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Chrysler Corporation
Featherstone Road Center

JUL 5 1995

Pollution Prevention
& Remediation

July 5, 1995

Ms. Pamela A. Mylotta
Environmental Repair Project Manager
State of Wisconsin Department of Natural Resources
4041 N. Richards Street
P.O. Box 12436
Milwaukee, WI 53212

RE: Classification of Excavated Soils
Chrysler Corporation – Kenosha Engine Plant
Kenosha, Wisconsin

Dear Ms. Mylotta:

Per your request, this letter has been prepared to document that soils excavated from the Kenosha Engine Plant facility, and described herein, are not listed hazardous wastes as defined under Wisconsin Statute Section 144 and implemented under Chapters NR 600 et al., Wisconsin Administrative Code (WAC). We request your concurrence in order to assess appropriate disposal/treatment options for the soils. Background and source evaluation information is provided in the following sections. Supporting documentation is provided as attachments.

BACKGROUND

Based on available information, approximately 20,000 cubic yards of soils were generated during excavation activities conducted during upgrading of assembly lines and manufacturing areas at the Kenosha Engine Plant. The excavated soils are from the unsaturated and saturated zones. These soils came primarily from the following four locations in the Engine Plant: (1) the modified oil recycling building slab (located north of Building 29C), (2) building 31, (3) Building 23/23A, and (4) Building 53 (Figure 1). The soils were moved to the area of former Buildings 10, 10A, 11, 15B, and 15. This area is currently paved. The soil piles were subsequently divided into 300-yard parcels and individually described and characterized via field screening and laboratory analysis of discreet samples for volatile organic compounds (VOCs; EPA Method 8260), gasoline range organics (GRO; Wisconsin DNR Modified GRO Method), diesel range organics (DRO; Wisconsin DNR Modified GRO Method), and select metals (EPA SW 846 Methods). An evaluation of remedial disposal and treatment options including soil sampling methodologies will be submitted under separate cover at a later date. The approximate size, location, and classifications of the resulting soil piles are depicted on Figures 2 through 4.



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A summary of detected constituents in site soil samples is presented in Tables 1 and 2. Detected constituents include tetrachloroethene (PCE), trichloroethene (TCE), and related breakdown products. Depending on its origin, PCE and TCE may be classified as listed wastes. In order to evaluate soil disposal and/or treatment options, Chrysler reviewed available information to assess the source of the release. The evaluation included conducting interviews with Chrysler personnel and reviewing plant records.

SOURCE EVALUATION

The most likely sources of PCE and TCE may be paint booths that were formerly located along the wall between Buildings 38 and 53, a bulk cleaning fluid storage area formerly located at Building 36, and above-ground paint supply lines from a paint mixing area located in Building 40A. Available information does not indicate the use of PCE near the other excavation areas. Additional Remedial Investigation to evaluate the extent of possible historical releases in these areas is underway.

The paint booths were active from approximately 1946 to 1986. Prior to paint application, metal parts were degreased using various PCE and TCE products. There are no records of spent materials being spilled in the area.

The fluid storage area was used from 1946 to 1988. Reportedly, PCE and TCE may have been spilled during transportation of drums from one area to another. Drums of solvents were stored in Building 36 and transported to other areas via pallets and forklifts. Drums may have leaked during loading and unloading operations. Small amounts of product left in used drums which were not sold may also have been a source of PCE and TCE.

The paint product line was used from approximately 1946 to 1986. Bulk storage of cleaning and paint viscosity adjusting solvents occurred in the area of the former tank farm located at the north end of the Engine Plant. Paint mixing was performed near the test cell area in former Building 40A. As you are aware, Remedial Investigation has been completed in this area. Remedial action, including groundwater recovery/treatment is ongoing. The mixed paint was then transported to the paint booths through several buildings via an above-ground piping system. Excess paint was also piped through the above-ground system back to former Building 40A for reuse. PCE and TCE, mixed with paint, may have been released through accidental discharges or leaks in the piping system. Based on interviews with employees, occasional leaks in PCE/TCE supply lines and occasional overflow from product tanks during filling operations may have occurred.



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It should be noted that Chrysler recognizes its responsibility under NR 600, WAC, to determine whether the soils exhibit hazardous characteristics. If the soils exhibit hazardous characteristics, then they must be handled as characteristic hazardous waste. The soil characterization will be completed prior to submitting the remedial disposal/treatment options analysis.

CONCLUSION

As discussed above, there are a number of potential sources of PCE, TCE, and their breakdown products detected in soil samples from the soil piles. As such, Chrysler concludes that the spilled solvents were not clearly a listed waste, therefore, the soils do not contain a listed hazardous waste and cannot be classified as hazardous by the mixture rules. The soils contain hazardous substances and, unless additional analytical data indicate the soils are hazardous by characteristic, they should be managed under the Wisconsin spills law (s. 144.76) and corresponding regulations (NR 700 series, WAC).

We request your concurrence in order to assess appropriate treatment/disposal options for the soils. I trust this information meets your needs. If you have any questions or comments, please do not hesitate to call.

Sincerely,

CHRYSLER CORPORATION

A handwritten signature in black ink, appearing to read "Gregory M. Rose".

Gregory M. Rose

W943324\943324.21\943324-B

cc: Curt Chapman/Chrysler
Richard Binder/Triad Engineering

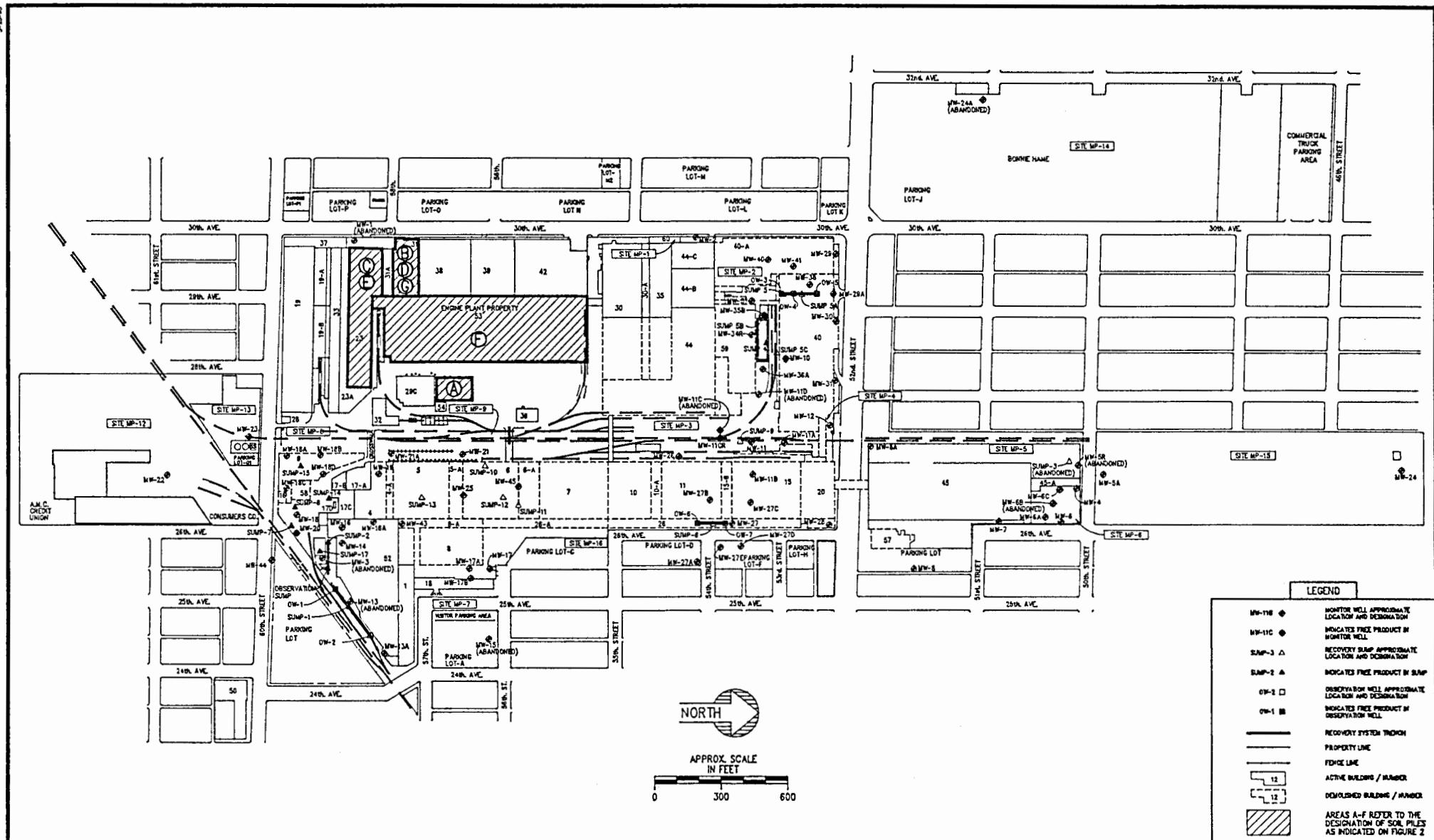
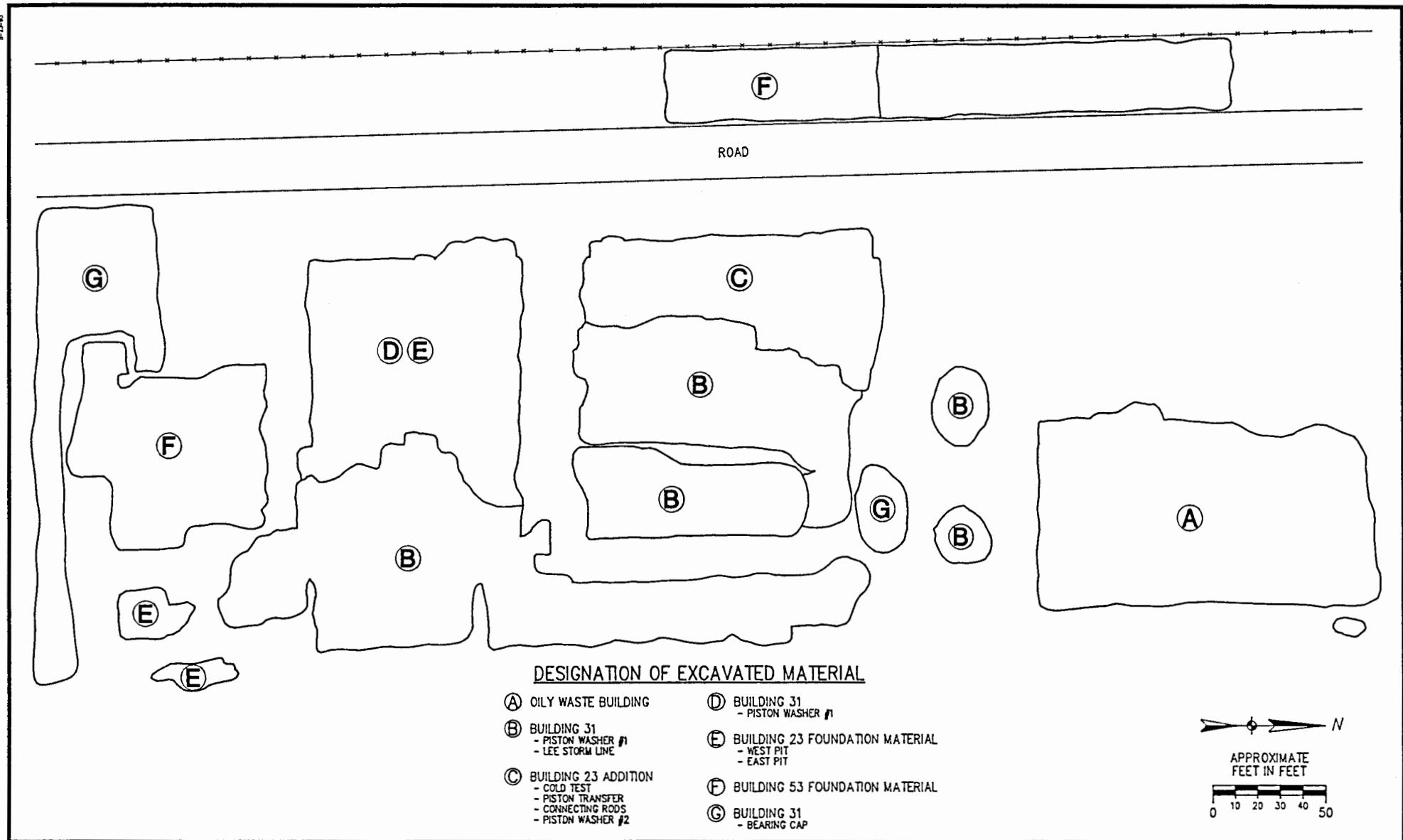


FIGURE 1
CHRYSLER KENOSHA ENGINE
AND MAIN PLANT
FACILITY LAYOUT



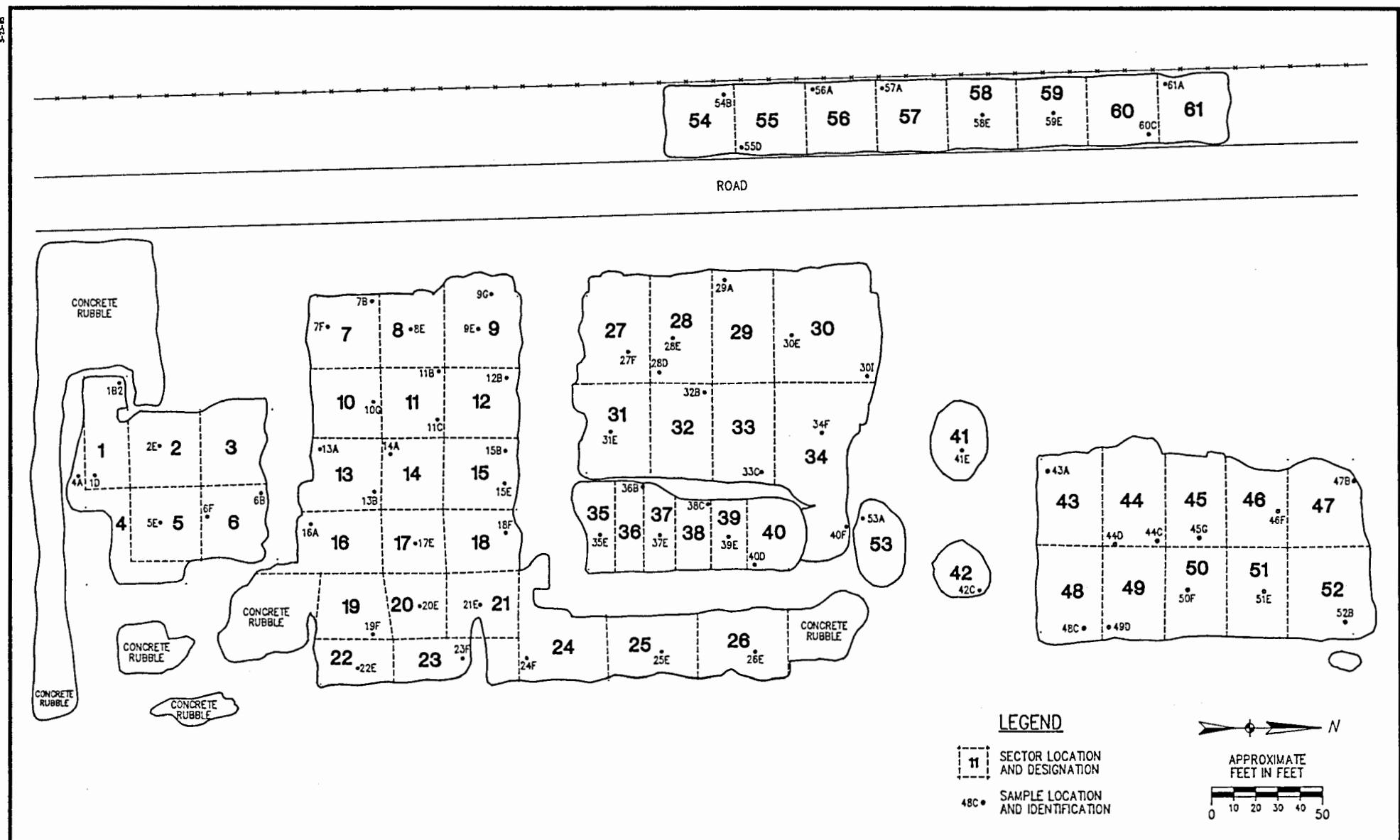


FIGURE 3
CHRYSLER KENOSHA ENGINE AND MAIN PLANT
SOIL PILE SECTORS AND SAMPLE LOCATIONS

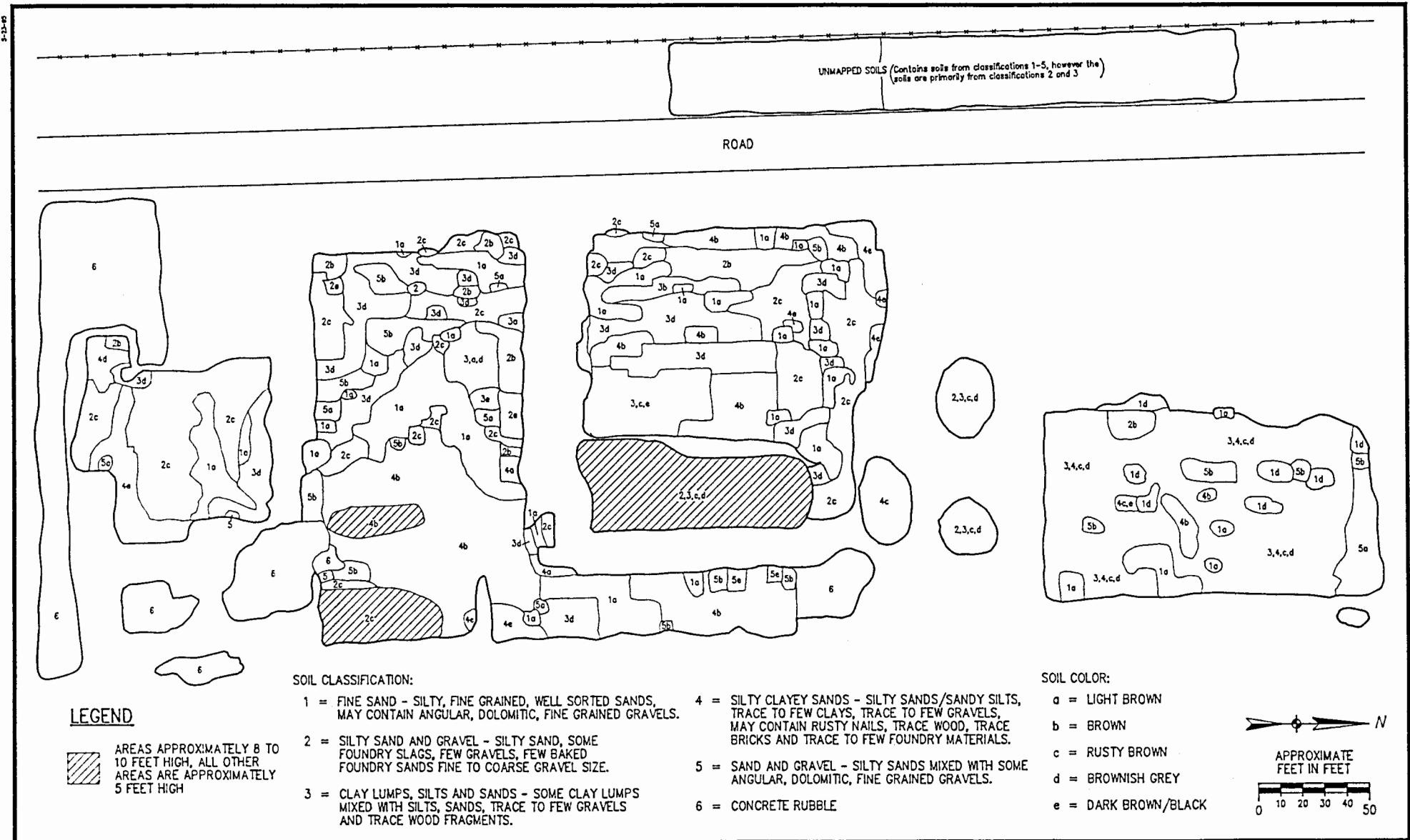


TABLE 1
SOIL PILE CHARACTERIZATION
SUMMARY OF DETECTED VOLATILE ORGANIC COMPOUNDS IN SOILS
CHRYSLER CORPORATION
KENOSHA MAIN PLANT, KENOSHA, WISCONSIN

SAMPLE ID.	DATE COLLECTED	U.S. EPA METHOD	LAB IDENTIFICATION ⁽¹⁾	SAMPLE RESULTS (in micrograms per kilogram)																																	
				BENZENE	n-BUTYLBENZENE	sec-BUTYLBENZENE	tert-BUTYLBENZENE	CHLOROBENZENE	1,2-DICHLOROBENZENE	1,3-DICHLOROBENZENE	1,4-DICHLOROBENZENE	1,1-DICHLOROETHANE	1,2-DICHLOROETHANE	1,1-DICHLOROETHENE	cis-1,2-DICHLOROETHENE	trans-1,2-DICHLOROETHENE	ETHYL BENZENE	HEXAChLOROBUTADIENE	ISOPROPYLBENZENE	p-ISOPROPYLTOluene	METHYLENE CHLORIDE ⁽²⁾	METHYL TERT BUTYL ETHER	NAPHTHALENE	n-PROPyl BENZENE	TETRACHLOROETHENE	TOLUENE	1,2,3-TRICHLOROBENZENE	1,2,4-TRICHLOROBENZENE	1,1,1-TRICHLOROETHANE	1,1,2-TRICHLOROETHANE	TRICHLOROETHENE	1,2,4-TRIMETHYLBENZENE	1,3,5-TRIMETHYLBENZENE	VINYl CHLORIDE	m & p-XyLene	DRO (mg/kg)	GRO (mg/kg)
1D	3/30/95	8260A	50403020	<5	16	<5	<5	<5	<5	<5	<5	<5	<5	<5	120	<5	<5	<5	<5	<5	<5	<5	7.9	10	<5	<5	420	35	<5	<5	<10	<5	24	<10			
1B2	3/30/95	8260A	50403024	42	<5	<5	<5	<5	19	61	68	<5	<5	<5	1100*	<5	<5	<5	11	<5	<5	<5	6.5	7.2	<5	<5	42	<5	150	8.4	<5	<5	<10	<5	<10		
2E	3/30/95	8260A	50403021	<5	12	<5	<5	<5	<5	<5	<5	<5	<5	<5	54	<5	<5	<5	<5	<5	<5	<5	<5	17	<5	<5	<5	160	29	5.1	<5	<10	<5	21	<10		
4A	3/30/95	8260A	50403023	5.7	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	630	<5	<5	<5	<5	<5	<5	<5	20	11	<5	<5	6.5	540*	7.6	<5	<5	<10	<5	35	<10		
5E	3/30/95	8260A	50403022	<5	14	<5	<5	<5	13	<5	18	<5	<5	<5	150	<5	<5	<5	<5	<5	<5	<5	8.4	16	<5	<5	8.8	440	34	<5	<5	<10	<5	<10			
6B	3/30/95	8260A	50403025	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	9.7	<5	<5	<5	10	<5	<5	<5	6.6	5.5	<5	<5	6.6	13	<5	<5	<10	<5	480	<10			
6F	3/30/95	8260A	50403026	5.7	14	<5	<5	<5	<5	<5	<5	<5	<5	<5	170	<5	<5	<5	<5	<5	<5	<5	5.8	<5	<5	<5	5.5	17	<5	<5	<10	<5	730	<10			
7B	4/5/95	8260A	50407049	<5	4.4	<5	<5	<5	<5	<5	<5	<5	<5	<5	930*	13	<5	<5	<5	<5	<5	<5	6.8	11	10	<5	42	<5	<5	<5	<10	<5	<10				
7F	4/5/95	NA	50407050	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1600	NA				
9E	4/5/95	8260A	50407052	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	1400*	180	<5	<5	<5	<5	<5	<5	<5	5.5	<5	<5	<5	370	<5	<5	<5	<10	<5	<10			
9G	4/5/95	NA	50407053	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1200	NA				
10G	4/5/95	8260A	50407054	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	9100*	200	<5	<5	<5	<5	55	<5	<5	<5	19	19	31	<5	<5	<10	<5	<10	14				
11B	4/5/95	8260A	50407055	<5	<5	<5	<5	<5	18	100	120	8.8	<5	<5	2500*	51	<5	<5	<5	<5	5.6	<5	5.1	<5	91	790*	85	<5	960*	<5	<5	<10	<5	<10			
11C	4/5/95	8260A	50407062	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	160	<5	<5	<5	<5	<5	49	<5	9.1	<5	<5	<5	<5	<5	<5	<5	<5	1500	<10				
12B	4/5/95	8260A	50407056	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	1400*	21	<5	<5	<5	<5	5.2	<5	6.2	<5	130	1100*	52	<5	260*	<5	<5	<10	<5	1700	<10		
13A	4/5/95	8260A	50407057	6.1	<5	<5	<5	<5	27	170	140	<5	<5	<5	1400*	21	<5	<5	<5	<5	5.5	<5	5.2	<5	130	1100*	52	<5	260*	<5	<5	<10	<5	150	<10		
13C	4/5/95	NA	50407058	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	970	NA				
14A	4/5/95	8260A	50407059	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	3600*	140	<5	<5	<5	<5	50	<5	<5	<5	8.0	<5	16	<5	<5	<10	<5	580	<10				
15B	4/5/95	NA	50407060	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	3700	NA				
15E	4/5/95	8260A	50407061	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	1000*	32	<5	<5	<5	<5	110	<50	1.4	<5	6.5	8.5	9.7	16	<5	<5	<10	<5	440	<10			
16A	4/6/95	8260A	50410001	<5	7.3	<5	<5	<5	<5	<5	<5	<5	<5	<5	110	<5	<5	<5	<5	<5	210	<50	5.5	<5	5.5	5.8	<5	<5	35	12	<5	<5	<10	<5	1700	<10	
17E	4/6/95	8260A	50410002	<5	7.4	<5	<5	<5	<5	<5	<5	<5	<5	<5	15	<5	<5	<5	<5	<5	310	<50	5.5	<5	5.5	8.2	<5	<5	<5	<5	19	6.3	790	<10			
18F	4/6/95	8260A	50410003	<5	13	<5	<5	<5	<5	<5	<5	<5	<5	<5	15	<5	<5	<5	<5	<5	1300	<50	11	<5	<5	12	5.2	<5	<5	<5	11	<5	<10	<5	440	15	
19F	4/6/95	8260A	50410004	<5	23	<5	<5	<5	<5	<5	<5	<5	<5	<5	3600*	140	<5	<5	<5	<5	6.7	280	<50	17	<5	12	7.4	19	19	5.9	<5	29	<5	<10	160	14	
20E	4/6/95	8260A	50410005	<5	44	<5	<5	<5	<5	<5	<5	<5	<5	<5	15	<5	<5	<5	<5	<5	14	100	<50	29	<5	<5	5.5	<5	<5	30	11	<5	<10	1700	14		
21E	4/6/95	8260A	50410006	<5	34	<5	<5	<5	<5	<5	<5	<5	<5	<5	15	<5	<5	<5	<5	<5	17	880	<50	33	5.1	<5	<5	5.5	<5	<5	31	<5	<5	960	18		
22E	4/6/95	8260A	50410007	<5	5.9	11	<5	<5	<5	<5	<5	<5	<5	<5	15	<5	<5	<5	<5	<5	450	<50	5.5	<5	6.6	5.5	<5	<5	93	<5	7.6	35	20	<5	10	43	<10
23F	4/6/95	8260A	50410008	<5	50	<5	<5	<5	<5	<5	<5	<5	<5	<5	15	<5	<5	<5	<5	<5	7.8	35	380	<50	28	<5	19	<5	5.3	<5	<5	8.5	19	<5	10	1200	11
24F	4/6/95	8260A	50410009	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	610	<50	<50	<50	<50	<50	370	<50	1700	<50	<50	<50	<50	<50	<50	<50	<50	<50	50	490	80		
25E	4/6/95	8260A	50410010	<5	6.9	<5	<5	<5	<5	<5	<5	<5	<5	<5	15	<5	<5	<5	<5	<5	260	<50	6.9	<5	<5	5.5	<5	<5	5.5	<5	8	<5	<5	870	28		
26E	4/6/95	8260A	50410011	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	350	<5	<5	<5	<5	<5	160	<50	5.5	<5	<5	5.5	<5	<5	5.5	<5	5.9	<5	<5	890	12		
28E	4/7/95	8260A	50410014	<5	34	<5	<5	<5	<5	<5	<5	<5	<5	<5	15	<5	<5	<5	<5	<5	18	160	<50	16	<5	<5	5.5	<5	<5	5.6	37	17	<5	<5	28	14	
29A	4/7/95	8260A	50410015	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	47	<5	<5	<5	<5	<5	520	<50	5.5	<5	<5	5.5	<5	<5	5.5	<5	390	<5	<5	55	<5	11	<10
30E	4/7/95	8260A	5041001																																		

CHRYSLER CORPORATION
KENOSHA MAIN PLANT, KENOSHA, WISCONSIN

SAMPLE ID.	DATE COLLECTED	U.S. EPA METHOD	LAB IDENTIFICATION ⁽¹⁾	SAMPLE RESULTS (in micrograms per kilogram)																														
				BENZENE	n-BUTYLBENZENE	sec-BUTYLBENZENE	tert-BUTYLBENZENE	CHLOROBENZENE	1,2-DICHLOROBENZENE	1,3-DICHLOROBENZENE	1,4-DICHLOROBENZENE	1,1-DICHLOROETHANE	1,2-DICHLOROETHANE	1,1-DICHLOROETHENE	cis-1,2-DICHLOROETHENE	trans-1,2-DICHLOROETHENE	ETHYL BENZENE	HEXA-CHLOROBUTADIENE	ISOPROPYL BENZENE	p-ISOPROPYL-TOLUENE	METHYLENE CHLORIDE ⁽²⁾	METHYL TERT BUTYL ETHER	NAPHTHALENE	n-PROPYL BENZENE	TETRA-CHLOROETHENE	TOLUENE	1,2,3-TRICHLOROBENZENE	1,2,4-TRICHLOROBENZENE	1,1,1-TRICHLOROETHANE	1,1,2-TRICHLOROETHANE	TRICHLOROETHENE	1,2,4-TRIMETHYLBENZENE	VINYL CHLORIDE	m & p-XYLENE
54B	5/9/95	8260A	50510035	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<5	11	13		
55D	5/9/95	8260A	50510036	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<5	10	<10			
56A	5/9/95	8260A	50510037	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<5	<10			
57A	5/9/95	8260A	50510038	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<5	<10	
58E	5/9/95	8260A	50510039	<5	12	5.1	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<5	<10	
59E	5/9/95	8260A	50510040	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<5	<10
60C	5/9/95	8260A	50510041	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<5	<10
61A	5/9/95	8260A	50510042	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<21	<21
MeOH																																		
Blank	3/30/95	NA	50403027	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<10				
MeOH	5/9/95	8260A	50510043	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<10			

* The analyte concentration was found to be outside of the established linear range of quantitation for this compound. The reported value is an approximation only.

(1) Analysis Performed by Midwest Analytical Services, Inc., (MAS), Metropolitan Center for High Technology, 2727 Second Avenue, Detroit, Michigan 48201 (WDNR Lab Id No. 999941580).

(2) Detected methylene chloride concentrations are not believed to be representative of actual soil samples. VOC soil samples were inadvertently packaged and shipped with DRO soil samples which had been preserved with methylene chloride. It is believed

that the VOC soil samples were contaminated with methylene chloride during shipping.

NA - Not Analyzed

TABLE 2
SOIL PILE CHARACTERIZATION
SUMMARY OF DETECTED METALS IN SOIL
CHRYSLER CORPORATION
KENOSHA MAIN PLANT, KENOSHA, WISCONSIN

SAMPLE I.D.	DATE COLLECTED	LAB IDENTIFICATION ⁽¹⁾	TOTAL METALS (milligrams per kilogram)							
			ARSENIC	BARIUM	CADMIUM	CHROMIUM	LEAD	MERCURY	SELENIUM	SILVER
4A	3/30/95	50403023	3.7	283	0.61	77	2260	<0.10	<0.50	<0.50
8E	4/5/95	50407051	1.1	18	<0.40	4.0	14	<0.10	<0.50	<0.50
19F	4/6/95	50410004	7.1	49	0.55	11	36	<0.10	<0.50	<0.50
35E	4/7/95	50410022	3.5	144	6.4	61	2120	<0.10	<0.50	<0.50
40F	4/7/95	50410028	2	79	<0.40	12	120	<0.10	<0.50	<0.50
53A	4/7/95	50410029	4.5	255	<0.40	13	89	<0.10	<0.50	<0.50
50F	4/10/95	50411012	4.4	198	1.5	93	3110	0.11	<0.50	<0.50
Method			6010A	6010A	6010A	6010A	7420	7471A	7741A	6010A
Method Detection Limit			0.1	1.0	0.40	2.5	0.50	0.10	0.50	0.50
NR 720 Industrial Standards ⁽²⁾			1.6	NE	510	200	500	NE	NE	NE
U.S. EPA Common Background Range ⁽³⁾			1-50	100-3000	0.01-0.7	1-1000	2-200	0.01-0.3	0.1-2	0.01-5
U.S. EPA Average ⁽³⁾			5	430	0.6	100	10	0.03	0.3	0.05

(1) Analysis Performed by Midwest Analytical Services, Inc., (MAS), Metropolitan Center for High Technology, 2727 Second Avenue, Detroit, Michigan 48201 (WDNR Lab Id No. 999941580).

(2) Soil cleanup standards for industrial sites given in Chapter NR 720, Wisconsin Administrative Code.

(3) United States Environmental Protection Agency (U.S. EPA) Office of Solid Waste and Emergency Response, Hazardous Waste Land Treatment, SW-874 (April 1983).

NE - Not Established