FINAL

ORIGINAL

PHASE III ENVIRONMENTAL ASSESSMENT AND CONCEPTUAL ACTION PLAN

FORMER EAST LOT FOUNDRY SAND FILL AREA

AT

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VERSAR PROJECT NUMBER 1871-002

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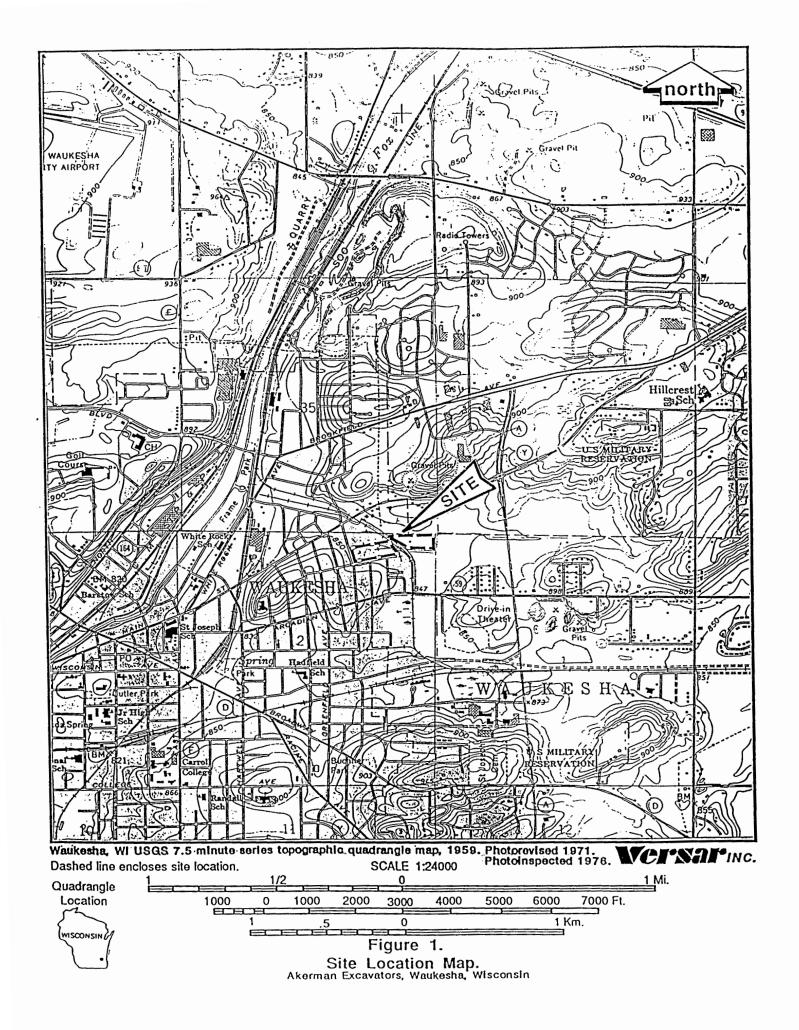
1.0 INTRODUCTION

Versar Inc. was retained by VME Americas, Inc. to perform environmental consulting and engineering services at the former VME Akerman facility, located at 1005 Perkins Avenue in Waukesha, Wisconsin. The facility is segregated into east and west parcels by an unnamed stream. The west parcel is associated with production buildings and associated yards and lots. The east parcel is an area developed consisting of gravel and asphalt covered lot surrounded by trees and brush. Versar previously performed Phase I, and II Environmental Assessments on both east and west lots. The Phase IIB and this Assessment was performed on a segregated area within the east parcel only. Refer to Figure 1 for site location.

1.1 Purpose

The east parcel was used for testing light earth moving equipment produced at the west parcel facility. The east lot has a central gravel covered area surrounded with brush and trees to the north, east, and south. A small area east of the gravel surface is of disturbed topography and has surface material consisting of foundry sand, concrete and cinder fragments, sandy gravel, and some surface soil. This area is overgrown with annual grasses as well as brush and small to medium sized trees. Soil analytical results from several test pits and surface grab composites indicated the presence of polychlorinated biphenols (PCBs). The source of PCBs is unknown and it appears that the contamination is localized.

The purpose of the Phase III Assessment was to determine the approximate extent of PCB contamination within the area of disturbed soil and evaluate possible alternatives to mitigate contamination. State of Wisconsin clean up guideline PCB action level is concentrations greater than 5 parts per million (ppm). PCB contamination found to be above 50 ppm would be considered hazardous and regulated under guidelines provided by the Toxic Substance Control Act (TSCA). TSCA regulated contaminated soils would require disposal at one of the following; TSCA regulated landfill, hazardous waste landfill permitted for organic contaminants, or thermally destroyed at a properly permitted incinerator. Soils with PCB concentration between 5 and 50 ppm would be not be considered hazardous and could be either closed in place or disposed of in a sanitary or special waste landfill permitted to accept PCB waste in that concentration range, depending on acceptable procedures regulated by the Wisconsin Department



of Natural Resources (WDNR). This investigation gathers site specific data related to satisfying PCB contaminated soil disposal under an emergency removal action.

1.2 Scope of Work

This report compiles data gathered during the Phase I, II, IIB and III east lot investigations and presents a conceptual strategy for PCB contaminated soil removal. Specific data from the Phase I, II and IIB are contained in Appendices A, B, and C, respectively. The results of the Phase III analyses are contained in Appendix D.

The area of disturbed soil visually appears to be approximately 150 feet square. The area was segregated into 9, 50 foot by 50 foot grid cells, with twelve exterior grid cell sides. Soil borings were advanced into each grid cell and along each exterior grid cell line. Soil samples were retained from the surface and at 2-foot depth intervals in each boring. Surface samples were also collected from soils outside of each external grid cell line. Refer to Figure 2 for site layout with sampling grid location.

Soil boring locations within each grid and along each exterior grid cell line were randomly determined as described in the systematic random sampling section of a U.S. EPA soil sampling guidance document. Surface sample locations outside each exterior grid cell line were placed to cover potential data gaps from random borehole placement.

Once the PCB contaminated area was delineated horizontally and identified as a surface release, samples were collected on a grid within the isolated area from 0 to 6 inches, 12 to 18 inches, and 24 to 30 inches. This sampling activity was intended to define the extent and depth for removal of hazardous versus special waste materials.

2.0 BACKGROUND

2.1 Phase I Assessment

As part of the Phase I Assessment the eastern lot was identified as an area used for testing light excavating/earth moving equipment. The lot is located in a regionally low lying area and fill was presumed to have been hauled to this location for grade adjustments. Foundry sand and fragments of concrete, wood, and cinders were also observed in the eastern portion of the east lot. Versar recommended investigating the fill for the presence of any environmental concerns. Historical photos obtained during the Phase I assessment are presented in Appendix A.

2.2 Phase II and IIB Assessments

A surface composite sample of soils within the disturbed fill area was analyzed and found to contain PCBs. A series of subsurface investigative techniques were then employed to determine the areal extent and PCB concentration of the fill. Refer to Appendix B1 for a summary of the surface fill analytical results and B2 for Chain-of-Custody Forms.

A series of seven test pits were advanced into the east lot. These test pits were to define the areal extent of fill. The test pits were originally to be within a grid set into the area of surface disturbance. After the initial two test pits it became apparent that the areal extent of fill was much larger than previously assumed. The remaining test pits were then located throughout the entire eastern half of the lot. Soil samples were taken from each test pit and the types of earth materials encountered in each test pit were noted. The test pits revealed that the fill was primarily foundry sand with minor amounts of concrete, brick, wood, metal, and cinder fragments. Appendix C1 presents laboratory analytical results and Appendix C2 contains test pit logs. Phase IIB Figures and Chain-of-Custody forms are located in Appendices C3 and C4, respectively. Analytical results indicate the presence of PCBs in test pits 1 and 2 only. These test pits were located within the area of surface disturbance.

At the conclusion of Phase IIB three soil borings were advanced on the east lot for the purpose of installing groundwater monitoring wells. The fill and natural soils encountered at each soil boring were described by a Versar geologist. The fill material ranged between 5 and 9.5 feet in

thickness. Natural deposits of peat, silty clay, and gravely sand are found under the fill. Dark brown peat is identified as the uppermost natural deposit and overlies a deposit of gray silty clay. Gravely sand saturated with groundwater was the basal unit encountered in all of the boreholes. The monitoring wells were installed into the gravely sand unit. The annular space between borehole and well casing was sealed from the fill by placement of bentonite pellets and then bentonite/cement grout. Soil boring and well logs are shown in Appendix D1.

The wells were developed by purging with a pump on the drill rig. The wells were then sampled for parameters associated with contaminants commonly found in foundry sand. The analytical results indicate the absence of any of those parameters in the groundwater found under the site. Groundwater laboratory analytical results are presented in Appendix D2. Chain-of-Custody forms for these samples are in Appendix D3. Depth to water elevations were taken from each well, and a registered land surveyor was contracted to survey in the well locations as associated elevations off of a USGS Benchmark. Common datums along the unnamed stream were also set. This information was utilized to develop groundwater potentiometric surface maps and access the potential for hydraulic connection to the stream. The groundwater flows from east to west across the east lot and appears to be connected hydraulically to the stream.

3.0 PHASE III DATA COLLECTION PROCEDURES

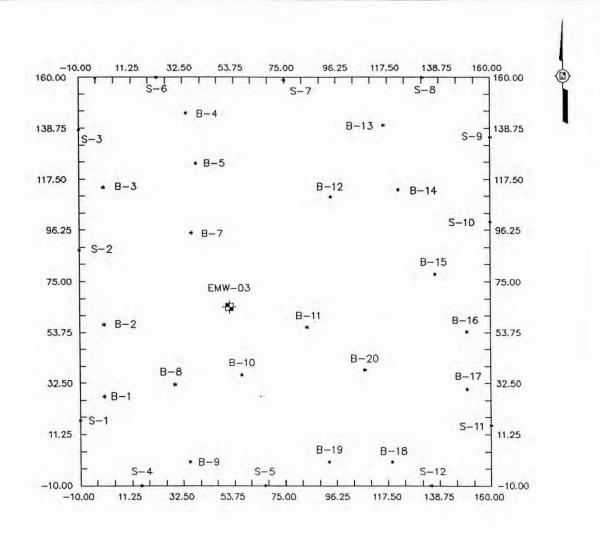
3.1 Soil Boring Locations and Sample Intervals

One soil boring was advanced into each of the 9 grid cells and one boring was located along each of the 12 exterior grid cell lines. The coordinates used for locating the borings were selected by using a table of randomly generated numbers between 1 and 50. Two table columns were used for locating borings in the grid cells while only one column was used for selecting locations along an exterior grid cell line. This random soil boring location technique was utilized to reduce any location bias from field personnel and because the exact fill sequence, horizontal lifts, load placement or surface discharge of the PCB contamination was not known. Using the random coordinate sampling method distributed on a uniform grid, combined with a field analysis of random sample depths, would help to determine if the PCB contamination was a surface discharge, placed and spread, or placed by load. Refer to Figure 3 for soil boring and surface grab sample locations.

A new location was selected if the boring was located within 20 feet of a previously selected boring location. Borings were also moved for access reasons due to grade terrain or tree overgrowth. The table of random numbers was also used for adjusting boring locations. A total of 20 of 21 soil borings were completed. One soil boring was not completed, boring 21 (B-21) due to access limitations along the exterior grid cell line. A surface sample was taken at this location only.

Soil borings were continuously sampled to a depth which penetrated the peat horizon. Undisturbed soil samples were obtained from depth by driving a split spoon sampler ahead of the advancing augers. Soil samples were retained for field screening and possible analysis from surface and from the following depths below grade; 2 feet, 4 feet, 6 feet, and 8 feet. Some borings were advanced deeper to penetrate the peat and had samples retained from 10 and 12-foot depths. At the completion of each borehole, annular space was backfilled with bentonite chips. Drilling equipment was steam cleaned before starting field activities and between boring locations. Drill cuttings were stockpiled on-site and covered with plastic. Split spoon samplers were thoroughly scrubbed with and rinsed between sampling intervals. Soils retained were placed into appropriate laboratory provided glass ware, labeled, and immediately placed on ice. Two





* - SAMPLE LOCATION WITH B-19 FIELD CONCENTRATION LEVEL

TITLE:	IL BOF		IGURE 3 ACE GRAB	SAMPLE LOCATIONS
DESIGNED: DRAWN:	DJD	APPROVED: DJD DATE: 10/19/93	FOR:	
	DJD	SCALE: AS NOTED	VME	E AMERICAS, INC.
		SINGTON ROAD	PROJECT NO.	1871.003
		OK, IL. 60521	DRAWING NO.	18713A3

borings were selected to have Shelby Tubes pushed into the lower part of the peat and the underlying silty clay and the tubes are being held at Versar offices. Boring logs are in Appendix D4.

3.2 Surface Perimeter Sample Locations

Surface grab sample locations along the perimeter of the grid configuration were selected to fill potential data gaps. The grab samples were placed between an exterior boring location and the farthest grid node from that boring. Grab samples were also offset 10 feet away from the exterior grid cell line. Sample locations for surface grabs were not moved for access reasons. Surface soils were placed into lab glass ware, labeled, and placed on ice.

3.3 Selecting Horizons for Field Screening

Soils collected were analyzed initially subjected for field PCB screening with immunoassay field kits calibrated for positive response to PCB concentrations of greater than 5 ppm and 50 ppm. This would allow 44 samples to be screened for PCBs with results in the range of less than 5 ppm, between 5 and 50 ppm, or greater than 50 ppm. The immunoassay technique utilizes the following steps;

A series of soil samples collected at the VME site were analyzed for PCBs in accordance with the proposed USEPA SW-846 Method 4020, an immunoassay-based field test method for PCBs, using an EnSys PCB RIS^c Soil Test System. Specifications of the EnSys field kits included a two level test kit designed to identify soil sample concentrations of PCB Aroclor 1248 below 5 ppm, between 5 and 50 ppm, and above 50 ppm. EnSys designs their field screening kits with a an intentional bias towards generating false positives, i.e., determining that a soil concentration exceeds a target level when in reality its actual concentration is less than the target level. Details regarding the specific data objectives, sample preparation, quality assurance, method specifications, and documentation procedures are outlined below.

Level I field screening methods, such as immunoassays, are characterized by the use of portable field equipment and instruments that can provide real-time data to assist in the selection of optimum sampling location. Data generated provided for the determination of whether PCBs

were present or absent at the customized target concentration ranges of the field kit, specifically established at 5 and 50 ppm. Sample preparation and analysis were conducted in a work station away from the actual remediation activity. Samples which were collected, containerized, and labelled were brought to the work station and field screened. The screening consisted of weighing a specified amount of sample, performing an extraction, and subjecting the extract to an immunoassay. The screening method ultimately measures PCB concentration as a function of light absorption (inverse relationship) relative to a standard in a photometer. A series of samples were subsequently submitted to NET-Midwest (Bartlett, Illinois) for PCB analysis (SW-846 Method 8080) for laboratory confirmation.

The QA measures detailed below provided a level of assurance based on establishing that complete and appropriate documentation during the field screening process was occurring, and that instruments were being calibrated and functioning properly. Versar's plan will include the following QA/QC measures:

- a) sample documentation including sample identification, location, depth, sampling personnel identification, time and date of collection, analyst identification, time and date of field analysis, raw data, calculations, final results, and observations as part of complete record keeping as pertains to the analyses in established notebooks;
- b) calibration of field instrumentation (e.g. such as the photometer, pipette, and scale). According to the manufacturer's instructions (EnSys) optical density measurements of duplicate standards were taken. A valid test is indicated when the magnitude of the standards are within 0.20 optical density units of each other;
 - c) laboratory confirmation of select samples to validate screening capabilities within the three ranges of concentration.

Sample records are presented in Appendix D5.

The interior borings located in each of the grid cells were first selected for field screening. The borings were divided into three east to west cross sections with three boreholes per cross section. A table of randomly generated numbers from 1 to 3 was utilized in the selection of what boreholes and which horizons would be screened for PCBs. An initial number of 12 samples were randomly selected for the initial screening. The subsequent 32 samples selected for field screening were manually selected based upon the initial screening results. This round of screening was used to resolve both the extent of elevated PCB contamination within the grid and to verify lower PCB concentrations at the edges of the horizontal and vertical sampling grids. Soils from interior cell borings, exterior grid cell line borings, and exterior surface grab samples were used for the second round of sampling.

3.4 Selecting Samples for Laboratory Analysis

Samples were then sent to NET Laboratories located in Bartlett, Illinois under proper chain of custody procedures. NET analyzed 17 soil samples for PCBs with U.S. EPA Method 8080 from Solid Waste 846. This PCB analysis was used to verify the results of the immunoassay field screening technique. Soil samples analyzed at NET were from borings outside and within the area of elevated PCB concentration. Some samples were analyzed at specific soil boring horizons while other samples were composited from an entire borehole. The purpose of laboratory sample confirmation analysis was to provide results that are acceptable to the WDNR and to verify the conclusions resulting from the field screening tests.

Samples were selected to determine the following:

- 1) Confirmation of clean (less than 5 ppm concentration action level) perimeter (horizontal isolation);
- 2) Confirmation of clean base (vertical isolation);
- Confirmation of general extent of area above 5 ppm;
- 4) Determination of highest concentrations; and
- 5) Potential determination of the PCB source placement method (i.e., surface discharge, load placement or horizontal lifts).

3.5 Isolated Sampling

Once the horizontal extent of the PCB contamination was indentfied and the results indicated the contamination was limited to a surface release, additional samples were collected at 18 surface locations and nine locations at depths of 0-6 inches, 12-18 inches, and 24-30 inches. This sample collection activity would identify the horizontal and vertical extent of contamination and would allow hazardous and special waste material quantities to be estimated. Samples were collected by hand with a stainless steel shovel and augor using the quality assurance and collection procedures previously described.

TABLE 1

VME SOIL BORING AND SURFACE GRAB PCB FIELD SCREENING RESULTS

Results in parts per million (ppm) Note: Blank areas were not analyzed

SAMPLE			DEPTH	OF SAME	LE IN F	EET		
LOCATION	Surface	2	4	6	8	9	10	12
B-1		>5			<5			
B-2			>5		>5			
B-3		<5		>5		<5		
B-4	<5				<5			
B-5		>5		<5	<5			
B-7		>5		>50	>50			
B-8					>50			
B-9					>5			
B-10	>50	<5	>50					
B-11	<5				-			
B-12		<5		<5	1			
B-13							<5	
B-14	<5		<5				<5	
B-15			<5				>5	<5
B-16		<5		<5				
B-17				<5 -		<5		
B-18	<5			11-1	<5			
B-19			<5					
B-20			4	>5			- 1	
S-1	>5						_	
S-3	<5							
S-5	<5							
S-7	<5		le . = 1					
S-9	<5							
S-11	<5							

4.0 SITE CONDITIONS AND RESULTS

4.1 Earth Materials Encountered

The fill that was drilled through started at surface grade and extended to a depth which ranged between 8 and 10 feet. The fill consisted of primarily dark gray foundry sand with minor amounts of cinder slag, wood, brick, concrete, and metal fragments, as well as, silt and gravel. The peat deposit was found to be directly under the fill and was underlain by an aquitard of silty clay. The gravely sand under the confining unit was not penetrated. The silty clay unit acts as a aquitard to the vertical movement of groundwater across the site. The peat unit also acts as a vertical confining unit for any migrating PCBs. PCBs are relatively immobile and are absorbed onto the surfaces of organic carbon found within peat.

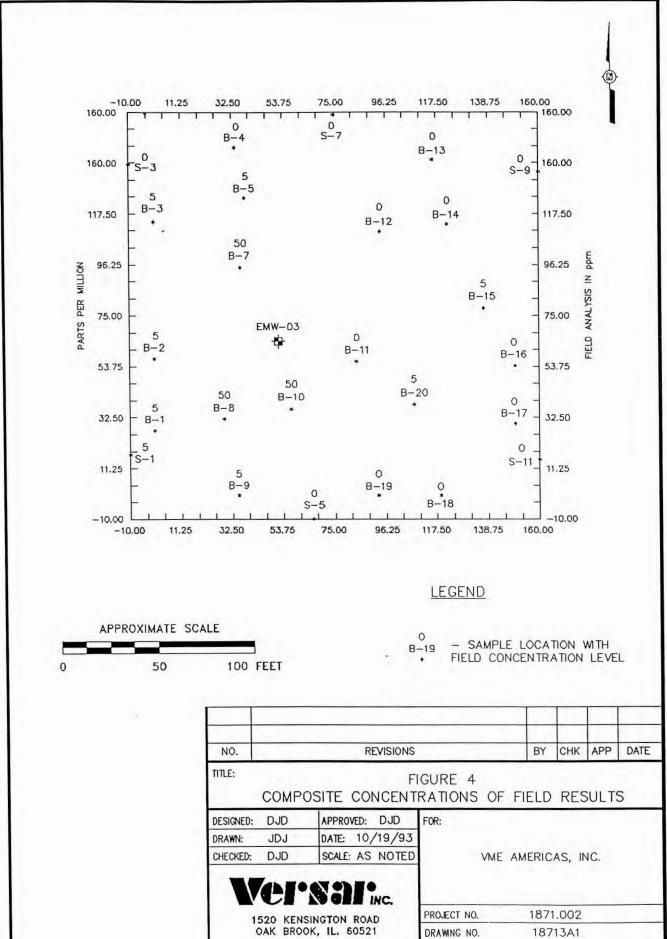
4.2 Contamination Defined with Field Screening Techniques

The results of immunoassay indicates that foundry sand fill with elevated concentrations of PCBs is located in the southwest portion of the grid cells. PCB concentrations outside this area drop quickly. The technique used to place the foundry sand fill associated with PCB contamination is not known, however, it appears that the elevated PCB contamination increases toward the surface and is fairly isolated. PCB concentration validation samples were analyzed and those results will be utilized for determining contamination extent. Refer to Table 1 for a summary of the Field Screening Results and Figure 4 for a composite of the areal distribution.

4.3 Additional Areas of Surface Disturbance

From observations of field personnel the area of surface disturbance extends past the boundaries initially indicated during the Phase II Assessment. Surface disturbance and fill extends into the wooded area to the east and north of the grid cells. Field screening indicates, however, that PCB contamination does not extend outside the previously investigated area.





4.4 Subsurface Flow

Groundwater monitoring wells were installed and groundwater sampled during Phase II activities indicate than PCBs are not found within the aquifer under the site. The groundwater which flows from east to west under the site is likely recharged upgradient of the site and part of the aquifer discharges into the unnamed stream west of the site. The small percentage of precipitation onto the area of surface disturbance which enters into a perched subsurface system percolating through the fill and most likely begins to flow laterally at the base of the fill and in the peat horizon. Any PCBs which are mobile and enter the perched water flow regime will be quickly adsorbed by the organic carbon found in the peat horizon.

4.5 Laboratory Analytical Results

The laboratory results ranged from below detectable limits to 98 ppm. All of the individual and composite samples were below 0.5 ppm except B-10 surface (98 ppm) B-7 at 6 feet (4.88 ppm) S-1 (1.6 ppm) and a composite from B-1 at 8 feet, B-3 at 9 feet, B-14 at 10 feet, B-15 at 12 feet and B-16 at 10 feet (1.17 ppm).

Table 2 presents a comparison of the field and laboratory analytical results.

Vertical composite samples were selected from the entire horizontal at locations B-4, B-5, B-12, B-14, B-16, B-17, B-18, and B-19 to verify a perimeter below the 5 ppm action level all of these laboratory confirmation results were below 0.5 ppm or BDL.

A composite was also selected at the deepest sample at locations B-1, B-3, B-14, B-15, and B-16 for the same purpose. This composite sample laboratory analysis result was 1.17 ppm.

Only one laboratory confirmation sample result was above the action level of 5 ppm, that being the surface sample at B-10. These results correlate well with the field results, indicating a surface release in the vicinity of Boring B-10. This confirms the Phase II and IIB test pit and surface composite sampling that also indicated concentrations of PCBs in this vicinity were isolated and higher at the surface.

Figure 5 presents the laboratory confirmation results and the field results below 5 ppm.

TABLE 2

VME SOIL BORING AND SURFACE GRAB PCB FIELD SCREENING RESULTS AND LABORATORY CONFIRMATION RESULTS COMPARISON

Results in parts per million (ppm) Note: Blank areas were not analyzed

SAMPLE		DEPTH OF SAMPLE IN FEET									
LOCATION	Surface	2	4	6	8	9	10	12	COMPOSITE SAMPLE RESULTS		
B-1		>5			<5*						
B-2			>5		>5						
B-3		<5		>5		<5*					
B-4	<5				<5				C: 0'-8', 0.12		
B-5		> 5/BDL		<5	<5				C: 6'-8', 0.27		
B-7		>5		>50/4.88	>50						
B-8					>50/0.32						
B-9					>5/.83						
B-10	>50/98	< 5	>50/ BDL								
B-11	<5										
B-12		<5		<5					C: 0'-8', 0.42		
B-13							<5				
B-14	<5		<5				<5*		C: 0'-10', 0.23		
B-15			< 5				>5	<5*			
B-16		<5		<5			•		C: 0'-10', 0.76		
B-17				<5		<5			C: 0'-9', BDL		
B-18	<5				<5				C: 0'-8', BDL		
B-19			<5						C: 0'-8', 0.41		
B-20				>5							
S-1	>5/1.6										
S-3	<5										
S-5	<5										
S-7	<5										
S-9	<5				1						
S-11	<5										

KEY

BDL = BELOW DETECTABLE LIMITS

• = COMPOSITE RESULTS OF 1.71 PPM

C: 0'-8', 0.12 = COMPOSITE SAMPLE, ZERO TO EIGHT FEET, 0.12 ppm

< 5/0.42 = FIELD SCREENING RESULTS/LAB RESULTS

Field screening tests yield slightly higher results than the laboratory analysis, providing a conservative estimate as to the extent of contamination above the 5 pm action level. As a result, the composite drawing of laboratory results (Figure 5) may exhibit a larger extent of 5 ppm contamination than actually exists in the field. The field screening results indicate that the contaminated area may extend west of the grid, however this area is generally based on field data.

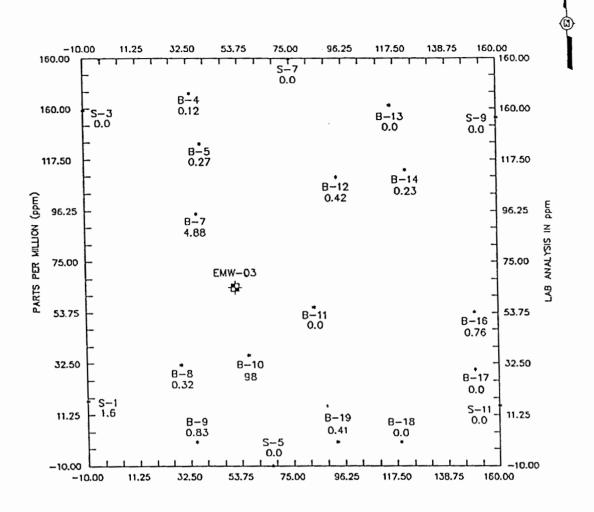
Based on previous correlation between the field and laboratory results, laboratory confirmation in the vicinity of B-1, B-2, and B-3 should provide concentrations of less than 5 ppm.

4.6 Isolated Sampling Results

Eighteen of the samples were selected for initial analysis. At each of the sample locations where samples were collected at depth, the 0-6 inch and 12-18 inch samples were analyzed for PCB contamination. The remaining samples from the 24-30 inch horizon and the additional surface sample locations were held for potential analysis, if further horizontal and vertical definition was determined to be necessary. Refer to Figures 6, 7, and 8 for sample locations.

Based on the isolated sampling analytical results, Versar selected six additional samples for analysis. The rationale for additional sample selection was that the horizontal and vertical extent needed further definition below locations CS(core sample)-3.-4, and -6, and at surface locations SS(surface sample)-4, 5, and 7. Isoconcentration coutours for the action levels of 5 PPM and 50 PPM for the depths of 0-6 inches, 12-18 inches, and 24-30 inches, are presented on Figures 6, 7, and 8, respectively. Analytical results are presented in Appendix D8.

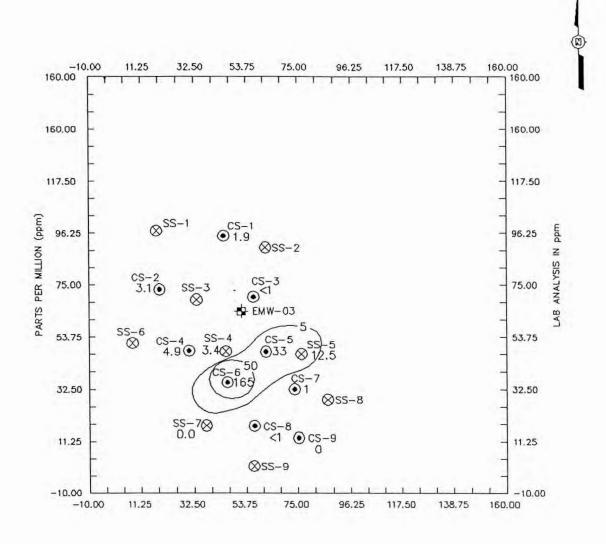




- SAMPLE LOCATION WITH
B-19
0.41
LAB CONCENTRATION LEVEL

TITLE:			IGURE 5 L LABORATO	ORY RESULTS
DESIGNED: DRAWN: CHECKED:	DND DND DND	APPROVED: DJD DATE: 10/19/93 SCALE: AS NOTED	-1	AMERICAS, INC.
1	520 KEN	SINGTON ROAD OK, IL. 60521	PROJECT NO. DRAWNG NO.	1871.003 18713A2





◆CS-2 - SAMPLE LOCATION WITH

LAB CONCENTRATION LEVEL

⊗ SS-1 - SURFACE SAMPLE ONLY

TITLE:			F	IGUI	RE 6				
ISOLA	TED	SAMPLING	ANALYTI	CAL	LABORATORY	RESULTS	0	-	6"
DESIGNED:	DJD	APPROVE	D: DJD	FOR:					
DRAWN:	JDJ	DATE:	11/19/93	1					



SCALE: AS NOTED

DJD

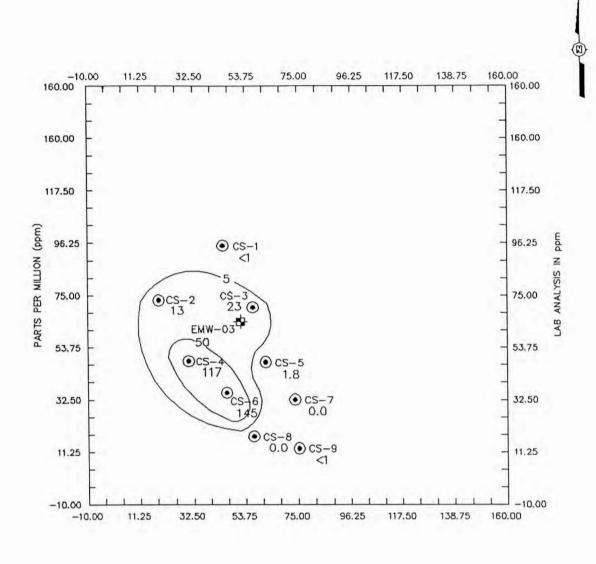
CHECKED:

1520 KENSINGTON ROAD OAK BROOK, IL. 60521

PROJECT NO.	1871.002	
DRAWING NO.	18712A4	

VME AMERICAS, INC.

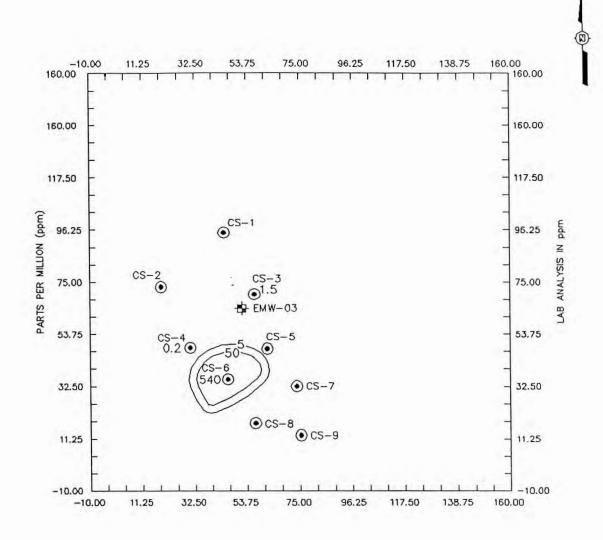




● CS-2 - SAMPLE LOCATION WITH LAB CONCENTRATION LEVEL

ISOLATED SA		IGURE 7 CAL LABORA	FORY RESULTS 12"-18"
DESIGNED: DJD DRAWN: JDJ CHECKED: DJD	APPROVED: DJD DATE: 11/19/93 SCALE: AS NOTED	FOR:	AMERICAS, INC.
	SOLING.	PROJECT NO.	1871.002





● CS-2 - SAMPLE LOCATION WITH LAB CONCENTRATION LEVEL

TITLE:	F	IGURE 8
ISOLATED SAM	PLING ANALYTICA	AL LABORATORY RESULTS 24" - 30
DESIGNED: DJD	APPROVED: DJD	FOR:
DRAWN: JDJ	DATE: 11/19/93	
CHECKED: DJD	SCALE: AS NOTED	VME AMERICAS, INC.

Versiling.

1520 KENSINGTON ROAD OAK BROOK, IL. 60521 PROJECT NO. 1871.002
DRAWING NO. 18712A6

5.0 CONCEPTUAL ACTION PLAN

5.1 Foundry Fill Area

As indicated in the Phase IIB reports, according to Ms. Frances Koonces of the Wisconsin Department of Natural Resources (WDNR), due to extensive backfilling with foundry fill in the Waukesha area, the WDNR may allow the foundry fill to remain in place. Should any future construction be planned for that portion of the property, the WDNR will require notice and will review development plans prior to construction. The WDNR may place restriction on building activities or design prior to approving any future projects on the eastern half of the property.

According to Mr. Ken Hein of the WDNR, precedence indicates the property will likely be listed on WDNR's Registry of Abandoned Landfills. Due to foundry waste currently being classified as a solid (non-hazardous) waste, the fill is viewed as an abandoned solid waste landfill. The Registry is not a current action or enforcement list, it will be used in the future to direct WDNR to properties that may require additional investigation and, possibly, clean-up action. Current listing on the Registry will not require any additional investigation in the immediate future.

Appropriate actions would include access restrictions and inclusion on the WDNR's registry of abandoned landfills.

5.2 PCB Contaminated Area

According to Mr. Tim Mulhood, Division of Environmental Quality of the WDNR, the practical maximum concentration goal of total PCBs allowed in soil is 5 ppm. In some cases, PCB concentrations of up to 25 ppm in soil have been allowed.

With respect to closure for the PCB impacted area, concentrations of PCBs above 50 ppm are classified as hazardous. Typically, landfills in Wisconsin that are allowed to accept PCB contaminated soil only allow up to approximately 35 ppm for disposal as a special waste. Soils with concentrations above approximately 35 ppm could be removed and transported out-of-state to a hazardous waste landfill or incinerator. Soils between 35 and 5 ppm could be removed and transported to a special waste landfill. Soils with concentrations from 5 to 25 ppm may be

allowed to remain on-site. The final concentration ranges separating removal action, special waste, and hazardous waste are subject to discussion with the WDNR and appropriate receiving facilities.

Confirmation samples could be collected in the isolated contamination area, on a grid and at depth intervals acceptable to WDNR. The final confirmation sampling would occur during an immediate removal activity, under the observation of the WDNR.

6.0 CONCLUSIONS AND RECOMMENDATIONS

The purpose of the Phase III investigation was to identify the extent of PCB contamination above the 5 ppm action level. Associated with this purpose is the evaluation of potential mitigative measures to limit exposure to the contaminated materials by either in place closure, removal, or some combination of the two methods.

The results of the Phase II, IIB, and III Investigations provide the following general conclusions.

- Laboratory analytical results indicate contaminants in the fill are not present in groundwater and surface water.
- Soil borings for monitoring wells and soil sampling, and test pit data indicate a clay layer
 of not less than 2.0 feet is beneath the entire fill area, limiting the potential flow into the
 underlying groundwater. The layer is performing as a natural clay liner for the fill area.
- Laboratory and field analysis of test pits, soil borings, and surface samples all indicate
 that the PCB contamination above the action limit of 5 ppm is isolated in the vicinity of
 B-10 and concentrated near the surface.
- PCBs are relatively immobile and it appears that the cause of the contamination may
 have been a surface release, and as a result, an immediate removal of the contaminated
 soil should be considered as the remedial action.

6.1 Recommendations

Inquiries to the WDNR have indicated that VME Americas Inc. should contact the WDNR and arrange an initial meeting to discuss the results of the on-site investigations and determine an action plan for PCB contaminated soil removal from the east lot.

Based on the information presented in this report, Versar recommends that VME contact the WDNR on the basis that a surface release has occurred and an immediate removal of the contaminated soil can be innitiated upon confirmation from the WDNR.

7.0 STATEMENT OF LIMITATIONS

The data presented and the opinions expressed in this report are qualified as follows:

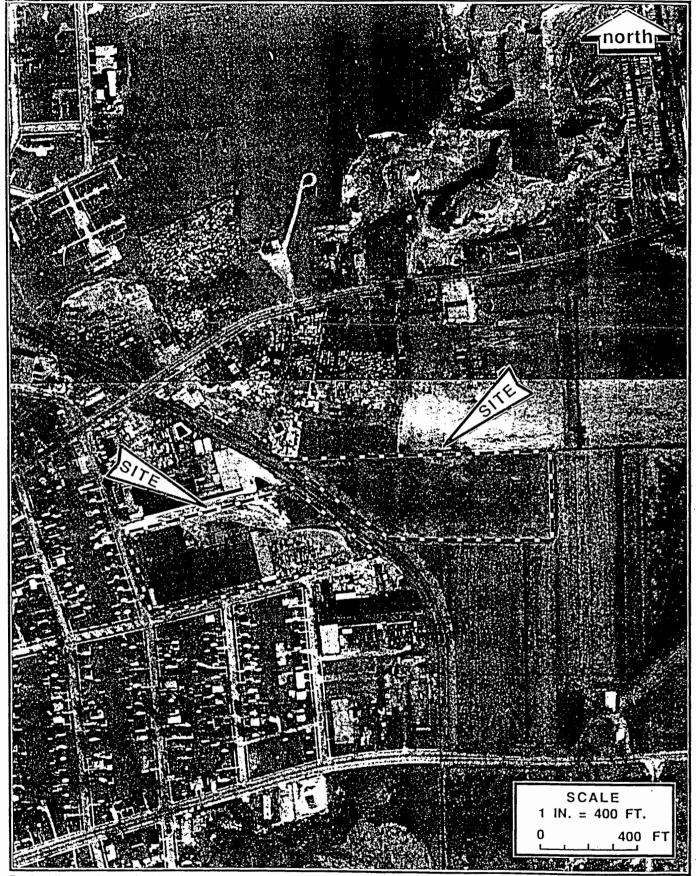
- The sole purpose of the investigation and of this report is to assess the physical characteristics of the Site with respect to the presence or absence of oil or hazardous materials and substances in the environment as defined in the applicable state and federal environmental laws and regulations and to gather information regarding current and past environmental conditions at the Site.
- Versar derived the data in this report primarily from visual inspections, examination of records in the public domain, interviews with individuals with information about the Site, and a limited number of subsurface explorations made on the dates indicated. The passage of time, manifestation of latent conditions, or occurrence of future events may require further exploration at the Site, analysis of the data, and reevaluation of the findings, observations, conclusions, and recommendations expressed in the report.
- In preparing this report, Versar has relied upon and presumed accurate certain information (or the absence thereof) about the Site and adjacent properties provided by governmental officials and agencies, the Client, and others identified herein. Except as otherwise stated in the report, Versar has not attempted to verify the accuracy or completeness of such information.
- The data reported and the findings, observations, conclusions, and recommendations expressed in the report are limited by the Scope of Services, including the extent of subsurface exploration and other tests. The Scope of Services was defined by the requests of the Client, the time and budgetary constraints imposed by the Client, and the availability of access to the Site.
- Because of the limitations stated above, the findings, observations, conclusions, and recommendations expressed by Versar in this report are limited to the information obtained and the surface and subsurface investigation undertaken and should not be considered an opinion concerning the compliance of any past or current owner or operator of the Site with any federal, state, or local law or regulation. No warranty or guarantee, whether express or implied is made with respect to the data reported or findings, observations, conclusions, and recommendations expressed in this report. Further, such data, findings, observations, conclusions, and recommendations are based solely upon Site conditions in existence at the time of investigation.
- This report has been prepared on behalf of and for the exclusive use of the Client, and is subject to and issued in connection with the Agreement and the provisions thereof.

8.0 REFERENCES

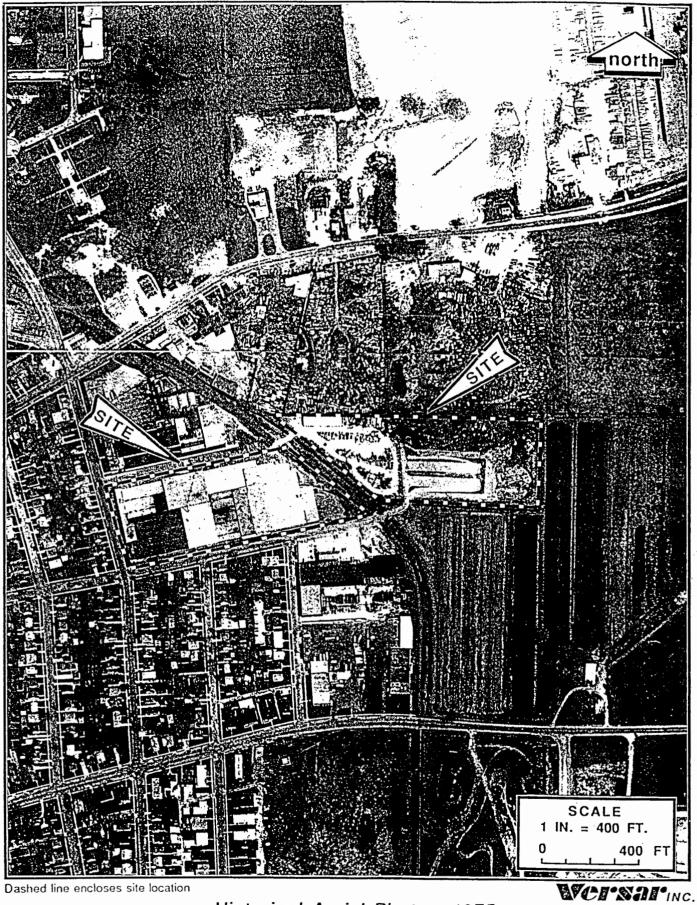
- "Removal Program Representative Sampling Guidance", Volume 1: Soil, Interim Final U.S. EPA, November 1991.
- "Guidance of Remedial Actions for Superfund Sites with PCB Contamination", U.S. EPA, August 1990.



APPENDIX A PHASE I APPENDIX A1 HISTORICAL AERIAL PHOTOS, 1963, 1975, 1985



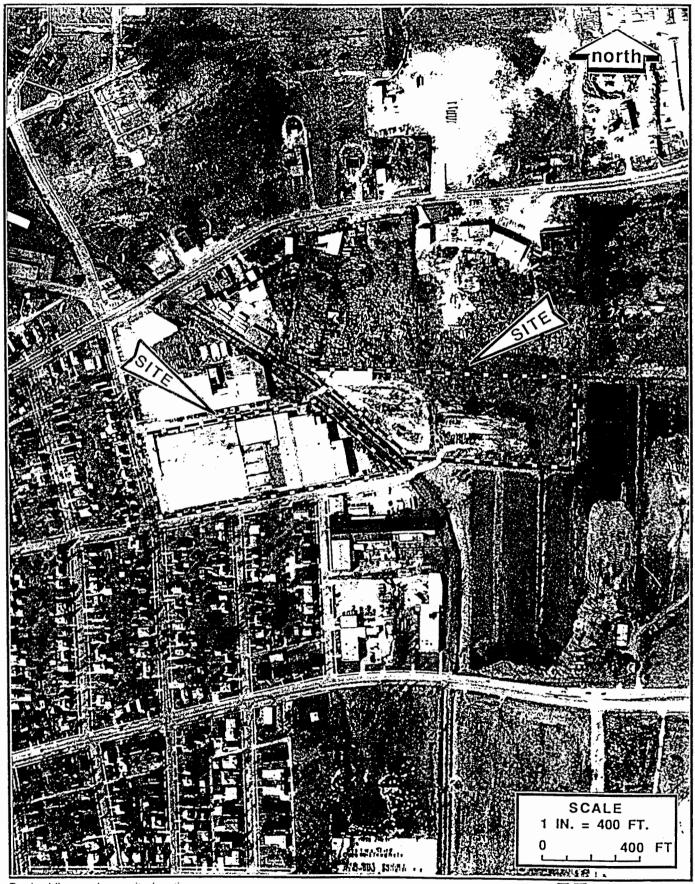
Dashed line encloses site location



Dashed line encloses site location

Historical Aerial Photo - 1975.

Akerman Excavators, Waukesha, Wisconsin



Dashed line encloses site location

APPENDIX B PHASE II

APPENDIX B1 SURFACE FILL ANALYTICAL RESULTS

Table 5 Surface Fill Analysis Results

Parameter	Concentration
Methylene Chloride	0.025 ppm
2-Chlorophenol	0.55 ppm
2,4-Dichlorophenol	0.50 ppm
4-Nitrophenol	0.52 ppm
Acenaphthene	0.61 ppm
Benzo(B)Fluoranthene	1.2 ppm
Dimethyl Phthalate	1.3 ppm
Di-N-Butyl Phthalate	2.2 ppm
1,2,-Diphenylhydrazine	0.42 ppm
Fluorene	0.59 ppm
Naphthalene	1.5 ppm
Nitrobenzene	1.2 ppm
N-Nitrosodiphenylamine	0.95 ppm
Phenanthrene	1.4 ppm
4,4-DDD	33 ppb
Dieldrin	140 ppb
Endosulfan I	17 ppb
Endosulfan Sulfate	10 ppb
Endrin Aldehyde	27 ppb
Heptachlor Epoxide	330 ppb
PCBs (Aroclor 1248)	42 ppm

ppm = parts per million ppb = parts per billion



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CHAIN OF CUSTODY

VERSAR, INC. - MIDWEST REGIONAL OFFICE

1520 KENSINGTON ROADSUITE 115 OAK BROOK .IL 60521

ATTN: M.PLACE/J.SMITH

SAMPLE 92210-E04004 SOIL-SURF/DUMP/PROJECT: VME
DATE COLLECTED 07/28/92 DATE RECEIVED 07/28/92
PRESERVED: YES TEMPERATURE: ON ICE

CONT. INTEGRITY: MEETS STANDARD SAMPLE INTEG: MEETS STANDARD

TEST NAME	RESULT		UNITS	<u>ANALYZED</u>	METHOD	LIMIT
a cui anaguria	0.55		2014	00 (04 (00	SUD 45 00 40	
2-CHLOROPHENOL	0.55		PPM	08/04/92		
2,4-DICHLOROPHENOL	0.50		PPM	08/04/92	SW846 8040	
2,4-DIMETHYLPHENOL	<0.50		PPM	08/04/92	SW846 8040	
4,6-DINITRO-2-METHYLPHENOL	<0.50		PPM	08/04/92		
2,4-DINITROPHENOL	<0.50		PPM	08/04/92		
2-NITROPHENOL	<0.50		PPM	08/04/92	SW846 8040	
4-NITROPHENOL	0.52		PPM	08/04/92	SW846 8040	
4-CHLORO-3-METHYLPHENOL	<0.50		PPM	08/04/92	SW846 8040	
PENTACHLOROPHENOL	<0.50		PPM	08/04/92	SW846 8040	
PHENOL	<0.050		PPM	08/04/92	SW846 8040	
2,4,6-TRICHLOROPHENOL	<0.050		PPM -	08/04/92	SW846 8040	
ACENAPHTHENE	0.61		PPM	08/04/92	SW846 8100	
ACENAPHTYLENE	<2.0	9	PPM	08/04/92	SW846 8100	
ANTHRACENE	<2.0	9	PPM	08/04/92	SW846 8100	
BENZIDINE	<2.0	9	PPM	08/04/92	SW846 8000(FID)	
BENZO (A) ANTHRACENE	<2.0	9	PPM	08/04/92	SW846 8100	
BENZO (A) PYRENE	<2.0	9	PPM	08/04/92	SW846 8100	
BENZO(B)FLUORANTHENE	1.2		PPM	08/04/92	SW846 8100	
BENZO(G,H,I)PERYLENE	<2.0	9	PPM	08/04/92	SW846 8100	
BENZO(K)FLUORANTHENE	<2.0	9	PPM	08/04/92	SW846 8100	
BIS (2-CHLOROETHOXY) METHA	<2.0	9	PPM	08/04/92	SW846 8110	
BIS (2-CHLOROETHYL) ETHER	<2.0	9	PPM	08/04/92	SW846 8110	
BIS (2-CHLOROISOPROPYL) ET	<2.0	9	PPM	08/04/92	SW846 8110	
BIS (2-ETHYLHEXYL) PHTHALA	<2.0	0	PPM	08/04/92	SW846 8060	
4-BROMOPHENYL PHENYL ETHER	<2.0	9	PPM	08/04/92	SW846 8110	
BUTYL BENZYL PHTHALATE	<2.0	9	PPM	08/04/92	SW846 8060	
2-CHLORONAPHTHALENE	<2.0	9	PPM	08/04/92	SW846 8120	
4-CHLOROPHENYL PHENYL ETHE	<2.0	9	PPM	08/04/92	SW846 8110	
CHRYSENE	<2.0	9	PPM	08/04/92	SW846 8100	

PLEASE CONTACT CLIENT SERVICES WITH ANY QUESTIONS. WATER SAMPLES ARE DISPOSED OF 30 DAYS AFTER RECEIPT; SOIL SAMPLES WILL BE DISPOSED OF 6 WEEKS AFTER RECEIPT; WASTE SAMPLES (NON-WATER, NON-SOIL) WILL BE RETURNED 6 WEEKS AFTER RECEIPT. N/T = NOT TESTED, N/A = NOT APPLICABLE, N/D = NOT DETECTED.

@ = ELEVATED DETECTION LIMIT DUE TO MATRIX INTERFERENCE. # = ELEVATED DETECTION LIMIT DUE TO SAMPLE CONCENTRATION. \$ = ELEVATED DETECTION LIMIT DUE TO SAMPLE QUANTITY. + = ELEVATED DETECTION LIMIT DUE TO EXTRACT VOLUME.

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CHAIN OF CUSTODY

VERSAR, INC. - MIDWEST REGIONAL OFFICE

1520 KENSINGTON ROADSUITE 115 OAK BROOK ,IL 60521

ATTN: M.PLACE/J.SMITH

SAMPLE 92210-E04004 SOIL-SURF/DUMP/PROJECT: VME
DATE COLLECTED 07/28/92 DATE RECEIVED 07/28/92
PRESERVED: YES TEMPERATURE: ON ICE

CONT. INTEGRITY: MEETS STANDARD SAMPLE INTEG: MEETS STANDARD

TEST NAME	RESULT		UNITS	ANALYZED	METHOD	LIMIT
DIBENZO(A,H)ANTHRACENE	<2.0	0	PPM	08/04/92	SW846 8100	
1,2-DICHLOROBENZENE	<2.0	0	PPM	08/04/92	SW846 8120	
1,3-DICHLOROBENZENE	<2.0	0	PPM	08/04/92	SW846 8120	
1,4-DICHLOROBENZENE	<2.0	9	PPM	08/04/92	SW846 8120	
3,3'-DICHLOROBENZIDINE	<2.0	0	PPM	08/04/92	SW846 8000(FID)	
DIETHYL PHTHALATE	<2.0	0	PPM	08/04/92	SW846 8060	
DIMETHYL PHTHALATE	1.3		PPM	08/04/92	SW846 8060	
DI-N-BUTYL PHTHALATE	2.2		PPM	08/04/92	SW846 8060	
2,4-DINITROTOLUENE	<2.0	0	PPM	08/04/92	SW846 8090	
2,6-DINITROTOLUENE	<2.0	0	PPM	08/04/92	SW846 8090	
DI-N-OCTYL PHTHALATE	<2.0	0	PPM	08/04/92	SW846 8060	
1,2-DIPHENYLHYDRAZINE	0.42		PPM	08/04/92	SW846 8000(FID)	
FLUORANTHENE	<2.0	9	PPM	08/04/92	SW846 8100	
FLUORENE	0.59		PPM	08/04/92	SW846 8100	
HEXACHLOROBENZENE	<2.0	0	PPM	08/04/92	SW846 8120	
HEXACHLOROBUTADIANE	<2.0	0	PPM	08/04/92	SW846 8120	
HEXACHLOROCYCLOPENTADIENE	<2.0	0	PPM	08/04/92	SW846 8120	
IEXACHLOROETHANE	<2.0	0	PPM	08/04/92	SW846 8120	
NDENO(1,2,3,C,D)PYRENE	<2.0	0	PPM	08/04/92	SW846 8100	
ISOPHORONE	<2.0	0	PPM	08/04/92	SW846 8090	
IAPHTHALENE	1.5		PPM	08/04/92	SW846 8100	
IITROBENZENE	1.2		PPM	08/04/92	SW846 8090	
N-NITROSODIMETHYLAMINE	<2.0	0	PPM	08/04/92	SW846 8070	
N-NITROSO-DI-N-PROPYLAMINE	<2.0	0	PPM	08/04/92	SW846 8070	
-NITROSODIPHENYLAMINE	0.95		PPM	08/04/92	SW846 8070	
HENANTHRENE	1.4		PPM	08/04/92	SW846 8100	
PYRENE	<2.0	0	PPM	08/04/92	SW846 8100	
,2,4-TRICHLOROBENZENE	<2.0	6	PPM	08/04/92	SW846 8120	
LDRIN	<2.0	9	PPB	08/04/92	SW846 8080	

LEASE CONTACT CLIENT SERVICES WITH ANY QUESTIONS. WATER SAMPLES ARE DISPOSED OF 30 DAYS AFTER RECEIPT; SOIL AMPLES WILL BE DISPOSED OF 6 WEEKS AFTER RECEIPT; WASTE SAMPLES (NON-WATER, NON-SOIL) WILL BE RETURNED 6 WEEKS AFTER RECEIPT. N/T = NOT TESTED, N/A = NOT APPLICABLE, N/D = NOT DETECTED.

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^{@ =} ELEVATED DETECTION LIMIT DUE TO MATRIX INTERFERENCE. # = ELEVATED DETECTION LIMIT DUE TO SAMPLE CONCENTRATION.



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LABORATORY REPORT

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CHAIN OF CUSTODY

VERSAR, INC. - MIDWEST REGIONAL OFFICE

1520 KENSINGTON ROADSUITE 115 OAK BROOK ,IL 60521

ATTN: M.PLACE/J.SMITH

SAMPLE 92210-E04004 SOIL-SURF/DUMP/PROJECT: VME
DATE COLLECTED 07/28/92 DATE RECEIVED 07/28/92
PRESERVED: YES TEMPERATURE: ON ICE

CONT. INTEGRITY: MEETS STANDARD SAMPLE INTEG: MEETS STANDARD

TEST NAME	RESULT		UNITS	ANALYZED	METHOD	LIMIT
ALPHA-BHC	<2.0	е	PPB	08/04/92	SW846 8080	
BETA-BHC	<2.0	0	PPB	08/04/92	SW846 8080	
GAMMA-BHC (LINDANE)	<2.0	0	PPB	08/04/92	SW846 8080	
DELTA-BHC	<2.0	9	PPB	08/04/92	SW846 8080	
CHLORDANE	<2.0	9	PPB	08/04/92	SW846 8080	
4,4'-DDT	<2.0	0	PPB	08/04/92	SW846 8080	
4,4'-DDE	<2.0	0	PPB	08/04/92	SW846 8080	
4,4'-DDD	33		PPB	08/04/92	SW846 8080	
DIELDRIN	140		PPB	08/04/92	SW846 8080	
ENDOSULFAN I	17		PPB	08/04/92	SW846 8080	
ENDOSULFAN II	<2.0	9	PPB	08/04/92	SW846 8080	
ENDOSULFAN SULFATE	10		PPB	08/04/92	SW846 8080	
ENDRIN	<2.0	0	PPB	08/04/92	SW846 8080	
ENDRIN ALDEHYDE	27		PPB	08/04/92	SW846 8080	
HEPTACHLOR	<2.0	0	PPB	08/04/92	SW846 8080	
HEPTACHLOR EPOXIDE	330		PPB	08/04/92	SW846 8080	
TOXAPHENE	<2.0	6	PPB	08/04/92	SW846 8080	
PCB'S	42		PPM	08/04/92	SW846 8080	
	AROCLOR	124	8			
BENZENE	<0.005	9	PPM	07/30/92	SW846 8021	
BROMO FORM	<0.015	0	PPM	07/30/92	SW846 8021	
CARBON TETRACHLORIDE	<0.005	0	PPM	07/30/92	SW846 8021	
CHLOROBENZENE	<0.005	0	PPM	07/30/92	SW846 8021	
CHLORODIBROMOMETHANE	<0.005	0	PPM	07/30/92	SW846 8021	
:HLOROETHANE	<0.025	0	PPM	07/30/92	SW846 8021	
-CHLOROETHYLVINYL ETHER	<0.025	0	PPM	07/30/92	SW846 8021	
CHLOROFORM	<0.005	9	PPM	07/30/92	SW846 8021	
DICHLOROBROMOMETHANE	<0.005	0	PPM	07/30/92	SW846 8021	
,1-DICHLOROETHANE	<0.005	0	PPM	07/30/92	SW846 8021	

PLEASE CONTACT CLIENT SERVICES WITH ANY QUESTIONS. WATER SAMPLES ARE DISPOSED OF 30 DAYS AFTER RECEIPT; SOIL

AMPLES WILL BE DISPOSED OF 6 WEEKS AFTER RECEIPT; WASTE SAMPLES (NON-WATER, NON-SOIL) WILL BE RETURNED 6 WEEKS

FIER RECEIPT. N/T = NOT TESTED, N/A = NOT APPLICABLE, N/D = NOT DETECTED.

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LABORATORY REPORT

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CHAIN OF CUSTODY

/ERSAR, INC. - MIDWEST REGIONAL OFFICE 1520 KENSINGTON ROADSUITE 115

OAK BROOK ,IL 60521

SAMPLE

ATTN: M.PLACE/J.SMITH

92210-E04004 SOIL-SURF/DUMP/PROJECT: VME DATE COLLECTED 07/28/92 DATE RECEIVED 07/28/92

PRESERVED: YES

TEMPERATURE: ON ICE

CONT. INTEGRITY: MEETS STANDARD

SAMPLE INTEG: MEETS STANDARD

EST NAME	RESULT		UNITS	ANALYZED	METHOD	LIMIT
,2-DICHLOROETHANE	<0.005	0	PPM	07/30/92	SW846 8021	
1.1-DICHLOROETHYLENE	<0.005	0	PPM	07/30/92	SW846 8021	
,2-DICHLOROPROPANE	<0.005	0	PPM	07/30/92	SW846 8021	
CIS-1,3-DICHLOROPROPENE	<0.015	9	PPM	07/30/92	SW846 8021	
THYLBENZENE	<0.005	0	PPM	07/30/92	SW846 8021	
BROMOMETHANE	<0.025	9	PPM	07/30/92	SW846 8021	
CHLOROMETHANE	<0.025	9	PPM	07/30/92	SW846 8021	
-1ETHYLENE CHLORIDE	0.025		PPM	07/30/92	SW846 8021	
1,1,2,2-TETRACHLOROETHANE	<0.005	0	PPM	07/30/92	SW846 8021	
TETRACHLOROETHYLENE	<0.005	0	PPM	07/30/92	SW846 8021	
TOLUENE	<0.005	0	PPM	07/30/92	SW846 8021	
TRANS-1,2-DICHLOROETHENE	<0.005	9	PPM	07/30/92	SW846 8021	
1,1,1-TRICHLOROETHANE	<0.005	9	PPM	07/30/92	SW846 8021	
1,1,2-TRICHLOROETHANE	<0.005	0	PPM	07/30/92	SW846 8021	
RICHLOROETHYLENE	<0.005	0	PPM	07/30/92	SW846 8021	
TRICHLOROFLUOROMETHANE	<0.005	9	PPM	07/30/92	SW846 8021	
VINYL CHLORIDE	<0.015	9	PPM	07/30/92	SW846 8021	
RANS-1,3-DICHLOROPROPENE	<0.025	9	PPM	07/30/92	SW846 8021	
C PESTICIDE EXTRACTION	COMPLET	E		07/31/92	SW846 3540	
GC BASE NEUTRAL EXTRACTION	COMPLET			07/31/92	SW846 3540	
C ACID EXTRACTION	COMPLET			07/31/92		

PLEASE CONTACT CLIENT SERVICES WITH ANY QUESTIONS. WATER SAMPLES ARE DISPOSED OF 30 DAYS AFTER RECEIPT; SOIL AMPLES WILL BE DISPOSED OF 6 WEEKS AFTER RECEIPT; WASTE SAMPLES (NON-WATER, NON-SOIL) WILL BE RETURNED 6 WEEKS FTER RECEIPT. N/T = NOT TESTED, N/A = NOT APPLICABLE, N/D = NOT DETECTED.

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APPENDIX B2 CHAIN-OF-CUSTODY FORMS

TIUI

Wershing. CHAIN OF CUSTODY RECORD PROJECT NAME **PARAMETERS** PROJECT NO. HYGIENE SAMPLE VME PROJECT MANAGER: MIKE PLACE) SAMPLERS: (Signature) JANICE SMITH-BAGHERY REMARKS GRAB TIME STATION LOCATION SAMPLE DATE PRES MATRIX NUMBER 3 SOIL NONE 7/28/92 DUMP SOIL-SURF NONE ELEV-2 ELEV-2 HQ WATER STREAM ST REAM-UP ACD WATER STREAM STREAM-DOWN 7/28/A Received by: (Signature) Relinquished by: (Signature) Date / Time Relinquished by: (Signature) Date / Time Received by: (Signature) 1 44 1, 1 2 11 1 (Printed) (Printed) (Printed) A WILL ST VICE WINDY L. BISHEP JANICE SMITH-BASHERI Date / Time Remarks HAND DRIVERED TO LAB. Received for Laboratory by: Date / Time IMMEDIATELY PLACED ON ICE ATTER (POL (Signature) SAMPLE COLLECTED. (Printed) (Printed) QA/QC PACKAGE "B" REQUIRED.

APPENDIX C PHASE IIB

APPENDIX C1 SUMMARY OF LABORATORY RESULTS

TABLE 2 Results of Laboratory Analysis

	Parameter Concentration (1)								
Parameter	TP-1 (5'-6') ⁽²⁾	TP-2 (5-6')	TP-3 (8-9')	TP-4 (6-7')	TP-5 (5-6')	TP-6 (5-6')	TP-7 (4-5')	Acceptance Limits	
TCLP Volatiles									
Tetrachloroethylene	0.013	0.024	<0.005	<0.005	<0.005	<0.005	0.054	0.7	
Trichloroethylene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.017	0.5	
TCLP Acid Extractables and Base/Neutrals	BDL	BDL	BDL	BDL	BDL	BDL	BDL	(3)	
TCLP Metals									
Barium	0.6	0.5	0.6	0.4	0.5	0.3	0.4	100.0	
Nickel	<0.1	<0.1	0.2	<0.1	0.2	0.4	<0.1	35.0	
Zinc	0.5	0.3	0.4	0.2	0.4	0.2	0.1	200.0	
TCLP Phenol	<0.12	0.33	0.20	<0.12	<0.12	<0.12	<0.12	2000 mg/l	
Chlorine	<0.015%	<0.015%	0.016%	<0.015%	<0.015%	<0.015%	<0.015%	<1.0%	
Cyanide	<5.0 mg/kg	<5.0 mg/kg	<5.0 mg/kg	<5.0 mg/kg	<5.0 mg/kg	<5.0 mg/kg	<5.0 mg/kg	50 mg/l	
Reactive Sulfide	<1.3 mg/kg	49 mg/kg	<1.3 mg/kg	<1.3 mg/kg	<1.3 mg/kg	4.8 mg/kg	<1.3 mg/kg	50 mg/l	
Closed Cup Flash-Point	>200°F	>200°F	>200°F	>200°F	>200°F	>200°F	>200°F	>140°F	
PCBs	4.5 mg/kg	2.5 mg/kg	<0.5 mg/kg	<0.5 mg/kg	<0.5 mg/kg	<0.5 mg/kg	<0.5 mg/kg	< Detection Limits	

⁽¹⁾ Concentrations shown as mg/l unless otherwise noted. The units mg/l and mg/kg are approximately equal to parts per million.

⁽²⁾ Sample interval shown as feet below ground surface.

⁽³⁾ Acceptance limits for TCLP Acid Extractables and Base/Neutrals are shown in Table 1.

APPENDIX C2 TEST PIT LOGS

Depth (feet)	TP-1
0 to 3/4: 3/4 to 6½: 6½ to 7½:	Top soil over gravel fill. Foundry fill consisting of black (N2/0) foundry sand, casting molds of founry sand, some slag, minor amounts of lumber, wire, plastic. Brown silty clay.
7½ to 9:	Gray (N6/0) silty clay.
	TP-2
0 to 34: 34 to 6½:	Gravel fill over sand base. Foundry fill consisting of black (N2/0) foundry sand, casting molds of founry sand, some slag, minor amounts of lumber, wire, plastic.
6½ to 10: 10 to 11:	Brown silty clay. Gray (N6/0) silty clay.
	TP-3
0 to $4\frac{1}{2}$: $4\frac{1}{2}$ to $9\frac{1}{2}$:	Fill consisting of subrounded gravel. Foundry fill consisting of black (N2/0) foundry sand, casting molds of founry sand, minor amounts of lumber and wire.
9½ to 13: 13 to 14:	Brown silty clay. Gray (N6/0) silty clay.
	TP-4
0 to 7:	Foundry fill consisting of black (N2/O) foundry sand, little wire, casting molds of foundry sand, some white silica foundry sand, some slag, moist to wet.
7 to 11:	Gray (N6/O) silty clay, trace subrounded gravel, moist.
	TP-5
•	
0 to 1: 1 to 6½:	White gravel fill. Foundary fill consisting of black (N2/0) foundery sand, little wire and lumber scraps, trace yellow (5Y7/8) foundery sand castings, trace oil filters, moist grading
6½ to 8½: 8½ to 9:	downward to wet. Very dark gray (5Y3/1) organic clay, moist. Light gray (N7/0) silt, moist.

Depth	(feet)

TP-6

0 to 8:

Foundery fill consisting of black (N2/0) foundery sand, some pockets of yellowish brown (10YR5/6) foundary sand, trace pockets of white (10YR8/2) foundery sand, little wire and lumber scraps, moist grading downward to wet. Grayish brown (2.5Y5/2) organic clay with gastropods and

8 to 10:

plant matter, moist.

TP-7

0 to 1:

Light gray (10YR6/1) limestone gravel, angular, gravel up to 4 inches in diameter, wet.

1 to 5:

Light brownish gray (10YR6/2) sand and gravel with some clay, subrounded, gravel up to 4 inches in diameter,

some broken cement blocks, wet.

5 to 6:

6 to $6\frac{1}{2}$:

Black (N2/0) organic clay, moist.
Dark grayish brown (2.5Y4/2) organic clay with gastropods

and plant matter, moist.

APPENDIX C3 ANALYTICAL RESULTS



Project #: 920515 Date : 10/01/92

Amended

VERSAR Suite 115 1520 Kensington Oak Brook, IL 60521-2139

ATTN: Janice R. Smith-Bagheri

Sampling Date: 09/08,09/92 Analyses Date: 09/14-10/01/92

Identification: Seven

Seven samples taken by Janice R. Smith-Bagheri

identified as:

VME

PROJECT #1871.1

Completed report.

Results follow:

. -

Project #: 920515 Page 2 of 15 Amended

Sample ID: TP-1-1

4.2

TCLP VOLATILES		
Method: SW-846 8240 (mod Parameter	MDL (mg/L)	Analysis (mg/L)
Parameter	MDH (mg/H)	Analysis (mg/L)
Benzene	0.005	BDL
Carbon tetrachloride	0.005	BDL
Chlorobenzene	0.005	BDL
Chloroform	0.005	BDL
1,2-Dichloroethane	0.005	BDL
1,1-Dichloroethylene	0.005	BDL
Methyl ethyl ketone	0.25	BDL
Tetrachloroethylene	0.005	0.013
Trichloroethylene	0.005	BDL
Vinyl chloride	0.005	BDL
TCLP ACID EXTRACTABLES		
Method: SW-846 8270		
Parameter	MDL (mg/L)	Analysis (mg/L)
o-Cresol	0.05	BDL
m & p-Cresol	0.05	BDL
Pentachlorophenol	0.25	BDL .
2,4,5-Trichlorophenol	0.05	BDL
2,4,6-Trichlorophenol	0.05	BDL
TCLP BASE/NEUTRALS		
Method: SW-846 8270		
Parameter	MDL (mg/L)	Analysis (mg/L)
1,4-Dichlorobenzene	0.05	BDL
2,4-Dinitrotoluene	0.05	BDL
Hexachloroethane	0.05	BDL
Hexachlorobutadiene	0.05	BDL
Hexachlorobenzene	0.05	BDL
Nitrobenzene	0.05	BDL
Pyridine	0.05	BDL

Project #: 920515 Page 3 of 15 Amended

Sample ID: TP-1-1 (cont'd)

1.5

TCLP METALS Method: Standard Method		
Parameter	MDL (mg/L)	Analysis (mg/L)
Arsenic	0.2	BDL
Cadmium	0.1	BDL
Chromium	0.1	BDL
Lead	0.1	BDL
Selenium	0.2	BDL
Silver	0.1	BDL
Barium	0.1	0.6
Mercury	0.05	BDL
Copper	0.1	BDL
Nickel	0.1	BDL
Zinc	0.1	0.5
TCLP Phenol:	0.12	BDL
Chlorine:	0.015%	BDL
Cyanide:	5.0 mg/Kg	BDL
Reactive Sulfide:	1.3 mg/Kg	BDL
Closed Cup Flashpoint:		>200 ⁰ F
pH: (10% solution)		7.6
Method: GC/ECD		
PCBs:	0.5 mg/Kg	4.5 mg/Kg

Project #: 920515 Page 4 of 15 Amended

Sample ID: TP-2-1

TCLP VOLATILES			
Method: SW-846 8240 (me			
Parameter	MDL (mg/L)	Analysis	(mg/L)
Benzene	0.005	BDL	
Carbon tetrachloride	0.005	BDL	
Chlorobenzene	0.005	BDL	
Chloroform	0.005	BDL	
1,2-Dichloroethane	0.005	BDL	
1,1-Dichloroethylene	0.005	BDL	
Methyl ethyl ketone	0.25	BDL	
Tetrachloroethylene	0.005	0.02	4
Trichloroethylene	0.005	BDL	
Vinyl chloride	0.005	BDL	
TCLP ACID EXTRACTABLES Method: SW-846 8270			
Parameter	MDL (mg/L)	Analysis	(mg/L)
o-Cresol	0.05	BDL	
m & p-Cresol	0.05	BDL	
Pentachlorophenol	0.25	BDL	
2,4,5-Trichlorophenol	0.05	BDL	
2,4,6-Trichlorophenol	0.05	BDL	
TCLP BASE/NEUTRALS			
Method: SW-846 8270			
Parameter	MDL (mg/L)	Analysis	(mg/L)
1,4-Dichlorobenzene	0.05	BDL	
2,4-Dinitrotoluene	0.05	BDL	
Hexachloroethane	0.05	BDL	
Hexachlorobutadiene	0.05	BDL	
Hexachlorobenzene	0.05	BDL	
Nitrobenzene	0.05	BDL	
Pyridine	0.05	BDL	

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Sample ID: TP-2-1 (cont'd)

5-

TCLP METALS		
Method: Standard Method Parameter	MDL (mg/L)	Analysis (mg/L)
Arsenic	0.2	BDL
Cadmium	0.1	BDL
Chromium	0.1	BDL
Lead	0.1	BDL
Selenium	0.2	BDL
Silver	0.1	BDL
Barium	0.1	0.5
Mercury	0.05	BDL
Copper	0.1	BDL
Nickel	0.1	BDL
Zinc	0.1	0.3
TCLP Phenol:	0.12	0.33
Chlorine:	0.015%	BDL
Cyanide:	5.0 mg/Kg	BDL
Reactive Sulfide:	1.3 mg/Kg	49. mg/Kg
Closed Cup Flashpoint:	40.00	>200°F
pH: (10% solution)		7.5
Method: GC/ECD		
PCBs:	0.5 mg/Kg	2.5 mg/Kg

Project #: 920515 Page 6 of 15 Amended

Sample ID: TP-3-1

1.2

TCLP VOLATILES			
Method: SW-846 8240 (mod Parameter	MDL (mg/L)	Analysis	(mg/L)
Benzene	0.005	BDL	
Carbon tetrachloride	0.005	BDL	
Chlorobenzene	0.005	BDL	
Chloroform	0.005	BDL	
1,2-Dichloroethane	0.005	BDL	
1,1-Dichloroethylene	0.005	BDL	
Methyl ethyl ketone	0.25	BDL	
Tetrachloroethylene	0.005	BDL	
Trichloroethylene	0.005	BDL	
Vinyl chloride	0.005	BDL	
TCLP ACID EXTRACTABLES Method: SW-846 8270			
Parameter	MDL (mg/L)	Analysis	(mg/L)
o-Cresol	0.05	BDL	
m & p-Cresol	0.05	BDL	
Pentachlorophenol	0.25	BDL	
2,4,5-Trichlorophenol	0.05	BDL	
2,4,6-Trichlorophenol	0.05	BDL	
TCLP BASE/NEUTRALS			
Method: SW-846 8270			
Parameter	MDL (mg/L)	Analysis	(mg/L)
1,4-Dichlorobenzene	0.05	BDL	
2,4-Dinitrotoluene	0.05	BDL	
Hexachloroethane	0.05	BDL	
Hexachlorobutadiene	0.05	BDL	
Hexachlorobenzene	0.05	BDL	
Nitrobenzene	0.05	BDL	
Pyridine	0.05	BDL	

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Sample ID: TP-3-1 (cont'd)

1-

TCLP METALS		
Method: Standard Method		
Parameter	MDL (mg/L)	Analysis (mg/L)
Arsenic	0.2	BDL
Cadmium	0.1	BDL
Chromium	0.1	BDL
Lead	0.1	BDL
Selenium	0.2	BDL
Silver	0.1	BDL
Barium	0.1	0.6
Mercury	0.05	BDL
Copper	0.1	BDL
Nickel	0.1	0.2
Zinc	0.1	0.4
TCLP Phenol:	0.12	0.20
Chlorine:	0.015%	0.016%
Cyanide:	5.0 mg/Kg	BDL
Reactive Sulfide:	1.3 mg/Kg	BDL
Closed Cup Flashpoint:		>200 ⁰ F
pH: (10% solution)		7.3
Method: GC/ECD		
PCBs:	0.5 mg/Kg	BDL

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Sample ID: TP-4-1

4

TCLP VOLATILES			
Method: SW-846 8240 (mod	프로그램 아이 많이 없어지다니다. 이 마른 맛이지는 그렇지 않는 사람이에 가게 되는 것이 없어요?		
Parameter	MDL (mg/L)	Analysis (mg/L)
Benzene	0.005	BDL	
Carbon tetrachloride	0.005	BDL	
Chlorobenzene	0.005	BDL	
Chloroform	0.005	BDL	
1,2-Dichloroethane	0.005	BDL	
1,1-Dichloroethylene	0.005	BDL	
Methyl ethyl ketone	0.25	BDL	
Tetrachloroethylene	0.005	BDL	
Trichloroethylene	0.005	BDL	
Vinyl chloride	0.005	BDL	
TCLP ACID EXTRACTABLES			
Method: SW-846 8270	0.00 C 5.49	45-10-12-	
Parameter	MDL (mg/L)	Analysis ((mg/L)
o-Cresol	0.05	BDL	
m & p-Cresol	0.05	BDL	
Pentachlorophenol	0.25	BDL	
2,4,5-Trichlorophenol	0.05	BDL	
2,4,6-Trichlorophenol	0.05	BDL	
TCLP BASE/NEUTRALS			
Method: SW-846 8270			
Parameter	MDL (mg/L)	Analysis	(mg/L)
1,4-Dichlorobenzene	0.05	BDL	
2,4-Dinitrotoluene	0.05	BDL	
Hexachloroethane	0.05	BDL	
Hexachlorobutadiene	0.05	BDL	
Hexachlorobenzene	0.05	BDL	
Nitrobenzene	0.05	BDL	
Pyridine	0.05	BDL	

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Sample ID: TP-4-1 (cont'd)

100

TCLP METALS		
Method: Standard Method		
Parameter	MDL (mg/L)	Analysis (mg/L)
Arsenic	0.2	BDL
Cadmium	0.1	BDL
Chromium	0.1	BDL
Lead	0.1	BDL
Selenium	0.2	BDL
Silver	0.1	BDL
Barium	0.1	0.4
Mercury	0.05	BDL
Copper	0.1	BDL
Nickel	0.1	BDL
Zinc	0.1	0.2
TCLP Phenol:	0.12	BDL
Chlorine:	0.015%	BDL
Cyanide:	5.0 mg/Kg	BDL
Reactive Sulfide:	1.3 mg/Kg	BDL
Closed Cup Flashpoint:		>200°F
pH: (10% solution)		7.6
Method: GC/ECD		
PCBs:	0.5 mg/Kg	BDL

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Sample ID: TP-5-1

TCLP VOLATILES Method: SW-846 8240 (mod		
Parameter	MDL (mg/L)	Analysis (mg/L)
Benzene	0.005	BDL
Carbon tetrachloride	0.005	BDL
Chlorobenzene	0.005	BDL
Chloroform	0.005	BDL
1,2-Dichloroethane	0.005	BDL
1,1-Dichloroethylene	0.005	BDL
Methyl ethyl ketone	0.25	BDL
Tetrachloroethylene	0.005	BDL
Trichloroethylene	0.005	BDL
Vinyl chloride	0.005	BDL
TCLP ACID EXTRACTABLES Method: SW-846 8270 Parameter	MDL (mg/L)	Analysis (mg/L)
	, 3,	(3/ -/
o-Cresol	0.05	BDL
m & p-Cresol	0.05	BDL
Pentachlorophenol	0.25	BDL
2,4,5-Trichlorophenol	0.05	BDL
2,4,6-Trichlorophenol	0.05	BDL
TCLP BASE/NEUTRALS Method: SW-846 8270		
Parameter	MDL (mg/L)	Analysis (mg/L)
1,4-Dichlorobenzene	0.05	BDL
2,4-Dinitrotoluene	0.05	BDL
Hexachloroethane	0.05	BDL
Hexachlorobutadiene	0.05	BDL
Hexachlorobenzene	0.05	BDL
Nitrobenzene	0.05	BDL
Pyridine	0.05	BDL
	4 5 5 5	202

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Sample ID: TP-5-1 (cont'd)

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TCLP METALS		
Method: Standard Method		
Parameter	MDL (mg/L)	Analysis (mg/L)
Arsenic	0.2	BDL
Cadmium	0.1	BDL
Chromium	0.1	BDL
Lead	0.1	BDL
Selenium	0.2	BDL
Silver	0.1	BDL
Barium	0.1	0.5
Mercury	0.05	BDL
Copper	0.1	BDL
Nickel	0.1	0.2
Zinc	0.1	0.4
TCLP Phenol:	0.12	BDL
Chlorine:	0.015%	BDL
Cyanide:	5.0 mg/Kg	BDL
Reactive Sulfide:	1.3 mg/Kg	BDL
Closed Cup Flashpoint:	100000000000000000000000000000000000000	>200 ⁰ F
pH: (10% solution)		8.1
Method: GC/ECD		
PCBs:	0.5 mg/Kg	BDL

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Sample ID: TP-6-1

TCLP VOLATILES Method: SW-846 8240 (modi	fied to capillary)	
Parameter	MDL (mg/L)	Analysis (mg/L)
Benzene	0.005	BDL
Carbon tetrachloride	0.005	BDL
Chlorobenzene	0.005	BDL
Chloroform	0.005	BDL
1,2-Dichloroethane	0.005	BDL
1,1-Dichloroethylene	0.005	BDL
Methyl ethyl ketone	0.25	BDL
Tetrachloroethylene	0.005	BDL
Trichloroethylene	0.005	BDL
Vinyl chloride	0.005	BDL
TCLP ACID EXTRACTABLES Method: SW-846 8270		
Parameter	MDL (mg/L)	Analysis (mg/L)
o-Cresol	0.05	BDL
m & p-Cresol	0.05	BDL
Pentachlorophenol	0.25	BDL
2,4,5-Trichlorophenol	0.05	BDL
2,4,6-Trichlorophenol	0.05	BDL
TCLP BASE/NEUTRALS		
Method: SW-846 8270		
Parameter	MDL (mg/L)	Analysis (mg/L)
1,4-Dichlorobenzene	0.05	BDL
2,4-Dinitrotoluene	0.05	BDL
Hexachloroethane	0.05	BDL
Hexachlorobutadiene	0.05	BDL
Hexachlorobenzene	0.05	BDL
Nitrobenzene	0.05	BDL
Pyridine	0.05	BDL

Project #: 920515 Page 13 of 15 Amended

Sample ID: TP-6-1 (cont'd)

100

TCLP METALS		
Method: Standard Method		
Parameter	MDL (mg/L)	Analysis (mg/L)
Arsenic	0.2	BDL
Cadmium	0.1	BDL
Chromium	0.1	BDL
Lead	0.1	BDL
Selenium	0.2	BDL
Silver	0.1	BDL
Barium	0.1	0.3
Mercury	0.05	BDL
Copper	0.1	BDL
Nickel	0.1	0.4
Zinc	0.1	0.2
TCLP Phenol:	0.12	BDL
Chlorine:	0.015%	BDL
Cyanide:	5.0 mg/Kg	BDL
Reactive Sulfide:	1.3 mg/Kg	4.8 mg/Kg
Closed Cup Flashpoint:	76.0	>200°F
pH: (10% solution)		7.6
Method: GC/ECD		
PCBs:	0.5 mg/Kg	BDL

Project #: 920515 Page 14 of 15 Amended

Sample ID: TP-7-1

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TCLP VOLATILES			
	dified to capillary).		/mar/T \
Parameter	MDL (mg/L)	Analysis	(mg/L)
Benzene	0.005	BDL	
Carbon tetrachloride	0.005	BDL	
Chlorobenzene	0.005	BDL	
Chloroform	0.005	BDL	
1,2-Dichloroethane	0.005	BDL	
1,1-Dichloroethylene	0.005	BDL	
Methyl ethyl ketone	0.25	BDL	
Tetrachloroethylene	0.005	0.05	4
Trichloroethylene	0.005	0.01	.7
Vinyl chloride	0.005	BDL	
TCLP ACID EXTRACTABLES Method: SW-846 8270			
Parameter	MDL (mg/L)	Analysis	(mg/L)
o-Cresol	0.05	BDL	
m & p-Cresol	0.05	BDL	
Pentachlorophenol	0.25	BDL	
2,4,5-Trichlorophenol	0.05	BDL	
2,4,6-Trichlorophenol	0.05	BDL	
TCLP BASE/NEUTRALS Method: SW-846 8270			
Parameter	MDL (mg/L)	Analysis	(mg/L)
1,4-Dichlorobenzene	0.05	BDL	
2,4-Dinitrotoluene	0.05	BDL	
Hexachloroethane	0.05	BDL	
Hexachlorobutadiene	0.05	BDL	
Hexachlorobenzene	0.05	BDL	
Nitrobenzene	0.05	BDL	
Pyridine	0.05	BDL	
	2762.2		

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Sample ID: TP-7-1 (cont'd)

TCLP	MET	ALS	
		Archardo.	Watha

Method: Standard Method		
Parameter	MDL (mg/L)	Analysis (mg/L)
Arsenic	0.2	BDL
Cadmium	0.1	BDL
Chromium	0.1	BDL
Lead	0.1	BDL
Selenium	0.2	BDL
Silver	0.1	BDL
Barium	0.1	0.4
Mercury	0.05	BDL
Copper	0.1	BDL
Nickel	0.1	BDL
Zinc	0.1	0.1
TCLP Phenol:	0.12	BDL
Chlorine:	0.015%	BDL
Cyanide:	5.0 mg/Kg	BDL
Reactive Sulfide:	1.3 mg/Kg	BDL
Closed Cup Flashpoint:		>200°F
pH: (10% solution)		8.5
Method: GC/ECD		
PCBs:	0.5 mg/Kg	BDL

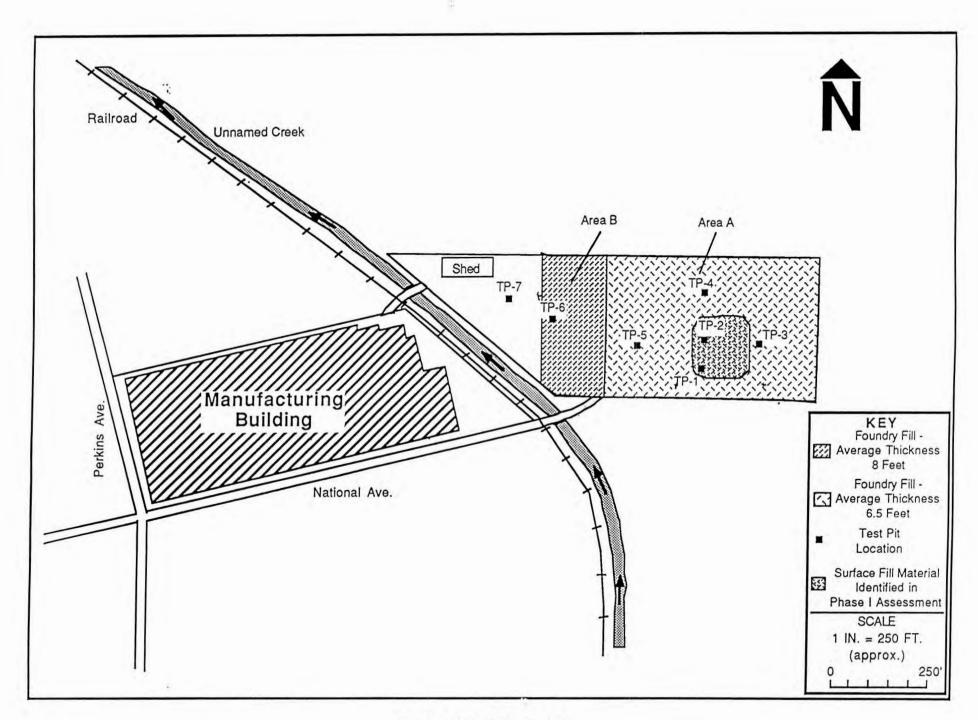
MDL = Method Detection Limit
BDL = Below Detection Limit

Respectfully submitted,

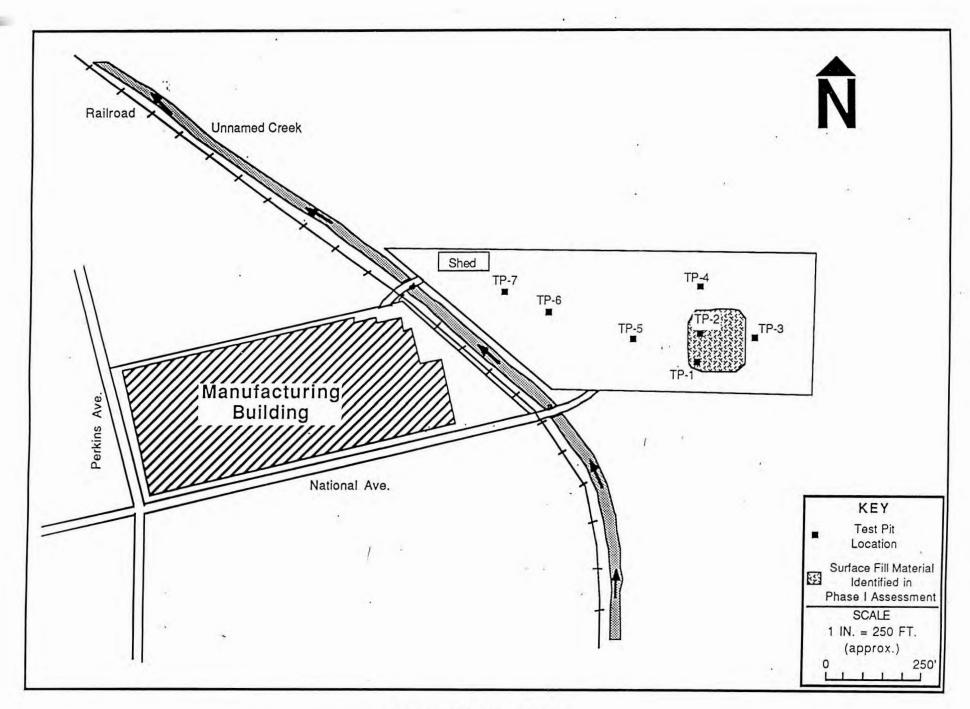
Nicholas Cuzzone Lab Manager

Quality Analytical Labs, Inc.

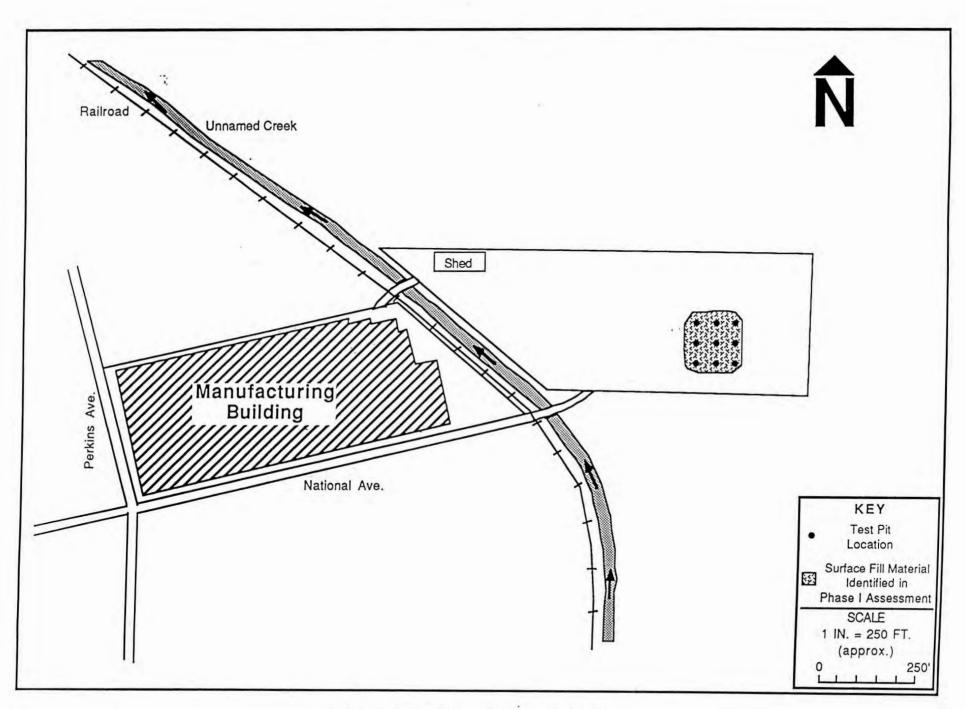
APPENDIX C4 PHASE IIB FIGURES



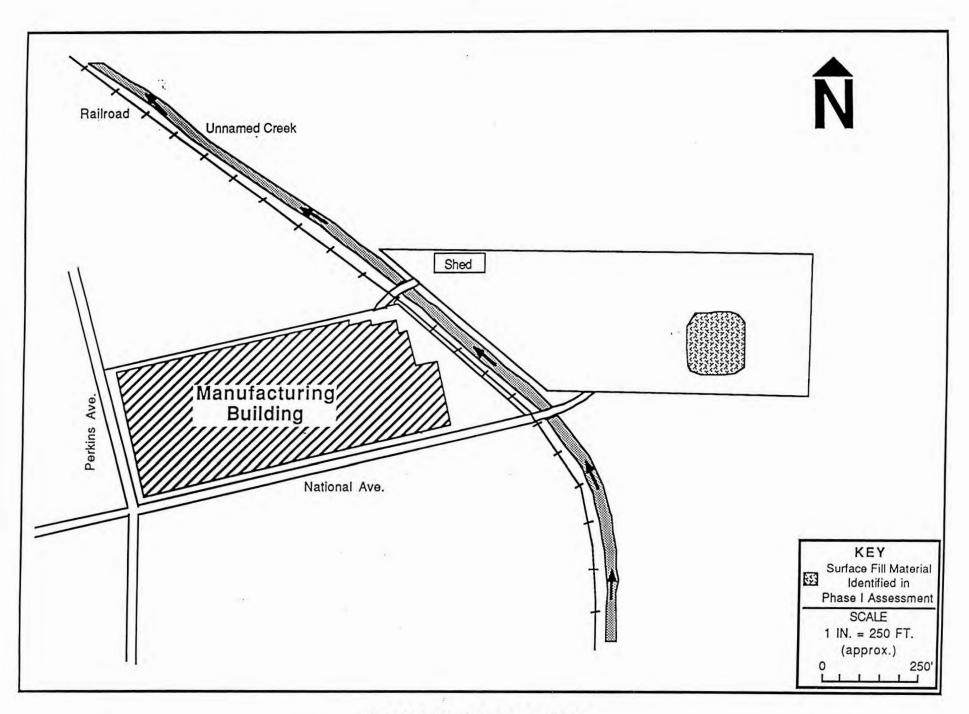
Foundry Fill Areas
VME/Akerman Excavators, Waukesha, Wisconsin



Test Pit Locations
VME/Akerman Excavators, Waukesha, Wisconsin



Proposed Test Pit Locations
VME/Akerman Excavators, Waukesha, Wisconsin



Property Features Map
VME/Akerman Excavators, Waukesha, Wisconsin

APPENDIX C5 CHAIN-OF-CUSTODY FORMS

PROJECT NO. 1871.1	PROJE V	ECT NAM	IE					2/	S. C.	P.	ARAME	TERS		INDUSTRIAL Y HYGIENE SAMPLE
SAMPLERS: (Signate					(Printed)		7	ATT REPS	1 /	/	//	///	./	
Jann & D	ND	ag	-	_	JANICE R. SMITH-R	AGH	的	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	/	//	//	//		REMARKS
FIELD SAMPLE NUMBER	DATE	TIME	COMP.	GRAB	(Printed) JANICE R. SMITH-R STATION LOCATION	1	5/5	4//		/	//		MATR	-IX
TP-1-1	9/8/12	845		X	TP-I	2	X						Soil	
TP-2-1	1/8/92	1000		X	TP-Z	2	\times						Sol	i.
TP-3-1	1/8/92	1150		X	TP-3	2	X						SOIL	
TP-4-1	1/8/92	1445		X	TP-4	2	X						Son	1
TP-5-1	1/9/92	900		X	TP-5	2	X						SOIL	
TP-6-1	9/1/92	1045		X	TP-6	2	X						SOIL	
TP-7-1	9/1/2	1245		X	TP-7	2	X						SOIL	
Pelinquished by: (Sign	ature)	\dashv	Date	/ Tim	Received by: (Sigfature)	Reli	nquish	ed by: /	Signature	,,	D	ate / Time	Receive	ed by: (Signature)
Camkluter	1	J 9/14	192		July Folk									
JANICE SMITH	Par				9/14/92	(Prin	ted)						(Printed)
Relinquished by: (Sign		13-13-	Date	/ Tim		,	gate /	Time	Remai	ks				
July fata		9/14	192	2:5	(Signatura)	9/14	92	2130	1, 1927 - 1200		TELY	PLAC	ED O	NICE IN
JEFF FATA	}				(Printed)				Coo					,

APPENDIX D PHASE III

APPENDIX D1 SOIL BORING AND WELL LOGS

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Har Dan NR F	1 E	By (I	irm na	ME me and nam	e of crew chief) In C.	-		Date Dr						1,5	BE	MU		1
NR F	KI	sto	1	11 ann	Inc.			DE	. 1	1	07	Date I O M N	Stilling 51 L	11	93	Drillin	g Met	hod
************	acility	Wall	No W	Unique Wa	Engineer II Nov. Com	mon Well	Name	Final St	atic	Vater I	cvel		E Eleva	7	YY	9/4 Borcho	H	5/7
oring l					- L	11/1/-	α	X 5	7.89	Feet M	ISL	84	+3.70	Feet !	MSL	Dicable	25	nches
E P	1/4 of	AJE	1/40	Section	2,479,556 2 . т_6	122	E/S/C/I	N La	t	0 .		Local			IN	olicable)	ΠE
ounty	2/4 0/	,	- 1	- 1	A.1_6	N, K_/	DNR	County (Code	Civil	Town/	City/ o	r Villa	eet [IS _		Feet	t 🗆 W
Samp	ole	W	aur	esha				2.8				ruk		ia				
	(F)	nts	eet.		Soil/Rock Des									Soil	Prop	erties		-
T.	Length Att	Blow Counts	Depth in Feet		And Geologic C Each Major			-	CS	.g	am.	Ð.	ressiv gth	ure		sity		ents
and Ty	28	Blo	Dep						US	Grapt Log	Well Diagram	PID/FID	Compressiv Strength	Moisture Content	Limit	Plasticity Index	P 200	RQD/ Comments
				Gravel	Fill						11							10
			=2	c: 1.	r Block/I	1	E.11				13							
	1	- 1	Ε,					J.			100	1						
S	2"	543/3/	= 9	Organ	ic Peat, s /black, so	ome C	lay,		PT		H 7							
-	0	73	=6	brown	/black, so	oft, w	et'	1	1		100	1.6						
			E								1							
	21	%1	= 0	Grad	tes to: S tesand,	74.5C	Tay,		11		1	1.6	4.25					
55	12	13/4	=10	grey	te sand,	satura	ted,		CL		11		(.25					
		1	En	Ary	oft.			1			Ш							
			EX															
	18!	5/1	-14	71	es Fo San , saturati	7		,,-			120							
55	14"	1/4	E	arivo	es to San	d, tn-c	5,11	Me 1	SW		Cree	11,4						
			E 16	9.400	, 591 urall	d, me	d. den	se			NA	1						
- 1			18	Grade	les to pred	Lamina	H.				4							
	18" 15	1/2/	E.	fine	les to pred rained, bro	wn.lo	050					2.4						
5	15	/2	= 10	FOR	0201				SP									
			=21	100	20.5	095.	÷											
			E								1							

This form is authorized by Chapters 144.147 and 162, Wis. Stats. Completion of this report is mandatory. Penalties: Forfeit not less than \$10 nor more than \$5,000 for each violation. Fined not less than \$10 or more than \$100 or imprisoned not less than 30 days, or both for each violation. Each day of continued violation is a separate offense, pursuant to ss 144.99 and 162.06, Wis. Stats.

	Solid Waste Haz. Waste		MONITORING W Form 4400-113A	ELL CONSTRUCT	
Facility/Project Name,	Ise & Repair Undergro	Well	Well Name		_
Akerman/VME	ft. 🖸	ft.	EMW-01		
Facility License, Permit or Monitoring Number	Grid Origin Location	Д.	Wis. Unique Well Numb	er DNR Well Nun	nber
	Lat	_ Long or			
Type of Well Water Table Observation Well 1	St. Plane 375, 229, 8	3 ft. N.2,479,556,27ft. E.	Date Well Installed	5111193	
Piezometer	Section Location of Wa		Tm'	m dd y y	
Distance Well Is From Waste/Source Boundary		ec. 2.T. 6 N, R. 196W.	Well Installed By: (Per	son's Name and Firm	n)
/00 ft.	Location of Well Relati		Van Kling		
Is Well A Point of Enforcement Std. Application?	u 🔲 Upgradient	s Sidegradient	117 F	T	
☐ Yes ☐ No			1 1/	neering, Inc	
A. Protective pipe, top elevation _ \$46.19	ft. MSL	1. Cap and lock		Yes 🗆	No
ali Ca	9 ft. MSL	2. Protective co		10	^
Di ii di danibi sel su		a. Inside diam	eter.		Qin.
C. Land surface elevation _ 843.7	Oft. MSL	b. Length:			5ft.
D. Surface seal, bottom ft. MSL or	3 O ft.	c. Material:		Steel 🗷	Alexander.
					22
12. USCS classification of soil near screen:	CD D	d. Additional	•	□ Yes YZ	No
GP GM GC GW SW SW SM SC ML MH CL C	CH	If yes, des	mbe:		20
Bedrock 🗆		3. Surface seal:		Bentonite 🗆	30
	ZÍ, No			Concrete 💆	01
	2000	Motorial hate	veen well casing and prote	Other 🗆	···
	,	4. Material betv	reen wen casing and prote	Bentonite	30
Hollow Stem Auger			An	nular space seal	20
Oun	I		All		
15. Drilling fluid used: Water □ 02 Air	□ 01 ※			Other Danular Bentonite	3 3
Drilling Mud 03 None	2 99	5. Annular space		Committee of the commit	35
	7, ₩		gal mud weight Bento		
16. Drilling additives used? ☐ Yes	12 No ₩		gal mud weight I		31
	/ 💮		entonite Benton		50
Describe		g two	Ft volume added for a	Tremie	01
17. Source of water (attach analysis):		f. How inst		Tremie pumped	
And the second s	₩			Gravity	02
I A					08
- 12M a	500	6. Bentonite se		entonite granules	33
E. Bentonite seal, top ft. MSL or	2.V II	b. 1/4 II	n. □3/8 in. □1/2 in. I	the state of the s	
F F 6 MSI or	N/A ft.	7 Fine and m	naterial: Manufacturer, pr	Other 🗆	
F. Fine sand, top ft. MSL or	-MH	/. Fine sand m	aterial: Manufacturer, pr	roduct name & mesn	A
e MSI or	800	1 1 1		ft ³	
G. Filter pack, top ft. MSL or	2:2	b. Volume			
H. Screen joint, top ft. MSL or	16 1 6		material: Manufacturer, p		
H. Screen joint, top ft. MSL or	-10-12		trial Sandy C	angda; 10-20) ===
6 MSI or	2016	b. Volume		_ft ²	22
I. Well bottom ft. MSL or	-80'T "	9. Well casing		VC schedule 40 12	
5 MSI or	1786	富 人	Flush threaded P	VC schedule 80	******
J. Filter pack, bottom ft. MSL or	- & & . Q IL.		((7) 1	Other	******
6 1401	2286	////	erial: <u>SS 304</u>		
K. Borehole, bottom ft. MSL or	-QQ.10 II.	a. Screen t		Factory cut	
9.00				Continuous slot	*******
L. Borehole, diameter _ 2.25 in.	Measurements	7-K	11 Til	Other 🗆	
225	made from T-o-C	b. Manufac	turer No. Illinois		10.
M. O.D. well casing _2.25 in.	TO C	c. Slot size			LQ in
		d Slotted			2.Qft
N. I.D. well casing _2 Q Q in.		11. Backfill ma	iterial (below filter pack):	None 🗆	
			native	Other 🔯	(==
hereby certify that the information or		correct to the best of m	y knowledge.		
Signature	Firm				

Please complete both sides of this form and return to the appropriate DNR office listed at the top of this form as required by chs. 144, 147 and 160, Wis. Stats., and ch. NR 141, Wis. Ad. Code. In accordance with ch. 144, Wis Stats., failure to file this form may result in a forfeiture of not less than \$10, nor more than \$5000 for each day of violation. In accordance with ch. 147, Wis. Stats., failure to file this form may result in a forfeiture of not more than \$10,000 for each day of violation. NOTE: Shaded areas are for DNR use only. See instructions for more information including where the completed form should be sent.

Firm:

MONITORING WELL DEVELOPMENT Form 4400-113B Rev. 4-90

ersar, Inc

Route to: Solid Waste | Haz. Waste | Wastewater | Env. Response & Repair Underground Tanks Other ___ County Name Well Name acility/Project Name EMW-01 Waukegan erman County Code Wis. Unique Well Number DNR Well Number acility License, Permit or Monitoring Number M No Before Development ☐ Yes After Development 1. Can this well be purged dry? 11. Depth to Water 8.40 ft 8.10ft (from top of . Well development method well casing) surged with bailer and bailed 41 surged with bailer and pumped 61 Date surged with block and bailed 42 surged with block and pumped A 62 surged with block, bailed and pumped 70 c. 15:30 p.m. 16:00 p.m. Time compressed air 20 bailed only 10 0.0 inches 12. Sediment in well pumped only 51 bottom pumped slowly 50 13. Water clarity Clear 10 Clear X 20 Other Turbid 15 Turbid 25 (Describe) 30 min. (Describe) 3. Time spent developing well _20.1 ft. 4. Depth of well (from top of well casisng) _2.0 Q in. 5. Inside diameter of well 6. Volume of water in filter pack and well 2.0 gal. casing Fill in if drilling fluids were used and well is at solid waste facility: 13.0gal. 7. Volume of water removed from well 14. Total suspended O. Ogal. 8. Volume of water added (if any) solids 15. COD 9. Source of water added 10. Analysis performed on water added? ☐ Yes O No (If yes, attach results) 16. Additional comments on development: Good Recharge Well developed by: Person's Name and Firm I hereby certify that the above information is true and correct to the best of my knowledge. Signature: Name: Print Initials: AGE

Firm:

Depar		f Natu		ources	Route To	Waste gency Response water	Ur 🗆 :	ater Re	und Ta		Î	SOIL BORING LOG INFO Form 4400-122 Page				1		CION . 5-92
//	y/Proje		/	1/ME	- Oupar		<u> </u>		sc/Pen	nit/Mo	nitorin	g Nun	ber	Borin	Numt	cr	_ of _	<u></u>
Boring	Drille	d By (Firm na	me and name rsar, Inc	of crew ch	uct)		Data F	Drilling		7			151	SEI	$n\omega$		
Hlav	1 FS	K0/	- Ve	rsar, Inc				6 6		1.	17	O S M N	Drilling	$\frac{2}{D}$	oleted 93	Drillin	g Mcd	nod A
5NR	Pacility	Well	No.W	ang End	neesii	Common Well	Name	M N	1 D	D Vatari	YY				Ϋ́Υ	41/4		
200000000000000000000000000000000000000			00000 1 000			F 111 11 1-1	\sim	7	395/	Feet M	ISL	Surtac	45.75	Feet	MSI.	Borelio	ole Dia 25 in	meter
tate I	lane_	375	537	.42 N.	2,479	359.24	E S/C/	N L	at	0	•	Local	Grid L	ocation	(If app	licable)	iches
100	_ 1/4 0	ENE	1/4 0	f Section _	<u>2</u> , r	6 N. R.	9 EV	V Lor	ıg	0 .			F	eet [N		Foot	DE
Count	y	111	- 1	esha			DNR	County	Code	Civil	Town/		* Villa	ge			reel	U W
Sam	ple	007		cona			1 -	0			$-\omega$	aut	res		0			
	Length Att. & Recovered (m)	unts	Get			Description									Prop	erties		
18 8	ih A væed	Blow Counts	Depth in Feet			gic Origin For Najor Unit			S		E	Д	sssiv	8.		È.		nts
Number and Type	Ref.	Blow	Dept			anjor Offic			SC	Graphic	Well	PID/FID	Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
-			_	GM	rel Fill				ם	0.7	20	집	೧೪	Σŏ	ĒĒ	F	4	80
	18" 5" 2" 18"	3/1/2 7/1/2	20	Sheen, Grade Vry. So Priller resista Grades graded	s to f oft observe mce, to San , satu	eat, brown of troleum or change and fill, brown or change	el, we	et, 	PT GW		1855 304 Screen PUC Care In Pellets Bent Chips 10	8 2 . 1						
her	eby c	ertlify	that	EOB6	ation on	this form is	true a	ind co	orrect	to th	0 500	1						
Signal	ure					101111 13	1100 8	Firm	nect	to in	e bes	t of i	my kn	owled	lge.	-		
-	_																	

his form is authorized by Chapters 144.147 and 162, Wis. Stats. Completion of this report is mandatory. Penalties: Forfeit not less than \$10 nor more than \$5,000 for each violation. Fined not less than \$10 or more than \$100 or imprisoned not less than 30 days, or both for each violation. Each day of continued violation is a separate offense, pursuant to ss 144.99 and 162.06, Wis. Stats.

	lid Waste Haz. Waste		MONITORING WELL CO Form 4400-113A	ONSTRUCTION Rev. 4-90
acility/Project Name	Local Grid Location of	ound Tanks Other	Well Name	
1/1/1/11/11	ft. 🖺		EMW-02	
acility License, Permit or Monitoring Number	Grid Origin Location	э., — Ц w.	Wis. Unique Well Number DN	R Well Number
acinty Election, I cannot be income and a	Lat.	_ Long or	0.513	_
ype of Well Water Table Observation Well [1]		2ft. N, 2, 479, 35924tt. E.	Date Well Installed	2 0 2
Piezometer 12			USIT!	<u>چ</u> 143
Distance Well Is From Waste/Source Boundary	Section Location of Wa		Well Installed By: (Person's Na	me and Firm
. † 0	NE1/4 of NE 1/4 of S	ec. <u>2, T. 6</u> N, R. <u>19</u> 骨 🕏	Dan Kling	ano and I min
s Well A Point of Enforcement Std. Application?	Location of Well Relati		Jun Killing	
Yes No	u Upgradient	s Sidegradient	Wang Engineeri	ine I Iuc
77.97.9	d Downgradient	1. Cap and lock		111
A. Protective pipe, top elevation -847.67	ft. MSL		,	X Yes D No
3. Well casing, top elevation -847.91	ft. MSL	2. Protective co	75.5.2.4.0.1.E	11 0.
. Hell capacity top ore attent		a. Inside dian	neter:	_4.Qin.
C. Land surface elevation _ 845.75	ft. MSL	b. Length:		_5.0ft
D. Surface seal, bottom ft. MSL or _	7 7 ft	c. Material:		Steel DK 04
	<u> </u>			Other 🗆
12. USCS classification of soil near screen:	1 200	d. Additional		☐ Yes 🗖 No
GP GM GC GW X SW X SW X	SP []	If yes, des	cribe:	
SM C SC C MLM MHU CL L	CH LI	3. Surface seal:	Ве	entonite D 30
Bedrock 🗆	. 🕷	S. Suntace scan	C	oncrete 12 01
13. Sieve analysis attached?	<i>№</i>			Other 🗆
14. Drilling method used: Rotary □	50	4. Material bety	ween well casing and protective pip	De: ,
Hollow Stem Auger	41		Be	entonite 2 30
Other 🗆	2000000 I DXX	· 🔛	Annular spa	ace seal 🔲 🎆
				Other 🗆
15. Drilling fluid used: Water □ 02 Air □	01	5 Annular spa	ce seal: a. Granular Be	entonite 2 33
Drilling Mud □ 03 None ☑	99		gal mud weight Bentonite-san	/ /
	, 🕷		gal mud weight Bentonite	
16. Drilling additives used? ☐ Yes ☐	No 8		entonite Bentonite-ceme	
			Ft 3 volume added for any of the	
Describe	I	f. How inst		Tremie 0
17. Source of water (attach analysis):		L now has		oumped 🗆 02
		8 📖	The state of the s	Gravity 0 08
	——」	(Participan		
- ISM A	(7.	6. Bentonite se		
E. Bentonite seal, top ft. MSL or _	→D. ∠ II	b. 1/4 ii	n. $\square 3/8$ in. $\square 1/2$ in. Bentonite	
h ==	uln a	2 C.		_Other 🗖 🧾
F. Fine sand, top ft. MSL or _	M. ft ft.	/. Fine sand n	naterial: Manufacturer, product na	ame & mesh size
	1276	a		
G. Filter pack, top ft. MSL or _	18.7 m	b. Volume		
	MA ft. 12.7 ft. 15.1 ft.	8. Filter pack	material: Manufacturer, product n	ame and mesh si
H. Screen joint, top ft. MSL or _	75 'T II'	- artuno		10-20
		b. Volume		,
I. Well bottom ft. MSL or _	25.1 ft.	9. Well casing	Flush threaded PVC sched	dule 40 🔼 2
			Flush threaded PVC sched	dule 80 🗀 2
J. Filter pack, bottom ft. MSL or _	26.0 ft.	/国/		Other 🛘
The state of the s		10. Screen mat	erial: 5.5 30 4	-
. Borehole, bottom ft. MSL or _	25.7 ft.	a. Screen		ctory cut 1
. Doichole, Dollotti				ious slot 🕱 0
L. Botehole, bottom			Commi	
				Other II ***
L. Borehole, diameter _8.25 in. Me	asurements D-	K Marrie	Thurs No Titues Por	_Other 🗖 🖔
L. Borehole, diameter _8.25 in. Me	asurements D-	O. Manutan	turer No. Illinois Pun	np -
L. Borehole, diameter _8.25 in. Me	asurements D-	c. Slot siz	e:	0.010
L. Borehole, diameter _8.25 in. Me M. O.D. well casing _2.25 in. Mag	asurements D-	c. Slot siz d. Slotted	e: length:	10.Q
L. Borehole, diameter _8.25 in. Me	asurements D-	c. Slot siz d. Slotted	e:	0.010

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	Solid Waste □ Haz. Was nse & Repair □ Under		a					
Pacility/Project Name Akerman/VME Pacility License, Permit or Monitoring Number	County Namo Way K County Code	e Sha Wis: Unique Well No	Well Name EM W-0 2 Number: DNR Wall Number					
1. Can this well be purged dry?	□ Yes px No	11 Death to Water	Before Development	After Development				
2. Well development method surged with bailer and bailed surged with bailer and pumped surged with block and bailed surged with block and pumped surged with block, bailed and pumped compressed air bailed only pumped only pumped slowly Other 3. Time spent developing well 4. Depth of well (from top of well casisng)	41	11. Depth to Water (from top of well casing) Date Time 12. Sediment in well bottom 13. Water clarity	a	09:45 p.m.				
5. Inside diameter of well 6. Volume of water in filter pack and well casing 7. Volume of water removed from well 8. Volume of water added (if any) 9. Source of water added 10. Analysis performed on water added?		Fill in if drilling flu 14. Total suspended solids 15. COD	ids were used and well is	nmg/l				
(If yes, attach results) 16. Additional comments on development:		Recharge						
Well developed by: Person's Name and Firm	2	•	at the above information i	s true and correct to the bes				
Name: Dan Kling Firm: Wang Engine	ering	Signature:	LE T	/				

Firm:

Versar, Inc.

⇒epartment of	Natura	l Reso	urces		☐ Undergro ☐ Water Ro ☐ Other —	und Ta	inks is	Î	Form 4	BOR1 1400-1	ING I		INFOI	Rev	10N . 5-92
acility Project			1.,		Licen	sc/Pen	nit/Mo	nitorin	g Nun	ber	Borin	Page g Num		_ of _	
Boring Drilled	By (Fi	m pan	VME								51	BEI	MW	-0	3
			ne and name of crew chief)		O de	Stilling	Starte 21	9.3	Date I	Drilling	Comp	oleted	Drillin	g Mct	lod
Van KI	ME	~ U	Jang Eng. Unique Well No. Com					-		5/ / D			141	4 H	SA
	E.D. 1	٠		non Well	Name Final	Static V	Water I Feet M	cvel	Surfac	Eleva 18.3	ation		Borcho	ole Dia	uncter
oring Location	75.8	08.	0.5 N. 2, 479, 437		100 - 1 - 100 - 10	-	0	10L	Local	Grid L	cation	1 (If an	plicable	25 i	nches
NE 1/4 of	NE	1/4 of	Section 2 . T 6	N D	E S/C/N L	at	0 .	-				IN		,	ΠE
County	1 . 1			N, R /	DNR County	Code	Civil	Town/	City/ c	F Villa	eet [18_		Feet	UW
Cample	W	aut	resha		6.	8_		Wa	uke	esh	a				
Sample & F	9	#	C-11/01-D	4.							Soil	Prop	erties		
Number and Type Length Att. Recovered (i	Blow Counts	Depth in Feet	Soil/Rock Des And Geologic O Each Major	rigin For	<u>.</u>	uscs	Graphic Log	Well Diagram	PID/FID	Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
"	12/5 12/2	2 4 6 8 10 12 14 16 18 20 22 24	difficult drilling Concrete Foundry Sand observable odort. Saturated. Peat, brown, wet, change to Organi black/grey, soft Grades to Sand, fn-cs, med. dense. Grades to Sandy Gravel Saturated, de EOBO 23 bg:	soft count	black, loose, ontact mottled	SP OH SW		Filter Pack Screen pollets Sent Chips	2 I ND ND.	.5					

State of Wisconsin

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	aste Haz. Waste Was		RITORING WELL CONSTRUCTION 4400-113A Rev. 4-90
Eliti Kespanise es i	epair Underground Tanl	KS LI Other LI Well Name	
11/2/	ft. S. —		IW-03
HKPrman/VIII	d Origin Location	Wie Union	e Well Number DNR Well Number
The state of the s		000000000000000000000000000000000000000	or the Hamilton Division of the Hamilton
	Long.	- T. C.	Installed
	Plane 375,808,05ft. N.2	14/4/4/11 IL. E.	03112193
Piezometer 12 Sec	tion Location of Waste/Source	ce Mail I	mm dd y y
stance Well Is From Waste/Source Boundary	1/4 of NE 1/4 of Sec. 2.7	6 N. R. MATWIT	led By: (Person's Name and Firm)
0 II. Io	cation of Well Relative to Wa	ste/Source	Ming
	Upgradient s	Sidegradient (1)	. Fusinger T.
	☐ Downgradient n ☐	TIOUTEROWIE	ng Engineering Inc
Protective pipe, top elevation _ 85 1 23 ft. N	ISL—	1. Cap and lock?	Yes No
\$10.76c1	1	2. Protective cover pipe:	
Well casing, top elevation 150.72 n. N	"" IHI'Y	a. Inside diameter:	_4.Qin.
Land surface elevation _ 848 39 ft. N	ISL .	b. Length:	_5.0ft.
<u> </u>		c. Material:	Steel 💆 04
Surface seal, bottom ft. MSL or _3.	tr / iv		Other 🗆 🧾
2. USCS classification of soil near screen:		d. Additional protection?	☐ Yes 🗖 No
GP II GMIII GCIII GWIII SWIII SP		If yes, describe:	
SM SC ML MH CL CH		1	Bentonite □ 30
Bedrock		3. Surface seal:	Concrete 💆 01
3. Sieve analysis attached?			Other 🗆
		4. Material between well ca	
4. Drilling method used: Rotary 0 50 Hollow Stem Auger 0 41			Bentonite 🕱 30
Other 🗆			Annular space seal
15. Drilling fluid used: Water □ 02 Air □ 01		\	a. Granular Bentonite 🛛 33
Drilling Mud 03 None 0 99	I m	5. Annular space seal:	
Diamig. To 1 to 1 to 1			ight Delinoithe parter
16. Drilling additives used? ☐ Yes ☐ No			ight Bentonite slurry 31
10. Diming acceptance and a large			Bentonite-cement grout 50
Describe			ne added for any of the above
17. Source of water (attach analysis):	_	f. How installed:	Tremie 0 01
17. Source of water (attach analysis).			Tremie pumped 02
	📟 🖼		Gravity 🛛 08
		6. Bentonite seal:	a. Bentonite granules 🔲 33
Bentonite seal, top ft. MSL or	ft_ 😸 🔛	/ b. 131/4 in. □3/8 in.	. 1/2 in. Bentonite pellets 2 32
1		/ c	Other 🗖 🧾
Fine sand, top ft. MSL or N/A	ft.	7. Fine sand material: M	anufacturer, product name & mesh size
		/ / a	
G. Filter pack, top ft. MSL or _ 1	图如	b. Volume added	ft ³
G. Plice pack, top			lanufacturer, produgt name and mesh siz
. Screen joint, top ft. MSL or _ 1.4	5 / ft		Sand: Canada 10-20
, screen joint, top		b. Volume addied	5000 Canaga 10 20 ===
Well bottom ft. MSL or 2.3	() ft.		ish threaded PVC schedule 40 🔁 23
Well bottom it. MSL or _ 22	3.1 [1]		그렇게 살아보고 지지하는 무슨 사람들이 되었다. 하는 경기를 하는 것으로 되었다.
6 MCI 24		FIL	ish threaded PVC schedule 80 24
Filter pack, bottom ft. MSL or _ 25	7.1		Other 🗆 🛄
	< 11 s	10. Screen material: 5.	
Borehole, bottom ft. MSL or _2_	2.4 11.	Screen type:	Factory cut 🔼 11
			Continuous slot 0 1
L. Borchole, diameter	urements To	\ · · — 11	Other 🗆
	0 - /- K	b. Manufacturer No.	Illinois Pump
. O.D. well casing _2.25 in. Made	rom T-0-C	c. Slot size:	0.QLOir
A A A A A A A A A A A A A A A A A A A		d Slotted length:	LQ. Q f
N. I.D. well casing _2.60 in.		11. Backfill material (below	v filter pack): None 🛘 14
_0.20		nativ	
hereby certify that the information on this	form is true and correct		
Signature	Firm		M

case complete both sides of this form and return to the appropriate DNR office listed at the top of this form as required by chs. 144, 147 and 160, Wis. Stats., and ch. NR 141, Wis. Ad. Code. In accordance with ch.144, Wis Stats., failure to file this form may result in a forfeiture of not less than \$10, nor more than \$5000 for each day of violation. In accordance with ch. 147, Wis. Stats., failure to file this form may result in a forfeiture of not more than \$10,000 for each ty of violation. NOTE: Shaded areas are for DNR use only. See instructions for more information including where the completed form should be sent.

MONITORING WELL DEVELOPMENT Form 4400-113B Rev. 4-90

Hity/Project Name	County Na		Well Name				
Kerman /VME	Way	ikesha	EMW-0	3			
ility License, Permit or Monitoring Number	County Co	de Wis Unique Well N	umber DNR W	all Number			
	6.5						
Can this well be purged dry?	□ Yes ☑ No		Before Development	After Development			
		11. Depth to Water		1 2 4 5 5 5 V			
Well development method		(from top of	a8.85ft	8.85ft			
surged with bailer and bailed	□ 41	well casing)	A. STENANTE A.				
surged with bailer and pumped	□ 61						
surged with block and bailed	□ 42	Date	10.5,13,93	65,13,93			
surged with block and pumped	₩ 62		m m d d v v	651/3193 mm dd y y			
surged with block, bailed and pumped	70						
		Time	10.0 N a.m	10:30 p.m			
compressed air	□ 20 □ 10	Thic	c. TU: DU pin	-			
bailed only	□ 10	12. Sediment in wel	11	• 7			
pumped only	□ 51 .	bottom	$\underline{}$ inches				
pumped slowly	□ 50		1,25, 2,74				
Other		13. Water clarity	Clear 10 Turbid 15	Clear 🔀 20 Turbid 🛘 25			
Time spent developing well			(Describe)	(Describe)			
			darkgray	Clear,			
Depth of well (from top of well casisng)	25.1ft	-31					
Inside diameter of well	_2.60in		-				
. Volume of water in filter pack and well			-				
casing	2. Zgal.						
•			uids were used and well is	at solid waste facility:			
. Volume of water removed from well	153.0 gal.		2,300 by 100 by	1			
. Volume of water removed Bont well		14. Total suspende	d mg	Л mg			
. Volume of water added (if any)		solids	u	"			
. Source of water added		15. COD					
0. Analysis performed on water added?	□ Y∞ □ 1	_ -					
(If yes, attach results)							
16. Additional comments on development:	7	11. + 0 1	Maria A				
	Ex	cellent Rech	arge				
			•				
Well developed by: Person's Name and Firm		I hereby certify th	nat the above information:	is true and correct to the l			
,, or coloporal, i organis i mine mine i min		of my knowledge					

ngineprine

Print Initials: AGE

Firm:

APPENDIX D2 WATER SAMPLE ANALYTICAL RESULTS

Bartlett Division 850 W. Bartlett Rd. Bartlett, IL 60103 Tel: (708) 289-3100 Fax: (708) 289-5445

CASE NARRATIVE

Mr. Joe McCue VERSAR CORP. 1520 Kensington Road Suite 115 Oakbrook, IL 60521

06/04/1993

NET Job Number: 93.03857

Project Description: VME Americas, Inc.

Sample	Sample Description	Date	Date
Number		Taken	Received
210867 210868 210869 210870 210871 210872	EMW-01 Down Gradient-Fill; Grab EMW-02 Down Gradient-Fill; Grab EMW-02D Down Gradient-Fill; Grab EMW-03 Upgradient-Fill; Grab Equipment Blank Trip Blank	05/13/1993 05/13/1993 05/13/1993 05/13/1993 05/13/1993 05/13/1993	05/14/1993 05/14/1993 05/14/1993 05/14/1993

Sample analysis in support of the project referenced above has been completed and results are presented on the following pages. Please refer to the enclosed "Key to Abbreviations" for definition of terms. The supporting QA/QC documentation has also been enclosed.

The following comments should be noted for the indicated fraction;

Volatile Organic Analysis

WDNR DRO and Method 8021 analysis was subcontracted to our Watertown Wisconsin Division.

The presence of chlorinated hydrocarbons was confirmed in sample 210864 was confirmed by re-analysis. The initial analysis contained 1,1,1-Trichloroethane and Trichloroethene above the range of the instrument's calibration. Therefore, a dilution and re-analysis was required. The diluted analysis contained these compounds in the expected range.

Semi-Volatile Organic Analysis

No exceptions to the normal protocol.





Bartlett Division 850 W. Bartlett Rd. Bartlett, IL 60103

Tel: (708) 289-3100 Fax: (708) 289-5445

Pesticide Analysis

No exceptions to the normal protocol. A Lab Control Spike and Lab Control Spike Duplicate were analyzed in place of an MS/MSD due to insufficient sample available.

Conventionals (Wet Chemistry) Analysis

The TRPH (Method 9073) analysis was subcontracted to NET's Portland Oregon Division.

This Quality Control report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed. Should you have any questions concerning procedures or results, do not hesitate to call.

Approved by:

Neal Cleghorn

Operations Manager



Fax: (708) 289-5445

ANALYTICAL REPORT

Mr. Joe McCue VERSAR CORP. 1520 Kensington Road Suite 115 Oakbrook, IL 60521 06/02/1993

Sample No. : 210867

NET Job No.: 93.03857

Sample Description:

EMW-01 Down Gradient-Fill; Grab

VME Americas, Inc.

Date Taken: 05/13/1993 Time Taken: 16:00 IEPA Cert. No. 100221 Date Received: 05/14/1993

Parameter	Results	Units	Batch No. Prep/Run	Date of Analysis	Reporting Limit	Analyst	Analytical Method
Conductivity	694.	umhos/cm	/137	05/19/1993	1.0	mas	2510B(4) 120.1(3)
Hq	7.51	units	/522	05/13/1993	0.10	ljd	150.1(3) 9040(1)
Prep, Pesticides/PCB AQUEOUS	extracted		107/	05/19/1993		era	3500 (1)
PESTICIDES/PCB - 8080 AQUEOUS			1				
4,4'-DDD	<0.1	ug/L	107/133	05/21/1993	0.1	seh	8080 (1)
Dieldrin	<0.1	ug/L	107/133	05/21/1993	0.1	seh	8080 (1)
Endosulfan I	<0.05	ug/L	107/133	05/21/1993	0.05	seh	8080 (1)
Endosulfan sulfate	<0.1	ug/L	107/133	05/21/1993	0.1	seh	8080 (1)
Endrin aldehyde	<0.1	ug/L	107/133	05/21/1993	0.1	seh	8080 (1)
Heptachlor epoxide	<0.05	ug/L	107/133	05/21/1993	0.05	seh	8080 (1)
PCB-1248	<1.0	ug/L	107/133	05/21/1993	1.0	seh	8080 (1)
Surr: Tetrachloroxylene (TCX)	33	%	107/133	05/21/1993	22-154	seh	8080 (1)
Surr: Decachlorobiphenyl (DCB)	41	%	107/133	05/21/1993	23-154	seh	8080 (1)
PREP, ACID EXT. AQUEOUS	extracted		120/	05/20/1993	5	law	3500 (1)
PREP, BN AQUEOUS	extracted		120/	05/20/1993	E	law	3500 (1)
ACID CMPDS - 8270 AQUEOUS			1				
2-Chlorophenol	<10.0	ug/L	120/177	05/26/1993	10.0	mjs	8270 (1)
2,4-Dichlorophenol	<10.0	ug/L	120/177	05/26/1993	10.0	mjs	8270 (1)
4-Nitrophenol	<50.0	ug/L	120/177	05/26/1993	50.0	mjs	8270 (1)
Surr: Phenol-d6	41	*	120/177	05/26/1993		mjs	8270 (1)
Surr: 2-Fluorophenol	55	*	120/177	05/26/1993		mjs	8270 (1)
Surr: 2,4,6-Tribromophenol	89	%	120/177	05/26/1993	10-123	mjs	8270 (1)



Fax: (708) 289-5445

ANALYTICAL REPORT

Mr. Joe McCue VERSAR CORP. 1520 Kensington Road Suite 115 Oakbrook, IL 60521

06/02/1993

Sample No. : 210867

NET Job No .: 93.03857

Sample Description:

EMW-01 Down Gradient-Fill; Grab

VME Americas, Inc.

Date Taken: 05/13/1993 Time Taken: 16:00

IEPA Cert. No. 100221

Date Received: 05/14/1993

Time Received: 10:23 WDNR Cert. No. 999447130

Units Batch No. Parameter **Results** Date of Reporting Analyst Analytical Prep/Run Analysis Limit Method BASE/NEUTRALS - 8270 AQUEOUS 120/177 Benzo(b)fluoranthene <10.0 ug/L 05/26/1993 10.0 mjs 8270 (1) Di-n-butyl phthalate <10.0 ug/L 120/177 05/26/1993 10.0 mis 8270 (1) <10.0 120/177 05/26/1993 Dimethyl phthalate ug/L 10.0 mjs 8270 (1) <10.0 uq/L 120/177 05/26/1993 10.0 8270 (1) 1,2-Diphenylhydrazine mis <10.0 ug/L 120/177 05/26/1993 10.0 8270 (1) Nitrobenzene mis <10.0 ug/L 120/177 05/26/1993 10.0 N-Nitrosodiphenylamine 8270 (1) mjs 50 % 120/177 05/26/1993 35-114 Surr: Nitrobenzene-d5 mis 8270 (1) Surr: 2-Fluorobiphenyl 50 % 120/177 05/26/1993 43-116 mis 8270 (1) Surr: Terphenyl-d14 86 % 120/177 05/26/1993 33-141 mis 8270 (1) extracted 83 / 05/18/1993 Prep, 8310 PNAs AQUEOUS law 8310 (1) PNA CMPDS - 8310 AQUEOUS Acenaphthene <0.018 mg/L 83 /178 05/21/1993 0.018 8310 (1) ргр <0.00018 83 /178 05/21/1993 0.00018 Benzo(b) fluoranthene mg/L 8310 (1) prp <0.0021 mg/L 83 /178 05/21/1993 0.0021 Fluorene 8310 (1) ргр <0.010 83 /178 0.010 05/21/1993 Naphthalene mg/L 8310 (1) prp <0.0064 83 /178 05/21/1993 0.0064 Phenanthrene mg/L 8310 (1) ргр 83 /178 Surr: 2-Fluorobiphenyl 33 mg/L 05/21/1993 1-118 8310 (1) ргр VOLATILES - 8021 AQUEOUS Methylene Chloride <10. ug/L /8 05/20/1993 10. 8021 (1) mis



Tel: (708) 289-3100 Fax: (708) 289-5445

ANALYTICAL REPORT

Mr. Joe McCue VERSAR CORP. 1520 Kensington Road Suite 115 Oakbrook, IL 60521 06/02/1993

Sample No. : 210868

NET Job No.: 93.03857

Sample Description:

EMW-02 Down Gradient-Fill; Grab

VME Americas, Inc.

Date Taken: 05/13/1993 Time Taken: 18:00

IEPA Cert. No. 100221

Date Received: 05/14/1993

Parameter	Results	Units	Batch No. Prep/Run	Date of Analysis	Reporting Limit	Analyst	Analytical Method
Of Beneat Level III	С		/5	05/27/1993		tag	
QA Report Level III Prep, Pesticides/PCB AQUEOUS	extracted		107/	05/19/1993		era	3500 (1)
PESTICIDES/PCB - 8080 AQUEOUS			1				
4,4'-DDD	<0.1	ug/L	107/133	05/21/1993	0.1	seh	8080 (1)
Dieldrin	<0.1	ug/L	107/133	05/21/1993	0.1	seh	8080 (1)
Endosulfan I	<0.05	ug/L	107/133	05/21/1993	0.05	seh	8080 (1)
Endosulfan sulfate	<0.1	ug/L	107/133	05/21/1993	0.1	seh	8080 (1)
Endrin aldehyde	<0.1	ug/L	107/133	05/21/1993	0.1	seh	8080 (1)
Heptachlor epoxide	<0.05	ug/L	107/133	05/21/1993	0.05	seh	8080 (1)
PCB-1248	<1.0	ug/L	107/133	05/21/1993	1.0	seh	8080 (1)
Surr: Tetrachloroxylene (TCX)	30	%	107/133	05/21/1993	22-154	seh	8080 (1)
Surr: Decachlorobiphenyl (DCB)	31	*	107/133	05/21/1993	23-154	seh	8080 (1)
PREP, ACID EXT. AQUEOUS	extracted		120/	05/20/1993		law	3500 (1)
PREP, BN AQUEOUS	extracted		120/	05/20/1993	F)	law	3500 (1)
ACID CMPDS - 8270 AQUEOUS			1				
2-Chlorophenol	<10.0	ug/L	120/177	05/26/1993	10.0	mjs	8270 (1)
2,4-Dichlorophenol	<10.0	ug/L	120/177	05/26/1993	10.0	mjs	8270 (1)
4-Nitrophenol	<50.0	ug/L	120/177	05/26/1993	50.0	mjs	8270 (1)
Surr: Phenol-d6	34	%	120/177	05/26/1993	10-94	mjs	8270 (1)
Surr: 2-Fluorophenol	50	%	120/177	05/26/1993	21-100	mjs	8270 (1)
Surr: 2,4,6-Tribromophenol	91	%	120/177	05/26/1993	10-123	mjs	8270 (1)





Fax: (708) 289-5445

ANALYTICAL REPORT

Mr. Joe McCue VERSAR CORP. 1520 Kensington Road Suite 115 Oakbrook, IL 60521

06/02/1993

Sample No. : 210868

NET Job No.: 93.03857

Sample Description:

EMW-02 Down Gradient-Fill; Grab

VME Americas, Inc.

Date Taken: Time Taken: 05/13/1993 18:00

IEPA Cert. No. 100221

Date Received:

05/14/1993 10:23 Time Received: WDNR Cert. No. 999447130

Parameter	Results	Units	Batch No. Prep/Run	Date of Analysis	Reporting Limit	Analyst	Analytical Method
BASE/NEUTRALS - 8270 AQUEOUS			,				
Benzo(b) fluoranthene	<10.0	ug/L	120/177	05/26/1993	10.0	mjs	8270 (1)
Di-n-butyl phthalate	<10.0	ug/L	120/177	05/26/1993		mjs	8270 (1)
Dimethyl phthalate	<10.0	ug/L	120/177	05/26/1993		mjs	8270 (1)
1,2-Diphenylhydrazine	<10.0	ug/L	120/177	05/26/1993	1.5		8270 (1)
Nitrobenzene	<10.0	ug/L	120/177	05/26/1993		mjs	8270 (1)
	<10.0		120/177	05/26/1993		mjs	
N-Nitrosodiphenylamine Surr: Nitrobenzene-d5	75	ug/L %	120/177	05/26/1993		mjs	8270 (1)
And the state of t	71					mjs	8270 (1)
Surr: 2-Fluorobiphenyl	100	%	120/177	05/26/1993		mjs	8270 (1)
Surr: Terphenyl-d14	100	<i>/</i> •	120/177	05/26/1993	33-141	mjs	8270 (1)
Prep, 8310 PNAs AQUEOUS	extracted		83 /	05/18/1993		law	8310 (1)
PNA CMPDS - 8310 AQUEOUS			1				
Acenaphthene	<0.018	mg/L	83 /178	05/21/1993	0.018	prp	8310 (1)
Benzo(b)fluoranthene	<0.00018	mg/L	83 /178	05/21/1993	0.00018	prp	8310 (1)
Fluorene	<0.0021	mg/L	83 /178	05/21/1993	0.0021	prp	8310 (1)
Naphthalene	<0.010	mg/L	83 /178	05/21/1993	0.010	prp	8310 (1)
Phenanthrene	<0.0064	mg/L	83 /178	05/21/1993	0.0064	prp	8310 (1)
Surr: 2-Fluorobiphenyl	41	*	83 /178	05/21/1993	1-118	prp	8310 (1)
VOLATILES - 8021 AQUEOUS			1				
Methylene Chloride	<20.	ug/L	/8	05/20/1993	10.	mjs	8021 (1)



Bartlett Division 850 W. Bartlett Rd. Bartlett, IL 60103

Tel: (708) 289-3100 Fax: (708) 289-5445

ANALYTICAL REPORT

Mr. Joe McCue VERSAR CORP. 1520 Kensington Road Suite 115 Oakbrook, IL 60521 06/02/1993

Sample No. : 210869

NET Job No.: 93.03857

Sample Description:

EMW-02D Down Gradient-Fill; Grab

VME Americas, Inc.

Date Taken: 05/13/1993 Time Taken: 18:00 IEPA Cert. No. 100221 Date Received: 05/14/1993 Time Received: 10:23 WDNR Cert. No. 999447130

Parameter	Results	Units	Batch No. Prep/Run	Date of Analysis	Reporting Limit	Analyst	Analytical Method
Prep, Pesticides/PCB AQUEOUS	extracted		107/	05/19/1993		era	3500 (1)
PESTICIDES/PCB - 8080 AQUEOUS			1				
4,4'-DDD	<0.1	ug/L	107/133	05/21/1993	0.1	seh	8080 (1)
Dieldrin	<0.1	ug/L	107/133	05/21/1993	0.1	seh	8080 (1)
Endosulfan I	<0.05	ug/L	107/133	05/21/1993	0.05	seh	8080 (1)
Endosulfan sulfate	<0.1	ug/L	107/133	05/21/1993	0.1	seh	8080 (1)
Endrin aldehyde	<0.1	ug/L	107/133	05/21/1993	0.1	seh	8080 (1)
Heptachlor epoxide	<0.05	ug/L	107/133	05/21/1993	0.05	seh	8080 (1)
PCB-1248	<1.0	ug/L	107/133	05/21/1993	1.0	seh	8080 (1)
Surr: Tetrachloroxylene (TCX)	37	%	107/133	05/21/1993	22-154	seh	8080 (1)
Surr: Decachlorobiphenyl (DCB)	33	%	107/133	05/21/1993	23-154	seh	8080 (1)
PREP, ACID EXT. AQUEOUS	extracted		120/	05/20/1993		law	3500 (1)
PREP, BN AQUEOUS	extracted		120/	05/20/1993		law	3500 (1)
ACID CMPDS - 8270 AQUEOUS			1				
2-Chlorophenol	<10.0	ug/L	120/177	05/26/1993	10.0	mjs	8270 (1)
2,4-Dichlorophenol	<10.0	ug/L	120/177	05/26/1993	10.0	mjs	8270 (1)
4-Nitrophenol	<50.0	ug/L	120/177	05/26/1993	50.0	mjs	8270 (1)
Surr: Phenol-d6	33	%	120/177	05/26/1993	10-94	mjs	8270 (1)
Surr: 2-Fluorophenol	50 %		120/177	05/26/1993	21-100	mjs	8270 (1)
Surr: 2,4,6-Tribromophenol	91	*	120/177	05/26/1993	10-123	mjs	8270 (1)



Tel: (708) 289-3100 Fax: (708) 289-5445

ANALYTICAL REPORT

Mr. Joe McCue VERSAR CORP. 1520 Kensington Road Suite 115 Oakbrook, IL 60521 06/02/1993

Sample No. : 210869

NET Job No.: 93.03857

Sample Description:

EMW-02D Down Gradient-Fill; Grab

VME Americas, Inc.

Date Taken: 05/13/1993

Date Received: 05/14/1993

Time Taken: 18:00 IEPA Cert. No. 100221

Parameter	Results	Units	Batch No. Prep/Run	Date of Analysis	Reporting Limit	Analyst	Analytical Method
BASE/NEUTRALS - 8270 AQUEOUS			,				
Benzo(b)fluoranthene	<10.0	ug/L	120/177	05/26/1993	10.0	mjs	8270 (1)
Di-n-butyl phthalate	<10.0	ug/L	120/177	05/26/1993	10.0	mjs	8270 (1)
Dimethyl phthalate	<10.0	ug/L	120/177	05/26/1993	10.0	mjs	8270 (1)
1,2-Diphenylhydrazine	<10.0	ug/L	120/177	05/26/1993	10.0	mjs	8270 (1)
Nitrobenzene	<10.0	ug/L	120/177	05/26/1993	10.0	mjs	8270 (1)
N-Nitrosodiphenylamine	<10.0	ug/L	120/177	05/26/1993	10.0	mjs	8270 (1)
Surr: Nitrobenzene-d5	73	% 1:		05/26/1993	35-114	mjs	8270 (1)
Surr: 2-Fluorobiphenyl			120/177	05/26/1993	43-116	mjs	8270 (1)
Surr: Terphenyl-d14	90	%	120/177	05/26/1993	33-141	mjs	8270 (1)
Prep, 8310 PNAs AQUEOUS	extracted		83 /	05/18/1993		law	8310 (1)
PNA CMPDS - 8310 AQUEOUS			1				
Acenaphthene	<0.018	mg/L	83 /178	05/21/1993	0.018	ргр	8310 (1)
Benzo(b)fluoranthene	<0.00018	mg/L	83 /178	05/21/1993	0.00018	prp	8310 (1)
Fluorene	<0.0021	mg/L	83 /178	05/21/1993	0.0021	prp	8310 (1)
Naphthalene	<0.010	mg/L	83 /178	05/21/1993	0.010	ргр	8310 (1)
Phenanthrene	<0.0064	mg/L	83 /178	05/21/1993	0.0064	ргр	8310 (1)
Surr: 2-Fluorobiphenyl	47	*	83 /178	05/21/1993	1-118	bcb	8310 (1)
VOLATILES - 8021 AQUEOUS			1				
Methylene Chloride	<50.	ug/L	/8	05/20/1993	10.	mjs	8021 (1)





Tel: (708) 289-3100 Fax: (708) 289-5445

ANALYTICAL REPORT

Mr. Joe McCue VERSAR CORP. 1520 Kensington Road Suite 115 Oakbrook, IL 60521 06/02/1993

Sample No. : 210870

NET Job No.: 93.03857

Sample Description:

EMW-03 Upgradient-Fill; Grab

VME Americas, Inc.

Date Taken: 05/13/1993 Time Taken: 19:00

IEPA Cert. No. 100221

Date Received: 05/14/1993

Parameter	Results	Units	Batch No. Prep/Run	Date of Analysis	Reporting Limit	Analyst	Analytical Method
Prep, Pesticides/PCB AQUEOUS	extracted		107/	05/19/1993		era	3500 (1)
PESTICIDES/PCB - 8080 AQUEOUS			1				
4,4'-DDD	<0.1	ug/L	107/133	05/21/1993	0.1	seh	8080 (1)
Dieldrin	<0.1	ug/L	107/133	05/21/1993	0.1	seh	8080 (1)
Endosulfan I	<0.05	ug/L	107/133	05/21/1993	0.05	seh	8080 (1)
Endosulfan sulfate	<0.1	ug/L	107/133	05/21/1993	0.1	seh	8080 (1)
Endrin aldehyde	<0.1	ug/L	107/133	05/21/1993	0.1	seh	8080 (1)
Heptachlor epoxide	<0.05	ug/L	107/133	05/21/1993	0.05	seh	8080 (1)
PCB-1248	<1.0	ug/L	107/133	05/21/1993	1.0	seh	8080 (1)
Surr: Tetrachloroxylene (TCX)	45	%	107/133	05/21/1993	22-154	seh	8080 (1)
Surr: Decachlorobiphenyl (DCB)	39	%	107/133	05/21/1993	23-154	seh	8080 (1)
PREP, ACID EXT. AQUEOUS	extracted		120/	05/20/1993		law	3500 (1)
PREP, BN AQUEOUS	extracted		120/	05/20/1993		law	3500 (1)
ACID CMPDS - 8270 AQUEOUS			1				
2-Chlorophenol	<10.0	ug/L	120/177	05/26/1993	10.0	mjs	8270 (1)
2,4-Dichlorophenol	<10.0	ug/L	120/177	05/26/1993	10.0	mjs	8270 (1)
4-Nitrophenol	<50.0	ug/L	120/177	05/26/1993	50.0	mjs	8270 (1)
Surr: Phenol-d6	34	%	120/177	05/26/1993 10-94		mjs	8270 (1)
Surr: 2-Fluorophenol	51	%	120/177	05/26/1993	21-100	mjs	8270 (1)
Surr: 2,4,6-Tribromophenol	95	%	120/177	05/26/1993	10-123	mjs	8270 (1)





Fax: (708) 289-3100

ANALYTICAL REPORT

Mr. Joe McCue VERSAR CORP. 1520 Kensington Road Suite 115 Oakbrook, IL 60521 06/02/1993

Sample No. : 210870

NET Job No.: 93.03857

Sample Description:

EMW-03 Upgradient-Fill; Grab

VME Americas, Inc.

Date Taken: 05/13/1993 Time Taken: 19:00 IEPA Cert. No. 100221 Date Received: 05/14/1993

Parameter	Results	Units	Batch No. Prep/Run	Date of Analysis	Reporting Limit	Analyst	Analytical Method		
BASE/NEUTRALS - 8270 AQUEOUS	40.0		120/177	05 /0/ /1007	10.0	=+=	0070 (4)		
Benzo(b)fluoranthene	<10.0	ug/L	120/177	05/26/1993	10.0	mjs	8270 (1)		
Di-n-butyl phthalate	<10.0	ug/L	120/177 120/177	05/26/1993	10.0	mjs	8270 (1)		
Dimethyl phthalate	<10.0			05/26/1993	10.0	mjs	8270 (1)		
1,2-Diphenylhydrazine	<10.0 ug/L		120/177	05/26/1993	10.0	mjs	8270 (1)		
Nitrobenzene	<10.0	ug/L	120/177	05/26/1993	10.0	mjs	8270 (1)		
N-Nitrosodiphenylamine	<10.0	ug/L	120/177	05/26/1993	10.0	mjs	8270 (1)		
Surr: Nitrobenzene-d5			120/177	05/26/1993	35-114	mjs	8270 (1)		
Surr: 2-Fluorobiphenyl	72 %		120/177	05/26/1993	43-116	mjs	8270 (1)		
Surr: Terphenyl-d14	94	%	120/177	05/26/1993	33-141	mjs	8270 (1)		
Prep, 8310 PNAs AQUEOUS	extracted		83 /	05/18/1993		law	8310 (1)		
PNA CMPDS - 8310 AQUEOUS			1						
Acenaphthene	<0.018	mg/L	83 /178	05/21/1993	0.018	prp	8310 (1)		
Benzo(b)fluoranthene	<0.00018	mg/L	83 /178	05/21/1993	0.00018	ргр	8310 (1)		
Fluorene	<0.0021	mg/L	83 /178	05/21/1993	0.0021	prp	8310 (1)		
Naphthalene	<0.010	mg/L	83 /178	05/21/1993	0.010	ргр	8310 (1)		
Phenanthrene	<0.0064	mg/L	83 /178	05/21/1993	0.0064	ргр	8310 (1)		
Surr: 2-Fluorobiphenyl	19	%	83 /178	05/21/1993	1-118	prp	8310 (1)		
VOLATILES - 8021 AQUEOUS			1						
Methylene Chloride	<10. ug/L		19	05/24/1993	10.	mjs	8021 (1)		



Bartlett Division 850 W. Bartlett Rd. Bartlett, IL 60103

Tel: (708) 289-3100 Fax: (708) 289-5445

ANALYTICAL REPORT

Mr. Joe McCue VERSAR CORP. 1520 Kensington Road Suite 115 Oakbrook, IL 60521 06/02/1993

Sample No. : 210871

NET Job No.: 93.03857

Sample Description: Equipment Blank VME Americas, Inc.

Date Taken: 05/13/1993 Time Taken: 15:20 IEPA Cert. No. 100221 Date Received: 05/14/1993

Parameter	Results	Units	Batch No. Prep/Run	Date of Analysis	Reporting Limit	Analyst	Analytical Method
TRPH	<1.0	mg/L	/3	05/20/1993	1.0	mjs	9073 (1)
DRO-Diesel Range Organics	<0.1	mg/L	16	05/20/1993	0.1	mjs	WDNR
Prep, 8310 PNAs AQUEOUS	extracted		83 /	05/18/1993		law	8310 (1)
PNA CMPDS - 8310 AQUEOUS			1				
Acenaphthene	<0.018	mg/L	83 /178	05/21/1993	0.018	prp	8310 (1)
Acenaphthylene	<0.010	mg/L	83 /178	05/21/1993	0.010	prp	8310 (1)
Anthracene	<0.0066	mg/L	83 /178 05/21/1993 0.006	0.0066	prp	8310 (1)	
Benzo(a)anthracene	<0.00013	mg/L	83 /178	05/21/1993	0.00013	prp	8310 (1)
Benzo(b)fluoranthene	<0.00018	mg/L	83 /178	05/21/1993	0.00018	ргр	8310 (1)
Benzo(k)fluoranthene	<0.00017	mg/L	83 /178	05/21/1993	0.00017	prp	8310 (1)
Benzo(a)pyrene	<0.00023	mg/L	83 /178	05/21/1993	0.00023	prp	8310 (1)
Benzo(ghi)perylene	<0.00076	mg/L	83 /178	05/21/1993	0.00076	prp	8310 (1)
Chrysene	<0.00015	mg/L	83 /178	05/21/1993	0.00015	prp	8310 (1)
Dibenzo(a,h)anthracene	<0.00030	mg/L	83 /178	05/21/1993	0.00030	prp	8310 (1)
Fluoranthene	<0.0021	mg/L	83 /178	05/21/1993	0.0021	prp	8310 (1)
Fluorene	<0.0021	mg/L	83 /178	05/21/1993	0.0021	prp	8310 (1)
Indeno(1,2,3-cd)pyrene	<0.00043	mg/L	83 /178	05/21/1993	0.00043	prp	8310 (1)
Naphthalene	<0.010	mg/L	83 /178	05/21/1993	0.010	prp	8310 (1)
Phenanthrene	<0.0064	mg/L	83 /178	05/21/1993	0.0064	prp	8310 (1)
Pyrene	<0.0027	mg/L	83 /178	05/21/1993	0.0027	prp	8310 (1)
Surr: 2-Fluorobiphenyl	48	%	83 /178	05/21/1993	1-118	prp	8310 (1)
VOLATILES - 8021 AQUEOUS			1				
Benzene	<1.0	ug/L	/8	05/20/1993	1.0	mjs	8021 (1)
Bromobenzene	<1.0	ug/L	/8	05/20/1993	1.0	mjs	8021 (1)
Bromochloromethane	<1.0	ug/L	/8	05/20/1993	1.0	mjs	8021 (1)
Bromodichloromethane	<1.0	ug/L	/8	05/20/1993	3 2.0	mjs	8021 (1)
Bromoform	<2.0	ug/L	/8	05/20/1993	3 4.0	mjs	8021 (1)
Bromomethane	<4.0	ug/L	/8	05/20/1993	1.0	mjs	8021 (1)



Fax: (708) 289-3100

ANALYTICAL REPORT

Mr. Joe McCue VERSAR CORP. 1520 Kensington Road Suite 115 Oakbrook, IL 60521 06/02/1993

Sample No. : 210871

NET Job No.: 93.03857

Sample Description:

Equipment Blank VME Americas, Inc.

Date Taken: 05/13/1993 Time Taken: 15:20 IEPA Cert. No. 100221 Date Received: 05/14/1993

Parameter	Results	Units	Batch No. Prep/Run	Date of Analysis	Reporting Limit	Analyst	Analytical Method
n-Butylbenzene	<1.0	ug/L	/8	05/20/1993	1.0	mjs	8021 (1)
sec-Butylbenzene	<1.0	ug/L	/8	05/20/1993		mjs	8021 (1)
tert-Butylbenzene	<1.0	ug/L	/8	05/20/1993		mjs	8021 (1)
Carbon tetrachloride	<1.0	ug/L	/8	05/20/1993		mjs	8021 (1)
Chlorobenzene	<1.0	ug/L	/8	05/20/1993		mjs	8021 (1)
Chlorodibromomethane	<1.0	ug/L	/8	05/20/1993		mjs	8021 (1)
Chloroethane	<4.0	ug/L	/8	05/20/1993		mjs	8021 (1)
Chloroform	<1.0	ug/L	/8	05/20/1993		mjs	8021 (1)
Chloromethane	<4.0	ug/L	/8	05/20/1993		mjs	8021 (1)
2-Chlorotoluene	<1.0	ug/L	/8	05/20/1993		mjs	8021 (1)
4-Chlorotoluene	<1.0	ug/L	/8	05/20/1993		mjs	8021 (1)
1,2-Dibromo-3-chloropropane	<2.0	ug/L	/8	05/20/1993		mjs	8021 (1)
1,2-Dibromoethane (EDB)	<1.0	ug/L	/8	05/20/1993		mjs	8021 (1)
Dibromomethane	<1.0	ug/L	/8	05/20/1993		mjs	8021 (1)
1,2-Dichlorobenzene	<1.0	ug/L	/8	05/20/1993		mjs	8021 (1)
1,3-Dichlorobenzene	<1.0	ug/L	/8	05/20/1993		mjs	8021 (1)
1,4-Dichlorobenzene	<1.0	ug/L	/8	05/20/1993		mjs	8021 (1)
Dichlorodifluoromethane	<3.0	ug/L	/8	05/20/1993	3.0	mjs	8021 (1)
1,1-Dichloroethane	<1.0	ug/L	/8	05/20/1993	1.0	mjs	8021 (1)
1,2-Dichloroethane	<1.0	ug/L	/8	05/20/1993	1.0	mjs	8021 (1)
1,1-Dichloroethene	<2.0	ug/L	/8	05/20/1993		mjs	8021 (1)
cis-1,2-Dichloroethene	<1.0	ug/L	/8	05/20/1993	1.0	mjs	8021 (1)
trans-1,2-Dichloroethene	<1.0	ug/L	/8	05/20/1993	1.0	mjs	8021 (1)
1,2-Dichloropropane	<1.0	ug/L	/8	05/20/1993	1.0	mjs	8021 (1)
1,3-Dichloropropane	<1.0	ug/L	/8	05/20/1993	3 1.0	mjs	8021 (1)
2,2-Dichloropropane	<1.0	ug/L	/8	05/20/1993	3 1.0	mjs	8021 (1)
1,1-Dichloropropene	<1.0	ug/L	/8	05/20/1993	3 1.0	mjs	8021 (1)
cis-1,3-Dichloropropene	<1.0	ug/L	/8	05/20/1993	3 1.0	mjs	8021 (1)
trans-1,3-Dichloropropene	<1.0	ug/L	/8	05/20/1993	3 1.0	mjs	8021 (1)
Ethylbenzene	<1.0	ug/L	/8	05/20/199	3 2.0	mjs	8021 (1)
Hexachlorobutadiene	<2.0	ug/L	/8	05/20/199	3 1.0	mjs	8021 (1)





Bartlett Division 850 W. Bartlett Rd. Bartlett, IL 60103 Tel: (708) 289-3100 Fax: (708) 289-5445

ANALYTICAL REPORT

Mr. Joe McCue VERSAR CORP. 1520 Kensington Road Suite 115 Oakbrook, IL 60521 06/02/1993

Sample No.: 210871

NET Job No.: 93.03857

Sample Description:

Equipment Blank VME Americas, Inc.

Date Taken: 05/13/1993 Time Taken: 15:20 IEPA Cert. No. 100221 Date Received: 05/14/1993

Parameter	Results	Units	Batch No. Prep/Run	Date of Analysis	Reporting Limit	Analyst	Analytical Method
Isopropylbenzene	<1.0	ug/L	/8	05/20/1993	1.0	mjs	8021 (1)
p-Isopropyltoluene	<1.0	ug/L	/8	05/20/1993		mjs	8021 (1)
Methylene Chloride	<10.	ug/L	/8	05/20/1993		mjs	8021 (1)
Methyl-t-butyl ether (MTBE)	<1.0	ug/L	/8	05/20/1993		mjs	8021 (1)
Naphthalene	<1.0	ug/L	/8	05/20/1993		mjs	8021 (1)
n-Propylbenzene	<1.0	ug/L	/8	05/20/1993		mjs	8021 (1)
Styrene	<1.0	ug/L	/8	05/20/1993		mjs	8021 (1)
1,1,1,2-Tetrachloroethane	<1.0	ug/L	/8	05/20/1993	1.0	mjs	8021 (1)
1,1,2,2-Tetrachloroethane	<1.0	ug/L	/8	05/20/1993	1.0	mjs	8021 (1)
Tetrachloroethene	<1.0	ug/L	/8	05/20/1993	1.0	mjs	8021 (1)
Toluene	<1.0	ug/L	/8	05/20/1993	1.0	mjs	8021 (1)
1,2,3-Trichlorobenzene	<1.0	ug/L	/8	05/20/1993	1.0	mjs	8021 (1)
1,2,4-Trichlorobenzene	<1.0	ug/L	/8	05/20/1993	1.0	mjs	8021 (1)
1,1,1-Trichloroethane	2.7	ug/L	/8	05/20/1993	1.0	mjs	8021 (1)
1,1,2-Trichloroethane	<1.0	ug/L	/8	05/20/1993	1.0	mjs	8021 (1)
Trichloroethene	2.7	ug/L	/8	05/20/1993	1.0	mjs	8021 (1)
Trichlorofluoromethane	<4.0	ug/L	/8	05/20/1993	4.0	mjs	8021 (1)
1,2,3-Trichloropropane	<1.0	ug/L	/8	05/20/1993	1.0	mjs	8021 (1)
1,2,4-Trimethylbenzene	<1.0	ug/L	/8	05/20/1993	1.0	mjs	8021 (1)
1,3,5-Trimethylbenzene	<1.0	ug/L	/8	05/20/1993	1.0	mjs	8021 (1)
Vinyl Chloride	<3.0	ug/L	/8	05/20/1993	3.0	mjs	8021 (1)
Xylenes, total	<3.0	ug/L	/8	05/20/1993	3.0	mjs	8021 (1)



Fax: (708) 289-5445

ANALYTICAL REPORT

Mr. Joe McCue VERSAR CORP. 1520 Kensington Road Suite 115 Oakbrook, IL 60521

06/02/1993

Sample No. : 210872

NET Job No.: 93.03857

Sample Description:

Trip Blank

VME Americas, Inc.

05/13/1993 Date Taken:

Date Received: 05/14/1993

Time Taken:

Time Received: 10:23

IEPA Cert. No. 100221

WDNR Cert. No. 999447130

Parameter	Results	Units	Batch No. Prep/Run	Date of Analysis	Reporting Limit	Analyst	Analytical Method
VOLATILES - 8021 AQUEOUS			1				
Benzene	<1.0	ug/L	/8	05/20/1993	1.0	mjs	8021 (1)
Bromobenzene	<1.0	ug/L	/8	05/20/1993	1.0	mjs	8021 (1)
Bromochloromethane	<1.0	ug/L	/8	05/20/1993	1.0	mjs	8021 (1)
Bromodichloromethane	<1.0	ug/L	/8	05/20/1993	1.0	mjs	8021 (1)
Bromoform	<2.0	ug/L	/8	05/20/1993	2.0	mjs	8021 (1)
Bromomethane	<4.0	ug/L	/8	05/20/1993	4.0	mjs	8021 (1)
n-Butylbenzene	<1.0	ug/L	/8	05/20/1993	1.0	mjs	8021 (1)
sec-Butylbenzene	<1.0	ug/L	/8	05/20/1993	1.0	mjs	8021 (1)
tert-Butylbenzene	<1.0	ug/L	/8	05/20/1993	1.0	mjs	8021 (1)
Carbon tetrachloride	<1.0	ug/L	/8	05/20/1993	1.0	mjs	8021 (1)
Chlorobenzene	<1.0	ug/L	/8	05/20/1993	1.0	mjs	8021 (1)
Chlorodibromomethane	<1.0	ug/L	/8	05/20/1993	1.0	mjs	8021 (1)
Chloroethane	<4.0	ug/L	/8	05/20/1993	4.0	mjs	8021 (1)
Chloroform	<1.0	ug/L	/8	05/20/1993	1.0	mjs	8021 (1)
Chloromethane	<4.0	ug/L	/8	05/20/1993	4.0	mjs	8021 (1)
2-Chlorotoluene	<1.0	ug/L	/8	05/20/1993	1.0	mjs	8021 (1)
4-Chlorotoluene	<1.0	ug/L	/8	05/20/1993	1.0	mjs	8021 (1)
1,2-Dibromo-3-chloropropane	<2.0	ug/L	/8	05/20/1993	2.0	mjs	8021 (1)
1,2-Dibromoethane (EDB)	<1.0	ug/L	/8	05/20/1993	1.0	mjs	8021 (1)
Dibromomethane	<1.0	ug/L	/8	05/20/1993	1.0	mjs	8021 (1)
1,2-Dichlorobenzene	<1.0	ug/L	/8	05/20/1993	1.0	mjs	8021 (1)
1,3-Dichlorobenzene	<1.0	ug/L	/8	05/20/1993	1.0	mjs	8021 (1)
1,4-Dichlorobenzene	<1.0	ug/L	/8	05/20/1993	1.0	mjs	8021 (1)
Dichlorodifluoromethane	<3.0	ug/L	/8	05/20/1993	3.0	mjs	8021 (1)
1,1-Dichloroethane	<1.0	ug/L	/8	05/20/1993	1.0	mjs	8021 (1)
1,2-Dichloroethane	<1.0	ug/L	/8	05/20/1993		mjs	8021 (1)
1,1-Dichloroethene	<2.0	ug/L	/8	05/20/1993	2.0	mjs	8021 (1)
cis-1,2-Dichloroethene	<1.0	ug/L	/8	05/20/1993	1.0	mjs	8021 (1)



Bartlett Division 850 W. Bartlett Rd. Bartlett, IL 60103

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ANALYTICAL REPORT

Mr. Joe McCue VERSAR CORP. 1520 Kensington Road Suite 115 Oakbrook, IL 60521 06/02/1993

Sample No. : 210872

NET Job No.: 93.03857

Sample Description:

Trip Blank

VME Americas, Inc.

Date Taken: 05/13/1993

Date Received: 05/14/1993

Time Taken:

Time Received: 10:23

IEPA Cert. No. 100221

WDNR Cert. No. 999447130

Parameter	Results	Units	7000 M - CARLEY (1997) - MATTER STOLEN		Reporting Limit	Analyst	Analytical Method
Maria Constitution of							4415
trans-1,2-Dichloroethene	<1.0	ug/L	/8	05/20/1993		mjs	8021 (1)
1,2-Dichloropropane	<1.0	ug/L	/8	05/20/1993		mjs	8021 (1)
1,3-Dichloropropane	<1.0	ug/L	/8	05/20/1993		mjs	8021 (1)
2,2-Dichloropropane	<1.0	ug/L	/8	05/20/1993		mjs	8021 (1)
1,1-Dichloropropene	<1.0	ug/L	/8	05/20/1993		mjs	8021 (1)
cis-1,3-Dichloropropene	<1.0	ug/L	/8	05/20/1993		mjs	8021 (1)
trans-1,3-Dichloropropene	<1.0	ug/L	/8	05/20/1993		mjs	8021 (1)
Ethylbenzene	<1.0	ug/L	/8	05/20/1993		mjs	8021 (1)
Hexachlorobutadiene	<2.0	ug/L	/8	05/20/1993		mjs	8021 (1)
Isopropylbenzene	<1.0	ug/L	/8	05/20/1993		mjs	8021 (1)
p-Isopropyltoluene	<1.0	ug/L	/8	05/20/1993		mjs	8021 (1)
Methylene Chloride	<10.	ug/L	/8	05/20/1993		mjs	8021 (1)
Methyl-t-butyl ether (MTBE)	<1.0	ug/L	/8	05/20/1993		mjs	8021 (1)
Naphthalene	<1.0	ug/L	/8	05/20/1993		mjs	8021 (1)
n-Propylbenzene	<1.0	ug/L	/8	05/20/1993		mjs	8021 (1)
Styrene	<1.0	ug/L	/8	05/20/1993		mjs	8021 (1)
1,1,1,2-Tetrachloroethane	<1.0	ug/L	/8	05/20/1993		mjs	8021 (1)
1,1,2,2-Tetrachloroethane	<1.0	ug/L	/8	05/20/1993	1.0	mjs	8021 (1)
Tetrachloroethene	<1.0	ug/L	/8	05/20/1993	1.0	mjs	8021 (1)
Toluene	<1.0	ug/L	/8	05/20/1993	1.0	mjs	8021 (1)
1,2,3-Trichlorobenzene	<1.0	ug/L	/8	05/20/1993	1.0	mjs	8021 (1)
1,2,4-Trichlorobenzene	<1.0	ug/L	/8	05/20/1993	1.0	mjs	8021 (1)
1,1,1-Trichloroethane	<1.0	ug/L	/8	05/20/1993	1.0	mjs	8021 (1)
1,1,2-Trichloroethane	<1.0	ug/L	/8	05/20/1993	1.0	mjs	8021 (1)
Trichloroethene	<1.0	ug/L	/8	05/20/1993	1.0	mjs	8021 (1)
Trichlorofluoromethane	<4.0	ug/L	/8	05/20/1993	4.0	mjs	8021 (1)
1,2,3-Trichloropropane	<1.0	ug/L	/8	05/20/1993	1.0	mjs	8021 (1)
1,2,4-Trimethylbenzene	<1.0	ug/L	/8	05/20/1993	1.0	mjs	8021 (1)
1,3,5-Trimethylbenzene	<1.0	ug/L	/8	05/20/1993	1.0	mjs	8021 (1)
Vinyl Chloride	<3.0	ug/L	/8	05/20/1993	3.0	mjs	8021 (1)
Xylenes, total	<3.0	ug/L	/8	05/20/1993	3.0	mjs	8021 (1)



APPENDIX D3 CHAIN-OF-CUSTODY FORMS

SL Visa	- 000004
Department of Natural	Resources

Chapter 144, Wis, Julies.
Form 4400-89

Rev. 1-90

Facility Name AKEYW	/1	11/2 =	-		Fa	cility ID Numbe	Date	5/1	3/93	Completed B	y (Nat	me and	Firm) 1/e V	sur,	I	10					
HKern	DNR	ME	TT	T	+		Well	Casing	Eleva	tions	Refe	rence						Type of Well	Aban-	Enf. Stds	Gradient U. S. D
Well Name	Well ID Number	Well Location	И	s			_	Турс	Top of Well Casing	Ground Surface	MSL (√)	Site Datum (V)	Length	Depth	HE	₹	LYS	Other	dered	Apply	or N
		375,229.8	3	1	1	5/11/93	2"	55	845.99	843.70	V		10	20.1					no		D
EMW-01		2,479,556.2	2	+	<u> </u>	-1	11	35	0,				1	,					no		D
EMW-02	1	375,537.42 2,479,359.2		,	1	5/12/93	2	304	847.41	845.75	V		10	25.2	-	V	+		110		
EMW-03		375,868,05	1 1	1	-	5/12/93 5/12/93	2"	364	850.75	848.39	1		10	25.1					no		U
<u>-MW-03</u>		2,479,437.1)	T	1		113			0303	0.007											
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Location Coord	inates Are:	1	+4			Remarks:										-		Use:			
□ Local Gr (prefe	id System	State Plane	Coor	litt	ate						-				-	-		le Maint Comp	eted: _		
Juli		Cen Cen	rel			Mary Mary Street									_	-1	UL	her:			

APPENDIX D4 SOIL SAMPLE BORING LOGS

	Wisco nent of		al Resou	irces	Route To: Solid Waste Emergency Res Wastewater	ponse Un	ater Rese		cs	S. F.	OIL I orm 44	ORII 00-12	NG L		NFOR	MATI Rev.	5-92
cility	/Projec	t Nam	c. An	1	☐ Superfund		License	/Permi	t/Mon	itoring	Numb	er	Boring	Page Numb	cr		_
oring Drilled By (Firm name and name of crew chief) LENGEN THE MICHAEL WELLEN, GOOD 1915+ LONG ENGINEEN BY BY KING, WILLEN NR Facility Well No WI Unique Well No. Common Well Name								illing S	19	131	Date D O 8 M M	12	319	eted 73	B-1 Drilling Method HSA		
_								F	ater L	SL			Feet M	ASL	Borehol Z olicable)	ir	meter iches
VE Punty	1/4 of	NE	1/4 of	Section_	. 2,479,437 2.т <u>б</u> п.	R 19(E)	V Long			_		F	ect 🗆	N S_			□ E
	U	Vav	Kesh	ä		£	3 8	2	U	Voiv	rest	19					
Sam	eld 왕 군	s			Soil/Rock Descrip	ntion.							Soil	Prop	erties		
and Type	Length Att. & Recovered (m)	Blow Counts	Depth in Feet		And Geologic Origi Each Major Un	in For		uscs	Graphic Log	Well Diagram	PID/FID	Compressive Strength	Moisture Content	Liquid	Plasticity Index	P 200	RQD/ Comments
			= ,	Misc & Con	Fill, silty sand waste, cinders, I, darle gray, , darf to moiss	W/ Frague Brick, wo	nants add				0.0						
	20	5/4	F-2	donse	, day to moiss	†	Med				0.0						,
1		5/4	= 3														
1	17	3	= d	<u> </u>							0.0		_				
+3	22	12	= 5						=			-	-			-	+
1		1/1		grad	es wete 6'						0.0		-				
4	18	'	- 7 - 8	1.00	s saturated @ 7	2. 3 '		,			0.0				-		
1			-9	Peat	(11) dark Som	m, firm, n	usist,	P+			0.0						
	-		- 10	>					-	-	-				-		-
-	-	-	E,	/		<u> </u>				-		-			-		
lihe	reby	certli	fy that	the info	ormation on this f	form is true	and o	correc	t to	the b	est of	my I	snowl	edge			
Sign	ature	Who	hart	Me	tura		Firm		Ven	0/	Tre						
lilan	\$10 n	or mor	e than S	5,000 for	rs 144.147 and 162, V each violation. Fined of continued violation	d not less that	n \$10 or	more t	han S	100 or	impris	oned i	not less	than :	30 days	or	

	Wisco tent of		l Resou	rces	☐ Wasta	Waste gency Respon cwater	se Und	ater Resou		s	SC Fo	OIL B orm 440	ORIN 00-122	G Lo	Page	,	AATI Rev. :	5-92
cility	Projec	t Name	c 1 /10	15	☐ Super	tund	□ Od	License/	Permi	Mon	itoring	Numbe	er E	Boring	Numbo	r		=
eve No.	Drilled	By (Fi	rm nam	ic and nar	ne of crew of nel Mel	chief) Len Geology Ag Nilles Common W	g/5+	Date Dri	23	19	3	Date Dr O 8 M M Surface	12	3 / Y	13 Y	B- Orilling H	Meth SA	
_									F	ect M		-		Feet N		2		ches
oring ate Pl	1/4 of	NE	75 , 8 c	98_N Section	1. 2,47 2. T	79,437 <u>6</u> n, r	19(EN	N Lat V Long County C			-		Fe	cet 🗆	N	licable)	Feet	□ E □ W
	U	Vav	Kesh	2			E	5.8	- June			rest						
Sam	eld 의				0.115									Soil	Prope	erties		
and Type	Length Att. & Recovered (in)	Blow Counts	Depth in Feet		And Geo	ck Description logic Origin F Major Unit			uscs	Graphic Log	Well Diagram	PID/FID	Compressive Strength	Moisture	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
			Ξ	Mise	Fill Sil	ty sand al	Came	arts				0.0						
- !	17	4	= 1	Conce	k, cinde ott, book , moist	wood, a	netald se to mo	rd							,			
+		4/5	-7									0.0						
マーフー	14	3/3	E d									0.0						
1		1/2	- 5	9 100	les wet	@ approx	5'											
3	6	2,	E 6									0.0			-			
1	6	1/1	1 (9000	les satu	vated @ g	prox 7				-	-		-	+	-		-
+	-	1/2	-0			,				-	+	00	-	+	+	-	-	+
لم	-	1	= 9	Pear	root frag	Mark brown monts, tr	n, film,	clay	Pt	-	-	0.0	+	-	+	-	-	
	-		E 10							-	-	+	-	-		-	-	+
	-		E	/			<u>-</u> _				-		-	-	-			
I he	ereby	certli	fy tha	t the in	formation	on this for	m is true	e and o	orrec	t to	the b	est of	my	know	edge.			1
				17					Vo		- 1							
thar	\$10 r	or mo	re than	\$5,000 fo	r each viola	and 162, Wish ation. Fined n ed violation is	ot less tha	n \$10 or	more	han :	\$100 0	r impri	soned	not les	s than	30 days	less , or	

cility	Projec	Nam	°VN	A.C.	☐ Supc	riuna	-	Other	c/Permi	t/Mo	nitorir	g Num	ber	Boring	Page .		01_	=
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eve	in En	Trice 19iv	m nam	ing /	ne of gew sel Well On klu ell No.	In G	eologia	Date I QE M N		5/9	73 Y Y	Oate I O & M N	1.1	Complete S	eted 3 Y	Drilling H	Meth SA	
lk li	doility	Welli	lo.WI	Unique W	el) Na;	Còmmo	n Well I	Name Final	Static W	ater ect h		Surfac	e Eleva	tion Feet N		Borchol		
ing	Locatio	n 2	75 D	28 N	1, 2,4	79 43	7 1	secol I	at	_		Local	Grid L	ocation	(If app	licable)	in	nches
E	1/4 of							2 EW Lo	ng		•		F	eet 🗆	N S_		Feet	O E
unty	U	lav	kesh	a				DNR Count	Code	Civil	Town	Cityl o	or Villa	ge				
am	ole					100								Soil	Prop	erties		
and Type	Length Att. & Recovered (in)	Blow Counts	Depth in Feet		And Geo Eacl	ock Descri ologic Orig h Major U	gin For nit		uscs	Graphic Los	Well	PID/FID	Compressive Strength	Moisture	Liquid Limit	Plasticity Index	P 200	RQD/
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T	22	5/1	= 1	ond .	meral, metal, maist	derk 9.	104, 10	ose to me	rd			0.0						
		1/8	= 3															
21	18		Ed									0.	0					
I			= 5	grad	les evet	e 4,5	•											
3	3	3/5	E 6	910	des sat	twated	egy	arox 6'				0.	0					
1		3/4	En															
1	9	1/1	E									0	.0					
1		1/2	= 9	Peat was	5014/0	dark be	roam,	fim, mon	7, P7	1	-	-				+		+
			E 10	2					-	-		-	4	-	+	+		
_	-	-	<u> </u>	/					-	-	-		-	+	+	-	-	+
			E	2														
he	ature	735			ormation		form i	s true and	revs.	1	the		of my	know	ledge.		-	

ility/	Project	Nam	c , /\a		perfund	Otho	icense/	Permi	t/Mon	itoring	Numbe	er E	Boring	Page Number	- r	of	_
evs	Drilled	By (Fi	irm nan	ne and name of cre Michael Me	w chief) Geolog		Date Dril 181 M M	7.	>19	3	Date Dr 08 M M	12.	319	eted 1	Brilling H	Meth SA	
RF	g //	Well	NO WI	Unique Well No.	Còmmon Wel	I Name	inal Sta	tic W	ater L	cvel	Surface	Elcval	tion Feet M		Borchol		meter
ing l	Locatio ane	" 37	75,8	8 N. 2, 9 Section 2.	179,437	E SICIN	Lat	_		-:	Local G			N	licable)		o e
inty			keshi		1_ <u>O_N, R_</u>	DNR	ounty C	ode	Civil 7	Fown/C	Cityl or	Villag	ge 🗆	s _		Feet	
am	ole									1000				Prope	erties		
and Type	Length Att. & Recovered (in)	Blow Counts	Depth in Feet	And C	Rock Description Seologic Origin Fo ach Major Unit	r		uscs	Graphic Log	Well Diagram	PID/FID	Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/
			Ε,	Mise Gill 51	ly sand ul fornavete, was	issumm	4				0.0						
1	70	70	2	derkgray ilo	est to mad de	rse, me	15+				مده						
L		10/14	= 3		-												
2	16	24	T 4	grades w	et e 5.8°					_	0.0			-			-
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1			E 2	grudes 5	strotele ?	,'											1
1	12/	1/	E				4				0.0						
		1/2	= 9) dark brown,	tim, i	noist	PT									
			= 10	5. Hy clay	(ec) med g.	ing, fa	m 40										
5	ST 27		E,	Stilly clay Still, most	to hish plant	ce Lin	e gard	, cc									
			E	2							0.0						
he	ereby	certl	ify tha	t the information	on on this form	is true	and o		t to	the b	est of	my	know	ledge.			1_

	Wiscon ent of		l Resou	rces	oute To: Solid Waste Emergency Respor Wastewater	nsc 🗆 Un	z. Waste dergroun ater Rese	d Tank	cs	Se Fe	OIL B orm 440	ORIN 00-122	G Lo		NFORM	AATI Rev.	
cility	Projec	t Name	c 4		Superfund	□ 00	License	/Perm	t/Mon	itorine	Numb	er II	Roring	Page .		of _	_
	-,,,		VW	1E											8-		
eve Nou	Drilled	By (Fi	irm nam	ic and name of invital lines	Me Han George Wille	laist	Date Dr <u>QB</u> M M	illing:	Started S 19 D Y	3	Date Dr O 8 M M	illing of D	Comple 5	eted 73	Orilling H	Meth SA	od
									ater L	SL	Surface		Feet N	ASL	Borchol Z licable)	in	ncter
ate Pl	anc	37	75,80	98 N. 6	2,479,437	E S/C	/N La	t	-					N			ΠE
ounty					_, <u>t_6</u> n, r	DNR	County	Code	Civil'	Fown/	City/ or	Villa	ge 🗆	s _		Feet	
	_	Vav	Keshi	2		£	5 . 8	3	U	Vai	test	19					
Samp	성 C				Soil/Rock Description				T				Soil	Prop	erties		
and Type	Length Att. & Recovered (in)	Blow Counts	Depth in Feet		nd Geologic Origin Each Major Unit			uscs	Graphic Log	Well Diagram	PID/FID	Compressive Strength	Moisture	Liquid Limit	Plasticity Index	P 200	RQD/
-				Mise fr	11 gilly sound	ul fres	me at				0.0						
			= 1	& concre	te, einder, and ose to medder	wood,	desle										
1	19	9/5	= 7	al grave	ose tomedow	rse, mo	1st,				0.0						
		3/2	= 3														
7	24	4/3	-	gradesv	ot eu'						0.0						
	7	2/3	E 5														
3	22		E 6	grades :	aturated e 5.	.5'					0-0						
1			En														
1	18	4/2	, = 8								0.0	,					
1		1/2	= 9	Peat (Pt	desk brown,	tim, w	losst,	PH									
			E	2													
			E,	/	*												
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Sign	ature			t the inform	nation on this fo	rm is tru	e and Fin	corre	ct to	the t	pest o	f my	know	ledge			1_
lhan	10 m	is auth	norized re than	by Chapters 1 \$5,000 for each	44.147 and 162, Wi th violation. Fined to continued violation i	not less the	Completi an \$10 o	on of	this rep	port is \$100 c	mandat or impri	soned	not les	s than	30 days		

ility	Projec	t Name	°VN	1		☐ Sup	rfund			ПО	License	Permi	/Moi	nitori	ng l	Numbe	er E	Boring	Page _ Number		ol	=
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eve bu	Drilled	By (Fi	m nan	ic and r	me!	Me	the ing	, Go	eolog	151	Date Dri <u>AB</u> M M	123	10	73		Oate Dy OB M M		Complex 1 2 Y	3 Y	Drilling H	Meth SA	
R F	ecility	Welli	Võ. WI	Unique	Well	No:	Cò	mmor	n Wel	Name	Final St		ater I		S	urface	Elevat	ion Feet N	10000	Borchol		meter
ng c Pl	Locatio	n 37	75,8	ð8	N.	2,4	79,	437	7	E SK	N La				. L	ocal C		cation	to a transfer like	licable)		
E	1/4 of	NE	1/4 of	Sectio	n _	2_,	r_(<u> N.</u>	R_	19(E	W Long						Fe	et 🗆			Feet	O E
inty	U	lav	kesh	à						DNI	County	Code	Livil	Tow	U/C	est	Villag	ge				
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			=	MIS	e W	1 616	445	and	wl.	fregn	reuts			T		0.0						
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1			= 5	191	edes	wet	95'															
3	16	3	= 6													0.0						
		3/	E																			
4	24	1	E									1	T				1	1				
+		-	F 8	3						-		-	+	+	_	0.0	0	+	-	-	-	+
			E	6	rade.	5 401	hva	tede	8.	7'												
5	20	1/	= /	1												0.0						
		2	2	_	at (P+) (davl	c br	rust	hom	maist	P+	T			-						
			E				71			a. y												
l h	ereby	certi	ify the	4 the	infor	matic	0.00	this	form	is tr	ue and	corre	1 10	the	h	021.0	f my	know	lodge			_
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					☐ Wastewate ☐ Superfund		☐ Water I	Resou	rces				-		Page	1	of	1
	/Projec		VV	ME				ense/P	ermi	/Mon	itoring	Numb	er [Boring	Numb	B-	7	
eve	Drilled Sol	By (Fi	irm nam	ne and name Michael	of grew chief) Ne Han hak ling	Geologie Diller	Date On M	81	24	tarted 19	3	Date D O 8 M M	rilling	Compl 4/2 D Y	cted 3	Drilling		od
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ate Pi	lanc	NE	75 8 1/4 of	<u>08</u> N, Section _	2,479,4 2.T.6	/37 F N. R_/	9 EWIL	ong _			•		Fe	cet 🗆	N S_		Feet	□ E
ounty		,	keshi				DNR Cou	nty C	ode (Civil 7	Sown/	test	Villa	ge				
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and Type	Length Att. & Recovered (m)	Blow Counts	Depth in Feet		Soil/Rock Do And Geologic Each Maj	Origin For			nscs	Graphic Log	Well Diagram	PID/FID	Compressive Strength	Moisture Content	Liquid	Plasticity Index	P 200	RQD/ Comments
			= ,		Gill Silty C wete, emde													
1	70	3/2	= 7	metal,	dork gra	y, loose to	omed					2.0						
		1/2	= 3															
2	18	3/2	Ed									0.0						
		1/1	= 5	4-ade	wet a 4	.4.										X.		
3	17	1/1	Eb															1
Ļ	21	1	= 7	2100	es satura	fod @ 6.5					-	-		1			_	1
+	-	3	0							_		v.		-		-		-
1	_	3/2	2 9	pent ulsi	(pt) date	brown , j	m, ms	s.t.,	P+	-	_		-	-	-	+		+
			= 10	2							-	-	_	_	-	-	-	-
		_	E	/								-	-	-				-
			E	2														
Sign	areby nature	Certli M/M	ly that	t the info	rmation on	this form	is true ar	Firm			the t		f my	know	ledge			
his	s form 1 \$10 n	is auth or mor	norized re than	by Chapter \$5,000 for	s 144.147 and each violation. of continued vio	Fined not I	ess than \$1	letion 0 or r	of the	is rep	ort is \$100 c	manda r impri	isoned	not les	s than	30 days	less , or	

	Wiscon cent of I		l Resour	ces	Route To: Solid V Emerge Wastew Superfu	Vaste ency Respon vater	sc Un	z. Waste dergrour ater Rese	d Tan	ks	Fo	orm 44(ORIN 00-122	G Lo		reorn /	Rcv.	5-92
cility	Projec	t Namo	1 /100	15	LI Superio	ша	L 00	License	/Perm	it/Mon	itoring	Numbe	er E	Boring	Numbe	- T	0	=
eve Lou	Drilled	By (Fi	rm name	e and nar	me of gow ch all Me Ho By k/ing Vell No.	ich), Geor	laist	Date Dr 128 M M	12	419 D Y	3 Y	08 M M	12 Bi	6/15/Y	13 Y	1.	SA	
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unty		,	kesho				DNR	County	Code	Civil'	Town/C	Cityl or Les L	Villag	ge				_ "
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and Type	Length Att. & Recovered (m)	Blow Counts	Depth in Feet		And Geole	k Descriptio ogic Origin I Major Unit			uscs	Graphic Log	Well Diagram	PID/FID	Compressive Strength	Moisture	Liquid Limit	Plasticity Index	P 200	RQD/
			Ε,	MISE E	e fill 511 movete, and	ty Sand	al freques	nats				1.0						
1	71	5/8	E	Loose	to med do	use, mi	rist					0.0						
1		25	E			******						000						
71	6	14	= 4								7	0,0						
I		4/1	= 5		<i>l t</i> -													
3	12	2/2	2 6	9000	les witch	led @ g	PIX 6'					0.0						
1		1/-	, = 2															
1	12	1/2	- 8									0.0						
1		1/1	= 9	Plai	(Pt) double	bring, Fl.	m, mis	 +	P	-	_							
			= 10	2								-						
_			E,	/														
			E	2														
h	ereby	certl	ify that	the in	formation of	on this fo	rm is tru	e and	corre	ct to	the b	est o	f my	know	ledge			
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partm		Natural	Resou		Route To	Waste gency Respons water	c Un	ater Reson		s	Fo	OIL B	ORIN 00-122	G Lo	Page	,	fATI Rev. :	5-92
cility/	Projec	Name	Mn	NE	Ц опра			License/	Permi	/Mon	itoring	Numbe	er E	Boring	Numbo	P-	9	-
ring l	Drilled	By (Fi	m nam	ne and nam	el Mell	nich Geology Orller Common We	3/5+	Date Dri <u>DB</u> M M	D D	tarted 19	3 Y	Date Dr 08 M M	illing (Complex / / Y	eted	Orilling H	Meth SA	od
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ounty			tesh				DNR £	County C	Code	Civil 1	Count C	test	Villag	ge				
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and Type	Length Att. & Recovered (in)	Blow Counts	Depth in Feet		And Geo	logic Origin Fo			uscs	Graphic Log	Well Diagram	PID/FID	Compressive Strength	Moisture	Liquid	Plasticity Index	P 200	RQD/ Comments
			= ,	Wise I	M 5/14	s and ulf	rag ma	n+s				610						
1	23	3/5	- 2	devke	ry, w	ost, love	e Ame	d d				as						
1		2/6	= 3															
7	14	4/4	_4									0.0						
1		3/2	= 5															
3	15	4/2	E 6	quade.	weta	5.5'						0.0						
		2/2	(grade	ssahv	atale 7'	•											
4	10	3/3	E 8	2				·				0.7	0					
		4		peat	414	dork brown	, Zm	romalst,	Pt									
			= 10	0								-	_	-	_			
_	1		E	/			·			_			-	-			-	
			E	2														
	nature				ormation	on this for	m is tru	Firm	1		the b		f my	know	ledge			

cility/	Project	Name	Vn	1	☐ Sup	erfund		Oth		/Perm	it/Mon	itoring	Numbe	er E	Boring	Page_ Number	r	of	_
					ne of crev	v chief)	,	/-	Date Dr	illing	Started		Date Dr	illing	Compl	eted II	B-	Moth	od
levs	9 6	Inc 19iu	eev	ing/	ne of governed Well Well	Her ,	Viller	54	<u>08</u> M M	12 D	419 D Y	The second second	Date Dr 08 M M						
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and Type	Length Att. & Recovered (m)	Blow Counts	Depth in Feet		And G	lock Desc cologic O ch Major	rigin For	3		uscs	Graphic Log	Well hagram	PID/FID	Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/
2 8	JW	М	_	Misel	vdi 611+	ly sand	ul Gre	smant	3 8	2	07	- 4	0.0	ON	20	니니	러면	Д	×C
			= 1		rdi Gilt te, slag														
T	22	2/3	= 7	trace	grand,	loose to	Med dam	ce, m	1/5+,		+		0.0						
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unty	1000	,	kesho		<u></u>		DNR	County	Code	Civil	Town/	City/ or kest	Villa	ge 🗀	5 _		Feet	
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5	24	1/2	<u> </u>	9-	ades	gatu	rated t	9'		-	+	-	-	-	-	+	+	-	-
+	-	-	F 10	2						-	+	+	0,	0	+		+		
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ility	Projec	t Nam	" IN		Superfund	Other L	icense/l	ermit	/Mon	itoring	Numbe	er E	Boring !	Number	- /		=
ing leve	Drilled	By (F	irm name	and name of	Common Wel	15t 0	Date Dril 1281 M. M.	24	19	3	08 M M	12	7/2 0 Y	ited	B-1 Drilling H		
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and Type	Length Att. & Recovered (m)	Blow Counts	Depth in Feet		oil/Rock Description d Geologic Origin For Each Major Unit			USCS	raphic og	Well Diagram	PID/FID	Compressive Strength		Liquid Limit	Plasticity Index	P 200	RQD/ Comments
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+	23	2	E8							-	0.6	-	-	-	_	_	1
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cility/	Projec	t Name	1/10	ME				License	/Perm	t/Moi	nitoring	Numb	er E	Boring	Numb	r_		
evs Lou	Orilled	By (File	rm nan	ne and nan	ne of crew cl nel Me la Du klin	pict) Geology Willer Common We	5/5+	Date Dr <u>QB</u> M M	12	419	7 3 Y Y	Date Dr	12	9/3 D Y	13 Y	1	Method SA	od
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	Wisco nent of		ıl Resou	urces	☐ Wastewat	cy Response C	Water Res	nd Tanl	cs	S	OIL B	ORIN 00-12:	NG L	OG II	NFOR	MAT! Rev.	ION 5-92
ility	Projec	t Nam	c, A	M	☐ Superfund		Other	/Permi	t/Mor	itoring	Numb	er	Boring	Numb		01_	_
eve	Drilled	By (F	irm nan	ne and nar	ne of crew chick nel We Han Du Kling Tell No. Co	Geolais-	Date D	12	519	31	08	12	510	eted 73 Y	B-Drilling	Meth SA	od
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and Type	Length Att. & Recovered (m)	Blow Counts	Depth in Feet		Soil/Rock D And Geologic Each Ma	Origin For		uscs	Graphic Log	Well Diagram	PID/FID	Compressive Strength	Moisture	Liquid Limit	Plasticity Index	P 200	ROD/ Comments
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7	20	24	_	grad	des dark go	og pod'					0.0						
1	15	3	= 6	9100	les wet at	5.5'					0.0	2					
L		3	E 2														
1	6	2/2	= 8	9140	les saturati	id a dibri	x 7.5'				0.0						
1		1/1	- 9	Peat W.	les saturate (pt) deck silt/clay	bourg from	mist,	Pt									
	-	-	= 10	2		ب بیشند		-	-	-	-			-			-
_		-	E,	/	-			-	-	-	-	-	-	-			
			E	2													
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than	\$10 n	or mor	e than	\$5,000 fo	ers 144.147 and reach violation. of continued vi	Fined not less	s than \$10 or	more	is rep	ort is n	impris	oned r	ot less	than 3	O days.	less or	

artn	Wisco nent of	nsin Natura	l Reso	Route To: Solid Waste Emergency Response Wastewater Superfund	Haz, Waste	nd Tan	ks	Se Fe	OIL B	ORIN 00-122	NG LO	OG IN	,	MATI Rev.	5-92
ility	Projec	t Nam	°1/1/	ME		c/Perm	it/Mon	itoring	Numb	er I	Boring	Numb	TD_	19	
oring eve	Drilled	By (Fi	rm nar	me and name of crew chief) MICHAEL ME LAN, Geolast Ting / Dy Eling, Viller Unique Well No. Common Well	Date D M M	12	519	3	08	12	510	7 3 Y	Drilling H Borehol	SA	
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inty	U	Var	kesh	na	DNR County	3	Civil	Jav.	test	Villa,	gc				
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and Type	Length Att. & Recovered (in)	Blow Counts	Depth in Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	1	uscs	Graphic Log	Well Diagram	PID/FID	Compressive Strength	Moisture	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
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F	22	3/2	= 1	orise Dell 4) (49 3 model or of cinders, slag and wood of my 15h bown, loose to day, moist, will gravel,	med Wact										
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		6/0		2 2 200 part (8 b	1, 200				0.0						
4	16	2/2	= 8	g-ades saturated & 7.3					0.0						
		1		peat (Pt) derk brown, for	u, moi bt,	P+									
			= 10				-		-	-		-	-		-
_	-		E		<u></u>	-	-	-		-	1	-	-	-	-
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Jigi	w	is auth	ined	Mestin		1	ev	591		7	ic				

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ing l	Drilled	By (Fi	rm nam	ne and name Michael	e of crew chief) of Me Han, Ge by k (ing , Dill)	olgist ler	Date D <u>OB</u> M M	12.	510	431	08	12	510	13 Y	Drilling H	Meth SA	nod
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amp	-	1		и						1		(Prop	erties		
and Type	Length Att. & Recovered (m)	Blow Counts	Depth in Feet		Soil/Rock Descript And Geologic Origin Each Major Uni	For		scs	Graphic	Well Diagram	PID/FID	Compressive Strength	Moisture	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
ğ	38	Blc	å		*			D	8.3	3 €		SS	žů	EE	FP. FR	P	80
	16	8	= 1	mise on	Cill Gilty Sam orote, eyndes graf, Loose f trace grant	d wood	45				000						
1	10	8/8	= 7	molst	trace grant		- 3.7				0.0						
		6/5	= 3	grad	ies darky my B	z′											
7	22	6/3	= d								0.0						
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Í		5/3	F 6	7,		-			-	-	0.0	2					-
L	13		F /	grade	s saturated e	7.3'		-		+	-	-	-	-		_	+
i		2/3	E8							1	6.2	,					
1		1/2	E					-							1		
۲	+	-	- 9	n/s/	pt) dork brown, H/eloy	LM, My	1	Pt		-			-				
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			E	2													
	ature	1	1	the info	rmation on this fo	orm is true	Firm			the be				edge.			
-					144.147 and 162, W	ic State C	ompletic							· Forf	oit not	less	_

APPENDIX D5 FIELD SCREENING LOG BOOK

8/25/93 DATE & TIME	ANALYST INITIALS	SAMPLE ID & TIME OF COLLECTION	SAMPLE WEIGHT (g)	ANALYT. BATCH #	OPTICAL DENSITY	[PCB] (5 ppm)	ENSYS LOT #	LAB CONFIRM (Y OR N)	COMMENTS
1900	Be	STANDAR OS		1	-0.01		8024	NA	5-1 to the left
2000		B-10-5 8-24,10:30 B-10-2		2	-0.83 -0.54 +0.51	750			
2000		8-24, 10:34 B-10-4			+0.54	6 50			
203/		B-20-6		3	-0.03	750	1		
2031		8-25, 9:12 13-8-8 8:24, 8:58		3	+0.19 -0.51 -0.33	< 50 > 5 7 50	8023		
2146		B-7-2		4	-0.15 +0.19	7 5-	1		
2146	1 1	8-24, 8:15 B-7-6 8-24, 8:24		4	-0.23	750			
2146		B-7-8 8-24 8:28 B-11-5		4	-0.15 -0.06 +0.22	750 750	<u> </u>		
2406		8-24 11:02	1	5	+0.61	250	8022		

Equipment Calibrations scale lag = 10 y Pilette your = 42 ML Photometer 0.70-0.90= 0.81

000002

DATE &	ANALYST INITIALS	SAMPLE ID & TIME OF COLLECTION	SAMPLE WEIGHT (g)	ANALYT. BATCH #	OPTICAL DENSITY	[PCB] (5 ppm)	ENSYS LOT #	LAB CONFIRM (Y OR N)	COMMENTS
2410		B-15-4 8-24, 15:12		5		25	8022	(1 ok ii)	
-400		B-15-10 8-24,15:22 B-5-2		5	-0.21 +0.15	250 250	-		
2400		8-5-2		5	-0.08 +0.13	250	ub_		
	V		V.						

8/2 6/93 DATE &	ANALYST	SAMPLE ID & TIME OF	SAMPLE WEIGHT	ANALYT. BATCH #	OPTICAL DENSITY	[PCB]	ENSYS LOT #	LAB CONFIRM (Y OR N)	COMMENTS
TIME	BU	STANDARD	(g) NA	l BATCH #	-0.06	(5 ppm) NA 25	8020	N A	SI-TO the lef
20:30		B-5-6 8-23, 16:15 B-5-8		2	+0.68	250			+0.74 < 5
20:00		B-5-8 8-23, 14:19 B-12-2		2	+1.38 +1.51 +0.31	250 250			+0.77 1 < 5
0:30		8-24, 11:45 B-12-6		2	+1.11	250 c5	V		+ 1.38 C 50 Ran a dupe with extraction on B.12.
0:30	-7-7	8-24 11:52 B-14-5		2	+ 1.28	250	·		(Time, 21:30)
3:30		8-24, 1430 B-14-4 B-24, 1437		3	+1.05 +0.48 +1.12	250	8021		
7:30		B-1-2 8-23 12:45		3	-0·12 +0·84	75			
3:26		B-1-8' 8-23, 12:55		3	+0.06	< 50	<u> </u>		Sample Verry Wet
4:00	>)	8-23, 13:17	<u>\(\) \</u>		0.48	> 5 250	8019		

Equipment Calibrations

SCALC 10 9 = 10 9 PIPETE 40 WL = 40 WL Photometer 0.70-0.80 = 0.82

C000C4

8/24/93	Y 133 2 4 5 5 1	SAMPLE ID	SAMPLE		0.6236		-uava	LAB	
DATE &	ANALYST	& TIME OF	WEIGHT	ANALYT.	OPTICAL	[PCB]	ENSYS	CONFIRM	
TIME	INITIALS	COLLECTION	(g)	BATCH #	DENSITY	(5 ppm)	LOT #	(Y OR N)	COMMENTS
		B-2-8			-0.70	>5			
24:00	AC	8-23 13-7	10 a	4	+0.41	250	8018		
		B-3-2	/		+0.39	25			
2400		8-23, 14:11	1	4	+1,14]		
		8-3-6'			-0.79				
24100		8-23 14:25		4	+0.48	< 50	>)		
		B-3-9			+1.02	25			
1.00	/-	8-23-14:30		5	+1.15		806.8		
		B-4-5			+ 0.85	- 25			
1100		8-23,14:40		5	+0.89	< 50			
		B-4-8			+0.96	< 5			
1:00		8-23, 13:04		5	+ 1-19	250			
	4	B-9-8		10.2	-0.58	1 > 5-	1		
1:00		8-24,9-?		5	+ 0.39	250			
		B-13-10		,	+ 0.39	25	8016	2.0	
1:30		6-24 14-17	/	. 6	+ 1.33	450			
		B-14-10			+0.69	25			
1:30		14:44	1841	6	+ 1.16	L 50 L5			
134	<u>v</u>	8-15-12	V	,	+0.86				
1830		8-2-1,	~	6	+1.25	450	~		

DATE &	ANALYST	SAMPLE ID & TIME OF	SAMPLE WEIGHT	ANALYT.	OPTICAL	[PCB]	ENSYS	LAB CONFIRM	
TIME	INITIALS	COLLECTION	(g)	BATCH #	DENSITY	(5 ppm)	LOT #	(Y OR N)	COMMENTS
1:30	Bu	B-18-2 -8-24, 13:55	iog	6	+0.38	450	8016		
2:30		8-24, 16:01		7	+0.79	450	8017		
2:30		8-17-6		7	+1.23	450			
2:30		8-17-4		7	+0.51	250			
2:30		B-18-3 8-25, 8:33		7	+1.06	250	1		
2:00		B-18-8 8-25, 8:46		8	+1.03	250	8014		
3:00		B-19-4 8-25 8:04		8	+0.83 F1.17	450			
:00		S-1 4-23 17:05		8	+0.14	75			
:00	\downarrow	5-3 8-23, 15:14	*	8	+1.14	L 50	<u> </u>		
:00		3-24, 9:12	1	9	+0.61	650	8015		

DATE &	ANALYST INITIALS	SAMPLE ID & TIME OF COLLECTION	SAMPLE WEIGHT (g)	ANALYT. BATCH #	OPTICAL DENSITY	[PCB] (5 ppm)	ENSYS LOT #	LAB CONFIRM (Y OR N)	COMMENTS
4.00	Be	5-7 8-23, 17:25		9	+0.35	250	8015		
4:00		5-9' 8-24 10:24	1	9	+0.58	250			*
4:00	<u> </u>	5-11 8-24 17:20	1	7	+ 0.95	< 50			
						, ,			
							16		

APPENDIX D6 LABORATORY ANALYTICAL RESULTS

Tel: (708) 289-3100 Fax: (708) 289-5445

CASE NARRATIVE

Mr. Doug Dahlberg VERSAR CORP. 1520 Kensington Road Suite 115 Oakbrook, IL 60521

09/29/1993

NET Job Number: 93.07730

Project Description: 1871002; VME

Sample	Sample Description	Date	Date
Number		Taken	Received
227056 227057 227058 227059 227060 227061 227062 227063 227064 227065 227066 227067 227068 227069 227070	B17-S thru 9; Comp B18-S thru 8; Comp B9-8 B5-2 B15-12,B3-9,B1-8,B16-10,B14-10; Co B14-S thru 10; Comp B17-9 B12-S thru 8; Comp B16-S thru 10; Comp B19-S thru 8; Comp B4-S thru 8; Comp B5-6 & 8; Comp S1 B10-S B10-S	08/23/1993 08/23/1993 08/23/1993 08/23/1993 08/23/1993 08/23/1993 08/23/1993 08/23/1993 08/23/1993 08/23/1993 08/23/1993 08/23/1993 08/23/1993 08/23/1993 08/23/1993	08/27/1993 08/30/1993 08/30/1993 08/30/1993 08/30/1993 08/30/1993 08/30/1993 08/30/1993 08/30/1993 08/30/1993 08/30/1993 08/30/1993 08/30/1993 08/30/1993
227071	B7-6	08/23/1993	08/30/1993
227072	B8-8	08/23/1993	08/30/1993

Sample analysis in support of the project referenced above has been completed and results are presented on the following pages. Please refer to the enclosed "Key to Abbreviations" for definition of terms.

The following comments should be noted for the indicated fraction;

PCB Analysis

Included here is your "Level III" QC Report in addition to the "Analytical Report". Upon further review of your data, the following corrections apply to the "Analytical Report":

Sample 227058 has a positive result for PCB-1254 not reported on the original report (dated 09/10/1993).

Sample 227060 gives a non-estimated result for PCB-1016. The original report showed an estimated concentration due to the analyte quantitated above the linear range of the calibration curve. This PCB was reanalyzed at a dilution within the range of the calibration curve.



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CASE NARRATIVE

Mr. Doug Dahlberg VERSAR CORP. 1520 Kensington Road Suite 115 Oakbrook, IL 60521

09/29/1993

NET Job Number: 93.07730

Project Description: 1871002; VME

PCB Analysis (continued)

Sample 227064 gives a non-estimated result for PCB-1016 at a 10x dilution. Sample 227064 has a positive result for PCB-1254 not reported on the original report.

Sample 227068 shows lower reporting limits for the PCBs other than PCB-1254. Further review of the data allowed for the lower reporting limits.

Analysis dates are corrected on this report. All holding times were met.

All Quality Control Indicators are within control limits.

This Quality Control report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your samples were analyzed. Should you have any questions concerning procedures or results, do not hesitate to call.

Approved by:

Ray Kalicki Coordinator

Quality Assurance





Tel: (708) 289-3100 Fax: (708) 289-5445

Mr. Doug Dahlberg VERSAR CORP. 1520 Kensington Road Suite 115 Oakbrook, IL 60521

09/28/1993

CORRECTED REPORT

NET Job Number: 93.07730

Enclosed is the Quality Control Data and Analytical Results for the following samples submitted to NET, Inc. Bartlett Division for analysis:

Project Description: 1871002; VME

Sample Number	Sample Description	Date Taken	Date Received
227056	B17-S thru 9; Comp	08/23/1993	08/27/1993
227057	B18-S thru 8; Comp	08/23/1993	08/30/1993
227058	B9-8	08/23/1993	08/30/1993
227059	B5-2	08/23/1993	08/30/1993
227060	B15-12, B3-9, B1-8, B16-10, B14-10; Co	08/23/1993	08/30/1993
227061	B14-S thru 10; Comp	08/23/1993	08/30/1993
227062	B17-9	08/23/1993	08/30/1993
227063	B12-S thru 8; Comp	08/23/1993	08/30/1993
227064	B16-S thru 10; Comp	08/23/1993	08/30/1993
227065	B19-S thru 8; Comp	08/23/1993	08/30/1993
227066	B4-S thru 8; Comp	08/23/1993	08/30/1993
227067	B5-6 & 8; Comp	08/23/1993	08/30/1993
227068	S1	08/23/1993	08/30/1993
227069	B10-S	08/23/1993	08/30/1993
227070	B10-4	08/23/1993	08/30/1993
227071	B7-6	08/23/1993	08/30/1993
227072	B8-8	08/23/1993	08/30/1993

Sample analysis in support of the project referenced above has been completed and results are presented on the following pages. Please refer to the enclosed "Key to Abbreviations" for definition of terms. Should you have questions regarding procedures or results, please do not hesitate to call.

This Quality Control report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

Approved by:

Neal E. Cleghorn Operations Manager





Tel: (708) 289-3100 Fax: (708) 289-5445

ANALYTICAL REPORT

Mr. Doug Dahlberg

VERSAR CORP.

1520 Kensington Road

Suite 115

Oakbrook, IL 60521

CORRECTED REPORT

09/28/1993

Sample No. :

227056

NET Job No.:

93.07730

Sample Description:

B17-S thru 9; Comp

1871002; VME

Date Taken: Time Taken: 08/23/1993

Date Received:

08/27/1993

Time Received:

13:40

Parameter	Results	Units	Date of Analysis	Method PQL	Analyst		lytical ethod
Solids, Total	90.0	%	09/02/1993	0.1	ars	2540	(4)
Prep, PCB - NONAQUEOUS	extracted		09/02/1993		era	3540	(1)
PCB'S - 8080 NONAQUEOUS							
PCB-1016	<0.10	ug/g	09/04/1993	0.10	seh	8080	(1)
PCB-1221	<0.08	ug/g	09/04/1993	0.08	seh	8080	(1)
PCB-1232	<0.08	ug/g	09/04/1993	0.08	seh	8080	(1)
PCB-1242	<0.08	ug/g	09/04/1993	0.08	seh	8080	(1)
PCB-1248	<0.08	ug/g	09/04/1993	0.08	seh	8080	(1)
PCB-1254	<0.10	ug/g	09/04/1993	0.10	seh	8080	(1)
PCB-1260	<0.10	ug/g	09/04/1993	0.10	seh	8080	(1)
PCB-1268	<0.10	ug/g	09/04/1993	0.10	seh	8080	(1)
Surr: Dibutylchlorendate	na	%	09/04/1993		seh	8080	(1)
Surr: Tetrachloroxylene (TCX)	100	%	09/04/1993	31-128	seh	8080	(1)
Surr: Decachlorobiphenyl (DCB)	124	%	09/04/1993	29-128	seh	8080	(1)



Tel: (708) 289-3100 Fax: (708) 289-5445

ANALYTICAL REPORT

Mr. Doug Dahlberg

VERSAR CORP.

1520 Kensington Road

Suite 115

Oakbrook, IL 60521

09/28/1993

CORRECTED REPORT

Sample No.: 227057

NET Job No.: 9

93.07730

Sample Description:

B18-S thru 8; Comp

1871002; VME

Date Taken: Time Taken: 08/23/1993

Date Received: 08/3

08/30/1993

Time Received: 13:40

Parameter	Results	Units	Date of Analysis	Method PQL	Analyst	Analytica Method	
Solids, Total	92.8	%	09/02/1993	0.1	ars	2540	(4)
Prep, PCB - NONAQUEOUS	extracted		09/01/1993		era	3540	(1)
PCB'S - 8080 NONAQUEOUS							
PCB-1016	<0.10	ug/g	09/10/1993	0.10	seh	8080	(1)
PCB-1221	<0.08	ug/g	09/04/1993	0.08	seh	8080	(1)
PCB-1232	<0.08	ug/g	09/04/1993	0.08	seh	8080	(1)
PCB-1242	<0.08	ug/g	09/04/1993	0.08	seh	8080	(1)
PCB-1248	<0.08	ug/g	09/04/1993	0.08	seh	8080	(1)
PCB-1254	<0.10	ug/g	09/04/1993	0.10	seh	8080	(1)
PCB-1260	<0.10	ug/g	09/04/1993	0.10	seh	8080	(1)
PCB-1268	<0.10	ug/g	09/04/1993	0.10	seh	8080	(1)
Surr: Dibutylchlorendate	na	%	09/03/1993		seh	8080	(1)
Surr: Tetrachloroxylene (TCX)	119	%	09/03/1993	31-128	seh	8080	(1)
Surr: Decachlorobiphenyl (DCB)	82	%	09/03/1993	29-128	seh	8080	(1)



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ANALYTICAL REPORT

Mr. Doug Dahlberg

VERSAR CORP.

1520 Kensington Road Suite 115

Oakbrook, IL 60521

09/28/1993

CORRECTED REPORT

Sample No. : 227058

NET Job No.:

93.07730

Sample Description:

B9-8

1871002; VME

Date Taken: Time Taken:

08/23/1993

Date Received:

08/30/1993

Time Received: 13:40

Parameter	Results		Units	Date of Analysis	Method PQL	Analyst		ytical
Solids, Total	65.1		%	09/02/1993	0.1	ars	2540	(4)
Prep, PCB - NONAQUEOUS	extracted			09/01/1993		era	3540	(1)
PCB'S - 8080 NONAQUEOUS								
PCB-1016	<0.10		ug/g	09/04/1993	0.10	seh	8080	(1)
PCB-1221	<0.08		ug/g	09/04/1993	0.08	seh	8080	(1)
PCB-1232	<0.08		ug/g	09/04/1993	0.08	seh	8080	(1)
PCB-1242	<0.08		ug/g	09/04/1993	0.08	seh	8080	(1)
PCB-1248	<0.08		ug/g	09/04/1993	0.08	seh	8080	(1)
PCB-1254	0.83	D10	ug/g	09/04/1993	0.10	seh	8080	(1)
PCB-1260	<0.10		ug/g	09/04/1993	0.10	seh	8080	(1)
PCB-1268	<0.10		ug/g	09/04/1993	0.10	seh	8080	(1)
Surr: Dibutylchlorendate	na		%	09/04/1993		seh	8080	(1)
Surr: Tetrachloroxylene (TCX)	99		%	09/04/1993	31-128	seh	8080	(1)
Surr: Decachlorobiphenyl (DCB)	76		%	09/04/1993	29-128	seh	8080	(1)

D10 : Parameter analysis performed at a 10x dilution.



Tel: (708) 289-3100 Fax: (708) 289-5445

ANALYTICAL REPORT

Mr. Doug Dahlberg

VERSAR CORP.

1520 Kensington Road

Suite 115

Oakbrook, IL 60521

09/28/1993

CORRECTED REPORT

Sample No. : 227059

NET Job No.: 93.07730

Sample Description:

B5-2

1871002; VME

Date Taken: Time Taken:

08/23/1993

08/30/1993

Date Received: Time Received: 13:40

Parameter	Results	Units	Date of Analysis	Method PQL	Analyst	Analytica Method	
Solids, Total	89.1	%	09/02/1993	0.1	ars	2540 (
Prep, PCB - NONAQUEOUS	extracted		09/01/1993		era	3540 (1)
PCB'S - 8080 NONAQUEOUS							
PCB-1016	<0.10	ug/g	09/04/1993	0.10	seh	8080 (1)
PCB-1221	<0.08	ug/g	09/04/1993	0.08	seh	8080 (1)
PCB-1232	<0.08	ug/g	09/04/1993	0.08	seh	8080 (1)
PCB-1242	<0.08	ug/g	09/04/1993	0.08	seh	8080 (1)
PCB-1248	<0.08	ug/g	09/04/1993	0.08	seh	8080 (1)
PCB-1254	<0.10	ug/g	09/04/1993	0.10	seh	8080 (1)
PCB-1260	<0.10	ug/g	09/04/1993	0.10	seh	8080 (1)
PCB-1268	<0.10	ug/g	09/04/1993	0.10	seh	8080 (1)
Surr: Dibutylchlorendate	na	%	09/04/1993		seh	8080 (1)
Surr: Tetrachloroxylene (TCX)	56	%	09/04/1993	31-128	seh	8080 (1)
Surr: Decachlorobiphenyl (DCB)	123	%	09/04/1993	29-128	seh	8080 (1)



Tel: (708) 289-3100 Fax: (708) 289-5445

ANALYTICAL REPORT

Mr. Doug Dahlberg

VERSAR CORP.

1520 Kensington Road

Oakbrook, IL 60521

Suite 115

CORRECTED REPORT

09/28/1993

Sample No. :

227060

NET Job No.: 93.07730

Sample Description:

B15-12, B3-9, B1-8, B16-10, B14-10; Comp

1871002; VME

Date Taken: Time Taken:

08/23/1993

Date Received:

08/30/1993

Time Received:

13:40

Parameter	Results		Units	Date of Analysis	Method PQL	Analyst		lytical ethod
Solids, Total Prep, PCB - NONAQUEOUS	64.6 extracted		%	09/02/1993 09/01/1993	0.1	ars era	2540 3540	
PCB'S - 8080 NONAQUEOUS								
PCB-1016	1.60	D10	ug/g	09/10/1993	0.10	seh	8080	(1)
PCB-1221	<0.08		ug/g	09/04/1993	0.08	seh	8080	(1)
PCB-1232	<0.08		ug/g	09/04/1993	0.08	seh	8080	(1)
PCB-1242	<0.08		ug/g	09/04/1993	0.08	seh	8080	(1)
PCB-1248	<0.08		ug/g	09/04/1993	0.08	seh	8080	(1)
PCB-1254	0.11		ug/g	09/04/1993	0.10	seh	8080	(1)
PCB-1260	<0.10		ug/g	09/04/1993	0.10	seh	8080	(1)
PCB-1268	<0.10		ug/g	09/04/1993	0.10	seh	8080	(1)
Surr: Dibutylchlorendate	na		%	09/04/1993		seh	8080	(1)
Surr: Tetrachloroxylene (TCX)	91		%	09/04/1993	31-128	seh	8080	(1)
Surr: Decachlorobiphenyl (DCB)	67		%	09/04/1993	29-128	seh	8080	(1)

D10 : Parameter analysis performed at a 10x dilution.



Tel: (708) 289-3100 Fax: (708) 289-5445

ANALYTICAL REPORT

Mr. Doug Dahlberg VERSAR CORP.

1520 Kensington Road

Suite 115

Oakbrook, IL 60521

CORRECTED REPORT

09/28/1993

Sample No. : 227061

NET Job No.: 93.07730

Sample Description:

B14-S thru 10; Comp

1871002; VME

Date Taken: Time Taken: 08/23/1993

Date Received: 08/30/1993

Time Received: 13:40

Parameter	Results	Units	Date of Analysis	Method PQL	Analyst	Analytica Method	
Solids, Total Prep, PCB - NONAQUEOUS	82.8 extracted	%	09/02/1993 09/01/1993	0.1	ars	2540 3540	12.20.0
PCB'S - 8080 NONAQUEOUS			20120000				
PCB-1016	0.13	ug/g	09/10/1993	0.10	seh	8080	(1)
PCB-1221	<0.08	ug/g	09/04/1993	0.08	seh	8080	(1)
PCB-1232	<0.08	ug/g	09/04/1993	0.08	seh	8080	(1)
PCB-1242	<0.08	ug/g	09/04/1993	0.08	seh	8080	(1)
PCB-1248	<0.08	ug/g	09/04/1993	0.08	seh	8080	(1)
PCB-1254	0.10	ug/g	09/04/1993	0.10	seh	8080	(1)
PCB-1260	<0.10	ug/g	09/04/1993	0.10	seh	8080	(1)
PCB-1268	<0.10	ug/g	09/04/1993	0.10	seh	8080	(1)
Surr: Dibutylchlorendate	na	%	09/04/1993		seh	8080	(1)
Surr: Tetrachloroxylene (TCX)	70	%	09/04/1993	31-128	seh	8080	(1)
Surr: Decachlorobiphenyl (DCB)	43	%	09/04/1993	29-128	seh	8080	(1)





Tel: (708) 289-3100 Fax: (708) 289-5445

ANALYTICAL REPORT

Mr. Doug Dahlberg

VERSAR CORP.

1520 Kensington Road

Suite 115

Oakbrook, IL 60521

CORRECTED REPORT

09/28/1993

Sample No. :

227062

8080 (1)

8080 (1)

8080 (1)

seh

seh

seh

31-128

29-128

NET Job No.:

93.07730

Sample Description:

B17-9

1871002; VME

Date Taken: Time Taken:

Surr: Dibutylchlorendate

Surr: Tetrachloroxylene (TCX)

Surr: Decachlorobiphenyl (DCB)

08/23/1993

na 99 Date Received:

08/30/1993

Time Received: 13:40

Units Analytical Results Date of Method Analyst Parameter Method Analysis PQL 2540 (4) 80.3 Solids, Total % 09/02/1993 0.1 ars extracted 09/01/1993 3540 (1) Prep, PCB - NONAQUEOUS era PCB'S - 8080 NONAQUEOUS 0.12 ug/g 09/10/1993 0.10 seh 8080 (1) PCB-1016 8080 (1) <0.08 09/04/1993 0.08 PCB-1221 ug/g seh PCB-1232 <0.08 ug/g 09/04/1993 0.08 seh 8080 (1) 8080 (1) PCB-1242 <0.08 ug/g 09/04/1993 0.08 seh PCB-1248 <0.08 ug/g 09/04/1993 0.08 8080 (1) 0.33 09/04/1993 0.10 8080 (1) PCB-1254 ug/g seh 09/04/1993 PCB-1260 <0.10 0.10 seh 8080 (1) ug/g < 0.10 09/04/1993 0.10 8080 (1) PCB-1268 seh ug/g

%

%

%

09/04/1993

09/04/1993

09/04/1993





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ANALYTICAL REPORT

Mr. Doug Dahlberg VERSAR CORP.

1520 Kensington Road

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CORRECTED REPORT

09/28/1993

Sample No. :

227063

NET Job No.:

93.07730

Sample Description:

B12-S thru 8; Comp

1871002; VME

Date Taken: Time Taken:

08/23/1993

Date Received:

08/30/1993

Time Received:

13:40

Parameter	Results	Units	Date of Analysis	Method PQL	Analyst	Analytical Method
Solids, Total	83.9	%	09/02/1993	0.1	ars	2540 (4)
Prep, PCB - NONAQUEOUS	extracted		09/01/1993		era	3540 (1)
PCB'S - 8080 NONAQUEOUS						
PCB-1016	0.24	ug/g	09/10/1993	0.10	seh	8080 (1)
PCB-1221	<0.08	ug/g	09/04/1993	80.0	seh	8080 (1)
PCB-1232	<0.08	ug/g	09/04/1993	0.08	seh	8080 (1)
PCB-1242	<0.08	ug/g	09/04/1993	0.08	seh	8080 (1)
PCB-1248	<0.08	ug/g	09/04/1993	0.08	seh	8080 (1)
PCB-1254	0.18	ug/g	09/04/1993	0.10	seh	8080 (1)
PCB-1260	<0.10	ug/g	09/04/1993	0.10	seh	8080 (1)
PCB-1268	<0.10	ug/g	09/04/1993	0.10	seh	8080 (1)
Surr: Dibutylchlorendate	na	%	09/04/1993		seh	8080 (1)
Surr: Tetrachloroxylene (TCX)	94	%	09/04/1993	31-128	seh	8080 (1)
Surr: Decachlorobiphenyl (DCB)	76	%	09/04/1993	29-128	seh	8080 (1)



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ANALYTICAL REPORT

Mr. Doug Dahlberg

COD

09/28/1993

VERSAR CORP. 1520 Kensington Road

CORRECTED REPORT

Sample No.: 227064

Suite 115

Oakbrook, IL 60521

NET Job No.: 93.07730

Sample Description:

B16-S thru 10; Comp

1871002; VME

Date Taken: Time Taken: 08/23/1993

Date Received:

08/30/1993

on.

Time Received: 13:40

Parameter	Results		Units	Date of Analysis	Method PQL	Analyst		Analytical Method	
Solids, Total	85.3		%	09/02/1993	0.1	ars	2540	100	
Prep, PCB - NONAQUEOUS	extracted			09/01/1993		era	3540	(1)	
PCB'S - 8080 NONAQUEOUS									
PCB-1016	0.59	D10	ug/g	09/10/1993	0.10	seh	8080	(1)	
PCB-1221	<0.08		ug/g	09/04/1993	0.08	seh	8080	(1)	
PCB-1232	<0.08		ug/g	09/04/1993	0.08	seh	8080	(1)	
PCB-1242	<0.08		ug/g	09/04/1993	0.08	seh	8080	(1)	
PCB-1248	<0.08		ug/g	09/04/1993	0.08	seh	8080	(1)	
PCB-1254	0.17		ug/g	09/04/1993	0.10	seh	8080	(1)	
PCB-1260	<0.10		ug/g	09/04/1993	0.10	seh	8080	(1)	
PCB-1268	<0.10		ug/g	09/04/1993	0.10	seh	8080	(1)	
Surr: Dibutylchlorendate	na		%	09/04/1993		seh	8080	(1)	
Surr: Tetrachloroxylene (TCX)	108		%	09/04/1993	31-128	seh	8080	(1)	
Surr: Decachlorobiphenyl (DCB)	75		%	09/04/1993	29-128	seh	8080	(1)	

D10 : Parameter analysis performed at a 10x dilution.



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ANALYTICAL REPORT

Mr. Doug Dahlberg VERSAR CORP.

1520 Kensington Road

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Oakbrook, IL 60521

CORRECTED REPORT

09/28/1993

Sample No. : 227065

NET Job No.: 93.07730

Sample Description:

B19-S thru 8; Comp

1871002; VME

Date Taken:

08/23/1993

Date Received: 08/

08/30/1993

Time Taken:

Time Received: 13:40

Parameter	Results	Units	Date of Analysis	Method PQL	Analyst	Analytical Method
Solids, Total	86.4	%	09/02/1993	0.1	ars	2540 (4)
Prep, PCB - NONAQUEOUS	extracted		09/01/1993		era	3540 (1)
PCB'S - 8080 NONAQUEOUS						
PCB-1016	0.28	ug/g	09/10/1993	0.10	seh	8080 (1)
PCB-1221	<0.08	ug/g	09/04/1993	0.08	seh	8080 (1)
PCB-1232	<0.08	ug/g	09/04/1993	0.08	seh	8080 (1)
PCB-1242	<0.08	ug/g	09/04/1993	0.08	seh	8080 (1)
PCB-1248	<0.08	ug/g	09/04/1993	0.08	seh	8080 (1)
PCB-1254	0.13	ug/g	09/04/1993	0.10	seh	8080 (1)
PCB-1260	<0.10	ug/g	09/04/1993	0.10	seh	8080 (1)
PCB-1268	<0.10	ug/g	09/04/1993	0.10	seh	8080 (1)
Surr: Dibutylchlorendate	na	%	09/04/1993		seh	8080 (1)
Surr: Tetrachloroxylene (TCX)	105	%	09/04/1993	31-128	seh	8080 (1)
Surr: Decachlorobiphenyl (DCB)	87	%	09/04/1993	29-128	seh	8080 (1)



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ANALYTICAL REPORT

Mr. Doug Dahlberg

VERSAR CORP.

1520 Kensington Road

Suite 115

Oakbrook, IL 60521

CORRECTED REPORT

09/28/1993

Sample No. : 227066

NET Job No.: 93.07730

Sample Description:

B4-S thru 8; Comp

1871002; VME

Date Taken: Time Taken: 08/23/1993

Date Received:

08/30/1993

Time Received: 13:40

Parameter Results Units Date of Method Analytical Analyst Analysis Method PQL Solids, Total 86.2 % 09/02/1993 0.1 ars 2540 (4) Prep, PCB - NONAQUEOUS extracted 09/01/1993 3540 (1) era PCB'S - 8080 NONAQUEOUS <0.10 PCB-1016 ug/g 09/10/1993 0.10 seh 8080 (1) PCB-1221 <0.08 ug/g 09/04/1993 0.08 seh 8080 (1) <0.08 PCB-1232 09/04/1993 0.08 ug/g seh 8080 (1) PCB-1242 <0.08 ug/g 09/04/1993 0.08 8080 (1) 8080 (1) PCB-1248 <0.08 ug/g 09/04/1993 0.08 seh PCB-1254 0.12 ug/g 09/04/1993 0.10 seh 8080 (1) 09/04/1993 PCB-1260 <0.10 8080 (1) ug/g 0.10 seh 0.10 8080 (1) PCB-1268 <0.10 09/04/1993 ug/g seh Surr: Dibutylchlorendate na % 09/04/1993 8080 (1) seh 101 % Surr: Tetrachloroxylene (TCX) 09/04/1993 31-128 seh 8080 (1) Surr: Decachlorobiphenyl (DCB) % 29-128 88 09/04/1993 seh 8080 (1)



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ANALYTICAL REPORT

Mr. Doug Dahlberg VERSAR CORP.

CORRECTED REPORT

09/28/1993

1520 Kensington Road

Sample No. : 227067

Suite 115 Oakbrook, IL 60521

NET Job No.: 93.07730

Sample Description:

B5-6 & 8; Comp 1871002; VME

Date Taken:

08/23/1993

Date Received:

08/30/1993

Time Taken:

Time Received: 13:40

Parameter	Results	Units	Date of Analysis	Method PQL	Analyst		lytical ethod
Solids, Total	84.0	%	09/02/1993	0.1	ars	2540	
Prep, PCB - NONAQUEOUS	extracted		09/01/1993		era	3540	(1)
PCB'S - 8080 NONAQUEOUS							
PCB-1016	0.27	ug/g	09/10/1993	0.10	seh	8080	(1)
PCB-1221	<0.08	ug/g	09/04/1993	0.08	seh	8080	(1)
PCB-1232	<0.08	ug/g	09/04/1993	0.08	seh	8080	(1)
PCB-1242	<0.08	ug/g	09/04/1993	0.08	seh	8080	(1)
PCB-1248	<0.08	ug/g	09/04/1993	0.08	seh	8080	(1)
PCB-1254	<0.10	ug/g	09/04/1993	0.10	seh	8080	(1)
PCB-1260	<0.10	ug/g	09/04/1993	0.10	seh	8080	(1)
PCB-1268	<0.10	ug/g	09/04/1993	0.10	seh	8080	(1)
Surr: Dibutylchlorendate	na	%	09/04/1993		seh	8080	(1)
Surr: Tetrachloroxylene (TCX)	102	%	09/04/1993	31-128	seh	8080	(1)
Surr: Decachlorobiphenyl (DCB)	54	%	09/04/1993	29-128	seh	8080	(1)



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ANALYTICAL REPORT

Mr. Doug Dahlberg

CORRECTED REPORT

09/28/1993

VERSAR CORP. 1520 Kensington Road

Sample No. :

227068

Suite 115 Oakbrook, IL 60521

NET Job No.: 93.07730

Sample Description:

S1

1871002; VME

Date Taken:

08/23/1993

Date Received:

08/30/1993

Time Taken:

Time Received: 13:40

Parameter	Results		Units	Date of Analysis	Method PQL	Analyst		ytical ethod
Solids, Total	92.1		%	09/02/1993	0.1	ars	2540	(4)
Prep, PCB - NONAQUEOUS	extracted			09/01/1993		era	3540	(1)
PCB'S - 8080 NONAQUEOUS								
PCB-1016	<0.10		ug/g	09/10/1993	0.10	seh	8080	(1)
PCB-1221	<0.08		ug/g	09/04/1993	0.08	seh	8080	(1)
PCB-1232	<0.08		ug/g	09/04/1993	0.08	seh	8080	(1)
PCB-1242	<0.08		ug/g	09/04/1993	0.08	seh	8080	(1)
PCB-1248	<0.08		ug/g	09/04/1993	0.08	seh	8080	(1)
PCB-1254	1.6	D10	ug/g	09/04/1993	0.10	seh	8080	(1)
PCB-1260	<0.10		ug/g	09/04/1993	0.10	seh	8080	(1)
PCB-1268	<0.10		ug/g	09/04/1993	0.10	seh	8080	(1)
Surr: Dibutylchlorendate	na		%	09/04/1993		seh	8080	(1)
Surr: Tetrachloroxylene (TCX)	111		%	09/04/1993	31-128	seh	8080	(1)
Surr: Decachlorobiphenyl (DCB)	113		%	09/04/1993	29-128	seh	8080	(1)

D10 : Parameter analysis performed at a 10x dilution.



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ANALYTICAL REPORT

Mr. Doug Dahlberg VERSAR CORP.

CORRECTED REPORT

09/28/1993

1520 Kensington Road

Sample No.: 227069

Suite 115 Oakbrook, IL 60521

NET Job No.:

93.07730

Sample Description:

B10-S

1871002; VME

Date Taken: Time Taken: 08/23/1993

Date Received: 08/30/1993

Time Received: 13:40

Parameter	Results		Units	Date of Analysis	Method PQL	Analyst	Analytical Method			
				Anatysis	PUL		Me	rtnoa		
Solids, Total	93.1		%	09/02/1993	0.1	ars	2540	(4)		
Prep, PCB - NONAQUEOUS	extracted			09/01/1993		era	3540	(1)		
PCB'S - 8080 NONAQUEOUS										
PCB-1016	<10		ug/g	09/04/1993	0.10	seh	8080	(1)		
PCB-1221	<8		ug/g	09/04/1993	0.08	seh	8080	(1)		
PCB-1232	<8		ug/g	09/04/1993	0.08	seh	8080	(1)		
PCB-1242	<8		ug/g	09/04/1993	0.08	seh	8080	(1)		
PCB-1248	98	D1000	ug/g	09/04/1993	0.08	seh	8080	(1)		
PCB-1254	<10		ug/g	09/04/1993	0.10	seh	8080	(1)		
PCB-1260	<10		ug/g	09/04/1993	0.10	seh	8080	(1)		
PCB-1268	<10		ug/g	09/04/1993	0.10	seh	8080	(1)		
Surr: Dibutylchlorendate	na		%	09/04/1993		seh	8080	(1)		
Surr: Tetrachloroxylene (TCX)	D		%	09/04/1993	31-128	seh	8080	(1)		
Surr: Decachlorobiphenyl (DCB)	D		%	09/04/1993	29-128	seh	8080	(1)		

Most compounds analyzed at a 100X dilution. D1000: Parameter analysis performed at a 1000x dilution.



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ANALYTICAL REPORT

Mr. Doug Dahlberg VERSAR CORP.

1520 Kensington Road

Suite 115

Oakbrook, IL 60521

CORRECTED REPORT 09/28/1993

Sample No. : 227070

NET Job No.: 93.07730

Sample Description: B10-4

1871002; VME

Date Taken: 08/23/1993

Time Taken: 08/23/1993

Date Received: 08/30/1993

Time Received: 13:40

Parameter	Results	Units	Date of Analysis	Method PQL	Analyst	Analytical Method	
Solids, Total	82.6	%	09/02/1993	0.1	ars	2540 (4)	
Prep, PCB - NONAQUEOUS	extracted		09/01/1993		era	3540 (1)	
PCB'S - 8080 NONAQUEOUS							
PCB-1016	<0.10	ug/g	09/04/1993	0.10	seh	8080 (1)	
PCB-1221	<0.08	ug/g	09/04/1993	0.08	seh	8080 (1)	
PCB-1232	<0.08	ug/g	09/04/1993	0.08	seh	8080 (1)	
PCB-1242	<0.08	ug/g	09/04/1993	0.08	seh	8080 (1)	
PCB-1248	<0.08	ug/g	09/04/1993	0.08	seh	8080 (1)	
PCB-1254	<0.10	ug/g	09/04/1993	0.10	seh	8080 (1)	
PCB-1260	<0.10	ug/g	09/04/1993	0.10	seh	8080 (1)	
PCB-1268	<0.10	ug/g	09/04/1993	0.10	seh	8080 (1)	
Surr: Dibutylchlorendate	na	%	09/04/1993		seh	8080 (1)	
Surr: Tetrachloroxylene (TCX)	95	%	09/04/1993	31-128	seh	8080 (1)	
Surr: Decachlorobiphenyl (DCB)	123	%	09/04/1993	29-128	seh	8080 (1)	



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ANALYTICAL REPORT

Mr. Doug Dahlberg

VERSAR CORP.

1520 Kensington Road

Suite 115

Oakbrook, IL 60521

CORRECTED REPORT

09/28/1993

Sample No. : 227071

NET Job No.: 93.07730

Sample Description:

B7-6

1871002; VME

Date Taken: Time Taken: 08/23/1993

Date Received:

08/30/1993

Time Received: 13:40

Parameter	Results		Units	Date of Analysis	Method PQL	Analyst		lytical ethod
Solids, Total Prep, PCB - NONAQUEOUS	86.9 extracted		%	09/02/1993 09/01/1993	0.1	ars era	2540 3540	
PCB'S - 8080 NONAQUEOUS								***
PCB-1016	<0.10		ug/g	09/04/1993	0.10	seh	8080	(1)
PCB-1221	<0.08		ug/g	09/04/1993	0.08	seh	8080	(1)
PCB-1232	<0.08		ug/g	09/04/1993	0.08	seh	8080	(1)
PCB-1242	<0.08		ug/g	09/04/1993	0.08	seh	8080	(1)
PCB-1248	4.6	D100	ug/g	09/04/1993	0.08	seh	8080	(1)
PCB-1254	0.28	D10	ug/g	09/04/1993	0.10	seh	8080	(1)
PCB-1260	<0.10		ug/g	09/04/1993	0.10	seh	8080	(1)
PCB-1268	<0.10		ug/g	09/04/1993	0.10	seh	8080	(1)
Surr: Dibutylchlorendate	na		%	09/04/1993		seh	8080	(1)
Surr: Tetrachloroxylene (TCX)	117		%	09/04/1993	31-128	seh	8080	(1)
Surr: Decachlorobiphenyl (DCB)	142		%	09/04/1993	29-128	seh	8080	(1)

D10: Parameter analysis performed at a 10x dilution.
D100: Parameter analysis performed at a 100x dilution.



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ANALYTICAL REPORT

Mr. Doug Dahlberg

VERSAR CORP.

1520 Kensington Road Suite 115

Oakbrook, IL 60521

CORRECTED REPORT

09/28/1993

Sample No. :

227072

NET Job No.:

93.07730

Sample Description:

B8-8

1871002; VME

Date Taken:

08/23/1993

Date Received:

08/30/1993

Time Taken:

Time Received: 13:40

Parameter	Results	Units	Date of Analysis	Method PQL	Analyst		ytical
			7.1.0.1,010				
Solids, Total	83.1	%	09/02/1993	0.1	ars	2540	(4)
Prep, PCB - NONAQUEOUS	extracted		09/01/1993		era	3540	(1)
PCB'S - 8080 NONAQUEOUS							
PCB-1016	0.32	ug/g	09/09/1993	0.10	seh	8080	(1)
PCB-1221	<0.08	ug/g	09/04/1993	0.08	seh	8080	(1)
PCB-1232	<0.08	ug/g	09/04/1993	0.08	seh	8080	(1)
PCB-1242	<0.08	ug/g	09/04/1993	0.08	seh	8080	(1)
PCB-1248	<0.08	ug/g	09/04/1993	0.08	seh	8080	(1)
PCB-1254	<0.10	ug/g	09/04/1993	0.10	seh	8080	(1)
PCB-1260	<0.10	ug/g	09/04/1993	0.10	seh	8080	(1)
PCB-1268	<0.10	ug/g	09/04/1993	0.10	seh	8080	(1)
Surr: Dibutylchlorendate	na	%	09/04/1993		seh	8080	(1)
Surr: Tetrachloroxylene (TCX)	84	%	09/04/1993	31-128	seh	8080	(1)
Surr: Decachlorobiphenyl (DCB)	70	%	09/04/1993	29-128	seh	8080	(1)





Bartlett Division 850 W. Bartlett Rd. Bartlett, IL 60103 Tel: (708) 289-3100 Fax: (708) 289 5445

QUALITY CONTROL REPORT

CONTINUING CALIBRATION VERIFICATION

VERSAR CORP. 1520 Kensington Road Suite 115 Oakbrook, IL 60521 Mr. Doug Dahlberg 09/10/1993

NET Job Number: 93.07730

	Run	CCV	Conc.		Percent
Analyto	Number	Conc.	Found	Unito	Recovery
PCB'8 - 8080 NONAQUEOUS					
PCB-1242	170	500	521	ug/L	104.2
PCB-1260	178	500	524	Ug/L	104.8
Surr: Tetrachloroxylene (TCX)	178	50-	100	-	
Surr: Decachlorobiphenyl (DCB)	178	*	100.	×	-200,0 Rek 9.13 13
PCR'S - 8080 NONAQUEOUS					
PCB-1242	178	500	521	Ug/L	104.2
PCB-1260	178	500	524	ug/L	104.8
Surr: Tetrachloroxylene (TCX)	178	-50-	100	-x-	300_0_
Surr: Decachlorobiphenyl (DCB)	178	-50-	180		-300 D PCK 9-10.93

CCV - Continuing Calibration Verification





Bartlett Division 850 W. Bartlett Rd. Bartlett, IL 60103 Tol: (708) 289-3100 Fax: (708) 289-5146

QUALITY CONTROL REPORT

BLANK ANALYSIS

VERSAR CORP. 1520 Kensington Road Suite 115 Oakbrook, IL 60521 Mr. Doug Dahlberg

SENT BY: NET MIDWEST

09/10/1993

NET Job Number: 93.07730

	Prep Botch	Run. Batch	Blank Analysis		Reporting	Analytical
Analyte	Number	Number	Roculte	Units	Limit	Mathod
PCB'S - 8080 NONAQUEOUS						8080 (1)
PCB-1016	109	178	<0.10	ug/g	0.10	8080 (1)
PCB-1221	109	178	<0.08	ug/g	0.08	8080 (1)
PCB-1232	109	178	<0.08	ug/g	0.08	8080 (1)
PCB-1242	109	178	<0.08	ug/8	0.08	8080 (1)
PCB-1248	109	1/8	<0.08	ug/g	0.08	8080 (1)
PCB-1254	109	178	<0.10	Ug/9	0.10	8080 (1)
PCB-1260	109	178	<0.10	ug/g	0.10	8080 (1)
Surr: Dibutylchlorendate	109	178	ne	×		8080 (1)
Surr: Tetrachloroxylene (ICX)	109	178	109	X	31-128	8080 (1)
Surr: Decachlorobiphenyl (DCB)	109	178	108	x	29-128	8080 (1)

Advisory Control Limits for Blanks:

All compounds should be less than the Reporting Limit, except for phtholotc esters, toluenc, methylene chloride, accepte and chloroform should be less than 5 times the Reporting Limit.





Bartlett Division 850 W. Dartlett Rd. Bartlett, IL 60103 Tel: (708) 289 3100 Fex: (708) 289-5445

QUALITY CONTROL REPORT

LABORATORY CONTROL STANDARD

VERSAR CORP. 1520 Kensington Road Suite 115 Oakbrook, IL 60521 Mr. Doug Dahlberg

09/10/1993

NET Job Number: 93.07/30

6 D	Prep Batch	Run Batch	LCS True	LCS
bra.2 - 8080 NOMYGREORS	Number	Number	Concentration	% Recovery
PCB-1221	109	178	500.	
PC8-1200	109	178	500.	90.2

LCS - Laboratory Control Standard

Advisory Control Limits - Inorganics - LCS recovery should be 80 - 120%.





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QUALITY CONTROL REPORT

DUPLICATES

VERSAR CORP. 1520 Kensington Road Suite 115 Oakbrook, IL 60521 Mr. Doug Dahlberg

SENT BY: NET MIDWEST

09/10/1993

NET Job Number: 93.07730

Analyte	Prep Batch Number	Run Batch Number		Duplicate Analysis	Units	RPD
Solids, Total		634	85.3	83.2	2	2.5
Solida, Total		635	83.1	81.2	Z	2.3

NOTE: Spikes and Duplicates may not be samples from this job.

RPD - Rolative Percent Difference

Advisory Control Limits for Duplicates - RPD should be less than 20.



NET Midwest, Bartlett Division

KEY TO ABBREVIATIONS and METHOD REFERENCES

<	:	Less than; When appearing in the results column indicates the analyte was not detected at or above the reported value.
mg/L	:	Concentration in units of milligrams of analyte per liter of sample. Measurement used for aqueous samples. Can also be expressed as parts per million (ppm).
ug/g	:	Concentration in units of micrograms of analyte per gram of sample. Measurement used for non-aqueous samples. Can also be expressed as parts per million (ppm) or mg/Kg.
ug/L	:	Concentration in units of micrograms of analyte per liter of sample. Measurement used for aqueous samples. Can also be expressed as parts per billion (ppb).
ug/Kg	:	Concentration in units of micrograms of analyte per kilogram of sample. Measurement used for non-aqueous samples. Can also be expressed as parts per billion (ppb).
8	:	Sample result flag indicating that the analyte was also found in the method blank analysis. The value after the B indicates the concentration found in the blank analysis.
E	:	Sample result flag indicating that the reported concentration exceeds the linear range of the instrument for that specific analysis and should be considered estimated.
TCLP	:	These initials appearing in front of an analyte name indicate that the Toxicity Characteristic Leaching Procedure (TCLP) was performed for this test.
%	:	Percent; To convert ppm to %, divide the result by 10,000. To convert % to ppm, multiply the result by 10,000.
Dry Weight	:	When indicated, the results are reported on a dry weight basis. The contribution of the moisture content in the sample is subtracted when calculating the concentration of the analyte.
ICP	:	Indicates analysis was performed using Inductively Coupled Plasma Spectroscopy.
AA	:	Indicates analysis was performed using Atomic Absorption Spectroscopy.
GFAA	:	Indicates analysis was performed using Graphite Furnace Atomic Absorption Spectroscopy.
 PQL	*	Practical Quantitation Limit; the lowest level_that can be_reliably_achieved within specified limits of precision and accuracy during routine laboratory operating conditions.

Method References

(1)	Methods 1000 through 9999: see "Test Methods for Evaluating Solid Waste", USEPA SW-846, 3rd Edition, 1986.
(2)	ASTM "American Society for Testing Materials
(3)	Methods 100 through 499: see "Methods for Chemical Analysis of Water and Wastes", USEPA, 600/4-79-020, Rev. 1983.
(4)	See "Standard Methods for the Examination of Water and Wastewater", 17th Ed, APHA, 1989.
(5)	Methods 600 through 625: see "Guidelines Establishing Test Procedures for the Analysis of Pollutants", USEPA Federal Register Vol. 49 No. 209, October 1984.
(6)	Methods 500 through 599: see "Methods for the Determination of Organic Compounds in

Drinking Water," USEPA 600/4-88/039, Rev. 1988.

APPENDIX D7 CHAIN-OF-CUSTODY FORMS

1		
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Wes	100	
		MC.

FROJECT NO. 1871002		ECT NAM	ME					1.1		. Р	ARAMET	ERS	INDUSTRIAL Y HYGIENE SAMPLE N
SAMPLERS: SOME	ture)				Dougias Damsens		So come	No.	//		//	//	REMARKS
FIELD SAMPLE NUMBER	DATE		COMP.	CHAB	STATION LOCATION	1	S C	0//	//		//	//	
B19@5	8-2)			1			1						
B19e 2	H			1								11	
019 E Y				1								7	CLEAT
819 e.6				1				į	1	12			
B19@8			11	1					i			1	
				1			1						
34@5 B4@2				1									composite to confin
1484				1									CLEAN CLEAN
84e6				1									
1408				1								/	
35e6				1			1				1	13	inaposite Confin
35 @ 6 35 @ 8				7								1	CLEAR
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(Pr.nted)				_	(Printed)	(Prin	tedi			-	1		(Printed.
Reinquished by: 15.	ignature)	8-		/ Tin	Received for Laboratory by:	8/37/	Date	/ Time	Rema	rks	1		1
(Printed) Ourse 1 Dane	teng				Signatures Colephon (Printed) NEAL E. CLEGHORN								

Versar

PROJECT NO. /87/602	87/002 VME						12/	,	PA	RAMETE	RS	INDUSTRIAL Y HYGIENE SAMPLE N	
SAMPLERS: (Signe)	Jian.	~			Doug is J. DAHLSELY		So Course					//	REMARKS
FÆLD SAMPLE NUMBER	DATE	TIME	COMP.	GRAB	STATION LOCATION	18	0/2		//		//		
117c 5	8-23			-			1						
11782				1									composite To
31784				-									composite to
B17 e6				-									
11109				-	? No Sample							/	
B18 @ 5				-			1)	
B18@ 2				-									CLEAR
518e 4				-									CLEAR
18E 6				-									
518E B			-	-		27						1	
1108				-			-					Co	MYIM ABOVES 450
35e2				/			1					Con	wfirm >5 L50
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(Printed)				1	(Printed)	(Prin	ted)			-			[P-inted)
Refinquished by: 'S	igrature)	18	Date - 27-	e / Tim	Received for Laboratory by: Signature:	8/27	Date /13	/ Time /340	Rem	erks	1		L.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
Doug LAS 1. DA	uzey				Printed! NEAL E. CLEGHORN								

Versara

PROJECT NO. 187/002	ooz VME						2/		PA	RAMET	ERS	INDUSTRIAL Y HYGIENE SAMPLE N	
SAMPLERS: (Signature)	ahl	3		- 1	Printed) Dorwies J. Paresens		Sourame	//	//	//	//	///	REMARKS '
FIELD SAMPLE NUMBER	DATE	TIME	COMP.	GRAB	STATION LOCATION	C S COUNTAINER.			//	//	//	//	
015@12	B-29			1			1		V.				
B30 9				1			1				i	1 1/	
8 910				1			1						> INDIVIOUR BASE
016@ 10				1	Delicate		/						CONFINA CLEAR
B14@ \$ 10	11_			1			1						
Biye 5				1			1						
314@2				1									
0140 4				1									composite to / SAME
81466				1					-				CONFINA CLEAR
61488				1									
8 140 10				1	NO SAMPLE							IV	
10 709	1			/			1			.		11	-DIVIOUM COMPING Chi
Relinquished by: (Sig	mature)		Date	/ Time	Received by: (Signature)	Reli	nguishe	d by: (Signatur	e)	Da	te / Time	Received by: Signature)
(Printed)	(Printed)		1	(Printed)	(Prin	ræc)	-					(Frinted)	
Reliaquished by Sign	gnature)	80	Date - 27 -	/ Time	Received for Laboratory by:	8/2	Date /		Rema	rks			
Cours Da	Hugen	1	.,		NEAL E. CLETHORN								

Versam

PROJECT NO.	87/ 002 VME							10	/		PA	RAME	TERS	,_	HYGIENE SAMPLE N
SAMPLERS: (Signape	re)			1	Printed) Douge's J. Damseus		N. M. M.	1	/	/	//	//	//		REMARKS
SAMPLE NUMBER	DATE	TIME	a.		STATION LOCATION		S S S S S S S S S S S S S S S S S S S		///		/	////		1	
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1402				1											
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succ				1											COMPINY CLEAR
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ANGOOD				1										1	
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iPrinted)					(Printed)	(Prin	ted)			-				-	(Printec)
Rainquished by: Isig	mature)	- 4	Date	/ Tim	(Signature) () and	8/27	Date /	1340	R	emark	ks	l		_	
Printerior Doug Case	yi Jan	,			NEAL E. CLEGHORN	1									

Versama

PROJECT NO. 187/002	37/002 VME						/2/	Z	P/	ARAMET	ERS	INDUSTRIAL Y HYGIENE SAMPLE N
SAMPLERS: (Signar	Dal	ely	_		Done is J. DAIPERE		Consumers	/	///	//	//	REMARKS
FIELD SAIMPLE NUMBER	DATE	TIME	COMP.	GRAB	STATION LOCATION	18	8/9/	1	///	//	//	/
51	8-21			-			/				1	0.11Am >5 450
B10@ 5				-			-				6	enfing 750
31004				-			/					ONFINE >50
107e.6				-			1				C	or Film 250
3808	11			/			/					onting 750
Relinquished by: (5%	gnature!		Date	/ Time	Received by: (Signature)	Relir	nquished by	v: (S	ignature;	Da	te / Time	Received by: (Signature)
(Printed)					(Frinted)	(Prins						(Printed)
Resinquished by: (54	grature)	E-1	Date 1-7)	/ Time	Received for Laboratory by: (Signaphre) College	8/27	Date / Tim /53 /3 70	9	Remarks			
Printed Deusen J. Aven	HC-Y				(Signapore) Colfage (Printed) NEALE. CLECHORN							

APPENDIX D8
ISOLATED SAMPLING LABORATORY ANALYTICAL RESULTS

11/10/93



Bartlett Division 850 W. Bartlett Rd. Bartlett , IL 60103 Tel: (708) 289-3100

Fax: (708) 289-5445

ANALYTICAL REPORT

Mr. Doug Dahlburg VERSAR CORP. 1520 Kensington Road Suite 115 Oakbrook, IL 60521

11/10/1993

NET MIDWEST CORP →→→ VERSAR INC.

NET Job Number: 93.09708

Enclosed are the Analytical Results for the following samples submitted to NET, Inc. Bartlett Division for analysis:

Project Description: 1871.002; VME Americas

Sample Number	Sample Description	Date Taken	Date Received
236889	CS-2 0-6' Core Sample 2; Soil	10/28/1993	10/29/1993
236890	CS-2 12-18' Core Sample 2; Soil	10/28/1993	10/29/1993
236891	CS-3 0-6' Core Sample 3; Soil	10/28/1993	10/29/1993
236892	CS-3 12-18' Core Sample 3; Soil	10/28/1993	10/29/1993
236893	CS-4 0-6' Core Sample 4; Soil	10/28/1993	10/29/1993
236894	CS-4 12-18' Core Sample 4; Soil	10/28/1993	10/29/1993
236895	CS-5 0-6' Core Sample 5; Soil	10/28/1993	10/29/1993
236896	CS-5 12-18' Core Sample 5; Soil	10/28/1993	10/29/1993
236897	CS-6 0-6" Core Sample 6; Soil	10/28/1993	10/29/1993
236898	CS-6 12-18" Core Sample 6; Soil	10/28/1993	10/29/1993
236899	CS-7 0-6" Core Sample 7; Soil	10/28/1993	10/29/1993
236900	CS-7 12-18" Core Sample 7; Soil	10/28/1993	10/29/1993
236901	CS-8 0-6" Core Sample 8; Soil	10/28/1993	10/29/1993
236902	CS-8 12-18" Core Sample 8; Soil	10/28/1993	10/29/1993
236903	CS-9 0-6" Core Sample 9; Soil	10/28/1993	10/29/1993
236904	CS-9 12-18" Core Sample 9; Soil	10/28/1993	10/29/1993
236905	CS-1 0-6" Core Sample 1; Soil	10/28/1993	10/29/1993
236906	CS-1 12-18" Core Sample 1; Soil	10/28/1993	10/29/1993

Sample analysis in support of the project referenced above has been completed and results are presented on the following pages. Please refer to the enclosed "Key to Abbreviations" for definition of terms. Should you have questions regarding procedures or results, please do not hesitate to call. NET has been pleased to provide these analytical services for you.

Neal E. Cleghorn Operations Manager





Bartlett Division 850 W. Bartlett Rd. Bartlett, IL 60103 Tel: (708) 289-3100

Fax: (708) 289-5445

ANALYTICAL REPORT

Mr. Doug Dahlburg

VERSAR CORP.

1520 Kensington Road

Suite 115

Oakbrook, IL 60521

11/10/1993

NET MIDWEST CORP →→→ VERSAR INC.

Sample No. :

236889

NET Job No.: 93.09708

Sample Description:

CS-2 0-6' Core Sample 2; Soil

1871.002; VME Americas

Date Taken: 10/28/1993

Time Taken: 11:17

Date Sample Picked Up: 10/29/1993

IEPA Cert. No. 100221

Date Received: 10/29/1993

Time Received: 13:00

Parameter	R esults	Units	Date of Analysis	Analytical Method
Solids, Total	76.9	×	11/05/1993	2540 (4)
PCB'S - 8080 NONAQUEOUS				
PCB-1016	<1.0	ug/g	11/05/1993	8080 (1)
PCB-1221	<0.8	ug/g	11/05/1993	8080 (1)
PCB-1232	<0.8	ug/g	11/05/1993	8080 (1)
PCB-1242	<0.8	ug/g	11/05/1993	8080 (1)
PCB-1248	2.3	ug/g	11/05/1993	8080 (1)
PCB-1254	0.8	ug/g	11/05/1993	8080 (1)
PCB-1260	<1.0	ug/g	11/05/1993	8080 (1)
PCB-1268	<1.0	ug/g	11/05/1993	8080 (1)





Tel: (708) 289-3100 Fax: (708) 289-5445

10/29/1993

13:00

ANALYTICAL REPORT

Mr. Doug Dahlburg VERSAR CORP.

1520 Kensington Road

Suite 115

Oakbrook, IL 60521

11/10/1993

Sample No. : 236890

NET Job No.: 93.09708

Sample Description: CS-2 12-18' Core Sample 2; Soil

1871.002; VME Americas

10/28/1993 Date Taken:

Time Taken: 11:25

Date Sample Picked Up: IEPA Cert. No. 100221

10/29/1993

WDNR Cert. No. 999447130

Date Received:

Time Received:

Parameter	Results	Units	Date of Analysis	Analytical Method
Solids, Total	81.2	%	11/05/1993	2540 (4)
PCB'S - 8080 NONAQUEOUS				
PCB-1016	9.7	ug/g	11/06/1993	8080 (1)
PCB-1221	<0.8	ug/g	11/06/1993	8080 (1)
PCB-1232	<0.8	ug/g	11/06/1993	8080 (1)
PCB-1242	<0.8	ug/g	11/06/1993	8080 (1)
PCB-1248	3.1	ug/g	11/06/1993	8080 (1)
PCB-1254	<1.0	ug/g	11/06/1993	8080 (1)
PCB-1260	<1.0	ug/g	11/06/1993	8080 (1)
PCB-1268	<1.0	ug/g	11/06/1993	8080 (1)





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Fax: (708) 289-5445

ANALYTICAL REPORT

Mr. Doug Dahlburg VERSAR CORP.

1520 Kensington Road

Suite 115

Oakbrook, IL 60521

11/10/1993

NET MIDWEST CORP →→→ VERSAR INC.

Sample No. : 236891

NET Job No.: 93.09708

Sample Description:

CS-3 0-6' Core Sample 3; Soil

1871.002; VME Americas

10/28/1993 Date Taken:

Time Taken:

11:38

10/29/1993

Date Sample Picked Up: IEPA Cert. No. 100221

Date Received: 10/29/1993

Time Received: 13:00

Parameter	Results	Units	Date of Analysis	Analytical Method
Solids, Total	92.3	%	11/05/1993	2540 (4)
PCB'S - 8080 NONAQUEOUS				
PCB-1016	<0.10	ug/g	11/06/1993	8080 (1)
PCB-1221	<0.08	ug/g	11/06/1993	8080 (1)
PCB-1232	<0.08	ug/g	11/06/1993	8080 (1)
PCB-1242	<0.08	ug/g	11/06/1993	8080 (1)
PC8-1248	0.76	ug/g	11/06/1993	8080 (1)
PCB-1254	0.22	ug/g	11/06/1993	8080 (1)
PCB-1260	<0.10	ug/g	11/06/1993	8080 (1)
PC8-1268	<0.10	ug/g	11/06/1993	8080 (1)





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ANALYTICAL REPORT

Mr. Doug Dahlburg VERSAR CORP.

1520 Kensington Road

Suite 115

Oakbrook, IL 60521

11/10/1993

Sample No. : 236892

NET Job No.: 93.09708

CS-3 12-18' Core Sample 3; Soil Sample Description:

1871.002; VME Americas

Date Taken: 10/28/1993 Date Received:

10/29/1993 Time Taken: 11:41 Time Received: 13:00

Date Sample Picked Up: 10/29/1993

IEPA Cert. No. 100221 WDNR Cert. No. 999447130

Parameter	R≥sults	Units	Date of Analysis	Analytical Method
Solids, Total	88.1	%	11/05/1993	2540 (4)
PCB'S - 8080 NONAQUEOUS				
PCB-1016	<1.0	ug/g	11/06/1993	8080 (1)
PCB-1221	<0.8	ug/g	11/06/1993	8080 (1)
PCB-1232	<0.8	ug/g	11/06/1993	8080 (1)
PCB-1242	<0.8	ug/g	11/06/1993	8080 (1)
PCB-1248	21	ug/g	11/06/1993	8080 (1)
PCB-1254	2.2	ug/g	11/06/1993	8080 (1)
PCB-1260	<1.0	ug/g	11/06/1993	8080 (1)
PCB-1268	<1.0	ug/g	11/06/1993	8080 (1)





Tei: (708) 289-3100 Fax: (708) 289-5445

ANALYTICAL REPORT

Mr. Doug Dahlburg VERSAR CORP.

1520 Kensington Road

Suite 115

Oakbrook, IL 60521

11/10/1993

Sample No. : 236893

NET Job No.: 93.09708

Sample Description: CS-4 0-6' Core Sample 4; Soil

1871.002; VME Americas

Date Taken: 10/28/1993 Date Received: 10/29/1993

Time Taken: 11:58 Time Received: 13:00

Date Sample Picked Up: 10/29/1993

IEPA Cert. No. 100221 WDNR Cert. No. 999447130

Parameter	Results	Units	Date of Analysis	Analytical Method
Solids, Total	89.0	%	11/05/1993	2540 (4)
PCB'S - 8080 NONAQUEOUS				
PCB-1016	<1.0	ug/g	11/06/1993	8080 (1)
PCB-1221	8. 3>	ug/g	11/06/1993	8080 (1)
PCB-1232	<0.8	ug/g	11/06/1993	8080 (1)
PCB-1242	<0.8	ug/g	11/06/1993	8080 (1)
PCB-1248	3.2	ug/g	11/06/1993	8080 (1)
PCB-1254	1.7	ug/g	11/06/1993	8080 (1)
PCB-1260	<1.0	ug/g	11/06/1993	8080 (1)
PC8-1268	<1.0	ug/g	11/06/1993	8080 (1)





Tel: (708) 289-3100 Fax: (708) 289-5445

ANALYTICAL REPORT

Mr. Doug Dahlburg VERSAR CORP.

1520 Kensington Road

Suite 115

Oakbrook, IL 60521

11/10/1993

Sample No. : 236894

NET Job No.: 93.09708

Sample Description: CS-4 12-18' Core Sample 4; Soil

1871.002; VME Americas

Date Taken: 10/28/1993

Time Taken: 12:04

Date Sample Picked Up: IEPA Cert. No. 100221

cked Up: 10/29/1993

Date Received: 10/29/1993

Time Received: 13:00

Parameter	Results	Units	Date of Analysis	Analytical Method
Solids, Total	88.8	%	11/05/1993	2540 (4)
PCB'S - 8080 NONAQUEOUS				
PCB-1016	<10	ug/g	11/06/1993	8080 (1)
PCB-1221	48	ug/g	11/06/1993	8080 (1)
PCB-1232	48	ug/g	11/06/1993	8080 (1)
PCB-1242	48	ug/g	11/06/1993	8080 (1)
PCB-1248	84	ug/g	11/06/1993	8080 (1)
PCB-1254	33	ug/g	11/06/1993	8080 (1)
PCB-1260	<10	ug/g	11/06/1993	8080 (1)
PCB-1268	<10	ug/g	11/06/1993	8080 (1)





Tel: (708) 289-3100 Fax: (708) 289-5445

ANALYTICAL REPORT

Mr. Doug Dahlburg VERSAR CORP. 1520 Kensington Road Suite 115

Sample No. : 236895

NET MIDWEST CORP →→→ VERSAR INC.

11/10/1993

NET Job No.: 93.09708 Oakbrook, IL 60521

Sample Description:

CS-5 0-6' Core Sample 5; Soil

1871.002; VME Americas

Date Taken: 10/28/1993 Date Received: 10/29/1993

12:20 Time Taken:

Time Received: 13:00

Date Sample Picked Up: IEPA Cert. No. 100221

WDNR Cert. No. 999447130

Parameter	Result	s	Units	Date of Analysis	Analytical Method
Solids, Total	90.1		*	11/05/1993	2540 (4)
PCB'S - 8080 NONAQUEOUS					
PCB-1016	<10		ug/g	11/06/1993	8080 (1)
PCB-1221	\$>		ug/g	11/06/1993	8080 (1)
PCB-1232	<8		ug/g	11/06/1993	8080 (1)
PCB-1242	3>	•	ug/g	11/06/1993	8080 (1)
PCB-1248	35		ug/g	11/06/1993	8080 (1)
PCB-1254	5	J	ug/g	11/06/1993	8080 (1)
PCB-1260	<10		ug/g	11/06/1993	8080 (1)
PCB-1268	<10		ug/g	11/06/1993	8080 (1)

10/29/1993





Tel: (708) 289-3100 Fax: (708) 289-5445

ANALYTICAL REPORT

Mr. Doug Dahlburg VERSAR CORP.

1520 Kensington Road

Suite 115

Oakbrook, IL 60521

11/10/1993

NET MIDWEST CORP →→→ VERSAR INC.

Sample No. : 236896

NET Job No.: 93.09708

Sample Description: CS-5 12-18' Core Sample 5; Soil

1871.002; VME Americas

Date Received: Date Taken: 10/28/1993 10/29/1993

Time Taken: Time Received: 12:21 13:00

10/29/1993 Date Sample Picked Up:

WDNR Cert. No. 999447130 IEPA Cert. No. 100221

Parameter	Results	Units	Date of Analysis	Analytical Method
Solids, Total	90.9	%	11/05/1993	2540 (4)
PCB'S - 8080 NONAQUEOUS				
PCB-1016	<0.10	ug/g	11/06/1993	8080 (1)
PCB-1221	<(.08	ug/g	11/06/1993	8080 (1)
PCB-1232	<(.08	ug/g	11/06/1993	8080 (1)
PCB-1242	<(.08	ug/g	11/06/1993	8080 (1)
PCB-1248	1.3	ug/g	11/06/1993	8080 (1)
PC8-1254	0.5	ug/g	11/06/1993	8080 (1)
PCB-1260	<(.10	ug/g	11/06/1993	8080 (1)
PCB-1268	<(.10	U9/9	11/06/1993	8080 (1)





Bartlett Division 850 W. Bartlett Rd. Bartlett , IL 60103 Tel: (708) 289-3100 Fax: (708) 289-5445

ANALYTICAL REPORT

Mr. Doug Dahlburg VERSAR CORP.

1520 Kensington Road

Suite 115

Oakbrook, IL 60521

11/10/1993

Sample No. : 236897

NET Job No.: 93.09708

Sample Description: CS-6 0-6" Core Sample 6; Soil

1871.002; VME Americas

Date Taken: 10/28/1993

Time Taken: 12:30

Date Sample Picked Up: 10/29/1993

IEPA Cert. No. 100221

Date Received: 10/29/1993

Time Received: 13:00

Parameter	R∋sults	Units	Date of Analysis	Analytical Method
Solids, Total	91.4	%	11/05/1993	2540 (4)
PCB'S - 8080 NONAQUEOUS				
PCB-1016	<10	ug/g	11/06/1993	8080 (1)
PCB-1221	<8	ug/g	11/06/1993	8080 (1)
PCB-1232	<8	ug/g	11/06/1993	8080 (1)
PCB-1242	<8	ug/g	11/06/1993	8080 (1)
PCB-1248	91	ug/g	11/06/1993	8080 (1)
PCB-1254	74	ug/g	11/06/1993	8080 (1)
PCB-1260	<10	ug/g	11/06/1993	8080 (1)
PCB-1268	<10	ug/g	11/06/1993	8080 (1)





Tel: (708) 289-3100 Fax: (708) 289-5445

10/29/1993

ANALYTICAL REPORT

Mr. Doug Dahlburg VERSAR CORP.

1520 Kensington Road

Suite 115

Oakbrook, IL 60521

11/10/1993

Date Received:

Sample No. : 236898

NET Job No.: 93.09708

Sample Description:

CS-6 12-18" Core Sample 6; Soil

1871.002; VME Americas

Date Taken: 10/28/1993 Time Taken:

12:35

10/29/1993

Date Sample Picked Up: IEPA Cert. No. 100221

Time Received: 13:00 WDNR Cert. No. 999447130

Parameter	R∋sults	Units	Date of Analysis	Analytical Method
Solids, Total	90.1	%	11/05/1993	2540 (4)
PCB'S - 8080 NONAQUEOUS				
PCB-1016	<10	ug/g	11/06/1993	8080 (1)
PCB-1221	<8	ug/g	11/06/1993	8080 (1)
PCB-1232	<8	ug/g	11/06/1993	8080 (1)
PCB-1242	8>	ug/g	11/06/1993	8080 (1)
PCB-1248	130	ug/g	11/06/1993	8080 (1)
PCB-1254	15	ug/g	11/06/1993	8080 (1)
PCB-1260	<10	ug/g	11/06/1993	8080 (1)
PCB-1268	<10	Ug/g	11/06/1993	8080 (1)





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10/29/1993

ANALYTICAL REPORT

Mr. Doug Dahlburg VERSAR CORP.

1520 Kensington Road

Suite 115

Oakbrook, IL 60521

11/10/1993

NET MIDWEST CORP →→→ VERSAR INC.

Sample No. : 236899

NET Job No.: 93.09708

Time Received: 13:00

Sample Description: CS-7 0-6" Core Sample 7; Soil

1871.002; VME Americas

Date Taken: 10/28/1993 Date Received:

Time Taken: 14:00

Date Sample Picked Up: 10/29/1993

IEPA Cert. No. 100221 WDNR Cert. No. 999447130

	Parameter	Fesults	Units	Date of Analysis	Analytical Method
Solid	s, Total	94.3	%	11/05/1993	2540 (4)
PCB'S	- 8080 NONAQUEOUS				
PCB-1	016	<(.10	ug/g	11/06/1993	8080 (1)
PCB-1	221	<(.08	ug/g	11/06/1993	8080 (1)
PCB-1	232	<(.08	ug/g	11/06/1993	8080 (1)
PCB-1	242	<(.08	ug/g	11/06/1993	8080 (1)
PCB-1	248	0.80	ug/g	11/06/1993	8080 (1)
PCB-1	254	0.20	ug/g	11/06/1993	8080 (1)
PCB-1	260	<0.10	ug/g	11/06/1993	8080 (1)
PCB-1	268	<0.10	ug/g	11/06/1993	8080 (1)





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10/29/1993

13:00

ANALYTICAL REPORT

Mr. Doug Dahlburg VERSAR CORP.

1520 Kensington Road

Suite 115

Oakbrook, IL 60521

11/10/1993

NET MIDWEST CORP →→→ VERSAR INC.

Sample No. : 236900

Date Received:

Time Received:

NET Job No.: 93.09708

Sample Description:

CS-7 12-18" Core Sample 7; Soil

1871.002; VME Americas

Date Taken: 10/28/1993

Time Taken: 14:05

IEPA Cert. No. 100221

Date Sample Picked Up: 10/29/1993

Parameter	Results	Units	Date of Analysis	Analytical Method
Solids, Total	81.2	%	11/05/1993	2540 (4)
PCB'S - 8080 NONAQUEOUS				
PCB-1016	<c.10< td=""><td>ug/g</td><td>11/06/1993</td><td>8080 (1)</td></c.10<>	ug/g	11/06/1993	8080 (1)
PCB-1221	<0.08	ug/g	11/06/1993	8080 (1)
PCB-1232	<0.08	ug/g	11/06/1993	8080 (1)
PCB-1242	<0.08	ug/g	11/06/1993	8080 (1)
PCB-1248	<(.08	ug/g	11/06/1993	8080 (1)
PCB-1254	<(.10	ug/g	11/06/1993	8080 (1)
PCB-1260	<(.10	ug/g	11/06/1993	8080 (1)
PCB-1268	<(.10	ug/g	11/06/1993	8080 (1)





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ANALYTICAL REPORT

Mr. Doug Dahlburg VERSAR CORP.

1520 Kensington Road

Suite 115

Oakbrook, IL 60521

11/10/1993

NET MIDWEST CORP →→→ VERSAR INC.

Sample No. : 236901

NET Job No.: 93.09708

Sample Description:

CS-8 0-6" Core Sample 8; Soil 1871.002; VME Americas

Date Taken: 10/28/1993

14:18 Time Taken:

Date Sample Picked Up: 10/29/1993 IEPA Cert. No. 100221

Date Received: 10/29/1993

Time Received: 13:00

Parameter	Results	Units	Date of Analysis	Analytical Method
Solids, Total	93.9	%	11/05/1993	2540 (4)
PCB'S - 8080 NONAQUEOUS				
PCB-1016	<(.10	ug/g	11/06/1993	8080 (1)
PCB-1221	<0.08	ug/g	11/06/1993	8080 (1)
PCB-1232	<0.08	ug/g	11/06/1993	8080 (1)
PCB-1242	<(.08	ug/g	11/06/1993	8080 (1)
PCB-1248	0.17	ug/g	11/06/1993	8080 (1)
PCB-1254	<(.10	ug/g	11/06/1993	8080 (1)
PCB-1260	<(. 10	ug/g	11/06/1993	8080 (1)
PCB-1268	<0.10	ug/g	11/06/1993	8080 (1)
			The second secon	





Tel: (708) 289-3100 Fax: (708) 289-5445

10/29/1993

13:00

ANALYTICAL REPORT

Mr. Doug Dahlburg VERSAR CORP.

1520 Kensington Road

Suite 115

Oakbrook, IL 60521

11/10/1993

Date Received:

Time Received:

Sample No. : 236902

NET Job No.: 93.09708

Sample Description: CS-8 12-18" Core Sample 8; Soil

1871.002; VME Americas

Date Taken: 10/28/1993

Time Taken: 14:20

IEPA Cert. No. 100221

Date Sample Picked Up: 10/29/1993

Parameter	Results	Units	Date of Analysis	Analytical Method
Solids, Total	85.7	%	11/05/1993	2540 (4)
PCB'S - 8080 NONAQUEOUS				
PCB-1016	<0.10	ug/g	11/06/1993	8080 (1)
PCB-1221	<(.08	ug/g	11/06/1993	8080 (1)
PCB-1232	<(.08	ug/g	11/06/1993	8080 (1)
PCB-1242	<0.08	ug/g	11/06/1993	8080 (1)
PCB-1248	0.09	ug/g	11/06/1993	8080 (1)
PCB-1254	<(.10	ug/g	11/06/1993	8080 (1)
PCB-1260	<(.10	ug/g	11/06/1993	8080 (1)
PC8-1268	<(10	ug/g	11/06/1993	8080 (1)





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10/29/1993

13:00

ANALYTICAL REPORT

Mr. Doug Dahlburg VERSAR CORP.

1520 Kensington Road

Suite 115

Oakbrook, IL 60521

11/10/1993

NET MIDWEST CORP →→→ VERSAR INC.

Sample No. : 236903

Date Received:

Time Received:

NET Job No.: 93.09708

Sample Description:

CS-9 0-6" Core Sample 9; Soil 1871.002; VME Americas

Date Taken: 10/28/1993

Time Taken: 14:30

IEPA Cert. No. 100221

Date Sample Picked Up:

10/29/1993

Parameter	Fesults	Units	Date of Analysis	Analytical Method
Solids, Total	92.0	%	11/05/1993	2540 (4)
PCB'S - 8080 NONAQUEOUS				
PCB-1016	<(.10	ug/g	11/07/1993	8080 (1)
PCB-1221	<(08	ug/g	11/07/1993	8080 (1)
PCB-1232	<(1.08	ug/g	11/07/1993	8080 (1)
PCB-1242	<0.08	ug/g	11/07/1993	8080 (1)
PCB-1248	<0.08	ug/g	11/07/1993	8080 (1)
PCB-1254	<0.10	ug/g	11/07/1993	8080 (1)
PCB-1260	<11.10	ug/g	11/07/1993	8080 (1)
PC8-1268	<11.10	ug/a	11/07/1993	8080 (1)





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10/29/1993

13:00

ANALYTICAL REPORT

Mr. Doug Dahlburg VERSAR CORP. 1520 Kensington Road

Suite 115

Oakbrook, IL 60521

11/10/1993

Sample No. : 236904

Date Received:

Time Received:

NET Job No.: 93.09708

Sample Description: CS-9 12-18" Core Sample 9; Soil

1871.002; VME Americas

Date Taken: 10/28/1993

14:32 Time Taken:

Date Sample Picked Up: IEPA Cert. No. 100221

10/29/1993

Parameter	Results	Units	Date of Analysis	Analytical Method	
Solids, Total	88.6	×	11/05/1993	2540 (4)	
PCB'S - 8080 NONAQUEOUS					
PCB-1016	<0.10	ug/g	11/07/1993	8080 (1)	
PC8-1221	<0.08	ug/g	11/07/1993	8080 (1)	
PCB-1232	<0.08	ug/g	11/07/1993	8080 (1)	
PCB-1242	<0.08	ug/g	11/07/1993	8080 (1)	
PCB-1248	0.24	ug/g	11/07/1993	8080 (1)	
PCB-1254	0.18	ug/g	11/07/1993	8080 (1)	
PCB-1260	<(.10	ug/g	11/07/1993	8080 (1)	
PCB-1268	<1.10	ug/g	11/07/1993	8080 (1)	





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ANALYTICAL REPORT

Mr. Doug Dahlburg VERSAR CORP. 1520 Kensington Road

Suite 115

Oakbrook, IL 60521

11/10/1993

NET MIDWEST CORP →→→ VERSAR INC.

Sample No. : 236905

NET Job No.: 93.09708

Sample Description: CS-1 0-6" Core Sample 1; Soil

1871.002; VME Americas

Date Taken: 10/28/1993

Time Taken: 11:02

Date Sample Picked Up: IEPA Cert. No. 100221

Date Received: 10/29/1993

Time Received: 13:00

WDNR Cert. No. 999447130

Parameter	Results	Units	Date of Analysis	Analytical Method
Solids, Total	90.9	%	11/05/1993	2540 (4)
PCB'S - 8080 NONAQUEOUS				
PCB-1016	<(.10	ug/g	11/06/1993	8080 (1)
PCB-1221	<(.08	ug/g	11/06/1993	8080 (1)
PCB-1232	<0.08	ug/g	11/06/1993	8080 (1)
PCB-1242	<(.08	ug/g	11/06/1993	8080 (1)
PCB-1248	1.6	ug/g	11/06/1993	8080 (1)
PCB-1254	0.32	ug/g	11/06/1993	8080 (1)
PCB-1260	<(10	ug/g	11/06/1993	8080 (1)
PCB-1268	<0.10	ug/g	11/06/1993	8080 (1)

10/29/1993





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ANALYTICAL REPORT

Mr. Doug Dahlburg VERSAR CORP.

1520 Kensington Road

Suite 115

Oakbrook, IL 60521

11/10/1993

Sample No. : 236906

NET Job No.: 93.09708

Sample Description:

CS-1 12-18" Core Sample 1; Soil

1871.002; VME Americas

Date Taken: 10/28/1993

Time Taken: 11:06

Date Sample Picked Up: 10/29/1993

IEPA Cert. No. 100221

Date Received: 10/29/1993

Time Received: 13:00

Parameter	Results	Units	Date of Analysis	Analytical Method
Solids, Total	89.3	%	11/05/1993	2540 (4)
PCB'S - 8080 NONAQUEOUS				
PCB-1016	<0.10	ug/g	11/07/1993	8080 (1)
PCB-1221	<0.08	ug/g	11/07/1993	8080 (1)
PCB-1232	<0.08	ug/g	11/07/1993	8080 (1)
PCB-1242	×C.08	ug/g	11/07/1993	8080 (1)
PCB-1248	0.45	ug/g	11/07/1993	8080 (1)
PCB-1254	0.18	ug/g	11/07/1993	8080 (1)
PCB-1260	<0.10	ug/g	11/07/1993	8080 (1)
PCB-1268	<0.10	ug/g	11/07/1993	8080 (1)





2708 289 5445

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Fax: (708) 289-5445

ANALYTICAL REPORT

Mr. Doug Dahlburg VERSAR CORP. 1520 Kensington Road Suite 115 Oakbrook, IL 60521

11/19/1993

NET Job Number: 93.10073

Enclosed are the Analytical Results for the following submitted to NET, Inc. Bartlett Division for analysis:

Project Description: VME; 1871-002

Sample	Sample Description	Date	Date
Number		Taken	Received
238474	SS-4; Soil	10/28/1993	10/29/1993
238475	SS-5; Soil	10/28/1993	11/10/1993
238476	SS-7; Soil	10/28/1993	11/10/1993
238477	CS-3, 24-36"; Soil	10/28/1993	11/10/1993
238478	CS-4, 24-36"; Soil	10/28/1993	11/10/1993
238479	CS-6, 24-36"; Soil	10/28/1993	11/10/1993

Sample analysis in support of the project referenced above has been completed and results are presented on the following pages. Please refer to the enclosed "Key to Abbreviations" for definition of terms. Should you have questions regarding procedures or results, please do not hesitate to call. NET has been pleased to provide these analytical services for you.

Approved By:

Darla J. Kalicki

Project Manager





Ø 003/013

ANALYTICAL REPORT

Mr. Doug Dahlburg VERSAR CORP.

1520 Kensington Road

Suite 115

Oakbrook, IL 60521

11/19/1993

Sample No.: 238474

NET Job No.: 93.10073

Sample Description: SS-4; Soil

VME; 1871-002

Date Taken: 10/28/1993

Time Taken: 10:28

Date Sample Picked Up: 10/29/1993

IEPA Cert. No. 100221

Date Received: 10/29/1993

Time Received: 13:00

Parameter	Results		Units	Date of Analysis	Analytical Method		
Solids, Total	82.2		%	11/17/1993	2540 (4)		
PCB'S - 8080 NONAQUEOUS							
PCB-1016	<1.0		ug/g	11/19/1993	8080 (1)		
PCB-1221	<0.8		ug/g	11/19/1993	8080 (1)		
PCB-1232	<0.8		ug/g	11/19/1993	8080 (1)		
PCB-1242	<0.8		ug/g	11/19/1993	8080 (1)		
PCB-1248	2.3		ug/g	11/19/1993	8080 (1)		
PCB-1254	0.9	J	ug/g	11/19/1993	8080 (1)		
PCB-1260	<1.0		ug/g	11/19/1993	8080 (1)		
PCB-1268	<1.0		ug/g	11/19/1993	8080 (1)		





ANALYTICAL REPORT

Mr. Doug Dahlburg

VERSAR CORP.

1520 Kensington Road

Suite 115

Oakbrook, IL 60521

11/19/1993

Sample No.: 238475

NET Job No.: 93.10073

Sample Description:

SS-5; Soil VME; 1871-002

Date Taken: 10/28/1993

Time Taken: 10:44 Date Sample Picked Up:

11/10/1993

IEPA Cert. No. 100221

Date Received: 11/10/1993

Time Received: 13:00

Parameter	Results	Units	Date of Analysis	Analytical Method
Solids, Total	95.1	%	11/17/1993	2540 (4)
PCB'S - 8080 NONAQUEOUS				
PCB-1016	<1.0	ug/g	11/19/1993	8080 (1)
PCB-1221	<0.8	ug/g	11/19/1993	8080 (1)
PCB-1232	<0.8	ug/g	11/19/1993	8080 (1)
PCB-1242	<0.8	ug/g	11/19/1993	8080 (1)
PCB-1248	11	ug/g	11/19/1993	8080 (1)
PCB-1254	1.5	ug/g	11/19/1993	8080 (1)
PCB-1260	<1.0	ug/g	11/19/1993	8080 (1)
PCB-1268	<1.0	ug/g	11/19/1993	8080 (1)



ANALYTICAL REPORT

Mr. Doug Dahlburg VERSAR CORP. 1520 Kensington Road

Suite 115

Oakbrook, IL 60521

11/19/1993

Sample No. : 238476

NET Job No.: 93.10073

Sample Description:

SS-7; Soil VME; 1871-002

Date Taken: 10/28/1993

Time Taken: 10:55

Date Sample Picked Up: 11/10/1993

IEPA Cert. No. 100221

Date Received: 11/10/1993

Time Received: 13:00

Parameter	Results	Units	Date of Analysis	Analytical Method
Solids, Total	91.1	%	11/17/1993	2540 (4)
PCB'S - 8080 NONAQUEOUS				
PCB-1016	<0.10	ug/g	11/18/1993	8080 (1)
PCB-1221	<0.08	ug/g	11/18/1993	8080 (1)
PCB-1232	<0.08	ug/g	11/18/1993	8080 (1)
PCB-1242	<0.08	ug/g	11/18/1993	8080 (1)
PCB-1248	<0.08	ug/g	11/18/1993	8080 (1)
PCB-1254	<0.10	ug/g	11/18/1993	8080 (1)
PCB-1260	<0.10	ug/g	11/18/1993	8080 (1)
PCB-1268	<0.10	ug/g	11/18/1993	8080 (1)





ANALYTICAL REPORT

Mr. Doug Dahlburg

VERSAR CORP.

1520 Kensington Road

Suite 115

11/19/93

Oakbrook, IL 60521

11/19/1993

Sample No. : 238477

NET Job No.: 93.10073

CS-3, 24-36"; Soil Sample Description:

VME; 1871-002

10/28/1993 Date Taken:

Time Taken: 11:45

11/10/1993

Date Sample Picked Up: IEPA Cert. No. 100221

Date Received: 11/10/1993

Time Received: 13:00

Parameter	Results	Units		Date of Analysis	Analytica Method		
Solids, Total	85.8		*	11/17/1993	2540 (4)		
PCB'S - 8080 NONAQUEOUS							
PCB-1016	<1.0		ug/g	11/18/1993	8080 (1)		
PC8-1221	<0.8		ug/g	11/18/1993	8080 (1)		
PCB-1232	<0.8		ug/g	11/18/1993	8080 (1)		
PCB-1242	<0.8		ug/g	11/18/1993	8080 (1)		
PCB-1248	0.9	J	ug/g	11/18/1993	8080 (1)		
PCB-1254	0.6	J	ug/g	11/18/1993	8080 (1)		
PCB-1260	<1.0		ug/g	11/18/1993	8080 (1)		
PCB-1268	<1.0		ug/g	11/18/1993	8080 (1)		

J : Estimated concentration (value is below the routine PQL).





ANALYTICAL REPORT

Mr. Doug Dahlburg VERSAR CORP.

1520 Kensington Road

Suite 115

Oakbrook, IL 60521

11/19/1993

Sample No. : 238478

NET Job No.: 93.10073

Sample Description:

CS-4, 24-36"; Soil VME; 1871-002

Date Taken: 10/28/1993

Time Taken: 12:08

Date Sample Picked Up: 11/10/1993

IEPA Cert. No. 100221

Date Received: 11/10/1993

Time Received: 13:00

Parameter	Results		Units	Date of Analysis	Analytical Method		
Solids, Total	90.2		*	11/17/1993	2540 (4)		
PCB'S - 8080 NONAQUEOUS							
PCB-1016	<1.0		ug/g	11/18/1993	8080 (1)		
PCB-1221	<0.8		ug/g	11/18/1993	8080 (1)		
PCB-1232	<0.8		ug/g	11/18/1993	8080 (1)		
PCB-1242	<0.8		ug/g	11/18/1993	8080 (1)		
PCB-1248	<0.8		ug/g	11/18/1993	8080 (1)		
PCB-1254	0.2	J	ug/g	11/18/1993	8080 (1)		
PCB-1260	<1.0		ug/g	11/18/1993	8080 (1)		
PCB-1268	<1.0		ug/g	11/18/1993	8080 (1)		
					2000		

J : Estimated concentration (value is below the routine PQL).





Ø 008/013

ANALYTICAL REPORT

Mr. Doug Dahlburg VERSAR CORP. 1520 Kensington Road

Sample No. :

11/19/1993

238479

Suite 115 Oakbrook, IL 60521

NET Job No.:

93.10073

Sample Description:

CS-6, 24-36"; Soil VME; 1871-002

11/10/1993

Date Received: 11/10/1993

Time Received: 13:00

Date Taken: 10/28/1993 Time Taken: 12:39 Date Sample Picked Up: IEPA Cert. No. 100221

Parameter	Results	Units	Date of Analysis	Analytical Method
Solids, Total	89.1	%	11/17/1993	2540 (4)
PCB'S - 8080 NONAQUEOUS				
PCB-1016	<10	ug/g	11/18/1993	8080 (1)
PCB-1221	<8.0	ug/g	11/18/1993	8080 (1)
PCB-1232	<8.0	ug/g	11/18/1993	8080 (1)
PCB-1242	<8.0	ug/g	11/18/1993	8080 (1)
PCB-1248	<8.0	ug/g	11/18/1993	8080 (1)
PCB-1254	540	ug/g	11/18/1993	8080 (1)
PCB-1260	<10	ug/g	11/18/1993	8080 (1)
PCB-1268	<10	ug/g	11/18/1993	8080 (1)



11/19/93

NET Midwest, Bartlett Division

KEY TO ABBREVIATIONS and METHOD REFERENCES

•	:	Less than; When appearing in the results column indicates the analyte was not detected at or above the reported value.
mg/L	:	Concentration in units of milligrams of analyte per liter of sample. Measurement used for aqueous samples. Can also be expressed as parts per million (ppm).
ug/g	:	Concentration in units of micrograms of analyte per gram of sample. Measurement used for non-aqueous samples. Can also be expressed as parts per million (ppm) or mg/Kg.
ug/L	:	Concentration in units of micrograms of analyte per liter of sample. Measurement used for aqueous samples. Can also be expressed as parts per billion (ppb).
ug/Kg	:	Concentration in units of micrograms of analyte per kilogram of sample. Measurement used for non-aqueous samples. Can also be expressed as parts per billion (ppb).
В	:	Sample result flag indicating that the analyte was also found in the method blank analysis. The value after the B indicates the concentration found in the blank analysis.
E	:	Sample result flag indicating that the reported concentration exceeds the linear range of the instrument for that specific analysis and should be considered estimated.
TCLP	:	These initials appearing in front of an analyte name indicate that the Toxicity Characteristic Leaching Procedure (TCLP) was performed for this test.
×	:	Percent; To convert ppm to %, divide the result by 10,000. To convert % to ppm, multiply the result by 10,000.
Dry Weight	:	When indicated, the results are reported on a dry weight basis. The contribution of the moisture content in the sample is subtracted when calculating the concentration of the analyte.
ICP	:	Indicates analysis was performed using Inductively Coupled Plasma Spectroscopy.
AA	:	Indicates analysis was performed using Atomic Absorption Spectroscopy.
GFAA	:	Indicates analysis was performed using Graphite Furnace Atomic Absorption Spectroscopy.
PQL	:	Practical Quantitation Limit; the lowest level that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions.

Method References

(6)

(1)	Methods 1000 through 9999: see "Test Methods for Evaluating Solid Waste", USEPA SW-846, 3rd Edition, 1986.
(2)	ASTM "American Society for Testing Materials
(3)	Methods 100 through 499: see "Methods for Chemical Analysis of Water and Wastes", USEPA, 600/4-79-020, Rev. 1983.
(4)	See "Standard Methods for the Examination of Water and Wastewater", 17th Ed, APHA, 1989.
(5)	Methods 600 through 625: see "Guidelines Establishing Test Procedures for the Analysis of Pollutants", USEPA Federal Register Vol. 49 No. 209, October 1984.

Drinking Water," USEPA 600/4-88/039, Rev. 1988.

Methods 500 through 599: see "Methods for the Determination of Organic Compounds in

PROJECT NO.	PROJE	CT NAM	E	1			//	Y	PARAMETE	RS	INDUSTRIAL HYGIENE SAMPLE	Y
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FIELD SAMPLE NUMBER	DATE	TIME	COMP.	GRAB	STATION LOCATION	3/4	8/18/					
55-1	10/28	10:22		1	Surface Gample 1	1	V					
55-2		10:24			1 2							
55-3		10:27			3							
55-4		10:29			4							
55-5		10:44			5							
55-6		10:40			6		V					
55-7		10:55			7		~					
55-8		10:46			8		1					
55-9		1020			V 9							
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APPENDIX D9 CHAIN-OF-CUSTODY FORMS

PROJECT NO. 1871.002	PROJECT NAME WE Americas							/. /	7	1	PARAM	METER	INDUSTRIAL Y HYGIENE SAMPLE N	
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	DATE	ME	COMP.	GRAB	STATION LOCATION		1 8 K				///			
CS-2 0-6"	12-18	11:17		V	Core Souple 2	1	V							
05-2 12-18"		11:25					/							
cs-2 24-26"		11:26			L			1						
15-3 0-6"		11:28		,	Cixe Souple 3		V	-						
C5-3 12-18"		1(:41			1		1				,			
CS-3 24-31"		11:45						1						
CS-4 0-6"		11:58			Core Sample 4		V							
05-412-18*		12:01					V							
CS-4 24-36"		12:08												
CS-5 06"		17:20			Core Souple 5		1							
05-5 12-18"		12:21					V							
CS-5 24-36"	1	12:23		1	V	V		1						
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Distribution: Original Plus One Accompanie Shipment (white and yellow); Copy to Coordinator Field Files (pink).

INDUSTRIAL PROJECT NO. PROJECT NAME **PARAMETERS** HYGIENE SAMPLE VME Americas 1871-002 SAMPLERS: (Signature) Maked Notar REMARKS FIELD DATE TIME SAMPLE STATION LOCATION NUMBER CS-6 0-6" 19/28 12:50 Coesantle 6 CS-6 12-18" 12:35 CS-6 24-31" 12:39 Peri Soull 7 14.00 CS-7 0.6" CS-7 12-18' 14:05 1 CS-7 24-36 14:10 CS-8 0-6" Core Sample & 14:18 CS-8 12-18" 14:20 CS-8 24-36" 14:25 Core Sculle 9 CS-9 0-6" 14:30 14:32 CS-9 12-18° 14:37 VERSAR INC Date / Time Relinquished by: (Signature) Received by: (Signature) Relinquished by: (Signature) Date / Time Received by: (Signatury) 10/29 1130 Kapusto (Printed) (Printed) Y. KAPUSTA Date / Time Remarks
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