkgd N=7
		4						
		3						
		6						
18	S-10	1	SP				Gr mf(+) S, t \$ - wood fragments - shell fragments	Rec=1.2' WET HNU=Bkgd N=4
		2						
		2						
		2						
20	S-11	1	SP				Gr mf(+) S, t \$ - wood fragments - shell fragments	Rec=1.3' WET HNU=Bkgd N=5
		3						
		2						
		4						
22	S-12	1	SW				Gr cmf(+) S, t \$, t f G - wood fragments - shell fragments	Rec=1.0' WET HNU=Bkgd N=6
		3	SW					
		3						
		7						
24								

Dunn Geoscience Corporation Albany, NY (518) 458-1313				Test Boring Log		Boring No. MW-3D
PROJECT: Inlet Investigation					Sheet 3 of 3	
CLIENT: Occidental Chemical Corporation					Job No. 00595-01165	
Depth (Feet)	Sample Number	Blow Counts	Unified Classif- ication	Graphic Log	Geologic Description	Remarks
24	S-13A	1	SW		Gr cmf(+) S, t \$, l f G 25.0'	Rec=1.0' WET HNU=Bkgd N=14
		10				
	S-13B	4	CL		Rd br \$yC - occ gr silt ptgs No Recovery	Rec=0.0 HNU=Bkgd
26		1				
	S-14		CL			
28	S-15	WH	CL		<u>Red brown SILTY CLAY</u> (GLACIO-LACUSTRINE)	Rec=1.3 WET HNU=Bkgd N=1/1.0'
		WH				
		1/1.0'				
	S-16	▼	CL		Br rd \$yC - occ f S seam	Rec=1.3' WET HNU=Bkgd N=1/1.0'
30		1/1.0'				
		▼				
	S-17A	1	CL		Rd br \$yC 33.1'	Rec=1.7' WET HNU=Bkgd N=1/1.0'
32		1/1.0'				
		▼				
	S-17B	1	CL		Rd br gr \$yC l(+), cmf S, t f G - angular to subrounded	Rec=0.6' WET HNU=Bkgd N=3
34						
	S-18	1			<u>Brown red gray SILTY CLAY little</u> <u>(+), medium fine SAND, trace fine</u> <u>Gravel</u> (TILL)	Rec=1.1' WET HNU=Bkgd N=7
		1				
		2				
	S-19	5			Br rd \$yC s(+), mfS, s m f G - angular to subrounded 38.0'	
36		1				
		3				
		4				
		4				
38					End of Boring Total Depth = 38.0 Casing to 35.5'	

Dunn Geoscience Corporation Albany, NY (518) 458-1313		Test Boring Log			Boring No. MW-4S
PROJECT: Inlet Investigation					Sheet 1 of 2
CLIENT: Occidental Chemical Corporation					Job No. 00595-01165
DRILLING CONTRACTOR: Pennsylvania Drilling Company					Meas. Pt. Elev. 572.72'
PURPOSE: Subsurface Investigation					Ground Elev. 573.1'
DRILLING METHOD: Hollow Stem Auger		SAMPLE	CORE	CASING	Datum MSL
DRILL RIG TYPE: Mobile 61	TYPE	NA	NA	HSA	Date Started: 11/21/89
GROUNDWATER DEPTH:	DIAM.	NA	NA	4-1/4" ID	Date Finished: 11/21/89
MEAS. PT.:	WEIGHT	NA			Driller: H. Dykes, Jr.
DATE OF MEAS.:	FALL	NA			Inspector: M. Ralbovsky

Depth (Feet)	Sample Number	Blow Count	Unified Classif- ication	GRAPHIC LOG	GEOLOGIC DESCRIPTION	REMARKS
		Auger			Auger to 10.5'--see Boring Log MW-41 for sample description	
2						
4						
5						
6						
8						
10						

Dunn Geoscience Corporation Albany, NY (518) 458-1313		Test Boring Log			Boring No. MW-41
PROJECT: Inlet Investigation					Sheet 1 of 2
CLIENT: Occidental Chemical Corporation					Job No. 00595-01165
DRILLING CONTRACTOR: Pennsylvania Drilling Company					Meas. Pt. Elev. 572.67'
PURPOSE: Subsurface Investigation					Ground Elev. 573.1'
DRILLING METHOD: Hollow Stem Auger		SAMPLE	CORE	CASING	Datum MSL
DRILL RIG TYPE: Mobile 61	TYPE	SS	NA	HSA	Date Started: 11/20/89
GROUNDWATER DEPTH:	DIAM.	2" OD	NA	4-1/4" ID	Date Finished: 11/20/89
MEAS. PT.:	WEIGHT	140#			Driller: H. Dykes, Jr.
DATE OF MEAS.:	FALL	30"			Inspector: J. Jones

Depth (Feet)	Sample Number	Blow Count	Unified Classification	GRAPHIC LOG	GEOLOGIC DESCRIPTION	REMARKS	
2	S-1	6	SW		Black and gray slag	Rec=0.5' Dry HNU=Bkgd (Bkgd=0.3 ppm)	
		10					
		50/0.1"					
4	S-2	45				Gray slag - pieces of cement Gray black SLAG (FILL)	Rec=1.9' Moist HNU=Bkgd N=65
		40					
		25					
		17					
5	S-3	3				No Recovery	Rec=0.0 N=3
		1					
		2					
6	S-4	3		Gr mf G l, cm S - slag	Rec=1.2' WET HNU=Bkgd N=7		
		1					
		4					
8	S-5A	3		Br cmf S, l mf G - wood fragments	Rec=1.5' WET HNU=Bkgd N=7		
		3					
		3					
10	S-5B	4		Gr bk mf S, t \$			
		4					

Dunn Geoscience Corporation Albany, NY (518) 458-1313				Test Boring Log		Boring No. MW-41
PROJECT: Inlet Investigation					Sheet 2 of 2	
CLIENT: Occidental Chemical Corporation					Job No. 00595-01165	
Depth (Feet)	Sample Number	Blow Counts	Unified Classif- ication	Graphic Log	Geologic Description	Remarks
12	S-6	1	SM		Gr bk f S, l Cy\$ - wood fragments - occ cmf sand partings <u>Gray black fine SAND, little Clayey Silt</u> (ALLUVIUM)	Rec=1.8' WET HNU=Bkgd N=2
		1				
		1				
		3				
14	S-7	1	SM		Gr bk f S, l Cy\$ - wood fragments - occ cmf S partings	Rec=1.9' WET HNU=Bkgd N=4
		2				
		2				
		5				
14	S-8A	1	SM		Gr bk f S, l Cy\$ - wood fragments - occ cmf S partings	Rec=1.7' WET HNU=Bkgd pp<0.25 N=8
		5				
16	S-8B	3	CL		Rd br \$yC <u>Red brown gray SILTY CLAY</u> (GLACIO-LACUSTRINE)	Rec=1.9' WET HNU=Bkgd pp<0.25 N=2
		2				
18	S-9	WR	CL		Rd br \$yC - gray mottling	18.0'
		WR				
		2				
		1				
					End of Boring Total Depth = 18.0' Water Level ~ 7.0' Casing to 18.0'	

Dunn Geoscience Corporation Albany, NY (518) 458-1313		Test Boring Log			Boring No. MW-5S	
PROJECT: Inlet Investigation					Sheet 1 of 2	
CLIENT: Occidental Chemical Corporation					Job No. 00595-01165	
DRILLING CONTRACTOR: Pennsylvania Drilling Company					Meas. Pt. Elev. 571.01'	
PURPOSE: Subsurface Investigation					Ground Elev. 571.5'	
DRILLING METHOD: Hollow Stem Auger		SAMPLE	CORE	CASING	Datum MSL	
DRILL RIG TYPE: Mobile 61	TYPE	NA	NA	HSA	Date Started: 12/7/89	
GROUNDWATER DEPTH:	DIAM.	NA	NA	4-1/4" ID	Date Finished: 12/7/89	
MEAS. PT.:	WEIGHT	NA			Driller: H. Dykes, Jr.	
DATE OF MEAS.:	FALL	NA			Inspector: M. Ralbovsky	
Depth (Feet)	Sample Number	Blow Count	Unified Classif- ication	GRAPHIC LOG	GEOLOGIC DESCRIPTION	REMARKS
		Auger			Auger to 12.8'--see Boring Log MW-5I for sample description	
2						
4						
5						
6						
8						
10						

Dunn Geoscience Corporation Albany, NY (518) 458-1313		Test Boring Log			Boring No. MW-5I
PROJECT: Inlet Investigation					Sheet 1 of 3
CLIENT: Occidental Chemical Corporation					Job No. 00595-01165
DRILLING CONTRACTOR: Pennsylvania Drilling Company					Meas. Pt. Elev. 570.38'
PURPOSE: Subsurface Investigation					Ground Elev. 571.1'
DRILLING METHOD: Hollow Stem Auger		SAMPLE	CORE	CASING	Datum MSL
DRILL RIG TYPE: Mobile 61		TYPE	SS	NA	HSA
GROUNDWATER DEPTH:		DIAM.	2" OD	NA	4-1/4" ID
MEAS. PT.:		WEIGHT	140#	Driller: H. Dykes, Jr.	
DATE OF MEAS.:		FALL	30"	Inspector: M. Ralbovsky	

Depth (Feet)	Sample Number	Blow Count	Unified Classification	GRAPHIC LOG	GEOLOGIC DESCRIPTION	REMARKS
2	S-1	14	SW		Dk br gr rd slag l, mf S - concrete pieces - oxidized pieces - fill	Rec=1.0' Moist HNU=1.0 ppm (Bkgd=0.6 ppm) N=46
		23				
		23				
		8				
4	S-2	1			Br rd wh gr slag l, S - oxidized pieces - fill	Rec=0.5' Moist HNU=Bkgd N=6
		3				
		3				
		2				
5	S-3	1			Lt gr br rd slag <u>Brown red gray SLAG little, medium fine SAND</u> (FILL)	Rec=0.4' WET HNU=Bkgd N=3
		2				
		1				
		3				
6	S-4	1/1.0'	Br rd gr slag, mf S	6.4'	Rec=0.7' WET HNU=Bkgd N=1	
						
		1				
		2				
8	S-5	1	Gr br mf S, t \$ - occ \$ilt seam	(ALLUVIUM)	Rec=1.3' WET HNU=Bkgd N=4	
		2				
		2				
		4				
10			SW			

Dunn Geoscience Corporation Albany, NY (518) 458-1313				Test Boring Log		Boring No. MW-51
PROJECT: Inlet Investigation					Sheet 2 of 3	
CLIENT: Occidental Chemical Corporation					Job No. 00595-01165	
Depth (Feet)	Sample Number	Blow Counts	Unified Classification	Graphic Log	Geologic Description	Remarks
12	S-6	1/1.0'	SW		Dk gr br mf S 10.3'	Rec=0.9' WET HNU=Bkgd N=7
		7	SW-GW		Dk br cmf S, a(+) m(+) f G - angular to rounded - wood fibres	
		18				
14	S-7	9	SW-GW		Gr br cmf S, a c(+) mf G - angular to subrounded	Rec=0.9' WET HNU=Bkgd N=16
		9				
		7				
16	S-8	6				Rec=1.7' WET HNU=Bkgd N=8
		1	SW-GW		Br gr cmf S, t(-) m G - rounded - pieces of wood	
		6				
18	S-9	2				Rec=1.5' WET HNU=Bkgd N=4
		2	SW-GW		Gr br cmf S, s m(+) f G - subangular to rounded	
		5				
20	S-10	2	SW		Gr br cmf S	Rec=1.0' WET HNU=Bkgd N=2
		2				
		2				
22	S-11	2	SW		Gr br cmf S - homogeneous	Rec=0.6' WET HNU=Bkgd N=6
		3				
		3				
24	S-12	3	SW		Gray brown coarse to fine SAND (ALLUVIUM) - chunk of wood - calcareous fragments - homogeneous - sheen on water	Rec=1.7' WET HNU=Bkgd N=5
		2				
		3				
		X				

Dunn Geoscience Corporation Albany, NY (518) 458-1313		Test Boring Log			Boring No. MW-5D
PROJECT: Inlet Investigation					Sheet 1 of 4
CLIENT: Occidental Chemical Corporation					Job No. 00595-01165
DRILLING CONTRACTOR: Pennsylvania Drilling Company					Meas. Pt. Elev. 570.42'
PURPOSE: Subsurface Investigation					Ground Elev. 570.87'
DRILLING METHOD: Hollow Stem Auger		SAMPLE	CORE	CASING	Datum MSL
DRILL RIG TYPE: Mobile 61	TYPE	SS	NA	HSA/Steel	Date Started: 1/22/90
GROUNDWATER DEPTH:	DIAM.	2" /3"	NA	4-1/4" ID	Date Finished: 1/25/90
MEAS. PT.:	WEIGHT	140#			Driller: H. Dykes, Jr.
DATE OF MEAS.:	FALL	30"			Inspector: M. Ralbovsky D. Rowlinson

Depth (Feet)	Sample Number	Blow Count	Unified Classification	GRAPHIC LOG	GEOLOGIC DESCRIPTION	REMARKS
2		Auger/ Drive			Auger to 28.0'; unable to reach top of clay due to running sand; withdrew augers and drove 6-inch casing to 32.5'; flushed; and took sample S-5; continued to drive 6-inch casing to 33.5'; flushed; and drove 4-inch casing with wood plug to 34.0'; split 4-inch wood plug and continued sampling. (FILL)	
4						
5		1	GW		Br gr mf G t, mf S - slag	Rec=0.2' WET HNU=Bkgd (Bkgd=0.2 ppm) N=6
6	S-1	2				
		4				
		6				
8	U-2	1				Rec=1.2' WET HNU=Bkgd
		11				
8.5		10				
		Auger/ Drive			3" spoon, with brass liner, liner sealed, sample unopened (ALLUVIUM)	
10						

Dunn Geoscience Corporation Albany, NY (518) 458-1313				Test Boring Log		Boring No. MW-5D
PROJECT: Inlet Investigation						Sheet 2 of 4
CLIENT: Occidental Chemical Corporation						Job No. 00595-01165
Depth (Feet)	Sample Number	Blow Counts	Unified Classification	Graphic Log	Geologic Description	Remarks
12		Auger/Drive				
14		6				
	S-3	6	SP		Gr br cm(+) f S	
		2			(ALLUVIUM)	Rec=2.0' WET HNU=1.0 ppm N=8
16		2			Gr br cmf S, lm(+) f G	
	U-4	3			3" spoon with brass liner, liner sealed, sample unopened.	Rec=1.2' WET HNU=Bkgd
		3				
17.5		Auger/Drive				
20						
22						
24						

Dunn Geoscience Corporation Albany, NY (518) 458-1313				Test Boring Log		Boring No. MW-5D
PROJECT: Inlet Investigation					Sheet 3 of 4	
CLIENT: Occidental Chemical Corporation					Job No. 00595-01165	
Depth (Feet)	Sample Number	Blow Counts	Unified Classif- ication	Graphic Log	Geologic Description	Remarks
24		Auger/ Drive				
26						
28						
30						
32					31.7' (inferred)	
	S-5	2	CL		Br rd gr \$yC t, cf G	Rec=0.7' WET HNU=1.0 ppm pp<0.25 N=5
		2				
34		3				
		4	CL		Br rd C & \$ t, f G - pieces of wooden plug blocked spoon	Rec=0.4' WET HNU=Bkgd pp<0.25 N=10
	S-6	5			(TILL)	
		5				
36		5				
		8	CL		Br rd gr C & \$ t, f G - angular	Rec=2.0' WET HNU=Bkgd pp<0.25 N=17
	S-7	9				
		8			37.1'	
38		10	CL		Br rd C & \$ s(+), mf G - angular	

Dunn Geoscience Corporation Albany, NY (518) 458-1313				Test Boring Log		Boring No. MW-5D			
PROJECT: Inlet Investigation						Sheet 4 of 4			
CLIENT: Occidental Chemical Corporation						Job No. 00595-01165			
Depth (Feet)	Sample Number	Blow Counts	Unified Classif- ication	Graphic Log	Geologic Description	Remarks			
38	S-8	4	CL		Br rd C & \$ a, mf G - angular	Rec=2.0' WET HNU=Bkgd pp<0.25 N=12			
		6							
		6							
		7							
40	S-9	3	CL			<u>Brown red CLAY and SILT some (+), medium fine Gravel</u> (TILL)	Rec=1.0' WET HNU=Bkgd pp<0.25 N=9		
		4							
		5							
		8							
42	S-10	2	CL				Br rd C & \$ s(+), f G - angular	Rec=0.4' WET HNU=Bkgd pp<0.25 N=5	
		2							
		3							
		3							
44	S-11	WH	CH				Br rd gr \$yC - rd, gr streaking	Rec=2.0' WET HNU=Bkgd pp<0.25 N=2	
		WH							
		2							
		1							
46	S-12	WH	CH				Br rd gr \$yC - one gray \$ilt seam	Rec=2.0' WET HNU=Bkgd pp<0.25 N=4	
		2							
		2							
		2							
48	S-13	WR	CH-CL				Br rd gr \$yC t, mf G - angular - two gray \$ilt pockets	Rec=2.0' WET HNU=Bkgd pp<0.25 N=3	
		1							
		2							
		2							
50							50.0'		
							End of Boring Total Depth = 50.0' 6" casing to 33.5' 4" Casing to 49.5'		

Dunn Geoscience Corporation Albany, NY (518) 458-1313		Test Boring Log			Boring No. MW-6I
PROJECT: Inlet Investigation					Sheet 1 of 2
CLIENT: Occidental Chemical Corporation					Job No. 00595-01165
DRILLING CONTRACTOR: Pennsylvania Drilling Company					Meas. Pt. Elev. 569.92'
PURPOSE: Subsurface Investigation					Ground Elev. 570.3'
DRILLING METHOD: Hollow Stem Auger		SAMPLE	CORE	CASING	Datum MSL
DRILL RIG TYPE: Mobile 61	TYPE	SS	NA	HSA	Date Started: 12/8/89
GROUNDWATER DEPTH:	DIAM.	2" OD	NA	4-1/4" ID	Date Finished: 12/8/89
MEAS. PT.:	WEIGHT	140#			Driller: H. Dykes, Jr.
DATE OF MEAS.:	FALL	30"			Inspector: M. Ralbovsky

Depth (Feet)	Sample Number	Blow Count	Unified Classification	GRAPHIC LOG	GEOLOGIC DESCRIPTION	REMARKS	
2	S-1	6	SW		Dk br gr slag - pieces of brick - oxidized pieces	Rec=1.3' Moist NHU=Bkgd (Bkgd=0.4 ppm) N=13	
		6					
		7					
		7					
4	S-2	3				Gray dark brown slag - ash-like material - oxidized pieces (FILL)	Rec=1.0' Moist HNU=Bkgd N=7
		3					
		4					
		3					
5	S-3	1/1.0'				Br tn bk mf(+) S, t(-) f G - slag Br mf(+) S - piece of wood (ALLUVIUM)	Rec=1.3' WET HNU=Bkgd N=2
		2					
		2					
8	S-4	1		Br tn mf(+) S Br gr mf S, s f G - rounded	Rec=1.0' WET HNU=Bkgd N=6		
		2					
		4					
		6					
10	S-5	WR		Dk gr br mf S - pieces of wood - plant fibres	Rec=1.4' WET HNU=Bkgd N=1/1.0'		
		1/1.0'					
		2					

Dunn Geoscience Corporation				Test Boring Log		Boring No. MW-6I
Albany, NY (518) 458-1313						
PROJECT: Inlet Investigation						Sheet 2 of 2
CLIENT: Occidental Chemical Corporation						Job No. 00595-01165
Depth (Feet)	Sample Number	Blow Counts	Unified Classif- ication	Graphic Log	Geologic Description	Remarks
12	S-6	WH	SW		Dk gr br mf S	Rec=0.9' WET HNU=Bkgd N=2
		- plant fibres				
		1			- homogeneous	
		1				
14	S-7	1	SW		Dk gr mf S	Rec=1.2' WET HNU=Bkgd N=4
		2			- calcareous fragments	
		2	- homogeneous			
		3	Br cmf S			
16	S-8	WR	SW		Dk gr br c(-) mf S	Rec=0.9' WET HNU=1.2ppm N=3
		1			- calcareous fragments	
		2			- plant fibres	
		1			- piece of wood	
18	S-9	1	SW		Brown dark gray coarse (-) to fine SAND	Rec=1.1' WET HNU=0.8ppm N=2 Slight Odor
		1			- calcareous fragments	
		1			(ALLUVIUM)	
		2				
20	S-10	WH	SW		Dk gr br c(+) mf S, l cmf G	Rec=1.6' WET HNU=2 ppm N=15
		5			- subangular to rounded	
		10			- calcareous fragments	
		15				
22	S-11	WH	SW		Br gr c(+) mf S, t f G	Rec=2.0' WET HNU=1.6 ppm N=3
		1			- calcareous fragments	
		2	CH	Brown red SILTY CLAY		
		2		- defined contact		
				- occasional varves		
				(GLACIO-LACUSTRINE)		
				End of Boring		
				Total Depth 22.0'		
				Casing to 21.5'		

Dunn Geoscience Corporation			Test Boring Log			Boring No. MW-7S	
PROJECT: Inlet Investigation						Sheet 1 of 2	
CLIENT: Occidental Chemical Corporation						Job No. 00595-01165	
DRILLING CONTRACTOR: Pennsylvania Drilling Company						Meas. Pt. Elev. 570.57'	
PURPOSE: Subsurface Investigation						Ground Elev. 570.9'	
DRILLING METHOD: Hollow Stem Auger			SAMPLE	CORE	CASING	Datum MSL	
DRILL RIG TYPE: Mobile 61		TYPE	SS	NA	HSA	Date Started: 11/17/89	
GROUNDWATER DEPTH:		DIAM.	2" OD	NA	4-1/4" ID	Date Finished: 11/17/89	
MEAS. PT.:		WEIGHT	140#				Driller: H. Dykes, Jr.
DATE OF MEAS.:		FALL	30"				Inspector: M. Ralbovsky
Depth (Feet)	Sample Number	Blow Count	Unified Classification	GRAPHIC LOG	GEOLOGIC DESCRIPTION		REMARKS
2		Refusal	SP		Unable to drive spoon 0.2' due to slag, fill deposits		Rec=1.6' Dry HNU=Bkgd (Bkgd=0.2 ppm) N=94
4	S-1	30	CH		Gray brown <u>SLAG</u>		
		66			(FILL)		
		28			Gr br slag		
5		16	CH		- slag		4.0'
					- glass-like pieces		
6	S-2A	1	CH		Br mf(+) S, l \$, t(-) \$yC t, f G		Rec=1.3' Moist HNU=Bkgd p>4.5 N=4
		2			(ALLUVIUM)		
7	S-2B	2	CH		Br \$yC		
		4			- frequent varving		
8	S-3A	1	CH		- bk spots		Rec=1.8' Sand lyr--WET Clay--Moist HNU=Bkgd pp 1.75, 2.0, 2.25 N=8
9	S-3B	3	SW-GW		Br cmf S, a f G		
					- rounded		
10	S-3C	5	CH		Br \$yC		Rec=1.6' Moist HNU=Bkgd pp=1.0 (0-1.1') pp=0.5 (1.1-1.6') N=9
					- frequent varving		
11	S-3D	7	CH		- frequent sand partings		
12		2	CH		Br rd \$yC		
					- frequent varving		
13		4	CH				
14		5	CH				
15		6	CH		Brown red <u>SILTY CLAY</u>		
					(GLACIO-LACUSTRINE)		

Dunn Geoscience Corporation Albany, NY (518) 458-1313				Test Boring Log		Boring No. MW-7S	
PROJECT: Inlet Investigation						Sheet 2 of 2	
CLIENT: Occidental Chemical Corporation						Job No. 00595-01165	
Depth (Feet)	Sample Number	Blow Counts	Unified Classif- ication	Graphic Log	Geologic Description	Remarks	
12	S-5A	1	CH		Br rd \$yC - frequent varving - piece of rock insitu - occ sand parting	Rec=1.9' WET HNU=Bkgd pp<0.25 N=3	
		2					
	S-5B	1					
		2					
14	S-6	WOH	CH		Br rd \$yC - rd mottling (GLACIO-LACUSTRINE)	Rec=1.4' WET HNU=Bkgd pp<0.25 N=1	
		WOH					
		1					
		WOH					
16	S-7	WR	CH		Br \$yC	Rec=1.9' WET HNU=Bkgd pp<0.25 N=0	
		▼					
18	S-8	WR	CH		Br \$yC	Rec=1.8' WET HNU=Bkgd pp<0.25 N=0	
		▼					
18					End of Boring Total Depth = 18.0' Casing to 18.0'	18.0'	

Dunn Geoscience Corporation Albany, NY (518) 458-1313		Test Boring Log			Boring No. MW-8S	
PROJECT: Inlet Investigation					Sheet 1 of 2	
CLIENT: Occidental Chemical Corporation					Job No. 00595-01165	
DRILLING CONTRACTOR: Pennsylvania Drilling Company					Meas. Pt. Elev. 568.83'	
PURPOSE: Subsurface Investigation					Ground Elev. 569.38'	
DRILLING METHOD: Hollow Stem Auger		SAMPLE	CORE	CASING	Datum MSL	
DRILL RIG TYPE: Mobile 61	TYPE	NA	NA	HSA	Date Started: 2/12/90	
GROUNDWATER DEPTH:	DIAM.	NA	NA	4-1/4" ID	Date Finished: 2/12/90	
MEAS. PT.:	WEIGHT	NA			Driller: H. Dykes, Jr.	
DATE OF MEAS.:	FALL	NA			Inspector: M. Ralbovsky	

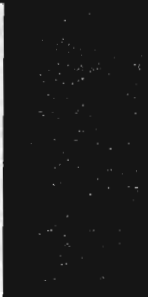
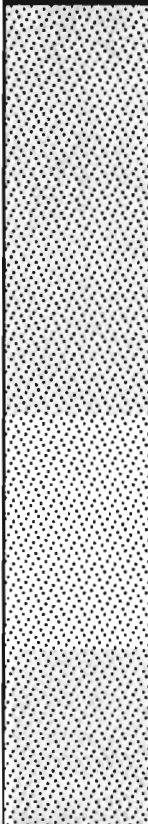
Depth (Feet)	Sample Number	Blow Count	Unified Classif- ication	GRAPHIC LOG	GEOLOGIC DESCRIPTION	REMARKS
		Auger			Auger to 11.0' See MW-8D Boring Log for sample description	
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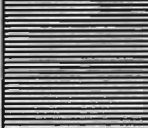
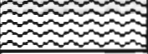
Dunn Geoscience Corporation Albany, NY (518) 458-1313		Test Boring Log			Boring No. MW-8I	
PROJECT: Inlet Investigation					Sheet 1 of 2	
CLIENT: Occidental Chemical Corporation					Job No. 00595-01165	
DRILLING CONTRACTOR: Pennsylvania Drilling Company					Meas. Pt. Elev. 568.54'	
PURPOSE: Subsurface Investigation					Ground Elev. 569.24'	
DRILLING METHOD: Hollow Stem Auger		SAMPLE	CORE	CASING	Datum MSL	
DRILL RIG TYPE: Mobile 61	TYPE	NA	NA	HSA	Date Started: 2/12/90	
GROUNDWATER DEPTH:	DIAM.	NA	NA	4 -1/4" ID	Date Finished: 2/12/90	
MEAS. PT.:	WEIGHT	NA			Driller: H. Dykes, Jr.	
DATE OF MEAS.:	FALL	NA			Inspector: D. Rowlinson	

Depth (Feet)	Sample Number	Blow Count	Unified Classif- ication	GRAPHIC LOG	GEOLOGIC DESCRIPTION	REMARKS
		Auger			Auger to 21.2'. See Boring MW-8D for sample description.	
1						
2						
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Dunn Geoscience Corporation Albany, NY (518) 458-1313		Test Boring Log			Boring No. MW-8D
PROJECT: Inlet Investigation					Sheet 1 of 4
CLIENT: Occidental Chemical Corporation					Job No. 00595-01165
DRILLING CONTRACTOR: Pennsylvania Drilling Company					Meas. Pt. Elev. 569.01'
PURPOSE: Subsurface Investigation					Ground Elev. 569.17'
DRILLING METHOD: Hollow Stem Auger		SAMPLE	CORE	CASING	Datum MSL
DRILL RIG TYPE: Mobile 61	TYPE	SS	NA	HSA/Steel	Date Started: 2/6/90
GROUNDWATER DEPTH:	DIAM.	2" OD	NA	8"/6"/4-1/4"	Date Finished: 2/7/90
MEAS. PT.:	WEIGHT	140#			Driller: H. Dykes, Jr.
DATE OF MEAS.:	FALL	30"			Inspector: D. Rowlinson

Depth (Feet)	Sample Number	Blow Count	Unified Classification	GRAPHIC LOG	GEOLOGIC DESCRIPTION	REMARKS HNU=0.2 ppm
1	S-1	1	OH-GM		Dk br \$ l, f S, l(-) f G - organic matter, roots - slag	Rec=0.7' Moist HNU=Bkgd N=4
		1				
		3				
		4				
2	S-2	1	CL		Tn br Cy\$ t(+), cmf S, t f G - angular	Rec=0.7' Moist HNU=Bkgd N=6
		3				
		3				
		4				
4	S-3	1	SM		Bk f S, a \$ - oily, odor - wood frag - augers hit bricks & concrete (FILL)	Rec=0.6' Moist HNU=4 ppm N=1
		1				
		2				
6	S-4	1	SM		Bk f S, a \$ - oily	Rec=1.0' WET HNU=Bkgd N=11
		1				
		10				
		20				
8	S-5	1	ML		Lt gr \$ t, f S - metallic particles	Rec=0.2' WET HNU=Bkgd N=13
		6				
		7				
		8				
10						

Dunn Geoscience Corporation				Test Boring Log		Boring No. MW-8D	
Albany, NY (518) 458-1313							
PROJECT: Inlet Investigation					Sheet 2 of 4		
CLIENT: Occidental Chemical Corporation					Job No. 00595-01165		
Depth (Feet)	Sample Number	Blow Counts	Unified Classification	Graphic Log	Geologic Description	Remarks	
10	S-6	10	ML-GM		Bk \$ s(+), cmf S, s f G - sheen, odor <u>Black SILT some fine Gravel.</u> (SOFT SEDIMENT)	Rec=1.2' WET HNU=Bkgd N=25	
		15					
		10					
		7					
12	S-7A	2	SM		Bk cmf (+) S, l \$, t mf G	Rec=1.2' WET HNU=Bkgd N=13	
		3					
	S-7B	10	SW		Br c(+)mf S l, mf G		
		5					
14	S-8	2	SW		Gr c(+) mf S, a mf G - subrounded to angular - odor <u>Gray coarse (+) medium fine SAND and medium fine Gravel.</u> (ALLUVIUM)	Rec=1.2' WET HNU=Bkgd N=9	
		3					
		6					
		8					
16	S-9	4	SW		Gr cmf (+) S, a m(+) f G - Block of wood - odor	Rec=1.5' WET HNU=Bkgd N=25	
		8					
		17					
		8					
18	S-10	7	SW		Gr c(+) mf S, a mf (+) G - brown liquid at 19.7'	Rec=1.8' WET HNU=100 ppm Peak=150 ppm N=19	
		9					
		10					
		12					
20	S-11A	5	SW		Gr cmf S, a f G - subrounded	Rec=1.4' WET HNU=7 ppm (A) =1 ppm (B) N=7	
		6					
	S-11B	1	CH				
		2					
22	S-12	WOH	CH		Br rd \$yC - rd varves <u>Brown red SILTY CLAY.</u> (GLACIO-LACUSTRINE)		Rec=1.8' WET HNU=Bkgd pp<0.25 N=0
24							

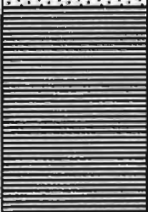
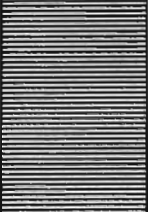
Dunn Geoscience Corporation Albany, NY (518) 458-1313				Test Boring Log		Boring No. MW-8D
PROJECT: Inlet Investigation					Sheet 3 of 4	
CLIENT: Occidental Chemical Corporation					Job No. 00595-01165	
Depth (Feet)	Sample Number	Blow Counts	Unified Classification	Graphic Log	Geologic Description	Remarks
24	S-13	1	CH		Br gr rd \$yC - rd varves - silt pockets (GLACIO-LACUSTRINE)	Rec=2.0' WET HNU=Bkgd pp=<0.25 N=2
		1				
		1				
		1				
26	S-14A	1	CH		Br gr rd \$yC - rd varves	Rec=2.0' WET HNU=Bkgd pp<0.25 N=2
		1				
	S-14B	1	CL		Br rd gr \$&C t, fS, t(-) f G - subrounded	27.3' Rec=1.7' WET HNU=Bkgd pp<0.25 N=7
		3				
28	S-15	1	CL		Br rd \$&C l(+), cmf S, l f G	Rec=0.5' WET HNU=Bkgd pp<0.25 N=8
		2				
		5				
		3				
30	S-16	3	CL		Br rd \$&C t, cmf S, t(-) f G - Poor recovery due to broken basket	Rec=1.1' WET HNU=Bkgd pp=0.5 N=15
		4				
		4				
		4				
32	S-17	9	CL		Br rd \$&C s, cmf S, l f G <u>Brown red SILT & CLAY little fine Gravel.</u> (TILL)	Rec=1.7' WET HNU=Bkgd pp=0.5 N=23
		7				
		8				
		9				
34	S-18	13	CL		Br rd \$&C s(+), cmf S, s f G	36.5' End of Boring Total Depth = 36.5' 4" casing to 36.5'
		11				
		12				
		15				
36						
37						

Dunn Geoscience Corporation Albany, NY (518) 458-1313		Test Boring Log			Boring No. MW-9S
PROJECT: Inlet Investigation					Sheet 1 of 2
CLIENT: Occidental Chemical Corporation					Job No. 00595-01165
DRILLING CONTRACTOR: Pennsylvania Drilling Company					Meas. Pt. Elev. 568.43'
PURPOSE: Subsurface Investigation					Ground Elev. 568.7'
DRILLING METHOD: Hollow Stem Auger		SAMPLE	CORE	CASING	Datum MSL
DRILL RIG TYPE: Mobile 61	TYPE	NA	NA	HSA	Date Started: 1/03/90
GROUNDWATER DEPTH:	DIAM.	NA	NA	4 -1/4" ID	Date Finished: 1/03/90
MEAS. PT.:	WEIGHT	NA			Driller: H. Dykes, Jr.
DATE OF MEAS.:	FALL	NA			Inspector: M. Ralbovsky

Depth (Feet)	Sample Number	Blow Count	Unified Classif- ication	GRAPHIC LOG	GEOLOGIC DESCRIPTION	REMARKS
		Auger			Auger to 10.5'. See Boring MW-9D for sample description.	
2						
4						
5						
6						
8						
10						

Dunn Geoscience Corporation Albany, NY (518) 458-1313		Test Boring Log			Boring No. MW-9D
PROJECT: Inlet Investigation					Sheet 1 of 3
CLIENT: Occidental Chemical Corporation					Job No. 00595-01165
DRILLING CONTRACTOR: Pennsylvania Drilling Company					Meas. Pt. Elev. 568.50'
PURPOSE: Subsurface Investigation					Ground Elev. 568.7'
DRILLING METHOD: Hollow Stem Auger		SAMPLE	CORE	CASING	Datum MSL
DRILL RIG TYPE: Mobile 61	TYPE	SS	NA	HSA	Date Started: 12/20/89
GROUNDWATER DEPTH:	DIAM.	2" OD	NA	4 - 1/4" ID	Date Finished: 1/02/90
MEAS. PT.:	WEIGHT	140#			Driller: H. Dykes, Jr.
DATE OF MEAS.:	FALL	30"			Inspector: M. Ralbovsky/ L. Gracz

Depth (Feet)	Sample Number	Blow Count	Unified Classification	GRAPHIC LOG	GEOLOGIC DESCRIPTION	REMARKS
2	S-1	23	OH		<u>Dark brown SILT little, fine Sand.</u> - pieces of brick - organics - slag (FILL)	Rec=1.0' Moist (frozen) HNU=Bkgd Bkgd=0.6 ppm N=30
		22				
		8				
		3				
4	S-2	1/1.0'	ML		Dk br \$ - pieces of brick - pieces of slag - odor	No Recovery 2nd try 0.2' WET HNU=Bkgd N=2
		2				
		1				
5	S-3	1	OH		Dk br \$s, f S - bk stained - organics - oily odor	Rec=0.8' WET HNU=Bkgd N=3
		1				
		2				
		2				
6	S-4	WOR	OH		Bk stained \$ l, f S - organics - micaceous	Rec=1.2' WET HNU=Bkgd N=0
		WOH				
		1/1.0'				
8	S-5	WOH	ML		<u>Black brown SILT little, fine Sand.</u> (SOFT SEDIMENT) - bk stained - chunk of wood	Rec=1.1' WET HNU=1.2 ppm N=1
		1/1.0'				
		1				
10						

Dunn Geoscience Corporation Albany, NY (518) 458-1313				Test Boring Log		Boring No. MW-9D
PROJECT: Inlet Investigation					Sheet 2 of 3	
CLIENT: Occidental Chemical Corporation					Job No. 00595-01165	
Depth (Feet)	Sample Number	Blow Counts	Unified Classif- ication	Graphic Log	Geologic Description	Remarks
10	S-6	WOR	ML		Br gr \$ l, \$yC - organics - piece of wood - black staining (SOFT SEDIMENT) 12.0'	Rec=0.9' WET HNU=1.4 ppm N=0
		WOH				
		WOH				
		2				
12	S-7	WOR	SM		Dark gray fine SAND, some Silt. - calcareous fragments - odor (ALLUVIUM) 14.0'	Rec=0.9' WET HNU=2.0 ppm N=2
		WOR				
		2				
		7				
14	S-8	WOH	CH		Br \$yC	Rec=1.6' WET HNU=Bkgd pp<0.25 N=1
		WOH				
		1				
		2				
16	S-9	WOR	CH		Br rd \$yC - freq varves @ 17.2'	Rec=1.8' WET HNU=Bkgd pp<0.25 N=2
		1				
		1				
		2				
18	S-10	WOR	CH		<u>Brown red SILTY CLAY.</u> (GLACIO-LACUSTRINE)	Rec=1.8' WET HNU=Bkgd pp<0.25 N=1
		WOH				
		1				
		1				
20	S-11	WOR	CH		Rd brgr \$yC - red streaking	Rec=1.9' WET HNU=Bkgd pp<0.25 N=1
		WOH				
		1				
		1				
22	S-12	WOR	CH		Br rd gr \$yC - occ varves	Rec=2.0' WET HNU=Bkgd pp<0.25 N=0
		WOH				
		WOH				
		1				
24						

Dunn Geoscience Corporation Albany, NY (518) 458-1313		Test Boring Log			Boring No. MW-10D
PROJECT: Inlet Investigation					Sheet 1 of 3
CLIENT: Occidental Chemical Corporation					Job No. 00595-01165
DRILLING CONTRACTOR: Pennsylvania Drilling Company					Meas. Pt. Elev. 572.13'
PURPOSE: Subsurface Investigation					Ground Elev. 572.6'
DRILLING METHOD: Hollow Stem Auger		SAMPLE	CORE	CASING	Datum MSL
DRILL RIG TYPE: Mobile 61	TYPE	SS	NA	HSA	Date Started: 12/13/89
GROUNDWATER DEPTH:	DIAM.	2" OD	NA	4 -1/4" ID	Date Finished: 12/13/89
MEAS. PT.:	WEIGHT	140#			Driller: H. Dykes, Jr.
DATE OF MEAS.:	FALL	30"			Inspector: M. Ralbovsky

Depth (Feet)	Sample Number	Blow Count	Unified Classification	GRAPHIC LOG	GEOLOGIC DESCRIPTION	REMARKS
2	S-1	3	OL		Dk br \$I, f S - grass, organics	Rec=0.7' Moist HNU=Bkgd Bkgd=0.2 ppm N=4
		2				
		2				
		2				
4	S-2	3	OL		Br or Cy\$I, f S - pieces of brick - organics	Rec=0.4' Moist HNU=Bkgd N=11
		3				
		8				
		10				
4	S-3A	4	SC		Brown tan fine SAND, some Clayey Silt. (FILL) 4.4'	Rec=1.5' Moist HNU=Bkgd pp=1.5, 1.5, 1.5 N=12
5	S-3B	4	CL		Br C&\$ - freq varves - black spots	Rec=1.7' Moist HNU=Bkgd pp=4.0, 4.5, 4.25 N=20
		8				
		4				
6	S-4	2	CH		Br \$yC - freq varves (GLACIO-LACUSTRINE)	Rec=1.7' Moist HNU=Bkgd pp=4.0, 4.5, 4.25 N=20
		8				
		12				
		12				
8	S-5	4	CH		Br \$yC - freq varves - pp=2.0, 1.5, 1.5	Rec=1.7' Moist HNU=Bkgd N=19
		8				
		11				
		14				
10			CH		Gr \$yC - freq varves - pp=3.5, 2.5, 3.5	

Dunn Geoscience Corporation				Test Boring Log		Boring No. MW-10D	
Albany, NY (518) 458-1313							
PROJECT: Inlet Investigation						Sheet 2 of 3	
CLIENT: Occidental Chemical Corporation						Job No. 00595-01165	
Depth (Feet)	Sample Number	Blow Counts	Unified Classification	Graphic Log	Geologic Description	Remarks	
10	S-6	3	CH		<u>Gray red SILTY CLAY.</u> - freq varves (GLACIO-LACUSTRINE)	Rec=2.0' Moist HNU=Bkgd Bkgd=0.8 ppm pp=1.5, 1.0, 1.5 N=9	
		4					
		5					
		5					
12	S-7	2	CH		Gr rd \$yC - freq varves - cobble blocked spoon	Rec=1.1' WET HNU=Bkgd pp<0.25 N=4	
		2					
		2					
		3					
14	S-8	1	CH		----- 14.0'	Br rd \$yC	Rec=1.0' WET HNU=Bkgd pp<0.25 N=3
		1					
		2					
		2					
16	S-9	WOR	CH		Br rd \$yC - red streaks	Rec=1.7' WET HNU=Bkgd pp<0.25 N=2	
		1					
		1					
		2					
18	S-10	WOH	CH		Br \$yC	Rec=2.0' WET HNU=Bkgd pp<0.25 N=2	
		1					
		1					
		1					
20	S-11	WOR	CH		Rd br \$yC - occ silt seam	Rec=1.6' WET HNU=Bkgd pp<0.25 N=1	
		WOR					
		1					
		2					
22	S-12	WOR	CH		Rd br \$yC - freq varves	Rec=1.7' WET HNU=Bkgd pp<0.25 N=1	
		WOH					
		1					
		1					
24							

Dunn Geoscience Corporation Albany, NY (518) 458-1313			Test Boring Log			Boring No. MW-11S	
PROJECT: Inlet Investigation						Sheet 1 of 1	
CLIENT: Occidental Chemical Corporation						Job No. 00595-01165	
DRILLING CONTRACTOR: Pennsylvania Drilling Company						Meas. Pt. Elev. 569.80'	
PURPOSE: Subsurface Investigation						Ground Elev. 569.9'	
DRILLING METHOD: Hollow Stem Auger			SAMPLE	CORE	CASING	Datum MSL	
DRILL RIG TYPE: Mobile 61		TYPE	NA	NA	HSA	Date Started: 12/12/89	
GROUNDWATER DEPTH:		DIAM.	NA	NA	4 - 1/4" ID	Date Finished: 12/12/89	
MEAS. PT.:		WEIGHT	NA			Driller: H. Dykes, Jr.	
DATE OF MEAS.:		FALL	NA			Inspector: M. Ralbovsky	

Depth (Feet)	Sample Number	Blow Count	Unified Classif- ication	GRAPHIC LOG	GEOLOGIC DESCRIPTION	REMARKS
		Auger			Auger to 9.5'. See Boring Log MW-11I for sample description.	
1						
2						
3						
4						
5						
6						
7						
8						
9						
		▼			9.5'	
10					End of Boring Total Depth = 9.5' Casing to 9.5'	

Dunn Geoscience Corporation Albany, NY (518) 458-1313		Test Boring Log			Boring No. MW-111
PROJECT: Inlet Investigation					Sheet 1 of 2
CLIENT: Occidental Chemical Corporation					Job No. 00595-01165
DRILLING CONTRACTOR: Pennsylvania Drilling Company					Meas. Pt. Elev. 570.01
PURPOSE: Subsurface Investigation					Ground Elev. 570.1
DRILLING METHOD: Hollow Stem Auger		SAMPLE	CORE	CASING	Datum MSL
DRILL RIG TYPE: Mobile 61	TYPE	SS	NA	HSA	Date Started: 12/12/89
GROUNDWATER DEPTH:	DIAM.	2" OD	NA	4 - 1/4" ID	Date Finished: 12/12/89
MEAS. PT.:	WEIGHT	140#			Driller: H. Dykes, Jr.
DATE OF MEAS.:	FALL	30"			Inspector: M. Ralbovsky

Depth (Feet)	Sample Number	Blow Count	Unified Classification	GRAPHIC LOG	GEOLOGIC DESCRIPTION	REMARKS	
2	S-1	5	MH		Dk br \$ - plant fibers (TOPSOIL) 0.2'	Rec=0.7' Moist HNU=Bkgd Bkgd=0.4 ppm N=20	
		14			Gr dk br slag - ashlike material - broken pieces of concrete		
		6					
		5					
4	S-2	6	MH		Dk br \$ - ~ 50% slag - roots, plant fibers	Rec=1.0' Moist HNU=Bkgd N=7	
		4					
		3					
		4					
5	S-3	1	MH		Br tn \$ - slag, oxidized pieces 4.3'	Rec=0.5' Moist HNU=Bkgd N=2	
		1					Br gr m f S, l\$ - black staining (FILL)
		1					
		3					
6	S-4	1	SM		Gr br \$ t, fS - bk staining - piece of wood - roots - slag	Rec=1.0' WET HNU=Bkgd N=3	
		1					
		2					
		15					
8	S-5	2	SW-GW		Gr br cmf S, s(+) mf G - rounded (ALLUVIUM)	Rec=0.4' WET HNU=Bkgd N=6	
		4					
		2					
		1					
10							

DUNN GEOSCIENCE CORPORATION

Dunn Geoscience Corporation Albany, NY (518) 458-1313			Test Boring Log			Boring No. MW-12D
PROJECT: Inlet Investigation						Sheet 1 of 3
CLIENT: Occidental Chemical Corporation						Job No. 00595-01165
DRILLING CONTRACTOR: Pennsylvania Drilling Company						Meas. Pt. Elev. 572.93'
PURPOSE: Subsurface Investigation						Ground Elev. 573.2'
DRILLING METHOD: Hollow Stem Auger			SAMPLE	CORE	CASING	Datum MSL
DRILL RIG TYPE: Mobile 61		TYPE	SS	NA	HSA	Date Started: 12/13/89
GROUNDWATER DEPTH:		DIAM.	2" OD	NA	4 - 1/4" ID	Date Finished: 12/13/89
MEAS. PT.:		WEIGHT	140#			Driller: H. Dykes, Jr.
DATE OF MEAS.:		FALL	30"			Inspector: M. Ralbovsky

Depth (Feet)	Sample Number	Blow Count	Unified Classification	GRAPHIC LOG	GEOLOGIC DESCRIPTION	REMARKS
2	S-1	2	ML		Br tn gr \$ l, f S - clay seam - roots, organics	Rec=0.9' Moist HNU=Bkgd Bkgd=0.7 ppm N=9
		4				
		5				
		8				
4	S-2	1	ML		<u>Brown tan orange SILT.</u> (FILL) - freq C&\$ seams - some oxidation	Rec=0.9' Moist HNU=Bkgd N=9
		4				
		5				
		6				
5	S-3	WR	ML		Br tn gr Cy\$ l, f S, t f G - angular	Rec=0.6' Moist HNU=Bkgd Bkgd=0.2 ppm N=4
		2				
		2				
		2				
6	S-4	1	CH		Br \$yC - frequent varves (GLACIO-LACUSTRINE)	Rec=1.5' Moist HNU=Bkgd pp=2.5, 2.5, 3.25 N=12
		4				
		8				
		13				
8	S-5	4	CH		Br \$yC - frequent varves	Rec=2.0' Moist HNU=Bkgd N=20
		8				
		12				
		16				
10					Gr \$yC - frequent varves - pp=4.25, 4.25, 4.0	

Dunn Geoscience Corporation				Test Boring Log		Boring No. MW-12D
Albany, NY (518) 458-1313						
PROJECT: Inlet Investigation						Sheet 2 of 3
CLIENT: Occidental Chemical Corporation						Job No. 00595-01165
Depth (Feet)	Sample Number	Blow Counts	Unified Classif- ication	Graphic Log	Geologic Description	Remarks
12	S-6	4	CH		Gr \$yC - frequent varves	Rec=2.0' Moist HNU=Bkgd pp=2.0, 2.0, 2.5 N=13
		6				
		7				
		9				
14	S-7	2	CH		Gr \$yC - 0.0' - 0.7' frequent varves - 0.7' - 2.0' occasional varves - red streaks	Rec=2.0' WET HNU=Bkgd pp<0.25 N=4
		2				
		2				
		3				
16	S-8	1	CH		Br rd \$yC	Rec=2.0' WET HNU=Bkgd pp=<0.25 N=3
		2				
		1				
		1				
18	S-9	WR	CH	<u>Brown gray red SILTY CLAY.</u> (GLACIO-LACUSTRINE)	Rec=1.1' WET HNU=Bkgd pp<0.25 N=2	
		WH				
		2				
		1				
20	S-10	WH	CH	Br gr \$yC - red streaks	Rec=2.0' WET HNU=Bkgd pp<0.25 N=0	
		WH				
		WH				
		1				
22	S-11	WH	CH	Br rd \$yC - sand lyr	Rec=1.5' WET HNU=Bkgd pp<0.25 N=3	
		2				
		1				
		2				
24	S-12	WH	CH	Br gr rd \$yC - frequent varves	Rec=1.5' WET HNU=Bkgd pp<0.25 N=3	
		1				
		2				
		1				
24						

DUNN GEOSCIENCE CORPORATION

Dunn Geoscience Corporation Albany, NY (518) 458-1313		Test Boring Log			Boring No. MW-13D
PROJECT: Inlet Investigation					Sheet 1 of 3
CLIENT: Occidental Chemical Corporation					Job No. 00595-01165
DRILLING CONTRACTOR: Pennsylvania Drilling Company					Meas. Pt. Elev. 574.89'
PURPOSE: Subsurface Investigation					Ground Elev. 575.3'
DRILLING METHOD: Hollow Stem Auger		SAMPLE	CORE	CASING	Datum MSL
DRILL RIG TYPE: Mobile 61	TYPE	SS	NA	HSA	Date Started: 12/14/89
GROUNDWATER DEPTH:	DIAM.	2" OD	NA	4 - 1/4" ID	Date Finished: 12/14/89
MEAS. PT.:	WEIGHT	140#			Driller: H. Dykes, Jr.
DATE OF MEAS.:	FALL	30"			Inspector: M. Halbovsky L. Gracz

Depth (Feet)	Sample Number	Blow Count	Unified Classification	GRAPHIC LOG	GEOLOGIC DESCRIPTION	REMARKS
2	S-1	1	OL		Dr br tn \$ - chunk of slag - organics	Rec=0.9' Moist HNU=Bkgd Bkgd=0.3 ppm N=9
		3				
		6				
		6				
4	S-2	3	ML		Br tn \$yC s, f S (FILL)	Rec=0.8' Moist HNU=Bkgd N=11
		5				
		6				
		5				
5	S-3	2	CH		Br \$yC - interbedded \$ layers - piece of slag	Rec=0.4' Moist HNU=Bkgd N=7
		3				
		4				
		5				
6	S-4	1	ML		Br tn \$yC a, f S, s \$ - slag pieces	Rec=1.2' Moist HNU=Bkgd N=5
		2				
		3				
		4				
8	S-5	1	SM		Br f S s(+), \$ - slag pieces - golden flakes	Rec=0.3' Moist HNU=Bkgd N=3
		1				
		2				
		2				
10						

Dunn Geoscience Corporation Albany, NY (518) 458-1313				Test Boring Log		Boring No. MW-13D
PROJECT: Inlet Investigation					Sheet 2 of 3	
CLIENT: Occidental Chemical Corporation					Job No. 00595-01165	
Depth (Feet)	Sample Number	Blow Counts	Unified Classification	Graphic Log	Geologic Description	Remarks
10	S-6	WR	ML		Brown tan <u>SILTY CLAY</u> and <u>fine Sand, some Silt.</u> - gravel and slag (FILL)	Rec=1.1' WET HNU=Bkgd N=8 12.0'
		3				
		5				
		5				
12	S-7	2	CH		Br \$yC - frequent varves	Rec=1.3' Moist HNU=Bkgd pp=3.5, 2.5, 3.5 N=17
		6				
		11				
		14				
14	S-8	2	CH		Dk br \$yC	Rec=1.5' Moist HNU=Bkgd pp=4.0, 3.5, 2.75 N=25
		11				
		14				
		12				
16	S-9	3	CH		Dk br \$yC - from 0.5' to 0.8' sample appeared disturbed; clay is broken into pieces - 0.8' to 2.0' frequent varves	Rec=2.0' Moist HNU=Bkgd pp=0.5' N=9
		3				
		6				
		6				
18	S-10	1	CH		Br rd gr \$yC - frequent varves	Rec=1.2' WET HNU=Bkgd pp<0.25 N=3
		2				
		1				
		3				
20	S-11	1	CH		Br rd gr \$yC	Rec=2.0' WET HNU=Bkgd pp<0.25 N=1
		1/1.0				
		↓				
		1				
22	S-12	WR	CH		Brown gray red <u>SILTY CLAY.</u> (GLACIO-LACUSTRINE)	Rec=2.0' WET HNU=Bkgd pp<0.25 N=1
		WR				
		1				
		1				
24						

Dunn Geoscience Corporation				Test Boring Log		Boring No. MW-13D	
Albany, NY (518) 458-1313							
PROJECT: Inlet Investigation						Sheet 3 of 3	
CLIENT: Occidental Chemical Corporation						Job No. 00595-01165	
Depth (Feet)	Sample Number	Blow Counts	Unified Classification	Graphic Log	Geologic Description	Remarks	
24	S-13	WH	CH		Br gr rd \$yC	Rec=2.0'	
		WH				WET	
		1				HNU=Bkgd	
		1				pp<.25	
26	S-14		CH		Br gr rd \$yC	N=1	
		1					
		2					
		2					
28	S-15	1	CH		Br rd \$yC	Rec=0.7'	
		1				WET	
		1				HNU=Bkgd	
		2				pp<0.25	
30	S-16	2	CL		Br rd \$yC	N=2	
		2					
31					Red brown SILT & CLAY little fine Sand, trace (-) Gravel. (TILL)	Rec=0.7'	
						WET	
						HNU=Bkgd; pp<0.25	
					End of Boring		
					Total Depth = 31.0'		
					Casing to 30.5'		

Dunn Geoscience Corporation Albany, NY (518) 458-1313			Test Boring Log			Boring No. MW-14S	
PROJECT: Inlet Investigation						Sheet 1 of 2	
CLIENT: Occidental Chemical Corporation						Job No. 00595-01165	
DRILLING CONTRACTOR: Pennsylvania Drilling Company						Meas. Pt. Elev. 570.37'	
PURPOSE: Subsurface Investigation						Ground Elev. 570.92'	
DRILLING METHOD: Hollow Stem Auger			SAMPLE	CORE	CASING	Datum MSL	
DRILL RIG TYPE: Mobile 61		TYPE	SS	NA	HSA	Date Started: 2/5/90	
GROUNDWATER DEPTH:		DIAM.	2" OD	NA	4 - 1/4" ID	Date Finished: 2/5/90	
MEAS. PT.:		WEIGHT	140#			Driller: H. Dykes, Jr.	
DATE OF MEAS.:		FALL	30"			Inspector: D. Rowlinson	

Depth (Feet)	Sample Number	Blow Count	Unified Classification	GRAPHIC LOG	GEOLOGIC DESCRIPTION	REMARKS	
2	S-1	2	SP		Br mf S	Rec=0.4' WET HNU=Bkgd Bkgd=0.2 ppm N=20	
		10	ML		- grass		0.2'
		10			- melting snow		
		9			Bk br \$ l, mf G		
4	S-2	2	ML		- slag	Rec=1.1' Moist HNU=Bkgd N=8	
		3			- roots		
		5			- brick frag		
		4			Tn br gr Cy\$		
5	S-3	1	ML		- orange mottling	Rec=0.9' Moist HNU=Bkgd N=4	
		2			- cinders		
		2		- bk staining/streaking			
		3		Tan brown gray CLAYEY SILT.			
6	S-4	1	SM	Tn or gr Cy\$ (FILL)	Rec=0.9' WET HNU=Bkgd N=12		
		7		4.8'		Gr f S, t f G	
		5				- wood frag	
		4				Dk gr f S, a \$	
8	S-5	WH	SM	- wood frag & chunks	Rec=1.3' WET HNU=Bkgd N=1		
		WH		Dk gr f S, a \$			
		1		- odor			
		1		Dark gray fine SAND and SILT.			
10					(ALLUVIUM)		

DUREZ INLET INVESTIGATION

Confirmation Soil Boring Logs
SB - series
(Task 3)

Dunn Geoscience Corporation Albany, NY (518) 458-1313		Test Boring Log			Boring No. SB-1	
PROJECT: Inlet Investigation					Sheet 1 of 2	
CLIENT: Occidental Chemical Corporation					Job No. 00595-01165	
DRILLING CONTRACTOR: Pennsylvania Drilling Company					Meas. Pt. Elev.	
PURPOSE: Subsurface Investigation					Ground Elev. 573.5'	
DRILLING METHOD: Hollow Stem Auger		SAMPLE	CORE	CASING	Datum MSL	
DRILL RIG TYPE: Mobile 61	TYPE	SS	NA	HSA	Date Started: 11/29/89	
GROUNDWATER DEPTH:	DIAM.	2" OD	NA	4 - 1/4" ID	Date Finished: 11/29/89	
MEAS. PT.:	WEIGHT	140#			Driller: H. Dykes, Jr.	
DATE OF MEAS.:	FALL	30"			Inspector: M. Ralbovsky	

Depth (Feet)	Sample Number	Blow Count	Unified Classification	GRAPHIC LOG	GEOLOGIC DESCRIPTION	REMARKS
		Auger				
2						
4						
		38			Br gr or slag, concrete, pieces of brick	Rec=0.6' Moist HNU=Bkgd Bkgd=0.3 ppm N=23
5	S-1	14			<u>Brown gray SLAG.</u>	
		9			(FILL)	
		4				
6		2			Br gr or rd slag, concrete, pieces of brick	Rec=0.7' WET HNU=Bkgd N=10
	S-2	6				
		4				
		4				
8		1			Lt gr br \$ l, f S	Rec=1.4' WET HNU=Bkgd N=3
		1			- oxidized pieces	
	S-3	2			<u>Dark gray coarse to fine (+) SAND.</u>	
		2	SM		<u>little Silt.</u>	
10					(ALLUVIUM)	

Dunn Geoscience Corporation Albany, NY (518) 458-1313			Test Boring Log			Boring No. SB-2	
PROJECT: Inlet Investigation						Sheet 1 of 2	
CLIENT: Occidental Chemical Corporation						Job No. 00595-01165	
DRILLING CONTRACTOR: Pennsylvania Drilling Company						Meas. Pt. Elev.	
PURPOSE: Subsurface Investigation						Ground Elev. 573.9'	
DRILLING METHOD: Hollow Stem Auger			SAMPLE	CORE	CASING	Datum MSL	
DRILL RIG TYPE: Mobile 61		TYPE	SS	NA	HSA	Date Started: 11/29/89	
GROUNDWATER DEPTH:		DIAM.	2" OD	NA	4 - 1/4" ID	Date Finished: 11/29/89	
MEAS. PT.:		WEIGHT	140#			Driller: H. Dykes, Jr.	
DATE OF MEAS.:		FALL	30"			Inspector: M. Ralbovsky	

Depth (Feet)	Sample Number	Blow Count	Unified Classif- ication	GRAPHIC LOG	GEOLOGIC DESCRIPTION	REMARKS
2		Auger				
4	S-1	3			Lt gr br rd or slag, concrete pieces - pieces of brick	Rec=0.7' Moist HNU=Bkgd Bkgd=0.2 ppm N=3
		1				
		2				
		1				
6	S-2	4			Lt gr br rd slag, concrete pieces - pieces of brick	Rec=0.6' WET HNU=Bkgd N=4
		3				
		1				
		2				
8	S-3	3			Dk br rd gr slag, concrete pieces	Rec=0.7' WET HNU=Bkgd H2S-like odor N=9
		5				
		4				
		4				
10						

Dunn Geoscience Corporation Albany, NY (518) 458-1313		Test Boring Log			Boring No. SB-3
PROJECT: Inlet Investigation					Sheet 1 of 4
CLIENT: Occidental Chemical Corporation					Job No. 00595-01165
DRILLING CONTRACTOR: Pennsylvania Drilling Company					Meas. Pt. Elev.
PURPOSE: Subsurface Investigation					Ground Elev. 571.3'
DRILLING METHOD: Hollow Stem Auger		SAMPLE	CORE	CASING	Datum MSL
DRILL RIG TYPE: Mobile 61	TYPE	SS	NA	HSA	Date Started: 12/11/89
GROUNDWATER DEPTH:	DIAM.	2" OD	NA	4 - 1/4" ID	Date Finished: 12/11/89
MEAS. PT.:	WEIGHT	140#			Driller: H. Dykes, Jr.
DATE OF MEAS.:	FALL	30"			Inspector: M. Ralbovsky

Depth (Feet)	Sample Number	Blow Count	Unified Classif- ication	GRAPHIC LOG	GEOLOGIC DESCRIPTION	REMARKS
		Auger			Auger to 35.5'	
					See MW-5I for sample description	
2						
4						
5						
6						
8						
10						

Dunn Geoscience Corporation Albany, NY (518) 458-1313			Test Boring Log		Boring No. SB-3	
PROJECT: Inlet Investigation					Sheet 2 of 4	
CLIENT: Occidental Chemical Corporation					Job No. 00595-01165	
Depth (Feet)	Sample Number	Blow Counts	Unified Classif- ication	Graphic Log	Geologic Description	Remarks
		Auger				
12						
14						
16						
18						
20						
22						
		▼				
24						

[illegible]

Dunn Geoscience Corporation Albany, NY (518) 458-1313		Test Boring Log			Boring No. SB-4
PROJECT: Inlet Investigation					Sheet 1 of 2
CLIENT: Occidental Chemical Corporation					Job No. 00595-01165
DRILLING CONTRACTOR: Pennsylvania Drilling Company					Meas. Pt. Elev.
PURPOSE: Subsurface Investigation					Ground Elev. 569.9'
DRILLING METHOD: Hollow Stem Auger		SAMPLE	CORE	CASING	Datum MSL
DRILL RIG TYPE: Mobile 61	TYPE	SS	NA	HSA	Date Started: 2/13/90
GROUNDWATER DEPTH:	DIAM.	2" OD	NA	4 -1/4" ID	Date Finished: 2/13/90
MEAS. PT.:	WEIGHT	140#			Driller: H. Dykes, Jr.
DATE OF MEAS.:	FALL	30"			Inspector: D. Rowlinson

Depth (Feet)	Sample Number	Blow Count	Unified Classification	GRAPHIC LOG	GEOLOGIC DESCRIPTION	REMARKS
2	S-1	1	ML		Dk br rts - roots, organic matter	Rec=0.9' Moist HNU=Bkgd Bkgd=0.3 ppm pp<0.25 N=10
		3				
		7				
		8				
4	S-2	3	ML		Tn Cy\$ - orange mottling	Rec=1.3' Moist HNU=Bkgd pp=0.5 N=7
		3				
		4				
		5				
5	S-3A	1	ML		Tn Cy\$ - orange mottling - wood frag	Rec=1.6' WET HNU=Bkgd pp=0.75 N=3
		1				
6	S-3B	2	ML		Bk br \$ - wood chunk	Rec=0.5' Moist HNU=Bkgd N=8
		1				
8	S-4	1	ML		Bk br \$ - organic matter - sand seam bedding plane 1/16"	Rec=0.9' WET HNU=Bkgd N=17
		3				
		5				
		4				
10	S-5	2	SW		Dr gr cmf(+) S, a cmf G, t \$ - calcareous frag (ALLUVIUM)	
		10				
		7				
		8				

Dunn Geoscience Corporation Albany, NY (518) 458-1313				Test Boring Log		Boring No. SB-4
PROJECT: Inlet Investigation					Sheet 2 of 2	
CLIENT: Occidental Chemical Corporation					Job No. 00595-01165	
Depth (Feet)	Sample Number	Blow Counts	Unified Classification	Graphic Log	Geologic Description	Remarks
10	S-6	1	SW		Dk gr f S, t m G - wood frag	Rec=0.8' WET HNU=Bkgd N=4
		3				
		1				
		2				
12	S-7	3	SW		Dark gray coarse to medium fine SAND, trace Silt, little coarse to medium fine (+) Gravel. (ALLUVIUM) Dk gr cmf S, t \$, l mf(+) G	Rec=1.4' WET HNU=Bkgd N=13
		7				
		6				
		3				
14	S-8A	1	SW		Gr cmf S, l f G - calcareous frag	Rec=1.1' WET HNU=Bkgd pp<0.25 N=2
		1				
	S-8B	1	CH			
		1				
16	S-9	1/1.0'	CH		Br \$yC	Rec=2.0' WET HNU=Bkgd pp,0.25 N=1
		↓			Br rd \$yC - rd varve	
		1/1.0'			<u>Brown red SILTY CLAY.</u> (GLACIO-LACUSTRINE)	
		↓				
18	S-10	WOH	CH		Gr rd \$yC - \$ pockets	Rec=2.0' WET HNU=Bkgd pp<0.25 N=0
		↓				
		↓				
		↓				
20	S-11	1/1.0'	CH		Br rd \$yC - freq varving	Rec=2.0' WET HNU=Bkgd pp<0.25 N=1/1.0'
		↓				
		1/1.0'				
		↓				
22	S-12	WOH	CH		Br rd \$yC - rd mottling	Rec=2.0' WET HNU=Bkgd pp<0.25 N=2
		↓				
		2				
		1				
24					End of Boring Total Depth = 24.0'; Casing to 22.0'	

DUREZ INLET INVESTIGATION

Lockport Water Line Boring Logs

WL - series

(Task 6)

Dunn Geoscience Corporation Albany, NY (518) 458-1313				Test Boring Log			Boring No. WL-1	
PROJECT: Inlet Investigation							Sheet 1 of 3	
CLIENT: Occidental Chemical Corporation							Job No. 595-3-1165	
DRILLING CONTRACTOR: Pennsylvania Drilling Company							Meas. Pt. Elev.	
PURPOSE: Subsurface Investigation							Ground Elev. 575.23'	
DRILLING METHOD: HSA/Driven Casing				SAMPLE	CORE	CASING	Datum MSL	
DRILL RIG TYPE: Mobile - 61		TYPE	SS	NA	HSA/Steel	Date Started: 12/19/89		
GROUNDWATER DEPTH:		DIAM.	2" OD	NA	4-1/4"/3"	Date Finished: 12/19/89		
MEAS. PT.:		WEIGHT	140#				Driller: H. Dykes, Jr.	
DATE OF MEAS.:		FALL	30" or push				Inspector: D. Rowlinson/ M. Ralbovsky	

Depth (Feet)	Sample Number	Blow Count	Unified Classification	GRAPHIC LOG	GEOLOGIC DESCRIPTION	REMARKS			
2.	S-1	2	OL		Dk br \$ l, f S, t(+) \$yC - pieces of brick - grass, roots, organics	Rec=0.6' Moist (frozen) HNU=Bkgd Bkgd=0.3 ppm N=9			
		3							
		6							
		13							
4	S-2	--	ML			Br tn rd \$ s, f S, l \$yC, t c G - pieces of brick	Rec=0.8' Moist HNU=Bkgd N=5		
		2							
		3							
		3							
5	S-3	1	CL				Br rd tn \$yC s, \$ - silt interbedded in clay	Rec=0.9' Moist HNU=Bkgd N=6	
		2							
		4							
		5							
6	S-4	1	CH					<u>Brown SILTY CLAY little. Silt.</u> - disturbed	Rec=0.4' Moist HNU=Bkgd 2nd try=0.0 rec. N=4
		2							
		2							
		1							
8	S-5	Push	CL					Br tn \$yC l, \$ - piece of charcoal	Rec=1.4' Moist HNU=Bkgd pp<0.25
10			CH					Br rd \$yC - freq varves	

Dunn Geoscience Corporation Albany, NY (518) 458-1313				Test Boring Log		Boring No. WL-1
PROJECT: Inlet Investigation					Sheet 2 of 3	
CLIENT: Occidental Chemical Corporation					Job No. 595-3-1165	
Depth (Feet)	Sample Number	Blow Counts	Unified Classif- ication	Graphic Log	Geologic Description	Remarks
12	S-6	Push ↓	CH		Br rd \$yC - freq varves	Rec=1.8' Moist HNU=Bkgd pp>4.5
14	S-7	Push ↓	CH		Br rd \$yC - freq silt partings	Rec=1.6' Moist HNU=Bkgd pp=4.0, 3.0, 3.5
16	S-8	Push ↓	CH		Br gr rd \$yC - freq varves - 0.0 - 0.6' - 0.6 - 2.0'	Rec=2.0' Moist HNU=Bkgd pp=2.0, 1.0, 1.75 pp<0.25
18	S-9	Push ↓	CH		Br rd gr \$yC - freq varves	Rec=2.0' Moist WET @ 1.1' HNU=Bkgd pp<0.25
20	S-10	Push ↓	CH		Br gr rd \$yC	Rec=2.0' WET HNU=Bkgd pp<0.25
22	S-11	Push ↓	CH		Br gr rd \$yC	Rec=1.6' WET HNU=Bkgd pp<0.25
24	S-12	Push ↓	CH	21.2' LWL	Brown red gray <u>SILTY CLAY</u> - red varves (GLACIO-LACUSTRINE)	Rec=1.8' WET HNU=Bkgd pp<0.25

Dunn Geoscience Corporation Albany, NY (518) 458-1313			Test Boring Log		Boring No. WL-1	
PROJECT: Inlet Investigation					Sheet 3 of 3	
CLIENT: Occidental Chemical Corporation					Job No. 595-3-1165	
Depth (Feet)	Sample Number	Blow Counts	Unified Classif- ication	Graphic Log	Geologic Description	Remarks
24	S-13	Push	CH	25.2' LWL Invert	Br rd gr \$yC - red streaks 0.0 - 1.0' - freq varves 1.0 - 2.0'	Rec=2.0' WET HNU=Bkgd pp<0.25
26	S-14	Push	CH		Rd br \$yC - occasional varves (GLACIO-LACUSTRINE)	Rec=2.0' WET HNU=Bkgd pp<0.25
28	S-15	Push	CH		Rd br gr \$yC - occasional varves	Rec=2.0' WET HNU=Bkgd pp<0.25
30					End of Boring Total Depth = 30.0' Hollow Stem Auger to 20.0' 3" casing pushed to 28.0'	

Dunn Geoscience Corporation Albany, NY (518) 458-1313		Test Boring Log			Boring No. WL-1A	
PROJECT: Inlet Investigation					Sheet 1 of 3	
CLIENT: Occidental Chemical Corporation					Job No. 595-3-1165	
DRILLING CONTRACTOR: Pennsylvania Drilling Company					Meas. Pt. Elev.	
PURPOSE: Subsurface Investigation					Ground Elev. 575.23'	
DRILLING METHOD: HSA/Driven Casing		SAMPLE	CORE	CASING	Datum MSL	
DRILL RIG TYPE: Mobile-61	TYPE	SS	NA	HSA/Steel	Date Started: 1/3/90	
GROUNDWATER DEPTH:	DIAM.	2" OD	NA	4-1/4"/3"	Date Finished: 1/4/90	
MEAS. PT.:	WEIGHT	140#/push			Driller: H. Dykes, Jr.	
DATE OF MEAS.:	FALL	30"			Inspector: M. Ralbovsky	

Depth (Feet)	Sample Number	Blow Count	Unified Classification	GRAPHIC LOG	GEOLOGIC DESCRIPTION	REMARKS
		Auger			Auger to 10.0' see boring log WL-1 for sample description from 0.0 - 8.8'	
2						
4						
5						
6						
8						
10						

Brown red gray tan medium fine
SAND. some Silty Clay. little medium
fine Gravel.

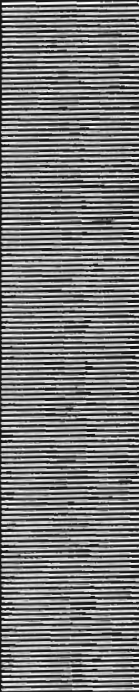
(FILL)

Dunn Geoscience Corporation Albany, NY (518) 458-1313				Test Boring Log		Boring No. WL-1A	
PROJECT: Inlet Investigation						Sheet 2 of 3	
CLIENT: Occidental Chemical Corporation						Job No. 595-3-1165	
Depth (Feet)	Sample Number	Blow Counts	Unified Classif- ication	Graphic Log	Geologic Description	Remarks	
12	S-1	2	OL		Tn br \$ l, \$yC - oxidized pieces - twig	Rec=1.2' WET HNU=Bkgd Bkgd=0.3 ppm N=6	
		3					
		3					
		2					
14	S-2	WH	SC		Br gr tn cmf S, l \$yC, l mf G - gravel rounded - disturbed, mixed sample	Rec=1.3' WET HNU=Bkgd N=3	
		1					
		2					
		2					
16	S-3	WR	SC		Br rd gr tn mf S, s \$yC, t mf G - gravel rounded - mixed sample	Rec=0.9' WET HNU=Bkgd N=3	
		1					
		2					
		2					
18	S-4	WH	CL		Br rd \$yC s(+), mf S, l f G (FILL)	Rec=1.1' Moist HNU=Bkgd pp<0.25 N=2	
		WH					
		2					
		2					
20	S-5	WR	SC		Br gr rd mfS, l \$yC, s mf G - gravel angular	Rec=0.8' WET HNU=Bkgd N=1	
		WH					
		1					
		1					
22	S-6	Push	CL SW		Br rd gr \$yC, l f S Br gr gn mf S, t \$yC, l f G	Rec=1.0' WET HNU=Bkgd pp<0.25	
24	S-7	Push	OL		Gr br \$ t, f G - plant fibers <u>Gray brown red SILT little.</u> <u>Silty Clay, little fine Gravel.</u> (BEDDING)	Rec=1.0' WET HNU=Bkgd	

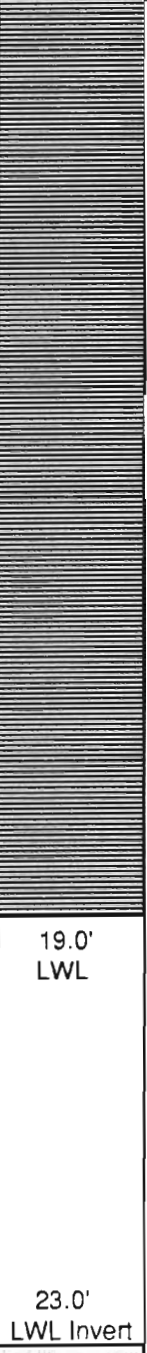
Dunn Geoscience Corporation Albany, NY (518) 458-1313				Test Boring Log		Boring No. WL-1A	
PROJECT: Inlet Investigation						Sheet 3 of 3	
CLIENT: Occidental Chemical Corporation						Job No. 595-3-1165	
Depth (Feet)	Sample Number	Blow Counts	Unified Classif- ication	Graphic Log	Geologic Description	Remarks	
24	S-8A	Push	CH	25.2' LWL Invert 	Br rd \$yC - disturbed	24.8'	Rec=2.0' WET HNU=Bkgd pp<0.25
	S-8B		CH		Br rd \$yC - red streaks - silt seam		
26		Push	CH		<u>Brown red gray SILTY CLAY.</u> - frequent varves - red streaking (GLACIO-LACUSTRINE)		Rec=2.0' WET HNU=Bkgd pp<0.25
	S-9						
28		Push	CH		Br rd gr \$yC - freq varves - red streaking		Rec=2.0' WET HNU=Bkgd pp<0.25
	S-10						
30		Push			Shelby Tube (2") @ 75 psi		Rec=2.0' HNU=Bkgd pp<0.25
	U-11						
32						End of Boring Total Depth = 32.0' Boring grouted to surface Casing to 30.0' Augers to 20.0'	

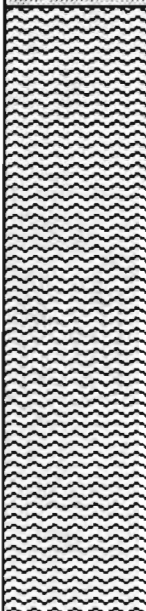
Dunn Geoscience Corporation Albany, NY (518) 458-1313		Test Boring Log			Boring No. WL-2
PROJECT: Inlet Investigation					Sheet 1 of 3
CLIENT: Occidental Chemical Corporation					Job No. 595-3-1165
DRILLING CONTRACTOR: Pennsylvania Drilling Company					Meas. Pt. Elev.
PURPOSE: Subsurface Investigation					Ground Elev. 565.38'
DRILLING METHOD: Driven Casing		SAMPLE	CORE	CASING	Datum MSL
DRILL RIG TYPE: Penn Drill 12-B	TYPE	SS	NA	Steel	Date Started: 12/7/89
GROUNDWATER DEPTH:	DIAM.	2" OD	NA	8"/6"/3"	Date Finished: 12/11/89
MEAS. PT.:	WEIGHT	140#/300 #			Driller: Jim Lang
DATE OF MEAS.:	FALL	6"			Inspector: D. Rowlinson

Depth (Feet)	Sample Number	Blow Count	Unified Classification	GRAPHIC LOG	GEOLOGIC DESCRIPTION	REMARKS
		Driven			8" casing to 9.4'	8" casing 1.4'
					6" casing to 10.0'	Below soft sediment
					Soft sediment probed to determine depth (4 times) Average = 8'	6" casing 1.9'
2						Below soft sediment
						Bentonite pellets
						Bentonite slurry
						fill annulus between
						8" & 6"
4						
5						
6						
8						
10						

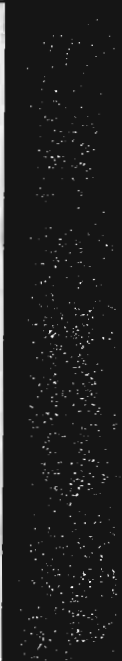
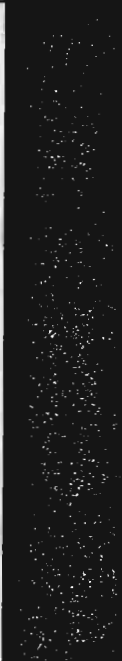
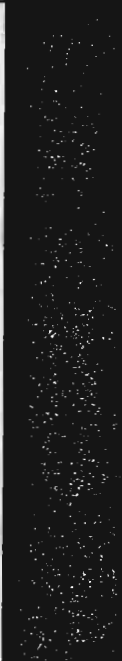
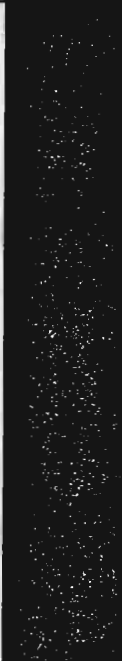
Dunn Geoscience Corporation Albany, NY (518) 458-1313				Test Boring Log		Boring No. WL-2
PROJECT: Inlet Investigation					Sheet 2 of 3	
CLIENT: Occidental Chemical Corporation					Job No. 595-3-1165	
Depth (Feet)	Sample Number	Blow Counts	Unified Classification	Graphic Log	Geologic Description	Remarks
10	S-1		CH		Br rd gr \$yC - red streaks ----- 10.8'	Rec=0.9' WET HNU=Bkgd Shoe=130 ppm pp<0.25
		WR			Rd br \$&C l, cS, l(-) mf (+) G - brown liquid on basket at (130 ppm) - sheen Br rd \$&C t(-), mf G - liquid clay on top of sample (no flushing prior to S-2) - brown liquid covering tip of shoe ----- (FILL) ----- 14.0'	Rec=1.5' WET HNU=Bkgd Shoe=150 ppm pp<0.25
12	S-2	140 lb tapped	CL			
						
14	S-3	140 lb tapped	CH		Br rd \$yC ----- 14.5'	Rec=2.0' WET HNU=500+ ppm pp<0.25 Note *
			CH		Rd br \$&C l(+), c S, l f G ----- 15.0'	
	S-4				Rd br \$yC - brown liquid running from sample - entire sample coated brown liquid Gr br \$yC - brown liquid coating sample - wood twig ----- 18.0'	Rec=1.8' WET HNU=150 ppm 300 ppm peak pp<0.25
16		Pushed	CH			
	S-5A				16.1' LWL	
		300 lb tapped	CL		Rd br \$&C t, f G - brown liquid on top of sample ----- 18.4'	Rec=1.9' WET HNU A=50 ppm B=100 ppm 200 ppm peak pp<0.25
	S-5B		CH		Gr br \$yC - rd streaks ----- 19.4'	
			CL		20.1' LWL Invert Rd br \$&C t, f G ----- 19.9'	
20	S-6	300 lb tapped	SM		Dk gr mf(+) S, s \$ Dk gr rd f S, a \$ - block of wood ----- 21.0'	Rec=1.9' WET HNU=5 ppm 60 ppm peak
			SP		Dk gr f S - sheen (60 ppm) ----- 21.2'	
22	S-7	Pushed	SM		Dk gr rd f S, a \$, l \$yC	Rec=1.9' WET HNU=100 ppm 200+ ppm peak
			SM		Dk gr br rd f S, a \$, l \$yC, t(-) f G - blocks of wood - brown liquid in sample	
		300 lb tapped			Dark gray fine SAND and SILT. ----- (BEDDING) ----- 24.0'	
24						

Dunn Geoscience Corporation Albany, NY (518) 458-1313				Test Boring Log		Boring No. WL-2
PROJECT: Inlet Investigation						Sheet 3 of 3
CLIENT: Occidental Chemical Corporation						Job No. 595-3-1165
Depth (Feet)	Sample Number	Blow Counts	Unified Classification	Graphic Log	Geologic Description	Remarks
24	S-8	300 lb tapped	CL		Br rd \$&C l, mf G - elevated HNU possibly caused by chemical carrydown	Rec=1.8' WET HNU=15 ppm coated sample HNU=Bkgd inside sample pp<0.25
26						Br rd wash water 15 ppm decreased to 0 ppm; hole at 2 ppm
28	S-9	300 lb tapped	CL		Br rd \$&C s(+), c(+) m S, s mf G - c G driving ahead of spoon	Rec=0.3' WET HNU=Bkgd Shoe break 8 ppm pp<0.25
30						<u>Brown red SILT and CLAY trace, coarse medium fine Sand, some medium fine Gravel.</u> (TILL)
32	S-10	300 lb tapped	CL		Br \$&C s, cmf S, s(-) mf G - subangular to subrounded	Rec=1.4' WET HNU=Bkgd pp=0.50
					32.0'	
				Note *	End of Boring Total Depth = 32.0' Casing (3") to 26.0' Grouted to surface	
					15.0' 12/8/89 8:00 am, 3" casing at 14.0'. Bailed 1.25 qt. brown liquid before advancing borehole.	

Dunn Geoscience Corporation Albany, NY (518) 458-1313				Test Boring Log		Boring No. WL-3
PROJECT: Inlet Investigation					Sheet 2 of 3	
CLIENT: Occidental Chemical Corporation					Job No. 595-3-1165	
Depth (Feet)	Sample Number	Blow Counts	Unified Classif- ication	Graphic Log	Geologic Description	Remarks
12	S-2	WOH	CH		Br rd bk \$yC a, \$ - wood frag - odor - twig - \$ black color	Rec=0.1' 2nd try = 0.5' WET HNU=2 ppm pp<0.25
		WOH	CH		Br rd gr \$yC - rd gr streaks - sm pockets of dk gr f S (FILL)	Rec=1.0' WET HNU=Bkgd pp=<0.25
14	S-4	WOH	CH		Br gr rd \$yC - rd varving entire sample	Rec=2.0' WET HNU=Bkgd pp<0.25
		WOH	CH		Br rd \$yC - rd streaks - wood frag - one round m G	Rec=1.7' WET HNU=Bkgd pp<0.25
18	S-6	WOH	CH		Br rd \$yC	Rec=1.3' WET HNU=Bkgd pp<0.25
		WOH	CH		Br gr rd \$yC - rd streaks - one round m G	Rec=2.0' WET HNU=Bkgd Shoe=3 ppm pp<0.25
22	S-8A	WOH	CH		Br rd \$yC, t (-) c S	Rec=1.9' WET HNU A=Bkgd B=100 ppm pp<0.25
		WOH	SM		Dk gr f S. a (+) \$ Dark gray fine SAND and SILT. (BEDDING)	

Dunn Geoscience Corporation				Test Boring Log		Boring No. WL-3
Albany, NY (518) 458-1313						
PROJECT: Inlet Investigation						Sheet 3 of 3
CLIENT: Occidental Chemical Corporation						Job No. 595-3-1165
Depth (Feet)	Sample Number	Blow Counts	Unified Classification	Graphic Log	Geologic Description	Remarks
24	S-9	300 lb tapped	SM		Dk gr f S, s \$ - brown liquid saturated S - wood chunk - sheen on entire sample	Rec=2.0' WET HNU=100 ppm 200 ppm peak
					25.3'	
					25.9'	
26	S-10	300 lb tapped	SP		Br f S	Rec=0.7' WET HNU=20 ppm pp<0.25
			CL			
28	S-11	300 lb tapped	CL		Br rd \$&C, t c S, a mf G - subangular to subrounded - pockets dk gr f S <u>Brown red SILTY CLAY, trace</u> <u>coarse medium fine Sand, little</u> <u>(+) medium fine Gravel.</u>	Rec=0.8' WET HNU=7 ppm pp<0.25
30	S-12	300 lb tapped	CL		Br rd \$&C s, mf S, s(-) mf(+) G - subrounded - possible chemical carrydown from wash water (TILL)	Rec=0.6' 2nd try=1.0' WET HNU=Bkgd pp<0.25
32					32.0'	
					End of Boring Total Depth = 32.0' Casing (3") to 30.0' Grouted to surface	

Dunn Geoscience Corporation Albany, NY (518) 458-1313				Test Boring Log		Boring No. WL-4	
PROJECT: Inlet Investigation						Sheet 1 of 4	
CLIENT: Occidental Chemical Corporation						Job No. 595-3-1165	
DRILLING CONTRACTOR: Pennsylvania Drilling Company						Meas. Pt. Elev.	
PURPOSE: Subsurface Investigation						Ground Elev. 563.54'	
DRILLING METHOD: Driven Casing				SAMPLE	CORE	CASING	Datum MSL
DRILL RIG TYPE: Penn Drill 12-B		TYPE	SS	NA	Steel	Date Started: 12/20/89	
GROUNDWATER DEPTH:		DIAM.	3 1/2" OD	NA	8" 6" 4" 3"	Date Finished: 1/3/90	
MEAS. PT.:		WEIGHT	140#			Driller: Jim Lang	
DATE OF MEAS.:		FALL	30"			Inspector: D. Rowlinson	

Depth (Feet)	Sample Number	Blow Count	Unified Classification	GRAPHIC LOG	GEOLOGIC DESCRIPTION	REMARKS
2		Driven			8" casing to 7.5'	8" casing 1.5' below soft sediment 6" casing 2.0' below soft sediment Bentonite pellets and slurry fill annulus between 8" & 6" casing HNUBkgd=0.3 ppm 12/20/89 HNU Bkgd = 0.4 ppm 01/02/90
4					6" casing to 8.0'	* Note: 12/21/89 - Site shutdown due to weather (sub-zero wind chills) and for the holidays. Drilling resumed 01/02/90.
5					Soft sediment probed to determine depth (4 times) Average = 6'	~6.0'
6						
8	S-1	300 lb tapped	CH		<u>Brown red SILT & CLAY, trace coarse Sand, little medium fine Gravel.</u> (FILL)	Rec=0.7' WET HNU=1 ppm pp<0.25
9.5					Br rd \$yC - rd vertical streaking - bentonite slurry on sample	

Dunn Geoscience Corporation				Test Boring Log		Boring No. WL-4	
Albany, NY (518) 458-1313							
PROJECT: Inlet Investigation						Sheet 2 of 4	
CLIENT: Occidental Chemical Corporation						Job No. 595-3-1165	
Depth (Feet)	Sample Number	Blow Counts	Unified Classif- ication	Graphic Log	Geologic Description	Remarks	
9.5	S-2	Pushed	CL		- sample destroyed possibly by wood plug	Rec=0 2nd try=0	
		↓					
11		140# 8			Br rd \$&C s, cS, s(-) mf G	Rec=1.4' WET HNU=1 ppm pp<0.25	
	S-3	2	CL		- wood frag from plug		
		4			- decaying wood frag		
12.5		2 140#			Br \$&C s, c S, s(-) mf G	Rec=1.3' WET HNU=1 ppm pp<0.25	
	S-4	3	CL		(FILL)		
		5					
14		Pushed			Shelby Tube No pressure gauge	Rec=2.0' WET HNU=1 ppm pp<0.25	
	U-5	↓					
16		1 140#	CL		Br \$&C l, c S, l(-) cmf(+) G 17.0'	Rec=1.5' WET HNU=7 ppm pp<0.25	
	S-6	2	CL		Gr \$&C l, c S, l(-) cmf (+) G 17.5'		
		1	CL		- odor		
17.5		WR	CH		Br \$yC l(-), f G 18.2'	Rec=1.5' WET HNU=1 ppm pp<0.25	
	S-7	140# 1	CL		Br gr \$&C l, c S, l(-) mf G		
		3	CL		Br rd \$&C l, c(+) mf S, l(-) mf(+) G 20.0'	Rec=1.5' WET HNU=Bkgd = 0.4 pp<0.25	
19		Pushed	CH				
	S-8	↓			Gr br rd \$yC		
20.5		Pushed			Br rd gr \$yC, t c S	Rec=1.5' WET HNU=1 ppm pp<0.25	
	S-9	↓	CL		- shell frag & shell		
		↓			- sheen on spoon & sample o/side		
		↓			- rd streaking		
22	S-10	Pushed	SM	22.8' LWL	- 1 med subangular piece m G	Rec=1.5' WET HNU=1-2 ppm pp<0.25	
		300 #			Br rd \$yC t, cm S 22.4'		
		tapped			Dk gr f S, a \$		
23.5		↓			- odor/sheen on o/side of spoon		
					- wood frag		

Dunn Geoscience Corporation Albany, NY (518) 458-1313				Test Boring Log		Boring No. WL-4
PROJECT: Inlet Investigation					Sheet 3 of 4	
CLIENT: Occidental Chemical Corporation					Job No. 595-3-1165	
Depth (Feet)	Sample Number	Blow Counts	Unified Classification	Graphic Log	Geologic Description	Remarks
23.5	S-11	300# tapped	SM		Dk gr f S, a \$, t m G - odor & sheen - wood frag & chunks <u>Dark gray fine SAND and SILT.</u> (BEDDING)	Rec=1.5' WET HNU=7 ppm Shoe=80 ppm
25		300# tapped				Rec=1.5' WET HNU=120 ppm 150 ppm peak
26.5	S-13	140# 10	SP CL	26.8' LWL Invert	Dk gr cmf(+) S, s mf(+) G	Rec=1.0' WET HNU=80 ppm Shoe break 400 ppm pp<0.25
28		15				Rec=0.8' WET HNU=5 ppm pp<0.25
30	S-15	140# 15	CL		Br rd \$&C s, mf G - angular to subangular	Rec=1.5' WET HNU=5 ppm 15 ppm peak pp=0.5
31.5		14				
32	S-16	5 140#	CL		3" casing/wood plug w/gasket sealer and duct tape driven Br rd \$&C - gr silt pockets <u>Brown red SILT & CLAY, trace coarse medium Sand, little (-) medium fine Gravel.</u> (TILL)	Rec=1.6' WET HNU=1 ppm Shoe break 10 ppm pp=2.25 N=11
34		5				
36	S-17	140# 5	CH		Br rd \$yC - gr silt pockets	Rec=2.0' WET HNU=1 ppm pp<0.25 N=11
38		6				
	S-18	1 140#	CL		Br rd \$&C t(+), c(+), m S, t(-) f G - silt pockets - wood frag Rd br gr \$yC - rd streaking - silt pockets	Rec=2.0' WET HNU=2 ppm pp<0.25 N=3
		2				
		1	CH			
		3				

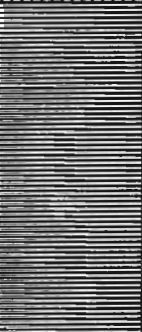
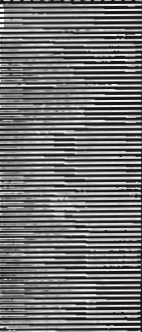
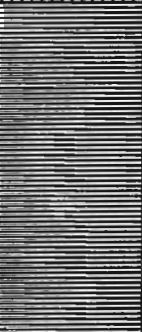
Dunn Geoscience Corporation Albany, NY (518) 458-1313		Test Boring Log			Boring No. WL-5
PROJECT: Inlet Investigation					Sheet 1 of 3
CLIENT: Occidental Chemical Corporation					Job No. 595-3-1165
DRILLING CONTRACTOR: Pennsylvania Drilling Company					Meas. Pt. Elev.
PURPOSE: Subsurface Investigation					Ground Elev. 567.39'
DRILLING METHOD: Driven Casing		SAMPLE	CORE	CASING	Datum MSL
DRILL RIG TYPE: Penn Drill 12-B		TYPE	SS	NA	Steel
GROUNDWATER DEPTH:		DIAM.	2" OD	NA	8" 6" 3"
MEAS. PT.:		WEIGHT	300#	Driller: Jim Lang	
DATE OF MEAS.:		FALL	6"	Inspector: D. Rowlinson	

Depth (Feet)	Sample Number	Blow Count	Unified Classif- ication	GRAPHIC LOG	GEOLOGIC DESCRIPTION	REMARKS
		Driven			8" casing to 10.5'	8" casing 0.5' below soft sediment
					6" casing to 11.0'	6" casing 1.0' below soft sediment
					Soft sediment probed to determine depth (4 times) Average = 10.0'	Bentonite pellets Bentonite slurry fill annulus between 8" and 6" casing
2						
4						
5						
6						
8						
10						

Revised

Dunn Geoscience Corporation Albany, NY (518) 458-1313				Test Boring Log		Boring No. WL-5
PROJECT: Inlet Investigation					Sheet 2 of 3	
CLIENT: Occidental Chemical Corporation					Job No. 595-3-1165	
Depth (Feet)	Sample Number	Blow Counts	Unified Classification	Graphic Log	Geologic Description	Remarks
11		Driven ↓			Brown gray red SILTY CLAY trace. medium fine Gravel. (FILL)	
	S-1	WR ↓	CH		Br gr \$yC - brown liquid oozes - soft sediment on top of sample - duct tape - sheen on sample - gn gr c m S, s\$ in shoe	Rec=1.7' WET HNU=20 ppm pp<0.25
13	S-2	WH ↓	CH		Br rd gr \$yC - rd gr streaking & mottling - brown liquid oozes - sheen on sample - wood frag - rd dry silt pockets	Rec=1.9' WET HNU=30 ppm pp<0.25
15	S-3	WH ↓	CH	15.1' LWL	Gr br rd \$yC t (-), mf G - wood frag	Rec=0.9' WET HNU=5 ppm pp<0.25
17	S-4	WH ↓	CH		Gr br rd \$yC t (-), m G - angular to subrounded	Rec=1.7' WET HNU=50 ppm pp<0.25
19	S-5	Pushed ↓	CL	19.1' LWL Invert	Gr br rd \$yC l, c S, l(-) mf G - brown liquid oozes (BEDDING)	Rec=1.4' WET HNU=100 ppm 200 ppm peak pp<0.25
	S-5A	↓	CH		Gr br \$yC - HNU 30 ppm	
21	S-6A	Pushed ↓	CH		Gr br \$yC (GLACIO-LACUSTRINE)	Rec=1.6' WET HNU=50 ppm pp<0.25
	S-6B	Hammer tapped 300# ↓	CH		Rd br gr \$yC t, f G - wood frag - block of wood - rd streaks & mottling	
23		WOH ↓	CH		Rd br gr \$yC t(+), mf G - wood frag - rd gr streaks - subrounded gravel	Rec=0.9' WET HNU=6 ppm pp<0.25
25		300#				

Duplicate

Dunn Geoscience Corporation				Test Boring Log		Boring No. WL-5
Albany, NY (518) 458-1313						
PROJECT: Inlet Investigation						Sheet 2 of 3
CLIENT: Occidental Chemical Corporation						Job No. 595-3-1165
Depth (Feet)	Sample Number	Blow Counts	Unified Classif- ication	Graphic Log	Geologic Description	Remarks
11	S-1	Driven ↓	CH		Brown gray red SILTY CLAY trace, medium fine Gravel. (FILL) Br gr \$yC - brown liquid oozes - soft sediment on top of sample - duct tape - sheen on sample - gn gr c m S, s\$ in shoe	Rec=1.7' WET HNU=20 ppm pp<0.25
		WR				
13	S-2	↓	CH		Br rd gr \$yC - rd gr streaking & mottling - brown liquid oozes - sheen on sample - wood frag - rd dry silt pockets	Rec=1.9' WET HNU=30 ppm pp<0.25
		WH				
15	S-3	↓	CH	15.1' LWL	Gr br rd \$yC t (-), mf G - wood frag	Rec=0.9' WET HNU=5 ppm pp<0.25
		WH				
17	S-4	↓	CH		Gr br rd \$yC t(-), m G - angular to subrounded	Rec=1.7' WET HNU=50 ppm pp<0.25
		WH				
19	S-5	↓	CL	19.1' LWL Invert	Gr br rd \$yC l, c S, l(-) mf G - brown liquid oozes	Rec=1.4' WET HNU=100 ppm pp<0.25
		Pushed				
	S-5A	↓	CH		Gr br \$yC - HNU 30 ppm	
21	S-6A	Pushed ↓	CH		Gr br \$yC ----- 21.5' (GLACIO-LACUSTRINE)	Rec=1.6' WET HNU=50 ppm pp<0.25
	S-6B	↓	CH		Rd br gr \$yC t, f G - wood frag - block of wood - rd streaks & mottling	
		Hammer tapped				
23	S-7	300#	CH		Rd br gr \$yC t(+), mf G - wood frag - rd gr streaks - subrounded gravel	Rec=0.9' WET HNU=6 ppm pp<0.25
		WOH ↓				
	Hammer tapped					
25		300#				25.0'

APPENDIX E

Geotechnical Laboratory Testing Data

SUMMARY OF LABORATORY TESTING

Layer I.D.

Soft Sediment

Sample/Mid-Depth (ft)	Water Content (%)	Dry / Wet Density (pcf)	Atterberg Limits			Gradation (%)			Undrained Shear Strength Su, ksf			Permeability (cm/sec)	Remarks
			LL (%)	PL (%)	PI (%)	Gr	Sa	Si	PP	TV	UU	CU	
Boring: 2													
212 , 1.3	55.1		51	26	25	36	52	12					0.5-2'
Boring: 3													
322 , 1.3	104.6		80	41	39	20	58	22					0.5-2'
332B , 1.3	68.5		61	30	31								0.5-2'
332C , 1.3	19.3		23	14	9								0.5-2'
Boring: 5													
522A , 1.3	57.6		53	32	21	14	70	16					0.5-2'
522B , 1.3	43.5		52	21	30	2	30	68					0.5-2'
Comp., 2.8	67.9		49	31	18	0	74	26					0.5-5'
Boring: 6													
Comp., 2.8	64.9		49	31	18	0	78	22					0.5-5'
Boring: 8													
832 , 1.3	61.8					62	32	6					0.5-5'
Comp., 2.8	71.4		46	31	15	30	52	18					0.5-5'

Atterberg Limits:

LL - Liquid Limit PL - Plastic Limit PI - Plasticity Index

Gradation: Gr - Gravel Sa - Sand Si - Silt Cl - Clay nt - not tested (Si is total Si & Cl)

Strength Index Tests: TV - Torvane PP - Pocket Penetrometer

Shear Strength Tests: UU - Unconsolidated, Undrained Triaxial CU - Consolidated, Undrained Triaxial

Conf Pres - confining pressure for triaxial and permeability tests in ksf

SUMMARY of LABORATORY TESTING

Layer I.D.

Fill

Sample/Mid-Depth (ft)	Water Content (%)	Dry / Wet Density (pcf)	Atterberg Limits			Gradation (%)		Undrained Shear Strength Su, ksf				Permeability (cm/sec)	Remarks	
			LL (%)	PL (%)	PI (%)	Gr	Sa	Si	Cl	PP	TV			UU
Boring: I-15														
S-6 , 11.0						1	11	39	49					
Boring: I-19														
S-4 , 7.0						39	18	42	nt					
Boring: MW-5D														
S-1 , 6.0	51.2					78	21	1	nt					

Atterberg Limits: LL - Liquid Limit PL - Plastic Limit PI - Plasticity Index
 Gradation: Gr - Gravel Sa - Sand Si - Silt Cl - Clay nt - not tested (Si is total Si & Cl)
 Strength Index Tests: TV - Torvane PP - Pocket Penetrometer
 Shear Strength Tests: UU - Unconsolidated, Undrained Triaxial CU - Consolidated, Undrained Triaxial
 Conf Pres - confining pressure for triaxial and permeability tests in ksf

SUMMARY OF LABORATORY TESTING

Layer I.D.

Silt Clay Fill

Sample/Mid-Depth (ft)	Water Content (%)	Dry / Wet Density (pcf)	Atterberg Limits			Gradation (%)			Undrained Shear Strength Su, ksf		Permeability (cm/sec)	Remarks
			LL (%)	PL (%)	PI (%)	Gr	Sa	Si Cl	Index PP	TV UU		
Boring: IW-2												
S-2 , 7.0	44.3								0.00	0.16		
Boring: IW-3												
S-3 , 15.0						1	1	35 63	0.00			
S-4 , 17.0	45.8		61	25	36				0.00	0.20		
Boring: IW-4												
S-1 , 4.0						5	3	31 61	0.00			
Boring: WL-4												
S-3 , 11.8	37.3					11	15	38 36				
S-4 , 13.3									0.93	0.60		
U-5 , 15.0	17.9		19	13	6	18	23	59 nt				
U-5a , 15.0	12.7								0.67	0.92		
U-5d , 15.0	13.3	124.0								0.35	1.73	
U-5e , 15.0	13.7	122.5								1.29	1.73	
U-5f , 15.0	13.6	121.7								0.75	0.43	5.0E-08
U-5g , 15.0	17.9											
U-5h , 15.0	17.9								0.13	0.52		
S-7 , 18.3									0.23	0.54		
S-9 , 21.3									0.00	0.30		
									0.13	0.36		

Atterberg Limits: LL - Liquid Limit PL - Plastic Limit PI - Plasticity Index
 Gradation: Gr - Gravel Sa - Sand Si - Silt Cl - Clay nt - not tested (Si is total Si & Cl)
 Strength Index Tests: TV - Torvane PP - Pocket Penetrometer
 Shear Strength Tests: UU - Unconsolidated, Undrained Triaxial CU - Consolidated, Undrained Triaxial
 Conf Pres - confining pressure for triaxial and permeability tests in ksf

SUMMARY OF LABORATORY TESTING

Layer I.D.

Alluvium

Sample/Mid-Depth (ft)	Water Content (%)	Dry / Wet Density (pcf)	Atterberg Limits			Gradation (%)			Undrained Shear Strength Su, ksf			Permeability (cm/sec)	Remarks	
			LL (%)	PL (%)	PI (%)	Gr	Sa	Si	Cl	Index				CU
										PP	TV			
Boring: I-11														
S-4 ,	7.0					0	82	18	nt					
S-5 ,	9.0					17	61	23	nt					
S-7 ,	13.0					0	73	27	nt					
S-11 ,	21.0					31	61	8	nt					
Boring: I-21														
S-8 ,	15.0					4	81	15	nt					
S-11 ,	21.0					5	91	4	nt					
S-16 ,	31.0					33	61	6	nt					
Boring: I-9														
S-6 ,	11.0					19	41	44	nt					
S-11 ,	21.0					16	74	10	nt					
Boring: MW-5D														
U-2a ,	8.0	27.7												
U-2e ,	8.0	30.8												
S-3 ,	15.0	23.6				9	90	2	nt					
U-4a ,	17.0	21.5												
U-4f ,	17.0	17.5												

Atterberg Limits: LL - Liquid Limit PL - Plastic Limit PI - Plasticity Index
 Gradation: Gr - Gravel Sa - Sand Si - Silt Cl - Clay nt - not tested (Si is total Si & Cl)
 Strength Index Tests: TV - Pocket Penetrometer
 Shear Strength Tests: UU - Unconsolidated, Undrained Triaxial CU - Consolidated, Undrained Triaxial
 Conf Pres - confining pressure for triaxial and permeability tests in ksf

SUMMARY of LABORATORY TESTING

Layer I.D.

Glacio-Lacustrine Clay

Sample/Mid-Depth (ft)	Water Content (%)	Dry / Wet Density (pcf)	Atterberg Limits		Gradation (%)		Undrained Shear Strength Su, ksf		Permeability (cm/sec)	Remarks
			LL (%)	PL (%)	Gr	Sa	Index PP	TV UU		
Boring: I-1 S-13 , 25.0			48	22						
Boring: I-15 S-7 , 13.0					0	4				
Boring: I-16 S-11 , 21.0					8	9				
Boring: I-3 S-10 , 19.0			42	21						
Boring: IW-6 S-6g , 15.0	42.5		50	23			0.00	0.20		
U-7b , 16.5	43.6		46	20			0.25			
U-7c , 16.5	41.8	78.4					0.63	0.64	0.43	0.52
U-7d , 16.5	42.1	78.9							0.42	0.52
U-7e , 16.5	57.1						0.00	0.48		7.3E-08

Atterberg Limits: LL - Liquid Limit PL - Plastic Limit PI - Plasticity Index
 Gradation: Gr - Gravel Sa - Sand Si - Silt Cl - Clay nt - not tested (Si is total Si & Cl)
 Strength Index Tests: TV - Torvane PP - Pocket Penetrometer
 Shear Strength Tests: UU - Unconsolidated, Undrained Triaxial CU - Consolidated, Undrained Triaxial
 Conf Pres - confining pressure for triaxial and permeability tests in ksf

SUMMARY of LABORATORY TESTING

Layer I.D.

Glacial Till

Sample/Mid-Depth (ft)	Water Content (%)	Dry / Wet Density (pcf)	Atterberg Limits		Gradation (%)			Undrained Shear Strength Su, ksf			Permeability (cm/sec)	Remarks
			LL (%)	PL (%)	Gr	Sa	Si	PP	TV	UU	CU	
Boring: I-1												
S-17 , 33.0			20	12	7							
Boring: I-21												
S-20 , 39.0			21	11	9							
S-25b, 49.0			21	10	11							
Boring: I-3												
S-16 , 31.0			22	12	10							
S-22 , 43.0			24	13	11							
Boring: IW-1												
U-10b, 26.0	24.7		22	14	9							
U-10c, 26.0	16.6	112.9						0.00	0.20	0.22		1.01
U-10d, 26.0	15.5	121.2									0.86	0.43
U-10e, 26.0	22.4							0.67	0.86			1.4E-07
Boring: IW-2												
U-11a, 25.0	16.7							0.00	0.40			
U-11b, 25.0	18.2							0.00	0.20			
U-11d, 25.0	15.5							1.03	0.64			
U-11e, 25.0	12.7											
S-12 , 26.8	12.7							1.00				
S-12g, 26.8	12.7		23	13	10			1.68	0.80			

Atterberg Limits: LL - Liquid Limit PL - Plastic Limit PI - Plasticity Index

Gradation: Gr - Gravel Sa - Sand Si - Silt Cl - Clay nt - not tested (Si is total Si & Cl)

Strength Index Tests: TV - Torvane PP - Pocket Penetrometer

Shear Strength Tests: UU - Unconsolidated, Undrained Triaxial CU - Consolidated, Undrained Triaxial

Conf Pres - confining pressure for triaxial and permeability tests in ksf

SUMMARY of LABORATORY TESTING

Layer I.D.

Glacial Till

Sample/Mid-Depth (ft)	Water Content (%)	Dry / Wet Density (pcf)	Atterberg Limits		Gradation (%)			Undrained Shear Strength Su, ksf			Permeability (cm/sec)	Remarks
			LL (%)	PL (%)	Gr	Sa	Si	TV	UU	CU		
Boring: MW-5D												
S-6 , 35.0	18.4		29	15	14							
Boring: WL-4												
S-19 , 39.0	20.2		25	14	11			0.00	0.20			
U-20a, 41.0	25.5							0.00	0.20			
U-20b, 41.0	32.7							0.10	0.44			
U-20h, 41.0	24.8							0.23				
U-20i, 41.0	22.5											

Atterberg Limits: LL - Liquid Limit PL - Plastic Limit PI - Plasticity Index
 Gradation: Gr - Gravel Sa - Sand Si - Silt Cl - Clay nt - not tested (Si is total Si & Cl)
 Strength Index Tests: TV - Torvane PP - Pocket Penetrometer
 Shear Strength Tests: UU - Unconsolidated, Undrained Triaxial CU - Consolidated, Undrained Triaxial
 Conf Pres - confining pressure for triaxial and permeability tests in ksf

APPENDIX F
Monitoring Well Completion Logs

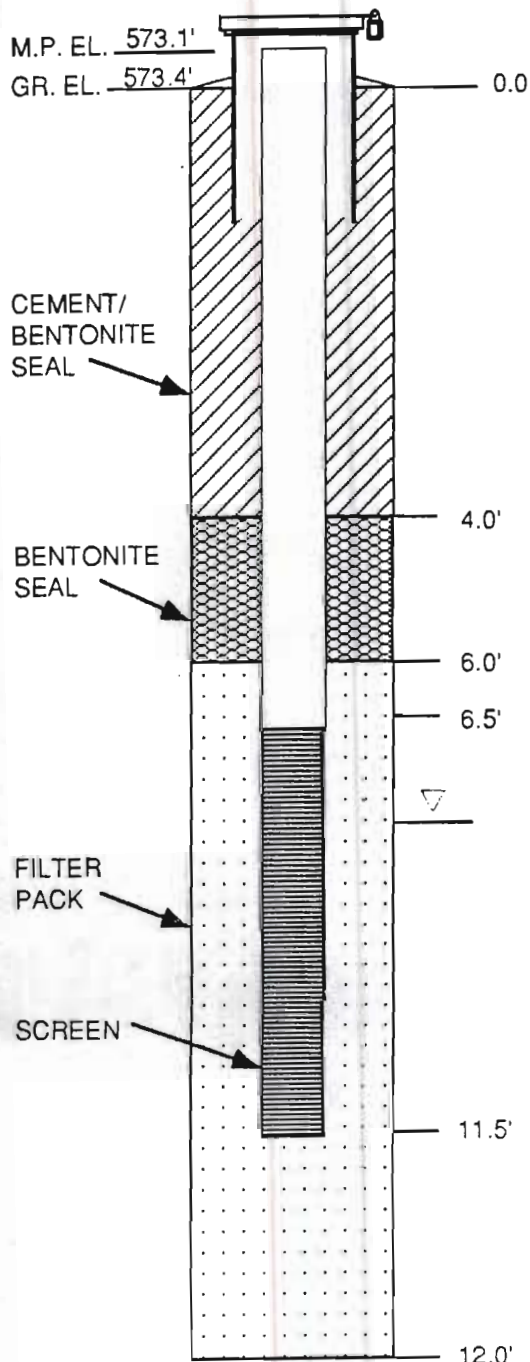
MONITORING WELL COMPLETION LOG WELL NO. MW-1S



Dunn Geoscience Corporation
 12 Metro Park Road
 Albany, NY 12205
 (518) 458-1313

Project Inlet Investigation
 Client Occidental Chemical Corp.
 Location N. Tonawanda, N.Y.
 Project No. 00595-01165
 Date Drilled 11/15/89
 Date Developed 1/8/90

WELL CONSTRUCTION DETAIL



NOT TO SCALE

INSPECTION NOTES

Inspector M. Ralbovsky
 Drilling Contractor Pennsylvania Drilling Co.
 Type of Well Monitoring Well
 Static Water Level 565.70 Date 6/18/90
 Measuring Point (M.P.) 573.1 MSL (PVC)
 Total Depth of Well 11.5'
 Total Depth of Boring 12.0'
 Drilling Method
 Type Hollow Stem Auger Diameter 4 - 1/4" ID
 Casing HSA
 Sampling Method
 Type _____ Diameter _____
 Weight _____ Fall _____
 Interval _____
 Riser Pipe Left in Place
 Material SCH 40 PVC Diameter 2" ID
 Length 6.2' Joint Type Thread
 Screen
 Material SCH 40 PVC Diameter 2" ID
 Slot Size .010 Length 5.0'
 Stratigraphic Unit Screened Fill/Alluvium
 Filter Pack
 Sand X Gravel _____ Natural _____
 Grade 430
 Amount 120# Interval 12.0' - 6.0'
 Seal(s)
 Type Bentonite Pellets Interval 4.0' - 6.0'
 Type Grout Interval 0.0 - 4.0'
 Type _____ Interval _____
 Locking Casing ☒ Yes ☐ No
 Notes:

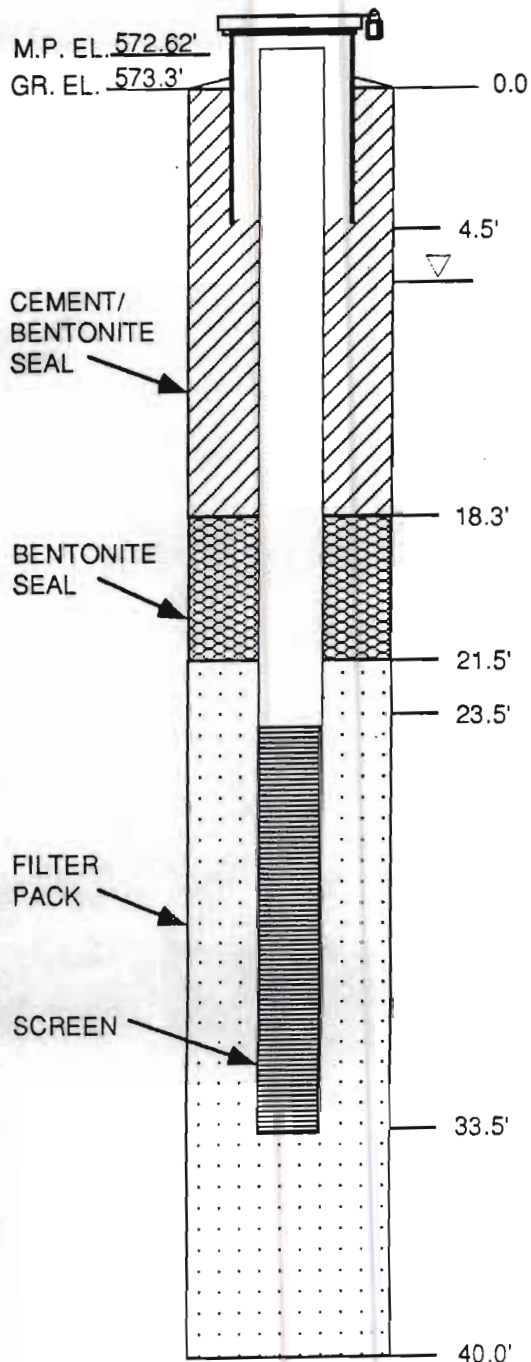
MONITORING WELL COMPLETION LOG WELL NO. MW-11



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Project Inlet Investigation
 Client Occidental Chemical Corp.
 Location N. Tonawanda, N.Y.
 Project No. 00595-01165
 Date Drilled 11/15/89
 Date Developed 1/8/90

WELL CONSTRUCTION DETAIL



NOT TO SCALE

INSPECTION NOTES

Inspector M. Ralbovsky
 Drilling Contractor Pennsylvania Drilling Co.
 Type of Well Monitoring Well
 Static Water Level 565.74 Date 6/18/90
 Measuring Point (M.P.) 572.62' MSL (PVC)
 Total Depth of Well 33.5'
 Total Depth of Boring 40.0'
 Drilling Method
 Type Hollow Stem Auger Diameter 4 - 1/4" ID
 Casing HSA
 Sampling Method
 Type SS Diameter 2" OD
 Weight 140# Fall 30"
 Interval Continuous
 Riser Pipe Left in Place
 Material SCH 40 PVC Diameter 2" ID
 Length 22.2' Joint Type Thread
 Screen
 Material SCH 40 PVC Diameter 2" ID
 Slot Size .010 Length 10.0'
 Stratigraphic Unit Screened Fill/Alluvium
 Filter Pack
 Sand X Gravel Natural
 Grade #430
 Amount 280# Interval 21.5' - 40.0'
 Seal(s)
 Type Bentonite Pellets Interval 18.3' - 21.5'
 Type Grout Interval 4.5' - 18.3'
 Type Interval
 Locking Casing ☒ Yes ☐ No
 Notes:

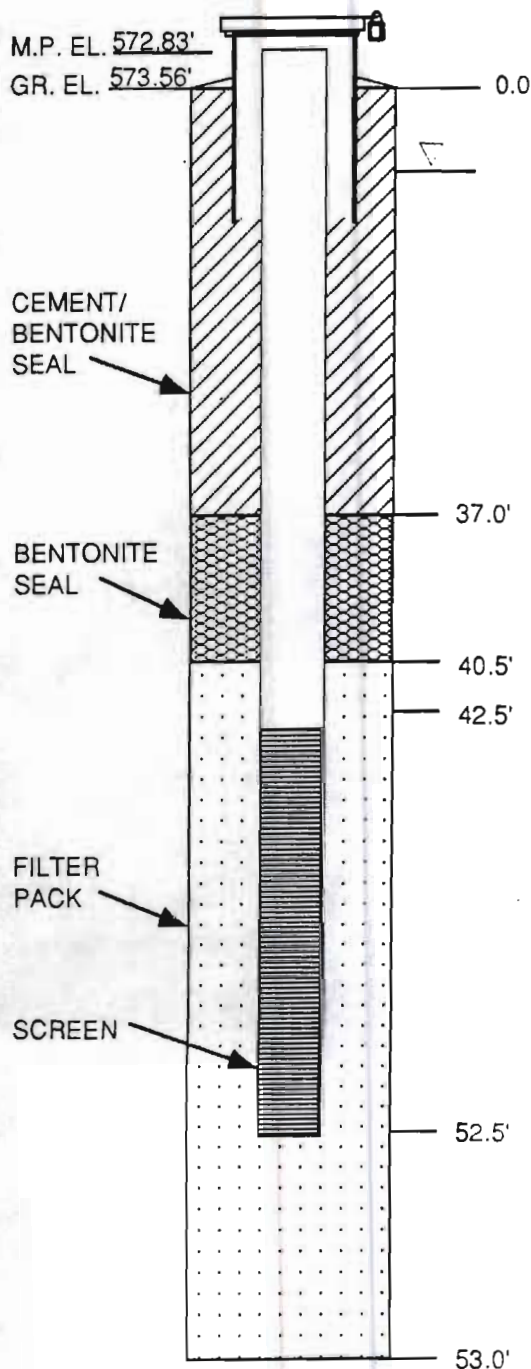
MONITORING WELL COMPLETION LOG WELL NO. MW-1D



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Project Inlet Investigation
 Client Occidental Chemical Corp.
 Location N. Tonawanda, N.Y.
 Project No. 00595-01165
 Date Drilled 1/31/90
 Date Developed 2/20/90

WELL CONSTRUCTION DETAIL



NOT TO SCALE

INSPECTION NOTES

Inspector D. Rowlinson
 Drilling Contractor Pennsylvania Drilling Co.
 Type of Well Monitoring Well
 Static Water Level 565.19 Date 6/18/90
 Measuring Point (M.P.) 572.83 MSL (PVC)
 Total Depth of Well 52.5'
 Total Depth of Boring 53.0'
 Drilling Method
 Type Driven Casing Diameter 6", 4" ID
 Casing Steel
 Sampling Method
 Type SS Diameter 2" OD
 Weight 140# Fall 30"
 Interval Continuous from 38'
 Riser Pipe Left in Place
 Material SCH 40 PVC Diameter 2" ID
 Length 42.2' Joint Type Thread
 Screen
 Material SCH 40 PVC Diameter 2" ID
 Slot Size .010 Length 10.0'
 Stratigraphic Unit Screened Till
 Filter Pack
 Sand X Gravel Natural
 Grade #1020
 Amount 110# Interval 40.5' - 53.0'
 Seal(s)
 Type Bentonite Pellets Interval 37.0' - 40.5'
 Type Grout Interval 0.0 - 37.0'
 Type Interval
 Locking Casing ☒ Yes ☐ No
 Notes:

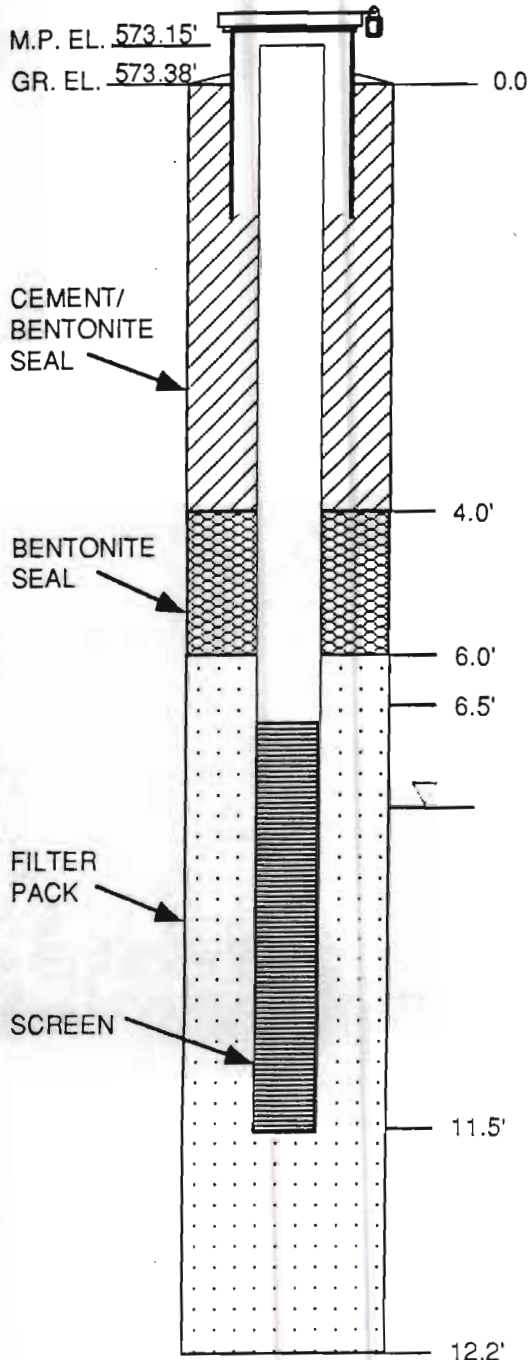
MONITORING WELL COMPLETION LOG WELL NO. MW-2S



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Project Inlet Investigation
 Client Occidental Chemical Corp.
 Location N. Tonawanda, N.Y.
 Project No. 00595-01165
 Date Drilled 12/5/89
 Date Developed 1/8/90

WELL CONSTRUCTION DETAIL



NOT TO SCALE

INSPECTION NOTES

Inspector M. Ralbovsky
 Drilling Contractor Pennsylvania Drilling Co.
 Type of Well Monitoring Well
 Static Water Level 565.70 Date 6/18/90
 Measuring Point (M.P.) 573.15 MSL (PVC)
 Total Depth of Well 11.5'
 Total Depth of Boring 12.2'
 Drilling Method
 Type Hollow Stem Auger Diameter 4 - 1/4" ID
 Casing HSA
 Sampling Method
 Type SS Diameter 2" OD
 Weight 140# Fall 30"
 Interval 10-12'
 Riser Pipe Left in Place
 Material SCH 40 PVC Diameter 2" ID
 Length 6.9' Joint Type Thread
 Screen
 Material SCH 40 PVC Diameter 2" ID
 Slot Size .010 Length 5.0'
 Stratigraphic Unit Screened Fill
 Filter Pack
 Sand X Gravel Natural
 Grade #1020
 Amount 160# Interval 6.0' - 12.2'
 Seal(s)
 Type Bentonite Pellets Interval 4.0' - 6.0'
 Type Grout Interval 0.0 - 4.0'
 Type Interval
 Locking Casing ☒ Yes ☐ No
 Notes:

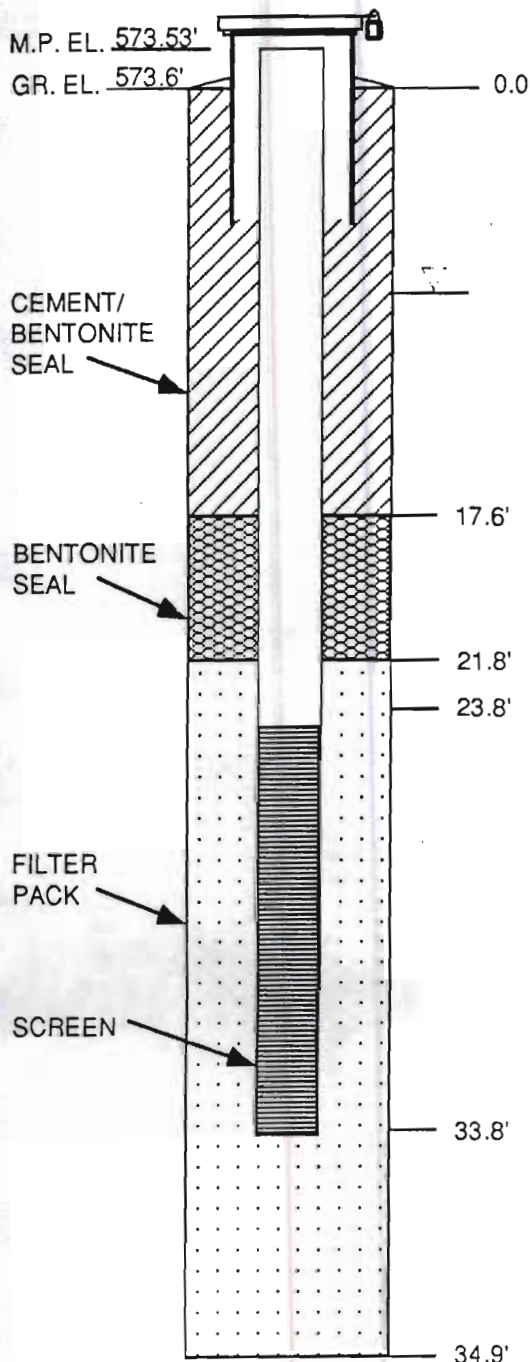
MONITORING WELL COMPLETION LOG WELL NO. MW-21



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Project Inlet Investigation
 Client Occidental Chemical Corp.
 Location N. Tonawanda, N.Y.
 Project No. 00595-01165
 Date Drilled 12/4/89
 Date Developed 1/8/90

WELL CONSTRUCTION DETAIL



NOT TO SCALE

INSPECTION NOTES

Inspector J. A. Jones
 Drilling Contractor Pennsylvania Drilling Co.

Type of Well Monitoring Well
 Static Water Level 565.71 Date 6/18/90
 Measuring Point (M.P.) 573.53' MSL (PVC)
 Total Depth of Well 33.8'
 Total Depth of Boring 34.9'

Drilling Method
 Type Hollow Stem Auger Diameter 4 - 1/4" ID
 Casing HSA

Sampling Method
 Type SS Diameter 2" OD
 Weight 140# Fall 30"
 Interval 34' - 35'

Riser Pipe Left in Place
 Material SCH 40 PVC Diameter 2" ID
 Length 24.2' Joint Type Thread

Screen
 Material SCH 40 PVC Diameter 2" ID
 Slot Size .010 Length 10.0'
 Stratigraphic Unit Screened Fill/Alluvium, Glacio-Lacustrine Clay

Filter Pack
 Sand X Gravel Natural
 Grade #1020
 Amount 350# Interval 21.8' - 34.9'

Seal(s)
 Type Bentonite Pellets Interval 19.0' - 21.8'
 Type Bentonite Slurry Interval 17.6' - 19.0'
 Type Grout Interval 0.0 - 17.6'

Locking Casing ☒ Yes ☐ No

Notes: Bentonite slurry used at 17.6' - 19.0' due to pellets bridging in augers.

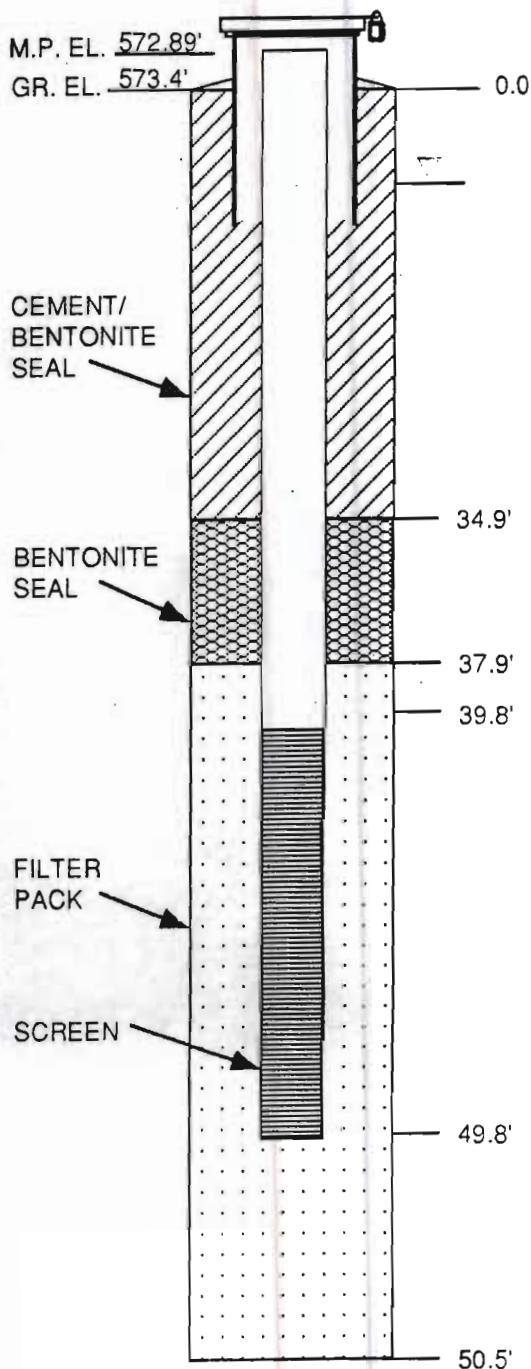
MONITORING WELL COMPLETION LOG WELL NO. MW-2D



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Project Inlet Investigation
 Client Occidental Chemical Corp.
 Location N. Tonawanda, N.Y.
 Project No. 00595-01165
 Date Drilled 11/29/89
 Date Developed 1/8/90

WELL CONSTRUCTION DETAIL



INSPECTION NOTES

Inspector M. Ralbovsky
 Drilling Contractor Pennsylvania Drilling Co.
 Type of Well Monitoring Well
 Static Water Level 565.04 Date 6/18/90
 Measuring Point (M.P.) 572.89' MSL (PVC)
 Total Depth of Well 49.8'
 Total Depth of Boring 50.5'
 Drilling Method
 Type Hollow Stem Auger Diameter 4 - 1/4" ID
 Casing HSA
 Sampling Method
 Type SS Diameter 2" OD
 Weight 140# Fall 30"
 Interval Continuous
 Riser Pipe Left in Place
 Material SCH 40 PVC Diameter 2" ID
 Length 39.5' Joint Type Thread
 Screen
 Material SCH 40 PVC Diameter 2" ID
 Slot Size .010 Length 10.2' 10.0'
 Stratigraphic Unit Screened Till
 Filter Pack
 Sand X Gravel Natural
 Grade #1020
 Amount 380# Interval 37.9' - 50.5'
 Seal(s)
 Type Bentonite Pellets Interval 34.9' - 37.9'
 Type Grout Interval 0.0 - 34.9'
 Type Interval
 Locking Casing ☒ Yes ☐ No
 Notes:

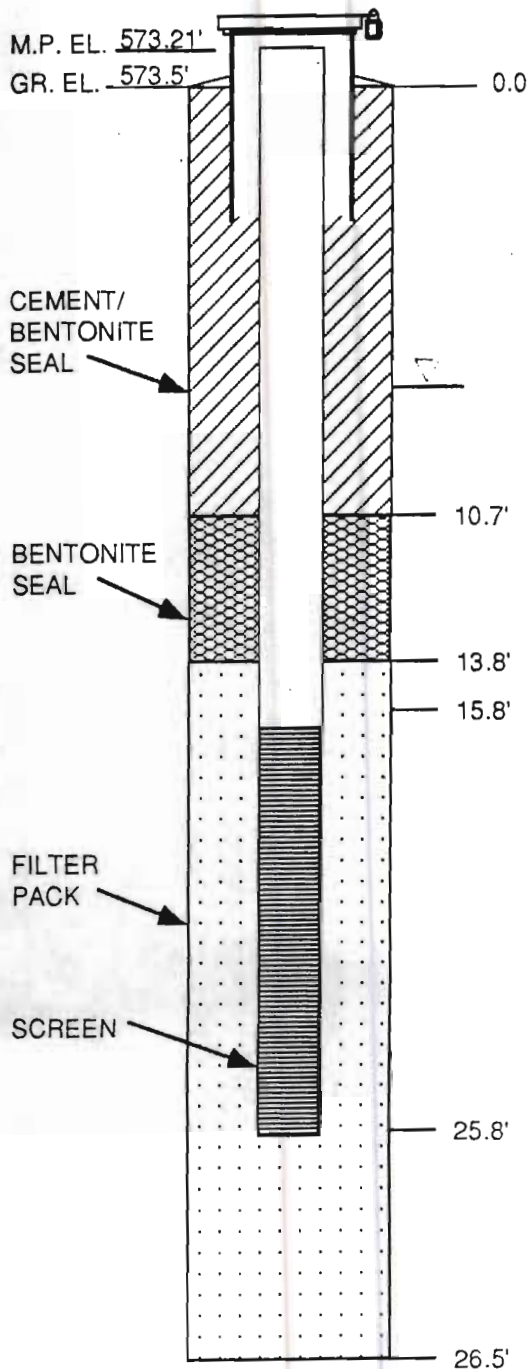
MONITORING WELL COMPLETION LOG WELL NO. MW-31



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Project Inlet Investigation
 Client Occidental Chemical Corp.
 Location N. Tonawanda, N.Y.
 Project No. 00595-01165
 Date Drilled 11/28/89
 Date Developed 1/9/90

WELL CONSTRUCTION DETAIL



NOT TO SCALE

INSPECTION NOTES

Inspector M. Ralbovsky
 Drilling Contractor Pennsylvania Drilling Co.

Type of Well Monitoring Well
 Static Water Level 565.82 Date 6/18/90
 Measuring Point (M.P.) 573.21' MSL (PVC)
 Total Depth of Well 25.8'
 Total Depth of Boring 26.5'

Drilling Method
 Type Hollow Stem Auger Diameter 4 - 1/4" ID
 Casing HSA

Sampling Method
 Type _____ Diameter _____
 Weight _____ Fall _____
 Interval _____

Riser Pipe Left in Place
 Material SCH 40 PVC Diameter 2" ID
 Length 15.8' Joint Type Thread

Screen
 Material SCH 40 PVC Diameter 2" ID
 Slot Size .010 Length 10.0'
 Stratigraphic Unit Screened Fill/Alluvium, Glacio-Lacustrine Clay

Filter Pack
 Sand X Gravel _____ Natural _____
 Grade #1020
 Amount 300# Interval 13.8' - 26.3'

Seal(s)
 Type Bentonite Pellets Interval 10.7' - 13.8'
 Type Grout Interval 0.0 - 10.7'
 Type _____ Interval _____

Locking Casing ☒ Yes ☐ No
 Notes:

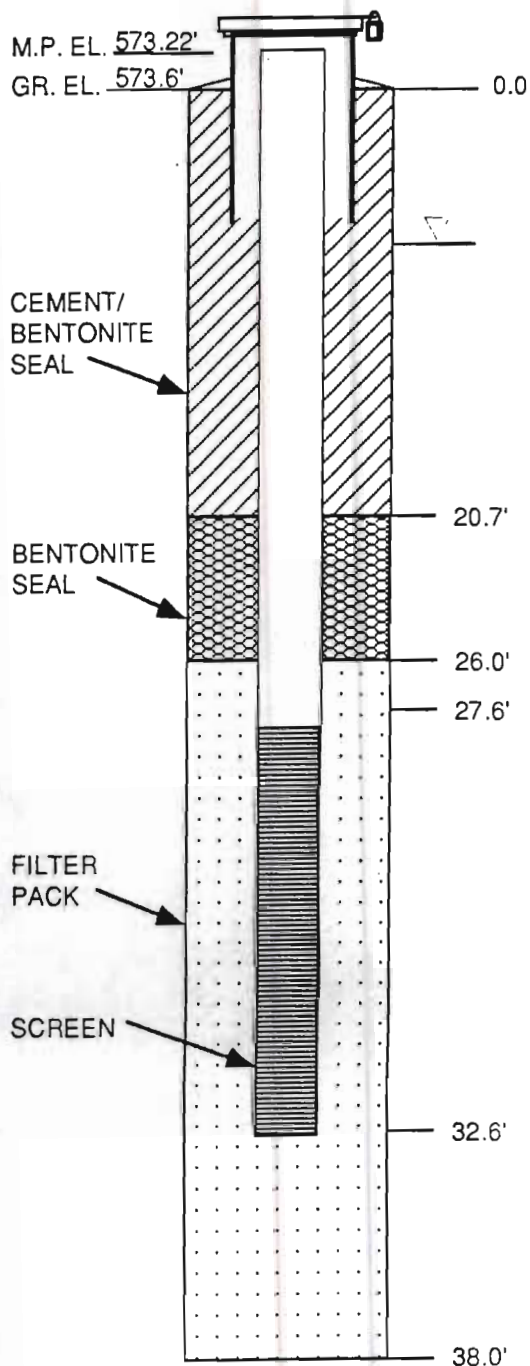
MONITORING WELL COMPLETION LOG WELL NO. MW-3D



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Project Inlet Investigation
 Client Occidental Chemical Corp.
 Location N. Tonawanda, N.Y.
 Project No. 00595-01165
 Date Drilled 11/27/89
 Date Developed 1/1890

WELL CONSTRUCTION DETAIL



NOT TO SCALE

INSPECTION NOTES

Inspector M. Ralbovsky
 Drilling Contractor Pennsylvania Drilling Co.

Type of Well Monitoring Well
 Static Water Level 565.74 Date 6/18/90
 Measuring Point (M.P.) 573.22' MSL (PVC)
 Total Depth of Well 32.6'
 Total Depth of Boring 38.0'

Drilling Method
 Type Hollow Stem Auger Diameter 4-1/4" ID
 Casing HSA

Sampling Method
 Type SS Diameter 2" OD
 Weight 140# Fall 30"
 Interval Continuous

Riser Pipe Left in Place
 Material SCH 40 PVC Diameter 2" ID
 Length 27.1' Joint Type Thread

Screen
 Material SCH 40 PVC Diameter 2" ID
 Slot Size .010 Length 5.0'
 Stratigraphic Unit Screened Glacio-Lacustrine Clay

Filter Pack
 Sand X Gravel Natural
 Grade #1020
 Amount 220# Interval 26.0' - 38.0'

Seal(s)
 Type Bentonite Pellets Interval 20.7' - 26.0'
 Type Grout Interval 0.0' - 20.7'
 Type Interval

Locking Casing ☒ Yes ☐ No

Notes: Bentonite pellets being rushed by running sand;
 Bentonite slurry used instead.

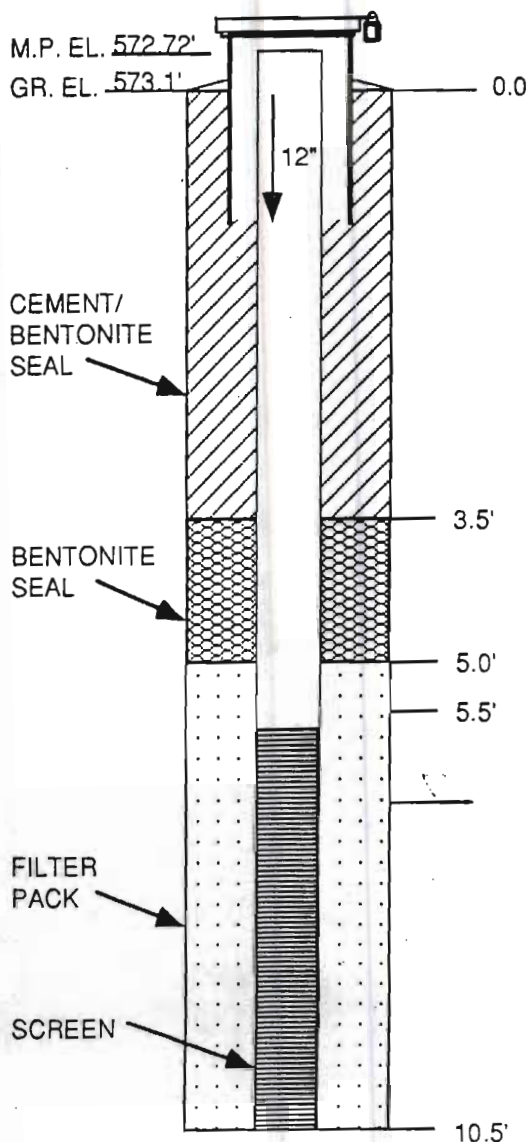
MONITORING WELL COMPLETION LOG WELL NO. MW-4S



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Project Inlet Investigation
 Client Occidental Chemical Corp.
 Location N. Tonawanda, N.Y.
 Project No. 00595-01165
 Date Drilled 11/21/89
 Date Developed 1/10/90

WELL CONSTRUCTION DETAIL



NOT TO SCALE

INSPECTION NOTES

Inspector M. Rabovsky
 Drilling Contractor Pennsylvania Drilling Co.
 Type of Well Monitoring Well
 Static Water Level 566.64 Date 6/18/90
 Measuring Point (M.P.) 572.72 MSL (PVC)
 Total Depth of Well 10.5'
 Total Depth of Boring 10.5'
 Drilling Method
 Type Hollow Stem Auger Diameter 4 - 1/4" ID
 Casing HSA
 Sampling Method
 Type _____ Diameter _____
 Weight _____ Fall _____
 Interval _____
 Riser Pipe Left in Place
 Material SCH 40 PVC Diameter 2" ID
 Length 4.7' Joint Type Thread
 Screen
 Material SCH 40 PVC Diameter 2" ID
 Slot Size .010 Length 5.0'
 Stratigraphic Unit Screened Fill/Alluvium
 Filter Pack
 Sand X Gravel _____ Natural _____
 Grade #1020
 Amount 175# Interval 5.0' - 10.5'
 Seal(s)
 Type Bentonite Pellets Interval 3.5' - 5.0'
 Type Grout Interval 0.0 - 3.5'
 Type _____ Interval _____
 Locking Casing ☒ Yes ☐ No
 Notes: 1.5' pellets

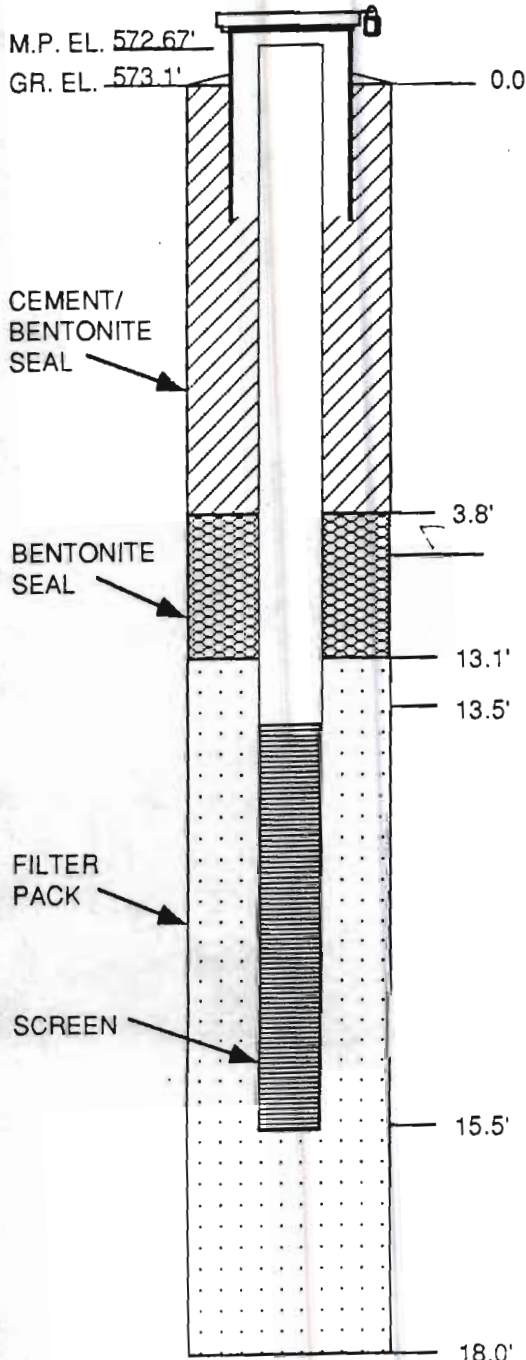
MONITORING WELL COMPLETION LOG WELL NO. MW-41



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Project Inlet Investigation
 Client Occidental Chemical Corp.
 Location N. Tonawanda, N.Y.
 Project No. 00595-01165
 Date Drilled 11/20/89
 Date Developed 1/10/90

WELL CONSTRUCTION DETAIL



NOT TO SCALE

INSPECTION NOTES

Inspector M. Ralbovsky, J. Jones
 Drilling Contractor Pennsylvania Drilling Co.

Type of Well Monitoring Well
 Static Water Level 566.43 Date 6/18/90
 Measuring Point (M.P.) 572.67' MSL (PVC)
 Total Depth of Well 15.5'
 Total Depth of Boring 18.0'

Drilling Method
 Type Hollow Stem Auger Diameter 4 - 1/4" ID
 Casing HSA

Sampling Method
 Type SS Diameter 2" OD
 Weight 140# Fall 30"
 Interval Continuous

Riser Pipe Left in Place
 Material SCH 40 PVC Diameter 2" ID
 Length 13.5' Joint Type Thread

Screen
 Material SCH 40 PVC Diameter 2" ID
 Slot Size .010 Length 2.0'
 Stratigraphic Unit Screened Fill/Alluvium, Glacio-Lacustrine Clay

Filter Pack
 Sand X Gravel Natural
 Grade #1020
 Amount 120# Interval 13.1' - 18.0'

Seal(s)
 Type Bentonite Slurry Interval 3.8' - 13.1'
 Type Grout Interval 0.0 - 3.8'
 Type Interval

Locking Casing ☒ Yes ☐ No

Notes: *Sand washed into augers, Bentonite slurry to 3.8'.

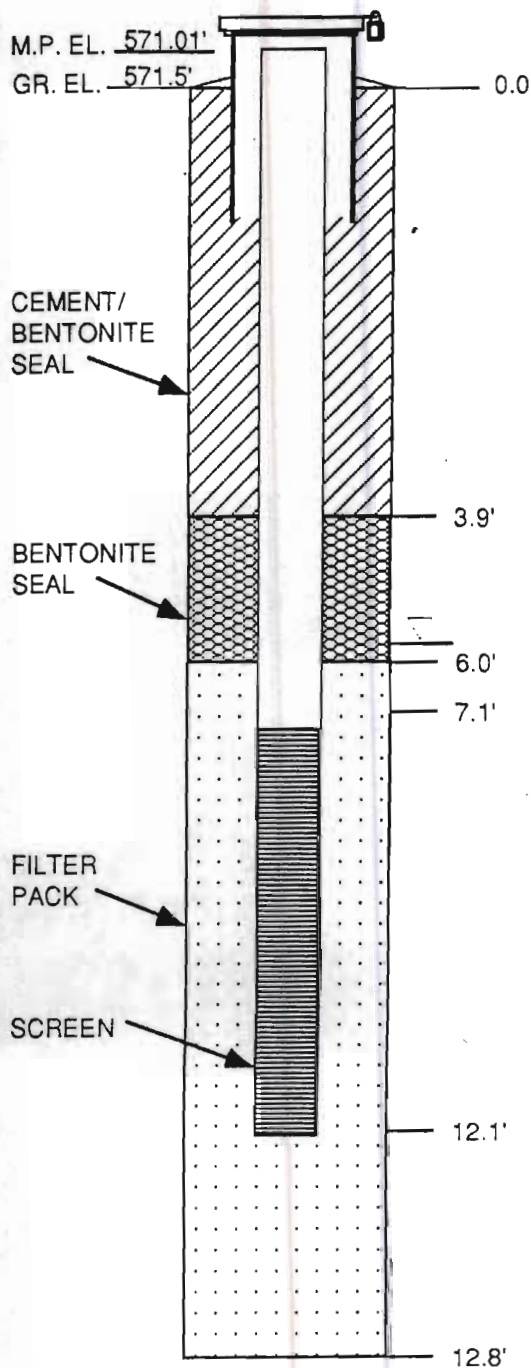
MONITORING WELL COMPLETION LOG WELL NO. MW -5S



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Project Inlet Investigation
 Client Occidental Chemical Corp.
 Location N. Tonawanda, N.Y.
 Project No. 00595-01165
 Date Drilled 12/7/89
 Date Developed 1/10/90

WELL CONSTRUCTION DETAIL



NOT TO SCALE

INSPECTION NOTES

Inspector M. Ralovsky
 Drilling Contractor Pennsylvania Drilling Co.
 Type of Well Monitoring Well
 Static Water Level 565.69 Date 6/18/90
 Measuring Point (M.P.) 571.01' MSL (PVC)
 Total Depth of Well 12.1'
 Total Depth of Boring 12.8'
 Drilling Method
 Type Hollow Stem Auger Diameter 4 - 1/4" ID
 Casing HSA
 Sampling Method
 Type _____ Diameter _____
 Weight _____ Fall _____
 Interval _____
 Riser Pipe Left in Place
 Material SCH 40 PVC Diameter 2" ID
 Length 7.5' Joint Type Thread
 Screen
 Material SCH 40 PVC Diameter 2" ID
 Slot Size .010 Length 5.0'
 Stratigraphic Unit Screened Fill/Alluvium
 Filter Pack
 Sand X Gravel _____ Natural _____
 Grade #1020
 Amount 220# Interval 6.0' - 12.8'
 Seal(s)
 Type Bentonite Pellets Interval 3.9' - 6.0'
 Type Grout Interval 0.0' - 3.9'
 Type _____ Interval _____
 Locking Casing ☒ Yes ☐ No
 Notes:

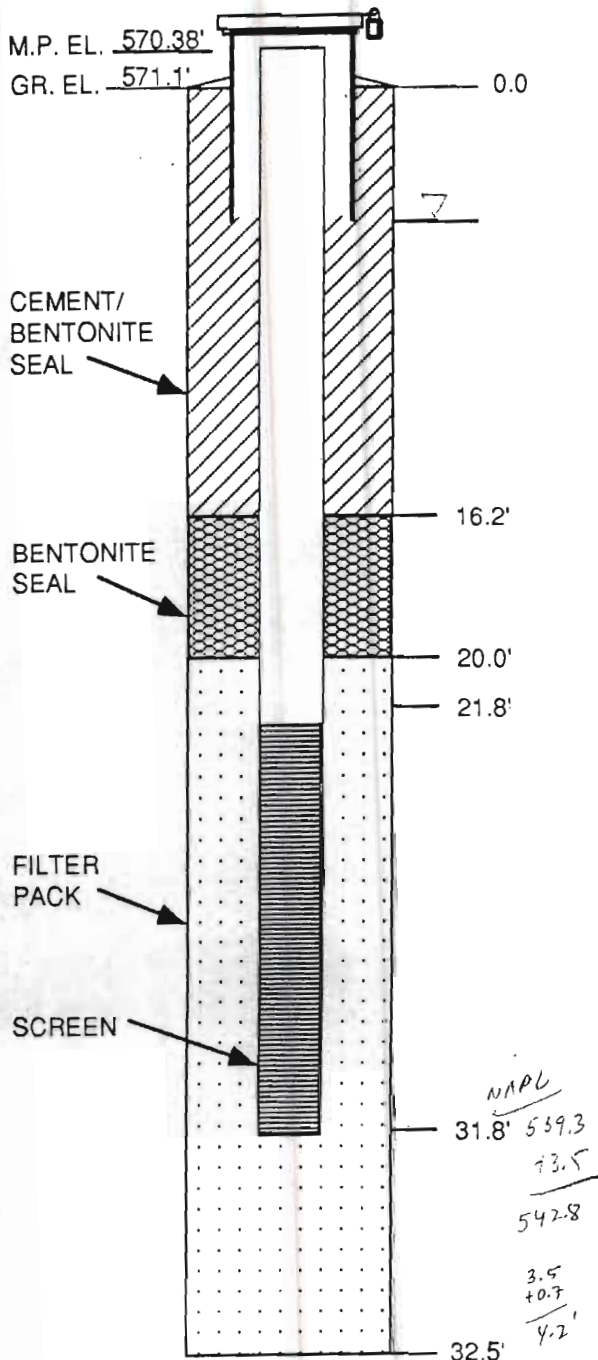
MONITORING WELL COMPLETION LOG WELL NO. MW -5I



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Project Inlet Investigation
 Client Occidental Chemical Corp.
 Location N. Tonawanda, N.Y.
 Project No. 00595-01165
 Date Drilled 12/6/89
 Date Developed 1/16/90

WELL CONSTRUCTION DETAIL



NOT TO SCALE

INSPECTION NOTES

Inspector M. Ralbovsky
 Drilling Contractor Pennsylvania Drilling Co.
 Type of Well Monitoring Well
 Static Water Level 565.70 Date 6/18/90
 Measuring Point (M.P.) 570.38' MSL (PVC)
 Total Depth of Well 31.8'
 Total Depth of Boring 32.5'
 Drilling Method
 Type Hollow Stem Auger Diameter 4 - 1/4" ID
 Casing HSA
 Sampling Method
 Type SS Diameter 2" OD
 Weight 140# Fall 30"
 Interval Continuous
 Riser Pipe Left in Place
 Material SCH 40 PVC Diameter 2" ID
 Length 21.5' Joint Type Thread
 Screen
 Material SCH 40 PVC Diameter 2" ID
 Slot Size .010 Length 10.0'
 Stratigraphic Unit Screened Fill/Alluvium/Till
 Filter Pack
 Sand X Gravel Natural
 Grade #1020
 Amount 240# Interval 20.0' - 32.5'
 Seal(s)
 Type Bentonite Pellets Interval 19.3' - 20.0'
 Type Bentonite Slurry Interval 16.2' - 19.3'
 Type Grout Interval 0.0 - 16.2'

Locking Casing ☒ Yes ☐ No

Notes:

NAPL in casing 31.0 - 31.7
539.4 - 542.1

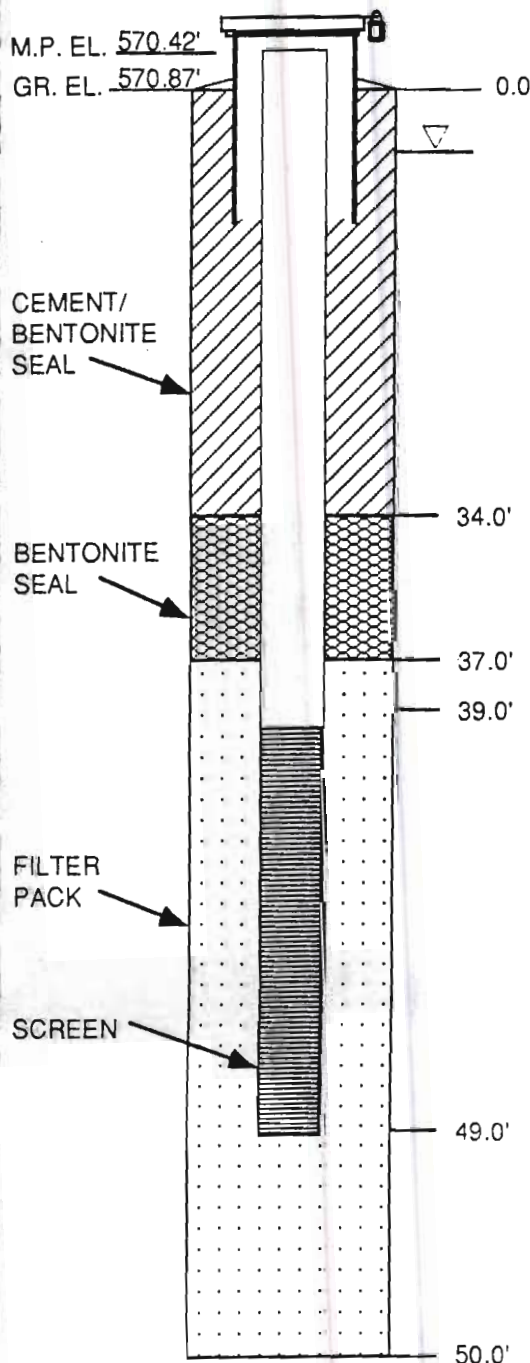
MONITORING WELL COMPLETION LOG WELL NO. MW-5D



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Project Inlet Investigation
 Client Occidental Chemical Corp.
 Location N. Tonawanda, N.Y.
 Project No. 00595-01165
 Date Drilled 1/24/90
 Date Developed 2/15/90

WELL CONSTRUCTION DETAIL



NOT TO SCALE

INSPECTION NOTES

Inspector M. Ralbovsky
 Drilling Contractor Pennsylvania Drilling Co.

Type of Well Monitoring Well
 Static Water Level 565.22 Date 6/18/90
 Measuring Point (M.P.) 570.42' MSL (PVC)
 Total Depth of Well 49.0'
 Total Depth of Boring 50.0'

Drilling Method
 Type Driven Casing Diameter 6", 4" ID
 Casing Steel

Sampling Method
 Type SS Diameter 2" OD
 Weight 140# Fall 30"
 Interval Continuous from 32'

Riser Pipe Left in Place
 Material SCH 40 PVC Diameter 2" ID
 Length 38.7' Joint Type Thread

Screen
 Material SCH 40 PVC Diameter 2" ID
 Slot Size .010 Length 10.0'
 Stratigraphic Unit Screened Glacio-Lacustrine Clay

Filter Pack
 Sand X Gravel Natural
 Grade #1020
 Amount 100# Interval 37.0' - 49.9'

Seal(s)
 Type Bentonite Pellets Interval 34.0' - 37.0'
 Type Grout Interval 0.0' - 34.0'
 Type Interval

Locking Casing ☒ Yes ☐ No

Notes: 0.1' of clay (49.9-50.0) came up into augers before start of sand pack.

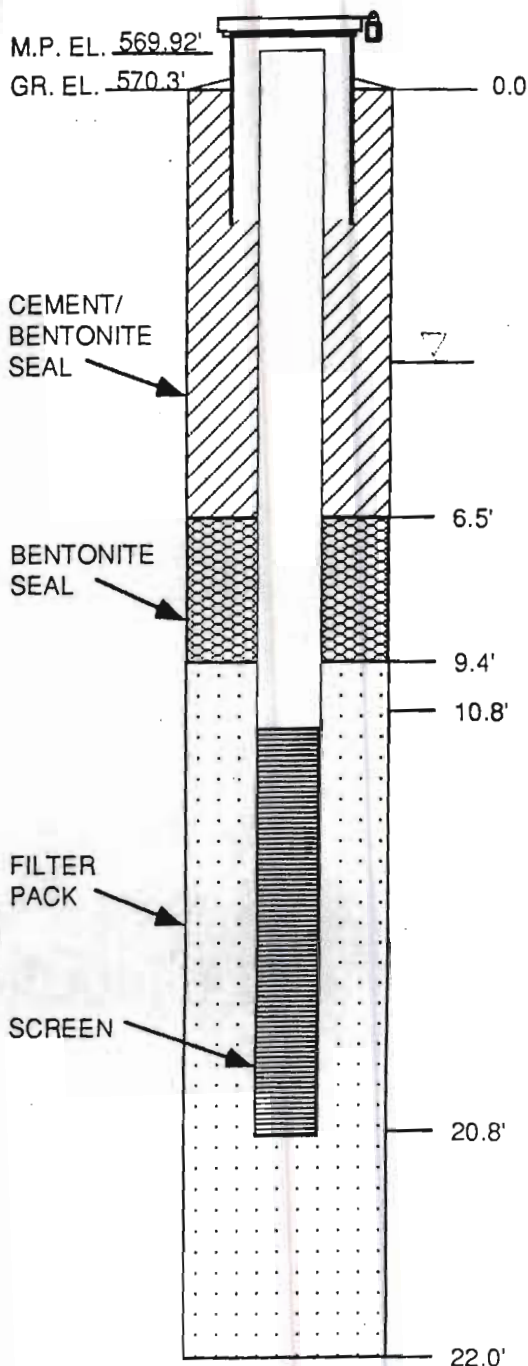
MONITORING WELL COMPLETION LOG WELL NO. MW-6I



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Project Inlet Investigation
 Client Occidental Chemical Corp.
 Location N. Tonawanda, N.Y.
 Project No. 00595-01165
 Date Drilled 12/8/89
 Date Developed 1/10/90

WELL CONSTRUCTION DETAIL



NOT TO SCALE

INSPECTION NOTES

Inspector D. Rowlinson
 Drilling Contractor Pennsylvania Drilling Co.
 Type of Well Monitoring Well
 Static Water Level 566.09 Date 6/18/90
 Measuring Point (M.P.) 569.92' MSL (PVC)
 Total Depth of Well 20.8'
 Total Depth of Boring 22.0'
 Drilling Method
 Type Hollow Stem Auger Diameter 4 - 1/4" ID
 Casing HSA
 Sampling Method
 Type SS Diameter 2.0" OD
 Weight 140# Fall 30"
 Interval Continuous
 Riser Pipe Left in Place
 Material SCH 40 PVC Diameter 2" ID
 Length 11.2' Joint Type Thread
 Screen
 Material SCH 40 PVC Diameter 2" ID
 Slot Size .010 Length 10.0'
 Stratigraphic Unit Screened Fill/Alluvium/Glacio-Lacustrine Clay
 Filter Pack
 Sand X Gravel Natural
 Grade #1020
 Amount 250# Interval 9.4' - 21.5'
 Seal(s)
 Type Bentonite Pellets Interval 6.5' - 9.4'
 Type Grout Interval 0.0 - 6.5'
 Type Interval

Locking Casing ☒ Yes ☐ No

Notes: 0.5' of boring collapse (21.5-22.0) between
 start of sand pack.

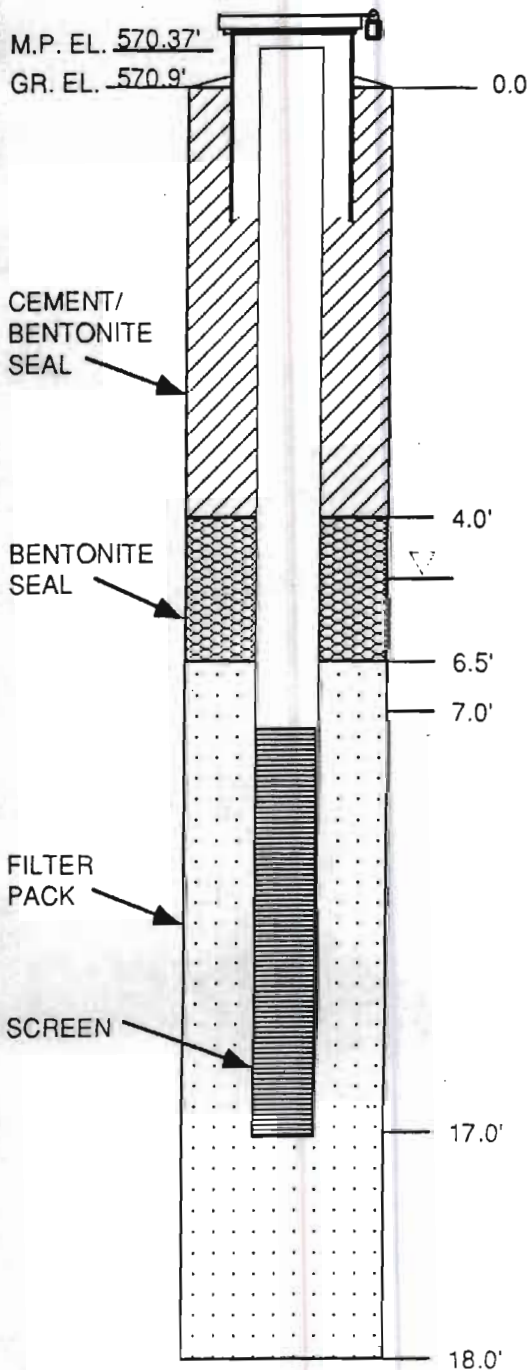
MONITORING WELL COMPLETION LOG WELL NO. MW-7S



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Project Inlet Investigation
 Client Occidental Chemical Corp.
 Location N. Tonawanda, N.Y.
 Project No. 00595-01165
 Date Drilled 11/17/89
 Date Developed 1/16/90

WELL CONSTRUCTION DETAIL



NOT TO SCALE

INSPECTION NOTES

Inspector D. Rowlinson
 Drilling Contractor Pennsylvania Drilling Co.
 Type of Well Monitoring Well
 Static Water Level 565.68 Date 6/18/90
 Measuring Point (M.P.) 570.57' MSL (PVC)
 Total Depth of Well 17.0'
 Total Depth of Boring 18.0'
 Drilling Method
 Type Hollow Stem Auger Diameter 4 - 1/4" ID
 Casing HSA
 Sampling Method
 Type SS Diameter 2.0" OD
 Weight 140# Fall 30"
 Interval Continuous
 Riser Pipe Left in Place
 Material SCH 40 PVC Diameter 2" ID
 Length 6.7' Joint Type Thread
 Screen
 Material SCH 40 PVC Diameter 2" ID
 Slot Size .010 Length 10.0'
 Stratigraphic Unit Screened Glacio-Lacustrine Clay
 Filter Pack
 Sand X Gravel Natural
 Grade #430
 Amount 300# Interval 6.5' - 18.0'
 Seal(s)
 Type Bentonite Pellets Interval 4.0' - 6.5'
 Type Grout Interval 0.0 - 4.0'
 Type Interval
 Locking Casing ☒ Yes ☐ No
 Notes:

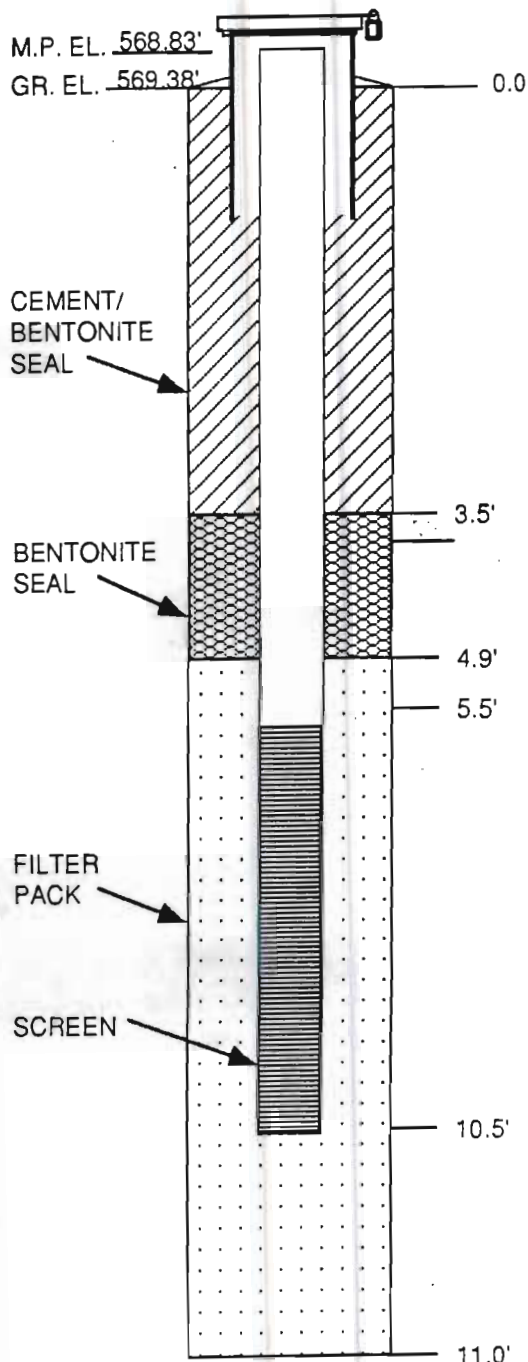
MONITORING WELL COMPLETION LOG WELL NO. MW-8S



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Project Inlet Investigation
 Client Occidental Chemical Corp.
 Location N. Tonawanda, N.Y.
 Project No. 00595-01165
 Date Drilled 2/12/90
 Date Developed 2/14/90

WELL CONSTRUCTION DETAIL



NOT TO SCALE

INSPECTION NOTES

Inspector D. Rowlinson
 Drilling Contractor Pennsylvania Drilling Co.
 Type of Well Monitoring Well
 Static Water Level 565.68 Date 6/18/90
 Measuring Point (M.P.) 568.83' MSL (PVC)
 Total Depth of Well 10.5'
 Total Depth of Boring 11.0'
 Drilling Method
 Type Hollow Stem Auger Diameter 4 - 1/4" ID
 Casing HSA
 Sampling Method
 Type _____ Diameter _____
 Weight _____ Fall _____
 Interval _____
 Riser Pipe Left in Place
 Material SCH 40 PVC Diameter 2" ID
 Length _____ Joint Type Thread
 Screen
 Material SCH 40 PVC Diameter 2" ID
 Slot Size .010 Length 5.0'
 Stratigraphic Unit Screened Fill/Soft Sediment
 Filter Pack
 Sand X Gravel _____ Natural _____
 Grade #1020
 Amount 120# Interval 4.9' - 11.0'
 Seal(s)
 Type Bentonite Pellets Interval 3.5' - 4.9'
 Type Grout Interval 0.0 - 3.5'
 Type _____ Interval _____
 Locking Casing ☒ Yes ☐ No
 Notes:

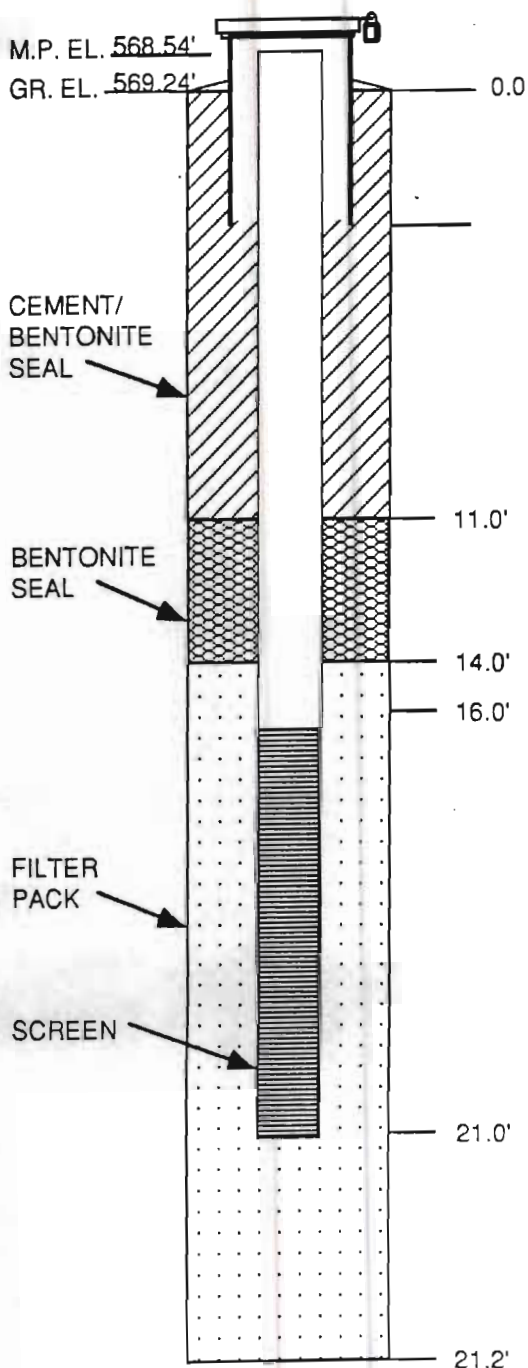
MONITORING WELL COMPLETION LOG WELL NO. MW-81



Dunn Geoscience Corporation
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 (518) 458-1313

Project Inlet Investigation
 Client Occidental Chemical Corp.
 Location N. Tonawanda, N.Y.
 Project No. 00595-01165
 Date Drilled 2/12/90
 Date Developed 2/14/90

WELL CONSTRUCTION DETAIL



NOT TO SCALE

INSPECTION NOTES

Inspector D. Rowlinson
 Drilling Contractor Pennsylvania Drilling Co.
 Type of Well Monitoring Well
 Static Water Level 565.66 Date 6/18/90
 Measuring Point (M.P.) 568.54' MSL (PVC)
 Total Depth of Well 21.0'
 Total Depth of Boring 21.2'
 Drilling Method
 Type Hollow Stem Auger Diameter 4 - 1/4" ID
 Casing HSA
 Sampling Method
 Type _____ Diameter _____
 Weight _____ Fall _____
 Interval _____
 Riser Pipe Left in Place
 Material SCH 40 PVC Diameter 2" ID
 Length 15.9' Joint Type Thread
 Screen
 Material SCH 40 PVC Diameter 2" ID
 Slot Size .010 Length 5.0'
 Stratigraphic Unit Screened Fill/Alluvium
 Filter Pack
 Sand X Gravel _____ Natural _____
 Grade #1020
 Amount 175/# Interval 14' - 21.2'
 Seal(s)
 Type Bentonite Pellets Interval 11.0' - 14.0'
 Type Grout Interval 0.0 - 11.0'
 Type _____ Interval _____
 Locking Casing ☒ Yes ☐ No
 Notes:

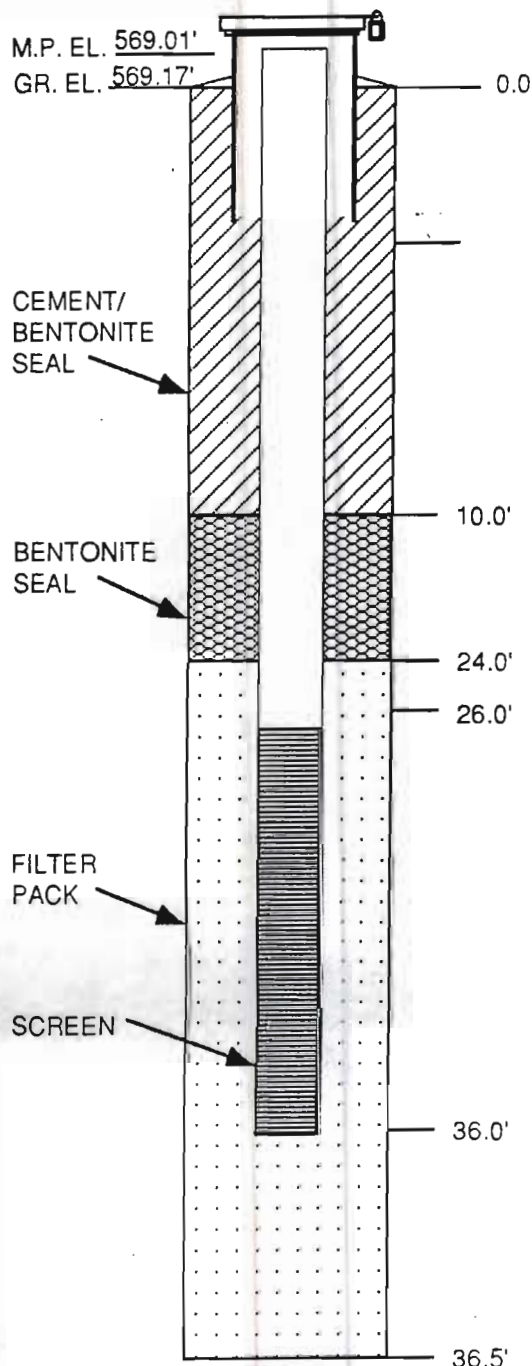
MONITORING WELL COMPLETION LOG WELL NO. MW-8D



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Project Inlet Investigation
 Client Occidental Chemical Corp.
 Location N. Tonawanda, N.Y.
 Project No. 00595-01165
 Date Drilled 2/5/90 - 2/7/90
 Date Developed 2/15/90

WELL CONSTRUCTION DETAIL



NOT TO SCALE

INSPECTION NOTES

Inspector D. Rowlinson
 Drilling Contractor Pennsylvania Drilling Co.
 Type of Well Monitoring Well
 Static Water Level 565.26 Date 6/18/90
 Measuring Point (M.P.) 569.01' MSL (PVC)
 Total Depth of Well 36.0'
 Total Depth of Boring 36.5'
 Drilling Method
 Type Driven Casing Diameter 6", 4" ID
 Casing Steel
 Sampling Method
 Type SS Diameter 2" OD
 Weight 140# Fall 30"
 Interval Continuous
 Riser Pipe Left in Place
 Material SCH 40 PVC Diameter 2" ID
 Length 25.7' Joint Type Thread
 Screen
 Material SCH 40 PVC Diameter 2" ID
 Slot Size .010 Length 10.0'
 Stratigraphic Unit Screened Glacio-Lacustrine Clay, Till
 Filter Pack
 Sand X Gravel Natural
 Grade #1020
 Amount 150# Interval 24.0' - 36.5'
 Seal(s)
 Type Bentonite Seal Interval 21.0' - 24.0'
 Type Bentonite Slurry Interval 10.0' - 21.0'
 Type Grout Interval 0.0' - 10.0'
 Locking Casing ☒ Yes ☐ No
 Notes:

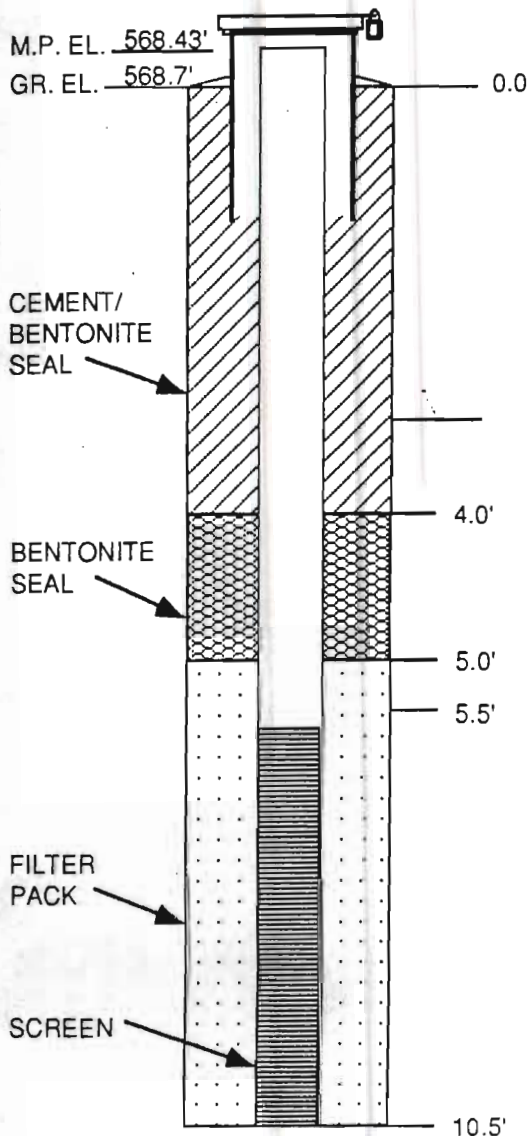
MONITORING WELL COMPLETION LOG WELL NO. MW-9S



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Project Inlet Investigation
 Client Occidental Chemical Corp.
 Location N. Tonawanda, N.Y.
 Project No. 00595-01165
 Date Drilled 1/3/90
 Date Developed 1/12/90

WELL CONSTRUCTION DETAIL



NOT TO SCALE

INSPECTION NOTES

Inspector M. Ralovsky
 Drilling Contractor Pennsylvania Drilling Co.
 Type of Well Monitoring Well
 Static Water Level 565.54 Date 6/18/90
 Measuring Point (M.P.) 568.43' MSL (PVC)
 Total Depth of Well 10.5'
 Total Depth of Boring 10.5'
 Drilling Method
 Type Hollow Stem Auger Diameter 4 - 1/4" ID
 Casing HSA
 Sampling Method
 Type _____ Diameter _____
 Weight _____ Fall _____
 Interval _____
 Riser Pipe Left in Place
 Material SCH 40 PVC Diameter 2" ID
 Length 5.2' Joint Type Thread
 Screen
 Material SCH 40 PVC Diameter 2" ID
 Slot Size .010 Length 5.0'
 Stratigraphic Unit Screened Fill
 Filter Pack
 Sand X Gravel _____ Natural _____
 Grade #1020
 Amount 120# Interval 5.0' - 10.5'
 Seal(s)
 Type Bentonite Pellets Interval 4.0' - 5.0'
 Type Grout Interval 0.0' - 4.0'
 Type _____ Interval _____
 Locking Casing ☒ Yes ☐ No
 Notes:

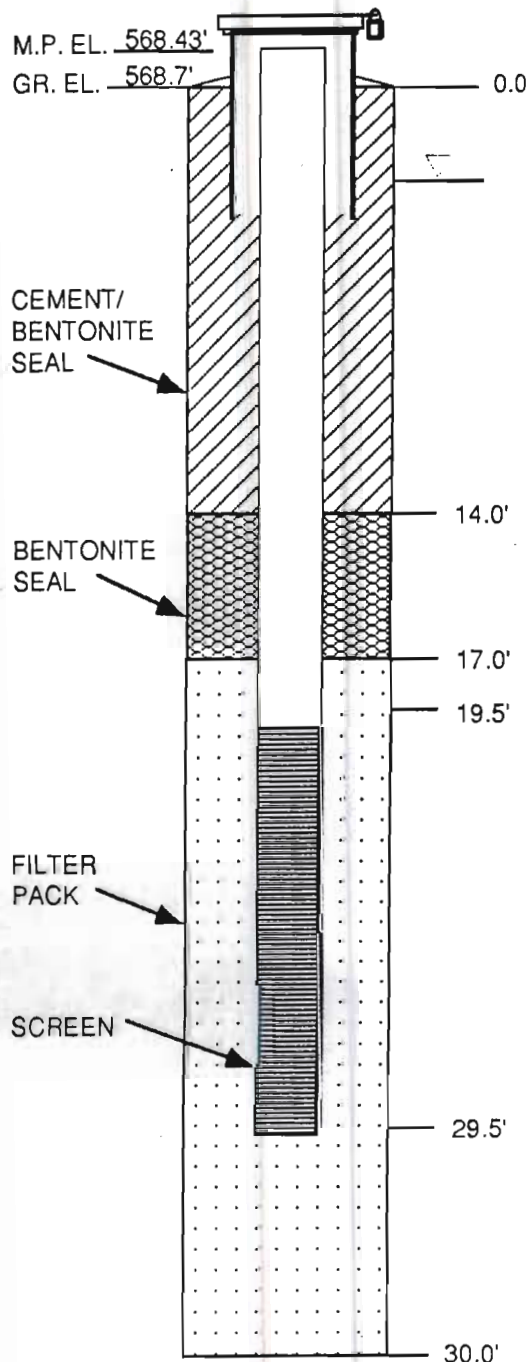
MONITORING WELL COMPLETION LOG WELL NO. MW-9D



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Project Inlet Investigation
 Client Occidental Chemical Corp.
 Location N. Tonawanda, N.Y.
 Project No. 00595-01165
 Date Drilled 12/20/89
 Date Developed 1/15/90

WELL CONSTRUCTION DETAIL



NOT TO SCALE

INSPECTION NOTES

Inspector M. Ralovsky
 Drilling Contractor Pennsylvania Drilling Co.
 Type of Well Monitoring Well
 Static Water Level 565.51 Date 6/18/90
 Measuring Point (M.P.) 568.5' MSL (PVC)
 Total Depth of Well 29.5'
 Total Depth of Boring 30.0'
 Drilling Method
 Type Hollow Stem Auger Diameter 4 - 1/4" ID
 Casing HSA
 Sampling Method
 Type SS Diameter 2" OD
 Weight 140# Fall 30"
 Interval Continuous
 Riser Pipe Left in Place
 Material SCH 40 PVC Diameter 2" ID
 Length 19.2' Joint Type Thread
 Screen
 Material SCH 40 PVC Diameter 2" ID
 Slot Size .010 Length 10.0'
 Stratigraphic Unit Screened Glacio-Lacustrine Clay, Till
 Filter Pack
 Sand X Gravel Natural
 Grade #1020
 Amount 320# Interval 17.0' - 30.0'
 Seal(s)
 Type Bentonite Pellets Interval 14.0' - 17.0'
 Type Grout Interval 0.0' - 14.0'
 Type Interval
 Locking Casing ☒ Yes ☐ No
 Notes:

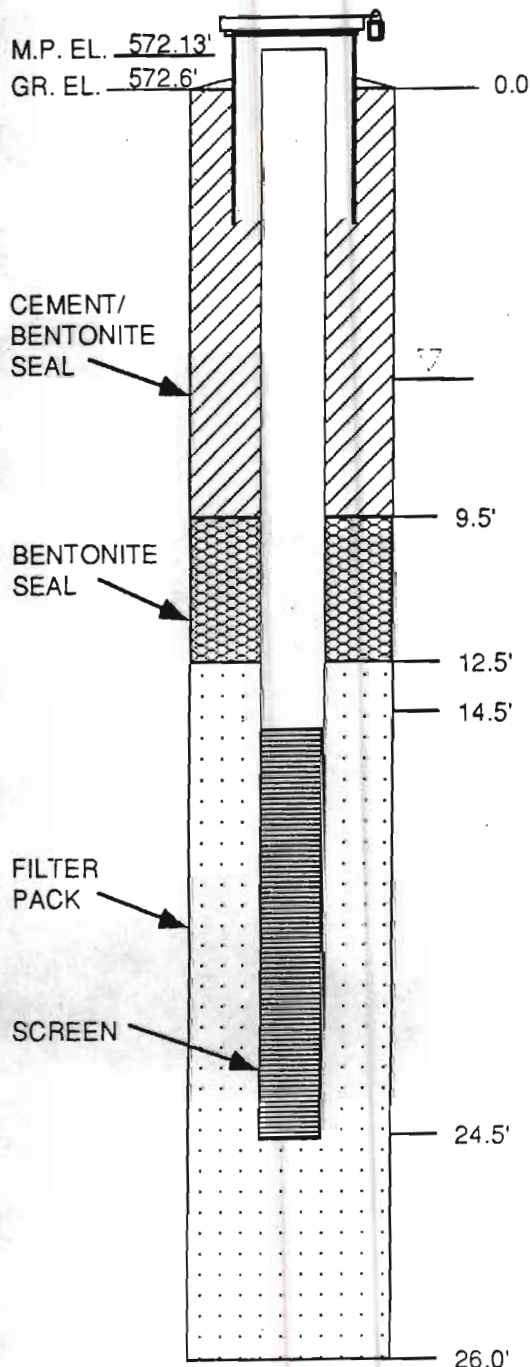
MONITORING WELL COMPLETION LOG WELL NO. MW-10D



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Project Inlet Investigation
 Client Occidental Chemical Corp.
 Location N. Tonawanda, N.Y.
 Project No. 00595-01165
 Date Drilled 12/13/89
 Date Developed 1/15/90

WELL CONSTRUCTION DETAIL



NOT TO SCALE

INSPECTION NOTES

Inspector M. Ralbovsky
 Drilling Contractor Pennsylvania Drilling Co.
 Type of Well Monitoring Well
 Static Water Level 565.99 Date 6/18/90
 Measuring Point (M.P.) 569.8' MSL (PVC)
 Total Depth of Well 24.5'
 Total Depth of Boring 26.0'
 Drilling Method
 Type Hollow Stem Auger Diameter 4 - 1/4" ID
 Casing HSA
 Sampling Method
 Type SS Diameter 2" OD
 Weight 140# Fall 30"
 Interval Continuous
 Riser Pipe Left in Place
 Material SCH 40 PVC Diameter 2" ID
 Length 14.2' Joint Type Thread
 Screen
 Material SCH 40 PVC Diameter 2" ID
 Slot Size .010 Length 10.0'
 Stratigraphic Unit Screened Glacio-Lacustrine Clay
 Filter Pack
 Sand X Gravel Natural
 Grade #1020
 Amount 310# Interval 12.5' - 25.0'
 Seal(s)
 Type Bentonite Pellets Interval 9.5' - 12.5'
 Type Grout Interval 0.0' - 9.5'
 Type Interval
 Locking Casing ☒ Yes ☐ No
 Notes:

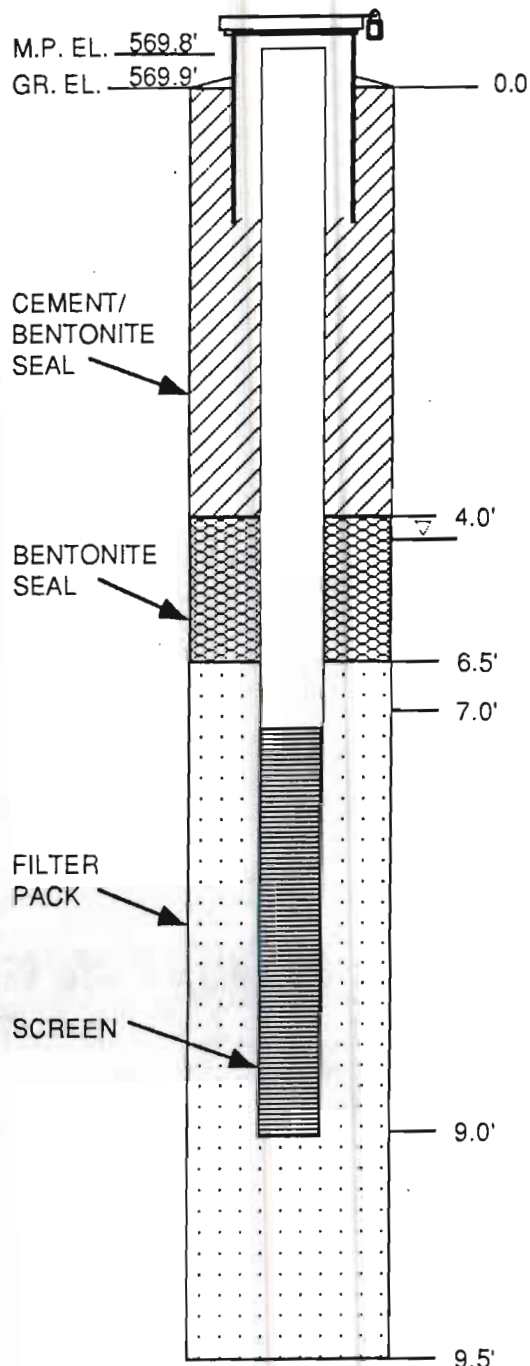
MONITORING WELL COMPLETION LOG WELL NO. MW-11S



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Project Inlet Investigation
 Client Occidental Chemical Corp.
 Location N. Tonawanda, N.Y.
 Project No. 00595-01165
 Date Drilled 12/12/89
 Date Developed 1/11/90

WELL CONSTRUCTION DETAIL



NOT TO SCALE

INSPECTION NOTES

Inspector M. Ralovsky
 Drilling Contractor Pennsylvania Drilling Co.
 Type of Well Monitoring Well
 Static Water Level 565.68 Date 6/18/90
 Measuring Point (M.P.) 569.8' MSL (PVC)
 Total Depth of Well 9.0'
 Total Depth of Boring 9.5'
 Drilling Method
 Type Hollow Stem Auger Diameter 4 - 1/4" ID
 Casing HSA
 Sampling Method
 Type _____ Diameter _____
 Weight _____ Fall _____
 Interval _____
 Riser Pipe Left in Place
 Material SCH 40 PVC Diameter 2" ID
 Length 7.2' Joint Type Thread
 Screen
 Material SCH 40 PVC Diameter 2" ID
 Slot Size .010 Length 2.0'
 Stratigraphic Unit Screened Fill/Alluvium
 Filter Pack
 Sand X Gravel _____ Natural _____
 Grade #1020
 Amount 80# Interval 6.5' - 9.5'
 Seal(s)
 Type Bentonite Pellets Interval 4.0' - 6.5'
 Type Grout Interval 0.0' - 4.0'
 Type _____ Interval _____
 Locking Casing ☒ Yes ☐ No
 Notes:

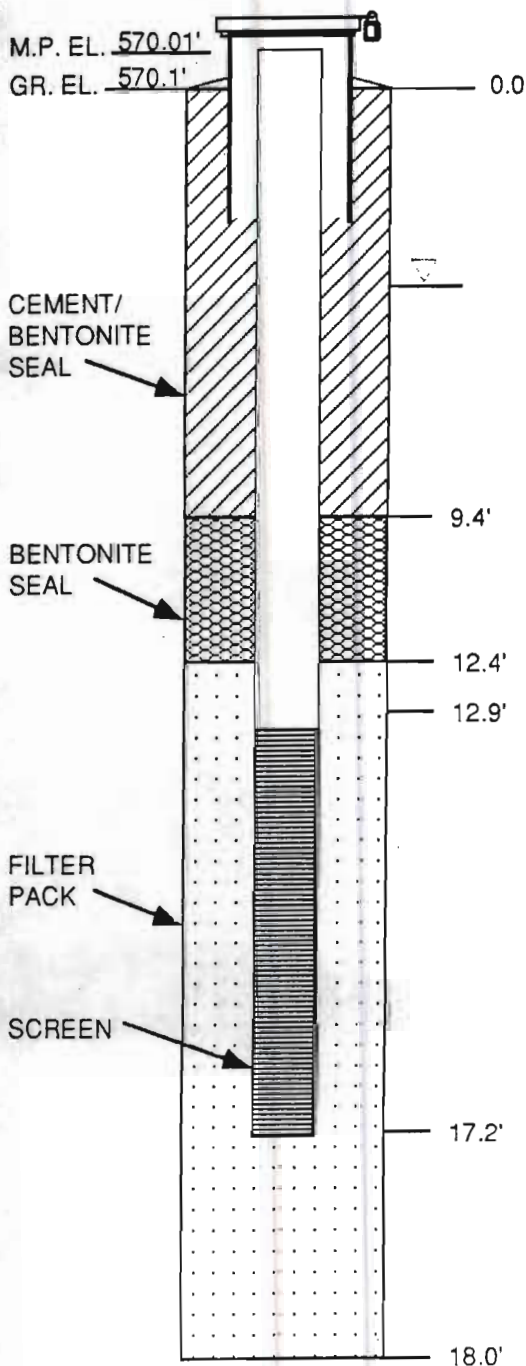
MONITORING WELL COMPLETION LOG WELL NO. MW-111



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Project Inlet Investigation
 Client Occidental Chemical Corp.
 Location N. Tonawanda, N.Y.
 Project No. 00595-01165
 Date Drilled 12/12/89
 Date Developed 1/11/90

WELL CONSTRUCTION DETAIL



NOT TO SCALE

INSPECTION NOTES

Inspector M. Ralbovsky
 Drilling Contractor Pennsylvania Drilling Co.
 Type of Well Monitoring Well
 Static Water Level 565.68 Date 6/18/90
 Measuring Point (M.P.) 570.01' MSL (PVC)
 Total Depth of Well 17.2'
 Total Depth of Boring 18.0'
 Drilling Method
 Type Hollow Stem Auger Diameter 4 - 1/4" ID
 Casing HSA
 Sampling Method
 Type SS Diameter 2" OD
 Weight 140# Fall 30"
 Interval Continuous
 Riser Pipe Left in Place
 Material SCH 40 PVC Diameter 2" ID
 Length 11.9' Joint Type Thread
 Screen
 Material SCH 40 PVC Diameter 2" ID
 Slot Size .010 Length 5.0' 4.3
 Stratigraphic Unit Screened Fill/Alluvium
 Filter Pack
 Sand X Gravel Natural
 Grade #1020
 Amount 160# Interval 12.4' - 18.0'
 Seal(s)
 Type Bentonite Pellets Interval 9.4' - 12.4'
 Type Grout Interval 0.0 - 9.4'
 Type Interval
 Locking Casing ☒ Yes ☐ No
 Notes:

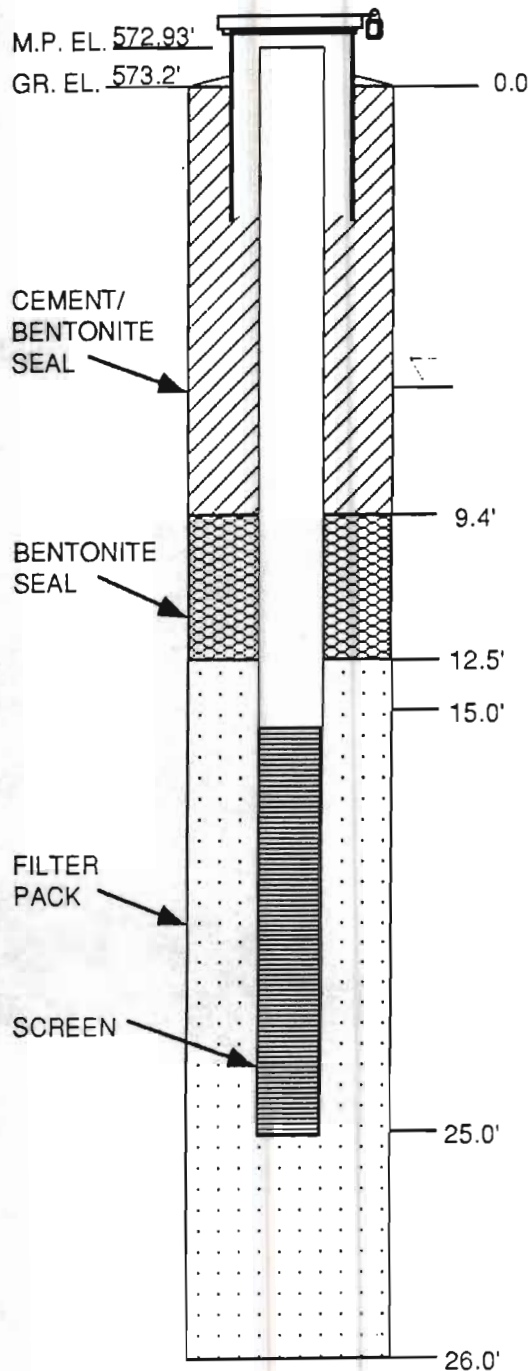
MONITORING WELL COMPLETION LOG WELL NO. MW-12D



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Project Inlet Investigation
 Client Occidental Chemical Corp.
 Location N. Tonawanda, N.Y.
 Project No. 00595-01165
 Date Drilled 12/13/89
 Date Developed 1/15/90

WELL CONSTRUCTION DETAIL



NOT TO SCALE

INSPECTION NOTES

Inspector M. Ralbovsky
 Drilling Contractor Pennsylvania Drilling Co.
 Type of Well Monitoring Well
 Static Water Level 566.32 Date 6/18/90
 Measuring Point (M.P.) 572.93' MSL (PVC)
 Total Depth of Well 25.0'
 Total Depth of Boring 26.0'
 Drilling Method
 Type Hollow Stem Auger Diameter 4 - 1/4" ID
 Casing HSA
 Sampling Method
 Type 2" SS Diameter 2" OD
 Weight 140# Fall 30"
 Interval Continuous
 Riser Pipe Left in Place
 Material SCH 40 PVC Diameter 2" ID
 Length 14.6' Joint Type Thread
 Screen
 Material SCH 40 PVC Diameter 2" ID
 Slot Size .010 Length 10.0'
 Stratigraphic Unit Screened Glacio-Lacustrine Clay
 Filter Pack
 Sand X Gravel Natural
 Grade #1020
 Amount 310# Interval 12.5' - 26.0'
 Seal(s)
 Type Bentonite Slurry Interval 9.4' - 12.5'
 Type Grout Interval 0.0' - 9.4'
 Type Interval
 Locking Casing ☒ Yes ☐ No
 Notes: Bentonite slurry used, unable to get pellets past auger bit - clogged with clay.

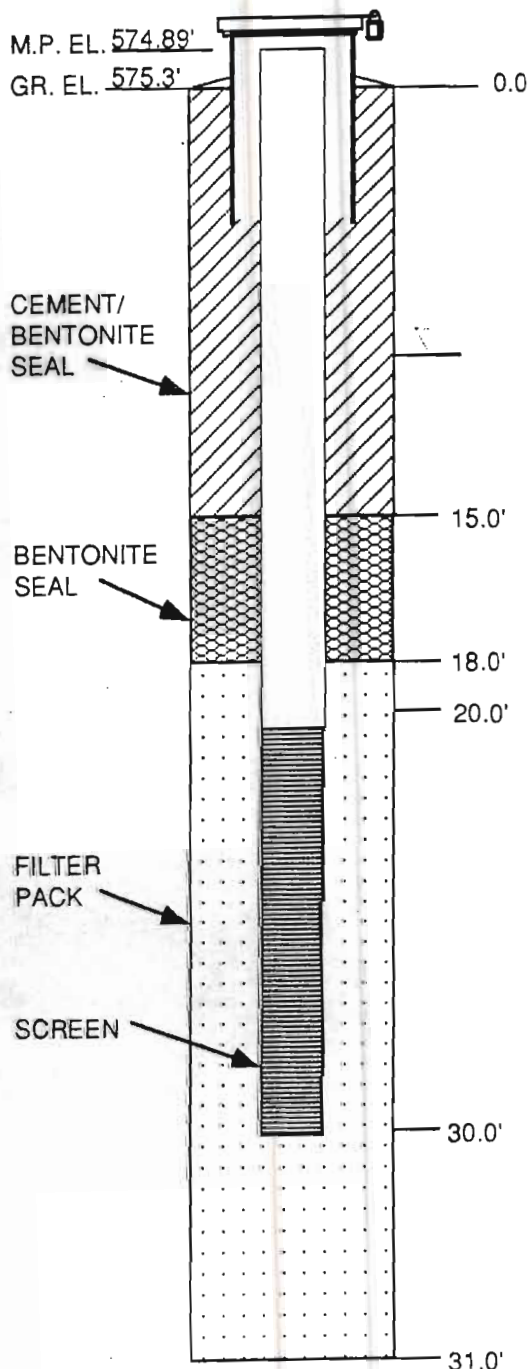
MONITORING WELL COMPLETION LOG WELL NO. MW-13D



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Project Inlet Investigation
 Client Occidental Chemical Corp.
 Location N. Tonawanda, N.Y.
 Project No. 00595-01165
 Date Drilled 12/15/89
 Date Developed 1/15/90

WELL CONSTRUCTION DETAIL



NOT TO SCALE

INSPECTION NOTES

Inspector M. Ralbovsky
 Drilling Contractor Pennsylvania Drilling Co.
 Type of Well Monitoring Well
 Static Water Level 566.51 Date 6/18/90
 Measuring Point (M.P.) 574.89' MSL (PVC)
 Total Depth of Well 30.0'
 Total Depth of Boring 31.0'

Drilling Method
 Type Hollow Stem Auger Diameter 4 - 1/4" ID
 Casing HSA

Sampling Method
 Type 2" SS Diameter 2" OD
 Weight 140# Fall 30"
 Interval Continuous

Riser Pipe Left in Place
 Material SCH 40 PVC Diameter 2" ID
 Length 20.2' Joint Type Thread

Screen
 Material SCH 40 PVC Diameter 2" ID
 Slot Size .010 Length 10.0'
 Stratigraphic Unit Screened Glacio-Lacustrine Clay

Filter Pack
 Sand X Gravel Natural
 Grade #1020
 Amount 380# Interval 18.0' - 31.0'

Seal(s)
 Type Bentonite Slurry Interval 15.0' - 18.0'
 Type Grout Interval 0.0' - 15.0'
 Type Interval

Locking Casing ☒ Yes ☐ No

Notes: Bentonite slurry used, unable to get pellets past auger bit - clogged with clay.

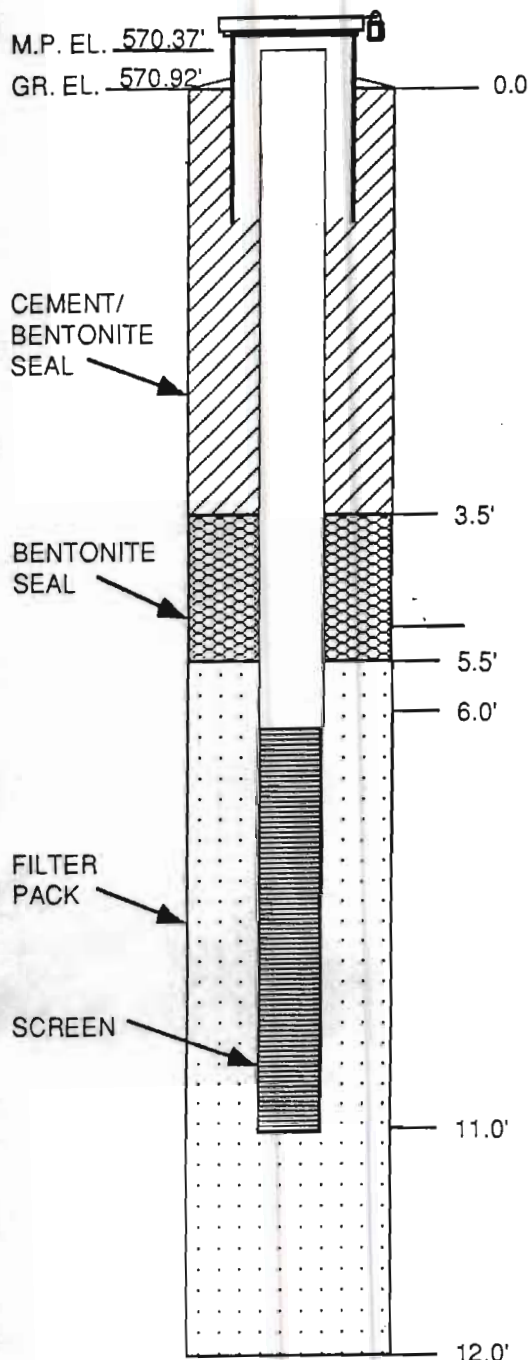
MONITORING WELL COMPLETION LOG WELL NO. MW-14S



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Project Inlet Investigation
 Client Occidental Chemical Corp.
 Location N. Tonawanda, N.Y.
 Project No. 00595-01165
 Date Drilled 2/5/90
 Date Developed 2/7/90

WELL CONSTRUCTION DETAIL



INSPECTION NOTES

Inspector D. Rowlinson
 Drilling Contractor Pennsylvania Drilling Co.
 Type of Well Monitoring Well
 Static Water Level 565.71 Date 6/18/90
 Measuring Point (M.P.) 570.37' MSL (PVC)
 Total Depth of Well 11.0'
 Total Depth of Boring 12.0'
 Drilling Method
 Type Hollow Stem Auger Diameter 4 -1/4" ID
 Casing HSA
 Sampling Method
 Type 2" SS Diameter 2" OD
 Weight 140# Fall 30"
 Interval Continuous
 Riser Pipe Left in Place
 Material SCH 40 PVC Diameter 2" ID
 Length 5.7' Joint Type Thread
 Screen
 Material SCH 40 PVC Diameter 2" ID
 Slot Size .010 Length 5.0'
 Stratigraphic Unit Screened Fill/Alluvium
 Filter Pack
 Sand X Gravel _____ Natural _____
 Grade #1040
 Amount 120# Interval 5.5' - 12.0'
 Seal(s)
 Type Bentonite Pellets Interval 3.5' - 5.5'
 Type Grout Interval 0.0' - 3.5'
 Type _____ Interval _____
 Locking Casing ☒ Yes ☐ No
 Notes:

APPENDIX G

Soil and Sediment Chemical Analytical Database

APPENDIX G.1

Occidental Chemical Corporation Analyses

OCCIDENTAL CHEMICAL CORPORATION
ENVIRONMENTAL DATABASE SYSTEM

+-----+
|ND-Not Detected above Quantitation level|
+-----+

DUREZ
INLET INVESTIGATION
SURFACE SAMPLES

Special Codes:

Sample Date:----->	07/10/89	07/10/89	07/10/89	11/24/87	11/24/87
Sample Description:-->	HA-1	HA-2	HA-3	DR 001	DR 002
Sampling Event:----->	TASK 3	TASK 3	TASK 3	MURCHISON	MURCHISON
Depth:----->	0-0.8'	0-2'	0-0.95'	0-1"	0-1"
Unit:----->	Soft Sed.	Fill	Fill	Fill	Fill

Analytes:	Units:	Quantitation	
		Level	

BENZENE	mg/Kg	0.1		ND	ND	ND	0.30	1.5
TOLUENE	mg/Kg	0.1		ND	ND	ND	0.10	0.60
CHLOROBENZENE	mg/Kg	0.1		ND	ND	ND	ND	ND
2-CHLOROTOLUENE	mg/Kg	0.1		ND	ND	ND	ND	ND
1,2-DICHLOROBENZENE	mg/Kg	0.1		ND	ND	ND	ND	ND
1,4-DICHLOROBENZENE	mg/Kg	0.1		ND	ND	ND	ND	ND
1,2,3-TRICHLOROBENZENE	mg/Kg	0.1		1.2	0.11	ND	0.25	ND
1,2,4-TRICHLOROBENZENE	mg/Kg	0.1		2.3	0.21	ND	ND	ND
1,2,3,4-TETRACHLOROBENZENE	mg/Kg	0.1		4.2	0.67	ND	ND	ND
1,2,4,5-TETRACHLOROBENZENE	mg/Kg	0.1		1.6	0.26	ND	ND	ND
PENTACHLOROBENZENE	mg/Kg	0.1		18	2.7	ND	ND	ND
HEXACHLOROBENZENE	mg/Kg	0.1		43	8.8	ND	ND	0.07

DUREZ INLET INVESTIGATION
TASK 3

Special Codes: NR - Not Requested

Sample Date:----->	04/08/88	04/08/88	04/08/88	09/12/88	09/12/88
Sample Description:->	I 1A	I 2	I 4	I 7	I 7
	S 1	S 7	S 17	S 1	S 8
Depth in feet:----->	3 - 5	12 - 14	32 - 34	0 - 2	14 - 16
Unit:----->	Fill	Alluvium	Alluvium	Fill	Alluvium

Analytes:	Units:	Quantitation					
		level:					
BENZENE	mg/Kg	0.1	ND	ND	ND	NR	NR
TOLUENE	mg/Kg	0.1	ND	ND	ND	NR	NR
CHLOROBENZENE	mg/Kg	0.1	15	1.1	17	ND	ND
2-CHLOROTOLUENE	mg/Kg	0.1	ND	ND	0.11	ND	ND
1,2-DICHLOROBENZENE	mg/Kg	0.1	2.2	ND	58	ND	ND
1,4-DICHLOROBENZENE	mg/Kg	0.1	7.5	0.14	19	ND	ND
1,2,3-TRICHLOROBENZENE	mg/Kg	0.1	1.7	ND	12	ND	ND
1,2,4-TRICHLOROBENZENE	mg/Kg	0.1	12	ND	21	ND	ND
1,2,3,4-TETRACHLOROBENZENE	mg/Kg	0.1	4.6	ND	9.5	ND	ND
1,2,4,5-TETRACHLOROBENZENE	mg/Kg	0.1	14	ND	25	ND	ND
PENTACHLOROBENZENE	mg/Kg	0.1	13	ND	9.1	ND	ND
HEXACHLOROBENZENE	mg/Kg	0.1	29	ND	13	ND	ND

Report Date: 07/17/90 10:20 am

OCCIDENTAL CHEMICAL CORPORATION

ENVIRONMENTAL DATABASE SYSTEM

+-----+
|ND-Not Detected above Quantitation level|
+-----+

DUREZ INLET INVESTIGATION

TASK 3

Special Codes: NR - Not Requested

Sample Date:----->	09/12/88	04/08/88	09/15/88	09/15/88	09/15/88
Sample Description:->	I 7	I 8	I 9	I 9	I 9
	S 10	S 13	S 4	S 16	S 17
Depth in feet:----->	18 - 20	24 - 26	6 - 8	34.5 - 36	36 - 38
Unit:----->	Gl. Clay	Alluvium	Fill	Till	Till

Analytes:	Units:	Quantitation					
		Level:					
BENZENE	mg/Kg	0.1	NR	ND	NR	NR	NR
TOLUENE	mg/Kg	0.1	NR	ND	NR	NR	NR
CHLOROBENZENE	mg/Kg	0.1	ND	ND	ND	110	16
2-CHLOROTOLUENE	mg/Kg	0.1	ND	ND	ND	ND	ND
1,2-DICHLOROBENZENE	mg/Kg	0.1	ND	0.94	ND	15	3.7
1,4-DICHLOROBENZENE	mg/Kg	0.1	ND	0.40	ND	28	6.0
1,2,3-TRICHLOROBENZENE	mg/Kg	0.1	ND	1.2	ND	ND	0.46
1,2,4-TRICHLOROBENZENE	mg/Kg	0.1	ND	2.7	ND	ND	0.77
1,2,3,4-TETRACHLOROBENZENE	mg/Kg	0.1	ND	2.7	ND	ND	0.39
1,2,4,5-TETRACHLOROBENZENE	mg/Kg	0.1	ND	7.4	ND	ND	0.33
PENTACHLOROBENZENE	mg/Kg	0.1	ND	4.0	ND	ND	0.20
HEXACHLOROBENZENE	mg/Kg	0.1	ND	7.8	ND	ND	0.23

Report Date: 07/17/90 10:20 am

OCCIDENTAL CHEMICAL CORPORATION

ENVIRONMENTAL DATABASE SYSTEM

+-----+
|ND-Not Detected above Quantitation level|
+-----+

DUREZ INLET INVESTIGATION

TASK 3

Special Codes: NR - Not Requested

Sample Date:----->	09/14/88	09/14/88	09/14/88	09/14/88	09/15/88
Sample Description:->	I 11	I 11	I 12	I 12	I 13
	S 9	S 12	S 4	S 6	S 4
Depth in feet:----->	18 - 20	25.1 - 26	4.4 - 6	8 - 10	6 - 8
Unit:----->	Alluvium	Gl. Clay	Alluvium	Gl. Clay	Fill

Analytes:	Units:	Quantitation				
		level:				
BENZENE	mg/Kg	0.1	NR	NR	NR	NR
TOLUENE	mg/Kg	0.1	NR	NR	NR	NR
CHLOROBENZENE	mg/Kg	0.1	ND	ND	ND	ND
2-CHLOROTOLUENE	mg/Kg	0.1	ND	ND	ND	ND
1,2-DICHLOROBENZENE	mg/Kg	0.1	ND	ND	ND	ND
1,4-DICHLOROBENZENE	mg/Kg	0.1	ND	ND	ND	ND
1,2,3-TRICHLOROBENZENE	mg/Kg	0.1	ND	ND	ND	ND
1,2,4-TRICHLOROBENZENE	mg/Kg	0.1	ND	ND	ND	ND
1,2,3,4-TETRACHLOROBENZENE	mg/Kg	0.1	ND	ND	ND	ND
1,2,4,5-TETRACHLOROBENZENE	mg/Kg	0.1	ND	ND	ND	ND
PENTACHLOROBENZENE	mg/Kg	0.1	ND	ND	ND	ND
HEXACHLOROBENZENE	mg/Kg	0.1	ND	ND	ND	ND

DUREZ INLET INVESTIGATION
TASK 3

Special Codes: NR - Not Requested

Sample Date:----->	09/15/88	09/15/88	09/14/88	09/14/88	09/12/88
Sample Description:->	I 13	I 13	I 14	I 14	I 15
	S 9	S 13	S 6	S 9	S 3
Depth in feet:----->	16 - 18	34 - 35.9	12 - 14	18 - 20	4 - 6
Unit:----->	Alluvium	Alluvium	Alluvium	Gl. Clay	Soft Sed.

Analytes:	Quantitation						
	Units:	Level:					
BENZENE	mg/Kg	0.1	NR	NR	NR	NR	NR
TOLUENE	mg/Kg	0.1	NR	NR	NR	NR	NR
CHLOROBENZENE	mg/Kg	0.1	1.1	8.5	ND	ND	65
2-CHLOROTOLUENE	mg/Kg	0.1	ND	ND	ND	ND	ND
1,2-DICHLOROBENZENE	mg/Kg	0.1	0.19	2.0	ND	ND	1000
1,4-DICHLOROBENZENE	mg/Kg	0.1	0.40	3.3	ND	ND	850
1,2,3-TRICHLOROBENZENE	mg/Kg	0.1	ND	ND	ND	ND	24
1,2,4-TRICHLOROBENZENE	mg/Kg	0.1	ND	ND	ND	ND	38
1,2,3,4-TETRACHLOROBENZENE	mg/Kg	0.1	ND	ND	ND	ND	40
1,2,4,5-TETRACHLOROBENZENE	mg/Kg	0.1	ND	ND	ND	ND	27
PENTACHLOROBENZENE	mg/Kg	0.1	ND	ND	ND	ND	32
HEXACHLOROBENZENE	mg/Kg	0.1	ND	ND	ND	ND	34

DUREZ INLET INVESTIGATION
TASK 3

Special Codes: NR - Not Requested

Sample Date:----->	09/12/88	09/12/88	09/12/88	09/12/88	09/12/88
Sample Description:->	I 15	I 15	I 16	I 16	I 16
	S 4	S 5	S 3	S 8	S 10
Depth in feet:----->	6 - 8	8 - 9.5	4 - 6	14 - 16	18 - 19.8
Unit:----->	Soft Sed.	Soft Sed.	Fill	Alluvium	Alluvium

Analytes:	Units:	Quantitation				
		level:				
BENZENE	mg/Kg	0.1	NR	NR	NR	NR
TOLUENE	mg/Kg	0.1	NR	NR	NR	NR
CHLOROBENZENE	mg/Kg	0.1	450	120	ND	ND
2-CHLOROTOLUENE	mg/Kg	0.1	0.71	ND	ND	ND
1,2-DICHLOROBENZENE	mg/Kg	0.1	12	16	ND	ND
1,4-DICHLOROBENZENE	mg/Kg	0.1	8.2	1.2	ND	ND
1,2,3-TRICHLOROBENZENE	mg/Kg	0.1	28	0.13	ND	ND
1,2,4-TRICHLOROBENZENE	mg/Kg	0.1	35	0.17	ND	ND
1,2,3,4-TETRACHLOROBENZENE	mg/Kg	0.1	36	0.18	ND	ND
1,2,4,5-TETRACHLOROBENZENE	mg/Kg	0.1	24	0.11	ND	ND
PENTACHLOROBENZENE	mg/Kg	0.1	26	0.16	ND	ND
HEXACHLOROBENZENE	mg/Kg	0.1	43	0.26	ND	ND

DUREZ INLET INVESTIGATION
TASK 3

Special Codes: NR - Not Requested

Sample Date:----->	09/12/88	09/12/88	09/12/88	09/12/88	09/12/88
Sample Description:->	I 17	I 17	I 17	I 18	I 18
	S 2	S 3	S 5	S 5	S 10
Depth in feet:----->	2 - 4	4.9 - 6	8 - 10	8.8 - 10	18 - 20
Unit:----->	Fill	Gl. Clay	Gl. Clay	Alluvium	Gl. Clay

Analytes:	Units:	Quantitation level:					
BENZENE	mg/Kg	0.1	NR	NR	NR	NR	NR
TOLUENE	mg/Kg	0.1	NR	NR	NR	NR	NR
CHLOROBENZENE	mg/Kg	0.1	ND	ND	ND	ND	ND
2-CHLOROTOLUENE	mg/Kg	0.1	ND	ND	ND	ND	ND
1,2-DICHLOROBENZENE	mg/Kg	0.1	ND	ND	ND	ND	ND
1,4-DICHLOROBENZENE	mg/Kg	0.1	ND	ND	ND	ND	ND
1,2,3-TRICHLOROBENZENE	mg/Kg	0.1	ND	ND	ND	ND	ND
1,2,4-TRICHLOROBENZENE	mg/Kg	0.1	ND	ND	ND	ND	ND
1,2,3,4-TETRACHLOROBENZENE	mg/Kg	0.1	ND	ND	ND	ND	ND
1,2,4,5-TETRACHLOROBENZENE	mg/Kg	0.1	ND	ND	ND	ND	ND
PENTACHLOROBENZENE	mg/Kg	0.1	ND	ND	ND	ND	ND
HEXACHLOROBENZENE	mg/Kg	0.1	ND	ND	ND	ND	ND

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OCCIDENTAL CHEMICAL CORPORATION
ENVIRONMENTAL DATABASE SYSTEM+-----+
|ND-Not Detected above Quantitation Level|
+-----+DUREZ INLET INVESTIGATION
TASK 3

Special Codes: NR - Not Requested

Sample Date:----->	09/12/88	09/12/88	09/12/88	09/12/88	09/12/88
Sample Description:->	I 19	I 19	I 19	I 19	I 20
	S 2	S 5	S 7	S 9	S 4
Depth in feet:----->	2 - 4	8.7 - 10	12 - 14	16 - 18	8 - 10
Unit:----->	Fill	Alluvium	Alluvium	Gl. Clay	Gl. Clay

Analytes:	Units:	Quantitation level:					
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BENZENE	mg/Kg	0.1	NR	NR	NR	NR	NR
TOLUENE	mg/Kg	0.1	NR	NR	NR	NR	NR
CHLOROBENZENE	mg/Kg	0.1	ND	ND	ND	ND	ND
2-CHLOROTOLUENE	mg/Kg	0.1	ND	ND	ND	ND	ND
1,2-DICHLOROBENZENE	mg/Kg	0.1	ND	ND	ND	ND	ND
1,4-DICHLOROBENZENE	mg/Kg	0.1	ND	ND	ND	ND	ND
1,2,3-TRICHLOROBENZENE	mg/Kg	0.1	ND	ND	ND	ND	ND
1,2,4-TRICHLOROBENZENE	mg/Kg	0.1	ND	ND	ND	ND	ND
1,2,3,4-TETRACHLOROBENZENE	mg/Kg	0.1	ND	ND	ND	ND	ND
1,2,4,5-TETRACHLOROBENZENE	mg/Kg	0.1	ND	ND	ND	ND	ND
PENTACHLOROBENZENE	mg/Kg	0.1	ND	ND	ND	ND	ND
HEXACHLOROBENZENE	mg/Kg	0.1	ND	ND	ND	ND	ND

DUREZ INLET INVESTIGATION
TASK 3

Special Codes: NR - Not Requested

Sample Date:----->	09/14/88	06/21/89	06/21/89	06/22/89	06/22/89
Sample Description:->	I 20	I 21	I 21	I 21	I 21
	S 6	S 2	S 15	S 18	S 23
Depth in feet:----->	12 - 14	2 - 4	28 - 30	34 - 36	45 - 47
Unit:----->	Gl. Clay	Fill	Alluvium	Till	Till

Analytes:	Units:	Quantitation				
		level:				

BENZENE	mg/Kg	0.1	NR	ND	ND	ND	ND
TOLUENE	mg/Kg	0.1	NR	ND	ND	ND	ND
CHLOROBENZENE	mg/Kg	0.1	ND	ND	ND	ND	ND
2-CHLOROTOLUENE	mg/Kg	0.1	ND	ND	ND	ND	ND
1,2-DICHLOROBENZENE	mg/Kg	0.1	ND	ND	ND	ND	ND
1,4-DICHLOROBENZENE	mg/Kg	0.1	ND	ND	ND	ND	ND
1,2,3-TRICHLOROBENZENE	mg/Kg	0.1	ND	ND	ND	ND	ND
1,2,4-TRICHLOROBENZENE	mg/Kg	0.1	ND	ND	ND	ND	ND
1,2,3,4-TETRACHLOROBENZENE	mg/Kg	0.1	ND	ND	ND	ND	ND
1,2,4,5-TETRACHLOROBENZENE	mg/Kg	0.1	ND	ND	ND	ND	ND
PENTACHLOROBENZENE	mg/Kg	0.1	ND	ND	ND	ND	ND
HEXACHLOROBENZENE	mg/Kg	0.1	ND	ND	ND	ND	ND

DUREZ INLET INVESTIGATION
TASK 3

Special Codes:

Sample Date:----->	06/22/89	06/16/89	06/16/89	06/16/89	06/16/89
Sample Description:->	I 21	I 22	I 22	I 22	I 22
	S 26	S 2	S 18A	S 20	S 23
Depth in feet:----->	60 - 62	2 - 4	34 - 34.6	38 - 40	42 - 44
Unit:----->	Till	Fill	Alluvium	Till	Till

Analytes:	Units:	Quantitation level:					
BENZENE	mg/Kg	0.1	ND	ND	ND	ND	ND
TOLUENE	mg/Kg	0.1	ND	ND	ND	ND	ND
CHLOROBENZENE	mg/Kg	0.1	ND	1.2	5.5	0.27	ND
2-CHLOROTOLUENE	mg/Kg	0.1	ND	ND	ND	ND	ND
1,2-DICHLOROBENZENE	mg/Kg	0.1	ND	1.1	10	0.28	ND
1,4-DICHLOROBENZENE	mg/Kg	0.1	ND	0.79	5.1	0.16	ND
1,2,3-TRICHLOROBENZENE	mg/Kg	0.1	ND	ND	0.51	ND	ND
1,2,4-TRICHLOROBENZENE	mg/Kg	0.1	ND	ND	1.0	ND	ND
1,2,3,4-TETRACHLOROBENZENE	mg/Kg	0.1	ND	ND	0.55	ND	ND
1,2,4,5-TETRACHLOROBENZENE	mg/Kg	0.1	ND	ND	ND	ND	ND
PENTACHLOROBENZENE	mg/Kg	0.1	ND	ND	0.35	ND	ND
HEXACHLOROBENZENE	mg/Kg	0.1	ND	ND	0.46	ND	ND

DUREZ INLET INVESTIGATION
TASK 3

Special Codes:

Sample Date:----->	06/09/89	06/09/89	06/14/89	06/14/89	06/05/89
Sample Description:->	I 23	I 23	I 23	I 23	I 24
	S 3	S 7	S 19B	S 22	S 2A
Depth in feet:----->	4 - 6	12 - 14	36.9 - 38	42 - 44	2 - 2.6
Unit:----->	Fill	Alluvium	Gl. Clay	Till	Soft Sed.

Analytes:	Units:	Quantitation level:					
BENZENE	mg/Kg	0.1	ND	ND	ND	ND	2.1
TOLUENE	mg/Kg	0.1	ND	ND	ND	ND	1.1
CHLOROBENZENE	mg/Kg	0.1	ND	ND	0.34	0.25	18
2-CHLOROTOLUENE	mg/Kg	0.1	ND	ND	ND	ND	1.7
1,2-DICHLOROBENZENE	mg/Kg	0.1	ND	ND	2.6	0.44	2.9
1,4-DICHLOROBENZENE	mg/Kg	0.1	ND	ND	1.3	0.31	3.5
1,2,3-TRICHLOROBENZENE	mg/Kg	0.1	ND	ND	6.5	0.57	0.44
1,2,4-TRICHLOROBENZENE	mg/Kg	0.1	ND	ND	6.1	0.56	0.94
1,2,3,4-TETRACHLOROBENZENE	mg/Kg	0.1	ND	ND	8.7	0.75	0.56
1,2,4,5-TETRACHLOROBENZENE	mg/Kg	0.1	ND	ND	6.2	0.52	0.35
PENTACHLOROBENZENE	mg/Kg	0.1	ND	ND	4.1	0.36	0.73
HEXACHLOROBENZENE	mg/Kg	0.1	ND	ND	4.3	0.35	1.7

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ENVIRONMENTAL DATABASE SYSTEM+-----+
|ND-Not Detected above Quantitation level|
+-----+DUREZ INLET INVESTIGATION
TASK 3

Special Codes:

Sample Date:----->	06/05/89	06/05/89	06/07/89	06/07/89	06/07/89
Sample Description:->	I 24	I 24	I 25	I 25	I 25
	S 28	S 4	S 2	S 68	S 7
Depth in feet:----->	2.6 - 4	6 - 8	2 - 4	10.6 - 12	12 - 14
Unit:----->	Gl. Clay	Gl. Clay	Soft Sed.	SC Fill	SC Fill

Analytes:	Units:	Quantitation level:
-----------	--------	---------------------

BENZENE	mg/Kg	0.1	ND	ND	0.29	4.4	0.55
TOLUENE	mg/Kg	0.1	ND	ND	ND	6.1	ND
CHLOROBENZENE	mg/Kg	0.1	ND	ND	270	6.8	1.4
2-CHLOROTOLUENE	mg/Kg	0.1	ND	ND	ND	ND	ND
1,2-DICHLOROBENZENE	mg/Kg	0.1	ND	ND	28	ND	ND
1,4-DICHLOROBENZENE	mg/Kg	0.1	ND	ND	29	ND	0.10
1,2,3-TRICHLOROBENZENE	mg/Kg	0.1	ND	ND	4.5	ND	ND
1,2,4-TRICHLOROBENZENE	mg/Kg	0.1	ND	ND	6.3	ND	ND
1,2,3,4-TETRACHLOROBENZENE	mg/Kg	0.1	ND	ND	6.3	ND	ND
1,2,4,5-TETRACHLOROBENZENE	mg/Kg	0.1	ND	ND	3.9	ND	ND
PENTACHLOROBENZENE	mg/Kg	0.1	ND	ND	5.0	ND	ND
HEXACHLOROBENZENE	mg/Kg	0.1	ND	ND	5.8	ND	0.43

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OCCIDENTAL CHEMICAL CORPORATION

ENVIRONMENTAL DATABASE SYSTEM

+-----+
|ND-Not Detected above Quantitation level|
+-----+

DUREZ INLET INVESTIGATION

TASK 3

Special Codes:

Sample Date:----->	06/07/89	06/07/89	06/07/89	06/07/89	06/08/89
Sample Description:->	I 26	I 26	I 26	I 26	I 27
	S 2	S 5	S 88	S 11	S 3
Depth in feet:----->	2 - 4	8 - 10	15.3 - 16	20 - 22	4 - 6
Unit:----->	Fill	Alluvium	Gl. Clay	Gl. Clay	Soft Sed.

Analytes:	Units:	Quantitation level:						
BENZENE	mg/Kg	0.1	ND	ND	ND	0.26	23	
TOLUENE	mg/Kg	0.1	ND	ND	ND	ND	0.34	
CHLOROBENZENE	mg/Kg	0.1	ND	ND	ND	15	1400	
2-CHLOROTOLUENE	mg/Kg	0.1	ND	ND	ND	ND	ND	
1,2-DICHLOROBENZENE	mg/Kg	0.1	ND	ND	ND	11	220	
1,4-DICHLOROBENZENE	mg/Kg	0.1	ND	ND	ND	8.5	250	
1,2,3-TRICHLOROBENZENE	mg/Kg	0.1	ND	ND	ND	ND	39	
1,2,4-TRICHLOROBENZENE	mg/Kg	0.1	ND	ND	ND	ND	31	
1,2,3,4-TETRACHLOROBENZENE	mg/Kg	0.1	ND	ND	ND	ND	46	
1,2,4,5-TETRACHLOROBENZENE	mg/Kg	0.1	ND	ND	ND	ND	34	
PENTACHLOROBENZENE	mg/Kg	0.1	ND	ND	ND	ND	26	
HEXACHLOROBENZENE	mg/Kg	0.1	ND	ND	ND	ND	41	

DUREZ INLET INVESTIGATION
TASK 3

Special Codes:

Sample Date:----->	06/08/89	06/08/89	06/08/89	06/26/89	06/26/89
Sample Description:->	I 27	I 27	I 27	I 28	I 28
	S 6A	S 9B	S 10	S 2	S 15
Depth in feet:----->	10 - 10.6	16.6 - 18	18 - 20	2 - 4	28 - 30
Unit:----->	Soft Sed.	Gl. Clay	Gl. Clay	Fill	Alluvium

Analytes:	Quantitation						
	Units:	level:					
BENZENE	mg/Kg	0.1	76	0.12	0.32	ND	ND
TOLUENE	mg/Kg	0.1	4.9	ND	ND	ND	ND
CHLOROBENZENE	mg/Kg	0.1	2600	8.2	16	ND	ND
2-CHLOROTOLUENE	mg/Kg	0.1	6.1	ND	ND	ND	ND
1,2-DICHLOROBENZENE	mg/Kg	0.1	1200	2.7	4.5	ND	ND
1,4-DICHLOROBENZENE	mg/Kg	0.1	880	2.1	4.4	ND	ND
1,2,3-TRICHLOROBENZENE	mg/Kg	0.1	110	0.25	0.52	ND	ND
1,2,4-TRICHLOROBENZENE	mg/Kg	0.1	180	0.45	0.90	ND	ND
1,2,3,4-TETRACHLOROBENZENE	mg/Kg	0.1	94	0.21	0.45	ND	ND
1,2,4,5-TETRACHLOROBENZENE	mg/Kg	0.1	91	0.16	0.35	ND	ND
PENTACHLOROBENZENE	mg/Kg	0.1	52	0.10	0.20	ND	ND
HEXACHLOROBENZENE	mg/Kg	0.1	66	0.12	0.20	ND	ND

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OCCIDENTAL CHEMICAL CORPORATION
ENVIRONMENTAL DATABASE SYSTEM+-----+
|ND-Not Detected above Quantitation level|
+-----+DUREZ INLET INVESTIGATION
TASK 3

Special Codes:

Sample Date:----->	06/26/89	06/26/89	06/27/89	06/27/89	06/27/89
Sample Description:->	I 28	I 28	I 29	I 29	I 29
	S 18	S 19	S 1	S 3	S 7
Depth in feet:----->	34 - 36	36 - 38	0 - 2	4 - 6	12 - 14
Unit:----->	Till	Till	Fill	Gl. Clay	Gl. Clay

Analytes:	Units:	Quantitation					
		level:					
BENZENE	mg/Kg	0.1	ND	ND	ND	ND	ND
TOLUENE	mg/Kg	0.1	ND	ND	ND	ND	ND
CHLOROBENZENE	mg/Kg	0.1	ND	ND	ND	ND	ND
2-CHLOROTOLUENE	mg/Kg	0.1	ND	ND	ND	ND	ND
1,2-DICHLOROBENZENE	mg/Kg	0.1	ND	ND	ND	ND	ND
1,4-DICHLOROBENZENE	mg/Kg	0.1	ND	ND	ND	ND	ND
1,2,3-TRICHLOROBENZENE	mg/Kg	0.1	ND	ND	ND	ND	ND
1,2,4-TRICHLOROBENZENE	mg/Kg	0.1	ND	ND	ND	ND	ND
1,2,3,4-TETRACHLOROBENZENE	mg/Kg	0.1	ND	ND	ND	ND	ND
1,2,4,5-TETRACHLOROBENZENE	mg/Kg	0.1	ND	ND	ND	ND	ND
PENTACHLOROBENZENE	mg/Kg	0.1	ND	ND	ND	ND	ND
HEXACHLOROBENZENE	mg/Kg	0.1	ND	ND	ND	ND	ND

BENZENE	mg/Kg	0.1	ND	ND	ND	ND	ND
TOLUENE	mg/Kg	0.1	ND	ND	ND	ND	ND
CHLOROBENZENE	mg/Kg	0.1	ND	ND	ND	ND	ND
2-CHLOROTOLUENE	mg/Kg	0.1	ND	ND	ND	ND	ND
1,2-DICHLOROBENZENE	mg/Kg	0.1	ND	ND	ND	ND	ND
1,4-DICHLOROBENZENE	mg/Kg	0.1	ND	ND	ND	ND	ND
1,2,3-TRICHLOROBENZENE	mg/Kg	0.1	ND	ND	ND	ND	ND
1,2,4-TRICHLOROBENZENE	mg/Kg	0.1	ND	ND	ND	ND	ND
1,2,3,4-TETRACHLOROBENZENE	mg/Kg	0.1	ND	ND	ND	ND	ND
1,2,4,5-TETRACHLOROBENZENE	mg/Kg	0.1	ND	ND	ND	ND	ND
PENTACHLOROBENZENE	mg/Kg	0.1	ND	ND	ND	ND	ND
HEXACHLOROBENZENE	mg/Kg	0.1	ND	ND	ND	ND	ND

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OCCIDENTAL CHEMICAL CORPORATION
ENVIRONMENTAL DATABASE SYSTEM+-----+
|ND-Not Detected above Quantitation level|
+-----+DUREZ INLET INVESTIGATION
TASK 3

Special Codes:

Sample Date:----->	07/05/89	07/05/89	07/05/89	07/05/89
Sample Description:->	I 30	I 30	I 30	I 30
	S 3	S 9	S 12B	S 14
Depth in feet:----->	4 - 6	16 - 18	23.4 - 24	26 - 26.5
Unit:----->	Gl. Clay	Alluvium	Gl. Clay	Gl. Clay

Analytes:	Units:	Quantitation			
		level:			
BENZENE	mg/Kg	0.1	ND	ND	ND
TOLUENE	mg/Kg	0.1	ND	ND	ND
CHLOROBENZENE	mg/Kg	0.1	0.21	ND	ND
2-CHLOROTOLUENE	mg/Kg	0.1	ND	ND	ND
1,2-DICHLOROBENZENE	mg/Kg	0.1	ND	ND	ND
1,4-DICHLOROBENZENE	mg/Kg	0.1	ND	ND	ND
1,2,3-TRICHLOROBENZENE	mg/Kg	0.1	ND	ND	ND
1,2,4-TRICHLOROBENZENE	mg/Kg	0.1	ND	ND	ND
1,2,3,4-TETRACHLOROBENZENE	mg/Kg	0.1	ND	ND	ND
1,2,4,5-TETRACHLOROBENZENE	mg/Kg	0.1	ND	ND	ND
PENTACHLOROBENZENE	mg/Kg	0.1	ND	ND	ND
HEXACHLOROBENZENE	mg/Kg	0.1	ND	ND	ND

Report Date: 07/17/90

OCCIDENTAL CHEMICAL CORPORATION
ENVIRONMENTAL DATABASE SYSTEM+-----+
|ND-Not Detected above Quantitation level|
+-----+DUREZ INLET INVESTIGATION
TASK 4
INLET BORINGS SOIL ANALYSIS

Special Codes:

Sample Date:----->	11/14/89	11/15/89	11/15/89	11/27/89	11/27/89
Sample Description:->	IW 1 S1	IW 1 S8	IW 1 S12	IW 2 S2B	IW 2 S5
Depth in feet:----->	7 - 9	21 - 23	29 - 31	8.5 - 9	12 - 13.5
Unit:----->	SC Fill*	Alluvium	Till	SC Fill*	SC Fill*

Analytes:	Units:	Quantitation					
		Level:					
2-CHLOROTOLUENE	ug/kg	10	ND500	ND500	ND	ND	ND
CHLOROBENZENE	ug/kg	10	13000	160000	24	ND	ND
1,2-DICHLOROBENZENE	ug/kg	10	ND500	240000	ND	ND	ND
1,4-DICHLOROBENZENE	ug/kg	10	ND500	120000	ND	ND	ND
1,2,3-TRICHLOROBENZENE	ug/kg	100	ND	3600	ND	ND	ND
1,2,4-TRICHLOROBENZENE	ug/kg	100	ND	7600	ND	ND	ND
1,2,3,4-TETRACHLOROBENZENE	ug/kg	100	ND	5100	ND	ND	ND
1,2,4,5-TETRACHLOROBENZENE	ug/kg	100	ND	4700	ND	ND	ND
PENTACHLOROBENZENE	ug/kg	100	ND	2400	ND	ND	ND
HEXACHLOROBENZENE	ug/kg	100	ND	3300	ND	ND	ND

* SC Fill = Silt-Clay Fill

OCCIDENTAL CHEMICAL CORPORATION
ENVIRONMENTAL DATABASE SYSTEM

+-----+
|ND-Not Detected above Quantitation level|
+-----+

DUREZ INLET INVESTIGATION
TASK 4
INLET BORINGS SOIL ANALYSIS

Special Codes:

Sample Date:----->	11/28/89	11/28/89	11/07/89	11/07/89	11/08/89
Sample Description:->	IW 2 S8	IW 2 S12	IW 3 S5	IW 3 S7B	IW 3 S9
Depth in feet:----->	18 - 19.5	26 - 27.5	18 - 20	22.8 - 24	26 - 28
Unit:----->	Alluvium	Till	SC Fill*	SC Fill*/ Bedding	Till

Analytes:	Units:	Quantitation				
		level:				
2-CHLOROTOLUENE	ug/kg	10	ND	ND	ND	ND
CHLOROBENZENE	ug/kg	10	470	ND	ND	ND
1,2-DICHLOROBENZENE	ug/kg	10	ND	ND	ND	ND
1,4-DICHLOROBENZENE	ug/kg	10	15	ND	ND	ND
1,2,3-TRICHLOROBENZENE	ug/kg	100	ND	ND	ND	ND
1,2,4-TRICHLOROBENZENE	ug/kg	100	ND	ND	ND	ND
1,2,3,4-TETRACHLOROBENZENE	ug/kg	100	ND	ND	ND	ND
1,2,4,5-TETRACHLOROBENZENE	ug/kg	100	ND	ND	ND	ND
PENTACHLOROBENZENE	ug/kg	100	ND	ND	ND	ND
HEXACHLOROBENZENE	ug/kg	100	ND	ND	ND	ND

* SC Fill = Silt-Clay Fill

Report Date: 07/17/90

OCCIDENTAL CHEMICAL CORPORATION
ENVIRONMENTAL DATABASE SYSTEM+-----+
|ND-Not Detected above Quantitation level|
+-----+DUREZ INLET INVESTIGATION
TASK 4
INLET BORINGS SOIL ANALYSIS

Special Codes:

Sample Date:----->	11/08/89	11/09/89	11/10/89	11/02/89	11/02/89
Sample Description:->	IW 3 S13	IW 4 S2A	IW 4 S8	IW 5 S4A	IW 5 S7B
Depth in feet:----->	33 - 34	5 - 6.1	17 - 19	17.5 - 19	24.1-25.1
Unit:----->	Till	SC Fill*	Gl. Clay	SC Fill*	SC Fill*/ Bedding

Analytes:

Units: Quantitation
level:

Analytes:	Units:	Quantitation level:					
2-CHLOROTOLUENE	ug/kg	10	ND	1100	ND	ND	ND500
CHLOROBENZENE	ug/kg	10	ND	900	1200	ND	42000
1,2-DICHLOROBENZENE	ug/kg	10	ND	280	ND	ND	ND500
1,4-DICHLOROBENZENE	ug/kg	10	ND	950	ND	ND	15000
1,2,3-TRICHLOROBENZENE	ug/kg	100	ND	400	ND	ND	ND
1,2,4-TRICHLOROBENZENE	ug/kg	100	ND	900	ND	ND	180
1,2,3,4-TETRACHLOROBENZENE	ug/kg	100	ND	180	ND	ND	ND
1,2,4,5-TETRACHLOROBENZENE	ug/kg	100	ND	230	ND	ND	ND
PENTACHLOROBENZENE	ug/kg	100	ND	120	ND	ND	ND
HEXACHLOROBENZENE	ug/kg	100	ND	240	ND	ND	ND

* SC Fill = Silt-Clay Fill

Report Date: 07/17/90

OCCIDENTAL CHEMICAL CORPORATION
ENVIRONMENTAL DATABASE SYSTEM+-----+
|ND-Not Detected above Quantitation level|
+-----+DUREZ INLET INVESTIGATION
TASK 4
INLET BORINGS SOIL ANALYSIS

Special Codes:

Sample Date:----->	11/03/89	11/20/89	11/20/89
Sample Description:->	IW 5 S12	IW 6 S5A	IW 6 S6
Depth in feet:----->	33.5-35.5	12.5 - 13	14 - 15.5
Unit:----->	Till	Alluvium	Gl. Clay

Analytes:	Units:	Quantitation			
		level:			
2-CHLOROTOLUENE	ug/kg	10	ND	ND	ND
CHLOROBENZENE	ug/kg	10	190	ND	ND
1,2-DICHLOROBENZENE	ug/kg	10	20	ND	ND
1,4-DICHLOROBENZENE	ug/kg	10	50	ND	ND
1,2,3-TRICHLOROBENZENE	ug/kg	100	ND	ND	ND
1,2,4-TRICHLOROBENZENE	ug/kg	100	ND	ND	ND
1,2,3,4-TETRACHLOROBENZENE	ug/kg	100	ND	ND	ND
1,2,4,5-TETRACHLOROBENZENE	ug/kg	100	ND	ND	ND
PENTACHLOROBENZENE	ug/kg	100	ND	ND	ND
HEXACHLOROBENZENE	ug/kg	100	ND	ND	ND

Report Date: 07/17/90

OCCIDENTAL CHEMICAL CORPORATION
ENVIRONMENTAL DATABASE SYSTEM+-----+
|ND-Not Detected above Quantitation level|
+-----+DUREZ INLET INVESTIGATION
TASK 3
MONITORING WELLS SOIL ANALYSIS

Special Codes:

Sample Date:----->	11/29/89	11/29/89	02/13/90	11/14/89	11/14/89
Sample Description:->	SB1 S1	SB2 S3	SB4 S11	MW1 S2	MW1 S7
Depth in feet:----->	4 - 6	8 - 10	20 - 22	2 - 4	12 - 14
Unit:----->	Fill	Fill	Gl. Clay	Fill	Alluvium

Analytes:	Units:	Quantitation level:					
2-CHLOROTOLUENE	ug/kg	10	ND	ND	ND	ND	ND
CHLOROBENZENE	ug/kg	10	ND	21	ND	180	18
1,2-DICHLOROBENZENE	ug/kg	10	ND	ND	ND	25	ND
1,4-DICHLOROBENZENE	ug/kg	10	ND	ND	ND	26	ND
1,2,3-TRICHLOROBENZENE	ug/kg	100	ND	ND	ND	ND	ND
1,2,4-TRICHLOROBENZENE	ug/kg	100	ND	ND	ND	ND	ND
1,2,3,4-TETRACHLOROBENZENE	ug/kg	100	ND	ND	ND	ND	ND
1,2,4,5-TETRACHLOROBENZENE	ug/kg	100	ND	ND	ND	ND	ND
PENTACHLOROBENZENE	ug/kg	100	ND	ND	ND	ND	ND
HEXACHLOROBENZENE	ug/kg	100	ND	ND	ND	ND	ND

Report Date: 07/17/90

OCCIDENTAL CHEMICAL CORPORATION
ENVIRONMENTAL DATABASE SYSTEM+-----+
|ND-Not Detected above Quantitation level|
+-----+DUREZ INLET INVESTIGATION
TASK 3
MONITORING WELLS SOIL ANALYSIS

Special Codes:

Sample Date:----->	11/15/89	11/15/89	01/31/90	11/27/89	11/27/89
Sample Description:->	MW1I S16	MW1I S19	MW1D S9	MW3D S3	MW3D S10
Depth in feet:----->	30 - 32	36 - 38	52 - 53	4 - 6	18 - 20
Unit:----->	Alluvium	Till	Till	Fill	Alluvium

Analytes:	Units:	Quantitation					
		level:					
2-CHLOROTOLUENE	ug/kg	10	ND	ND	ND	ND	ND
CHLOROBENZENE	ug/kg	10	130	29	ND	ND	ND
1,2-DICHLOROBENZENE	ug/kg	10	41	ND	ND	ND	ND
1,4-DICHLOROBENZENE	ug/kg	10	34	ND	ND	ND	ND
1,2,3-TRICHLOROBENZENE	ug/kg	100	ND	ND	ND	ND	ND
1,2,4-TRICHLOROBENZENE	ug/kg	100	ND	ND	ND	ND	ND
1,2,3,4-TETRACHLOROBENZENE	ug/kg	100	ND	ND	ND	ND	ND
1,2,4,5-TETRACHLOROBENZENE	ug/kg	100	ND	ND	ND	ND	ND
PENTACHLOROBENZENE	ug/kg	100	ND	ND	ND	ND	ND
HEXACHLOROBENZENE	ug/kg	100	ND	ND	ND	ND	ND

OCCIDENTAL CHEMICAL CORPORATION
ENVIRONMENTAL DATABASE SYSTEM

-----+
|ND-Not Detected above Quantitation level|
-----+

DUREZ INLET INVESTIGATION
TASK 3
MONITORING WELLS SOIL ANALYSIS

Special Codes:

Sample Date:----->	11/27/89	11/27/89	11/27/89	11/20/89	11/17/89
Sample Description:->	MW3D S15	MW3D S17A	MW3D S19	MW4I S2	MW7S S1
Depth in feet:----->	28 - 30	32 - 33	36 - 38	2 - 4	2 - 4
Unit:----->	Gl. Clay	Till	Till	Fill	Fill

Analytes:	Units:	Quantitation				
		level:				

2-CHLOROTOLUENE	ug/kg	10	ND	ND	ND	ND	ND
CHLOROBENZENE	ug/kg	10	ND	ND	ND	ND	ND
1,2-DICHLOROBENZENE	ug/kg	10	ND	ND	ND	ND	ND
1,4-DICHLOROBENZENE	ug/kg	10	ND	ND	ND	ND	ND
1,2,3-TRICHLOROBENZENE	ug/kg	100	ND	ND	ND	ND	ND
1,2,4-TRICHLOROBENZENE	ug/kg	100	ND	ND	ND	ND	ND
1,2,3,4-TETRACHLOROBENZENE	ug/kg	100	ND	ND	ND	ND	ND
1,2,4,5-TETRACHLOROBENZENE	ug/kg	100	ND	ND	ND	ND	ND
PENTACHLOROBENZENE	ug/kg	100	ND	ND	ND	ND	ND
HEXACHLOROBENZENE	ug/kg	100	ND	ND	ND	ND	ND

OCCIDENTAL CHEMICAL CORPORATION
ENVIRONMENTAL DATABASE SYSTEM

+-----+
|ND-Not Detected above Quantitation Level|
+-----+

DUREZ INLET INVESTIGATION
TASK 3
MONITORING WELLS SOIL ANALYSIS

Special Codes:

Sample Date:----->	02/06/90	02/06/90	02/07/90	12/20/89	12/20/89
Sample Description:->	MW8D S6	MW8D S10	MW8D S18	MW9D S3	MW9D S7
Depth in feet:----->	10 - 12	18 - 20	34 - 36	4 - 6	12 - 14
Unit:----->	Soft Sed.	Alluvium	Till	Soft Sed.	Alluvium

Analytes:	Quantitation						
	Units:	level:					
2-CHLOROTOLUENE	ug/kg	10	ND50	ND5000	ND	ND50	ND50
CHLOROBENZENE	ug/kg	10	4200	260000	ND	2300	20000
1,2-DICHLOROBENZENE	ug/kg	10	410	220000	ND	1200	ND50
1,4-DICHLOROBENZENE	ug/kg	10	1000	160000	ND	980	5200
1,2,3-TRICHLOROBENZENE	ug/kg	100	500	9800	ND	1200	ND
1,2,4-TRICHLOROBENZENE	ug/kg	100	2300	15000	ND	2400	ND
1,2,3,4-TETRACHLOROBENZENE	ug/kg	100	650	8900	ND	1300	ND
1,2,4,5-TETRACHLOROBENZENE	ug/kg	100	690	2900	ND	1200	ND
PENTACHLOROBENZENE	ug/kg	100	3000	9800	ND	1100	ND
HEXACHLOROBENZENE	ug/kg	100	6900	13000	ND	7700	ND

OCCIDENTAL CHEMICAL CORPORATION
ENVIRONMENTAL DATABASE SYSTEM

+-----+
|ND-Not Detected above Quantitation level|
+-----+

DUREZ INLET INVESTIGATION
TASK 3
MONITORING WELLS SOIL ANALYSIS

Special Codes:

Sample Date:----->	12/20/89	12/21/89	12/13/89	12/13/89	12/13/89
Sample Description:->	MW9D S8	MW9D S15	MW10D S3A	MW10D S3B	MW10D S11
Depth in feet:----->	14 - 16	28 - 30	4 - 4.4	4.4 - 6	20 - 22
Unit:----->	Gl. Clay	Till	Fill	Gl. Clay	Gl. Clay

Analytes:	Units:	Quantitation				
		level:				

2-CHLOROTOLUENE	ug/kg	10	ND	ND	ND	ND	ND
CHLOROBENZENE	ug/kg	10	1800	14	ND	25	15
1,2-DICHLOROBENZENE	ug/kg	10	ND	ND	ND	ND	ND
1,4-DICHLOROBENZENE	ug/kg	10	59	ND	ND	23	ND
1,2,3-TRICHLOROBENZENE	ug/kg	100	ND	ND	ND	ND	ND
1,2,4-TRICHLOROBENZENE	ug/kg	100	ND	ND	ND	ND	ND
1,2,3,4-TETRACHLOROBENZENE	ug/kg	100	ND	ND	ND	ND	ND
1,2,4,5-TETRACHLOROBENZENE	ug/kg	100	ND	ND	ND	ND	ND
PENTACHLOROBENZENE	ug/kg	100	ND	ND	ND	ND	ND
HEXACHLOROBENZENE	ug/kg	100	ND	ND	ND	ND	ND

DUREZ INLET INVESTIGATION
TASK 3
MONITORING WELLS SOIL ANALYSIS

Special Codes:

Sample Date:----->	12/14/89	12/14/89	12/15/89
Sample Description:->	MW13D S6	MW13D S7	MW13D S16
Depth in feet:----->	10 - 12	12 - 14	30 - 31
Unit:----->	Fill	Gl. Clay	Till

Analytes:	Units:	Quantitation		
		level:		

2-CHLOROTOLUENE	ug/kg	10	ND	ND	ND
CHLOROBENZENE	ug/kg	10	47	36	39
1,2-DICHLOROBENZENE	ug/kg	10	ND	ND	ND
1,4-DICHLOROBENZENE	ug/kg	10	10	ND	ND
1,2,3-TRICHLOROBENZENE	ug/kg	100	ND	ND	ND
1,2,4-TRICHLOROBENZENE	ug/kg	100	ND	ND	ND
1,2,3,4-TETRACHLOROBENZENE	ug/kg	100	ND	ND	ND
1,2,4,5-TETRACHLOROBENZENE	ug/kg	100	ND	ND	ND
PENTACHLOROBENZENE	ug/kg	100	ND	ND	ND
HEXACHLOROBENZENE	ug/kg	100	ND	ND	ND

Report Date: 07/17/90

OCCIDENTAL CHEMICAL CORPORATION
ENVIRONMENTAL DATABASE SYSTEM+-----+
|ND-Not Detected above Quantitation level|
+-----+DUREZ INLET INVESTIGATION
TASK 6
LOCKPORT WATER LINE BACKFILL BORINGS SOIL ANALYSIS

Note - Results for water samples are in ug/L.

Sample Date:----->	12/19/89	12/19/89	12/19/89	12/19/89
Sample Description:->	WL1 S2 & S3 COMP	WL1 S2	WL1 S4 & S5 COMP	WL1 S6 & S7 COMP
Depth in feet:----->	2 - 6	2 - 4	6 - 10	10 - 14
Unit:----->	Fill	Rinse Water	Fill/ Gl. Clay	Gl. Clay

Analytes:	Units:	Quantitation level:
-----------	--------	------------------------

2-CHLOROTOLUENE	ug/kg	10	ND	ND1	ND	ND
CHLOROBENZENE	ug/kg	10	ND	ND0.4	31	ND
1,2-DICHLOROBENZENE	ug/kg	10	ND	ND1	24	ND
1,4-DICHLOROBENZENE	ug/kg	10	ND	1.4	ND	ND
1,2,3-TRICHLOROBENZENE	ug/kg	100	ND	ND0.2	ND	ND
1,2,4-TRICHLOROBENZENE	ug/kg	100	ND	ND0.2	ND	ND
1,2,3,4-TETRACHLOROBENZENE	ug/kg	100	ND	ND0.2	ND	ND
1,2,4,5-TETRACHLOROBENZENE	ug/kg	100	ND	ND0.2	ND	ND
PENTACHLOROBENZENE	ug/kg	100	ND	ND0.2	ND	ND
HEXACHLOROBENZENE	ug/kg	100	ND	ND0.2	ND	ND

DUREZ INLET INVESTIGATION
TASK 6
LOCKPORT WATER LINE BACKFILL BORINGS SOIL ANALYSIS

Sample Date:----->	12/19/89	12/19/89	12/19/89	12/19/89	01/03/90
Sample Description:->	WL1 S8 & S9 COMP	WL1 S10 & S11 COMP	WL1 S12 & S13 COMP	WL1 S15	WL1A S2& S3 COMP
Depth in feet:----->	14 - 18	18 - 22	22 - 26	28 - 30	12 - 16
Unit:----->	Gl. Clay	Gl. Clay	Gl. Clay	Gl. Clay	SC Fill*

Analytes:	Units:	Quantitation				
		Level:				
2-CHLOROTOLUENE	ug/kg	10	ND	ND	ND	ND
CHLOROBENZENE	ug/kg	10	ND	ND	ND	ND
1,2-DICHLOROBENZENE	ug/kg	10	ND	ND	ND	ND
1,4-DICHLOROBENZENE	ug/kg	10	ND	ND	ND	ND
1,2,3-TRICHLOROBENZENE	ug/kg	100	ND	ND	ND	ND
1,2,4-TRICHLOROBENZENE	ug/kg	100	ND	ND	ND	ND
1,2,3,4-TETRACHLOROBENZENE	ug/kg	100	ND	ND	ND	ND
1,2,4,5-TETRACHLOROBENZENE	ug/kg	100	ND	ND	ND	ND
PENTACHLOROBENZENE	ug/kg	100	ND	ND	ND	ND
HEXACHLOROBENZENE	ug/kg	100	ND	ND	ND	ND

* SC Fill = Silt-Clay Fill

Report Date: 07/17/90

OCCIDENTAL CHEMICAL CORPORATION

ENVIRONMENTAL DATABASE SYSTEM

+-----+
|ND-Not Detected above Quantitation level|
+-----+

DUREZ INLET INVESTIGATION

TASK 6

LOCKPORT WATER LINE BACKFILL BORINGS SOIL ANALYSIS

Sample Date:----->	01/03/90	01/03/90	01/04/90	01/04/90	01/04/90
Sample Description:->	WL1A S4 & S5 COMP	WL1A S6 & S7 COMP	WL1A S8A	WL1A S8B	WL1A S9 & S10 COMP
Depth in feet:----->	16 - 20	20 - 24	24 - 24.8	24.8 - 26	26 - 30
Unit:----->	SC Fill*	SC Fill*/ Bedding	Bedding	Gl. Clay	Gl. Clay

Analytes:	Units:	Quantitation				
		level:				
2-CHLOROTOLUENE	ug/kg	10	ND	ND	ND	ND
CHLOROBENZENE	ug/kg	10	ND	ND	ND	ND
1,2-DICHLOROBENZENE	ug/kg	10	ND	ND	ND	ND
1,4-DICHLOROBENZENE	ug/kg	10	ND	ND	ND	ND
1,2,3-TRICHLOROBENZENE	ug/kg	100	ND	ND	ND	680
1,2,4-TRICHLOROBENZENE	ug/kg	100	ND	ND	ND	930
1,2,3,4-TETRACHLOROBENZENE	ug/kg	100	ND	ND	ND	420
1,2,4,5-TETRACHLOROBENZENE	ug/kg	100	ND	ND	ND	440
PENTACHLOROBENZENE	ug/kg	100	ND	ND	ND	ND
HEXACHLOROBENZENE	ug/kg	100	ND	ND	ND	ND

* SC Fill = Silt-Clay Fill

Report Date: 07/17/90

OCCIDENTAL CHEMICAL CORPORATION

ENVIRONMENTAL DATABASE SYSTEM

+-----+
|ND-Not Detected above Quantitation level|
+-----+

DUREZ INLET INVESTIGATION

TASK 6

LOCKPORT WATER LINE BACKFILL BORINGS SOIL ANALYSIS

Sample Date:----->	12/07/89	12/07/89	12/08/89	12/08/89	12/08/89
Sample Description:->	WL2 S1 & S2 COMP	WL2 S3 & S4 COMP	WL2 S5 & S6 COMP	WL2 S7	WL2 S8
Depth in feet:----->	10 - 14	14 - 18	18 - 22	22 - 24	24 - 26
Unit:----->	SC Fill*	SC Fill*	SC Fill*/ Bedding	Bedding	Till

Analytes:	Units:	Quantitation level:					
2-CHLOROTOLUENE	ug/kg	10	ND1000	37000	ND1000	ND1000	ND1000
CHLOROBENZENE	ug/kg	10	97000	1100000	32000	330000	19000
1,2-DICHLOROBENZENE	ug/kg	10	42000	1100000	17000	380000	20000
1,4-DICHLOROBENZENE	ug/kg	10	32000	830000	11000	220000	35000
1,2,3-TRICHLOROBENZENE	ug/kg	100	7400	420000	6600	28000	6100
1,2,4-TRICHLOROBENZENE	ug/kg	100	6700	440000	8000	27000	5800
1,2,3,4-TETRACHLOROBENZENE	ug/kg	100	6400	490000	7600	29000	7200
1,2,4,5-TETRACHLOROBENZENE	ug/kg	100	1400	130000	1600	6900	970
PENTACHLOROBENZENE	ug/kg	100	2000	190000	2200	8800	1500
HEXACHLOROBENZENE	ug/kg	100	42000	310000	4100	17000	3300

* SC Fill = Silt-Clay Fill

DUREZ INLET INVESTIGATION
TASK 6
LOCKPORT WATER LINE BACKFILL BORINGS SOIL ANALYSIS

Note - Results for water samples are in ug/L.

Sample Date:----->	12/08/89	12/11/89	12/13/89	12/13/89	12/14/89
Sample Description:->	WL2 S8A DUP	WL2 S10	WL3 S2 & S3 COMP	WL3 S4 & S5 COMP	WL3 S5
Depth in feet:----->	24 - 26	30 - 32	10 - 14	14 - 18	16 - 18
Unit:----->	Till	Till	SC Fill*	SC Fill*	Rinse Water

Analytes:	Units:	Quantitation level:					
2-CHLOROTOLUENE	ug/kg	10	ND1000	ND	210	23	ND1
CHLOROBENZENE	ug/kg	10	32000	95	1500	2900	ND0.4
1,2-DICHLOROBENZENE	ug/kg	10	34000	180	160	9100	ND1
1,4-DICHLOROBENZENE	ug/kg	10	22000	110	160	1500	ND1
1,2,3-TRICHLOROBENZENE	ug/kg	100	6200	ND	110	ND	ND0.2
1,2,4-TRICHLOROBENZENE	ug/kg	100	6100	ND	250	ND	ND0.2
1,2,3,4-TETRACHLOROBENZENE	ug/kg	100	6900	ND	ND	ND	ND0.2
1,2,4,5-TETRACHLOROBENZENE	ug/kg	100	960	ND	ND	ND	ND0.2
PENTACHLOROBENZENE	ug/kg	100	1500	ND	ND	ND	ND0.2
HEXACHLOROBENZENE	ug/kg	100	2900	ND	ND	ND	ND0.2

* SC Fill = Silt-Clay Fill

DUREZ INLET INVESTIGATION
TASK 6
LOCKPORT WATER LINE BACKFILL BORINGS SOIL ANALYSIS

Sample Date:----->	12/13/89	12/13/89	12/14/89	12/14/89	12/14/89
Sample Description:->	WL3 S6 & S7 COMP	WL3 S88	WL3 S9	WL3 S10	WL3 S10A DUP
Depth in feet:----->	18 - 22	23.3 - 24	24 - 26	26 - 28	26 - 28
Unit:----->	SC Fill*	Bedding	Bedding	Till	Till

Analytes:	Units:		Quantitation level:				
2-CHLOROTOLUENE	ug/kg	10	ND40	3800	49000	ND400	59
CHLOROBENZENE	ug/kg	10	3700	120000	1800000	11000	940
1,2-DICHLOROBENZENE	ug/kg	10	ND40	97000	900000	9300	1100
1,4-DICHLOROBENZENE	ug/kg	10	ND40	56000	610000	6100	750
1,2,3-TRICHLOROBENZENE	ug/kg	100	ND	13000	17000	ND	ND
1,2,4-TRICHLOROBENZENE	ug/kg	100	ND	24000	31000	140	190
1,2,3,4-TETRACHLOROBENZENE	ug/kg	100	ND	4900	6800	ND	ND
1,2,4,5-TETRACHLOROBENZENE	ug/kg	100	ND	7700	11000	ND	ND
PENTACHLOROBENZENE	ug/kg	100	ND	2900	4600	ND	ND
HEXACHLOROBENZENE	ug/kg	100	ND	4200	6600	ND	ND

* SC Fill = Silt-Clay Fill

Report Date: 07/17/90

OCCIDENTAL CHEMICAL CORPORATION
ENVIRONMENTAL DATABASE SYSTEM+-----+
|ND-Not Detected above Quantitation level|
+-----+DUREZ INLET INVESTIGATION
TASK 6
LOCKPORT WATER LINE BACKFILL BORINGS SOIL ANALYSIS

Sample Date:----->	12/14/89	12/20/89	12/20/89	01/02/90	01/02/90
Sample Description:->	WL3 S12	WL4 S3 & S4 COMP	WL4 S6 & S7 COMP	WL4 S8 & S9 COMP	WL4 S10 & S11 COMP
Depth in feet:----->	30 - 32	11 - 14	16 - 19	19 - 22	22 - 25
Unit:----->	Till	SC Fill*	SC Fill	SC Fill*	SC Fill*/ Bedding

Analytes:	Quantitation						
	Units:	level:					
2-CHLOROTOLUENE	ug/kg	10	ND30	ND50	ND50	ND	ND500
CHLOROBENZENE	ug/kg	10	3800	4100	14000	80	200000
1,2-DICHLOROBENZENE	ug/kg	10	6300	ND50	4300	ND	95000
1,4-DICHLOROBENZENE	ug/kg	10	2600	110	3300	ND	50000
1,2,3-TRICHLOROBENZENE	ug/kg	100	ND	ND	880	ND	8300
1,2,4-TRICHLOROBENZENE	ug/kg	100	ND	ND	1400	ND	11000
1,2,3,4-TETRACHLOROBENZENE	ug/kg	100	ND	ND	1300	ND	5300
1,2,4,5-TETRACHLOROBENZENE	ug/kg	100	ND	ND	940	ND	5300
PENTACHLOROBENZENE	ug/kg	100	ND	ND	1000	ND	1500
HEXACHLOROBENZENE	ug/kg	100	ND	ND	1900	ND	1800

* SC Fill = Silt-Clay Fill

Report Date: 07/17/90

OCCIDENTAL CHEMICAL CORPORATION

ENVIRONMENTAL DATABASE SYSTEM

+-----+
|ND-Not Detected above Quantitation level|
+-----+

DUREZ INLET INVESTIGATION

TASK 6

LOCKPORT WATER LINE BACKFILL BORINGS SOIL ANALYSIS

Note - Results for water samples are in ug/L.

Sample Date:----->	01/02/90	01/03/90	01/03/90	01/03/90	01/07/90
Sample Description:->	WL4 S12	WL4 S13	WL4 S13	WL4 S15	WL4 S15A DUP
Depth in feet:----->	25 - 26.5	26.5 - 28		30 - 31.5	30 - 31.5
Unit:----->	Bedding	Bedding/ Till	Rinse Water	Till	Till

Analytes:	Units:	Quantitation level:					
2-CHLOROTOLUENE	ug/kg	10	33000	26000	ND1	770	ND
CHLOROBENZENE	ug/kg	10	3900000	740000	ND0.4	49000	590
1,2-DICHLOROBENZENE	ug/kg	10	1700000	1000000	ND1	32000	200
1,4-DICHLOROBENZENE	ug/kg	10	1100000	690000	ND1	23000	130
1,2,3-TRICHLOROBENZENE	ug/kg	100	110000	290000	ND0.2	550	190
1,2,4-TRICHLOROBENZENE	ug/kg	100	160000	410000	0.22	700	260
1,2,3,4-TETRACHLOROBENZENE	ug/kg	100	98000	240000	ND0.2	330	ND
1,2,4,5-TETRACHLOROBENZENE	ug/kg	100	100000	260000	ND0.2	390	110
PENTACHLOROBENZENE	ug/kg	100	42000	100000	ND0.2	ND	ND
HEXACHLOROBENZENE	ug/kg	100	64000	76000	0.57	ND	ND

Report Date: 07/17/90

OCCIDENTAL CHEMICAL CORPORATION
ENVIRONMENTAL DATABASE SYSTEM+-----+
|ND-Not Detected above Quantitation level|
+-----+DUREZ INLET INVESTIGATION
TASK 6
LOCKPORT WATER LINE BACKFILL BORINGS SOIL ANALYSIS

Sample Date:----->	01/03/90	01/03/90	12/04/89	12/04/89	12/04/89
Sample Description:->	WL4 S16	WL4 S19	WL5 S1	WL5 S2	WL5 S1 & S2 COMP
Depth in feet:----->	32 - 34	38 - 40	11 - 13	13 - 15	11 - 15
Unit:----->	Till	Till	SC Fill*	SC Fill*	SC Fill*

Analytes:	Quantitation						
	Units:	level:					
2-CHLOROTOLUENE	ug/kg	10	ND	ND	ND1000	ND1000	ND1000
CHLOROBENZENE	ug/kg	10	610	36	150000	170000	170000
1,2-DICHLOROBENZENE	ug/kg	10	100	ND	32000	23000	28000
1,4-DICHLOROBENZENE	ug/kg	10	69	15	23000	19000	22000
1,2,3-TRICHLOROBENZENE	ug/kg	100	200	110			
1,2,4-TRICHLOROBENZENE	ug/kg	100	230	150			
1,2,3,4-TETRACHLOROBENZENE	ug/kg	100	110	ND			
1,2,4,5-TETRACHLOROBENZENE	ug/kg	100	120	ND			
PENTACHLOROBENZENE	ug/kg	100	ND	ND			
HEXACHLOROBENZENE	ug/kg	100	ND	ND			

* SC Fill = Silt-Clay Fill

Report Date: 07/17/90

OCCIDENTAL CHEMICAL CORPORATION
ENVIRONMENTAL DATABASE SYSTEM+-----+
|ND-Not Detected above Quantitation level|
+-----+DUREZ INLET INVESTIGATION
TASK 6
LOCKPORT WATER LINE BACKFILL BORINGS SOIL ANALYSIS

Sample Date:----->	12/04/89	12/04/89	12/04/89	12/04/89	12/04/89
Sample Description:->	WL5 S1R & S2R COMP	WL5 S3	WL5 S4	WL5 S3 & S4 COMP	WL5 S3R & S4R COMP
Depth in feet:----->	11 - 15	15 - 17	17 - 19	15 - 19	15 - 19
Unit:----->	SC Fill*	SC Fill*	SC Fill*	SC Fill*	SC Fill*

Analytes:	Units:	Quantitation level:			
2-CHLOROTOLUENE	ug/kg	10		ND1000	ND1000
CHLOROBENZENE	ug/kg	10		160000	200000
1,2-DICHLOROBENZENE	ug/kg	10		26000	32000
1,4-DICHLOROBENZENE	ug/kg	10		22000	27000
1,2,3-TRICHLOROBENZENE	ug/kg	100	7800		
1,2,4-TRICHLOROBENZENE	ug/kg	100	7500		
1,2,3,4-TETRACHLOROBENZENE	ug/kg	100	5800		
1,2,4,5-TETRACHLOROBENZENE	ug/kg	100	1400		
PENTACHLOROBENZENE	ug/kg	100	1600		
HEXACHLOROBENZENE	ug/kg	100	2200		

* SC Fill = Silt-Clay Fill

Report Date: 07/17/90

OCCIDENTAL CHEMICAL CORPORATION

ENVIRONMENTAL DATABASE SYSTEM

+-----+
|ND-Not Detected above Quantitation Level|
+-----+

DUREZ INLET INVESTIGATION

TASK 6

LOCKPORT WATER LINE BACKFILL BORINGS SOIL ANALYSIS

Sample Date:----->	12/04/89	12/04/89	12/05/89	12/05/89
Sample Description:->	WL5 S5	WL5 S5R	WL5 S8	WL5 S8R
Depth in feet:----->	19 - 19.9	19 - 19.9	25 - 27	25 - 27
Unit:----->	SC Fill*	SC Fill*	Till	Till

Analytes:	Units:	Quantitation level:
2-CHLOROTOLUENE	ug/kg 10	ND1000
CHLOROBENZENE	ug/kg 10	200000
1,2-DICHLOROBENZENE	ug/kg 10	68000
1,4-DICHLOROBENZENE	ug/kg 10	56000
1,2,3-TRICHLOROBENZENE	ug/kg 100	19000
1,2,4-TRICHLOROBENZENE	ug/kg 100	17000
1,2,3,4-TETRACHLOROBENZENE	ug/kg 100	19000
1,2,4,5-TETRACHLOROBENZENE	ug/kg 100	4600
PENTACHLOROBENZENE	ug/kg 100	5600
HEXACHLOROBENZENE	ug/kg 100	9100

* SC Fill = Silt-Clay Fill

APPENDIX G.2

Other Analyses

G
TABLE F.2-1

**SOFT SEDIMENT ANALYSES
NYSDEC
OCC DUREZ INLET**

Parameter	Detection Limit	Range	Average Concentration
Pesticides/PCBs	0.01	ND - 0.05	
Dichlorobenzenes	0.01	8.6 - 1100	234.8
Trichlorobenzenes	0.01	ND - 24	
Tetrachlorobenzenes	0.01	ND - 0.05	
Pentachlorobenzenes	0.01	ND - 78	
Hexachlorobenzenes	0.01	0.084 - 32	12.9
Hexachlorobutadiene	0.01	ND - 25	
alpha-Hexachlorocyclohexane	0.08	ND - 0.08	
beta-Hexachlorocyclohexane	0.08	ND - 0.08	
gamma-Hexachlorocyclohexane	0.08	ND - 0.08	
Silver		<0.26 - 3.5	1.3
Arsenic		2.5 - 13	6.6
Beryllium		0.27 - 0.77	0.5
Cadmium		<0.26 - 3.2	1.2
Chromium		16 - 950	168.2
Copper		19 - 1710	483.7
Mercury		0.10 - 3.0	1.0
Nickel		15 - 100	32.0
Lead		22 - 410	179.3
Strontium		<1.3 - <1.8	0.8
Selenium		<0.8 - <1.8	0.8
Thallium		<0.75 - <1.8	0.8
Zinc		63 - 1990	641.6

Notes:

1. Samples were collected by NYSDEC from a single vibracore hole 9/18/85, location uncertain.
2. Samples were analyzed for the following depth intervals (in inches)
0-2, 3-4, 5-6, 7-8, 13-15, 20-22, 27-29, 36-38, 41-44.
3. Units in mg/kg (ppm).
4. Reference - Niagara River Area Sediment Study, Simon Litten, December, 1987.

APPENDIX H

Groundwater Chemical Analytical Database

APPENDIX H.1

Field Sampling Summary Sheet

FIELD SAMPLING SUMMARY SHEET

PHYSICAL PARAMETERS

WELL #	DATE	TIME	DEVELOP/ SAMPLE SEQ.	WATER LEVEL (FT.)	WATER		COLOR	TURBIDITY	ODOR	TEMPERATURE		pH	SPECIFIC CONDUCTIVITY
					ELEVATION	GALLONS REMOVED				(degrees Fahrenheit)			
MW-1S	1/8/90	2:46 P	DEV I	8.52	564.58	2.5	Dk Br	H	N				
MW-1S	1/10/90	11:53 A	DEV II	8.09	565.01	4.0	Dk Br	H	N				
MW-1S	2/20/90	12:10 P	SAM I	8.00	565.10	3.5	Lt Br	M	N	47.0, 50.1	7.76, 8.34		1954, 2030
MW-1S	4/18/90	11:20 A	SAM II	7.61	565.49	5.0	Dk Br	M	N	46.0, 46.5, 50.1	8.06, 8.25, 8.17		1540, 1280, 1050
MW-1I	1/8/90	2:55 P	DEV I	7.90	564.72	35.0	Lt Br	M	N				
MW-1I	1/10/90	3:00 P	DEV II	7.90	564.72	35.0	Lt Br	M	N				
MW-1I	2/20/90	9:50 A	SAM I	7.39	565.23	37.0	-	L	N	49.9, 51.9	6.97, 7.44		1843, 1834
MW-1I	4/20/90	12:00 P	SAM II	7.05	565.57	35.0	Lt Br	M	N	51.0, 52.6, 52.7	6.43, 6.96, 6.58		1010, 1580, 1590
MW-1D	2/8/90	9:45 A	DEV I	7.08	565.75	11.0	Lt Br	L	N				
MW-1D	2/20/90	2:30 P	DEV II	19.54	553.29	8.0	Lt Br	L	N				
MW-1D	3/2/90	9:30 A	SAM I	24.30	548.53	7.5	Lt Br	L	N	51.5, 49.7, 56.8	10.26, 8.29, 8.24		8880, 11300, 11540
MW-1D	4/12/90	1:45 P	SAM II	8.52	564.31	10.0	Lt Br	L	N	50.7, 42.7, 45.4	9.20, 7.83, 8.30		9350, 8640, 8840
MW-2S	1/8/90	1:15 P	DEV I	***	***	11.0	Rk	H	N				
MW-2S	1/10/90	10:05 A	DEV II	8.82	564.33	11.0	Dk Br	H	Y				
MW-2S	2/26/90	10:50 A	SAM I	8.24	564.91	11.0	Dk Br	H	N	43.1, 42.3, 49.7	9.63, 9.63, 8.91		1030, 740, 870
MW-2S	4/18/90	11:10 A	SAM II	7.66	565.49	15.0	Dk Br	H	N	45.6, 46.9, 48.9	9.43, 9.28, 8.91		700, 600, 610
MW-2I	1/8/90	11:35 A	DEV I	9.03	564.50	35.0	Gr Br	H	Y				
MW-2I	1/10/90	10:42 A	DEV II	***	***	35.0	Br Gr	M	Y				
MW-2I	2/27/90	10:20 A	SAM I	8.10	565.43	35.0	Lt Br	H	Y	45.4, 46.5, 47.2	8.57, 7.63, 7.49		1500, 1700, 1640
MW-2I	4/20/90	12:15 P	SAM II	8.02	565.51	35.0	Lt Br	L	Y	51.1, 51.7, 52.4	6.43, 6.54, 6.57		1600, 1480, 1490
MW-2D	1/8/90	1:30 P	DEV I	7.80	565.09	11.0	Rd Br	H	N				
MW-2D	1/16/90	9:45 A	DEV II	36.41	536.48	5.0	Rd Br	H	N				
MW-2D	2/23/90	10:40 A	SAM I	9.67	563.22	12.5	Dk Br	H	N	40.1, 41.7, 47.2	12.59, 9.81, 8.74		5160, 7770, 8360
MW-2D	4/16/90	1:45 P	SAM II	8.25	564.64	10.5	Br	H	N	51.8, 58.3, 55.9	12.34, 8.85, 8.46		4620, 7320, 9020
MW-3I	1/9/90	11:15 A	DEV I	8.25	564.96	32.0	Br	H	N				
MW-3I	1/9/90	9:00 A	DEV II	8.25	564.96	32.0	Br	H	N				
MW-3I	2/23/90	10:40 A	SAM I	7.16	566.05	35.0	Lt Br	M	N	45.8, 47.5, 48.1	7.89, 7.94, 8.10		1440, 1450, 1440
MW-3I	4/18/90	11:00 A	SAM II	7.26	566.95	35.0	-	-	-	48.5, 49.2, 53.7	8.13, 7.59, 7.41		1520, 1430, 1530
MW-3D	1/9/90	9:05 A	DEV I	7.62	565.60	7.0	Br	H	N				
MW-3D	1/10/90	3:15 P	DEV II	17.08	556.14	6.0	Lt Br	H	N				
MW-3D	2/22/90	11:15 A	SAM I	7.69	565.53	6.5	Lt Br	M	N	47.6, 47.5, 49.4	7.46, 7.58, 7.57		2360, 3334, 3334
MW-3D	4/16/90	1:35 P	SAM II	7.35	565.87	6.5	Lt Br	L	N	51.7, 56.4, 56.5	8.76, 8.85, 8.00		1770, 2430, 3100
MW-4S	1/9/90	11:00 A	DEV I	5.93	566.79	7.0	Rd Br	H	N				
MW-4S	1/10/90	3:05 P	DEV II	6.08	566.64	2.0	Lt Br	L	N				
MW-4S	2/23/90	12:10 P	SAM I	4.17	568.55	5.0	Clear	L	N	42.6, 44.4, 45.9	8.63, 8.36, 8.44		710, 930, 1030
MW-4S	4/17/90	11:05 A	SAM II	5.05	567.67	4.0	Clear	L	N	44.6, 43.0, 45.1	8.50, 8.45, 8.01		610, 780, 750

FIELD SAMPLING SUMMARY SHEET

PHYSICAL PARAMETERS

WELL #	DATE	TIME	DEVELOP/ SAMPLE SEQ.	(to PVC)		WATER LEVEL (FT.)	WATER ELEVATION (FT.)	GALLONS REMOVED	COLOR	TURBIDITY	ODOR	TEMPERATURE (degrees Fahrenheit)	pH	SPECIFIC CONDUCTIVITY
MW-41	1/9/90	10:55 A	DEV I		6.38		566.29	2.0	Lt Br	Br	N			
MW-41	1/10/90	2:40 P	DEV II		6.48		566.19	2.0	Lt Br	L	N			
MW-41	2/26/90	10:40 A	SAM I		5.06		567.61	3.0	-	L	N	45.8, 43.4, #51.8	8.59, 8.72, 7.94	1470, 1440, 1660
MW-41	4/17/90	11:10 A	SAM II		5.28		567.39	3.0	Clear	L	N	45.5, 44.5, 45.4	7.74, 7.96, 7.69	1420, 1420, 1460
MW-55	1/9/90	11:20 A	DEV I		6.34		564.67	14.0	Br	H	N			
MW-55	1/10/90	10:00 A	DEV II		6.09		564.92	14.0	Br	N	N			
MW-55	2/27/90	11:00 A	SAM I		5.54		565.47	15.0	Lt Br	H	N	42.7, 44.1, 43.4	7.43, 7.24, 7.41	1100, 1130, 1130
MW-55	4/20/90	12:25 P	SAM II		5.54		565.47	15.5	-	L	N	49.9, 49.4, 51.3	7.40, 6.69, 6.58	1060, 1030, 1080
MW-51	1/10/90	10:05 A	DEV I		4.66		565.72	35.0	Br	H	Y			
MW-51	1/16/90	10:25 A	DEV II		5.72		564.66	30.0	Br	M	Y			
MW-51	3/2/90	11:30 A	SAM I		4.66		565.72	35.0	Ok Br	-	Y	53.3, 50.2	7.50, 6.58	1590, 1350
MW-51	4/19/90	2:10 P	SAM II		4.80		565.58	35.0	Br	M	Y	**	**	**
MW-50	2/2/90	10:00 A	DEV I		4.17		566.25	10.0	Br Rd	H	N			
MW-50	2/15/90	2:15 P	DEV II		14.02		556.40	8.0	Lt Br	L	N			
MW-50	3/1/90	10:15 A	SAM I		14.06		556.36	8.0	Lt Br	L	N	47.4, 48.2, 51.3	8.25, 7.97, 7.94	11000, 13750, 13970
MW-50	4/16/90	1:40 P	SAM II		5.46		564.96	9.0	Lt Br	L	N	51.4, 58.4, 55.7	8.36, 8.47, 7.85	8066, 10440, 13445
MW-61	1/9/90	10:00 A	DEV I		***		***	35.0	Lt Br	H	Y			
MW-61	1/10/90	2:50 P	DEV II		4.43		565.49	30.0	Lt Br	M	Y			
MW-61	2/27/90	12:10 P	SAM I		3.67		566.25	30.0	Lt Br	M	N	43.6, 42.3, 41.8	7.82, 7.56, 7.57	1370, 1350, 1370
MW-61	4/17/90	1:50 P	SAM II		3.72		566.20	35.0	Lt Br	M	N	50.1, 51.5, 57.5	6.79, 6.86, 6.40	1360, 1330, 1410
MW-75	1/8/90	9:15 A	DEV I		4.49		566.08	8.0	Br	M	N			
MW-75	1/16/90	9:45 A	DEV II		9.78		560.79	4.0	Lt Br	M	N			
MW-75	2/26/90	11:05 A	SAM I		3.87		566.70	7.0	-	L	N	43.3, 42.1, #49.7	8.29, 9.38, 7.39	4410, 4200, 4720
MW-75	4/17/90	11:20 A	SAM II		3.98		566.59	7.5	Lt Br	L	N	48.6, 44.8, 46.8	7.84, 7.54, 7.44	4510, 4320, 4440
MW-75	4/25/90	2:05 P	SAM III		7.67		562.90	5.0	Br	M	N	58.3, 62.6, 62.3	6.59, 6.74, 6.89	4050, 3610, 2910
MW-85	2/13/90	3:30 P	DEV I		3.86		564.97	10.0	Bk	H	Y			
MW-85	2/14/90	12:20 P	DEV II		3.86		564.97	7.0	Lt Br	L	N			
MW-85	2/26/90	10:45 A	SAM I		3.57		565.26	5.0	Clear	L	Y	52.3, 50.2, 52.9	8.35, 7.98, 7.95	1530, 1580, 1660
MW-85	4/12/90	1:30 P	SAM II		3.15		565.68	4.5	Lt Br	M	Y	43.2, 44.9, 45.4	8.18, 7.19, 7.99	1350, 1370, 1500
MW-81	2/13/90	3:30 P	DEV I		3.60		564.94	24.0	Ok Br	H	Y			
MW-81	2/14/90	10:00 A	DEV II		3.60		564.94	25.0	Lt Br	L	Y			
MW-81	3/2/90	11:45 A	SAM I		2.31		566.23	35.0	-	L	Y	53.7, 53.0, 52.6	7.26, 7.02, 7.15	2480, 2350, 2370
MW-81	4/17/90	1:35 P	SAM II		3.14		565.40	35.0	Lt Br	L	Y	50.7, #56.5, 56.4	7.13, 7.18, 6.65	2030, 2060, 2000
MW-80	2/8/90	3:10 P	DEV I		1.33		567.68	7.5	Lt Br	L	N			
MW-80	2/15/90	2:00 P	DEV II		6.96		562.05	7.0	Purple	L	N			
MW-80	3/1/90	10:05 A	SAM I		4.72		564.29	8.0	Clear	L	N	49.7, 49.3, 49.8	8.05, 7.72, 7.97	6340, 6470, 6520
MW-80	4/09/90	1:00 P	SAM II		3.85		569.01	8.0	Clear	L	N	50.8, 50.3, 52.3	8.14, 8.09, 7.90	5790, 5770, 5170

FIELD SAMPLING SUMMARY SHEET

PHYSICAL PARAMETERS

WELL #	DATE	TIME	DEVELOP/ SAMPLE SEQ.	(to FWC)		WATER LEVEL (FT.)	GALLONS REMOVED	COLOR	TURBIDITY	ODOR	TEMPERATURE		pH	SPECIFIC CONDUCTIVITY
											(degrees Farenheit)			
MM-9S	1/11/90	2:40 P	DEV I	3.38		565.05	14.0	Gr	M	Y				
MM-9S	1/12/90	9:15 A	DEV II	3.26		565.17	14.0	Lt Br	M	Y				
MM-9S	2/28/90	10:00 A	SAM I	3.17		565.26	15.0	Clear	-	-	44.1, 44.2, 46.8	7.73, 7.67, 7.70		1960, 2080, 2160
MM-9S	4/11/90	11:15 A	SAM II	2.56		565.87	10.0	Lt Br	M	Y	41.0, 42.1, 47.6	7.55, 7.46, 7.62		1660, 1790, 1900
MM-9P	1/11/90	10:14 A	DEV I	3.34		565.16	9.0	Br	H	N				
MM-9P	1/15/90	3:32 P	DEV II	3.50		565.00	9.0	Rd Br	H	N				
MM-9P	2/28/90	10:00 A	SAM I	3.27		565.23	10.0	-	L	N	44.7, 44.7, 49.6	7.85, 7.84, 8.02		5260, 5280, 5660
MM-9P	4/09/90	12:55 P	SAM II	3.08		565.42	9.0	Lt Br	M	N	49.2, 50.8, 52.3	8.75, 8.60, 8.19		4540, 4840, 4950
MM-100	1/11/90	10:15 A	DEV I	5.94		566.19	9.0	Rd Br	H	N				
MM-100	1/15/90	2:00 P	DEV II	17.89		554.24	4.0	Rd Br	H	N				
MM-100	2/21/90	9:45 A	SAM I	17.50		554.63	8.0	-	M	N	48.2, 49.7	9.84, 8.21		2910, 3240
MM-100	4/09/90	12:40 P	SAM II	6.78		565.35	7.5	Clear	L	N	50.5, 49.7, 52.7	9.29, 8.93, 8.38		2810, 2860, 2880
MM-11S	1/11/90	1:32 P	DEV I	4.97		564.83	10.0	Gr	H	N				
MM-11S	1/11/90	3:20 P	DEV II	4.96		564.84	10.0	Lt Br	S	N				
MM-11S	2/20/90	11:10 A	SAM I	4.64		565.16	10.0	Clear	-	Y	44.1, 44.3	6.96, 6.95		1420, 1525
MM-11S	4/10/90	11:30 A	SAM II	4.52		565.28	10.0	Clear	L	N	47.3, 46.6, 46.7	6.90, 6.93, 6.75		1430, 1400, 1400
MM-11I	1/11/90	1:33 P	DEV I	5.23		564.78	18.0	Lt Br	H	N				
MM-11I	1/11/90	2:33 P	DEV II	5.30		564.71	18.0	Lt Br	M	N				
MM-11I	2/21/90	10:40 A	SAM I	4.78		565.23	21.0	-	L	N	46.7, 48.9	7.29, 6.96		2580, 2540
MM-11I	4/11/90	11:05 A	SAM II	4.35		565.66	20.0	Lt Br	M	N	43.4, 43.1, 46.3	7.17, 7.04, 6.94		2110, 2600, 2090
MM-120	1/11/90	11:15 A	DEV I	6.44		566.49	8.0	Rd Br	H	N				
MM-120	1/15/90	2:30 P	DEV II	18.36		554.57	3.5	Lt Br	H	N				
MM-120	2/22/90	10:50 A	SAM I	7.22		565.71	7.0	Lt Br	M	N	49.2, 49.5, 47.8	8.24, 7.93, 7.69		2850, 3090, 2790
MM-120	4/10/90	11:05 A	SAM II	7.05		565.88	7.0	Lt Br	M	N	49.6, 49.7, 49.6	8.43, 8.16, 8.12		2840, 2760, 2780
MM-130	1/11/90	11:00 A	DEV I	8.52		566.37	8.0	Br	H	N				
MM-130	1/15/90	3:20 P	DEV II	20.22		554.67	6.0	Rd Br	H	N				
MM-130	2/21/90	9:50 A	SAM I	8.57		566.32	7.5	Br	H	N	46.2, 47.5	8.73, 8.34		3430, 3530
MM-130	4/10/90	11:15 A	SAM II	8.55		566.34	7.0	Clear	L	N	48.9, 50.0, 49.6	8.00, 7.99, 7.99		2990, 3310, 3250
MM-14S	2/7/90	3:15 P	DEV I	2.63		567.54	4.0	Lt Br	M	N				
MM-14S	2/8/90	8:30 A	DEV II	4.49		565.88	3.0	Lt Br	L	N				
MM-14S	2/22/90	9:45 A	SAM I	4.81		565.56	3.5	Clear	L	N	46.8, 46.5, 46.9	6.77, 7.00, 6.82		1580, 1620, 1670
MM-14S	4/11/90	11:30 A	SAM II	3.72		566.65	3.0	Lt Br	L	N	39.8, 40.7, 45.7	6.92, 6.93, 6.94		1310, 1390, 1490
MM-14S	4/25/90	1:50 P	SAM III	4.42		565.95	3.0	Br	M	N	54.4, 55.6, 61.2	6.77, 6.40, 6.78		1550, 1230, 1050

NOTE: Physical parameters measured before purging, after purging and during sampling.

Some wells were measured before purging and during sampling. After purging measurements were added to the sampling program due to some conflicting results.

* time elapsed before parameters could be measured.

** not measured due to elevated levels of chemistry.

*** water level meter inoperative.

APPENDIX H.2

Occidental Chemical Corporation Analyses

Report Date: 05/02/90 11:18 am

OCCIDENTAL CHEMICAL CORPORATION
ENVIRONMENTAL DATABASE SYSTEM+-----+
|ND-Not Detected above Method Detection Level|
+-----+DUREZ INLET INVESTIGATIONS
RESULTS OF GROUNDWATER SAMPLING
ROUND 1 AND ROUND 2

Special Codes:

Sample Date:----->	02/20/90	04/18/90	02/20/90	04/20/90	03/02/90
Sample Description:->	MW 1	MW 1	MW 1	MW 1	MW 1
	S	S	I	I	D
Special Code:----->					

Analytes:	Units:	Method Detection Level:					
BENZENE	ug/L	1	ND	ND	ND	ND	ND
TOLUENE	ug/L	1	ND	ND	ND	ND	ND
CHLOROBENZENE	ug/L	1	ND	ND	ND	ND	ND
2-CHLOROTOLUENE	ug/L	1	ND	ND	ND	ND	ND
1,2-DICHLOROBENZENE	ug/L	1	ND	ND	ND	ND	ND
1,4-DICHLOROBENZENE	ug/L	1	ND	ND	ND	ND	ND
1,2,3-TRICHLOROBENZENE	ug/L	1	ND	ND	ND	ND	ND
1,2,4-TRICHLOROBENZENE	ug/L	1	ND	ND	ND	ND	ND

Report Date: 05/02/90 11:18 am

OCCIDENTAL CHEMICAL CORPORATION
ENVIRONMENTAL DATABASE SYSTEM+-----+
|ND-Not Detected above Method Detection level|
+-----+DUREZ INLET INVESTIGATIONS
RESULTS OF GROUNDWATER SAMPLING
ROUND 1 AND ROUND 2

Special Codes:

Sample Date:----->	04/12/90	02/26/90	04/18/90	02/27/90	04/20/90
Sample Description:->	MW 1	MW 2	MW 2	MW 2	MW 2
	D	S	S	I	I
Special Code:----->					

Analytes:	Units:	Method Detection					
		level:					
BENZENE	ug/L	1	ND	ND	ND	14000	9500
TOLUENE	ug/L	1	ND	ND	ND	140	ND300
CHLOROBENZENE	ug/L	1	ND	ND	ND	36000	26000
2-CHLOROTOLUENE	ug/L	1	ND	ND	ND	4	ND300
1,2-DICHLOROBENZENE	ug/L	1	ND	ND	ND	3700	2500
1,4-DICHLOROBENZENE	ug/L	1	ND	ND	ND	300	1400
1,2,3-TRICHLOROBENZENE	ug/L	1	ND	ND	ND	7	ND300
1,2,4-TRICHLOROBENZENE	ug/L	1	ND	ND	ND	32	ND300

Report Date: 05/02/90 11:18 am

OCCIDENTAL CHEMICAL CORPORATION
ENVIRONMENTAL DATABASE SYSTEM+-----+
[ND-Not Detected above Method Detection level]
+-----+DUREZ INLET INVESTIGATIONS
RESULTS OF GROUNDWATER SAMPLING
ROUND 1 AND ROUND 2

Special Codes:

Sample Date:----->	02/23/90	04/16/90	02/23/90	04/18/90	02/22/90
Sample Description:->	MW 2	MW 2	MW 3	MW 3	MW 3
	D	D	I	I	D
Special Code:----->					

Analytes:	Units:	Method Detection					
		level:					
BENZENE	ug/L	1	30	1	ND	ND	ND
TOLUENE	ug/L	1	ND	ND	ND	ND	ND
CHLOROBENZENE	ug/L	1	130	14	ND	ND	ND
2-CHLOROTOLUENE	ug/L	1	ND	ND	ND	ND	ND
1,2-DICHLOROBENZENE	ug/L	1	16	5	ND	ND	ND
1,4-DICHLOROBENZENE	ug/L	1	8	3	ND	ND	ND
1,2,3-TRICHLOROBENZENE	ug/L	1	ND	ND	ND	ND	ND
1,2,4-TRICHLOROBENZENE	ug/L	1	ND	ND	ND	ND	ND

BENZENE	ug/L	1	30	1	ND	ND	ND
TOLUENE	ug/L	1	ND	ND	ND	ND	ND
CHLOROBENZENE	ug/L	1	130	14	ND	ND	ND
2-CHLOROTOLUENE	ug/L	1	ND	ND	ND	ND	ND
1,2-DICHLOROBENZENE	ug/L	1	16	5	ND	ND	ND
1,4-DICHLOROBENZENE	ug/L	1	8	3	ND	ND	ND
1,2,3-TRICHLOROBENZENE	ug/L	1	ND	ND	ND	ND	ND
1,2,4-TRICHLOROBENZENE	ug/L	1	ND	ND	ND	ND	ND

Report Date: 05/02/90 11:18 am

OCCIDENTAL CHEMICAL CORPORATION
ENVIRONMENTAL DATABASE SYSTEM+-----+
|ND-Not Detected above Method Detection Level|
+-----+DUREZ INLET INVESTIGATIONS
RESULTS OF GROUNDWATER SAMPLING
ROUND 1 AND ROUND 2

Special Codes:

Sample Date:----->	04/16/90	02/23/90	04/17/90	02/26/90	04/17/90
Sample Description:->	MW 3	MW 4	MW 4	MW 4	MW 4
	D	S	S	I	I
Special Code:----->					

Analytes:	Units:	Method Detection level:
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BENZENE	ug/L	1	ND	ND	ND	ND	ND
TOLUENE	ug/L	1	ND	ND	ND	ND	ND
CHLOROBENZENE	ug/L	1	ND	ND	ND	ND	ND
2-CHLOROTOLUENE	ug/L	1	ND	ND	ND	ND	ND
1,2-DICHLOROBENZENE	ug/L	1	ND	ND	ND	ND	ND
1,4-DICHLOROBENZENE	ug/L	1	ND	ND	ND	ND	ND
1,2,3-TRICHLOROBENZENE	ug/L	1	ND	ND	ND	ND	ND
1,2,4-TRICHLOROBENZENE	ug/L	1	ND	ND	ND	ND	ND

Report Date: 05/02/90 11:18 am

OCCIDENTAL CHEMICAL CORPORATION
ENVIRONMENTAL DATABASE SYSTEM+-----+
[ND-Not Detected above Method Detection Level]
+-----+DUREZ INLET INVESTIGATIONS
RESULTS OF GROUNDWATER SAMPLING
ROUND 1 AND ROUND 2

Special Codes:

Sample Date:----->	02/21/90	04/20/90	03/02/90	04/19/90	04/16/90
Sample Description:->	MW 5	MW 5	MW 5	MW 5	MW 5
	S	S	I	I	D
Special Code:----->					

Method Detection

Analytes:

Units: level:

Analytes	Units	level	6	8	40000	46000	ND
BENZENE	ug/L	1	6	8	40000	46000	ND
TOLUENE	ug/L	1	ND	ND	880	970	ND
CHLOROBENZENE	ug/L	1	ND	5	150000	170000	ND
2-CHLOROTOLUENE	ug/L	1	ND	ND	760	820	ND
1,2-DICHLOROBENZENE	ug/L	1	ND	ND	23000	27000	ND
1,4-DICHLOROBENZENE	ug/L	1	ND	ND	18000	20000	ND
1,2,3-TRICHLOROBENZENE	ug/L	1	ND	ND	380	500	ND
1,2,4-TRICHLOROBENZENE	ug/L	1	ND	ND	900	1100	ND

Report Date: 05/02/90 11:18 am

OCCIDENTAL CHEMICAL CORPORATION
ENVIRONMENTAL DATABASE SYSTEM+-----+
|ND-Not Detected above Method Detection level|
+-----+DUREZ INLET INVESTIGATIONS
RESULTS OF GROUNDWATER SAMPLING
ROUND 1 AND ROUND 2

Special Codes: + Resampled on 4/25/90 and analyzed by GC/MS.

Sample Date:----->	02/27/90	04/19/90	02/26/90	04/17/90	02/28/90
Sample Description:-->	MW 6	MW 6	MW 7	MW 7	MW 8
	I	I	S	S	S
Special Code:----->					

Analytes:	Units:	Method Detection level:					
BENZENE	ug/L	1	ND	ND	ND	ND	56
TOLUENE	ug/L	1	ND	ND	ND	ND	ND5
CHLOROBENZENE	ug/L	1	3	2	ND	ND	1700
2-CHLOROTOLUENE	ug/L	1	ND	ND	ND	ND	ND5
1,2-DICHLOROBENZENE	ug/L	1	2	1	ND	+ND2	76
1,4-DICHLOROBENZENE	ug/L	1	1	ND	ND	+ND4	180
1,2,3-TRICHLOROBENZENE	ug/L	1	ND	ND	ND300	+ND2	ND5
1,2,4-TRICHLOROBENZENE	ug/L	1	ND	ND	ND300	+ND2	36

Report Date: 05/02/90 11:18 am

OCCIDENTAL CHEMICAL CORPORATION
ENVIRONMENTAL DATABASE SYSTEM+-----+
|ND-Not Detected above Method Detection Level|
+-----+DUREZ INLET INVESTIGATIONS
RESULTS OF GROUNDWATER SAMPLING
ROUND 1 AND ROUND 2

Special Codes:

= disqualified

Sample Date:----->	04/12/90	03/02/90	04/19/90	03/01/90	04/09/90
Sample Description:->	MW 8	MW 8	MW 8	MW 8	MW 8
	S	I	I	D	D
Special Code:----->					

Analytes:	Method Detection						
	Units:	level:					
BENZENE	ug/L	1	76	ND300	270	2 #	ND
TOLUENE	ug/L	1	ND	ND300	ND75	ND	ND
CHLOROBENZENE	ug/L	1	1300	11000	19000	ND	ND
2-CHLOROTOLUENE	ug/L	1	ND5	ND300	ND75	ND	ND
1,2-DICHLOROBENZENE	ug/L	1	73	6400	12000	ND	ND
1,4-DICHLOROBENZENE	ug/L	1	170	5400	9900	ND	ND
1,2,3-TRICHLOROBENZENE	ug/L	1	ND5	ND500	300	ND	ND
1,2,4-TRICHLOROBENZENE	ug/L	1	32	400	840	2 #	ND

Report Date: 05/02/90 11:18 am

OCCIDENTAL CHEMICAL CORPORATION
ENVIRONMENTAL DATABASE SYSTEM+-----+
|ND-Not Detected above Method Detection Level|
+-----+DUREZ INLET INVESTIGATIONS
RESULTS OF GROUNDWATER SAMPLING
ROUND 1 AND ROUND 2

Special Codes:

= disqualified

Sample Date:----->	02/28/90	04/11/90	02/28/90	04/09/90	02/21/90
Sample Description:->	MW 9	MW 9	MW 9	MW 9	MW 10
	S	S	D	D	D
Special Code:----->					

Analytes:	Units:	Method Detection level:
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BENZENE	ug/L	1	10	8	ND	ND	ND
TOLUENE	ug/L	1	ND	ND	ND	ND	ND
CHLOROBENZENE	ug/L	1	210	170	ND	ND	ND
2-CHLOROTOLUENE	ug/L	1	ND	ND	ND	ND	ND
1,2-DICHLOROBENZENE	ug/L	1	2	2	ND	ND	ND
1,4-DICHLOROBENZENE	ug/L	1	6	5	ND	ND	ND
1,2,3-TRICHLOROBENZENE	ug/L	1	ND	ND	ND	ND	ND
1,2,4-TRICHLOROBENZENE	ug/L	1	2	ND	1 #	ND	ND

Report Date: 05/02/90 11:18 am

OCCIDENTAL CHEMICAL CORPORATION
ENVIRONMENTAL DATABASE SYSTEM+-----+
|ND-Not Detected above Method Detection level|
+-----+DUREZ INLET INVESTIGATIONS
RESULTS OF GROUNDWATER SAMPLING
ROUND 1 AND ROUND 2

Special Codes:

= disqualified

Sample Date:----->	04/09/90	02/20/90	04/10/90	02/21/90	04/11/90
Sample Description:->	MW 10	MW 11	MW 11	MW 11	MW 11
	D	S	S	I	I
Special Code:----->					

Analytes:	Units:	Method Detection level:
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BENZENE	ug/L	1	ND	ND	ND	ND	ND
TOLUENE	ug/L	1	ND	ND	ND	ND	ND
CHLOROBENZENE	ug/L	1	ND	ND	ND	1 #	ND
2-CHLOROTOLUENE	ug/L	1	ND	ND	ND	ND	ND
1,2-DICHLOROBENZENE	ug/L	1	ND	ND	ND	ND	ND
1,4-DICHLOROBENZENE	ug/L	1	ND	ND	ND	ND	ND
1,2,3-TRICHLOROBENZENE	ug/L	1	ND	ND	ND	ND	ND
1,2,4-TRICHLOROBENZENE	ug/L	1	ND	ND	ND	ND	ND

Report Date: 05/02/90 11:18 am

OCCIDENTAL CHEMICAL CORPORATION
ENVIRONMENTAL DATABASE SYSTEM+-----+
|ND-Not Detected above Method Detection Level|
+-----+DUREZ INLET INVESTIGATIONS
RESULTS OF GROUNDWATER SAMPLING
ROUND 1 AND ROUND 2

Special Codes: * Possible Hydrocarbon interference

= disqualified

Sample Date:----->	02/22/90	04/10/90	02/21/90	04/10/90	02/22/90
Sample Description:->	MW 12	MW 12	MW 13	MW 13	MW 14
	D	D	D	D	S
Special Code:----->					

Analytes:	Units:	Method Detection				
		level:				
BENZENE	ug/L 1	ND	ND	ND	ND	ND
TOLUENE	ug/L 1	ND	ND	ND	ND	ND
CHLOROBENZENE	ug/L 1	ND	ND	ND	ND	ND
2-CHLOROTOLUENE	ug/L 1	ND	ND	ND	ND	ND
1,2-DICHLOROBENZENE	ug/L 1	ND	ND	ND	ND	*
1,4-DICHLOROBENZENE	ug/L 1	ND	ND	ND	ND	9 #
1,2,3-TRICHLOROBENZENE	ug/L 1	ND	ND	ND	ND	*
1,2,4-TRICHLOROBENZENE	ug/L 1	ND	ND	ND	ND	*

Report Date: 05/02/90 11:18 am

OCCIDENTAL CHEMICAL CORPORATION
ENVIRONMENTAL DATABASE SYSTEM+-----+
|ND-Not Detected above Method Detection level|
+-----+DUREZ INLET INVESTIGATIONS
RESULTS OF GROUNDWATER SAMPLING
ROUND 1 AND ROUND 2

Special Codes: + Resampled on 4/25/90 and analyzed by GC/MS.

Sample Date:-----> 04/11/90

Sample Description:-> MW 14

S

Special Code:----->

Analytes:	Units:	Method Detection level:
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BENZENE	ug/L	1		ND
TOLUENE	ug/L	1		ND
CHLOROBENZENE	ug/L	1		ND
2-CHLOROTOLUENE	ug/L	1		ND
1,2-DICHLOROBENZENE	ug/L	1		+ND2
1,4-DICHLOROBENZENE	ug/L	1		+ND4
1,2,3-TRICHLOROBENZENE	ug/L	1		+ND2
1,2,4-TRICHLOROBENZENE	ug/L	1		+ND2

Report Date: 05/02/90 2:10 pm

OCCIDENTAL CHEMICAL CORPORATION
ENVIRONMENTAL DATABASE SYSTEM+-----+
|ND-Not Detected above Method Detection Level|
+-----+DUREZ INLET INVESTIGATIONS
ROUND 2 - FIELD BLANKS

Special Codes: B - FIELD BLANK

Sample Date:----->	04/09/90	04/17/90	04/20/90
Sample Description:->	FLD BLNK	FLD BLNK	FLD BLNK
Special Code:----->	B	B	B

Analytes:	Units:	Method Detection level:
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BENZENE	ug/L	1	ND	ND	ND
TOLUENE	ug/L	1	ND	ND	ND
CHLOROBENZENE	ug/L	1	ND	ND	ND
2-CHLOROTOLUENE	ug/L	1	ND	ND	ND
1,2-DICHLOROBENZENE	ug/L	1	ND	ND	ND
1,4-DICHLOROBENZENE	ug/L	1	ND	ND	ND
1,2,3-TRICHLOROBENZENE	ug/L	1	ND	ND	ND
1,2,4-TRICHLOROBENZENE	ug/L	1	ND	ND	ND

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