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ERR/ERP  
KENOSHA Co.



Chrysler Corporation  
Chrysler Center

June 2, 1994

Ms. Pamela A. Mylotta, Hydrogeologist  
Environmental Repair Program  
State of Wisconsin Department of Natural Resources  
4041 North Richards Street  
Milwaukee, WI 53212

RE: **Soil Remedial Action Work Plan**  
**Former UST #11, 12, 13 and AST #19 Area, Site MP-8**  
**Chrysler Corporation, Kenosha Main Plant**

Dear Ms. Mylotta:

Attached please find the referenced work plan for your review/approval. I trust this information meets your needs. If you have any questions or comments, please call.

Sincerely,

A handwritten signature in blue ink that appears to read "Robert J. Rose".

Gregory M. Rose  
Environmental and Energy Affairs

RJB:klb





COPY

June 2, 1994

Mr. Gregory M. Rose  
Deactivation Environmental Specialist  
Energy and Environmental Affairs  
Chrysler Corporation, Featherstone Road Engineering Center  
2301 Featherstone Road, CIMS 429-02-04  
Auburn Hills, Michigan 48326

**RE: Soil Remedial Action Work Plan  
Former UST #11, 12, 13 and AST #19 Area, Site MP-8  
Chrysler Corporation, Kenosha Main Plant  
Triad Engineering Project No. W943163**

Dear Mr. Rose:

The proposed Soil Remedial Action Work Plan for the referenced area at the Chrysler Corporation, Kenosha Main Plant is presented herein. Our approach consists of both in-situ and ex-situ bioremediation of soils primarily containing diesel range organic (DRO) compounds and low levels of gasoline range organic (GRO) compounds. Based on a June 1, 1994 telephone conversation with Mr. George M. Mickelson P.E., CPG, Remedial Action Engineer for the LUST Program, Wisconsin Department of Natural Resources (WDNR), Mr. Mickelson concurs with our approach from a technical and engineering standpoint provided the action is in compliance with Chapter NR 718, Wisconsin Administrative Code (NR 718) requirements. The proposed approach appears to be in compliance with NR 718. Site background information and the proposed remedial action approach is described in the following sections.

I. BACKGROUND

As documented in previous reports submitted to the WDNR, three 60,000-gallon heating oil underground storage tanks (USTs #11, 12, and 13) and an aboveground storage tank (AST #19) used to store soluble oil were previously located east of former building 9 and south of former building 52 (Figure 1). The USTs were contained in a former concrete coal bin and an aggregate placed over them to provide structural support as well as a safety precaution. AST #19 was housed in a cinder block containment structure. The USTs and AST have been closed in accordance with state regulations and guidelines.

Release to site soils and groundwater was observed during initial investigations in the area. A groundwater recovery trench (Sump 2, Observation Sump) was installed in the area to facilitate recovery of free-phase product and groundwater. The recovery system continues to provide hydraulic control and recovery of product and groundwater in the release area.

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Subsequent to removal of USTs #11, 12, and 13, coarse gravel was removed from the former coal bin structure and the concrete base removed. Approximately 100 yards of product-stained soils were removed and stockpiled on and covered with visqueen at the site. These soils will be disposed at an approved landfill. Per WDNR approval, a collection sump (Sump 17) was installed in the excavation to facilitate product/groundwater recovery and the coarse gravel placed back in the excavation. A surface depression is currently present at this location.

Based on investigation and remedial action in the area, the apparent extent of release to soil and groundwater has been assessed. A summary of site analytical and characterization data is provided in Attachment A. In addition, soil sample results for soils remaining in place at the base of the former coal bin and gravel placed back into the excavation is also attached. These results have not previously been submitted to WDNR. Based on the analytical results, DRO and several GRO compounds occur in site soils above Draft Chapter NR 720 Administrative Code standards. The extent of release to soils is depicted on Figure 1. In general, release to soils has been confined to the former coal bin area and up to the Building 52 foundation. It should be noted that as of June 1, 1994 free phase product recovery has reduced to deminimus levels and less than 0.01 foot of product could be measured in Sumps 2 and 17. No product was observed in the observation sump.

## **II. REMEDIAL ACTION APPROACH**

In-situ and ex-situ bioremediation techniques will be used to treat soils in this area. In addition to soils remaining in place at the site, stockpiled soils, generated during the installation of a storm sewer in a separate area located to the west of the treatment site and containing similar petroleum compounds, will be transferred to the former coal bin area, for combined remediation. Analytical results for these soils are contained in Attachment B. The surface depression at the former coal bin area will provide proper confinement to the soils to be transferred to that location. The existing groundwater recovery trench and sump system, should provide effective hydraulic control at the site, thereby reducing the potential for any off-site migration during the bioremediation process.

### **A. Bioremediation Process.**

The ultimate goal of bioremediation (biodegradation) at the site is to convert petroleum organic compounds into biomass and harmless byproducts of microbial metabolism such as CO<sub>2</sub>, CH<sub>4</sub> and inorganic salts. Microorganisms (principally bacteria and fungi) make up the most significant group of organisms involved in biodegradation, and soil environments contain a diverse microbial population.

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B. System Design.

Predesign Activities.

In order to optimize the biodegradation potential at the site, the following sampling and analysis shall be conducted.

**Former Coal Bin Area:  
(In-Situ)**

Approximately 12 soil samples (8 samples inside the release area and 4 samples outside the release area) and 4 groundwater samples (2 samples inside the release area and 2 samples outside the release area), shall be collected. Two soil samples shall be collected from each of six soil borings, one within the unsaturated region and the second within the saturated region. Groundwater samples will be collected from the groundwater recovery system located within the release area and two site monitoring wells located outside the release area. This type of sampling and analysis will facilitate a comparative evaluation of the site in terms of its biodegradability.

**Stockpiled Soil:  
(Ex-Situ)**

Approximately four composite soil samples shall be collected from the stockpiled soils for biodegradation evaluation.

All applicable WDNR regulations and guidelines shall be followed during the sample collection process.

The collected samples shall be shipped under chain-of-custody to a bioevaluation laboratory for testing and evaluation. Analyses to be conducted on the samples and their significance, are given in Table 1.



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Table 1  
Predesign Analytical Requirements

No.	Test	Significance
1	Comparative Enumeration Analysis	Will give an idea on the availability of indigenous microorganisms in terms of total microbial population and total hydrocarbon degrader population.
2	Metal Analysis	Will indicate the presence or absence of metals that may be inhibitory to biological activity.
3	Nutrient Analysis (both macro and micro)	Will indicate the amount of available nutrients and any deficiencies at the site. Will help in deciding whether any nutrient additions are required to sustain biological activity.  Also, calculated values of C:N:P ratios will help in optimizing the bioremediation potential at the site.
4	Dissolved Oxygen (DO)	Will indicate the O <sub>2</sub> availability at the site and help in designing O <sub>2</sub> supply system, if required.
5	Porosity of Soils	An indirect indicator of O <sub>2</sub> availability in unsaturated soils. Helps in deciding whether air and other amendments can be supplied to the subsurface.
6	Other Parameters (pH, redox potential, particle size distribution, temperature, etc.)	Helps in optimizing the biodegradation potential at the site.

Note: Dissolved oxygen, pH, temperature and redox potential tests will be conducted in the Field.

Field tests required to complete design of the system will also be conducted. The tests are described in Table 2.

Table 2  
Predesign Field Evaluation

No.	Test	Significance
1	Percolation Test	Helps in designing infiltration galleries, for the supply of O <sub>2</sub> , nutrients or microorganisms to the subsurface.
2	Air Extraction/Air Sparging Test	This is needed only when air extraction or air sparging techniques will be used to supply air (O <sub>2</sub> ) to the sub surface.



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Design Activities.

Based on the results of the predesign tests the appropriate system will be designed to optimize biodegradation at the site. Some or all of the following elements may be needed to remediate site soils.

- An O<sub>2</sub> supply system, which may include air injection, air extraction, hydrogen peroxide infiltration, pure oxygen injection or a combination of these techniques.
- A nutrient supply system to amend the soils with any deficient nutrients.
- A pH adjustment system to maintain the pH at an optimum level and sustain the biological activity at its peak.

A report documenting the results of the above evaluations (including chain-of-custody forms and lab analysis reports) and a detailed design of the recommended bioremediation system shall be submitted to the WDNR, before operation of the system. The Operation and Maintenance Plan (O&M Plan) along with a Performance Monitoring Plan (showing sampling locations, parameters and frequencies) shall be included in the final report.

We trust this information meets your needs. If you have any questions or comments, please do not hesitate to call.

Sincerely,

TRIAD ENGINEERING INC.

Richard J. Binder, PG  
Project Manager

TRIAD ENGINEERING INC.

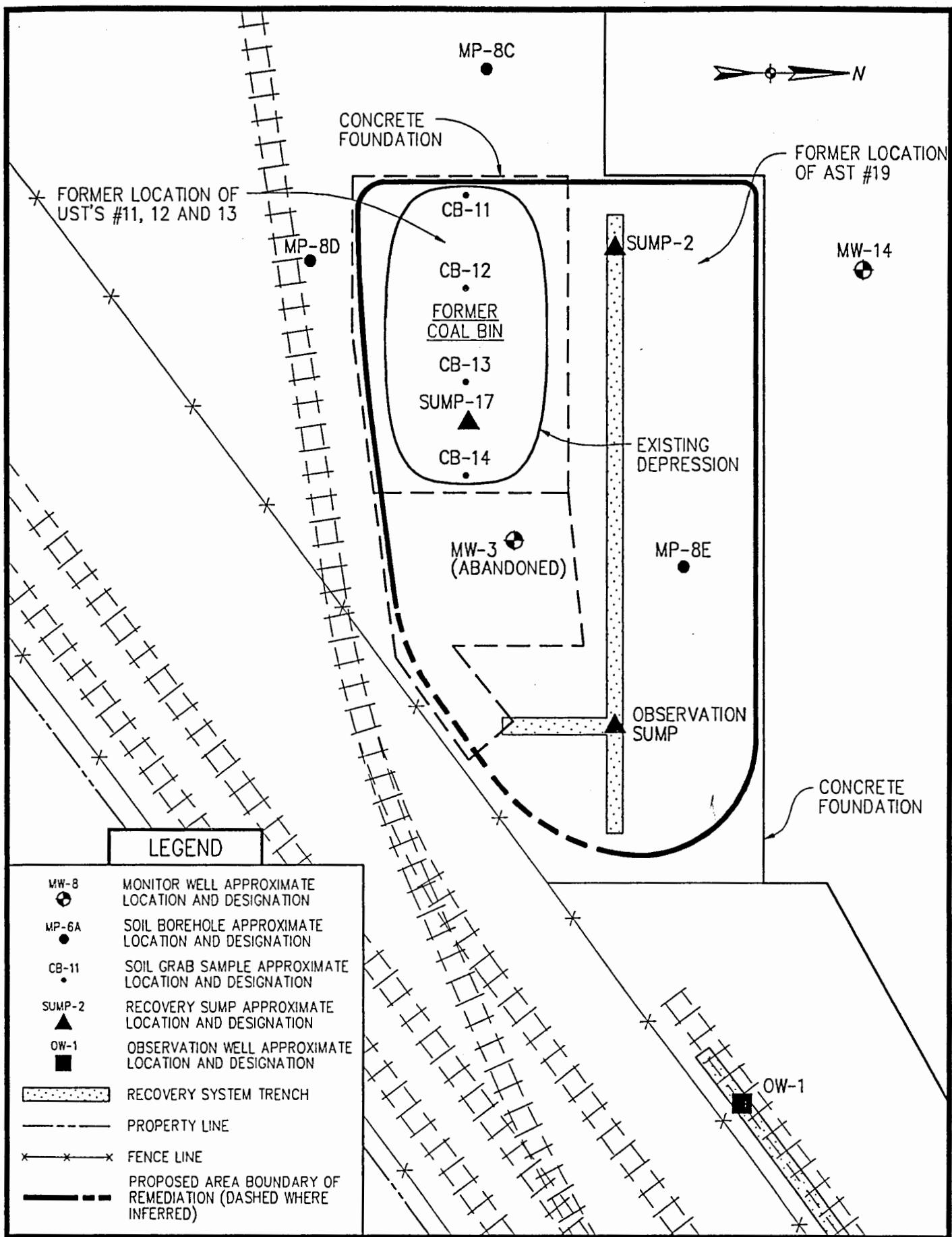
  
*for*  
Thomas C. Bachman, P.E.  
Project Engineer

RJB:kib  
W943163\W943163.002\943163-B

cc: John P. Bugno, Chrysler/Kenosha Main Plant  
Veer R. Karri, Triad  
Valerie A. Jansen, Triad

TE

## FIGURE



**FIGURE 1**  
**CHRYSLER KENOSHA MAIN PLANT**  
**FORMER UST'S 11, 12, 13**  
**AND AST 19 AREA**

**ATTACHMENT A**

**SITE ANALYTICAL AND CHARACTERIZATION DATA**

<u>ANALYTE</u>	<u>DETECTION LIMIT</u>	<u>CB-11<sup>a</sup></u>	<u>CB-12<sup>b</sup></u>	<u>CB-13</u>	<u>CB-14<sup>c</sup></u>	<u>CB-GRAVEL</u>
Volatile Organic Compounds (VOCs) <sup>d</sup>						
m-Butylbenzene	0.02	<0.2	2.53	<0.02	2.0	0.13
sec-Butylbenzene	0.04	<0.4	25.5 <sup>e</sup>	<0.04	<0.04	0.04
tert-Butylbenzene	0.02	<0.2	<0.4	<0.02	0.4	<0.02
Ethylbenzene	0.02	<0.2	1.3	<0.02	0.5	0.10
Isopropylbenzene	0.02	<0.2	4.4 <sup>e</sup>	<0.02	<0.2	<0.02
p-Isopropyltoluene	0.02	0.2	4.0 <sup>e</sup>	<0.02	3.3	0.07
Methylene Chloride	0.05	<0.5	<1.0	0.40	<0.5	0.84 <sup>a</sup>
Naphthalene	0.03	0.3	20.0 <sup>e</sup>	<0.03	2.8	0.10
n-Propylbenzene	0.03	<0.3	5.7	<0.03	0.3	0.04
Toluene	0.02	0.4	<0.4	<0.02	0.5	0.56 <sup>a</sup>
Trichlorofluoromethane	0.02	<0.2	<0.4	<0.02	<0.2	<0.02
1,2,4-Trimethylbenzene	0.04	<0.4	2.4	<0.04	1.0	<0.04
1,3,5-Trimethylbenzene	0.02	<0.2	17.5	<0.02	<0.2	<0.02
o-Xylenes	0.02	<0.2	6.4	<0.02	0.3	0.06
m&p Xylenes	0.02	<0.2	15.9	<0.02	<0.2	<0.02
TOTAL VOCs	---	0.6	85.6	0.4	8.3	1.8
DRO <sup>ee</sup>	10	45 <sup>d</sup>	14,600 <sup>e</sup>	857	256	5,930

Concentrations are in mg/kg (ppm)

- <sup>a</sup> EPA Method #8021.
- <sup>ee</sup> WDNR Modified DRO.
- <sup>b</sup> Elevated detection limits due to high analyte concentration; a 10X dilution necessary.
- <sup>c</sup> Elevated detection limits due to high analyte concentration; a 20X dilution necessary.
- <sup>d</sup> Elevated detection limits due to high analyte concentration; a 200X dilution necessary.
- <sup>e</sup> Baseline Raised, outside DRO window.
- <sup>f</sup> Elevated detection limits due to high analyte concentration; a 110X dilution necessary.
- <sup>ee</sup> Elevated detection limits due to high analyte concentration; a 11X dilution necessary.

Table 4-9. Summary of Detected Constituents in Soil Samples, Site MP-8

Parameter	Phase I						Phase II				
	MP-8A B8450*		MP-8B B8450*		MW-3 B0450*		MP-8C B9833*	MP-8D B9833*	MP-8E B9833	MP-8G B0115*	
	0-5'	5-10'	0-5'	5-10'	0-5'	5-10'	4-6'	1-3'	2-4'	1-2'	4-5'
<u>Metals (soluble)</u>											
Cadmium (0.5)	1.0	0.9	1.3	3.7	4.7	1.3	NA	NA	NA	ND	ND
Chromium (1)	15	8	7	22	17	9	NA	NA	NA	18	11
Lead (2)	16	9	11	23	60	17	NA	NA	NA	57	27
Nickel (1)	11	6	7	18	18	13	NA	NA	NA	27	15
Zinc (1)	43	41	41	53	116	73	NA	NA	NA	86	41
<u>Base/Neutral Extractables (BNAs)</u>											
Acenaphthene (1)	ND	ND	ND	ND	ND	1	NA	NA	NA	ND	ND
Anthracene (1)	ND	ND	ND	ND	4	ND	NA	NA	NA	ND	ND
Benz(a)anthracene (1)	ND	ND	ND	ND	3	ND	NA	NA	NA	ND	ND
Benz(b)fluoranthene (1)	ND	ND	ND	ND	9	ND	NA	NA	NA	ND	ND
Benz(k)fluoranthene (1)	ND	ND	ND	ND	7	ND	NA	NA	NA	ND	ND
Benzo(a)pyrene (1)	ND	ND	ND	ND	8	ND	NA	NA	NA	ND	ND
Bis(2-ethylhexyl)phthalate (1)	ND	ND	ND	ND	8	ND	NA	NA	NA	4	2
Chrysene (1)	ND	ND	ND	ND	11	ND	NA	NA	NA	ND	ND
Di-n-butylphthalate	ND	ND	ND	ND	1	ND	NA	NA	NA	ND	ND
1,2-Dichlorobenzene (1)	ND	ND	ND	ND	1	1	NA	NA	NA	ND	ND
1,4-Dichlorobenzene (1)	ND	ND	ND	ND	ND	ND	NA	NA	NA	ND	ND
Fluoranthene (1)	ND	ND	ND	ND	15	ND	NA	NA	NA	ND	ND
Fluorene (1)	ND	ND	ND	ND	5	ND	NA	NA	NA	13	ND
Naphthalene (1)	ND	ND	ND	ND	11	5	NA	NA	NA	8	ND
Phenanthrene (1)	ND	ND	ND	ND	29	10	NA	NA	NA	35	ND
Pyrene (1)	ND	ND	ND	ND	ND	ND	NA	NA	NA	5	ND
Total BNAs	ND	ND	ND	ND	112	17	NA	NA	NA	65	2
<u>Volatile Organic Compounds (VOCs)</u>											
Benzene (0.05)	ND	ND	ND	ND	ND	0.28	ND	ND	ND	ND	ND
Bromodichloromethane (0.05)	ND	ND	ND	ND	ND	ND	NA	NA	NA	ND	ND
Bromoform (0.05)	ND	ND	ND	ND	ND	ND	NA	NA	NA	ND	ND
Carbon Tetrachloride (0.05)	ND	ND	ND	ND	ND	ND	NA	NA	NA	ND	ND
Chloroform (0.05)	ND	ND	ND	ND	ND	ND	NA	NA	NA	ND	ND
1,1-Dichloroethane (0.05)	ND	ND	ND	ND	0.12	ND	NA	NA	NA	ND	ND
1,1-Dichloroethene (0.05)	ND	ND	ND	ND	ND	ND	NA	NA	NA	ND	ND
Trans-1,2-Dichloroethene (0.05)	ND	ND	ND	ND	ND	ND	NA	NA	NA	ND	ND
Trans-1,3-Dichloroethene (0.05)	ND	ND	ND	ND	0.05	ND	ND	NA	NA	ND	ND
1,2-Dichloropropane (0.05)	ND	ND	ND	ND	ND	ND	NA	NA	NA	ND	ND
Cis-1,3-Dichloropropene (0.05)	ND	ND	ND	ND	ND	ND	NA	NA	NA	ND	ND
Ethylbenzene (0.05)	ND	0.09	ND	ND	0.07	3.15	ND	ND	0.37	0.05	0.39
Methylene Chloride (0.05)	ND	ND	ND	ND	ND	ND	NA	NA	NA	ND	ND
Toluene (0.05)	ND	0.05	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane (0.05)	ND	ND	ND	ND	ND	ND	NA	NA	NA	ND	ND
Trichloroethene (0.05)	ND	ND	ND	ND	2.51	ND	NA	NA	NA	ND	ND
Vinyl Chloride (0.05)	ND	ND	ND	ND	ND	ND	NA	NA	NA	ND	ND
Xylenes (0.05)	ND	0.83	ND	ND	0.49	16.44	ND	ND	0.89	0.54	0.33
Total BETX	ND	0.97	ND	ND	0.56	19.87	ND	ND	1.26	0.59	0.72
Total VOCs	ND	0.97	ND	2.48	0.56	19.87	ND	ND	1.26	0.59	0.72
Oil and Grease (20)	7660	1950	90	810	7910	2240	NA	NA	NA	NA	NA
Total Petroleum Hydrocarbons (TPHs) (5)	NA	NA	NA	NA	NA	NA	ND	ND	406	253	348
PCBs (0.5)	7.0	ND	ND	ND	NA	NA	NA	NA	NA	ND	ND

NOTE: All values in milligrams per kilogram (mg/kg)

( ) = Detection Limit (mg/kg)

ND = Not Detected

NA = Not Analyzed

\* = Laboratory Report Number; analyses by Swanson Environmental, Inc., Brookfield, WI, AIHA Accreditation #352, WDNR Certification #2681870, Appendix C.

+ = Located at Site MP-9.

Borehole locations are depicted on Figure 4-8.

Table 4-10. Summary of Detected Constituents in Ground Water Samples, Site NP-8

Parameter	MJ-3 Phase I 8/03/90 (6/01/90)	MJ-3 Phase II 8/03/90 (1/30/90)	MJ-18 Phase II 8/02/70* (1/23/90)	MJ-18 Phase III 8/12/90* (5/14/90)	MJ-18A Phase III 8/12/95* (5/09/90)	MJ-18B Phase III 8/12/95* (5/09/90)	MJ-18C Phase III 8/12/95* (5/09/90)	MJ-18E (Dup. MJ-18C) 8/12/95* (5/09/90)	MJ-19 Phase II 8/02/70* (1/23/90)	MJ-19 (Dup. MJ-19) 8/02/70* (5/14/90)	MJ-20 Phase II 8/12/95* (5/09/90)	MJ-20 Phase III 8/12/95* (5/14/90)	NR 140** Enforcement Standard	PAL	
Barium															
Cadmium (total)(0.0002)	0.008	0.012	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
Cadmium (total)(0.001)	0.1	0.022	NA	NA	0.020	NA	0.008	NA	NA	NA	NA	NA	NA		
Cyanides (total)(0.005)	0.008	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
Lead (total)(0.02)	0.16	0.063	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
Nickel (total)(0.02)	0.13	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
Zinc (total)(0.005)	0.94	0.16	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
Chromium (soluble)(0.0002)			NA	NA	NA	ND	ND	ND	0.003	ND	ND	ND	ND	0.010	0.001
Chromium (soluble)(0.001)			NA	NA	0.001	0.001	0.001	0.001	0.001	0.002	0.001	0.001	0.003	0.050	0.005
Cyanides (soluble)(0.005)	NA	NA	NA	0.007	NA	NA	NA	NA	NA	ND	ND	ND	ND	0.200	0.040
Lead (soluble)(0.02)	NA	ND	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.050	0.005
Nickel (soluble)(0.02)	NA	ND	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	---	---
Zinc (soluble)(0.005)	NA	0.03	NA	NA	ND	ND	ND	ND	0.02	ND	0.02	NA	ND	5.0	2.5
<u>BTEX/Neutral/Acid Extraction (BTXAs)</u>															
Magnesium (0.010)	ND	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	---	---
Phenols (0.005)	0.049	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	---	---
Total BTXAs	0.049	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	---	---
<u>Volatile Organic Compounds (VOCs)</u>															
Acetone (0.050)	ND	ND	NA	ND	ND	ND	ND	0.004	0.041	ND	ND	ND	ND	---	---
Carbon Tetrachloride (0.001)	ND	ND	NA	ND	ND	ND	0.001	0.003	0.003	ND	ND	ND	ND	0.005	0.0005
Chloroethane (0.001)	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	---	---
Chloroform (0.001)	ND	ND	NA	ND	0.001	0.001	0.004	0.004	0.004	ND	ND	ND	ND	0.070	0.002
1,2-Dichlorobenzene (0.001)	ND	ND	NA	ND	0.001	ND	ND	ND	ND	ND	ND	ND	ND	1.250	0.125
1,3-Dichlorobenzene (0.001)	ND	ND	NA	ND	0.001	ND	ND	ND	ND	ND	ND	ND	ND	1.250	0.125
1,4-Dichlorobenzene (0.001)	ND	ND	NA	ND	0.001	ND	ND	ND	ND	ND	ND	ND	ND	0.075	0.015
1,1-Dichloroethane (0.001)	ND	ND	NA	ND	0.010	ND	0.018	ND	ND	ND	ND	ND	ND	0.850	0.085
1,2-Dichloroethane (0.001)	ND	ND	NA	ND	0.002	ND	0.002	ND	ND	ND	ND	ND	ND	0.005	0.00005
1,1-Dichloroethane (0.001)	ND	ND	NA	ND	0.001	ND	0.010	0.001	ND	ND	ND	ND	ND	0.007	0.000024
trans-1,2-Dichloroethylene (0.001)	ND	ND	NA	0.129	ND	ND	0.068	0.003	ND	ND	ND	ND	ND	0.100	0.020
Cis-1,3-Dichloropropene (0.001)	ND	ND	NA	ND	ND	ND	0.002	0.003	ND	ND	ND	ND	ND	---	---
Ethylbenzene (0.001)	ND	0.109	ND	ND	ND	ND	ND	0.005	0.002	ND	ND	ND	ND	1.360	0.272
Methylene Chloride (0.001)	ND	ND	NA	0.003	0.001	0.001	0.001	0.005	0.004	ND	ND	ND	ND	0.150	0.015
Tetrachloroethene (0.001)	ND	ND	NA	ND	ND	ND	ND	0.001	ND	ND	ND	ND	ND	0.001	0.0001
Toluene (0.001)	ND	ND	NA	ND	ND	ND	ND	0.002	0.002	ND	ND	ND	ND	0.313	0.048
1,1,1-Trichloroethane(0.001)	ND	ND	NA	0.001	0.001	0.001	0.001	0.004	0.004	ND	ND	ND	ND	0.200	0.040
Trichloroethene (0.001)	ND	ND	NA	0.000	ND	ND	ND	0.216	0.003	0.002	0.003	0.003	0.224	0.398	0.005
Vinyl Chloride (0.001)	ND	ND	NA	ND	ND	ND	ND	0.108	ND	ND	ND	ND	ND	0.312	0.0002
Xyloane (0.001)	ND	0.099	ND	ND	0.002	ND	0.001	0.006	0.005	ND	ND	0.073	ND	0.420	0.124
Total VOCs	ND	0.208	ND	ND	0.002	ND	0.001	0.013	0.009	0.002	0.001	ND	0.165	---	---
Total REIX	ND	0.208	ND	1.045	0.007	0.004	0.538	0.109	0.026	0.054	0.061	0.041	0.104	0.332	---
Oil and Grease (20)	344	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	---	---
Total Petroleum Hydrocarbons (TPH) (\$)	NA	306.2	ND	ND	ND	ND	1.9	0.3	0.3	ND	ND	ND	8.9	ND	---
PCBs (0.3)	ND	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	---	---

NOTE: All values in milligrams per liter (mg/l).

( ) = Detection Limit (mg/l)

ND = Not Detected

NA = Not Analyzed

PAL = Preventative Action Limit

\* Laboratory Report Number; Analyses by Swanon Environmental, Inc., Brookfield, WI, AWWA Accreditation #352, WQTC Certification #2681870, Appendix C.

\*\* Per Chapter NR10 of the Wisconsin Administrative Code

\*\*\* No standards currently exist

\* Located at Site NP-9.

Borehole locations are depicted on Figure 4-8.

Table 4-8. Summary of Detected Constituents in Ground-Water Samples, Site HP-7

Parameter	HP-7I <sup>a</sup> Phase II B9828* (12/01/89)	HP-7J <sup>a</sup> Phase II B9828* (12/01/89)	HP-7K <sup>a</sup> Phase II B9828* (12/01/89)	HP-7N <sup>a</sup> Phase II B9828* (12/01/89)	HP-7O <sup>a</sup> Phase II B9828* (12/01/89)	HP-7P <sup>a</sup> Phase II B0115* (12/19/89)	HP-7Q <sup>a</sup> Phase II B9835* (12/13/89)	HP-7R <sup>a</sup> Phase II B9765* (12/11/90)	HP-7S <sup>a</sup> Phase II B9833* (12/13/89)	HP-7Z <sup>a</sup> (Dup. HP-7S*) B9833* (12/13/89)	MJ-13 Phase II B0041* (12/28/89)	MJ-13A Phase III B1239* (5/14/90)	MJ-14 Phase II B0041* (12/28/89)	MJ-14 Phase III B1235* (5/09/90)	MJ-15 Phase II B0041* (12/28/90)	MJ-16 Phase II B0041* (12/28/89)	MJ-16(A) (Dup. MJ-16) B0041*
<u>Metals</u>																	
Cyanides (total)(0.005)	NA	NA	NA	NA	NA	NA	NA										
Cadmium (soluble)(0.0002)	NA	NA	NA	NA	ND	0.0002	0.0003										
chromium (soluble)(0.001)	NA	NA	NA	NA	ND	0.001	ND										
Cyanides (soluble)(0.005)	NA	NA	ND	ND	ND	0.517	0.083										
Zinc (total)(0.005)	NA	NA	NA	NA	0.03	0.12	ND										
<u>Volatile Organic Compounds</u> (VOCs)																	
Benzene (0.001)	ND	ND	ND	ND	ND	ND	ND										
Chloroform (0.001)	ND	NA	ND	ND	NA	ND	ND	0.001									
1,1-Dichloroethane (0.001)	ND	NA	0.008	ND	NA	ND	0.008	0.009									
1,2-Dichloroethane (0.001)	ND	NA	ND	ND	NA	ND	ND	ND									
Trans-1,2-Dichloroethene (0.001)	ND	NA	ND	ND	NA	ND	ND	ND									
Ethylbenzene (0.001)	ND	ND	ND	ND	ND	ND	ND										
Methylene Chloride (0.001)	0.001	NA	ND	ND	NA	ND	ND	ND									
Toluene (0.001)	ND	ND	ND	ND	ND	ND	ND										
Trichloroethene (0.001)	ND	NA	ND	ND	NA	ND	ND	ND									
1,1,1-Trichloroethane(0.001)	ND	NA	ND	ND	NA	ND	ND	ND									
Xylenes (0.001)	ND	ND	ND	ND	ND	ND	ND										
Total BETX	ND	ND	ND	ND	ND	ND	ND										
Total VOCs	0.001	ND	0.008	ND	ND	ND	0.008	0.010									
<u>Total Petroleum Hydrocarbons</u> (TPH) (S)	ND	ND	ND	ND	ND	ND	ND										

NOTE: All values in milligrams per liter (mg/l).

( ) = Detection Limit (mg/l)

ND = Not Detected

NA = Not Analyzed

PAL = Preventative Action Limit

\* = Laboratory Report Number; analyses by Swanson Environmental, Inc., Brookfield, WI, AIHA Accreditation #352, WQHR Certification #2681870, Appendix C.

\*\* = Per Chapter NR140 of the Wisconsin Administrative Code

\*\*\* = No standards currently exist

^ = Water sampled collected with a Hydro-Punch.

Borehole locations are depicted on Figure 4-4 and 4-5.



## ANALYTICAL REPORT

REPORT NUMBER: A3435

Triad Engineering, Inc.  
 325 East Chicago Street  
 Milwaukee, WI 53202

Attn: Mr. Rick Binder  
 Project #W943163.002

DATE: April 22, 1994  
 PURCHASE ORDER:  
 SEI NO: WL9848  
 DATE COLLECTED: 03/18/94  
 DATE RECEIVED: 03/21/94

Matrix: Soil  
 Source: Chrysler - Kenosha

DATE EXTRACTED  
 DRO - 03/21/94

Units: mg/kg (ppm)

DATE ANALYZED  
 DRO - 03/25/94

<u>DNR #</u>	<u>Analyte</u>	SEI ID <u>PQL</u>	9848-1	9848-2 <u>CB-11</u>	9848-3 <u>CB-12</u>	9848-4 <u>CB-13</u>	9848-5 <u>CB-14</u>	<u>Soil Pile</u>
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WDNR Modified Method DRO

78919	DRO	45 <sup>d</sup>	14,600 <sup>e</sup>	857	256	3,110 <sup>f</sup>
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<sup>d</sup> Baseline raised, outside DRO window.

<sup>e</sup> Elevated detection limits due to high analyte concentration; a 110x dilution necessary.

<sup>f</sup> Elevated detection limits due to high analyte concentration; a 11x dilution necessary.



## ANALYTICAL REPORT

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Triad Engineering, Inc.  
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DATE: April 22, 1994  
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Matrix: Soil  
 Source: Chrysler - Kenosha

Units: mg/kg (ppm)

<u>DNR #</u>	<u>Analyte</u>	<u>SEI ID</u>	<u>9848-1<sup>a</sup></u>	<u>9848-2<sup>b</sup></u>	<u>9848-3</u>
		<u>Sample ID</u>	<u>CB-11</u>	<u>CB-12</u>	<u>CB-13</u>
<u>PQL</u>					
EPA Method 8021					
78124	Benzene	0.02	<0.2	<0.4	<0.02
81555	Bromobenzene	0.02	<0.2	<0.4	<0.02
77297	Bromochloromethane	0.02	<0.2	<0.4	<0.02
32101	Bromodichloromethane	0.02	<0.2	<0.4	<0.02
32104	Bromoform	0.02	<0.2	<0.4	<0.02
14413	Bromomethane	0.02	<0.2	<0.4	<0.02
77342	n-Butylbenzene	0.02	<0.2	2.53	<0.02
77350	sec-Butylbenzene	0.04	<0.4	25.5 <sup>c</sup>	<0.04
77353	tert-Butylbenzene	0.02	<0.2	<0.4	<0.02
32102	Carbon tetrachloride	0.02	<0.2	<0.4	<0.02
34301	Chlorobenzene	0.02	<0.2	<0.4	<0.02
34306	Chlorodibromomethane	0.02	<0.2	<0.4	<0.02
34311	Chloroethane	0.02	<0.2	<0.4	<0.02
32106	Chloroform	0.02	<0.2	<0.4	<0.02
34418	Chloromethane	0.02	<0.2	<0.4	<0.02
77275	2-Chlorotoluene	0.02	<0.2	<0.4	<0.02
77277	4-Chlorotoluene	0.02	<0.2	<0.4	<0.02
38437	1,2-Dibromo-3-chloropropane	0.02	<0.2	<0.4	<0.02
77651	1,2-Dibromoethane	0.02	<0.2	<0.4	<0.02
77596	Dibromomethane	0.02	<0.2	<0.4	<0.02



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Brookfield, Wisconsin 53045  
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FAX (414) 783-5752

## ANALYTICAL REPORT

REPORT NUMBER: A3435

Triad Engineering, Inc.  
325 East Chicago Street  
Milwaukee, WI 53202

Attn: Mr. Rick Binder  
Project #W943163.002

DATE: April 22, 1994  
PURCHASE ORDER:  
SEI NO: WL9848  
DATE COLLECTED: 03/18/94  
DATE RECEIVED: 03/21/94  
DATE ANALYZED: 03/29/94

Matrix: Soil  
Source: Chrysler - Kenosha

Units: mg/kg (ppm)

<u>DNR #</u>	<u>Analyte</u>	<u>SEI ID</u>	<u>9848-1<sup>a</sup></u>	<u>9848-2<sup>b</sup></u>	<u>9848-3</u>	
		<u>Sample ID</u>	<u>PQL</u>	<u>CB-11</u>	<u>CB-12</u>	<u>CB-13</u>
<b>EPA Method 8021</b>						
34536	1,2-Dichlorobenzene		0.02	<0.2	<0.4	<0.02
34566	1,3-Dichlorobenzene		0.02	<0.2	<0.4	<0.02
34571	1,4-Dichlorobenzene		0.03	<0.3	<0.6	<0.03
34668	Dichlorodifluoromethane		0.02	<0.2	<0.4	<0.02
34496	1,1-Dichloroethane		0.03	<0.3	<0.6	<0.03
32103	1,2-Dichloroethane		0.02	<0.2	<0.4	<0.02
34501	1,1-Dichloroethene		0.02	<0.2	<0.4	<0.02
77093	cis-1,2-Dichloroethene		0.03	<0.3	<0.6	<0.03
34546	trans-1,2-Dichloroethene		0.03	<0.3	<0.6	<0.03
34541	1,2-Dichloropropane		0.02	<0.2	<0.4	<0.02
77173	1,3-Dichloropropane		0.02	<0.2	<0.4	<0.02
77170	2,2-Dichloropropane		0.03	<0.3	<0.6	<0.03
77168	1,1-Dichloropropene		0.02	<0.2	<0.4	<0.02
34704	cis-1,3-Dichloropropene		0.02	<0.2	<0.4	<0.02
34699	trans-1,3-Dichloropropene		0.02	<0.2	<0.4	<0.02
78113	Ethylbenzene		0.02	<0.2	1.3	<0.02
34391	Hexachlorobutadiene		0.03	<0.3	<0.6	<0.03
77223	Isopropylbenzene		0.02	<0.2	4.4 <sup>c</sup>	<0.02
77356	p-Isopropyltoluene		0.02	<0.2	4.0 <sup>c</sup>	<0.02
34423	Methylene chloride		0.05	<0.5	<1.0	0.40
34696	Naphthalene		0.03	0.3	20.0 <sup>c</sup>	<0.03



## ANALYTICAL REPORT

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Triad Engineering, Inc.  
 325 East Chicago Street  
 Milwaukee, WI 53202

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 Project #W943163.002

DATE: April 22, 1994  
 PURCHASE ORDER:  
 SEI NO: WL9848  
 DATE COLLECTED: 03/18/94  
 DATE RECEIVED: 03/21/94  
 DATE ANALYZED: 03/29/94

Matrix: Soil  
 Source: Chrysler - Kenosha

Units: mg/kg (ppm)

<u>DNR #</u>	<u>Analyte</u>	<u>SEI ID</u> <u>Sample ID</u> <u>PQL</u>	<u>9848-1<sup>a</sup></u>	<u>9848-2<sup>b</sup></u>	<u>9848-3</u>
			<u>CB-11</u>	<u>CB-12</u>	<u>CB-13</u>
<b>EPA Method 8021</b>					
77224	n-Propylbenzene	0.03	<0.3	5.7	<0.03
77128	Styrene	0.03	<0.3	<0.6	<0.03
77562	1,1,1,2-Tetrachloroethane	0.02	<0.2	<0.4	<0.02
34516	1,1,2,2-Tetrachloroethane	0.02	<0.2	<0.4	<0.02
34475	Tetrachloroethene	0.02	<0.2	<0.4	<0.02
78131	Toluene	0.02	0.4	<0.4	<0.02
77613	1,2,3-Trichlorobenzene	0.02	<0.2	<0.4	<0.02
34551	1,2,4-Trichlorobenzene	0.02	<0.2	<0.4	<0.02
34506	1,1,1-Trichloroethane	0.02	<0.2	<0.4	<0.02
34511	1,1,2-Trichloroethane	0.02	<0.2	<0.4	<0.02
39180	Trichloroethene	0.02	<0.2	<0.4	<0.02
34488	Trichlorofluoromethane	0.02	<0.2	<0.4	<0.02
77443	1,2,3-Trichloropropane	0.02	<0.2	<0.4	<0.02
77222	1,2,4-Trimethylbenzene	0.04	<0.4	2.4	<0.04
77226	1,3,5-Trimethylbenzene	0.02	<0.2	17.5	<0.02
39175	Vinyl Chloride	0.02	<0.2	<0.4	<0.02
77135	o-Xylenes	0.02	<0.2	6.4	<0.02
85795	m & p Xylenes	0.02	<0.2	15.9	<0.02

<sup>a</sup> Elevated detection limits due to high analyte concentration; a 10x dilution necessary.

<sup>b</sup> Elevated detection limits due to high analyte concentration; a 20x dilution necessary.

<sup>c</sup> Elevated detection limits due to high analyte concentration; a 200x dilution necessary.



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## ANALYTICAL REPORT

REPORT NUMBER: A3435

Triad Engineering, Inc.  
325 East Chicago Street  
Milwaukee, WI 53202

Attn: Mr. Rick Binder  
Project #W943163.002

DATE: April 22, 1994  
PURCHASE ORDER:  
SEI NO: WL9848  
DATE COLLECTED: 03/18/94  
DATE RECEIVED: 03/21/94  
DATE ANALYZED: 03/29/94

Matrix: Soil  
Source: Chrysler - Kenosha

Units: mg/kg (ppm)

<u>DNR #</u>	<u>Analyte</u>	<u>SEI ID</u>	<u>9848-4<sup>a</sup></u>	<u>9848-5<sup>a</sup></u>
		<u>PQL</u>	<u>CB-14</u>	<u>Soil Pile</u>
<b>EPA Method 8021</b>				
78124	Benzene	0.02	<0.2	<0.2
81555	Bromobenzene	0.02	<0.2	<0.2
77297	Bromochloromethane	0.02	<0.2	<0.2
32101	Bromodichloromethane	0.02	<0.2	<0.2
32104	Bromoform	0.02	<0.2	<0.2
14413	Bromomethane	0.02	<0.2	<0.2
77342	n-Butylbenzene	0.02	2.0	4.7
77350	sec-Butylbenzene	0.04	<0.4	1.6
77353	tert-Butylbenzene	0.02	0.4	<0.2
32102	Carbon tetrachloride	0.02	<0.2	<0.2
34301	Chlorobenzene	0.02	<0.2	<0.2
34306	Chlorodibromomethane	0.02	<0.2	<0.2
34311	Chloroethane	0.02	<0.2	<0.2
32106	Chloroform	0.02	<0.2	<0.2
34418	Chloromethane	0.02	<0.2	<0.2
77275	2-Chlorotoluene	0.02	<0.2	<0.2
77277	4-Chlorotoluene	0.02	<0.2	<0.2
38437	1,2-Dibromo-3-chloropropane	0.02	<0.2	<0.2
77651	1,2-Dibromoethane	0.02	<0.2	<0.2
77596	Dibromomethane	0.02	<0.2	<0.2



## ANALYTICAL REPORT

REPORT NUMBER: A3435

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DATE: April 22, 1994  
 PURCHASE ORDER:  
 SEI NO: WL9848  
 DATE COLLECTED: 03/18/94  
 DATE RECEIVED: 03/21/94  
 DATE ANALYZED: 03/29/94

Matrix: Soil

Source: Chrysler - Kenosha

Units: mg/kg (ppm)

<u>DNR #</u>	<u>Analyte</u>	<u>SEI ID</u>	<u>9848-4<sup>a</sup></u>	<u>9848-5<sup>a</sup></u>
		<u>Sample ID</u>	<u>PQL</u>	<u>CB-14</u>
<b>EPA Method 8021</b>				
34536	1,2-Dichlorobenzene	0.02	<0.2	<0.2
34566	1,3-Dichlorobenzene	0.02	<0.2	<0.2
34571	1,4-Dichlorobenzene	0.03	<0.3	<0.3
34668	Dichlorodifluoromethane	0.02	<0.2	<0.2
34496	1,1-Dichloroethane	0.03	<0.3	<0.3
32103	1,2-Dichloroethane	0.02	<0.2	<0.2
34501	1,1-Dichloroethene	0.02	<0.2	<0.2
77093	cis-1,2-Dichloroethene	0.03	<0.3	<0.3
34546	trans-1,2-Dichloroethene	0.03	<0.3	<0.3
34541	1,2-Dichloropropane	0.02	<0.2	<0.2
77173	1,3-Dichloropropane	0.02	<0.2	<0.2
77170	2,2-Dichloropropane	0.03	<0.3	<0.3
77168	1,1-Dichloropropene	0.02	<0.2	<0.2
34704	cis-1,3-Dichloropropene	0.02	<0.2	<0.2
34699	trans-1,3-Dichloropropene	0.02	<0.2	<0.2
78113	Ethylbenzene	0.02	0.5	2.0
34391	Hexachlorobutadiene	0.03	<0.3	<0.3
77223	Isopropylbenzene	0.02	<0.2	0.5
77356	p-Isopropyltoluene	0.02	3.3	0.8
34423	Methylene chloride	0.05	<0.5	<0.5
34696	Naphthalene	0.03	2.8	4.7



## ANALYTICAL REPORT

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 DATE ANALYZED: 03/29/94

Matrix: Soil  
 Source: Chrysler - Kenosha

Units: mg/kg (ppm)

<u>DNR #</u>	<u>Analyte</u>	<u>SEI ID</u>	<u>9848-4<sup>a</sup></u>	<u>9848-5<sup>a</sup></u>
		<u>Sample ID</u>	<u>CB-14</u>	<u>Soil Pile</u>
<u>PQL</u>				
77224	n-Propylbenzene	0.03	0.3	4.8
77128	Styrene	0.03	<0.3	<0.3
77562	1,1,1,2-Tetrachloroethane	0.02	<0.2	<0.2
34516	1,1,2,2-Tetrachloroethane	0.02	<0.2	<0.2
34475	Tetrachloroethene	0.02	<0.2	<0.2
78131	Toluene	0.02	0.5	<0.2
77613	1,2,3-Trichlorobenzene	0.02	<0.2	<0.2
34551	1,2,4-Trichlorobenzene	0.02	<0.2	<0.2
34506	1,1,1-Trichloroethane	0.02	<0.2	<0.2
34511	1,1,2-Trichloroethane	0.02	<0.2	<0.2
39180	Trichloroethene	0.02	<0.2	<0.2
34488	Trichlorofluoromethane	0.02	<0.2	0.6
77443	1,2,3-Trichloropropane	0.02	<0.2	<0.2
77222	1,2,4-Trimethylbenzene	0.04	1.0	0.9
77226	1,3,5-Trimethylbenzene	0.02	<0.2	<0.2
39175	Vinyl Chloride	0.02	<0.2	<0.2
77135	o-Xylenes	0.02	0.3	1.1
85795	m & p Xylenes	0.02	<0.2	<0.2

<sup>a</sup> Elevated detection limits due to high analyte concentration; a 10x dilution necessary.

<sup>b</sup> Elevated detection limits due to high analyte concentration; a 20x dilution necessary.

<sup>c</sup> Elevated detection limits due to high analyte concentration; a 200x dilution necessary.

Clark J. Crosby  
 Laboratory Manager

3150 North Brookfield Road  
Brookfield, Wisconsin 53045  
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FAX (414) 783-5752



WDNR Certification #268181760

## ANALYTICAL REPORT

REPORT NUMBER: A3435

Triad Engineering, Inc.  
325 East Chicago Street  
Milwaukee, WI 53202

Attn: Mr. Rick Binder  
Project #W943163.002

DATE: April 22, 1994  
PURCHASE ORDER:  
SEI NO: WL9848  
DATE COLLECTED: 03/18/94  
DATE RECEIVED: 03/21/94

Matrix: Soil  
Source: Chrysler - Kenosha

Units: mg/kg (ppm)

<u>Analyte</u>	<u>SEI ID</u>	<u>Sample ID</u>	<u>Base of Coal Bin</u>
Grain Size			See Attached

# Wisconsin TESTING LABORATORIES



Testing and Inspection of:  
Soils  
Concrete  
Asphalt  
Geotechnical Reports  
Soil Borings  
Rock Coring

March 31, 1994

Mr. Kurt Goomey  
Swanson Environmental, Inc.  
3150 North Brookfield Road  
Brookfield, Wisconsin 53045

Re: Grain Size Analysis  
Soil Sample  
Sample No. 9848-6  
Purchase Order No. W-04635  
(WTL L-9425)

Dear Mr. Goomey:

We are submitting herewith the results of a grain size analysis performed on the referenced sample, which was received at our laboratory on March 22, 1994.

We appreciate the opportunity to be of service to you. If there are any questions, or if we can be of any further assistance, please contact our office.

Very truly yours,

A handwritten signature in black ink, appearing to read "Jeffrey G. Smith".

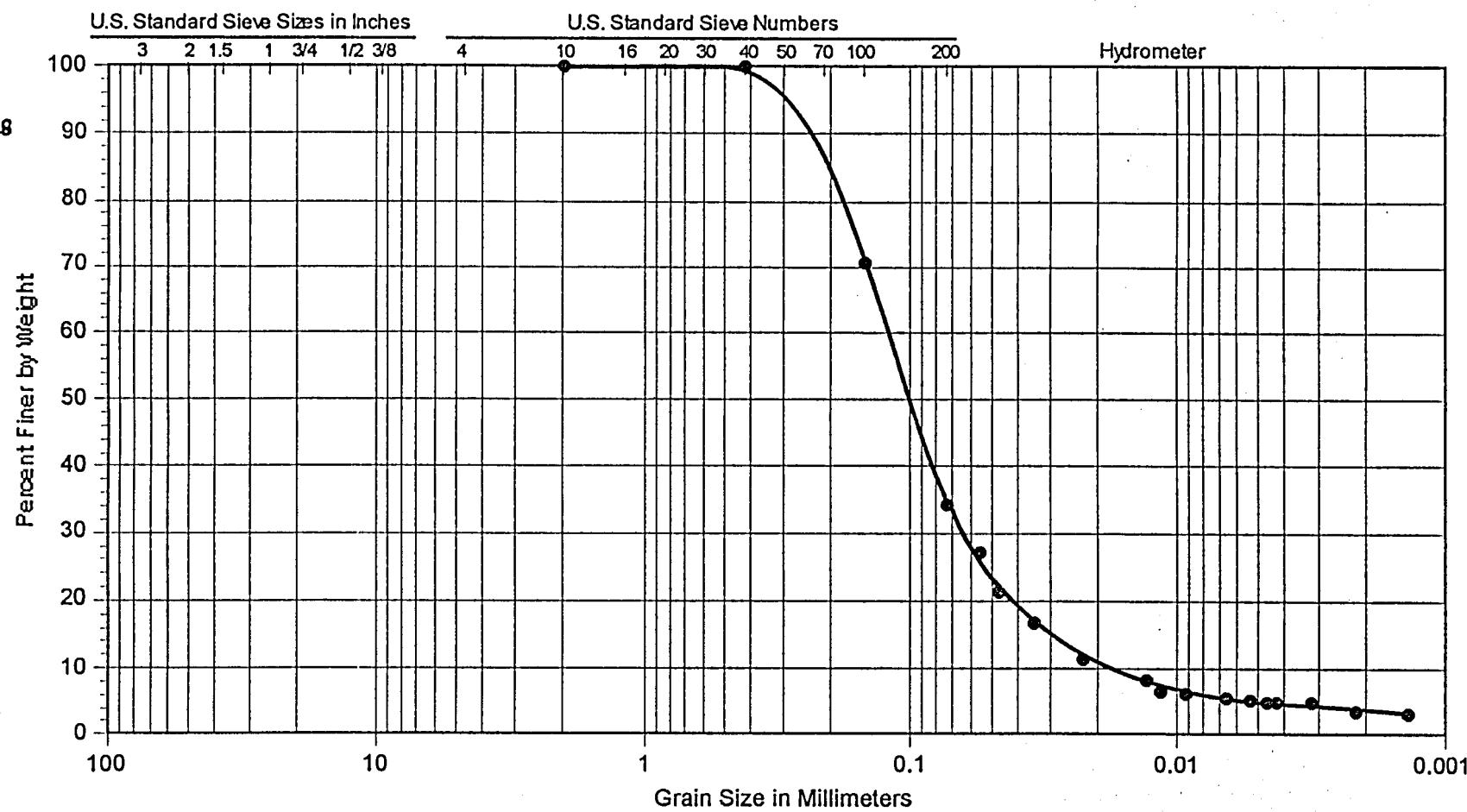
Jeffrey G. Smith, P.E.  
Geotechnical Engineer

JGS/jlt

Copies 12 Client



### GRAIN SIZE ANALYSIS



Sieve Size	Percent Passing
No. 10	100.0
No. 40	100.0
No. 100	70.7
No. 200	34.3

UNIFIED	GRAVEL	SAND	SILT AND CLAY
AASHTO	GRAVEL	SAND	SILT AND CLAY

NUMBER	DEPTH	W	W <sub>L</sub>	W <sub>P</sub>		CLASSIFICATION	Project: 9848 WTL Job No.: S-9425 Client: Swanson Environmental, Inc. Date: March 28, 1994	
9848-6						Silty Sand (SM) or Silty, Clayey Sand (SC-SM) or Clayey Sand (SC)		

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Brookfield, Wisconsin 53045  
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FAX (414) 783-5752



WDNR Certification #268181760

## ANALYTICAL REPORT

REPORT NUMBER: A3436

Triad Engineering, Inc.  
325 East Chicago Street  
Milwaukee, WI 53202

Attn: Mr. Rick Binder  
Project #W943163.009

DATE: April 22, 1994  
PURCHASE ORDER:  
SEI NO: WL9924  
DATE COLLECTED: 03/22/94  
DATE RECEIVED: 03/24/94

Matrix: Soil  
Source: Chrysler

DATE EXTRACTED  
DRO - 03/24/94

Units: mg/kg (ppm)

DATE ANALYZED  
DRO - 04/06/94

<u>DNR #</u>	<u>Analyte</u>	SEI ID	9924-1
		Sample ID	<u>CB-Gravel</u>
		PQL	

WDNR Modified Method DRO

78919	DRO	10	5,930
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## ANALYTICAL REPORT

REPORT NUMBER: A3436

Triad Engineering, Inc.  
 325 East Chicago Street  
 Milwaukee, WI 53202

Attn: Mr. Rick Binder  
 Project #W943163.009

DATE: April 22, 1994  
 PURCHASE ORDER:  
 SEI NO: WL9924  
 DATE COLLECTED: 03/22/94  
 DATE RECEIVED: 03/24/94  
 DATE ANALYZED: 04/05/94

Matrix: Soil  
 Source: Chrysler

Units: mg/kg (ppm)

<u>DNR #</u>	<u>Analyte</u>	<u>SEI ID</u> 9924-1	<u>Sample ID</u> <u>PQL</u> <u>CB-Gravel</u>
<b>EPA Method 8021</b>			
78124	Benzene	0.02	<0.02
81555	Bromobenzene	0.02	<0.02
77297	Bromochloromethane	0.02	<0.02
32101	Bromodichloromethane	0.02	<0.02
32104	Bromoform	0.02	<0.02
14413	Bromomethane	0.02	<0.02
77342	n-Butylbenzene	0.02	0.13
77350	sec-Butylbenzene	0.04	0.04
77353	tert-Butylbenzene	0.02	<0.02
32102	Carbon tetrachloride	0.02	<0.02
34301	Chlorobenzene	0.02	<0.02
34306	Chlorodibromomethane	0.02	<0.02
34311	Chloroethane	0.02	<0.02
32106	Chloroform	0.02	<0.02
34418	Chloromethane	0.02	<0.02
77275	2-Chlorotoluene	0.02	<0.02
77277	4-Chlorotoluene	0.02	<0.02
38437	1,2-Dibromo-3-chloropropane	0.02	<0.02
77651	1,2-Dibromoethane	0.02	<0.02
77596	Dibromomethane	0.02	<0.02



3150 North Brookfield Road  
Brookfield, Wisconsin 53045  
telephone (414) 783-6111  
FAX (414) 783-5752

## ANALYTICAL REPORT

REPORT NUMBER: A3436

Triad Engineering, Inc.  
325 East Chicago Street  
Milwaukee, WI 53202

Attn: Mr. Rick Binder  
Project #W943163.009

DATE: April 22, 1994  
PURCHASE ORDER:  
SEI NO: WL9924  
DATE COLLECTED: 03/22/94  
DATE RECEIVED: 03/24/94  
DATE ANALYZED: 04/05/94

Matrix: Soil  
Source: Chrysler

Units: mg/kg (ppm)

<u>DNR #</u>	<u>Analyte</u>	<u>SEI ID</u> 9924-1	<u>Sample ID</u> CB-Gravel		
		<u>PQL</u>			
<b>EPA Method 8021</b>					
34536	1,2-Dichlorobenzene	0.02	<0.02		
34566	1,3-Dichlorobenzene	0.02	<0.02		
34571	1,4-Dichlorobenzene	0.03	<0.03		
34668	Dichlorodifluoromethane	0.02	<0.02		
34496	1,1-Dichloroethane	0.03	<0.03		
32103	1,2-Dichloroethane	0.02	<0.02		
34501	1,1-Dichloroethene	0.02	<0.02		
77093	cis-1,2-Dichloroethene	0.03	<0.03		
34546	trans-1,2-Dichloroethene	0.03	<0.03		
34541	1,2-Dichloropropane	0.02	<0.02		
77173	1,3-Dichloropropane	0.02	<0.02		
77170	2,2-Dichloropropane	0.03	<0.03		
77168	1,1-Dichloropropene	0.02	<0.02		
34704	cis-1,3-Dichloropropene	0.02	<0.02		
34699	trans-1,3-Dichloropropene	0.02	<0.02		
78113	Ethylbenzene	0.02	0.10		
34391	Hexachlorobutadiene	0.03	<0.03		
77223	Isopropylbenzene	0.02	<0.02		
77356	p-Isopropyltoluene	0.02	0.07		
34423	Methylene chloride	0.05	0.84 <sup>a</sup>		
34696	Naphthalene	0.03	0.10		

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Matrix: Soil  
 Source: Chrysler

Units: mg/kg (ppm)

<u>DNR #</u>	<u>Analyte</u>	<u>SEI ID</u> Sample ID <u>PQL</u>	<u>9924-1</u> CB-Gravel
<b>EPA Method 8021</b>			
77224	n-Propylbenzene	0.03	0.04
77128	Styrene	0.03	<0.03
77562	1,1,1,2-Tetrachloroethane	0.02	<0.02
34516	1,1,2,2-Tetrachloroethane	0.02	<0.02
34475	Tetrachloroethene	0.02	<0.02
78131	Toluene	0.02	0.56 <sup>a</sup>
77613	1,2,3-Trichlorobenzene	0.02	<0.02
34551	1,2,4-Trichlorobenzene	0.02	<0.02
34506	1,1,1-Trichloroethane	0.02	<0.02
34511	1,1,2-Trichloroethane	0.02	<0.02
39180	Trichloroethene	0.02	<0.02
34488	Trichlorofluoromethane	0.02	<0.02
77443	1,2,3-Trichloropropane	0.02	<0.02
77222	1,2,4-Trimethylbenzene	0.04	<0.04
77226	1,3,5-Trimethylbenzene	0.02	<0.02
39175	Vinyl Chloride	0.02	<0.02
77135	o-Xylenes	0.02	0.06
85795	m & p Xylenes	0.02	<0.02

<sup>a</sup> Elevated detection limits due to high analyte concentration; a 10x dilution necessary.

Clark J. Crosby  
 Laboratory Manager

PROJ. NO.	PROJECT NAME	SAMPLERS: VS, GM	NO. OF CONTAINERS	TEST PARAMETERS							SAMPLE TYPE  (Specify groundwater, soil, wastewater, sludge, etc.)	
				VOCs (PCP)	VOCs (SOX)	DRC (DPR Mol.)						
MW-31	3/23/94	1523	X	MW-31 ✓	2	X						GROUNDWATER
MW-35B	3/23/94	1342	X	MW-35B ✓	2	X						
MW-29A	3/23/94	1540	X	MW-29A ✓	2	X						
MW-38	3/23/94	1345	X	MW-38 ✓	2	X						
MW-238	3/23/94	1345	X	MW-238 ✓	2	X						↓
	3/22/94	1625	X	CB-GRAVEL	1	X						SOIL
	3/22/94	1625	X	CB-GRAVEL	1	X						SOIL
	3/17/94		*	TRIP BLANK	1	X						GROUNDWATER
SAMPLE CONDITION:	Cyanide samples were field filtered VOC samples prepared with HCl				SAMPLE LOCATION:							

RELINQUISHED BY: <i>Rick Binder</i>	DATE / TIME 3/29/94 7:30	RELINQUISHED BY: <i>Jay Volden</i>	DATE / TIME 3/24/94 12:00	SPECIAL REQUESTS:
RECEIVED BY: <i>Rick Binder</i>	DATE / TIME 3/24/94 10:00	RECEIVED BY: <i>Mary E. Barry</i>	DATE / TIME 3/24/94 14:00	REPORT TO: RICK BINDER
LABORATORY 3150 North Brookfield Rd. Brookfield, WI 53045 (414) 783-6111 Fax (414) 783-5752				NAME: TRIAD ENGINEERING
				ADDRESS: 325 E. CHICAGO ST. MILWAUKEE, WI 53202
				PHONE: 291-8840 FAX: 291-8841



SWANSON ENVIRONMENTAL INC.

**COMM SECURITY RECORD**

PROJ. NO. W94316-2.C02	PROJECT NAME Chrysler, Kenosha						NO. OF CONTAINERS	TEST PARAMETERS						SAMPLE TYPE (Specify groundwater, soil, wastewater, sludge, etc.)		
SAMPLERS: James Tobin						VCC		8021	DRO (w/ or w/o H2O)	DRO METHOD	GRAIN SIZE	AIR DRY	WET DRY		REFRIGERATE	FREEZE DRY
SEI #	STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION										
	CB-11	03/18	1200		X	Base of coal bin W. END		2	X X							SOIL
	CB-12	03/18	1210		X	Base of coal bin W. CENTER		2	X X							SOIL
	CB-13	03/18	1220		X	Base of coal bin E. CENTER		2	X X							SOIL
	CB-14	03/18	1330		X	Base of coal bin E. END		2	X X							SOIL
	CB - SOIL PILE	03/18	1425		X	Stack piled soils from Coal Bin		2	X X							SOIL
	CBH4 FIN	03/18			X	Base of Coal bin		5		X						SOIL
SAMPLE CONDITION:								SAMPLE LOCATION:								
RELINQUISHED BY: <i>James Tobin</i>			DATE / TIME 03/21/94	RELINQUISHED BY:			DATE / TIME 1			SPECIAL REQUESTS:						
RECEIVED BY: <i>J. J. Klemmer</i>			DATE / TIME 3/21/94	RECEIVED BY:			DATE / TIME 1			REPORT TO:						
NAME: _____																
ADDRESS: _____																
PHONE: _____																



**LABORATORY**  
3150 North Brookfield Rd.  
Brookfield, WI 53045  
(414) 783-6111  
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*SWANSON ENVIRONMENTAL INC.*

**STRAIN OF CUSTODY RECORD**

RELINQUISHED BY: <i>R. M. Mendenhall</i>	DATE / TIME 7/30/94 10:16	RELINQUISHED BY:	DATE / TIME	SPECIAL REQUESTS:
RECEIVED BY: <i>T. J. Franklin</i>	DATE / TIME 7/30 11:35	RECEIVED BY:	DATE / TIME	REPORT TO: NAME: ADDRESS: PHONE:



**LABORATORY**  
3150 North Brookfield Rd.  
Brookfield, WI 53045  
(414) 783-6111  
Fax (414) 783-5752

*swanson environmental inc.*

# SOIL BOREHOLE LOG

SITE NAME AND LOCATION: Chrysler Corp., Site #8  
Bldgs. 4, 7B, 9, 17A, 17C, and 58

DRILLING METHOD: 8 in. CO HSA

BORING NO. MP-8C	
SHEET	
1 OF 1	
DRILLING	
START	FINISH
TIME	TIME
1000	1030
DATE	DATE
12/14/89	12/14/89

DATUM: msl

ELEVATION:

SURFACE CONDITIONS: 0.5 ft. concrete/0.5 ft. sand and gravel

DRILL RIG: Diedrich D-50

BEARING ---

ANGLE: Vertical

SAMPLE HAMMER TORQUE 140#/30 in. drop FT.-LBS

DEPTH IN FEET	BLOWS/ 6 IN. ON SAMPLER (RECOVERY)	SYMBOL	SAMPLE NUMBER AND DESCRIPTION OF MATERIAL	TEST RESULTS			
				SAMPLER AND BIT	CASING TYPE	BLOWS/FOOT ON CASING	PID (ppm) OTHER TESTS

2	13.5 5.3 - (65%)	SP/SC	0.0 - 0.5: CONCRETE (Fill)	SS #1			<1
			0.5 - 1.0: SAND and GRAVEL (Fill)				
4	1.2 3.2 (50%)	CL	1.0 - 2.0: CLAYEY SAND, some coarse-grained sand to fine-grained subangular to subrounded gravel, dark yellowish-brown (10YR 4/4), loose to medium dense, no odor, moist (SP/SC)	SS #2			<1
			2.0 - 5.0: SILTY CLAY, very dark gray (10YR 3/1), medium stiff, no odor, stiff (CL)				
6	1.5 8.9 (100%)	SW	5.0 - EOB: SILTY CLAY, very fine-grained, some clay, dark yellowish-brown (10YR 4/6), medium dense, no odor, saturated below 6.5 ft. (SW)	SS #3			<1
			EOB: 7.0 ft.				

LOGGED BY Stephen D. Mueller

DATE 12/14/89

DRILLING CONTRACTOR Wisconsin Test Drilling, Inc.

Schofield, Wisconsin

# SOIL BOREHOLE LOG

SITE NAME AND LOCATION: Chrysler Corp., Site #8 Bldgs. 4, 7B, 9, 17A, 17C, and 58				DRILLING METHOD: <u>8 in. CO HSA</u>  SAMPLE METHOD: <u>2 in. x 2 ft.</u> <u>continuous split-spoon</u> <u>sampling</u>				BORING NO. <u>MP-80</u> SHEET <u>1 OF 1</u> DRILLING START <u>TIME</u> <u>1030</u> DATE <u>DATE</u> <u>12/14/89</u> <u>12/14/89</u>			
DATUM: msl DRILL RIG: Diedrich D-50 ANGLE: Vertical BEARING --- SAMPLE HAMMER TORQUE 140#/30 in. drop FT.-LBS				ELEVATION: SURFACE CONDITIONS: One foot concrete.							
DEPTH IN FEET (ELEVATION)	BLOWS/ 6 IN. ON SAMPLER (RECOVERY)	SYMBOL	SAMPLE NUMBER AND DESCRIPTION OF MATERIAL					TEST RESULTS			
				SAMPLER AND BIT	CASTING TYPE	BLOWS/FOOT ON CASING	WATER CONTENT %	Liquid Limit %	Plastic Limit %	Spec. Gravity	PID (ppm)
2	28,29 15,17 (75%)	F SP/F	0.0 - 1.0: CONCRETE (Fill)  1.0 - 3.0: SAND and CINDER FILL, medium-grained sand, 0.5 to 1.0 cm. clasts of metallic slag, little gravel, dark brown (7.5YR 3/2) and dark reddish-brown (2.5Y 3/4), dense, no odor, damp (SP, Fill)	SS #1						<1	
4	4,7 7,12 (75%)	CL/SW	3.0 - 4.0: SILTY CLAY and SAND, fine-grained sand, gray (10YR 5/1), medium dense, no odor, moist (CL/SW)	SS #2						<1	
6	5,9 14,14 (50%)	SW	4.0 - EOB: SILTY SAND, very fine-grained, grayish brown (10YR 5/2), medium dense, no odor, moist grading to gray (10YR 5/1), saturated below 8.0 ft. (SW)	SS #3						<1	
8	9,8 10,11 (100%)		EOB: 9.0 ft.	SS #4						<1	
10											

LOGGED BY Stephen D. Mueller  
 DATE 12/14/89

DRILLING CONTRACTOR Wisconsin Test Drilling, Inc.

Schofield, Wisconsin

# SOIL BOREHOLE LOG

SITE NAME AND LOCATION: Chrysler Corp., Site #8 Bldgs. 4, 7B, 9, 17A, 17C, and 58				DRILLING METHOD: 8 in. OO HSA				BORING NO. MP-8E							
				SAMPLE METHOD: 2 in. x 2 ft. continuous split-spoon sampling				SHEET 1 OF 1							
				WATER LEVEL				DRILLING							
				TIME				START	FINISH						
				DATE				TIME	TIME						
				CASING DEPTH				1430	1600						
								DATE	DATE						
								12/13/89	12/13/89						
DATUM: msl				ELEVATION:				SURFACE CONDITIONS: One foot concrete							
DRILL RIG: Diedrich D-50				ANGLE: Vertical BEARING ---				SAMPLE HAMMER TORQUE 140#/30 in. drop FT.-LBS							
DEPTH IN FEET (ELEVATION)	BLOWS / 6 IN. ON SAMPLER (RECOVERY)	SYMBOL	SAMPLE NUMBER AND DESCRIPTION OF MATERIAL				TEST RESULTS								
			SAMPLER AND BIT	CASING TYPE	BLOKS/FOOT	ON-CASING	WATER CONTENT %	LIQUID LIMIT %	PLASTIC LIMIT %	SPEC. GRAVITY	PID (ppm)				
2	14, 8 8, 9.. (75%)	F	0.0 - 1.0: CONCRETE (Fill)				SS #1						6		
		SW	1.0 - 2.0: SILTY SAND, some gravel, poorly sorted, dark grayish-brown (10YR 4/2), medium dense, no odor, dry grading to moist below 1.25 ft. (SW)												
		SW/GW F													
	4	13, 5 8, 8	SW	2.0 - 3.0: SILTY SAND and GRAVEL, fine-grained sand, 0.5 to 1.0 cm. slag clasts, dark brown (7.5YR 3/4), medium dense, hydrocarbon odor, damp (SW/GW, Fill)				SS #2						54	
		5	13, 13 13, 14	SW	3.0 - 6.0: SILTY SAND, fine-grained, yellowish-brown (10YR 5/4), medium dense, hydrocarbon odor (gasoline-like), moist (SW)				SS #3						31
					6.0 - EOB: SILTY SAND, very fine-grained, gray (10YR 5/1), medium dense, hydrocarbon odor, saturated below 6.0 ft. (SW)										
8			EOB: 7.0 ft.												

DRILLING CONTRACTOR Wisconsin Test Drilling, Inc.

Schofield, Wisconsin

LOGGED BY Stephen D. Mueller

DATE 12/13/89

BOREHOLE LOG

Project: Chrysler Subsurface Assess. 251E09533  
 Location: Kenosha Main Plant and Support Sites

Borehole ID : MW-3Logged by: R. J. Binder

LOCATION: Main Plant, south of Building #52, east of UST's GROUND ELEV.: 623.21 ft. msl	DRILLER: Wis. Test Drilling, Inc Schofield, Wisconsin RIG: Diedrich D-50	DATE: 5/22/89	END 5/22/89
TOTAL DEPTH: 14.0 ft.	BIT(S): 4-1/4" I.D. HSA	TIME: 12:00	13:00
BOREHOLE DIAM.: ~ 7-3/4 in.	FLUID: None	COMPLETED AS:	Monitoring Well

D E P T H ft.	S A M P L E ft. E	R E C O V R e	N V A L R e	H N u ppm
1	1	1.0	11	18
2				
3	2	1.8	20	60
4				
5	3	2.0	6	60
6				
7				
8	4	0.6	35	70
9				
10	5	-	19	60
11				
12	6	.25	35	60
13				
14	7	-	-	-

## MATERIAL DESCRIPTIONS AND COMMENTS

0.0 - 0.5:	CONCRETE
0.5 - 3.8:	SILTY SAND and GRAVEL, fine- to coarse-grained, poorly sorted, very dark brown (10YR 2/2), medium dense, strong hydrocarbon odor, wet to saturated below 2.5 ft (SW-SM, Fill)
3.8 - 5.0:	SANDY SILT, fine-grained sand, nonplastic, grayish brown (10YR 5/2), very stiff, strong hydrocarbon odor, saturated (ML)
5.0 - 6.0:	SILTY SAND, very fine-grained to fine-grained, poorly sorted, grayish brown (10YR 5/2), loose, strong hydrocarbon odor, saturated (SM)
6.0 - 8.0:	SAND and GRAVEL, trace silt and clay, medium- to coarse-grained, poorly sorted, black (10YR 2/1), dense, strong hydrocarbon odor, saturated (GW)
8.0 - EOB:	SILTY SAND, fine- to medium-grained, poorly sorted, brown (10YR 5/1), medium dense to dense, strong hydrocarbon odor, saturated (SW-SM)
EOB:	14.0 ft.

## WELL/PROBE CONSTRUCTION SUMMARY

PROJECT: Chrysler Subsurface Site  
Assessment  
PROJECT NO.: 251EO9533  
PERSONNEL: R. J. Binder

## ELEVATION:

GROUND LEVEL: 623.21 ft. msl  
TOP OF RISER: 622.29 ft. msl  
TOP OF PROT. CASING: 623.21 ft. msl

## DRILLING SUMMARY:

TOTAL DEPTH: 14.0 ft.

BOREHOLE DIAMETER: 7-3/4 in.

DRILLER: Wisconsin Test Drilling  
Schofield, WI

RIG: Diedrich D-50

BIT(S): 4-1/4" ID HSA

DRILLING FLUID: None

SURFACE CASING: Flush-mounted steel  
well vault

## WELL DESIGN:

BASIC: GEOLOGIC LOG X GEOPHYS. LOG

CASING STRING(S): C=CASING / S=SCREEN

0.92 - 2.5 C1 2.5 - 12.5 S1

0.0 - 0.5 C2 . - - -

- - - - - - - -

CASING: C1: 2" dia. flush-threaded  
Sch. 40 PVCC2: 8" dia. flush-mounted  
iron well vaultSCREEN: S1: 2" dia., 0.010" factory  
slot, flush-threaded,  
Sch. 40 PVC

CENTRALIZERS: None

FILTER MATERIAL: Coarse quartz sand  
14.0 - 1.5 ft.ANNULAR SEAL: Volclay bentonite  
pellets, 1.5 - 1.0 ft.

CEMENT: \_\_\_\_\_

OTHER: \_\_\_\_\_

## CONSTRUCTION TIME LOG:

TASK	START	DATE	TIME	FINISH	DATE	TIME
	1989	5/22	1200	1989	5/22	1300
DRILLING: HSA						
GEOPHYSICAL LOGGING:						
CASING: C1, S1	5/22	1305		5/22	1310	
C2	5/22	1335		5/22	1345	
FILTER PLACEMENT:	5/22	1310		5/22	1330	
CEMENTING:	5/22	1330		5/22	1335	
DEVELOPMENT OTHER:						
Ann. Seal	5/22	1310		5/22	1330	

## DEVELOPMENT SUMMARY:

Total of 26.0 gallons purged  
5/31 - 6/1 = 21.6 casing volumes

## COMMENTS:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

## HYDRAULIC TEST DATA FOR WELL MW-3

## RECOVERY DATA

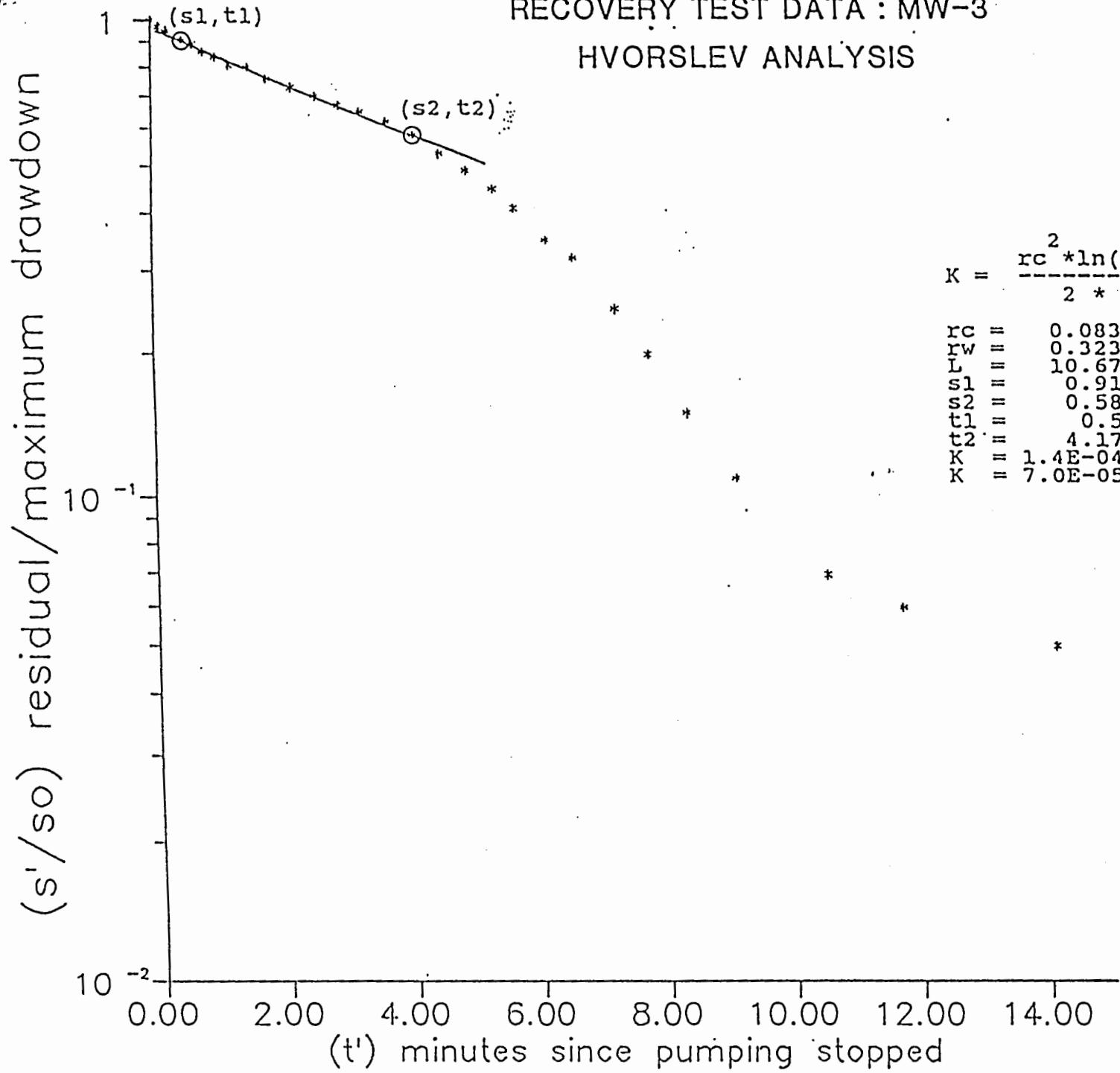
Project: Chrysler Subsurface Site Assessment  
 Project Number: 251E09533  
 Location: Kenosha, Wisconsin  
 Personnel: R.J. Binder, J.L. Fassbender

Type of Test : Bail/Recovery  
 Meas. Pt. for Wtr.Lvl : Top of Riser  
 Water Level Measured By: Olympic Water Level Probe  
 Elev. of Meas. Pt. : 622.29 ft. msl  
 Static Water Lvl. Elev.: 619.90 ft. msl  
 Type of Pump: Bailer  
 Discharge: 5.75 Gallons; 0.46 GPM

Pump or Bailing Started: Date 6/13/89 Time 1226.00  
 Pump or Bailing Stopped: Date 6/13/89 Time 1232.42  
 End Wtr. Lvl. Obsevation: Date 6/13/89 Time 1246.90

TIME	WATER LEVEL DATA					COMMENTS	
	Date	Clock Time	t' (min)	Static Wtr. Lvl. Reading:	2.31 ft		
				Reading (ft)	Water Level (ft. msl)	Residual Draw. s' (ft.)	s'/so
6/13/89	1232.75	0.0000		9.70	612.59	7.39	1.00
6/13/89	1232.87	0.1200		9.51	612.78	7.20	0.97
6/13/89	1233.00	0.2500		9.31	612.98	7.00	0.95
6/13/89	1233.25	0.5000		9.05	613.24	6.74	0.91
6/13/89	1233.42	0.6700		8.88	613.41	6.57	0.89
6/13/89	1233.58	0.8300		8.70	613.59	6.39	0.86
6/13/89	1233.78	1.0300		8.50	613.79	6.19	0.84
6/13/89	1234.00	1.2500		8.32	613.97	6.01	0.81
6/13/89	1234.30	1.5500		8.19	614.10	5.88	0.80
6/13/89	1234.60	1.8500		7.91	614.38	5.60	0.76
6/13/89	1235.00	2.2500		7.72	614.57	5.41	0.73
6/13/89	1235.38	2.6300		7.49	614.80	5.18	0.70
6/13/89	1235.75	3.0000		7.28	615.01	4.97	0.67
6/13/89	1236.08	3.3300		7.10	615.19	4.79	0.65
6/13/89	1236.50	3.7500		6.07	615.42	4.56	0.62
6/13/89	1236.92	4.1700		6.58	615.71	4.27	0.58
6/13/89	1237.33	4.5800		6.26	616.03	3.95	0.53
6/13/89	1237.75	5.0000		5.92	616.37	3.61	0.49
6/13/89	1238.17	5.4200		5.65	616.64	3.34	0.45
6/13/89	1238.50	5.7500		5.32	616.97	3.01	0.41
6/13/89	1239.00	6.2500		4.90	617.39	2.59	0.35
6/13/89	1239.42	6.6700		4.66	617.63	2.35	0.32
6/13/89	1240.08	7.3300		4.15	618.14	1.84	0.25
6/13/89	1240.58	7.8300		3.76	618.53	1.45	0.20
6/13/89	1241.17	8.4200		3.40	618.89	1.09	0.15

6/13/89	1241.92	9.1700	3.11	619.18	0.80	0.11
6/13/89	1243.33	10.5800	2.86	619.43	0.55	0.07
6/13/89	1244.50	11.7500	2.73	619.56	0.42	0.06
6/13/89	1246.90	14.1500	2.65	619.64	0.34	0.05



## WELL DEVELOPMENT SUMMARY

WELL MW-3

PROJECT Chrysler (251E09533)  
LOCATION Kenosha Main Plant  
PERSONNEL R. J. Binder

South of Building 52  
WELL LOCATION East of USTs  
ELEVATION (PVC riser) 622.29  
GROUND LEVEL 623.21

## **SOIL BOREHOLE LOG**

SITE NAME AND LOCATION: Chrysler Corp. Site #7 Inside building 52			DRILLING METHOD: 8 in. CO HSA	BORING NO. HW-14	
			SAMPLE METHOD: 2 in. x 2 in. continuous split-spoon sampling	SHEET 1 OF 1	
			WATER LEVEL TIME DATE CASING DEPTH	DRILLING START TIME 1030 1145 DATE DATE 11/30/89 11/30/89	
DATUM: msl	ELEVATION:	SURFACE CONDITIONS: Concrete floor			
DRILL RIG: Diedrich D-50 ANGLE: Vertical BEARING --- SAMPLE HAMMER TORQUE 140#/30 in. drop					
DEPTH IN FEET (ELEVATION)	BLOWS/ 6 IN. ON SAMPLER (RECOVERY)	SYMBOL	SAMPLE NUMBER AND DESCRIPTION OF MATERIAL	SAMPLER AND BIT	TEST RESULTS
				CASING TYPE BLOWS/FOOT ON CASING	WATER CONTENT % LIQUID LIMIT % PLASTIC LIMIT % SPEC. GRAVITY OTHER TESTS
2	F (80)	SW/ GW	0.0 - 1.0: Concrete (Fill) 1.0 - 3.0: SAND and GRAVEL (Fill SW/GW) 3.0 - 7.5: SAND, fine-grained, well sorted, yellowish-brown (10YR 5/4), medium dense, moist to wet (SM) 7.5 - EOB: SAND, fine-grained, well sorted, dark gray (10YR 4/1), medium dense, saturated (SW) EOB: 13.0 Feet	SS #1	
4	(60)			SS #2	
6	(50)			SS #3	
8	(50)	SW		SS #4	
10	(65)			SS #5	
12	(70)			SS #6	
14					

LOGGED BY Robert Schneiker (HSI)

DATE 11/30/88

DRILLING CONTRACTOR Wisconsin Test Drilling, Inc.

schonfield wisconsin

## **MONITOR WELL CONSTRUCTION SUMMARY**

Well No. KW-14

Boring No. X-Ref: \_\_\_\_\_

**Survey Coords:** \_\_\_\_\_

Elevation Ground Level 622.87

Top of Casing 622.34

**Drilling Summary:**  
Total Depth: 14.0 ft.  
Borehole Diameter: 8.0 in.  
Casing Stick-up Height: .53 ft.  
Driller: Wisconsin Test Drilling, Inc.  
Schofield, WI

Rig: Diedrich D-50

Drilling Fluid: None

Protective Casing: Flush-mounted steel well vault

## Well Design & Specifications

Basic: Geologic Log X Geophysical Log     
Casing String(s): C = Casing S = Screen

<u>Depth</u>	<u>String(s)</u>	<u>Elevation</u>
<u>0.0</u> - <u>0.1</u>	<u>C1</u>	<u>622.87</u> - <u>621.87</u>
<u>.53</u> - <u>4.0</u>	<u>C2</u>	<u>622.34</u> - <u>618.34</u>
<u>4.0</u> - <u>14.0</u>	<u>S1</u>	<u>618.34</u> - <u>608.34</u>
-	-	-

Casing: C1: 8" dia., flush-mounted iron  
well vault

Casing: C2: 2" dia. flush-threaded Sch. 40  
PVC

Screen: S1: 2" dia. 0.010" factory-slot  
flush-threaded Sch. 40 PVC

Filter Pack: #30 flint sand 14.0 - 4.0 ft.  
Fine silica sand 4.0 - 3.0 ft

Grout Seal: Cement = 1.0 : 0.0 ft

Digitized by srujanika@gmail.com

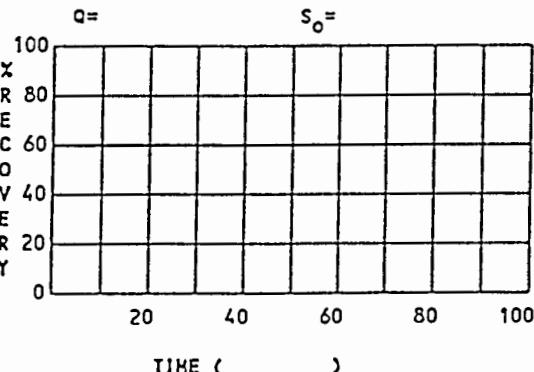
Digitized by srujanika@gmail.com

**Comments:**

## Well Development:

### Stabilization Test Data

Recovery Data:



SUPERVISED BY Robert A. Schneiker (HSI)

11/10/00

## HYDRAULIC TEST DATA FOR WELL MW-14

Elev. of Meas. Pt.: 622.34

Static Water Lvl. Elev.: 616.94

Discharge: 6.0 Gal.

.6 gpm SWL: 5.40

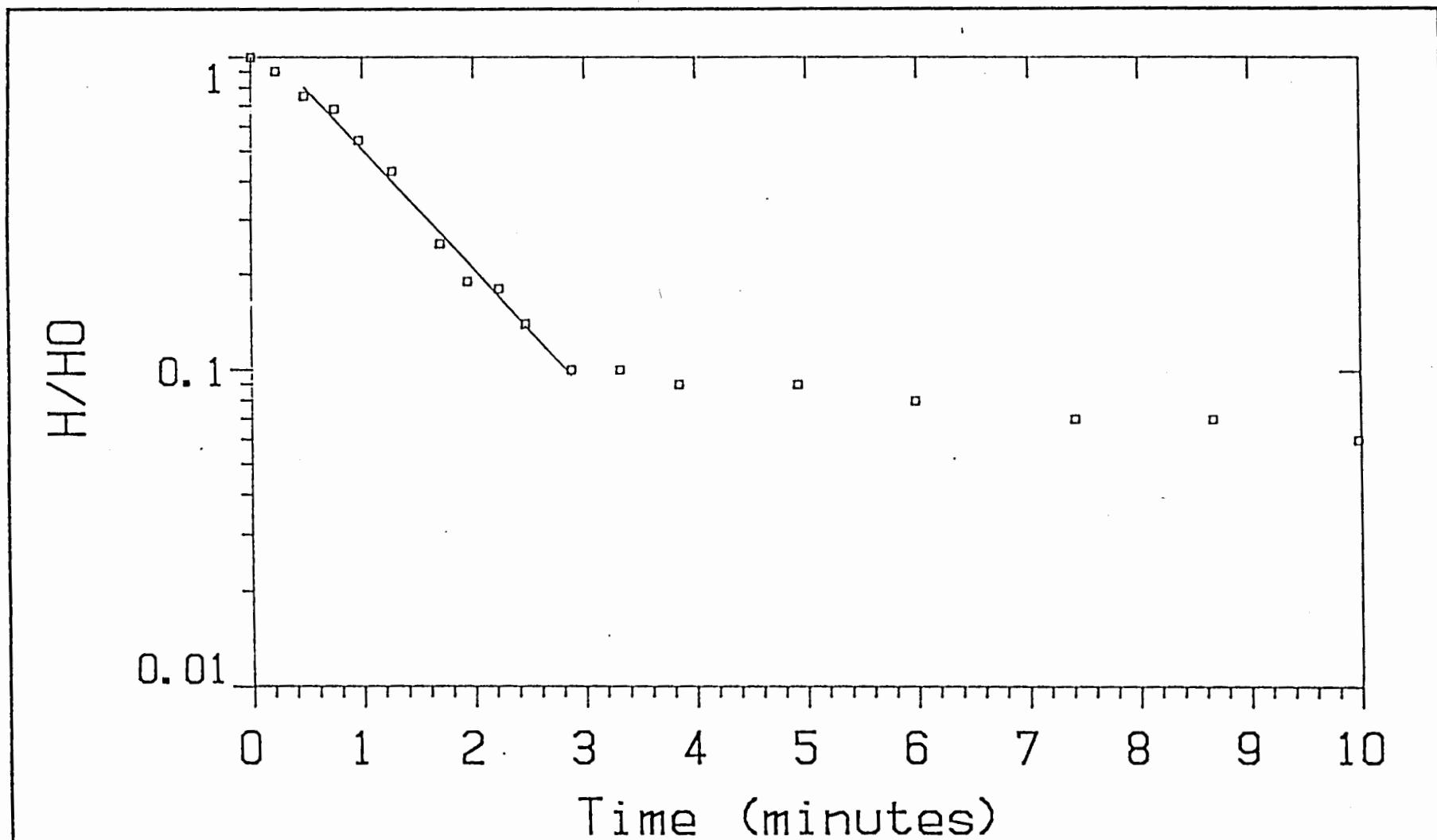
Type of Test: Bail/Recovery

Meas. Pt. for Water Level: Top of Riser

Type of Pump: Bailer

Personnel: R.J. Binder, S.D. Mueller, R.A. Schneiker

DATE	Clock Time	t' (min)	Reading (ft)	Residual Draw. s' (ft)	s'/so
02/07/90	12:36:00	0.00	10.20	4.80	1.00
02/07/90	12:36:13	0.22	9.74	4.34	0.90
02/07/90	12:36:29	0.48	8.98	3.58	0.75
02/07/90	12:36:45	0.75	8.66	3.26	0.68
02/07/90	12:36:58	0.97	7.98	2.58	0.54
02/07/90	12:37:16	1.27	7.45	2.05	0.43
02/07/90	12:37:42	1.70	6.62	1.22	0.25
02/07/90	12:37:57	1.95	6.29	0.89	0.19
02/07/90	12:38:14	2.23	6.28	0.88	0.18
02/07/90	12:38:28	2.47	6.09	0.69	0.14
02/07/90	12:38:53	2.88	5.90	0.50	0.10
02/07/90	12:39:19	3.32	5.86	0.46	0.10
02/07/90	12:39:51	3.85	5.84	0.44	0.09
02/07/90	12:40:55	4.92	5.82	0.42	0.09
02/07/90	12:41:59	5.98	5.80	0.40	0.08
02/07/90	12:43:25	7.42	5.75	0.35	0.07
02/07/90	12:44:40	8.67	5.72	0.32	0.07
02/07/90	12:45:59	9.98	5.69	0.29	0.06



MODEL TYPE: HVORSLEV  
CONDUCTIVITY: .0009530 ft/min  
TRANSMISSIVITY: .9520 sq. ft/min  
INITIAL HEAD: 1.000 ft

for: CHRYSLER  
by: Hydrosearch, Inc.  
WELL DATA: Units: ft  
AQUIFER: Endless  
THICKNESS: 999.0  
SCREEN: top: 4.000 base: 14.00  
DIAMETER: casing: .1660 intake: .6660  
DEPTH: Water Table: 5.400 TD: 14.50

Well Slug Test Data  
Well: MW-14  
MAIN PLANT  
Kenosha

Data Set: MP-7

Date: 02/07/90

## WELL DEVELOPMENT SUMMARY

Well MW-14

PROJECT: Chrysler Corporation  
PROJECT #: 251E09533  
LOCATION: Kenosha, WI  
PERSONNEL: R.A. Schneiker

WELL COORDINATES: \_\_\_\_\_  
PVC RISER ELEVATION: 622.87  
GROUND LEVEL ELEVATION: 622.34

## INSTRUMENTS

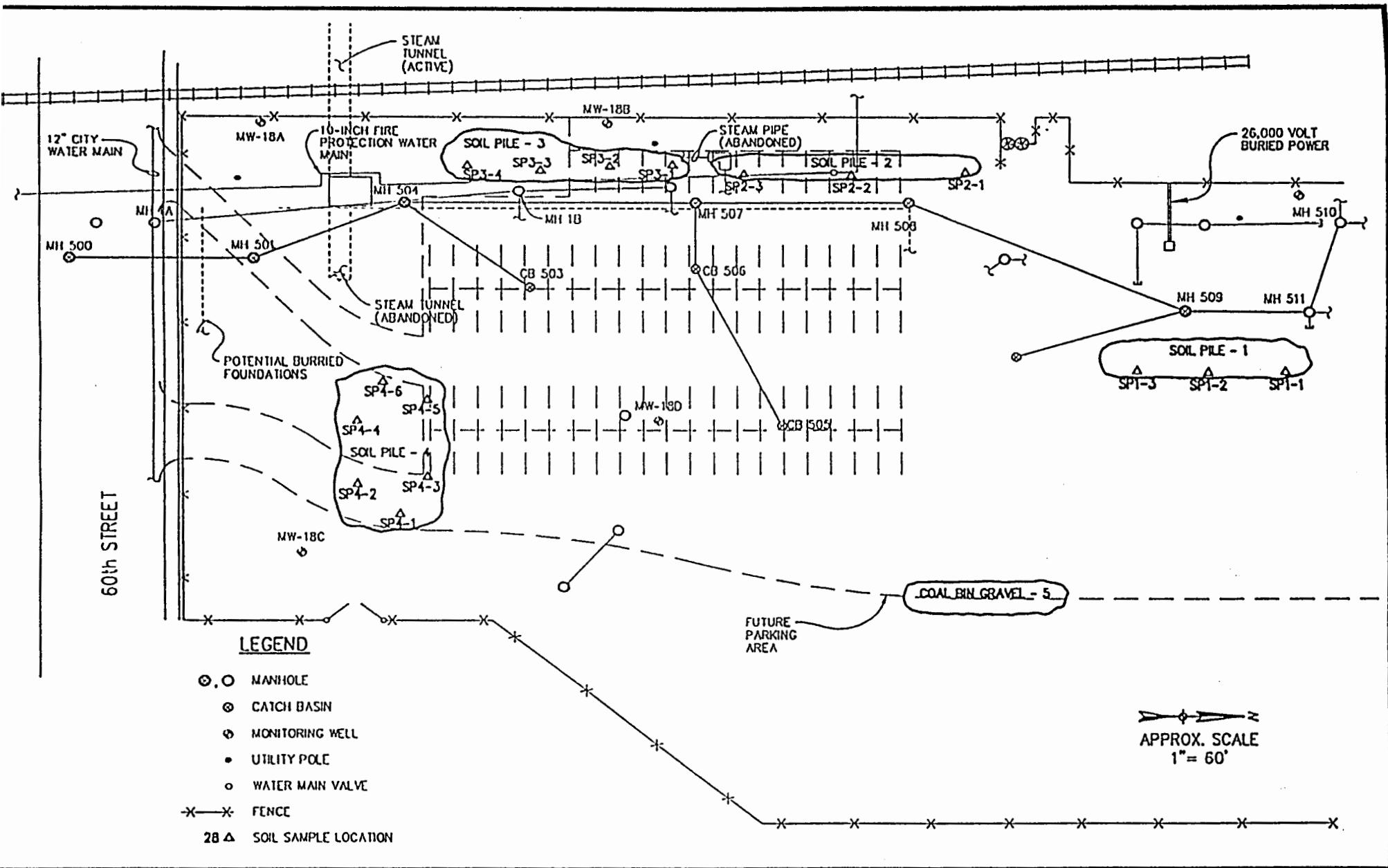
TEMPERATURE: YSI SP-C-T Meter #3  
CONDUCTIVITY: YSI SP-C-T Meter #3  
pH METER: PHM80 Meter #1  
WATER LEVEL PROBE: Olympic Water-Level Probe (OWP)  
OTHER:

HC = hydrocarbon



**ATTACHMENT B**

**STOCKPILED SOIL ANALYTICAL DATA**



**FIGURE 1**  
**CHRYSLER KENOSHA MAIN PLANT**  
**SOIL PILE AND SAMPLE LOCATIONS**



## ANALYTICAL REPORT

REPORT NUMBER: A3264

Triad Engineering, Inc.  
 325 East Chicago Street  
 Milwaukee, WI 53202

Attn: Mr. Rick Binder  
 Project #W943163

DATE: April 5, 1994  
 PURCHASE ORDER:  
 SEI NO: WL9797  
 DATE COLLECTED: 03/15/94  
 DATE RECEIVED: 03/15/94

Matrix: Soil  
 Source: Chrysler

DATE EXTRACTED  
 DRO - 03/17/94

Units: mg/kg (ppm)

DATE ANALYZED  
 DRO - 03/22&25/94

		SEI ID	9797-1	9797-2	9797-3	9797-4	9797-5	9797-6
		Sample ID	SP1-1	SP1-2	SP1-3	SP2-1	SP2-2	SP2-3
<u>DNR #</u>	<u>Analyte</u>	<u>PQL</u>						

WDNR Modified Method DRO

78124	DRO	1	<1	699 <sup>a</sup>	167	<1	<1	5
-------	-----	---	----	------------------	-----	----	----	---

		SEI ID	9797-7	9797-8	9797-9	9797-10	9797-11	9797-12
		Sample ID	SP3-1	SP3-2	SP3-3	SP3-4	SP4-1	SP4-2
<u>DNR #</u>	<u>Analyte</u>	<u>PQL</u>						

WDNR Modified Method DRO

78124	DRO	1	150 <sup>b</sup>	<1	63 <sup>b</sup>	67 <sup>b</sup>	78	484 <sup>b</sup>
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<sup>a</sup> Sample pattern did not resemble Diesel.

<sup>b</sup> Baseline raised with peaks outside DRO window.

Samples received "on ice"



## ANALYTICAL REPORT

REPORT NUMBER: A3264

Triad Engineering, Inc.  
 325 East Chicago Street  
 Milwaukee, WI 53202

Attn: Mr. Rick Binder  
 Project #W943163

DATE: April 5, 1994  
 PURCHASE ORDER:  
 SEI NO: WL9797  
 DATE COLLECTED: 03/14&15/94  
 DATE RECEIVED: 03/15/94

Matrix: Soil  
 Source: Chrysler

Units: mg/kg (ppm)

<u>DNR #</u>	<u>Analyte</u>	<u>PQL</u>	<u>SEI ID</u>	9797-13	9797-14	9797-15	9797-16
			<u>Sample ID</u>	SP4-3	SP4-4	SP4-5	SP4-6

WDNR Modified Method DRO

78124	DRO	1	960 <sup>a</sup>	34 <sup>ab</sup>	1,280 <sup>bc</sup>	1,560 <sup>adg</sup>
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<sup>a</sup> Sample pattern did not resemble Diesel.

<sup>b</sup> Baseline raised with peaks outside DRO window.

<sup>c</sup> Elevated detection limits due to high analyte concentration; a 5x dilution necessary.

<sup>d</sup> Elevated detection limits due to high analyte concentration; a 11x dilution necessary.

<sup>e</sup> Elevated detection limits due to high analyte concentration; a 55x dilution necessary.

<sup>g</sup> Baseline raised.

Samples received "on ice"



## ANALYTICAL REPORT

REPORT NUMBER: A3264

Triad Engineering, Inc.  
 325 East Chicago Street  
 Milwaukee, WI 53202

Attn: Mr. Rick Binder  
 Project #W943163

DATE: April 5, 1994  
 PURCHASE ORDER:  
 SEI NO: WL9797  
 DATE COLLECTED: 03/15/94  
 DATE RECEIVED: 03/15/94  
 DATE ANALYZED: 03/21/94

Matrix: Soil

Source: Chrysler

Units: mg/kg (ppm)

<u>DNR #</u>	<u>Analyte</u>	<u>PQL</u>	<u>SEI ID</u>	9797-1	9797-2	9797-3	9797-4
			<u>Sample ID</u>	<u>SP1-1</u>	<u>SP1-2</u>	<u>SP1-3</u>	<u>SP2-1</u>
<b>EPA Method 8021</b>							
78124	Benzene	0.02	<0.02	<0.02	<0.02	<0.02	<0.02
81555	Bromobenzene	0.02	<0.02	<0.02	<0.02	<0.02	<0.02
77297	Bromochloromethane	0.02	<0.02	<0.02	<0.02	<0.02	<0.02
32101	Bromodichloromethane	0.02	<0.02	<0.02	<0.02	<0.02	<0.02
32104	Bromoform	0.02	<0.02	<0.02	<0.02	<0.02	<0.02
14413	Bromomethane	0.02	<0.02	<0.02	<0.02	<0.02	<0.02
77342	<u>n</u> -Butylbenzene	0.02	<0.02	<0.02	0.11	<0.02	<0.02
77350	sec-Butylbenzene	0.04	<0.04	<0.04	0.20	<0.04	<0.04
77353	tert-Butylbenzene	0.02	<0.02	<0.02	0.07	<0.02	<0.02
32102	Carbon tetrachloride	0.02	<0.02	<0.02	<0.02	<0.02	<0.02
34301	Chlorobenzene	0.02	<0.02	<0.02	<0.02	<0.02	<0.02
34306	Chlorodibromomethane	0.02	<0.02	<0.02	<0.02	<0.02	<0.02
34311	Chloroethane	0.02	<0.02	<0.02	0.02	<0.02	<0.02
32106	Chloroform	0.02	<0.02	<0.02	<0.02	<0.02	<0.02
34418	Chloromethane	0.02	<0.02	<0.02	0.02	<0.02	<0.02
77275	2-Chlorotoluene	0.02	<0.02	<0.02	<0.02	<0.02	<0.02
77277	4-Chlorotoluene	0.02	<0.02	<0.02	<0.02	<0.02	<0.02
38437	1,2-Dibromo-3-chlorepropane	0.02	<0.02	<0.02	<0.02	<0.02	<0.02
77651	1,2-Dibromoethane	0.02	<0.02	<0.02	<0.02	<0.02	<0.02
77596	Dibromochthane	0.02	<0.02	<0.02	<0.02	<0.02	<0.02



## ANALYTICAL REPORT

REPORT NUMBER: A3264

Triad Engineering, Inc.  
 325 East Chicago Street  
 Milwaukee, WI 53202

Attn: Mr. Rick Binder  
 Project #W943163

DATE: April 5, 1994  
 PURCHASE ORDER:  
 SEI NO: WL9797  
 DATE COLLECTED: 03/15/94  
 DATE RECEIVED: 03/15/94  
 DATE ANALYZED: 03/21/94

Matrix: Soil  
 Source: Chrysler

Units: mg/kg (ppm)

<u>DNR #</u>	<u>Analyte</u>	<u>SEI ID</u>	9797-1	9797-2	9797-3	9797-4
		<u>Sample ID</u>	<u>PQL</u>	<u>SP1-1</u>	<u>SP1-2</u>	<u>SP1-3</u>
<b>EPA Method 8021</b>						
34536	1,2-Dichlorobenzene	0.02	<0.02	<0.02	<0.02	<0.02
34566	1,3-Dichlorobenzene	0.02	<0.02	<0.02	<0.02	<0.02
34571	1,4-Dichlorobenzene	0.03	<0.03	<0.03	<0.03	<0.03
34668	Dichlorodifluoromethane	0.02	<0.02	<0.02	<0.02	<0.02
34496	1,1-Dichloroethane	0.03	<0.03	<0.03	<0.03	<0.03
32103	1,2-Dichloroethane	0.02	<0.02	<0.02	<0.02	<0.02
34501	1,1-Dichloroethene	0.02	<0.02	<0.02	<0.02	<0.02
77093	cis-1,2-Dichloroethene	0.03	<0.03	<0.03	<0.03	<0.03
34546	trans-1,2-Dichloroethene	0.03	<0.03	<0.03	<0.03	<0.03
34541	1,2-Dichloropropane	0.02	<0.02	<0.02	<0.02	<0.02
77173	1,3-Dichloropropane	0.02	<0.02	<0.02	<0.02	<0.02
77170	1,2-Dichloropropene	0.03	<0.03	<0.03	<0.03	<0.03
77168	1,1-Dichloropropene	0.02	<0.02	<0.02	<0.02	<0.02
34704	cis-1,3-Dichloropropene	0.02	<0.02	<0.02	<0.02	<0.02
34699	trans-1,3-Dichloropropene	0.02	<0.02	<0.02	<0.02	<0.02
78113	Ethylbenzene	0.02	<0.02	<0.02	<0.02	<0.02
34391	Hexachlorobutadiene	0.03	<0.03	<0.03	<0.03	<0.03
77223	Isopropylbenzene	0.02	<0.02	<0.02	<0.02	<0.02
77356	p-Isopropyltoluene	0.02	<0.02	<0.02	0.04	<0.02
34423	Methylene chloride	0.05	<0.05	<0.05	0.12	<0.05
34696	Naphthalene	0.03	<0.03	<0.03	0.05	<0.03



## ANALYTICAL REPORT

REPORT NUMBER: A3264

Triad Engineering, Inc.  
 325 East Chicago Street  
 Milwaukee, WI 53202

Attn: Mr. Rick Binder  
 Project #W943163

DATE: April 5, 1994  
 PURCHASE ORDER:  
 SEI NO: WL9797  
 DATE COLLECTED: 03/15/94  
 DATE RECEIVED: 03/15/94  
 DATE ANALYZED: 03/21/94

Matrix: Soil  
 Source: Chrysler

Units: mg/kg (ppm)

<u>DNR #</u>	<u>Analyte</u>	<u>SEI ID</u>	9797-1	9797-2	9797-3	9797-4
		<u>Sample ID</u>	<u>SP1-1</u>	<u>SP1-2</u>	<u>SP1-3</u>	<u>SP2-1</u>
<u>PQL</u>						
77224	n-Propylbenzene	0.03	<0.03	<0.03	<0.03	<0.03
77128	Styrene	0.03	<0.03	<0.03	<0.03	<0.03
77562	1,1,1,2-Tetrachloroethane	0.02	<0.02	<0.02	<0.02	<0.02
34516	1,1,2,2-Tetrachloroethane	0.02	<0.02	<0.02	<0.02	<0.02
34475	Tetrachloroethylene	0.02	<0.02	<0.02	<0.02	<0.02
78131	Toluene	0.02	<0.02	<0.02	<0.02	<0.02
77613	1,2,3-Trichlorobenzene	0.02	<0.02	<0.02	<0.02	<0.02
34551	1,2,4-Trichlorobenzene	0.02	<0.02	<0.02	<0.02	<0.02
34506	1,1,1-Trichloroethane	0.02	<0.02	<0.02	<0.02	<0.02
34511	1,1,2-Trichloroethane	0.02	<0.02	<0.02	<0.02	<0.02
59180	Trichloroethylene	0.02	<u>0.21</u>	<u>0.41f</u>	<0.02	<0.02
34488	Trichlorofluoromethane	0.02	<0.02	<0.02	<0.02	<0.02
77443	1,2,3-Trichloropropane	0.02	<0.02	<0.02	<0.02	0.02
77222	1,2,4-Trimethylbenzene	0.04	<0.04	<0.04	<0.04	<0.04
77226	1,3,5-Trimethylbenzene	0.02	<0.02	<0.02	<0.02	0.02
39175	Vinyl Chloride	0.02	<0.02	<0.02	<0.02	<0.02
77135	<i>e</i> -Xylenes	0.02	<0.02	<0.02	0.02	0.02
85795	m & p Xylenes	0.02	<0.02	<0.02	<0.02	<0.02

<sup>f</sup> Elevated detection limit due to high analyte concentration; a 10x dilution necessary.



## ANALYTICAL REPORT

REPORT NUMBER: A3261

Triad Engineering, Inc.  
 325 East Chicago Street  
 Milwaukee, WI 53202

Attn: Mr. Rick Binder  
 Project #W943163

DATE: April 5, 1994  
 PURCHASE ORDER:  
 SEI NO: WL9797  
 DATE COLLECTED: 03/15/94  
 DATE RECEIVED: 03/15/94  
 DATE ANALYZED: 03/21/94

Matrix: Soil

Source: Chrysler

Units: mg/kg (ppm)

DNR #	Analyte	PQL	SEI ID	9797-5	9797-6	9797-7	9797-8
			Sample ID	SP2-2	SP2-3	SP3-1	SP3-2
<b>EPA Method 8021</b>							
78124	Benzene	0.02	<0.02	<0.02	<0.02	<0.02	<0.02
81555	Bromobenzene	0.02	<0.02	<0.02	<0.02	<0.02	<0.02
77297	Bromochloromethane	0.02	<0.02	<0.02	<0.02	<0.02	<0.02
32101	Bromodichloromethane	0.02	<0.02	<0.02	<0.02	<0.02	<0.02
32104	Bromoform	0.02	<0.02	<0.02	<0.02	<0.02	<0.02
14413	Bromomethane	0.02	<0.02	<0.02	<0.02	<0.02	<0.02
77342	n-Buylbenzene	0.02	<0.02	<0.02	<0.02	<0.02	<0.02
77350	sec-Buylbenzene	0.04	<0.04	<0.04	<0.04	<0.04	<0.04
77353	tert-Buylbenzene	0.02	<0.02	<0.02	<0.02	<0.02	<0.02
32102	Carbon tetrachloride	0.02	<0.02	<0.02	<0.02	<0.02	<0.02
34301	Chlorobenzene	0.02	<0.02	<0.02	<0.02	<0.02	<0.02
34306	Chlorodibromomethane	0.02	<0.02	<0.02	<0.02	<0.02	<0.02
34311	Chloroethane	0.02	<0.02	<0.02	<0.02	<0.02	<0.02
32106	Chlereform	0.02	<0.02	<0.02	<0.02	<0.02	<0.02
34418	Chlormethane	0.02	<0.02	<0.02	<0.02	<0.02	<0.02
77275	2-Chloretoluene	0.02	<0.02	<0.02	<0.02	<0.02	<0.02
77277	4-Chlretoluene	0.02	<0.02	<0.02	<0.02	<0.02	<0.02
38437	1,2-Dibromo-3-chlrepropane	0.02	<0.02	<0.02	<0.02	<0.02	<0.02
77651	1,2-Dibromochlare	0.02	<0.02	<0.02	<0.02	<0.02	<0.02
77596	Dibromocihane	0.02	<0.02	<0.02	<0.02	<0.02	<0.02



## ANALYTICAL REPORT

REPORT NUMBER: A3264

Triad Engineering, Inc.  
 325 East Chicago Street  
 Milwaukee, WI 53202

Attn: Mr. Rick Binder  
 Project #W943163

DATE: April 5, 1994  
 PURCHASE ORDER:  
 SEI NO: WL9797  
 DATE COLLECTED: 03/15/94  
 DATE RECEIVED: 03/15/94  
 DATE ANALYZED: 03/21/94

Matrix: Soil

Source: Chrysler

Units: mg/kg (ppm)

<u>DNR #</u>	<u>Analyte</u>	<u>SEI ID</u>	9797-5	9797-6	9797-7	9797-8
		<u>Sample ID</u>	<u>SP2-2</u>	<u>SP2-3</u>	<u>SP3-1</u>	<u>SP3-2</u>
<u>PQL</u>						
EPA Method 8021						
34536	1,2-Dichlorobenzene	0.02	<0.02	<0.02	<0.02	<0.02
34566	1,3-Dichlorobenzene	0.02	<0.02	<0.02	<0.02	<0.02
34571	1,4-Dichlorobenzene	0.03	<0.03	<0.03	<0.03	<0.03
34668	Dichlorodifluoromethane	0.02	<0.02	<0.02	<0.02	<0.02
34496	1,1-Dichloroethane	0.03	<0.03	<0.03	<0.03	<0.03
32103	1,2-Dichloroethane	0.02	<0.02	<0.02	<0.02	<0.02
34501	1,1-Dichloroethene	0.02	<0.02	<0.02	<0.02	<0.02
77093	cis-1,2-Dichloroethene	0.03	<0.03	<0.03	<0.03	<0.03
34546	trans-1,2-Dichloroethene	0.03	<0.03	<0.03	<0.03	<0.03
34541	1,2-Dichloropropane	0.02	<0.02	<0.02	<0.02	<0.02
77173	1,3-Dichloropropane	0.02	<0.02	<0.02	<0.02	<0.02
77170	2,2-Dichloropropane	0.03	<0.03	<0.03	<0.03	<0.03
77168	1,1-Dichloropropene	0.02	<0.02	<0.02	<0.02	<0.02
34704	cis-1,3-Dichloropropene	0.02	<0.02	<0.02	<0.02	<0.02
34699	trans-1,3-Dichloropropene	0.02	<0.02	<0.02	<0.02	<0.02
78113	Ethylbenzene	0.02	<0.02	<0.02	<0.02	<0.02
34391	Hexachlorobutadiene	0.03	<0.03	<0.03	<0.03	<0.03
77223	Isopropylbenzene	0.02	<0.02	<0.02	<0.02	<0.02
77356	p-Isopropyltoluene	0.02	<0.02	<0.02	<0.02	<0.02
34423	Methylene chloride	0.05	<0.05	<0.05	<0.05	<0.05
34696	Naphthalene	0.03	<0.03	<0.03	<0.03	<0.03



## ANALYTICAL REPORT

REPORT NUMBER: A3264

Triad Engineering, Inc.  
 325 East Chicago Street  
 Milwaukee, WI 53202

Attn: Mr. Rick Binder  
 Project #W943163

DATE: April 5, 1994  
 PURCHASE ORDER:  
 SEI NO: WL9797  
 DATE COLLECTED: 03/15/94  
 DATE RECEIVED: 03/15/94  
 DATE ANALYZED: 03/21/94

Matrix: Soil

Source: Chrysler

Units: mg/kg (ppm)

<u>DNR #</u>	<u>Analyte</u>	<u>SEI ID</u> <u>Sample ID</u> <u>PQL</u>	9797-5	9797-6	9797-7	9797-8
			<u>SP2-2</u>	<u>SP2-3</u>	<u>SP3-1</u>	<u>SP3-2</u>
<b>EPA Method 8021</b>						
77224	n-Propylbenzene	0.03	<0.03	<0.03	<0.03	<0.03
77128	Styrene	0.03	<0.03	<0.03	<0.03	<0.03
77562	1,1,1,2-Tetrachloroethane	0.02	<0.02	<0.02	<0.02	<0.02
34516	1,1,2,2-Tetrachloroethane	0.02	<0.02	<0.02	<0.02	<0.02
34475	Tetrachloroethene	0.02	<0.02	<0.02	<0.02	<0.02
78131	Toluene	0.02	<0.02	<0.02	<0.02	<0.02
77613	1,2,3-Trichlorobenzene	0.02	<0.02	<0.02	<0.02	<0.02
34551	1,2,4-Trichlorobenzene	0.02	<0.02	<0.02	<0.02	<0.02
34506	1,1,1-Trichloroethane	0.02	<0.02	<0.02	<0.02	<0.02
34511	1,1,2-Trichloroethane	0.02	<0.02	<0.02	<0.02	<0.02
39180	Trichloroethene	0.02	<0.02	<0.02	<0.02	<0.02
34488	Trichlorofluoromethane	0.02	<0.02	<0.02	<0.02	<0.02
77443	1,2,3-Trichloropropane	0.02	<0.02	<0.02	<0.02	<0.02
77222	1,2,4-Trimethylbenzene	0.04	<0.04	<0.04	<0.04	<0.04
77226	1,3,5-Trimethylbenzene	0.02	<0.02	<0.02	<0.02	<0.02
39175	Vinyl Chloride	0.02	<0.02	<0.02	<0.02	<0.02
77135	c-Xylenes	0.02	<0.02	<0.02	<0.02	<0.02
85795	m & p Xylenes	0.02	<0.02	<0.02	<0.02	<0.02



## ANALYTICAL REPORT

REPORT NUMBER: A3264

Triad Engineering, Inc.  
 325 East Chicago Street  
 Milwaukee, WI 53202

Attn: Mr. Rick Binder  
 Project #W943163

DATE: April 5, 1994  
 PURCHASE ORDER:  
 SEI NO: WL9797  
 DATE COLLECTED: 03/15/94  
 DATE RECEIVED: 03/15/94  
 DATE ANALYZED: 03/21/94

Matrix: Soil  
 Source: Chrysler

Units: mg/kg (ppm)

<u>DNR #</u>	<u>Analyte</u>	<u>SEI ID</u>	9797-9	9797-10	9797-11	9797-12
		<u>Sample ID</u>	<u>PQL</u>	<u>SP3-3</u>	<u>SP3-4</u>	<u>SP4-1</u>
<b>EPA Method 8021</b>						
78124	Benzene	0.02	<0.02	<0.02	<0.02	<0.02
81555	Bromobenzene	0.02	<0.02	<0.02	<0.02	<0.02
77297	Bromo-chloromethane	0.02	<0.02	<0.02	<0.02	<0.02
32101	Bromo-dichloromethane	0.02	<0.02	<0.02	<0.02	<0.02
32104	Bromoform	0.02	<0.02	<0.02	<0.02	<0.02
14413	Bromomethane	0.02	<0.02	<0.02	<0.02	<0.02
77342	- n-Butylbenzene	0.02	0.06	0.12	0.62	0.06
77350	sec-Butylbenzene	0.04	<0.04	0.22	<0.04	0.05
77353	- tert-Butylbenzene	0.02	0.03	0.06	0.05	<0.02
32102	Carbon tetrachloride	0.02	<0.02	<0.02	<0.02	<0.02
34301	Chlorobenzene	0.02	<0.02	<0.02	<0.02	<0.02
34306	Chloro-dibromomethane	0.02	<0.02	<0.02	<0.02	<0.02
34311	Chloroethane	0.02	<0.02	<0.02	<0.02	<0.02
32106	Chlorotoluene	0.02	<0.02	<0.02	<0.02	<0.02
34418	Chloro-methane	0.02	<0.02	<0.02	<0.02	<0.02
77275	2-Chlorotoluene	0.02	<0.02	<0.02	<0.02	<0.02
77277	4-Chlorotoluene	0.02	<0.02	<0.02	<0.02	<0.02
38437	1,2-Dibromo-3-chloropropane	0.02	<0.02	<0.02	<0.02	<0.02
77651	1,2-Dibromoethane	0.02	<0.02	<0.02	<0.02	<0.02
77596	Dibromoethane	0.02	<0.02	<0.02	<0.02	<0.02



## ANALYTICAL REPORT

REPORT NUMBER: A3264

Triad Engineering, Inc.  
 325 East Chicago Street  
 Milwaukee, WI 53202

Attn: Mr. Rick Binder  
 Project #W943163

DATE: April 5, 1994  
 PURCHASE ORDER:  
 SEI NO: WL9797  
 DATE COLLECTED: 03/15/94  
 DATE RECEIVED: 03/15/94  
 DATE ANALYZED: 03/21/94

Matrix: Soil  
 Source: Chrysler

Units: mg/kg (ppm)

<u>DNR #</u>	<u>Analyte</u>	<u>PQL</u>	<u>SEI ID</u>	9797-9	9797-10	9797-11	9797-12
			<u>Sample ID</u>	<u>SP3-3</u>	<u>SP3-4</u>	<u>SP4-1</u>	<u>SP4-2</u>
<b>EPA Method 8021</b>							
34536	1,2-Dichlorobenzene	0.02		<0.02	<0.02	<0.02	<0.02
34566	1,3-Dichlorobenzene	0.02		<0.02	<0.02	<0.02	<0.02
34571	1,4-Dichlorobenzene	0.03		<0.03	<0.03	<0.03	<0.03
34668	Dichlorodifluoromethane	0.02		<0.02	<0.02	<0.02	<0.02
34496	1,1-Dichloroethane	0.03		<0.03	<0.03	<0.03	<0.03
32103	1,2-Dichloroethane	0.02		<0.02	<0.02	<0.02	<0.02
34501	1,1-Dichloroethene	0.02		<0.02	<0.02	<0.02	<0.02
77093	cis-1,2-Dichloroethene	0.03		<0.03	<0.03	<0.03	<0.03
34546	trans-1,2-Dichloroethene	0.03		<0.03	<0.03	<0.03	<0.03
34541	1,2-Dichloropropane	0.02		<0.02	<0.02	<0.02	<0.02
77173	1,3-Dichloropropane	0.02		<0.02	<0.02	<0.02	<0.02
77170	2,2-Dichloropropane	0.03		<0.03	<0.03	<0.03	<0.03
77168	1,1-Dichloropropene	0.02		<0.02	<0.02	<0.02	<0.02
34704	cis-1,3-Dichloropropene	0.02		<0.02	<0.02	<0.02	<0.02
34699	trans-1,3-Dichloropropene	0.02		<0.02	<0.02	<0.02	<0.02
78113	— Ethylbenzene	0.02		<0.02	0.03	0.04	<0.02
34391	Hexachlorobutadiene	0.03		<0.03	<0.03	<0.03	<0.03
77223	— Isopropylbenzene	0.02		<0.02	<0.02	0.07	<0.02
77356	p-Isopropyltoluene	0.02		<0.02	<0.02	<0.02	<0.02
34423	Methylene chloride	0.05		<0.05	<0.05	<0.05	<0.05
34696	— Naphthalene	0.03		<0.03	1.6	2.3 <sup>f</sup>	<0.03



## ANALYTICAL REPORT

REPORT NUMBER: A3264

Triad Engineering, Inc.  
 325 East Chicago Street  
 Milwaukee, WI 53202

Attn: Mr. Rick Binder  
 Project #W943163

DATE: April 5, 1994  
 PURCHASE ORDER:  
 SEI NO: WL9797  
 DATE COLLECTED: 03/15/94  
 DATE RECEIVED: 03/15/94  
 DATE ANALYZED: 03/21/94

Matrix: Soil  
 Source: Chrysler

Units: mg/kg (ppm)

<u>DNR #</u>	<u>Analyte</u>	<u>SEI ID</u> <u>Sample ID</u> <u>PQL</u>	9797-9	9797-10	9797-11	9797-12
			<u>SP3-3</u>	<u>SP3-4</u>	<u>SP4-1</u>	<u>SP4-2</u>
77224	n-Propylbenzene	0.03	0.05	0.10	0.15	0.04
77128	Styrene	0.03	<0.03	<0.03	<0.03	<0.03
77562	1,1,1,2-Tetrachloroethane	0.02	<0.02	<0.02	<0.02	<0.02
34516	1,1,2,2-Tetrachloroethane	0.02	<0.02	<0.02	<0.02	<0.02
34475	Tetrachloroethene	0.02	<0.02	<0.02	<0.02	<0.02
78131	Toluene	0.02	<0.02	<0.02	<0.02	<0.02
77613	1,2,3-Trichlorobenzene	0.02	<0.02	<0.02	<0.02	<0.02
34551	1,2,4-Trichlorobenzene	0.02	<0.02	<0.02	<0.02	<0.02
34506	1,1,1-Trichloroethane	0.02	<0.02	<0.02	<0.02	<0.02
34511	1,1,2-Trichloroethane	0.02	<0.02	<0.02	<0.02	<0.02
39180	Trichloroethene	0.02	<0.02	<0.02	<0.02	0.03
34488	Trichloroethane	0.02	<0.02	<0.02	<0.02	<0.02
77443	1,2,3-Trichloropropane	0.02	<0.02	<0.02	<0.02	<0.02
77222	1,2,4-Trimethylbenzene	0.04	<0.04	<0.04	<0.04	<0.04
77226	1,3,5-Trimethylbenzene	0.02	<0.02	<0.02	<0.02	<0.02
39175	Vinyl Chloride	0.02	<0.02	<0.02	<0.02	<0.02
77135	o-Xylenes	0.02	0.03	0.07	0.05	<0.02
85795	m & p Xylenes	0.02	<0.02	<0.02	<0.02	<0.02

<sup>f</sup> Elevated detection limit due to high analyte concentration; a 10x dilution necessary.



## ANALYTICAL REPORT

REPORT NUMBER: A3261

Triad Engineering, Inc.  
 325 East Chicago Street  
 Milwaukee, WI 53202

Attn: Mr. Rick Binder  
 Project #W943163

DATE: April 5, 1994  
 PURCHASE ORDER:  
 SEI NO: WL9797  
 DATE COLLECTED: 03/15/94  
 DATE RECEIVED: 03/15/94  
 DATE ANALYZED: 03/21/94

Matrix: Soil  
 Source: Chrysler

Units: mg/kg (ppm)

<u>DNR #</u>	<u>Analyte</u>	<u>SEI ID</u>	9797-13	9797-14	9797-15	9797-16
		<u>Sample ID</u>	<u>PQL</u>	<u>SP4-3</u>	<u>SP4-4</u>	<u>SP4-5</u>
<b>EPA Method 8021</b>						
78124	Benzene	0.02	<0.02	<0.02	<0.02	<0.02
81555	Bromobenzene	0.02	<0.02	<0.02	<0.02	<0.02
77297	Bromochloromethane	0.02	<0.02	<0.02	<0.02	<0.02
32101	Bromodichloromethane	0.02	<0.02	<0.02	<0.02	<0.02
32104	Bromoform	0.02	<0.02	<0.02	<0.02	<0.02
14413	Bromomethane	0.02	<0.02	<0.02	<0.02	<0.02
77342	— n-Butylbenzene	0.02	<0.02	<0.02	1.6 <sup>f</sup>	0.12
77350	— sec-Butylbenzene	0.04	<0.04	<0.04	2.2 <sup>f</sup>	0.24
77353	— tert-Butylbenzene	0.02	<0.02	0.16	1.0 <sup>f</sup>	0.08
32102	Carbon tetrachloride	0.02	<0.02	<0.02	<0.02	<0.02
34301	Chlorobenzene	0.02	<0.02	<0.02	<0.02	<0.02
34306	Chlorodibromomethane	0.02	<0.02	<0.02	<0.02	<0.02
34311	Chloroethane	0.02	<0.02	<0.02	0.02	<0.02
32106	Chlooreform	0.02	<0.02	<0.02	<0.02	<0.02
34413	Chlortoluene	0.02	<0.02	<0.02	<0.02	<0.02
77275	2-Chlorotoluene	0.02	<0.02	<0.02	<0.02	<0.02
77277	4-Chlorotoluene	0.02	<0.02	<0.02	<0.02	<0.02
38437	1,2-Dibromo-3-chloroprop	0.02	<0.02	<0.02	<0.02	<0.02
77651	1,2-Dibromoethane	0.02	<0.02	<0.02	<0.02	<0.02
77596	Dibromoethane	0.02	<0.02	<0.02	<0.02	<0.02



## ANALYTICAL REPORT

REPORT NUMBER: A3264

Triad Engineering, Inc.  
 325 East Chicago Street  
 Milwaukee, WI 53202

Attn: Mr. Rick Binder  
 Project #W943163

DATE: April 5, 1994  
 PURCHASE ORDER:  
 SEI NO: WL9797  
 DATE COLLECTED: 03/15/94  
 DATE RECEIVED: 03/15/94  
 DATE ANALYZED: 03/21/94

Matrix: Soil

Source: Chrysler

Units: mg/kg (ppm)

<u>DNR #</u>	<u>Analte</u>	<u>PQL</u>	<u>SEI ID</u>	9797-13	9797-14	9797-15	9797-16
			<u>Sample ID</u>	<u>SP4-3</u>	<u>SP4-4</u>	<u>SP4-5</u>	<u>SP4-6</u>
EPA Method 8021							
34536	1,2-Dichlorobenzene	0.02		<0.02	<0.02	<0.02	<0.02
34566	1,3-Dichlorobenzene	0.02		<0.02	<0.02	<0.02	<0.02
34571	1,4-Dichlorobenzene	0.03		<0.03	<0.03	<0.03	<0.03
34668	Dichlorodifluoromethane	0.02		<0.02	<0.02	<0.02	<0.02
34496	1,1-Dichloroethane	0.03		<0.03	<0.03	<0.03	<0.03
32103	1,2-Dichloroethane	0.02		<0.02	<0.02	<0.02	<0.02
34501	1,1-Dichloroethene	0.02		<0.02	<0.02	<0.02	<0.02
77093	cis-1,2-Dichloroethene	0.03		<0.03	<0.03	<0.03	<0.03
34546	trans-1,2-Dichloroethene	0.03		<0.03	<0.03	<0.03	<0.03
34541	1,2-Dichloropropane	0.02		<0.02	<0.02	<0.02	<0.02
77173	1,3-Dichloropropane	0.02		<0.02	<0.02	<0.02	<0.02
77170	2,2-Dichloropropane	0.03		<0.03	<0.03	<0.03	<0.03
77168	1,1-Dichloropropene	0.02		<0.02	<0.02	<0.02	<0.02
34704	cis-1,3-Dichloropropene	0.02		<0.02	<0.02	<0.02	<0.02
34699	trans-1,3-Dichloropropene	0.02		<0.02	<0.02	<0.02	<0.02
78113	Ethylbenzene	0.02		<0.02	<0.02	0.06	0.08
34391	Hexachlorobutadiene	0.03		<0.03	<0.03	<0.03	<0.03
77223	Isopropylbenzene	0.02		<0.02	<0.02	<0.02	<0.02
77356	p-Isopropylbenzene	0.02		<0.02	<0.02	0.19	<0.02
34423	Methylene chloride	0.05		<0.05	<0.05	0.10	0.06
34696	Naphthalene	0.03		<0.03	<0.03	0.08	<0.03



## ANALYTICAL REPORT

REPORT NUMBER: A3264

Triad Engineering, Inc.  
 325 East Chicago Street  
 Milwaukee, WI 53202

Attn: Mr. Rick Binder  
 Project #W943163

DATE: April 5, 1994  
 PURCHASE ORDER:  
 SEI NO: WL9797  
 DATE COLLECTED: 03/15/94  
 DATE RECEIVED: 03/15/94  
 DATE ANALYZED: 03/21/94

Matrix: Soil

Source: Chrysler

Units: mg/kg (ppm)

<u>DNR #</u>	<u>Analyte</u>	<u>SEI ID</u> <u>Sample ID</u> <u>PQL</u>	9797-13	9797-14	9797-15	9797-16
			<u>SP4-3</u>	<u>SP4-4</u>	<u>SP4-5</u>	<u>SP4-6</u>
EPA Method 8021						
77224	n-Propylbenzene	0.03	<0.03	0.04	2.2 <sup>f</sup>	1.6 <sup>f</sup>
77128	Styrene	0.03	<0.03	<0.03	<0.03	<0.03
77562	1,1,1,2-Tetrachloroethane	0.02	<0.02	<0.02	<0.02	<0.02
34516	1,1,2,2-Tetrachloroethane	0.02	<0.02	<0.02	<0.02	<0.02
34475	Tetrachloroethylene	0.02	<0.02	<0.02	<0.02	<0.02
78131	Toluene	0.02	<0.02	<0.02	<0.02	<0.02
77613	1,2,3-Trichlorobenzene	0.02	<0.02	<0.02	<0.02	<0.02
34551	1,2,4-Trichlorobenzene	0.02	<0.02	<0.02	<0.02	<0.02
34506	1,1,1-Trichloroethane	0.02	<0.02	<0.02	<0.02	<0.02
34511	1,1,2-Trichloroethane	0.02	<0.02	<0.02	<0.02	<0.02
39180	Trichloroethylene	0.02	0.02	<0.02	<0.02	<0.02
34488	Trichloroethane	0.02	<0.02	<0.02	<0.02	<0.02
77443	1,2,3-Trichloropropane	0.02	<0.02	<0.02	<0.02	<0.02
77222	1,2,4-Trimethylbenzene	0.02	<0.04	0.25	<0.04	0.06
77226	1,3,5-Trimethylbenzene	0.02	<0.02	<0.02	<0.02	<0.02
39175	Vinyl Chloride	0.02	<0.02	<0.02	<0.02	<0.02
77135	c-Xylenes	0.02	<0.02	<0.02	0.15	0.13
85795	m & p Xylenes	0.02	<0.02	<0.02	<0.02	<0.02

<sup>f</sup> Elevated detection limits due to high analyte concentration; a 10x dilution necessary.

*Clark J. Crowley /D*  
 Clark J. Crowley  
 Laboratory Manager

## CHAIN OF CUSTODY RECORD

NO. 3163	PROJECT NAME CHRYSLER					NO. OF CONTAINERS	TEST PARAMETERS										SAMPLE TYPE (Specify groundwater, soil, wastewater, sludge, etc.)		
	ERS: JAN, EN / JIM TUBIN						Y	O	U	Q	R	D	E	F	G	H		I	J
STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION														
SP1-1	7/17/91	1350		X	SOIL PIPE # 2 (N) END		2	X	X										
SP1-2	"			X	" " CENTER		2	X	X										
SP1-3	"			X	" " (S) END		2	X	X										
SP2-1	"			X	SOIL PIPE # 2 (N) END		2	X	X										
SP2-2	"			X	" " CENTER		2	X	X										
SP2-3	"			X	" " (S) END		2	X	X										
SP3-1	"			X	SOIL PIPE # 3 (N) END		2	X	X										
SP3-2	"			X	" " (N) CENTER		2	X	X										
SP3-3	"			X	" " (S) CENTER		2	X	X										
SP3-4	"			X	" " (S) END		2	X	X										
SP4-1	"			X	SOIL PIPE # 4		2	X	X										
SP4-2	"			X	" " "		2	X	X										
SP4-3	"			X	" " "		2	X	X										

E CONDITION:

DRY CONTAINER UTS ARE WRITTEN ON  
 6.24 KGS UTS INCLUDE COVER

SAMPLE LOCATION:

(SOUTH) END OF PLANT PROPERTY  
 (EAST)

DISMISSED BY: <i>John Swanson</i>	DATE / TIME 7/17/91	RELINQUISHED BY: <i></i>	DATE / TIME 7/17/91	SPECIAL REQUESTS:
RECEIVED BY: <i></i>	DATE / TIME 7/17/91	RECEIVED BY: <i></i>	DATE / TIME 7/17/91	REPORT TO:

REPORT TO:

NAME: RICK BINDER

ADDRESS: TRIAD

PHONE:

LABORATORY  
 3150 North Brookfield Rd.  
 Brookfield, WI 53045  
 (414) 783-6111  
 Fax (414) 783-5752

SWANSON ENVIRONMENTAL INC.

## CHAIN OF CUSTODY RECORD

NO. 214	PROJECT NAME CHRYSLER					NO. OF CONTAINERS	TEST PARAMETERS							SAMPLE TYPE (Specify groundwater, soil, wastewater, sludge, etc.)							
ERS: JANSEN/TOM TOPIN	STATION NO.	DATE	TIME	COMP:	GRAB		STATION LOCATION							VOC	DRD						
	P4-4	3/14/94	1520		/	SOUTHEAST END							X	X							
	P4-5	"	1530	X	..	.. .. "							X	X							
	P4-6	"	1540	X	..	.. .. "							X	X							
E CONDITION: ALL CONTAINERS WERE WRITTEN ON GRAB - JT INCLUDES COVER						SAMPLE LOCATION: SOUTHEAST END OF PLANT PROPERTY															
RElinquished BY: Tom Topin			DATE / TIME	RElinquished BY:				DATE / TIME	SPECIAL REQUESTS:												
RECEIVED BY: V			DATE / TIME	RECEIVED BY:				DATE / TIME													
LABORATORY 3150 North Brookfield Rd. Brookfield, WI 53045 (414) 783-6111 Fax (414) 783-5752															REPORT TO: NAME: RICK BINDER ADDRESS: TRIAD PHONE:						



SWANSON ENVIRONMENTAL INC.



## ANALYTICAL REPORT

REPORT NUMBER: A3435

Triad Engineering, Inc.  
325 East Chicago Street  
Milwaukee, WI 53202

Attn: Mr. Rick Binder  
Project #W943163.002

DATE: April 22, 1994  
PURCHASE ORDER:  
SEI NO: WL9848  
DATE COLLECTED: 03/18/94  
DATE RECEIVED: 03/21/94

Matrix: Soil  
Source: Chrysler - Kenosha

DATE EXTRACTED  
DRO - 03/21/94

Units: mg/kg (ppm)

DATE ANALYZED  
DRO - 03/25/94

<u>DNR #</u>	<u>Analyte</u>	SEI ID	9848-5
--------------	----------------	--------	--------

Sample ID  
POL

Soil Pile

WDNR Modified Method DRO

78919	DRO	3,110 <sup>f</sup>
-------	-----	--------------------

<sup>d</sup> Baseline raised, outside DRO window.

<sup>e</sup> Elevated detection limits due to high analyte concentration; a 110x dilution necessary.

<sup>f</sup> Elevated detection limits due to high analyte concentration; a 11x dilution necessary.



3150 North Brookfield Road  
Brookfield, Wisconsin 53045  
telephone (414) 783-6111  
FAX (414) 783-5752

## ANALYTICAL REPORT

REPORT NUMBER: A3435

Triad Engineering, Inc.  
325 East Chicago Street  
Milwaukee, WI 53202

Attn: Mr. Rick Binder  
Project #W943163.002

DATE: April 22, 1994  
PURCHASE ORDER:  
SEI NO: WL9848  
DATE COLLECTED: 03/18/94  
DATE RECEIVED: 03/21/94  
DATE ANALYZED: 03/29/94

Matrix: Soil  
Source: Chrysler - Kenosha

Units: mg/kg (ppm)

<u>DNR #</u>	<u>Analyte</u>	<u>SEI ID</u> <u>Sample ID</u> <u>PQL</u>	<u>9848-5a</u> <u>Soil Pile</u>
EPA Method 8021			
78124	Benzene	0.02	<0.2
81555	Bromobenzene	0.02	<0.2
77297	Bromochloromethane	0.02	<0.2
32101	Bromodichloromethane	0.02	<0.2
32104	Bromoform	0.02	<0.2
14413	Bromomethane	0.02	<0.2
77342	- n-Butylbenzene	0.02	4.7
77350	- sec-Butylbenzene	0.04	1.6
77353	tert-Butylbenzene	0.02	<0.2
32102	Carbon tetrachloride	0.02	<0.2
34301	Chlorobenzene	0.02	<0.2
34306	Chlorodibromomethane	0.02	<0.2
34311	Chloroethane	0.02	<0.2
32106	Chloroform	0.02	<0.2
34418	Chloromethane	0.02	<0.2
77275	2-Chlorotoluene	0.02	<0.2
77277	4-Chlorotoluene	0.02	<0.2
38437	1,2-Dibromo-3-chloropropane	0.02	<0.2
77651	1,2-Dibromoethane	0.02	<0.2
77596	Dibromomethane	0.02	<0.2



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## ANALYTICAL REPORT

REPORT NUMBER: A3435

Triad Engineering, Inc.  
325 East Chicago Street  
Milwaukee, WI 53202

Attn: Mr. Rick Binder  
Project #W943163.002

DATE: April 22, 1994  
PURCHASE ORDER:  
SEI NO: WL9848  
DATE COLLECTED: 03/18/94  
DATE RECEIVED: 03/21/94  
DATE ANALYZED: 03/29/94

Matrix: Soil  
Source: Chrysler - Kenosha

Units: mg/kg (ppm)

<u>DNR #</u>	<u>Analyte</u>	<u>SEI ID</u> <u>Sample ID</u> <u>PQL</u>	9848-5 <sup>a</sup> <u>Soil Pile</u>
<b>EPA Method 8021</b>			
34536	1,2-Dichlorobenzene	0.02	<0.2
34566	1,3-Dichlorobenzene	0.02	<0.2
34571	1,4-Dichlorobenzene	0.03	<0.3
34668	Dichlorodifluoromethane	0.02	<0.2
34496	1,1-Dichloroethane	0.03	<0.3
32103	1,2-Dichloroethane	0.02	<0.2
34501	1,1-Dichloroethene	0.02	<0.2
77093	cis-1,2-Dichloroethene	0.03	<0.3
34546	trans-1,2-Dichloroethene	0.03	<0.3
34541	1,2-Dichloropropane	0.02	<0.2
77173	1,3-Dichloropropane	0.02	<0.2
77170	2,2-Dichloropropane	0.03	<0.3
77168	1,1-Dichloropropene	0.02	<0.2
34704	cis-1,3-Dichloropropene	0.02	<0.2
34699	trans-1,3-Dichloropropene	0.02	<0.2
78113	- Ethylbenzene	0.02	2.0
34391	Hexachlorobutadiene	0.03	<0.3
77223	- Isopropylbenzene	0.02	0.5
77356	- p-Isopropyltoluene	0.02	0.8
34423	Methylene chloride	0.05	<0.5
34696	- Naphthalene	0.03	4.7



## ANALYTICAL REPORT

REPORT NUMBER: A3435

Triad Engineering, Inc.  
 325 East Chicago Street  
 Milwaukee, WI 53202

Attn: Mr. Rick Binder  
 Project #W943163.002

DATE: April 22, 1994  
 PURCHASE ORDER:  
 SEI NO: WL9848  
 DATE COLLECTED: 03/18/94  
 DATE RECEIVED: 03/21/94  
 DATE ANALYZED: 03/29/94

Matrix: Soil

Source: Chrysler - Kenosha

Units: mg/kg (ppm)

<u>DNR #</u>	<u>Analyte</u>	<u>SEI ID</u> <u>Sample ID</u> <u>PQL</u>	9848-5 <sup>a</sup> <u>Soil Pile</u>
<b>EPA Method 8021</b>			
77224	n-Propylbenzene	0.03	4.8
77128	Styrene	0.03	<0.3
77562	1,1,1,2-Tetrachloroethane	0.02	<0.2
34516	1,1,2,2-Tetrachloroethane	0.02	<0.2
34475	Tetrachloroethene	0.02	<0.2
78131	Toluene	0.02	<0.2
77613	1,2,3-Trichlorobenzene	0.02	<0.2
34551	1,2,4-Trichlorobenzene	0.02	<0.2
34506	1,1,1-Trichloroethane	0.02	<0.2
34511	1,1,2-Trichloroethane	0.02	<0.2
39180	Trichloroethene	0.02	<0.2
34488	Trichlorofluoromethane	0.02	0.6
77443	1,2,3-Trichloropropane	0.02	<0.2
77222	1,2,4-Trimethylbenzene	0.04	0.9
77226	1,3,5-Trimethylbenzene	0.02	<0.2
39175	Vinyl Chloride	0.02	<0.2
77135	o-Xylenes	0.02	1.1
85795	m & p Xylenes	0.02	<0.2

<sup>a</sup> Elevated detection limits due to high analyte concentration; a 10x dilution necessary.

<sup>b</sup> Elevated detection limits due to high analyte concentration; a 20x dilution necessary.

<sup>c</sup> Elevated detection limits due to high analyte concentration; a 200x dilution necessary.

Clark J. Crosby  
 Laboratory Manager

## CHAIN OF CUSTODY RECORD

NO. 6J.002	PROJECT NAME <i>Chrysler, Kenosha</i>					NO. OF CONTAINERS	TEST PARAMETERS						SAMPLE TYPE (Specify groundwater, soil, wastewater, sludge, etc.)	
ERS: <i>James Tobin</i>	STA. NO.	DATE	TIME	COMP.	GRAB		VOC, DRO, 8021, DRO, DRO, GRAIN SIZE, ANALY							
C 8 - SOIL PILE	03/18	1425	X	Stock piled soils from Coal Bin			2	X	X					SOIL
LE CONDITION:							SAMPLE LOCATION:							
DISMISSED BY: <i>James Tobin</i>		DATE / TIME 03/21/94	RELINQUISHED BY:			DATE / TIME 		SPECIAL REQUESTS:						
RECEIVED BY:		DATE / TIME 	RECEIVED BY:			DATE / TIME 		REPORT TO: NAME: ADDRESS: PHONE:						
<p><b>LABORATORY</b>            3150 North Brookfield Rd.            Brookfield, WI 53045            (414) 783-6111            Fax (414) 783-5752</p> 														

SWANSON ENVIRONMENTAL INC.



## PROJECT

May 17, 1994

Mr. John P. Bugno  
Site Administrator/Wisconsin Operations Manager  
Chrysler Corporation  
5555 30th Avenue  
Kenosha, Wisconsin 53144-2800

**RE: Soil Disposal**  
Monitoring Well Abandonment/Replacement  
Chrysler Corporation Kenosha Main Plant  
Triad Engineering Project No. W943163

Dear Jack:

This letter is to inform you that 10 55-gallon Department of Transportation-approved drums containing soil generated during the abandonment and/or replacement of monitoring wells, MW-3, MW-5, MW-11C, MW-15 and MW-24A have been removed from the Kenosha Main Plant Site and adjacent properties. Drum removal/transport and disposal was performed by Bane-Nelson under the supervision of Triad personnel.

Analytical results of soil and groundwater samples corresponding to soils contained in the drums are attached. The analytical results were compared with analytical results of soil samples from existing storm sewer excavation soil piles (Figure 1). The soil in each drum was placed onto the respective soil pile with soils containing similar compounds.

<u>Location</u>	<u>Quantity of Drums</u>	<u>Disposition</u>
MW-3 (abandoned)	1	Soil Pile 5
MW-5 (replaced)	2	Soil Pile 4
MW-11C (replaced)	3	Soil Pile 1
MW-15 (abandoned)	2	Soil Pile 2 (clean soil)
MW-24A (abandoned)	2	Soil Pile 2 (clean soil)

The empty drums were disposed by Bane-Nelson. The enclosed data will be used to supplement Triad's May 2, 1994, letter to Greg Rose regarding stockpiled soil characterization and evaluation of Disposal/Treatment Alternatives.

325 east chicago street  
milwaukee, wisconsin 53202  
414/291-8840  
fax: 414/291-8841



Mr. John P. Bugno  
May 17, 1994  
Page 2

We trust this information meets your needs. If you have any questions or comments, please feel free to call.

Sincerely,

TRIAD ENGINEERING INC.

A handwritten signature in black ink that appears to read "Richard J. Binder".

Richard J. Binder, P.G.  
Project Manager

RJB:klb

W943163\943163.008\943163-B

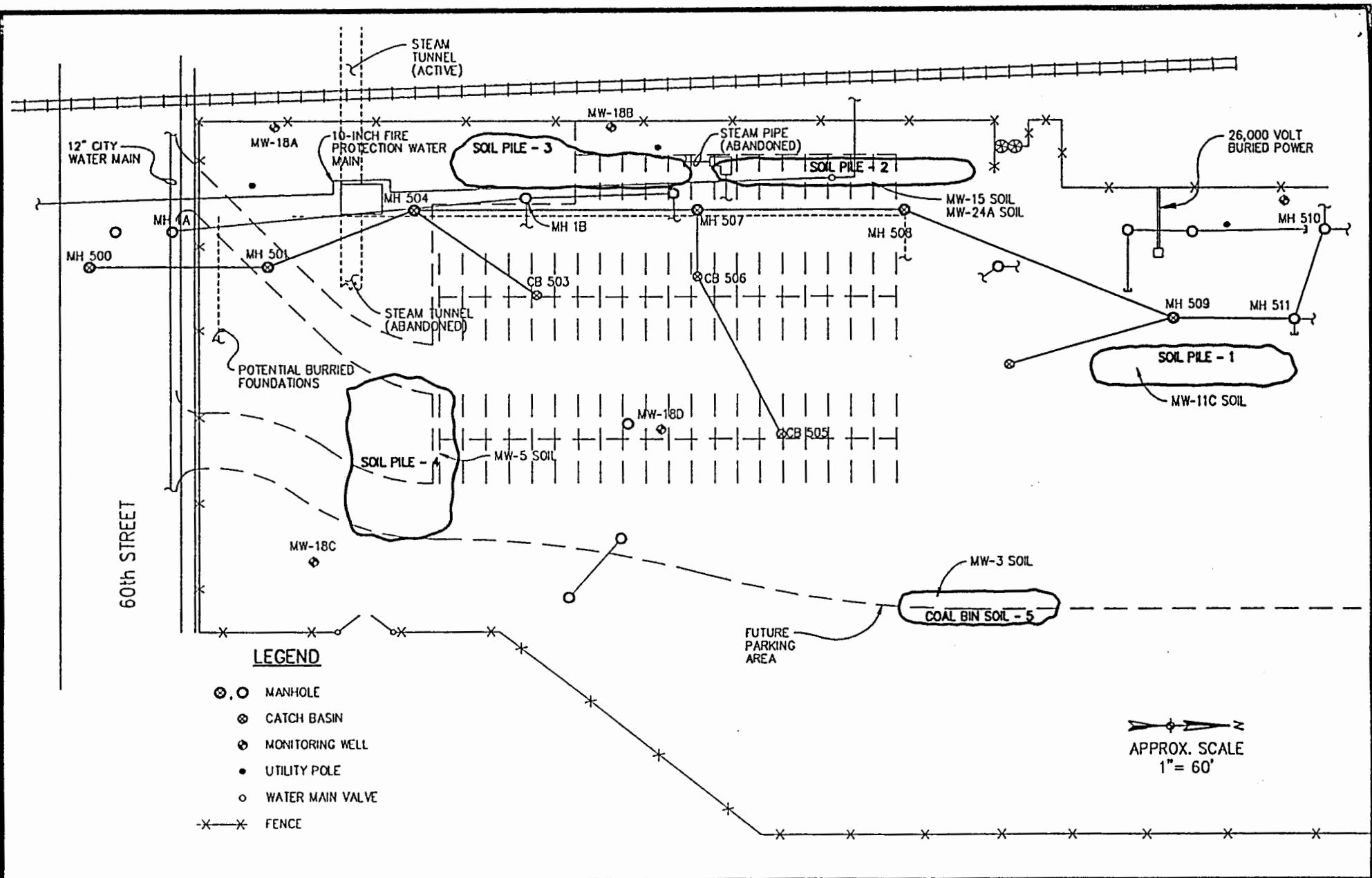
Enclosures

cc: Greg Rose, Chrysler\Environmental and Energy Affairs

TRIAD ENGINEERING INC.

A handwritten signature in black ink that appears to read "Valerie A. Jansen".

Valerie A. Jansen  
Project Hydrogeologist



**FIGURE 1**  
**CHRYSLER KENOSHA MAIN PLANT**  
**SOIL PILE AND MONITORING WELL ABANDONMENT/**  
**REPLACEMENT SOIL DISPOSAL LOCATIONS**

## **LABORATORY DOCUMENTATION**

**MW-3**

Table 5-10. Summary of Detected Constituents in Soil Samples, Kenosha Main Plant, Area 4 (Cont'd)

<u>Parameter</u>	MP-9B			MP-9C			MP-9D			MW-3	
	0-5'	5-10'	10-15'	0-5'	5-10'	10-15'	0-5'	5-10'	10-15'	0-5'	5-10'
Cadmium (0.5)	8.4	2.2	0.9	3.1	0.9	ND	3.3	1.5	0.8	4.7	1.3
Chromium (1)	23	17	5	20	6	4	20	8	5	17	9
Lead	21	18	3	44	6	4	49	10	18	60	17
Nickel (1)	30	15	7	20	6	5	17	9	7	18	13
Zinc (1)	728	43	41	96	39	26	82	40	42	116	73
Oil & Grease (20)	1360	40	20	420	210	ND	230	ND	70	7910	2240
<u>Base/Neutral Extractables</u>											
Acenaphthene (1)	ND	ND	ND	ND	ND	ND	ND	ND	ND	1	ND
Anthracene (1)	ND	ND	ND	ND	ND	ND	ND	ND	4	ND	ND
Benzo(a)anthracene (1)	ND	ND	ND	ND	ND	ND	ND	ND	3	ND	ND
Benzo(b)fluoranthene (1)	ND	ND	ND	ND	ND	ND	ND	ND	9	ND	ND
Benzo(k)fluoranthene (1)	ND	ND	ND	ND	ND	ND	ND	ND	7	ND	ND
Benzo(a)pyrene (1)	ND	ND	ND	ND	ND	ND	ND	ND	8	ND	ND
Bis(2-ethylhexyl)phthalate (1)	ND	ND	ND	ND	ND	ND	ND	ND	8	ND	ND
Chrysene (1)	ND	ND	ND	ND	ND	ND	ND	ND	11	ND	ND
Di-n-butylphthalate (1)	ND	ND	ND	ND	ND	ND	ND	ND	1	ND	ND
1,2 - Dichlorobenzene (1)	ND	1	1.6	ND	ND	ND	ND	ND	1	1	ND
Fluoranthene (1)	ND	ND	ND	ND	ND	ND	ND	ND	15	ND	ND
Fluorene (1)	ND	ND	ND	ND	ND	ND	ND	ND	5	ND	ND
Naphthalene (1)	ND	ND	ND	ND	ND	ND	ND	ND	11	5	ND
Phenanthrene (1)	ND	ND	ND	ND	ND	ND	ND	ND	29	10	ND
Pyrene (1)	ND	ND	ND	ND	ND	ND	ND	ND	22	3	ND
Total BNAs	ND	1	1.6	ND	ND	ND	ND	ND	134	20	ND
<u>VOCs</u>											
Acetone (5.0)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene (0.05)	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.28	ND
1,1-Dichloroethane (0.05)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloroethene (0.05)	ND	ND	ND	ND	ND	ND	ND	ND	0.06	ND	ND
Ethylbenzene (0.05)	ND	ND	ND	3.50	0.77	ND	ND	ND	ND	0.07	3.15
Methylene chloride (0.05)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethylene (0.05)	ND	ND	ND	0.74	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane (0.05)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethylene (0.05)	ND	ND	ND	0.38	ND	ND	ND	ND	ND	ND	ND
Toluene (0.05)	ND	ND	ND	0.40	ND	ND	ND	ND	ND	ND	ND
Xylenes (0.05)	ND	ND	ND	18.76	0.17	ND	ND	ND	ND	0.49	16.44
Total VOCs	ND	ND	ND	23.78	0.94	ND	ND	ND	0.06	0.56	19.87

NOTE: All values in milligrams per kilogram (mg/kg)

( ) = Detection Limit (mg/kg)

ND = Not Detected

Borehole locations are depicted on Figure 5-5

3150 North Brookfield Road  
 Brookfield, Wisconsin 53005  
 telephone (414) 783-6111  
 facsimile (414) 783-5752



## ANALYTICAL REPORT

REPORT NUMBER: B8450

Hydro-Search, Inc.  
 235 Executive Drive, Suite 309  
 Brookfield, WI 53005  
 Attn: Mr. Rick Binder  
 (Project 251E09533)

DATE: July 14, 1989  
 PURCHASE ORDER:  
 SEI JOB NO: WL9707  
 DATE COLLECTED: 05/22-24/89  
 DATE RECEIVED: 05/24/89

## Soil Samples (Chrysler, Kenosha)

Units: mg/kg (ppm)

Detection Limit: 0.05, unless otherwise noted below in ( )

	SEI ID	9707-6 05/22	9707-7 05/22	9707-8 05/22	9707-9 05/22	9707-10 05/16
VOLATILES <u>(Purge &amp; Trap)</u>	<u>Sample ID</u>	MP3D-2 5-10'	MW1-1 0-5'	MW1-2 5-10'	MW1-3 10-15'	MW3-1 0-5'
Acetone (5.0)		ND	ND	ND	ND	ND
Benzene		ND	ND	ND	ND	ND
Bromomethane		ND	ND	ND	ND	ND
Bromodichloromethane		ND	ND	ND	ND	ND
Bromoform		ND	ND	ND	ND	ND
Carbon tetrachloride		ND	ND	ND	ND	ND
Chlorobenzene		ND	ND	ND	ND	ND
Chloroethane		ND	ND	ND	ND	ND
2-Chloroethylvinylether		ND	ND	ND	ND	ND
Chloroform		ND	ND	ND	ND	ND
Chloromethane		ND	ND	ND	ND	ND
Dibromochloromethane		ND	ND	ND	ND	ND
1,2-Dichlorobenzene		ND	ND	ND	ND	ND
1,3-Dichlorobenzene		ND	ND	ND	ND	ND
1,4-Dichlorobenzene		ND	ND	ND	ND	ND
1,1-Dichloroethane		ND	ND	ND	ND	ND
1,2-Dichloroethane		ND	ND	ND	ND	ND
1,1-Dichlorcethene		ND	ND	ND	ND	ND
trans-1,3-Dichloroethene		ND	ND	ND	ND	ND
1,2-Dichloropropane		ND	ND	ND	ND	ND
cis-1,3-Dichloropropene		ND	ND	ND	ND	ND
trans-1,3-Dichloropropene		ND	ND	ND	ND	ND
Ethylbenzene		ND	ND	ND	ND	0.07

ND--Not Detected

Reviewed &amp; Approved by:

Rosemary L. Dineen  
 Laboratory Supervisor

3150 North Brookfield Road  
 Brookfield, Wisconsin 53005  
 telephone (414) 783-6111  
 facsimile (414) 783-5752



AIHA Accreditation #352  
 WDNR Certification =26818170

REPORT NUMBER: B8450

## ANALYTICAL REPORT

Hydro-Search, Inc.  
 235 Executive Drive, Suite 309  
 Brookfield, WI 53005  
 Attn: Mr. Rick Binder  
 (Project 251E09533)

DATE: July 14, 1989  
 PURCHASE ORDER:  
 SEI JOB NO: WL9707  
 DATE COLLECTED: 05/22-24/89  
 DATE RECEIVED: 05/24/89

## Soil Samples (Chrysler, Kenosha)

Units: mg/kg (ppm)

Detection limit: 0.05, unless otherwise noted below in ( )

	SEI ID	9707-6 05/22	9707-7 05/22	9707-8 05/22	9707-9 05/22	9707-10 05/16
VOLATILES <u>(Purge &amp; Trap)</u>	<u>Sample ID</u>	MP3D-2 <u>5-10'</u>	MW1-1 <u>0-5'</u>	MW1-2 <u>5-10'</u>	MW1-3 <u>10-15'</u>	MW3-1 <u>0-5'</u>
Methylene chloride		0.05	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane		ND	ND	ND	ND	ND
Tetrachloroethene		ND	ND	ND	ND	ND
1,1,1-Trichloroethane		ND	0.07	ND	ND	ND
1,1,2-Trichloroethane		ND	ND	ND	ND	ND
Trichloroethene		ND	ND	ND	ND	ND
Trichlorofluoromethane		ND	ND	ND	ND	ND
Toluene		ND	ND	ND	ND	ND
Vinyl chloride		ND	ND	ND	ND	ND
Xylenes		ND	ND	ND	ND	0.49

ND--Not Detected

Reviewed &amp; Approved by:

Rosemary L. Dineen  
 Laboratory Supervisor

3150 North Brookfield Road  
 Brookfield, Wisconsin 53005  
 telephone (414) 783-6111  
 facsimile (414) 783-5752



AIHA Accreditation =352  
 WDNR Certification =26818170

## ANALYTICAL REPORT

REPORT NUMBER: B8450

Hydro-Search, Inc.  
 235 Executive Drive, Suite 309  
 Brookfield, WI 53005  
 Attn: Mr. Rick Binder  
 (Project 251E09533)

DATE: July 14, 1989  
 PURCHASE ORDER:  
 SEI JOB NO: WL9707  
 DATE COLLECTED: 05/22-24/89  
 DATE RECEIVED: 05/24/89

## Soil Samples (Chrysler, Kenosha)

Units: mg/kg (ppm)

Detection Limit: 2, unless otherwise noted below in ( )

	SEI ID	9707-6 05/22 MP3D-2	9707-7 05/22 MW1-1	9707-8 05/22 MW1-2	9707-9 05/22 MW1-3	9707-10 05/22 MW3-1
ACID <u>EXTRACTABLES</u>	Sample ID	5-10'	0-5'	5-10'	10-15'	0-5'
4-Chloro-3-methylphenol		ND	ND	ND	ND	ND
2-Chlorophenol		ND	ND	ND	ND	ND
2,4-Dichlorophenol		ND	ND	ND	ND	ND
2,4-Dimethylphenol		ND	ND	ND	ND	ND
2,4-Dinitrophenol (20)		ND	ND	ND	ND	ND
2-Methyl-4,6-dinitrophenol (20)		ND	ND	ND	ND	ND
2-Nitrophenol		ND	ND	ND	ND	ND
4-Nitrophenol		ND	ND	ND	ND	ND
Pentachlorophenol		ND	ND	ND	ND	ND
Phenol		ND	ND	ND	ND	ND
2,4,6-Trichlorophenol		ND	ND	ND	ND	ND

ND--Not Detected

Reviewed &amp; Approved by:

Rosemary L. Dineen  
 Laboratory Supervisor



## ANALYTICAL REPORT

REPORT NUMBER: B8450

Hydro-Search, Inc.  
 235 Executive Drive, Suite 309  
 Brookfield, WI 53005

Attn: Mr. Rick Binder  
 (Project 251E09533)

DATE: July 14, 1989  
 PURCHASE ORDER:  
 SEI JOB NO: WL9707  
 DATE COLLECTED: 05/22-24/89  
 DATE RECEIVED: 05/24/89

## Soil Samples (Chrysler, Kenosha)

Units: mg/kg (ppm)

Detection Limit: 0.05, unless otherwise noted below in ( )

	SEI ID	9707-11 05/22	9707-12 MW3-2	9707-13 MP7A-1	9707-14 MP7A-2	9707-15 MP7B-1
VOLATILES <u>(Purge &amp; Trap)</u>	Sample ID	5-10'	0-5'	5-10'	0-5'	5-10'
Acetone (5.0)		ND	ND	ND	ND	ND
Benzene		0.28	ND	ND	ND	ND
Bromomethane		ND	ND	ND	ND	ND
Bromodichloromethane		ND	ND	ND	ND	ND
Bromoform		ND	ND	ND	ND	ND
Carbon tetrachloride		ND	ND	ND	ND	ND
Chlorobenzene		ND	ND	ND	ND	ND
Chloroethane		ND	ND	ND	ND	ND
2-Chloroethylvinylether		ND	ND	ND	ND	ND
Chloroform		ND	ND	ND	ND	ND
Chloromethane		ND	ND	ND	ND	ND
Dibromochloromethane		ND	ND	ND	ND	ND
1,2-Dichlorobenzene		ND	ND	ND	ND	ND
1,3-Dichlorobenzene		ND	ND	ND	ND	ND
1,4-Dichlorobenzene		ND	ND	ND	ND	ND
1,1-Dichloroethane		ND	0.16	ND	ND	ND
1,2-Dichloroethane		ND	ND	ND	ND	ND
1,1-Dichloroethene		ND	ND	ND	ND	ND
trans-1,3-Dichloroethene		ND	ND	ND	ND	ND
1,2-Dichloropropane		ND	ND	ND	ND	ND
cis-1,3-Dichloropropene		ND	ND	ND	ND	ND
trans-1,3-Dichloropropene		ND	ND	ND	ND	ND
Ethylbenzene		3.15	ND	ND	ND	ND

ND--Not Detected

Reviewed &amp; Approved by:

Rosemary L. Dineen  
 Laboratory Supervisor



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AIHA Accreditation #352  
WDNR Certification #26818170

## ANALYTICAL REPORT

REPORT NUMBER: 88450

Hydro-Search, Inc.  
235 Executive Drive, Suite 309  
Brookfield, WI 53005

Attn: Mr. Rick Binder  
(Project 251E09533)

DATE: July 14, 1989  
PURCHASE ORDER:  
SEI JOB NO: WL9707  
DATE COLLECTED: 05/22-24/89  
DATE RECEIVED: 05/24/89

Soil Samples (Chrysler, Kenosha)

Units: mg/kg (ppm)

Detection Limit: 0.05, unless otherwise noted below in ( )

	SEI ID	9707-11 05/22	9707-12 05/22	9707-13 05/22	9707-14 05/22	9707-15 05/22
VOLATILES <u>(Purge &amp; Trap)</u>	Sample ID	MW3-2 5-10'	MP7A-1 0-5'	MP7A-2 5-10'	MP7B-1 0-5'	MP7B-2 5-10'
Methylene chloride		ND	ND	0.05	0.05	0.05
1,1,2,2-Tetrachloroethane		ND	ND	ND	ND	ND
Tetrachloroethene		ND	ND	ND	ND	ND
1,1,1-Trichloroethane		ND	ND	ND	ND	ND
1,1,2-Trichloroethane		ND	ND	ND	ND	ND
Trichloroethene		ND	ND	ND	ND	ND
Trichlorofluoromethane		ND	ND	ND	ND	ND
Toluene		ND	ND	ND	ND	ND
Vinyl chloride		ND	ND	ND	ND	ND
Xylenes		16.44	0.10	ND	0.19	ND

ND--Not Detected

Reviewed &amp; Approved by:

Rosemary L. Dineen  
Laboratory Supervisor



## ANALYTICAL REPORT

Hydro-Search, Inc.  
 235 Executive Drive, Suite 309  
 Brookfield, WI 53005  
 Attn: Mr. Rick Binder  
 (Project 251E09533)

DATE: July 14, 1989  
 PURCHASE ORDER:  
 SEI JOB NO: WL9707  
 DATE COLLECTED: 05/22-24/89  
 DATE RECEIVED: 05/24/89

## Soil Samples (Chrysler, Kenosha)

Units: mg/kg (ppm)

Detection Limit: 0.05, unless otherwise noted below in ( )

	SEI ID	9707-11 05/22	9707-12 MW3-2	9707-13 MP7A-1	9707-14 MP7A-2	9707-15 MP7B-1
VOLATILES <u>(Purge &amp; Trap)</u>	<u>Sample ID</u>	<u>5-10'</u>	<u>0-5'</u>	<u>5-10'</u>	<u>0-5'</u>	<u>5-10'</u>
Methylene chloride		ND	ND	0.05	0.05	0.05
1,1,2,2-Tetrachloroethane		ND	ND	ND	ND	ND
Tetrachloroethene		ND	ND	ND	ND	ND
1,1,1-Trichloroethane		ND	ND	ND	ND	ND
1,1,2-Trichloroethane		ND	ND	ND	ND	ND
Trichloroethene		ND	ND	ND	ND	ND
Trichlorofluoromethane		ND	ND	ND	ND	ND
Toluene		ND	ND	ND	ND	ND
Vinyl chloride		ND	ND	ND	ND	ND
Xylenes		16.44	0.10	ND	0.19	ND

ND--Not Detected

Reviewed &amp; Approved by:

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 Laboratory Supervisor

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AIHA Accreditation #352  
WDNR Certification #26818170

## ANALYTICAL REPORT

REPORT NUMBER: 88450

Hydro-Search, Inc.  
235 Executive Drive, Suite 309  
Brookfield, WI 53005  
  
Attn: Mr. Rick Binder  
(Project 251E09533)

DATE: July 14, 1989  
PURCHASE ORDER:  
SEI JOB NO: WL9707  
DATE COLLECTED: 05/22-24/89  
DATE RECEIVED: 05/24/89

## Soil Samples (Chrysler, Kenosha)

Units: mg/kg (ppm)

Detection Limit: Noted below in ( )

	SEI ID	9707-1 05/22 MP3B-1 0-5'	9707-2 05/22 MP3B-2 5-10'	9707-3 05/22 MP3C-1 0-5'	9707-4 05/22 MP3C-2 5-10'	9707-5 05/22 MP3D-1 0-5'
Cadmium (0.5)		3.5	0.9	1.6	1.1	2.2
Chromium (1)		11	6	9	7	16
Lead (3)		21	7	16	7	20
Nickel (1)		18	8	10	8	15
Zinc (1)		57	37	50	50	48
Oil & Grease* (20)		ND	80	ND	20	50
Total PCB's** (1.0)		ND	ND	ND	ND	ND
	SEI ID	9707-6 05/22 MP3D-2 5-10'	9707-7 05/22 MW1-1 0-5'	9707-8 05/22 MW1-2 5-10'	9707-9 05/22 MW1-3 10-15'	9707-10 05/22 MW3-1 0-5'
Cadmium (0.5)		0.9	1.3	1.2	1.1	4.7
Chromium (1)		6	7	6	17	17
Lead (3)		7	12	9	2	60
Nickel (1)		8	6	9	6	18
Zinc (1)		44	21	46	40	116
Oil & Grease* (20)		ND	100	ND	40	7910
Total PCB's** (1.0)		ND	ND	ND	ND	ND

\* Method 503E.

\*\* Concentration of Total PCB's based on response of Arochlor 1242, 1248, 1254, and 1260.

Reviewed &amp; Approved by:

Rosemary L. Dineen  
Laboratory Supervisor

ND--Not Detected



## ANALYTICAL REPORT

Hydro-Search, Inc.  
 235 Executive Drive, Suite 309  
 Brookfield, WI 53005  
 Attn: Mr. Rick Binder  
 (Project 251E09533)

DATE: July 14, 1989  
 PURCHASE ORDER:  
 SEI JOB NO: WL9707  
 DATE COLLECTED: 05/22-24/89  
 DATE RECEIVED: 05/24/89

## Soil Samples (Chrysler, Kenosha)

Units: mg/kg (ppm)

Detection Limit: Noted below in ( )

	SEI ID	9707-11 05/22 MW3-2	9707-12 05/22 MP7A-1	9707-13 05/22 MP7A-2	9707-14 05/22 MP7B-1	9707-15 05/22 MP7B-2
<u>Parameter</u>	<u>Sample ID</u>	<u>5-10'</u>	<u>0-5'</u>	<u>5-10'</u>	<u>0-5'</u>	<u>5-10'</u>
Cadmium (0.5)		1.3	1.5	1.3	4.7	0.9
Chromium (1)		9	9	7	24	6
Lead (3)		17	20	8	293	9
Nickel (1)		13	12	7	26	8
Zinc (1)		73	62	39	401	52
Oil & Grease* (20)		2240	11570	120	2090	100
Total PCB's** (1.0)		ND	ND	ND	ND	ND
	SEI ID	9707-16 05/22 MP7C-1	9707-17 05/22 MP7C-2	9707-18 05/23 MP8A-1	9707-19 05/23 MP8A-2	9707-20 05/23 MP8B-1
<u>Parameter</u>	<u>Sample ID</u>	<u>0-5'</u>	<u>5-10'</u>	<u>0-5'</u>	<u>5-10'</u>	<u>0-5'</u>
Cadmium (0.5)		1.5	0.9	1.0	0.9	1.3
Chromium (1)		9	8	15	8	7
Lead (3)		8	8	16	9	11
Nickel (1)		9	8	11	6	7
Zinc (1)		38	42	43	41	41
Oil & Grease* (20)		4620	90	7660	1950	90
Total PCB's** (1.0)		ND	ND	7.0	ND	ND

\* Method 503E.

\*\* Concentration of Total PCB's based on response of Arochlor 1242, 1248, 1254, and 1260.

Reviewed &amp; Approved by:

Rosemary L. Dineen  
 Laboratory Supervisor

ND--Not Detected

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AIHA Accreditation = 352  
 WDNR Certification = 26818170

## ANALYTICAL REPORT

REPORT NUMBER: B8450

Hydro-Search, Inc.  
 235 Executive Drive, Suite 309  
 Brookfield, WI 53005  
 Attn: Mr. Rick Binder  
 (Project 251E09533)

DATE: July 14, 1989  
 PURCHASE ORDER:  
 SEI JOB NO: WL9707  
 DATE COLLECTED: See Below  
 DATE RECEIVED: 05/24/89

## Soil Samples (Chrysler, Kenosha)

Units: mg/kg (ppm)

Detection Limit: 1, unless otherwise noted below in ( )

	SEI ID	9707-6 05/22	9707-7 MP3D-2	9707-8 MW1-1	9707-9 MW1-2	9707-10 MW1-3
BASE/NEUTRAL EXTRACTABLES	Sample ID	5-10'	0-5'	5-10'	10-15'	0-5'
Acenaphthene		ND	ND	ND	ND	ND
Acenaphthylene		ND	ND	ND	ND	4
Anthracene		ND	ND	ND	ND	3
Benzidine (10)		ND	ND	ND	ND	ND
Benzo(a)anthracene		ND	ND	ND	ND	9
Benzo(b)fluoranthene		ND	ND	ND	ND	7
Benzo(k)fluoranthene		ND	ND	ND	ND	8
Benzo(a)pyrene		ND	ND	ND	ND	8
Benzyl butyl phthalate		ND	ND	ND	ND	ND
Bis(2-chloroethyl)ether		ND	ND	ND	ND	ND
Bis(2-chloroethoxy)methane		ND	ND	ND	ND	ND
Bis(2-chloroisopropyl)ether		ND	ND	ND	ND	ND
Bis(2-ethylhexyl)phthalate		ND	ND	ND	ND	ND
4-Bromophenyl phenyl ether		ND	ND	ND	ND	ND
2-Chloronaphthalene		ND	ND	ND	ND	ND
4-Chlorophenyl phenyl ether		ND	ND	ND	ND	ND
Chrysene		ND	ND	ND	ND	11
Di-n-butylphthalate		ND	ND	ND	ND	1
1,2-Dichlorobenzene		ND	ND	1	2	1
1,3-Dichlorobenzene		ND	ND	ND	ND	ND
1,4-Dichlorobenzene		ND	ND	ND	ND	ND
3,3'-Dichlorobenzidine		ND	ND	ND	ND	ND

ND--Not Detected

Reviewed &amp; Approved by:

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AIHA Accreditation =352  
WDNR Certification =26818170

## ANALYTICAL REPORT

REPORT NUMBER: 88450

Hydro-Search, Inc.  
235 Executive Drive, Suite 309  
Brookfield, WI 53005  
  
Attn: Mr. Rick Binder  
(Project 251E09533)

DATE: July 14, 1989  
PURCHASE ORDER:  
SEI JOB NO: WL9707  
DATE COLLECTED: See Below  
DATE RECEIVED: 05/24/89

## Soil Samples (Chrysler, Kenosha)

Units: mg/kg (ppm)

Detection Limit: 1, unless otherwise noted below in ( )

	SEI ID	9707-6	9707-7	9707-8	9707-9	9707-10
BASE/NEUTRAL		05/22	05/22	05/22	05/22	05/22
<u>EXTRACTABLES</u>	<u>Sample ID</u>	MP3D-2	MW1-1	MW1-2	MW1-3	MW3-1
		<u>5-10'</u>	<u>0-5'</u>	<u>5-10'</u>	<u>10-15'</u>	<u>0-5'</u>
Diethyl phthalate		ND	ND	ND	ND	ND
Dimethyl phthalate		ND	ND	ND	ND	ND
2,4-Dinitrotoluene (2)		ND	ND	ND	ND	ND
2,6-Dinitrotoluene (2)		ND	ND	ND	ND	ND
Di-n-octylphthalate		ND	ND	ND	ND	ND
Fluoranthene		ND	ND	ND	ND	15
Fluorene		ND	ND	ND	ND	5
Hexachlorobenzene		ND	ND	ND	ND	ND
Hexachlorobutadiene (10)		ND	ND	ND	ND	ND
Hexachlorocyclopentadiene (10)		ND	ND	ND	ND	ND
Hexachloroethane		ND	ND	ND	ND	ND
Isophorone		ND	ND	ND	ND	ND
Naphthalene		ND	ND	ND	ND	11
Nitrobenzene		ND	ND	ND	ND	ND
n-Nitrosodimethylamine (100)		ND	ND	ND	ND	ND
n-Nitrosodi-n-propylamine (100)		ND	ND	ND	ND	ND
n-Nitrosodiphenylamine (50)		ND	ND	ND	ND	ND
Phenanthrene		ND	ND	ND	ND	29
Pyrene		ND	ND	ND	ND	22
1,2,4-Trichlorobenzene		ND	ND	ND	ND	ND

ND--Not Detected

Reviewed &amp; Approved by:

Rosemary L. Dineen  
Laboratory Supervisor

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AIHA Accreditation #352  
WDNR Certification #26818170

## ANALYTICAL REPORT

REPORT NUMBER: B8450

Hydro-Search, Inc.  
235 Executive Drive, Suite 309  
Brookfield, WI 53005  
  
Attn: Mr. Rick Binder  
(Project 251E09533)

DATE: July 14, 1989  
PURCHASE ORDER:  
SEI JOB NO: WL9707  
DATE COLLECTED: See Below  
DATE RECEIVED: 05/24/89

## Soil Samples (Chrysler, Kenosha)

Units: mg/kg (ppm)

Detection Limit: 1, unless otherwise noted below in ( )

	SEI ID	9707-11 05/22	9707-12 05/22	9707-13 05/22	9707-14 05/22	9707-15 05/22
BASE/NEUTRAL <u>EXTRACTABLES</u>	Sample ID	MW3-2 5-10'	MP7A-1 0-5'	MP7A-2 5-10'	MP7B-1 0-5'	MP7B-2 5-10'
Acenaphthene		1	ND	ND	ND	ND
Acenaphthylene		ND	ND	ND	ND	ND
Anthracene		ND	ND	ND	5	ND
Benzidine (10)		ND	ND	ND	ND	ND
Benzo(a)anthracene		ND	ND	ND	ND	ND
Benzo(b)fluoranthene		ND	ND	ND	ND	ND
Benzo(k)fluoranthene		ND	ND	ND	2	ND
Benzo(a)pyrene		ND	ND	ND	2	ND
Benzyl butyl phthalate		ND	ND	ND	ND	ND
Bis(2-chloroethyl)ether		ND	ND	ND	ND	ND
Bis(2-chloroethoxy)methane		ND	ND	ND	ND	ND
Bis(2-chloroisopropyl)ether		ND	ND	ND	ND	ND
Bis(2-ethylhexyl)phthalate		ND	ND	ND	ND	ND
4-Bromophenyl phenyl ether		ND	ND	ND	ND	ND
2-Chloronaphthalene		ND	ND	ND	ND	ND
4-Chlorophenyl phenyl ether		ND	ND	ND	ND	ND
Chrysene		ND	ND	ND	2	ND
Di-n-butylphthalate		ND	ND	ND	ND	ND
1,2-Dichlorobenzene		1	ND	1	ND	ND
1,3-Dichlorobenzene)		ND	ND	ND	ND	ND
1,4-Dichlorobenzene		ND	ND	ND	ND	ND
3,3'-Dichlorobenzidine		ND	ND	ND	ND	ND

ND--Not Detected

Reviewed &amp; Approved by:

Rosemary L. Dineen  
Laboratory Supervisor

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AIHA Accreditation = 352  
WDNR Certification = 26818170

## ANALYTICAL REPORT

REPORT NUMBER: 88450

Hydro-Search, Inc.  
235 Executive Drive, Suite 309  
Brookfield, WI 53005  
  
Attn: Mr. Rick Binder  
(Project 251E09533)

DATE: July 14, 1989  
PURCHASE ORDER:  
SEI JOB NO: WL9707  
DATE COLLECTED: See Below  
DATE RECEIVED: 05/24/89

## Soil Samples (Chrysler, Kenosha)

Units: mg/kg (ppm)

Detection Limit: 1, unless otherwise noted below in ( )

	SEI ID	9707-11 05/22 MW3-2	9707-12 05/22 MP7A-1	9707-13 05/22 MP7A-2	9707-14 05/22 MP7B-1	9707-15 05/22 MP7B-2
<u>BASE/NEUTRAL EXTRACTABLES</u>	<u>Sample ID</u>	<u>5-10'</u>	<u>0-5'</u>	<u>5-10'</u>	<u>0-5'</u>	<u>5-10'</u>
Diethyl phthalate		ND	ND	ND	ND	ND
Dimethyl phthalate		ND	ND	ND	ND	ND
2,4-Dinitrotoluene (2)		ND	ND	ND	ND	ND
2,6-Dinitrotoluene (2)		ND	ND	ND	ND	ND
Di-n-octylphthalate		ND	ND	ND	ND	ND
Fluoranthene		ND	ND	ND	4	ND
Fluorene		ND	ND	ND	1	ND
Hexachlorobenzene		ND	ND	ND	ND	ND
Hexachlorobutadiene (10)		ND	ND	ND	ND	ND
Hexachlorocyclopentadiene (10)		ND	ND	ND	ND	ND
Hexachlorcethane		ND	ND	ND	ND	ND
Isophorone		ND	ND	ND	ND	ND
Naphthalene		5	ND	ND	ND	ND
Nitrobenzene		ND	ND	ND	ND	ND
n-Nitrosodimethylamine (100)		ND	ND	ND	ND	ND
n-Nitroso-di-n-propylamine (100)		ND	ND	ND	ND	ND
n-Nitrosodiphenylamine (50)		ND	ND	ND	ND	ND
Phenanthrene		10	ND	ND	ND	ND
Pyrene		3	ND	ND	3	ND
1,2,4-Trichlorobenzene		ND	ND	ND	ND	ND

ND--Not Detected

Reviewed &amp; Approved by:

Rosemary L. Dineen  
Laboratory Supervisor

Table 5-5. SUMMARY OF DETECTED CONSTITUENTS IN GROUND-WATER SAMPLES, KENOSHA MAIN PLANT

Parameter	HW-1	HW-2	HW-3	HW-4	Dup.	Field	Trip	NR140***		
					HW-2	Blank		HW-5*	HW-6#	Blank
Total Cadmium (0.0002)	ND*	0.0008*	0.0080*	0.0002*	0.0110*	ND*	--	0.010		0.001
Total Chromium (0.001)	0.019*	0.056*	0.10*	0.077*	0.12*	0.003*	--	0.050		0.005
Total Lead (0.001)	0.015*	0.034*	0.14*	0.023*	0.13*	0.002*	--	0.050		0.005
Total Nickel (0.02)	ND*	0.06*	0.13*	0.04*	0.11*	ND*	--	**		**
Total Zinc (0.02)	0.09*	0.28*	0.94*	0.22*	0.55*	0.74*	--	5.0		2.5
Cyanides (0.005)	ND*	ND*	0.008*	ND*	ND*	ND*	--	0.200		0.040
Oil & Grease* (1)	ND	ND	364	ND	ND	5	5	**		**
Phenols (0.005)	ND	0.015	0.049	ND	ND	0.020	--	**		**
<u>Volatiles</u>										
Xylenes (0.001)	ND	ND	0.021	0.002	ND	ND	ND	0.620		0.124

NOTE:

All values in milligrams per liter (mg/l)

( ) = Detection Limit (mg/l)

Monitor Well locations are depicted on Figure 5-1.

ND = Not Detected

\* The samples were not field filtered. Chapter NR140 of the Wisconsin Administrative Code standards are for filtered analysis and therefore, cannot be applied to this result.

\*\* No Standards Currently Exist

\*\*\* Per Chapter NR140 of the Wisconsin Administrative Code

ES - Enforcement Standard

PAL - Preventative Action Limit

# - THE LABORATORY FIELD DUPLICATE FROM MW-2 WAS DESIGNATED AS "MW-5", MONITORING WELL MW-5 WAS NOT INSTALLED AT THE TIME OF SAMPLING.

# - THE LABORATORY FIELD BLANK WAS DESIGNATED AS "MW-6" MONITORING WELL MW-6 WAS NOT INSTALLED Analyses by Swanson Environmental, Inc., Brookfield, Wisconsin, AIHA Accreditation #352, WDNR Certification #26818170 AT THE TIME OF SAMPLING.

~~Subsurface~~  
site E.A.R.

7/28/89  
J.M.

RECEIVED JUL 2 1

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AIHA Accreditation =352  
 WDNR Certification =26818170

## ANALYTICAL REPORT

REPORT NUMBER: E8451

Hydro-Search, Inc.  
 235 Executive Drive, Suite 309  
 Brookfield, WI 53005  
 Attn: Mr. Rick Binder  
 (Project 251E09533)

DATE: July 17, 1989  
 PURCHASE ORDER:  
 SEI JOB NO: WL9784  
 DATE COLLECTED: 06/01/89  
 DATE RECEIVED: 06/02/89

## Groundwater Samples (Chrysler, Kenosha)

Units: mg/l (ppm)

Detection limit: Noted below in ( )

<u>Parameter</u>	<u>SEI ID</u>	9784-1 <u>MW-1</u>	9784-2 <u>MW-2</u>	9784-3 <u>MW-3</u>	9784-4 <u>MW-4</u>	9784-5 <u>MW-5**</u>
Cadmium (0.0002)		ND	0.0008	0.0080	0.0002	0.0110
Chromium (0.001)		0.019	0.056	0.10	0.077	0.12
Lead (0.001)		0.015	0.034	0.14	0.023	0.13
Nickel (0.02)		ND	0.06	0.13	0.04	0.11
Zinc (0.02)		0.09	0.28	0.94	0.22	0.55
Cyanides (0.005)		ND	ND	0.008	ND	ND
Oil & Grease* (1)		ND	ND	364	ND	ND
Phenols (0.005)		ND	0.015	0.049	ND	ND
Total PCB's**, ug/l (1.0)		ND	ND	ND	ND	ND

<u>Parameter</u>	<u>SEI ID</u>	9784-6 <u>MW-6***</u>	9784-7 <u>Trip Blank</u>
Cadmium (0.0002)		ND	--
Chromium (0.001)		0.003	--
Lead (0.001)		0.002	--
Nickel (0.02)		ND	--
Zinc (0.02)		0.74	--
Cyanides (0.005)		ND	--
Oil & Grease* (1)		5	5
Phenols (0.005)		0.020	--
Total PCB's**, ug/l (1.0)		ND	ND

\* Method 503E.

\*\* Concentration of Total PCB's based on response of Arochlor 1242, 1248, 1254, and 1260.

ND--Not Detected

Reviewed &amp; Approved by:

Rosemary L. Dineen  
 Laboratory Supervisor

\*\*\* - DUPLICATE OF MW-2 DESIGNATED AS "MW-5", MONITORING WELL MW-5 DID NOT EXIST AT THE TIME OF SAMPLING.

\*\*\*\* - FIELD 2-AW DESIGNATED MW-6, MONITORING WELL MW-6 DID NOT EXIST AT THE TIME OF SAMPLING.

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AIHA Accreditation =352  
WDNR Certification =26818170

## ANALYTICAL REPORT

REPORT NUMBER: 88451

Hydro-Search, Inc.  
235 Executive Drive, Suite 309  
Brookfield, WI 53005  
Attn: Mr. Rick Binder  
(Project 251E09533)

DATE: July 17, 1989  
PURCHASE ORDER:  
SEI JOB NO: WL9784  
DATE COLLECTED: 06/01/89  
DATE RECEIVED: 06/02/89

## Groundwater Samples (Chrysler, Kenosha)

Units: ug/l (ppb)

Detection Limit: 20, unless otherwise noted below in ( )

ACID <u>EXTRACTABLES</u>	SEI ID <u>Sample ID</u>	9784-1 <u>MW-1</u>	9784-2 <u>MW-2</u>	9784-3 <u>MW-3</u>	9784-4 <u>MW-4</u>	9784-5 <u>MW-5</u> ***
4-Chloro-3-methylphenol		ND	ND	ND	ND	ND
2-Chlorophenol		ND	ND	ND	ND	ND
2,4-Dichlorophenol		ND	ND	ND	ND	ND
2,4-Dimethylphenol		ND	ND	ND	ND	ND
2,4-Dinitrophenol (200)		ND	ND	ND	ND	ND
2-Methyl-4,6-dinitrophenol (200)		ND	ND	ND	ND	ND
2-Nitrophenol		ND	ND	ND	ND	ND
4-Nitrophenol		ND	ND	ND	ND	ND
Pentachlorophenol		ND	ND	ND	ND	ND
Phenol		ND	ND	ND	ND	ND
2,4,6-Trichlorophenol		ND	ND	ND	ND	ND

ACID <u>EXTRACTABLES</u>	SEI ID <u>Sample ID</u>	9784-6 <u>MW-6</u> ***	9784-7 <u>Trip Blank</u>
4-Chloro-3-methylphenol		ND	ND
2-Chlorophenol		ND	ND
2,4-Dichlorophenol		ND	ND
2,4-Dimethylphenol		ND	ND
2,4-Dinitrophenol (200)		ND	ND
2-Methyl-4,6-dinitrophenol (200)		ND	ND
2-Nitrophenol		ND	ND
4-Nitrophenol		ND	ND
Pentachlorophenol		ND	ND
Phenol		ND	ND
2,4,6-Trichlorophenol		ND	ND

ND--Not Detected

Reviewed &amp; Approved by:

Rosemary L. Dineen  
Laboratory Supervisor

\*\*\* - DUPLICATE OF MW-2 DESIGNATED AS "MW-5", MONITORING WELL MW-5 DID NOT EXIST AT THE TIME OF SAMPLING.

\*\*\* - FIELD BLANK DESIGNATED MW-6 MONITORING WELL MW-6 DID NOT EXIST

3150 North Brookfield Road  
Brookfield, Wisconsin 53005  
telephone (414) 783-6111  
facsimile (414) 783-5752



AIHA Accreditation #352  
WDNR Certification = 26818170

## ANALYTICAL REPORT

REPORT NUMBER: B8451

Hydro-Search, Inc.  
235 Executive Drive, Suite 309  
Brookfield, WI 53005  
  
Attn: Mr. Rick Binder  
(Project 251E09533)

DATE: July 17, 1989  
PURCHASE ORDER:  
SEI JOB NO: WL9784  
DATE COLLECTED: 06/01/89  
DATE RECEIVED: 06/02/89

## Groundwater Samples (Chrysler, Kenosha)

Units: ug/l (ppb)

Detection Limit: 10, unless otherwise noted below in ( )

BASE/NEUTRAL EXTRACTABLES	SEI ID Sample ID	9784-1 MW-1	9784-2 MW-2	9784-3 MW-3	9784-4 MW-4	9784-5 MW-5***
Acenaphthene		ND	ND	ND	ND	ND
Acenaphthylene		ND	ND	ND	ND	ND
Anthracene		ND	ND	ND	ND	ND
Benzidine (100)		ND	ND	ND	ND	ND
Benzo(a)anthracene		ND	ND	ND	ND	ND
Benzo(b)fluoranthene		ND	ND	ND	ND	ND
Benzo(k)fluoranthene		ND	ND	ND	ND	ND
Benzo(a)pyrene		ND	ND	ND	ND	ND
Benzo(g,h,i)perylene (30)		ND	ND	ND	ND	ND
Benzyl butyl phthalate		ND	ND	ND	ND	ND
Bis(2-chloroethyl)ether		ND	ND	ND	ND	ND
Bis(2-chloroethoxy)methane		ND	ND	ND	ND	ND
Bis(2-chloroisopropyl)ether		ND	ND	ND	ND	ND
Bis(2-ethylhexyl)phthalate		ND	ND	ND	ND	ND
4-Bromophenyl phenyl ether		ND	ND	ND	ND	ND
2-Chloronaphthalene		ND	ND	ND	ND	ND
4-Chlorophenyl phenyl ether		ND	ND	ND	ND	ND
Chrysene		ND	ND	ND	ND	ND
Dibenzo(a,h)anthracene (30)		ND	ND	ND	ND	ND
Di-n-butylphthalate		ND	ND	ND	ND	ND
1,2-Dichlorobenzene		ND	ND	ND	ND	ND
1,3-Dichlorobenzene		ND	ND	ND	ND	ND
1,4-Dichlorobenzene		ND	ND	ND	ND	ND
3,3'-Dichlorobenzidine		ND	ND	ND	ND	ND

ND--Not Detected

Reviewed &amp; Approved by:

Rosemary L. Dineen  
Laboratory Supervisor

\*\*\*DUPLICATE OF MW-2 DESIGNATED AS "MW-5", MONITORING WELL, MW-5 DID NOT EXIST AT THE TIME OF SAMPLING.



## ANALYTICAL REPORT

Hydro-Search, Inc.  
 235 Executive Drive, Suite 309  
 Brookfield, WI 53005  
 Attn: Mr. Rick Binder  
 (Project 251E09533)

DATE: July 17, 1989  
 PURCHASE ORDER:  
 SEI JOB NO: WL9784  
 DATE COLLECTED: 06/01/89  
 DATE RECEIVED: 06/02/89

Groundwater Samples (Chrysler, Kenosha)

Units: ug/l (ppb)

Detection Limit: 10, unless otherwise noted below in ( )

BASE/NEUTRAL EXTRACTABLES	SEI ID Sample ID	9784-1 MW-1	9784-2 MW-2	9784-3 MW-3	9784-4 MW-4	9784-5 MW-5 ***
Diethyl phthalate		ND	ND	ND	ND	ND
Dimethyl phthalate		ND	ND	ND	ND	ND
2,4-Dinitrotoluene (20)		ND	ND	ND	ND	ND
2,6-Dinitrotoluene (20)		ND	ND	ND	ND	ND
Di-n-octylphthalate		ND	ND	ND	ND	ND
Fluoranthene		ND	ND	ND	ND	ND
Fluorene		ND	ND	ND	ND	ND
Hexachlorobenzene		ND	ND	ND	ND	ND
Hexachlorobutadiene (20)		ND	ND	ND	ND	ND
Hexachlorocyclopentadiene (100)		ND	ND	ND	ND	ND
Hexachloroethane		ND	ND	ND	ND	ND
Indeno(1,2,3-cd)pyrene (30)		ND	ND	ND	ND	ND
Isophorone		ND	ND	ND	ND	ND
Naphthalene		ND	ND	ND	ND	ND
Nitrobenzene (20)		ND	ND	ND	ND	ND
n-Nitrosodimethylamine (100)		ND	ND	ND	ND	ND
n-Nitrosodi-n-propylamine (100)		ND	ND	ND	ND	ND
n-Nitrosodiphenylamine (50)		ND	ND	ND	ND	ND
Phenanthrene		ND	ND	ND	ND	ND
Pyrene		ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene		ND	ND	ND	ND	ND

ND--Not Detected

Reviewed & Approved by:

Rosemary L. Dineen  
 Laboratory Supervisor

\*\*\*DUPLICATE OF MW-2 DESIGNATED AS "MW-5", MONITORING WELL, MW-5 DID NOT EXIST  
 AT THE TIME OF SAMPLING.

3150 North Brookfield Road  
Brookfield, Wisconsin 53005  
telephone (414) 783-6111  
facsimile (414) 783-5752



AIHA Accreditation =352  
WDNR Certification =26818170

REPORT NUMBER: B8451

## ANALYTICAL REPORT

Hydro-Search, Inc.  
235 Executive Drive, Suite 309  
Brookfield, WI 53005  
  
Attn: Mr. Rick Binder  
(Project 251E09533)

DATE: July 17, 1989  
PURCHASE ORDER:  
SEI JOB NO: WL9784  
DATE COLLECTED: 06/01/89  
DATE RECEIVED: 06/02/89

Groundwater Samples (Chrysler, Kenosha)

Units: ug/l (ppb)

Detection Limit: 10, unless otherwise noted below in ( )

<u>BASE/NEUTRAL EXTRACTABLES</u>	<u>SEI ID Sample ID</u>	9784-6 <u>MW-6</u> *** <u>Trip Blank</u>	9784-7
Diethyl phthalate		ND	ND
Dimethyl phthalate		ND	ND
2,4-Dinitrotoluene (20)		ND	ND
2,6-Dinitrotoluene (20)		ND	ND
Di-n-octylphthalate		ND	ND
Fluoranthene		ND	ND
Fluorene		ND	ND
Hexachlorobenzene		ND	ND
Hexachlorobutadiene (20)		ND	ND
Hexachlorocyclopentadiene (100)		ND	ND
Hexachloroethane		ND	ND
Indeno(1,2,3-cd)pyrene (30)		ND	ND
Isophorone		ND	ND
Naphthalene		ND	ND
Nitrobenzene (20)		ND	ND
n-Nitrosodimethylamine (100)		ND	ND
n-Nitrosodi-n-propylamine (100)		ND	ND
n-Nitrosodiphenylamine (50)		ND	ND
Phenanthrene		ND	ND
Pyrene		ND	ND
1,2,4-Trichlorobenzene		ND	ND

ND--Not Detected

Reviewed &amp; Approved by:

Rosemary L. Dineen  
Laboratory Supervisor



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## ANALYTICAL REPORT

REPORT NUMBER: B8451

Hydro-Search, Inc.  
235 Executive Drive, Suite 309  
Brookfield, WI 53005  
  
Attn: Mr. Rick Binder  
(Project 251E09533)

DATE: July 17, 1989  
PURCHASE ORDER:  
SEI JOB NO: WL9784  
DATE COLLECTED: 06/01/89  
DATE RECEIVED: 06/02/89

## Groundwater Samples (Chrysler, Kenosha)

Units: ug/l (ppb)

Detection Limit: 1, unless otherwise noted below in ( )

VOLATILES (Purge & Trap)	SEI ID Sample ID	9784-1 MW-1	9784-2 MW-2	9784-3 MW-3	9784-4 MW-4	9784-5 MW-5 ***
Acetone, mg/l (0.1)		ND	ND	ND	ND	ND
Benzene		ND	ND	ND	ND	ND
Bromomethane (10)		ND	ND	ND	ND	ND
Bromodichloromethane (2)		ND	ND	ND	ND	ND
Bromoform (2)		ND	ND	ND	ND	ND
Carbon tetrachloride		ND	ND	ND	ND	ND
Chlorobenzene		ND	ND	ND	ND	ND
Chloroethane		ND	ND	ND	ND	ND
2-Chloroethylvinylether (4)		ND	ND	ND	ND	ND
Chloroform		ND	ND	ND	ND	ND
Chloromethane (10)		ND	ND	ND	ND	ND
Dibromochloromethane (2)		ND	ND	ND	ND	ND
1,2-Dichlorobenzene (2)		ND	ND	ND	ND	ND
1,3-Dichlorobenzene (2)		ND	ND	ND	ND	ND
1,4-Dichlorobenzene (2)		ND	ND	ND	ND	ND
1,1-Dichloroethane		ND	ND	ND	ND	ND
1,2-Dichloroethane		ND	ND	ND	ND	ND
1,1-Dichloroethene		ND	ND	ND	ND	ND
trans-1,3-Dichloroethene		ND	ND	ND	ND	ND
1,2-Dichloropropane		ND	ND	ND	ND	ND
cis-1,3-Dichloropropene (2)		ND	ND	ND	ND	ND
trans-1,3-Dichloropropene (2)		ND	ND	ND	ND	ND
Ethylbenzene		ND	ND	ND	ND	ND

ND=Not Detected

Reviewed &amp; Approved by:

Rosemary L. Dineen  
Laboratory Supervisor

\*\*\* - DUPLICATE OF MW-2 DESIGNATED AS "MW-5", MONITORING WELL, MW-5 DID NOT EXIST  
AT THE TIME OF SAMPLING.

3150 North Brookfield Road  
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telephone (414) 783-6111  
facsimile (414) 783-5752



AIHA Accreditation =352  
WDNR Certification =26818170

REPORT NUMBER: B8451

## ANALYTICAL REPORT

Hydro-Search, Inc.  
235 Executive Drive, Suite 309  
Brookfield, WI 53005  
  
Attn: Mr. Rick Binder  
(Project 251E09533)

DATE: July 17, 1989  
PURCHASE ORDER:  
SEI JOB NO: WL9784  
DATE COLLECTED: 06/01/89  
DATE RECEIVED: 06/02/89

## Groundwater Samples (Chrysler, Kenosha)

Units: ug/l (ppb)

Detection Limit: 1, unless otherwise noted below in ( )

VOLATILES (Purge & Trap)	SEI ID Sample ID	9784-1 MW-1	9784-2 MW-2	9784-3 MW-3	9784-4 MW-4	9784-5 MW-5***
Methylene chloride		ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane (3)		ND	ND	ND	ND	ND
Tetrachloroethene		ND	ND	ND	ND	ND
Toluene		ND	ND	ND	ND	ND
1,1,1-Trichloroethane		ND	ND	ND	ND	ND
1,1,2-Trichloroethane		ND	ND	ND	ND	ND
Trichloroethene		ND	ND	ND	ND	ND
Trichlorofluoromethane		ND	ND	ND	ND	ND
Vinyl chloride (10)		ND	ND	ND	ND	ND
Xylenes		ND	ND	21	2	ND

ND--Not Detected

Reviewed &amp; Approved by:

Rosemary L. Dineen  
Laboratory Supervisor

\*\*\*DUPLICATE OF MW-2 DESIGNATED AS "MW-5", MONITORING WELL, MW-5 DID NOT EXIST AT THE TIME OF SAMPLING.

3150 North Brookfield Road  
 Brookfield, Wisconsin 53005  
 telephone (414) 783-6111  
 facsimile (414) 783-5752



AIHA Accreditation #352  
 WDNR Certification #268181760

REPORT NUMBER: B0337

## ANALYTICAL REPORT

Hydro-Search, Inc.  
 235 Executive Drive, Suite 309  
 Brookfield, WI 53005

Attn: Mr. Rick Binder  
 (Project #251E09533)

DATE February 20, 1990  
 PURCHASE ORDER:  
 SEI JOB NO: WL1824  
 DATE COLLECTED:  
 DATE RECEIVED: 01/31/90

## Groundwater Samples (Chrysler, Kenosha)

Units: mg/l (ppm)

Detection Limit: 0.02, unless otherwise noted below in ( )

<u>Parameter</u>	<u>SEI ID</u>	1824-1 <u>MW-2</u>	1824-2 <u>MW-3</u>		
<b>Total</b>					
Cadmium (0.0002)		0.0090	0.012		
Chromium (0.001)		0.21	0.022		
Lead (0.001)		0.14	0.065		
Nickel ..		0.23	ND		
Zinc ..		0.79	0.46		
<u>Parameter</u>	<u>SEI ID</u>	1824-1 <u>MW-2</u>	1824-2 <u>MW-3</u>	1824-5 <u>MW-23</u>	1824-8 <u>MW-28</u>
<b>Soluble</b>					
Cadmium (0.0002)		0.0002	0.0002	0.0011	ND
Chromium (0.001)		0.001	0.001	ND	ND
Lead (0.001)		ND	ND	ND	ND
Nickel ..		ND	ND	ND	ND
Zinc ..		0.02	0.03	0.02	ND
Cyanides, Total (0.005)	--	--	--	ND	ND
Phenols (0.005)	--	--	--	ND	ND
Total PCB's*, ug/l (0.5)	--	--	--	ND	ND

\* Concentration of Total PCB's based on response of seven Arochlor.

ND--Not Detected

Reviewed &amp; Approved by:

Rosemary L. Dineen  
 Laboratory Supervisor



## ANALYTICAL REPORT

Hydro-Search, Inc.  
 235 Executive Drive, Suite 309  
 Brookfield, WI 53005

Attn: Mr. Rick Binder  
 (Project #251E09533)

DATE February 20, 1990  
 PURCHASE ORDER:  
 SEI JOB NO: WL1824  
 DATE COLLECTED:  
 DATE RECEIVED: 01/31/90

## Groundwater Samples (Chrysler, Kenosha)

Units: ug/l (ppb)

Detection Limit: 1, unless otherwise noted below in ( )

VOLATILES <u>PURGE &amp; TRAP</u>	SEI ID <u>Sample ID</u>	1824-2 <u>MW-3</u>	1824-3 <u>MW-10</u>	1824-5 <u>MW-23</u>	1824-6 <u>MW-26</u>	1824-7 <u>MW-27</u>
Acetone (50)		--	--	ND	--	--
Benzene		ND	ND	ND	ND	ND
Bromomethane (10)		ND	ND	ND	ND	ND
Bromodichloromethane (2)		ND	ND	ND	ND	ND
Bromoform (2)		ND	ND	ND	ND	ND
Carbon tetrachloride		ND	ND	ND	ND	ND
Chlorobenzene		ND	ND	ND	ND	ND
Chloroethane		ND	ND	ND	ND	ND
2-Chloroethylvinylether (4)		ND	ND	ND	ND	ND
Chloroform		ND	ND	ND	ND	ND
Chloromethane (10)		ND	ND	ND	ND	ND
Dibromochloromethane (2)		ND	ND	ND	ND	ND
1,2-Dichlorobenzene (2)		ND	ND	ND	ND	ND
1,3-Dichlorobenzene (2)		ND	ND	ND	ND	ND
1,4-Dichlorobenzene (2)		ND	ND	ND	ND	ND
Dichlorodifluoromethane		ND	ND	ND	ND	ND
1,1-Dichloroethane		ND	ND	ND	ND	11
1,2-Dichloroethane		ND	ND	ND	ND	6
1,1-Dichloroethene		ND	ND	ND	ND	ND
trans-1,2-Dichloroethene		ND	ND	ND	ND	162
1,2-Dichloropropane		ND	ND	ND	ND	ND
cis-1,3-Dichloropropene (2)		ND	ND	ND	ND	ND
trans-1,3-Dichloropropene (2)		ND	ND	ND	ND	ND
Ethylbenzene		109	ND	ND	ND	ND

ND--Not Detected

Reviewed &amp; Approved by:

Rosemary L. Dineen  
 Laboratory Supervisor



## ANALYTICAL REPORT

Hydro-Search, Inc.  
 235 Executive Drive, Suite 309  
 Brookfield, WI 53005  
 Attn: Mr. Rick Binder  
 (Project #251E09533)

DATE February 20, 1990  
 PURCHASE ORDER:  
 SEI JOB NO: WL1824  
 DATE COLLECTED:  
 DATE RECEIVED: 01/31/90

## Groundwater Samples (Chrysler, Kenosha)

Units: ug/l (ppb)

Detection Limit: 1, unless otherwise noted below in ( )

VOLATILES	SEI ID	1824-2	1824-3	1824-5	1824-6	1824-7
PURGE & TRAP	Sample ID	MW-3	MW-10	MW-23	MW-26	MW-27
Methylene chloride		ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane (3)		ND	ND	ND	ND	ND
Tetrachloroethene		ND	ND	ND	ND	ND
Toluene		ND	ND	ND	ND	ND
1,1,1-Trichloroethane		ND	ND	ND	ND	13
1,1,2-Trichloroethane		ND	ND	ND	ND	ND
Trichloroethene		ND	ND	ND	ND	5
Trichlorofluoromethane		ND	ND	ND	ND	ND
Vinyl chloride (10)		ND	ND	ND	ND	ND
Xylenes		99	ND	ND	ND	ND
Total Petroleum		306.2*	ND	ND	ND	ND
Hydrocarbons, mg/l (0.2)						

\* Concentration based on a fuel oil standard using the State of California Method.

ND--Not Detected

Reviewed &amp; Approved by:

Rosemary L. Dineen  
 Laboratory Supervisor

Summary of Detected Constituents in Site Soils  
Building 45-A Property

<u>Parameters</u>	MP-5D	MP-5E	MP-5F	MP-5G	MW5	MW-5A 14.5- 16.5'	MW-6	MW-6	MW-6	MP-6D	MP-6E
<u>VOCs</u>	<u>10-12'</u>	<u>12-14'</u>	<u>13-15'</u>	<u>12-14'</u>	<u>12-14'</u>	<u>1-3'</u>	<u>4-6'</u>	<u>9-11'</u>	<u>9-10'</u>	<u>7-8'</u>	
Benzene (0.05)	ND	ND	ND	ND	1.29	ND	ND	ND	ND	ND	0.73
Ethylbenzene (0.05)	ND	ND	ND	ND	0.18	ND	ND	ND	ND	ND	2.35
Toluene (0.05)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.06
Xylene (0.05)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	29.18
Total Petroleum Hydrocarbons (TPH) (5)	ND	ND	ND	ND	8	ND	ND	ND	ND	ND	175

Note: All values in parts per million (ppm)  
 ( ) = Detection Limit (ppm)  
 ND = Not Detected  
 VOCs = Volatile Organic Compounds

Analyses by Swanson Environmental, Inc., Brookfield, Wisconsin, WDNR Certification #26818170.

3150 North Brookfield Road  
Brookfield, Wisconsin 53005  
telephone (414) 783-6111  
facsimile (414) 783-5752



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AQHA Accredited #332  
WMOHRI Certification #268181780

REPORT NUMBER: B9360

## ANALYTICAL REPORT

Hydro-Search, Inc.  
235 Executive Drive, Suite 309  
Brookfield, WI 53005  
  
Attn: Mr. Rick Binder  
(Project 251E09533)

DATE: October 30, 1989  
PURCHASE ORDER:  
SEI JOB NO: WL0947  
DATE COLLECTED: 10/10-12/89  
DATE RECEIVED: 10/13/89

Soil Samples (Chrysler, Kenosha)

Units: mg/kg (ppm)  
Detection Limit: 0.2

<u>SEI ID</u>	<u>Sample ID</u>	<u>Organic Lead</u>
0947-4	MW-5	ND
0947-5	MP-5F	ND
0947-6	MP-6D	ND
0947-7	MP-6E	ND
0947-8	MP-5D	ND
0947-9	MP-5E	ND
0947-10	MW-5A	ND
0947-11	MP-5G	ND
0947-12	MP-6F	ND
0947-13	MP-6G	ND

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Project # 251E09533 20001  
CC: RJB

ND--Not Detected

Reviewed &amp; Approved by:

  
 Rosemary L. DiVine  
 Laboratory Supervisor



## ANALYTICAL REPORT

REPORT NUMBER: B9360

Hydro-Search, Inc.  
 235 Executive Drive, Suite 309  
 Brookfield, WI 53005  
 Attn: Mr. Rick Binder  
 (Project 251E09533)

DATE: October 30, 1989  
 PURCHASE ORDER:  
 SEI JOB NO: WL0947  
 DATE COLLECTED: 10/10-12/89  
 DATE RECEIVED: 10/13/89

## Soil Samples (Chrysler, Kenosha)

Units: mg/kg (ppm)

Detection Limit: 0.05, unless otherwise noted below in ( )

<u>SEI_ID</u>	<u>Sample_ID</u>	<u>Benzene</u>	<u>Ethyl-benzene</u>	<u>Toluene</u>	<u>Xylenes</u>
0947-4	MW-5	1.29	0.18	ND	ND
0947-5	MP-5F	ND	ND	ND	ND
0947-6	MP-6D	ND	ND	ND	ND
0947-7	MP-6E	0.73	2.35	0.06	29.18
0947-8	MP-5D	ND	ND	ND	ND
0947-9	MP-5E	ND	ND	ND	ND
0947-10	MW-5A	ND	ND	ND	ND
0947-11	MP-5G	ND	ND	ND	ND
0947-12	MP-6F	ND	ND	ND	ND
0947-13	MP-6G	ND	ND	ND	ND

<u>SEI_ID</u>	<u>Sample_ID</u>	<u>Total Petroleum Hydrocarbons (5)</u>
0947-1	MW6-1	ND
0947-2	MW6-2	ND
0947-3	MW6-3	ND
0947-4	MW-5	8
0947-5	MP-5F	ND
0947-6	MP-6D	ND
0947-7	MP-6E	175
0947-8	MP-5D	ND
0947-9	MP-5E	ND
0947-10	MW-5A	ND
0947-11	MP-5G	ND
0947-12	MP-6F	ND
0947-13	MP-6G	ND

ND--Not Detected

Reviewed &amp; Approved by:

Rosemary L. Dingen  
 Laboratory Supervisor

**ANALYTICAL REPORT****Report Date:** 05/05/94**Date Received:** 04/28/94**Your Reference:** 943163.9**To:** Triad Engineering, Inc.  
325 East Chicago Street  
Milwaukee, WI 53202**Attn:** Val Jansen**SEI Project:** WL 10399**Date Collected:** 04/27/94

<b>Our Reference</b>					<b>AA01345</b>
<b>Sample Point</b>					<b>MW-5R</b>
<b>Analyte</b>	<b>Units</b>	<b>PQL</b>	<b>Analytical Method</b>	<b>Analyzed</b>	<b>Result</b>
<b>PRELIMINARY DATA</b>					
Benzene	ug/L	0.7	EPA 602	04/28/94	1.5
Ethylbenzene	ug/L	1.0	EPA 602	04/28/94	Not Detected
Toluene	ug/L	0.9	EPA 602	04/28/94	Not Detected
Xylenes, Total	ug/L	1.5	EPA 602	04/28/94	2.5

Table 5. Summary of Detected Constituents in Ground Water Samples, Building 45-A Property

<u>Parameters</u>	<u>MW-4</u>	<u>MW-5</u>	<u>MW-5A</u>	<u>MW-6</u>	<u>MW-9 Field Blank</u>	<u>MW-10 Dup. of MW-5</u>	<u>NR140** Enforcement Standard</u>	<u>(PAL)</u>
<u>Dissolved Metals</u>								
Cadmium (0.0002)	0.0025	NA	NA	NA	NA	NA	0.010	0.001
Chromium (0.001)	0.002	NA	NA	NA	NA	NA	0.050	0.005
Lead (0.001)	0.008	NA	NA	NA	NA	NA	0.050	0.005
Zinc (0.02)	0.05	NA	NA	NA	NA	NA	5.0	2.5
<u>VOCs</u>								
Benzene (.001)	ND	0.746	ND	ND	ND	0.687	0.00067	0.000067
Chloroethane (.001)	ND	0.002	ND	ND	ND	0.001	*	*
1,1-Dichloroethane (.001)	ND	0.002	ND	0.002	ND	ND	.850	.085
1,4-Dichlorobenzene (.002)	ND	ND	ND	ND	ND	0.002	*	*
Ethylbenzene (.001)	ND	0.035	ND	ND	ND	0.021	1.360	.272
Methylene Chloride (.001)	ND	ND	ND	ND	ND	0.002	.150	.015
Toluene (.001)	ND	0.008	ND	ND	ND	0.007	.343	.0686
Xylenes (.001)	ND	0.061	ND	ND	ND	0.053	.620	.124
Total Petroleum Hydrocarbons (TPH) (0.2)	ND	5.3	ND	ND	ND	4.7	*	*
<u>Acid Extractables</u>								
Phenol (0.020)	NA	0.015	ND	ND	ND	0.020	*	*
<u>Base/Neutral Extractables</u>								
Hexachloroethane (0.010)	NA	0.013	ND	ND	ND	0.010	*	*
Naphthalene (0.010)	NA	0.012	ND	ND	ND	0.011	*	*

Note: All values in parts per million (ppm)

( ) = Detection Limit (ppm)

Monitor well locations are depicted on Figure 3.

ND = Not Detected

NA = Not analyzed

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AIHA Accreditation #352  
WDNR Certification #268181760

REPORT NUMBER: 59484

## ANALYTICAL REPORT

Ayco-Search, Inc.  
235 Executive Drive, Suite 309  
Brookfield, WI 53005

Attn: Mr. Rick Binder  
(Project 251E09533)

DATE: November 13, 1989  
PURCHASE ORDER:  
SEI JOB NO: WL1106  
DATE COLLECTED: 10/31/89  
DATE RECEIVED: 11/06/89

## Groundwater Samples (Chrysler, Kenosha)

Units: ug/l (ppb)

Detection limit: 1, unless otherwise noted below in ( )

VOLATILES <u>(Purge &amp; Trap)</u>	SEI ID <u>Sample ID</u>	1108-1 <u>MW-4</u>	1108-2 <u>MW-5</u>	1108-3 <u>MW-5A</u>	1108-4 <u>MW-6</u>	1108-5 <u>MW-7</u>
Benzene		ND	748	ND	ND	ND
Bromomethane (10)		ND	ND	ND	ND	ND
Bromodichloromethane (2)		ND	ND	ND	ND	ND
Bromoform (2)		ND	ND	ND	ND	ND
Carbon tetrachloride		ND	ND	ND	ND	ND
Chlorobenzene		ND	ND	ND	ND	ND
Chloroethane		ND	2	ND	ND	ND
2-Chloroethylvinylether (4)		ND	ND	ND	ND	ND
Chloroform		ND	ND	ND	ND	ND
Chloromethane (10)		ND	ND	ND	ND	ND
Dibromochloromethane (2)		ND	ND	ND	ND	ND
1,2-Dichlorobenzene (2)		ND	ND	ND	ND	ND
1,3-Dichlorobenzene (2)		ND	ND	ND	ND	ND
1,4-Dichlorobenzene (2)		ND	ND	ND	ND	ND
1,1-Dichloroethane		ND	2	ND	2	ND
1,2-Dichloroethane		ND	ND	ND	ND	ND
1,1-Dichloroethene		ND	ND	ND	ND	ND
trans-1,3-Dichloroethane		ND	ND	ND	ND	ND
1,2-Dichloropropane		ND	ND	ND	ND	ND
cis-1,3-Dichloropropene (2)		ND	ND	ND	ND	ND
trans-1,3-Dichloropropene (2)		ND	ND	ND	ND	ND
Ethylbenzene		ND	35	ND	ND	ND

ND--Not Detected

Reviewed &amp; Approved by:

Rosemary E. Dineen  
Laboratory Supervisor

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Brookfield, Wisconsin 53005  
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AIHA Accreditation #352  
WDNR Certification #268181760

## ANALYTICAL REPORT

REPORT NUMBER: E3484

Hydro-Search, Inc.  
235 Executive Drive, Suite 309  
Brookfield, WI 53005  
  
Attn: Mr. Rick Binder  
(Project 251509533)

DATE: November 13, 1989  
PURCHASE ORDER:  
SEI JOB NO: WL1108  
DATE COLLECTED: 10/31/89  
DATE RECEIVED: 11/06/89

## Groundwater Samples (Chrysler, Kenosha)

Units: ug/l (ppb)

Detection Limit: 1, unless otherwise noted below in ( )

<u>VOLATILES</u> <u>(Purge &amp; Trap)</u>	<u>SEI ID</u>	1108-1 <u>MW-4</u>	1108-2 <u>MW-5</u>	1108-3 <u>MW-5A</u>	1108-4 <u>MW-6</u>	1108-5 <u>MW-7</u>
Methylene chloride		ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane (?)		ND	ND	ND	ND	ND
Tetrachloroethene		ND	ND	ND	ND	ND
Toluene		ND	8	ND	ND	ND
1,1,1-Trichloroethane		ND	ND	ND	ND	ND
1,1,2-Trichloroethane		ND	ND	ND	ND	ND
Trichloroethene		ND	ND	ND	ND	ND
Trichlorofluoromethane		ND	ND	ND	ND	ND
Vinyl chloride (10)		ND	ND	ND	ND	ND
Xylenes		ND	61	ND	ND	ND
Total Petroleum Hydrocarbons, mg/l (0.2)		ND	5.3	ND	ND	ND

ND--Not Detected

Reviewed &amp; Approved by:

*Rosemary L. Dineen*  
Rosemary L. Dineen  
Laboratory Supervisor

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AIHA Accreditation #352  
 WDNR Certification #268181760

REPORT NUMBER: B9434

## ANALYTICAL REPORT

Hydro-Search, Inc.  
 235 Executive Drive, Suite 309  
 Brookfield, WI 53005  
 Attn: Mr. Rick Binder  
 (Project 251E09533)

DATE: November 13, 1989  
 PURCHASE ORDER:  
 SEI JOB NO: WL1108  
 DATE COLLECTED: 10/31/89  
 DATE RECEIVED: 11/05/89

## Groundwater Samples (Chrysler, Kenosha)

Units: ug/l (ppb)

Detection Limit: 20, unless otherwise noted below in ( )

ACID <u>EXTRACTABLES</u>	SEI ID <u>Sample ID</u>	1108-2 <u>MW-5</u>	1108-3 <u>MW-5A</u>	1108-4 <u>MW-6</u>	1108-5 <u>MW-7</u>	1108-6 <u>MW-8</u>
4-Chloro-3-methylphenol		ND	ND	ND	ND	ND
2-Chlorophenol		ND	ND	ND	ND	ND
2,4-Dichlorophenol		ND	ND	ND	ND	ND
2,4-Dimethylphenol		ND	ND	ND	ND	ND
2,4-Dinitrophenol (200)		ND	ND	ND	ND	ND
2-Methyl-4,6-dinitrophenol (200)		ND	ND	ND	ND	ND
2-Nitrophenol		ND	ND	ND	ND	ND
4-Nitrophenol		ND	ND	ND	ND	ND
Pentachlorophenol		ND	ND	ND	ND	ND
Phenol		15	ND	ND	ND	ND
2,4,6-Trichlorophenol		ND	ND	ND	ND	ND

ACID <u>EXTRACTABLES</u>	SEI ID <u>Sample ID</u>	1108-7 <u>MW-8A</u>	1108-9 <u>MW-10</u>
4-Chloro-3-methylphenol		ND	ND
2-Chlorophenol		ND	ND
2,4-Dichlorophenol		ND	ND
2,4-Dimethylphenol		ND	ND
2,4-Dinitrophenol (200)		ND	ND
2-Methyl-4,6-dinitrophenol (200)		ND	ND
2-Nitrophenol		ND	ND
4-Nitrophenol		ND	ND
Pentachlorophenol		ND	ND
Phenol		ND	20
2,4,6-Trichlorophenol		ND	ND

Reviewed &amp; Approved by:

Rosemary L. Dineen  
 Laboratory Supervisor

ND--Not Detected



## ANALYTICAL REPORT

REPORT NUMBER: 30494

Hydro-Search, Inc.  
 235 Executive Drive, Suite 309  
 Brookfield, WI 53005  
 Attn: Mr. Rick Binder  
 (Project 261E09533)

DATE: November 13, 1989  
 PURCHASE ORDER:  
 SEI JCS NO: WL1103  
 DATE COLLECTED: 10/31/89  
 DATE RECEIVED: 11/06/89

## Groundwater Samples (Chrysler, Kenosha)

Units: ug/l (ppb)

Detection Limit: 10, unless otherwise noted below in ( )

<u>BASE/NEUTRAL EXTRACTABLES</u>	<u>SEI ID</u>	1108-2 <u>MW-5</u>	1108-3 <u>MW-5A</u>	1108-4 <u>MW-6</u>	1108-5 <u>MW-7</u>	1108-6 <u>MW-8</u>
Acenaphthene		ND	ND	ND	ND	ND
Acenaphthylene		ND	ND	ND	ND	ND
Anthracene		ND	ND	ND	ND	ND
Benzidine (100)		ND	ND	ND	ND	ND
Benzo(a)anthracene		ND	ND	ND	ND	ND
Benzo(b)fluoranthene		ND	ND	ND	ND	ND
Benzo(k)fluoranthene		ND	ND	ND	ND	ND
Benzo(a)pyrene		ND	ND	ND	ND	ND
Benzo(g,h,i)perylene (30)		ND	ND	ND	ND	ND
Benzyl butyl phthalate		ND	ND	ND	ND	ND
Bis(2-chloroethyl)ether		ND	ND	ND	ND	ND
Bis(2-chloroethoxy)methane		ND	ND	ND	ND	ND
Bis(2-chlorocisopropyl)ether		ND	ND	ND	ND	ND
Bis(2-ethylhexyl)phthalate		ND	ND	ND	ND	ND
4-Bromophenyl phenyl ether		ND	ND	ND	ND	ND
2-Chloronaphthalene		ND	ND	ND	ND	ND
4-Chlorophenyl phenyl ether		ND	ND	ND	ND	ND
Chrysene		ND	ND	ND	ND	ND
Dibenzo(a,h)anthracene (30)		ND	ND	ND	ND	ND
Di-n-butylphthalate		ND	ND	ND	ND	ND
1,2-Dichlorobenzene		ND	ND	ND	ND	ND
1,3-Dichlorobenzene		ND	ND	ND	ND	ND
1,4-Dichlorobenzene		ND	ND	ND	ND	ND
3,3'-Dichlorobenzidine		ND	ND	ND	ND	ND

ND--Not Detected

Reviewed &amp; Approved by:

Rosemary L. Dineen  
 Laboratory Supervisor



## ANALYTICAL REPORT

Hydro-Search, Inc.  
 235 Executive Drive, Suite 300  
 Brookfield, WI 53005  
 Attn: Mr. Rick Binder  
 (Project 251EO9533)

DATE: November 13, 1992  
 PURCHASE ORDER:  
 SEI JOB NO: WL1108  
 DATE COLLECTED: 10/31/92  
 DATE RECEIVED: 11/05/92

## Groundwater Samples (Chrysler, Kenosha)

Units: ug/l (ppb)

Detection Limit: 10, unless otherwise noted below in ( )

BASE/NEUTRAL EXTRACTABLES	SEI ID Sample ID	1108-2 MW-5	1108-3 MW-5A	1108-4 MW-6	1108-5 MW-7	1108-6 MW-8
Diethyl phthalate		ND	ND	ND	ND	ND
Dimethyl phthalate		ND	ND	ND	ND	ND
2,4-Dinitrotoluene (20)		ND	ND	ND	ND	ND
2,6-Dinitrotoluene (20)		ND	ND	ND	ND	ND
Di-n-octylphthalate		ND	ND	ND	ND	ND
Fluoranthene		ND	ND	ND	ND	ND
Fluorene		ND	ND	ND	ND	ND
Hexachlorobenzene		ND	ND	ND	ND	ND
Hexachlorobutadiene (20)		ND	ND	ND	ND	ND
Hexachlorocyclooctadiene (100)		ND	ND	ND	ND	ND
Hexachloroethane		13	ND	ND	ND	ND
Indeno(1,2,3-cd)pyrene (30)		ND	ND	ND	ND	ND
Isophorone		ND	ND	ND	ND	ND
Naphthalene		12	ND	ND	ND	ND
Nitrobenzene (20)		ND	ND	ND	ND	ND
n-Nitrosodimethylamine (100)		ND	ND	ND	ND	ND
n-Nitrosodi-n-propylamine (100)		ND	ND	ND	ND	ND
n-Nitrosodiphenylamine (50)		ND	ND	ND	ND	ND
Phenanthrene		ND	ND	ND	ND	ND
Pyrene		ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene		ND	ND	ND	ND	ND

ND--Not Detected

Reviewed &amp; Approved by:

Rosemary L. Dineen  
 Laboratory Supervisor

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## ANALYTICAL REPORT

REPORT NUMBER: B9484

Hydro-Search, Inc.  
 235 Executive Drive, Suite 309  
 Brookfield, WI 53005  
 Attn: Mr. Rick Binder  
 (Project 251E09533)

DATE: November 13, 1989  
 PURCHASE ORDER:  
 SEI JOB NO: WL1108  
 DATE COLLECTED: 10/31/89  
 DATE RECEIVED: 11/06/89

## Groundwater Samples (Chrysler, Kenosha)

Units: ug/l (ppb)

Detection Limit: 1, unless otherwise noted below in ( )

VOLATILES <u>(Purge &amp; Trap)</u>	SEI ID <u>Sample ID</u>	1108-1 <u>MW-4</u>	1108-2 <u>MW-5</u>	1108-3 <u>MW-5A</u>	1108-4 <u>MW-6</u>	1108-5 <u>MW-7</u>
Benzene		ND	746	ND	ND	ND
Bromomethane (10)		ND	ND	ND	ND	ND
Bromodichloromethane (2)		ND	ND	ND	ND	ND
Bromoform (2)		ND	ND	ND	ND	ND
Carbon tetrachloride		ND	ND	ND	ND	ND
Chlorobenzene		ND	ND	ND	ND	ND
Chloroethane		ND	2	ND	ND	ND
2-Chloroethylvinylether (4)		ND	ND	ND	ND	ND
Chloroform		ND	ND	ND	ND	ND
Chloromethane (10)		ND	ND	ND	ND	ND
Dibromochloromethane (2)		ND	ND	ND	ND	ND
1,2-Dichlorobenzene (2)		ND	ND	ND	ND	ND
1,3-Dichlorobenzene (2)		ND	ND	ND	ND	ND
1,4-Dichlorobenzene (2)		ND	ND	ND	ND	ND
1,1-Dichloroethane		ND	2	ND	2	ND
1,2-Dichloroethane		ND	ND	ND	ND	ND
1,1-Dichloroethene		ND	ND	ND	ND	ND
trans-1,3-Dichloroethene		ND	ND	ND	ND	ND
1,2-Dichloropropane		ND	ND	ND	ND	ND
cis-1,3-Dichloropropene (2)		ND	ND	ND	ND	ND
trans-1,3-Dichloropropene (2)		ND	ND	ND	ND	ND
Ethylbenzene		ND	35	ND	ND	ND

ND--Not Detected

Reviewed &amp; Approved by:

*Carol Koroghanian*  
 Carol Koroghanian  
 Laboratory Supervisor

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## ANALYTICAL REPORT

REPORT NUMBER: B9484

Hydro-Search, Inc.  
 235 Executive Drive, Suite 309  
 Brookfield, WI 53005  
 Attn: Mr. Rick Binder  
 (Project 251E09533)

DATE: November 13, 1989  
 PURCHASE ORDER:  
 SEI JOB NO: WL1108  
 DATE COLLECTED: 10/31/89  
 DATE RECEIVED: 11/06/89

## Groundwater Samples (Chrysler, Kenosha)

Units: ug/l (ppb)

Detection Limit: 1, unless otherwise noted below in ( )

VOLATILES <u>(Purge &amp; Trap)</u>	SEI ID <u>Sample ID</u>	1108-1 <u>MW-4</u>	1108-2 <u>MW-5</u>	1108-3 <u>MW-5A</u>	1108-4 <u>MW-6</u>	1108-5 <u>MW-7</u>
Methylene chloride		ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane (3)		ND	ND	ND	ND	ND
Tetrachloroethene		ND	ND	ND	ND	ND
Toluene		ND	8	ND	ND	ND
1,1,1-Trichloroethane		ND	ND	ND	ND	ND
1,1,2-Trichloroethane		ND	ND	ND	ND	ND
Trichloroethene		ND	ND	ND	ND	ND
Trichlorofluoromethane		ND	ND	ND	ND	ND
Vinyl chloride (10)		ND	ND	ND	ND	ND
Xylenes		ND	61	ND	ND	ND
Total Petroleum Hydrocarbons, mg/l (0.2)		ND	5.3	ND	ND	ND

ND--Not Detected

Reviewed &amp; Approved by:

*Carol Koroghanian*  
 Carol Koroghanian  
 Laboratory Supervisor

**MW-11C**

Table 4-4. Summary of Detected Constituents in Soil Samples, Site MP-3

Parameter	Phase I								Phase II						Phase III			
	MP-3A B8347* 5/19/89		MP-3B B8450* 5/22/89		MP-3C B8450* 5/22/89		MP-3D B8450* 5/22/89		MW-11 B9833* 12/14/89						MW-11A B1003* 4/18/90	MW-11B B1003* 4/18/90	MW-11C B1084* 4/23/90	MW-11D B1003* 4/18/90
	0-5 <sup>t</sup>	5-10 <sup>t</sup>	0-5 <sup>t</sup>	5-10 <sup>t</sup>	0-5 <sup>t</sup>	5-10 <sup>t</sup>	0-1 <sup>t</sup>	1-2 <sup>t</sup>	0-1 <sup>t</sup>	1-2 <sup>t</sup>	2-3 <sup>t</sup>	3-4 <sup>t</sup>	4-5 <sup>t</sup>	3-5 <sup>t</sup>	5-7 <sup>t</sup>	1-3 <sup>t</sup>	5-7 <sup>t</sup>	
<u>Metals</u>																		
Cadmium (0.5)	15	1.5	3.5	0.9	1.6	1.1	2.2	0.9	2.8	ND	ND	ND	ND	NA	NA	NA	NA	NA
Chromium (1)	44	7	11	6	9	7	16	6	39	24	28	32	22	NA	NA	NA	NA	NA
Lead (2)	110	13	21	7	16	7	20	7	286	223	216	73	55	NA	NA	NA	NA	NA
Nickel (1)	48	7	18	8	10	8	15	8	23	12	17	26	18	NA	NA	NA	NA	NA
Zinc (1)	100	37	57	37	50	50	48	44	257	197	176	213	78	NA	NA	NA	NA	NA
Chromium EPTOX (0.02)	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead EPTOX (0.05)	NA	NA	NA	NA	NA	NA	NA	NA	0.38	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel EPTOX (0.02)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.03	NA	NA	NA	NA	NA	NA
Zinc EPTOX (0.02)	NA	NA	NA	NA	NA	NA	NA	NA	4.01	NA	NA	NA	NA	NA	NA	NA	NA	NA
<u>Base/Neutral Extractables</u>																		
Anthracene (1)	2.8	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)anthracene (1)	4.7	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(b)fluoranthene (1)	3.6	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene (1)	5.6	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluoranthene (1)	5.2	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pyrene (1)	4.1	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total BNAs	26.0	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<u>Volatile Organic Compounds (VOCs)</u>																		
Acetone (5.0)	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	ND	0.05	ND
Benzene (0.05)	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND
Ethylbenzene (0.05)	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND
Methylene Chloride (0.05)	ND	1.96	ND	0.08	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	ND	ND	0.08
1,1,1-Trichloroethane (0.05)	ND	ND	ND	ND	ND	ND	ND	ND	0.05	NA	NA	NA	NA	NA	NA	ND	ND	NA
Toluene (0.05)	ND	0.07	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	ND	ND	0.08
Xylenes (0.05)	ND	5.96	ND	0.15	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	ND	ND	0.07
Total BETX	ND	6.03	ND	0.15	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	ND	ND	0.15
Total VOCs	ND	7.99	ND	0.23	ND	ND	ND	ND	0.05	NA	NA	NA	NA	NA	NA	ND	ND	0.23
<u>Oil &amp; Grease (20)</u>	40	110	ND	80	ND	20	50	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<u>Total Petroleum Hydrocarbons (TPHs) (5.0)</u>	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND
<u>PCBs (0.5)</u>	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

NOTE:

All values in milligrams per kilogram (mg/kg)

( ) = Detection Limit (mg/kg)

ND = Not Detected

NA = Not Analyzed

\* = Laboratory Report Number; Analyses by Swanson Environmental, Inc., Brookfield, Wisconsin,  
AIHA Accreditation #352, WDNR Certification #26818170, Appendix C.

Borehole locations are depicted on Figure 4-3.

Table 4-5. Summary of Detected Constituents in Ground Water, Site MP-3

Parameter	Phase II		Phase III							NR 140**	
	MW-11 B0270* 1/23/90	MW-11 B0688* 3/19/90	MW-11 B1234* 5/8/90	MW-11A B1234* 5/8/90	MW-11B B1234* 5/8/90	MW-11C B1234* 5/8/90	MW-11D B1234* 5/7/90	TRIP BLANK B0270* 1/23/90	TRIP BLANK B1234* 5/7/90	Enforcement Standard	PAL
<u>Volatile Organic Compounds</u>											
Benzene (0.001)	0.031	0.050	0.078	0.039	0.002	0.009	0.002	ND	ND	0.005	0.000067
Ethylbenzene (0.001)	0.001	0.017	0.523	0.011	0.002	0.009	0.002	ND	ND	1.360	0.272
Toluene (0.001)	0.019	0.023	0.055	0.007	0.001	0.006	0.001	ND	ND	0.343	0.0686
Xylenes (0.001)	1.271	1.509	2.162	0.209	ND	0.007	ND	ND	ND	0.620	0.124
Total BETX	1.322	1.599	2.818	0.266	0.005	0.031	0.005	ND	ND	***	***
<u>Total Petroleum Hydrocarbons (0.2)</u>	6.1	16.0	18.2	2.7	ND	0.4	ND	NA	ND	***	***

NOTE: All values in milligrams/liter (mg/l).

( ) = Detection Limit (mg/l)

ND = Not Detected

\* = Laboratory Report Number; analyses by Swanson Environmental, Inc., Brookfield, WI, AIHA Accreditation #352, WDNR Certification #2681870, Appendix C.

\*\* = Per Chapter NR140 of the Wisconsin Administrative Code

\*\*\* = No standards currently exist

PAL = Preventative Action Limit

Monitor well locations are depicted on Figure 4-3.

3150 North Brookfield Road  
 Brookfield, Wisconsin 53005  
 telephone (414) 783-6111  
 facsimile (414) 783-5752



AIHA Accreditation #352  
 WDNR Certification #268181760  
 REPORT NUMBER: B1084

## ANALYTICAL REPORT

Hydro-Search, Inc.  
 235 Executive Drive, Suite 309  
 Brookfield, WI 53005  
 Attn: Mr. Richard Binder  
 (Project #251E09533)

DATE May 9, 1990  
 PURCHASE ORDER:  
 SEI JOB NO: WL2662  
 DATE COLLECTED: 04/23&24/90  
 DATE RECEIVED: 04/26/90

Soil Samples (Chrysler, Kenosha)

Units: mg/kg (ppm)  
 Detection Limit: 0.05

<u>SEI ID</u>	<u>Sample ID</u>	<u>Cyanides, Total (0.5)</u>
2662-1	MP7AD1 1-2'	ND
2662-2	MP7AD2 2-3'	ND
2662-3	MP7AD3 3-4'	ND
2662-4	MP7AD4 4-5'	ND
2662-5	MP7AD5 5-6'	0.6
2662-6	MP7AC 1-2'	ND
2662-7	MP7AE1 1-2'	0.9
2662-8	MP7AE2 2-3'	ND
2662-9	MP7AE3 3-4'	ND
2662-10	MP7AE4 4-5'	ND
2662-11	MP7AE5 5-6'	ND
2662-17	MW16A1 1-2'	2.73
2662-18	MW16A2 2-3'	ND
2662-19	MW16A3 3-4'	0.5
2662-20	MW16A4 5-6'	ND

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MAY 14, 1990

<u>SEI ID</u>	<u>Sample ID</u>	<u>Benzene</u>	<u>Ethyl-benzene</u>	<u>Toluene</u>	<u>Styrenes</u>
2662-16	MP11C 1-3'	0.05	ND	ND	ND

ND--Not Detected

Reviewed & Approved by:

Rosemary L. Dineen  
 Rosemary L. Dineen  
 Laboratory Director

SWANSON ENVIRONMENTAL INC.

3150 North Brookfield Road  
Brookfield, Wisconsin 53005  
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AIHA Accreditation #352  
WDNR Certification #268181760

REPORT NUMBER: B1084

ANALYTICAL REPORT

Hydro-Search, Inc.  
235 Executive Drive, Suite 309  
Brookfield, WI 53005  
  
Attn: Mr. Richard Binder  
(Project #251E09533)

DATE May 9, 1990  
PURCHASE ORDER:  
SEI JOB NO: WL2662  
DATE COLLECTED: 04/23&24/90  
DATE RECEIVED: 04/26/90

Soil Samples (Chrysler, Kenosha)

Units: mg/kg (ppm)  
Detection Limit: 5

<u>SEI ID</u>	<u>Sample ID</u>	<u>Total Petroleum Hydrocarbons*</u>
2662-4	MP7AD4 4-5'	413
2662-6	MP7AC 1-2'	ND
2662-10	MP7AE 4-5'	ND
2662-12	MP8Q1 4-5'	ND
2662-13	MP8Q2 5-6'	ND
2662-14	MP8R 1-2'	ND
2662-15	MP8S 1-2'	ND
2662-16	MW11C 1-3'	ND
2662-19	MW16A3 3-4'	ND
2662-21	MW21A1 2-3'	ND
2662-22	MW21A2 4-5'	ND

FILE ON

\* Concentration based on a fuel oil standard using the State of California Method.

ND--Not Detected

Reviewed & Approved by:

Rosemary L. Dineen  
Rosemary L. Dineen  
Laboratory Director

MAY 14, 1990

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 Brookfield, Wisconsin 53005  
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 facsimile (414) 783-5752



AIHA Accreditation #352  
 WDNR Certification #268181760  
 REPORT NUMBER: B1234

## ANALYTICAL REPORT

Hydro-Search, Inc.  
 235 Executive Drive, Suite 309  
 Brookfield, WI 53005  
 Attn: Mr. Rick Binder  
 (Project 251E09533)

DATE: May 29, 1990  
 PURCHASE ORDER:  
 SEI JOB NO: WL2772  
 DATE COLLECTED: 05/07&08/90  
 DATE RECEIVED: 05/08/90

Groundwater Samples (Chrysler, Kenosha)

Units: ug/l (ppb)  
 Detection Limit: 1

<u>SEI ID</u>	<u>Sample ID</u>	<u>Benzene</u>	<u>Ethyl-benzene</u>	<u>Toluene</u>	<u>Xylenes</u>
2772-1	MW-5	2,246	110	22	25
2772-3	MW-11	78	523	55	2,162
2772-4	MW-11A	39	11	7	209
2772-5	MW-11B	2	2	1	ND
2772-6	MW-11C	9	9	6	7
2772-7	MW-11D	2	2	1	ND
2772-15	Sump 45A	ND	ND	ND	ND
2772-16	STF Inflow	19	2	4	5
2772-17	STF Outflow	8	1	2	2

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JUN 1 1990

ND--Not Detected

Reviewed & Approved by:

Rosemary L. Dineen  
 Laboratory Director



## ANALYTICAL REPORT

Hydro-Search, Inc.  
 235 Executive Drive, Suite 309  
 Brookfield, WI 53005  
 Attn: Mr. Rick Binder  
 (Project 251E09533)

DATE: May 29, 1990  
 PURCHASE ORDER:  
 SEI JOB NO: WL2772  
 DATE COLLECTED: 05/07&08/90  
 DATE RECEIVED: 05/08/90

Groundwater Samples (Chrysler, Kenosha)

Units: mg/l (ppm)  
 Detection Limit: 0.2

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 CC: \_\_\_\_\_

<u>SEI ID</u>	<u>Sample ID</u>	<u>Total Petroleum Hydrocarbons*</u>
2772-1	MW-5	10.2
2772-2	MW-10	0.5
2772-3	MW-11	18.2
2772-4	MW-11A	2.7
2772-5	MW-11B	ND
2772-6	MW-11C	0.4
2772-7	MW-11D	ND
2772-8	MW-35A	51.5
2772-9	MW-35B	43.5
2772-10	MW-36A	ND
2772-11	MW-38	ND
2772-12	MW-40	ND
2772-13	MW-41	ND
2772-14	Sump 40	65.6
2772-15	Sump 45A	ND
2772-16	STF Inflow	0.3
2772-17	STF Outflow	ND
2772-18	Trip Blank	ND

RECEIVED

JUN 1 1990

\* Concentration based on a gasoline standard using the State of California Method.

ND--Not Detected

Reviewed &amp; Approved by:

Rosemary L. Dineen  
 Rosemary L. Dineen  
 Laboratory Director

**MW-15**

Table 4-10. Summary of Detected Constituents in Soil Samples, Site MP-7 (Cont'd.)

Parameter	MP-7I B9828*	MP-7L B9828*	MP-7H B9828*	MP-7T B9699*		MP-7U B0301*	MP-7V B0301*	MP-7M B0301*	MJ-13 B9819*		MJ-15 B9699*		MJ-16 B9828*		MJ-17 B9699*		MJ-17B B0301*	Common Natural Range** (ppm)
	3-5†	11-13†	7-9†	0-2‡	4-6‡	3-5†	5-6†	3-5†	0-1§	4-5§	0-2‡	4-6‡	0-1§	4-5§	1-3‡	5-7‡	3-5†	
<b>Metals</b>																		
Cadmium (0.5)	NA	NA	NA	ND	ND	NA	NA	NA	NA	NA	ND	ND	NA	ND	ND	NA	0.01 - 7	
Chromium (1)	NA	NA	NA	11	14	NA	NA	NA	NA	NA	11	13	18	5	14	20	NA	5 - 200
Lead (2)	NA	NA	NA	89	28	NA	NA	NA	NA	NA	96	48	26	8	27	24	NA	15 - 25
Nickel (1)	NA	NA	NA	15	11	NA	NA	NA	NA	NA	12	13	22	7	14	19	NA	10 - 200
Zinc (1)	NA	NA	NA	76	44	NA	NA	NA	NA	NA	78	79	44	42	37	39	NA	3 - 75
Lead EPOX (0.05)	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	---	
<b>Base/Neutral Extractables</b>																		
Acenaphthene (1)	NA	ND	ND	ND	ND	NA	NA	NA	4	ND	ND	ND	1	ND	ND	ND	NA	
Anthracene (1)	NA	ND	ND	ND	ND	NA	NA	NA	2	ND	ND	ND	3	ND	ND	ND	NA	
Benz(a)anthracene (1)	NA	ND	ND	ND	ND	NA	NA	NA	2	ND	ND	ND	1	ND	ND	ND	NA	
Benz(b)fluoranthene (1)	NA	ND	ND	ND	ND	NA	NA	NA	1	ND	ND	ND	1	ND	ND	ND	NA	
Benz(k)fluoranthene (1)	NA	ND	ND	ND	ND	NA	NA	NA	1	ND	ND	ND	1	ND	ND	ND	NA	
Benz(a)pyrene (1)	NA	ND	ND	ND	ND	NA	NA	NA	1	ND	ND	ND	1	ND	ND	ND	NA	
Benz(g,h,i)perylene (3.0)	NA	ND	ND	ND	ND	NA	NA	NA	ND	ND	ND	ND	2	ND	ND	ND	NA	
Bis(2-ethylhexyl)phthalate (1)	NA	1	1	ND	ND	NA	NA	NA	3	ND	ND	ND	2	ND	ND	ND	NA	
Chrysene (1)	NA	ND	ND	ND	ND	NA	NA	NA	2	ND	ND	ND	3	ND	ND	ND	NA	
Fluoranthene (1)	NA	1	ND	ND	ND	NA	NA	NA	23	2	ND	ND	5	ND	1	ND	NA	
Fluorene (1)	NA	1	ND	ND	ND	NA	NA	NA	4	ND	ND	ND	1	ND	ND	ND	NA	
Naphthalene (1)	NA	ND	ND	ND	ND	NA	NA	NA	2	ND	ND	ND	1	ND	ND	ND	NA	
Phenanthrene (1)	NA	1	ND	ND	ND	NA	NA	NA	6	ND	ND	ND	6	ND	2	ND	NA	
Pyrene (1)	NA	ND	ND	ND	ND	NA	NA	NA	10	5	ND	ND	6	ND	2	ND	NA	
Total BNAs	--	4	1	ND	ND	NA	NA	NA	61	18	ND	ND	33	2	5	ND	NA	
<b>Volatile Organic Compounds (VOCs)</b>																		
Acetone (5.0)	ND	ND	ND	ND	ND	NA	NA	NA	ND	ND	ND	ND	ND	ND	NA	NA		
1,1-Dichloroethane (0.05)	ND	ND	ND	ND	ND	NA	NA	NA	ND	ND	ND	ND	ND	ND	NA	NA		
Trans-1,2-Dichloroethene (0.05)	ND	ND	ND	0.12	0.12	NA	NA	NA	0.08	ND	ND	ND	0.05	ND	NA	NA		
Methylene Chloride (0.05)	ND	ND	ND	0.23	ND	NA	NA	NA	0.07	ND	ND	ND	0.10	ND	0.12	NA		
1,1,1-Trichloroethane (0.05)	ND	ND	ND	ND	ND	NA	NA	NA	ND	ND	ND	ND	0.06	ND	ND	ND		
Toluene (0.05)	ND	0.09	ND	0.06	ND	ND	ND	ND	0.05	ND	ND	ND	0.08	ND	ND	ND		
Xylenes (0.05)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.12	ND	0.23	0.12		
Total VOCs	ND	0.09	ND	0.41	0.12	ND	ND	ND	--	--	0.20	ND	ND	0.12	0.23	0.12	ND	10.0
<b>Oil &amp; Grease (20)</b>	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
<b>Total Petroleum Hydrocarbons (TPHs) (5)</b>	ND	ND	ND	ND	ND	ND	ND	170	498	ND	ND	ND	ND	ND	ND	ND	ND	10.0
<b>PCBs (0.5)</b>	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	

NOTE: All values in parts per million (ppm)  
 ( ) = Detection Limit (ppm)

ND = Not Detected

NA = Not Analyzed

\* = Laboratory Report Number: Analyses by Swanson Environmental, Inc., Brookfield, Wisconsin, AIHA Accreditation #352, WNR Certification #26818170, Appendix C.

\*\* = From Wisconsin Department of Natural Resources (WDNR), 1980

\*\*\* = From Wisconsin Department of Natural Resources (WDNR), April, 1986, Memo to District Directors, "Practices and Standards for the Management of VOC Contaminated Soils," from Paul Didier, File Ref. 4430.

Borehole locations are depicted on Figures 4-5 and 4-6.

State of  
Wisconsin  
Guideline\*\*\*



## ANALYTICAL REPORT

Hydro-Search, Inc.  
 235 Executive Drive, Suite 309  
 Brookfield, WI 53005  
 Attn: Mr. Rick Binder  
 (Project #251E09533)

DATE January 5, 1990  
 PURCHASE ORDER:  
 SEI JOB NO: WL1416  
 DATE COLLECTED: 12/08/89  
 DATE RECEIVED: 12/09/89

## Soil Samples (Chrysler, Kenosha)

Units: mg/kg (ppm)

Detection Limit: 1, unless otherwise noted below in ( )

	<u>SEI ID</u>	1416-1 1-3'	1416-2 5-7'	1416-3 0-2'	1416-4 4-6'	1416-5 0-2'
<u>Parameter</u>	<u>Sample ID</u>	<u>MW171</u>	<u>MW172</u>	<u>MW151</u>	<u>MW152</u>	<u>MP7T1</u>
Cadmium		ND	ND	ND	ND	ND
Chromium		14	20	11	13	11
Lead (2)		27	24	96	48	89
Nickel		14	19	12	13	15
Zinc		37	39	78	79	76
Total PCB's* (0.5)		ND	ND	ND	ND	ND

	<u>SEI ID</u>	1416-5 4-6'
<u>Parameter</u>	<u>Sample ID</u>	<u>MP7T2</u>
Cadmium		ND
Chromium		14
Lead (2)		28
Nickel		11
Zinc		44
Total PCB's* (0.5)		ND

\* Concentration of Total PCB's based on response of Arochlor 1242, 1248, 1254, and 1260.

ND=Not Detected

Reviewed &amp; Approved by:

Rosemary L. Dineen  
 Laboratory Supervisor



## ANALYTICAL REPORT

Hydro-Search, Inc.  
 235 Executive Drive, Suite 309  
 Brookfield, WI 53005  
 Attn: Mr. Rick Binder  
 (Project #251E09533)

DATE January 5, 1990  
 PURCHASE ORDER:  
 SEI JOB NO: WL1416  
 DATE COLLECTED: 12/08/89  
 DATE RECEIVED: 12/09/89

## Soil Samples (Chrysler, Kenosha)

Units: mg/kg (ppm)

Detection Limit: 1, unless otherwise noted below in ( )

	SEI ID	1416-1	1416-2	1416-3	1416-4	1416-5
ACID		1-3'	5-7'	0-2'	4-6'	0-2'
EXTRACTABLES	Sample ID	MW171	MW172	MW151	MW152	MP7T1
4-Chloro-3-methylphenol		ND	ND	ND	ND	ND
2-Chlorophenol		ND	ND	ND	ND	ND
2,4-Dichlorophenol		ND	ND	ND	ND	ND
2,4-Dimethylphenol		ND	ND	ND	ND	ND
2,4-Dinitrophenol (20)		ND	ND	ND	ND	ND
2-Methyl-4,6-dinitrophenol (20)		ND	ND	ND	ND	ND
2-Nitrophenol (2)		ND	ND	ND	ND	ND
4-Nitrophenol (2)		ND	ND	ND	ND	ND
Pentachlorophenol (2)		ND	ND	ND	ND	ND
Phenol		ND	ND	ND	ND	ND
2,4,6-Trichlorophenol		ND	ND	ND	ND	ND

ND--Not Detected

Reviewed &amp; Approved by:

Rosemary L. Dineen  
 Rosemary L. Dineen  
 Laboratory Supervisor

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 facsimile (414) 783-5752



AIHA Accreditation #352  
 WDNR Certification #268181760

## ANALYTICAL REPORT

REPORT NUMBER: B9699

Hydro-Search, Inc.  
 235 Executive Drive, Suite 309  
 Brookfield, WI 53005  
 Attn: Mr. Rick Binder  
 (Project #251E09533)

DATE January 5, 1990  
 PURCHASE ORDER:  
 SEI JOB NO: WL1416  
 DATE COLLECTED: 12/08/89  
 DATE RECEIVED: 12/09/89

## Soil Samples (Chrysler, Kenosha)

Units: mg/kg (ppm)

Detection Limit: 1, unless otherwise noted below in ( )

ACID	SEI ID	1416-6
		4-6'
<u>EXTRACTABLES</u>	<u>Sample ID</u>	<u>MP7T2</u>

4-Chloro-3-methylphenol	ND
2-Chlorophenol	ND
2,4-Dichlorophenol	ND
2,4-Dimethylphenol	ND
2,4-Dinitrophenol (20)	ND
2-Methyl-4,6-dinitrophenol (20)	ND
2-Nitrophenol (2)	ND
4-Nitrophenol (2)	ND
Pentachlorophenol (2)	ND
Phenol	ND
2,4,6-Trichlorophenol	ND

ND--Not Detected

Reviewed &amp; Approved by:

Rosemary L. Dineen  
 Laboratory Supervisor



## ANALYTICAL REPORT

Hydro-Search, Inc.  
 135 Executive Drive, Suite 309  
 Brookfield, WI 53005  
 Attn: Mr. Rick Binder  
 (Project #251E09533)

DATE January 5, 1990  
 PURCHASE ORDER:  
 SEI JOB NO: WL1416  
 DATE COLLECTED: 12/08/89  
 DATE RECEIVED: 12/09/89

Groundwater Samples (Chrysler, Kenosha)

Units: ug/l (ppb)

Detection Limit: 10, unless otherwise noted below in ( )

ACID <u>EXTRACTABLES</u>	SEI ID <u>Sample ID</u>	1416-9 MW-24	1416-10 MP-15H
4-Chloro-3-methylphenol	ND	ND	
2-Chlorophenol	ND	ND	
2,4-Dichlorophenol	ND	ND	
2,4-Dimethyphenol	ND	ND	
2,4-Dinitrophenol (100)	ND	ND	
2-Methyl-4,6-dinitrophenol (100)	ND	ND	
2-Nitrophenol (20)	ND	ND	
4-Nitrophenol (20)	ND	ND	
Pentachlorophenol (20)	ND	ND	
Phenol	ND	ND	
2,4,6-Trichlorophenol	ND	ND	

ND--Not Detected

Reviewed & Approved by:

Rosemary L. Dinsen  
 Laboratory Supervisor



## ANALYTICAL REPORT

Hydro-Search, Inc.  
 235 Executive Drive, Suite 309  
 Brookfield, WI 53005  
 Attn: Mr. Rick Binder  
 (Project #251E09533)

DATE January 5, 1990  
 PURCHASE ORDER:  
 SEI JOB NO: WL1416  
 DATE COLLECTED: 12/08/89  
 DATE RECEIVED: 12/09/89

## Soil Samples (Chrysler, Kenosha)

Units: mg/kg (ppm)

Detection Limit: 1, unless otherwise noted below in ( )

	SEI ID	1416-1	1416-2	1416-3	1416-4	1416-5
BASE/NEUTRAL EXTRACTABLES	Sample ID	1-3'	5-7'	0-2'	4-6'	0-2'
Acenaphthene		ND	ND	ND	ND	ND
Acenaphthylene		ND	ND	ND	ND	ND
Anthracene		ND	ND	ND	ND	ND
Benzidine (10)		ND	ND	ND	ND	ND
Benzo(a)anthracene		ND	ND	ND	ND	ND
Benzo(b)fluoranthene		ND	ND	ND	ND	ND
Benzo(k)fluoranthene		ND	ND	ND	ND	ND
Benzo(a)pyrene		ND	ND	ND	ND	ND
Benzo(ghi)perylene (3)		ND	ND	ND	ND	ND
Benzyl butyl phthalate		ND	ND	ND	ND	ND
Bis(2-chloroethyl)ether		ND	ND	ND	ND	ND
Bis(2-chloroethoxy)methane		ND	ND	ND	ND	ND
Bis(2-chloroisopropyl)ether		ND	ND	ND	ND	ND
Bis(2-ethylhexyl)phthalate		ND	ND	ND	ND	ND
4-Bromophenyl phenyl ether		ND	ND	ND	ND	ND
2-Chloronaphthalene		ND	ND	ND	ND	ND
4-Chlorophenyl phenyl ether		ND	ND	ND	ND	ND
Chrysene		ND	ND	ND	ND	ND
Dibenzo(a,h)anthracene (3)		ND	ND	ND	ND	ND
Di-n-butylphthalate		ND	ND	ND	ND	ND
1,2-Dichlorobenzene		ND	ND	ND	ND	ND
1,3-Dichlorobenzene		ND	ND	ND	ND	ND
1,4-Dichlorobenzene		ND	ND	ND	ND	ND
3,3'-Dichlorobenzidine		ND	ND	ND	ND	ND

ND--Not Detected

Reviewed &amp; Approved by:

Rosemary L. Dineen  
 Laboratory Supervisor



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REPORT NUMBER: 33609

## ANALYTICAL REPORT

Hydro-Search, Inc.  
235 Executive Drive, Suite 309  
Brookfield, WI 53005

Attn: Mr. Rick Binder  
(Project #251E09533)

DATE January 5, 1990  
PURCHASE ORDER:  
SEI JOB NO: WL1416  
DATE COLLECTED: 12/03/89  
DATE RECEIVED: 12/03/89

## Soil Samples (Chrysler, Kenosha)

Units: mg/kg (ppm)

Detection Limit: 1, unless otherwise noted below in ( )

BASE/NEUTRAL <u>EXTRACTABLES</u>	SEI ID <u>Sample ID</u>	1416-1 1-3'	1416-2 5-7'	1416-3 0-2'	1416-4 4-6'	1416-5 0-2'
Diethyl phthalate		ND	ND	ND	ND	ND
Dimethyl phthalate		ND	ND	ND	ND	ND
2,4-Dinitrotoluene (2)		ND	ND	ND	ND	ND
2,6-Dinitrotoluene (2)		ND	ND	ND	ND	ND
Di-n-octylphthalate		ND	ND	ND	ND	ND
Fluoranthene	1	ND	ND	ND	ND	ND
Fluorene		ND	ND	ND	ND	ND
Hexachlorobenzene		ND	ND	ND	ND	ND
Hexachlorbutadiene (2)		ND	ND	ND	ND	ND
Hexachlorocyclopentadiene (10)		ND	ND	ND	ND	ND
Hexachloroethane		ND	ND	ND	ND	ND
Indeno(1,2,3-cd)pyrene (3)		ND	ND	ND	ND	ND
Isophorone		ND	ND	ND	ND	ND
Naphthalene		ND	ND	ND	ND	ND
Nitrobenzene (2)		ND	ND	ND	ND	ND
n-Nitrosodimethylamine (10)		ND	ND	ND	ND	ND
n-Nitrosodi-n-propylamine (10)		ND	ND	ND	ND	ND
n-Nitrosodiphenylamine (5)		ND	ND	ND	ND	ND
Phenanthrene	2	ND	ND	ND	ND	ND
Pyrene	2	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene		ND	ND	ND	ND	ND

ND--Not Detected

Reviewed &amp; Approved by:

Rosemary L. Dineen  
Laboratory Supervisor

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AIHA Accreditation #352  
 WDNR Certification #268181760

REPORT NUMBER: 33599

## ANALYTICAL REPORT

Hydro-Search, Inc.  
 235 Executive Drive, Suite 309  
 Brookfield, WI 53005  
 Attn: Mr. Rick Binder  
 (Project #251E09533)

DATE January 5, 1990  
 PURCHASE ORDER:  
 SEI JOB NO: WL1416  
 DATE COLLECTED: 12/08/89  
 DATE RECEIVED: 12/09/89

## Soil Samples (Chrysler, Kenosha)

Units: mg/kg (ppm)

Detection Limit: 1, unless otherwise noted below in ( )

BASE/NEUTRAL	SEI ID	1416-6
<u>EXTRACTABLES</u>	Sample ID	MP7T2

Acenaphthene	ND
Acenaphthylene	ND
Anthracene	ND
Senzidine (10)	ND
Benzo(a)anthracene	ND
Benzo(b)fluoranthene	ND
Benzo(k)fluoranthene	ND
Benzo(a)pyrene	ND
Benzo(ghi)perylene (3)	ND
Benzyl butyl phthalate	ND
Bis(2-chloroethyl)ether	ND
Bis(2-chloroethoxy)methane	ND
Bis(2-chloroisopropyl)ether	ND
Bis(2-ethylhexyl)phthalate	ND
4-Bromophenyl phenyl ether	ND
2-Chloronaphthalene	ND
4-Chlorophenyl phenyl ether	ND
Chrysene	ND
Dibenzo(a,h)anthracene (3)	ND
Di-n-butylphthalate	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
3,3'-Dichlorobenzidine	ND

ND--Not Detected

Reviewed &amp; Approved by:

Rosemary L. Dineen  
 Laboratory Supervisor



## ANALYTICAL REPORT

Hydro-Search, Inc.  
 235 Executive Drive, Suite 309  
 Brookfield, WI 53005  
 Attn: Mr. Rick Binder  
 (Project #251E09533)

DATE January 5, 1990  
 PURCHASE ORDER:  
 SEI JOB NO: WL1416  
 DATE COLLECTED: 12/09/89  
 DATE RECEIVED: 12/09/89

## Soil Samples (Chrysler, Kenosha)

Units: mg/kg (ppm)

Detection Limit: 1, unless otherwise noted below in ( )

	SEI ID	1416-6
BASE/NEUTRAL		4-6'
<u>EXTRACTABLES</u>	<u>Sample ID</u>	MP7T2

Diethyl phthalate	ND
Dimethyl phthalate	ND
2,4-Dinitrotoluene (2)	ND
2,5-Dinitrotoluene (2)	ND
Di-n-octylphthalate	ND
Fluoranthene	ND
Fluorene	ND
Hexachlorbenzene	ND
Hexachlorbutadiene (2)	ND
Hexachlorcyclopentadiene (10)	ND
Hexachlorcethane	ND
Indeno(1,2,3-cd)pyrene (3)	ND
Isophorone	ND
Naphthalene	ND
Nitrobenzene (2)	ND
n-Nitrosodimethylamine (10)	ND
n-Nitrosodi-n-propylamine (10)	ND
n-Nitrosodiphenylamine (5)	ND
Phenanthrene	ND
Pyrene	ND
1,2,4-Trichlorobenzene	ND

ND--Not Detected

Reviewed &amp; Approved by:

Rosemary L. Dineen  
 Laboratory Supervisor



## ANALYTICAL REPORT

Hydro-Search, Inc.  
 235 Executive Drive, Suite 309  
 Brookfield, WI 53005  
 Attn: Mr. Rick Binder  
 (Project #251E09533)

DATE January 5, 1990  
 PURCHASE ORDER:  
 SEI JOB NO: WL1416  
 DATE COLLECTED: 12/08/89  
 DATE RECEIVED: 12/09/89

## Groundwater Samples (Chrysler, Kenosha)

Units: ug/l (ppb)

Detection Limit: 10, unless otherwise noted below in ( )

<u>BASE/NEUTRAL EXTRACTABLES</u>	<u>SEI ID Sample ID</u>	1416-9 <u>NW-24</u>	1416-10 <u>MP-15H</u>
Acenaphthene		ND	ND
Acenaphthylene		ND	ND
Anthracene		ND	ND
Benzidine (100)		ND	ND
Benzo(a)anthracene		ND	ND
Benzo(b)fluoranthene		ND	ND
Benzo(k)fluoranthene		ND	ND
Benzo(a)pyrene		ND	ND
Benzo(ghi)perylene (30)		ND	ND
Benzyl butyl phthalate		ND	ND
Bis(2-chloroethyl)ether		ND	ND
Bis(2-chloroethoxy)methane		ND	ND
Bis(2-chloroisopropyl)ether		ND	ND
Bis(2-ethylhexyl)phthalate		ND	ND
4-Bromophenyl phenyl ether		ND	ND
2-Chloronaphthalene		ND	ND
4-Chlorophenyl phenyl ether		ND	ND
Chrysene		ND	ND
Dibenzo(a,h)anthracene (30)		ND	ND
Di-n-butylphthalate		ND	ND
1,2-Dichlorobenzene		ND	ND
1,3-Dichlorobenzene		ND	ND
1,4-Dichlorobenzene		ND	ND
3,3'-Dichlorobenzidine		ND	ND

ND--Not Detected

Reviewed &amp; Approved by:

Rosemary L. Dineen  
 Laboratory Supervisor

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AIHA Accreditation #352  
 WDNR Certification #268181760

REPORT NUMBER: 89690

## ANALYTICAL REPORT

Hydro-Search, Inc.  
 235 Executive Drive, Suite 309  
 Brookfield, WI 53005  
 Attn: Mr. Rick Binder  
 (Project #251E09533)

DATE January 5, 1990  
 PURCHASE ORDER:  
 SEI JOB NO: WL1416  
 DATE COLLECTED: 12/08/89  
 DATE RECEIVED: 12/09/89

### Groundwater Samples (Chrysler, Kenosha)

Units: ug/l (ppb)

Detection Limit: 10, unless otherwise noted below in ( )

<u>BASE/NEUTRAL EXTRACTABLES</u>	<u>SEI ID Sample ID</u>	1416-9	1416-10
Diethyl phthalate		ND	ND
Dimethyl phthalate		ND	ND
2,4-Dinitrotoluene (20)		ND	ND
2,6-Dinitrotoluene (20)		ND	ND
Di-n-octylphthalate		ND	ND
Fluoranthene		ND	ND
Fluorene		ND	ND
Hexachlorobenzene		ND	ND
Hexachlorobutadiene (20)		ND	ND
Hexachlorocyclopentadiene (100)		ND	ND
Hexachloroethane		ND	ND
Indeno(1,2,3-cd)pyrene (30)		ND	ND
Isophorone		ND	ND
Naphthalene		ND	ND
Nitrobenzene (20)		ND	ND
n-Nitrosodimethylamine (100)		ND	ND
n-Nitrosodi-n-propylamine (100)		ND	ND
n-Nitroso-dichethylamine (50)		ND	ND
Phenanthrene		ND	ND
Pyrene		ND	ND
1,2,4-Trichlorobenzene		ND	ND

ND--Not Detected

Reviewed & Approved by:

Rosemary L. Dineen  
 Laboratory Supervisor

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AIHA Accreditation #352  
WDNR Certification #268181760

REPCRT NUMBER: B9600

## ANALYTICAL REPORT

Hydro-Search, Inc.  
235 Executive Drive, Suite 309  
Brookfield, WI 53005  
  
Attn: Mr. Rick Binder  
(Project #251E09533)

DATE January 5, 1990  
PURCHASE ORDER:  
SEI JOB NO: WL1416  
DATE COLLECTED: 12/08/89  
DATE RECEIVED: 12/09/89

## Soil Samples (Chrysler, Kenosha)

Units: mg/kg (ppm)  
Detection Limit: 0.05

	SEI ID	1416-1 1-3'	1416-2 5-7'	1416-3 0-2'	1416-4 4-6'	1416-5 0-2'
VOLATILES <u>PURGE &amp; TRAP</u>	Sample ID	MW171	MW172	MW151	MW152	MP771
Acetone		ND	ND	ND	ND	ND
Benzene		ND	ND	ND	ND	ND
Bromomethane		ND	ND	ND	ND	ND
Bromodichloromethane		ND	ND	ND	ND	ND
Bromoform		ND	ND	ND	ND	ND
Carbon tetrachloride		ND	ND	ND	ND	ND
Chlorobenzene		ND	ND	ND	ND	ND
Chloroethane		ND	ND	ND	ND	ND
2-Chloroethylvinylether		ND	ND	ND	ND	ND
Chloroform		ND	ND	ND	ND	ND
Chloromethane		ND	ND	ND	ND	ND
Dibromochloromethane		ND	ND	ND	ND	ND
1,2-Dichlorobenzene		ND	ND	ND	ND	ND
1,3-Dichlorobenzene		ND	ND	ND	ND	ND
1,4-Dichlorobenzene		ND	ND	ND	ND	ND
1,1-Dichloroethane		ND	ND	ND	ND	ND
1,2-Dichloroethane		ND	ND	ND	ND	ND
1,1-Dichloroethene		ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	0.05	ND	0.03	ND	0.12	
1,2-Dichloropropane		ND	ND	ND	ND	ND
cis-1,3-Dichloropropene		ND	ND	ND	ND	ND
trans-1,3-Dichloropropene		ND	ND	ND	ND	ND
Ethylbenzene		ND	ND	ND	ND	ND

ND--Not Detected

Reviewed &amp; Approved by:

Rosemary L. Dineen  
Laboratory Supervisor



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AIHA Accreditation #352  
WDNR Certification #268181760

REPORT NUMBER: B0839

## ANALYTICAL REPORT

Hydro-Search, Inc.  
235 Executive Drive, Suite 309  
Brookfield, WI 53005  
  
Attn: Mr. Rick Binder  
(Project #251E09533)

DATE January 5, 1990  
PURCHASE ORDER:  
SEI JOB NO: WL1416  
DATE COLLECTED: 12/08/89  
DATE RECEIVED: 12/09/89

Soil Samples (Chrysler, Kenosha)

Units: mg/kg (ppm)

Detection Limit: 0.05, unless otherwise noted below in ( )

	SEI ID	1416-1 1-3'	1416-2 5-7'	1416-3 0-2'	1416-4 4-6'	1416-5 0-2'
VOLATILES <u>PURGE &amp; TRAP</u>	<u>Sample ID</u>	<u>MW171</u>	<u>MW172</u>	<u>MW151</u>	<u>MW152</u>	<u>MP7T1</u>
Methylene chloride	0.10	0.12	0.07	ND	0.23	
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	ND	
Tetrachloroethene	ND	ND	ND	ND	ND	
Toluene	0.08	ND	0.05	ND	0.06	
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	
Trichloroethene	ND	ND	ND	ND	ND	
Trichlorofluoromethane	ND	ND	ND	ND	ND	
Vinyl chloride	ND	ND	ND	ND	ND	
Xylenes	ND	ND	ND	ND	ND	
Total Petroleum Hydrocarbons (5)	ND	ND	ND	ND	ND	

ND--Not Detected

Reviewed & Approved by:

Rosemary L. Dineen  
Laboratory Supervisor



## ANALYTICAL REPORT

Hydro-Search, Inc.  
 235 Executive Drive, Suite 309  
 Brookfield, WI 53005

Attn: Mr. Rick Binder  
 Project #26E09532

DATE January 23, 1990  
 PURCHASE ORDER:  
 SEI JOS NO: WL1690  
 DATE COLLECTED: 12/28/89  
 DATE RECEIVED: 12/29/89

## Groundwater Samples (Chrysler, Kenosha)

Units: mg/l (ppm)

Detection Limit: Notes below in ( )

<u>Parameter</u>	<u>SEI ID</u>	<u>1590-1</u> <u>MW-13</u>	<u>1590-4</u> <u>MW-15</u>	<u>1590-5</u> <u>MW-16</u>	<u>1590-6</u> <u>MW-16A</u>	<u>1590-7</u> <u>MW-17</u>
<b>Soluble</b>						
Cadmium (0.0002)		ND	ND	0.0002	0.0003	0.0003
Chromium (0.001)		0.006	ND	0.001	ND	ND
Lead (0.001)		ND	ND	ND	ND	ND
Nickel (0.02)		ND	ND	ND	ND	ND
Zinc (0.02)		ND	0.03	0.12	ND	ND
Cyanide (0.005)	--	ND	0.517	0.083	0.005	
Phenolics (0.005)	--	ND	ND	ND	ND	ND
Total PCB's*, mg/l (0.5)	--	ND	ND	ND	ND	ND

\* Concentration of Total PCB's based on response of Arochlor 1242, 1248, 1254, and 1260.

ND--Not Detected

Reviewed &amp; Approved by:

Rosemary L. Dineen  
 Laboratory Supervisor



## ANALYTICAL REPORT

Hydro-Search, Inc.  
235 Executive Drive, Suite 300  
Brookfield, WI 53005

Attn: Mr. Rick Binder  
Project #25E09533

DATE January 29, 1990  
PURCHASE ORDER:  
SEI JOB NO: WI1590  
DATE COLLECTED: 12/26/89  
DATE RECEIVED: 12/29/89

## Groundwater Samples (Chrysler, Kenosha)

Units: ug/l (ppb)

Detection limit: 10, unless otherwise noted below in ( )

ACID EXTRACTABLES	SEI ID <u>Sample ID</u>	1590-1 <u>MW-13</u>	1590-4 <u>MW-15</u>	1590-5 <u>MW-16</u>	1590-6 <u>MW-16A</u>	1590-7 <u>MW-17</u>
4-Chloro-3-methylphenol		ND	ND	ND	ND	ND
2-Chlorophenol		ND	ND	ND	ND	ND
2,4-Dichlorophenol		ND	ND	ND	ND	ND
2,4-Dimethylphenol		ND	ND	ND	ND	ND
2,4-Dinitrophenol (100)		ND	ND	ND	ND	ND
2-Methyl-4,6-dinitrophenol (100)		ND	ND	ND	ND	ND
2-Nitrophenol (20)		ND	ND	ND	ND	ND
4-Nitrophenol (20)		ND	ND	ND	ND	ND
Pentachlorophenol (20)		ND	ND	ND	ND	ND
Phenol		ND	ND	ND	ND	ND
2,4,6-Trichlorophenol		ND	ND	ND	ND	ND

ND--Not Detected

Reviewed &amp; Approved by:

Rosemary L. Dineen  
Laboratory Supervisor



## ANALYTICAL REPORT

Hydro-Search, Inc.  
 235 Executive Drive, Suite 300  
 Brookfield, WI 53005

Attn: Mr. Rick Binder  
 Project #26E09533

DATE January 26, 1990  
 PURCHASE ORDER:  
 SEI JCB NO: WL1590  
 DATE COLLECTED: 12/26/89  
 DATE RECEIVED: 12/29/89

## Groundwater Samples (Chrysler, Kenosha)

(Units: ug/L (ppb))

Detection Limit: 10, unless otherwise noted below in ( )

BASE/NEUTRAL EXTRACTABLES	SEI ID Sample ID	1590-1 MW-13	1590-4 MW-15	1590-5 MW-15	1590-6 MW-16A	1590-7 MW-17
Acenaphthene		ND	ND	ND	ND	ND
Acenaphthylene		ND	ND	ND	ND	ND
Anthracene		ND	ND	ND	ND	ND
Benzidine (100)		ND	ND	ND	ND	ND
Benzo(a)anthracene		ND	ND	ND	ND	ND
Benzo(b)fluoranthene		ND	ND	ND	ND	ND
Benzo(k)fluoranthene		ND	ND	ND	ND	ND
Benzo(a)pyrene		ND	ND	ND	ND	ND
Benzo(ghi)perylene (30)		ND	ND	ND	ND	ND
Benzyl butyl phthalate		ND	ND	ND	ND	ND
Bis(2-chloroethyl)ether		ND	ND	ND	ND	ND
Bis(2-chloroethyl)methane		ND	ND	ND	ND	ND
Bis(2-chloroisopropyl)ether		ND	ND	ND	ND	ND
Bis(2-ethylhexyl)phthalate		ND	ND	ND	ND	ND
4-Bromophenyl phenyl ether		ND	ND	ND	ND	ND
2-Chloronaphthalene		ND	ND	ND	ND	ND
4-Chlorophenyl phenyl ether		ND	ND	ND	ND	ND
Chrysene		ND	ND	ND	ND	ND
Dibenzo(a,h)anthracene (30)		ND	ND	ND	ND	ND
Di-n-butylphthalate		ND	ND	ND	ND	ND
1,2-Dichlorobenzene		ND	ND	ND	ND	ND
1,3-Dichlorobenzene		ND	ND	ND	ND	ND
1,4-Dichlorobenzene		ND	ND	ND	ND	ND
3,3'-Dichlorobenzidine		ND	ND	ND	ND	ND

ND--Not Detected

Reviewed &amp; Approved by:

Rosemary E. Dineen  
 Laboratory Supervisor



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AIHA Accreditation #352  
WDNR Certification #268181760

REPORT NUMBER: 80041

## ANALYTICAL REPORT

Hydro-Search, Inc.  
235 Executive Drive, Suite 309  
Brookfield, WI 53005

To: Mr. Rick Binder  
Project #05EC09533

DATE: January 23, 1990  
PURCHASE ORDER:  
SEI JOB NO: WL1590  
DATE COLLECTED: 12/28/89  
DATE RECEIVED: 12/29/89

### Groundwater Samples (Chrysler, Kenosha)

Units: ug/L (ppb)

Detection Limit: 10, unless otherwise noted below in ( )

BASE/NEUTRAL EXTRACTABLES	SEI ID Sample ID	1590-1 MW-13	1590-4 MW-15	1590-5 MW-16	1590-6 MW-16A	1590-7 MW-17
Diethyl phthalate		ND	ND	ND	ND	ND
Dimethyl phthalate		ND	ND	ND	ND	ND
2,4-Dinitrotoluene (20)		ND	ND	ND	ND	ND
2,6-Dinitrotoluene (20)		ND	ND	ND	ND	ND
Di-n-octylphthalate		ND	ND	ND	ND	ND
Fluoranthene		ND	ND	ND	ND	ND
Fluorene		ND	ND	ND	ND	ND
Hexachlorobenzene		ND	ND	ND	ND	ND
Hexachlorobutadiene (20)		ND	ND	ND	ND	ND
Hexachlorocyclopentadiene (100)		ND	ND	ND	ND	ND
Hexachloroethane		ND	ND	ND	ND	ND
Indeno(1,2,3-cd)syrene (30)		ND	ND	ND	ND	ND
Isophorone		ND	ND	ND	ND	ND
Naphthalene		ND	ND	ND	ND	ND
Nitrobenzene (20)		ND	ND	ND	ND	ND
n-Nitrosodimethylamine (100)		ND	ND	ND	ND	ND
n-Nitrosodi-n-propylamine (100)		ND	ND	ND	ND	ND
n-Nitrosodiphenylamine (50)		ND	ND	ND	ND	ND
Phenanthrene		ND	ND	ND	ND	ND
Pyrene		ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene		ND	ND	ND	ND	ND

ND--Not Detected

Reviewed & Approved by:

Rosemary L. Dineen  
Laboratory Supervisor

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AIHA Accreditation #352  
 WDNR Certification #268181760

REPORT NUMBER: 30041

## ANALYTICAL REPORT

Hydro-Search, Inc.  
 235 Executive Drive, Suite 309  
 Brookfield, WI 53005

Attn: Mr. Rick Binder  
 Project #26E09533

DATE January 23, 1990  
 PURCHASE ORDER:  
 SEI JOB NO: WL1590  
 DATE COLLECTED: 12/29/89  
 DATE RECEIVED: 12/29/89

Groundwater Samples (Chrysler, Kenosha)

Units:  $\mu\text{g/l}$  (ppb)

Detection Limit: 1, unless otherwise noted below in ( )

<u>Parameter</u>	<u>SEI ID</u>	1590-2	1590-3
	<u>Sample ID</u>	MW-14	Trip Blank
Benzene		ND	ND
Ethylbenzene		ND	ND
Toluene		ND	ND
Xylenes		ND	ND
Total Petroleum		ND	ND
Hydrocarbons, $\mu\text{g/l}$ (0.2)			

ND--Not Detected

Reviewed &amp; Approved by:

Rosemary L. Dineen  
 Laboratory Supervisor



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AIHA Accreditation #352  
WDNR Certification #268181760

## ANALYTICAL REPORT

REPORT NUMBER: ECO41

Ryco-Seiner, Inc.  
235 Executive Drive, Suite 309  
Brookfield, WI 53005

Attn: Mr. Rick Binder  
Project #25E09533

DATE January 23, 1990  
PURCHASE ORDER:  
SEI JOB NO: WL1590  
DATE COLLECTED: 12/28/89  
DATE RECEIVED: 12/29/89

## Groundwater Samples (Chrysler, Kenosha)

Units: ug/l (ppb)

Detection Limit: 1, unless otherwise noted below in ( )

VOLATILES <u>PURGE &amp; TRAP</u>	SEI ID <u>Sample ID</u>	1590-1 <u>MW-13</u>	1590-4 <u>MW-15</u>	1590-5 <u>MW-16</u>	1590-6 <u>MW-16A</u>	1590-7 <u>MW-17</u>
Acetone (50)		--	ND	ND	ND	ND
Benzene		ND	ND	ND	ND	ND
Bromodichloromethane (2)		ND	ND	ND	ND	ND
Bromoform (2)		ND	ND	ND	ND	ND
Bromomethane (10)		ND	ND	ND	ND	ND
Carbon tetrachloride		ND	ND	ND	ND	ND
Chlorobenzene		ND	ND	ND	ND	ND
Chloroethane		ND	ND	ND	ND	ND
2-Chloroethylvinyl ether (4)		ND	ND	ND	ND	ND
Chloroform		ND	ND	ND	1	ND
Chlormethane (10)		ND	ND	ND	ND	ND
Dibromochloromethane (2)		ND	ND	ND	ND	ND
1,2-Dichlorobenzene (2)		ND	ND	ND	ND	ND
1,3-Dichlorobenzene (2)		ND	ND	ND	ND	ND
1,4-Dichlorobenzene (2)		ND	ND	ND	ND	ND
Dichlorodifluoromethane		ND	ND	ND	ND	ND
1,1-Dichloroethane	8	ND	8	8	8	ND
1,2-Dichloroethane		ND	ND	ND	ND	ND
1,1-Dichloroethane		ND	ND	ND	ND	ND
trans-1,2-Dichloroethane		ND	ND	ND	ND	ND
1,2-Dichloropropane		ND	ND	ND	ND	ND
cis-1,3-Dichloropropene (2)		ND	ND	ND	ND	ND
trans-1,3-Dichloropropene (2)		ND	ND	ND	ND	ND
Ethylbenzene		ND	ND	ND	ND	ND

ND--Not Detected

Reviewed &amp; Approved by:

Rosemary L. Dineen  
Laboratory Supervisor



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AIHA Accreditation #352  
WDNR Certification #268181760

REPORT NUMBER: B0041

## ANALYTICAL REPORT

Hydro-Search, Inc.  
235 Executive Drive, Suite 306  
Brookfield, WI 53005

DATE January 23, 1990  
PURCHASE ORDER:  
SEI JOB NO: WL1590  
DATE COLLECTED: 12/28/89  
DATE RECEIVED: 12/29/89

Attn: Mr. Rick Binder  
Project #25E09888

### Groundwater Samples (Chrysler, Kenosha)

Units: ug/l (ppb)

Detection Limit: 1, unless otherwise noted below in ( )

VOLATILES PURGE & TRAP	SEI ID Sample ID	1590-1 MW-13	1590-4 MW-15	1590-5 MW-16	1590-6 MW-16A	1590-7 MW-17
Methylene chloride	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane (3)	ND	ND	ND	ND	ND	ND
Tetrachloroethene	ND	ND	ND	ND	ND	ND
Toluene	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND
Trichloroethene	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	ND	ND	ND	ND	ND	ND
Vinyl chloride (10)	ND	ND	ND	ND	ND	ND
Xylenes	ND	ND	ND	ND	ND	ND

ND--Not Detected

Reviewed & Approved by:

Rosemary L. Dineen  
Laboratory Supervisor

**MW-24A**

Table 4-24 Summary of Detected Constituents in Soil Samples, Site MP-14

Parameters	MP-14A1 B9671*	MP-14A2 B9671*	MP-14B1 B9674*	MP-14B2 B9674*	MP-14C1 B9674*	MP-14C2 B9674*	MP-14D1 B9674*	MP-14D2 B9674*	MP-14E1 B9674*	MP-14E2 B9674*	MP-14F1 B9671*	MP-14F2 B9671*	MP-14G1 B9671*	MP-14G2 B9671* (MW-24A)	MP-14H1 B9671* (MW-24A)	MP-14H2 B9671* (MW-24A)	MP-14I1 B9671*	MP-14I2 B9671*	Common Natural Range** (ppm)
	0-2†	4-6†	0-2†	4-6†	0-2†	4-6†	0-2†	4-6†	0-2†	4-6†	0-2†	4-6†	0-2†	4-6†	0-2†	4-6†	0-2†	4-6†	
<u>Metals</u>																			
Cadmium (0.5)	ND	12	ND	ND	ND	ND	0.01 - 0.7												
Chromium (1)	10	37	24	21	2	20	18	21	14	15	22	9	19	15	32	18	14	5 - 200	
Lead (2)	25	48	635	203	19	20	24	24	43	18	51	15	86	19	56	25	21	15 - 25	
Nickel (1)	8	38	37	31	ND	24	16	25	ND	19	25	16	16	17	36	21	11	10 - 200	
Zinc (1)	66	287	303	134	64	40	37	41	58	35	50	37	91	39	72	46	36	3 - 75	
<u>Benzene/Neutral Extractables</u>																			
Benzo(a)anthracene (1)	ND	ND	ND	ND	ND														
Benzo(b)fluoranthene (1)	ND	ND	ND	ND	ND														
Benzo(k)fluoranthene (1)	ND	ND	ND	ND	ND														
Benzo(a)pyrene (1)	ND	ND	ND	ND	ND														
Benzo(g,h,i)perylene (1)	ND	ND	ND	ND	ND														
Bis(2-ethylhexyl)phthalate (1)	ND	ND	2.5	ND	5.5	3.9	6.3	ND	ND	7.1	ND	ND	ND	ND	ND	5.1	ND	ND	
Chrysene (1)	ND	ND	ND	ND	ND														
Fluoranthene (1)	ND	ND	1.4	1.1	ND														
Indeno(1,2,3-cd)pyrene (1)	ND	ND	ND	ND	ND														
Phenanthrene (1)	ND	ND	ND	ND	2.3														
Pyrene (1)	ND	ND	ND	ND	1.2														
Total BNAs	ND	ND	2.5	ND	5.5	3.9	6.3	ND	ND	7.1	ND	ND	32.9	ND	ND	5.1	3.5	5.6	
<u>Volatile Organic Compounds (VOCs)</u>																			
Chloroform (0.05)	ND	ND	0.15	0.26	0.23	0.10	0.23	0.07	ND	0.12	ND	ND	ND	ND	ND	ND	ND	ND	
Ethylbenzene (0.05)	ND	ND	0.23	ND	ND	ND	ND	0.09											
Methylene chloride (0.05)	ND	ND	0.33	0.09	ND	0.07	ND	0.10	ND	0.17	ND	0.08	0.05	0.07	0.06	0.07	ND	State of Wisconsin Guideline***	
1,1,1-trichloroethane (0.05)	ND	ND	0.05	ND	ND	ND	ND	ND	ND	0.09	ND	ND	ND	ND	ND	ND	ND	ND	
Trichloroethene (0.05)	ND	ND	0.09	ND	ND	ND	ND	ND	ND	0.06	ND	ND	ND	ND	ND	ND	ND	ND	
Toluene (0.05)	ND	ND	0.08	ND	ND	ND	ND	ND											
Xylenes (0.05)	ND	ND	1.42	ND	ND	ND	ND	ND											
Total VOCs	ND	ND	2.35	0.35	0.23	0.17	0.23	0.17	ND	0.44	ND	0.08	0.05	0.07	0.06	0.07	ND	0.09	
Total Petroleum Hydrocarbons (TPHs) (5)	ND	ND	32	ND	ND	ND	ND	10.0											
PCBs (0.5)	ND	ND	ND	ND															

NOTE: All values in parts per million (ppm)  
 (\*) = Detection Limit (ppm)

ND = Not Detected

NA = Not Analyzed

\* = Laboratory Report Number; Analyses by Swanson Environmental, Inc., Brookfield, Wisconsin, AIHA Accreditation #352, WDNR Certification #26818170, Appendix C.

\*\* = From Wisconsin Department of Natural Resources (WDNR), 1980

\*\*\* = From Wisconsin Department of Natural Resources (WDNR), April, 1986, Memo to District Directors, "Practices and Standards for the Management of VOC Contaminated Soils," from Paul Oldier, File Ref. 4430.

Borehole locations are depicted on Figure 4-11.



## ANALYTICAL REPORT

REPORT NUMBER: 89671

Hydro-Search, Inc.  
 235 Executive Drive, Suite 309  
 Brookfield, WI 53005  
 Attn: Mr. Rick Binder  
 (Project 251E09533)

DATE: December 7, 1989  
 PURCHASE ORDER:  
 SEI JOB NO: WL1209  
 DATE COLLECTED: 11/14/89  
 DATE RECEIVED: 11/16/89

## Soil Samples (Chrysler, Kenosha)

Units: mg/kg (ppm)

Detection Limit: 1, unless otherwise noted below in ( )

	<u>Parameter</u>	<u>SEI ID</u>	1209-6 0-2'	1209-7 4-6'	1209-8 2-4'	1209-9 4-6'	1209-10 2-4'
	<u>Parameter</u>	<u>Sample ID</u>	<u>MP-14A1</u>	<u>MP-14A2</u>	<u>MP-14F1</u>	<u>MP-14F2</u>	<u>MP-14G1</u>
Total							
Cadmium			ND	12	ND	ND	ND
Chromium			10	37	22	9	19
Lead (2)			25	48	51	15	36
Nickel			8	38	25	16	16
Zinc			66	287	50	37	91
Total PCB's* (1.0)			ND	ND	ND	ND	ND
	<u>Parameter</u>	<u>SEI ID</u>	1209-11 4-6'	1209-12 2-4'	1209-13 4-6'	1209-14 0-2'	1209-15 4-6'
			<u>MP-14G2</u>	<u>MP-14H1</u>	<u>MP-14H2</u>	<u>MP-14I1</u>	<u>MP-14I2</u>
Total			MW-24A	MW-24A	MW-24A		
Cadmium			ND	ND	ND	ND	ND
Chromium			15	32	18	14	17
Lead (2)			19	56	25	21	26
Nickel			17	36	21	11	23
Zinc			39	72	46	36	43
Total PCB's* (1.0)			ND	ND	ND	ND	ND

Concentration of Total PCB's based on response of Arochlor 1242, 1248, 1254, and 1260.

---Not Detected

Reviewed &amp; Approved by:

Rosemary L. Dineen  
 Laboratory Supervisor



## ANALYTICAL REPORT

Hydro-Search, Inc.  
135 Executive Drive, Suite 309  
Brookfield, WI 53005  
Attn: Mr. Rick Binder  
(Project 251E09533)

DATE: December 7, 1989  
PURCHASE ORDER:  
SEI JOB NO: WL1209  
DATE COLLECTED: 11/14/89  
DATE RECEIVED: 11/16/89

## Soil Samples (Chrysler, Kenosha)

Units: mg/kg (ppm)

Detection Limit: 0.05, unless otherwise noted below in ( )

	SEI ID	1209-11 4-6'	1209-12 2-4'	1209-13 4-6'	1209-14 0-2'	1209-15 4-6'
VOLATILES	Sample ID	MP-14G2	MP-14H1	MP-14H2	MP-14I1	MP-14I2
Acetone (5.0)		ND	ND	ND	ND	ND
Benzene		ND	ND	ND	ND	ND
Bromomethane		ND	ND	ND	ND	ND
Bromodichloromethane		ND	ND	ND	ND	ND
Bromoform		ND	ND	ND	ND	ND
Carbon tetrachloride		ND	ND	ND	ND	ND
Chlorobenzene		ND	ND	ND	ND	ND
Chloroethane		ND	ND	ND	ND	ND
1-Chloroethylvinylether		ND	ND	ND	ND	ND
Chloroform		ND	ND	ND	ND	ND
Chloromethane		ND	ND	ND	ND	ND
Dibromochloromethane		ND	ND	ND	ND	ND
1,2-Dichlorobenzene		ND	ND	ND	ND	ND
1,3-Dichlorobenzene		ND	ND	ND	ND	ND
1,4-Dichlorobenzene		ND	ND	ND	ND	ND
1,1-Dichloroethane		ND	ND	ND	ND	ND
1,2-Dichloroethane		ND	ND	ND	ND	ND
1,1-Dichloroethane		ND	ND	ND	ND	ND
trans-1,3-Dichloroethene		ND	ND	ND	ND	ND
1,2-Dichloropropane		ND	ND	ND	ND	ND
cis-1,3-Dichloropropene		ND	ND	ND	ND	ND
trans-1,3-Dichloropropene		ND	ND	ND	ND	ND
Chylbenzene		ND	ND	ND	ND	ND

ND=Not Detected

Reviewed &amp; Approved by:

*Rosemary L. Dineen*  
Rosemary L. Dineen  
Laboratory Supervisor



3150 North Brookfield Road  
Brookfield, Wisconsin 53005  
telephone (414) 783-6111  
facsimile (414) 783-5752

REPORT NUMBER: B9671

## ANALYTICAL REPORT

Hydro-Search, Inc.  
235 Executive Drive, Suite 309  
Brookfield, WI 53005

Attn: Mr. Rick Binder  
(Project 251E09533)

DATE: December 7, 1989  
PURCHASE ORDER:  
SEI JOB NO: WL1209  
DATE COLLECTED: 11/14/89  
DATE RECEIVED: 11/16/89

## Soil Samples (Chrysler, Kenosha)

Units: mg/kg (ppm)

Detection Limit: 0.05, unless otherwise noted below in ( )

	SEI ID	1209-11	1209-12	1209-13	1209-14	1209-15
VOLATILES		4-6'	2-4'	4-6'	0-2'	4-6'
PURGE & TRAP	Sample ID	MP-14G2	MP-14H1	MP-14H2	MP-14I1	MP-14I2
Methylene chloride		0.07	0.06	0.07	ND	0.09
1,1,2,2-Tetrachloroethane		ND	ND	ND	ND	ND
Tetrachloroethene		ND	ND	ND	ND	ND
Toluene		ND	ND	ND	ND	ND
1,1,1-Trichloroethane		ND	ND	ND	ND	ND
1,1,2-Trichloroethane		ND	ND	ND	ND	ND
Trichloroethene		ND	ND	ND	ND	ND
Trichlorofluoromethane		ND	ND	ND	ND	ND
Vinyl chloride		ND	ND	ND	ND	ND
Xylenes		ND	ND	ND	ND	ND
Total Petroleum Hydrocarbons (5)		ND	ND	ND	ND	ND

ND--Not Detected

Reviewed &amp; Approved by:

Rosemary L. Dineen  
Laboratory Supervisor



North Brookfield Road  
Brookfield, Wisconsin 53005  
Phone (414) 783-6111  
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AIHA Accreditation #352  
WDNR Certification #268181760

REPORT NUMBER: B9699

## ANALYTICAL REPORT

Ac-Search, Inc.  
Executive Drive, Suite 309  
Brookfield, WI 53005  
Mr. Rick Binder  
(Project #251E09533)

DATE January 5, 1990  
PURCHASE ORDER:  
SEI JOB NO: WL1416  
DATE COLLECTED: 12/08/89  
DATE RECEIVED: 12/09/89

Underwater Samples (Chrysler, Kenosha)

s: ug/l (ppb)

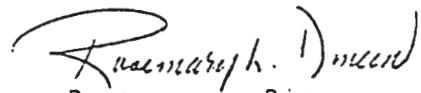
Detection Limit: 1, unless otherwise noted below in ( )

<u>FILES</u>	<u>SEI ID</u>	1416-12
<u>DE &amp; TRAP</u>	<u>Sample ID</u>	MP-14H
		MW-24A

methane	ND
methane (10)	ND
1,1-dichloromethane (2)	ND
proform (2)	ND
benzene tetrachloride	ND
arobenzene	ND
ethane	ND
chloroethylvinylether (4)	ND
proform	ND
bromomethane (10)	ND
1,1-dichloromethane (2)	ND
-Dichlorobenzene (2)	ND
-Dichlorobenzene (2)	ND
-Dichloroethane	ND
-Dichloroethane	ND
-Dichloroethene	ND
trans-1,2-Dichloroethene	ND
-Dichloropropene	ND
trans-1,3-Dichloropropene (2)	ND
trans-1,3-Dichloropropene (2)	ND
benzene	ND

Not Detected

Reviewed & Approved by:

  
 Rosemary L. Dineen  
 Laboratory Supervisor

50 North Brookfield Road  
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Phone (414) 783-6111  
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AIHA Accreditation #352  
WDNR Certification #268181760

REPORT NUMBER: B9699

## ANALYTICAL REPORT

dro-Search, Inc.  
5 Executive Drive, Suite 309  
Brookfield, WI 53005  
Attn: Mr. Rick Binder  
(Project #251E09533)

DATE January 5, 1990  
PURCHASE ORDER:  
SEI JOB NO: WL1416  
DATE COLLECTED: 12/08/89  
DATE RECEIVED: 12/09/89

Groundwater Samples (Chrysler, Kenosha)

Units: ug/l (ppb)

Detection Limit: 1, unless otherwise noted below in ( )

<u>SOLATIVES</u>	<u>SEI ID</u>	1416-12
<u>GAGE &amp; TRAP</u>	<u>Sample ID</u>	MP-14H
		MW-24A

Ethylene chloride	ND
1,1,2,2-Tetrachloroethane (3)	ND
Tetrachloroethene	ND
oluene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
1,1-Dilorocethene	ND
Trichlorofluoromethane	ND
vinyl chloride (10)	ND
lenes	ND

Not Detected

Reviewed &amp; Approved by:

Rosemary L. Dineen  
Laboratory Supervisor



## ANALYTICAL REPORT

Hydro-Search, Inc.  
 35 Executive Drive, Suite 309  
 Brookfield, WI 53005  
 Attn: Mr. Rick Binder  
 (Project 251E09533)

DATE: December 7, 1989  
 PURCHASE ORDER:  
 SEI JOB NO: WL1209  
 DATE COLLECTED: 11/14/89  
 DATE RECEIVED: 11/16/89

## Oil Samples (Chrysler, Kenosha)

Units: mg/kg (ppm)

Detection Limit: 2, unless otherwise noted below in ( )

CID TRACTABLES	Sample ID	SEI ID	1209-11	1209-12	1209-13	1209-14	1209-15
			4-6'	2-4'	4-6'	0-2'	4-6'
-Chloro-3-methylphenol		MP-14G2	ND	ND	ND	ND	ND
-Chlorophenol			ND	ND	ND	ND	ND
,4-Dichlorophenol			ND	ND	ND	ND	ND
,4-Dimethylphenol			ND	ND	ND	ND	ND
,4-Dinitrophenol (20)			ND	ND	ND	ND	ND
-Methyl-4,6-dinitrophenol		MW-24A	ND	ND	ND	ND	ND
)							
-Nitrophenol			ND	ND	ND	ND	ND
-Nitrophenol			ND	ND	ND	ND	ND
pentachlorophenol			ND	ND	ND	ND	ND
phenol			ND	ND	ND	ND	ND
,4,6-Trichlorophenol			ND	ND	ND	ND	ND

ND--Not Detected

Reviewed &amp; Approved by:

Rosemary L. Dineen  
 Laboratory Supervisor



## ANALYTICAL REPORT

REPORT NUMBER: 89699

Hydro-Search, Inc.  
 235 Executive Drive, Suite 309  
 Brookfield, WI 53005  
 Attn: Mr. Rick Binder  
 (Project #251EO9533)

DATE January 5, 1990  
 PURCHASE ORDER:  
 SEI JOB NO: WL1416  
 DATE COLLECTED: 12/08/89  
 DATE RECEIVED: 12/09/89

## Groundwater Samples (Chrysler, Kenosha)

Units: mg/l (ppm)

Detection Limit: Noted below in ( )

	<u>SEI ID</u>	1416-7 17'	1416-8 17'
<u>Parameter</u>	<u>Sample ID</u>	MP2E	MP2P
Organic Lead		*	*

	<u>SEI ID</u>	1416-9 MW-24	1416-10 MP-15H	1416-12 MP-14H MW-24A
<u>Parameter</u>	<u>Sample ID</u>			
Soluble				
Cadmium (0.0002)		ND	ND	ND
Chromium (0.001)		ND	0.001	ND
Lead (0.001)		0.004	0.003	0.004
Nickel (0.02)		0.03	0.02	ND
Zinc (0.02)		ND	0.05	ND
Cyanides, Total (0.005)		ND	ND	--
Phenols (0.002)		0.029	0.025	--
Total PCB's***, ug/l (0.5)		8.0	ND	--

\* Insufficient sample

\*\* Concentration of Total PCB's based on response of Arochlor 1242, 1248, 1254, and 1260.

ND=Not Detected

Reviewed &amp; Approved by:

Rosemary L. Dineen  
 Laboratory Supervisor

Table 4-26. Summary of Detected Constituents in Ground Water Samples, Site MP-14

Parameter	MP-14 API B9671*	MW-24A B9699*	NR140**	
			Enforcement Standard	PAL
<u>Soluble Metals</u> Lead (0.001)	ND	0.004	0.050	0.005

Note: All values in parts per million (ppm)

( ) = Detection Limit (ppm)

ND = Not Detected

\* Laboratory Report Number; Analyses by Swanson Environmental, Inc., Brookfield Wisconsin, AIHA Accreditation #352, WOHR Certification #26818170, Appendix C.

\*\* Per Chapter NR140 of the Wisconsin Administrative Code

PAL Preventive Action Limit

Monitor well locations are depicted on Figure 4-11.



## ANALYTICAL REPORT

REPORT NUMBER: 89633

Hydro-Search, Inc.  
 235 Executive Drive, Suite 300  
 Brookfield, WI 53005  
 Attn: Mr. Rick Binder  
 (Project #261EC09533)

DATE January 5, 1990  
 PURCHASE ORDER:  
 SEI JOS NO: NL1416  
 DATE COLLECTED: 12/03/89  
 DATE RECEIVED: 12/09/89

## Groundwater Samples (Chrysler, Kenosha)

Units: mg/l (ppm)  
 Detection Limit: Noted below in ( )

	<u>SEI-ID</u>	1416-7	1416-8
<u>Parameter</u>	<u>Sample ID</u>	17'	17'

Organic Lead	*	*
--------------	---	---

	<u>SEI ID</u>	1416-9	1416-10	1416-12
<u>Parameter</u>	<u>Sample ID</u>	MW-24	MW-15H	MW-14H

## Soluble

Cadmium (0.0002)	ND	ND	ND
Chromium (0.001)	ND	0.001	ND
Lead (0.001)	0.004	0.003	0.004
Nickel (0.02)	0.03	0.02	ND
Zinc (0.02)	ND	0.05	ND

Cyanides, Total (0.005)	ND	ND	--
Phenols (0.002)	0.009	0.005	--

Total PCB's**, ug/l (0.5)	8.0	ND	--
---------------------------	-----	----	----

\* Insufficient sample

\*\* Concentration of Total PCB's based on response of Arochlor 1042, 1248, 1264, and 1260.

ND--Not Detected

Reviewed & Approved by:

Rosemary L. Dineen  
 Laboratory Supervisor