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Environmental Engineers and Scientists

Report on Modified Phase I Activities Clark Oil Station # 1656 Grafton, WI

October, 1993

Prepared For:

Clark Oil & Refining Corp. 8182 Maryland Avenue St. Louis, MO 63105-3721

Prepared By:

BT², Inc. 3118 Watford Way Madison, WI 53713



Environmental Engineers and Scientists

October 20, 1993

Mr. Terry Miner Clark Oil & Refining Corporation 8182 Maryland Avenue St. Louis, MO 63105-3721

SUBJECT: Report on Modified Phase I Activities at Clark Oil Station 1656 at 102 Washington Street in Grafton, Wisconsin.

Dear Mr. Miner:

This letter serves to inform you of the Modified Phase I activities, results to date and recommedations for Clark Station 1656.

Soil contamination has been detected at this site at concentrations that require remediation. The degree and extent of the soil contamination has been adequately defined. Groundwater contamination has been detected at one location, and the concentration of benzene is above the WDNR Preventive Action Limit.

We recommend the installation of monitoring wells to determine the degree and extent of groundwater contamination.

If you have any questions or comments regarding this letter, please contact me at (608) 277-2840.

Sincerely, **BT**², **Inc.**

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Jom Bergamini Tom Bergamini

Tom Bergamini Hydrogeologist

enc:

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- Analytical Results А
- Soil Boring Logs B

1.0 SITE LOCATION AND KEY INFORMATION

1. Site Owner:

2. Site Address:

3. Site Location (see Figure 1):

4. Site Contact:

5. Environmental Consultant:

6. Project Hydrogeologist:

7. Purposes of Investigation:

Clark Oil & Refining Corp.

Clark Oil Station # 1656 1020 Washington St. Grafton, WI 53024 (414) 377-9941

NW1/4, NE1/4, Sec.24, T10N, R21E Latitude 43°19'00"N, Longitude 87°57'00"W

Mr. Terry Miner Clark Oil & Refining Corp. 8182 Maryland Avenue St. Louis, MO 63105-3271 (314) 854-9629

BT², Inc. 3118 Watford Way Madison, WI 53713-3251

Tom Bergamini (608) 277-2840

a) Define the nature and extent (horizontal and vertical) of soil contamination in the immediate vicinity of an underground storage tank (UST) system. Determine the horizontal and vertical extent of groundwater contamination.

b) Assess the alternative methods for addressing soil and groundwater contamination.

2.0 SITE BACKGROUND

2.1 Case Summary, Actions to Date

New product piping and a vapor recovery system were installed at this site by Badger Oil Equipment, Inc. in May, 1993. In order to expedite the management of any contaminated soil or groundwater encountered during construction, two soil borings were drilled and sampled with a hand auger in the locations shown in Figure 2 on March 31, 1993. One boring (H1) between the USTs and a dispenser island contained GRO in soil at a concentration of 40.7 mg/kg, and a second boring (H2) between two of the islands contained 128 mg/kg GRO (see Table 1). A petroleum product release was reported to Giselle Red at the WDNR Southeastern District Headquarters. Approval was gained for disposal of soil from this site at the Waste Management Parkview Landfill. On May 5, construction began, and soil samples were collected from the excavations in the locations shown on **Figure 2**. Soil excavation was limited to 50 cubic yards of soil which had to be removed to provide space for new petroleum equipment. No additional overexcavation was performed. Screening of soil samples with a flame-ionization detector (FID) indicated that all excavated soil was contaminated, and it was hauled to the Parkview Landfill. Two soil samples were analyzed by a laboratory for confirmation. A sample collected below the old piping contained GRO at a concentration of 13,729 mg/kg, and a sample collected near the USTs contained 13.6 mg/kg GRO (see **Table 1**). Some of the old product piping was removed on May 5, and it was moderately corroded with no holes or breaks observed. Removal of the old piping and excavation of new piping trenches was completed on May 6. Badger Oil Equipment personnel reported that the remaining piping was moderately corroded, with no holes observed.

A Workplan for a Petroleum Release Investigation was submitted to WDNR in July, 1993. The Modified Phase I Investigation has been conducted in accordance with that workplan.

2.2 Background Geology & Hydrogeology

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Clark Station # 1656 is located in the Lake Michigan Basin, and it is underlain by approximately 50 feet of unconsolidated deposits over bedrock (Skinner and Borman, 1973). The unconsolidated deposits are derived primarily from glacial processes.

Silurian Dolomite is present at the bedrock surface below this site. This comprises the Niagara Aquifer, which is the most widely used aquifer in the area. Most wells yield at least 10 gallons per minute (gpm), and some high-capacity wells yield as much as 1200 gpm. Water moves mostly in fractures in the dolomite, so recharge to the aquifer is local and paths of groundwater movement are short (Skinner and Borman, 1973). Below the Niagara Aquifer is the Ordovician Maquoketa Formation, which consists of shale, dolomitic shale and dolomite (Mudrey and others, 1982). The Maquoketa Formation acts as an aquitard between the overlying Niagara Aquifer and the sandstone aquifer below (Skinner and Borman, 1973). The sandstone aquifer is comprised by the following bedrock units (Mudrey and others, 1982):

Ordovician Sinnipee Group (dolomite with some limestone and shale) Ordovician Ancell Group (sandstone with minor conglomerate, shale and limestone) Ordovician Prairie du Chien Group (dolomite with some sandstone and shale) Cambrian sandstones of the Trempealeau, Tunnel City and Elk Mound Groups

The sandstone aquifer yields up to 1500 gpm in high-capacity wells. Most recharge of the aquifer is laterally from the west, but small quantities of water move downward through the Maquoketa shale and

wells that are open to both the Niagara and sandstone aquifers in areas of heavy groundwater usage (Skinner and Borman, 1973).

The unconsolidated deposits at this site are mapped as Ozaukee Member till of the Keewaunee Formation. This till was deposited by the glacier ice of the Lake Michigan Lobe of the Laurentide Ice Sheet approximately 13,000 years ago (Clayton and others, 1991). The Ozaukee Member till is light reddish brown to light gray, hard and blocky to crumbly when dry, and very plastic when wet. The till contains abundant dolomite pebbles and cobbles, and the average composition of the matrix is 13% sand, 47% silt, and 40% clay (Mickelson and others, 1984). The glacial deposits are not a productive aquifer in this area (Skinner and Borman, 1973).

Groundwater is present below this site at a depth of approximately 15 - 20 feet. The groundwater-flow direction is reported to be southeast toward the Milwaukee River. The presence of a dam on the Milwaukee River just south of Washington Street may disturb the local groundwater flow. The resulting flow direction at this site may be south or even southwest. Typical infiltration rates for the soil in this area range from 0.8 to 2.5 inches per hour (Skinner and Borman, 1973).

3.0 MODIFIED PHASE I FIELD ACTIVITIES

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On July 13 and 14, 1993, 4 soil borings were installed with a drill rig operated by Burlington Environmental, and soil samples were collected and described by a BT², Inc. field geologist. The locations of these borings are shown in Figure 3, and soil boring logs are included in Appendix B. Soil samples were collected by the method described in the Workplan for a Petroleum Release Investigation submitted to WDNR in July, 1993. All borings were abandoned with 3/8-inch bentonite pellets below the water table and granular bentonite above the water table. WDNR Borehole Abandonment Forms will be included in the final Site Investigation Report.

On August 24, 2 additional borings were drilled with a Geoprobe operated by Metco in the locations shown in Figure 3. Soil samples were collected from both borings, and a groundwater sample was collected in one of the borings. Geoprobe borings were advanced by using hydraulic percussion to drive a soil probe into the subsurface. Soil samples were collected in a 1.50-inch-diameter hollow tube. The groundwater sample was obtained with the Geoprobe by advancing a screened probe to the bottom of the borehole and removing water through the center of the hollow extension rods. Clean one-half-inch-diameter polyethylene tubing was lowered to the bottom of the sampling probe, and a vacuum pump was used to draw water into the tubing. The tubing was pinched near the pump and lifted out of the borehole, and the water was then allowed to drain into sample containers. The tubing was discarded after being

used. Approximately 2 tubing-volumes of water (about 100 ml) were purged from the Geoprobe sampler before the sample was collected.

Native soil encountered in borings consists of approximately 7 feet of stratified brown and gray silty clay to silty fine sand overlying poorly stratified to massive sand and gravel. These sediments were probably deposited by the Milwaukee River after the Wisconsin Glaciation. The water table was encountered at a depth of 8.5 feet.

Soil samples were collected for headspace analysis at all sampling intervals. Samples were field screened with a flame-ionization detector (FID) or a photoionization detector (PID) following the procedure described in the workplan. Headspace results are presented on the soil boring logs (Appendix B). Headspace concentrations above 10 mg/kg were detected in all borings except GP2. The maximum headspace concentration of 500 mg/kg as isobutylene was detected in samples from 8.5 to 10 feet in B1 and 5 to 7 feet in GP1.

One or two soil samples from each boring were subjected to laboratory analysis. All soil samples were analyzed by Specialized Assays Environmental of Nashville, Tenneessee. Soil samples were collected for laboratory analysis for Gasoline Range Organics (GRO), Volatile Organic Compounds (VOCs), Petroleum Volatile Organic Compounds (PVOCs), and total lead. Groundwater was sampled for GRO and VOCs. Sample collection and analysis were performed according to the methods described in the workplan.

4.0 RESULTS

Laboratory analysis of soil samples indicates that petroleum contamination is present in soil at this site at concentrations that require remediation. Analytical results for soil samples collected in the Modified Phase I Investigation are summarized in **Table 2**. Gasoline Range Organics (GRO) were detected in soil from 5 to 7 feet in boring GP1 (see Figure 3) at a concentration of 904 mg/kg. The concentrations of GRO in all other Modified Phase I borings were below the laboratory detection limit of 11 to 12 mg/kg. Low concentrations of PVOCs were detected in soil from GP1 and GP2, and no PVOCs were detected in soil from B1 - B4.

The Phase I and Modified Phase I results indicate that soil contamination at concentrations above the WDNR action limit of 10 mg/kg is present below the canopy and near the southern ends of the USTs. The horizontal extent of the soil contamination has been adequately defined by soil samples with no or low concentrations of contamination from B1 - B4 and GP2.

The groundwater sample from GP1 was analyzed for GRO and VOCs. The GRO concentration was 100 μ g/l, and benzene was present at 3.0 μ g/l, which is above the WDNR Preventive Action Limit (PAL). Several other PVOCs were detected, but these compounds were all detected at concentrations below their PAL. Two non-petroleum VOCs were also detected. Isopropylbenzene and n-Propylbenzene were present at 81 μ g/l and 230 μ g/l, respectively. The laboratory analytical report for groundwater sample GP1 is included in **Appendix A**.

5.0 CONCLUSIONS AND RECOMMENDATIONS

- (1) Soil contamination above the WDNR guideline of 10 mg/kg GRO is present below the canopy and near the southern ends of the USTs. The contamination extends downward to the water table.
- (2) The extent of soil contamination has been adequately defined.
- (3) Groundwater contamination has been detected, and the benzene concentration is above the WDNR Preventive Action Limit. The degree and extent of contamination has not been defined.
- (4) The installation of monitoring wells is necessary to define the degree and extent of groundwater contamination. Proposed well locations are shown in Figure 4.

6.0 REFERENCES

Clayton, L; J.W. Attig; D.M. Mickelson, and M.D. Johnson, 1991. <u>Glaciation of Wisconsin</u>. Wisconsin Geological and Natural History Survey, Educational Series 36.

Mickelson, D.M.; L. Clayton; R.W. Baker; W.N. Mode; and A.F. Schneider, 1984. <u>Pleistocene</u> <u>Stratigraphic Units of Wisconsin</u>. Wisconsin Geological and Natural History Survey, Miscellaneous Paper 84-1.

Mudrey, M.G.; B.A. Brown; and J.K. Greenberg, 1982. <u>Bedrock Geologic Map of Wisconsin</u>. Wisconsin Geological and Natural History Survey.

Skinner, E.L. and R.G. Borman, 1973. <u>Water Resources of Wisconsin: Lake Michigan Basin</u>. United States Geological Survey, Hydrologic Investigations Atlas HA-432.

TABLES

Phase I Soil Analytical Results Summary Modified Phase I Soil Analytical Results Summary

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Table 1

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SAMPLE	DATE	РН	Flash Pi	GRO	BENZENE	TOLUENE	E	XYLENE S	MTBE	1,2,4-TMB	1,3,5-TMB	Lead
H1	3/31/93	8.26	none to 200°	40.7	0.21	NA	NA	NA	NA	NA	NA	58.5
Н2	3/31/93	9.88	none to 200°	178	0.43	NA	NA	NA	NA	NA	NA	7.32
S4 old piping	5/5/93	NA	NA	13,729	70	321	137	891	<7.3	570	248	691
S6 SE Corner UST exc.	5/5/93	NA	NA	13.6	< 0.05	< 0.05	< 0.05	1.3	<0.05	1.6	0.6	37.4

Phase I Soil Analytical Results Summary Clark Station 1656 (Results in mg/kg)

ABBREVIATIONS

GRO = Gasoline Range Organics

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 $1 = 1_{\mathcal{X}}$

TMB = Trimethylbenzene

PID = Photoionization Detector

E= Ethylbenzene MTBE = Methyl tert-butyl ether

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NA = Not Analyzed

Table 2

Modified Phase I Soil Analytical Results Summary Clark Station 1656 (Results in mg/kg)

SAMPLE	Depth (ft)	FID/PID ¹	GRO	BENZENE	TOLUENE	E	XYLENES	MTBE	1,2,4-TMB	1,3,5-TMB	Lead
B1 S3	6 - 7.5	300	<12	< 0.061	< 0.061	< 0.061	< 0.061	<3.030	< 0.061	< 0.061	11.6
B2 S3	6 - 7.5	150	<12	< 0.058	< 0.058	< 0.058	< 0.058	<2.910	< 0.058	< 0.058	11.6
B3 S1	1 - 2.5	100	<11	< 0.057	< 0.057	< 0.057	< 0.057	<2.830	< 0.057	< 0.057	98.9
B4 S1	1 - 2.5	100	<12	< 0.060	< 0.060	< 0.060	< 0.060	<3.020	< 0.060	< 0.060	19.8
GP1 \$1	5 - 7	500	904	< 0.055	< 0.055	18.800	90.900	<2.770	78.700	26.600	15.6
GP2 S2	6 - 8	0	<11	< 0.057	< 0.057	0.103	0.388	<2.850	0.388	0.137	13.8

¹ Field screened with a PID ABBREVIATIONS

PID = Photo-ionization Detector Reading TMB = Trimethylbenzene GRO = Gasoline Range Organics MTBE = Methyl tert-butyl ether DRO = Diesel Range Organics NA = Not Analyzed E = Ethylbenzene

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FIGURES

1 2 3 4

Site Location Map Site Map Soil Boring Location Map Proposed Well Location Map



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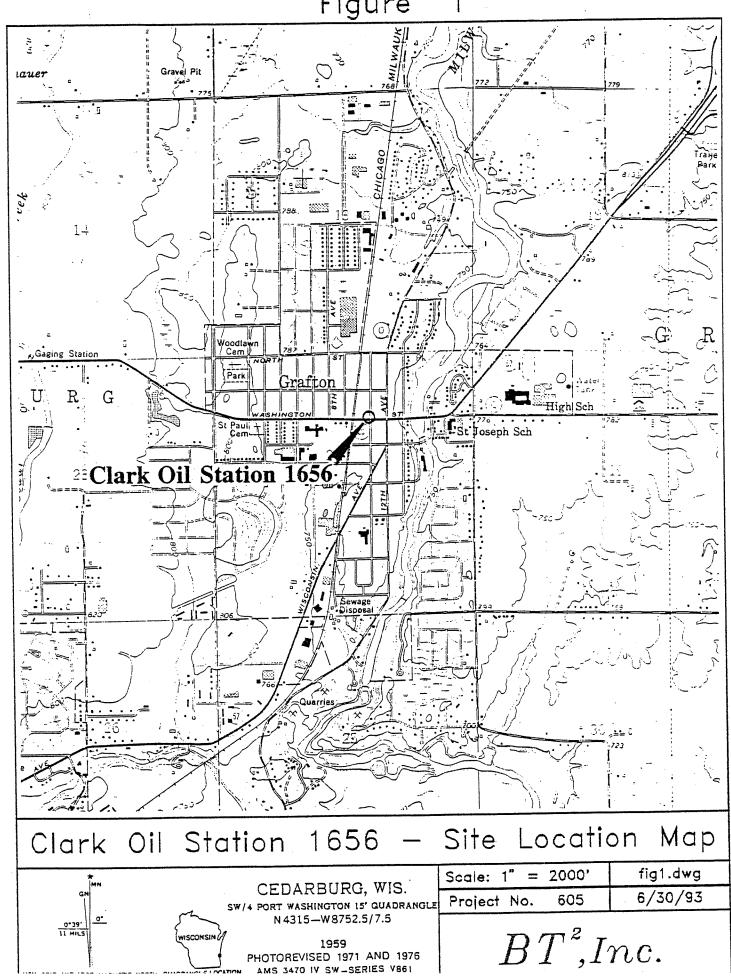
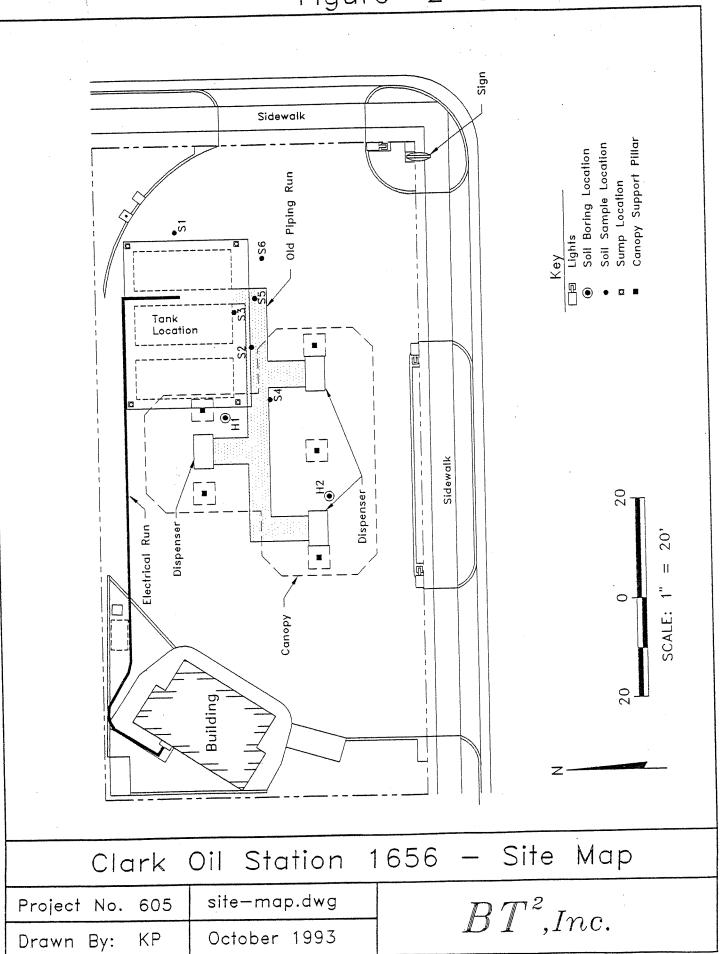


Figure 2



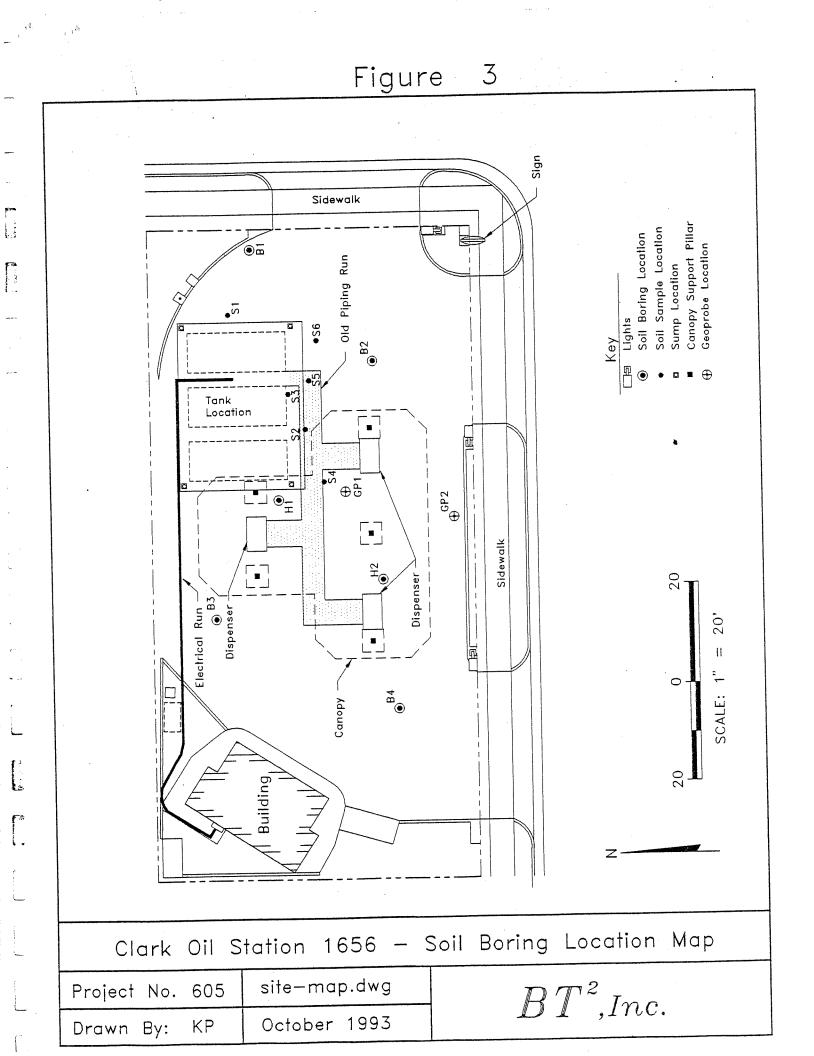
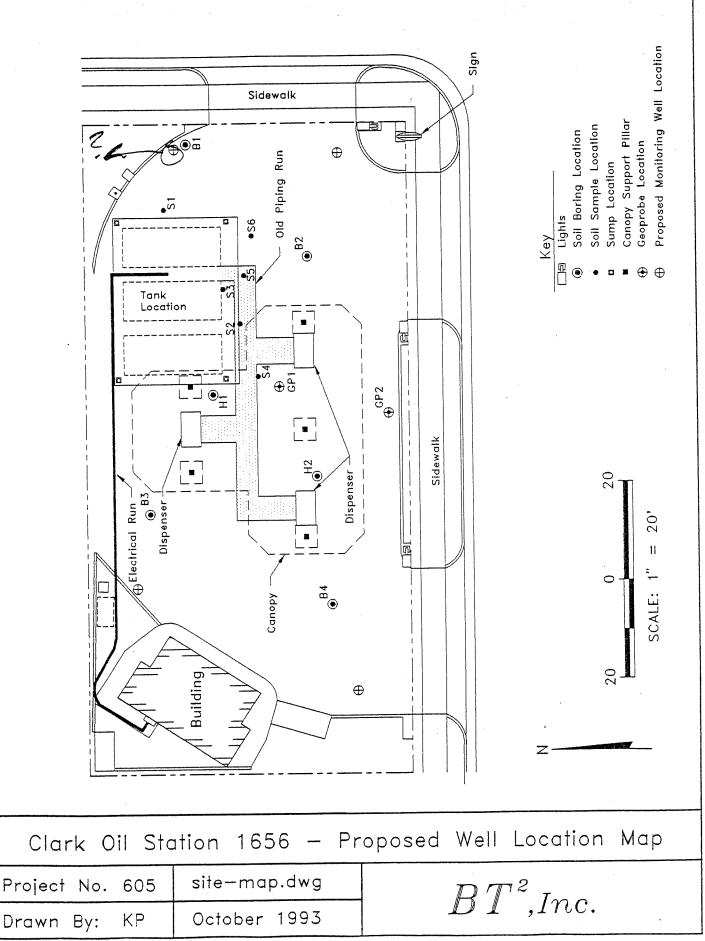


Figure 4

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SPECIALIZED ASSAYS ENVIRONMENTAL

300 12th Avenue South Nashville, Tennessee 37203

ANALYTICAL REPORT

BT-2 3118 Watford Way Madison, WI 53713

Sample: CLARK STORE #1656 B1-S3

Date Collected: 7/13/93

Time Collected: 13:10

Lab Number: 93-A000828 State Lab Certification: 998020430 Date Received: 7/16/93 Time Received: 9:00

Sample type: Soil

Preservative:

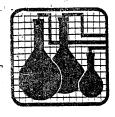
Analyte	Result	Units	POL	MDL	Date	Time	Analyst	Method
Benzene	< 61	ue /Ka	 61		7/16/93		P.LANE	8020
Toluene	< 61	ue/Kg	61	1	7/16/93		P.LANE	8020
Ethylbenzene	< 61	uc/Ko	51	1	7/16/93		P,LANE	8030
Xylenes, total	< 51	uq/Kq	61	1	7/16/93		P.LANE	9050
Methyl-t-butylether	< 3030	ua/Ka	3030	50	7/16/93		F.LANE	8020
1,2,4-Trimethylbenzene	< 61	ua /Kg	61	1	7/16/93		P.LANE	8050
1,3,5-Trimethylbenzene	< 61	ua/Ka	61	1	7/16/93		P.LANE	8020
Gasoline Range Organics	< 12000	ua /Ka	12100	10000	7/16/93		P.LANE	WONR M
Lead	11.6	ma/Ka	1.2	1.0	7/19/93		P.LANE	6010
% Dry Weight	82.0				7/16/93		P.LANE	

QUALITY CONTROL DATA

🖒 Surrogate Recoveries

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Surrogate	% Recovery	Target Range		
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GRC Surrogate, soil	70.	<u> 90 - 120</u>		



SPECIALIZED ASSAYS

300 12th Avenue South Nashville, Tennessee 37203

ANALYTICAL REPORT

BT-2 3118 Watford Way Madison, WI 53713

Sample: CLARK STORE #1656 B2-53

Date Collected: 7/13/93

Time Collected: 14:50

Lab Number: 93-4	4000829	
State Lab Certi	fication:	998020430
Date Received:	7/16/93	
Time Received:	9:00	

Sample type: Soil

Preservative:

Analyte	Result	Units	POL	MDL	Date	Time	Analyst	Methoc
Benzene	< 58	ua /Ka	58	1	7/16/93		P.LANE	8020
Toluene	< 58	ua /Ka	58	1	7/16/93		P.LANE	3020
Ethylbenzene	< 58	ua/Ka	58	1	7/16/93		P.LANE	8020
Xylenes, total	< 58	ug/Kg	58	1	7/16/93		P.LANE	3050
Methyl-t-butylether	< 2910	ua/Ka	2910	50	7/16/93		P.LANE	0508
1,2,4-Trimethylbenzene	< 58	ug /Kg	58	1	7/16/93		P.LANE	8050
1,3,5-Trimethylbenzene	< 58	ua/Ka	58	1	7/16/93		P.LANE	5030
Gasoline Range Organics	< 12000	ua /Ka	11600	10000	7/16/93		P.LANE	WDNR M
Lead	11.6	ma/Ka	1.2	1.0	7/19/93		P.LANE	6010
% Dry Weight	85.1				7/16/93		P.LANE	

QUALITY CONTROL DATA

🔓 Surrogate Recoveries

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Surrogate	% Recovery	Target Range		
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GRC Surrogate, soil	74.	80 - 120		



SPECIALIZED ASSAYS

300 12th Avenue South Nashville, Tennessee 37203

ANALYTICAL REPORT

BT-2 3118 Watford Way Madison, WI 53713

Sample: CLARK STORE #1656 B3-S1

Date Collected: 7/13/93

Time Collected: 16:40

Lab Number: 93-A000830 State Lab Certification: 998020430 Date Received: 7/16/93

Time Received: 9:00

Sample type: Soil

Preservative:

Analyte	Result	Units	PØL	MDL	Date	Time	Analyst	Metnod
Benzene	< 57	ug /Ka	57	1	7/16/93		P.LANE	8020
Toluene	< 57	ug /Kg	57	1	7/16/93		P.LANE	8050
Ethylbenzene	< 57	ua /Ka	57	1	7/16/93		P.LANE	6030
Xylenes, total	< 57	ug /Kg	57	1	7/16/93		P.LANE	8020
Methyl-t-butylether	< 2830	ua/Ka	2830	50	7/16/93		P.LANE	8030
1,2,4-Trimethylbenzene	< 57	ua/Ka	57	1	7/16/93		P.LANE	8050
1,3,5-Trimethylbenzene	< 57	ue/Ka	57	1	7/16/93		P.LANE	8030
Gasoline Range Organics	< 11000	ua/Ka	11300	10000	7/16/93		P.LANE	WDNR M
Lead	98,9	ma/Ka	1.1	1.0	7/19/93		P.LANE	6010
% Dry Weight	88.3				7/16/93		P.LANE	

QUALITY CONTROL DATA

🔓 Surrogate Recoveries

Surrogate	% Recovery	Target Range		
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GRO Surrogate, soil	98.	80 - 120		



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300 12th Avenue South Nashville, Tennessee 37203

ANALYTICAL REPORT

BT-2 3118 Watford Way Madison, WI 53713

Sample: CLARK STORE #1656 B4-S1

Date Collected: 7/14/93

Time Collected: 9:15

Lab Number: 93-A000831 State Lab Certification: 998020430 Date Received: 7/16/93

Time Received: 9:00

Sample type: Soil

Preservative:

Analyte	Result	Units	POL	MDL	Date	Time	Analyst	Methoc
Benzene Toluene Ethylbenzene Xylenes, total Methyl-t-butylether 1,2,4-Trimethylbenzene 1,3,5-Trimethylbenzene Gasoline Range Organics Lead - % Dry Weight	<pre>< 60 < 60 < 60 < 60 < 3020 < 60 < 60 < 60 < 60 < 12000 19.8 82.</pre>	ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg mg/Kg 7 %	40 60 60 3020 50 60 12100 1.2	1 1 1 50 1 1 10000 1.0	7/16/93 7/16/93 7/16/93 7/16/93 7/16/93 7/16/93 7/16/93 7/16/93 7/16/93 7/16/93		P.LANE P.LANE P.LANE P.LANE P.LANE P.LANE P.LANE P.LANE P.LANE P.LANE P.LANE	5020 3020 5020 3020 8020 8020 5020 5020 9020 5020 900R 1 6010

QUALITY CONTROL DATA

🕹 Surrogate Recoveries

Surrogate	% Recovery	Target Range
		اللاية أشبرة بدواة الشنا فيعد معاد جويه كالنا تثبيه جس ويعد نوريه
GRO Surrogate, soil	81.	80 - 120

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CLARK Acco - BT-2, Inc Tom Bergar 3118 Watfo Madison, W	mini ord Way,								300 12th Ave., South Nashville, TN. 37203 615-726-0177 FAX 615-726-3404
Ph: 608-2	77-2840 F		608-277-	-2850		-			
BILLING CONTROL NUME	SER [FOR LAB U	se ONLYJ	3-042	163	PROJE	CT#	B7	-2	# 605 P.O.#
AMPLERS [Signature]	Treva R.				PROJEC	CT NA	ME	GL	LARK # 1656, Grafta, WI
FOR LAB USE ONLY ACC #		DESCRIP		DATE	TIME	COMP	GRAB	1 OF CONT	ANALYSIS REQUESTED
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880908	B2	53			1450		V	4	
880909	B3	51			1640		X	4	
380910	B4	51		7/14/93	0915		X	4	
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									ttn: Terry Miner.

For further assistance in completing the chain of custody form please refer to the instructions found on the opposite side Shined on ice

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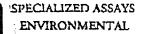
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- Account: 5	470 5464				H		р. — Р. —	Nashville, TN. 37203 615-726-0177
BT-2, Inc.	-				H			FAX 615-726-3404
Tom Bergan 3118 Watfo							<u>, </u>	
🦈 Madison, W	II 53713							
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386512		-	1	1815	+	x	2	
	GP2-5	L	· · ·	1010	ļ		~	ti n u
	EPI-WI			1705		X	2	VOC (8021) W/HCI 551
386513_	$rac{1}{1}$			1700			-	Voc (oval) W/ACI DI
	GPI-WI			1705		X	$\left \gamma \right $	GRO/PUOC (no preservation
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elinguished by: [Signature]	Date / Time	Received by: [j Signaturej	1	<u>!</u>	Re		for Laboratory on Date / Time
remark Countin	8/25/93 1600						St	actore 1. 8/26/43 13:11
linquished by: [Signature]	Date / Time	Received by: (Signature]			RA	nrarks	py of COC with results.
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elinquished by: [Signature]	Date / Time	Received by: [[Signeture]			1		1 1-10 -
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For further assistance in completing the chain of custody form please refer to the instructions found on the opposite side

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SPECIALIZED ASSAYS ID:615-726-3404

SEP 09'93 9:43 No.003 P.03



300 12th Avenue South Nashville, Tennessee 37203

ANALYTICAL REPORT

BT-2 3118 Watford Way Madison, WI 53713

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Sample: CLARK STORE #1656 GP1-S1

Date Collected: 8/24/93

Time Collected: 16:30

Sample type: Soil Lab Number: 93-A002051

State Lab Certification: 99802043

Date Received: 8/26/93

Time Received: 13:10

Preservative:

Analyte	Result	Units	PQL	MEL	Date	Time	Analyst	Method
Benzene	< 55	ug/Kg	55	1	8/30/93	18:13	JM	8020
Toluene	< 55	ug /Kg	55	1	8/30/93	18:13	JM	8020
Ethylbenzene	18600	ug /Kg	55	1 *	8/30/93	18:13	JM	8020
Xylenes, total	90900	uo /Ko	55	1	8/30/93	18:13	JM	3020
Methyl-t-butylether	< 2770	ug/Kg	2770	50	8/30/93			8020
1,2,4-Trimethylbenzene	78700	uo/Ka	55	1	8/30/93	18:13	JM	8020
1,3,5-Trimethylbenzene	26600	ua/Ko	55	1	8/30/93			8020
Gasoline Range Droanics	504000	ua/Ko	11100	10000	8/30/93			WDNR 1
Lead	15.6	ma/Ka	1.1	1.0	8/31/93		RS	6010
% Dry Weight	90.2	e x 🕺			8/26/93		F.LANE	

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All samples have been corrected for dry weight. All analyses performed at this location.

Laboratory Supervisor

SPECIALIZED ASSAYS ID:615-726-3404

SEP 09'93

SPECIALIZED ASSAYS ENVIRONMENTAL

300 12th Avenue South Nashville, Tennessee 37203

ANALYTICAL REPORT

BT-2 Sil8 Watford Way Madison, WI 53713

Sample: CLARK STORE #1456 GP2-52

Date Collected: 8/24/93

Time Collected: 18:15

Lab Number: 93-A002052 State Lab Certification: 99802043 Date Received: 8/26/93 Time Received: 13:10

Sample type: Soil

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Preservative:

Analyte	Result	Units	POL	MDL	Date	Time	Analyst	Methoc
Benzene	< 57	ug/Kg	57	1	8/30/93	18:13	JM	8020
Toluene	< 57	ug/Kg	57	1	8/30/93			8020
Ethylbenzene	103.	ug/Kg	57	1 *	8/30/93			8020
Xylenes, total	388.	uo/Kg	57	1	8/30/93			8020
Methyl-t-butylether	< 2850	ug/Kg	2850	50	6/30/93	18:13	JM	8020
1,2,4-Trimethylbenzene	388.	ua /Ko	57	1	8/30/93			8020
1,3,5-Trimethylbenzene	137.	uc /Ka	57	1	8/30/93	18:13	M	8020
Gasoline Range Organics	< 11000	ug/Kg	11400	10000	8/30/93	18:13	ML	WONR 1
Lead	13.8	mg /Kg	1.1	1.0	8/31/93		RS	6010
% Dry Weight	87.6	5 % -			8/26/73		P.LANE	

All samples have been corrected for dry weight. All analyses performed at this location.

Laboratory Supervisor

SPECIALIZED ASSAYS

ID:615-726-3404

SEP 09'93



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SPECIALIZED ASSAYS ENVIRONMENTAL

300 12th Avenue South Nashville, Tennessee 37203

ANALYTICAL REPORT

BT-2 3118 Watford Way Madison, WI 53713

Sample Location: GP1-W1 CLARK STORE #1656

Date Collected: 8/24/93

Time Collected: 17:05

Lab Number: 93-A002053

State Lab Certification: 998020430

Date Received: 8/26/93

Time Received: 13:10

Sample type: Water

Preservative: HCl

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Analyte	Result	Units	PQL	MDL	Date	Time	Analyst	Method
Benzene	3.0	ug/1	1.0	1.0	9/ 1/93	18:04	JM	8020
Toluene	18.0	ug/l	1.0	1.0	9/ 1/93	18:04	JM	8050
Ethylbenzene	2.0	ug/l	1.0	1.0	9/ 1/93	18:04	JM	8020
Xylenes, total	14.0	ug/l	1.0	1.0	9/ 1/93	18:04	JM	8020
Methyl-t-butylether	< 50	ug/l	50.0	50.0	9/ 1/93	18:04	JM	8020
1,2,4-Trimethylbenzene	2.0	ug/l	1.0	1.0	9/ 1/93	18:04	JM	8020
1,3,5-Trimethylbenzene	2.0	ug/l	1.0	1.0	9/ 1/93	18:04	JM	8020
Gasoline Range Organics	Q.1	mg/1	0.1	0.10	9/ 1/93	18:04	JM	WDNR M
Benzene	0.003	mg/l	0.001	0.001	9/ 1/93	15:53	JM	8021
Bromobenzene	< 0.001	mg/1	0.001	0.001	9/ 1/93	15:53	JM	8021
n-Butylbenzene	< 0.001	mg/l	0.001	0.001	9/ 1/93	15:53	JM	8021
sec-Butylbenzene	< 0.001	mg/1	0.001	0.001	9/ 1/93	15:53	JM	8021
tert-Butylbenzene	< 0.001	ma/l	0.001	0,001	9/ 1/93	15:53	JM	8021
Chlorobenzene	< 0.001	mg/l	0.001	0.001	9/ 1/93	15:53	JM	8021
2-Chloratoluene	< 0.001	mg/1	0.001	0.001	9/ 1/93	15:53	JM	8021
4-Chlorotoluene	< 0.001	mg/l	0.001	0.001	9/ 1/93	15:53	JM	8021
1,2-Dichlorobenzene	< 0.001	mg/1	0.001	0.001	9/ 1/93	15:53	JM	8021
1,3-Dichlorobenzene	< 0.001	mg/1	0.001	0.001	9/ 1/93	15:53	JM	8021
1,4-Dichlorobenzene	< 0.001	mg/l	0.001	0.001	9/ 1/93	15:53	JM	8021
Ethylbenzene	0.002	mg/1	0.001	0.001	9/ 1/93	15:53	JM	8021
Isopropylbenzene	0.081	mg/1	0.001	0.001	9/ 1/93	15:53	JM	8021
4-Isopropyltoluene	< 0.001	mg/1	0.001	0.001	9/ 1/93	15:53	JM	8021
Napthalene	< 0.001	mg/1	0.001	0.001	9/ 1/93	15:53	JM	8021
n-Propylbenzene	0.230	π <u>g</u> /1	0,001	0.001	9/ 1/93	15:53	JM	8021
Styrene	< 0.001	mg/l	0.001	0.001	9/ 1/93	15:53	JM	8021
Toluene	0.018	mg/l	0.001	0.001	9/ 1/93	15:53	JM	8021
1,2,3-Trichlorobenzene	< 0.001	mg/l	0.001	0.001	9/ 1/93	15:53	JM	8021
1,2,4-Trichlørøbenzene	< 0.001	mg/1	0.001	0.001	9/ 1/93	15:53	JM	8021
1,2,4-Trimethylbenzene	0.002	mg/1	0,001	0,001	9/ 1/93	15:53	ML	8021
1,3,5-Trimethylbenzene	0.002	mg/1	0.001	0.001	9/ 1/93	15:53	M	8021
m,p-Xylenes	0.010	mg∕1	0.001	0,001	9/ 1/93	15:53	JM	8021

SPECIALIZED ASSAYS ID:615-726-3404

SPECIALIZED ASSAYS ENVIRONMENTAL

300 12th Avenue South Nashville, Tennessee 37203

ANALYTICAL REPORT

BT-2 3118 Watford Way Madison, WI 53713

Sample Location: GP1-W1 CLARK STORE #1656

Date Collected: 8/24/93

Time Collected: 17:05

Sample type: Water

Lab Number: 93-A002053

State Lab Certification: 99802043(

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Date Received: 8/26/93

Time Received: 13:10

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Preservative: HCl

	Analyte	Result	Units	PQL	MDL	Date	Time	Analyst	Method
	o-Xylene	0.004	mg/1	0.001	0.001	9/ 1/93	15:53	JM	8021
	Hexachlorobutadiene	< 0.001	mg/1	0.001	0.001	9/ 1/93	15:53	JM	8021
	Bromochloromethane	< 0.001	mg/1	0.001	0.001	9/ 1/93	15:53	JM	8021
	Bromodichloromethane	< 0.001	mg/l	0,001	0.001	9/ 1/93	15:53	JM	8021
	Bromoform	< 0.001	mg∕l	0.001	0.001	9/ 1/93	15:53	JM	8021
	Bromomethane	< 0.001	mg/1	0.001	0,001	9/ 1/93	15:53	JM	8021
	Carbon tetrachloride	< 0.001	mg/1	0.001	0.001	9/ 1/93	15:53	JM	8021
	Chloroethane	< 0.001	mg/l	0.001	0.001	9/ 1/93	15:53	JM	8021
	Chloroform	< 0.001	mg/l	0.001	0.001	9/ 1/93	15:53	JM	8021
_	Chloromethane	< 0.001	mg/1	0.001	0.001	9/ 1/93	15:53	JM	8021
	Dibromochloromethane	< 0.001	mg/1	0.001	0,001	9/ 1/93	15:53	JM .	8021
• -	1,2-Dibromoethane	< 0.001	mg/l	0,001	0.001	9/ 1/93	15:53	JM	8021
	Dipromomethane	< 0.001	mg/1	0.001	0.001	9/ 1/93	15:53	JM	8021
1	1,2,3-Trichloropropane	< 0.001	mg/l	0.001	0.001	9/ 1/93	15:53	JM	8021
-	Vinyl chloride	< 0.001	mg/1	0,001	0,001	9/ 1/93	15:53	JM	8021
	Dichlorodifluoromethane	< 0.001	mg/l	0.001	0.001	9/ 1/93	15:53	ML	8021
b -38	1,1-Dichloroethane	< 0.001	mg /1	0.001	0.001	9/ 1/93	15:53	JM	8021
	1,2-Dichloroethane	< 0.001	mg/1	0.001	0.001	9/ 1/93	15:53	JM	8021
	1,1-Dichloroethene	< 0.001	mg/l	0.001	0,001	9/ 1/93	15:53	JM	8021
	cis-1,2-Dichloroethene	< 0.001	mg/1	0.001	0.001	9/ 1/93	15:53	JM	8021
	trans-1,2-Dichloroethene	< 0.001	mg/1	0.001	0.001	9/ 1/93	15:53	JM	8021
	1,2-Dichloropropane	< 0.001	mg/1	0.001	0,001	9/ 1/93	15:53	. JM	8021
:	1,3-Dichloropropane	< 0.001	mg/1	0.001	0.001	9/ 1/93	15:53	JM	8021
	2,2-Dichloropropane	< 0.001	mg/l	0.001	0.001	9/ 1/93	15:53	JM	8021
	1,1-Dichloropropene	< 0.001	mg/l	0.001	0.001	9/ 1/93	15:53	JM	8021
	cis-1,3-Dichloropropene	< 0.001	mg/l	0.001	0.001	9/ 1/93	15:53	JM	8021
	trans-1,3-Dichloropropene	< 0.001	mg/1	0.001	0.001	9/ 1/93	15:53	JM	8021
	Nethylene chloride	< 0,001	mg/1	0.001	0.001	9/ 1/93	15:53	JM	8021
·· .	1,1,1,2-Tetrachloroethane	< 0.001	mg/1	0.001	0.001		15:53		8021
	1,1,2,2-Tetrachloroethane	< 0.001	mg/1	0.001	0.001		15:53	JM	8021



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SPECIALIZED ASSAYS	ID:615-7	26-3404		SEP	09'93	9:45	5 No.003	P.07
- SPECIALIZED ASSA ENVIRONMENTA 300 12th Avenue South Nashville, Tennessee 37	L		•			·	•	
	•		ANA	אראז	ICAL	- RI	EPOR	T
BT-2 3118 Watford Way Madison, WI 53713					.			
	11			Lab Nu	umber: 9	3-A002	2053	
_ Sample Location: GP1-h		ムちん						
_ Sample Location: GP1-h	STORE #1	656		State	Lab Cer	tifica	ation: 9	98020430
_ Sample Location: GP1-h	STORE #1	656			Lab Cer Received			98020430
_ Sample Location: GP1-W CLARK	STORE #1	656		Date F		: 8/2	26/93	98020430
Sample Location: GP1-W CLARK Date Collected: 8/24/	STORE #1	656	Pre	Date F Time F	Received	: 8/2	26/93	98020430
Sample Location: GP1-W CLARK Date Collected: 8/24/ Time Collected: 17:05	STORE #1	656 Units	Pre	Date F Time F	Received Received ive: HC1	: 8/2	26/93	
Sample Location: GP1-W CLARK Date Collected: 8/24/ Time Collected: 17:05 Sample type: Water	STORE #1	Units mg/l mg/l mg/l mg/l	PQL	Date F Time F - servati MDL	Received Received ive: HC1 Date 9/ 1/9 9/ 1/9 9/ 1/9 9/ 1/9	: 8/2	Analyst JM JM JM	
Sample Location: GP1-W CLARK Date Collected: 8/24/ Time Collected: 17:05 Sample type: Water 1,1,1-Trichloroethane 1,1,2-Trichloroethane Trichloroethene Trichlorofluoromethane 1,2-Dibromo-3-chloropropane	STORE #1	Units Mg/1 mg/1 mg/1 mg/1 mg/1	PQL 0.001 0.001 0.001 0.001	Date F Time F 	Received Received ive: HC1 Date 9/ 1/9 9/ 1/9 9/ 1/9 9/ 1/9	: 8/8 : 13:1 Time 3 15:53 3 15:53 3 15:53	Analyst JM JM JM	Method 8021 8021 8021 8021 8021
Sample Location: GP1-W CLARK Date Collected: 8/24/ Time Collected: 17:05 Sample type: Water 1,1,1-Trichloroethane 1,1,2-Trichloroethane Trichloroethene Trichlorofluoromethane 1,2-Dibromo-3-chloropropane	STORE #1	Units Mg/1 mg/1 mg/1 mg/1 mg/1	PQL 0.001 0.001 0.001 0.001	Date F Time F 	Received Received ive: HC1 Date 9/ 1/9 9/ 1/9 9/ 1/9 9/ 1/9	: 8/8 : 13:1 Time 3 15:53 3 15:53 3 15:53	Analyst JM JM JM	Method 8021 8021 8021 8021 8021
Sample Location: GP1-W CLARK Date Collected: 8/24/ Time Collected: 17:05 Sample type: Water Analyte 1.1,1-Trichloroethane 1,1,2-Trichloroethane Trichloroethene Trichlorofluoromethane 1,2-Dibromo-3-chloropropane	STORE #1	Units Mg/1 mg/1 mg/1 mg/1 mg/1	PQL 0.001 0.001 0.001 0.001 0.001	Date F Time F 	Received Received ive: HC1 Date 9/ 1/9 9/ 1/9 9/ 1/9 9/ 1/9	: 8/2 : 13:1 Time 15:53 15:53 15:53 3 15:53 3 15:53	Analyst JM JM JM	Method 8021 8021 8021 8021 8021

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Laboratory Supervisor

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State of Wi Department		ral Reso		To: d Waste ergency Respon stewater	se $\overline{\mathbf{X}}$ Uno \Box Wa	. Waste lergrou ter Resc er	nd Tar ources	iks		IL BOI rm 4400		LOG		DRMATION 10-92
Facility/Pro	ject Nar	ne	rk Oil Station 1656	#605		Licens	e/Pern	nit/Mo	nito	ring Nu	mber	Bo	ing]	Number GP1
Boring Dri Metco	led By (Harry Sh	Firm nar	me and name of crev			Drillin	g Star 8/24/9		I	Drilling 8	Comp /24/93			illing Method
ONR Facil	ty Well	No. W	I Unique Well No.	Common We	ll Name	Static V	Water F	Level Feet M		Surface		ion æt MS		rehole Diam. 1.5 Inche
Boring Loc State Plane NW 1/		NE 1/4 -	N,	E 10 N., R. 21	E.	Lat.		<u>19' 00</u> 57' 00		Local G		cation N□ S⊠	(If a	pplicable) E⊠ 62_Feet w□
County	+ OI ukee	NC 1/4 0	F Section 24 ,1	<u>10 N., R. 21</u>	DNR Co					vn/City/		lage	rafto	
Sample									ε		Soil	Proper	3	
N umber Length	Recovered Blow Counts	D epth in Feet	And G	Rock Descriptic eologic Origin I ch Major Unit			U S C S	G raphic Log	W ell Diagram	M ax. PID	Standard Penetration	M oisture Content	P 200	RQD/ Comments
S1 S2 S3				asing sand conter y fine sand to fin)	nt at 7' e gravel at		ML			500 40 60		M M/W W		slight weathere gasoline odor slight weathere gasoline odor slight weathere gasoline odor
I hereby ce Signature	rtify tha	t the info	formation on this form \mathcal{A}	m is true and co	Firm			nowled	lge.					

This form is authorized by Chapters 144.147 and 162, Wis. Stats. Completion of this report is mandatory. Penalties: Forfeit not less than \$10 nor more than \$5.000 for each violation. Fined not less than \$10 or more than \$100 or imprisoned not less than 30

	Wiscor ment of		l Resou		Fo: id Waste ergency Resp stewater	onse 🛱	Unde	Waste rgroun r Resor	id Tan			IL BOR m 4400		LOG I		PRMATION 10-92 e <u>1</u> of <u>1</u>
acility	/Projec	t Name			#605		L	icense	/Perm	it/Mon	itor	ing Nu	nber	Bor	ing N	lumber GP2
Boring	Drilled	By (F		k Oil Station 1656 ne and name of crea			I	Orilling	-		I	Drilling	_	leted	1	lling Method
Metco		ry She		Unique Well No.	Common	Vell Nar	ne IS	Static V	8/24/9 Vater			8/ Surface 1	/24/93 Elevati	on	Bor	probe rehole Diam.
	Facility 1		10. WI	Omque wen 140.					F	Feet MS		i a sel Ci		et MS		1.5 Inche plicable)
Boring State P	Locatio lane	n		N,	E			Lat.		<u>19' 00'</u>			Feet		(II ap	EIX
NV	<u>N 1/4 of</u>	N	E 1/4 of	Section 24 ,T	10 N., R.		R Cou			<u>57' 00"</u> Civil '	 Tov	26.5 vn/City/	Feet or Vil	lage		56.5Feet W
County	Ozauke)					46					-		Proper	iraftor	
N umber	Length Recovered	Blow Counts	D epth in Feet	And G	/Rock Descrij Geologic Orig ach Major Ur	in For			USCS	G raphic Log	W ell Diagram	M ax. PID	Standard Penetration	M oisture Content	P 200	RQD / Comments
S1 S2					gravel ; some fine to a	coarse sa	nd; little	3	ML			0		M		
	hv certi	fv the	+	formation on this fo	orm is true an	d correct	t to the	best o	f my l	knowle	dge		<u> </u>			<u> </u>
There	ししょ へいてい	مت ر	e and mit	CARDON AND ALL CAR MARAN			Firm									

		f Wisco ment o		ral Reso	ources		To: id Waste ergency Resp stewater	onse	₩ Une	ter Res	e ind Tar ources			DIL BO		LOG		ORMATION 10-92
		-/70	4 37						□ Oth									ge <u>1</u> of <u>1</u>
•		y/Proje		Cla	ark Oil Station		#605			Licens	se/Pern	nit/Mo		ring Nu			ring	Number B1
29 9	-		• •		me and nam		w chief)			Drillin	ng Star			Drilling			D	illing Method
		ton Env Facility			Chris Hebe I Unique W		Common	W_11	Name	Static	7/13/9 Water			7 Surface	/13/93			25" HSA prehole Diam.
							Common		I vallie	Junic		Feet M				et MS		Inches
	State P	Locati lane	on		N,		E			Lat.	<u>43</u> °	19' 00	2"	Local G				pplicable)
	N	№ 1/4 o	of N	IE 1/4 o	of Section 2	4 ,T	10 N., R.		Е.		. <u>87</u> °			14		N X S 🗌		E ⊠ 111Feet W□
<u> </u>	County	/ Ozauka	e					-	DNR Co 46	unty C	ode	Civil	To	wn/City	/or Vi	llage G	irafto	n
.	San	nple													Soil	Рторег	ties	
-		प्र	Blow Counts	epth in Feet			Rock Descrip					G raphic Log	ell Diagram		цс			22
- 1 •	lber	ver	Co	h in			eologic Orig ich Major Un		r		C S	blic	Die	FID.	lard Irati	l oisture	0	/ ment
	N umber	Length Recovered	Blow	D epi			ion major on				U S	G raj	W el.	M ax.	Standard Penetration	M ois Cont	P 200	RQD/ Comments
,				-	6" concrete	; gravel b	ase; dark gray	to bla	ack siltv c	av								
	S1	7	4, 2,		light gray sil	ty clay to	o clayey silt; tr				CL			50		м		
			4	<u></u>	and fine gra	vel					02							
**	S2	12	7, 9,															
• •			13	5			t to silty very : 1.5-2" interval		and		SM/ML			100		М		slight weathered gasoline odor
•••	S3	13	3, 5, 13				nottled 6-7'; 1 pears wet at 6							300		м/w		weathered gasoline odor
	S4	18	4, 12,		light gray fir	ne to med	ium sand; littl thick lenses of	e silt;	weakly		SM			500		s		relatively fresh
			16	10	intervals bel end of borin		25" silt lens at	9'	·····									gasoline odor
				F		gatio												
				E												•		
				F														
				-15														
5- <u>5</u> -				E												Ì		
Ly.			-	F														
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	Signatu	ure 7	In	DO	int				Firm	BT ² ,	Inc.							
_ 7	This C.	•	1/12 .	11	71 4. 14.	1 1 477	1 1 (0 117)	04.4	~ 1					• .				

This form is authorized by Chapters 144.147 and 162, Wis. Stats. Completion of this report is mandatory. Penalties: Forfeit not less than \$10 nor more than \$5,000 for each violation. Fined not less than \$10 or more than \$100 or imprisoned not less than 30

State of Departr			il Resou	Solid Waste						z. Wast lergrou ter Reso ter	nd Tar	ıks		PIL BOJ rm 4400		LOG	OG INFORMATION 10-92 Page <u>1</u> of <u>1</u>		
Facility	/Projec	t Name	e							Licens	e/Perm	nit/Mo	nito	ring Nu	mber	Bo	ring	Number	
Boring	Driller	By (F		rk Oil Station ne and nai			#605			Drillir	og Start	ted	1	Drilling	Com	leted	D	B2 illing Method	
Burling				Chris Hebe						2	7/13/9			-	/13/93			25" HSA	
DNR F				I Unique		o. Com	imon V	Vell]	Name	Static	Water	Level		Surface		ion et MS	Bo	orehole Diam.	
Boring	Locatio	on				L				L		Feet M	1	Local G				Inche pplicable)	
State P	lane			N,			E		F	Lat.		<u>19' 00</u>	2		Feet		X ,	EX	
County	<u>v 1/4 o</u>	<u>t</u> N	E 1/4 0	f Section	24 ,	<u>r 10 n</u>	., K.		E. DNR Co		<u>. 87°</u> ode			wn/City		lage		88.5 Feet W	
-	Ozauke	e							46					1	C all		irafto	n 	
San	ipie	s	et									20	un			Proper	ues		
N umber	Length Recovered	Blow Counts	D epth in Feet		And	il/Rock I Geologic Each Ma	c Origi	n Fo	r		USCS	G raphic Log	W ell D'iagram	M ax. FID	Standard Penetration	M oisture Content	P 200	RQD/ Comments	
S1	10	2, 3, 4		6" concret alternating and fine to	2-3" la	yers of tar	n fine sa		clay, clay	ey silt,	ML/SC SP			5		м		no odor	
S2	6	22,24, 8	5	brown-gra sand; scat petroleum	tered co	bbles;		medi	um to co	arse	CL			12		м		slight weathered gasoline odor	
S3		8, 19, 27		gray fine t .5" lenses		m sand; s um sand f					SM			150		M/W	m	oderate weathere gasoline odor	
S4	,	9, 21, 7	10	gray coars some fine end of boi	sand an	d silt	dolomite	e grav	vel; little t	:0	GM	99		150		W		slight weathere gasoline odor	
			15		ing at i	U													
			20																
· · · · · · · · · · · · · · · · · · ·			25																
		fy that	the info	ormation o	n this f	orm is tru	ue and	COLL			f my k	nowle	dge.						
Signati	100		10	- 1					Firm	BT ²									

	State of Departn			il Resou	irces		fo: d Waste ergency Re: stewater	sponse	₩ Un	z. Waste dergroui ter Resc	nd Tar	ıks		IL BOI m 4400		LOG		DRMATION 10-92 e 1 of 1	
_	Taviliter	/D-ning	+ Nom	<u> </u>					□ Otł		e/Perm	nit/Mo	nito	ring Nu	mber			Number	
•	Facility/Project Name Clark Oil Station 1656 #605 Boring Drilled By (Firm name and name of crew chief)													_				B3	
	-							Drillin	-			Drilling 7	Comp /13/93						
	Burlingt DNR Fr	the second s	الكالية بالخد مختيطة إعتداؤه ويعوا		Chris Heber [Unique V		Common	n Well	Name	Static V	7/13/9 Water	and the second design of the s		Surface	Elevat		Bo	25" HSA rehole Diam. Inches	
	Boring		on			I		_		Lat.		<u>19' 00</u>	1	local G	rid Lo	cation	(If a	oplicable)	
1	State Plane N, E NW 1/4 of NE 1/4 of Section 24 ,T 10 N., R. 21 I										. <u>87</u> °			22	Feet	NX S	N ⊠ E ⊠ S □ 36.5 Feet W □		
-	County				000000	<u>-</u>			DNR Co					vn/City/	/or Vil	lage	Grafto	n	
	Sam	_	e						40				_		Soil	Proper			
			str	er		Soil/	Rock Desci	rintion				ы	ell Diagram		. u			70	
	5	ered	C ounts	inF			eologic Ori	-			\$2	jic L	Diag	ax. FID	atio	an te		/ nent	
	N umber	Length Recovered	Blow (D epth in Feet		Ea	ich Major U	Unit			I S C	G raphic Log		ax.	Standard Penetration	M oisture Content	200	RQD/ Comments	
•	ž	ÄŘ	BI	Ď	_						n	0	M	M	Ϋ́́	ΧÜ	Ч.	e c m	
							silty sand an				ML			150		м		slight gasoline	
	S1	11	3, 3, 4				nic silt; little el; trace root		n to coars	e								odor	
				-															
	S2	12	8, 4, 6				silty clay; lit			:0	CL			100		м		slight weathered	
					coarse san	d; scattere	ed cobbles a	nd coar	rse gravel									gasoline odor	
	S3		4, 8, 14		light brow	n silty fine	to coarse s	and and	i gravel		SM			80		м/w		slight weathered gasoline odor	
	S4		10,21 19		light brown		oarse gravel;	; some	silt;		GM	6		80		w	very	slight weathered gasoline odor	
-			10	10	end of bor		ound					1							
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This form is authorized by Chapters 144.147 and 162, Wis. Stats. Completion of this report is mandatory. Penalties: Forfeit not less than \$10 nor more than \$5 000 for each violation. Fined not less than \$10 or more than \$100 or imprisoned not less than 30 - *

	Wisco nent of		ll Resou	urces 🗆 S	☐ Emergency Response ♀ Under □ Wastewater □ Othe						SOIL BORING LOG INFORMATION Form 4400-122 10- Page 1 of						
acility	/Projec	t Name	e	de Oil Station 1656	#605			Licens	e/Perm	nit/Mor	itor	ing Nu	mber	Bor	ing l	Number B4	
Boring	Drilled	By (F		rk Oil Station 1656 ne and name of c				Drillin	g Start	ed	I	rilling	Comp	leted	Dr	illing Method	
-		ronment		Chris Heber					7/14/9	3		7.	/14/93		4.:	25" HSA	
		Well N		Unique Well N	o. Common	Well 1	Name	Static '	Water	Level Feet MS	st S	urface	Elevat Fe	ion æt MS	Bo	rehole Diam. Incl	
Boring	Locatio	on						l , ,			T	ocal G				oplicable)	
State P	lane			N,	I		-	Lat.		<u>19' 00'</u>				N □ S ⊠	_	E 18 Feet W	
NV County	V 1/4 o	<u>f N</u>	E 1/4 of	f Section 24,	<u>T 10 N., R.</u>	deside and the second se	E. DNR Co	Long		<u>57' 00'</u> Civil		14 /n/City/				18 Feel WI	
Jounty	Ozauke	e					46							G	rafto	n	
San	nple										m		Soil	Proper	ties		
N umber	Length Recovered	Blow Counts	D epth in Feet		il/Rock Descri I Geologic Orig Each Major U	gin Fo	r		U S C S	G raphic Log	W ell Diagram	M ax. FID	Standard Penetration	M oisture C ontent	P 200	RQD/ Comments	
				8" concrete; brow	un silty sand and	aravel	(fill)										
S1	12	3, 5, 8		dark brown-gray t sand; trace roots	o black organic :			m	ML			70		M		no odor	
S2	2	12,11, 16		pushed dolomite clay; little fine to				ome	ML			3		м		no odor	
S3	1	4, 12, 15		cobbles to 6" in c			, 					1		w		no odor	
S4 - S5		6, 13, 30 7, 14,		light brown silt to fine gravel; fine to some fine to coar	o medium sand le	ens; no	gravel 8	-8.5';	SM			.5 1		M/W W		no odor no odor	
		23	10 	corse gravel 9-9. end of boring at 1		m sand											
			- 15														
			E														
		4															
			<u>= 20</u>														
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		ty that	the info	ormation on this	torm is true an	d corr	Firm	-		nowled	ige.						
Signat	ure	_	-1	HATAN SI			1 1,111	" вт ²	, Inc.								

less than \$10 nor more than \$5,000 for each violation. Fined not less than \$10 or more than \$100 or imprisoned not less than 30