RESULTS OF
HYDROGEOLOGICAL INVESTIGATION
AT THE COLUMN A-15 EXCAVATION
FOR
GENERAL MOTORS CORPORATION
CHEVROLET-PONTIAC-CANADA GROUP
GRAND RAPIDS, MICHIGAN

MARCH, 1986

PAASE I

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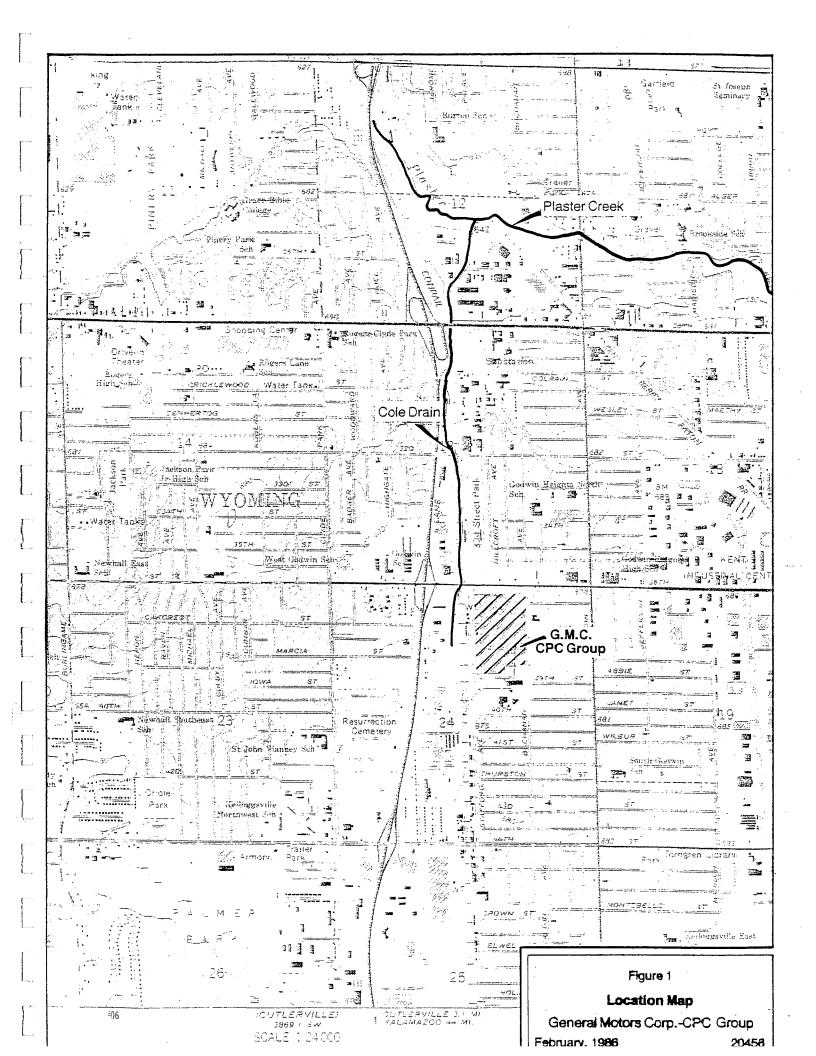
INTRODUCTION

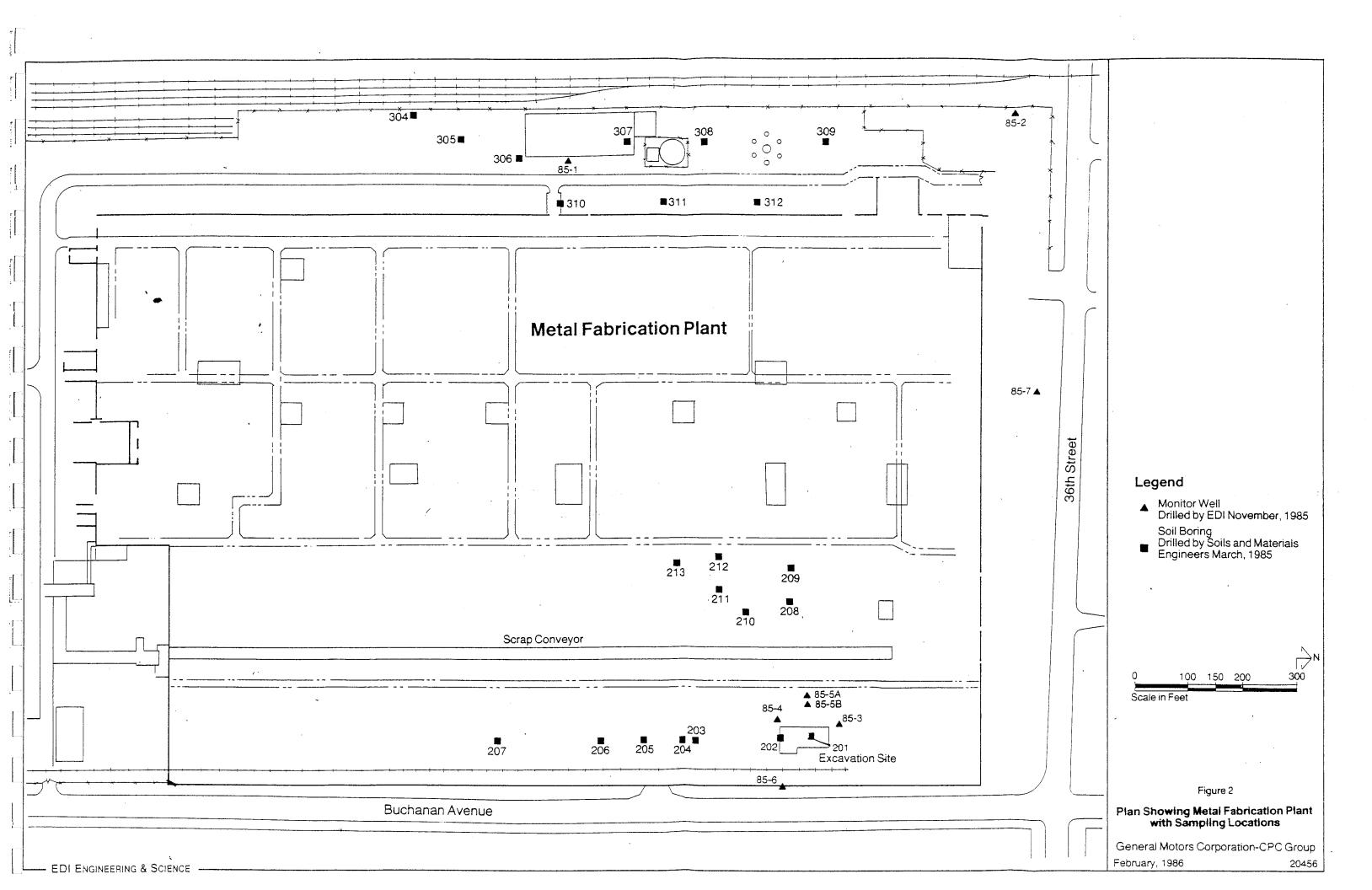
EDI Engineering & Science has conducted a Phase I study of the hydrogeology at the General Motors Corporation CPC Metal Fabrication Plant in Grand Rapids, Michigan. The specific area of investigation is a large excavation located in the northeast section of the plant in the area of column A-15. The excavation is part of the plant modernization program.

The General Motors Corporation CPC Metal Fabrication Plant is located approximately five miles south of downtown Grand Rapids and one-third mile east of Highway US-131. More specifically, the plant is located within the NE 1/4 of Section 24, T6W-R12W, Kent County, Michigan at the corner of 36th Street and Buchanan Avenue. A map showing the GM CPC plant site in relation to nearby roads and other features is shown in Figure 1.

The excavation that was constructed during June, 1985 went down to a depth of approximately 20 feet (Figure 2). In some areas, soil was removed down to the water table where a distinct layer of hydrocarbons consisting of mineral spirits was discovered (in contact with the groundwater). After the oil was discovered in the excavation by General Motors, EDI began a hydrogeological investigation to determine the impact of the oil, if any, on the underlying upper saturated zone and to establish more information on the hydrogeology.

The Phase I study determined the subsurface conditions near the excavation and in three monitoring wells on the west and north sides of the plant. The study was accomplished by: 1) drilling and completing seven monitoring wells; 2) measuring the oil layer in wells near the excavation; 3) determining ground-water elevations in the wells; and 4) taking water samples from the wells for laboratory analysis. This report also makes an estimate of the extent of oil-impacted groundwater in the area of the excavation. The existing information was reviewed and incorporated into the study.





In addition to the Phase I study outlined above, water samples were collected from dewatering wells and discharge points in the area of new construction at the south end of the plant. The sampling was done at the request of the MDNR, and the water samples were collected during November, 1985 and January, 1986. The results are summarized in a letter report to Merl Petzold at General Motors dated February 14, 1986.

METHODS OF INVESTIGATION

All of the monitoring wells terminated in a shallow sand or gravelly sand saturated zone and range in depth from 20 feet to 33 feet. The monitoring wells were drilled using a hollow stem auger and split spoon cores were collected every 5 feet starting at a depth of 5 feet below the surface.

The seven monitoring wells were completed with 2-inch galvanized steel casing attached to a wire-wrapped stainless steel screen. The casing and screen for each well were steam cleaned prior to being lowered into the hole. Wells 85-1, 85-2, 85-6 and 85-7 have 5-foot screens and wells 85-3, 85-4, and 85-5B, have 10-foot screens. The wells were constructed to have the screens only partially submerged below the water table so that floatable hydrocarbons could be detected and the thickness measured. The wells were backfilled with natural soils and bentonite, and cement grout was placed around the wells at the surface. Detailed information about each of the monitoring wells and borings can be found in Appendix A.

The elevation of the top of casing was determined for each monitoring well using standard instrument surveying techniques. The wells were completed with flush-mounted sealed caps with enclosed locking caps. At all of the locations, the top of casing was measured at the top of the surface pipe. Within the plant, the top of the casing is at the same elevation as the top of concrete floor. The seal-type flush-mounts eliminate the need for raising the tops of the casing above the level of the concrete. Because the well screens straddle the water table, venting of the wells is not required.

Water levels in the monitoring wells were measured on December 6, 1985 using a steel tape. The thickness of the hydrocarbon layer was measured in Wells 85-4, 85-5B, and 85-3 at the same time as sampling occurred. A clear acrylic bailer was used except in the case of 85-3. The bailer was lowered into the well and recovered the oil and water through a bottom check valve. The clear bailer would not fit inside the screen of Well 85-3. The stainless steel

bailer which is slightly smaller in diameter was lowered into the well so that the oil and water entered through the bottom check valve. The liquid was then poured into the clear acrylic bailer for measurement. The difference in internal diameter of the two bailers is 1/8-inch so the difference measured is not significant.

After the hydrocarbon thickness measurement at each well inside the plant; three casing volumes of water were removed from the well with the stainless steel bailer. The stainless steel bailer was rinsed at each well before sampling.

The seven monitoring wells were sampled in the following order: 85-4, 85-5B, 85-3, 85-1, 85-2, 85-7, and 85-6. The two bailers were thoroughly washed with detergent and water after the sampling of well 85-3 which was the last of the wells containing floatables.

The acrylic bailer was not employed in the sampling of the wells outside the plant as these wells had shown no indication of oil during drilling and did not show a sheen while the three casing volumes were being removed to purge the well.

Because of the sampling procedure, there is the possibility of cross contamination between the wells containing the oil. However, the two wells having less oil were sampled prior to 85-3. A second concern in sampling a well straddling the water table and containing oil is that the bailer goes through the oil and may bring the sample water into more contact with the oil.

The analyses of the water samples for priority pollutants were performed in EDI's laboratory. The volatiles on the priority pollutant list were analyzed using gas chromatography/mass spectrometry (GC/MS). The GC/MS volatile analyses were done according to EPA Method 624. The analyses of the base neutrals on the priority pollutant list were done according to EPA Method 625.

FINDINGS

A total of seven monitoring wells were drilled at the General Motors CPC Metal Fabrication Plant during November and December, 1985.

Four of the wells were drilled around the excavation which is located within the northeastern portion of the plant. Three additional wells were drilled outside of the plant on the north, northwest and west sides of the building. The locations of the seven wells are shown in Figure 2.

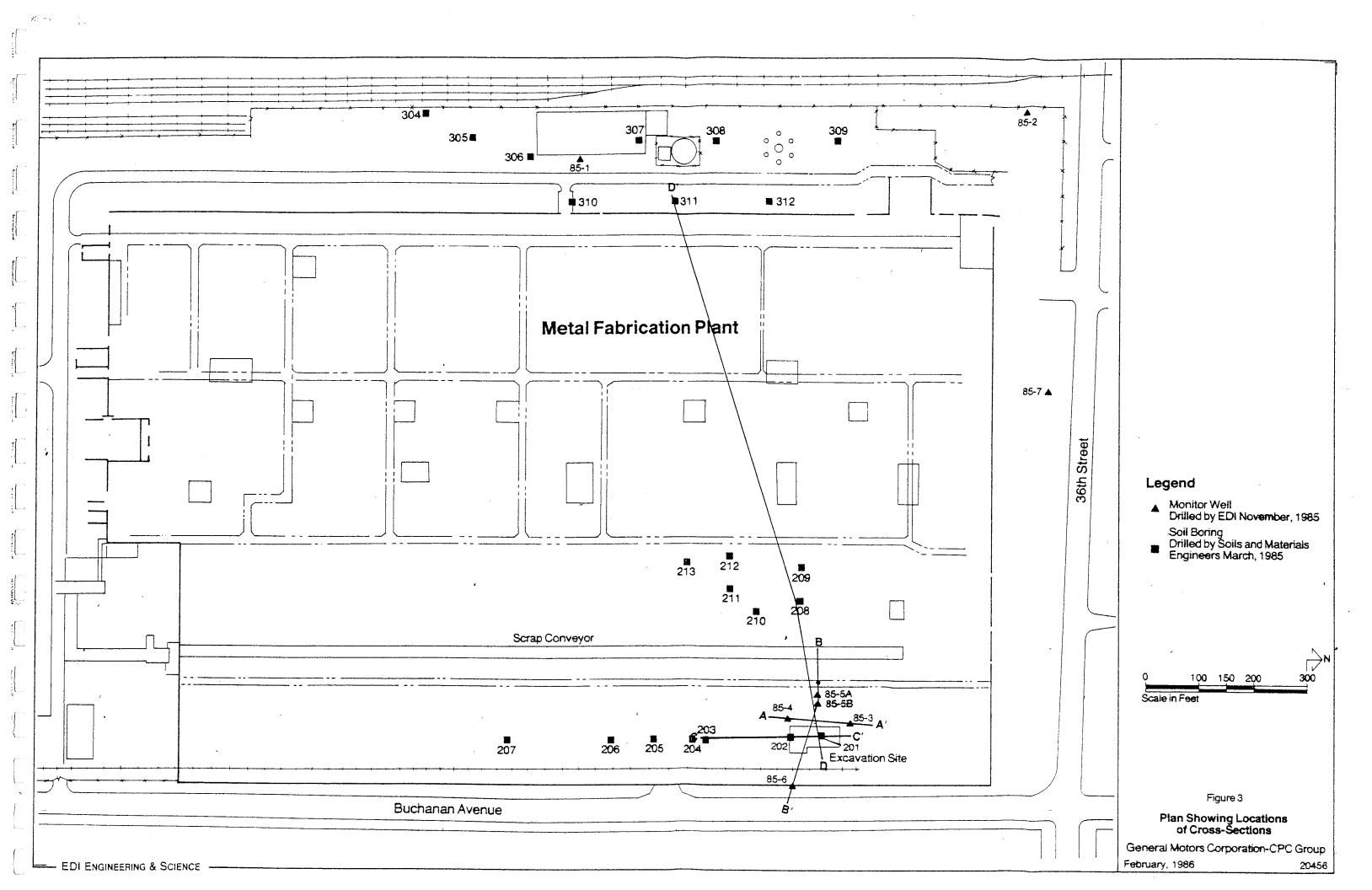
Boring #85-5A, which was not completed as a monitoring well, was drilled to a depth of 7.7 feet where concrete was encountered. Difficulty in penetrating the concrete resulted in the abandonment of 85-5A and moving to a new location 10.5 feet east which is designated as 85-5B.

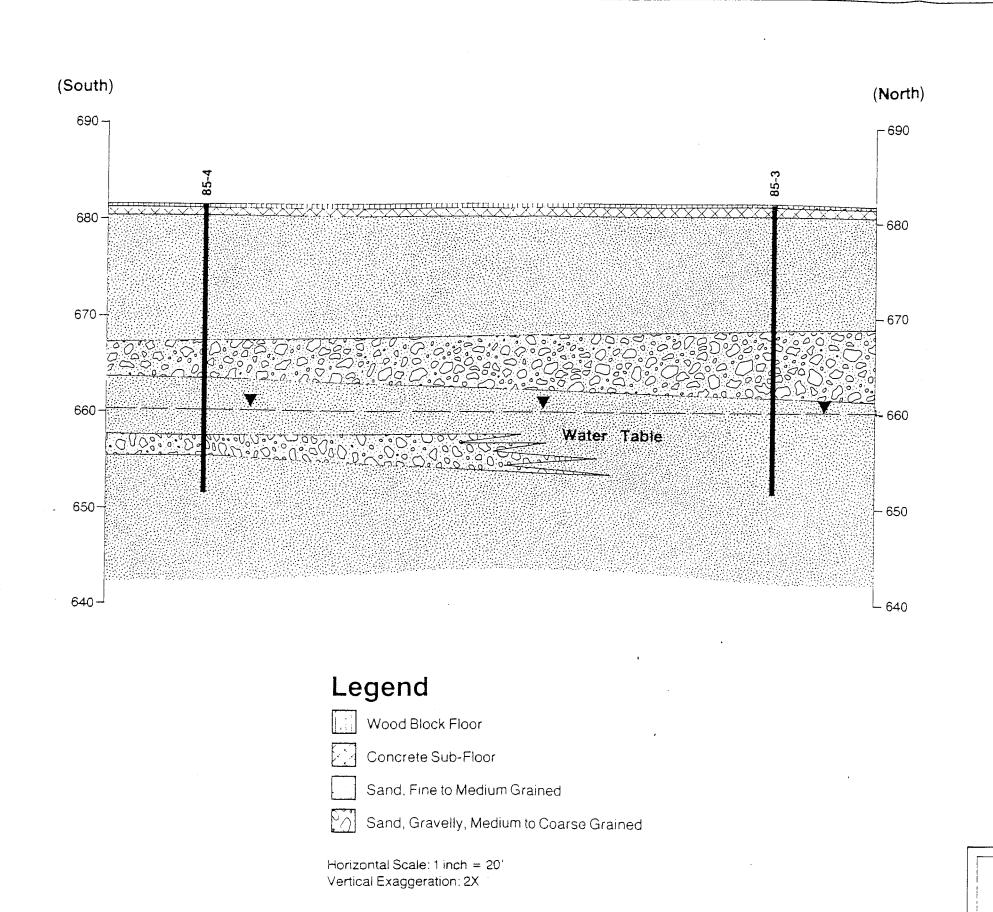
The borings designated 201 through 213 and 304 through 312 were drilled by Soil and Materials Engineers, Inc. in March and April, 1985 prior to the construction of the excavation at column A-15. The excavation was completed during June, 1985.

Geology:

The area occupied by the plant is underlaid by glacial outwash sediments consisting of sand and gravelly sand. Figure 3 shows the locations of cross sections A-A', B-B', and C-C' (Figures 4, 5, and 6) in the immediate area of Column A-15. Cross section C-C' (Figure 6) has the subsurface units dashed in the area of the excavation because part of boring 201 was removed during the construction of the excavation.

Monitoring wells 85-3, 85-4 and 85-5B, and boring 85-5A, are located inside the plant near the excavation. All of these wells penetrate a 0.3-foot wood block floor underlaid by a concrete floor varying in thickness from 0.8 foot





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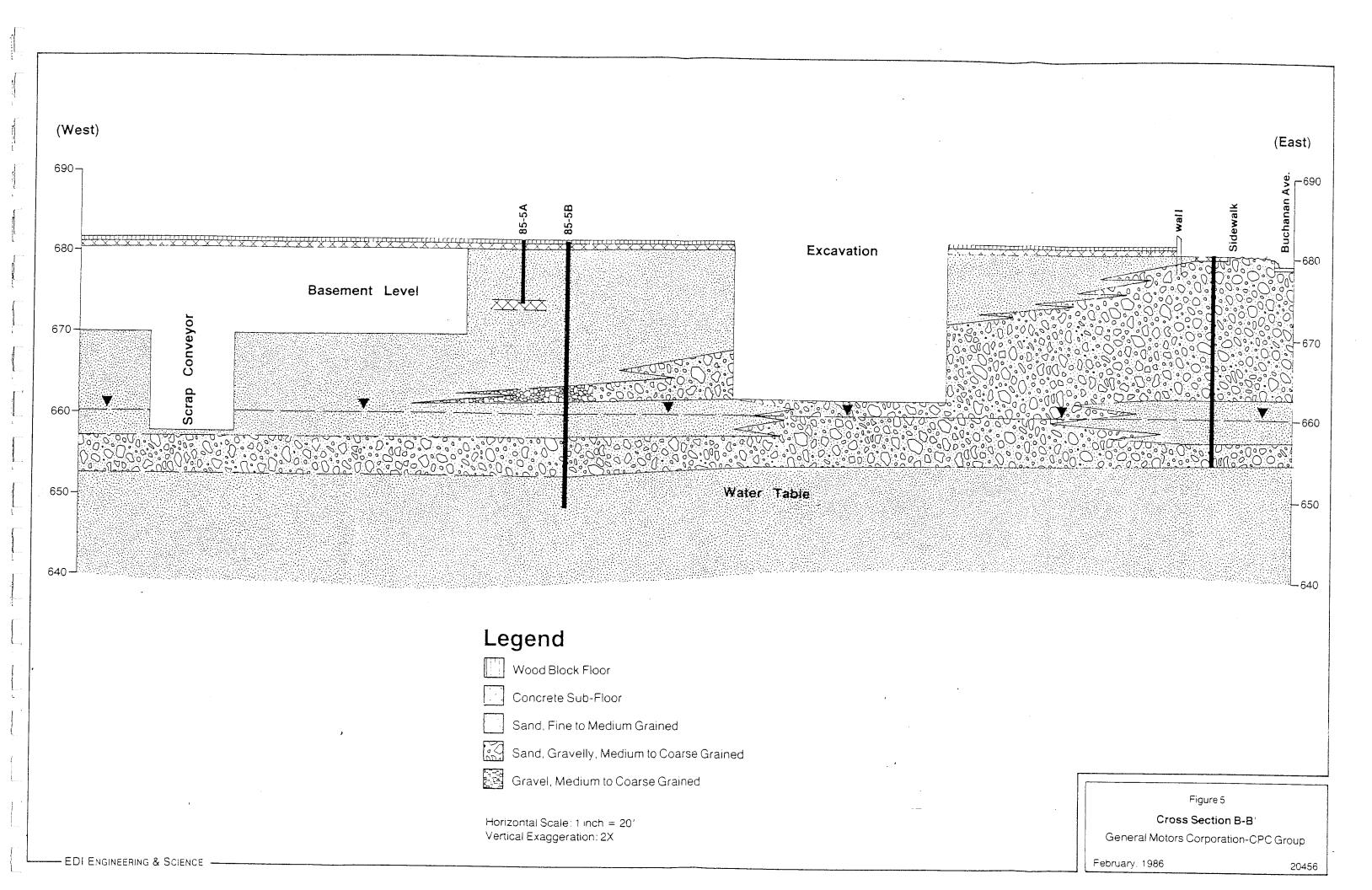
Figure 4

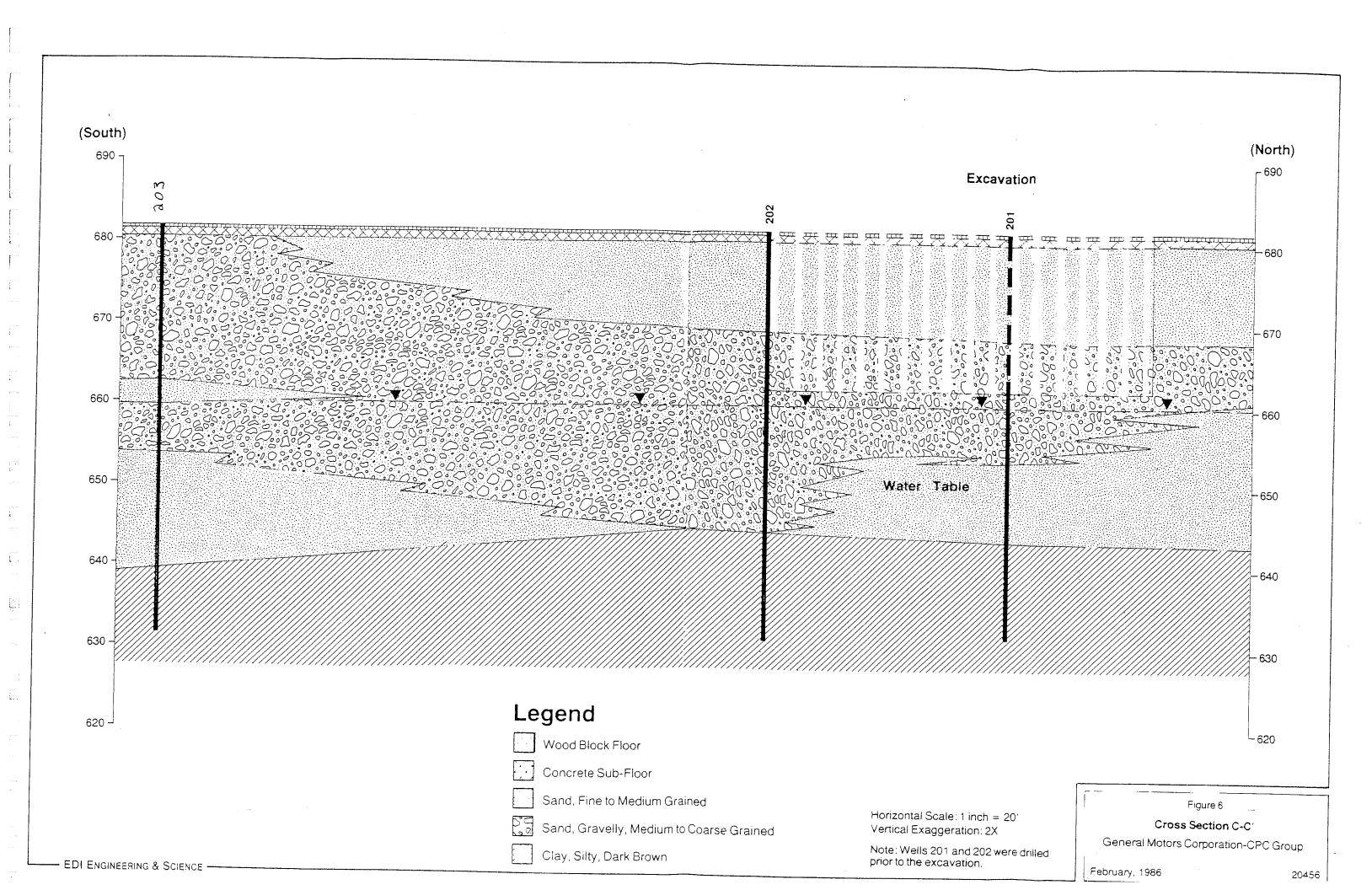
Cross Section A-A'

General Motors Corporation-CPC Group

February, 1986

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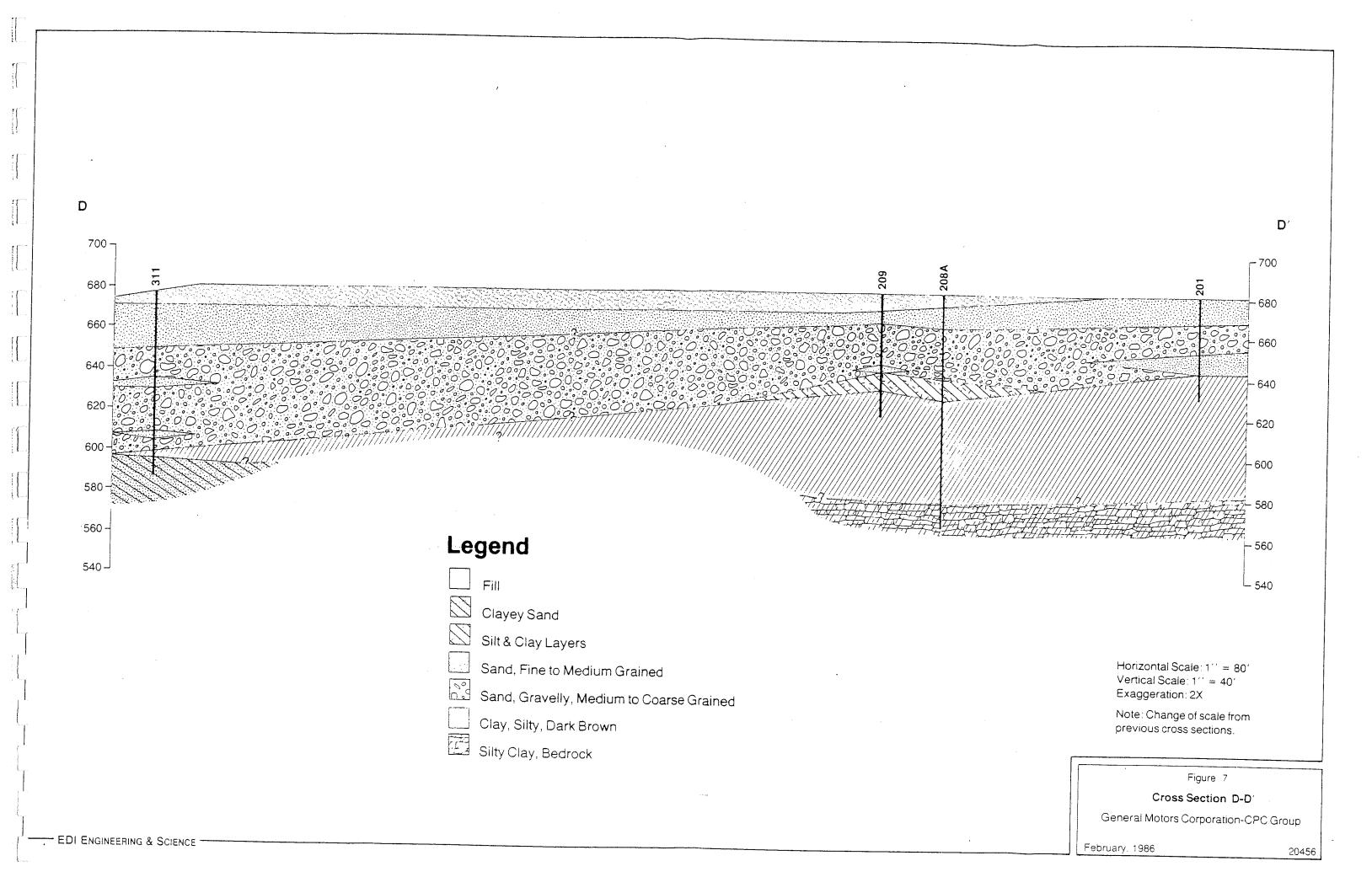
to I foot. Below the concrete floor is an upper fine-to-medium grained sand ranging in thickness from 11 to 17 feet, and this sand unit is continuous in the immediate area of the excavation.

The upper sand thins to the east and interfingers with a fine-to-coarse grained gravelly sand unit found extensively in well 85-6 (see cross section B-B' which is Figure 5). The fine-to-coarse grained gravelly sand unit is interbedded with fine-to-medium grained sand toward the bottom of the unit. The total thickness of the gravelly sand layer varies from 7 to 25 feet within and near the excavation.

Below the gravelly sand is a lower unit of fine-to-medium grained sand. Only boring 201 penetrated completely through the lower sand into the underlying dark brown silty clay. The lower sand unit found in boring 201 is 10 feet thick, as shown on cross section C-C' (Figure 6).

The SME borings provide information deeper in the ground than the wells. In the area of the excavation there appears to be a clay layer beneath the sand and gravel at approximately 40 feet. To the west, the sand and gravel thicken substantially as shown in cross section D-D' (Figure 7). Note the change of scale of cross section D-D' compared to the others. However, the vertical exaggeration is two times the same as the other cross sections. On the west side of the plant the clay is much deeper. The clay is of substantial thickness in boring 208. On the west side of the plant, the one boring which penetrated it only encountered three feet.

The sedimentary units of fine-to-medium grained sand and gravelly sand contain no clay lenses or stringers and would behave as one unit hydraulically down to the top of the silty clay. The clay appears to be thick enough to segregate the upper saturated zone from water below the east side of the plant. On the west side of the plant the interpretation is less clear. Additional deep borings and wells would be required to define the shape of the clay. A pump test might then be necessary to prove or disprove connections between the upper saturated zone and a deeper aquifer.



Groundwater Flow and Presence of Hydrocarbons:

A measurable hydrocarbon layer was found in monitoring wells 85-3, 85-4 and 85-5B. Table 1 shows the thickness of the hydrocarbon layer in three wells and the equivalent thickness of water. It was necessary to convert the thickness of the hydrocarbon layer to an equivalent thickness of water so that accurate water level elevations could be calculated. A density of 0.752 g/cm³ was used for the hydrocarbon layer to convert from oil to water. Mineral spirits has a density of 0.752 g/cm³, and this density was used because the sampling of the oil in the pit identified mineral spirits.

The thickest hydrocarbon layer was found in monitoring well 85-3 which is located at the north end of the excavation. Well 85-3 is located immediately adjacent to the large Verson cutting press #SE4-400-186-102. Thinner but measurable quantities of hydrocarbons were found in monitoring wells 85-4 and 85-5B, which are also located on the perimeter of the excavation.

A measurable hydrocarbon layer was not detected in wells 85-1, 85-2, 85-6, and 85-7. Monitoring well 85-6 is located immediately outside of the plant on the east side (Figure 2). This well is located upgradient of the excavation.

Water table elevations are shown on Table 2, and a water table contour map with the indicated directions of groundwater flow is shown in Figure 8. The water table contour map indicates that the principal direction of groundwater flow is toward the north and northwest. The gradient is 0.0032. Groundwater is moving toward Cole Drain and Plaster Creek, both of which are illustrated in Figure 1.

All of the wells were placed with the screen straddling the water table so in-situ permeability testing cannot be done on the wells. Based on the soil types, the permeability can be estimated to be between 2 X 10^{-5} m/sec and 2 X 10^{-4} m/sec, with an assumed average porosity of 25%. With the gradient of 0.0032, the groundwater velocity would range between 25 feet per year and 250 ft/yr.

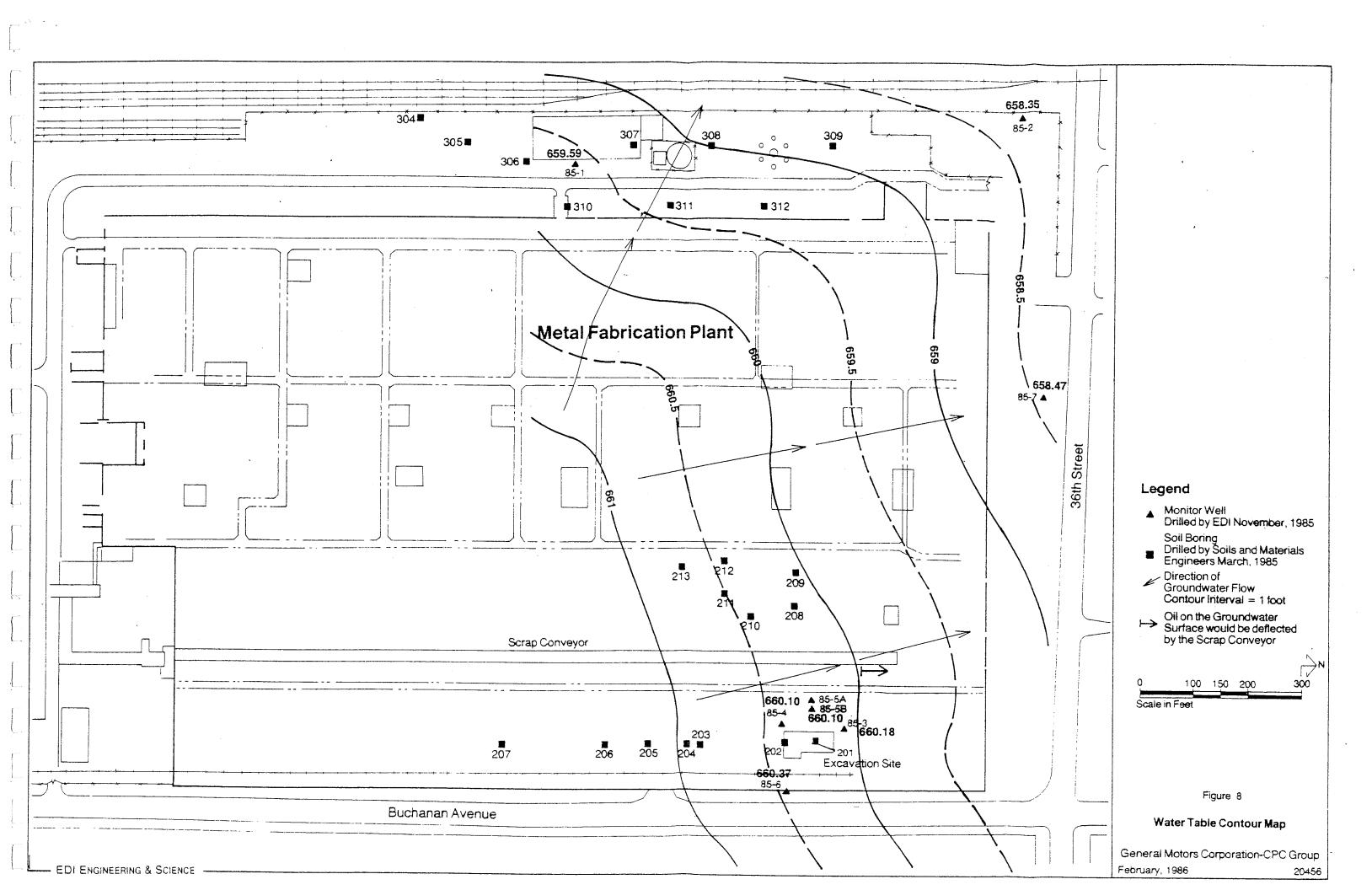


TABLE 1
THICKNESS OF HYDROCARBON LAYER
IN THE AREA OF THE EXCAVATION

WELL NUMBER	HYDROCARBON THICKNESS* (feet)	HYDROCARBON THICKNESS (inches)	EQUIVALENT WATER THICKNESS* (feet)
85-3	0.033	0.40	0.025
85-4	0.016	0.20	0.012
85-5B	0.008	0.10	0.006

TABLE 2

GROUNDWATER LEVELS AT THE GENERAL MOTORS - CPC METAL FABRICATION PLANT

December 6, 1985

WELL NUMBER	TOC ELEVATION (feet)	WATER LEVEL BELOW TOC* (feet)	WATER LEVEL ELEVATION (feet)
85-1	675.87	16.28	659.59
85-2	672.48	14.13	658.35
85-3	681.37	21.19	660.18
85-4	681.29	21.19	660.10
85-5B	681.33	21.23	660.10
.85-6	680.35	19.98	660.37
85-7	678.69	20.22	658.47
	~~~~~~~~~~~~~~~~~~		

*The water level below top of casing for the three wells with an oil layer is calculated as follows: Water level below TOC = actual observed water level below TOC less the equivalent water thickness for the hydrocarbon layer.

The metal scrap conveyor that is illustrated in Figures 5 and 8 runs through the entire length of the plant except for a small portion at the north end. In the area west of the excavation, the base of the scrap conveyor wall is approximately 2 feet below the water table with an elevation which is approximately 658 feet.

The direction of groundwater flow in the area of the scrap conveyor is toward the north-northwest. This suggests that if floatable hydrocarbons were present upgradient of the conveyor that they would not be trapped at the base of the conveyor wall. The conveyor would cause a perturbation of the flow of the groundwater at the surface and have the effect of diverting the floatables to the north until reaching the end of the conveyor system.

The lateral extent of the oil layer is estimated to be confined to the plant with floatables probably not going beyond the downgradient end of the scrap conveyor.

### <u>Groundwater Quality:</u>

Water samples that were collected from each of the seven monitoring wells were analyzed for volatile and base neutral organic compounds that are on the priority pollutant list. The results for the volatile compounds are shown in Table 3, and the results for the base neutral compounds are shown in Table 4. The complete analytical results for volatiles and base neutrals are shown in Appendices B and C.

All of the water samples had detectable quantities of volatile organic compounds. The samples from wells 85-4 and 85-5B, located near the excavation, had the largest number of volatile compounds. Both samples contained detectable amounts of 1,1-dichloroethane, tetrachloroethylene, 1,1,1-trichloroethane, and trichloroethylene.

Water samples from wells 85-1, 85-2, 85-5B, and 85-7 had detectable amounts of trans-1,2-dichloroethylene. The highest concentrations of this compound were

TABLE 3

RESULTS OF CHEMICAL ANALYSES

OF WATER SAMPLES

VOLATILE FRACTION*

(Concentrations in mg/1)

WELL	TRANS-1,2-DICHLORO- ETHYLENE	TRICHLORO- ETHYLENE	TOLUENE	1,1-DICHLORO- ETHANE	TETRACHLORO- ETHYLENE	1,1,1-TRICHLORO- ETHANE
85-1	0.012	··				
85-2	0.021	0.006		·		
85-3			0.003			
85-4		0.002		0.002	0.002	0.005
85-5B	0.012	0.004		0.006	0.002	0.003
85-6					0.004	
85-7	0.004	0.084				
DETECTIO LIMIT	N 0.002	0.002	0.001	0.002	0.002	0.002
				~		

^{*}The compounds shown here are those compounds in detectable concentrations from a scan of 28 volatile compounds.

TABLE 4

# RESULTS OF CHEMICAL ANALYSES OF WATER SAMPLES BASE NEUTRAL FRACTION

(Concentrations in mg/1)

WEILL	FLUORANTHENE	FLUORENE	NAPHTHALENE	PHENANTHRENE	PYRENE	BIS-(2-ETHYL HEXYL)- PHTHALATE	DI-N-BUTYL- PHTHALATE
85-3 ²		3.2	0.17	2.8	0.56		
85-4	0.004			0.010	0.003	0.002	0.007
85-5B		0.004		0.003	0.005		
DETECTION LIMIT	O.001	0.002	0.10	0.001	0.001	0.002	0.001

The compounds shown here are those compounds found in detectable concentrations from a scan of 44 base neutral compounds.

The detection limits for well 85-3 are 0.10 mg/l for fluoranthene, phenanthrene, and pyrene; and 0.20 mg/l for fluorene.

from wells 85-1, 85-2, and 85-5B; namely, 0.012 mg/1, 0.021 mg/1, and 0.012 mg/1, respectively.

Only toluene with a concentration of 0.003 mg/l was detected in the water sample from well 85-3. This well is located immediately downgradient of the excavation and has the thickest hydrocarbon layer (0.033 feet). A relatively high concentration of trichloroethylene (0.084 mg/l) was detected in the water sample from well 85-7.

Base neutral compounds were detected in water samples from wells 85-3, 85-4, and 85-5B (Table 4). Well 85-3 has relatively high concentrations of fluoranthene (0.46 mg/l), fluorene (3.2 mg/l), naphthalene (0.17 mg/l), phenanthrene (2.8 mg/l), and pyrene (0.56 mg/l). Lesser amounts of fluoranthene, phenanthrene and pyrene were detected in the samples from wells 85-4 and 85-5B.

#### CONCLUSIONS

Information obtained during the drilling of the seven monitoring wells and the previous borings indicates that the plant area is underlaid by a continuous sand and gravelly sand unit which is approximately 35 to 40 feet thick in the area of the excavation. The saturated thickness is 15 to 20 feet. To the west the unit thickens substantially downward.

Locally, groundwater flows to the north and northwest from the plant toward Cole Drain and Plaster Creek. The shallow saturated zone has a gently sloping gradient. The water table falls only two feet from the east wall of the building to the northwest corner of the plant.

A layer of hydrocarbons probably consisting mainly of mineral spirits was detected in the three wells on the perimeter of the excavation. The thickness of the hydrocarbon layer varies from 0.008 to 0.033 feet.

Only monitoring wells 85-3, 85-4 and 85-5B have detectable levels of base neutral compounds that are on the priority pollutant list. Well 85-3 has the highest concentrations of base neutrals with detectable levels of fluoranthene, fluorene, naphthalene, phenanthrene, and pyrene.

Because the oil in the soils is under the building, rainfall should not drive the oil down to the water table. Also, a significant portion of the oil-contaminated soil was removed in the excavation, reducing the amount of oil likely to reach the groundwater. Coupled with the limited thickness of the oil presently on the surface of the groundwater, the potential for significant movement of the oil is low. Although the conveyor foundations are deep enough to intersect the water levels, the flow direction is to the north-northwest. The foundation would divert the oil if it moves, but probably not act as a significant barrier.

A thick pad with slopes to a sump will be placed under new equipment in the

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area of the excavation. This will prevent spills or leakage from the new equipment from getting into the groundwater.

Volatile organic compounds appear in all of the monitoring wells, although the levels in some of the wells are at or near the detection limit. The wells near the excavation which contained oil showed minimal amounts of volatile compounds. Wells 85-1 and 85-2 showed levels of trans-1,2-dichloroethylene in the 10 to 20 ppb range. Well 85-7 had trichloroethylene (TCE) at 84 ppb. This well is downgradient of the plant based on the water levels of the seven wells. A source for the TCE is not known at present.

#### RECOMMENDATIONS

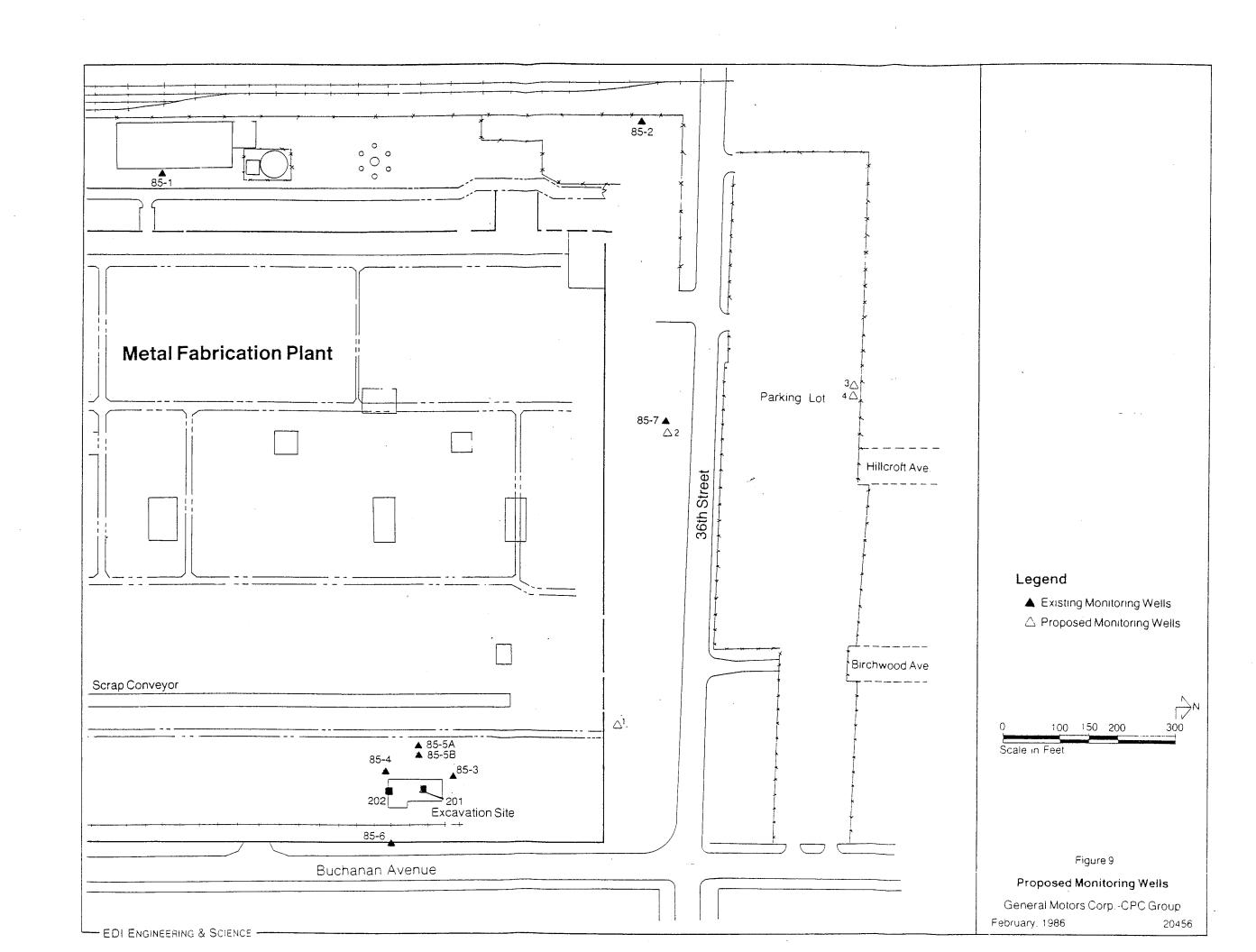
Water samples from the seven monitoring wells should be collected semi-annually. The samples from wells 85-3, 85-4, and 85-5B should be analyzed for volatiles and base neutrals; and wells 85-1, 85-2, 85-6 and 85-7 should be analyzed for volatiles only (using priority pollutant scans).

After one year, the monitoring should include only those compounds that were detectable and had significant concentrations during previous analyses.

It is recommended that four monitoring wells be drilled on the north side of the plant (Figure 9). One well should be drilled northwest of the excavation just north of the plant wall. The well should be set with the screen straddling the water table (for the detection of hydrocarbons). The water samples from this well should be analyzed for volatiles and base neutrals.

A second well should be drilled next to monitoring well 85-7. The screen should be placed near the bottom of the upper saturated zone for the detection of trichloroethylene (TCE). TCE is denser than water and can sink to the bottom of the sand unit as a separate phase.

It is recommended that a well cluster consisting of two wells be drilled on the north edge of the plant property downgradient of well 85-7 (Figure 8). One well should have its screen submerged just below the water table. A second well should have its screen placed near the bottom of the saturated zone. The water samples from both wells should be analyzed for volatiles using priority pollutant scans.



### APPENDIX A

CONSTRUCTION RECORDS FOR MONITORING WELLS AND BORINGS



Page:	of	85-1	
Well/Borin	ng No.:		
Client: .	General	Motors	<u>- СР</u> С
Project No	o.: 20456		
Permit No	l.:		
	11/26	1	1/25/00

## Well/Boring Log Sheet Permit No.: Date Started 11/25 inished 11/25/85

County	Township	Fraction	Section	T	R
KENT	CITY OF WYOMING	1/4 NW 1/4 NE 1/4	24	6N	12W

Contractor:  Address:  Equipment: (  Supervisor:  Drilling Meth Hollow	Dutton, M DME 45 D. Johns J. Venn	11	Screen:  Manufacturer: Johnson  Material: Stainless Stee!  Model: 960  Slot/Gauze: 10 Dia.: 2!!  Length: 5!  Depth Set: 15.5 To: 20.5!  Casing	LOCATION MAP	
Auger 8 Grouting/Sea Depth To 0 20. Developmen	S Split S  Matura  S Natura  and Be	erial i Soils inseal; at Sur-	Dia. Type Depth Set  211 Galv. 0 To 1.5.5'  —————————————————————————————————		
Water Level:	<u>16.28</u> Ft. a 0n: 12/6	Below: T <u>OC</u>	Well has flush-mounted sealed metal cap will locking cap. Top of casing is cemented in drive.		
(====)	( ·- · )		Remarks		
(FEET)	(FEET)		Remarks SAMPLE		
Thick-	Depth To Baco		Remarks  SAMPLE  Description  Depth		
Thick- ness 0.8	Depth To Saco	CONCRE	Remarks  SAMPLE  Description  TE DRIVE	3.55.0	
Thick- ness 0.8	Depth To Baco 0.8 1.8	SAND -	Remarks  SAMPLE Description  TE DRIVE fine to medium grained, brown	8.510	
Thick- ness 0.8 1.0 0.3	Depth To Saco 0.8 1.8 2.1	S AND - CON CRE	Remarks  SAMPLE Description  TE DRIVE fine to medium grained, brown TE		
Thick- ness 0.8	Depth To Baco 0.8 1.8	S AND - CON CRE	Remarks  SAMPLE Description  TE DRIVE fine to medium grained, brown	8.510	
Thick- ness 0.8 1.0 0.3	Depth To Saco 0.8 1.8 2.1	S AND - CON CRE	Remarks  SAMPLE Description  TE DRIVE fine to medium grained, brown TE	8.510 B.515	
Thick- ness 0.8 1.0 0.3	Depth To Saco 0.8 1.8 2.1	SAND - CONCRE SAND -	Remarks  SAMPLE Description  TE DRIVE fine to medium grained, brown TE fine to medium grained, brown; occasional traces of asphalt	8.510 B.515	
Thick- ness 0.8 1.0 0.3 6.9	Depth Ta Saca 0.8 1.8 2.1 9.0	SAND - CONCRE SAND -	Remarks  SAMPLE Description  TE DRIVE fine to medium grained, brown TE fine to medium grained, brown; occasional	8.510 B.515	
Thick- ness 0.8 1.0 0.3 6.9	Depth Ta Saca 0.8 1.8 2.1 9.0	SAND - CONCRE SAND -	Remarks  SAMPLE Description  TE DRIVE fine to medium grained, brown  TE fine to medium grained, brown; occasional traces of asphalt fine to coarse grained, gray, contains	8.510 B.515 18.520	
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Thick- ness 0.8 1.0 0.3 6.9	Depth To Saco 0.8 1.8 2.1 9.0	SAND - CONCRE SAND - SAND -	Remarks  SAMPLE Description  TE DRIVE fine to medium grained, brown  TE fine to medium grained, brown; occasional traces of asphalt fine to coarse grained, gray, contains	8.510 B.515 18.520	
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Page: Well/Bori			85-2		
Client:	Ğ	ene ral	Motors	_	CPC
Project N	ю.:	20456			
Permit No	o.:				

### Well / Boring Log Sheet Date Started 11/26 Finished 11/26/85

County	Township	Fraction	Section	Т	R
KENT	CITY OF WYOMING	NW ¹ / ₄ NW ¹ / ₄ NE ¹ / ₄	24	6N	12W

Contractor:	itearns [	<u>)rilling</u>	Screen: Location Sketch :	SEE LOC	ATION M.	AP
Address: _[	Outton, N	11	Manufacturer: Johnson			
			Material: Stainless Steel			
	ME 45		Model:960 Slot/Gauze:10Dia.:2!!			
Supervisor:	D. Johns J. Venn	ion	Length:5 !			
	J. Venn		Depth Set: 13.5 To: 18.5			
Drilling Meth Hollow	Stem	0-20'	Casing			
Auger 8	Split S	ipoons	Dia. Type Depth Set  211 Galv. 0 To 13.5			
Grouting/Sea	ii		211 Galv. 0 To 13.5			
Depth To 0 18		terial al Soils enseal:	Elevation Casing: 672.5 1 Ground:			
<del></del>	face		Ref. Pt.:			
		lowered	Remarks (include here, other data available)			
	:: three		Wall has flush-roughed souled metal sos	i+b on	alacad	
			Well has flush-mounted sealed metal cap locking cap. Top of casing is cemented			
Water Level:			parking lot.	THEO BOD	iia i t	
Measured C	11	17.0.3				
				•		
1			·		<del></del>	
			<del></del>			
(FEET)	(FEET)		Remarks			
(FEET) Thick-	(FEET)		Remarks SAMPLE			
Thick-			Remarks			
Thick-	Depth	ASPHAI	Remarks SAMPLE	В.5	515.0	
Thick-	Depth To Base		Remarks  SAMPLE  Description  DEPTH		5 5.0	
Thick- ness 0.3	Depth To Base 0.3	ROAD (	Remarks  SAMPLE  Description  DEPTH  LT PARKING LOT  GRAVEL	8. 9		
Thick- ness 0.3 0.7	Depth To Base	ROAD (	Remarks  SAMPLE  Description  DEPTH  LT PARKING LOT	8. s :k 13 .	5 10 0	
Thick- ness 0.3 0.7 1.5	Depth To Base 0.3 1.0 2.5	ROAD (	Remarks  SAMPLE  Description  DEPTH  LT PARKING LOT  GRAVEL  gravelly, fine to medium grained, blace (with cinders)	8. 9 2k 13 .9 18 .9	5 10 0	
Thick- ness 0.3 0.7	Depth To Base 0.3 1.0 2.5 4.8	ROAD ( SAND - SAND -	Remarks  SAMPLE  Description  DEPTH  LT PARKING LOT  GRAVEL  - gravelly, fine to medium grained, blac  (with cinders)  - gravelly, fine to medium grained, brown	8. 9 2k 13 .9 18 .9	5 10 0	
Thick- ness 0.3 0.7 1.5	Depth To Base 0.3 1.0 2.5 4.8 7.0	ROAD ( SAND - SAND - CLAY -	Remarks  SAMPLE  Description  DEPTH  LT PARKING LOT  GRAVEL  gravelly, fine to medium grained, blace (with cinders)	8. 9 2k 13 .9 18 .9	5 10 0	
Thick- ness 0.3 0.7 1.5 2.3 2.2 0.5	Depth To Base 0.3 1.0 2.5 4.8 7.0 7.5	ROAD ( SAND - SAND - CLAY - PEAT	Remarks  SAMPLE  Description  LT PARKING LOT  GRAVEL  - gravelly, fine to medium grained, blac  (with cinders)  - gravelly, fine to medium grained, brown  - sandy, dark brown	8. 9 2k 13 .9 18 .9	5 10 0	
Thick- ness 0.3 0.7 1.5 2.3 2.2 0.5 1.5	Depth To Base  0.3  1.0  2.5  4.8  7.0  7.5  9.0	ROAD ( SAND - SAND - CLAY - PEAT SILT -	Remarks  SAMPLE  Description  DEPTH  LT PARKING LOT  GRAVEL  - gravelly, fine to medium grained, blac  (with cinders)  - gravelly, fine to medium grained, brown  - sandy, dark brown	8. 9 2k 13 .9 18 .9	5 10 0	
Thick- ness 0.3 0.7 1.5 2.3 2.2 0.5 1.5 4.0	Depth To Base 0.3 1.0 2.5 4.8 7.0 7.5 9.0	ROAD ( SAND - SAND - CLAY - PEAT SILT - SAND -	Remarks  SAMPLE Description  DEPTH  LT PARKING LOT  GRAVEL  - gravelly, fine to medium grained, blac  (with cinders)  - gravelly, fine to medium grained, brown  - sandy, dark brown  - gray  - silty, fine to medium grained, brown	8. 5 :k 13.4 18.	5 10 0	
Thick- ness 0.3 0.7 1.5 2.3 2.2 0.5 1.5	Depth To Base  0.3  1.0  2.5  4.8  7.0  7.5  9.0	ROAD ( SAND - SAND - CLAY - PEAT SILT -	Remarks  SAMPLE Description  DEPTH  LT PARKING LOT  GRAVEL  - gravelly, fine to medium grained, blac  (with cinders)  - gravelly, fine to medium grained, brown  - sandy, dark brown  - gray  - silty, fine to medium grained, brown	8. 5 :k 13.4 18.	5 10 0	
Thick- ness 0.3 0.7 1.5 2.3 2.2 0.5 1.5 4.0	Depth To Base 0.3 1.0 2.5 4.8 7.0 7.5 9.0	SAND -  SAND -  CLAY -  PEAT  SILT -  SAND -	Remarks  SAMPLE Description  DEPTH  LT PARKING LOT  GRAVEL  - gravelly, fine to medium grained, blac  (with cinders)  - gravelly, fine to medium grained, brown  - sandy, dark brown  - gray  - silty, fine to medium grained, brown	8. 5 :k 13.4 18.	5 10 0	
Thick- ness 0.3 0.7 1.5 2.3 2.2 0.5 1.5 4.0	Depth To Base 0.3 1.0 2.5 4.8 7.0 7.5 9.0	SAND -  SAND -  CLAY -  PEAT  SILT -  SAND -	Remarks  SAMPLE Description  DEPTH  LT PARKING LOT  GRAVEL  - gravelly, fine to medium grained, blac  (with cinders)  - gravelly, fine to medium grained, brown  - sandy, dark brown  - gray  - silty, fine to medium grained, brown	8. 5 :k 13.4 18.	5 10 0	
Thick- ness 0.3 0.7 1.5 2.3 2.2 0.5 1.5 4.0	Depth To Base 0.3 1.0 2.5 4.8 7.0 7.5 9.0	SAND -  SAND -  CLAY -  PEAT  SILT -  SAND -	Remarks  SAMPLE Description  DEPTH  LT PARKING LOT  GRAVEL  - gravelly, fine to medium grained, blac  (with cinders)  - gravelly, fine to medium grained, brown  - sandy, dark brown  - gray  - silty, fine to medium grained, brown	8. 5 :k 13.4 18.	5 10 0	
Thick- ness 0.3 0.7 1.5 2.3 2.2 0.5 1.5 4.0	Depth To Base 0.3 1.0 2.5 4.8 7.0 7.5 9.0	SAND -  SAND -  CLAY -  PEAT  SILT -  SAND -	Remarks  SAMPLE Description  DEPTH  LT PARKING LOT  GRAVEL  - gravelly, fine to medium grained, blac  (with cinders)  - gravelly, fine to medium grained, brown  - sandy, dark brown  - gray  - silty, fine to medium grained, brown	8. 5 :k 13.4 18.	5 10 0	
Thick- ness 0.3 0.7 1.5 2.3 2.2 0.5 1.5 4.0	Depth To Base 0.3 1.0 2.5 4.8 7.0 7.5 9.0	SAND -  SAND -  CLAY -  PEAT  SILT -  SAND -	Remarks  SAMPLE Description  DEPTH  LT PARKING LOT  GRAVEL  - gravelly, fine to medium grained, blac  (with cinders)  - gravelly, fine to medium grained, brown  - sandy, dark brown  - gray  - silty, fine to medium grained, brown	8. 5 :k 13.4 18.	5 10 0	



Page:	ot	85-3	
Well/Borin	ng No.: ——		
Client:	General	Motors	<u>- CP</u> C
Project N	o.: 20456	****	
Permit No	o.:	·-·	
Onto Stor	+nr 11/26 c	idiobod 11	126 185

# Well / Boring Log Sheet Date Started 11/26 Finished 11/26/85

County	Township	Fraction	Section	Т	R
KENT	CITY OF WYOMING	NE 1/4 NW 1/4 NE 1/4	24	6N	12W

Contractor:	tearns D		Screen:	Location Sketch : S	EE LOCATION MAI	P
Address: _[	Outton, M	<u> </u>	Manufacturer: Johnson  Material: Stainless Steel	•		
Equipment: (	ME LE		Model: 960			
, ,						
Supervisor:	D. Johnso	on	Slot/Gauze: 10 Dia.: 211 Length: 10	•		
	J . V C !!!!		Depth Set: 20.3 To: 30.3'			
Hollow	od(s) Stem	0-30.01	Casing			
	Split Sp		Dia. Type Depth Set			
Grouting/Sea	ni		211 Galv0.3 To20.3			
Depth To	Mate	erial . ,	Elevation			
<u>-0.3 30</u>	. 3' Natura		Casing: 681.41			
	and Ber	at Sur-	Ground:			
	face t: Bailer	ar sur	Ref. Pt.:	•		
			Remarks (include here, other data available)			
	:; three o					_
	21.19 Ft. B		Well has flush-mounted locking cap. Top of cap.	sealed metal cap asing is cemented	with enclosed	-
	n: <u>12/6</u>		floor	3 mg 13 cemented	THEO CONCIECE	<del>-</del>
Measured O	11. <u>12/31</u>					_
			,			
1						
			Ρο	marks		
(FEET)	(FEET)		Re	marks		
(FEET)	(FEET)  Depth		Re	SAMPLE		
			Re Description			
Thick-	Depth	WOOD B		SAMPLE	B.515.0	
Thick-	Depth To Bass		Description	SAMPLE	3.515.0 8.5 10.0	
Thick- ness 0.3	Depth To Base	CONCRE	<b>Description</b> LOCK FLOOR	S AMPLE DEPTH		
Thick- ness 0.3 0.8	Depth To Bass 0.3	CONCRE SAND -	<b>Description</b> LOCK FLOOR TE FLOOR fine to medium grained, b	SAMPLE DEPTH	8.5 10.0	
Thick- necs 0.3 0.8 2.9	Depth To Base 0.3 1.1 4.0 13.0	CONCRE SAND - SAND -	Description LOCK FLOOR TE FLOOR fine to medium grained, befine grained, light brown	SAMPLE DEPTH	8.5 10.0 135 15.0	
Thick- ness 0.3 0.8 2.9 9.0 2.0	Depth To Ease 0.3 1.1 4.0 13.0 15.0	CONCRE SAND - SAND - GRAVEL	Description  LOCK FLOOR  TE FLOOR  fine to medium grained, be a second of the second o	SAMPLE DEPTH Drown Drown	8.5 10.0 13.5 15.0 18.5 20.0	
Thick- necs 0.3 0.8 2.9 9.0	Depth To Base 0.3 1.1 4.0 13.0	CONCRE SAND - SAND - GRAVEL	Description  LOCK FLOOR  TE FLOOR  fine to medium grained, be a fine grained, light brown a medium to coarse grained gravelly, coarse grained	SAMPLE DEPTH  prown a ed , with oily	8.5 10.0 13.5 15.0 18.5 20.0 23.5 25.0	
Thick- ness 0.3 0.8 2.9 9.0 2.0	Depth To Ease 0.3 1.1 4.0 13.0 15.0	CONCRE SAND - SAND - GRAVEL SAND -	Description  LOCK FLOOR  TE FLOOR  fine to medium grained, be the grained, light brown to coarse grained gravelly, coarse grained appearance on surface of	SAMPLE DEPTH  orown  ed , with oily grains; slight o	8.5 10.0 13.5 15.0 18.5 20.0 23.5 25.0	
Thick- necs 0.3 0.8 2.9 9.0 2.0 5.0	Depth To Base 0.3 1.1 4.0 13.0 15.0 20.0	CONCRE SAND - SAND - GRAVEL SAND -	Description  LOCK FLOOR  TE FLOOR  fine to medium grained, to the grained, light brown to medium to coarse grained appearance on surface of silty, very fine grained	SAMPLE DEPTH  orown  ded , with oily grains; slight o , traces of	8.5 10.0 13.5 15.0 18.5 20.0 23.5 25.0	
Thick- necs 0.3 0.8 2.9 9.0 2.0 5.0	Depth To Base 0.3 1.1 4.0 13.0 15.0 20.0	CONCRE SAND - SAND - GRAVEL SAND -	Description  LOCK FLOOR  TE FLOOR  fine to medium grained, be the grained, light brown to coarse grained gravelly, coarse grained appearance on surface of	SAMPLE DEPTH  orown  ded , with oily grains; slight o , traces of	8.5 10.0 13.5 15.0 18.5 20.0 23.5 25.0	
Thick- necs 0.3 0.8 2.9 9.0 2.0 5.0	Depth To Base 0.3 1.1 4.0 13.0 15.0 20.0	CONCRE SAND - SAND - GRAVEL SAND -	Description  LOCK FLOOR  TE FLOOR  fine to medium grained, to the grained, light brown to medium to coarse grained appearance on surface of silty, very fine grained	SAMPLE DEPTH  orown  ded , with oily grains; slight o , traces of	8.5 10.0 13.5 15.0 18.5 20.0 23.5 25.0	
Thick- necs 0.3 0.8 2.9 9.0 2.0 5.0	Depth To Base  0.3  1.1  4.0  13.0  15.0  20.0	CONCRE SAND - SAND - GRAVEL SAND -	Description  LOCK FLOOR  TE FLOOR  fine to medium grained, to the grained, light brown to medium to coarse grained appearance on surface of silty, very fine grained	SAMPLE DEPTH  orown  ded , with oily grains; slight o , traces of	8.5 10.0 13.5 15.0 18.5 20.0 23.5 25.0	
Thick- necs 0.3 0.8 2.9 9.0 2.0 5.0	Depth To Base 0.3 1.1 4.0 13.0 15.0 20.0	CONCRE SAND - SAND - GRAVEL SAND -	Description  LOCK FLOOR  TE FLOOR  fine to medium grained, to the grained, light brown to medium to coarse grained appearance on surface of silty, very fine grained	SAMPLE DEPTH  orown  ded , with oily grains; slight o , traces of	8.5 10.0 13.5 15.0 18.5 20.0 23.5 25.0	
Thick- necs 0.3 0.8 2.9 9.0 2.0 5.0	Depth To Base  0.3  1.1  4.0  13.0  15.0  20.0	CONCRE SAND - SAND - GRAVEL SAND -	Description  LOCK FLOOR  TE FLOOR  fine to medium grained, to the grained, light brown to medium to coarse grained appearance on surface of silty, very fine grained	SAMPLE DEPTH  orown  ded , with oily grains; slight o , traces of	8.5 10.0 13.5 15.0 18.5 20.0 23.5 25.0	
Thick- necs 0.3 0.8 2.9 9.0 2.0 5.0	Depth To Base  0.3  1.1  4.0  13.0  15.0  20.0	CONCRE SAND - SAND - GRAVEL SAND -	Description  LOCK FLOOR  TE FLOOR  fine to medium grained, to the grained, light brown to medium to coarse grained appearance on surface of silty, very fine grained	SAMPLE DEPTH  orown  ded , with oily grains; slight o , traces of	8.5 10.0 135 15.0 18.5 20.0 235 25.0	



Screen:

Contractor: Stearns Drilling Address: Dutton, MI

Page:of Well/Boring No.:	85-4
Client: General	Motors - CPC
Project No.: 20456	
Permit No.:	
Date Started 11/26 F	inished $11/26/85$

Location Sketch : SEE LOCATION MAP

### Well / Boring Log Sheet

County	Township	Fraction	Section	T	R
KENI	CITY OF WYOMING	NE 1/4 NW 1/4 NE 1/4	24	6N	12W

Contractor:			Screen. Location Ski	31C1 . 3	200	7117	J11	1171
Address: _	Dutton, M	1	Manufacturer: Johnson					
Equipment:	CME /LE		Material: Stainless Steel  Model: 960					
equipment:	CHE 45	<del></del>	SlovGauze: 10 Dia.: 2"					
Supervisor:	D. Johns J. Venn	on	Length: 10'					entan.
Drilling Meth		Depth	Depth Set: 20.7' To: 30.7'					
Hollow	Stem	0-30	Casing					
	Split S		Dia. Type Depth Set					
Grouting/Sea			211 Galv0.3 To 20.7'					
Depth To	Mate	erial						
<b>-</b> 0.3 30	<u>.7' Natura</u>	<u>l Soils</u>	Elevation Casing: 681.3					
· · · · · · · · · · · · · · · · · · ·		nseal;	Casing: 681.3' Ground:					
	<u>Cement</u> Face	at Sur-	Ref. Pt.:					
	t: <u>Bailer</u>		Remarks (include here, other data available)					
	e; three		Herria va Impinos nela, otner data avaliable:					
yo lume:	removed	· · · · · · · · · · · · · · · · · · ·	Well has flush-mounted sealed m					
	21.19 Ft. B		locking cap. Top of casing is	cemented	<u>into</u>	<u>cor</u>	1016	<u>ete</u>
Measured C	n: <u>12/6</u>	/85	floor.					
					<del></del> .			
				***				
			· · · · · · · · · · · · · · · · · · ·		· · · · ·			
. (====)	( == == )		Remarks					٦
(FEET)	(FEET)		<u></u>	<u></u>			7	
Thick-	Depth			MPLE		7		
ness	To Base		<u>Description</u> Ut	PTH		<u> </u>	<u> </u>	
0.3	0.3	WOOD B	LOCK FLOOR			5.0		
0.8	1.1	CON CRE	TE FLOOR			10.	1	
4.9	6.0	SAND -	fine to medium grained, brown		13.	15.	.0	
3.5	9.5	SAND -	fine grained, light brown		18.	20.	.0	
4.5	14.0		fine to medium grained, brown		23.	25.	0	
4.0	18.0		gravelly, medium to coarse grained	, brown,	28.4	30.	0	
	i	<del></del>	slight odor		1			
6.0	24.0	SAND -	very fine grained, light gray, odo		_	†	$\vdash$	1-1-
2.0	26.0		gravelly, medium to coarse grained			-	<del> </del>	
4.0						+-	-	
4.0	30.0	SANU -	fine to medium, brown, becoming grat base	averry		-	┼─	+ +
	<del>.</del>		at base			┼	<del>                                     </del>	
	1					ــــ	<u> </u>	<del>                                     </del>
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County KENT

Page: Well/Bor	ina i	ot	85-5A		
Client:	G	eneral	Motors	_	CPC
Project !	٧o.:	20456			
Manusca A	ı				

6N

12W

24

### Well / Boring Log Sheet

NE1/4 NW 1/4

Date Started 11/26 Finished 11/26/85 Township CITY OF WYOMING Fraction Section NE 1/4

					•
Contractor:	Stearns Dr	rilling	Screen:	Location Sketch : SEI	E LOCATION MAP
Address:	Outton, MI		Manufacturer:		
			Material:		
Equipment: (	CME 45		Model:		
			Slot/Gauze:Dia.:	No. 564	
Supervisor:	D. Johnso J. Venn	on	Length:	en e	
Drilling Meth	J. Venn od(s)	Death	Depth Set:To:		
Hollow	Stem	0-7.7'	Casing		
	Split Sp		Dia. Type Depth Set		
-			To		
Grouting/Sea Depth To	Mate Mate	امند	To		
Debiii 10	lud=t+	riai .	Elevation		
			Casing:		
			Ground:		
			Ref. Pt.:	•	
Developmen	t:		Remarks (include here, other data available)		
		<del></del>	Auger hit concrete with re		
	Ft. 34				
Measured C	)n:		abandon well and move over	r and drill 85-58	
	······································	<del></del>			
			,		
			Ren	narks ———	
(FEET)	(FEET)				
Thick-	Depth			SAMPLE	
noce	To Base		Description	DEPTH	
0.3	0.3	WOOD	BLOCK FLOOR		3.55.0
1.0	1.3		ETE FLOOR		<del></del>
6.2	!				
	7.5		gravelly, fine to medium o	grained, brown	
0.2	7.7	CONCR	TE - sub-floor with rebar		
				<del></del>	
	1			•	: :
	i				<del></del>



Screen:

Manufacturer: Johnson

Material: Stainless Steel

Model: 960

Contractor: Stearns Drilling Address: Dutton, MI

Equipment: CME 45

Page: of 85-58

Well/Boring No.:
Client: General Motors - CPC

Project No.: 20456

Permit No.:
Date Started 12/2 Finished 12/2/85

Location Sketch : SEE LOCATION MAP

### Well/Boring Log Sheet

County	Township	Fraction	Section	Т	8
KENT	CITY OF WYOMING	NE 1/4 NW 1/4 NE 1/4	24	6N	12W

			Slot/Gauze: 10 Dia.: 211	100		
Supervisor:	D. Johns	on	Length:			
Drilling Meth	J. Venn	Denth	Depth Set: 21.9 To: 31.91			
Hollow	<b>od(s)</b> Stem	0-33'	Casing			
Auger 8	. Split S	poons	Dia. Type Depth Set			
Grouting/Sea	ai .		211 Galv0.3 To 21.9	The second secon		
Donth To	Mat	erial	To			
<u>-0.3 31.</u>	9' <u>Natura</u>	1 Soils	Casing: 681.3'			
		nseal;	Ground:			
	<u>Lement</u> face	at Sur-	Ref. Pt.:			
Developmen	face t: Bailer	lowered	Remarks (include here, other data available)			
	: three		`			
	removed		Well has flush-mounted seals			
	21.23 Ft. E		locking cap. Top of casing floor. This well was drille	<u>is cemented in</u>	fo concrete 5-54 was	
Measured C	n: <u>12/6</u>	/85	plugged and abandoned.			
			bragged gird dodrigotica.			
		·	,			
			D a see a silv			
(FEET)	(FEET)		Remark	S		
Thick-	Depth			SAMPLE		
noos	To Base		Description	DEPTH		
0.3	0.3	WOOD B	LOCK FLOOR		3.55.0	_
0.8	1.1		TE FLOOR		8.5 10.0	
11.9	13.0		fine to medium grained, brown	7	13. 5 15.0	
5.0	18.0		fine to medium grained, dark		18.5 20 0	_
			gravel and pebbles		23.525.0	-
1.8	19.8	GRAVEL	- with pebbles, brown to whi	te	28.530.0	
4.7	24.5		· fine grained, tan to brown			
4.7	29.2		gravelly, coarse grained, bro	own: arades to		_
4./	29.2	2 AND	gravely, coarse grained, bro	JWII, GIAGES EO		
0.8	30.0	SAND -	fine grained, brown to tan, r	ao odor		_
0.0	, ,0.0	3 AND	Time grained, brown to tan, i	10 0001		_
	:					
	1					
		i				
	:					
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				<u>-</u>		
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	i					_



Contractor: Stearns Drilling
Address: Dutton, MI

Equipment: CME 45

Page:0 Well/Boring N		85-6				
Client: Ge	neral	Moto:	<u>- s</u>	-	СP	С
Project No.:	20456	<u></u>				
Permit No.:		···				_
Date Started	11/27=	nished	11	/2	7/8	3=

Location Sketch: SEE LOCATION MAP

### Well / Boring Log Sheet

County	Township	Fraction	Section	T	R
KENI	CITY OF WYOMING	NE 1/4 NW 1/4 NE 1/4	24	6N	12W

Manufacturer: Johnson
Material: Stainless Steel

960

Drilling Meth Hollow Auger & Grouting/Sea Depth To 24  Developmen on rope volumes Water Level:	Split S  al  Ma  5'Natura  and Be  Cement	Depth 0-25.5' Spoons terial al Soils enseal; at Sur- lowered casing	Length: 5' Depth Set: 19.5 To: 24.5'  Casing Dia. Type Depth Set 2'' Galv. 0 To 19.5' To  Elevation Casing: 680.4' Ground: Ref. Pt.:  Remarks (include here, other data available)  Well has flush-mounted sealed locking cap. Top of casing is idewalk.			
(FEET) Thick-	(FEET) Depth		, Remarks Description	S AMPLE DEPTH		
0.3	0.3	CON CRE	TE SIDEWALK	······································	3.55.a	
3.7	4.0		gravelly, fine to medium graine	d, brown	8.510.0	
3.0	7.0	SAND -	gravelly, medium to coarse grai	ned, brown	13,515.0	
6.0	13.0	SAND -	gravelly, fine to medium graine	d, light brow	_{/n} 18.520.0	
5.0	18.0	SAND _	gravelly, medium to coarse grai	ned, brown	23.525.0	<u> </u>
4.0	22.0	SAND -	silty, fine grained, brown			
2.0	24.0		fine to coarse grained, brown			
1.5	25.5	SAND -	gravelly, medium to coarse grai	ned, brown		
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				<del> </del>		
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	,	: 			<del>                                     </del>	<del></del>
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Page:	ot	ral Motors - CPC	
Well/Borin	ig No.:		
Client: _	<u>General</u>	Motors	<u>- CP</u> C
Project No	o.: 20456		
Permit No	u:		
_	.11/27	1.1	/17/00

## Well / Boring Log Sheet Permit No.: Oate Started 11/27 Finished 11/27/85

County	Township	Fraction	Section	T	R
KENT	CITY OF WYOMING	NE 1/4 NW 1/4 NE 1/4	24	6N	12W

Contractor: Stearns Drilling Address: Dutton, MI	Screen: Location Sketch : SEE LOCATION MAP  Manufacturer: Johnson
Equipment: CME 45	Material: Stainless Steel  Model: 960
Supervisor: D. Johnson J. Venn	Slot/Gauze:10Dia.: _2' !  Length:5
Drilling Method(s)  Hollow Stem 0-25'  Auger & Split Spoons	Casing Dia. Type Depth Set
Grouting/Seal	2" Galy. 0 To 20 6"
Depth To Material Soils and Benseal;  Cement at Surface Bailer lowered on rope; three casing	Elevation Casing: 678.7' Ground:
volumes removed.	Woll has flush-roughed souled matel and with a start
Water Level: 20.22 Ft. Below: T <u>0C</u> Measured On: 12/6/85	Well has flush-mounted sealed metal cap with enclosed locking cap. Top of casing is cemented into area of loose soil surrounding well.
(FEET) (FEET)	Remarks

h .	(FEET)  Depth To Base	Remarks  Description	SAMPLE DEPTH				
0.2	<del></del>			L ==		-	
	0.2	WOOD CHIPS		3.55.	<u> </u>		
5.8	6.0	SAND - fine to medium grained, brown		8. 5 10			
14.0	20.0	SAND - fine to coarse grained, brown		13.5 1 5	.0		
5.0	25.0	SAND - fine grained, light brown		18.520	.b		
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			<del></del>		-		
						<u>                                      </u>	<del></del>
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OWN	_	11	MOTORS	CORPORATION-CPC GROUP	ARCHITECT / E ALBERT			ATES	INC			
LOC.	ATION				PROJECT NAM	E		<del></del>	<del></del>			
GF	RAND	RA T	PIDS,	MICHIGAN	PLANT M	ODERN	VI ZA I LU	N PROC				<del></del>
SAMPLE NUMBER	SAMPLE TYPE	SIO	OEPTH IN FEET	DESCRIPTION OF MATE	ERIAL	UNIT DRY WT. LBS / FT ²	* 00 1	URAL W ATTERSE ONFINED	PENETRA ATER CI RG LIM COMPE HAND P	EESSIVE ENETROM CALE 3	PLN STRENGT	5 tsf
		$\left\{ \cdot \right\}$		SURFACE ELEVATION  Oriller reported 3" of	Wood	<del> </del>	● 1 1	0 2	20	30	40	50 %,N
			- - - 10 -	Driller reported 3" of Blocks over 15" of Coloriller reported Fine Scalls' thick layer of foodrage sand & gravel at Dark Brown at 4.5'	and with ine to 4.5'- nging to							
1	SS			Fine to Coarse Sand-Trad Gravel-Moist-Light Brown		(14)		⊗				
2	SS		20	Fine to Coarse Sand-Trac Gravel-Wet-Brown-Dense (Chemical odor noted in	ce Silt & (SP)	3W )					8	
	SS			Fine to Coarse Sand & Gi to Some Silt-Wet-Brown-I		3				8		
	SS SS		- 30 <del>-</del>	Silty Fine Sand-Wet-Ligh Dense (SM)	nt Brown-			***		8		
7.	SS SS		<u>40</u> -	Silty Clay-Trace Sand-Da Stiff to Hard (CL)	ark Brown-					8	*	
, a	77		<del>- 50 -</del>	END OF BORING	<u> </u>			· · · · · · ·		Ť		
				30' of hollow stem auge *Drilling water was used Boring backfilled with	d below 27	1	na tura	l soil	5.			
NOTE				tracification lines are approximate	1							
2 19	2'		WHILE	LEVEL OBSERVATIONS **  SAMPLING OR WHILE ORILLING ATELY AFTER COMPLETION  AFTER COMPLETION	BORIN BORIN RIG: () FOREN JOB:	IG ST. IG CO SD IAN: H	leff APP	wn BY: 90ved:/ et: 1/1	PT AMS/GM L	SOII		naterials ers, inc

EN		L	MOTORS	CORPORATION-CPC GROUP	ALBERT	KAHN	ASSOC!	IATES,	INC.	20	12	
CAT CRA		RA	PIDS.	MICHIGAN	PROJECT NAM PLANT M	ODERN	HIZATIO	ON PRO	GRAM	•		
		SAMPLE DISTANCE	DEPTH IN FEET	DESCRIPTION OF MAT		UHIT DRY WT.		AMOARD TURAL W ATTERSE ICONFINED	LEGE PENETEATION PATER COMPRES HANG PEN SCA 2 3	ON "N" BU TENT, \ \( \rightarrow \) SIVE STREN ETROMETER  LE 4	GTH ISTREMET	X
1				SURFACE ELEVATION	of Consum		• 🕸	10	20 30	40	50	*, N
			10 -	Driller reported 10"  Driller reported Fine Brown Sand								-
	SS SS	E	20 -	Fine to Coarse Sand-Trace Gravel-Wet-Brown-Medium (SW) (A chemical odor was namples 1 and 2)	m Dense	e			8			
	\$\$ \$\$ \$\$		30	Fine to Coarse Sand-Tr Gravel-Wet-Light Brown Fine to Coarse Sand-Tr Gravel-Wet-Light Brown	-Dense (SW ace to Som	)		8		3		
	55 55	i,	F	(SP-SW)  Silty Clay-Trace Sand- Very Stiff to Hard (CL	-Dark Brown	-		• •		*	) @	
<u>Y</u>	55	i e		END OF BORING  30' of hollow stem a  ** Orilling-water used		sed				8		
TE			4. ( <del>54. 1</del> 74)	Stratification times are approximately the providing the p	80A 80A 80A 81G:	HO. ING S ING C	TARTED OMPLET	ED   RAWN BY				
	<i>+</i> 3			DIATELY AFTER COMPLETION  AFTER COMPLETION	80t N		09 s	HEET: ]	: AMS/GM L of 1 with nation of the second of	soli an engii	d mat neers,	

. L					<b>,</b>			BOH	ING	LUG	NO. 7	203
G		L	MOTORS	CORPORATION-CPC GROUP	ARCHITECT / EN	CAHN		ATES,	INC.	•		
	RAND	RΑ	APIDS,	MI CHI GAN	PROJECT NAME PLANT MC	DERN	IIZATIO	N PROG	RAM			
SAMPLE NUMBER	SAMPLE TYPE	SAMPLE DISTANCE	DEPTH IN FEET	DESCRIPTION OF MATE	ERIAL	UNIT DRY WT. LBS/FT*	8 NA UNICAL **	TURAL W. ATTERBE CONFINED	PENETRAT ATER CO RG LIMI COMPRE HAND PE	HTEHT, S TS A P.I ESSIVE S	<del></del> \	· <b>X</b> • u. √ ••••
				SURFACE ELEVATION			● ⊗ 1	0 2	0 1	0 4	10 5	0 %,N
		П		_Driller Reported 18" o	f Concrete_							
			10	Driller Reported Dark E & Gravel		٠,		-				
F	22.	*		Fine to Coarse Sand-Tra Gravel-Trace Silt-Light				8				
2	SS	2	20	<u>Moist-Medium Dense (SW</u> Fine Sand-Brown-Moist-E	)		-					
3	55	dip.		Silty Fine to Coarse Sa to Some Gravel-Brown-We Dense (SM)				8				
4 · · · · · · · · · · · · · · · · · · ·	SS	7	-30 -	Silty Fine Sand-Brown-W to Medium Dense (SM)	Vet-Dense	•	•		ø	<b>8</b>		
6	SS		40	Silty Fine Sand-Gray-Sa Loose (SM)	aturated-		8					
<u>-</u> -	SS			Silty Clay-Trace Sand & With Occasional Silt Se Very Stiff to Hard (CL)	eams-Gray-			•	***			
8	SS		50	END OF BORING			•				*0	<b>→</b>
				NOTE: 50' of Hollow St Used								
		lu,	WATER WHILE	tratification lines are approximate tion between materials may be grad LEVEL OBSERVATIONS  SAMPLING OR WHILE DRILLING ATELY AFTER COMPLETION  AFTER COMPLETION	BORING	G STA	MPLETER		PT S/PL		and mat	

	VNER GENERA	VL	MOTORS	CORPORATION-CPC GROUP	ARCHITECT /EN			IATES,	INC.	•			
	CATION GRAND	R.A	APIDS,	MICHIGAN	PROJECT NAME	E DERN	NIZATI(	ON PRO	OGRAM				
SAMPLE NUMBER	ETYPE	SAMPLE DISTANCE	DEPTH IN FEET	DESCRIPTION OF MATE	ERIAL	UNIT DRY WT. LBS/FT	₩ MA	LIBRATE	PENET WATER SERG LI ED COM D HAND	CONTEN MITS PRESSIVE	TH' FBLO T. N 	● } TH = 111	× •
<u> </u>				SURFACE ELEVATION			• 🕸	10	20	30	40	50	%,N
			10	Driller Reported 12' Cor Driller Reported Brown Occasional Fine Gravel Driller Reported Black Medium Sand Driller Reported Dark E	Fine Sand-								
.]			-	Sand Driller Reported Brown	Fine Sand				1_		-		
	22			Fine to Coarse Sand-Tra Gravel-Trace Silt-Brown Medium Dense (SW) Fine Sand-Trace Silt-Br	ace to Some n-Moist-				3				10 - 10 - 10 - 10 - 10 - 10 - 10 - 10
	\$\$		20	Fine Sand-Trace Silt-Br Medium Dense (SP)	own-Wet-				\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	) 			
3			30	Fine to Coarse Sand-Tre Gravel-Trace Silt-Brown Medium Dense (SW-SM)	1			   ⊗	<b>8</b>			*	
Ľ_	SS			Silty Very Fine Sand-Br Medium Dense (SM)	rown-Wet-			**					
1 <u>6</u>	SS		- 40 -	Silty Clay-Trace Sand & Gray-Stiff to Hard (CL)									
8	S\$		50	END OF BORING  NOTE: 50' of Hollow St  Used	em Auger		<u> </u>					)+	
- T				tratification lines are approximate									
FL_				LEVEL OBSERVATIONS	BORIN		ARTED MPLETE		-21-8 -21-8			Ž.	
	20'	-		SAMPLING OR WHILE DRILLING ATELY AFTER COMPLETION AFTER COMPLETION	RIG: AI FOREM. JOB: L	cker an: H 8109	DRA eff App	WN BY: ROVED: ET: ]	PT AS/TM of 1	50	il and rengined		

								ROH	ING	LUG	NU. 4	<u> </u>
OWN				200 200 200 200 200 200 200 200 200 200	ARCHITECT / EN			דרכ ז	N.C	•		
		RAL	MOTOR	S CORPORATION CPC GROUP	ALBERT KA		4220CIA	165, 1	IVC.		<del></del>	<del></del>
1	ation GRANE	R	APIDS,	MICHIGAN	PROJECT NAME PLANT MO	DERN	IZATION	PROGR	RAM			
SAMPLE NUMBER	SAMPLE TYPE	DIST	DEPTH IN FEET	DESCRIPTION OF MATE	ERIAL	UNIT DRY WT. LBS / FT	Q UNCC *Q CALI	JRAL WA ATTERBER DNFINED BRATED	PENETRATATER CO	PLESSIVE ST NETROMET ALE 3	IRENGTH	5 tsf
		$\sqcup$		SURFACE ELEVATION			● ⊗ 10	2	0 3	10 4	10 :	50 %,N
				—Driller Reported 12" o	of Concrete							
			10	Driller Reported Fine Sand-Some Fine Gravel-	Dark Brown						Arm.	
2	\$\$ \$\$ \$\$			Fine to Coarse Sand-Tr Brown-Moist Loose to M Dense (SP)	ledium		8		8	×		
			_ 20 _	Fine Sand-Trace to Som Brown-Wet-Dense (SM)	15 JIIC -							
4	-55			Fine to Coarse Sand-Tr Some Silt & Gravel-Bro Medium Dense (SM)								⊗ <u>61</u>
6	SS		_ 30 <del>_</del> _	Fine Sand-Trace to Som Brown-Wet-Very Dense t (SM)		-						\(\sigma\)
8	\$\$ \$\$ \$\$		40 -	Fine Sandy Silt-With C Fine Sand Layers-Gray- Medium Dense to Dense Silty Clay-Trace Sand Gray-Hard (CL)	Saturated- (ML)			/		8	<b>0</b> *⊙+-	
				END OF BORING  NOTE: 50' of Hollow S  Used-Boring Pe  Below A 25'Dept	erformed							
NOTE		tu, I	he transi	tratification lines are approximate ition between materials may be granted to the control of the	duaL PERMIT NO	O. G ST	ARTED '	+	4-85		æ	was and
2 2 W	0' 8' CI @	<del>-</del>	WHILE	SAMPLING OR WHILE DRILLING ATELY AFTER COMPLETION AFTER COMPLETION	RIG: CI FOREM JOB: L NOTE:	ME 5: AN: GI 810'	MPLETED  O DRAW  RY APPR  SHEE  Ing backfinless off	VN BY: FOVED: A	S/PL 1 ith nat-	end	and ma	

OWN		71	MOTOR	S CORPORATION-CPC GROUP	ARCHITECT / EN			IATES,	INC.			
LOC	ATION			MICHIGAN'	PROJECT NAME	 E				<u>-</u>		
SAMPLE NUMBER	ЕТУРЕ	DISTANCE	DEPTH IN FEET	DESCRIPTION OF MATE	ERIAL	UNIT DRY WT. LBS / FT*	NA OUN	ATTERBE	PENETRAT ATER CO RG LIMIT D COMPRE HAND PE SC 2	PITENT, TS C	TRENGTH TER STREN	· × *
-		$\vdash$		_Oriller reported 12" C	oncrete _							
2	\$\$ \$\$			Fine to Coarse Sand Fi to Some Silt & Gravel Moist-Dense (SP-Fill)	11-Trace Dark Brown						8	
4	SS SS		10-	Fine to Coarse Sand-Tr Light Brown-Moist-Med (SP)	·			ST.	8			
5	SS SS		- 20 -	Fine to Medium Sand-Tr Light Brown-Moist to W Dense to Dense (SP) NOTE: Sample 6 Had a Odor	et-Medium			(\$n_		8		
8	\$\$ \$\$ \$\$		30	Fine to Coarse Sand-Tr Some Gravel-Brown-Wet- Dense (SW)					8			
	SS SS		40 _	Fine Sandy Silt-Gray-S Medium Dense (ML)					8			
12	SS		. ] - 50 <del>]</del> .	Silty Clay-Trace Sand & Gray-Hard (CL)	& Gravel-						*0*	
	J J			End of Boring NOTE: 50'of Hollow Sta Used	em Auger							
1,075					. MINERAL V	<u></u>						
NOTE				tratification lines are approximate tion between materials may be grad								
	22.5	! -	WHILE :	LEVEL OBSERVATIONS  SAMPLING OR WHILE DRILLING MITTER COMPLETION  AFTER COMPLETION	BORING BORING RIG: CM FOREMA JOB: L	G STA G COA E 45 AN: S .8109	APLETEI B DRA T APP	0 4-1 WN BY: ROVED: A	AS/PL of 1		and matgineers,	
1							niess of					

OWN	ER			COORDERATION CRC CROUP	ARCHITE AL RE				ATES,			<b>40.</b> 20	<i>.</i>
LOC	ATION			CORPORATION-CPC GROUP	890 ISCT	NAME	:		N PROG				
SAMPLE NUMBER	ETYPE	DISTANCE	DEPTH IN FEET	MICHIGAN  DESCRIPTION OF MATE			UNIT DRY WT. LBS/FT	Ø STA ■ NAT	NOARO TURAL WARTERBEI CONFINEO	LEG PENETRAT ATER COP RG LIMIT COMPRE HAND PER	ION, THT NTENT, N S & P.L SSIVE ST	RENGTH ER STRENG	<b>★</b> 1.6.% (n.t)
		"		SURFACE ELEVATION				● ⊗ 1	o 2	0 3	0 4	0 5	0 %,N
1 2 3 4	\$\$ \$\$ \$\$ \$\$ \$\$		10 -	Driller Reported 12" C   Fine to Medium Sand Fi   Silt & Gravel-Brown-Mo   Dense (SP-Fill)   Fine to Coarse Sand Fi   Some Black Cinders-Bla   Dense (SP-Fill)   Fine to Coarse Sand -T   Gravel-Brown-Moist to Wolense to Loose (SP)	11-Trac	te to			8				<u></u> ⊗52
6	SS		- - 20 -	NOTE: Sample 6 had a Odor.	chemica	al			8				
8	SS		30 -	Silty Fine to Coarse S to Some Gravel-Brown-W to Dense (SM-GM)					× ×		⊗		
10	SS		40 -	Fine Sandy Silt-Gray-S Medium Dense (ML)	aturate	ed-			<b>⊗</b>				
11	\$\$ ! \$\$	/45	50½	Silty Clay-Trace Sand Gray-Very Stiff (CL) /Trace to Some Sand-Tra Gray-Hard-Silty Clay (					*(	<b>∞</b>		*0+	<u>`</u> ⊗-
				END OF BORING  NOTE: 50' of Hollow S  Used.	tem Aug	jer							
NOT	E: The	in itu,	the tran	stratification lines are approximal sition between materials may be gr	aduat PEF	IERAL RMIT N	0.	335-8	B32-141	l 4-85		-C	
-	18' - CI	<u>0</u>	WHILE	SAMPLING OR WHILE DRILLING IATELY AFTER COMPLETION AFTER COMPLETION	G	BORIN RIG: C FOREM JOB:	ME 4 (AN:S L810	SB OR. T APP		4-85 PT AS/PL of 1 with nate	en	and ma	

OWN	ER NFRA	 \L_	MOTORS	CORPORATION-CPC GROUP	ARCHITEC	RT K	gineei AHN	a ASSOC	IATES	, INC.				
LOCA	ATION			MICHIGAN .	PROJECT PLAN	NAME T MO	DERN	IZATI	ON PR	OGRAM				
SAMPLE NUMBER	SAMPLE TYPE	SAMPLE DISTANCE	DEPTH IN	DESCRIPTION OF MAT	ERIAL		UNIT DRY WT. LBS/FT		ATURAL ATTER NCONFIN ALIBRAT	PENETR WATER SERG LIVE HED COMMED HAND	PENETRO	T. N. IBLO	TH (I	C.L.% «f) (H ((«f))
				SURFACE ELEVATION				• &	10	2'0	30	40	5 0	%,N
1	SS		- 9 -	Tiller Reported 11" Co Fine Sand-Fill-Light E Very Loose (SP-Fill) Driller Reported Concr Reinforcing Steel	3rown-Mc			⊗						
				END OF BORING  Boring Offset and redr See Boring 208A  NOTE: 10' of Hollow S  Used.	Stem Aug		WELL							
	Non Non	situ e	WATER WHILE	SAMPLING OR WHILE DRILLIN DIATELY AFTER COMPLETION  AFTER COMPLETION	raduati Per	BORII RIG: FORE JOB:	NG CI MAN: L810	. 9	ORAWN APPROV SHEET:	4-14-8: 4-14-8: 8Y: PT ED: AS/	PL 1	soil and engin	d ma	terials , inc
					[1	NOTE ural:	:: Bor soils	unies:	s other	ed with wise not	ed.			

	NER ENER		MOTOR:	S CORPORATION-CPC GROUP	ARCHITEC ALBERT				INC.		···	200 A
	CATI RAND			MICHIGAN	PROJECT PLANT M	ODERI	15 NEZATI	ON PRO	GRAM			
SAMPLE NUMBER	SAMPLE TYPE	SAMPLE DISTANCE	OEPTH IN FEET	DESCRIPTION OF MATE	ERIAL	UNIT DRY WT. LBS / FTª	1	CONFINE LIBRATED	PENETRA VATER C ERG LIM D COMPI	ONTENT, NTS RESSIVE	O P.L.N STRENGT	<b>-</b> - ×
		H	-	Driller Reported 11" o	of Concrete			1			<del>-</del>	30 %.
1	SS			Fine to Medium Sand F- Silt, Gravel & Cinders Moist-Very Loose- (SP-	ill-Trace s-Brown- -Fill)		8				_	
2	SS		10	Fine to Medium Sand-Tr & Gravel-Brown-Moist-\ (SP)			8				-	:
3	35		· ;				8					
4	SS		20 _			:		8				
5	SS	<b>:</b>		Fine to Coarse Sand-Tr Some Gravel-Trace Silt Moist to Wet-Medium D	:-Brown-		8					
6	SS		30 -	Loose (SW)			8					
7	SS		- - -									
8	SS	2	40	·	· · · · · · · · · · · · · · · · · · ·							123
9	SS		·	Fine Sandy Silt With ( Silty Clay Layers-Gray	Occasional /-Medium			•		8	0	
70	SS		50 <u>-</u>	Dense (ML)						-		
וו	SS			Silty Clay-Trace Sand- casional Silt Layers-( Medium (CL)	-With Oc- Gray-		* ()	•				8
12	SS		60				\		•			-⊗
13	55			Silty Clay-Trace to So Trace Gravel-Gray-Sti Stiff (CL)	ome Sand-\ ff to Very		* (					
14	55		70 :	Stiff (CL) CONTINUED ON PAGE	2			*(	) 	⊗		

OWN	ER NER	\L	MOTORS	CORPORATION-CPC GROUP	ARCHITECT / E ALBERT			ATES,	INC.			
1.00	ATION			MICHIGAN.	PROJECT NAM PLANT M	AE NODERN	NIZATIO	N PRO	GRAM			
SAMPLE NUMBER	SAMPLE TYPE	AMPLE DISTANCE	DEPTH IN FEET	DESCRIPTION OF MAT	ERIAL	UNIT DRY WT. LBS / FT*	MA UN	ATTERBE	PENETRA /ATER CO :RG LIM! D COMPR	GEND TION, 'N' ONTENT, N HTS AL ESSIVE ST ENETROMET  CALE 3		× ×
		S	•	SURFACE ELEVATION			• 🕸	10	20	30 4	0 50	У,, К
				CONTINUED FROM PA	AGE 2			*	ř.			,
15 16 17 18	SS SS SS		80 -	SiltyClay-Trace to Trace Gravel-Gray-S Very Stiff (CL)	Some Sand - tiff to		*	*	0		8	87
_20	SS			Fine Sandy Silt-Sat Dense (ML)	urated-Ver	у						⊗6 <u>5</u>
21	SS		- 110 - - 115 -	Silty Clay-Trace to Trace Weathered Bla Limestone-Gray (CL)  END OF BORING  NOTE: 40' of Hollo Auger Used. Rotary Was Performed Below	ck Shale & w Stem Drilling							 ⊗—
ТОИ	E: The	ic situ	WATER WHILE	Was Performed Below stratification lines are approxima sition between materials may be greated between	G RIG:	ING STING CHE	TARTED OMPLET 550 DE GRY AF	ED 4- RAWN BY PROVED HEET: kfilled	: AS/PL 2 of 2 with na	soil en	and ma	

OWN					ARCHITECT / EN					LOG	<u>110.</u> <u>2</u>	09
LOC	ATION			CORPORATION-CPC GROUP	ALBERT K	=				·	<del></del>	
E NUMBER	AMPLE TYPE DAY	E DISTANCE	DEPTH IN FEET	MICHIGAN  DESCRIPTION OF MATE	PLANT MC	UNIT DRY WT.	NA STA	LNOARO TURAL Y ATTERBI	LEC PENETRAT VATER CO ERG LIMI O COMPR HAND PE	F.L ESSIVE ST ENETROMET	. `` . RENGTH	· × 
SAMPL	SΑ	SAMPL					*00	<del></del>	2 1	3	(	5 tsf
				SURFACE ELEVATION			• 🕸	10	2'0 :	30 4	o s	N, & 0
	55			TOriller Reported 7" of Fine to Medium Sand Fi Gravel-Brown-Moist-Med (SP-Fill)	ill-Trace	<b>7</b> 7		×				
2	22		10 -	Fine Sand-Light Brown- Loose (SP	-Moist-		8					
3 4 5	SS   SS   SS   SS		20 _	Fine to Coarse Sand-Tr Some Gravel-Trace Silt Moist to Wet-Medium De	t-Brown-			8	8			
7	SS		-	Silty Fine Sand-Trace Gravel-Brown-Wet-Dense	to Some e (SM)					8		
9	SS SS		40 -	Fine Sandy Silt-Wet-Gr (ML)	ray-Dense						-⊗	
10	SS		50	Silty Clay-Trace to So Trace Gravel-Very Stir (CL)					**	8		
_12	SS		60	END OF BORING NOTE:	60' of Ho Performed		Stem w a 3	Ayger Dep	Used-W	ash Bo	* <u>O</u> +	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\
NOTE	22' 32'	itu,	WATER WHILE	stratification lines are approximated in the strategies of the str	BORIN BORIN RIG: CI FOREM JOB: NOTE:	IG ST IG CO ME 5 IAN:G L810	RY AP 9 sh	AWN BY PROVED: EET: ]	AS/PL	en	and magineers	

OWN	YER ENERA	L	MOTORS	CORPORATION-CPC GROUP	ARCHITECT ALBER			ASSOC1		INC.	,		
1.00	ATION			MICHIGAN .	PROJECT N	NAME OM	DERN	IZATIO	N PRO	GRAM			
SAMPLE NUMBER	SAMPLE TYPE	DISTANCE	DEPTH	DESCRIPTION OF MAT	ERIAL	- 1	UNIT DRY WT. LBS / FT	AH A	ATTERBE	PENETRA VATER CO ERG LIMI O COMPR HAND PI	ONTENT, SITS A	(BLOWS / B	X LLX
				SURFACE ELEVATION				• 🛇	10	20	30	o s	N, & 0
			-	Driller Noted 12" Con						-	-		
	SS		  	Fine Sand Fill-Trace Light Brown-Moist-Loo	Medium Sa se (SP-F	and ill) 		<u></u>					<del>_</del>
2	SS		10 -	Fine to Medium Sand-T Gravel-Brown-Moist-Lo		- 1		$  \otimes  $		:			
3	SS		- - -					×					
4	SS		_ 20 _ 	Fine to Coarse Sand-T Some Gravel-Trace Sil Moist to Wet-Loose to	t Brown-								
5	SS		- - - -	Dense (SW) NOTE: Samples 5 & 6	had a			⊗.		<b>⊗</b> .			
- 7	SS		- 30 <i>-</i>	chemical odor.								<b>3</b>	<b>.</b>
8	SS		40 -	Silty Fine Sand With I Silt Layers-Gray-Satu Dense (SM-ML)		ıdy							
10	22		- -  - 50 -	Silty Clay-Trace to So	ome Sand-	_	··		*0.				
	\$5			Trace Gravel-With Occ Silt Seams-Gray-Stiff Stiff (CL)									
12	SS		- 60 -	END OF BORING NOTE: 60' of Hollow	Stem Auge					• &			
NOT	E: The	itu.	idicated , the trans	stratification lines are approxima sition between materials may be gr	aduaL PERM	HT NO	٥.				_		
				LEVEL OBSERVATIONS	80			ARTED		21-85	ہ	N	
	22.	2'		SAMPLING OR WHILE DRILLING IATELY AFTER COMPLETION AFTER COMPLETION	G RII	G: A	cke An: 1 810	Heff AP	AWN BY PROVED HEET: kfilled		er	and ma	

OWN	IER		WOTO DO	COORDONATION CRC GROUP	ARCHITECT			ASSOCIATES	, INC	•			
100	ATION			CORPORATION-CPC GROUP	BOOLECT N	14145		IZATION PR					
SAMPLE NUMBER	SAMPLE TYPE	SAMPLE DISTANCE	DEPTH IN	MICHIGAN  DESCRIPTION OF MAT		TW YOU TINII	S/FT	STANDARD NATURAL ATTER	PENET WATER BERG L	EGEND RATION, TONTENTS APPRESSIVE PENETRO SCALE 3		⊕ } TH = 10	Κ ×
"		S		SURFACE ELEVATION	,			● ⊗ 10	20	30	40	50	%,N
	SS   SS   SS   SS   SS		10 -	Fine to Medium Sand-Tr Moist-Brown-Loose (SP) Possible Fill	ace Grave -	el-		88-8-8					
	5 SS 7 SS 8 SS 9 SS		20 -	Fine to Coarse Sand-So Trace Silt-Moist-Brown Dense (SW)  Fine to Medium Sand-We	-Medium			. 8	<b>⊗</b>				
	0 SS 1 SS 2 SS .3 SS		40 .	Medium Dense (SP)  Fine Sand-Trace Silt & Gray- Dense (SP-SC)  Silty Clay-Trace Sand-Very Stiff to Hard (CI	-Gray-	2t-			*0	8 8	<b>⊗</b> *	0	
	.4 \$5		<del>- 60</del>	END OF BORING	ger was i	ised ERAL Y	VF!!					-	
NC	23 '	situ	WATER WHILE	stratification lines are approximately after completion after used below 30.1	Raduat PERM B B NG R F	ORING ORING ORING OREM OB: L	). 3 S' 3 C' ) AN: .81(	DRAWN Heffapprov	ep:AMS  1 of	/Gh: s	oil and engin	f mareers	terials , inc

OWN	ER NFRA		MOTORS	CORPORATION-CPC GROUP	ARCHITEC ALBER	T/ENG	HN	R ASSOCI	ATES,	INC	•	3	·*···	
100	TION			MICHIGAN .	PROJECT PLANT	NAME T MO(	DERN	IZATIO	N PRO	GRAM				
SAMPLE NUMBER	Е ТҮРЕ	NCE	DEPTH	DESCRIPTION OF MAT	ERIAL		UNIT DRY WT. LBS/FT	Q uni	TURAL ATTERE CONFINE LIBRATE	PENET WATER ERG L	EGEND  IRATION,  CONTENT  IMITS  MPRESSIVE  D PENETRO  SCALE  3  30	*N* (BLO *. *) 	: TH (1 TRENGT	X C.C. <b>x</b>
		$\left  \cdot \right $		SURFACE ELEVATION										
				CONTINUED FROM F	PAGE 1									
15 16			80 _	Silty Clay-Trace San Gray-Hard (CL)	d & Grav	/e1-						* **		general et al.
18	SS		9 <u>.</u> 0									× (	D+,	
19	SS		100	Fine Sand-Trace Silt Very Dense (SP)  Medium to Coarse San Gravel-Gray -Wet-Dens	d With	et-				,			⊗	
				END OF BORING  NOTE: 35' of Hollow Used. Rotary Drilli formed Below a 35' d	Stem Aung per- lepth.	uger	WELL							
NOT	TE: The	e ir situ	, the trac	stratification lines are approximation between materials may be good to the control of the contr	raduaL PER	BORIN	10. 1G S	TARTED OMPLET	ED .	1-14- 1-14-	85		C	
	Non-			SAMPLING OR WHILE DRILLINDIATELY AFTER COMPLETION  AFTER COMPLETION	,	JOB:	L81	Heff	HEET:	p: AS 2 of d with	2 1 nat-	soil and engin	d ma leers	terials , inc

OWNER CONFIDAL MO	TORS CORPORATION-CPC GROUP	ARCHITECT / ENGI ALBERT KA		OCIATES,	INC.		
LOCATION	DS, MICHIGAN	OCCUPET NAME		TION PROGE		·	
TYPE TYPE STANCE	DESCRIPTION OF MAT	BRIAL	T I B	NATURAL WA	COMPRESS HAND PENE	N, TNT (BLOW ENT, N P.L.N IVE STRENGTI TROMETER STR	+ - <del>X</del> UU.∿ H = 0041
1 SS 2 2 SS 3 SS 4 SS 1 1 SS 1 1	Driller Reported 11" of Silty Fine to Medium Son Trace Gravel-Brown-Moi Dense to Loose (SM-Fil Amorphous Peat-Trace to Black-Moist-Loose (PT NOTE: Sample 4 had a odor	and Fill- st-Medium 1)	8				
7 SS 6	Fine to Medium Sand-Tr Gravel-Brown-Moist to Dense to Loose (SP)	ace to Some Wet-Medium	٥	8 8			
8 SS	END OF BORING  NOTE: Driller reported odor in peat and wet seen samples.  30' of Hollow Stem Aug	sand					
in situ, th	cated stratification lines are approximated stratification lines are approximate transition between materials may be gottoned and the control of the completion of the complet	BORIN BORIN RIG: CI FOREM JOB: L	G START G COMPI ME 550 AN: GRY 8109	DRAWN BY:	AS/PL of 1 with nate		materials ers, inc-

		OG N	10. 30	15							
OWN	ĒR		a conscionation coc coolin	ARCHITECT / E	YGINEE	R ASSOCIA	ATES.	INC.			
LOCA	TION		S CORPORATION-CPC GROUP	PROJECT NAM PLANT M							
NUMBER	TYPE	RAPIDS,	MICHIGAN DESCRIPTION OF MAT	1	DRY WT.	STAN NATI	HOARO F URAL WA ATTERBER	LEGIENETRATI	OH, "H"		
SAMPLE	٦	AMPLE T			UNIT		BRATED	SCA	LE	R STRENG	tsf
0,		Ś	SURFACE ELEVATION	95.5	1	● ⊗ 10	) 2	0 3	0 4	5 0	%,N
2	\$\$ \$\$ \$\$		Driller Reported 9½"  Silty Fine to Coarse Trace to Some Gravel  Turning Brown @4'-Moi th Medium Dense  Driller Reported 12"C	Sand Fill- Dark Gray st-Dense (SM-Fill)		8	<b>⊗</b>			⊗ 3	 216
4	55	10	See Note A Amorphous Peat-Irace Black-Moist-Loose (PT	Wood Fibers		8			.,		
6	SS SS SS	20	Fine to Medium Sand-T Gravel-Brown-Wet-Loos Dense (SP)	race Silt 8 e to Medium	n l	8					
8	SS	30			-			⊗		. 144 A	
			END OF BORING  Note A: Fine to Medi Fill-Trace Silt & Gra Moist-Very Loose (SP-  NOTE: 30' of Hollow Used	um Sand vel-Brown- Fill)							
том	E: The	WATE	stratification lines are approximated assistion between materials may be good as the control of	BOR BOR RIG:	NO. ING S	TARTED OMPLETE 45 B OR.	D 4-	AS/PL	5	ne.	toriolo
	٠	<u></u>	AFTER COMPLETION	1	L81		EET: 1	of 1	soil.	and ma gineers	i, inc

NOTE: Boring backfilled with natural soils unless otherwise noted.

BUHING LUG NU. 306

	own GE	ER NER	—- 1L	MOTORS	CORPORATION-CPC GROUP	ARCHITECT / E			ATES,	INC.			!
-	LOCA	ATION			MICHIGAN .	PROJECT NAM PLANT M	4E ODERN	IZATIO	N PROG	RAM			
	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE DISTANCE	OEPTH IN FEET	DESCRIPTION OF MAT	ERIAL 95.4	UNIT DRY WT. LBS/FT ²	Q UNC	URAL WA AITERBER ONFINEO IBRATED	COMPRE	NTENT, NTS C. P.L. ESSIVE ST. NETROMET ALE 3	RENGTH ER STRENG	× u.s
-			$\perp$		30111 704 -4-		<u> </u>				⊗		
	2 3 4	\$\$ \$\$ \$\$ \$\$		- 10 -	Driller Reported 11" of Fine to Medium Sand Fine Silt-Brown-Moist-Dense Silty Fine Sand Fill-1 & Gravel-Black-Moist-L Very Loose (SM-Fill) Amorphous Peat-Trace V	race Root: _oose to	5	8		. ——			
_		- 55		- 10 -	_Black-Moist-Loose (PT)					· · · · ·			
-	5	SS			Fine to Coarse Sand-Tr	race		-88					
	6 7	SS		- 20 - 	Gravel-Brown-Wet-Very Medium Dense (SW)			$\otimes$					
						•			·Ø				
F	8	SS		30 _			+				<del> </del>		
					END OF BORING  NOTE: 30' of Hollow S  Used								
	нот	E: The	in	dicated	stratification lines are approxima sition between materials may be gr	ie. MINERA							
L		in 3	ii u,		LEVEL OBSERVATIONS	воя	NG S	TARTED		1-85	] _	A C	
	-	17 11.3	i 3 ' @	WHILE	SAMPLING OR WHILE DRILLING INTELLY AFTER COMPLETION  AFTER COMPLETION	G RIG: FORE JOB:	CME 4 EMAN: L810	ST APP	WN BY: PROVED: A EET: 1 C	S/PL of 1 with na	→ en	and ma	

OWN	ER MCD4		MOTORS	CORPORATION-CPC GROUP	ARCHITE ALBI	ERT K	GINEEI AHN	ASSOCI	ATES,	INC.			
1.004	ATION			MICHIGAN .	200100	TAIANE		IZATIO					
NUMBER	ЕТҮРЕ	DISTANCE	DEPTH IN	DESCRIPTION OF MATE			DRY WT. S/FT³	STA NAT	NOARO TURAL WA ATTERBET	LEG PENETRAT ATER COI RG LIMIT	ENO  TON, 'N'  NTENT, N  IS A  FL  ESSIVE ST  NETROMET	<del></del> : N IRENGTH	- X 1.1. %
SAMPLE	SAMPL	SAMPLE	, 6 % 1				UNIT	*00	<del> </del>	2	ALE 3	¢	5 tsf
				SURFACE ELEVATION	95.4			● ⊗ 1	0 2	0 3	10 4	10	50 %,N
		士		-Driller Reported 103"C	<u>Concre</u> t	:e				<del> </del>		8	
. 2	SS SS			Fine to Medium Sand Fi to Some Silt-Trace Gra Moist-Dense to Medium	ill-Tra avel-Br	ace /		⊗					
<u>3</u>	SS SS		- - 10 -	(SP-SM-Fill)   Broken Concrete-Drille   Gravel & Coarse Sand-G	er Repo Gray	orted		<b>⊗</b>					
				Amorphous Peat-Black-M Loose (PT)	10ist-			1	8	<del> </del> -			.   -
5	55		- - -										
6	55		20 _	Fine to Coarse Sand-Tr	ace Gr	-avel-			. «				
7	SS		- - -	Brown-Moist to Wet-Med (SW)	dium D∈	ense			./	Ø			
8	SS		30 =					- 4	8				
9	SS		-						×	-			
10	SS		40½				-	-		\$		-	
				END OF BORING	h according								
				NOTE: 40'of Hollow S Used.	cem Aug	ger							
				• - - - - - -									
			F .	1							-		
NOT	E: The	2 II	ndicated	stratification fines are approxima sition between materials may be gi		INERAL ERMIT N	NO.	333-	832-14		_		)
				LEVEL OBSERVATIONS				TARTED		11-85 11-85	4 4	A	New York
	18 8		WHILE	SAMPLING OR WHILE DRILLIN HATELY AFTER COMPLETION AFTER COMPLETION		1	CME			: PT AS/PL	soil	and m	naterials rs, inc
	CI @	8	1	<u> </u>	!	NOTE	·Bor	ing bac unless	kfilled otherwis	with na e noted.	. (-)	J	

OWN	ER NEDA	ם חדחם	S CORPORATION-CPC GROUP	ARCHITECT/EN ALBERT K			ATES,	INC.			
1.004	TION		MICHIGAN	PROJECT NAME PLANT MO							
SAMPLE NUMBER	E TYPE	SAMPLE DISTANCE SAMPLE DISTANCE	DESCRIPTION OF MAT		UNIT DRY WT. LBS / FT*	STA NAT	NOARO PORTERBER	LEGE PENETRATIF LITER CON EG LIMITS COMPRES	ON, N- 18L TENT, N S PL, N SSIVE STREN SETROMETER		st
<u> </u>			SURFACE ELEVATION  Driller Reported 9"of	_			Ι				
2 3	\$\$ \$\$ \$\$ \$\$	10	Fine to Medium Sand f to Some Silt-Brown-Mc Dense to Very Loose ( Fine to Medium Sand-1 With Occasional Peat Wet-Very Loose (SP)	fill-Trace moist-Medium (SM-Fill)		8 8	⊗				
		-	Wet-Very Loose (SP)			<del></del>	<del> </del>				
	\$\$ \$\$ \$\$ \$\$	30	Fine to Coarse Sand-Some Gravel-Brown-We Medium Dense (SW)  Fine Sand-Trace Silt Dense (SP)	Trace to t-Loose to					⊗		
NOT	17' 20'	WATE WHIL	END OF BORING  NOTE: 40' of Hollow Used.  I stratification lines are approximately after Completion  After Completion	Stem Auger  Stem Auger  MINERA  GRADUAU PERMIT  BORI  BORI  FORE  N JOB:	WEL NO. NG S NG C ME 5 MAN: L81	TARTED OMPLET 550 DF GRY AF 09 SE	ED 4- RAWN BY: PPROVED: HEET: ]	AS/PL of l	engi e	nd materineers, in	
		IMME	DIATELY AFTER COMPLETION  AFTER COMPLETIO	BOL N	L81	09 si	HEET: 1	of 1 with na-	engi		

C)44	NER				ARCHITEC	T / E	NGINEE	R		JG N	<u> </u>	
GEGE	NER/	AL.	MOTORS	S CORPORATION-CPC GROUP	ALBERT K	MHA	ASSOCIA	ITES, I				
LOC	ITAS GNAS	ON RA	APIDS.	MICHIGAN	PROJECT PLANT MC	DERN	1EZATION	1 PROGR	RAM			
SAMPLE NUMBER	SAMPLE TYPE	NCE	DEPTH IN FEET	DESCRIPTION OF MAT	ERIAL	UNIT DRY WT. LBS/FT	Q UNCO	OARO PE IRAL WAT LITERBERG ONFINED BRATED H	COMPRESS	H, TH' PENT. NOTES OF THE PENT		K ×
တ		ΥS		SURFACE ELEVATION	93.4		● ⊗ 10			40		*.N
3 4	\$\$ \$\$ \$\$ \$\$ \$\$		10 -		of Asphalt I-Trace Moist- e (SP-Fill) Trace Silt to Wet-		8	Ø				
6	SS		20 _					8				
7 8	SS		30 -	Silty Fine Sand-Brow Medium Dense to Dens	n-Wet- e (SM)				$\otimes$		8	
9			- - - - - 40 -					8	<b>⊗</b>	Ø		
12	\$\$ \$\$ \$\$		50 .	Fine to Coarse Sand- Some Gravel-Brown-We Dense to Loose (SW)				8	   			
14	SS		60	CONTINUED ON PA	AGE 2		<u> </u>					
			1.1.1.									-

OWN	ER NERÆ	\L	MOTORS	CORPORATION-CPC GROUP	ARCHITECT / EN ALBERT K	GINEE AHN	R ASSOCI	ATES,	INC.			
LOC	ATION			MICHIGAN	PROJECT NAME PLANT MO	DERN	IZATIO	N PROG	RAM		,	
SAMPLE NUMBER	SAMPLE TYPE	SAMPLE DISTANCE	DEPTH IN	DESCRIPTION OF MAT	93.4	UNIT DRY WT. LBS / FT³	© UNC *O :	URAL W. ATTERBEI ONFINED IBRATED	ATER CON RG LIMIT	ON, NO STENT, S A-PLANTSSIVE STRUCTOMETE	RENGTH (	X CCS (net) STH (net):
			- 60	CONTINUED FRO								
14			  - 70	Fine to Coarse San to Some Gravel-Bro Medium Dense to Lo	wn-Wet-			8				
				END OF BORING  NOTE: 55' of Holl Auger Used.  Rotary Drilling wa below a 55'depth.	ow Stem							
NOT	In	5 '	WATER WHILE	stratification lines are approximated by the province of the p	BORII  IG RIG: ( FORE	NO.	TARTED OMPLETI  550 DR  GRY AP		AS/PL	soil en	and ma	aterials s, inc

רו מ זקי

NOTE: Boring backfilled with natural soils unless otherwise noted.

OWN	ER NEDA	.1	MOTORS	CORPORATION-CPC GROUP	ARCHITE ALBI	ERT K	GINEE AHN	R ASSOCI	ATES,	INC.			
LOC	ATION			MICHIGAN	PROJEC PLAI	T NAME OM TN	DERN	IIZATIĆ	N PROG	RAM			
SAMPLE NUMBER	SAMPLE TYPE	DISTANCE	OEPTH IN FEET	DESCRIPTION OF MAT	ERIAL		UNIT DRY WT. LBS / FT ³	AN BUND	TURAL W. ATTERBE: CONFINED	LEG PENETRATI ATER CON RG LIMIT COMPRE HAND PEN SCA	OH, THT  S ATTENT, N  SSIVE STS  HETROMETE	TENGTH	××
				<b>33</b>	96.5				10 2	0 3	0 4	0 5	N, & 0
		-		—Driller Reported 8½"o	f Concr	rete-							···-
2 3	\$\$ \$\$ \$\$			Fine to Medium Sand f to Some Silt-Trace Gr Moist-Loose to Medium (SM-Fill)	avel-Br	rown-		() () ()	8				
4	SS		-10 -	Mixed Sand & Cinder F Moist-Loose (SP-Fill)									349 ●=
5	SS		<u> </u>	Amorphous Peat-Trace Roots-Black-Loose (PT	to Some	e		1					
6 7 8 9	SS		- 20	Fine to Medium Sand-T Brown-Wet-Loose to Me (SP)	race S	ilt-			8 8 8	8			
				END OF BORING NOTE: 40'of Hollow S Used.	Stem Au	ger	WEL	275-	-832-14	.1			
МОТ	E:The	site	, the tran	sition between materials may be g		TIME	NO.	333-			-	_0	-
	18	311	WATER	SAMPLING OR WHILE DRILLING HATELY AFTER COMPLETION AFTER COMPLETION	۷ ۱G	BORI RIG: FORE JOB:	CME MAN: L81	ST AN	RAWN BY PPROVED: HEET: 1	11-85 : PT : AS./PL	en	and m	aterials s, inc

O <b>WNE</b> GENE	R RAL	MOTORS	S CORPORATION-CPC GROUP	ARCHITEC ALBERT K	AHN	ASSOCI	ATES,			
LOCA GRAN	TIOI D R	N APIDS,	MICHIGAN	PROJECT PLANT MC	DERN	IZATIC	N PROG	RAM		
SAMPLE NUMBER	IPLE DIS	DEPTH IN	DESCRIPTION OF MAT	ERIAL	UNIT DRY WT. LBS/FT*	M NAT	URAL WA ATTERBER CONFINED IBRATED	TER CON G LIMITS COMPRES HAND PEN	ON, "N" IBLOV TENT, "  L.   SSIVE STRENGT ETROMETER STR	- X (i.i. %
	"			96.8		● ⊗ 1	0 2	3 30	3 40	5'0 %, N
1 SS 2 SS 3 SS 4 SS	S S	- 10 -	Driller Reported 7"of Silty Fine Sand Fill-I Some Cinders-Trace Gra Gray-Moist-Medium Dens Silty Fine to Medium S Trace Gravel Brown-Moi Dense (SP-SM-Fill	race to ivel-nark se (SM-Fill) sand Fill- st-Medium	/		8			
5 \$3	S		Fine to Medium Sand-Tr Brown-Moist-Loose to V (SP)			Ø _				
6 SS		20 -	Fine to Medium Sand-Br Loose to Medium Dense			⊗	<b>⊗</b>			
8 SS		30 -	Fine to Coarse Sand-Tr Some Gravel-Brown-Wet- Medium Dense (SW)			«	×			
10 S:	S	40 -	Fine Sand-Trace Silt-E				Ø			
11 5	5	<b>■</b> ·	Medium Dense (SP)	DI OMII-MEC-				⊗		
12 S:		50 -	Fine to Coarse Sand-Tr Gravel-Seams of Very F Brown-Wet-Medium Dense (SP)	Fine Sand-	7	N-	8			
14 S	S	60				_ &	1			
			CONTINUED ON	PAGE 2						

OWN GE	ER NERA	L MOT	ORS	CORPORATION-CPC GROUP	ARCHITE ALBE	CT/ENG	GINEE AHN	R ASSOCI	ATES,	INC.		***		
100	ATION			MICHIGAN	PROJECT	T NAME OM TV	DERN	IZATIO	N PRO	GRAM				
SAMPLE NUMBER	SAMPLE TYPE	SAMPLE DISTANCE	тн	DESCRIPTION OF MAT			UNIT DRY WT. LBS/FT	* O O	ATTERBI	PENETR VATER ERG LI D COM	CONTENT MITS PRESSIVE	"N"   BLC	TH III	X uu.*
		<del>                                     </del>		SURFACE ELEVATION 9	06.8			● ⊗ 1	0	<del>70</del>	1	Ť		
		- - - - - - - - - - - - - - - - - - -	)	CONTINUED FROM P	AGE 1									701
15			) -	Fine to Coarse Sand-Tr Gravel-Seams of Very F Brown-Wet-Medium Dense (SP) Fine Sand-Trace to Som Sand-Brown-Wet-Medium	ine San to Loc	nd- ose		8	Þ					,
17	SS		- - - - - -	Fine to Coarse Sand-Tr Some Gravel-Seams of F Brown-Wet-Loose (SW) Silty Clay-Trace Sand Gravel-Gray (CL)	ine San	nd-		⊗	8					
19	SS	- 90	- - -	Clayey Fine to Coarse S Gravel-Gray-Saturated	Sand-Tr (SC)	ace		8/6/h	•					
			- - - -	END OF BORING  NOTE: Driller lost mu lation at 81' borehole Borehole redrilled. L again plus 8 bags Bent  25' of Hollow Stem Aug Rotary Drilling Perfor 25'Depth.	ud circula colla cost muc conite.	psed- d i.								
NOT	E: The	situ, the WA	tran TER	stratification lines are approxima sition between materials may be good LEVEL OBSERVATIONS  SAMPLING OR WHILE DRILLING	raduaL PE	BORIN	io. ig s ig ci Acke	TARTED OMPLETI	ED 4-	<u>12-85</u> 12-85 _{Y:} PT		e e e		
	No			IATELY AFTER COMPLETION AFTER COMPLETION	4	JOB:	L810	leff AP )9 sh ing bac unless	kfilled	of 2 with	na t-	oil and engin		

1 ^	NER ENED/	١.	MOTODS	CORPORATION-CPC GROUP	ARCHITECT / EN	iginee (AHN	ASSOCI	ATES,	INC.			
LOC	CATION			MICHIGAN	PROJECT NAMI							<del></del>
SAMPLE NUMBER	SAMPLE TYPE	DISTANCE	DEPTH IN FEET	DESCRIPTION OF MAT	UNIT DRY WT. LBS / FT	NA ON	W JARUTA ATTENDE	PENETRA /ATER C ERG LIM D COMP!	RESSIVE S	\	· - ×	
		"		SURFACE ELEVATION 96	5.5	1	• 🛇 1	0	20	30	40	50 %,N
				Driller Reported 8"of					d			
3	\$\$ \$\$ \$\$ \$\$		10	Fine to Medium Sand Fi to Some Silt-Trace Gra Brown-Moist-Medium Den Loose (SM-Fill)	ll-Trace lvel-Dark lse to		8					
5	SS		20 _	Fine to Medium Sand-Tr Brown-Moist to Wet-Loo								
7	SS			Fine to Coarse Sand-Tr Gravel-Brown-Wet-Loose			8					
9	SS		30 _	Fine Sand-Trace Silt-B Loose to Medium Dense								
10	SS		40			<u> </u>				<u> </u>		
				END OF BORING  NOTE: 40' of Hollow S  Used.	Stem Auger							
NO	TE: The	: In	dicated	stratification lines are approxima	te. MINERAL		335-	<u> </u> 832-14	 }1			
	in	situ,		sition between materials may be gr	BORII		TARTED		11-85	-	-	<b>}</b> ===.
	18' 15'		WHILE	LEVEL OBSERVATIONS  SAMPLING OR WHILE ORILLING  IATELY AFTER COMPLETION  AFTER COMPLETION	BORII G RIG: FORE JOB:	MG CO CME ! MAN: ( L810	OMPLETE 550 OR GRY AP 19 SH	AWN BY PROVED EET: 1	11-85 : PT : AS/Pl of 1	a I-		naterials ers, inc

APPENDIX B

ANALYTICAL RESULTS FOR VOLATILE ORGANIC COMPOUNDS

### TABLE 1 VOLATILE FRACTION

CLIENT: GMC-CPC DIVISION DATE SAMPLED: 12/06/85 TIME: 2:30 PM PROJECT NO.: 25554 DATE RECEIVED: 12/09/85 TIME: 7:00 AM

SAMPLE: 85-1 DATE COMPLETED: 12/16/85

			SAMPLE	NO.	58324
COMPOUND	RESULT (mg/l )	D.L.	COMPOUND	REŞULT (mg/l )	
BENZENE	*	0.001	TRANS-1,2-DICHLOROETHYLENE	0.012	0.002
BROMODICHLOROMETHANE	*	0.002	1,2-DICHLOROPROPANE	*	0.003
BROMOFORM	*	0.015	CIS-1,3-DICHLOROPROPYLENE	*	0.004
BROMOMETHANE	*	0.010	TRANS-1,3-DICHLOROPROPYLENE	*	0.004
CARBON TETRACHLORIDE	*	0.004	ETHYL BENZENE	*	0.001
CHLOROBENZENE	*	0.001	METHYLENE CHLORIDE	*	0.002
CHLORODIBROMOMETHANE	*	0.003	1,1,2,2-TETRACHLOROETHANE	*	0.002
CHLOROETHANE	*	0.010	TETRACHLOROETHYLENE	*	0.002
2-CHLOROETHYLVINYL ETHER	*	0.010	TOLUENE	*	0.001
CHLOROFORM	*	0.001	1,1,1-TRICHLOROETHANE	*	0.002
CHLOROMETHANE	*	0.010	1,1,2-TRICHLOROETHANE	*	0.003
1,1-DICHLOROETHANE	*	0.002	TRICHLOROETHYLENE	*	0.002
1,2-DICHLOROETHANE	*	0.002	TRICHLOROFLUOROMETHANE	*	0.003
1,1-DICHLOROETHYLENE	*	0.002	VINYL CHLORIDE	*	0.010

### TABLE 1 VOLATILE FRACTION

CLIENT: GMC-CPC DIVISION

DATE SAMPLED: 12/06/85 TIME: 12:10 PM
DATE RECEIVED: 12/09/85 TIME: 7:00 AM
DATE COMPLETED: 12/16/85

PROJECT NO.: 25554 SAMPLE: 85~3

			SAMPLE 1	NO. 5	8326
COMPOUND	RESULT (mg/l )	D.L.		RESULT (mg/l )	D.L.
BENZENE	*	0.001	TRANS-1,2-DICHLOROETHYLENE	*	0.002
BROMODICHLOROMETHANE	*	0.002	1,2-DICHLOROPROPANE	*	0.003
BROMOFORM	*	0.015	CIS-1,3-DICHLOROPROPYLENE	*	0.004
BROMOMETHANE	*	0.010	TRANS-1,3-DICHLOROPROPYLENE	*	0.004
CARBON TETRACHLORIDE	*	0.004	ETHYL BENZENE	*	0.001
CHLOROBENZENE	*	0.001	METHYLENE CHIORIDE	*	0.002
CHLORODIBROMOMETHANE	*	0.003	1,1,2,2-TETRACHLOROETHANE	*	0.002
CHLOROETHANE	*	0.010	TETRACHLOROETHYLENE	*	0.002
2-CHLOROETHYLVINYL ETHER	*	0.010	TOLUENE	0.003	0.001
CHLOROFORM	*	0.001	1,1,1-TRICHLOROETHANE	*	0.002
CHLOROMETHANE	*	0.010	1,1,2-TRICHLOROETHANE	*	0.003
1,1-DICHLOROETHANE	* .	0.002	TRICHLOROETHYLENE	*	0.002
1,2-DICHLOROETHANE	*	0.002	TRICHLOROFLUOROMETHANE	*	0.003
1,1-DICHLOROETHYLENE	*	0.002	VINYL CHLORIDE	*	0.010

#### TABLE 1 VOLATILE FRACTION

CLIENT: GMC-CPC DIVISION

PROJECT NO.: 25554 SAMPLE: 85-4

DATE SAMPLED: 12/06/85 TIME: 10:50 AM

DATE RECEIVED: 12/09/85 TIME: 7:00 AM

DATE COMPLETED: 12/17/85

SAMPLE NO. 58327 RESULT D.L. COMPOUND COMPOUND RESULT D.I. (mq/1)(mq/l)BENZENE * 0.001 TRANS-1,2-DICHLOROETHYLENE * 0.002 BROMODICHLOROMETHANE * 0.002 1,2-DICHLOROPROPANE * 0.003 BROMOFORM * 0.015 CIS-1,3-DICHLOROPROPYLENE * 0.004 BROMOMETHANE * 0.010 TRANS-1,3-DICHLOROPROPYLENE * 0.004 CARBON TETRACHLORIDE 0.004 ETHYL BENZENE 0.001 CHLOROBENZENE 0.001 METHYLENE CHLORIDE 0.002 CHLORODIBROMOMETHANE * 0.003 1,1,2,2-TETRACHLOROETHANE * 0.002 CHLOROETHANE 0.010 TETRACHLOROETHYLENE 0.002 0.002 2-CHLOROETHYLVINYL ETHER * 0.010 TOLUENE 0.001 * CHLOROFORM 0.001 1,1,1-TRICHLOROETHANE 0.005 0.002 CHLOROMETHANE 0.010 1,1,2-TRICHLOROETHANE * 0.003 1,1-DICHLOROETHANE 0.002 0.002 TRICHLOROETHYLENE 0.002 0.002 1.2-DICHLOROETHANE * 0.002 TRICHLOROFLUOROMETHANE 0.003 1,1-DICHLOROETHYLENE * 0.002 VINYL CHLORIDE 0.010

*COMPOUND NOT PRESENT AT DETECTION LIMIT

### TABLE 1 VOLATILE FRACTION

CLIENT: GMC-CPC DIVISION

DATE SAMPLED: 12/06/85 TIME: 11:30 AM DATE RECEIVED: 12/09/85 TIME: 7:00 AM DATE COMPLETED: 12/17/85

PROJECT NO.: 25554

SAMPLE: 85-5B

			SAMPLE	NO.	58328
COMPOUND	RESULT (mg/l)	D.L.		RESULT (mg/l )	
BENZENE	*	0.001	TRANS-1,2-DICHLOROETHYLENE	0.012	0.002
BROMODICHLOROMETHANE	*	0.002	1,2-DICHLOROPROPANE	*	0.003
BROMOFORM	*	0.015	CIS-1,3-DICHLOROPROPYLENE	*	0.004
BROMOMETHANE	*	0.010	TRANS-1,3-DICHLOROPROPYLENE	*	0.004
CARBON TETRACHLORIDE	*	0.004	ETHYL BENZENE	*	0.001
CHLOROBENZENE	*	0.001	METHYLENE CHLORIDE	*	0.002
CHLORODIBROMOMETHANE	*	0.003	1,1,2,2-TETRACHLOROETHANE	*	0.002
CHLOROETHANE	*	0.010	TETRACHLOROETHYLENE	0.002	0.002
2-CHLOROETHYLVINYL ETHER	*	0.010	TOLUENE	*	0.001
CHLOROFORM	*	0.001	1,1,1-TRICHLOROETHANE	0.003	0.002
CHLOROMETHANE	*	0.010	1,1,2-TRICHLOROETHANE	*	0.003
1,1-DICHLOROETHANE	0.006	0.002	TRICHLOROETHYLENE	0.004	0.002
1,2-DICHLOROETHANE	*	0.002	TRICHLOROFLUOROMETHANE	*	0.003
1,1-DICHLOROETHYLENE	*	0.002	VINYL CHLORIDE	*	0.010

### TABLE 1 VOLATILE FRACTION

CLIENT: GMC-CPC DIVISION

PROJECT NO.: 25554

DATE SAMPLED: 12/06/85 TIME: 3:25 PM

DATE RECEIVED: 12/09/85 TIME: 7:00 AM

SAMPLE: 85-6	DATE COMPLETED: 12	2/16/85

			SAMPLE .	NO.	58329
COMPOUND	RESULT (mg/l )	D.L.	COMPOUND	RESULT (mg/l ,	
BENZENE	*	0.001	TRANS-1,2-DICHLOROETHYLENE	*	0.002
BROMODICHLOROMETHANE	· · · * ·	0.002	1,2-DICHLOROPROPANE	*	0.003
BROMOFORM	*	0:015	CIS-1,3-DICHLOROPROPYLENE	*	0.004
BROMOMETHANE	*	0.010	TRANS-1,3-DICHLOROPROPYLENE	. <b>*</b>	0.004
CARBON TETRACHLORIDE	*	0.004	ETHYL BENZENE	*	0.001
CHLOROBENZENE	*	0.001	METHYLENE CHLORIDE	*	0.002
CHLORODIBROMOMETHANE	* * * * * * * * * * * * * * * * * * * *	0.003	1,1,2,2-TETRACHLOROETHANE	* .	0.002
CHLOROETHANE	*	0.010	TETRACHLOROETHYLENE	0.004	0.002
2-CHLOROETHYLVINYL ETHER	*	0.010	TOLUENE	*	0.001
CHLOROFORM	*	0.001	1,1,1-TRICHLOROETHANE	*	0.002
CHLOROMETHANE	*	0.010	1,1,2-TRICHLOROETHANE	*	0.003
1,1-DICHLOROETHANE	*	0.002	TRICHLOROETHYLENE	*	0.002
1,2-DICHLOROETHANE	*	0.002	TRICHLOROFLUOROMETHANE	*	0.003
1,1-DICHLOROETHYLENE	*	0.002	VINYL CHLORIDE	*	0.010
1					

*COMPOUND NOT PRESENT AT DETECTION LIMIT

### TABLE 1 VOLATILE FRACTION

CLIENT: GMC-CPC DIVISION

PROJECT NO.: 25554 SAMPLE: 85-7

DATE SAMPLED: 12/06/85 TIME: 3:10 PM DATE RECEIVED: 12/09/85 TIME: 7:00 AM

DATE COMPLETED: 12/16/85

*			SAMPLE .	NO.	58330
COMPOUND	RESULT (mg/l )	D.L.		RESULT (mg/l	
BENZENE	*	0.001	TRANS-1,2-DICHLOROETHYLENE	0.004	0.002
BROMODICHLOROMETHANE	*	0.002	1,2-DICHLOROPROPANE	*	0.003
BROMOFORM	*	0.015	CIS-1,3-DICHLOROPROPYLENE	*	0.004
BROMOMETHANE	*	0.010	TRANS-1,3-DICHLOROPROPYLENE	*	0.004
CARBON TETRACHLORIDE	*	0.004	ETHYL BENZENE	*	0.001
CHLOROBENZENE	*	0.001	METHYLENE CHLORIDE	*	0.002
CHLORODIBROMOMETHANE	*	0.003	1,1,2,2-TETRACHLOROETHANE	*	0.002
CHLOROETHANE	*	0.010	TETRACHLOROETHYLENE	*	0.002
2-CHLOROETHYLVINYL ETHER	*	0.010	TOLUENE	*	0.001
CHLOROFORM	*	0.001	1,1,1-TRICHLOROETHANE	*	0.002
CHLOROMETHANE	*	0.010	1,1,2-TRICHLOROETHANE	*	0.003
1,1-DICHLOROETHANE	* .	0.002	TRICHLOROETHYLENE	0.084	0.002
1,2-DICHLOROETHANE	*	0.002	TRICHLOROFLUOROMETHANE	*	0.003
1,1-DICHLOROETHYLENE	*	0.002	VINYL CHLORIDE	*	0.010

### APPENDIX C

ANALYTICAL RESULTS FOR
BASE NEUTRAL ORGANIC COMPOUNDS

## TABLE 2 BASE-NEUTRAL FRACTION

CLIENT: GMC-CPC DIVISION DATE SAMPLED: 12/06/85 TIME: 2:30 PM PROJECT NO.: 25554 DATE RECEIVED: 120985 TIME: 7:00 AM

SAMPLE: 85-1 DATE COMPLETED: 12/19/85

SAMPLE NO. 58324

COMPOUND	RESULT (mg/l )	D.L.	COMPOUND	RESULT	D.L.
ACENAPHTHENE	(11G/1 ) *	0 002	3,3'-DICHLOROBENZIDINE	(mg/1)	2 222
ACENAPHTHYLENE	*		DIETHYL PHTHALATE	*	0.020
ANTHRACENE	*		DIEINIL PHINALAIE DIMETHYL PHTHALATE	*	0.002
BENZIDINE	*			*	0.002
BENZO (A) ANTHRACENE	*		2,4-DINITROTOLUENE	*	0.010
BENZO (K) FLUORANTHENE	*		2,6-DINITROTOLUENE	*	0.009
( ) = =================================	^ *		DI-N-OCTYLPHTHALATE	*	0.002
, - /			1,2-DIPHENYLHYDRAZINE	*	0.001
BENZO (G,H,I) PERYLENE	*		FLUORANTHENE	*	0.001
BIS-(2-CHLOROETHYL) ETHER	*		FLUORENE	*	0.002
BIS (2-CHLOROETHOXY) METHANE			HEXACHLOROBENZENE	*	0.005
BIS(2-CHLOROISOPROPYL)-	*	0.001	HEXACHLOROBUTADIENE	*	0.005
ETHER					
BIS-(2-ETHYL HEXYL)-	*	0.002	HEXACHLOROETHANE	*	0.007
PHTHALATE					
4-BROMOPHENYL PHENYL ETHER	*	0.007	HEXACHLOROCYCLOPENTADIENE	*	0.005
BUTYL BENZYL PHTHALATE	*	0.003	INDENO (1,2,3-CD) PYRENE	*	0.010
2-CHLORONAPTHALENE	*	0.002	ISOPHORONE	*	0.002
4-CHLOROPHENYL PHENYL ETHER	*	0.003	NAPHTHALENE	*	0.001
CHRYSENE	*	0.005	NITROBENZENE	*	0.004
DIBENZO (A,H) ANTHRACENE	*	0.010	N-NITROSODI-N-PROPYLAMINE	*	0.004
DI-N-BUTYL PHTHALATE	*	0.001	N-NITROSODIPHENYLAMINE	*	0.003
1,2-DICHLOROBENZENE	*		PHENANTHRENE	*	0.001
1,3-DICHLOROBENZENE	*		PYRENE	*	0.001
1,4-DICHLOROBENZENE	*		1,2,4-TRICHLOROBENZENE	*	0.003

*COMPOUND NOT PRESENT AT DETECTION LIMIT

### TABLE 2 BASE-NEUTRAL FRACTION

CLIENT: GMC-CPC DIVISION

PROJECT NO.: 25554

SAMPLE: 85-2

 DATE SAMPLED:
 12/06/85
 TIME: 2:50 PM

 DATE RECEIVED:
 120985
 TIME: 7:00 AM

DATE COMPLETED: 12/20/85

ACENAPHTHENE
ACENAPHTHYLENE
ANTHRACENE
BENZIDINE       * 0.050 2,4-DINITROTOLUENE       * 0.010         BENZO (A) ANTHRACENE       * 0.005 2,6-DINITROTOLUENE       * 0.009         BENZO (K) FLUORANTHENE       * 0.005 DI-N-OCTYLPHTHALATE       * 0.002         BENZO (A) PYRENE       * 0.005 1,2-DIPHENYLHYDRAZINE       * 0.001         BENZO (G,H,I) PERYLENE       * 0.010 FLUORANTHENE       * 0.001         BIS-(2-CHLOROETHYL) ETHER       * 0.004 FLUORENE       * 0.002         BIS (2-CHLOROETHOXY) METHANE       * 0.004 HEXACHLOROBUTADIENE       * 0.005         BIS (2-CHLOROISOPROPYL) -       * 0.001 HEXACHLOROBUTADIENE       * 0.005         BIS (2-ETHYL HEXYL) -       * 0.002 HEXACHLOROETHANE       * 0.007         PHTHALATE       * 0.007 HEXACHLOROCYCLOPENTADIENE       * 0.005         BUTYL BENZYL PHTHALATE       * 0.003 INDENO (1,2,3-CD) PYRENE       * 0.010
BENZO (A) ANTHRACENE       * 0.005 2,6-DINITROTOLUENE       * 0.009         BENZO (K) FLUORANTHENE       * 0.005 DI-N-OCTYLPHTHALATE       * 0.002         BENZO (A) PYRENE       * 0.005 1,2-DIPHENYLHYDRAZINE       * 0.001         BENZO (G,H,I) PERYLENE       * 0.010 FLUORANTHENE       * 0.001         BIS-(2-CHLOROETHYL) ETHER       * 0.004 FLUORENE       * 0.002         BIS (2-CHLOROETHOXY) METHANE       * 0.004 HEXACHLOROBENZENE       * 0.005         BIS (2-CHLOROISOPROPYL) - * 0.001 HEXACHLOROBUTADIENE       * 0.005         ETHER       * 0.002 HEXACHLOROETHANE       * 0.007         PHTHALATE       * 0.007 HEXACHLOROCYCLOPENTADIENE       * 0.005         BUTYL BENZYL PHTHALATE       * 0.003 INDENO (1,2,3-CD) PYRENE       * 0.010
BENZO (K) FLUORANTHENE       * 0.005 DI-N-OCTYLPHTHALATE       * 0.002         BENZO (A) PYRENE       * 0.005 1,2-DIPHENYLHYDRAZINE       * 0.001         BENZO (G,H,I) PERYLENE       * 0.010 FLUORANTHENE       * 0.001         BIS-(2-CHLOROETHYL) ETHER       * 0.004 FLUORENE       * 0.002         BIS (2-CHLOROETHOXY) METHANE       * 0.004 HEXACHLOROBENZENE       * 0.005         BIS (2-CHLOROISOPROPYL) - * 0.001 HEXACHLOROBUTADIENE       * 0.005         ETHER       * 0.002 HEXACHLOROETHANE       * 0.007         PHTHALATE       * 0.007 HEXACHLOROCYCLOPENTADIENE       * 0.005         BUTYL BENZYL PHTHALATE       * 0.003 INDENO (1,2,3-CD) PYRENE       * 0.010
BENZO (A) PYRENE       * 0.005 1,2-DIPHENYLHYDRAZINE       * 0.001         BENZO (G,H,I) PERYLENE       * 0.010 FLUORANTHENE       * 0.001         BIS-(2-CHLOROETHYL) ETHER       * 0.004 FLUORENE       * 0.002         BIS (2-CHLOROETHOXY) METHANE       * 0.004 HEXACHLOROBENZENE       * 0.005         BIS (2-CHLOROISOPROPYL) - * 0.001 HEXACHLOROBUTADIENE       * 0.005         ETHER       * 0.002 HEXACHLOROETHANE       * 0.007         PHTHALATE       * 0.007 HEXACHLOROCYCLOPENTADIENE       * 0.005         BUTYL BENZYL PHTHALATE       * 0.003 INDENO (1,2,3-CD) PYRENE       * 0.010
BENZO (G,H,I) PERYLENE       * 0.010 FLUORANTHENE       * 0.001         BIS-(2-CHLOROETHYL) ETHER       * 0.004 FLUORENE       * 0.002         BIS(2-CHLOROETHOXY) METHANE       * 0.004 HEXACHLOROBENZENE       * 0.005         BIS(2-CHLOROISOPROPYL) - * 0.001 HEXACHLOROBUTADIENE       * 0.005         ETHER       * 0.002 HEXACHLOROETHANE       * 0.007         PHTHALATE       * 0.007 HEXACHLOROCYCLOPENTADIENE       * 0.005         BUTYL BENZYL PHTHALATE       * 0.003 INDENO (1,2,3-CD) PYRENE       * 0.010
BIS-(2-CHLOROETHYL) ETHER       * 0.004 FLUORENE       * 0.002         BIS(2-CHLOROETHOXY) METHANE       * 0.004 HEXACHLOROBENZENE       * 0.005         BIS(2-CHLOROISOPROPYL) - * 0.001 HEXACHLOROBUTADIENE       * 0.005         ETHER       * 0.002 HEXACHLOROETHANE       * 0.007         PHTHALATE       * 0.007 HEXACHLOROCYCLOPENTADIENE       * 0.005         BUTYL BENZYL PHTHALATE       * 0.003 INDENO (1,2,3-CD) PYRENE       * 0.010
BIS (2-CHLOROETHOXY) METHANE       * 0.004 HEXACHLOROBENZENE       * 0.005         BIS (2-CHLOROISOPROPYL) - * 0.001 HEXACHLOROBUTADIENE       * 0.005         ETHER       * 0.002 HEXACHLOROETHANE       * 0.007         PHTHALATE       * 0.007 HEXACHLOROCYCLOPENTADIENE       * 0.005         BUTYL BENZYL PHTHALATE       * 0.003 INDENO (1,2,3-CD) PYRENE       * 0.010
BIS (2-CHLOROISOPROPYL) - * 0.001 HEXACHLOROBUTADIENE * 0.005  ETHER  BIS-(2-ETHYL HEXYL) - * 0.002 HEXACHLOROETHANE * 0.007  PHTHALATE * 0.007 HEXACHLOROCYCLOPENTADIENE * 0.005  BUTYL BENZYL PHTHALATE * 0.003 INDENO (1,2,3-CD) PYRENE * 0.010
ETHER  BIS-(2-ETHYL HEXYL)- * 0.002 HEXACHLOROETHANE * 0.007  PHTHALATE  4-BROMOPHENYL PHENYL ETHER * 0.007 HEXACHLOROCYCLOPENTADIENE * 0.005  BUTYL BENZYL PHTHALATE * 0.003 INDENO (1,2,3-CD) PYRENE * 0.010
BIS-(2-ETHYL HEXYL)- * 0.002 HEXACHIOROETHANE * 0.007 PHTHALATE  4-BROMOPHENYL PHENYL ETHER * 0.007 HEXACHIOROCYCLOPENTADIENE * 0.005 BUTYL BENZYL PHTHALATE * 0.003 INDENO (1,2,3-CD) PYRENE * 0.010
PHTHALATE  4-BROMOPHENYL PHENYL ETHER * 0.007 HEXACHLOROCYCLOPENTADIENE * 0.005  BUTYL BENZYL PHTHALATE * 0.003 INDENO (1,2,3-CD) PYRENE * 0.010
4-BROMOPHENYL PHENYL ETHER * 0.007 HEXACHLOROCYCLOPENTADIENE * 0.005 BUTYL BENZYL PHTHALATE * 0.003 INDENO (1,2,3-CD) PYRENE * 0.010
BUTYL BENZYL PHTHALATE * 0.003 INDENO (1,2,3-CD) PYRENE * 0.010
0.010
2-CHLORONAPTHALENE * 0.002 ISOPHORONE * 0.002
4-CHLOROPHENYL PHENYL ETHER * 0.003 NAPHTHALENE * 0.001
CHRYSENE * 0.005 NITROBENZENE * 0.004
DIBENZO (A,H) ANTHRACENE * 0.010 N-NITROSODI-N-PROPYLAMINE * 0.004
DI-N-BUTYL PHTHALATE * 0.001 N-NITROSODIPHENYLAMINE * 0.003
1,2-DICHLOROBENZENE * 0.003 PHENANTHRENE * 0.001
1,3-DICHLOROBENZENE * 0.003 PYRENE * 0.001
1,4-DICHLOROBENZENE * 0.003 1,2,4-TRICHLOROBENZENE * 0.003

^{*}COMPOUND NOT PRESENT AT DETECTION LIMIT

#### TABLE 2 BASE-NEUTRAL FRACTION

CLIENT: GMC-CPC DIVISION

SAMPLE: 85-3

PROJECT NO.: 25554

DATE SAMPLED: 12/06/85 TIME: 12:10 PM DATE RECEIVED: 120985 TIME: 7:00 AM

DATE COMPLETED: 12/23/85

SAMPLE NO. 58326

COMPOUND	RESULT	D.L.	COMPOUND	RESULT	D.L.
	(mg/1)			(mg/l)	
ACENAPHTHENE	*	0.20	3,3'-DICHLOROBENZIDINE	*	2.0
ACENAPHTHYLENE	*	0.10	DIETHYL PHTHALATE	*	0.20
ANTHRACENE	*	0.10	DIMETHYL PHTHALATE	*	0.20
BENZIDINE	*	5.0	2,4-DINITROTOLUENE	*	1.0
BENZO (A) ANTHRACENE	* <b>*</b>	0.50	2,6-DINITROTOLUENE	*	0.90
BENZO (K) FLUORANTHENE	* .	0.50	DI-N-OCTYLPHTHALATE	*	0.20
BENZO (A) PYRENE	<b>*</b> .	0.50	1,2-DIPHENYLHYDRAZINE	*	0.10
BENZO $(G,H,I)$ $PERYLENE$	*	1.0	FLUORANTHENE	0.46	0.10
BIS-(2-CHLOROETHYL) ETHER		0.40	FLUORENE	3.2	0.20
BIS(2-CHLOROETHOXY) METHANE	' *	0.40	HEXACHLOROBENZENE	*	0.50
BIS(2-CHLOROISOPROPYL)-	*	0.10	HEXACHLOROBUTADIENE	*	0.50
ETHER					
BIS-(2-ETHYL HEXYL)-	*	0.20	HEXACHLOROETHANE	*	0.70
PHTHALATE					
4-BROMOPHENYL PHENYL ETHER	*	0.70	HEXACHLOROCYCLOPENTADIENE	*	0.50
BUTYL BENZYL PHTHALATE	*	0.30	INDENO (1,2,3-CD) PYRENE	*	1.0
2-CHLORONAPTHALENE	*	0.20	ISOPHORONE	*	0.20
4-CHLOROPHENYL PHENYL ETHER	*	0.30	NAPHTHALENE	0.17	0.10
CHRYSENE	*	0.50	NITROBENZENE	*	0.40
DIBENZO (A,H) ANTHRACENE	*	1.0	N-NITROSODI-N-PROPYLAMINE	*	0.004
DI-N-BUTYL PHTHALATE	*	0.10	N-NITROSODIPHENYLAMINE	*	0.40
1,2-DICHLOROBENZENE	*	0.30	PHENANTHRENE	2.8	0.10
1,3-DICHLOROBENZENE	*	0.30	PYRENE	0.56	0.10
<i>1,4-DICHLOROBENZENE</i>	*	0.30	<i>1,2,4-TRICHLOROBENZENE</i>	*	0.30

*COMPOUND NOT PRESENT AT DETECTION LIMIT

### TABLE 2 BASE-NEUTRAL FRACTION

CLIENT: GMC-CPC DIVISION

PROJECT NO.: 25554

SAMPLE: 85-4

DATE SAMPLED: 12/06/85 TIME: 10:50 AM DATE RECEIVED: 120985 TIME: 7:00 AM

DATE COMPLETED: 12/19/85

COMPOUND	RESULT	D.L.	COMPOUND	RESULT	D.L.
	(mg/l)			(mg/1)	
ACENAPHTHENE	*		3,3'-DICHLOROBENZIDINE	*	0.020
ACENAPHTHYLENE	*	0.001	DIETHYL PHTHALATE	*	0.002
ANTHRACENE	*	0.001	DIMETHYL PHTHALATE	*	0.002
BENZIDINE	*	0.050	2,4-DINITROTOLUENE	*	0.010
BENZO (A) ANTHRACENE	*	0.005	2,6-DINITROTOLUENE	*	0.009
BENZO (K) FLUORANTHENE	*	0.005	DI-N-OCTYLPHTHALATE	*	0.002
BENZO (A) PYRENE	*	0.005	1,2-DIPHENYLHYDRAZINE	*	0.001
BENZO $(G,H,I)$ $PERYLENE$	*	0.010	FLUORANTHENE	0.004	0.001
BIS-(2-CHLOROETHYL) ETHER	*	0.004	FLUORENE	*	0.002
BIS (2-CHLOROETHOXY) METHANE	; *	0.004	HEXACHLOROBENZENE	*	0.005
BIS(2-CHLOROISOPROPYL)-	*	0.001	HEXACHLOROBUTADIENE	*	0.005
ETHER					
BIS-(2-ETHYL HEXYL)-	0.002	0.002	HEXACHLOROETHANE	*	0.007
PHTHALATE					
4-BROMOPHENYL PHENYL ETHER	*	0.007	HEXACHLOROCYCLOPENTADIENE	*	0.005
BUTYL BENZYL PHTHALATE	*	0.003	INDENO (1,2,3-CD) PYRENE	*	0.010
2-CHLORONAPTHALENE	*		ISOPHORONE	*	0.002
4-CHLOROPHENYL PHENYL ETHER	? <b>*</b>	0.003	NAPHTHALENE	*	0.001
CHRYSENE	*		NITROBENZENE	*	0.004
DIBENZO (A,H) ANTHRACENE	*		N-NITROSODI-N-PROPYLAMINE	*	0.004
DI-N-BUTYL PHTHALATE	0.007		N-NITROSODIPHENYLAMINE	*	0.003
1,2-DICHLOROBENZENE	*		PHENANTHRENE	0.010	0.001
1,3-DICHLOROBENZENE	*	0.003	PYRENE	0.003	0.001
1,4-DICHLOROBENZENE	*		1,2,4-TRICHLOROBENZENE	*	0.003
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^{*}COMPOUND NOT PRESENT AT DETECTION LIMIT

### TABLE 2 BASE-NEUTRAL FRACTION

CLIENT: GMC-CPC DIVISION

PROJECT NO.: 25554

SAMPLE: 85-5B

DATE SAMPLED: 12/06/85 TIME: 11:30 AM DATE RECEIVED: 120985 TIME: 7:00 AM

DATE COMPLETED: 12/19/85

COMPOUND	RESULT	D.L.	COMPOUND	RESULT	D.L.
	(mg/1)			(mg/l)	
ACENAPHTHENE	*	0.002	3,3'-DICHLOROBENZIDINE	*	0.020
ACENAPHTHYLENE	*	0.001	DIETHYL PHTHALATE	*	0.002
ANTHRACENE	*	0.001	DIMETHYL PHTHALATE	*	0.002
BENZIDINE	*	0.050	2,4-DINITROTOLUENE	*	0.010
BENZO (A) ANTHRACENE	*	0.005	2,6-DINITROTOLUENE	*	0.009
BENZO (K) FLUORANTHENE	*	0.005	DI <b>-</b> N-OCTYLPHTHALATE	*	0.002
BENZO (A) PYRENE	*	0.005	1,2-DIPHENYLHYDRAZINE	*	0.001
BENZO $(G,H,I)$ $PERYLENE$	*	0.010	FLUORANTHENE	*	0.001
BIS-(2-CHLOROETHYL) ETHER	*	0.004	FLUORENE	0.004	0.002
BIS (2-CHLOROETHOXY) METHANE	*	0.004	HEXACHLOROBENZENE	*	0.005
BIS(2-CHLOROISOPROPYL)-	*	0.001	HEXACHLOROBUTADIENE	*	0.005
ETHER					
BIS-(2-ETHYL HEXYL)-	*	0.002	HEXACHLOROETHANE	*	0.007
PHTHALATE					
4-BROMOPHENYL PHENYL ETHER	*	0.007	HEXACHLOROCYCLOPENTADIENE	*	0.005
BUTYL BENZYL PHTHALATE	*	0.003	INDENO (1,2,3-CD) PYRENE	*	0.010
2-CHLORONAPTHALENE	*	0.002	ISOPHORONE	*	0.002
4-CHLOROPHENYL PHENYL ETHER	*	0.003	NAPHTHALENE	*	0.001
CHRYSENE	*	0.005	NITROBENZENE	*	0.004
DIBENZO (A,H) ANTHRACENE	*	0.010	N-NITROSODI-N-PROPYLAMINE	*	0.004
DI-N-BUTYL PHTHALATE	*	0.001	N-NITROSODIPHENYLAMINE	*	0.003
1,2-DICHLOROBENZENE	*		PHENANTHRENE	0.003	0.001
<i>1,3-DICHLOROBENZENE</i>	*	0.003	PYRENE	0.005	0.001
<i>1,4-DICHLOROBENZENE</i>	*	0.003	1,2,4-TRICHLOROBENZENE	*	0.003

^{*}COMPOUND NOT PRESENT AT DETECTION LIMIT *COMPOUND NOT PRESENT AT DETECTION LIMIT

### TABLE 2 BASE-NEUTRAL FRACTION

CLIENT: GMC-CPC DIVISION

PROJECT NO.: 25554

SAMPLE: 85-6

 DATE SAMPLED:
 12/06/85
 TIME: 3:25 PM

 DATE RECEIVED:
 120985
 TIME: 7:00 AM

DATE COMPLETED: 12/19/85

ACENAPHTHENE	COMPOUND	RESULT (mg/l )	D.L.	COMPOUND	RESULT (mg/l )	D.L.
ACEMAPHTHYLENE	ACENAPHTHENE		0.002	3,3'-DICHLOROBENZIDINE		0.020
## ## ## ## ## ## ## ## ## ## ## ## ##	ACENAPHTHYLENE	*			*	
BENZIDINE         * 0.050 2,4-DINITROTOLUENE         * 0.010           BENZO (A) ANTHRACENE         * 0.005 2,6-DINITROTOLUENE         * 0.009           BENZO (K) FLUORANTHENE         * 0.005 DI-N-OCTYLPHTHALATE         * 0.002           BENZO (A) PYRENE         * 0.005 DI-N-OCTYLPHTHALATE         * 0.001           BENZO (G, H, I) PERYLENE         * 0.005 I,2-DIPHENYLHYDRAZINE         * 0.001           BENZO (G,H,I) PERYLENE         * 0.004 FLUORANTHENE         * 0.001           BIS-(2-CHLOROETHYL) ETHER         * 0.004 FLUORENE         * 0.002           BIS (2-CHLOROETHOXY) METHANE         * 0.004 FLUORENE         * 0.005           BIS (2-CHLOROISOPROPYL) - * 0.001 HEXACHLOROBUTADIENE         * 0.005           BIS - (2-ETHYL HEXYL) - PHTHALATE         * 0.002 HEXACHLOROETHANE         * 0.007           BIS - (2-ETHYL HEXYL) - PHTHALATE         * 0.007 HEXACHLOROCYCLOPENTADIENE         * 0.007           BUTYL BENZYL PHTHALATE         * 0.003 INDENO (1,2,3-CD) PYRENE         * 0.005           BUTYL BENZYL PHTHALATE         * 0.003 INDENO (1,2,3-CD) PYRENE         * 0.002           4-CHLOROPHENYL PHENYL ETHER         * 0.003 INDENO (1,2,3-CD) PYRENE         * 0.002           4-CHLOROPHENYL PHENYL ETHER         * 0.003 NAPHTHALENE         * 0.004           CHYSENE         * 0.005 NITROBENZENE         * 0.004	ANTHRACENE	*			*	
BENZO (A) ANTHRACENE       * 0.005 2,6-DINITROTOLUENE       * 0.009         BENZO (K) FLUORANTHENE       * 0.005 DI-N-OCTYLPHTHALATE       * 0.002         BENZO (A) PYRENE       * 0.005 1,2-DIPHENYLHYDRAZINE       * 0.001         BENZO (G,H,I) PERYLENE       * 0.010 FLUORANTHENE       * 0.001         BIS-(2-CHLOROETHYL) ETHER       * 0.004 FLUORENE       * 0.002         BIS (2-CHLOROETHOXY) METHANE       * 0.004 HEXACHLOROBENZENE       * 0.005         BIS (2-CHLOROISOPROPYL) - * 0.001 HEXACHLOROBUTADIENE       * 0.005         ETHER       * 0.002 HEXACHLOROETHANE       * 0.007         BIS-(2-ETHYL HEXYL) - PHTHALATE       * 0.002 HEXACHLOROCYCLOPENTADIENE       * 0.005         BUTYL BENZYL PHTHALATE       * 0.003 INDENO (1,2,3-CD) PYRENE       * 0.005         BUTYL BENZYL PHTHALATE       * 0.002 ISOPHORONE       * 0.002         4-CHLOROPHENYL PHENYL ETHER       * 0.003 INDENO (1,2,3-CD) PYRENE       * 0.002         4-CHLOROPHENYL PHENYL ETHER       * 0.003 NAPHTHALENE       * 0.001         CHRYSENE       * 0.005 NITROBENZENE       * 0.004         DIBENZO (A, H) ANTHRACENE       * 0.001 N-NITROSODI-N-PROPYLAMINE       * 0.003         1, 2-DICHLOROBENZENE       * 0.003 PHENANTHRENE       * 0.001         1, 4-DICHLOROBENZENE       * 0.003 PYRENE       * 0.001	BENZIDINE	*			*	
BENZO (K) FLUORANTHENE         * 0.005 DI-N-OCTYLPHTHALATE         * 0.002           BENZO (A) PYRENE         * 0.005 1,2-DIPHENYLHYDRAZINE         * 0.001           BENZO (G,H,I) PERYLENE         * 0.010 FLUORANTHENE         * 0.001           BIS-(2-CHLOROETHYL) ETHER         * 0.004 FLUORENE         * 0.002           BIS (2-CHLOROETHOXY) METHANE         * 0.004 HEXACHLOROBENZENE         * 0.005           BIS (2-CHLOROISOPROPYL) -         * 0.001 HEXACHLOROBUTADIENE         * 0.005           BIS (2-ETHYL HEXYL) -         * 0.002 HEXACHLOROETHANE         * 0.007           PHTHALATE         * 0.002 HEXACHLOROCYCLOPENTADIENE         * 0.005           BUTYL BENZYL PHTHALATE         * 0.003 INDENO (1,2,3-CD) PYRENE         * 0.005           BUTYL BENZYL PHTHALATE         * 0.002 ISOPHORONE         * 0.002           4-CHLOROPHENYL PHENYL ETHER         * 0.003 INDENO (1,2,3-CD) PYRENE         * 0.002           4-CHLOROPHENYL PHENYL ETHER         * 0.003 NAPHTHALENE         * 0.004           CHRYSENE         * 0.005 NITROBENZENE         * 0.004           DI-N-BUTYL PHTHALATE         * 0.001 N-NITROSODI-N-PROPYLAMINE         * 0.003           1,2-DICHLOROBENZENE         * 0.003 PHENANTHRENE         * 0.001           1,3-DICHLOROBENZENE         * 0.003 PYRENE         * 0.001	BENZO (A) ANTHRACENE	*		•	*	
BENZO (A) PYRENE       * 0.005 1,2-DIPHENYLHYDRAZINE       * 0.001         BENZO (G,H,I) PERYLENE       * 0.010 FLUORANTHENE       * 0.001         BIS-(2-CHLOROETHYL) ETHER       * 0.004 FLUORENE       * 0.002         BIS (2-CHLOROETHOXY) METHANE       * 0.004 HEXACHLOROBENZENE       * 0.005         BIS (2-CHLOROISOPROPYL) -       * 0.001 HEXACHLOROBUTADIENE       * 0.005         ETHER       * 0.002 HEXACHLOROETHANE       * 0.007         BIS-(2-ETHYL HEXYL) -       * 0.002 HEXACHLOROCYCLOPENTADIENE       * 0.007         PHTHALATE       * 0.003 INDENO (1,2,3-CD) PYRENE       * 0.010         2-CHLORONAPTHALENE       * 0.002 ISOPHORONE       * 0.002         4-CHLOROPHENYL PHENYL ETHER       * 0.003 NAPHTHALENE       * 0.001         CHRYSENE       * 0.005 NITROBENZENE       * 0.004         DIBENZO (A,H) ANTHRACENE       * 0.010 N-NITROSODI-N-PROPYLAMINE       * 0.004         DI-N-BUTYL PHTHALATE       * 0.001 N-NITROSODI-N-PROPYLAMINE       * 0.003         1,2-DICHLOROBENZENE       * 0.003 PHENANTHRENE       * 0.001         1,3-DICHLOROBENZENE       * 0.003 PYRENE       * 0.001	BENZO (K) FLUORANTHENE	· *			*	
BENZO (G,H,I) PERYLENE		*			*	
BIS-(2-CHIOROETHYL)       ETHER       * 0.004       FLUORENE       * 0.002         BIS(2-CHIOROETHOXY)       METHANE       * 0.004       HEXACHIOROBENZENE       * 0.005         BIS(2-CHIOROISOPROPYL)       * 0.001       HEXACHIOROBUTADIENE       * 0.005         ETHER       * 0.002       HEXACHIOROETHANE       * 0.007         BIS-(2-ETHYL HEXYL)       * 0.002       HEXACHIOROETHANE       * 0.007         PHTHALATE       * 0.007       HEXACHIOROCYCLOPENTADIENE       * 0.005         BUTYL BENZYL PHTHALATE       * 0.003       INDENO (1,2,3-CD) PYRENE       * 0.010         2-CHIORONAPTHALENE       * 0.002       ISOPHORONE       * 0.002         4-CHIOROPHENYL PHENYL ETHER       * 0.003       NAPHTHALENE       * 0.001         CHRYSENE       * 0.005       NITROBENZENE       * 0.004         DIBENZO (A, H) ANTHRACENE       * 0.005       NITROSODI-N-PROPYLAMINE       * 0.004         DI-N-BUTYL PHTHALATE       * 0.001       N-NITROSODI-N-PROPYLAMINE       * 0.003         1,2-DICHIOROBENZENE       * 0.003       PHENANTHRENE       * 0.001         1,3-DICHIOROBENZENE       * 0.003       PYRENE       * 0.001	BENZO $(G,H,I)$ $PERYLENE$	*			*	
BIS (2-CHLOROETHOXY) METHANE		*	0.004	FLUORENE	*	
## 0.001 HEXACHIOROBUTADIENE ## 0.005  ETHER  ## 0.002 HEXACHIOROETHANE ## 0.007  PHTHALATE ## 0.007 HEXACHIOROCYCIOPENTADIENE ## 0.005  BUTYL BENZYL PHENYL ETHER ## 0.003 INDENO (1,2,3-CD) PYRENE ## 0.010  2-CHIORONAPTHALENE ## 0.002 ISOPHORONE ## 0.002  4-CHIOROPHENYL PHENYL ETHER ## 0.003 NAPHTHALENE ## 0.001  CHRYSENE ## 0.005 NITROBENZENE ## 0.004  DIBENZO (A, H) ANTHRACENE ## 0.010 N-NITROSODI-N-PROPYLAMINE ## 0.004  DI-N-BUTYL PHTHALATE ## 0.001 N-NITROSODIPHENYLAMINE ## 0.003  1,2-DICHLOROBENZENE ## 0.003 PYRENE ## 0.001  1,3-DICHLOROBENZENE ## 0.003 PYRENE ## 0.001	BIS(2-CHLOROETHOXY) METHANE	? *	0.004	HEXACHLOROBENZENE	*	
ETHER  BIS-(2-ETHYL HEXYL)-	BIS(2-CHLOROISOPROPYL)-	*	0.001	HEXACHLOROBUTADIENE	*	
PHTHALATE           4-BROMOPHENYL PHENYL ETHER         * 0.007 HEXACHLOROCYCLOPENTADIENE         * 0.005           BUTYL BENZYL PHTHALATE         * 0.003 INDENO (1,2,3-CD) PYRENE         * 0.010           2-CHLORONAPTHALENE         * 0.002 ISOPHORONE         * 0.002           4-CHLOROPHENYL PHENYL ETHER         * 0.003 NAPHTHALENE         * 0.001           CHRYSENE         * 0.005 NITROBENZENE         * 0.004           DIBENZO (A, H) ANTHRACENE         * 0.010 N-NITROSODI-N-PROPYLAMINE         * 0.004           DI-N-BUTYL PHTHALATE         * 0.001 N-NITROSODIPHENYLAMINE         * 0.003           1,2-DICHLOROBENZENE         * 0.003 PHENANTHRENE         * 0.001           1,3-DICHLOROBENZENE         * 0.003 PYRENE         * 0.001	ETHER					
### PHTHALATE  4-BROMOPHENYL PHENYL ETHER	BIS-(2-ETHYL HEXYL)-	*	0.002	HEXACHLOROETHANE	*	0.007
BUTYL BENZYL PHTHALATE       * 0.003 INDENO (1,2,3-CD) PYRENE       * 0.010         2-CHIORONAPTHALENE       * 0.002 ISOPHORONE       * 0.002         4-CHIOROPHENYL PHENYL ETHER       * 0.003 NAPHTHALENE       * 0.001         CHRYSENE       * 0.005 NITROBENZENE       * 0.004         DIBENZO (A, H) ANTHRACENE       * 0.010 N-NITROSODI-N-PROPYLAMINE       * 0.004         DI-N-BUTYL PHTHALATE       * 0.001 N-NITROSODIPHENYLAMINE       * 0.003         1,2-DICHLOROBENZENE       * 0.003 PHENANTHRENE       * 0.001         1,3-DICHLOROBENZENE       * 0.003 PYRENE       * 0.001						7,7,7,1
BUTYL BENZYL PHTHALATE       * 0.003 INDENO (1,2,3-CD) PYRENE       * 0.010         2-CHIORONAPTHALENE       * 0.002 ISOPHORONE       * 0.002         4-CHIOROPHENYL PHENYL ETHER       * 0.003 NAPHTHALENE       * 0.001         CHRYSENE       * 0.005 NITROBENZENE       * 0.004         DIBENZO (A, H) ANTHRACENE       * 0.010 N-NITROSODI-N-PROPYLAMINE       * 0.004         DI-N-BUTYL PHTHALATE       * 0.001 N-NITROSODIPHENYLAMINE       * 0.003         1,2-DICHLOROBENZENE       * 0.003 PHENANTHRENE       * 0.001         1,3-DICHLOROBENZENE       * 0.003 PYRENE       * 0.001		*	0.007	HEXACHLOROCYCLOPENTADIENE	*	0.005
2-CHIORONAPTHALENE       * 0.002 ISOPHORONE       * 0.002         4-CHIOROPHENYL PHENYL ETHER       * 0.003 NAPHTHALENE       * 0.001         CHRYSENE       * 0.005 NITROBENZENE       * 0.004         DIBENZO (A, H) ANTHRACENE       * 0.010 N-NITROSODI-N-PROPYLAMINE       * 0.004         DI-N-BUTYL PHTHALATE       * 0.001 N-NITROSODIPHENYLAMINE       * 0.003         1,2-DICHLOROBENZENE       * 0.003 PHENANTHRENE       * 0.001         1,3-DICHLOROBENZENE       * 0.003 PYRENE       * 0.001		*	0.003	INDENO (1,2,3-CD) PYRENE	*	
4-CHLOROPHENYL PHENYL ETHER       * 0.003 NAPHTHALENE       * 0.001         CHRYSENE       * 0.005 NITROBENZENE       * 0.004         DIBENZO (A, H) ANTHRACENE       * 0.010 N-NITROSODI-N-PROPYLAMINE       * 0.004         DI-N-BUTYL PHTHALATE       * 0.001 N-NITROSODIPHENYLAMINE       * 0.003         1,2-DICHLOROBENZENE       * 0.003 PHENANTHRENE       * 0.001         1,3-DICHLOROBENZENE       * 0.003 PYRENE       * 0.001			0.002		*	
CHRYSENE       * 0.005 NITROBENZENE       * 0.004         DIBENZO (A, H) ANTHRACENE       * 0.010 N-NITROSODI-N-PROPYLAMINE       * 0.004         DI-N-BUTYL PHTHALATE       * 0.001 N-NITROSODIPHENYLAMINE       * 0.003         1,2-DICHLOROBENZENE       * 0.003 PHENANTHRENE       * 0.001         1,3-DICHLOROBENZENE       * 0.003 PYRENE       * 0.001		*	0.003	NAPHTHALENE	*	
DIBENZO (A, H) ANTHRACENE       * 0.010 N-NITROSODI-N-PROPYLAMINE       * 0.004         DI-N-BUTYL PHTHALATE       * 0.001 N-NITROSODIPHENYLAMINE       * 0.003         1,2-DICHLOROBENZENE       * 0.003 PHENANTHRENE       * 0.001         1,3-DICHLOROBENZENE       * 0.003 PYRENE       * 0.001         1,4-DICHLOROBENZENE       * 0.003       * 0.003	<del>_</del>	*	0.005	NITROBENZENE	*	
DI-N-BUTYL PHTHALATE       * 0.001 N-NITROSODIPHENYLAMINE       * 0.003         1,2-DICHLOROBENZENE       * 0.003 PHENANTHRENE       * 0.001         1,3-DICHLOROBENZENE       * 0.003 PYRENE       * 0.001         1,4-DICHLOROBENZENE       * 0.003       PYRENE       * 0.001	DIBENZO (A,H) ANTHRACENE	*	0.010	N-NITROSODI-N-PROPYLAMINE	*	
1,2-DICHLOROBENZENE		*			*	
1,3-DICHLOROBENZENE * 0.003 PYRENE * 0.001		*	0.003	PHENANTHRENE	*	
1 A=DTCUT ODODENIZENE		*	0.003	PYRENE	*	
	1,4-DICHLOROBENZENE	*	0.003	1,2,4-TRICHLOROBENZENE	*	

^{*}COMPOUND NOT PRESENT AT DETECTION LIMIT

### TABLE 2 BASE-NEUTRAL FRACTION

CLIENT: GMC-CPC DIVISION

PROJECT NO.: 25554

SAMPLE: 85-7

DATE SAMPLED: 12/06/85 TIME: 3:10 PM

DATE RECEIVED: 120985 TIME: 7:00 AM

DATE COMPLETED: 12/19/85

COMPOUND	RESULT	D.L.	COMPOUND	RESULT	D.L.
	(mg/1)			(mg/1)	
ACENAPHTHENE	*		3,3'-DICHLOROBENZIDINE	*	0.020
ACENAPHTHYLENE	*	0.001	DIETHYL PHTHALATE	*	0.002
ANTHRACENE	*	0.001	DIMETHYL PHTHALATE	*	0.002
BENZIDINE	*	0.050	2,4-DINITROTOLUENE	*	0.010
BENZO (A) ANTHRACENE	*	0.005	2,6-DINITROTOLUENE	*	0.009
BENZO (K) FLUORANTHENE	*	0.005	DI-N-OCTYLPHTHALATE	*. ;	0.002
BENZO (A) PYRENE	*	0.005	1,2-DIPHENYLHYDRAZINE	*	0.001
BENZO $(G,H,I)$ $PERYLENE$	*	0.010	FLUORANTHENE	*	0.001
BIS-(2-CHLOROETHYL) ETHER	*	0.004	FLUORENE	<b>*</b>	0.002
BIS (2-CHLOROETHOXY) METHANE	*	0.004	HEXACHLOROBENZENE	*	0.005
BIS(2-CHLOROISOPROPYL)-	*	0.001	HEXACHLOROBUTADIENE	*	0.005
ETHER					
BIS-(2-ETHYL HEXYL)-	*	0.002	HEXACHLOROETHANE	*	0.007
PHTHALATE					
4-BROMOPHENYL PHENYL ETHER	*	0.007	HEXACHLOROCYCLOPENTADIENE	*	0.005
BUTYL BENZYL PHTHALATE	*	0.003	INDENO (1,2,3-CD) PYRENE	*	0.010
2-CHLORONAPTHALENE	*	0.002	ISOPHORONE	*	0.002
4-CHLOROPHENYL PHENYL ETHER	? <b>*</b>	0.003	NAPHTHALENE	*	0.001
CHRYSENE	*	0.005	NITROBENZENE	*	0.004
DIBENZO (A,H) ANTHRACENE	*	0.010	N-NITROSODI-N-PROPYLAMINE	*	0.004
DI-N-BUTYL PHTHALATE	*		N-NITROSODIPHENYLAMINE	*	0.003
1,2-DICHLOROBENZENE	*	0.003	PHENANTHRENE	*	0.001
1,3-DICHLOROBENZENE	*	0.003	PYRENE	*	0.001
1,4-DICHLOROBENZENE	*	0.003	1,2,4-TRICHLOROBENZENE	*	0.003
			· ·		

^{*}COMPOUND NOT PRESENT AT DETECTION LIMIT