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UNDERGROUND STORAGE TANK ABANDONMENT MILWAUKEE PLATING COMPANY MILWAUKEE, WISCONSIN

December 28, 1993

Prepared For:

Milwaukee Plating Company 1434 N. 4th Street Milwaukee, Wisconsin 53212

Prepared By:

Simon Hydro-Search Brookfield Lakes Corporate Center XII 175 N. Corporate Drive, Suite 100 Brookfield, Wisconsin 53045

Project No.: 366115203

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15203

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1.0 EXECUTIVE SUMMARY

Simon Hydro-Search was contracted by Milwaukee Plating Company to abandon in-place an underground storage tank (UST) at their facility at 1434 N. 4th Street, Milwaukee, Wisconsin. The tank was located below the basement floor, and was discovered by Milwaukee Plating in November of 1991. The tank had not been used by Milwaukee Plating since their purchase of the property in 1964. The facility was previously owned by Everbrite Electric, Inc.

The 880-gallon tank was abandoned in-place due to its location underneath the basement floor. The tank was emptied and cleaned on November 1, 1993 and soil samples were collected from native soils surrounding the tank. A sump was installed through the bottom of the tank on November 3 and the tank was then filled with clean sand. A flush-mount cover was placed on the sump and the floor surface was finished with concrete.

Subsequent to cleaning the UST, ground water was observed leaking into the bottom of the tank, indicating that the tank had leaked in the past. Laboratory analyses of soil samples collected from native soils surrounding the tank indicate impacts with weathered leaded gasoline.

Copies of this report should be submitted to the Wisconsin Department of Natural Resources (WDNR) and to the Wisconsin Department of Industry, Labor and Human Relations. A work plan should be developed for submittal to and approval by the WDNR to identify the extent of impacts at the site.

2.0 INTRODUCTION

2.1 Purpose

This report documents the abandonment in-place of an underground storage tank (UST) located beneath the basement floor at Milwaukee Plating Company at their facility at 1434 N. 4th Street, Milwaukee, Wisconsin (Figure 2-1).

2.2 Introduction to Milwaukee Plating Facility

Milwaukee Plating provide zinc, copper, nickel, chrome, silver and tin plating on aluminum products. The facility is located in a building that was previously used by a sign company, Everbrite Electric, Inc. until 1964. The northern lot of the Milwaukee Plating Company was previously occupied by Kepec Paint Company which was destroyed by fire in the late 1960's.

2.3 Background

Milwaukee Plating Company contracted Simon Hydro-Search on November 9, 1989, to remove and abandon underground storage tanks (USTs) at their facility. Company personnel knew of two USTs on the property, which were used to store heating oil. A 3,000-gallon UST located on the southeast side of the site was removed and a 6,400-gallon UST on the east side of the building was abandoned-in-place due to its location under a loading dock (Figure 2-2). In addition, two 250-gallon USTs were located and removed north of the 6,400-gallon UST. Soil directly under the two 250-gallon USTs was tested and found to be free of impacts. Impacted soil was encountered in the vicinity of the 3,000-gallon UST and the 6,400-gallon UST. The UST closure activities were documented in the Simon Hydro-Search report dated May 15, 1990.

In November 30, 1990, a soil and ground-water investigation was conducted to determine the extent of impacts from hydrocarbons at the site. Five boreholes were installed in the public alleyways east and south of the Milwaukee Plating Company facility to determine the extent of soil impacts (Figure 2-2). Three of the boreholes were converted to ground-water monitor wells to evaluate ground-water quality and flow direction at the facility. In addition, a sixth borehole was installed in the northeast corner of the property to evaluate the background soil and ground-water quality.

Two additional monitor wells were installed in July, 1992 north of the site to aid in determining the direction of ground-water flow and upgradient water quality.

In November, 1991, a UST was discovered below the basement of Milwaukee Plating Company. Based upon this discovery, a free product sample from existing monitor well MW-1 and a product sample from the UST was submitted to Global Geochemistry Corporation (GGC) to characterize the type, origin, and source of the products and to attempt to determine if the two products are source-related. Based upon their analysis of the UST product sample, GGC concluded that it consisted primarily of fresh gasoline from dispensers. Their analysis of the product sample from well MW-1 indicated that it is a mixture of gasoline and diesel fuel. GGC also concluded that the MW-1 sample is relatively fresh, appearing to have been released into the environment less than 5 years ago.

In May of 1992, an adjacent property owner, Central Control Alarm Corporation, threatened to file a lawsuit against Milwaukee Plating. This threat came about after Central Control discovered contamination on its property located across the public alley and directly east of Milwaukee Plating's facility. Central Control claimed that as a result of this contamination, it lost a potential purchase for its property.

At the request of the Wisconsin Department of Natural Resources (WDNR), Milwaukee Plating has been removing free product from well MW-1 since September 13, 1993. Product is being removed by bailing. It was originally removed on a daily basis, but because of the small quantity removed, is now being bailed weekly.

2.4 Scope of Work

The scope of work documented in this report is limited to the abandonment in place of the UST discovered beneath the basement floor in November of 1991. The UST in the basement of Milwaukee Plating was emptied, cleaned and abandoned in-place during the week of November 1, 1993. Abandonment procedures, as well as laboratory analytical results are provided in this report.

3.0 DESCRIPTION OF TANK ABANDONMENT ACTIVITIES

3.1 Tank Abandonment Procedures

The gasoline UST was located beneath the basement floor and it was determined that it should be abandoned in-place because of the impracticality of excavation. Prior to abandonment, a UST abandonment permit (Appendix D) was obtained from the City of Milwaukee. As a requirement of the permit, the city of Milwaukee Department of Building Inspection was notified. A building inspector was present for inspection after the tank had been cleaned, and prior to filling the tank with sand.

On Monday, November 1, 1993, abandonment of UST was initiated at Milwaukee Plating Company. Figure 3-1 shows the location of the 880-gallon UST. Personnel present at activity included:

- ♦ Phil Pinkus of the U.S. Environmental Company with two laborers,
- ♦ Gerald DeMers and Dan Davies of Simon Hydro-Search,
- ♦ Ernie Hooks of Milwaukee Plating, and
- ♦ Dan D. Viegut of Dames & Moore representing Central Controls, Inc.

The concrete around the fill cap of the UST was broken using a jack hammer (see Photograph #1, Appendix A). Six inches of concrete was underlain by 2 feet of silty clay soil which covered the steel top of the UST. The silty clay fill was removed and stockpiled (Photograph #2). Two samples of this fill material were collected and analyzed for any volatile organic compounds (VOCs) present. This was accomplished using a headspace analysis utilizing the HNu Model PI-101 photoionization detector (PID) meter equipped with an 11.7 eV probe. All samples of soil were collected as they were removed from the soil outside to the UST. Each sample filled one-half of a 1-pint class jar which was covered with aluminum foil and secured with the cap ring. Soil samples were allowed to volatilize for a minimum of 30 minutes at room temperature (approximately 70°F). The probe was then inserted into the jar's headspace and the total VOCs present were shown on the PID

meter and recorded on Simon Hydro-Search's Field PID Data Form (Appendix D). Laboratory samples were collected at the same time for analysis of gasoline range organics (GROs), VOCs, lead, and percent solids.

The working area was enclosed with plastic sheeting to capture UST vapors and dust (Photograph #3). Vapors from inside the UST were removed by inserting compressed air to displace the vapors out of the UST into an air removal unit which blew them out of an existing exhaust vent to the outside atmosphere (Photographs #4 and #5). When the atmosphere within the tank was reduced to 7% of the lower explosive limit (LEL), removal of a section of the steel UST tank top surface was initiated. The fill pipe was cut off and the top section of the UST was removed (Photographs #8, #9, and #10). Compressed air was also pumped into the UST during cleaning procedures in order to keep the atmosphere below 10% of the LEL (Photograph #11).

Sludge in the bottom of the tank was shoveled out of the tank, and liquids were pumped from the tank. These residuals were containerized in 55-gallon drums. A hydrophobic adsorbent material was distributed throughout the tank to adsorb hydrocarbons. The tank interior was then scraped clean, and the adsorbent material containerized with the sludge and liquid from the bottom of the tank. The solid waste inside the tank consisted of sand saturated by the liquid waste. The liquid appeared to be mostly water mixed with aged gasoline (Photograph #12). A total of approximately 90 gallons of liquid waste and sludge was contained in two 55-gallon steel barrels and appropriately labeled by the U.S. Environmental Company. The solid waste removed from the UST filled one-half of a third 55-gallon steel drum and was also properly labeled.

The interior dimensions of the tank were measured to be 6 feet long and 5 feet in diameter. The calculated capacity of the tank is 880 gallons. The tank was constructed out of 3/16-inch thick steel.

After the tank had been cleaned, liquid was observed seeping into the tank through a rusty portion in the tank bottom (Photographs #13 and #14). As about 8 inches of liquid was

originally present in the tank, it is assumed that the ground-water surface was approximately 8 inches above the bottom of the UST.

Holes were drilled in each end of the UST approximately 1 foot above the UST bottom. Holes were drilled at these levels to collect soil samples above the water table, and to prevent the tank from filling with ground water overnight. Soil samples were collected from each end of the UST approximately 1 foot from the outside surface of the tank using a hand-hammered Shelby tube.

On November 2, 1993 following approval by the city inspector to abandon the UST in-place, a section of the steel was cut out of the bottom of the UST directly below the top opening (Photograph #15). When this section of the tank bottom was removed, several holes due to corrosion were observed (Photograph #16). An access hole was also drilled into the north wall of the UST and a soil sample was collected in the same manner as the samples collected from each end.

A sump approximately 1-foot deep was dug out below the bottom of the tank. The excavated soil was removed and containerized. A soil sample was then collected at this location (Photograph #17).

An 8-foot length of 1.05-foot outside diameter, 0.98-foot inside diameter, schedule 80 polyvinylchloride (PVC) pipe with a 3-foot long factory cut 0.010-inch screen section (Photograph #18) was placed into the sump below the UST. The top of the PVC pipe was 2 inches below the concrete floor surface. Clean concrete that was removed to gain entry to the UST was placed in the eastern half of the tank bottom. Sand was then brought in to backfill the UST (Photograph #19). A flush-mount steel protective top was installed over the PVC sump and concrete was used to complete the floor repair and sump installation (Photograph #20). Pipes leading to the tank from the east wall of the facility were cut and filled with hydrocarbon absorption towels or concrete.

Soil removed during UST abandonment that was not impacted was spread over the backfill area of the former 3,000-gallon UST excavation on the south end of the building.

3.2 Analytical Results

Soil samples were submitted to NET Laboratory in Watertown, Wisconsin for the analysis of VOCs (EPA Method 8021), diesel range organics (DROs), gasoline range organics (GROs), lead, and total solids. Analytical results from soil samples are provided in Appendix B, and are summarized on Table 3-1.

All of the soil samples collected exhibited impacts by petroleum hydrocarbons. GRO ranged from <5 mg/kg (parts per million) in the sample from the west wall to 260 mg/kg in the sample from the north wall. DRO ranged from 6.6 mg/kg in the sample from the west wall to 380 mg/kg in the east wall. Total VOCs ranged from 8.9 mg/kg in the west wall to 152 mg/kg in the sample from beneath the tank. The most prevalent VOC present in sample from the north wall and sample from beneath the tank was 1,2,4-trimethylbenzene, which was present at concentrations of about 90 mg/kg in both of these samples.

The VOCs detected in soil samples from the UST at Milwaukee Plating are compared to the components of fuel oil, leaded and unleaded gasoline in Table 3-2. All of the compounds detected are components of leaded gasoline; only 6 of the 11 compounds are present in fuel oil, and only 5 of them are present in unleaded gasoline.

The compounds detected were compared with a listing of the components of fresh and weathered gasoline (Johnson, et al.; Table 3-3). This reference indicates that the predominant VOCs from the EPA Method 8021 list in weathered gasoline are xylenes, 1,2,4-trimethylbenzene, and 1,3,5-trimethylbenzene, respectively. The predominant VOCs in fresh gasoline are xylenes, n-propylbenzene and toluene. While gasolines from different sources will vary significantly as to their components, the VOCs detected in soil samples from the UST at Milwaukee Plating are more similar to the makeup of weathered gasoline

than to fresh gasoline. This is contrary to the analyses performed by GGC on a sample collected from the tank in 1991.

3.3 Waste Disposal

Sludge and liquids generated from cleaning the tank were containerized on-site. Disposal arrangements were made through Superior Environmental Services Hazardous Waste Group, Inc. of Port Washington, Wisconsin. Manifests for disposal will be submitted to the WDNR upon receipt from Superior.

4.0 CONCLUSIONS AND RECOMMENDATIONS

Based upon the closure activities, the following conclusions can be made:

- 1. The 880-gallon tank had contained leaded gasoline. The tank was last known to be used in 1964.
- 2. Soil impacts were determined to be present in the soils adjacent to the tank.

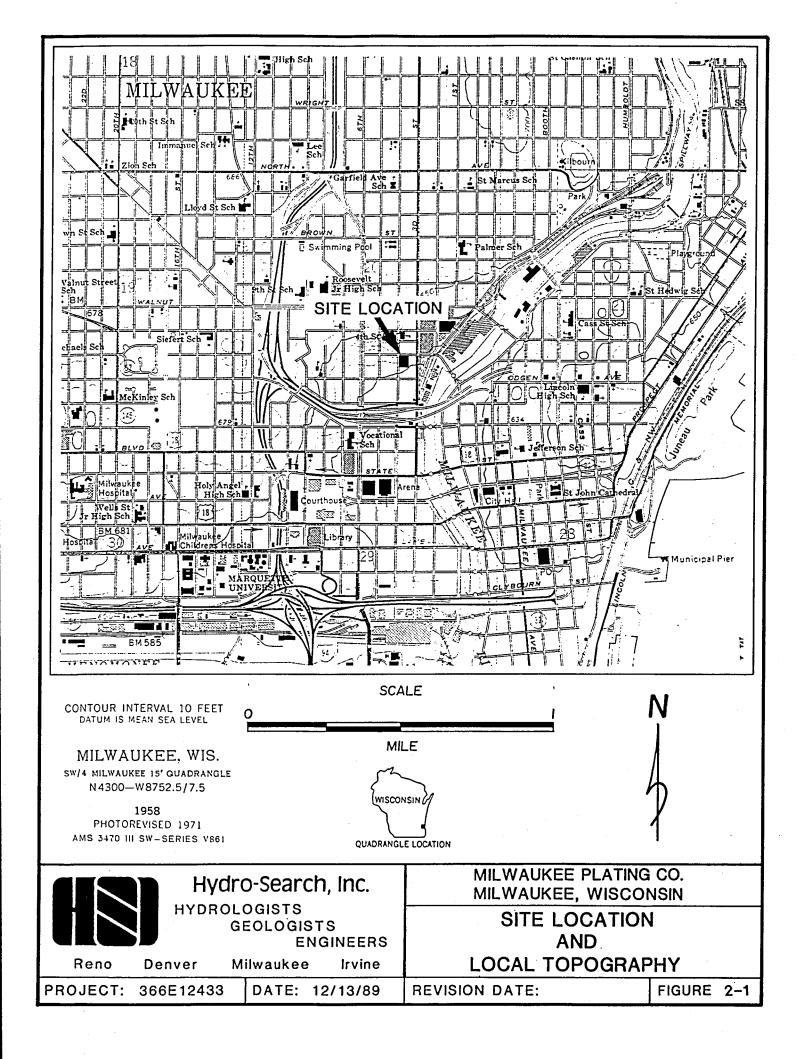
 The compounds detected are typical of weathered gasoline.
- 3. A sump was installed through the bottom of the tank to assist in future remediation of the site.

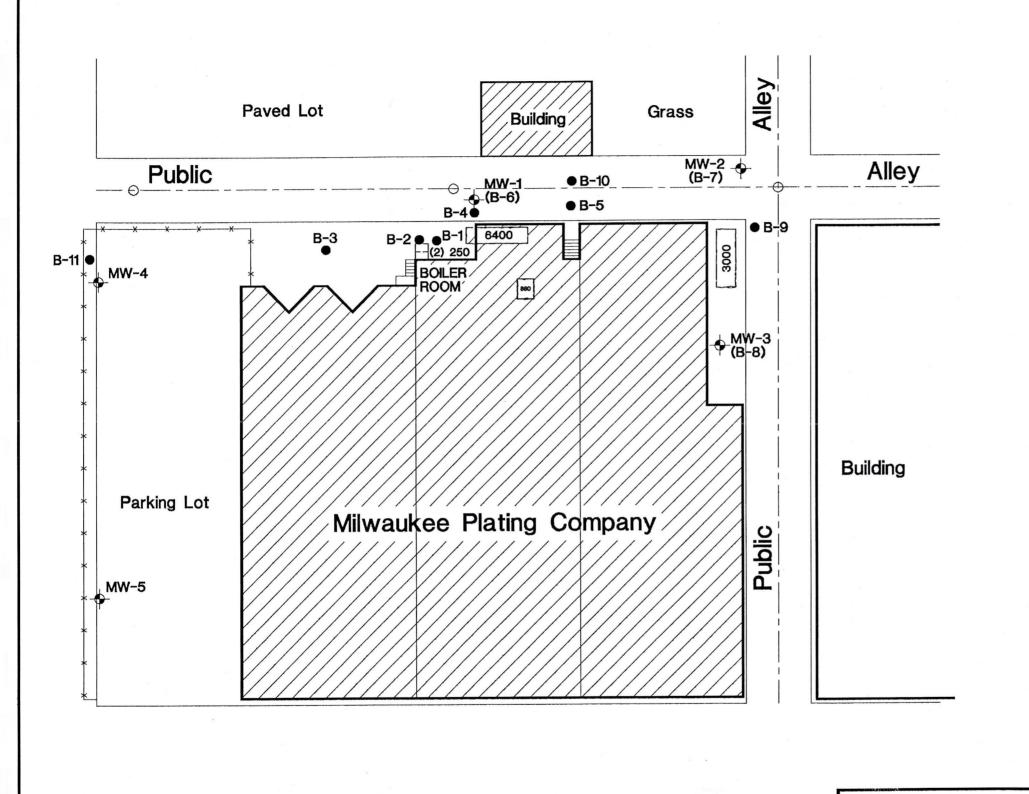
As a result of closure activities at this site, Simon Hydro-Search recommends than an investigation be conducted to determine the extent of petroleum impacts at the site. Due to the presence of floating product observed in well MW-1, the WDNR has classified this as a high priority site. A work plan for future site investigation and evaluation of remedial alternatives should be prepared and submitted to the WDNR for approval.

5.0 REFERENCES

- Dragun, James, The Soil Chemistry of Hazardous Materials, 1988.
- Hydro-Search, Inc., Soil and Ground-Water Investigations, Milwaukee Plating Company, November 21, 1991.
- Hydro-Search, Inc., Underground Storage Tank Closures and Remediation, Milwaukee Plating Company, May 15, 1990.
- Johnson, P.C., Stanley, C.C., Kemblowski, M.W., Byers, D.L., and Colthart, J.D., "A Practical Approach to the Design, Operation, and Monitoring of In Situ Soil-Venting Systems," Groundwater Monitoring Review, Spring 1990.

FIGURES





EXPLANATION

MW-1 • MONITOR WELL LOCATION AND DESIGNATION

B-6 ● BOREHOLE LOCATION AND DESIGNATION

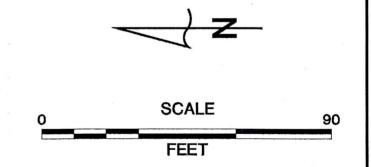
FORMER UNDERGROUND STORAGE TANK LOCATION (SIZE IN GALLONS)

SEWER MANHOLE

6400

----- COMBINED SEWER

--- CHAIN-LINK FENCE



HED SIMON HYDRO-SEARCH

Brookfield Lakes Corporate Center XII 175 N. Corporate Drive, Suite 100 Brookfield, Wisconsin 53045

Dsgn. by: R46 Chk. by: GLD Apprv. by: DLM

PROJECT: 366115203 DATE

DATE: 12/29/93

MILWAUKEE PLATING CO. MILWAUKEE, WISCONSIN

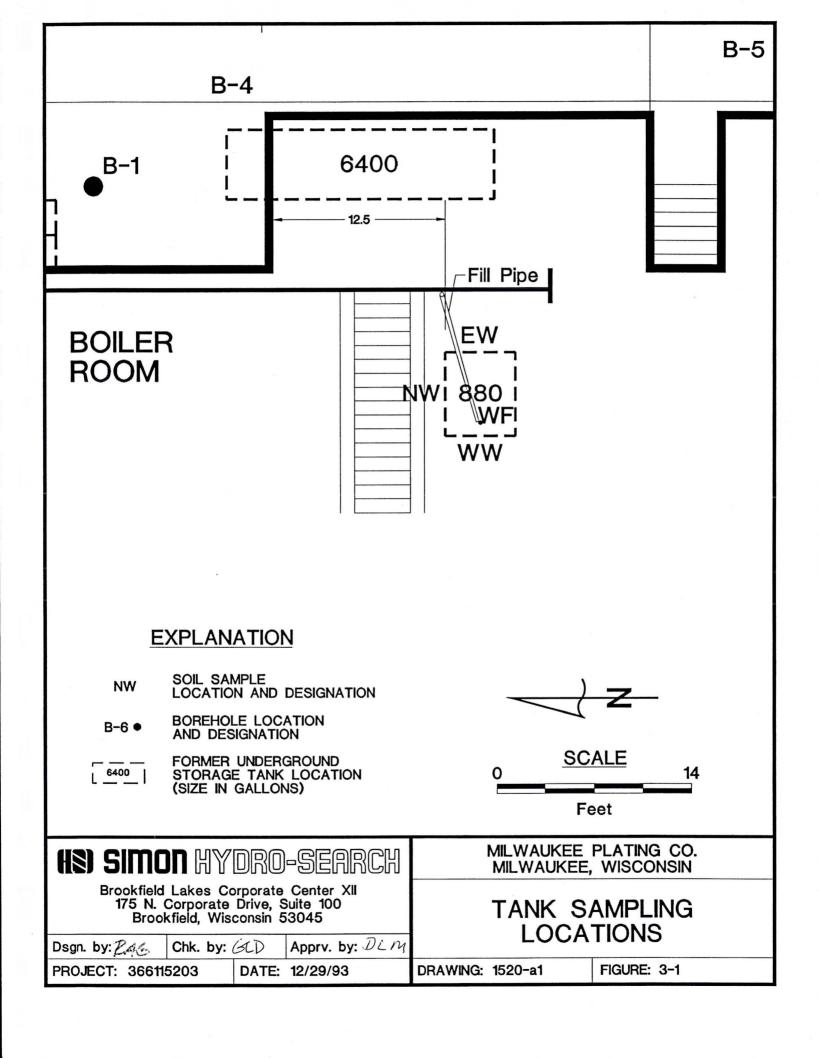
SITE LAYOUT

FIGURE:

DRAWING:

1520-b2

2-2



TABLES

Table 3-1. Soil Sampling Results

COMPOUND	SOIL CONCENTRATION (mg/kg)				
COMPOUND	WEST WALL	EAST WALL	NORTH WALL	WEST FLOOR	
Benzene	0.32	< 0.50	< 0.50	7.7	
n-Butylbenzene	1.1	2.0	5.7	2.4	
sec-Butylbenzene	< 0.10	< 0.50	0.51	0.19	
Ethylbenzene	0.34	0.76	1.4	5.6	
Isopropylbenzene	< 0.10	< 0.50	0.32	0.68	
p-Isopropyltoluene	0.42	< 0.50	0.28	< 0.10	
Naphthalene	0.85	1.5	1.9	0.97	
n-propylbenzene	1.2	1.4	1.5	1.9	
Toluene	0.32	0.38	0.11	13	
1,2,4-Trimethylbenzene	0.98	2.1	93	90	
1,3,5-Trimethylbenzene	2.3	1.5	3.7	3.1	
Xylenes	1.1	2.4	4.5	26	
TOTAL VOCs:	8.93	12.04	112.92	151.54	
Gasoline Range Organics	< 5.0	170	260	110	
Diesel Range Organics	6.6	380	190	27	
Lead 41 58 42		42	40		

Table 3-2. Components of Petroleum Products

COMPOUNDS DETECTED IN SOIL	C	COMPOUND CAN BE PRESENT				
SAMPLES	FUEL OIL LEADED GASOLINE		UNLEADED GASOLINE			
Benzene	Х	Х	Х			
n-Butylbenzene		X				
sec-Butylbenzene	,	X				
Ethylbenzene	X	X	X			
Isopropylbenzene	X	X				
Naphthalene	X	X				
n-propylbenzene		X				
Toluene	X	X	X			
1,2,4-Trimethylbenzene		X	X			
1,3,5-Trimethylbenzene		· X				
Xylenes	X	X	X			

Source:

Table 9-16 of The Soil Chemistry of Hazardous Materials,

James Dragun, 1988.

Note:

p-Isopropyltoluene was also detected in soil samples collected at this site, but is not listed among the components of petroleum products provided in the

above reference.

Table 3-3. Composition Fractions of Fresh and Weathered Gasoline

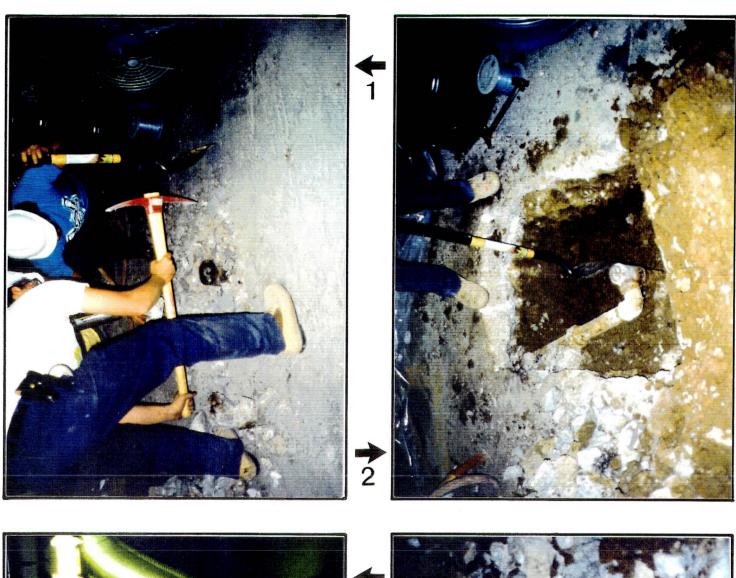
COMPOUNDS	PERCENT FRACTION OF U.S. EPA	METHOD 8021 VOCS IN
COMPOUNDS	FRESH GASOLINE	WEATHERED GASOLINE
Benzene	2.5	0.8
Toluene	17.8	13.3
Ethylbenzene	0	4.8
Xylenes	30.9	29.6
n-propylbenzene	27.2	4.3
1,3,5-Trimethylbenzene	13.3	18.2
1,2,4-Trimethylbenzene	6.9	26.1
Naphthalene	1.5	2.8
TOTAL:	100.1	99.9

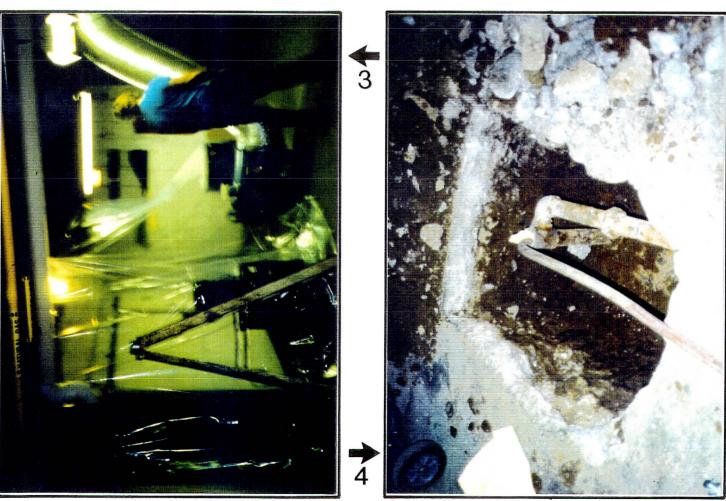
Adapted from "A Practical Approach to the Design, Operations and Monitoring of In Situ Soil-Venting Systems," P.C. Johnson, et al., Groundwater Monitor Review, Spring 1990

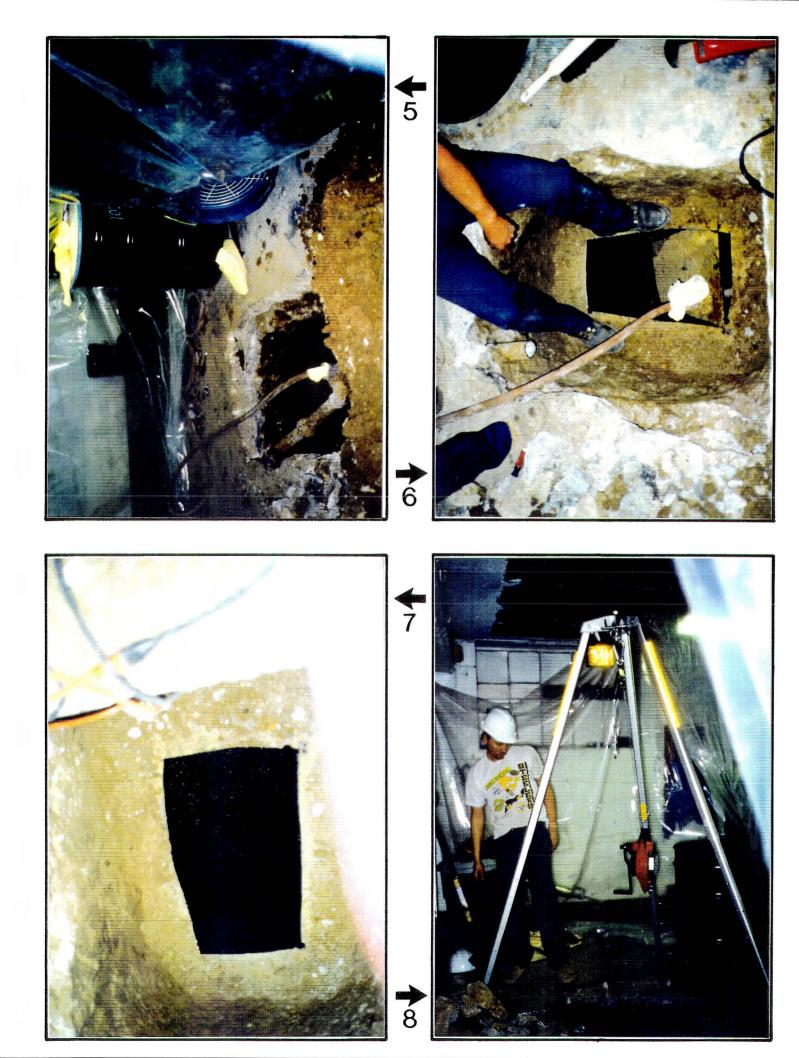
APPENDIX A PHOTODOCUMENTATION

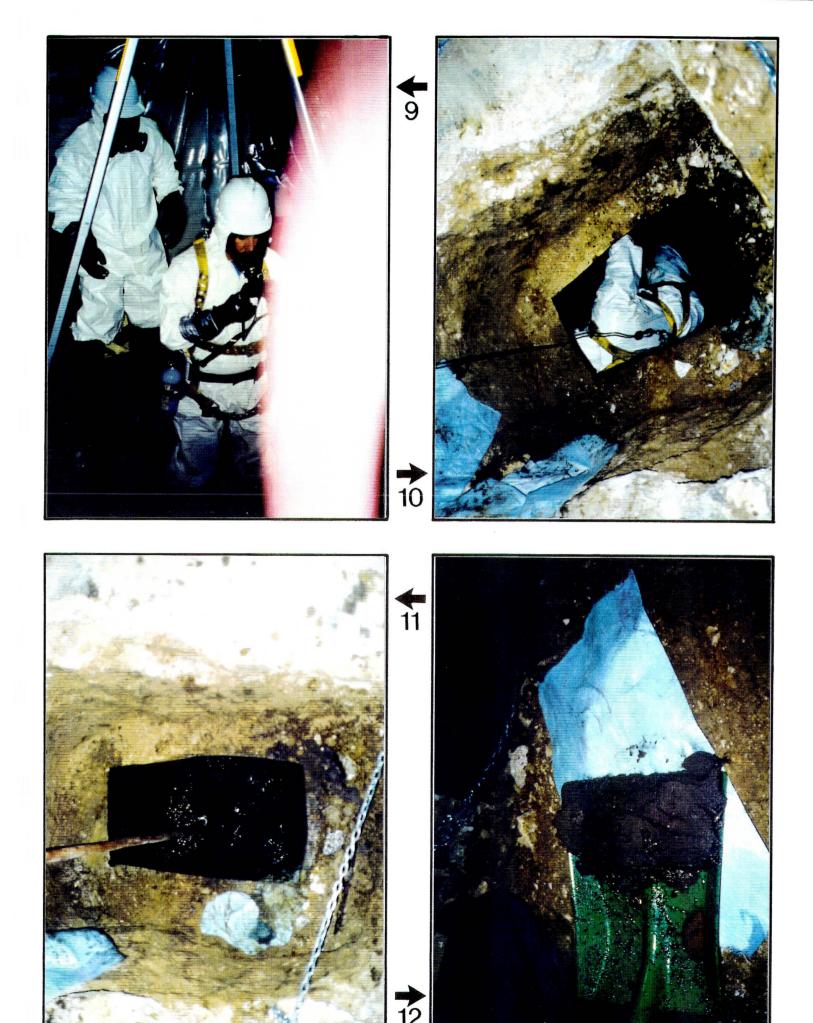
PHOTODOCUMENTATION

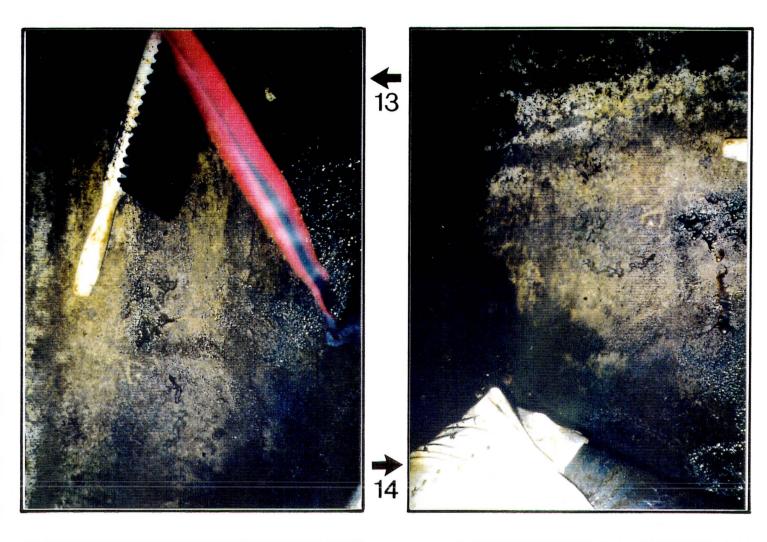
Photo #	Description
1.	Removal of concrete, facing east.
	, ,
2.	Removal of silty clay soil above UST, facing east.
3.	Enclosure of working area with exhaust fan, facing east.
4.	Compressed air being pumped into UST, facing west.
5.	Compressed air being pumped into UST, facing east.
6.	Removal of UST top wall section, facing east
7.	Removal of UST top wall section, facing south.
8.	Tripod set up, facing east.
9.	Lowering employee with supplied air into UST, facing north.
10.	Employee inside UST, facing east.
11.	Compressed air pumped into UST, facing east.
12.	Saturated sand from UST bottom.
13.	Liquid seeping into UST near bottom, facing north.
14.	Liquid seeping into UST near bottom, facing north.
15.	Section of UST bottom wall removed, facing north.
16.	Rust holes in bottom section removed from UST.
17.	Sample and sump bottom location, west end of UST visible on left.
18.	Eight-foot length of PVC sump with screen and bottom piece.
19.	Backfilling UST with sand, facing east.
20.	Protective steel flush-mount installed.

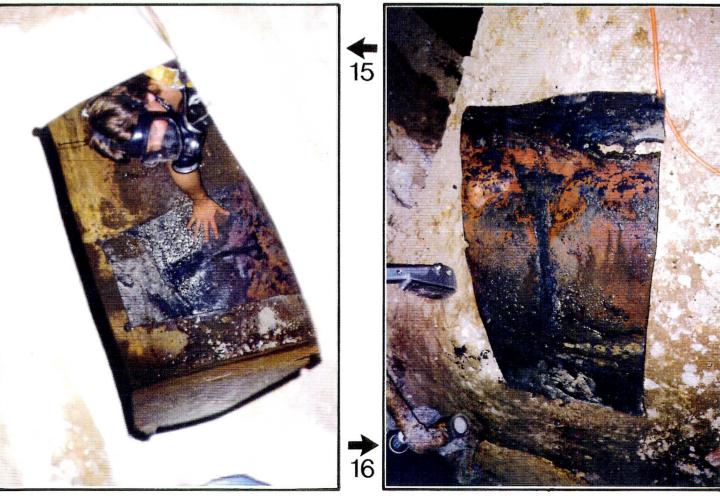


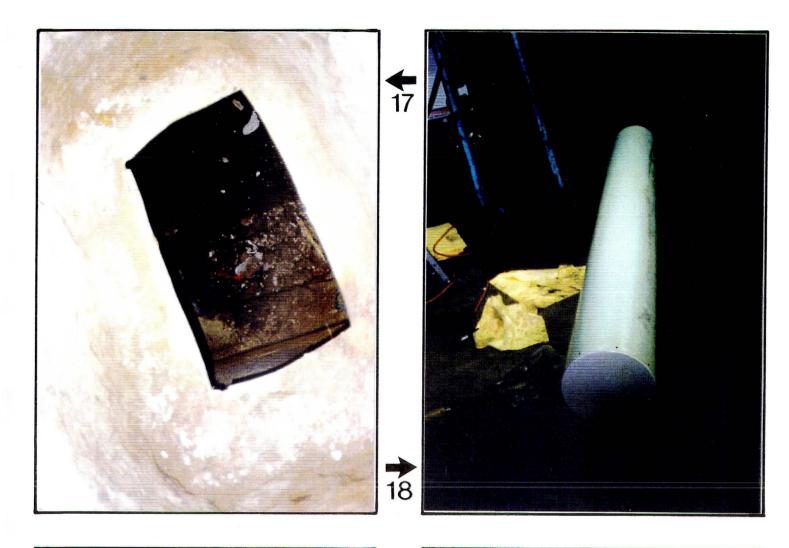


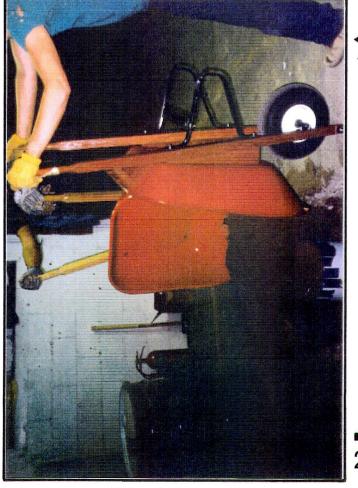


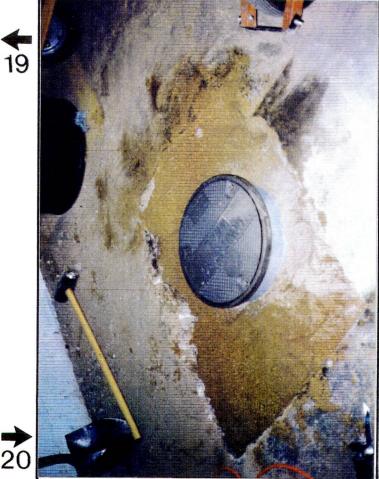












APPENDIX B

LABORATORY REPORTS

AND

CHAIN-OF-CUSTODY FORMS



NOV 2 4 1993

602 Commerce Drive P.O. Box 288 Watertown, WI 53094 Tel: (414) 261-1660

Watertown Division

Fax: (414) 261-8120

ANALYTICAL REPORT

MASTER ALE COPY PROJECT # 366/15 203 CC:

Mr. Gerald DeMers SIMON HYDRO-SEARCH, INC. 175 N. Corporate Drive Suite 100 Brookfield, WI 53045

11/22/1993

Job Number:

93.05425

Page 1

The following samples were received by NET for analysis:

Sample Number	Sample Description		Date Taken
83497 83498 83499 83500 83501	Waste-UST-100 B-Waste-UST WW - 6.0 EW - 6.0 NW - 4.5	#366115203 #366115203 #366115203 #366115203	11/01/1993 11/01/1993 11/01/1993 11/01/1993 11/03/1993
83502	WF - 7.5	#366115203	11/03/1993

The above sample(s) may have a result flag shown on the report. The following are the result flag definitions:

A = Analyzed past hold time

C = Standard outside of control limits

E = Extracted past hold time

G = Received past hold time

I = Improperly handled sample

M = Matrix interference

S = Sediment present

X = Unidentified compound(s) present

B = Blank is contaminated

D = Diluted for analysis

F = Sample filtered in lab

H = Late eluting hydrocarbons present

J = Estimated concentration

P = Improperly preserved sample

T = Does not match typical pattern



Watertown Division 602 Commerce Drive P.O. Box 288 Watertown, WI 53094 Tel: (414) 261-1660

Fax: (414) 261-8120

ANALYTICAL REPORT

Mr. Gerald DeMers SIMON HYDRO-SEARCH, INC. 175 N. Corporate Drive Suite 100 Brookfield, WI 53045

11/22/1993

Job No: 93.05425 Sample No: 83497 Account No: 66000

Page 2

JOB DESCRIPTION: Milwaukee Plating #366115203

SAMPLE DESCRIPTION: Waste-UST-1000

Recv'd 4.5 C

Date Received: 11/04/1993 Date Taken: 11/01/1993

Parameter		Result	Unit of Measure	Dated Analyzed
Lead, AA		1.5	mg/L	11/18/1993
DRO Extraction GRO - Aqueous	H	11/08/93 388,000	ug/L	11/08/1993 11/11/1993
VOC - AQUEOUS - EPA 8021 Benzene		3,900	ug/L	11/10/1993
Bromobenzene		<500	ug/L	11/10/1993
Bromochloromethane		<500	ug/L	11/10/1993
Bromodichloromethane		<500	ug/L	11/10/1993
Bromoform		<1,000	ug/L	11/10/1993
Bromomethane		<2,000	ug/L	11/10/1993
n-Butylbenzene	•	30,000	ug/L	11/10/1993
sec-Butylbenzene		2,400	ug/L	11/10/1993
tert-Butylbenzene		<500	ug/L	11/10/1993
Carbon Tetrachloride		<500	ug/L	11/10/1993 11/10/1993
Chlorobenzene		<500 <500	ug/L	11/10/1993
Chlorodibromomethane		<2,000	ug/L ug/L	11/10/1993
Chloroethane Chloroform		<500	ug/L	11/10/1993
Chloromethane		<2,000	ug/L	11/10/1993
2-Chlorotoluene		<500	ug/L	11/10/1993
4-Chlorotoluene		<500	ug/L	11/10/1993
1,2-Dibromo-3-Chloropropane		<1,000	ug/L	11/10/1993
1,2-Dibromoethane (EDB)		<500	ug/L	11/10/1993
Dibromomethane		<500	ug/L	11/10/1993
1,2-Dichlorobenzene		<500	ug/L	11/10/1993
1,3-Dichlorobenzene		<500	ug/L	11/10/1993
1,4-Dichlorobenzene		<500	ug/L	11/10/1993
Dichlorodifluoromethane		<1,500	ug/L	11/10/1993
1,1-Dichloroethane		<500	ug/L	11/10/1993
1,2-Dichloroethane		<500	ug/L	11/10/1993
1,1-Dichloroethene		<1,000	ug/L	11/10/1993
cis-1,2-Dichloroethene		<500	ug/L	11/10/1993
trans-1,2-Dichloroethene		<500	ug/L	11/10/1993
1,2-Dichloropropane		<50 0	ug/L	11/10/1993

Brian D. DeJong, Organic Project Manager

Certification No.128053530





Watertown Division 602 Commerce Drive P.O. Box 288 Watertown, WI 53094 Tel: (414) 261-1660 Fax: (414) 261-8120

ANALYTICAL REPORT

Mr. Gerald DeMers SIMON HYDRO-SEARCH, INC. 175 N. Corporate Drive Suite 100 Brookfield, WI 53045 11/22/1993 Job No: 93.05425 Sample No: 83497 Account No: 66000

Page 3

JOB DESCRIPTION: Milwaukee Plating #366115203

SAMPLE DESCRIPTION: Waste-UST-1000 Recv'd 4.5 C

Date Taken: 11/01/1993 Date Received: 11/04/1993

Parameter	Result	Unit of Measure	Dated Analyzed
1,3-Dichloropropane 2,2-Dichloropropane 1,1-Dichloropropene cis-1,3-Dichloropropene trans-1,3-Dichloropropene Ethylbenzene Hexachlorobutadiene Isopropylbenzene p-Isopropyltoluene Methylene Chloride Naphthalene n-Propylbenzene Styrene 1,1,1,2-Tetrachloroethane 1,1,2,2-Tetrachloroethane Tetrachloroethene Toluene 1,2,3-Trichlorobenzene 1,1,1-Trichloroethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane 1,1,2-Trichloropropane 1,2,4-Trimethylbenzene 1,3,5-Trimethylbenzene Vinyl Chloride Xylenes, Total	<500 <500 <500 <500 <500 29,000 4,600 880 <2,500 18,000 19,000 <500 <500 <500 <500 <500 <500 <500	ug/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L	11/10/1993 11/10/1993
Methyl-t-butyl ether DRO - AQUEOUS	<500 920	ug/L mg/L	11/10/1993 11/14/1993

Brian D. DeJong, Organic Project Manager Certification No.128053530





Watertown Division 602 Commerce Drive P.O. Box 288 Watertown, WI 53094 Tel: (414) 261-1660 Fax: (414) 261-8120

ANALYTICAL REPORT

Mr. Gerald DeMers SIMON HYDRO-SEARCH, INC. 175 N. Corporate Drive Suite 100 Brookfield, WI 53045

11/22/1993 Job No: 93.05425 Sample No: 83498 Account No: 66000

Page 4

JOB DESCRIPTION: Milwaukee Plating #366115203 #366115203 SAMPLE DESCRIPTION: B-Waste-UST

Recv'd 4.5 C

Date Taken: 11/01/1993 Date Received: 11/04/1993

Parameter		Result	Unit of Measure	Dated Analyzed
Solids, Total Lead, AA		88.6 64 11/05/93	% mg/kg	11/16/1993 11/18/1993 11/17/1993
DRO Extraction GRO - Nonaqueous	Н	122,000	mg/kg	11/12/1993
VOC NONAQUEOUS - EPA 8021 Benzene Bromobenzene Bromochloromethane Bromodichloromethane Bromoform Bromomethane n-Butylbenzene sec-Butylbenzene tert-Butylbenzene Carbon Tetrachloride Chlorobenzene Chlorodibromethane Chloroform Chloromethane 2-Chlorotoluene 4-Chlorotoluene 1,2-Dibromo-3-Chloropropane 1,2-Dibromoethane 1,2-Dichlorobenzene 1,3-Dichlorobenzene 1,4-Dichlorobenzene 1,4-Dichlorobenzene Dichlorodifluoromethane	H	122,000 130 <50 <50 <100 <200 880 63 <50 <50 <50 <50 <50 <50 <50 <50 <50 <50	mg/kg	11/15/1993 11/15/1993
1,1-Dichloroethane 1,2-Dichloroethane 1,1-Dichloroethene		<50 <50 <100	mg/kg mg/kg mg/kg	11/15/1993 11/15/1993 11/15/1993
cis-1,2-Dichloroethene trans-1,2-Dichloroethene		<50 <59	mg/kg mg/kg	11/15/1993 11/15/1993

Brian D. DeJong, Organic Project Manager

Certification No.128053530





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ANALYTICAL REPORT

Mr. Gerald DeMers SIMON HYDRO-SEARCH, INC. 175 N. Corporate Drive Suite 100 Brookfield, WI 53045 11/22/1993

Job No: 93.05425 Sample No: 83498 Account No: 66000

Page 5

JOB DESCRIPTION: MESAMPLE DESCRIPTION:

Milwaukee Plating #366115203 N: B-Waste-UST #366115203

Recv'd 4.5 C

Date Taken: 11/01/1993 Date Received: 11/04/1993

Parameter	Result	Unit of Measure	Dated Analyzed
1,2-Dichloropropane 2,2-Dichloropropane 2,2-Dichloropropane 1,1-Dichloropropene cis-1,3-Dichloropropene trans-1,3-Dichloropropene Ethylbenzene Hexachlorobutadiene Isopropylbenzene p-Isopropyltoluene Methylene Chloride Naphthalene n-Propylbenzene Styrene 1,1,1,2-Tetrachloroethane 1,1,2,2-Tetrachloroethane Tetrachloroethene Toluene 1,2,3-Trichlorobenzene 1,1,1-Trichlorobenzene 1,1,1-Trichloroethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane 1,1,2-Trichloropropane 1,2,4-Trimethylbenzene 1,3,5-Trimethylbenzene Vinyl Chloride Xylenes, Total	<50 <50 <50 <50 <50 <50 <50 <130 <50 <470 <550 <550 <550 <550 <550 <550 <550 <5	mg/kg	11/15/1993 11/15/1993
Methyl-t-butyl ether DRO - NONAQUEOUS	<50 16,000	mg/kg mg/kg	11/15/1993 11/19/1993

Brian D. DeJong, Organic Project Manager Certification No.128053530





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ANALYTICAL REPORT

Mr. Gerald DeMers SIMON HYDRO-SEARCH, INC. 175 N. Corporate Drive Suite 100 Brookfield, WI 53045

11/22/1993

Job No: 93.05425 Sample No: 83499 Account No: 66000

Page 6

JOB DESCRIPTION: Milwaukee Plating #366115203 #366115203 SAMPLE DESCRIPTION: WW - 6.0

Recv'd 4.5 C

Date Taken: 11/01/1993 Date Received: 11/04/1993

Parameter	Result	Unit of Measure	Dated Analyzed
Solids, Total	81.7 41	% mg/kg	11/16/1993 11/18/1993
Lead, AA DRO Extraction	11/05/93	1119/129	11/17/1993
GRO - Nonaqueous	<5.0	mg/kg	11/12/1993
VOC NONAQUEOUS - EPA 8021	73.0	3/3	,,,
Benzene	0.32	mg/kg	11/15/1993
Bromobenzene	<0.10	mg/kg	11/15/1993
Bromochloromethane	<0.10	mg/kg	11/15/1993
Bromodichloromethane	<0.10	mg/kg	11/15/1993
Bromoform	<0.20	mg/kg	11/15/1993
Bromomethane	<0.40	mg/kg	11/15/1993
n-Butylbenzene	1.1	mg/kg	11/15/1993
sec-Butylbenzene	<0.10	mg/kg	11/15/1993
tert-Butylbenzene	<0.10	mg/kg	11/15/1993
Carbon Tetrachloride	<0.10	mg/kg	11/15/1993
Chlorobenzene	<0.10	mg/kg	11/15/1993
Chlorodibromethane	<0.10	mg/kg	11/15/1993
Chloroethane	<0.40	mg/kg	11/15/1993
Chloroform	<0.10	mg/kg	11/15/1993
Chloromethane	<0.40	mg/kg	11/15/1993
2-Chlorotoluene	<0.10	mg/kg	11/15/1993
4-Chlorotoluene	<0.10	mg/kg	11/15/1993 11/15/1993
1,2-Dibromo-3-Chloropropane	<0.20 <0.10	mg/kg mg/kg	11/15/1993
1,2-Dibromoethane (EDB)	<0.10	mg/kg	11/15/1993
Dibromomethane 1,2-Dichlorobenzene	<0.10	mg/kg	11/15/1993
1,3-Dichlorobenzene	<0.10	mg/kg	11/15/1993
1,4-Dichlorobenzene	<0.10	mg/kg	11/15/1993
Dichlorodifluoromethane	<0.30	mg/kg	11/15/1993
1,1-Dichloroethane	<0.10	mg/kg	11/15/1993
1,2-Dichloroethane	<0.10	mg/kg	11/15/1993
1,1-Dichloroethene	<0.20	mg/kg	11/15/1993
cis-1,2-Dichloroethene	<0.10	mg/kg	11/15/1993
trans-1,2-Dichloroethene	<0.1/0	mg/kg	11/15/1993

Brian D. Defong, Organic Project Manager

Certification No.128053530





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ANALYTICAL REPORT

Mr. Gerald DeMers SIMON HYDRO-SEARCH, INC. 175 N. Corporate Drive Suite 100 Brookfield, WI 53045

11/22/1993 Job No: 93.05425 Sample No: 83499 Account No: 66000

Page 7

JOB DESCRIPTION: Milwaukee Plating #366115203 SAMPLE DESCRIPTION: WW - 6.0 #366115203

Recv'd 4.5 C

Date Taken: 11/01/1993 Date Received: 11/04/1993

Parameter	Result	Unit of Measure	Dated Analyzed
1,2-Dichloropropane 1,3-Dichloropropane 2,2-Dichloropropane 1,1-Dichloropropene cis-1,3-Dichloropropene trans-1,3-Dichloropropene Ethylbenzene Hexachlorobutadiene Isopropylbenzene p-Isopropyltoluene Methylene Chloride Naphthalene n-Propylbenzene Styrene 1,1,1,2-Tetrachloroethane 1,1,2,2-Tetrachloroethane Tetrachloroethene Toluene 1,2,3-Trichlorobenzene 1,1,1-Trichloroethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane 1,1,2-Trichloropropane 1,2,4-Trimethylbenzene 1,3,5-Trimethylbenzene Vinyl Chloride	<pre><0.10 <0.10 <0.10 <0.10 <0.10 <0.10 0.34 <0.20 <0.10 0.42 <0.50 0.85 1.2 <0.10 <0.32 <0.10 <0.33 <0.30</pre>	mg/kg mg/kkg mg/kg	11/15/1993 11/15/1993
Xylenes, Total Methyl-t-butyl ether DRO - NONAQUEOUS	1.1 <0.10 6.6	mg/kg mg/kg mg/kg	11/15/1993 11/15/1993 11/19/1993

Brian D. DeJong, Organic Project Manager

Certification No.128053530





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ANALYTICAL REPORT

Mr. Gerald DeMers SIMON HYDRO-SEARCH, INC. 175 N. Corporate Drive Suite 100 Brookfield, WI 53045

11/22/1993 Job No: 93.05425 Sample No: 83500 Account No: 66000

Page 8

JOB DESCRIPTION: Milwaukee Plating #366115203 SAMPLE DESCRIPTION: EW - 6.0 #366115203

Recv'd 4.5 C

Report MTBE quantities with VOC analysis for all Sam

Date Taken: 11/01/1993 Date Received: 11/04/1993

Parameter	Result	Unit of Measure	Dated Analyzed
Solids, Total Lead, AA DRO Extraction	82.4 58 11/05/93	% mg/kg	11/16/1993 11/18/1993 11/17/1993
GRO - Nonaqueous VOC NONAQUEOUS - EPA 8021	170	mg/kg	11/12/1993
Benzene	<0.50	mg/kg	11/14/1993
Bromobenzene	<0.50	mg/kg	11/14/1993
Bromochloromethane	<0.50	mg/kg	11/14/1993
Bromodichloromethane	<0.50	mg/kg	11/14/1993
Bromoform	<1.0	mg/kg	11/14/1993
Bromomethane	<2.0	mg/kg	11/14/1993
n-Butylbenzene	2.0	mg/kg	11/14/1993
sec-Butylbenzene	<0.50	mg/kg	11/14/1993
tert-Butylbenzene	<0.50	mg/kg	11/14/1993
Carbon Tetrachloride	<0.50	mg/kg	11/14/1993
Chlorobenzene	<0.50	mg/kg	11/14/1993
Chlorodibromethane	<0.50	mg/kg	11/14/1993
Chloroethane	<2.0	mg/kg	11/14/1993
Chloroform	<0.50	mg/kg	11/14/1993
Chloromethane	<2.0	mg/kg	11/14/1993
2-Chlorotoluene	<0.50	mg/kg	11/14/1993
4-Chlorotoluene	<0.50	mg/kg	11/14/1993
1,2-Dibromo-3-Chloropropane	<1.0	mg/kg	11/14/1993
1,2-Dibromoethane (EDB)	<0.50	mg/kg	11/14/1993
Dibromomethane	<0.50	mg/kg	11/14/1993
1,2-Dichlorobenzene	<0.50	mg/kg	11/14/1993
1,3-Dichlorobenzene 1,4-Dichlorobenzene	<0.50	mg/kg	11/14/1993
	<0.50	mg/kg	11/14/1993
Dichlorodifluoromethane	<1.5	mg/kg	11/14/1993
1,1-Dichloroethane 1,2-Dichloroethane	<0.50	mg/kg	11/14/1993
	<0.50	mg/kg	11/14/1993
1,1-Dichloroethene	<1.0	mg/kg	11/14/1993
cis-1,2-Dichloroethene	<0.50	mg/kg	11/14/1993
trans-1,2-Dichloroethene	<0.50	mg/kg	11/14/1993

Brian D. DeJong, Organic Project Manager

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ANALYTICAL REPORT

Mr. Gerald DeMers SIMON HYDRO-SEARCH, INC. 175 N. Corporate Drive Suite 100 Brookfield, WI 53045

11/22/1993

Job No: 93.05425 Sample No: 83500 Account No: 66000

Page 9

SAMPLE DESCRIPTION:

JOB DESCRIPTION: Milwaukee Plating #366115203 #366115203 EW - 6.0

Recv'd 4.5 C

Report MTBE quantities with VOC analysis for all Sam

Date Taken: 11/01/1993 Date Received: 11/04/1993

Parameter	Result	Unit of Measure	Dated Analyzed
1,2-Dichloropropane 1,3-Dichloropropane 2,2-Dichloropropane 1,1-Dichloropropene cis-1,3-Dichloropropene trans-1,3-Dichloropropene trans-1,3-Dichloropropene Ethylbenzene Hexachlorobutadiene Isopropylbenzene p-Isopropyltoluene Methylene Chloride Naphthalene n-Propylbenzene Styrene 1,1,1,2-Tetrachloroethane 1,1,2,2-Tetrachloroethane Tetrachloroethene Toluene 1,2,3-Trichlorobenzene 1,2,4-Trichloroethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane 1,1,2-Trichloropropane 1,2,4-Trimethylbenzene 1,3,5-Trimethylbenzene 1,3,5-Trimethylbenzene Vinyl Chloride Xylenes, Total Methyl-t-butyl ether DRO - NONAQUEOUS	<pre><0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <1.0 <0.50 <1.5 <0.50 <0.</pre>	mg/kg	11/14/1993 11/14/1993
~		J. J	

Brian D. DeJong, Organic Project Manager Certification No.128053530





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ANALYTICAL REPORT

Mr. Gerald DeMers SIMON HYDRO-SEARCH, INC. 175 N. Corporate Drive Suite 100 Brookfield, WI 53045 11/22/1993

Job No: 93.05425 Sample No: 83501 Account No: 66000

Page 10

JOB DESCRIPTION: Milwaukee Plating #366115203 SAMPLE DESCRIPTION: NW - 4.5 #366115203

Recv'd 4.5 C

Report MTBE quantities with VOC analysis for all Sam

Date Taken: 11/03/1993 Date Received: 11/04/1993

Parameter		Result	Unit of Measure	Dated Analyzed
Solids, Total Lead, AA		82.0 42	% mg/kg	11/16/1993 11/18/1993
DRO Extraction GRO - Nonaqueous	Н	11/05/93 260	mg/kg	11/17/1993 11/13/1993
VOC NONAQUEOUS - EPA 8021 Benzene		<0.10	mg/kg	11/14/1993
Bromobenzene Bromochloromethane		<0.10 <0.10	mg/kg mg/kg	11/14/1993 11/14/1993
Bromodichloromethane		<0.10	mg/kg	11/14/1993
Bromoform		<0.20	mg/kg	11/14/1993
Bromomethane		<0.40	mg/kg	11/14/1993
n-Butylbenzene		5.7	mg/kg	11/14/1993
sec-Butylbenzene		0.51 <0.10	mg/kg mg/kg	11/14/1993 11/14/1993
tert-Butylbenzene Carbon Tetrachloride		<0.10	mg/kg	11/14/1993
Chlorobenzene		<0.10	mg/kg	11/14/1993
Chlorodibromethane		<0.10	mg/kg	11/14/1993
Chloroethane		<0.40	mg/kg	11/14/1993
Chloroform		<0.10	mg/kg	11/14/1993
Chloromethane		<0.40	mg/kg	11/14/1993
2-Chlorotoluene		<0.10	mg/kg	11/14/1993
4-Chlorotoluene		<0.10 <0.20	mg/kg mg/kg	11/14/1993 11/14/1993
1,2-Dibromo-3-Chloropropane 1,2-Dibromoethane (EDB)		<0.10	mg/kg	11/14/1993
Dibromomethane		<0.10	mg/kg	11/14/1993
1,2-Dichlorobenzene		<0.10	mg/kg	11/14/1993
1,3-Dichlorobenzene		<0.10	mg/kg	11/14/1993
1,4-Dichlorobenzene		<0.10	mg/kg	11/14/1993
Dichlorodifluoromethane		<0.30	mg/kg	11/14/1993
1,1-Dichloroethane		<0.10	mg/kg	11/14/1993
1,2-Dichloroethane		<0.10	mg/kg	11/14/1993
1,1-Dichloroethene		<0.20	mg/kg	11/14/1993
cis-1,2-Dichloroethene trans-1,2-Dichloroethene		<0.10	mg/kg mg/kg	11/14/1993 11/14/1993
trans-1, 2-Dichioroethene		<0.10	11197 vg	11/14/1333

Brian D. Defong, Organic Project Manager Certification No.128053530





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ANALYTICAL REPORT

Mr. Gerald DeMers SIMON HYDRO-SEARCH, INC. 175 N. Corporate Drive Suite 100 Brookfield, WI 53045

11/22/1993

Job No: 93.05425 Sample No: 83501 Account No: 66000

Page 11

JOB DESCRIPTION: Milwaukee Plating #366115203 SAMPLE DESCRIPTION:

NW - 4.5 #366115203

Recv'd 4.5 C

Report MTBE quantities with VOC analysis for all Sam

Date Taken: 11/03/1993 Date Received: 11/04/1993

Parameter	Result	Unit of Measure	Dated Analyzed
1,2-Dichloropropane 1,3-Dichloropropane 2,2-Dichloropropane 1,1-Dichloropropene cis-1,3-Dichloropropene trans-1,3-Dichloropropene Ethylbenzene Hexachlorobutadiene Isopropylbenzene p-Isopropyltoluene Methylene Chloride Naphthalene n-Propylbenzene styrene 1,1,1,2-Tetrachloroethane 1,1,2,2-Tetrachloroethane Tetrachloroethene Toluene 1,2,3-Trichlorobenzene 1,1,1-Trichloroethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane 1,1,2-Trichloropropane 1,2,4-Trichloropropane 1,2,3-Trichloropropane 1,2,4-Trimethylbenzene 1,3,5-Trimethylbenzene Vinyl Chloride Xylenes, Total Methyl-t-butyl ether	<0.10 <0.10 <0.10 <0.10 <0.10 <0.10 1.4 <0.20 0.32 0.28 <0.50 1.9 1.5 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0	mg/kg	11/14/1993 11/14/1993
DRO - NONAQUEOUS	190	mg/kg	11/17/1993

Brian D. BeJong, Organic Project Manager Certification No.128053530





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ANALYTICAL REPORT

Mr. Gerald DeMers SIMON HYDRO-SEARCH, INC. 175 N. Corporate Drive Suite 100 Brookfield, WI 53045

11/22/1993

Job No: 93.05425 Sample No: 83502 Account No: 66000

Page 12

JOB DESCRIPTION: Milwaukee Plating #366115203 SAMPLE DESCRIPTION:

WF - 7.5 #366115203

Recv'd 4.5 C

Report MTBE quantities with VOC analysis for all Sam

Date Taken: 11/03/1993 Date Received: 11/04/1993

Parameter	Result	Unit of Measure	Dated Analyzed
Paint Filter Test Solids, Total	ND 79.8	%	11/17/1993 11/16/1993
Lead, AA	40	mg/kg	11/18/1993
DRO Extraction	11/05/93		11/17/1993
GRO - Nonaqueous	110	mg/kg	11/13/1993
VOC NONAQUEOUS - EPA 8021		4-	
Benzene	7.7	mg/kg	11/15/1993
Bromobenzene	<0.10	mg/kg	11/14/1993
Bromochloromethane	<0.10	mg/kg	11/14/1993
Bromodichloromethane	<0.10	mg/kg	11/14/1993
Bromoform	<0.20	mg/kg	11/14/1993
Bromomethane	<0.40	mg/kg	11/14/1993
n-Butylbenzene	2.4	mg/kg	11/14/1993
sec-Butylbenzene	0.19	mg/kg	11/14/1993
tert-Butylbenzene	<0.10	mg/kg	11/14/1993
Carbon Tetrachloride	<0.10	mg/kg	11/14/1993
Chlorobenzene	<0.10	mg/kg	11/14/1993 11/14/1993
Chlorodibromethane	<0.10	mg/kg	11/14/1993
Chloroethane Chloroform	<0.40 <0.10	mg/kg	11/14/1993
Chloromethane	<0.40	mg/kg mg/kg	11/14/1993
2-Chlorotoluene	<0.10	mg/kg	11/14/1993
4-Chlorotoluene	<0.10	mg/kg	11/14/1993
1,2-Dibromo-3-Chloropropane	<0.20	mg/kg	11/14/1993
1,2-Dibromoethane (EDB)	<0.10	mg/kg	11/14/1993
Dibromomethane	<0.10	mg/kg	11/14/1993
1,2-Dichlorobenzene	<0.10	mg/kg	11/14/1993
1,3-Dichlorobenzene	<0.10	mg/kg	11/14/1993
1,4-Dichlorobenzene	<0.10	mg/kg	11/14/1993
Dichlorodifluoromethane	<0.30	mg/kg	11/14/1993
1,1-Dichloroethane	<0.10	mg/kg	11/14/1993
1,2-Dichloroethane	<0.10	mg/kg	11/14/1993
1,1-Dichloroethene	<0.20	mg/kg	11/14/1993
cis-1,2-Dichloroethene	<0.10	mg/kg	11/14/1993

Desong, Organic Project Manager

Certification No.128053530





Watertown Division 602 Commerce Drive P.O. Box 288 Watertown, WI 53094

Tel: (414) 261-1660 Fax: (414) 261-8120

ANALYTICAL REPORT

Mr. Gerald DeMers SIMON HYDRO-SEARCH, INC. 175 N. Corporate Drive Suite 100 Brookfield, WI 53045 11/22/1993

Job No: 93.05425 Sample No: 83502 Account No: 66000

Page 13

JOB DESCRIPTION: Milwaukee Plating #366115203 SAMPLE DESCRIPTION: WF - 7.5 #366115203

Recv'd 4.5 C

Report MTBE quantities with VOC analysis for all Sam

Date Taken: 11/03/1993 Date Received: 11/04/1993

			• •
Parameter	Result	Unit of Measure	Dated Analyzed
trans-1,2-Dichloroethene 1,2-Dichloropropane 1,3-Dichloropropane 2,2-Dichloropropane 1,1-Dichloropropene cis-1,3-Dichloropropene trans-1,3-Dichloropropene trans-1,3-Dichloropropene Ethylbenzene Hexachlorobutadiene Isopropylbenzene p-Isopropyltoluene Methylene Chloride Naphthalene n-Propylbenzene Styrene 1,1,1,2-Tetrachloroethane 1,1,2,2-Tetrachloroethane Tetrachloroethene Toluene 1,2,3-Trichlorobenzene 1,1,1-Trichloroethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane 1,1,2-Trichloropropane 1,2,4-Trimethylbenzene 1,3,5-Trimethylbenzene	Result <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.50 0.97 1.9 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0.10 <0	Measure mg/kg	
Vinyl Chloride Xylenes, Total Methyl-t-butyl ether	<0.30 26 <0.10	mg/kg mg/kg mg/kg	11/14/1993 11/14/1993 11/15/1993 11/14/1993
DRO - NONAQUEOUS	27	mg/kg	11/17/1993

Brian D. DeJong, Organic Project Manager Certification No.128053530



CHAINDF	COSTODY	RECORD
COMPANY_51	10N HYDRO	SEARCH

ENVIRONMENTAL TESTING INC				AH_{Y}						•				•	REPORT TO: LOCALD DE MERS
® TESTING, INC.		COMPANY SIMON HYDRO SEARCH ADDRESS 175 N. CORPORATE DR STE 100													
				1282) _		INVOICE TO:
				ATION					P	AT	W	<u>-</u>			P.O. NO
	PROJE	CT NU	IMBER_	366	115	20	03	48.4	,						
	PROJE	CT MA	NAGER	GEA	CALI		DE	·M	ER	<u>.</u>					NET QUOTE NO
AMPLED BY DAVIES RINT NAME) SIG	Anu	\swarrow	wa			ນຳປີເ	ili. Sile il				—		ANA	YSES	
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RINT NAME) SIG	NATURE											Ζ.	/ /	/ /	
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			ERS	0	VED		/0			n/	/ ,	/ /	/ /	/ /	
DATE TIME SAMPLE ID/DESCRIPTION	(GRAB	# OF TYPE	MATRIX	PRESERVED Y/N		/2/ /2//	%	S)/(S	QY/				/ /	/ /orblings
			ŏ		PRI	<u>Z</u>		<u>/</u>	<u>Z</u>	_		<u>//</u>			COMMENTS
1/1 15:40 WASTE-UST-100		×	7	Liquid			X	_	_	_					Please report MTBE.
WI 1555 B-WASTE-UST		×	3	SOIL	YN		K							·	quantifies with Voc analysis for all samples
4/1 17:64 1.40 1 4		K	3	SOIL			K								analysis for all samples
1/1 18:05 EW-610		K	3	Soil	4/1	X	X	ዾ	X			, -			
1/3 8:55 NW-4.5		X	3	SOIL		X	X	X	X				T		
1/1 17:30 WW-6.0 1/1 18:05 EW-6.0 1/3 8:55 NW-4.5 1/3 9:50 WF-7.5		K	3	Soil		K	K	L	x						
QC-TB-1			1		Y	×	K	K	X						TRIP BLANK I GOM Jar much
QC-QA-TB-Z		×	3		Ý	×		X	K					_	TRIP BLANK 3015 No Pb San
					<u> </u>			•				- -	_		No PRO BOLLLY
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			 								\dashv				050 C50410 D3415575
			-										_		PER CERALD DEMEERS
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			-										_ -		QC - QA - TB - 2
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CONDITION OF SAMPLE: BOTTLES INTACT? (TE FIELD FILTERED? VE	S)/ NO		. (COC SEAL	S PRES	OF H	AND	INTA	CTT	YES)	NO				TEMPERATURE UPON RECEIPT: 4,5
	_				J. 11LL	O , 1	LAD	JI AC	٦: ٢٠		10				
SAMPLE REMAINDER DISPOSAL: RETURN SAM I REQUEST NE					MAINDE	BS					_			•	DATE
RELINQUISHED BY: DATE/TIME	RECEIVED						MUDOL	IISHEL) BY:					ATE/TIME	
Day Pavier 11-4-93		Ma	Bol	20-0				111	n/	B 1	Jack .	2 1)	11	141	99 3:24 /1/m Hour Walson
METHOD OF SHIPMENT	REMARK	(S:	<u> </u>	Je J.K	· · ·	/	<u> </u>		<u>. در</u> ز	<u> / K</u>	77	مزا آ			1-1-11 11 01 11 11 11 11 11 11 11 11 11 11 1
			•	,				9	Ko	11	ź	Ke	ارر	11/	4(93 16:47 .)
SEAR S												•			TRIVIL Ans 11,593

APPENDIX C PERMITS

November 1, 1993

Mr. Timothy J. Temperly Building Construction Inspector 841 N. Broadway, Room 1016 Milwaukee, WI 53202

RE: Tank Abandonment, Milwaukee Plating Company 1434 N. 4th Street

Dear Mr. Temperly:

Simon Hydro-Search requests a variance to abandon in-place, an underground storage tank (UST) located in the basement of Milwaukee Plating Company, 1434 N. 4th Street, Milwaukee. The variance is requested in accordance with DILHR 10.732 (2) (b) due to its inaccessibility.

The tank is estimated to be 1,000 gallons in size, and will be abandoned by filling with sand after it has been cleaned.

Sincerely,

SIMON HYDRO-SEARCH, INC.

Gerald L. DeMers, P.E.

Gerald De Mus

Senior Engineer

ISTRUCTIONS:

IYEE OR PRINT A SEPARATE FORM FOR EACH LOCATION (PLEASE USE BLACK INF)

RETURN ALL COPIES WITH FEE TO THIS OFFICE

EPT. OF BLDG. INSPECTION 41 N. BROADWAY, 10TH FLOOR 1LWAUKEE, WISCONSIN 53202

CITY OF MILWAUKEE, WISCONSIN APPLICATION FOR PERMIT

Plating Services (Plating Plating Light

						1		•
OCATE	OF GIVE EXACT STREET ADDRESS)	W						
X	MT/TENANT DI	······································		T	272-3433			
- 100	auker lating Us	· · · · · · · · · · · · · · · · · · ·			ADDROSS 1 N- 4th st.	M.l. UT.	PHONE NO.	12.3
11/12	Aulter Matin, Co.				1937 N- 7 37.		THE PROPERTY OF	
	bor Hyllo Statin				175 Caporte la.	Blandin	797-12	
D.S	- Environmental Crop.				ADDRESS N. 51-54. 1/4!	ZUP C/C	108 PHONENO. 23 354-88	77
SHINO	HISTORIC	The Ustra	pirc.			BOZA	3205.00	
上	USE GROUP CURCLE THE PROPER USE GROUP	industrial	210	८१५५	TOR DEPARTMENT USE O	YES NO	JA03.00	
	[1] One family [5] Hotel/Mote [2] Two family [6] Other resid [3] 3-4 family [7] Recreation [4] 5-fam./gtr. [8] Religious bl	entia) (16 bldg. [13	of Pul 11 Ser	blic pa	lbldg. [13] Office buil	ding [17] 0 bldg. [18] S	ther non-res- tructure/ of bldg. es. garage	
	Type of Permit	F	ERM		IS THIS BUILDING FIRE DAT SUBJECT TO A CONDEMNA	MAGED OR TION ORDER?	YES 1	40
120	alterations				STATE IN DETAIL THE K	CIND OF WORK TO	BE PERFORME	De
710	SIDING				Abaila 11) one	Un, Levatour	d Sixxage	2
715	FENCE				frinkLETTER	V	7 LE.	
7F^	FIRE DAMAGE				Size- IFARY 100	O gallons.		
745	RAZING/DEMOLITION				Cratents - suspect	gasaline.		
				:	v .	J		
515	gas furnace				Comply w/ Ich	2-103	chap 2	36.3
	BOILER 545 New 555 Repair			• ",	Q Codo a Orde	marx a	• 1 f	
560	AIR CONDITIONING				0			
600	FIRE PROTECTION							
726	on premise sign				I Declare that an asbeste	os project (as defin	ed in Chapter 6	6 of the
735	TANK REMOVAL 1 (2 50° -	5	3 6	かり	Milwaukea Code of Ordinance under this permit.	s) will not be includ	ed in the work p	ertormed
отн	BR:				Signature of Applicant:			
				~	It is Hereby Agreed between the use biliwarkee, that for and in consideration of stall and the nonupancy of hubding as she Budding has posterior, that the work there forth in this statement, and it is further as planner with Chapter 20 to Chapter 25 thereter, and to obey any said all levelid posterior, and so obey any said all levelid posterior and the said by wirther of the 1919, and Chapter 9 of the Milwayshee City	andernigued, as owners, his of the premises and of the p- tre described, to be issued a on will be dues in accordan- road to construct, after, after 5 of the Milmuke Code; then of the Commissioner a	agent or servent, and result to construct, ever, of granted by the Coun- te with the description of install and county in if Ordinances and all a Fibriding Inspection of	the City of ; alter or in- minimum of a borsin set ; attrict cam- mated district I the City of
		ALTER	D	ඊට	$\Delta H \Lambda$		of the laws of Wisconniz of all unsenderents there	of the year
Š.	Ture of blog. Inspection fersonnel. KED Y	I	1k.		SIGNATURE OF APPLICANT	f.		
FORM	BI-19 (6-93)	·	7		<u> </u>			

Wisconsin Department of Industry, Labor and Human Relations

UNDERGROUND PETROLEUM PRODUCT TANK INVENTORY

Send Completed Form To: Safety & Buildings Division P.O. Box 7969 Madison WI 53707

=or Office Use Only: Fank ID # 442 名分	Information Required By Sec. 101.142, Wis. Stats.	Madison, WI 53707 Telephone (608) 267-5280
Underground tanks in Wisconsin that	have stored or currently store petroleum or regulated sub	ostances must be registered.
Please see the reverse side for additio	nal information on this program. An underground storag	ge tank is defined as any tank
with at least 10 percent of its total vol	ume (included piping) located below ground level. A se	parate form is needed for

each tank. Send each completed form to the agency designations tank by submitting a form? YES NO If yes, are y	ted in the top right corner. Have you previously regis:	tered No
 This registration applies to a tank that is (check one): ■A. ☐ In Use or 1B. ☐ Newly Installed 2. ☐ Abandoned With Product 3. ☐ Abandoned No Product (empty) or With Water 7. ☐ Out of Service - Provide Date 	8. Changed Ownership (Indicate new owner below) Fire Department Providing Fire Cov Where Tank Located:	
A. IDENTIFICATION: (Please Print) 1. Tank Site Name Mi wankee Plating CO Site Add Site Add Village Town of:	State W; S Zip Code S3223 County M; C	ນ
2. Owner Name (mail sent here unless indicated otherwise in #3 below) Same City Village Town of:	Owner Mailing Address (mail sent here unless indicated otherwise) State Zip Code County	se in #3)
3. Alternate Mailing Name If Different Than #2	Alternate Mailing Street Address If Different From #2	
☐ City ☐ Village ☐ Town of:	State Zip Code County	
4. Tank Age (date installed, if known: or years old) 5. Tank Capacity (ga いたのいへ 1000	unknown 3	
1. ☐ Gas Station 2. ☐ Bulk Storage 5. ☐ Industrial 6. ☐ Government 9. ☐ Agricultural 10. ☒ Other (specify): ᠘Λλαμμα	3. X Utility 4. Mercandle 7. School 8. Existential	A CONTROL OF THE CONT
3. ☐ Coated Steel 4. ☐ Fiberglass 6. ☐ Relined - Date 7. ☐ Steel - Fiberglass Reinforced Plants	ated Steel (A. Sacrificial Anodes or B. Impressed Current) 5. Other (specify):	City
Approval: 1. Nat'l Std. 2. DL 3. Other:		Yes ⊠ No Yes ⊠ No
Overfill Protection Provided?	or monitoring 3. Groundwater monitoring 4. Inventor	y control and
PIPING CONSTRUCTION Bare Steel 2. □ Cathodically Protected and Coated or Wrapped St 4. □ Fiberglass 5. □ Other (specify): □	teel (A. Sacrificial Anodes or B. Impressed Current) 3. 9.	Coated Steel Unknown
Piping System Type: 1. ☐ Pressurized piping with: A. ☐ auto shutoff; B. ☐ 3. ☐ Suction piping with check valve at pump and insp	pectable	valve at tank
Piping leak detection method: used if pressurized or check valve at tank: 1. 3. ☐ Groundwater monitoring 4. ☐ Tightness testing 5.	☐ Line Leak Detector 6. ☐ Not Required	
Approval: 1. 🗆 Nat'l Std 2. 정 UL 3. 🗎 Other:	Double Walled: ☐ Yes 💢 No)
t. TANK CONTENTS 1. Diesel 2. Leaded 5. Gasohol 6. Other 9. Unknown 10. Premix 13. Chemical * * If # 13 is checked, indicate the chemical name(s) or number(s) of the chem	3. ☐ Unleaded	urry
f Tank Closed, Give Date (mo/day/yr): ∏ − 3 − 93	Has a site assessment been completed? (see reverse side for de XYes □ No	tails)
f installation of a new tank is being reported, indicate who performed the in		
1. Fire Department 2. DILHR	3. Other (identify)	
Name of Owner or Operator (please print):	Indicate Whether: Owner or Operator	,
Fignature of Owner or Operator:	Date Signed:	

APPENDIX D FIELD FORM Site: MILWAUKEE PLATING

Project No: 366115203

FIELD PID DATA FORM

Date: Nov 1+2, 1993

Personnel: D.DAVIES

Meter No: Z

Probe eV: 11.7

Sampl Numbe		Sample Media(1)	Moisture (2)	Time Sample Collected	Time Sample Analyzed	Volatilization Period Air Temp (2)	PID Read	dings (ppm) Peak Response	Comments
1	center/2'	50	MOIST	10:55	11:45	65°F	0.8	2.2	SILTY CLAY FILL above UST
2	ust/7'	WL		15:30	16:10	65° F	0.8	195.0	LIQUID IN UST (WASTE-UST-1000)
3	ust/7'	50	WET	15:55	16:50	65°F	0.6	240.0	SOIL IN UST (B-WASTE-UST)
4	WW/6'	కం	Moist	17:50	18:20	65°F	0.8	15.0	(WW-6.0) West UST Wall @ 6.0ft
5	EW/6'	50	MOIST-WET	18:05	18:38	65°F	0.7	104.0	(EW-6.0) EAST UST WALL@ 6.0 ft.
6	NW/4.5'	మ	MOIST-WET	8:55	10:35	65°F	0.7	90.0	(NW-4.5) NORTH UST WALL @ 4.5 FT
1	WF/1.5	50	WET	9:50	10:36	65°F	0.7	180.0	(WF-7.5) WEST UST FLOOR @ 7.5 FT
									
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(1) SO - Soil

SD - Sediment

GW - Ground water

SW - Surface water

WS - Waste (Solid)

WL - Waste (Liquid)

(2)

D - Dry

M - Moist

W - Wet