One Market Plaza
Spear Street Tower, Suite 717
San Francisco, CA 94105
(415) 957-9557

GEOMATRIX

27 November 1990
Project 1459.04

Mr. John Adams
Project Manager
Kaiser Foundation Health Plan
1950 Franklin Street, 11th Floor
Oakland, California 94612-2998

Subject: Soil Remediation Report
Pentachlorophenol and Related Compounds
Kaiser Permanente Medical Center
280 West MacArthur Boulevard
Oakland, California

Dear Mr. Adams:

Enclosed is our report summarizing and documenting the work conducted to remediate soil affected by pentachlorophenol and related compounds at the Kaiser Permanente Medical Center construction site. The removal of affected soil from the site has been completed and the soil has been transported off-site to an approved incinerator facility for disposal. No further work is anticipated at the site with regard to the pentachlorophenol-affected soil. A copy of this report should be submitted to Susan Hugo of the Alameda Health Agency, Department of Environmental Health, for their files.

We appreciate the opportunity to providing our consulting engineering services to Kaiser. If you have any questions or comments, please feel free to contact either of the undersigned.

Sincerely yours,
GEOMATRIX CONSULTANTS, INC.

N. Debra Favre
Project Manager

Tom Graf
Vice President

cc: Fonda Karelitz, Kaiser Foundation Health Plan
Mark Zemelman, McCutchen, Doyle, Brown & Enersen

GEOMATRIX

SOIL REMEDIATION - PENTACHLOROPHENOL AND RELATED COMPOUNDS

Kaiser Permanente Medical Center
280 West MacArthur Boulevard
Oakland, California

Prepared for

Kaiser Foundation Health Plan
1950 Franklin Street
Oakland, California

November 1990
Project No. 1459.04

Geomatrix Consultants

GEOMATRIX

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

TABLE OF CONTENTS (concluded)

LIST OF APPENDICES

1.0 INTRODUCTION

As requested by the Kaiser Foundation Health Plan (Kaiser), we herein present a summary of the work performed to remove and dispose of soil affected by pentachlorophenol (PCP) and related compounds from the Kaiser Permanente Medical Center (Kaiser Hospital) construction site at 280 West MacArthur Boulevard in Oakland, California (Figure 1). The purpose of this report is to document the excavation and disposal of soil affected by PCP and related compounds and to discuss the results of efforts to classify and characterize the soil for disposal. Work described herein was performed by or under the guidance of Geomatrix Consultants, Inc. (Geomatrix).

2.0 BACKGROUND

On 28 February 1990, while excavating soil affected by mineral spirits on the hillside on the northern part of the Kaiser Hospital construction site, Kaiser Construction Services unexpectedly encountered a damaged 55-gallon metal drum. The buried drum was located approximately two feet below grade near the crest of the hill. Figure 2 shows the approximate location of the drum. As reported by Kaiser Construction Services personnel, the drum appeared to have been buried for some time; it was rusted and bore no label. Kaiser Construction Services personnel removed the drum from the hillside soon after they encountered it and placed it in a hazardous waste storage bin. The drum was then covered with soil and plastic sheeting. The contents of the drum, as observed by Kaiser Construction services personnel and a Geomatrix geologist, had a brownish yellow color, gave off a pungent odor, and was highly viscous. Construction activities were halted until the drum and affected soil were removed.

3.0 MOBILIZATION

At Kaiser's request, within one hour of the drum's discovery, Geomatrix collected two samples of soil from the area where the drum was found. Because no information on the material was available, samples initially were screened qualitatively by the analytical laboratory using infrared spectroscopy (FTIR). The FTIR scan indicated that the soil samples contained high concentrations of phenolic and chlorinated compounds. A more definitive laboratory analysis then was conducted using gas chromatography and mass spectrometry (GC/MS) by Environmental Protection Agency (EPA) Method 8270; these tests indicated that the material contained PCP and 2,4,5-trichlorophenol (TCP). American Environmental Laboratories Corporation (AELC) performed the chemical identification; subsequent analyses were performed by AELC and BC Analytical.

Geomatrix immediately notified Kaiser and Kaiser's legal counsel of the preliminary identification of the material from the drum. Arrangements were made for Crosby & Overton, Inc., a hazardous waste management contractor, to excavate the affected soil from the hillside. Excavation began on 6 March 1990 and was completed on 4 April 1990.

3.1 Site Control

To maintain site control and minimize chemical exposure to the public, access to the construction area of the site was limited to authorized personnel. The site was completely enclosed within an 8-foot-high chain-link fence, and gates were locked except to admit authorized equipment and personnel. Work and support zones were established, and access to the work zone was limited to necessary personnel wearing appropriate protective clothing and equipment.

3.2 Health and Safety

In addition to the site control measures described above, other measures were taken to reduce the risk of chemical exposure to hazardous waste cleanup workers, site visitors, and the nearby public. Both Geomatrix and Crosby & Overton prepared site health and safety plans before beginning excavation. Appendix A contains a copy of Geomatrix's health and safety plan, which describes the procedures and control measures followed at the site.

3.3 Geophysical Survey

To locate additional drums that might be buried in the hillside, West Coast Locators, under Geomatrix's direction, conducted a survey using geophysical techniques. On 6 March 1990, a magnetometer survey was attempted, but because of interference from the Magnetic Resonance Imaging Laboratory adjacent to the site, the survey was abandoned. Another survey was conducted on 8 March 1990 using a metal detector (Fischer M-Scope); results indicated that no additional drums were likely present within a depth of approximately 10 to 12 feet below slope grade.

4.0 DOCUMENTATION SAMPLING

Throughout the effort to remove the soil affected by PCP and related compounds, samples were collected to document the effectiveness of cleanup activities. Documentation samples were collected from soil within the excavation, from equipment after decontamination, and from ambient air. The following sections describe the types of samples collected. Appendix B presents a more detailed description of sampling procedures and Appendix C contains copies of the laboratory analytical reports.

4.1 Soil Samples

During excavation, grab and composite soil samples were collected to assess the need for additional excavation. These samples were analyzed within 24 to 48 hours to reduce delays in excavation.

An AELC chemist was on site to screen grab soil samples for PCP on 6 and 7 March 1990, when soil containing the highest concentrations of PCP was removed. The screening method, which used Dragger colorimetric indicator tubes specific to chlorinated phenols, had an approximate detection limit that ranged from 50 to 100 milligrams per kilogram (mg/kg), or parts per million (ppm). The technique was used to identify the general areas and depths where soil was to be excavated. Additional sampling and analysis using more sensitive laboratory methods were performed to document the removal of soil affected by PCP and related compounds in areas where PCP was present at less than 50 ppm.

In total, 33 documentation soil samples were collected from the floor, sidewalls, and subsurface of the excavation at depths ranging from 1 to 5 feet. These samples were analyzed for PCP and TCP using either EPA Method 8270 (GC/MS) or EPA Method 8040 for phenolic compounds, which uses gas chromatography based on retention time identification. Selected samples were also analyzed for dioxins and furans by EPA Method 8280 and for mineral spirits by EPA Method 8015. Figure 2 shows the extent of excavation of affected soil and where documentation samples were collected throughout the excavation process.

4.2 Air Samples

To assess the potential release of PCP and TCP to ambient air during excavation, air samples were collected on 6 and 7 March 1990, the days when soil containing the highest concentrations of TCP and PCP was removed. Each day, a field blank and samples from two locations were collected following OSHA Method 39. Samples were collected at the

base of the slope along the water tank fence (within the soil excavation area) and at the top of the hillside generally downwind of the excavation (Figure 1). A summary of air sampling results is presented in Table 1. Because air sampling detected no PCP or TCP at the site perimeter, we concluded that air affected by the excavation did not pose a health risk to hospital personnel, neighboring residents, or bystanders outside the site.

4.3 Wipe Samples

After the excavation was completed, equipment was decontaminated with a solution of water and nonionic detergent. After decontamination, surfaces of equipment were wipe-sampled and the samples analyzed to document decontamination.

5.0 SOIL EXCAVATION, TRANSPORT, AND DISPOSAL

The following sections describe activities undertaken to remove affected soil from the site.

5.1 Excavation of PCP-Affected Soil

Most of the soil affected by PCP was removed on 6 and 7 March 1990. The remaining soil, which contained concentrations less than 50 ppm, was removed before or on 4 April 1990. Because soil that contained high concentrations of PCP was most easily identified, it generally was removed within the first two days of excavation. The excavation of soil containing PCP at concentrations less than 50 ppm required an iterative approach to avoid excavating soil not affected by PCP. Because a field indicator test was not available for soil containing PCP concentrations less than 50 ppm, samples were collected daily and analyzed to evaluate whether the previous day's excavation had completed the task. Soil was excavated using this iterative process on 6, 7, and 28 March and on 4 April 1990. Table 2 presents a summary of events involved in the excavation of soil affected by PCP; Table 3 presents a summary of analytical results for soil samples.

During excavation on the hillside, some soil that may have contained PCP spilled onto the asphalt pavement at the base of the hillside near the cooling tower and northeast side of the mechanical building. Samples of this soil (samples MC-1 and MC-2) were collected for analysis; one sample (MC-2) was found to contain low concentrations of PCP and TCP. Based on this finding, soil that had accumulated in this area was removed and stored on site in drums for disposal.

The excavation was considered complete when PCP and TCP were not detected above 1 ppm, the practical reporting limit for PCP and TCP, in samples collected from the floor and sidewalls of the excavated area. Because of the high concentrations of mineral spirits in the area affected by PCP, a detection limit of 1 ppm was used to define the extent the excavation for PCP and related compounds. This limit was used because the analytical laboratories could achieve it consistently and with certainty for the soil matrix containing mineral spirits. Figure 3 shows a cross section of the extent of soil excavated and the location of final documentation samples.

In total, approximately 160 cubic yards of soil were excavated from the area where the drum was found. The soil was stored on site within the fenced construction area in two labeled 20-cubic-yard hazardous waste storage bins, ninety-two 55-gallon metal drums, and a covered, lined stockpile on the excavated hillside.

Samples also were collected from areas not associated with the drum to evaluate whether PCP and related compounds are present outside the area where the drum was found. PCP and TCP were not detected in a sample taken inside the mechanical building (sample B-36). In addition, soil excavated from the hillside before the drum was encountered (samples B-33, B-34, and B-35), which had been temporarily stored near the mechanical building and the paint shed, also was sampled and analyzed for PCP. No chlorinated phenols were detected in the soil excavated before the drum was encountered. Based on these results, the

soil affected by PCP and related compounds appears to have been limited to the area adjacent to and directly downhill from the drum location.

5.2 Removal and Transportation of Soil

Soil affected by PCP and related compounds was removed from the site between 24 and 28 August 1990. Arrangements were made for Crosby and Overton, Inc., to remove and transfer contaminated soil from the designated areas to trucks for transport to the disposal site. Hazardous Materials Services arranged for transportation of the soil to ThermalKEM, Inc., an incineration facility in Rock Hill, South Carolina.

On 24 August 1990, eighty-five of the ninety-two 55-gallon drums containing soil were placed on a flatbed truck and transported from the site to the ThermalKEM incinerator. These drums contained approximately 21.25 cubic yards of soil. Soil from the other 7 drums was emptied directly into a dump truck for transport to the incinerator. The drums were then wiped clean and sampled to document decontamination.

Soil stockpiled on the hillside initially was removed on 25 August 1990. Approximately 104 cubic yards of soil from the hillside was transferred to 17-cubic-yard dump trucks and then transported to the incinerator facility. This quantity included soil stored on the hillside and some sand that had been used with a polyethylene liner to separate the native soil from soil affected by PCP and related compounds. Four samples (SP-1 to SP-4) were collected from the hillside to evaluate whether PCP-affected soil remained in the hillside stockpile area. Only one sample (SP-4) was found to contain low concentrations of PCP and TCP, at 2 milligrams per kilogram (mg/kg) and 4 mg/kg, respectively. Sample SP-4 was taken from the bottom, southwest corner of the hillside, approximately 5½ feet from the fence. Based on the analytical results, approximately 15 additional cubic yards of soil were removed from this area on 28 August 1990. Two additional samples (SP-5 and SP-6) were taken following the removal of soil; in neither sample was PCP or TCP detected. Table 3

includes a summary of analytical results for soil samples collected during the transfer of stockpiled soil.

Soil stored in two hazardous waste bins was transferred to 17-cubic-yard dump trucks and transported from the facility on 26 August 1990. The bins contained a total of approximately 40 cubic yards of soil. Following the removal of soil, the containers were decontaminated and two wipe samples were collected from each bin. The samples were analyzed for TCP and PCP by EPA Method 8270. The analyses detected 17 micrograms per wipe (μg/wipe) of 2,4,5-TCP on the bottom surface of one storage bin (sample WP-3). As a result, additional decontamination of the bin was performed by Crosby and Overton on 28 August 1990. The two wipe samples taken following decontamination revealed no TCP or PCP.

Table 4 summarizes the quantities of soil removed from each area. In total, approximately 180 cubic yards of soil were removed and transported from the drums, storage bins, and the hillside stockpile of the subject site. This total included the original 160 cubic yards excavated between 6 March and 4 April 1990 and 20 cubic yards consisting of additional soil from the base of the hillside and some of the sand used for lining the hillside stockpile. Appendix D contains the manifests for transportation of affected soil.

5.3 Soil Disposal

The PCP-affected soil removed from the site was transported by a licensed hazardous waste transporter to ThermalKEM, which operates a hazardous waste incinerator that is permitted under the U.S. EPA's Resource Conservation and Recovery Act (RCRA). The drums were transported on a flat-bed truck. The first truck arrived at the incineration on 29 August 1990; the last truck arrived on 31 August 1990. Upon arrival at the incinerator facility, the soil was transferred from the drums to cardboard boxes for burning. Soil from the hillside stockpile and the hazardous waste storage bins, which was transported in 17-cubic-yard

dump trucks, also was transferred at the incinerator facility into cardboard boxes for burning. All soil was transported under a South Carolina hazardous waste manifest, which indicated that the material was not classified as a RCRA hazardous waste.

ThermalKEM's incinerator is a multiple-hearth type. After the soil is burned, the ash is transported to a RCRA-permitted hazardous waste landfill under federal hazardous waste manifest that identifies ThermalKEM as the waste generator. The soil that originated from Kaiser's site has not yet been completely burned. Soil burned after 25 September 1990 was handled by ThermalKEM as a RCRA waste under newly instituted hazardous waste code D037 for PCP and D041 for TCP. The burn certificates will be sent to Kaiser when Geomatrix receives them.

6.0 CONCLUSIONS

As of 28 August 1990, soil affected by PCP and related compounds had been removed from the Kaiser site and taken to a permitted incinerator facility for proper disposal. Based on sampling and analysis conducted during and after excavating affected soil, no detectable concentrations of PCP or related compounds remain at the Kaiser site. The affected soil has been properly disposed of by incineration.

GEOMATRIX

TABLE 1

AIR SAMPLING RESULTS
Kaiser Hospital Site
Oakland, California

Concentrations in milligrams per cubic meter (mg/m^3)

Date	Location	Pentachlorophenol	2,4,5-Trichlorophenol
3/6/90	Hillside base	ND	ND
3/6/90	Hillside base	ND	ND
3/7/90	Hillside base	ND	0.04
3/7/90	Hillside top	ND	ND

ND = not detected. Detection limits: 0.1 mg/m^3 for pentachlorophenol; 0.03 mg/m^3 for 2,4,5-trichlorophenol

TABLE 2

SUMMARY OF EVENTS
EXCAVATION OF SOIL AFFECTED BY PENTACHLOROPHENOL
Kaiser Hospital Site
Oakland, California

Date	Activity	Sample I.D.			
		Excavation	Stockpile	Air	Other
2/28/90	Drum discovered. Samples of soil saturated with drum contents collected for chemical analysis.	H-1, H-2, H-3			
3/6/90	Excavation of soil affected by pentachlorophenol (PCP) began. one foot of soil removed from excavation walls, floor, and berm. Excavation floor samples, air samples, and soil debris samples collected. Magnatometer survey attempted.	A, B, C, D		1,2	E-P&J
3/7/90	Based on excavation results, an additional foot of soil removed from the excavation. Soil placed in three piles for further testing for PCP. Excavation floor samples, stockpile samples, and air samples collected.	G, H, J	F, I	3, 4	P&J
3/8/90	Geophysical survey conducted in hillside to locate any additional drums that might be buried.				

TABLE 2

SUMMARY OF EVENTS
EXCAVATION OF SOIL AFFECTED BY PENTACHLOROPHENOL
Kaiser Hospital Site
Oakland, California

Date	Activity	Sample I.D.			
		Excavation	Stockpile	Air	Other
3/11/90	Stockpiled soil transferred on 3/7 to hazardous waste storage bin. Additional samples collected from excavation, and wipe samples of decontaminated equipment collected for chemical analyses.	SS-1, SS2			BC-1
3/12/90	PCP-containing soil transferred from stockpiles to drums. Wipe sample of decontaminated backhoe collected.				WS-1, WS-2 WS-3
3/15/90	Soil samples collected for PCP analysis from mechanical building area and stockpiles containing soil affected by mineral spirits.		Pile-1 Pile-2		MC-1, MC-2
3/16/90	Based on 3/11 sample results, additional soil samples collected from the excavation. Samples collected from excavation floor and subsurface at depths of from 1 to 2 feet.	401-S, 402-S 404-1, 405-2.5 406-2			
3/21/90	Additional excavation samples collected, and stockpiles containing soil affected by mineral spirits resampled for PCP analysis.	401-2, 403-2 404-1, 405-2.5 406-2	P1-COM,		

TABLE 2

SUMMARY OF EVENTS
EXCAVATION OF SOIL AFFECTED BY PENTACHLOROPHENOL
Kaiser Hospital Site
Oakland, California

Date	Activity	Sample I.D.			
		Excavation	Stockpile	Air	Other
3/23/90	Soil in storage bin and selected drums sampled.				YB-S-1-4, VB-C, D1-4, D19-22
3/28/90	Based on results of 3/11, 3/16, and 3/21 sample analysis, an additional 2 to 3 feet of soil excavated. Samples collected from excavation floor and surrounding hillside.	7, 8, 9, 10, 11, 12, 13, 14, 15			
3/29/90	Three borings hand-augered into backfill of excavation to sample for mineral spirits; borings located between the mechanical building and paint shed. One boring hand-augered inside the mechanical building. One sample collected from each boring for PCP analysis.				B-33-10, B-34-3, B-35-6, B-36-5
4/4/90	Based on 3/28 sample results, an additional 1/2 to 3 feet of soil excavated. Soil samples collected from excavation floor.	16-1, 17-1.5, 18-1, 19-2			

TABLE 2

SUMMARY OF EVENTS
EXCAVATION OF SOIL AFFECTED BY PENTACHLOROPHENOL
Kaiser Hospital Site
Oakland, California

Date	Activity	Sample I.D.			
		Excavation	Stockpile	Air	Other
8/24/90	85 drums transferred to truck for transportation to incineration facility in South Carolina. Drums contained PCP-affected soil and debris from excavation.				
8/25/90	Approximately 104 cubic yards of soil removed and transported from hillside stockpile area. Four soil samples collected from base of stockpile.		SP-1, SP-2		SP-3, SP-4
8/26/90	Soil removed and transferred from hazardous waste storage bins. Storage bins decontaminated, and two wipe samples collected from each for chemical analysis.				WP-1, WP-2, WP-3, WP-4
8/28/90	Based on 8/25/ and 8/26 sample results, approximately 15 additional cubic yards of soil removed from hillside. One storage bin recleaned. Soil samples collected from hillside and wipe samples from the decontaminated bin.		SP-5, SP-6		WP-6, WP-7

GEOMATRIX

TABLE 3

SUMMARY OF ANALYTICAL RESULTS
Kaiser Hospital Site
Oakland, California

Date	Sample	Depth[1] (feet)	Mineral Spirits	Chemical Concentrations (mg/kg or ppm) PCP	TCP	Chemical concentrations in µg/g or parts per billion (ppb) TCDD	PCDD	HxCDD	HpCDD	OCDD	TCDF	PCDF	HxCDF	HpCDF	OCDF
EXCAVATION SAMPLES															
2/28/90	H-1	Surface		300	1000										
2/28/90	H-2	Surface		600	2000										
2/28/90	H-1/ H-2	Surface				ND[2]	ND	26	260	720	ND	ND	31	160	120
3/6/90	A	1	3100	ND	ND										
3/6/90	B	1	2400	28	83										
3/6/90	C	1	730	12	31										
3/6/90	D	1	ND	ND	ND										
3/6/90	E	1	860	31	73										
3/6/90	G	2	12,000	ND	ND										
3/6/90	H	2	1300	ND	ND										
3/11/90	SS-1	2		1000	3200	0.26	ND	38	430	1100	ND	ND	47	340	190
3/11/90	SS-2	2		380	1800	0.25	ND	30	330	940	ND	ND	36	250	150
3/21/90	1-S	2		28	170										
3/21/90	2-S	Surface		0.2	1.1										
3/21/90	3-S	2		560	3000										
3/21/90	4-S	2		7.3	33										
3/21/90	5-S	Surface		0.3	1.6										
3/21/90	6-S	2		21	54										
3/21/90	1-2	4		ND	ND										
3/21/90	3-2	4		2	4										
3/21/90	4-1	3		ND	ND										
3/21/90	5-2.5	2.5		ND	ND										
3/28/90	6-2	4		ND	ND										

GEOMATRIX

TABLE 3

SUMMARY OF ANALYTICAL RESULTS

Date	Sample	Depth[1] (feet)	Mineral Spirits	Chemical Concentrations (mg/kg or ppm) PCP	TCP	Chemical concentrations in µg/g or parts per billion (ppb) TCDD	PCDD	HxCDD	HpCDD	OCDD	TCDF	PCDF	HxCDF	HpCDF	OCDF
3/28/90	7	4		1	2										
3/28/90	8	5		ND	ND										
3/28/90	9	3		ND	ND										
3/28/90	10	4		ND	ND										
3/28/90	11	Surface		6	9										
3/28/90	12	Surface		ND	ND										
3/28/90	13	Surface		ND	ND										
3/28/90	14	1		ND	1										
3/28/90	15	3		41	57										
4/4/90	16	5		ND	ND										
4/4/90	17	1.5		ND	ND										
4/4/90	18	3.5		ND	ND										
8/28/90	SP-5	Hillside, Southwest corner		ND	ND										
	SP-6	Hillside, Southwest corner		ND	ND										
STOCKPILE SAMPLES															
		Location													
3/7/90	F	West temporary stockpile	2400	13	32										
3/7/90	I	Middle temporary stockpile	850	28	103										

GEOMATRIX

TABLE 3

SUMMARY OF ANALYTICAL RESULTS

Date	Sample	Depth[1] (feet)	Mineral Spirits	Chemical Concentrations (mg/kg or ppm) PCP	TCP	Chemical concentrations in µg/g or parts per billion (ppb) TCDD	PCDD	HxCDD	HpCDD	OCDD	TCDF	PCDF	HxCDF	HpCDF	OCDF
STOCKPILE SAMPLES (cont'd)															
3/7/90	J	East temporary stockpile	2100	53	135										
3/15/90	PILE-1	West stockpile		3.2	6										
3/15/90	PILE-2	East stockpile		2.6	5.5										
3/21/90	P1-COM	West stockpile		8	12	ND	ND	ND	2.2	10	ND	ND	0.10	0.81	0.97
3/21/90	P1-COM EX[3]	West stockpile		ND	0.16										
3/21/90	P2-COM	East stockpile		4	7	ND	ND	ND	1.5	6.1	ND	ND	0.09	0.60	0.66
3/21/90	P2-COM EX[3]	East stockpile		ND	0.16										
3/15/90	MC-1	Mech Bld (north)		ND	ND										
3/15/90	MC-2	Mech Bld (north)		2.3	4.7										
4/6/90	SGE	Stockpile grade elevation, (east)		5	11										
4/6/90	SGW	Stockpile, grade Elevation, (west)		ND	ND										

GEOMATRIX

TABLE 3

SUMMARY OF CHEMICAL ANALYTICAL RESULTS

Date	Sample	Depth[1] (feet)	Mineral Spirits	Chemical Concentrations (mg/kg or ppm) PCP	TCP	Chemical concentrations in µg/g or parts per billion (ppb) TCDD	PCDD	HxCDD	HpCDD	OCDD	TCDF	PCDF	HxCDF	HpCDF	OCDF
OTHER SAMPLES															
8/25/90	SP-1	Hillside		ND	ND										
	SP-2	Hillside		ND	ND										
	SP-3	Hillside		ND	ND										
	SP-4	Hillside		2	4										
3/23/90	YB-S-1-4	Bin		73	120	ND	ND	1.6	42	250	ND	ND	1.8	13	20
3/23/90	YB-S-1-4 EX[3]	Bin		0.68	5.8	ND	ND	ND	0.022	0.015	ND	ND	ND	ND	ND
3/23/90	YB-C	Bin		31	60	ND	ND	1.3	36	210	ND	ND	1.5	11	16
3/23/90	YB-C EX[3]	Bin		0.44	3.5										
3/23/90	D1-4	Drum		16	40	ND	ND	0.69	18	110	ND	ND	0.74	5.5	8.4
3/23/90	D1-4 EX[3]	Drum		0.26	2	ND	ND	ND	0.0039	0.0039	ND	ND	ND	ND	ND
3/23/90	D19-22	Drum		16	38	ND	ND	1.7	42	240	ND	ND	1.8	13	20
3/23/90	D19-22 EX[3]	Drum		0.4	3										
3/29/90	B-33	Backfill, depth 10 ft		ND	ND										
3/29/90	B-34	Backfill, depth 3 ft		ND	ND										
3/29/90	B-35	Backfill, depth 6 ft		ND	ND										
3/29/90	B-36	Mech Bld (interior), depth 5 ft		ND	ND										

GEOMATRIX

TABLE 3

SUMMARY OF CHEMICAL ANALYTICAL RESULTS

Notes:

All samples analyzed for PCP and TCP by EPA Method 8270 except B, C, F, I, J, which were analyzed by EPA Method 8040.

[1] Sample depth is depth into hillside slope as it existed prior to PCP excavation (3/6/90).
[2] ND = not detected. See laboratory reports for detection limits.
[3] Samples with suffix EX are extracted results analyzed in accordance with EPA's Toxicity Characteristic Leaching Procedure (TCLP). For PCP and TCP, results are in mg/l. For dioxin and furan, results are in ng/l.

PCP - Pentachlorophenol
TCP - 2,4,5-Trichlorophenol
TCDD - Tetrachlorodibenzo-dioxin
PCDD - Pentachlorodibenzo-dioxin
HxCDD - Hexachlorodibenzo-dioxin
HpCDD - Heptachlorodibenzo-dioxin
OCDD - Octachlorodibenzo-dioxin
TCDF - Tetrachlorodibenzo-furan
PCDF - Pentachlorodibenzo-furan
HxCDF - Hexachlorodibenzo-furan
HpCDF - Heptachlorodibenzo-furan
OCDF - Octachlorodibenzo-furan

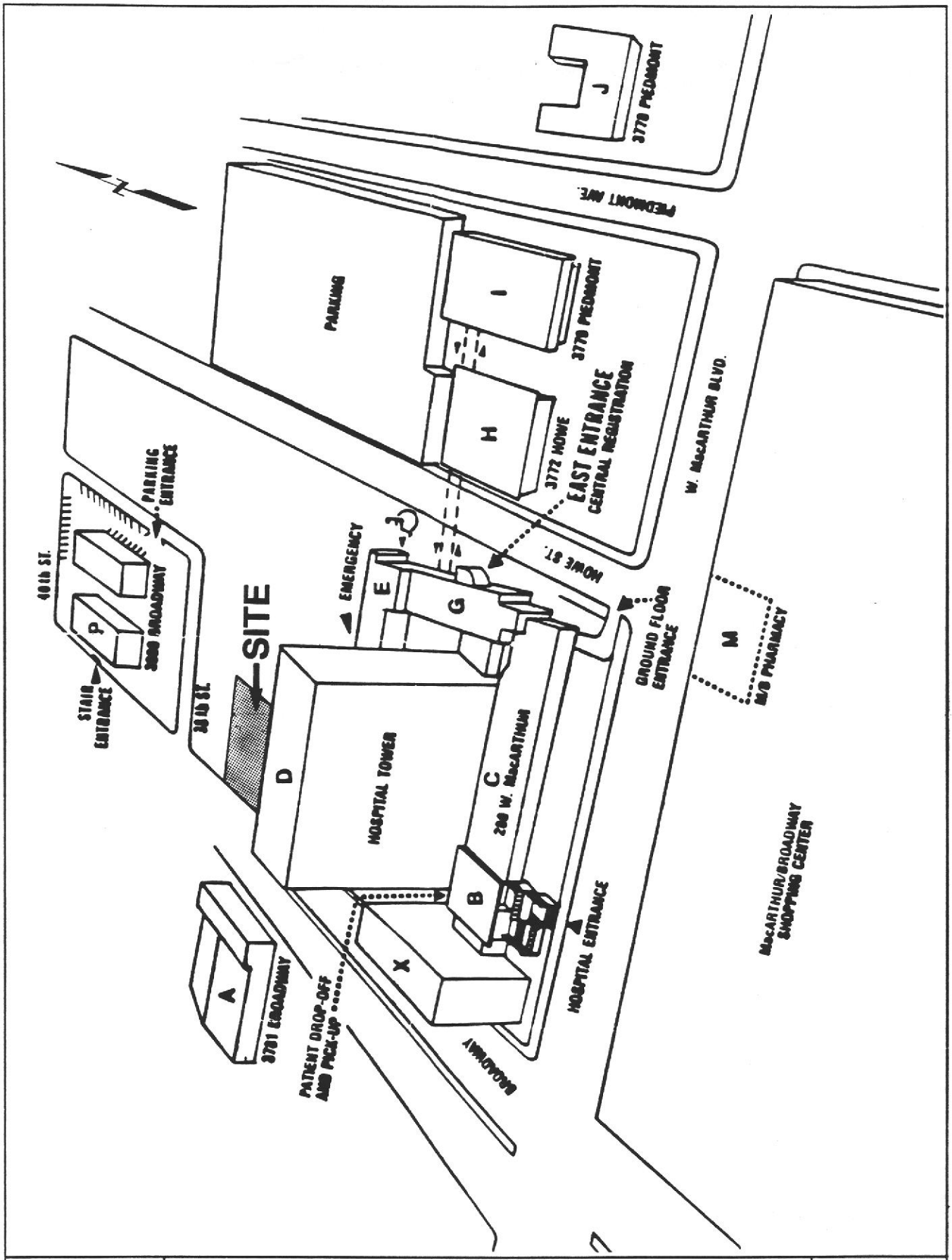
GEOMATRIX

GEOMATRIX

TABLE 4

SUMMARY OF SOIL REMOVED

Date	Approximate Quantity (cubic yards)	Description
8/24/90	21.25	85 55-gallon drums
8/25/90	104	Hillside area
8/26/90	40	Hazardous waste bins
8/28/90	15	Southwest corner of hillside area

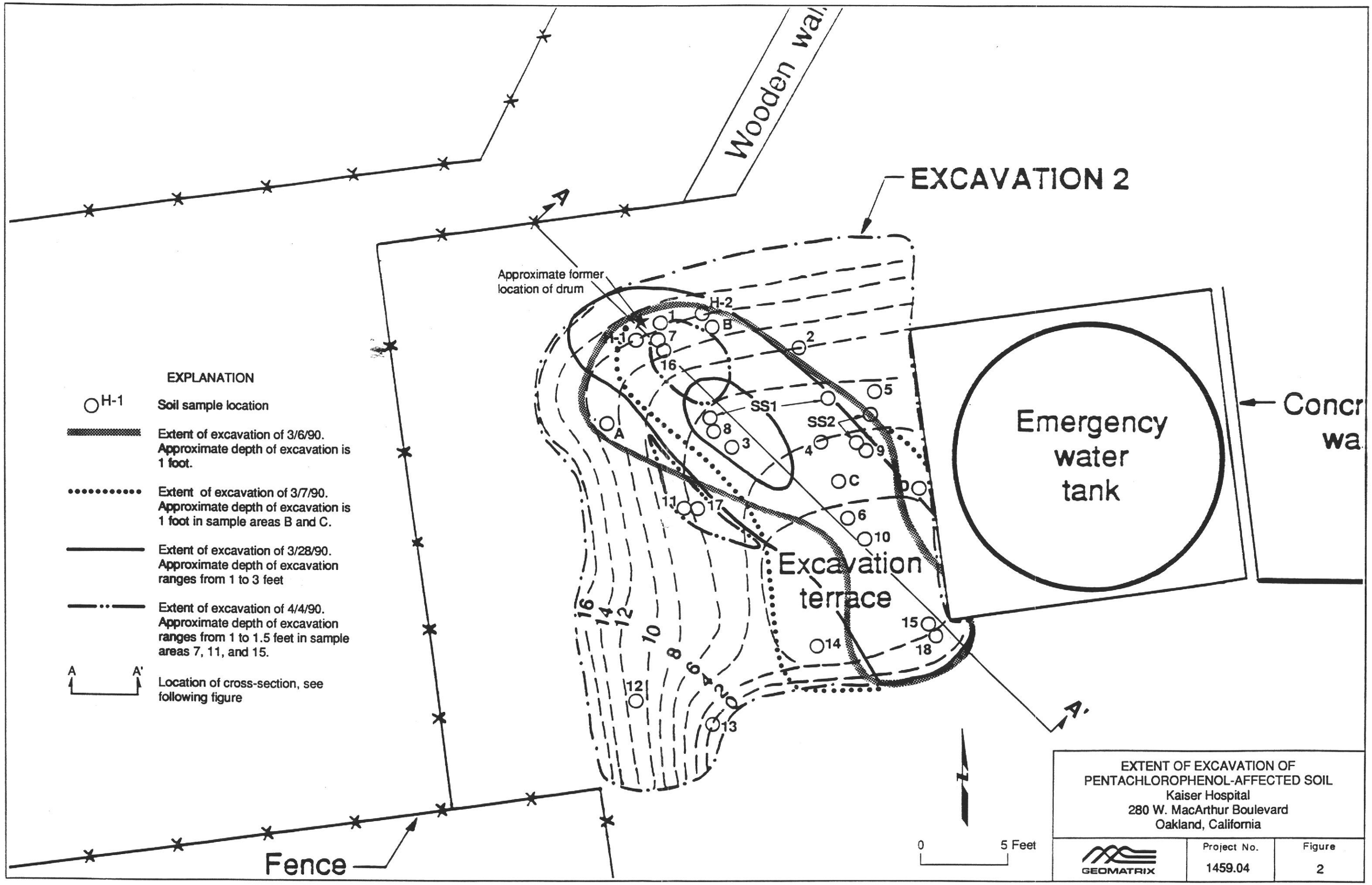


GEOMATRIX

SITE LOCATION
Kaiser Hospital
Oakland, California

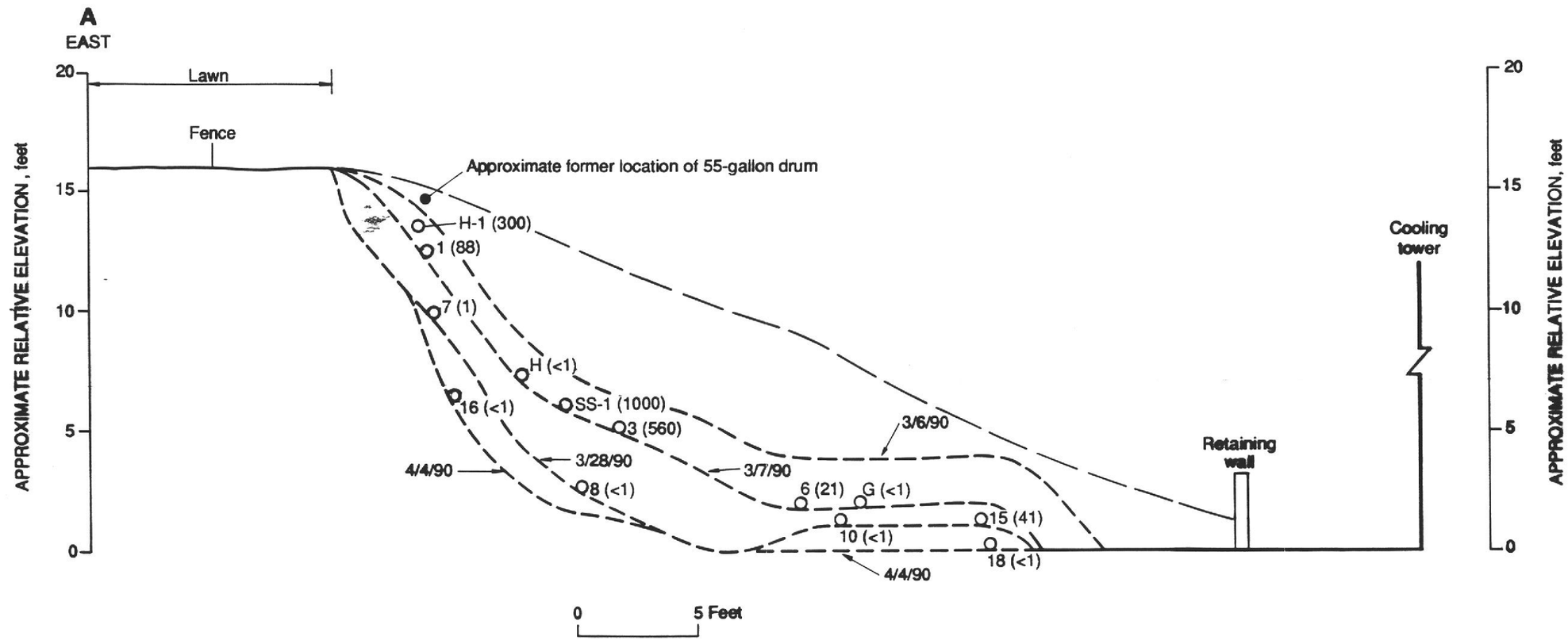
Figure
1

Project No.
1459.04



EXTENT OF EXCAVATION OF
PENTACHLOROPHENOL-AFFECTED SOIL
Kaiser Hospital
280 W. MacArthur Boulevard
Oakland, California

GEOMATRIX	Project No. 1459.04	Figure 2



EXPLANATION

(>1) 2 Soil sample location, concentration of pentachlorophenol detected in parentheses

———— Approximate extent of excavation at date indicated

– – – – Approximate slope surface before excavation

CROSS-SECTION OF
PENTACHLOROPHENOL EXCAVATION
Kaiser Hospital
280 W. MacArthur Boulevard
Oakland, California

GEOMATRIX	Project No. 1459.04	Figure 3

GEOMATRIX

HEALTH AND SAFETY PLAN

EXCAVATION MONITORING

Kaiser Construction Services
Kaiser Hospital Site
280 West MacArthur Boulevard
Oakland, California

Geomatrix Consultants

GEOMATRIX

TABLE OF CONTENTS

GEOMATRIX

HEALTH AND SAFETY PLAN

EXCAVATION MONITORING
Kaiser Construction Services
Kaiser Hospital Site
280 West MacArthur Boulevard
Oakland, California

1.0 INTRODUCTION

This Plan provides health and safety procedures to be followed during removal of soil containing hazardous materials originating for a buried drum located at the Kaiser Hospital site in Oakland, California. The contents were determined to be pentachlorophenol, 2,4,5-trichlorophenol contaminated with dioxin and dibenzofuran isomers. The purpose of this plan is to inform and educate all personnel involved in on-site field work of the potential hazards associated with the site, to assign responsibilities,. to establish personnel protective standards and safety procedures, and to provide for contingencies that may arise while activities are conducted at the site.

The provisions of this plan are mandatory for all on-site Geomatrix employees engaged activities associated with excavation monitoring and soil removal and shall be followed without acception unless specifically modified by the Project Manager and Health and Safety Officer. All contractors/ subcontractors shall provide a Health and Safety Plan for their employees, and subcontracting employees shall follow the health and safety procedures designated by their employer. The contractor/subcontractor may choose to use Geomatrix's Health and Safety Plan as a guide in developing its own action plan, or may choose to adopt Geomatrix's plan. In either case, the contractor/subcontractor shall hold Geomatrix harmless and indemnify it against all liability in case of injury.

Grossly inadequate health and safety precautions on the part of the contractor/subcontractor, or the belief that the contractor's/subcontractor's personnel are or may be exposed to an immediate health hazard, can be cause for Geomatrix to suspend further site work and ask that personnel to evacuate the hazard area. The contractor/subcontractor shall provide its own safety

equipment in accordance with its Health and Safety Plan requirements. In addition, the contractor/subcontractor shall comply with all applicable federal, state, and local health and safety regulations.

Field activities that may expose personnel to potential health and safety hazards are identified below:

- o Soil sampling and testing
- o Excavation monitoring

1.1 Site Location

The Kaiser Hospital site is located at 280 West MacArthur Boulevard near the intersection with Broadway in Oakland, California.

1.2 Site History

Geomatrix Consultants, Inc., was contracted by Kaiser Construction Services to assist in the removal of soil containing mineral spirits at the future location of a hospital addition. During excavation of the soil, a rusted buried durm was encountered. The contents of the drum leaked onto the soil within the excavation during removal of the drum. A sample of the soil containing the drum contents was sampled and identified to be pentachlorophenol and 2,4,5-trichlorophenol. Subsequent analysis indicated that the material in the drum also contained low concentrations of hexachloro-, heptachloro-, and octachlorodibenzodioxins and corresponding dibenzofurans.

2.0 ADMINISTRATIVE INFORMATION

Project Number: ~~1579C~~ 1459D NOF
Site Owner: Kaiser Permanante
Address/Location: 280 West MacArthur Boulevard, Oakland, California
Project Manager: Thomas E. Graf
Project Safety Officer: Debra Favre
Site Safety Officer: Cheri Young

3.0 RESPONSIBILITIES

A. Project Manager

The Project Manager (PM) shall: (1) direct all project activities, including contractor selection and site characterization activities; (2) make the Project Health and Safety Officer aware of all pertinent project developments and plans; and (3) make all resources available that are necessary for a safe working environment.

C. Project Safety Officer

The Project Safety Officer (PSO) shall direct all health and safety aspects of the investigation. The PSO has the primary responsibility to:

1. Ensure that all personnel have received required training, are aware of the potential hazards associated with site operations, are instructed in the work practices necessary for personal safety, and are familiar with the plan's procedures for dealing with emergencies.
2. Monitor the safety performance of all personnel and correcting any work practices or conditions that may result in injury or exposure to hazardous substances or safety hazards.
3. Perform required exposure monitoring to evaluate any potential health hazards that personnel could be exposed to at the site.
4. Prepare any accident/incident reports.
5. Make modifications to the Health and Safety Plan as required based on accidents/incidents and findings regarding personnel exposures and work practices.
6. Report all accident/incidents and findings regarding personnel exposure and work practices observed to the Project Manager.

D. Site Safety Officer

The Site Safety Officer (SSO) shall implement all health and safety aspects of monitoring site characterization activities at the site. The SSO shall:

1. Ensure that appropriate personal protective equipment is available and properly utilized by all on-site personnel.

2. Observe any subcontractor's health and safety procedures/ precautions. If it is the belief of the SSO that subcontractor's personnel are or may be exposed to an immediate health hazard, the SSO shall suspend the subcontractor's site work. If the subcontractor's personnel do not have appropriate equipment to perform work without risking exposure to health hazards, the SSO shall consult with the PM or PSO for further action before proceeding with the work

3. Implement the project Health and Safety Plan, and report any deviation from anticipated site conditions described in the Plan.

4. Calibrate monitoring equipment on a daily basis and properly record and file the results.

5. Maintain monitoring equipment and provide for maintenance as necessary.

6. Assume other duties as directed by the PM and PSO.

7. Report accident/incidents or inadequate work practices observed to the PSO.

E. Project Personnel

Project personnel involved in on-site investigations and operations are responsible to:

1. Take all reasonable precautions to prevent injury to themselves and to their fellow employees.

2. Perform only those tasks that they believe they can do safely, and immediately report accidents and/or unsafe conditions to the SSO or PSO.

3. Implement the procedures set forth in the Health and Safety Plan, and report deviations from the procedures described in the Plan to the SSO and PSO for action.

4.0 SITE CONTROL

The purpose of site control is to minimize the potential for exposure to the chemicals of concern for workers and the public, and to prevent vandalism at the site.

4.1 Site Security

The site is enclosed by fencing and access is restricted by entry through a locked gate. Only authorized personnel and vehicles shall enter the site.

4.2 Hazard Zones

To reduce the accidental spread of contaminated soil by workers from the contaminated area to the clean area and to limit number of workers potentially exposed to chemicals detected, zones will be delineated where different types of work will occur. The flow of personnel between the zones will be controlled through a single access point into each of the zones. The three site zones shall be established as described below.

1. Red Zone - Exclusion zone whre contamination occurs and cleanup activities are conducted. Only persons working directly on cleanup shall be permitted within this zone.

2. Yellow Zone - Contaminant reduction zone, the transiiton zone between the contaminated area and the clean area, and a perimeter around the Red Zone. This area is where personnel and euqipment decontanation occurs. Only personnel directly working on cleanup and helping with decontamination shall be permitted with this zone.

3. Green Zone - The clean zone, where administrative and other support functions are located.

The Yellow and Red Zones shall be identified by either fencing or tape. Within the Yellow Zone, personnel and equipment will be cleaned in a designated decontamination area before moving into the Green Zone. All equipment must be decontaminated in the Yellow Zone before entering the Green zone. All wash wate and disposable clothing and equipment must be collected and stored in drums in the Yellow Zone until transported for disposal.

4.3 Communication

During field activities site personnel shall not work alone. Both partners are responsible for:

Providing the other partner with assistance.

Observing the other partner for signs of chemical or heat exposure.

Checking the integrity of the other partner's protective equipment.

Obtaining emergency assistance, providing first response First Aid and notifying others.

5.0 CHEMICAL HAZARD ASSESSMENT AND REVIEW OF TOXICOLOGY

The relative toxicity of the chemicals suspected to be present in soil and groundwater at the site were evaluated based on the chemical's Threshold Limit Value (TLV) and/or by reviewing toxicity literature. TLV's are developed by the American Conference of Government Industrial Hygienists (ACGIH) and are defined as the airborne concentration of a chemical to which it is believed that nearly all workers may be repeatedly exposed day after day without adverse effect. Eight-hour time-weighted average threshold limit value concentration limits are for a normal 8-hour workday and a 40-hour work week. For comparison, applicable California Occupational Safety and Health Administration (CalOSHA) Permissible Exposure Limits (PEL) are also listed. PELs are legal limits for the maximum permitted 8-hour time-weighted average concentration of an airborne contaminant that any worker may be exposed to day after day without adverse effect.

Compound	TLV* (mg/m^3)	PEL** (mg/m^3)
Pentachlorophenol	0.5	0.5
2,4,5-Trichlorophenol	NA	NA
Dioxins	NA	NA
Dibenzofurans	NA	NA
Mineral Spirits	100 ppm	NA

N/A = No Applicable Limit

* = Recommended Limits. Not legally enforceable.
** = Legally enforceable limits.

When airborne contaminant levels are above detection, respiratory protection will be required for all personnel.

Of the chemicals suspected to be present at the site, pentachlorophenol, 2,4,5-trichlorophenol, dioxin isomers and dibenzofuran isomers are subject to warning requirements under the California Safe Drinking Water and Toxic Enforcement Act (also known as Proposition 65). These chemical which may be present at the site, are known to the State of California to cause cancer.

6.0 PHYSICAL HAZARD ASSESSMENT

A. Safety and Physical Hazards

In addition to potential chemical hazards, the ~~Eureka Waterfront~~ site NOT ~~Property~~ may contain a number of physical safety hazards such as:

- Falling/flying objects
- Holes, uneven ground surface
- Slippery surfaces
- Buried underground conduits
- Heavy equipment and train traffic

All personnel will be aware of these hazards and take all practical measures to reduce the risk of accidents.

B. Electrical Hazards

Overhead power lines, underground power cables and electrical equipment used on-site may pose a danger of shock, electrocution or fire if contacted or severed during site activities.

Prior to commencing any subsurface work such as drilling, check for underground utilities (electricity, gas, water, telephone, sewer, storm drain), and the locations of overhead power lines. The following are minimum clearances from overhead high voltage lines:

Nominal Voltage (phase to phase)	Minimum Required Clearance (feet)
750 - 50,000	10
50,000 - 75,000	11
75,000 - 125,000	13
125,000 - 175,000	15
250,000 - 350,000	21
370,000 - 550,000	27
550,000 - 1,000,000	42

It is desirable to entirely avoid working under overhead high voltage lines when possible. Many experienced drillers consider these minimum clearances unacceptable, especially the distances for the higher voltage lines. A driller should not be required to set up his equipment against his better judgement.

C. Noise

Work around large heavy equipment, such as drilling rigs, earth movers, etc., often creates excessive noise. The effects of noise can include:

Workers being startled, annoyed or distracted.

Physical damage to the ear, pain, and temporary and/or permanent hearing loss.

Communication interference that may increase potential hazards due to the inability to warn of danger and the proper safety precautions to be taken.

Hearing protection shall be worn when noise levels exceed 85 dba.

D. Heat Stress

In its early stages, heat stress can cause rashes, cramps, discomfort and drowsiness, resulting in impaired functional ability that threatens the safety of both the individual and co-workers. Continued heat stress can lead to heat stroke and death.

To avoid heat stress, frequently replace fluids by drinking water and taking rests periodically. At the first sign of heat stress remove affected personnel from the hazard and evaluate the need for medical attentional and/or modifications in work schedule or equipment.

E. Ultraviolet Radiation

Exposure of skin to ultraviolet radiation can pose a hazard of sunburn. Clothing or sunscreen should be used to protect against sunburn if weather is clear.

F. Other

No confined spaces are anticipated at the site. If a confined space problem is identified in the field, the PM shall be notified immediately and no personnel shall enter the space until a confined space entry plan is developed.

7.0 AIR MONITORING PROGRAM

Air sampling may be conducted as part of the site health and safety program. Air sampling will consist of monitoring at the site perimeter and in Red Zone. The Project Health and Safety Officer will determine the frequency of air sampling required.

8.0 EDUCATION AND TRAINING

Each employee assigned to participate in field activities will complete health and safety training before field work begins. The training program will include:

a. Chemical toxicity

b. Use of personal safety equipment

c. Site work zones.

d. Site work areas.

e. Hazard recognition

f. Decontamination procedures

Upon completion of the training, each participant will sign a training record.

9.0 CORPORATE HEALTH AND SAFETY PROGRAM

As a corporate policy, all Geomatrix employees assigned to participate in field activities will complete a 40-hour health and safety training course before fieldwork begins. The training program includes information about:

Work safety rules

Personal safety equipment

Review of physical and chemical hazards that may be encountered

Recognition of signs and symptoms of injury/chemical exposure/ environmental (heat, noise) exposure

Chemical toxicity

Respirator use and care, and qualitative fit testing of respirator

Decontamination procedures

Emergency response procedures

All Geomatrix field personnel shall participate in the Geomatrix medical monitoring program and have medical clearance prior to participating in field activities.

10.0 SAFETY PRACTICES

For chemical hazards, the four basic routes of exposure (inhalation, skin absorption, ingestion and eye contact) must be protected. Section 11.0 specifies the personal protective equipment or controls that shall be used for the activities to be performed at the site.

A. Respiratory Protection

To protect against the inhalation of toxic concentrations of particles and vapors, a respirator with a combination high-efficiency filter and an organic vapor adsorption cartridge will be available to Geomatrix personnel.

The respirator(s) shall be the full-face type approved by NIOSH/MSHA. Only respirator cartridges manufactured by the same manufacturer as the respirator being worn shall be used. Each person required to use a respirator shall have medical clearance from a licensed physician and have been trained to use a respirator prior to initiating the project. All persons required to wear a respirator shall be clean shaven and contact lenses shall not be worn when wearing a respirator.

B. Skin Absorption

Skin exposure to on-site chemical can result in skin irritation and/or penetration. The following safety rules shall be followed when working with soil, mud, groundwater or other materials that may be contaminated with hazardous chemicals:

1. Protect skin areas that may come in contact with the hazardous material. Skin protection includes wearing rubber boots, work clothes, and gloves.

2. After completing work, decontaminate boots in the designated area in the Yellow Zone using an non-ionic decontamination solution. Use gloves during decontamination.

3. Bag all contaminated rags and other disposable items, such as gloves and coveralls, and dispose in designated on-site drums in the Yellow Zone.

4. Avoid walking through potentially contaminated puddles, mud, and other discolored surfaces.

C. Ingestion

Eating, drinking, chewing gum or tobacco, or smoking, are prohibited on-site. Furthermore, liquids will not be pipetted or syphoned by mouth under any circumstances.

The hands and face must be thoroughly washed upon leaving the work areas and before any eating, drinking or smoking occurs.

D. Eye Contact

The following precautions will be taken to avoid eye injury:

1. Wear appropriate safety goggles or glasses when near rotating, vibrating or other heavy equipment.

2. Do not rub eyes.

3. Do not wear contact lenses when working in areas where hazardous materials may be encountered. OSHA regulations do not allow contact lenses to be worn while using respirators.

E. General Safety Rules

1. Wear protective equipment and clothing provided, when required.

2. Wear approved hard hats in all construction areas and during drilling activities.

3. Wear safety glasses or face shields whenever the situation poses an eye hazard.

4. Wear hearing protection when performing tasks around heavy equipment which emit noise levels greater than 85 dBA. (This is likely to occur around soil compacting equipment, drilling rigs, and other impact equipment.)

5. Wear sturdy work boots or shoes at the site. Steel-toed boots are preferred.

6. Prevent, to the extent possible, spillage of hazardous material. In the event that a spill occurs, contain the material if possible, initiate cleanup, and report the spill to the project manager.

7. Prevent splashing of contaminated materials.

8. Prevent back injury by never lifting or carrying a load that is more than you can comfortably handle. When lifting heavy objects, bend the knees and use the leg muscles.

9. Keep all heat sources away from combustible liquids, gases or any flammable materials. When working in areas where combustible gases are present, use only intrinsically safe equipment (no-sparking).

10. Field crew members shall be familiar with the physical characteristics of investigations, including:

    Wind direction in relation to contamination areas

    Accessibility of other personnel, equipment and vehicles

    Areas of known or suspected contamination

    Site access

    Nearest water sources

11. The number of personnel and equipment in the contaminant areas should be minimized to the extent necessary to perform the task at hand.

12. All wastes generated during investigative activities at the site shall be disposed of as directed by the PM.

13. Inspect power cords for damage such as cuts or frays. Suspend cords with nylon rope or plastic ties only.

14. When in doubt of your safety, it is better to over-protect.

Full-face respirators with combination high-efficiency particulate filter and carbon adsorption cartridges.

Saranak suit.

Double glove as described above for Red Zone.

Chemical resistant boots.

Hard Hat.

3. Green Zone - EPA Protection Level D.

Work long-sleeved shirt and long pants.

Hard Hat.

12.0 DECONTAMINATION PROCEDURES

Personnel, equipment and sample exteriors leaving the site shall be thoroughly decontaminated in the designated area within the Yellow Zone.

Equipment (soil samplers, backhoe, trucks, etc.,)

Detergent wash, tap water rinse and final rinse with deionized water.
Scrub or scrape using a brush, scrapper or sponge with detergent wash for adhering contaminants.

Protective Equipment

Respirators - Remove filters or chemical cartridges, wash with a mild detergent in warm water using a brush. Thoroughly rinse with a disinfectant solution and then air dry in a clean place. Care should be taken to prevent rough handling.

Gloves - discard.

Coveralls - discard.

Boots - detergent wash, tap water rinse.

Personnel

Thorough bathing with soap and water after leaving site.

Vehicles

Thorough wash down of exterior with tap water.

13.0 REPORTING REQUIREMENTS

Employees are required to report to the Project Safety Officer any unexpected or irregular occurrences relating to health and safety which may be encountered during the course of work on the project, including accidents, injuries, spills, etc.

Comments relating to the general safety procedures followed each day will be included in the daily field record by the Site Safety Officer.

14.0 EMERGENCIES

In the event of an accident or emergency conditions, the procedure listed below shall be followed immediately. Emergency conditions are:

An accident (physical or chemical) involving any field personnel, or if anyone experiences adverse effects or symptoms of exposure while onsite.

Discovery of a situation more hazardous than anticipated.

Accidental release of hazardous materials or waste.

The Site Safety Officer shall take charge and follow the emergency procedures listed below:

1. Remove the injured or exposed person(s) from immediate danger if possible.

2. If a serious injury or life-threatening condition exists CALL AN AMBULANCE and alert the ~~St. Joseph Hospital~~ Kaiser Hospital that an injury has occurred. Clearly describe location, injury and conditions to the ambulance dispatcher. Designate a person to direct emergency equipment to the injured person. MOF

3. Provide emergency first aid, if possible.

4. If there is any question as to the nature of injury or what should be done, call an ambulance or appropriate emergency numbers.

5. Call the Project Manager — Office - (415) 957-9557, Home - (415) 863-6239

   or Project Safety Officer (Debra Favre) — Office - (415) 957-9557, Home - (415) 751-1825

6. Evacuate other on-site personnel to a safe place until the Assistant Project Manager or Project Safety Officer determines that it is safe for work to resume.

7. Immediately implement steps to prevent recurrence of the accident.

Emergency telephone numbers for the Oakland area are:

Kaiser Hospital Emergency Room — (415) 956-7600

Ambulance, Fire Department and Police Department 911

Kaiser Hospital is located adjacent to the site.

15.0 APPROVALS

Debra Favre
Project Safety Officer
Geomatrix Consultants

3/6/90
Date

Thomas E. Graf
Project Manager
Geomatrix Consultants

3/6/90
Date

Cheri Young
Site Safety Officer
Geomatrix Consultants

3/6/90
Date

CONTR\1579-H&S.TXT

APPENDIX B
SAMPLING METHODS

B.1 Excavation Soil Samples

Soil samples were acquired at the end of each day during excavation of PCP-affected soil, as well as between excavation periods, to confirm that PCP-affected soils had been removed. Samples were collected in clean brass liners; soil from each sample location was tightly packed by hand or with a hammer sampler into a liner, which then was sealed with aluminum foil, plastic caps, and electrical tape. Samples were labeled immediately and stored in a chest with ice. At the end of the sampling day, the samples were delivered to the analytical laboratory. Samples were acquired from the surface of the excavation and from various depths below that day's excavation bottom.

B.2 Stockpile Soil Samples

Before the drum containing PCP was discovered, soil excavated from the hillside was temporarily stored within and above a plastic-lined mineral spirits excavation located just west of the mechanical building. Stockpiles referenced as 1 and 2 on Table 3 were located on top of the backfill from the mineral spirits excavation. Stockpiles F, I, and J were generated on 7 March 1990 during PCP excavation. An additional stockpile, located along the north edge of the cooling tower (labeled mechanical building stockpile in Table 3), consisted of soil spilled during the excavation of PCP-affected soil. Stockpile soil samples were acquired from approximately six inches below the stockpile surface and packed into clean brass liners that were then sealed with aluminum foil, plastic end caps, and electrical tape. Samples were labeled immediately and stored in a chest with ice. Four grab samples from each stockpile were collected and composited by the laboratory, except for samples F, I, and J, which were composited in the field, and samples MC-1 and MC-2, which were grab samples and not composited.

B.3 Other Stockpiled Soil Samples

Soil samples also were collected from the following locations: one of the disposal bins filled with soil excavated on 7 March 1990; temporary stockpiles 1 and 2 (containing PCP-affected soil); soil placed in 55-gallon drums (from parts of stockpiles 1 and 2); backfill material for the mineral spirits excavation; and native soil under the mechanical building. All soil samples were collected in clean brass liners that were sealed, preserved, and delivered to the laboratory as described above. Individual samples from the storage bin were collected from approximately one foot below the soil surface using a hand auger and a hammer sampler. Four samples from the south side of the bin were composited by the laboratory. Because access to the north side of the bin was restricted, only one sample was collected from the center of the bin. Soil samples were collected by hand from approximately three inches below the soil surface in eight 55-gallon drums used to store PCP-affected soil. Samples D-1 through D-4 and D-19 through D-22 were composited by the laboratory into two samples for analysis. Samples B-33, B-34, and B-35 were taken from the mineral spirits excavation backfill at depths of 10, 3, and 6 feet, respectively. A hand auger was used to collect soil samples from the mineral spirits excavation backfill; each sample was transferred directly from the auger into a brass liner. This method also was used to collect a soil sample from five feet below the mechanical building in an area known to be affected by mineral spirits.

B.4 Wipe Samples

Soil excavation and transfer equipment was washed down with a non-ionic soap solution and water after soil excavation and transfer activities. Then one or more wipe samples was taken from the bucket and other areas that had contacted site soil. Wipe samples were taken by wiping a laboratory-grade filter paper saturated with acetone on an area of the equipment, then sealing the wipe in a sample jar and placing the jar on ice. A blank wipe prepared by saturating a clean filter with acetone was also analyzed to provide quality control.

WCAS
WEST COAST
ANALYTICAL
SERVICE, INC.

May 7, 1990

Ms. Debra Favre
GEOMATRIX CONSULTANTS
One Market Plaza
Spear Street Tower, Suite 717
San Francisco, CA 94105

Ref: WCAS Job Number 14971

Dear Ms. Favre:

Please find enclosed a revised laboratory report for WCAS Job No. 14971. The detection limit in Table I for 2,4,5 Trichlorophenol now reads 0.03 instead of 0.3.

Sincerely,
WEST COAST ANALYTICAL SERVICE, INC.

Robert Olson
for

Ramona Lee Northington
Laboratory Manager

RLN/am

Enclosures

March 9, 1990

WEST COAST ANALYTICAL SERVICE, INC.

GEOMATRIX CONSULTANTS
One Market Plaza
Spear Street Tower, Suite 717
San Francisco, CA 94105

Attn: Debra Favre

JOB NO. 14971 A

LABORATORY REPORT

Samples Received: Three (3) XAD Tubes
Date Received: 3-8-90
Purchase Order No: Proj#: 1459C

The samples were analyzed as follows:

Samples Analyzed	Analysis	Results
Three (3) XAD tubes	Pentachlorophenol and 2,4,5-Trichlorophenol by OSHA Method 39	Table I

B. Michael Hovanec
Senior Staff Chemist

Michael Shelton
Technical Director

9840 Alburtis Avenue • Santa Fe Springs, California 90670 • 213/948-2225

WEST COAST ANALYTICAL SERVICE, INC.

GEOMATRIX CONSULTANTS
Ms. Debra Favre

Job # 14971
March 9, 1990

LABORATORY REPORT

TABLE I

Sample ID	Volume (L)	Pentachlorophenol (mg/M^3)	2,4,5-Trichlorophenol (mg/M^3)
Blank	60*	ND	ND
Sample 3	79	ND	.04
Sample 4	93	ND	ND
TLV	-	0.5	-
Detection Limit	-	0.1	0.03

ND-Not Detected

* Assumed sample volume for calculation.

Date Analyzed: 3-8-90

March 9, 1990

WCAS
WEST COAST ANALYTICAL SERVICE, INC.

GEOMATRIX CONSULTANTS
One Market Plaza
Spear Street Tower, Suite 717
San Francisco, CA 94105

Attn: Debra Favre

JOB NO. 14971 A

LABORATORY REPORT

Samples Received: Three (3) XAD Tubes
Date Received: 3-8-90
Purchase Order No: Proj#: 1459C

The samples were analyzed as follows:

Samples Analyzed	Analysis	Results
Three (3) XAD tubes	Pentachlorophenol and 2,4,5-Trichlorophenol by OSHA Method 39	Table I

Michael Shelton
Senior Chemist

D. J. Northington, Ph.D.
Technical Director

9840 Alburtis Avenue • Santa Fe Springs, California 90670 • 213/948-2225 • FAX 213/948-5850

WEST COAST ANALYTICAL SERVICE, INC.

GEOMATRIX CONSULTANTS
Ms. Debra Favre

Job # 14963
March 9, 1990

LABORATORY REPORT

TABLE I

Sample ID	Volume (L)	Pentachlorophenol (mg/M^3)	2,4,5-Trichlorophenol (mg/M^3)
Blank	60*	ND	ND
Sample 1	60	ND	ND
Sample 2	82.5	ND	ND
TLV	-	0.5	-
Detection Limit	-	0.1	0.03

ND-Not Detected

* Assumed sample volume for calculation.

Date Analyzed: 3-8-90

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

Geomatrix Consultants
1 Mkt. Plaza, Spear St.#717
San Francisco, CA 94105

07/25/90

Attn: D. Favre

Re: Project: 1459.04
AEMC Lab Reference No.: L5019 Project No.: 1459.04
Date Samples Received: 07/11/90 Job No.: 795019
No. Samples Received: 1 Soil sample

These samples were received by AEMC intact and accompanied by chain-of-custody documentation.

The above referenced samples were analyzed as follows:

No. of Samples	Analysis
1	EPTOX 8 Metals Scan
1	Oil and Grease - gravimetric

Analytical results are attached to this letter. Please call if we can provide additional assistance.

Sincerely,

George Hampton
Laboratory Director

3249 Fitzgerald Road • Rancho Cordova, CA 95742 • Fax (916) 638-4510 • (916) 638-7301

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: EPTOX Metals, EPA Method 7000

CLIENT: Geomatrix Consultants
One Market Plaza
Spear Street Tower #717
San Francisco, CA

Project No.: 1459.04
Contact: D. Favre
Phone:

Project: 1459.04

AEMC Contact: M. Jaeger

Date Sampled: 07/11/90
Date Received:07/11/90
Date Digested:07/13/90
Date Analyzed:07/16/90
Date Reported:07/24/90
Client Sample I.D.: EP-1

Job No.: 795019
COC Log No.: 0106

AEMC I.D.: L5019-1
Batch No.: 50946,50947,50948
Matrix: Soil

Element	Results (mg/L)	Rpt. Limit (mg/L)	Method
Ag (Silver)	ND	0.050	7760
As (Arsenic)	ND	0.005	7061
Ba (Barium)	ND	10	7080
Cd (Cadmium)	ND	0.01	7130
Cr (Chromium - total)	0.10	0.050	7190
Hg (Mercury)	0.0014	0.0005	7471
Pb (Lead)	0.46	0.050	7420
Se (Selenium)	ND	0.005	7741

Rpt. Limit = Reporting Limit
ND = Not Detected at or above indicated Reporting Limit.

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: EPTOX Metals, EPA Method 7000

CLIENT: Geomatrix Consultants
One Market Plaza
Spear Street Tower =717
San Francisco, CA

Project No.: 1459.04
Contact: D. Favre
Phone:

Project: 1459.04

AEMC Contact: M. Jaeger

Date Sampled: 07/11/90
Date Received:07/11/90
Date Digested:07/13/90
Date Analyzed:07/16/90
Date Reported:07/24/90
Client Sample I.D.: Method Blank

Job No.: 795019
COC Log No.: 0106

AEMC I.D.: L5019-MB
Batch No.: 50946,50947,50948
Matrix: Soil

Element	Results (mg/L)	Rpt. Limit (mg/L)	Method
Ag (Silver)	ND	0.050	7760
As (Arsenic)	ND	0.005	7061
Ba (Barium)	ND	10	7080
Cd (Cadmium)	ND	0.01	7130
Cr (Chromium - total)	ND	0.050	7190
Hg (Mercury)	ND	0.0005	7471
Pb (Lead)	ND	0.050	7420
Se (Selenium)	ND	0.005	7741

Rpt. Limit = Reporting Limit
ND = Not Detected at or above indicated Reporting Limit.

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: EPTOX Metals, EPA Method 7000

CLIENT: Geomatrix Consultants
One Market Plaza
Spear Street Tower =717
San Francisco, CA

Project No.: 1459.04
Contact: D. Favre
Phone:

Project: 1459.04

AEMC Contact: M. Jaeger

Date Sampled: 07/11/90
Date Received:07/11/90
Date Digested:07/13/90
Date Analyzed:07/16/90
Date Reported:07/24/90

Job No.: 795019
COC Log No.: 0106

AEMC I.D.: L5019
Batch No.: 50946,50947,50948
Matrix: Soil

ELEMENT	Spike Conc. (mg/L)	MS %Rec	MSD %Rec	Duplicate RPD
Ag (Silver)	0.5	109%	116%	6%
As (Arsenic)	0.04	86%	88%	2%
Ba (Barium)	10	90%	90%	0%
Cd (Cadmium)	0.5	93%	90%	3%
Cr (Chromium - total)	0.5	86%	84%	2%
Hg (Mercury)	0.02	97%	97%	0%
Pb (Lead)	0.5	82%	80%	2%
Se (Selenium)	0.04	95%	115%	10%

MS = Matrix Spike
MSD = Matrix Spike Duplicate
% REC = Percent Recovery
RPD = Relative Percent Difference

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: EPTOX Metals, EPA Method 7000

CLIENT: Geomatrix Consultants
One Market Plaza
Spear Street Tower #717
San Francisco, CA

Project No.: 1459.04
Contact: D. Favre
Phone:

Project: 1459.04

AEMC Contact: M. Jaeger

Date Sampled: 07/11/90
Date Received: 07/11/90
Date Digested: 07/13/90
Date Analyzed: 07/16/90
Date Reported: 07/24/90

Job No.: 795019
COC Log No.: 0106

AEMC I.D.: L5019
Batch No.: 50946,50947,50948

Element	LCS Conc. (mg/L)	LCS %Rec
Ag (Silver)	0.5	94%
As (Arsenic)	0.04	90%
Ba (Barium)	10	96%
Cd (Cadmium)	0.5	90%
Cr (Chromium - total)	0.5	86%
Hg (Mercury)	0.02	102%
Pb (Lead)	0.5	82%
Se (Selenium)	0.04	111%

LCS = Laboratory Control Standards
% Rec = Percent Recovery

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: Total Oil & Grease, EPA Method 9071

CLIENT: Geomatrix Consultants
One Market Plaza
Spear Street Tower #717
San Francisco

Project No.: 1459.04
Contact: D. Favre
Phone:

Project: 1459.04

AEMC Contact: M. Jaeger

Date Sampled: 07/11/90
Date Received: 07/11/90
Date Extracted: 07/16/90
Date Analyzed: 07/16/90
Date Reported: 07/19/90

Job No.: 795019
COC Log No.: 01106

AEMC I.D.: L5019
Batch No.: 5935
Matrix: Soil

Sample I.D. Client	Sample I.D. AEMC	Concentration (mg/kg)	Rpt. Limit (mg/kg)
EP-1	L5019-1	ND	50
Method Blank	L5019-MB	ND	50

RPT. LIMIT = Reporting Limit
ND = Not Detected at or above indicated Reporting Limit.

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: Total Oil & Grease, EPA Method 9071

CLIENT: Geomatrix Consultants
One Market Plaza
Spear Street Tower #717
San Francisco

Project No.: 1459.04
Contact: D. Favre
Phone:

Project: 1459.04

AEMC Contact: M. Jaeger

Date Sampled: 07/11/90
Date Received: 07/11/90
Date Extracted: 07/16/90
Date Analyzed: 07/16/90
Date Reported: 07/19/90

Job No.: 795019
COC Log No.: 01106

AEMC I.D.: L5019
Batch No.: 5935
Matrix: Soil

Analyte	Spike Conc. (mg/kg)	MBS %Rec	MBSD %Rec	Duplicate RPD
Total Oil & Grease	250	97%	96%	1%

MBS = Method Blank Spike
MBSD = Method Blank Spike Duplicate
% REC = Percent Recovery
ND = Not Detected
RPD = Relative Percent Difference

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

Geomatrix Consultants
1 Mkt. Plaza, Spear St. #171
San Francisco, CA 94105

3/12/90

Attn: D. Favre

Re: Project: Geomatrix Consultants/1579C
AEMC Lab Reference No.: L4424
Date Samples Received: 03/01/90
No. Samples Received: 2 soil samples

These samples were received by AEMC in a chilled state, intact, and accompanied by chain-of-custody documentation.

The above referenced samples were analyzed as follows:

No. of Samples	Analysis
2	IR San
2	GCMS Semi Volatiles
1	Dioxins

Method 8270 surrogate standard recovery data could not be calculated/reported for samples "H-1" and "H-2" due to the presence of significant concentrations of hydrocarbons in these samples (surrogates were "diluted out").

Analytical results are attached to this letter. Please call if we can provide additional assistance.

Sincerely,

George Hampton
Laboratory Director

3249 Fitzgerald Road • Rancho Cordova, CA 95742 • Fax (916) 638-4510 • (916) 638-7301

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: FTIR Analysis

CLIENT: Geomatrix Consultants, Inc.
1 Market Plaza, Ste. 17
San Francisco, CA

P.O/Contract No.:
Contact: D. Favre
Phone:

Project: Geomatrix Consultants. Inc.

Lab Contact: M. Jaeger

Date Sampled: 2/28/90
Date Received: 3/1/90
Date Analyzed: 3/1/90

Job No.: 794424
COC Log No.: None

AEMC I.D.: L4424-1 & 2

Client Sample I.D.: H-1, H-2

Matrix: Soil

FTIR Analysis

The samples were extracted with Tetrahydrofuran, concentrated, and evaporated to dryness on a KBr plate. The samples were scanned for gross constituents. Absorption peaks indicate the sample to be a mixture of aliphatic and aromatic hydrocarbons, with major functional groups of chlorinated hydrocarbons and phenol-alcohol groups. Based on the composite spectrum the material's extractable compounds resemble a chlorinated phenol with other functional groups as minor constituents.

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: Tentatively Identified Compounds, EPA Method 8270

CLIENT: Geomatrix Consultants, Inc.
1 Market Plaza, Ste. 17
San Francisco, CA

P.O/Contract No.:
Contact: D. Favre
Phone:

Project: Geomatrix Consultants, Inc.

Lab Contact: M. Jaeger

Date Sampled: 2/28/90
Date Received: 3/1/90
Date Extracted: 3/1/90
Date Analyzed: 3/1/90

Job No.: 794424
COC Log No.: None

AEMC I.D.: L4424-1

Client Sample I.D.: H-1

Matrix: Soil

FRACTION	RETENTION TIME (Min.)	TENTATIVE IDENTIFICATION	ESTIMATED CONC. (mg/kg)
BNA	16.91	2,4,5-Trichlorophenol	1,000
	22.19	Pentachlorophenol	300

Estimated Reporting Limit = 100 mg/kg

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: Tentatively Identified Compounds, EPA Method 8270

CLIENT: Geomatrix Consultants, Inc.
1 Market Plaza, Ste. 17
San Francisco, CA

P.O/Contract No.:
Contact: D. Favre
Phone:

Project: Geomatrix Consultants, Inc.

Lab Contact: M. Jaeger

Date Sampled: 2/28/90
Date Received: 3/1/90
Date Extracted: 3/1/90
Date Analyzed: 3/1/90

Job No.: 794424
COC Log No.: None

AEMC I.D.: L4424-2

Client Sample I.D.: H-2

Matrix: Soil

FRACTION	RETENTION TIME (Min.)	TENTATIVE IDENTIFICATION	ESTIMATED CONC. (mg/kg)
BNA	16.91	2,4,5-Trichlorophenol	2,000
	22.20	Pentachlorophenol	600

Estimated Reporting Limit = 100 mg/kg

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: Base/Neutral Extractables, EPA Method 8270

CLIENT: Geomatrix Consultants
1 Mkt. Plaza, Spear St. =71
San Francisco, CA

P.O/Contract No.:
Contact: D. Favre
Phone:

Project: Geomatrix Consultants, Inc.

AEMC Contact: M. Smith

Date Sampled: 2/28/90
Date Received: 3/1/90
Date Extracted: 3/1/90
Date Analyzed: 3/6/90

Job No.: 794424
COC Log No.:

AEMC I.D.: L4424-1
Batch No.: 5193
Client Sample I.D.: H-1
Matrix: Soil

SURROGATES	SPIKE CONC. (mg/kg)	RECOVERY (percent)
Phenol-d6	NR	NR
2-Fluorophenol	NR	NR
2,4,6-Tribromophenol	NR	NR
Nitrobenzene-d5	NR	NR
2-Fluorobiphenyl	NR	NR
Terphenyl-d14	NR	NR

ANALYTES	CAS #	CONCENTRATION (mg/kg)	RPT. LIMIT (mg/kg)
Acenaphthene	83-32-9	ND	100
Acenaphthylene	208-96-8	ND	100
Anthracene	120-12-7	ND	100
Benzo(a)anthracene	56-55-3	ND	100
Benzo(b)fluoranthene	205-99-2	ND	100
Benzo(k)fluoranthene	207-08-9	ND	100
Benzo(g,h,i)perylene	191-24-2	ND	100
Benzo(a)pyrene	50-32-8	ND	100
Benzyl alcohol	100-51-6	ND	200
Bis(2-chloroethoxy)methane	111-91-1	ND	100
Bis(2-chloroethyl)ether	111-44-4	ND	100
Bis(2-chloroisopropyl)ether	108-60-1	ND	100
Bis(2-ethylhexyl)phthalate	117-81-7	ND	100
4-Bromophenyl phenyl ether	101-55-3	ND	100
Butylbenzyl phthalate	85-68-7	ND	100
4-Chloroaniline	106-47-8	ND	200
2-Chloronaphthalene	91-58-7	ND	100
4-Chlorophenyl phenyl ether	7005-72-3	ND	100
Chrysene	218-01-9	ND	100
Dibenzo(a,h)anthracene	53-70-3	ND	100
Dibenzofuran	132-64-9	ND	100
Di-n-butylphthalate	84-74-2	ND	100
1,2-Dichlorobenzene	95-50-1	ND	100
1,3-Dichlorobenzene	541-73-1	ND	100
1,4-Dichlorobenzene	106-46-7	ND	100
3,3'-Dichlorobenzidine	91-94-1	ND	200
Diethylphthalate	84-66-2	ND	100
Dimethylphthalate	131-11-3	ND	100
2,4-Dinitrotoluene	121-14-2	ND	100
2,6-Dinitrotoluene	606-20-2	ND	100
Di-n-octylphthalate	117-84-0	ND	100
Fluoranthene	206-44-0	ND	100
Fluorene	86-73-7	ND	100
Hexachlorobenzene	118-74-1	ND	100
Hexachlorobutadiene	87-68-3	ND	100

RPT. Limit = Reporting Limit
ND = Not Detected at or above indicated Reporting Limit
NR = Not Reported

3249 Fitzgerald Road • Rancho Cordova, CA 95742 • Fax (916) 638-4510 • (916) 638-7301

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: Base/Neutral Extractables (cont.), EPA Method 8270

CLIENT: Geomatrix Consultants
1 Mkt. Plaza, Spear St. =71
San Francisco, CA

P.O/Contract No.:
Contact: D. Favre
Phone:

Project: Geomatrix Consultants, Inc.

AEMC Contact: M. Smith

Date Sampled: 2/28/90
Date Received: 3/1/90
Date Extracted: 3/1/90
Date Analyzed: 3/6/90

Job No.: 794424
COC Log No.:

AEMC I.D.: L4424-1
Batch No.: 5193
Matrix: Soil

Client Sample I.D.: H-1

ANALYTES	CAS #	CONCENTRATION (mg/kg)	RPT. LIMIT (mg/kg)
Hexachlorocyclopentadiene	77-47-4	ND	100
Hexachloroethane	67-72-1	ND	100
Indeno(1,2,3-c,d)pyrene	193-39-5	ND	100
Isophorone	78-59-1	ND	100
2-Methylnaphthalene	91-57-6	ND	100
Naphthalene	91-20-3	ND	100
2-Nitroaniline	88-74-4	ND	500
3-Nitroaniline	99-09-2	ND	500
4-Nitroaniline	100-01-6	ND	500
Nitrobenzene	98-95-3	ND	100
N-Nitrosodiphenylamine	86-30-6	ND	100
N-Nitroso-di-n-propylamine	621-64-7	ND	100
Phenanthrene	85-01-8	ND	100
Pyrene	129-00-0	ND	100
1,2,4-Trichlorobenzene	120-82-1	ND	100

RPT. Limit = Reporting Limit
ND = Not Detected at or above indicated Reporting Limit

3249 Fitzgerald Road • Rancho Cordova, CA 95742 • Fax (916) 638-4510 • (916) 638-7301

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: Acid Extractables, EPA Method 8270

CLIENT: Geomatrix Consultants
1 Mkt. Plaza, Spear St. #71
San Francisco, CA

P.O/Contract No.:
Contact: D. Favre
Phone:

Project: Geomatrix Consultants, Inc.

AEMC Contact: M. Smith

Date Sampled: 2/28/90
Date Received: 3/1/90
Date Extracted: 3/1/90
Date Analyzed: 3/6/90

Job No.: 794424
COC Log No.:

Client Sample I.D.: H-1

AEMC I.D.: L4424-1
Batch No.: 5193
Matrix: Soil

ANALYTES	CAS #	CONCENTRATION (mg/kg)	RPT. LIMIT (mg/kg)
Benzoic Acid	65-85-0	ND	500
4-Chloro-3-methylphenol	59-50-7	ND	200
2-Chlorophenol	95-57-8	ND	100
2,4-Dichlorophenol	120-83-2	ND	100
2,4-Dimethylphenol	105-67-9	ND	100
2,4-Dinitrophenol	51-28-5	ND	500
2-Methyl-4,6-dinitrophenol	534-52-1	ND	500
2-Methylphenol	95-48-7	ND	100
4-Methylphenol	106-44-5	ND	100
2-Nitrophenol	88-75-5	ND	100
4-Nitrophenol	100-02-7	ND	500
Pentachlorophenol	87-86-5	190	100
Phenol	108-95-2	ND	100
2,4,5-Trichlorophenol	95-95-4	1200	100
2,4,6-Trichlorophenol	88-06-2	ND	100

Sample return - reporting limit too high CG

RPT. Limit = Reporting Limit
ND = Not Detected at or above indicated Reporting Limit

3249 Fitzgerald Road • Rancho Cordova, CA 95742 • Fax (916) 638-4510 • (916) 638-7301

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: Base/Neutral Extractables, EPA Method 8270

CLIENT: Geomatrix Consultants
1 Mkt. Plaza, Spear St. #71
San Francisco, CA

P.O/Contract No.:
Contact: D. Favre
Phone:

Project: Geomatrix Consultants, Inc.

AEMC Contact: M. Smith

Date Sampled: 2/28/90
Date Received: 3/1/90
Date Extracted: 3/1/90
Date Analyzed: 3/6/90

Job No.: 94424
COC Log No.:

Client Sample I.D.: H-2

AEMC I.D.: L4424-2
Batch No.: 5193
Matrix: Soil

SURROGATES	SPIKE CONC. (mg/kg)	RECOVERY (percent)
Phenol-d6	NR	NR
2-Fluorophenol	NR	NR
2,4,6-Tribromophenol	NR	NR
Nitrobenzene-d5	NR	NR
2-Fluorobiphenyl	NR	NR
Terphenyl-d14	NR	NR

ANALYTES	CAS #	CONCENTRATION (mg/kg)	RPT. LIMIT (mg/kg)
Acenaphthene	83-32-9	ND	200
Acenaphthylene	208-96-8	ND	200
Anthracene	120-12-7	ND	200
Benzo(a)anthracene	56-55-3	ND	200
Benzo(b)fluoranthene	205-99-2	ND	200
Benzo(k)fluoranthene	207-08-9	ND	200
Benzo(g,h,i)perylene	191-24-2	ND	200
Benzo(a)pyrene	50-32-8	ND	200
Benzyl alcohol	100-51-6	ND	400
Bis(2-chloroethoxy)methane	111-91-1	ND	200
Bis(2-chloroethyl)ether	111-44-4	ND	200
Bis(2-chloroisopropyl)ether	108-60-1	ND	200
Bis(2-ethylhexyl)phthalate	117-81-7	ND	200
4-Bromophenyl phenyl ether	101-55-3	ND	200
Butylbenzyl phthalate	85-68-7	ND	200
4-Chloroaniline	106-47-8	ND	400
2-Chloronaphthalene	91-58-7	ND	200
4-Chlorophenyl phenyl ether	7005-72-3	ND	200
Chrysene	218-01-9	ND	200
Dibenzo(a,h)anthracene	53-70-3	ND	200
Dibenzofuran	132-64-9	ND	200
Di-n-butylphthalate	84-74-2	ND	200
1,2-Dichlorobenzene	95-50-1	ND	200
1,3-Dichlorobenzene	541-73-1	ND	200
1,4-Dichlorobenzene	106-46-7	ND	200
3,3'-Dichlorobenzidine	91-94-1	ND	400
Diethylphthalate	84-66-2	ND	200
Dimethylphthalate	131-11-3	ND	200
2,4-Dinitrotoluene	121-14-2	ND	200
2,6-Dinitrotoluene	606-20-2	ND	200
Di-n-octylphthalate	117-84-0	ND	200
Fluoranthene	206-44-0	ND	200
Fluorene	86-73-7	ND	200
Hexachlorobenzene	118-74-1	ND	200
Hexachlorobutadiene	87-68-3	ND	200

RPT. Limit = Reporting Limit
ND = Not Detected at or above indicated Reporting Limit
NR = Not Reported

3249 Fitzgerald Road • Rancho Cordova, CA 95742 • Fax (916) 638-4510 • (916) 638-7301

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: Base/Neutral Extractables (cont.), EPA Method 8270

CLIENT: Geomatrix Consultants
1 Mkt. Plaza, Spear St. =71
San Francisco, CA

P.O/Contract No.:
Contact: D. Favre
Phone:

Project: Geomatrix Consultants, Inc.

AEMC Contact: M. Smith

Date Sampled: 2/28/90
Date Received: 3/1/90
Date Extracted: 3/1/90
Date Analyzed: 3/6/90

Job No.: 794424
COC Log No.:

AEMC I.D.: L4424-2
Batch No.: 5193
Client Sample I.D.: H-2
Matrix: Soil

ANALYTES	CAS #	CONCENTRATION (mg/kg)	RPT. LIMIT (mg/kg)
Hexachlorocyclopentadiene	77-47-4	ND	200
Hexachloroethane	67-72-1	ND	200
Indeno(1,2,3-c,d)pyrene	193-39-5	ND	200
Isophorone	78-59-1	ND	200
2-Methylnaphthalene	91-57-6	ND	200
Naphthalene	91-20-3	ND	200
2-Nitroaniline	88-74-4	ND	1000
3-Nitroaniline	99-09-2	ND	1000
4-Nitroaniline	100-01-6	ND	1000
Nitrobenzene	98-95-3	ND	200
N-Nitrosodiphenylamine	86-30-6	ND	200
N-Nitroso-di-n-propylamine	621-64-7	ND	200
Phenanthrene	85-01-8	ND	200
Pyrene	129-00-0	ND	200
1,2,4-Trichlorobenzene	120-82-1	ND	200

RPT. Limit = Reporting Limit
ND = Not Detected at or above indicated Reporting Limit

3249 Fitzgerald Road • Rancho Cordova, CA 95742 • Fax (916) 638-4510 • (916) 638-7301

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: Acid Extractables, EPA Method 8270

CLIENT: Geomatrix Consultants
1 Mkt. Plaza, Spear St. =71
San Francisco, CA

P.O/Contract No.:
Contact: D. Favre
Phone:

Project: Geomatrix Consultants, Inc.

AEMC Contact: M. Smith

Date Sampled: 2/28/90
Date Received: 3/1/90
Date Extracted: 3/1/90
Date Analyzed: 3/6/90

Job No.: 794424
COC Log No.:

AEMC I.D.: L4424-2
Batch No.: 5193
Matrix: Soil

Client Sample I.D.: H-2

ANALYTES	CAS #	CONCENTRATION (mg/kg)	RPT. LIMIT (mg/kg)
Benzoic Acid	65-85-0	ND	1000
4-Chloro-3-methylphenol	59-50-7	ND	400
2-Chlorophenol	95-57-8	ND	200
2,4-Dichlorophenol	120-83-2	ND	200
2,4-Dimethylphenol	105-67-9	ND	200
2,4-Dinitrophenol	51-28-5	ND	200
2-Methyl-4,6-dinitrophenol	534-52-1	ND	1000
2-Methylphenol	95-48-7	ND	200
4-Methylphenol	106-44-5	ND	200
2-Nitrophenol	88-75-5	ND	200
4-Nitrophenol	100-02-7	ND	1000
Pentachlorophenol	87-86-5	560	200
Phenol	108-95-2	ND	200
2,4,5-Trichlorophenol	95-95-4	3000	200
2,4,6-Trichlorophenol	88-06-2	ND	200

RPT. Limit = Reporting Limit
ND = Not Detected at or above indicated Reporting Limit

3249 Fitzgerald Road • Rancho Cordova, CA 95742 • Fax (916) 638-4510 • (916) 638-7301

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: Base/Neutral Extractables, EPA Method 8270

CLIENT: Geomatrix Consultants
1 Mkt. Plaza, Spear St. #71
San Francisco, CA

P.O/Contract No.:
Contact: D. Favre
Phone:

Project: Geomatrix Consultants, Inc.

AEMC Contact: M. Smith

Date Sampled: 2/28/90
Date Received: 3/1/90
Date Extracted: 3/1/90
Date Analyzed: 3/6/90

Job No.: 794424
COC Log No.:

Client Sample I.D.: Method Blank

AEMC I.D.: L4424-MB
Batch No.: 5193
Matrix: Soil

SURROGATES	SPIKE CONC. (mg/kg)	RECOVERY (percent)
Phenol-d6	NR	NR
2-Fluorophenol	NR	NR
2,4,6-Tribromophenol	NR	NR
Nitrobenzene-d5	NR	NR
2-Fluorobiphenyl	NR	NR
Terphenyl-d14	NR	NR

ANALYTES	CAS #	CONCENTRATION (mg/kg)	RPT. LIMIT (mg/kg)
Acenaphthene	83-32-9	ND	100
Acenaphthylene	208-96-8	ND	100
Anthracene	120-12-7	ND	100
Benzo(a)anthracene	56-55-3	ND	100
Benzo(b)fluoranthene	205-99-2	ND	100
Benzo(k)fluoranthene	207-08-9	ND	100
Benzo(g,h,i)perylene	191-24-2	ND	100
Benzo(a)pyrene	50-32-8	ND	100
Benzyl alcohol	100-51-6	ND	200
Bis(2-chloroethoxy)methane	111-91-1	ND	100
Bis(2-chloroethyl)ether	111-44-4	ND	100
Bis(2-chloroisopropyl)ether	108-60-1	ND	100
Bis(2-ethylhexyl)phthalate	117-81-7	ND	100
4-Bromophenyl phenyl ether	101-55-3	ND	100
Butylbenzyl phthalate	85-68-7	ND	100
4-Chloroaniline	106-47-8	ND	200
2-Chloronaphthalene	91-58-7	ND	100
4-Chlorophenyl phenyl ether	7005-72-3	ND	100
Chrysene	218-01-9	ND	100
Dibenzo(a,h)anthracene	53-70-3	ND	100
Dibenzofuran	132-64-9	ND	100
Di-n-butylphthalate	84-74-2	ND	100
1,2-Dichlorobenzene	95-50-1	ND	100
1,3-Dichlorobenzene	541-73-1	ND	100
1,4-Dichlorobenzene	106-46-7	ND	100
3,3'-Dichlorobenzidine	91-94-1	ND	200
Diethylphthalate	84-66-2	ND	100
Dimethylphthalate	131-11-3	ND	100
2,4-Dinitrotoluene	121-14-2	ND	100
2,6-Dinitrotoluene	606-20-2	ND	100
Di-n-octylphthalate	117-84-0	ND	100
Fluoranthene	206-44-0	ND	100
Fluorene	86-73-7	ND	100
Hexachlorobenzene	118-74-1	ND	100
Hexachlorobutadiene	87-68-3	ND	100

RPT. Limit = Reporting Limit
ND = Not Detected at or above indicated Reporting Limit
NR = Not Reported

3249 Fitzgerald Road • Rancho Cordova, CA 95742 • Fax (916) 638-4510 • (916) 638-7301

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: Base/Neutral Extractables (cont.), EPA Method 8270

CLIENT: Geomatrix Consultants
1 Mkt. Plaza, Spear St. #71
San Francisco, CA

P.O/Contract No.:
Contact: D. Favre
Phone:

Project: Geomatrix Consultants, Inc.

AEMC Contact: M. Smith

Date Sampled: 2/28/90
Date Received: 3/1/90
Date Extracted: 3/1/90
Date Analyzed: 3/6/90

Job No.: 794424
COC Log No.:

AEMC I.D.: L4424-MB
Batch No.: 5193
Matrix: Soil

Client Sample I.D.: Method Blank

ANALYTES	CAS #	CONCENTRATION (mg/kg)	RPT. LIMIT (mg/kg)
Hexachlorocyclopentadiene	77-47-4	ND	100
Hexachloroethane	67-72-1	ND	100
Indeno(1,2,3-c,d)pyrene	193-39-5	ND	100
Isophorone	78-59-1	ND	100
2-Methylnaphthalene	91-57-6	ND	100
Naphthalene	91-20-3	ND	100
2-Nitroaniline	88-74-4	ND	500
3-Nitroaniline	99-09-2	ND	500
4-Nitroaniline	100-01-6	ND	500
Nitrobenzene	98-95-3	ND	100
N-Nitrosodiphenylamine	86-30-6	ND	100
N-Nitroso-di-n-propylamine	621-64-7	ND	100
Phenanthrene	85-01-8	ND	100
Pyrene	129-00-0	ND	100
1,2,4-Trichlorobenzene	120-82-1	ND	100

RPT. Limit = Reporting Limit
ND = Not Detected at or above indicated Reporting Limit

3249 Fitzgerald Road • Rancho Cordova, CA 95742 • Fax (916) 638-4510 • (916) 638-7301

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: Acid Extractables, EPA Method 8270

CLIENT: Geomatrix Consultants
1 Mkt. Plaza, Spear St. #71
San Francisco, CA

P.O/Contract No.:
Contact: D. Favre
Phone:

Project: Geomatrix Consultants, Inc.

AEMC Contact: M. Smith

Date Sampled: 2/28/90
Date Received: 3/1/90
Date Extracted: 3/1/90
Date Analyzed: 3/6/90

Job No.: 794424
COC Log No.:

AEMC I.D.: L4424-MB
Batch No.: 5193
Matrix: Soil

Client Sample I.D.: Method Blank

ANALYTES	CAS #	CONCENTRATION (mg/kg)	RPT. LIMIT (mg/kg)
Benzoic Acid	65-85-0	ND	500
4-Chloro-3-methylphenol	59-50-7	ND	200
2-Chlorophenol	95-57-8	ND	100
2,4-Dichlorophenol	120-83-2	ND	100
2,4-Dimethylphenol	105-67-9	ND	100
2,4-Dinitrophenol	51-28-5	ND	500
2-Methyl-4,6-dinitrophenol	534-52-1	ND	500
2-Methylphenol	95-48-7	ND	100
4-Methylphenol	106-44-5	ND	100
2-Nitrophenol	88-75-5	ND	100
4-Nitrophenol	100-02-7	ND	500
Pentachlorophenol	87-86-5	ND	100
Phenol	108-95-2	ND	100
2,4,5-Trichlorophenol	95-95-4	ND	100
2,4,6-Trichlorophenol	88-06-2	ND	100

RPT. Limit = Reporting Limit
ND = Not Detected at or above indicated Reporting Limit

3249 Fitzgerald Road • Rancho Cordova, CA 95742 • Fax (916) 638-4510 • (916) 638-7301

Enseco
A CORNING Company

DUPLICATE CONTROL SAMPLE REPORT
Special Services by Low Resolution

Analyte	Concentration Spiked	Measured DCS1	Measured DCS2	Accuracy(%) DCS1	Accuracy(%) DCS2	Accuracy(%) Limits	Precision(RPD) DCS	Precision(RPD) Limits
Category: DXNFUR-S								
Matrix: SOIL								
QC Lot: 12 MAY 89-A								
Concentration Units: ng								
2378-TCDF	10	10	10	100	100	60-140	0	50
23478-PECDF	10	11	11	110	110	60-140	0	50
123478-HXCDF	10	11	11	110	110	60-140	0	50
1234678-HPCDF	10	10	10	100	100	60-140	0	50
12345678-OCDF	50	70	70	140	140	60-140	0	50
2378-TCDD	10	10	11	100	110	60-140	9.5	50
12378-PECDD	10	8.5	8.6	85	86	60-140	1.2	50
123478-HXCDD	10	9.0	9.2	90	92	60-140	2.2	50
1234678-HPCDD	10	9.3	9.2	93	92	60-140	1.1	50
12345678-OCDD	50	41	41	82	82	60-140	0	50

Enseco
CORNING Company

POLYCHLORINATED DIOXINS/FURANS

LOW RESOLUTION

Client Name: AETC
Client ID: H-1
Lab ID: 051740-0001-SA
Enseco ID: 139632
Matrix: SOIL
Sampled: 28 FEB 90
Received: 02 MAR 90
Authorized: 02 MAR 90
Prepared: 02 MAR 90
Analyzed: 05 MAR 90

Sample Amount 1.0G
Percent Moisture NA
Column Type DB-5

Parameter	Result	Units	Detection Limit	Data Qualifiers
Furans				
TCDFs (total)	ND	ng/g	0.068	
PeCDFs (total)	ND	ng/g	0.11	
HxCDFs (total)	31	ng/g	--	
HpCDFs (total)	160	ng/g	--	
OCDF	120	ng/g	--	
Dioxins				
TCDDs (total)	ND	ng/g	0.22	
PeCDDs (total)	ND	ng/g	0.33	
HxCDDs (total)	26	ng/g	--	
HpCDDs (total)	260	ng/g	--	
OCDD	720	ng/g	--	
	% Recovery			
13C-2,3,7,8-TCDF	57			
13C-2,3,7,8-TCDD	72			
13C-1,2,3,7,8-PeCDD	79			
13C-1,2,3,6,7,8-HxCDD	62			
13C-1,2,3,4,6,7,8-HpCDD	64			
13C-OCDD	34			

ND = Not detected
NA = Not applicable

Reported By: Andre Algazi
Approved By: Steve Rogers

The cover letter is an integral part of this report.
Rev 230787

Enseco
CORNING CLINICAL

POLYCHLORINATED DIOXINS/FURANS

LOW RESOLUTION

Client Name: AETC
Client ID: Method Blank
Lab ID: 051740-0001-MB
Matrix: SOIL
Authorized: NA

Enseco ID: 139633
Sampled: NA
Prepared: 02 MAR 90

Received: NA
Analyzed: 05 MAR 90

Sample Amount 1.0G
Percent Moisture NA
Column Type DB-5

Parameter	Result	Units	Detection Limit	Data Qualifiers
Furans				
TCDFs (total)	ND	ng/g	0.052	
PeCDFs (total)	ND	ng/g	0.039	
HxCDFs (total)	ND	ng/g	0.054	
HpCDFs (total)	ND	ng/g	0.077	
OCDF	ND	ng/g	0.44	
Dioxins				
TCDDs (total)	ND	ng/g	0.060	
PeCDDs (total)	ND	ng/g	0.13	
HxCDDs (total)	ND	ng/g	0.14	
HpCDDs (total)	ND	ng/g	0.097	
OCDD	ND	ng/g	0.24	

	% Recovery
13C-2,3,7,8-TCDF	42
13C-2,3,7,8-TCDD	56
13C-1,2,3,7,8-PeCDD	70
13C-1,2,3,6,7,8-HxCDD	57
13C-1,2,3,4,6,7,8-HpCDD	58
13C-OCDD	32

ND = Not detected
NA = Not applicable

Reported By: Andre Algazi

Approved By: Steve Rogers

The cover letter is an integral part of this report.
Rev 230787

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

Geomatrix Consultants
1 Mkt. Plaza, Spear St.#71
San Francisco, CA 94105

03/12/90

Attn: D. Favre

Re: Project: Geomatrix Consultants/1579C
AEMC Lab Reference No.: L4440 Job No.: 794440
Date Samples Received: 03/06/90
No. Samples Received: 5 Soil samples

These samples were received by AEMC in a chilled state, intact, and accompanied by chain-of-custody documentation.

The above referenced samples were analyzed as follows:

No. of Samples	Analysis
5	TCP, PCP and Stoddard Solvent
2	GCMS Semi-Volatiles

Analytical results are attached to this letter. Please call if we can provide additional assistance.

Sincerely,

George Hampton
Laboratory Director

3249 Fitzgerald Road • Rancho Cordova, CA 95742 • Fax (916) 638-4510 • (916) 638-7301

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: TCP, PCP & Stoddard Solvent; EPA Methods 8040/8015

CLIENT: Geomatrix Consultants
1 Mkt. Plaza, Spear St. #71
San Francisco, CA

P.O/Contract No.:
Contact: D. Favre
Phone:

Project: Geomatrix Consultants/1579C

AEMC Contact: M. Smith

Date Sampled: 3/6/90
Date Received: 3/6/90
Date Extracted: 3/6/90
Date Analyzed: 3/7/90

Job No.: 794440
COC Log No.: 847

AEMC I.D.: L4440

Matrix: Soil

Sample I.D. Client	AEMC	2,4,5-Trichlorophenol (mg/kg)	Pentachlorophenol (mg/kg)	Stoddard Solvent (mg/kg)
A	L4440-1	ND	ND	3,100
B	L4440-2	83	28	2,400
C	L4440-3	31	12	730
D	L4440-4	ND	ND	ND
E	L4440-5	73	31	860
Method Blank	L4440-MB	ND	ND	ND
REPORTING LIMIT*		10	10	100

*Unless otherwise indicated in parentheses

ND = Not Detected at or above indicated Reporting Limit.

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: Acid Extractables, EPA Method 8270

CLIENT: Geomatrix Consultants
1 Market Plaza, Ste. 717
San Francisco, CA 94105

Project: Geomatrix Consultants/1579C

Date Sampled: 3/7/90
Date Received: 3/7/90
Date Extracted: 3/7/90
Date Analyzed: 3/8/90

Client Sample I.D.: A

Project No.: 1579C
Contact: D. Favre
Phone:

AEMC Contact: M. Smith

Job No.: 794440
COC Log No.: 847

AEMC I.D.: L4440-1
Batch No.: 5237
Matrix: Soil

SURROGATE	SPIKE CONC. (mg/kg)	RECOVERY (percent)
Phenol-d6	2	50%
2-Fluorophenol	2	57%
2,4,6-Tribromophenol	2	126%

ANALYTES	CAS #	CONCENTRATION (mg/kg)	RPT. LIMIT (mg/kg)
Benzoic Acid	65-85-0	ND	1
4-Chloro-3-methylphenol	59-50-7	ND	1
2-Chlorophenol	95-57-8	ND	1
2,4-Dichlorophenol	120-83-2	ND	1
2,4-Dimethylphenol	105-67-9	ND	1
2,4-Dinitrophenol	51-28-5	ND	1
2-Methyl-4,6-dinitrophenol	534-52-1	ND	1
2-Methylphenol	95-48-7	ND	1
4-Methylphenol	106-44-5	ND	1
2-Nitrophenol	88-75-5	ND	1
4-Nitrophenol	100-02-7	ND	1
Pentachlorophenol	87-86-5	ND	1
Phenol	108-95-2	ND	1
2,4,5-Trichlorophenol	95-95-4	ND	1
2,4,6-Trichlorophenol	88-06-2	ND	1

ND = Not Detected at or above indicated Reporting Limit.

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: Acid Extractables, EPA Method 8270

CLIENT: Geomatrix Consultants
1 Market Plaza. Ste. 717
San Francisco, CA 94105

Project: Geomatrix Consultants/1579C

Date Sampled: 3/7/90
Date Received: 3/7/90
Date Extracted: 3/7/90
Date Analyzed: 3/8/90

Client Sample I.D.: D

Project No.: 1579C
Contact: D. Favre
Phone:

AEMC Contact: M. Smith

Job No.: 794440
COC Log No.: 847

AEMC I.D.: L4440-4
Batch No.: 5237
Matrix: Soil

SURROGATE	SPIKE CONC. (mg/kg)	RECOVERY (percent)
Phenol-d6	2	53%
2-Fluorophenol	2	44%
2,4,6-Tribromophenol	2	104%

ANALYTES	CAS #	CONCENTRATION (mg/kg)	RPT. LIMIT (mg/kg)
Benzoic Acid	65-85-0	ND	1
4-Chloro-3-methylphenol	59-50-7	ND	1
2-Chlorophenol	95-57-8	ND	1
2,4-Dichlorophenol	120-83-2	ND	1
2,4-Dimethylphenol	105-67-9	ND	1
2,4-Dinitrophenol	51-28-5	ND	1
2-Methyl-4,6-dinitrophenol	534-52-1	ND	1
2-Methylphenol	95-48-7	ND	1
4-Methylphenol	106-44-5	ND	1
2-Nitrophenol	88-75-5	ND	1
4-Nitrophenol	100-02-7	ND	1
Pentachlorophenol	87-86-5	ND	1
Phenol	108-95-2	ND	1
2,4,5-Trichlorophenol	95-95-4	ND	1
2,4,6-Trichlorophenol	88-06-2	ND	1

ND = Not Detected at or above indicated Reporting Limit.

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: Base/Neutral/Acid Extractables, EPA Method 8270

ANALYSIS REPORT: Acid Extractables, EPA Method 8270

CLIENT: Geomatrix Consultants
1 Market Plaza, Ste. 717
San Francisco, CA 94105

Project No.: 1579C
Contact: D. Favre
Phone:

Project: Geomatrix Consultants/1579C

AEMC Contact: M. Smith

Date Sampled: 3/7/90
Date Received: 3/7/90
Date Extracted: 3/7/90
Date Analyzed: 3/8/90

Job No.: 794440
COC Log No.: 847

AEMC I.D.: L4440
Batch No.: 5237
Matrix: Soil

SURROGATE	Spike Conc. (mg/kg)	MS %Rec	MSD %Rec
Phenol-d6	2	52%	59%
2-Fluorophenol	2	45%	45%
2,4,6-Dibromophenol	2	104%	111%

ANALYTE	Spike Conc. (mg/kg)	MS %Rec	MSD %Rec	Duplicate RPD
Acids				
Pentachlorophenol	2	71%	61%	15%
2,4,6-Trichlorophenol	2	42%	45%	7%

MS = Matrix Spike
MSD = Matrix Spike Duplicate
% Rec = Percent Recovery
RPD = Relative Percent Difference

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: Acid Extractables, EPA Method 8270

CLIENT: Geomatrix Consultants
1 Market Plaza, Ste. 717
San Francisco, CA 94105

Project No.: 1579C
Contact: D. Favre
Phone:

Project: Geomatrix Consultants/1579C

AEMC Contact: M. Smith

Date Sampled: 3/7/90
Date Received: 3/7/90
Date Extracted: 3/7/90
Date Analyzed: 3/8/90

Job No.: 794440
COC Log No.: 847

AEMC I.D.: L4440-MB
Batch No.: 5237
Matrix: Soil

Client Sample I.D.: Method Blank

SURROGATE	SPIKE CONC. (mg/kg)	RECOVERY (percent)
Phenol-d6	2	42%
2-Fluorophenol	2	30%
2,4,6-Tribromophenol	2	88%

ANALYTES	CAS #	CONCENTRATION (mg/kg)	RPT. LIMIT (mg/kg)
Benzoic Acid	65-85-0	ND	1
4-Chloro-3-methylphenol	59-50-7	ND	1
2-Chlorophenol	95-57-8	ND	1
2,4-Dichlorophenol	120-83-2	ND	1
2,4-Dimethylphenol	105-67-9	ND	1
2,4-Dinitrophenol	51-28-5	ND	1
2-Methyl-4,6-dinitrophenol	534-52-1	ND	1
2-Methylphenol	95-48-7	ND	1
4-Methylphenol	106-44-5	ND	1
2-Nitrophenol	88-75-5	ND	1
4-Nitrophenol	100-02-7	ND	1
Pentachlorophenol	87-86-5	ND	1
Phenol	108-95-2	ND	1
2,4,5-Trichlorophenol	95-95-4	ND	1
2,4,6-Trichlorophenol	88-06-2	ND	1

ND = Not Detected at or above indicated Reporting Limit.

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

Geomatrix Consultants
1 Mkt. Plaza, Spear St.#71
San Francisco, CA 94105

03/15/90

Attn: D. Favre

Re: Project: Kaiser Hospital/Oakland
AEMC Lab Reference No.: L4446 Job No.: 794446
Date Samples Received: 03/07/90
No. Samples Received: 5 Soil samples
1 Wipe sample

These samples were received by AEMC in a chilled state, intact, and accompanied by chain-of-custody documentation.

The above referenced samples were analyzed as follows:

No. of Samples	Analysis
6	PCP, TPC and Stoddard Solvent
2	GCMS Semi-Volatiles

Analytical results are attached to this letter. Please call if we can provide additional assistance.

Sincerely,

George Hampton
Laboratory Director

3249 Fitzgerald Road • Rancho Cordova, CA 95742 • Fax (916) 638-4510 • (916) 638-7301

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: TCP, PCP & Stoddard Solvent; EPA Methods 8040/8015

CLIENT: Geomatrix Consultants
1 Mkt. Plaza, Spear St. =71
San Francisco, CA

P.O/Contract No.:
Contact: D. Favre
Phone:

Project: Kaiser Hospital/Oakland

AEMC Contact: M. Smith

Date Sampled: 3/7/90
Date Received: 3/7/90
Date Extracted: 3/7/90
Date Analyzed: 3/8/90

Job No.: 794446
COC Log No.: 848

AEMC I.D.: L4446
Batch No.: 5247
Matrix: Soil

Sample I.D. Client	AEMC	2,4,5-Trichlorophenol (mg/kg)	Pentachlorophenol (mg/kg)	Stoddard Solvent (mg/kg)
=F	L4446-1	32	13	2,400
=G	L4446-2	ND	ND	12,000
=H	L4446-3	ND	ND	1,300
#I	L4446-4	103	28	850
#J	L4446-5	135	53	2,100
Method Blank	L4446-MB	ND	ND	ND
REPORTING LIMIT*		10	10	100

*Unless otherwise indicated in parentheses

ND = Not Detected at or above indicated Reporting Limit.

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: Acid Extractables, EPA Method 8270

CLIENT: Geomatrix Consultants
1 Mkt. Plaza, Spear St. =71
San Francisco, CA 94105

Project No.: 1459C
Contact: D. Favre
Phone:

Project: Kaiser Hospital/Oakland

AEMC Contact: M. Smith

Date Sampled: 3/7/90
Date Received: 3/7/90
Date Extracted: 3/8/90
Date Analyzed: 3/9/90

Job No.: 794446
COC Log No.: 848

AEMC I.D.: L4446-2
Batch No.: 5249
Matrix: Soil

Client Sample I.D.: #G

SURROGATE	CONCENTRATION (mg/kg)	RECOVERY (percent)
Phenol-d6	2	53%
2-Fluorophenol	2	40%
2,4,6-Tribromophenol	2	70%

ANALYTES	CAS #	CONCENTRATION (mg/kg)	RPT. LIMIT (mg/kg)
Benzoic Acid	65-85-0	ND	5
4-Chloro-3-methylphenol	59-50-7	ND	2
2-Chlorophenol	95-57-8	ND	1
2,4-Dichlorophenol	120-83-2	ND	1
2,4-Dimethylphenol	105-67-9	ND	1
2,4-Dinitrophenol	51-28-5	ND	5
2-Methyl-4,6-dinitrophenol	534-52-1	ND	5
2-Methylphenol	95-48-7	ND	1
4-Methylphenol	106-44-5	ND	1
2-Nitrophenol	88-75-5	ND	1
4-Nitrophenol	100-02-7	ND	5
Pentachlorophenol	87-86-5	ND	1
Phenol	108-95-2	ND	1
2,4,5-Trichlorophenol	95-95-4	ND	1
2,4,6-Trichlorophenol	88-06-2	ND	1

RPT. Limit = Reporting Limit
ND = Not Detected at or above indicated Reporting Limit

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: Acid Extractables, EPA Method 8270

CLIENT: Geomatrix Consultants
1 Mkt. Plaza, Spear St. #71
San Francisco, CA 94105

Project No.: 1459C
Contact: D. Favre
Phone:

Project: Kaiser Hospital/Oakland

AEMC Contact: M. Smith

Date Sampled: 3/7/90
Date Received: 3/7/90
Date Extracted: 3/8/90
Date Analyzed: 3/9/90

Job No.: 794446
COC Log No.: 848

AEMC I.D.: L4446-3
Batch No.: 5249
Client Sample I.D.: #H
Matrix: Soil

SURROGATE	CONCENTRATION (mg/kg)	RECOVERY (percent)
Phenol-d6	2	53%
2-Fluorophenol	2	34%
2,4,6-Tribromophenol	2	76%

ANALYTES	CAS #	CONCENTRATION (mg/kg)	RPT. LIMIT (mg/kg)
Benzoic Acid	65-85-0	ND	5
4-Chloro-3-methylphenol	59-50-7	ND	2
2-Chlorophenol	95-57-8	ND	1
2,4-Dichlorophenol	120-83-2	ND	1
2,4-Dimethylphenol	105-67-9	ND	1
2,4-Dinitrophenol	51-28-5	ND	5
2-Methyl-4,6-dinitrophenol	534-52-1	ND	5
2-Methylphenol	95-48-7	ND	1
4-Methylphenol	106-44-5	ND	1
2-Nitrophenol	88-75-5	ND	1
4-Nitrophenol	100-02-7	ND	5
Pentachlorophenol	87-86-5	ND	1
Phenol	108-95-2	ND	1
2,4,5-Trichlorophenol	95-95-4	ND	1
2,4,6-Trichlorophenol	88-06-2	ND	1

RPT. Limit = Reporting Limit
ND = Not Detected at or above indicated Reporting Limit

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: Acid Extractables, EPA Method 8270

CLIENT: Geomatrix Consultants
1 Mkt. Plaza, Spear St. =71
San Francisco, CA 94105

Project No.: 1459C
Contact: D. Favre
Phone:

Project: Kaiser Hospital/Oakland

AEMC Contact: M. Smith

Date Sampled: 3/7/90
Date Received: 3/7/90
Date Extracted: 3/8/90
Date Analyzed: 3/9/90

Job No.: 794446
COC Log No.: 848

AEMC I.D.: L4446-MB
Batch No.: 5249
Client Sample I.D.: Method Blank
Matrix: Soil

SURROGATE	CONCENTRATION (mg/kg)	RECOVERY (percent)
Phenol-d6	2	48%
2-Fluorophenol	2	29%
2,4,6-Tribromophenol	2	81%

ANALYTES	CAS #	CONCENTRATION (mg/kg)	RPT. LIMIT (mg/kg)
Benzoic Acid	65-85-0	ND	5
4-Chloro-3-methylphenol	59-50-7	ND	2
2-Chlorophenol	95-57-8	ND	1
2,4-Dichlorophenol	120-83-2	ND	1
2,4-Dimethylphenol	105-67-9	ND	1
2,4-Dinitrophenol	51-28-5	ND	5
2-Methyl-4,6-dinitrophenol	534-52-1	ND	5
2-Methylphenol	95-48-7	ND	1
4-Methylphenol	106-44-5	ND	1
2-Nitrophenol	88-75-5	ND	1
4-Nitrophenol	100-02-7	ND	5
Pentachlorophenol	87-86-5	ND	1
Phenol	108-95-2	ND	1
2,4,5-Trichlorophenol	95-95-4	ND	1
2,4,6-Trichlorophenol	88-06-2	ND	1

RPT. Limit = Reporting Limit
ND = Not Detected at or above indicated Reporting Limit

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: Acid Extractables, EPA Method 8270

CLIENT: Geomatrix Consultants
1 Mkt. Plaza, Spear St. =71
San Francisco, CA 94105

Project No.: 1459C
Contact: D. Favre
Phone:

Project: Kaiser Hospital/Oakland

AEMC Contact: M. Smith

Date Sampled: 3/7/90
Date Received: 3/7/90
Date Extracted: 3/8/90
Date Analyzed: 3/9/90

Job No.: 794446
COC Log No.: 848

AEMC I.D.: L4446
Batch No.: 5249
Matrix: Soil

SURROGATE	Spike Conc. (mg/kg)	MS %Rec	MSD %Rec
Phenol-d6	2	49%	44%
2-Fluorophenol	2	26%	27%
2,4,6-Tribromophenol	2	81%	75%

ANALYTE Acids	Spike Conc. (mg/kg)	MS %Rec	MSD %Rec	Duplicate RPD
Pentachlorophenol	2	92%	92%	0%
2,4,6-Trichlorophenol	2	60	61%	2%

MS = Matrix Spike
MSD = Matrix Spike Duplicate
% Rec = Percent Recovery
RPD = Relative Percent Difference

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: TCP, PCP & Stoddard Solvent; EPA Methods 8040/8015

CLIENT: Geomatrix Consultants
1 Mkt. Plaza, Spear St. =71
San Francisco, CA

P.O/Contract No.:
Contact: D. Favre
Phone:

Project: Kaiser Hospital/Oakland

AEMC Contact: M. Smith

Date Sampled: 3/7/90
Date Received: 3/7/90
Date Extracted: 3/7/90
Date Analyzed: 3/8/90

Job No.: 794446
COC Log No.: 848

AEMC I.D.: L4446
Batch No.: 5247
Matrix: Wipe

ANALYTE	Spike Conc. (ug/wipe)	MS %Rec	MSD %Rec	RPD
2,4,5-Trichlorophenol	1250	97%	102%	5%
Pentachlorophenol	1250	96%	103%	7%

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: TCP, PCP & Stoddard Solvent; EPA Methods 8040/8015

CLIENT: Geomatrix Consultants
1 Mkt. Plaza, Spear St. =71
San Francisco, CA

P.O/Contract No.:
Contact: D. Favre
Phone:

Project: Kaiser Hospital/Oakland

AEMC Contact: M. Smith

Date Sampled: 3/7/90
Date Received: 3/7/90
Date Extracted: 3/7/90
Date Analyzed: 3/8/90

Job No.: 794446
COC Log No.: 848

AEMC I.D.: L4446
Batch No.: 5247
Matrix: Soil

ANALYTE	Spike Conc. (mg/kg)	MS %Rec	MSD %Rec	RPD
2,4,5-Trichlorophenol	50	97%	102%	5%
Pentachlorophenol	50	96%	103%	7%

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

Geomatrix Consultants
1 Mkt. Plaza, Spear St. =71
San Francisco, CA

03/21/90

Attn: D. Favre

Re: Project: Kaiser-Oakland
AEMC Lab Reference No.: L4458
Date Samples Received: 03/12/90
No. Samples Received: 2 Soil samples
1 Wipe sample
3 Blank samples

Job No.: 794458

These samples were received by AEMC in a chilled state, intact, and accompanied by chain-of-custody documentation.

The above referenced samples were analyzed as follows:

No. of Samples	Analysis
2	Dioxins
1	Phenols
2	GCMS Semi-Volatiles

Method 8270 surrogate standard recovery data could not be calculated/ reported for samples SS1 and SS2 due to the presence of significant concentrations of target compounds in these samples. (Surrogates were "diluted out".)

Analytical results are attached to this letter. Please call if we can provide additional assistance.

Sincerely,

George Hampton
Laboratory Director

3249 Fitzgerald Road • Rancho Cordova, CA 95742 • Fax (916) 638-4510 • (916) 638-7301

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: Acid Extractables, EPA Method 8270

CLIENT: Geomatrix Consultants
1 Mkt. Plaza, Spear St. =71
San Francisco, CA

P.O/Contract No.:
Contact: D. Favre
Phone:

Project: Kaiser-Oakland

AEMC Contact: G. Hampton

Date Sampled: 3/11/90
Date Received: 3/12/90
Date Extracted: 3/14/90
Date Analyzed: 3/15/90

Job No.: 794458
COC Log No.: 21604

AEMC I.D.: L4458-1
Batch No.: 5290
Matrix: Soil

Client Sample I.D.: SS1

SURROGATE	CONCENTRATION (mg/kg)	RPT. LIMIT (mg/kg)
Phenol-d6	2	NR
2-Fluorophenol	2	NR
2,4,6-Tribromphenol	2	NR

ANALYTES	CAS #	CONCENTRATION (mg/kg)	RPT. LIMIT (mg/kg)
Benzoic Acid	65-85-0	ND	200
4-Chloro-3-methylphenol	59-50-7	ND	80
2-Chlorophenol	95-57-8	ND	40
2,4-Dichlorophenol	120-83-2	70	40
2,4-Dimethylphenol	105-67-9	ND	40
2,4-Dinitrophenol	51-28-5	ND	200
2-Methyl-4,6-dinitrophenol	534-52-1	ND	200
2-Methylphenol	95-48-7	ND	40
4-Methylphenol	106-44-5	ND	40
2-Nitrophenol	88-75-5	ND	40
4-Nitrophenol	100-02-7	ND	200
Pentachlorophenol	87-86-5	1,000	200
Phenol	108-95-2	ND	40
2,4,5-Trichlorophenol	95-95-4	3,200	40
2,4,6-Trichlorophenol	88-06-2	ND	40

RPT. Limit = Reporting Limit
ND = Not Detected at or above indicated Reporting Limit
NR = Not Reportable; see report cover-letter for explanation.

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: Acid Extractables, EPA Method 8270

CLIENT: Geomatrix Consultants
1 Mkt. Plaza, Spear St. =71
San Francisco, CA

P.O/Contract No.:
Contact: D. Favre
Phone:

Project: Kaiser-Oakland

AEMC Contact: G. Hampton

Date Sampled: 3/11/90
Date Received: 3/12/90
Date Extracted: 3/14/90
Date Analyzed: 3/15/90

Job No.: 794458
COC Log No.: 21604

AEMC I.D.: L4458-2
Batch No.: 5290
Client Sample I.D.: SS2
Matrix: Soil

SURROGATE	CONCENTRATION (mg/kg)	RPT. LIMIT (mg/kg)
Phenol-d6	2	NR
2-Fluorophenol	2	NR
2,4,6-Tribromphenol	2	NR

ANALYTES	CAS #	CONCENTRATION (mg/kg)	RPT. LIMIT (mg/kg)
Benzoic Acid	65-85-0	ND	200
4-Chloro-3-methylphenol	59-50-7	ND	80
2-Chlorophenol	95-57-8	ND	40
2,4-Dichlorophenol	120-83-2	ND	40
2,4-Dimethylphenol	105-67-9	ND	40
2,4-Dinitrophenol	51-28-5	ND	200
2-Methyl-4,6-dinitrophenol	534-52-1	ND	200
2-Methylphenol	95-48-7	ND	40
4-Methylphenol	106-44-5	ND	40
2-Nitrophenol	88-75-5	ND	40
4-Nitrophenol	100-02-7	ND	200
Pentachlorophenol	87-86-5	380	200
Phenol	108-95-2	ND	40
2,4,5-Trichlorophenol	95-95-4	1,800	40
2,4,6-Trichlorophenol	88-06-2	ND	40

RPT. Limit = Reporting Limit
ND = Not Detected at or above indicated Reporting Limit
NR = Not Reportable; see report cover-letter for explanation.

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: Acid Extractables, EPA Method 8270

CLIENT: Geomatrix Consultants
1 Mkt. Plaza, Spear St. =71
San Francisco, CA

P.O/Contract No.:
Contact: D. Favre
Phone:

Project: Kaiser-Oakland

AEMC Contact: G. Hampton

Date Sampled: 3/11/90
Date Received: 3/12/90
Date Extracted: 3/14/90
Date Analyzed: 3/15/90

Job No.: 794458
COC Log No.: 21604

AEMC I.D.: L4458-MB
Batch No.: 5290
Client Sample I.D.: Method Blank
Matrix: Soil

SURROGATE	CONCENTRATION (mg/kg)	RPT. LIMIT (mg/kg)
Phenol-d6	2	28%
2-Fluorophenol	2	40%
2,4,6-Tribromphenol	2	54%

ANALYTES	CAS #	CONCENTRATION (mg/kg)	RPT. LIMIT (mg/kg)
Benzoic Acid	65-85-0	ND	200
4-Chloro-3-methylphenol	59-50-7	ND	80
2-Chlorophenol	95-57-8	ND	40
2,4-Dichlorophenol	120-83-2	ND	40
2,4-Dimethylphenol	105-67-9	ND	40
2,4-Dinitrophenol	51-28-5	ND	200
2-Methyl-4,6-dinitrophenol	534-52-1	ND	200
2-Methylphenol	95-48-7	ND	40
4-Methylphenol	106-44-5	ND	40
2-Nitrophenol	88-75-5	ND	40
4-Nitrophenol	100-02-7	ND	200
Pentachlorophenol	87-86-5	ND	200
Phenol	108-95-2	ND	40
2,4,5-Trichlorophenol	95-95-4	ND	40
2,4,6-Trichlorophenol	88-06-2	ND	40

RPT. Limit = Reporting Limit
ND = Not Detected at or above indicated Reporting Limit

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: Acid Extractables, EPA Method 8270

CLIENT: Geomatrix Consultants
1 Mkt. Plaza, Spear St. =71
San Francisco, CA

P.O/Contract No.:
Contact: D. Favre
Phone:

Project: Kaiser-Oakland

AEMC Contact: G. Hampton

Date Sampled: 3/11/90
Date Received: 3/12/90
Date Extracted: 3/14/90
Date Analyzed: 3/15/90

Job No.: 794458
COC Log No.: 21604

AEMC I.D.: L4458
Batch No.: 5290
Matrix: Soil

SURROGATE	Spike Conc. (mg/kg)	MS %Rec	MSD %Rec
Phenol-d6	2	44%	34%
2-Fluorophenol	2	60%	42%
2,4,6-Tribromphenol	2	97%	78%

ANALYTE	Spike Conc. (mg/kg)	MS %Rec	MSD %Rec	Duplicate RPD
Acids				
Pentachlorophenol	2	63%	44%	36%
2,4,6-Trichlorophenol	2	82%	69%	17%

MS = Matrix Spike
MSD = Matrix Spike Duplicate
% Rec = Percent Recovery
RPD = Relative Percent Difference

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: TCP, PCP; EPA Method 8040

CLIENT: Geomatrix Consultants
1 Mkt. Plaza, Spear St. =71
San Francisco, CA

Project: Kaiser/Oakland

Date Sampled: 3/11/90
Date Received: 3/12/90
Date Extracted: 3/13/90
Date Analyzed: 3/13/90

Project No.: 1459D
Contact: D. Favre
Phone:

AEMC Contact: G. Hampton

Job No.: 794458
COC Log No.: 21604

AEMC I.D.: L4458
Batch No.: 5275
Matrix: Wipe

Sample I.D. Client	AEMC	2,4,5-Trichlorophenol (ug/wipe)	Pentachlorophenol (ug/wipe)
BC1	L4458-3	ND	ND
Method Blank	L4458-MB	ND	ND
REPORTING LIMIT*		20	20

*Unless otherwise indicated in parentheses

ND = Not Detected at or above indicated Reporting Limit.

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: TCP, PCP; EPA Method 8040

CLIENT: Geomatrix Consultants
1 Mkt. Plaza, Spear St. #71
San Francisco, CA

Project: Kaiser/Oakland

Date Sampled: 3/11/90
Date Received: 3/12/90
Date Extracted: 3/13/90
Date Analyzed: 3/13/90

Project No.: 1459D
Contact: D. Favre
Phone:

AEMC Contact: G. Hampton

Job No.: 794458
COC Log No.: 21604

AEMC I.D.: L4458
Batch No.: 5275
Matrix: Wipe

ANALYTE	Spike Conc. (ug/wipe)	MS %Rec	MSD %Rec	RPD
2,4,5-Trichlorophenol	100	110%	112%	2%
Pentachlorophenol	100	100%	102%	2%

MS = Matrix Spike
% Rec = Percent Recovery
MSD = Matrix Spike Duplicate
RPD = Relative Percent Difference

SAMPLE DESCRIPTION INFORMATION
for
AEMC

Lab ID	Client ID	Matrix	Sampled Date	Sampled Time	Received Date
051868-0001-SA	SS-1	SOIL	11 MAR 90	13:00	12 MAR 90
051868-0001-MB	Method Blank	SOIL			12 MAR 90
051868-0002-SA	SS-2	SOIL	11 MAR 90	13:00	12 MAR 90

Enseco
A CORNING Company

POLYCHLORINATED DIOXINS/FURANS

LOW RESOLUTION

Client Name: AEMC
Client ID: SS-1
Lab ID: 051868-0001-SA
Matrix: SOIL
Authorized: 12 MAR 90

Enseco ID: 140554
Sampled: 11 MAR 90
Prepared: 12 MAR 90
Received: 12 MAR 90
Analyzed: 12 MAR 90

Sample Amount 10.0 G
Percent Moisture NA
Column Type DB-5

Parameter	Result	Units	Detection Limit	Data Qualifiers
Furans				
TCDFs (total)	ND	ng/g	0.011	
PeCDFs (total)	ND	ng/g	0.079	
HxCDFs (total)	47	ng/g	--	
HpCDFs (total)	340	ng/g	--	
OCDF	190	ng/g	--	
Dioxins				
TCDDs (total)	0.26	ng/g	--	
PeCDDs (total)	ND	ng/g	0.061	
HxCDDs (total)	38	ng/g	--	
HpCDDs (total)	430	ng/g	--	
OCDD	1100	ng/g	--	
	% Recovery			
13C-2,3,7,8-TCDF	66			
13C-2,3,7,8-TCDD	72			
13C-1,2,3,7,8-PeCDD	98			
13C-1,2,3,6,7,8-HxCDD	75			
13C-1,2,3,4,6,7,8-HpCDD	44			
13C-OCDD	22			

ND = Not detected
NA = Not applicable

Reported By: Dan Vickers

Approved By: Steve Rogers

The cover letter is an integral part of this report.
Rev 230787

Enseco
A CORNING COMPANY

POLYCHLORINATED DIOXINS/FURANS

LOW RESOLUTION

Client Name: AEMC
Client ID: SS-2
Lab ID: 051868-0002-SA
Matrix: SOIL
Authorized: 12 MAR 90

Enseco ID: 140555
Sampled: 11 MAR 90
Prepared: 12 MAR 90

Received: 12 MAR 90
Analyzed: 12 MAR 90

Sample Amount 10.1 G
Percent Moisture NA
Column Type DB-5

Parameter	Result	Units	Detection Limit	Data Qualifiers
Furans				
TCDFs (total)	ND	ng/g	0.013	
PeCDFs (total)	ND	ng/g	0.014	
HxCDFs (total)	36	ng/g	--	
HpCDFs (total)	250	ng/g	--	
OCDF	150	ng/g	--	
Dioxins				
TCDDs (total)	0.25	ng/g	--	
PeCDDs (total)	ND	ng/g	0.052	
HxCDDs (total)	30	ng/g	--	
HpCDDs (total)	330	ng/g	--	
OCDD	940	ng/g	--	
	% Recovery			
13C-2,3,7,8-TCDF	57			
13C-2,3,7,8-TCDD	57			
13C-1,2,3,7,8-PeCDD	85			
13C-1,2,3,6,7,8-HxCDD	70			
13C-1,2,3,4,6,7,8-HpCDD	51			
13C-OCDD	30			

ND = Not detected
NA = Not applicable

Reported By: Dan Vickers

Approved By: Steve Rogers

The cover letter is an integral part of this report.
Rev 230787

Enseco
A CORNING Company

POLYCHLORINATED DIOXINS/FURANS

LOW RESOLUTION

Client Name: AEMC
Client ID: Method Blank
Lab ID: 051868-0001-MB
Matrix: SOIL
Authorized: NA

Enseco ID: 140556
Sampled: NA
Prepared: 12 MAR 90

Received: NA
Analyzed: 12 MAR 90

Sample Amount 10.0 G
Percent Moisture NA
Column Type DB-5

Parameter	Result	Units	Detection Limit	Data Qualifiers
Furans				
TCDFs (total)	ND	ng/g	0.0051	
PeCDFs (total)	ND	ng/g	0.0056	
HxCDFs (total)	ND	ng/g	0.11	
HpCDFs (total)	ND	ng/g	0.10	
OCDF	ND	ng/g	0.093	
Dioxins				
TCDDs (total)	ND	ng/g	0.0095	
PeCDDs (total)	ND	ng/g	0.012	
HxCDDs (total)	ND	ng/g	0.014	
HpCDDs (total)	ND	ng/g	0.055	
OCDD	ND	ng/g	0.35	
	% Recovery			
13C-2,3,7,8-TCDF	52			
13C-2,3,7,8-TCDD	53			
13C-1,2,3,7,8-PeCDD	77			
13C-1,2,3,6,7,8-HxCDD	63			
13C-1,2,3,4,6,7,8-HpCDD	42			
13C-OCDD	20			

ND = Not detected
NA = Not applicable

Reported By: Dan Vickers

Approved By: Steve Rogers

The cover letter is an integral part of this report.
Rev 230787

Enseco
A CORNING Company

DUPLICATE CONTROL SAMPLE REPORT
Special Services - Low Resolution Mass Spectrometry

Analyte	Concentration Spiked	Concentration Measured DCS1	Concentration Measured DCS2	Accuracy(%) DCS1	Accuracy(%) DCS2	Accuracy(%) Limits	Precision(RPD) DCS	Precision(RPD) Limits
Category: DXNFUR-S								
Matrix: SOIL								
QC Lot: 01 MAR 90-A								
Concentration Units: ng								
2378-TCDF	10	9.2	8.4	92	84	60-140	9.1	50
23478-PECDF	10	6.7	6.0	67	60	60-140	11	50
123478-HXCDF	10	8.5	9.4	85	94	60-140	10	50
1234678-HPCDF	10	11	10	110	100	60-140	9.1	50
12345678-OCDF	50	67	66	134	132	60-140	1.5	50
2378-TCDD	10	9.9	11	99	110	60-140	10	50
12378-PECDD	10	9.4	8.8	94	88	60-140	6.6	50
123478-HXCDD	10	8.6	8.3	86	83	60-140	3.5	50
1234678-HPCDD	10	12	11	120	110	60-140	8.3	50
12345678-OCDD	50	49	51	98	102	60-140	4.0	50

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

Geomatrix Consultants
1 Mkt. Plaza, Spear St.#71
San Francisco, CA 95638

03/14/90

Attn: D. Favre

Re: Project: Geomatrix Consultants/1459D
AEMC Lab Reference No.: L4466 Job No.: 794466
Date Samples Received: 03/13/90
No. Samples Received: 6 Wipe samples

These samples were received by AEMC in a chilled state, intact, and accompanied by chain-of-custody documentation.

The above referenced samples were analyzed as follows:

No. of Samples	Analysis
3	TCP, PCP

Analytical results are attached to this letter. Please call if we can provide additional assistance.

Sincerely,

George Hampton
Laboratory Director

3249 Fitzgerald Road • Rancho Cordova, CA 95742 • Fax (916) 638-4510 • (916) 638-7301

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

Wipe Samples

ANALYSIS REPORT: TCP, PCP; EPA Method 8040

CLIENT: Geomatrix Consultants
1 Mkt. Plaza, Spear St. #71
San Francisco, CA

Project No.: 1459D
Contact: D. Favre
Phone:

Project: Geomatrix Consultants/1459D

AEMC Contact: G. Hampton

Date Sampled: 3/12/90
Date Received: 3/13/90
Date Extracted: 3/13/90
Date Analyzed: 3/13/90

Job No.: 794466
COC Log No.: 859

AEMC I.D.: L4466
Batch No.: 5275
Matrix: Wipe

Sample I.D. Client	AEMC	2,4,5-Trichlorophenol (ug/wipe)	Pentachlorophenol (ug/wipe)
WS-1	L4466-1	ND	ND
WS-2	L4466-2	ND	ND
WS-3	L4466-3	ND	ND
Method Blank	L4466-MB	ND	ND
REPORTING LIMIT*		20	20

*Unless otherwise indicated in parentheses

ND = Not Detected at or above indicated Reporting Limit.

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: TCP, PCP; EPA Method 8040

CLIENT: Geomatrix Consultants
1 Mkt. Plaza, Spear St. #71
San Francisco, CA

Project: Geomatrix Consultants/1459D

Date Sampled: 3/12/90
Date Received: 3/13/90
Date Extracted: 3/13/90
Date Analyzed: 3/13/90

Project No.: 1459D
Contact: D. Favre
Phone:

AEMC Contact: G. Hampton

Job No.: 794466
COC Log No.: 859

AEMC I.D.: L4466
Batch No.: 5275
Matrix: Wipe

ANALYTE	Spike Conc. (ug/wipe)	MS %Rec	MSD %Rec	RPD
2,4,5-Trichlorophenol	100	110%	112%	2%
Pentachlorophenol	100	100%	102%	2%

MS = Matrix Spike
% Rec = Percent Recovery
MSD = Matrix Spike Duplicate
RPD = Relative Percent Difference

Analytical Report

LOG NO: E90-03-622

Received: 16 MAR 90
Reported: 20 MAR 90

Ms. Cheri Young
Geomatrix Consultants
1 Market Plaza, Spear Tower, Ste.717
San Francisco, California 94105

Project: 1459D

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
03-622-1	401-S (#1-S)	16 MAR 90
03-622-2	402-S (#2-S)	16 MAR 90
03-622-3	403-S (#3-S)	16 MAR 90
03-622-4	404-S (#4-S)	16 MAR 90
03-622-5	405-S (#5-S)	16 MAR 90

PARAMETER	03-622-1	03-622-2	03-622-3	03-622-4	03-622-5
B/N,A Ext.Pri.Poll. (EPA-8270)					
Date Analyzed	03.20.90	03.19.90	03.19.90	03.19.90	03.19.90
Date Extracted	03.17.90	03.17.90	03.17.90	03.17.90	03.17.90
Dilution Factor, Times	1	1	1	1	1
1,2,4-Trichlorobenzene, mg/kg	<0.03	<0.02	<0.03	<0.03	<0.03
1,2-Dichlorobenzene, mg/kg	<0.03	<0.03	<0.03	<0.03	<0.03
1,2-Diphenylhydrazine, mg/kg	<0.03	<0.03	<0.03	<0.03	<0.03
1,3-Dichlorobenzene, mg/kg	<0.03	<0.03	<0.03	<0.03	<0.03
1,4-Dichlorobenzene, mg/kg	<0.03	<0.03	<0.03	<0.03	<0.03
2,4,5-Trichlorophenol, mg/kg	170	1.1	3000	33	1.6
2,4,6-Trichlorophenol, mg/kg	<0.03	<0.03	760	7.9	3.1
2,4-Dichlorophenol, mg/kg	2.6	<0.02	60	0.2	<0.03
2,4-Dimethylphenol, mg/kg	<0.03	<0.03	<0.03	<0.03	<0.03
2,4-Dinitrophenol, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
2,4-Dinitrotoluene, mg/kg	<0.03	<0.03	<0.03	<0.03	<0.03
2,6-Dinitrotoluene, mg/kg	<0.03	<0.03	<0.03	<0.03	<0.03
2-Chloronaphthalene, mg/kg	<0.03	<0.03	<0.03	<0.03	<0.03
2-Chlorophenol, mg/kg	<0.03	<0.03	<0.03	<0.03	<0.03
2-Methyl-4,6-dinitrophenol, mg/kg	<0.03	<0.03	<0.03	<0.03	<0.03
2-Methylnaphthalene, mg/kg	<0.03	<0.03	<0.03	<0.03	<0.03
2-Methylphenol, mg/kg	<0.03	<0.03	<0.03	<0.03	<0.03
2-Nitroaniline, mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
2-Nitrophenol, mg/kg	<0.03	<0.03	<0.03	<0.03	<0.03

1255 Powell Street
Emeryville, CA 94608

415/428-2300
Fax: 415/547-3643

BCA B C Analytical

Analytical Report

LOG NO: E90-03-622

Received: 16 MAR 90
Reported: 20 MAR 90

Ms. Cheri Young
Geomatrix Consultants
1 Market Plaza, Spear Tower, Ste.717
San Francisco, California 94105

Project: 1459D

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
03-622-1	401-S	16 MAR 90
03-622-2	402-S	16 MAR 90
03-622-3	403-S	16 MAR 90
03-622-4	404-S	16 MAR 90
03-622-5	405-S	16 MAR 90

PARAMETER	03-622-1	03-622-2	03-622-3	03-622-4	03-622-5
3,3'-Dichlorobenzidine, mg/kg	<0.03	<0.03	<0.03	<0.03	<0.03
3-Nitroaniline, mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
4-Bromophenylphenylether, mg/kg	<0.03	<0.03	<0.03	<0.03	<0.03
4-Chloro-3-methylphenol, mg/kg	<0.03	<0.03	<0.03	<0.03	<0.03
4-Chloroaniline, mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
4-Chlorophenylphenylether, mg/kg	<0.03	<0.03	<0.03	<0.03	<0.03
4-Methylphenol, mg/kg	<0.03	<0.03	<0.03	<0.03	<0.03
4-Nitroaniline, mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
4-Nitrophenol, mg/kg	<0.7	<0.7	<0.7	<0.7	<0.7
Acenaphthene, mg/kg	<0.03	<0.03	<0.03	<0.03	<0.03
Acenaphthylene, mg/kg	<0.03	<0.03	<0.03	<0.03	<0.03
Aniline, mg/kg	<0.03	<0.03	<0.03	<0.03	<0.03
Anthracene, mg/kg	<0.03	<0.03	<0.03	<0.03	<0.03
Benzidine, mg/kg	<1	<1	<1	<1	<1
Benzo(a)anthracene, mg/kg	<0.03	<0.03	<0.03	<0.03	<0.03
Benzo(a)pyrene, mg/kg	<0.03	<0.03	<0.03	<0.03	<0.03
Benzo(b)fluoranthene, mg/kg	<0.03	<0.03	<0.03	<0.03	<0.03
Benzo(g,h,i)perylene, mg/kg	<0.03	<0.03	<0.03	<0.03	<0.03
Benzo(k)fluoranthene, mg/kg	<0.03	<0.03	<0.03	<0.03	<0.03
Benzyl alcohol, mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzoic acid, mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Butylbenzylphthalate, mg/kg	<0.03	<0.03	<0.03	<0.03	<0.03
Chrysene, mg/kg	<0.03	<0.03	<0.03	<0.03	<0.03

Analytical Report

LOG NO: E90-03-622

Received: 16 MAR 90
Reported: 20 MAR 90

Ms. Cheri Young
Geomatrix Consultants
1 Market Plaza, Spear Tower, Ste.717
San Francisco, California 94105

Project: 1459D

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
03-622-1	401-S	16 MAR 90
03-622-2	402-S	16 MAR 90
03-622-3	403-S	16 MAR 90
03-622-4	404-S	16 MAR 90
03-622-5	405-S	16 MAR 90

PARAMETER	03-622-1	03-622-2	03-622-3	03-622-4	03-622-5
Di-n-octylphthalate, mg/kg	<0.03	<0.03	<0.03	<0.03	<0.03
Dibenzo(a,h)anthracene, mg/kg	<0.03	<0.03	<0.03	<0.03	<0.03
Dibenzofuran, mg/kg	<0.03	<0.03	<0.03	<0.03	<0.03
Dibutylphthalate, mg/kg	<0.03	<0.03	<0.03	<0.03	<0.03
Diethylphthalate, mg/kg	<0.03	<0.03	<0.03	<0.03	<0.03
Dimethylphthalate, mg/kg	<0.03	<0.03	<0.03	<0.03	<0.03
Fluoranthene, mg/kg	<0.03	<0.03	<0.03	<0.03	<0.03
Fluorene, mg/kg	<0.03	<0.03	<0.03	<0.03	<0.03
Hexachlorobenzene, mg/kg	<0.03	<0.03	<0.03	<0.03	<0.03
Hexachlorobutadiene, mg/kg	<0.03	<0.03	<0.03	<0.03	<0.03
Hexachlorocyclopentadiene, mg/kg	<0.03	<0.03	<0.03	<0.03	<0.03
Hexachloroethane, mg/kg	<0.03	<0.03	<0.03	<0.03	<0.03
Indeno(1,2,3-c,d)pyrene, mg/kg	<0.03	<0.03	<0.03	<0.03	<0.03
Isophorone, mg/kg	<0.03	<0.03	<0.03	<0.03	<0.03
N-Nitrosodimethylamine, mg/kg	<0.03	<0.03	<0.03	<0.03	<0.03
N-Nitrosodiphenylamine, mg/kg	<0.03	<0.03	<0.03	<0.03	<0.03
N-Nitrosodi-n-propylamine, mg/kg	<0.03	<0.03	<0.03	<0.03	<0.03
Nitrobenzene, mg/kg	<0.03	<0.03	<0.03	<0.03	<0.03
Naphthalene, mg/kg	<0.03	<0.02	<0.03	<0.03	<0.03
Phenanthrene, mg/kg	<0.03	<0.03	<0.03	<0.03	<0.03
Phenol, mg/kg	<0.03	<0.03	<0.03	<0.03	<0.03
Pentachlorophenol, mg/kg	28	0.2	560	7.3	0.3
Pyrene, mg/kg	<0.03	<0.03	<0.03	<0.03	<0.03

Analytical Report

LOG NO: E90-03-622

Received: 16 MAR 90
Reported: 20 MAR 90

Ms. Cheri Young
Geomatrix Consultants
1 Market Plaza, Spear Tower, Ste.717
San Francisco, California 94105

Project: 1459D

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
03-622-1	401-S	16 MAR 90
03-622-2	402-S	16 MAR 90
03-622-3	403-S	16 MAR 90
03-622-4	404-S	16 MAR 90
03-622-5	405-S	16 MAR 90

PARAMETER	03-622-1	03-622-2	03-622-3	03-622-4	03-622-5
Bis(2-chloroethoxy)methane, mg/kg	<0.03	<0.02	<0.03	<0.03	<0.03
Bis(2-chloroethyl)ether, mg/kg	<0.03	<0.03	<0.03	<0.03	<0.03
Bis(2-chloroisopropyl)ether, mg/kg	<0.03	<0.03	<0.03	<0.03	<0.03
Bis(2-ethylhexyl)phthalate, mg/kg	<3	<3	<3	<3	<3
Other B/N,A Ext.Pri.Poll. (EPA-8270)	---	---	---	---	---
Semi-Quantified Results **					
C3H6N2S, mg/kg	2	---	4	---	---
C7-C11 Hydrocarbons, mg/kg	30	---	200	20	20
Dichloromethoxyphenol, mg/kg	---	---	7	---	---
Molecular Sulfur, mg/kg	0.7	---	---	---	---
Pentachloromethoxyphenol, mg/kg	---	---	---	0.4	0.2
Tetrachlorophenol, mg/kg	4	---	10	2	0.9
Unidentified Matrix, mg/kg	---	20	---	---	30

** Quantification based upon comparison of total ion count of the compound with that of the nearest internal standard.

1255 Powell Street
Emeryville, CA 94608

415/428-2300
Fax: 415/547-3643

BCA B C Analytical

Analytical Report

LOG NO: E90-03-622

Received: 16 MAR 90
Reported: 20 MAR 90

Ms. Cheri Young
Geomatrix Consultants
1 Market Plaza, Spear Tower, Ste.717
San Francisco, California 94105

Project: 1459D

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
03-622-6	406-S (406-5)	16 MAR 90
03-622-7	401-1.0	16 MAR 90
03-622-8	401-2.0	16 MAR 90
03-622-9	402-1.0	16 MAR 90
03-622-10	402-2.0	16 MAR 90

PARAMETER	03-622-6	03-622-7	03-622-8	03-622-9	03-622-10
Sample Held, Not Analyzed	---	HELD	HELD	HELD	HELD

1255 Powell Street
Emeryville, CA 94608

415/428-2300
Fax: 415/547-3643

BCA B C Analytical

Analytical Report

LOG NO: E90-03-622

Received: 16 MAR 90
Reported: 20 MAR 90

Ms. Cheri Young
Geomatrix Consultants
1 Market Plaza, Spear Tower, Ste.717
San Francisco, California 94105

Project: 1459D

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
03-622-6	406-S	16 MAR 90
03-622-7	401-1.0	16 MAR 90
03-622-8	401-2.0	16 MAR 90
03-622-9	402-1.0	16 MAR 90
03-622-10	402-2.0	16 MAR 90

PARAMETER	03-622-6	03-622-7	03-622-8	03-622-9	03-622-10
B/N,A Ext.Pri.Poll. (EPA-8270)					
Date Analyzed	03.19.90	---	---	---	---
Date Extracted	03.17.90	---	---	---	---
Dilution Factor, Times	1	---	---	---	---
1,2,4-Trichlorobenzene, mg/kg	<0.03	---	---	---	---
1,2-Dichlorobenzene, mg/kg	<0.03	---	---	---	---
1,2-Diphenylhydrazine, mg/kg	<0.03	---	---	---	---
1,3-Dichlorobenzene, mg/kg	<0.03	---	---	---	---
1,4-Dichlorobenzene, mg/kg	<0.03	---	---	---	---
2,4,5-Trichlorophenol, mg/kg	54	---	---	---	---
2,4,6-Trichlorophenol, mg/kg	<0.03	---	---	---	---
2,4-Dichlorophenol, mg/kg	0.6	---	---	---	---
2,4-Dimethylphenol, mg/kg	<0.03	---	---	---	---
2,4-Dinitrophenol, mg/kg	<0.3	---	---	---	---
2,4-Dinitrotoluene, mg/kg	<0.03	---	---	---	---
2,6-Dinitrotoluene, mg/kg	<0.03	---	---	---	---
2-Chloronaphthalene, mg/kg	<0.03	---	---	---	---
2-Chlorophenol, mg/kg	<0.03	---	---	---	---
2-Methyl-4,6-dinitrophenol, mg/kg	<0.03	---	---	---	---
2-Methylnaphthalene, mg/kg	<0.03	---	---	---	---
2-Methylphenol, mg/kg	<0.03	---	---	---	---
2-Nitroaniline, mg/kg	<0.2	---	---	---	---
2-Nitrophenol, mg/kg	<0.03	---	---	---	---

Analytical Report

LOG NO: E90-03-622

Received: 16 MAR 90
Reported: 20 MAR 90

Ms. Cheri Young
Geomatrix Consultants
1 Market Plaza, Spear Tower, Ste.717
San Francisco, California 94105

Project: 1459D

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
03-622-6	406-S	16 MAR 90
03-622-7	401-1.0	16 MAR 90
03-622-8	401-2.0	16 MAR 90
03-622-9	402-1.0	16 MAR 90
03-622-10	402-2.0	16 MAR 90

PARAMETER	03-622-6	03-622-7	03-622-8	03-622-9	03-622-10
3,3'-Dichlorobenzidine, mg/kg	<0.03	---	---	---	---
3-Nitroaniline, mg/kg	<0.2	---	---	---	---
4-Bromophenylphenylether, mg/kg	<0.03	---	---	---	---
4-Chloro-3-methylphenol, mg/kg	<0.03	---	---	---	---
4-Chloroaniline, mg/kg	<0.2	---	---	---	---
4-Chlorophenylphenylether, mg/kg	<0.03	---	---	---	---
4-Methylphenol, mg/kg	<0.03	---	---	---	---
4-Nitroaniline, mg/kg	<0.2	---	---	---	---
4-Nitrophenol, mg/kg	<0.7	---	---	---	---
Acenaphthene, mg/kg	<0.03	---	---	---	---
Acenaphthylene, mg/kg	<0.03	---	---	---	---
Aniline, mg/kg	<0.03	---	---	---	---
Anthracene, mg/kg	<0.03	---	---	---	---
Benzidine, mg/kg	<1	---	---	---	---
Benzo(a)anthracene, mg/kg	<0.03	---	---	---	---
Benzo(a)pyrene, mg/kg	<0.03	---	---	---	---
Benzo(b)fluoranthene, mg/kg	<0.03	---	---	---	---
Benzo(g,h,i)perylene, mg/kg	<0.03	---	---	---	---
Benzo(k)fluoranthene, mg/kg	<0.03	---	---	---	---
Benzyl alcohol, mg/kg	<0.2	---	---	---	---
Benzoic acid, mg/kg	<0.2	---	---	---	---
Butylbenzylphthalate, mg/kg	<0.03	---	---	---	---
Chrysene, mg/kg	<0.03	---	---	---	---

1255 Powell Street
Emeryville, CA 94608

415/428-2300
Fax: 415/547-3643

BCA B C Analytical

Analytical Report

LOG NO: E90-03-622

Received: 16 MAR 90
Reported: 20 MAR 90

Ms. Cheri Young
Geomatrix Consultants
1 Market Plaza, Spear Tower, Ste.717
San Francisco, California 94105

Project: 1459D

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
03-622-6	406-S	16 MAR 90
03-622-7	401-1.0	16 MAR 90
03-622-8	401-2.0	16 MAR 90
03-622-9	402-1.0	16 MAR 90
03-622-10	402-2.0	16 MAR 90

PARAMETER	03-622-6	03-622-7	03-622-8	03-622-9	03-622-10
Di-n-octylphthalate, mg/kg	<0.03	---	---	---	---
Dibenzo(a,h)anthracene, mg/kg	<0.03	---	---	---	---
Dibenzofuran, mg/kg	<0.03	---	---	---	---
Dibutylphthalate, mg/kg	<0.03	---	---	---	---
Diethylphthalate, mg/kg	<0.03	---	---	---	---
Dimethylphthalate, mg/kg	<0.03	---	---	---	---
Fluoranthene, mg/kg	<0.03	---	---	---	---
Fluorene, mg/kg	<0.03	---	---	---	---
Hexachlorobenzene, mg/kg	<0.03	---	---	---	---
Hexachlorobutadiene, mg/kg	<0.03	---	---	---	---
Hexachlorocyclopentadiene, mg/kg	<0.03	---	---	---	---
Hexachloroethane, mg/kg	<0.03	---	---	---	---
Indeno(1,2,3-c,d)pyrene, mg/kg	<0.03	---	---	---	---
Isophorone, mg/kg	<0.03	---	---	---	---
N-Nitrosodimethylamine, mg/kg	<0.03	---	---	---	---
N-Nitrosodiphenylamine, mg/kg	<0.03	---	---	---	---
N-Nitrosodi-n-propylamine, mg/kg	<0.03	---	---	---	---
Nitrobenzene, mg/kg	<0.03	---	---	---	---
Naphthalene, mg/kg	<0.03	---	---	---	---
Phenanthrene, mg/kg	<0.03	---	---	---	---
Phenol, mg/kg	<0.03	---	---	---	---
Pentachlorophenol, mg/kg	21	---	---	---	---
Pyrene, mg/kg	<0.03	---	---	---	---

1255 Powell Street
Emeryville, CA 94608

415/428-2300
Fax: 415/547-3643

B C Analytical

Analytical Report

LOG NO: E90-03-622

Received: 16 MAR 90
Reported: 20 MAR 90

Ms. Cheri Young
Geomatrix Consultants
1 Market Plaza, Spear Tower, Ste.717
San Francisco, California 94105

Project: 1459D

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
03-622-6	406-S	16 MAR 90
03-622-7	401-1.0	16 MAR 90
03-622-8	401-2.0	16 MAR 90
03-622-9	402-1.0	16 MAR 90
03-622-10	402-2.0	16 MAR 90

PARAMETER	03-622-6	03-622-7	03-622-8	03-622-9	03-622-10
Bis(2-chloroethoxy)methane, mg/kg	<0.03	---	---	---	---
Bis(2-chloroethyl)ether, mg/kg	<0.03	---	---	---	---
Bis(2-chloroisopropyl)ether, mg/kg	<0.03	---	---	---	---
Bis(2-ethylhexyl)phthalate, mg/kg	<3	---	---	---	---
Other B/N,A Ext.Pri.Poll. (EPA-8270)	---	---	---	---	---
Semi-Quantified Results **					
C7-C11 Hydrocarbons, mg/kg	200	---	---	---	---
Tetrachlorophenol, mg/kg	2	---	---	---	---

** Quantification based upon comparison of total ion count of the compound with that of the nearest internal standard.

1255 Powell Street
Emeryville, CA 94608

415/428-2300
Fax: 415/547-3643

BCA B C Analytical

Analytical Report

LOG NO: E90-03-622

Received: 16 MAR 90
Reported: 20 MAR 90

Ms. Cheri Young
Geomatrix Consultants
1 Market Plaza, Spear Tower, Ste.717
San Francisco, California 94105

Project: 1459D

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
03-622-11	404-1.0	16 MAR 90
03-622-12	404-2.0	16 MAR 90
03-622-13	403-1.0	16 MAR 90
03-622-14	403-2.0	16 MAR 90
03-622-15	406-1.0	16 MAR 90

PARAMETER	03-622-11	03-622-12	03-622-13	03-622-14	03-622-15
Sample Held, Not Analyzed	HELD	HELD	HELD	HELD	HELD

1255 Powell Street
Emeryville, CA 94608

415/428-2300
Fax: 415/547-3643

BCA B C Analytical

Analytical Report

LOG NO: E90-03-622

Received: 16 MAR 90
Reported: 20 MAR 90

Ms. Cheri Young
Geomatrix Consultants
1 Market Plaza, Spear Tower, Ste.717
San Francisco, California 94105

Project: 1459D

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
03-622-16	406-2.0	16 MAR 90
03-622-17	405-1.5	16 MAR 90
03-622-18	405-2.5	16 MAR 90

PARAMETER	03-622-16	03-622-17	03-622-18
Sample Held, Not Analyzed	HELD	HELD	HELD

Sim D. Lessley, Ph.D., Laboratory Director

1255 Powell Street
Emeryville, CA 94608

415/428-2300
Fax: 415/547-3643

BCA B C Analytical

Analytical Report

LOG NO: E90-03-545

Received: 15 MAR 90
Reported: 16 MAR 90

Ms. Debra Favre
Geomatrix Consultants
1 Market Plaza, Spear Tower, Ste.717
San Francisco, California 94105

Project: 1459D

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
03-545-1	MC-1	15 MAR 90
03-545-2	MC-2	15 MAR 90
03-545-3	Pile 1 Composite (Pile 1) (G)	15 MAR 90
03-545-4	Pile 2 Composite (Pile 2)	15 MAR 90

PARAMETER	03-545-1	03-545-2	03-545-3	03-545-4
B/N.A Ext.Pri.Poll. (EPA-8270)				
Date Analyzed	3.15.90	03.15.90	03.15.90	03.15.90
Date Extracted	3.15.90	03.15.90	03.15.90	03.15.90
Dilution Factor, Times	2	2	2	2
1,2,4-Trichlorobenzene, mg/kg	<0.07	<0.07	<0.07	<0.07
1,2-Dichlorobenzene, mg/kg	<0.07	<0.07	<0.07	<0.07
1,2-Diphenylhydrazine, mg/kg	<0.07	<0.07	<0.07	<0.07
1,3-Dichlorobenzene, mg/kg	<0.07	<0.07	<0.07	<0.07
1,4-Dichlorobenzene, mg/kg	<0.07	<0.07	<0.07	<0.07
2,4,5-Trichlorophenol, mg/kg	<0.07	4.7	6.0	5.5
2,4,6-Trichlorophenol, mg/kg	<0.07	<0.07	<0.07	<0.07
2,4-Dichlorophenol, mg/kg	<0.07	<0.07	<0.07	<0.07
2,4-Dimethylphenol, mg/kg	<0.07	<0.07	<0.07	<0.07
2,4-Dinitrophenol, mg/kg	<0.7	<0.7	<0.7	<0.7
2,4-Dinitrotoluene, mg/kg	<0.07	<0.07	<0.07	<0.07
2,6-Dinitrotoluene, mg/kg	<0.07	<0.07	<0.07	<0.07
2-Chloronaphthalene, mg/kg	<0.07	<0.07	<0.07	<0.07
2-Chlorophenol, mg/kg	<0.07	<0.07	<0.07	<0.07
2-Methyl-4,6-dinitrophenol, mg/kg	<0.07	<0.07	<0.07	<0.07
2-Methylnaphthalene, mg/kg	<0.07	<0.07	<0.07	<0.07
2-Methylphenol, mg/kg	<0.07	<0.07	<0.07	<0.07
2-Nitroaniline, mg/kg	<0.4	<0.4	<0.4	<0.4
2-Nitrophenol, mg/kg	<0.07	<0.07	<0.07	<0.07
3,3'-Dichlorobenzidine, mg/kg	<0.07	<0.07	<0.07	<0.07

1255 Powell Street
Emeryville, CA 94608

415/428-2300
Fax: 415/547-3643

BCA B C Analytical

Analytical Report

LOG NO: E90-03-545

Received: 15 MAR 90
Reported: 16 MAR 90

Ms. Debra Favre
Geomatrix Consultants
1 Market Plaza, Spear Tower, Ste.717
San Francisco, California 94105

Project: 1459D

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
03-545-1	MC-1	15 MAR 90
03-545-2	MC-2	15 MAR 90
03-545-3	Pile 1 Composite	15 MAR 90
03-545-4	Pile 2 Composite	15 MAR 90

PARAMETER	03-545-1	03-545-2	03-545-3	03-545-4
3-Nitroaniline, mg/kg	<0.4	<0.4	<0.4	<0.4
4-Bromophenylphenylether, mg/kg	<0.07	<0.07	<0.07	<0.07
4-Chloro-3-methylphenol, mg/kg	<0.07	<0.07	<0.07	<0.07
4-Chloroaniline, mg/kg	<0.4	<0.4	<0.4	<0.4
4-Chlorophenylphenylether, mg/kg	<0.07	<0.07	<0.07	<0.07
4-Methylphenol, mg/kg	<0.07	<0.07	<0.07	<0.07
4-Nitroaniline, mg/kg	<0.4	<0.4	<0.4	<0.4
4-Nitrophenol, mg/kg	<1	<1	<1	<1
Acenaphthene, mg/kg	<0.07	<0.07	<0.07	<0.07
Acenaphthylene, mg/kg	<0.07	<0.07	<0.07	<0.07
Aniline, mg/kg	<0.07	<0.07	<0.07	<0.07
Anthracene, mg/kg	<0.07	<0.07	<0.07	<0.07
Benzidine, mg/kg	<2	<2	<2	<2
Benzo(a)anthracene, mg/kg	<0.07	<0.07	<0.07	<0.07
Benzo(a)pyrene, mg/kg	<0.07	<0.07	<0.07	<0.07
Benzo(b)fluoranthene, mg/kg	<0.07	<0.07	<0.07	<0.07
Benzo(g,h,i)perylene, mg/kg	<0.07	<0.07	<0.07	<0.07
Benzo(k)fluoranthene, mg/kg	<0.07	<0.07	<0.07	<0.07
Benzyl alcohol, mg/kg	<0.4	<0.4	<0.4	<0.4
Benzoic acid, mg/kg	<0.4	<0.4	<0.4	<0.4
Butylbenzylphthalate, mg/kg	<0.07	<0.07	<0.07	<0.07
Chrysene, mg/kg	<0.07	<0.07	<0.07	<0.07
Di-n-octylphthalate, mg/kg	<0.07	<0.07	<0.07	<0.07
Dibenz(a,h)anthracene, mg/kg	<0.07	<0.07	<0.07	<0.07

1255 Powell Street
Emeryville, CA 94608

415/428-2300
Fax: 415/547-3643

BCA B C Analytical

Analytical Report

LOG NO: E90-03-545

Received: 15 MAR 90
Reported: 16 MAR 90

Ms. Debra Favre
Geomatrix Consultants
1 Market Plaza, Spear Tower, Ste.717
San Francisco, California 94105

Project: 1459D

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
03-545-1	MC-1	15 MAR 90
03-545-2	MC-2	15 MAR 90
03-545-3	Pile 1 Composite	15 MAR 90
03-545-4	Pile 2 Composite	15 MAR 90

PARAMETER	03-545-1	03-545-2	03-545-3	03-545-4
Dibenzofuran, mg/kg	<0.07	<0.07	<0.07	<0.07
Dibutylphthalate, mg/kg	<0.07	<0.07	<0.07	<0.07
Diethylphthalate, mg/kg	<0.07	<0.07	<0.07	<0.07
Dimethylphthalate, mg/kg	<0.07	<0.07	<0.07	<0.07
Fluoranthene, mg/kg	<0.07	<0.07	<0.07	<0.07
Fluorene, mg/kg	<0.07	<0.07	<0.07	<0.07
Hexachlorobenzene, mg/kg	<0.07	<0.07	<0.07	<0.07
Hexachlorobutadiene, mg/kg	<0.07	<0.07	<0.07	<0.07
Hexachlorocyclopentadiene, mg/kg	<0.07	<0.07	<0.07	<0.07
Hexachloroethane, mg/kg	<0.07	<0.07	<0.07	<0.07
Indeno(1,2,3-c,d)pyrene, mg/kg	<0.07	<0.07	<0.07	<0.07
Isophorone, mg/kg	<0.07	<0.07	<0.07	<0.07
N-Nitrosodimethylamine, mg/kg	<0.07	<0.07	<0.07	<0.07
N-Nitrosodiphenylamine, mg/kg	<0.07	<0.07	<0.07	<0.07
N-Nitroso-di-n-propylamine, mg/kg	<0.07	<0.07	<0.07	<0.07
Nitrobenzene, mg/kg	<0.07	<0.07	<0.07	<0.07
Naphthalene, mg/kg	<0.07	<0.07	<0.07	<0.07
Phenanthrene, mg/kg	<0.07	<0.07	<0.07	<0.07
Phenol, mg/kg	<0.07	<0.07	<0.07	<0.07
Pentachlorophenol, mg/kg	<0.07	2.3	3.2	2.6
Pyrene, mg/kg	<0.07	<0.07	<0.07	<0.07
Bis(2-chloroethoxy)methane, mg/kg	<0.07	<0.07	<0.07	<0.07
Bis(2-chloroethyl)ether, mg/kg	<0.07	<0.07	<0.07	<0.07
Bis(2-chloroisopropyl)ether, mg/kg	<0.07	<0.07	<0.07	<0.07

1255 Powell Street
Emeryville, CA 94608

415/428-2300
Fax: 415/547-3643

B C Analytical

Analytical Report

LOG NO: E90-03-545

Received: 15 MAR 90
Reported: 16 MAR 90

Ms. Debra Favre
Geomatrix Consultants
1 Market Plaza, Spear Tower, Ste.717
San Francisco, California 94105

Project: 1459D

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
03-545-1	MC-1	15 MAR 90
03-545-2	MC-2	15 MAR 90
03-545-3	Pile 1 Composite	15 MAR 90
03-545-4	Pile 2 Composite	15 MAR 90

PARAMETER	03-545-1	03-545-2	03-545-3	03-545-4
Bis(2-ethylhexyl)phthalate, mg/kg	<7	<7	<7	<7
Semi-Quantified Results **				
C8-C15 Hydrocarbon Matrix, mg/kg	100	40	200	200

** Quantification based upon comparison of total ion count of the compound with that of the nearest internal standard.

Sim D. Lessley, Ph.D./ Laboratory Director

1255 Powell Street
Emeryville, CA 94608

415/428-2300
Fax: 415/547-3643

BCA B C Analytical

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

Geomatrix Consultants
1 Mkt. Plaza, Spear St.#71
San Francisco, CA 95638

04/06/90

Attn: D. Favre

Re: Project: Geomatrix Consultants/1459D
AEMC Lab Reference No.: L4510 Project No.: 1459D
Date Samples Received: 03/21/90 Job No.: 794510
No. Samples Received: 15 Soil samples

These samples were received by AEMC in a chilled state, intact, and accompanied by chain-of-custody documentation.

The above referenced samples were analyzed as follows:

No. of Samples	Analysis
7	GCMS Semi-Volatiles
2	Phenols
2	Dioxins

Analytical results are attached to this letter. Please call if we can provide additional assistance.

Sincerely,

George Hampton
Laboratory Director

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: Acid Extractables, EPA Method 8270

CLIENT: Geomatrix Consultants
1 Mkt. Plaza, Spear St. =71
San Francisco, CA

Project No.: 1459D
Contact: D. Favre
Phone:

Project: Geomatrix Consultants

AEMC Contact: G. Hampton

Date Sampled: 3/21/90
Date Received: 3/21/90
Date Extracted: 3/21/90
Date Analyzed: 3/22/90
Date Reported: 3/26/90
Client Sample I.D.: Composite 1-A to 1-D (Precom) (C)

Job No.: 794510
COC Log No.: 767

AEMC I.D.: L4510-5
Batch No.: 5319
Matrix: Soil

SURROGATE	CONCENTRATION (mg/kg)	RECOVERY (percent)
Phenol-d6	2	79%
2-Fluorophenol	2	80%
2,4,6-Tribromphenol	2	80%

ANALYTES	CAS #	CONCENTRATION (mg/kg)	RPT. LIMIT (mg/kg)
Benzoic Acid	65-85-0	ND	1
4-Chloro-3-methylphenol	59-50-7	ND	1
2-Chlorophenol	95-57-8	ND	1
2,4-Dichlorophenol	120-83-2	ND	1
2,4-Dimethylphenol	105-67-9	ND	1
2,4-Dinitrophenol	51-28-5	ND	1
2-Methyl-4,6-dinitrophenol	534-52-1	ND	1
2-Methylphenol	95-48-7	ND	1
4-Methylphenol	106-44-5	ND	1
2-Nitrophenol	88-75-5	ND	1
4-Nitrophenol	100-02-7	ND	1
Pentachlorophenol	87-86-5	8	1
Phenol	108-95-2	ND	1
2,4,5-Trichlorophenol	95-95-4	12	1
2,4,6-Trichlorophenol	88-06-2	ND	1

RPT. Limit = Reporting Limit
ND = Not Detected at or above indicated Reporting Limit

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: Acid Extractables, EPA Method 8270

CLIENT: Geomatrix Consultants
1 Mkt. Plaza, Spear St. #71
San Francisco, CA

Project No.: 1459D
Contact: D. Favre
Phone:

Project: Geomatrix Consultants

AEMC Contact: G. Hampton

Date Sampled: 3/16/90
Date Received: 3/21/90
Date Extracted: 3/21/90
Date Analyzed: 3/22/90
Date Reported: 3/26/90
Client Sample I.D.: Composite 2-A to 2-D (P2-COMP)(C-1)

Job No.: 794510
COC Log No.: 767

AEMC I.D.: L4510-10
Batch No.: 5319
Matrix: Soil

SURROGATE	CONCENTRATION (mg/kg)	RECOVERY (percent)
Phenol-d6	2	76%
2-Fluorophenol	2	75%
2,4,6-Tribromphenol	2	80%

ANALYTES	CAS #	CONCENTRATION (mg/kg)	RPT. LIMIT (mg/kg)
Benzoic Acid	65-85-0	ND	1
4-Chloro-3-methylphenol	59-50-7	ND	1
2-Chlorophenol	95-57-8	ND	1
2,4-Dichlorophenol	120-83-2	ND	1
2,4-Dimethylphenol	105-67-9	ND	1
2,4-Dinitrophenol	51-28-5	ND	1
2-Methyl-4,6-dinitrophenol	534-52-1	ND	1
2-Methylphenol	95-48-7	ND	1
4-Methylphenol	106-44-5	ND	1
2-Nitrophenol	88-75-5	ND	1
4-Nitrophenol	100-02-7	ND	1
Pentachlorophenol	87-86-5	4	1
Phenol	108-95-2	ND	1
2,4,5-Trichlorophenol	95-95-4	7	1
2,4,6-Trichlorophenol	88-06-2	ND	1

RPT. Limit = Reporting Limit
ND = Not Detected at or above indicated Reporting Limit

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: Acid Extractables, EPA Method 8270

CLIENT: Geomatrix Consultants
1 Mkt. Plaza, Spear St. #71
San Francisco, CA

Project: Geomatrix Consultants

Date Sampled: 3/16/90
Date Received: 3/21/90
Date Extracted: 3/21/90
Date Analyzed: 3/22/90
Date Reported: 3/26/90
Client Sample I.D.: 401-2.0 (#1-2')

Project No.: 1459D
Contact: D. Favre
Phone:

AEMC Contact: G. Hampton

Job No.: 794510
COC Log No.: 767

AEMC I.D.: L4510-11
Batch No.: 5319
Matrix: Soil

SURROGATE	CONCENTRATION (mg/kg)	RECOVERY (percent)
Phenol-d6	2	71%
2-Fluorophenol	2	70%
2,4,6-Tribromphenol	2	59%

ANALYTES	CAS #	CONCENTRATION (mg/kg)	RPT. LIMIT (mg/kg)
Benzoic Acid	65-85-0	ND	1
4-Chloro-3-methylphenol	59-50-7	ND	1
2-Chlorophenol	95-57-8	ND	1
2,4-Dichlorophenol	120-83-2	ND	1
2,4-Dimethylphenol	105-67-9	ND	1
2,4-Dinitrophenol	51-28-5	ND	1
2-Methyl-4,6-dinitrophenol	534-52-1	ND	1
2-Methylphenol	95-48-7	ND	1
4-Methylphenol	106-44-5	ND	1
2-Nitrophenol	88-75-5	ND	1
4-Nitrophenol	100-02-7	ND	1
Pentachlorophenol	87-86-5	ND	1
Phenol	108-95-2	ND	1
2,4,5-Trichlorophenol	95-95-4	ND	1
2,4,6-Trichlorophenol	88-06-2	ND	1

RPT. Limit = Reporting Limit
ND = Not Detected at or above indicated Reporting Limit

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: Acid Extractables, EPA Method 8270

CLIENT: Geomatrix Consultants
1 Mkt. Plaza, Spear St. #71
San Francisco, CA

Project No.: 1459D
Contact: D. Favre
Phone:

Project: Geomatrix Consultants

AEMC Contact: G. Hampton

Date Sampled: 3/16/90
Date Received: 3/21/90
Date Extracted: 3/21/90
Date Analyzed: 3/22/90
Date Reported: 3/26/90
Client Sample I.D.: 403-2.0 (43-2.0)

Job No.: 794510
COC Log No.: 767

AEMC I.D.: L4510-12
Batch No.: 5319
Matrix: Soil

SURROGATE	CONCENTRATION (mg/kg)	RECOVERY (percent)
Phenol-d6	2	77%
2-Fluorophenol	2	76%
2,4,6-Tribromphenol	2	68%

ANALYTES	CAS #	CONCENTRATION (mg/kg)	RPT. LIMIT (mg/kg)
Benzoic Acid	65-85-0	ND	1
4-Chloro-3-methylphenol	59-50-7	ND	1
2-Chlorophenol	95-57-8	ND	1
2,4-Dichlorophenol	120-83-2	ND	1
2,4-Dimethylphenol	105-67-9	ND	1
2,4-Dinitrophenol	51-28-5	ND	1
2-Methyl-4,6-dinitrophenol	534-52-1	ND	1
2-Methylphenol	95-48-7	ND	1
4-Methylphenol	106-44-5	ND	1
2-Nitrophenol	88-75-5	ND	1
4-Nitrophenol	100-02-7	ND	1
Pentachlorophenol	87-86-5	2	1
Phenol	108-95-2	ND	1
2,4,5-Trichlorophenol	95-95-4	4	1
2,4,6-Trichlorophenol	88-06-2	ND	1

RPT. Limit = Reporting Limit
ND = Not Detected at or above indicated Reporting Limit

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: Acid Extractables, EPA Method 8270

CLIENT: Geomatrix Consultants
1 Mkt. Plaza, Spear St. #71
San Francisco, CA

Project No.: 1459D
Contact: D. Favre
Phone:

Project: Geomatrix Consultants

AEMC Contact: G. Hampton

Date Sampled: 3/16/90
Date Received: 3/21/90
Date Extracted: 3/21/90
Date Analyzed: 3/22/90
Date Reported: 3/26/90
Client Sample I.D.: 404-1.0 (#-1-1 ¼')

Job No.: 794510
COC Log No.: 767

AEMC I.D.: L4510-13
Batch No.: 5319
Matrix: Soil

SURROGATE	CONCENTRATION (mg/kg)	RECOVERY (percent)
Phenol-d6	2	68%
2-Fluorophenol	2	97%
2,4,6-Tribromphenol	2	56%

ANALYTES	CAS #	CONCENTRATION (mg/kg)	RPT. LIMIT (mg/kg)
Benzoic Acid	65-85-0	ND	1
4-Chloro-3-methylphenol	59-50-7	ND	1
2-Chlorophenol	95-57-8	ND	1
2,4-Dichlorophenol	120-83-2	ND	1
2,4-Dimethylphenol	105-67-9	ND	1
2,4-Dinitrophenol	51-28-5	ND	1
2-Methyl-4,6-dinitrophenol	534-52-1	ND	1
2-Methylphenol	95-48-7	ND	1
4-Methylphenol	106-44-5	ND	1
2-Nitrophenol	88-75-5	ND	1
4-Nitrophenol	100-02-7	ND	1
Pentachlorophenol	87-86-5	ND	1
Phenol	108-95-2	ND	1
2,4,5-Trichlorophenol	95-95-4	ND	1
2,4,6-Trichlorophenol	88-06-2	ND	1

RPT. Limit = Reporting Limit
ND = Not Detected at or above indicated Reporting Limit

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: Acid Extractables, EPA Method 8270

CLIENT: Geomatrix Consultants
1 Mkt. Plaza, Spear St. #71
San Francisco, CA

Project No.: 1459D
Contact: D. Favre
Phone:

Project: Geomatrix Consultants

AEMC Contact: G. Hampton

Date Sampled: 3/16/90
Date Received: 3/21/90
Date Extracted: 3/21/90
Date Analyzed: 3/22/90
Date Reported: 3/26/90
Client Sample I.D.: 405-2.5 (#5-2.5')

Job No.: 794510
COC Log No.: 767

AEMC I.D.: L4510-14
Batch No.: 5319
Matrix: Soil

SURROGATE	CONCENTRATION (mg/kg)	RECOVERY (percent)
Phenol-d6	2	69%
2-Fluorophenol	2	71%
2,4,6-Tribromphenol	2	49%

ANALYTES	CAS #	CONCENTRATION (mg/kg)	RPT. LIMIT (mg/kg)
Benzoic Acid	65-85-0	ND	1
4-Chloro-3-methylphenol	59-50-7	ND	1
2-Chlorophenol	95-57-8	ND	1
2,4-Dichlorophenol	120-83-2	ND	1
2,4-Dimethylphenol	105-67-9	ND	1
2,4-Dinitrophenol	51-28-5	ND	1
2-Methyl-4,6-dinitrophenol	534-52-1	ND	1
2-Methylphenol	95-48-7	ND	1
4-Methylphenol	106-44-5	ND	1
2-Nitrophenol	88-75-5	ND	1
4-Nitrophenol	100-02-7	ND	1
Pentachlorophenol	87-86-5	ND	1
Phenol	108-95-2	ND	1
2,4,5-Trichlorophenol	95-95-4	ND	1
2,4,6-Trichlorophenol	88-06-2	ND	1

RPT. Limit = Reporting Limit
ND = Not Detected at or above indicated Reporting Limit

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: Acid Extractables, EPA Method 8270

CLIENT: Geomatrix Consultants
1 Mkt. Plaza, Spear St. #71
San Francisco, CA

Project No.: 1459D
Contact: D. Favre
Phone:

Project: Geomatrix Consultants

AEMC Contact: G. Hampton

Date Sampled: 3/16/90
Date Received: 3/21/90
Date Extracted: 3/21/90
Date Analyzed: 3/22/90
Date Reported: 3/26/90
Client Sample I.D.: 406-2.0 (=6-2 1/64)

Job No.: 794510
COC Log No.: 767

AEMC I.D.: L4510-15
Batch No.: 5319
Matrix: Soil

SURROGATE	CONCENTRATION (mg/kg)	RECOVERY (percent)
Phenol-d6	2	71%
2-Fluorophenol	2	67%
2,4,6-Tribromphenol	2	39%

ANALYTES	CAS #	CONCENTRATION (mg/kg)	RPT. LIMIT (mg/kg)
Benzoic Acid	65-85-0	ND	1
4-Chloro-3-methylphenol	59-50-7	ND	1
2-Chlorophenol	95-57-8	ND	1
2,4-Dichlorophenol	120-83-2	ND	1
2,4-Dimethylphenol	105-67-9	ND	1
2,4-Dinitrophenol	51-28-5	ND	1
2-Methyl-4,6-dinitrophenol	534-52-1	ND	1
2-Methylphenol	95-48-7	ND	1
4-Methylphenol	106-44-5	ND	1
2-Nitrophenol	88-75-5	ND	1
4-Nitrophenol	100-02-7	ND	1
Pentachlorophenol	87-86-5	ND	1
Phenol	108-95-2	ND	1
2,4,5-Trichlorophenol	95-95-4	ND	1
2,4,6-Trichlorophenol	88-06-2	ND	1

RPT. Limit = Reporting Limit
ND = Not Detected at or above indicated Reporting Limit

3249 Fitzgerald Road • Rancho Cordova, CA 95742 • Fax (916) 638-4510 • (916) 638-7301

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: Acid Extractables, EPA Method 8270

CLIENT: Geomatrix Consultants
1 Mkt. Plaza, Spear St. #71
San Francisco, CA

Project No.: 1459D
Contact: D. Favre
Phone:

Project: Geomatrix Consultants

AEMC Contact: G. Hampton

Date Sampled: 3/16/90
Date Received: 3/21/90
Date Extracted: 3/21/90
Date Analyzed: 3/22/90
Date Reported: 3/26/90
Client Sample I.D.: Method Blank

Job No.: 794510
COC Log No.: 767

AEMC I.D.: L4510-MB
Batch No.: 5319
Matrix: Soil

SURROGATE	CONCENTRATION (mg/kg)	RECOVERY (percent)
Phenol-d6	2	67%
2-Fluorophenol	2	66%
2,4,6-Tribromphenol	2	48%

ANALYTES	CAS #	CONCENTRATION (mg/kg)	RPT. LIMIT (mg/kg)
Benzoic Acid	65-85-0	ND	1
4-Chloro-3-methylphenol	59-50-7	ND	1
2-Chlorophenol	95-57-8	ND	1
2,4-Dichlorophenol	120-83-2	ND	1
2,4-Dimethylphenol	105-67-9	ND	1
2,4-Dinitrophenol	51-28-5	ND	1
2-Methyl-4,6-dinitrophenol	534-52-1	ND	1
2-Methylphenol	95-48-7	ND	1
4-Methylphenol	106-44-5	ND	1
2-Nitrophenol	88-75-5	ND	1
4-Nitrophenol	100-02-7	ND	1
Pentachlorophenol	87-86-5	ND	1
Phenol	108-95-2	ND	1
2,4,5-Trichlorophenol	95-95-4	ND	1
2,4,6-Trichlorophenol	88-06-2	ND	1

RPT. Limit = Reporting Limit
ND = Not Detected at or above indicated Reporting Limit

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: Acid Extractables, EPA Method 8270

CLIENT: Geomatrix Consultants
1 Mkt. Plaza, Spear St. #71
San Francisco, CA

Project No.: 1459D
Contact: D. Favre
Phone:

Project: Geomatrix Consultants

AEMC Contact: G. Hampton

Date Sampled: 3/16/90
Date Received: 3/21/90
Date Extracted: 3/21/90
Date Analyzed: 3/22/90
Date Reported: 3/26/90

Job No.: 794510
COC Log No.: 767

AEMC I.D.: L4510
Batch No.: 5319
Matrix: Soil

SURROGATE	Spike Conc. (mg/kg)	MS %Rec	MSD %Rec
Phenol-d6	2	79%	83%
2-Fluorophenol	2	80%	85%
2,4,6-Tribromphenol	2	75%	73%

ANALYTE	Spike Conc. (mg/kg)	MS %Rec	MSD %Rec	Duplicate RPD
Acids				
Pentachlorophenol	2	111%	83%	29%
2,4,6-Trichlorophenol	2	68%	60%	13%

MS = Matrix Spike
MSD = Matrix Spike Duplicate
% Rec = Percent Recovery
RPD = Relative Percent Difference

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: Acid Extractables, EPA Method 8270

CLIENT: Geomatrix Consultants 1 Mkt. Plaza, Spear St.#71 San Francisco, CA 94107	Project No.: 1459D Contact: D. Favre Phone:
Project: Geomatrix Consultants	AEMC Contact: G. Hampton
Date Sampled: 03/21/90 Date Received: 03/16/90, 03/21/90	Job No.: 794510 COC Log No.: 767
Date Extracted: 04/02/90 Date Analyzed: 04/03/90 Date Reported: 04/05/90 Client Sample I.D.: Composite 1A to 1D (P1-COAL EX Y[illegible])	AEMC I.D.: L4510-05 Batch No.: 5389 Matrix: Leachate

SURROGATE	CAS #	CONCENTRATION (mg/L)	RPT. LIMIT (mg/L)
Phenol-d6	d108-95-2	0.2	83%
2-Fluorophenol	367-12-4	0.2	68%
2,4,6-Tribromophenol	118-79-6	0.2	86%
Nitrobenzene-d5	98-95-3	0.2	93%
2-Fluorobiphenyl	321-60-80	0.2	79%
Terphenyl-d14	d92-94-4	0.2	88%

ANALYTE	CAS #	CONCENTRATION (mg/L)	RPT. LIMIT (mg/L)
Benzoic Acid	65-85-0	ND	0.1
4-Chloro-3-methylphenol	59-50-7	ND	0.1
2-Chlorophenol	95-57-8	ND	0.1
2,4-Dichlorophenol	120-83-2	ND	0.1
2,4-Dimethylphenol	105-67-9	ND	0.1
2,4-Dinitrophenol	51-28-5	ND	0.1
2-Methyl-4,6-dinitrophenol	534-52-1	ND	0.1
2-Methylphenol	95-48-7	ND	0.1
4-Methylphenol	106-44-5	ND	0.1
2-Nitrophenol	88-75-5	ND	0.1
4-Nitrophenol	100-02-7	ND	0.1
Pentachlorophenol	87-86-5	ND	0.1
Phenol	108-95-2	ND	0.1
2,4,5-Trichlorophenol	95-95-4	0.16	0.1
2,4,6-Trichlorophenol	88-06-2	ND	0.1

RPT. LIMIT = Reporting Limit
ND = Not Detected at or above indicated Reporting Limit
NR = Not Reportable; see report cover-letter for explanation.

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: Acid Extractables, EPA Method 8270

CLIENT: Geomatrix Consultants
1 Mkt. Plaza, Spear St.#71
San Francisco, CA 94107

Project No.: 1459D
Contact: D. Favre
Phone:

Project: Geomatrix Consultants

AEMC Contact: G. Hampton

Date Sampled: 03/21/90
Date Received: 03/16/90, 03/21/90
Date Extracted: 04/02/90
Date Analyzed: 04/03/90
Date Reported: 04/05/90
Client Sample I.D.: Composite 2A to 2D

Job No.: 794510
COC Log No.: 767

AEMC I.D.: L4510-10
Batch No.: 5389
Matrix: Leachate

SURROGATE	CAS #	CONCENTRATION (mg/L)	RPT. LIMIT (mg/L)
Phenol-d6	d108-95-2	0.2	87%
2-Fluorophenol	367-12-4	0.2	78%
2,4,6-Tribromophenol	118-79-6	0.2	115%
Nitrobenzene-d5	98-95-3	0.2	108%
2-Fluorobiphenyl	321-60-80	0.2	91%
Terphenyl-d14	d92-94-4	0.2	117%

ANALYTE	CAS #	CONCENTRATION (mg/L)	RPT. LIMIT (mg/L)
Benzoic Acid	65-85-0	ND	0.1
4-Chloro-3-methylphenol	59-50-7	ND	0.1
2-Chlorophenol	95-57-8	ND	0.1
2,4-Dichlorophenol	120-83-2	ND	0.1
2,4-Dimethylphenol	105-67-9	ND	0.1
2,4-Dinitrophenol	51-28-5	ND	0.1
2-Methyl-4,6-dinitrophenol	534-52-1	ND	0.1
2-Methylphenol	95-48-7	ND	0.1
4-Methylphenol	106-44-5	ND	0.1
2-Nitrophenol	88-75-5	ND	0.1
4-Nitrophenol	100-02-7	ND	0.1
Pentachlorophenol	87-86-5	0.16	0.1
Phenol	108-95-2	ND	0.1
2,4,5-Trichlorophenol	95-95-4	1.4	0.1
2,4,6-Trichlorophenol	88-06-2	ND	0.1

RPT. LIMIT = Reporting Limit
ND = Not Detected at or above indicated Reporting Limit
NR = Not Reportable; see report cover-letter for explanation.

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: Acid Extractables, EPA Method 8270

CLIENT: Geomatrix Consultants
1 Mkt. Plaza, Spear St.#71
San Francisco, CA 94107

Project No.: 1459D
Contact: D. Favre
Phone:

Project: Geomatrix Consultants

AEMC Contact: G. Hampton

Date Sampled: 03/21/90
Date Received: 03/16/90, 03/21/90
Date Extracted: 04/02/90
Date Analyzed: 04/03/90
Date Reported: 04/05/90
Client Sample I.D.: Method Blank

Job No.: 794510
COC Log No.: 767

AEMC I.D.: L4510-MB
Batch No.: 5389
Matrix: Leachate

SURROGATE	CAS #	CONCENTRATION (mg/L)	RPT. LIMIT (mg/L)
Phenol-d6	d108-95-2	0.2	25%
2-Fluorophenol	367-12-4	0.2	36%
2,4,6-Tribromophenol	118-79-6	0.2	34%
Nitrobenzene-d5	98-95-3	0.2	78%
2-Fluorobiphenyl	321-60-80	0.2	69%
Terphenyl-d14	d92-94-4	0.2	81%

ANALYTE	CAS #	CONCENTRATION (mg/L)	RPT. LIMIT (mg/L)
Benzoic Acid	65-85-0	ND	0.1
4-Chloro-3-methylphenol	59-50-7	ND	0.1
2-Chlorophenol	95-57-8	ND	0.1
2,4-Dichlorophenol	120-83-2	ND	0.1
2,4-Dimethylphenol	105-67-9	ND	0.1
2,4-Dinitrophenol	51-28-5	ND	0.1
2-Methyl-4,6-dinitrophenol	534-52-1	ND	0.1
2-Methylphenol	95-48-7	ND	0.1
4-Methylphenol	106-44-5	ND	0.1
2-Nitrophenol	88-75-5	ND	0.1
4-Nitrophenol	100-02-7	ND	0.1
Pentachlorophenol	87-86-5	ND	0.1
Phenol	108-95-2	ND	0.1
2,4,5-Trichlorophenol	95-95-4	ND	0.1
2,4,6-Trichlorophenol	88-06-2	ND	0.1

RPT. LIMIT = Reporting Limit
ND = Not Detected at or above indicated Reporting Limit
NR = Not Reportable; see report cover-letter for explanation.

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: Acid Extractables, EPA Method 8270

CLIENT: Geomatrix Consultants
1 Mkt. Plaza, Spear St.#71
San Francisco, CA 94107

Project No.: 1459D
Contact: D. Favre
Phone:

Project: Geomatrix Consultants

AEMC Contact: G. Hampton

Date Sampled: 03/21/90
Date Received: 03/16/90, 03/21/90
Date Extracted: 04/02/90
Date Analyzed: 04/03/90
Date Reported: 04/05/90

Job No.: 794510
COC Log No.: 767

AEMC I.D.: L4510
Batch No.: 5389
Matrix: Leachate

SURROGATE	SPIKE CONC. (mg/L)	MS %REC	MSD %REC
Phenol-d6	0.2	74%	72%
2-Fluorophenol	0.2	74%	70%
2,4,6-Tribromophenol	0.2	84%	78%
Nitrobenzene-d5	0.2	81%	81%
2-Fluorobiphenyl	0.2	86%	80%
Terphenyl-d14	0.2	90%	85%

ANALYTE	SPIKE CONC. (mg/L)	MS %REC	MSD %REC	DUPLICATE RPD
Acids				
Pentachlorophenol	0.2	76%	76%	0%
2,4,6-Trichlorophenol	0.2	108%	102%	6%

MS = Matrix Spike
MSD = Matrix Spike Duplicate
% REC = Percent Recovery
ND = Not Detected
RPD = Relative Percent Difference

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: Acid Extractables, EPA Method 8270

CLIENT: Geomatrix Consultants
1 Mkt. Plaza, Spear St.#71
San Francisco, CA 94107

Project: Geomatrix Consultants

Date Sampled: 03/21/90
Date Received: 03/16/90, 03/21/90
Date Extracted: 04/02/90
Date Analyzed: 04/03/90
Date Reported: 04/05/90

Project No.: 1459D
Contact: D. Favre
Phone:

AEMC Contact: G. Hampton

Job No.: 794510
COC Log No.: 767

AEMC I.D.: L4510
Batch No.: 5389
Matrix: Leachate

ANALYTE Acids	LCS CONC. (mg/L)	LCS %REC
Pentachlorophenol	0.2	79%
Phenol	0.2	97%
2-Chlorophenol	0.2	102%
4-Chloro-3-methylphenol	0.2	88%
4-Nitrophenol	0.2	48%

LCS = Laboratory Control Standard
%REC = Percent Recovery

Enseco

POLYCHLORINATED DIOXINS/FURANS

LOW RESOLUTION

Client Name: AEMC
Client ID: L4510-5 1A-1D Composite (PI-COM) ES
Lab ID: 052083-0001-SA Enseco ID: 142389
Matrix: SOIL Sampled: 21 MAR 90 Received: 26 MAR 90
Authorized: 26 MAR 90 Prepared: 27 MAR 90 Analyzed: 29 MAR 90

Sample Amount 10.6G
Percent Moisture NA
Column Type DB-5

Parameter	Result	Units	Detection Limit	Data Qualifiers
Furans				
TCDFs (total)	ND	ng/g	0.0017	
PeCDFs (total)	ND	ng/g	0.0031	
HxCDFs (total)	0.10	ng/g	--	
HpCDFs (total)	0.81	ng/g	--	
OCDF	0.97	ng/g	--	
Dioxins				
TCDDs (total)	ND	ng/g	0.0033	
PeCDDs (total)	ND	ng/g	0.0088	
HxCDDs (total)	ND	ng/g	0.048	
HpCDDs (total)	2.2	ng/g	--	
OCDD	10	ng/g	--	
	% Recovery			
13C-2,3,7,8-TCDF	42			
13C-2,3,7,8-TCDD	58			
13C-1,2,3,7,8-PeCDD	60			
13C-1,2,3,6,7,8-HxCDD	60			
13C-1,2,3,4,6,7,8-HpCDD	59			
13C-OCDD	37			

ND = Not detected
NA = Not applicable

Reported By: Robert Hrabak Approved By: Steve Rogers

The cover letter is an integral part of this report.
Rev 230787

Enseco

POLYCHLORINATED DIOXINS/FURANS

LOW RESOLUTION

Client Name: AEMC
Client ID: L4510-10 2A-2D Composite (PZ-[illegible])
Lab ID: 052083-0002-SA Enseco ID: 142391
Matrix: SOIL Sampled: 21 MAR 90 Received: 26 MAR 90
Authorized: 26 MAR 90 Prepared: 27 MAR 90 Analyzed: 29 MAR 90

Sample Amount 10.5G
Percent Moisture NA
Column Type DB-5

Parameter	Result	Units	Detection Limit	Data Qualifiers
Furans				
TCDFs (total)	ND	ng/g	0.0047	
PeCDFs (total)	ND	ng/g	0.0030	
HxCDFs (total)	0.090	ng/g	--	
HpCDFs (total)	0.60	ng/g	--	
OCDF	0.66	ng/g	--	
Dioxins				
TCDDs (total)	ND	ng/g	0.0023	
PeCDDs (total)	ND	ng/g	0.0070	
HxCDDs (total)	ND	ng/g	0.041	
HpCDDs (total)	1.5	ng/g	--	
OCDD	6.1	ng/g	--	
	% Recovery			
13C-2,3,7,8-TCDF	51			
13C-2,3,7,8-TCDD	60			
13C-1,2,3,7,8-PeCDD	61			
13C-1,2,3,6,7,8-HxCDD	61			
13C-1,2,3,4,6,7,8-HpCDD	59			
13C-OCDD	36			

ND = Not detected
NA = Not applicable

Reported By: Robert Hrabak Approved By: Steve Rogers

The cover letter is an integral part of this report.
Rev 230787

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

Geomatrix Consultants
1 Mkt. Plaza, Spear St.=71
San Francisco, CA

04/19/90

Attn: C. Young

Re: Project: Geomatrix Consultants
AEMC Lab Reference No.: L4526 Project No.: 1459D
Date Samples Received: 03/26/90 Job No.: 794526
No. Samples Received: 16 Soil samples

These samples were received by AEMC in a chilled state, intact, and accompanied by chain-of-custody documentation.

The above referenced samples were analyzed as follows:

No. of Samples	Analysis
8	GCMS Semi-Volatiles
2	Dioxin by TCLP
4	Dioxin

Analytical results are attached to this letter. Please call if we can provide additional assistance.

Sincerely,

George Hampton
Laboratory Director

3249 Fitzgerald Road • Rancho Cordova, CA 95742 • Fax (916) 638-4510 • (916) 638-7301

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: Acid Extractables, EPA Method 8270

CLIENT: Geomatrix Consultants
1 Mkt. Plaza, Spear St.#71
San Francisco, CA 94107

Project No.: 1459D
Contact: C. Young
Phone:

Project: Geomatrix Consultants

AEMC Contact: G. Hampton

Date Sampled: 03/23/90
Date Received: 03/26/90
Date Extracted: 04/02/90
Date Analyzed: 04/03/90
Date Reported: 04/05/90
Client Sample I.D.: Comp. YB-S-1 to YB-S-4

(YB-S-1-4EX) NDF

Job No.: 794526
COC Log No.: None

AEMC I.D.: L4526-05
Batch No.: 5389
Matrix: Leachate

SURROGATE	CAS #	CONCENTRATION (mg/L)	RPT. LIMIT (mg/L)
Phenol-d6	d108-95-2	0.2	65%
2-Fluorophenol	367-12-4	0.2	66%
2,4,6-Tribromophenol	118-79-6	0.2	99%
Nitrobenzene-d5	98-95-3	0.2	61%
2-Fluorobiphenyl	321-60-80	0.2	72%
Terphenyl-d14	d92-94-4	0.2	97%

ANALYTE	CAS #	CONCENTRATION (mg/L)	RPT. LIMIT (mg/L)
Benzoic Acid	65-85-0	ND	0.1
4-Chloro-3-methylphenol	59-50-7	ND	0.1
2-Chlorophenol	95-57-8	ND	0.1
2,4-Dichlorophenol	120-83-2	ND	0.1
2,4-Dimethylphenol	105-67-9	ND	0.1
2,4-Dinitrophenol	51-28-5	ND	0.1
2-Methyl-4,6-dinitrophenol	534-52-1	ND	0.1
2-Methylphenol	95-48-7	ND	0.1
4-Methylphenol	106-44-5	ND	0.1
2-Nitrophenol	88-75-5	ND	0.1
4-Nitrophenol	100-02-7	ND	0.1
Pentachlorophenol	87-86-5	0.68	0.1
Phenol	108-95-2	ND	0.1
2,4,5-Trichlorophenol	95-95-4	5.8	0.1
2,4,6-Trichlorophenol	88-06-2	ND	0.1

RPT. LIMIT = Reporting Limit
ND = Not Detected at or above indicated Reporting Limit
NR = Not Reportable; see report cover-letter for explanation.

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: Acid Extractables, EPA Method 8270

CLIENT: Geomatrix Consultants
1 Mkt. Plaza, Spear St.#71
San Francisco, CA 94107

Project: Geomatrix Consultants

Date Sampled: 03/23/90
Date Received: 03/26/90
Date Extracted: 04/02/90
Date Analyzed: 04/03/90
Date Reported: 04/05/90
Client Sample I.D.: YB-C (YB-C EX) MF

Project No.: 1459D
Contact: C. Young
Phone:

AEMC Contact: G. Hampton

Job No.: 794526
COC Log No.: None

AEMC I.D.: L4526-06
Batch No.: 5389
Matrix: Leachate

SURROGATE	CAS #	CONCENTRATION (mg/L)	RPT. LIMIT (mg/L)
Phenol-d6	d108-95-2	0.2	74%
2-Fluorophenol	367-12-4	0.2	70%
2,4,6-Tribromophenol	118-79-6	0.2	108%
Nitrobenzene-d5	98-95-3	0.2	73%
2-Fluorobiphenyl	321-60-80	0.2	67%
Terphenyl-d14	d92-94-4	0.2	85%

ANALYTE	CAS #	CONCENTRATION (mg/L)	RPT. LIMIT (mg/L)
Benzoic Acid	65-85-0	ND	0.1
4-Chloro-3-methylphenol	59-50-7	ND	0.1
2-Chlorophenol	95-57-8	ND	0.1
2,4-Dichlorophenol	120-83-2	ND	0.1
2,4-Dimethylphenol	105-67-9	ND	0.1
2,4-Dinitrophenol	51-28-5	ND	0.1
2-Methyl-4,6-dinitrophenol	534-52-1	ND	0.1
2-Methylphenol	95-48-7	ND	0.1
4-Methylphenol	106-44-5	ND	0.1
2-Nitrophenol	88-75-5	ND	0.1
4-Nitrophenol	100-02-7	ND	0.1
Pentachlorophenol	87-86-5	0.44	0.1
Phenol	108-95-2	ND	0.1
2,4,5-Trichlorophenol	95-95-4	3.5	0.1
2,4,6-Trichlorophenol	88-06-2	ND	0.1

RPT. LIMIT = Reporting Limit
ND = Not Detected at or above indicated Reporting Limit
NR = Not Reportable; see report cover-letter for explanation.

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: Acid Extractables, EPA Method 8270

CLIENT: Geomatrix Consultants
1 Mkt. Plaza, Spear St.#71
San Francisco, CA 94107

Project No.: 1459D
Contact: C. Young
Phone:

Project: Geomatrix Consultants

AEMC Contact: G. Hampton

Date Sampled: 03/23/90
Date Received: 03/26/90
Date Extracted: 04/02/90
Date Analyzed: 04/03/90 (D1-4 EX) MF
Date Reported: 04/05/90
Client Sample I.D.: Composite D-1 to D-4

Job No.: 794526
COC Log No.: None

AEMC I.D.: L4526-11
Batch No.: 5389
Matrix: Leachate

SURROGATE	CAS #	CONCENTRATION (mg/L)	RPT. LIMIT (mg/L)
Phenol-d6	d108-95-2	0.2	76%
2-Fluorophenol	367-12-4	0.2	65%
2,4,6-Tribromophenol	118-79-6	0.2	80%
Nitrobenzene-d5	98-95-3	0.2	82%
2-Fluorobiphenyl	321-60-80	0.2	69%
Terphenyl-d14	d92-94-4	0.2	86%

ANALYTE	CAS #	CONCENTRATION (mg/L)	RPT. LIMIT (mg/L)
Benzoic Acid	65-85-0	ND	0.1
4-Chloro-3-methylphenol	59-50-7	ND	0.1
2-Chlorophenol	95-57-8	ND	0.1
2,4-Dichlorophenol	120-83-2	ND	0.1
2,4-Dimethylphenol	105-67-9	ND	0.1
2,4-Dinitrophenol	51-28-5	ND	0.1
2-Methyl-4,6-dinitrophenol	534-52-1	ND	0.1
2-Methylphenol	95-48-7	ND	0.1
4-Methylphenol	106-44-5	ND	0.1
2-Nitrophenol	88-75-5	ND	0.1
4-Nitrophenol	100-02-7	ND	0.1
Pentachlorophenol	87-86-5	0.26	0.1
Phenol	108-95-2	ND	0.1
2,4,5-Trichlorophenol	95-95-4	2.0	0.1
2,4,6-Trichlorophenol	88-06-2	ND	0.1

RPT. LIMIT = Reporting Limit
ND = Not Detected at or above indicated Reporting Limit
NR = Not Reportable; see report cover-letter for explanation.

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: Acid Extractables, EPA Method 8270

CLIENT: Geomatrix Consultants
1 Mkt. Plaza, Spear St. 71
San Francisco, CA 941[illegible]

Project No.: 1459D
Contact: C. Young
Phone:

Project: Geomatrix Consultants

AEMC Contact: G. Hampton

Date Sampled: 03/23/90
Date Received: 03/26/90
Date Extracted: 04/02/90
Date Analyzed: 04/03/90 (D19- [illegible] EX) NDF
Date Reported: 04/05/90
Client Sample I.D.: Comp. D-19 to D-22

Job No.: 794526
COC Log No.: None

AEMC I.D.: L4526-16
Batch No.: 5389
Matrix: Leachate

SURROGATE	CAS #	CONCENTRATION (mg/L)	RPT. LIMIT (mg/L)
Phenol-d6	d108-95-2	0.2	70%
2-Fluorophenol	367-12-4	0.2	59%
2,4,6-Tribromophenol	118-79-6	0.2	80%
Nitrobenzene-d5	98-95-3	0.2	79%
2-Fluorobiphenyl	321-60-80	0.2	66%
Terphenyl-d14	d92-94-4	0.2	73%

ANALYTE	CAS #	CONCENTRATION (mg/L)	RPT. LIMIT (mg/L)
Benzoic Acid	65-85-0	ND	0.1
4-Chloro-3-methylphenol	59-50-7	ND	0.1
2-Chlorophenol	95-57-8	ND	0.1
2,4-Dichlorophenol	120-83-2	ND	0.1
2,4-Dimethylphenol	105-67-9	ND	0.1
2,4-Dinitrophenol	51-28-5	ND	0.1
2-Methyl-4,6-dinitrophenol	534-52-1	ND	0.1
2-Methylphenol	95-48-7	ND	0.1
4-Methylphenol	106-44-5	ND	0.1
2-Nitrophenol	88-75-5	ND	0.1
4-Nitrophenol	100-02-7	ND	0.1
Pentachlorophenol	87-86-5	0.40	0.1
Phenol	108-95-2	ND	0.1
2,4,5-Trichlorophenol	95-95-4	3.0	0.1
2,4,6-Trichlorophenol	88-06-2	ND	0.1

RPT. LIMIT = Reporting Limit
ND = Not Detected at or above indicated Reporting Limit
NR = Not Reportable; see report cover-letter for explanation.

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: Acid Extractables, EPA Method 8270

CLIENT: Geomatrix Consultants
1 Mkt. Plaza, Spear St.#71
San Francisco, CA 94107

Project No.: 1459D
Contact: C. Young
Phone:

Project: Geomatrix Consultants

AEMC Contact: G. Hampton

Date Sampled: 03/23/90
Date Received: 03/26/90
Date Extracted: 04/02/90
Date Analyzed: 04/03/90
Date Reported: 04/05/90
Client Sample I.D.: Method Blank

Job No.: 794526
COC Log No.: None

AEMC I.D.: L4526-MB
Batch No.: 5389
Matrix: Leachate

SURROGATE	CAS #	CONCENTRATION (mg/L)	RPT. LIMIT (mg/L)
Phenol-d6	d108-95-2	0.2	25%
2-Fluorophenol	367-12-4	0.2	36%
2,4,6-Tribromophenol	118-79-6	0.2	34%
Nitrobenzene-d5	98-95-3	0.2	78%
2-Fluorobiphenyl	321-60-80	0.2	69%
Terphenyl-d14	d92-94-4	0.2	81%

ANALYTE	CAS #	CONCENTRATION (mg/L)	RPT. LIMIT (mg/L)
Benzoic Acid	65-85-0	ND	0.1
4-Chloro-3-methylphenol	59-50-7	ND	0.1
2-Chlorophenol	95-57-8	ND	0.1
2,4-Dichlorophenol	120-83-2	ND	0.1
2,4-Dimethylphenol	105-67-9	ND	0.1
2,4-Dinitrophenol	51-28-5	ND	0.1
2-Methyl-4,6-dinitrophenol	534-52-1	ND	0.1
2-Methylphenol	95-48-7	ND	0.1
4-Methylphenol	106-44-5	ND	0.1
2-Nitrophenol	88-75-5	ND	0.1
4-Nitrophenol	100-02-7	ND	0.1
Pentachlorophenol	87-86-5	ND	0.1
Phenol	108-95-2	ND	0.1
2,4,5-Trichlorophenol	95-95-4	ND	0.1
2,4,6-Trichlorophenol	88-06-2	ND	0.1

RPT. LIMIT = Reporting Limit
ND = Not Detected at or above indicated Reporting Limit
NR = Not Reportable; see report cover-letter for explanation.

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: Acid Extractables, EPA Method 8270

CLIENT: Geomatrix Consultants
1 Mkt. Plaza, Spear St.#71
San Francisco, CA 94107

Project No.: 1459D
Contact: C. Young
Phone:

Project: Geomatrix Consultants

AEMC Contact: G. Hampton

Date Sampled: 03/23/90
Date Received: 03/26/90
Date Extracted: 04/02/90
Date Analyzed: 04/03/90
Date Reported: 04/05/90

Job No.: 794526
COC Log No.: None

AEMC I.D.: L4526
Batch No.: 5389
Matrix: Leachate

SURROGATE	SPIKE CONC. (mg/L)	MS %REC	MSD %REC
Phenol-d6	0.2	74%	72%
2-Fluorophenol	0.2	74%	70%
2,4,6-Tribromophenol	0.2	84%	78%
Nitrobenzene-d5	0.2	81%	81%
2-Fluorobiphenyl	0.2	86%	80%
Terphenyl-d14	0.2	90%	85%

ANALYTE	SPIKE CONC. (mg/kg)	MS %REC	MSD %REC	DUPLICATE RPD
Acids				
Pentachlorophenol	0.2	76%	76%	0%
2,4,6-Trichlorophenol	0.2	108%	102%	6%

MS = Matrix Spike
MSD = Matrix Spike Duplicate
% REC = Percent Recovery
RPD = Relative Percent Difference

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: Acid Extractables, EPA Method 8270

CLIENT: Geomatrix Consultants
1 Mkt. Plaza, Spear St.#71
San Francisco, CA 94107

Project No.: 1459D
Contact: C. Young
Phone:

Project: Geomatrix Consultants

AEMC Contact: G. Hampton

Date Sampled: 03/23/90
Date Received: 03/26/90
Date Extracted: 04/02/90
Date Analyzed: 04/03/90
Date Reported: 04/05/90

Job No.: 794526
COC Log No.: None

AEMC I.D.: L4526
Batch No.: 5389
Matrix: Leachate

ANALYTE	LCS CONC. (mg/L)	LCS %REC
Pentachlorophenol	0.2	79%
Phenol	0.2	97%
2-Chlorophenol	0.2	102%
4-Chloro-3-methylphenol	0.2	88%
4-Nitrophenol	0.2	48%

LCS = Laboratory Control Standard
%REC = Percent Recovery

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: Acid Extractables, EPA Method 8270

CLIENT: Geomatrix Consultants
1 Mkt. Plaza, Spear St. #71
San Francisco, CA

Project No.: 1459D
Contact: C. Young
Phone:

Project: Geomatrix Consultant

AEMC Contact: G. Hampton

Date Sampled: 3/23/90
Date Received: 3/26/90
Date Extracted: 3/26/90
Date Analyzed: 4/1/90
Date Reported: 4/3/90
Client Sample I.D.: Comp. YB-S-1 - YB-S-2 (YB-S-4) NOF

Job No.: 794.26
COC Log No.: None

AEMC I.D.: L4526-5
Batch No.: 5363
Matrix: Soil

SURROGATE	CONCENTRATION (mg/kg)	RPT. LIMIT (mg/kg)
Phenol-d6	NR	NR
2-Fluorophenol	NR	NR
2,4,6-Tribromphenol	NR	NR
Nitrobenzene-d5	NR	NR
2-Fluorobiphenyl	NR	NR
Terphenyl-d14	NR	NR

ANALYTES	CAS #	CONCENTRATION (mg/kg)	RPT. LIMIT (mg/kg)
Benzoic Acid	65-85-0	ND	10
4-Chloro-3-methylphenol	59-50-7	ND	10
2-Chlorophenol	95-57-8	ND	10
2,4-Dichlorophenol	120-83-2	ND	10
2,4-Dimethylphenol	105-67-9	ND	10
2,4-Dinitrophenol	51-28-5	ND	10
2-Methyl-4,6-dinitrophenol	534-52-1	ND	10
2-Methylphenol	95-48-7	ND	10
4-Methylphenol	106-44-5	ND	10
2-Nitrophenol	88-75-5	ND	10
4-Nitrophenol	100-02-7	ND	10
Pentachlorophenol	87-86-5	73	10
Phenol	108-95-2	ND	10
2,4,5-Trichlorophenol	95-95-4	120	10
2,4,6-Trichlorophenol	88-06-2	ND	10

RPT. Limit = Reporting Limit
ND = Not Detected at or above indicated Reporting Limit
NR = Not Reportable; see report cover-letter for explanation.

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: Acid Extractables, EPA Method 8270

CLIENT: Geomatrix Consultants
1 Mkt. Plaza, Spear St. #71
San Francisco, CA

Project: Geomatrix Consultants

Date Sampled: 3/23/90
Date Received: 3/26/90
Date Extracted: 3/26/90
Date Analyzed: 4/1/90
Date Reported: 4/3/90
Client Sample I.D.: YB-C

Project No.: 1459D
Contact: C. Young
Phone:

AEMC Contact: G. Hampton

Job No.: 794526
COC Log No.: None

AEMC I.D.: L4526-6
Batch No.: 5363
Matrix: Soil

SURROGATE	CONCENTRATION (mg/kg)	RPT. LIMIT (mg/kg)
Phenol-d6	NR	NR
2-Fluorophenol	NR	NR
2,4,6-Tribromphenol	NR	NR
Nitrobenzene-d5	NR	NR
2-Fluorobiphenyl	NR	NR
Terphenyl-d14	NR	NR

ANALYTES	CAS #	CONCENTRATION (mg/kg)	RPT. LIMIT (mg/kg)
Benzoic Acid	65-85-0	ND	10
4-Chloro-3-methylphenol	59-50-7	ND	10
2-Chlorophenol	95-57-8	ND	10
2,4-Dichlorophenol	120-83-2	ND	10
2,4-Dimethylphenol	105-67-9	ND	10
2,4-Dinitrophenol	51-28-5	ND	10
2-Methyl-4,6-dinitrophenol	534-52-1	ND	10
2-Methylphenol	95-48-7	ND	10
4-Methylphenol	106-44-5	ND	10
2-Nitrophenol	88-75-5	ND	10
4-Nitrophenol	100-02-7	ND	10
Pentachlorophenol	87-86-5	31	10
Phenol	108-95-2	ND	10
2,4,5-Trichlorophenol	95-95-4	60	10
2,4,6-Trichlorophenol	88-06-2	ND	10

RPT. Limit = Reporting Limit
ND = Not Detected at or above indicated Reporting Limit
NR = Not Reportable; see report cover-letter for explanation.

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: Acid Extractables, EPA Method 8270

CLIENT: Geomatrix Consultants
1 Mkt. Plaza, Spear St. #71
San Francisco, CA

Project No.: 1459D
Contact: C. Young
Phone:

Project: Geomatrix Consultants

AEMC Contact: G. Hampton

Date Sampled: 3/23/90
Date Received: 3/26/90
Date Extracted: 3/26/90
Date Analyzed: 4/1/90
Date Reported: 4/3/90
Client Sample I.D.: Comp. D-1 - D-4
(D1-4) NDF

Job No.: 794526
COC Log No.: None

AEMC I.D.: L4526-11
Batch No.: 5363
Matrix: Soil

SURROGATE	CONCENTRATION (mg/kg)	RPT. LIMIT (mg/kg)
Phenol-d6	NR	NR
2-Fluorophenol	NR	NR
2,4,6-Tribromphenol	NR	NR
Nitrobenzene-d5	NR	NR
2-Fluorobiphenyl	NR	NR
Terphenyl-d14	NR	NR

ANALYTES	CAS #	CONCENTRATION (mg/kg)	RPT. LIMIT (mg/kg)
Benzoic Acid	65-85-0	ND	10
4-Chloro-3-methylphenol	59-50-7	ND	10
2-Chlorophenol	95-57-8	ND	10
2,4-Dichlorophenol	120-83-2	ND	10
2,4-Dimethylphenol	105-67-9	ND	10
2,4-Dinitrophenol	51-28-5	ND	10
2-Methyl-4,6-dinitrophenol	534-52-1	ND	10
2-Methylphenol	95-48-7	ND	10
4-Methylphenol	106-44-5	ND	10
2-Nitrophenol	88-75-5	ND	10
4-Nitrophenol	100-02-7	ND	10
Pentachlorophenol	87-86-5	16	10
Phenol	108-95-2	ND	10
2,4,5-Trichlorophenol	95-95-4	40	10
2,4,6-Trichlorophenol	88-06-2	ND	10

RPT. Limit = Reporting Limit
ND = Not Detected at or above indicated Reporting Limit
NR = Not Reportable; see report cover-letter for explanation.

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: Acid Extractables, EPA Method 8270

CLIENT: Geomatrix Consultants
1 Mkt. Plaza, Spear St. #71
San Francisco, CA

Project: Geomatrix Consultants

Date Sampled: 3/23/90
Date Received: 3/26/90
Date Extracted: 3/26/90
Date Analyzed: 4/1/90
Date Reported: 4/3/90
Client Sample I.D.: Comp. D-19 - D-22 (D19-22) NOF

Project No.: 1459D
Contact: C. Young
Phone:

AEMC Contact: G. Hampton

Job No.: 794526
COC Log No.: None

AEMC I.D.: L4526-16
Batch No.: 5363
Matrix: Soil

SURROGATE	CONCENTRATION (mg/kg)	RPT. LIMIT (mg/kg)
Phenol-d6	NR	NR
2-Fluorophenol	NR	NR
2,4,6-Tribromphenol	NR	NR
Nitrobenzene-d5	NR	NR
2-Fluorobiphenyl	NR	NR
Terphenyl-d14	NR	NR

ANALYTES	CAS #	CONCENTRATION (mg/kg)	RPT. LIMIT (mg/kg)
Benzoic Acid	65-85-0	ND	10
4-Chloro-3-methylphenol	59-50-7	ND	10
2-Chlorophenol	95-57-8	ND	10
2,4-Dichlorophenol	120-83-2	ND	10
2,4-Dimethylphenol	105-67-9	ND	10
2,4-Dinitrophenol	51-28-5	ND	10
2-Methyl-4,6-dinitrophenol	534-52-1	ND	10
2-Methylphenol	95-48-7	ND	10
4-Methylphenol	106-44-5	ND	10
2-Nitrophenol	88-75-5	ND	10
4-Nitrophenol	100-02-7	ND	10
Pentachlorophenol	87-86-5	16	10
Phenol	108-95-2	ND	10
2,4,5-Trichlorophenol	95-95-4	38	10
2,4,6-Trichlorophenol	88-06-2	ND	10

RPT. Limit = Reporting Limit
ND = Not Detected at or above indicated Reporting Limit
NR = Not Reportable; see report cover-letter for explanation.

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: Acid Extractables, EPA Method 8270

CLIENT: Geomatrix Consultants
1 Mkt. Plaza, Spear St. #71
San Francisco, CA

Project No.: 1459D
Contact: C. Young
Phone:

Project: Geomatrix Consultants

AEMC Contact: G. Hampton

Date Sampled: 3/23/90
Date Received: 3/26/90
Date Extracted: 3/26/90
Date Analyzed: 4/1/90
Date Reported: 4/3/90
Client Sample I.D.: Method Blank

Job No.: 794526
COC Log No.: None

AEMC I.D.: L4526-MB
Batch No.: 5363
Matrix: Soil

SURROGATE	CONCENTRATION (mg/kg)	RPT. LIMIT (mg/kg)
Phenol-d6	2	64%
2-Fluorophenol	2	53%
2,4,6-Tribromphenol	2	63%
Nitrobenzene-d5	2	59%
2-Fluorobiphenyl	2	57%
Terphenyl-d14	2	81%

ANALYTES	CAS #	CONCENTRATION (mg/kg)	RPT. LIMIT (mg/kg)
Benzoic Acid	65-85-0	ND	1
4-Chloro-3-methylphenol	59-50-7	ND	1
2-Chlorophenol	95-57-8	ND	1
2,4-Dichlorophenol	120-83-2	ND	1
2,4-Dimethylphenol	105-67-9	ND	1
2,4-Dinitrophenol	51-28-5	ND	1
2-Methyl-4,6-dinitrophenol	534-52-1	ND	1
2-Methylphenol	95-48-7	ND	1
4-Methylphenol	106-44-5	ND	1
2-Nitrophenol	88-75-5	ND	1
4-Nitrophenol	100-02-7	ND	1
Pentachlorophenol	87-86-5	ND	1
Phenol	108-95-2	ND	1
2,4,5-Trichlorophenol	95-95-4	ND	1
2,4,6-Trichlorophenol	88-06-2	ND	1

RPT. Limit = Reporting Limit
ND = Not Detected at or above indicated Reporting Limit
NR = Not Reportable; see report cover-letter for explanation.

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: Acid Extractables, EPA Method 8270

CLIENT: Geomatrix Consultants
1 Mkt. Plaza, Spear St. #71
San Francisco, CA

Project: Geomatrix Consultants

Date Sampled: 3/23/90
Date Received: 3/26/90
Date Extracted: 3/26/90
Date Analyzed: 4/1/90
Date Reported: 4/3/90

Project No.: 1459D
Contact: C. Young
Phone:

AEMC Contact: G. Hampton

Job No.: 794526
COC Log No.: None

AEMC I.D.: L4526
Batch No.: 5363
Matrix: Soil

SURROGATE	Spike Conc. (mg/kg)	MS %Rec	MSD %Rec
Phenol-d6	2	80%	79%
2-Fluorophenol	2	68%	65%
2,4,6-Tribromphenol	2	63%	55%
Nitrobenzene-d5	2	78%	72%
2-Flurobiphenyl	2	72%	70%
Terphenyl-d14	2	96%	85%

ANALYTE	Spike Conc. (mg/kg)	MS %Rec	MSD %Rec	Duplicate RPD
Acids				
Pentachlorophenol	2	40%	43%	7%
2,4,6-Trichlorophenol	2	72%	70%	3%

MS = Matrix Spike
MSD = Matrix Spike Duplicate
% Rec = Percent Recovery
RPD = Relative Percent Difference

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: Acid Extractables, EPA Method 8270

CLIENT: Geomatrix Consultants
1 Mkt. Plaza, Spear St. #71
San Francisco, CA

Project No.: 1459D
Contact: C. Young
Phone:

Project: Geomatrix Consultants

AEMC Contact: G. Hampton

Date Sampled: 3/23/90
Date Received: 3/26/90
Date Extracted: 3/26/90
Date Analyzed: 4/1/90
Date Reported: 4/3/90

Job No.: 794526
COC Log No.: None

AEMC I.D.: L4526
Batch No.: 5363
Matrix: Soil

ANALYTE Acids	LCS Conc. (mg/kg)	LCS %Rec
Pentachlorophenol	2	79%
Phenol	2	97%
2-Chlorophenol	2	102%
4-Chloro-3-methylphenol	2	88%
4-Nitrophenol	2	48%

LCS = Laboratory Control Standard
% Rec = Percent Recovery

Enseco
A CORNING Company

DUPLICATE CONTROL SAMPLE REPORT
Special Services by Low Resolution

Analyte	Concentration Spiked	Concentration Measured DCS1	Concentration Measured DCS2	Accuracy(%) DCS1	Accuracy(%) DCS2	Accuracy(%) Limits	Precision(RPD) DCS	Precision(RPD) Limits
Category: DXNFUR-A								
Matrix: AQUEOUS								
QC Lot: 3 APR 90-A								
Concentration Units: ng								
2378-TCDF	10	10	11	100	110	60-140	9.5	50
23478-PECDF	10	6.6	6.1	66	61	60-140	7.8	50
123478-HXCDF	10	8.3	8.6	83	86	60-140	3.5	50
1234678-HPCDF	10	8.7	8.9	87	89	60-140	2.2	50
12345678-OCDF	50	54	54	108	108	60-140	0	50
2378-TCDD	10	9.8	10	98	100	60-140	2.0	50
12378-PECDD	10	8.3	8.3	83	83	60-140	0	50
123478-HXCDD	10	7.0	7.2	70	72	60-140	2.8	50
1234678-HPCDD	10	9.8	9.9	98	99	60-140	1.0	50
12345678-OCDD	50	33	34	66	68	60-140	3.0	50

Enseco

POLYCHLORINATED DIOXINS/FURANS

LOW RESOLUTION

Client Name: AEMC
Client ID: COMPOSITE YB-S-1-YB-S-4 (YB-S-1-4) NDF
Lab ID: 052082-0001-SA Enseco ID: 142384
Matrix: SOIL Sampled: 23 MAR 90 Received: 26 MAR 90
Authorized: 26 MAR 90 Prepared: 27 MAR 90 Analyzed: 29 MAR 90

Sample Amount 10.2G
Percent Moisture NA
Column Type DB-5

Parameter	Result	Units	Detection Limit	Data Qualifiers
Furans				
TCDFs (total)	ND	ng/g	0.0021	
PeCDFs (total)	ND	ng/g	0.0090	
HxCDFs (total)	1.8	ng/g	--	
HpCDFs (total)	13	ng/g	--	
OCDF	20	ng/g	--	
Dioxins				
TCDDs (total)	ND	ng/g	0.017	
PeCDDs (total)	ND	ng/g	0.014	
HxCDDs (total)	1.6	ng/g	--	
HpCDDs (total)	42	ng/g	--	
OCDD	250	ng/g	--	
	% Recovery			
13C-2,3,7,8-TCDF	42			
13C-2,3,7,8-TCDD	49			
13C-1,2,3,7,8-PeCDD	57			
13C-1,2,3,6,7,8-HxCDD	52			
13C-1,2,3,4,6,7,8-HpCDD	55			
13C-OCDD	34			

ND = Not detected
NA = Not applicable

Reported By: Dan Vickers Approved By: Steve Rogers

The cover letter is an integral part of this report.
Rev 230787

Enseco
A CORNING Company

POLYCHLORINATED DIOXINS/FURANS

LOW RESOLUTION

Client Name: AEMC
Client ID: COMPOSITE YB-S-1-YB-S-4 (YB-S-1-4-EX) MDF
Lab ID: 052212-0001-SA Enseco ID: 143274
Matrix: LEACHATE Sampled: 23 MAR 90 Received: 04 APR 90
Authorized: NA Prepared: 05 APR 90 Analyzed: 05 APR 90

Sample Amount 0.75L
Column Type DB-5

Parameter	Result	Units	Detection Limit	Data Qualifiers
Furans				
TCDFs (total)	ND	ng/L	0.30	
PeCDFs (total)	ND	ng/L	0.32	
HxCDFs (total)	ND	ng/L	0.43	
HpCDFs (total)	ND	ng/L	0.58	
OCDF	ND	ng/L	1.3	
Dioxins				
TCDDs (total)	ND	ng/L	0.22	
PeCDDs (total)	ND	ng/L	0.81	
HxCDDs (total)	ND	ng/L	1.3	
HpCDDs (total)	22	ng/L	--	
OCDD	15	ng/L	--	
	% Recovery			
13C-2,3,7,8-TCDF	83			
13C-2,3,7,8-TCDD	83			
13C-1,2,3,7,8-PeCDD	87			
13C-1,2,3,6,7,8-HxCDD	87			
13C-1,2,3,4,6,7,8-HpCDD	83			
13C-OCDD	60			

ND = Not detected
NA = Not applicable

Reported By: Dan Vickers Approved By: Steve Rogers

The cover letter is an integral part of this report.
Rev 230787

Enseco

POLYCHLORINATED DIOXINS/FURANS

LOW RESOLUTION

Client Name: AEMC
Client ID: Method Blank
Lab ID: 052212-0001-MB
Enseco ID: 143275
Matrix: LEACHATE
Sampled: NA
Received: NA
Authorized: NA
Prepared: 05 APR 90
Analyzed: 05 APR 90

Sample Amount 0.75L
Column Type DB-5

Parameter	Result	Units	Detection Limit	Data Qualifiers
Furans				
TCDFs (total)	ND	ng/L	0.14	
PeCDFs (total)	ND	ng/L	0.13	
HxCDFs (total)	ND	ng/L	0.21	
HpCDFs (total)	ND	ng/L	0.20	
OCDF	ND	ng/L	0.85	
Dioxins				
TCDDs (total)	ND	ng/L	0.23	
PeCDDs (total)	ND	ng/L	0.33	
HxCDDs (total)	ND	ng/L	0.33	
HpCDDs (total)	ND	ng/L	0.49	
OCDD	ND	ng/L	0.37	
	% Recovery			
13C-2,3,7,8-TCDF	86			
13C-2,3,7,8-TCDD	93			
13C-1,2,3,7,8-PeCDD	106			
13C-1,2,3,6,7,8-HxCDD	103			
13C-1,2,3,4,6,7,8-HpCDD	113			
13C-OCDD	86			

ND = Not detected
NA = Not applicable

Reported By: Dan Vickers
Approved By: Steve Rogers

The cover letter is an integral part of this report.
Rev 230787

LABORATORY CONTROL SAMPLE REPORT
Special Services by Low Resolution

Analyte	Concentration Spiked	Concentration Measured DCS1	Concentration Measured DCS2	Accuracy(%) DCS1	Accuracy(%) DCS2	Accuracy(%) Limits	Precision(RPD) DCS	Precision(RPD) Limits
Category: DXNFUR-A								
Matrix: SOLID								
QC Lot: 16 MAR 90 - A								
Concentration Units: ng								
2378-TCDF	10	11	11	113	108	60-140	4.5	50
23478-PNCDF	10	7.0	6.8	70	68	60-140	2.9	50
123478-HXCDF	10	8.5	7.7	85	77	60-140	11	50
1234678-HPCDF	10	7.6	8.0	76	80	60-140	5.1	50
12345678-OCDF	50	60	55	120	109	60-140	10	50
2378-TCDD	10	11	8.8	110	88	60-140	19	50
12378-PNCDD	10	8.4	7.3	84	73	60-140	14	50
123478-HXCDD	10	6.7	6.4	67	64	60-140	4.5	50
1234678-HPCDD	10	9.5	9.5	95	95	60-140	0	50
12345678-OCDD	50	42	35	83	70	60-140	17	50

Enseco

POLYCHLORINATED DIOXINS/FURANS

LOW RESOLUTION

Client Name: AEMC
Client ID: METHOD BLANK
Lab ID: 052082-0001-MB
Enseco ID: 142385
Matrix: SOIL
Sampled: NA
Received: NA
Authorized: NA
Prepared: 27 MAR 90
Analyzed: 29 MAR 90

Sample Amount 10.0G
Percent Moisture NA
Column Type DB-5

Parameter	Result	Units	Detection Limit	Data Qualifiers
Furans				
TCDFs (total)	ND	ng/g	0.0063	
PeCDFs (total)	ND	ng/g	0.011	
HxCDFs (total)	ND	ng/g	0.0080	
HpCDFs (total)	ND	ng/g	0.013	
OCDF	ND	ng/g	0.037	
Dioxins				
TCDDs (total)	ND	ng/g	0.0052	
PeCDDs (total)	ND	ng/g	0.020	
HxCDDs (total)	ND	ng/g	0.015	
HpCDDs (total)	ND	ng/g	0.018	
OCDD	ND	ng/g	0.074	
	% Recovery			
13C-2,3,7,8-TCDF	85			
13C-2,3,7,8-TCDD	134			
13C-1,2,3,7,8-PeCDD	97			
13C-1,2,3,6,7,8-HxCDD	88			
13C-1,2,3,4,6,7,8-HpCDD	94			
13C-OCDD	57			

ND = Not detected
NA = Not applicable

Reported By: Dan Vickers
Approved By: Steve Rogers

Enseco
A CORNING COMPANY

POLYCHLORINATED DIOXINS/FURANS

LOW RESOLUTION

Client Name: AEMC
Client ID: COMPOSITE D-1-D-4 (D1-4) NOF
Lab ID: 052082-0003-SA Enseco ID: 142387
Matrix: SOIL Sampled: 23 MAR 90 Received: 26 MAR 90
Authorized: 26 MAR 90 Prepared: 27 MAR 90 Analyzed: 29 MAR 90

Sample Amount 10.6G
Percent Moisture NA
Column Type DB-5

Parameter	Result	Units	Detection Limit	Data Qualifiers
Furans				
TCDFs (total)	ND	ng/g	0.0069	
PeCDFs (total)	ND	ng/g	0.0079	
HxCDFs (total)	0.74	ng/g	--	
HpCDFs (total)	5.5	ng/g	--	
OCDF	8.4	ng/g	--	
Dioxins				
TCDDs (total)	ND	ng/g	0.017	
PeCDDs (total)	ND	ng/g	0.012	
HxCDDs (total)	0.69	ng/g	--	
HpCDDs (total)	18	ng/g	--	
OCDD	110	ng/g	--	
	% Recovery			
13C-2,3,7,8-TCDF	36			
13C-2,3,7,8-TCDD	45			
13C-1,2,3,7,8-PeCDD	57			
13C-1,2,3,6,7,8-HxCDD	54			
13C-1,2,3,4,6,7,8-HpCDD	57			
13C-OCDD	36			

ND = Not detected
NA = Not applicable

Reported By: Dan Vickers Approved By: Steve Rogers

The cover letter is an integral part of this report.
Rev 230787

Enseco
CORNING C.T.

POLYCHLORINATED DIOXINS/FURANS

LOW RESOLUTION

Client Name: AEMC
Client ID: COMPOSITE YB-C
Lab ID: 052082-0002-SA
Matrix: SOIL
Authorized: 26 MAR 90

Enseco ID: 142386
Sampled: 23 MAR 90
Prepared: 27 MAR 90

Received: 26 MAR 90
Analyzed: 29 MAR 90

Sample Amount 10.0G
Percent Moisture NA
Column Type DB-5

Parameter	Result	Units	Detection Limit	Data Qualifiers
Furans				
TCDFs (total)	ND	ng/g	0.0030	
PeCDFs (total)	ND	ng/g	0.0067	
HxCDFs (total)	1.5	ng/g	--	
HpCDFs (total)	11	ng/g	--	
OCDF	16	ng/g	--	
Dioxins				
TCDDs (total)	ND	ng/g	0.0089	
PeCDDs (total)	ND	ng/g	0.0091	
HxCDDs (total)	1.3	ng/g	--	
HpCDDs (total)	36	ng/g	--	
OCDD	210	ng/g	--	
	% Recovery			
13C-2,3,7,8-TCDF	50			
13C-2,3,7,8-TCDD	58			
13C-1,2,3,7,8-PeCDD	65			
13C-1,2,3,6,7,8-HxCDD	58			
13C-1,2,3,4,6,7,8-HpCDD	63			
13C-OCDD	40			

ND = Not detected
NA = Not applicable

Reported By: Dan Vickers

Approved By: Steve Rogers

The cover letter is an integral part of this report.
Rev 230787

Enseco
A CORNING COMPANY

POLYCHLORINATED DIOXINS/FURANS

LOW RESOLUTION

Client Name: AEMC
Client ID: COMPOSITE D-1-D-4 (D1-4EX) MDF
Lab ID: 052212-0002-SA Enseco ID: 143276
Matrix: LEACHATE Sampled: 23 MAR 90 Received: 04 APR 90
Authorized: NA Prepared: 05 APR 90 Analyzed: 05 APR 90

Sample Amount 0.75L
Column Type DB-5

Parameter	Result	Units	Detection Limit	Data Qualifiers
Furans				
TCDFs (total)	ND	ng/L	0.17	
PeCDFs (total)	ND	ng/L	0.19	
HxCDFs (total)	ND	ng/L	0.26	
HpCDFs (total)	ND	ng/L	0.41	
OCDF	ND	ng/L	1.2	
Dioxins				
TCDDs (total)	ND	ng/L	0.38	
PeCDDs (total)	ND	ng/L	0.56	
HxCDDs (total)	ND	ng/L	0.66	
HpCDDs (total)	3.9	ng/L	--	
OCDD	3.9	ng/L	--	
	% Recovery			
13C-2,3,7,8-TCDF	86			
13C-2,3,7,8-TCDD	95			
13C-1,2,3,7,8-PeCDD	100			
13C-1,2,3,6,7,8-HxCDD	88			
13C-1,2,3,4,6,7,8-HpCDD	92			
13C-OCDD	71			

ND = Not detected
NA = Not applicable

Reported By: Dan Vickers Approved By: Steve Rogers

The cover letter is an integral part of this report.
Rev 230787

Enseco

POLYCHLORINATED DIOXINS/FURANS

LOW RESOLUTION

Client Name: AEMC
Client ID: COMPOSITE D-19-D22 (D19-22) MDF
Lab ID: 052082-0004-SA Enseco ID: 142388
Matrix: SOIL Sampled: 23 MAR 90 Received: 26 MAR 90
Authorized: 26 MAR 90 Prepared: 27 MAR 90 Analyzed: 29 MAR 90

Sample Amount 10.2G
Percent Moisture NA
Column Type DB-5

Parameter	Result	Units	Detection Limit	Data Qualifiers
Furans				
TCDFs (total)	ND	ng/g	0.0066	
PeCDFs (total)	ND	ng/g	0.0071	
HxCDFs (total)	1.8	ng/g	--	
HpCDFs (total)	13	ng/g	--	
OCDF	20	ng/g	--	
Dioxins				
TCDDs (total)	ND	ng/g	0.016	
PeCDDs (total)	ND	ng/g	0.0059	
HxCDDs (total)	1.7	ng/g	--	
HpCDDs (total)	42	ng/g	--	
OCDD	240	ng/g	--	
	% Recovery			
13C-2,3,7,8-TCDF	50			
13C-2,3,7,8-TCDD	64			
13C-1,2,3,7,8-PeCDD	72			
13C-1,2,3,6,7,8-HxCDD	70			
13C-1,2,3,4,6,7,8-HpCDD	75			
13C-OCDD	49			

ND = Not detected
NA = Not applicable

Reported By: Dan Vickers Approved By: Steve Rogers

The cover letter is an integral part of this report.
Rev 230787

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

Geomatrix Consultants
1 Mkt. Plaza, Spear St.#71
San Francisco, CA

04/06/90

Attn: C. Young

Re: Project: Geomatrix Consultants
AEMC Lab Reference No.: L4544 Project No.: 1459D
Date Samples Received: 03/28/90 Job No.: 794544
No. Samples Received: 9 Soil samples

These samples were received by AEMC in a chilled state, intact, and accompanied by chain-of-custody documentation.

The above referenced samples were analyzed as follows:

No. of Samples	Analysis
4	TPH Stoddard
9	Phenols

Method 8270 Surrogate standard recovery data could not be calculated/ reported for sample #10 due to the presence of a significant amount of mineral spirits in this sample.

Analytical results are attached to this letter. Please call if we can provide additional assistance.

Sincerely,

George Hampton
Laboratory Director

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: Total Petroleum Hydrocarbons, EPA Method 8015

CLIENT: Geomatrix Consultants
One Market Plaza
Spear Street Tower, Ste. 717
San Francisco, CA 94105

Project No.: 1459D
Contact: C. Young
Phone:

Project: Geomatrix Consultants

AEMC Contact: G. Hampton

Date Sampled: 03/28/90
Date Received: 03/28/90
Date Extracted: 03/29/90
Date Analyzed: 03/29/90
Date Reported: 04/02/90

Job No.: 794544
COC Log No.: None

AEMC I.D.: L4544

Matrix: Soil

Sample I.D. Client	AEMC	Batch #	TPH as Stoddard (mg/kg)
= 7	L4544-01	5372	32
= 8	L4544-02	5372	1300
# 10	L4544-04	5372	7500
# 15	L4544-09	5372	19
Method Blank	L4544-MB	5372	ND
REPORTING LIMIT*			10

*Unless otherwise indicated in parentheses

ND = Not Detected at or above indicated Reporting Limit.

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: Total Petroleum Hydrocarbons, EPA Method 8015

CLIENT: Geomatrix Consultants
One Market Plaza
Spear Street Tower, Ste. 717
San Francisco, CA 94105

Project No.: 1459D
Contact: C. Young
Phone:

Project: Geomatrix Consultants

AEMC Contact: G. Hampton

Date Sampled: 03/28/90
Date Received: 03/28/90
Date Extracted: 03/29/90
Date Analyzed: 03/29/90
Date Reported: 04/02/90

Job No.: 794544
COC Log No.: None

AEMC I.D.: L4544

Matrix: Soil

ANALYTE	SPIKE CONC. (mg/kg)	MS %REC	MSD %REC	DUPLICATE RPD
Stoddard	100	62%	71%	14%

MS = Matrix Spike
MSD = Matrix Spike Duplicate
% REC = Percent Recovery
RPD = Relative Percent Difference

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: Phenols, EPA Method 8270

CLIENT: Geomatrix Consultants
1 Mkt. Plaza, Spear St. #71
San Francisco, CA

Project No.: 1459D
Contact: C. Young
Phone:

Project: Geomatrix Consultants

AEMC Contact: G. Hampton

Date Sampled: 3/28/90
Date Received: 3/28/90
Date Extracted: 3/29/90
Date Analyzed: 3/31/90
Date Reported: 4/4/90
Client Sample I.D.: #7

Job No.: 794544
COC Log No.: None

AEMC I.D.: L4544-1
Batch No.: 5373
Matrix: Soil

SURROGATE	CAS #	CONCENTRATION (mg/kg)	RPT. LIMIT (mg/kg)
Phenol-d6	d108-95-2	2	40%
2-Fluorophenol	367-12-4	2	43%
2,4,6-Tribromophenol	118-79-6	2	58%

ANALYTES	CAS #	CONCENTRATION (mg/kg)	RPT. LIMIT (mg/kg)
Benzoic Acid	65-85-0	ND	1
4-Chloro-3-methylphenol	59-50-7	ND	1
2-Chlorophenol	95-57-8	ND	1
2,4-Dichlorophenol	120-83-2	ND	1
2,4-Dimethylphenol	105-67-9	ND	1
2,4-Dinitrophenol	51-28-5	ND	1
2-Methyl-4,6-dinitrophenol	534-52-1	ND	1
2-Methylphenol	95-48-7	ND	1
4-Methylphenol	106-44-5	ND	1
2-Nitrophenol	88-75-5	ND	1
4-Nitrophenol	100-02-7	ND	1
Pentachlorophenol	87-86-5	1	1
Phenol	108-95-2	ND	1
2,4,5-Trichlorophenol	95-95-4	2	1
2,4,6-Trichlorophenol	88-06-2	ND	1

RPT. Limit = Reporting Limit
ND = Not Detected at or above indicated Reporting Limit

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: Phenols, EPA Method 8270

CLIENT: Geomatrix Consultants
1 Mkt. Plaza, Spear St. #71
San Francisco, CA

Project No.: 1459D
Contact: C. Young
Phone:

Project: Geomatrix Consultants

AEMC Contact: G. Hampton

Date Sampled: 3/28/90
Date Received: 3/28/90
Date Extracted: 3/29/90
Date Analyzed: 3/31/90
Date Reported: 4/4/90
Client Sample I.D.: #8

Job No.: 794544
COC Log No.: None

AEMC I.D.: L4544-2
Batch No.: 5373
Matrix: Soil

SURROGATE	CAS #	CONCENTRATION (mg/kg)	RPT. LIMIT (mg/kg)
Phenol-d6	d108-95-2	2	42%
2-Fluorophenol	367-12-4	2	45%
2,4,6-Tribromophenol	118-79-6	2	67%

ANALYTES	CAS #	CONCENTRATION (mg/kg)	RPT. LIMIT (mg/kg)
Benzoic Acid	65-85-0	ND	1
4-Chloro-3-methylphenol	59-50-7	ND	1
2-Chlorophenol	95-57-8	ND	1
2,4-Dichlorophenol	120-83-2	ND	1
2,4-Dimethylphenol	105-67-9	ND	1
2,4-Dinitrophenol	51-28-5	ND	1
2-Methyl-4,6-dinitrophenol	534-52-1	ND	1
2-Methylphenol	95-48-7	ND	1
4-Methylphenol	106-44-5	ND	1
2-Nitrophenol	88-75-5	ND	1
4-Nitrophenol	100-02-7	ND	1
Pentachlorophenol	87-86-5	ND	1
Phenol	108-95-2	ND	1
2,4,5-Trichlorophenol	95-95-4	ND	1
2,4,6-Trichlorophenol	88-06-2	ND	1

RPT. Limit = Reporting Limit
ND = Not Detected at or above indicated Reporting Limit

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: Phenols, EPA Method 8270

CLIENT: Geomatrix Consultants
1 Mkt. Plaza, Spear St. #71
San Francisco, CA

Project No.: 1459D
Contact: C. Young
Phone:

Project: Geomatrix Consultants

AEMC Contact: G. Hampton

Date Sampled: 3/28/90
Date Received: 3/28/90
Date Extracted: 3/29/90
Date Analyzed: 3/31/90
Date Reported: 4/4/90
Client Sample I.D.: #9

Job No.: 794544
COC Log No.: None

AEMC I.D.: L4544-3
Batch No.: 5373
Matrix: Soil

SURROGATE	CAS #	CONCENTRATION (mg/kg)	RPT. LIMIT (mg/kg)
Phenol-d6	d108-95-2	2	49%
2-Fluorophenol	367-12-4	2	48%
2,4,6-Tribromophenol	118-79-6	2	52%

ANALYTES	CAS #	CONCENTRATION (mg/kg)	RPT. LIMIT (mg/kg)
Benzoic Acid	65-85-0	ND	1
4-Chloro-3-methylphenol	59-50-7	ND	1
2-Chlorophenol	95-57-8	ND	1
2,4-Dichlorophenol	120-83-2	ND	1
2,4-Dimethylphenol	105-67-9	ND	1
2,4-Dinitrophenol	51-28-5	ND	1
2-Methyl-4,6-dinitrophenol	534-52-1	ND	1
2-Methylphenol	95-48-7	ND	1
4-Methylphenol	106-44-5	ND	1
2-Nitrophenol	88-75-5	ND	1
4-Nitrophenol	100-02-7	ND	1
Pentachlorophenol	87-86-5	ND	1
Phenol	108-95-2	ND	1
2,4,5-Trichlorophenol	95-95-4	ND	1
2,4,6-Trichlorophenol	88-06-2	ND	1

RPT. Limit = Reporting Limit
ND = Not Detected at or above indicated Reporting Limit

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: Phenols, EPA Method 8270

CLIENT: Geomatrix Consultants
1 Mkt. Plaza, Spear St. #71
San Francisco, CA

Project No.: 1459D
Contact: C. Young
Phone:

Project: Geomatrix Consultants

AEMC Contact: G. Hampton

Date Sampled: 3/28/90
Date Received: 3/28/90
Date Extracted: 3/29/90
Date Analyzed: 3/31/90
Date Reported: 4/4/90
Client Sample I.D.: =10

Job No.: 794544
COC Log No.: None

AEMC I.D.: L4544-4
Batch No.: 5373
Matrix: Soil

SURROGATE	CAS #	CONCENTRATION (mg/kg)	RPT. LIMIT (mg/kg)
Phenol-d6	d108-95-2	2	NR
2-Fluorophenol	367-12-4	2	NR
2,4,6-Tribromophenol	118-79-6	2	59%

ANALYTES	CAS #	CONCENTRATION (mg/kg)	RPT. LIMIT (mg/kg)
Benzoic Acid	65-85-0	ND	1
4-Chloro-3-methylphenol	59-50-7	ND	1
2-Chlorophenol	95-57-8	ND	1
2,4-Dichlorophenol	120-83-2	ND	1
2,4-Dimethylphenol	105-67-9	ND	1
2,4-Dinitrophenol	51-28-5	ND	1
2-Methyl-4,6-dinitrophenol	534-52-1	ND	1
2-Methylphenol	95-48-7	ND	1
4-Methylphenol	106-44-5	ND	1
2-Nitrophenol	88-75-5	ND	1
4-Nitrophenol	100-02-7	ND	1
Pentachlorophenol	87-86-5	ND	1
Phenol	108-95-2	ND	1
2,4,5-Trichlorophenol	95-95-4	ND	1
2,4,6-Trichlorophenol	88-06-2	ND	1

RPT. Limit = Reporting Limit
ND = Not Detected at or above indicated Reporting Limit
NR = Not Reportable; see report cover-letter for explanation.

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: Phenols, EPA Method 8270

CLIENT: Geomatrix Consultants
1 Mkt. Plaza, Spear St. #71
San Francisco, CA

Project No.: 1459D
Contact: C. Young
Phone:

Project: Geomatrix Consultants

AEMC Contact: G. Hampton

Date Sampled: 3/28/90
Date Received: 3/28/90
Date Extracted: 3/29/90
Date Analyzed: 3/31/90
Date Reported: 4/4/90
Client Sample I.D.: #11

Job No.: 794544
COC Log No.: None

AEMC I.D.: L4544-5
Batch No.: 5373
Matrix: Soil

SURROGATE	CAS #	CONCENTRATION (mg/kg)	RPT. LIMIT (mg/kg)
Phenol-d6	d108-95-2	2	36%
2-Fluorophenol	367-12-4	2	39%
2,4,6-Tribromophenol	118-79-6	2	66%

ANALYTES	CAS #	CONCENTRATION (mg/kg)	RPT. LIMIT (mg/kg)
Benzoic Acid	65-85-0	ND	1
4-Chloro-3-methylphenol	59-50-7	ND	1
2-Chlorophenol	95-57-8	ND	1
2,4-Dichlorophenol	120-83-2	ND	1
2,4-Dimethylphenol	105-67-9	ND	1
2,4-Dinitrophenol	51-28-5	ND	1
2-Methyl-4,6-dinitrophenol	534-52-1	ND	1
2-Methylphenol	95-48-7	ND	1
4-Methylphenol	106-44-5	ND	1
2-Nitrophenol	88-75-5	ND	1
4-Nitrophenol	100-02-7	ND	1
Pentachlorophenol	87-86-5	6	1
Phenol	108-95-2	ND	1
2,4,5-Trichlorophenol	95-95-4	9	1
2,4,6-Trichlorophenol	88-06-2	ND	1

RPT. Limit = Reporting Limit
ND = Not Detected at or above indicated Reporting Limit

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: Phenols, EPA Method 8270

CLIENT: Geomatrix Consultants
1 Mkt. Plaza, Spear St. #71
San Francisco, CA

Project No.: 1459D
Contact: C. Young
Phone:

Project: Geomatrix Consultants

AEMC Contact: G. Hampton

Date Sampled: 3/28/90
Date Received: 3/28/90
Date Extracted: 3/29/90
Date Analyzed: 3/31/90
Date Reported: 4/4/90
Client Sample I.D.: #12

Job No.: 794544
COC Log No.: None

AEMC I.D.: L4544-6
Batch No.: 5373
Matrix: Soil

SURROGATE	CAS #	CONCENTRATION (mg/kg)	RPT. LIMIT (mg/kg)
Phenol-d6	d108-95-2	2	54%
2-Fluorophenol	367-12-4	2	42%
2,4,6-Tribromophenol	118-79-6	2	71%

ANALYTES	CAS #	CONCENTRATION (mg/kg)	RPT. LIMIT (mg/kg)
Benzoic Acid	65-85-0	ND	1
4-Chloro-3-methylphenol	59-50-7	ND	1
2-Chlorophenol	95-57-8	ND	1
2,4-Dichlorophenol	120-83-2	ND	1
2,4-Dimethylphenol	105-67-9	ND	1
2,4-Dinitrophenol	51-28-5	ND	1
2-Methyl-4,6-dinitrophenol	534-52-1	ND	1
2-Methylphenol	95-48-7	ND	1
4-Methylphenol	106-44-5	ND	1
2-Nitrophenol	88-75-5	ND	1
4-Nitrophenol	100-02-7	ND	1
Pentachlorophenol	87-86-5	ND	1
Phenol	108-95-2	ND	1
2,4,5-Trichlorophenol	95-95-4	ND	1
2,4,6-Trichlorophenol	88-06-2	ND	1

RPT. Limit = Reporting Limit
ND = Not Detected at or above indicated Reporting Limit

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: Phenols, EPA Method 8270

CLIENT: Geomatrix Consultants
1 Mkt. Plaza, Spear St. #71
San Francisco, CA

Project No.: 1459D
Contact: C. Young
Phone:

Project: Geomatrix Consultants

AEMC Contact: G. Hampton

Date Sampled: 3/28/90
Date Received: 3/28/90
Date Extracted: 3/29/90
Date Analyzed: 3/31/90
Date Reported: 4/4/90
Client Sample I.D.: =13

Job No.: 794544
COC Log No.: None

AEMC I.D.: L4544-7
Batch No.: 5373
Matrix: Soil

SURROGATE	CAS #	CONCENTRATION (mg/kg)	RPT. LIMIT (mg/kg)
Phenol-d6	d108-95-2	2	42%
2-Fluorophenol	367-12-4	2	42%
2,4,6-Tribromophenol	118-79-6	2	64%

ANALYTES	CAS #	CONCENTRATION (mg/kg)	RPT. LIMIT (mg/kg)
Benzoic Acid	65-85-0	ND	1
4-Chloro-3-methylphenol	59-50-7	ND	1
2-Chlorophenol	95-57-8	ND	1
2,4-Dichlorophenol	120-83-2	ND	1
2,4-Dimethylphenol	105-67-9	ND	1
2,4-Dinitrophenol	51-28-5	ND	1
2-Methyl-4,6-dinitrophenol	534-52-1	ND	1
2-Methylphenol	95-48-7	ND	1
4-Methylphenol	106-44-5	ND	1
2-Nitrophenol	88-75-5	ND	1
4-Nitrophenol	100-02-7	ND	1
Pentachlorophenol	87-86-5	ND	1
Phenol	108-95-2	ND	1
2,4,5-Trichlorophenol	95-95-4	ND	1
2,4,6-Trichlorophenol	88-06-2	ND	1

RPT. Limit = Reporting Limit
ND = Not Detected at or above indicated Reporting Limit

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: Phenols, EPA Method 8270

CLIENT: Geomatrix Consultants
1 Mkt. Plaza, Spear St. #71
San Francisco, CA

Project No.: 1459D
Contact: C. Young
Phone:

Project: Geomatrix Consultants

AEMC Contact: G. Hampton

Date Sampled: 3/28/90
Date Received: 3/28/90
Date Extracted: 3/29/90
Date Analyzed: 3/31/90
Date Reported: 4/4/90
Client Sample I.D.: #14

Job No.: 794544
COC Log No.: None

AEMC I.D.: L4544-8
Batch No.: 5373
Matrix: Soil

SURROGATE	CAS #	CONCENTRATION (mg/kg)	RPT. LIMIT (mg/kg)
Phenol-d6	d108-95-2	2	39%
2-Fluorophenol	367-12-4	2	38%
2,4,6-Tribromophenol	118-79-6	2	60%

ANALYTES	CAS #	CONCENTRATION (mg/kg)	RPT. LIMIT (mg/kg)
Benzoic Acid	65-85-0	ND	1
4-Chloro-3-methylphenol	59-50-7	ND	1
2-Chlorophenol	95-57-8	ND	1
2,4-Dichlorophenol	120-83-2	ND	1
2,4-Dimethylphenol	105-67-9	ND	1
2,4-Dinitrophenol	51-28-5	ND	1
2-Methyl-4,6-dinitrophenol	534-52-1	ND	1
2-Methylphenol	95-48-7	ND	1
4-Methylphenol	106-44-5	ND	1
2-Nitrophenol	88-75-5	ND	1
4-Nitrophenol	100-02-7	ND	1
Pentachlorophenol	87-86-5	ND	1
Phenol	108-95-2	ND	1
2,4,5-Trichlorophenol	95-95-4	1	1
2,4,6-Trichlorophenol	88-06-2	ND	1

RPT. Limit = Reporting Limit
ND = Not Detected at or above indicated Reporting Limit

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: Phenols, EPA Method 8270

CLIENT: Geomatrix Consultants
1 Mkt. Plaza, Spear St. #71
San Francisco, CA

Project No.: 1459D
Contact: G. Young
Phone:

Project: Geomatrix Consultants

AEMC Contact: G. Hampton

Date Sampled: 3/28/90
Date Received: 3/28/90
Date Extracted: 3/29/90
Date Analyzed: 3/31/90
Date Reported: 4/4/90
Client Sample I.D.: #15

Job No.: 794544
COC Log No.: None

AEMC I.D.: L4544-9
Batch No.: 5373
Matrix: Soil

SURROGATE	CAS #	CONCENTRATION (mg/kg)	RPT. LIMIT (mg/kg)
Phenol-d6	d108-95-2	2	43%
2-Fluorophenol	367-12-4	2	39%
2,4,6-Tribromophenol	118-79-6	2	76%

ANALYTES	CAS #	CONCENTRATION (mg/kg)	RPT. LIMIT (mg/kg)
Benzoic Acid	65-85-0	ND	1
4-Chloro-3-methylphenol	59-50-7	ND	1
2-Chlorophenol	95-57-8	ND	1
2,4-Dichlorophenol	120-83-2	ND	1
2,4-Dimethylphenol	105-67-9	ND	1
2,4-Dinitrophenol	51-28-5	ND	1
2-Methyl-4,6-dinitrophenol	534-52-1	ND	1
2-Methylphenol	95-48-7	ND	1
4-Methylphenol	106-44-5	ND	1
2-Nitrophenol	88-75-5	ND	1
4-Nitrophenol	100-02-7	ND	1
Pentachlorophenol	87-86-5	41	1
Phenol	108-95-2	ND	1
2,4,5-Trichlorophenol	95-95-4	57	1
2,4,6-Trichlorophenol	88-06-2	ND	1

RPT. Limit = Reporting Limit
ND = Not Detected at or above indicated Reporting Limit

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: Phenols, EPA Method 8270

CLIENT: Geomatrix Consultants
1 Mkt. Plaza, Spear St. #71
San Francisco, CA

Project No.: 1459D
Contact: C. Young
Phone:

Project: Geomatrix Consultants

AEMC Contact: G. Hampton

Date Sampled: 3/28/90
Date Received: 3/28/90
Date Extracted: 3/29/90
Date Analyzed: 3/31/90
Date Reported: 4/4/90
Client Sample I.D.: Method Blank

Job No.: 794544
COC Log No.: None

AEMC I.D.: L4544-MB
Batch No.: 5373
Matrix: Soil

SURROGATE	CAS #	CONCENTRATION (mg/kg)	RPT. LIMIT (mg/kg)
Phenol-d6	d108-95-2	2	41%
2-Fluorophenol	367-12-4	2	45%
2,4,6-Tribromophenol	118-79-6	2	43%

ANALYTES	CAS #	CONCENTRATION (mg/kg)	RPT. LIMIT (mg/kg)
Benzoic Acid	65-85-0	ND	1
4-Chloro-3-methylphenol	59-50-7	ND	1
2-Chlorophenol	95-57-8	ND	1
2,4-Dichlorophenol	120-83-2	ND	1
2,4-Dimethylphenol	105-67-9	ND	1
2,4-Dinitrophenol	51-28-5	ND	1
2-Methyl-4,6-dinitrophenol	534-52-1	ND	1
2-Methylphenol	95-48-7	ND	1
4-Methylphenol	106-44-5	ND	1
2-Nitrophenol	88-75-5	ND	1
4-Nitrophenol	100-02-7	ND	1
Pentachlorophenol	87-86-5	ND	1
Phenol	108-95-2	ND	1
2,4,5-Trichlorophenol	95-95-4	ND	1
2,4,6-Trichlorophenol	88-06-2	ND	1

RPT. Limit = Reporting Limit
ND = Not Detected at or above indicated Reporting Limit

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: Phenols, EPA Method 8270

CLIENT: Geomatrix Consultants
1 Mkt. Plaza, Spear St. #71
San Francisco, CA

Project No.: 1459D
Contact: C. Young
Phone:

Project: Geomatrix Consultants

AEMC Contact: G. Hampton

Date Sampled: 3/28/90
Date Received: 3/28/90
Date Extracted: 3/29/90
Date Analyzed: 3/31/90
Date Reported: 4/4/90

Job No.: 794544
COC Log No.: None

AEMC I.D.: L4544
Batch No.: 5373
Matrix: Soil

SURROGATE	Spike Conc. (mg/kg)	MS %Rec	MSD %Rec
Phenol-d6	2	39%	44%
2-Fluorophenol	2	38%	42%
2,4,6-Tribromphenol	2	60%	56%

ANALYTE	Spike Conc. (mg/kg)	MS %Rec	MSD %Rec	Duplicate RPD
Acids				
Pentachlorophenol	2	59%	59%	0%
2,4,6-Trichlorophenol	2	60%	60%	0%

MS = Matrix Spike
MSD = Matrix Spike Duplicate
% Rec = Percent Recovery
RPD = Relative Percent Difference

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: Phenols, EPA Method 8270

CLIENT: Geomatrix Consultants
1 Mkt. Plaza, Spear St. #71
San Francisco, CA

Project No.: 1459D
Contact: C. Young
Phone:

Project: Geomatrix Consultants

AEMC Contact: G. Hampton

Date Sampled: 3/28/90
Date Received: 3/28/90
Date Extracted: 3/29/90
Date Analyzed: 3/31/90
Date Reported: 4/4/90

Job No.: 794544
COC Log No.: None

AEMC I.D.: L4544
Batch No.: 5373

ANALYTE	LCS Conc. (mg/kg)	LCS %Rec
Acids		
Pentachlorophenol	2	79%
Phenol	2	97%
2-Chlorophenol	2	102%
4-Chloro-3-methylphenol	2	88%
5-Nitrophenol	2	48%

LCS = Laboratory Control Standard
% Rec = Percent Recovery

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

Geomatrix Consultants
1 Mkt. Plaza, Spear St.#71
San Francisco, CA

04/06/90

Attn: D. Favre

Re: Project: Geomatrix Consultants
AEMC Lab Reference No.: 4553 Project No.: 1459D
Date Samples Received: 3/29/90 Job No.: 794553
No. Samples Received: 4 soil samples

These samples were received by AEMC in a chilled state, intact, and accompanied by chain-of-custody documentation.

The above referenced samples were analyzed as follows:

No. of Samples	Analysis
4	GCMS Semi-Volatiles

Analytical results are attached to this letter. Please call if we can provide additional assistance.

Sincerely,

George Hampton
Laboratory Director

3249 Fitzgerald Road • Rancho Cordova, CA 95742 • Fax (916) 638-4510 • (916) 638-7301

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: Acid Extractables, EPA Method 8270

CLIENT: Geomatrix Consultants
One Market Plaza
Spear Street Tower, Ste. 717
San Francisco, CA 94105
Project: Geomatrix Consultants

Project No.: 1459D
Contact: D. Favre
Phone:

AEMC Contact: G. Hampton

Date Sampled: 03/29/90
Date Received: 03/29/90
Date Extracted: 03/29/90
Date Analyzed: 03/31/90
Date Reported: 04/04/90
Client Sample I.D.: B 33

Job No.: 794553
COC Log No.: 898

AEMC I.D.: L4553-02
Batch No.: 5373
Matrix: Soil

SURROGATE	CAS #	CONCENTRATION (mg/kg)	RPT. LIMIT (mg/kg)
Phenol-d6	d108-95-2	2	45
2-Fluorophenol	367-12-4	2	40
2,4,6-Tribromophenol	118-79-6	2	48

ANALYTES	CAS #	CONCENTRATION (mg/kg)	RPT. LIMIT (mg/kg)
Benzoic Acid	65-85-0	ND	1
4-Chloro-3-methylphenol	59-50-7	ND	1
2-Chlorophenol	95-57-8	ND	1
2,4-Dichlorophenol	120-83-2	ND	1
2,4-Dimethylphenol	105-67-9	ND	1
2,4-Dinitrophenol	51-28-5	ND	1
2-Methyl-4,6-dinitrophenol	534-52-1	ND	1
2-Methylphenol	95-48-7	ND	1
4-Methylphenol	106-44-5	ND	1
2-Nitrophenol	88-75-5	ND	1
4-Nitrophenol	100-02-7	ND	1
Pentachlorophenol	87-86-5	ND	1
Phenol	108-95-2	ND	1
2,4,5-Trichlorophenol	95-95-4	ND	1
2,4,6-Trichlorophenol	88-06-2	ND	1

RPT. Limit = Reporting Limit
ND = Not Detected at or above indicated Reporting Limit
NR = Not Reportable; see report cover-letter for explanation.

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: Acid Extractables, EPA Method 8270

CLIENT: Geomatrix Consultants
One Market Plaza
Spear Street Tower, Ste. 717
San Francisco, CA 94105
Project: Geomatrix Consultants

Project No.: 1459D
Contact: D. Favre
Phone:

AEMC Contact: G. Hampton

Date Sampled: 03/29/90
Date Received: 03/29/90
Date Extracted: 03/29/90
Date Analyzed: 03/31/90
Date Reported: 04/04/90
Client Sample I.D.: B 34

Job No.: 794553
COC Log No.: 898

AEMC I.D.: L4553-03
Batch No.: 5373
Matrix: Soil

SURROGATE	CAS #	CONCENTRATION (mg/kg)	RPT. LIMIT (mg/kg)
Phenol-d6	d108-95-2	2	42
2-Fluorophenol	367-12-4	2	41
2,4,6-Tribromophenol	118-79-6	2	67

ANALYTES	CAS #	CONCENTRATION (mg/kg)	RPT. LIMIT (mg/kg)
Benzoic Acid	65-85-0	ND	1
4-Chloro-3-methylphenol	59-50-7	ND	1
2-Chlorophenol	95-57-8	ND	1
2,4-Dichlorophenol	120-83-2	ND	1
2,4-Dimethylphenol	105-67-9	ND	1
2,4-Dinitrophenol	51-28-5	ND	1
2-Methyl-4,6-dinitrophenol	534-52-1	ND	1
2-Methylphenol	95-48-7	ND	1
4-Methylphenol	106-44-5	ND	1
2-Nitrophenol	88-75-5	ND	1
4-Nitrophenol	100-02-7	ND	1
Pentachlorophenol	87-86-5	ND	1
Phenol	108-95-2	ND	1
2,4,5-Trichlorophenol	95-95-4	ND	1
2,4,6-Trichlorophenol	88-06-2	ND	1

RPT. Limit = Reporting Limit
ND = Not Detected at or above indicated Reporting Limit
NR = Not Reportable; see report cover-letter for explanation.

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: Acid Extractables, EPA Method 8270

CLIENT: Geomatrix Consultants
One Market Plaza
Spear Street Tower, Ste. 717
San Francisco, CA 94105
Project: Geomatrix Consultants

Project No.: 1459D
Contact: D. Favre
Phone:

AEMC Contact: G. Hampton

Date Sampled: 03/29/90
Date Received: 03/29/90
Date Extracted: 03/29/90
Date Analyzed: 03/31/90
Date Reported: 04/04/90
Client Sample I.D.: B 35

Job No.: 794553
COC Log No.: 898

AEMC I.D.: L4553-04
Batch No.: 5373
Matrix: Soil

SURROGATE	CAS #	CONCENTRATION (mg/kg)	RPT. LIMIT (mg/kg)
Phenol-d6	d108-95-2	2	41
2-Fluorophenol	367-12-4	2	32
2,4,6-Tribromophenol	118-79-6	2	23

ANALYTES	CAS #	CONCENTRATION (mg/kg)	RPT. LIMIT (mg/kg)
Benzoic Acid	65-85-0	ND	1
4-Chloro-3-methylphenol	59-50-7	ND	1
2-Chlorophenol	95-57-8	ND	1
2,4-Dichlorophenol	120-83-2	ND	1
2,4-Dimethylphenol	105-67-9	ND	1
2,4-Dinitrophenol	51-28-5	ND	1
2-Methyl-4,6-dinitrophenol	534-52-1	ND	1
2-Methylphenol	95-48-7	ND	1
4-Methylphenol	106-44-5	ND	1
2-Nitrophenol	88-75-5	ND	1
4-Nitrophenol	100-02-7	ND	1
Pentachlorophenol	87-86-5	ND	1
Phenol	108-95-2	ND	1
2,4,5-Trichlorophenol	95-95-4	ND	1
2,4,6-Trichlorophenol	88-06-2	ND	1

RPT. Limit = Reporting Limit
ND = Not Detected at or above indicated Reporting Limit
NR = Not Reportable; see report cover-letter for explanation.

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: Acid Extractables, EPA Method 8270

CLIENT: Geomatrix Consultants
One Market Plaza
Spear Street Tower, Ste. 717
San Francisco, CA 94105
Project: Geomatrix Consultants

Project No.: 1459D
Contact: D. Favre
Phone:

AEMC Contact: G. Hampton

Date Sampled: 03/29/90
Date Received: 03/29/90
Date Extracted: 03/29/90
Date Analyzed: 03/31/90
Date Reported: 04/04/90
Client Sample I.D.: ELEC RM (B-36) MDF

Job No.: 794553
COC Log No.: 898

AEMC I.D.: L4553-01
Batch No.: 5373
Matrix: Soil

SURROGATE	CAS #	CONCENTRATION (mg/kg)	RPT. LIMIT (mg/kg)
Phenol-d6	d108-95-2	2	41
2-Fluorophenol	367-12-4	2	36
2,4,6-Tribromophenol	118-79-6	2	35

ANALYTES	CAS #	CONCENTRATION (mg/kg)	RPT. LIMIT (mg/kg)
Benzoic Acid	65-85-0	ND	1
4-Chloro-3-methylphenol	59-50-7	ND	1
2-Chlorophenol	95-57-8	ND	1
2,4-Dichlorophenol	120-83-2	ND	1
2,4-Dimethylphenol	105-67-9	ND	1
2,4-Dinitrophenol	51-28-5	ND	1
2-Methyl-4,6-dinitrophenol	534-52-1	ND	1
2-Methylphenol	95-48-7	ND	1
4-Methylphenol	106-44-5	ND	1
2-Nitrophenol	88-75-5	ND	1
4-Nitrophenol	100-02-7	ND	1
Pentachlorophenol	87-86-5	ND	1
Phenol	108-95-2	ND	1
2,4,5-Trichlorophenol	95-95-4	ND	1
2,4,6-Trichlorophenol	88-06-2	ND	1

RPT. Limit = Reporting Limit
ND = Not Detected at or above indicated Reporting Limit
NR = Not Reportable; see report cover-letter for explanation.

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: Acid Extractables, EPA Method 8270

CLIENT: Geomatrix Consultants
One Market Plaza
Spear Street Tower, Ste. 717
San Francisco, CA 94105
Project: Geomatrix Consutants

Project No.: 1459D
Contact: D. Favre
Phone:

AEMC Contact: G. Hampton

Date Sampled: 03/29/90
Date Received: 03/29/90
Date Extracted: 03/29/90
Date Analyzed: 03/31/90
Date Reported: 04/04/90
Client Sample I.D.: Method Blank

Job No.: 794553
COC Log No.: 898

AEMC I.D.: L4553-MB
Batch No.: 5373
Matrix: Soil

SURROGATE	CAS #	CONCENTRATION (mg/kg)	RPT. LIMIT (mg/kg)
Phenol-d6	d108-95-2	2	41
2-Fluorophenol	367-12-4	2	45
2,4,6-Tribromophenol	118-79-6	2	43

ANALYTES	CAS #	CONCENTRATION (mg/kg)	RPT. LIMIT (mg/kg)
Benzoic Acid	65-85-0	ND	1
4-Chloro-3-methylphenol	59-50-7	ND	1
2-Chlorophenol	95-57-8	ND	1
2,4-Dichlorophenol	120-83-2	ND	1
2,4-Dimethylphenol	105-67-9	ND	1
2,4-Dinitrophenol	51-28-5	ND	1
2-Methyl-4,6-dinitrophenol	534-52-1	ND	1
2-Methylphenol	95-48-7	ND	1
4-Methylphenol	106-44-5	ND	1
2-Nitrophenol	88-75-5	ND	1
4-Nitrophenol	100-02-7	ND	1
Pentachlorophenol	87-86-5	ND	1
Phenol	108-95-2	ND	1
2,4,5-Trichlorophenol	95-95-4	ND	1
2,4,6-Trichlorophenol	88-06-2	ND	1

RPT. Limit = Reporting Limit
ND = Not Detected at or above indicated Reporting Limit
NR = Not Reportable; see report cover-letter for explanation.

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: Acid Extractables, EPA Method 8270

CLIENT: Geomatrix Consultants
One Market Plaza
Spear Street Tower, Ste. 717
San Francisco, CA 94105
Project: Geomatrix Consultants

Project No.: 1459D
Contact: D. Favre
Phone:

AEMC Contact: G. Hampton

Date Sampled: 03/29/90
Date Received: 03/29/90
Date Extracted: 03/29/90
Date Analyzed: 03/31/90
Date Reported: 04/04/90

Job No.: 794553
COC Log No.: 898

AEMC I.D.: L4553
Batch No.: 5373
Matrix: Soil

SURROGATE	Spike Conc. (mg/kg)	MS %Rec	MSD %Rec
Phenol-d6	2	39%	44%
2-Fluorophenol	2	38%	42%
2,4,6-Tribromphenol	2	60%	56%

ANALYTE	Spike Conc. (mg/kg)	MS %Rec	MSD %Rec	Duplicate RPD
Acids				
Pentachlorophenol	2	59%	59%	0%
2,4,6-Trichlorophenol	2	60%	60%	0%

MS = Matrix Spike
MSD = Matrix Spike Duplicate
% Rec = Percent Recovery
RPD = Relative Percent Difference

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: Base/Neutral/Acid Extractables, EPA Method 8270

CLIENT: Geomatrix Consultants
One Market Plaza
Spear Street Tower, Ste. 717
San Francisco, CA 94105
Project: Geomatrix Consultants

Project No.: 1459D
Contact: D. Favre
Phone:

AEMC Contact: G. Hampton

Date Sampled: 03/29/90
Date Received: 03/29/90
Date Extracted: 03/29/90
Date Analyzed: 03/31/90
Date Reported: 04/04/90

Job No.: 794553
COC Log No.: 898

AEMC I.D.: L4553
Batch No.: 5373
Matrix: Soil

ANALYTE	LCS CONC. (mg/kg)	LCS %REC
Acids		
Pentachlorophenol	100	79%
Phenol	100	97%
2-Chlorophenol	100	102%
4-Chloro-3-methylphenol	100	88%
4-Nitrophenol	100	48%

MS = Matrix Spike
MSD = Matrix Spike Duplicate
% REC = Percent Recovery
ND = Not Detected
RPD = Relative Percent Difference

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

Geomatrix Consultants
1 Mkt. Plaza, Spear St.#71
San Francisco, CA

04/11/90

Attn: D. Favre

Re: Project: Geomatrix Consultants
AEMC Lab Reference No.: L4586 Project No.: 1459D
Date Samples Received: 04/04/90 Job No.: 794586
No. Samples Received: 4 Soil samples

These samples were received by AEMC in a chilled state, intact, and accompanied by chain-of-custody documentation.

The above referenced samples were analyzed as follows:

No. of Samples	Analysis
3	GCMS Semi-Volatiles

Analytical results are attached to this letter. Please call if we can provide additional assistance.

Sincerely,

George Hampton
Laboratory Director

3249 Fitzgerald Road • Rancho Cordova, CA 95742 • Fax (916) 638-4510 • (916) 638-7301

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: Acid Extractables, EPA Method 8270

CLIENT: Geomatrix Consultants
1 Mkt. Plaza, Spear St.#71
San Francisco, CA 94105

Project No.: 1459D
Contact: D. Favre
Phone:

Project: Geomatrix Consultants

AEMC Contact: M. Jaeger

Date Sampled: 04/04/90
Date Received: 04/04/90
Date Extracted: 04/07/90
Date Analyzed: 04/08/90
Date Reported: 04/10/90
Client Sample I.D.: #16

Job No.: 794586
COC Log No.: 00865

AEMC I.D.: L4586-01
Batch No.: 5431
Matrix: Soil

SURROGATE	CAS #	SPIKE CONC. (mg/kg)	RECOVERY (percent)
Phenol-d6	d108-95-2	2	62%
2-Fluorophenol	367-12-4	2	64%
2,4,6-Tribromophenol	118-79-6	2	50%

ANALYTE	CAS #	CONCENTRATION (mg/kg)	RPT. LIMIT (mg/kg)
Benzoic Acid	65-85-0	ND	1
4-Chloro-3-methylphenol	59-50-7	ND	1
2-Chlorophenol	95-57-8	ND	1
2,4-Dichlorophenol	120-83-2	ND	1
2,4-Dimethylphenol	105-67-9	ND	1
2,4-Dinitrophenol	51-28-5	ND	1
2-Methyl-4,6-dinitrophenol	534-52-1	ND	1
2-Methylphenol	95-48-7	ND	1
4-Methylphenol	106-44-5	ND	1
2-Nitrophenol	88-75-5	ND	1
4-Nitrophenol	100-02-7	ND	1
Pentachlorophenol	87-86-5	ND	1
Phenol	108-95-2	ND	1
2,4,5-Trichlorophenol	95-95-4	ND	1
2,4,6-Trichlorophenol	88-06-2	ND	1

RPT. LIMIT = Reporting Limit
ND = Not Detected at or above indicated Reporting Limit

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: Acid Extractables, EPA Method 8270

CLIENT: Geomatrix Consultants
1 Mkt. Plaza, Spear St.#71
San Francisco, CA 94105

Project: Geomatrix Consultants

Date Sampled: 04/04/90
Date Received: 04/04/90
Date Extracted: 04/07/90
Date Analyzed: 04/08/90
Date Reported: 04/10/90
Client Sample I.D.: #17

Project No.: 1459D
Contact: D. Favre
Phone:

AEMC Contact: M. Jaeger

Job No.: 794586
COC Log No.: 00865

AEMC I.D.: L4586-02
Batch No.: 5431
Matrix: Soil

SURROGATE	CAS #	SPIKE CONC. (mg/kg)	RECOVERY (percent)
Phenol-d6	d108-95-2	2	58%
2-Fluorophenol	367-12-4	2	64%
2,4,6-Tribromophenol	118-79-6	2	65%

ANALYTE	CAS #	CONCENTRATION (mg/kg)	RPT. LIMIT (mg/kg)
Benzoic Acid	65-85-0	ND	1
4-Chloro-3-methylphenol	59-50-7	ND	1
2-Chlorophenol	95-57-8	ND	1
2,4-Dichlorophenol	120-83-2	ND	1
2,4-Dimethylphenol	105-67-9	ND	1
2,4-Dinitrophenol	51-28-5	ND	1
2-Methyl-4,6-dinitrophenol	534-52-1	ND	1
2-Methylphenol	95-48-7	ND	1
4-Methylphenol	106-44-5	ND	1
2-Nitrophenol	88-75-5	ND	1
4-Nitrophenol	100-02-7	ND	1
Pentachlorophenol	87-86-5	ND	1
Phenol	108-95-2	ND	1
2,4,5-Trichlorophenol	95-95-4	ND	1
2,4,6-Trichlorophenol	88-06-2	ND	1

RPT. LIMIT = Reporting Limit
ND = Not Detected at or above indicated Reporting Limit

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: Acid Extractables, EPA Method 8270

CLIENT: Geomatrix Consultants
1 Mkt. Plaza, Spear St.#71
San Francisco, CA 94105

Project: Geomatrix Consultants

Date Sampled: 04/04/90
Date Received: 04/04/90
Date Extracted: 04/07/90
Date Analyzed: 04/08/90
Date Reported: 04/10/90
Client Sample I.D.: #18

Project No.: 1459D
Contact: D. Favre
Phone:

AEMC Contact: M. Jaeger

Job No.: 794586
COC Log No.: 00865

AEMC I.D.: L4586-03
Batch No.: 5431
Matrix: Soil

SURROGATE	CAS #	SPIKE CONC. (mg/kg)	RECOVERY (percent)
Phenol-d6	d108-95-2	2	57%
2-Fluorophenol	367-12-4	2	64%
2,4,6-Tribromophenol	118-79-6	2	43%

ANALYTE	CAS #	CONCENTRATION (mg/kg)	RPT. LIMIT (mg/kg)
Benzoic Acid	65-85-0	ND	1
4-Chloro-3-methylphenol	59-50-7	ND	1
2-Chlorophenol	95-57-8	ND	1
2,4-Dichlorophenol	120-83-2	ND	1
2,4-Dimethylphenol	105-67-9	ND	1
2,4-Dinitrophenol	51-28-5	ND	1
2-Methyl-4,6-dinitrophenol	534-52-1	ND	1
2-Methylphenol	95-48-7	ND	1
4-Methylphenol	106-44-5	ND	1
2-Nitrophenol	88-75-5	ND	1
4-Nitrophenol	100-02-7	ND	1
Pentachlorophenol	87-86-5	ND	1
Phenol	108-95-2	ND	1
2,4,5-Trichlorophenol	95-95-4	ND	1
2,4,6-Trichlorophenol	88-06-2	ND	1

RPT. LIMIT = Reporting Limit
ND = Not Detected at or above indicated Reporting Limit

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: Acid Extractables, EPA Method 8270

CLIENT: Geomatrix Consultants
1 Mkt. Plaza, Spear St.#71
San Francisco, CA 94105

Project No.: 1459D
Contact: D. Favre
Phone:

Project: Geomatrix Consultants

AEMC Contact: M. Jaeger

Date Sampled: 04/04/90
Date Received: 04/04/90
Date Extracted: 04/07/90
Date Analyzed: 04/08/90
Date Reported: 04/10/90
Client Sample I.D.: Method Blank

Job No.: 794586
COC Log No.: 00865

AEMC I.D.: L4586-MB
Batch No.: 5431
Matrix: Soil

SURROGATE	CAS #	SPIKE CONC. (mg/kg)	RECOVERY (percent)
Phenol-d6	d108-95-2	2	36%
2-Fluorophenol	367-12-4	2	50%
2,4,6-Tribromophenol	118-79-6	2	59%

ANALYTE	CAS #	CONCENTRATION (mg/kg)	RPT. LIMIT (mg/kg)
Benzoic Acid	65-85-0	ND	1
4-Chloro-3-methylphenol	59-50-7	ND	1
2-Chlorophenol	95-57-8	ND	1
2,4-Dichlorophenol	120-83-2	ND	1
2,4-Dimethylphenol	105-67-9	ND	1
2,4-Dinitrophenol	51-28-5	ND	1
2-Methyl-4,6-dinitrophenol	534-52-1	ND	1
2-Methylphenol	95-48-7	ND	1
4-Methylphenol	106-44-5	ND	1
2-Nitrophenol	88-75-5	ND	1
4-Nitrophenol	100-02-7	ND	1
Pentachlorophenol	87-86-5	ND	1
Phenol	108-95-2	ND	1
2,4,5-Trichlorophenol	95-95-4	ND	1
2,4,6-Trichlorophenol	88-06-2	ND	1

RPT. LIMIT = Reporting Limit
ND = Not Detected at or above indicated Reporting Limit

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: Acid Extractables, EPA Method 8270

CLIENT: Geomatrix Consultants
1 Mkt. Plaza, Spear St.#71
San Francisco, CA 94105

Project: Geomatrix Consultants

Date Sampled: 04/04/90
Date Received: 04/04/90
Date Extracted: 04/07/90
Date Analyzed: 04/08/90
Date Reported: 04/10/90

Project No.: 1459D
Contact: D. Favre
Phone:

AEMC Contact: M. Jaeger

Job No.: 794586
COC Log No.: 00865

AEMC I.D.: L4586
Batch No.: 5431
Matrix: Soil

SURROGATE	SPIKE CONC. (mg/kg)	MS %REC	MSD %REC
Phenol-d6	2	30%	29%
2-Fluorophenol	2	49%	47%
2,4,6-Tribromophenol	2	62%	96%

ANALYTE	SPIKE CONC. (mg/kg)	MS %REC	MSD %REC	DUPLICATE RPD
Acids				
Pentachlorophenol	2	104%	96%	8%
2,4,6-Trichlorophenol	2	62%	59%	5%

MS = Matrix Spike
MSD = Matrix Spike Duplicate
% REC = Percent Recovery
RPD = Relative Percent Difference

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: Base/Neutral/Acid Extractables, EPA Method 8270

CLIENT: Geomatrix Consultants
1 Mkt. Plaza, Spear St.#71
San Francisco, CA 94105

Project No.: 1459D
Contact: D. Favre
Phone:

Project: Geomatrix Consultants

AEMC Contact: M. Jaeger

Date Sampled: 04/04/90
Date Received: 04/04/90
Date Extracted: 04/07/90
Date Analyzed: 04/08/90
Date Reported: 04/10/90

Job No.: 794586
COC Log No.: 00865

AEMC I.D.: L4586
Batch No.: 5431
Matrix: Soil

ANALYTE	SPIKE CONC. (mg/kg)	LCS %REC
Base		
1,2,4-Trichlorobenzene	2	89%
Acenaphthene	2	74%
2,4-Dinitrotoluene	2	68%
Pyrene	2	115%
N-Nitroso-di-n-propylamine	2	103%
1,4-Dichlorobenzene	2	89%

ANALYTE	SPIKE CONC. (mg/kg)	LCS %REC
Acids		
Pentachlorophenol	2	79%
Phenol	2	97%
2-Chlorophenol	2	102%
4-Chloro-3-methylphenol	2	88%
4-Nitrophenol	2	48%

LCS = Laboratory Control Standard
% REC = Percent Recovery

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

Geomatrix Consultants
1 Mkt. Plaza, Spear St.#71
San Francisco, CA

04/11/90

Attn: D. Favre

Re: Project: Geomatrix Consultants
AEMC Lab Reference No.: L4597 Project No.: 1459D
Date Samples Received: 04/06/90 Job No.: 794597
No. Samples Received: 2 Soil samples

These samples were received by AEMC in a chilled state, intact, and accompanied by chain-of-custody documentation.

The above referenced samples were analyzed as follows:

No. of Samples	Analysis
2	GCMS Semi-Volatiles

Analytical results are attached to this letter. Please call if we can provide additional assistance.

Sincerely,

George Hampton
Laboratory Director

1249 Fitzgerald Road • Rancho Cordova, CA 95742 • Fax (916) 638-4510 • (916) 638-7301

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: Acid Extractables, EPA Method 8270

CLIENT: Geomatrix Consultants
1 Mkt. Plaza, Spear St. =71
San Francisco, CA 94105

Project No.: 1459D
Contact: D. Favre
Phone:

Project: Geomatrix Consultants

AEMC Contact: G. Hampton

Date Sampled: 4/6/90
Date Received: 4/6/90
Date Extracted: 4/7/90
Date Analyzed: 4/8/90
Date Reported: 4/11/90
Client Sample I.D.: SGE

Job No.: 794597
COC Log No.: 866

AEMC I.D.: L4597-2
Batch No.: 5431
Matrix: Soil

SURROGATE	CAS #	SPIKE CONC. (mg/kg)	RECOVERY (percent)
Phenol-d6	d108-95-2	2	28%
2-Fluorophenol	367-12-4	2	42%
2,4,6-Tribromophenol	118-79-6	2	102%

ANALYTE	CAS #	CONCENTRATION (mg/kg)	RPT. LIMIT (mg/kg)
Benzoic Acid	65-85-0	ND	1
4-Chloro-3-methylphenol	59-50-7	ND	1
2-Chlorophenol	95-57-8	ND	1
2,4-Dichlorophenol	120-83-2	ND	1
2,4-Dimethylphenol	105-67-9	ND	1
2,4-Dinitrophenol	51-28-5	ND	1
2-Methyl-4,6-dinitrophenol	534-52-1	ND	1
2-Methylphenol	95-48-7	ND	1
4-Methylphenol	106-44-5	ND	1
2-Nitrophenol	88-75-5	ND	1
4-Nitrophenol	100-02-7	ND	1
Pentachlorophenol	87-86-5	5	1
Phenol	108-95-2	ND	1
2,4,5-Trichlorophenol	95-95-4	ND	1
2,4,6-Trichlorophenol	88-06-2	11	1

RPT. LIMIT = Reporting Limit
ND = Not Detected at or above indicated Reporting Limit

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: Acid Extractables, EPA Method 8270

CLIENT: Geomatrix Consultants
1 Mkt. Plaza, Spear St. =71
San Francisco, CA 94105

Project No.: 1459D
Contact: D. Favre
Phone:

Project: Geomatrix Consultants

AEMC Contact: G. Hampton

Date Sampled: 4/6/90
Date Received: 4/6/90
Date Extracted: 4/7/90
Date Analyzed: 4/8/90
Date Reported: 4/11/90
Client Sample I.D.: SGW

Job No.: 794597
COC Log No.: 866

AEMC I.D.: L4597-1
Batch No.: 5431
Matrix: Soil

SURROGATE	CAS #	SPIKE CONC. (mg/kg)	RECOVERY (percent)
Phenol-d6	d108-95-2	2	28%
2-Fluorophenol	367-12-4	2	48%
2,4,6-Tribromophenol	118-79-6	2	76%

ANALYTE	CAS #	CONCENTRATION (mg/kg)	RPT. LIMIT (mg/kg)
Benzoic Acid	65-85-0	ND	1
4-Chloro-3-methylphenol	59-50-7	ND	1
2-Chlorophenol	95-57-8	ND	1
2,4-Dichlorophenol	120-83-2	ND	1
2,4-Dimethylphenol	105-67-9	ND	1
2,4-Dinitrophenol	51-28-5	ND	1
2-Methyl-4,6-dinitrophenol	534-52-1	ND	1
2-Methylphenol	95-48-7	ND	1
4-Methylphenol	106-44-5	ND	1
2-Nitrophenol	88-75-5	ND	1
4-Nitrophenol	100-02-7	ND	1
Pentachlorophenol	87-86-5	ND	1
Phenol	108-95-2	ND	1
2,4,5-Trichlorophenol	95-95-4	ND	1
2,4,6-Trichlorophenol	88-06-2	ND	1

RPT. LIMIT = Reporting Limit
ND = Not Detected at or above indicated Reporting Limit

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: Acid Extractables, EPA Method 8270

CLIENT: Geomatrix Consultants
1 Mkt. Plaza, Spear St. #71
San Francisco, CA 94105

Project No.: 1459D
Contact: D. Favre
Phone:

Project: Geomatrix Consultants

AEMC Contact: G. Hampton

Date Sampled: 4/6/90
Date Received: 4/6/90
Date Extracted: 4/7/90
Date Analyzed: 4/8/90
Date Reported: 4/11/90
Client Sample I.D.: Method Blank

Job No.: 794597
COC Log No.: 866

AEMC I.D.: L4597-MB
Batch No.: 5431
Matrix: Soil

SURROGATE	CAS #	SPIKE CONC. (mg/kg)	RECOVERY (percent)
Phenol-d6	d108-95-2	2	36%
2-Fluorophenol	367-12-4	2	50%
2,4,6-Tribromophenol	118-79-6	2	89%

ANALYTE	CAS #	CONCENTRATION (mg/kg)	RPT. LIMIT (mg/kg)
Benzoic Acid	65-85-0	ND	1
4-Chloro-3-methylphenol	59-50-7	ND	1
2-Chlorophenol	95-57-8	ND	1
2,4-Dichlorophenol	120-83-2	ND	1
2,4-Dimethylphenol	105-67-9	ND	1
2,4-Dinitrophenol	51-28-5	ND	1
2-Methyl-4,6-dinitrophenol	534-52-1	ND	1
2-Methylphenol	95-48-7	ND	1
4-Methylphenol	106-44-5	ND	1
2-Nitrophenol	88-75-5	ND	1
4-Nitrophenol	100-02-7	ND	1
Pentachlorophenol	87-86-5	ND	1
Phenol	108-95-2	ND	1
2,4,5-Trichlorophenol	95-95-4	ND	1
2,4,6-Trichlorophenol	88-06-2	ND	1

RPT. LIMIT = Reporting Limit
ND = Not Detected at or above indicated Reporting Limit

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: Acid Extractables, EPA Method 8270

CLIENT: Geomatrix Consultants
1 Mkt. Plaza, Spear St. #71
San Francisco, CA 94105

Project No.: 1459D
Contact: D. Favre
Phone:

Project: Geomatrix Consultants

AEMC Contact: G. Hampton

Date Sampled: 4/6/90
Date Received: 4/6/90
Date Extracted: 4/7/90
Date Analyzed: 4/8/90
Date Reported: 4/11/90

Job No.: 794597
COC Log No.: 866

AEMC I.D.: L4597
Batch No.: 5431
Matrix: Soil

SURROGATE	SPIKE CONC. (mg/kg)	MS %REC	MSD %REC
Phenol-d6	2	30%	29%
2-Fluorophenol	2	49%	47%
2,4,6-Tribromophenol	2	62%	96%

ANALYTE	SPIKE CONC. (mg/kg)	MS %REC	MSD %REC	DUPLICATE RPD
Acids				
Pentachlorophenol	2	104%	96%	8%
2,4,6-Trichlorophenol	2	62%	59%	5%

MS = Matrix Spike
MSD = Matrix Spike Duplicate
% REC = Percent Recovery
RPD = Relative Percent Difference

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: Base/Neutral/Acid Extractables, EPA Method 8270

CLIENT: Geomatrix Consultants
1 Mkt. Plaza, Spear St. #71
San Francisco, CA 94105

Project No.: 1459D
Contact: D. Favr
Phone:

Project: Geomatrix Consultants

AEMC Contact: G mpton

Date Sampled: 4/6/90
Date Received: 4/6/90
Date Extracted: 4/7/90
Date Analyzed: 4/8/90
Date Reported: 4/11/90

Job No.: 794597
COC Log No.: 866

AEMC I.D.: L4597
Batch No.: 5431
Matrix: Soil

ANALYTE (Base)	LCS CONC. (mg/kg)	LCS %REC
1,2,4-Trichlorobenzene	2	89%
Acenaphthene	2	74%
2,4-Dinitrotoluene	2	68%
Pyrene	2	115%
N-Nitroso-di-n-propylamine	2	103%
1,4-Dichlorobenzene	2	89%

ANALYTE (Acids)	LCS CONC. (mg/kg)	LCS %REC
Pentachlorophenol	2	79%
Phenol	2	97%
2-Chlorophenol	2	102%
4-Chloro-3-methylphenol	2	88%
4-Nitrophenol	2	48%

LCS = Laboratory Control Standard
% REC = Percent Recovery

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

Geomatrix Consultants
1 Mkt. Plaza, Spear St.#717
San Francisco, CA 94105

08/30/90

Attn: I. Khalil

Re: Project: 1459.04
AEMC Lab Reference No.: L5253 Project No.: 1459.04
Date Samples Received: 08/28/90 Job No.: 795253
No. Samples Received: 2 Soil samples

These samples were received by AEMC in a chilled state, intact, and accompanied by chain-of-custody documentation.

The above referenced samples were analyzed as follows:

No. of Samples	Analysis
2	Extractable Organics by GC-MS (BNA's)

Analytical results are attached to this letter. Please call if we can provide additional assistance.

Sincerely,

George Hampton
Laboratory Director

3249 Fitzgerald Road • Rancho Cordova, CA 95742 • Fax (916) 638-4510 • (916) 638-7301

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: Base/Neutral Extractables, EPA Method 8270

CLIENT: Geomatrix Consultants
1 Market Plaza
Spear Street Tower, Ste. 717
San Francisco, CA 94105
Project: 1459.04

Project No.: 1459.04
Contact: I. Khalil
Phone:

AEMC Contact: M. Jaeger

Date Sampled: 8/28/90
Date Received: 8/28/90
Date Extracted: 8/28/90
Date Analyzed: 8/28/90
Date Reported: 8/29/90
Client Sample I.D.: SP-5

Job No.: 795253
COC Log No.: 4142

AEMC I.D.: L5253-1
Batch No.: 6146
Matrix: Soil

Surrogate	CAS #	Spike Conc. (mg/kg)	Recovery (percent)
Phenol-d6	d108-95-2	20	85%
2-Fluorophenol	367-12-4	20	89%
2,4,6-Tribromophenol	118-79-6	20	68%
Nitrobenzene-d5	d98-95-3	20	70%
2-Fluorobiphenyl	321-60-8	20	68%
Terphenyl-d14	d92-94-4	20	87%

Analyte	CAS #	Concentration (mg/kg)	Rpt. Limit (mg/kg)
Acenaphthene	83-32-9	ND	2
Acenaphthylene	208-96-8	ND	2
Anthracene	120-12-7	ND	2
Benzo(a)anthracene	56-55-3	ND	2
Benzo(b)fluoranthene	205-99-2	ND	2
Benzo(k)fluoranthene	207-08-9	ND	2
Benzo(g,h,i)perylene	191-24-2	ND	2
Benzo(a)pyrene	50-32-8	ND	2
Benzyl alcohol	100-51-6	ND	2
Bis(2-chloroethoxy)methane	111-91-1	ND	2
Bis(2-chloroethyl)ether	111-44-4	ND	2
Bis(2-chloroisopropyl)ether	108-60-1	ND	2
Bis(2-ethylhexyl)phthalate	117-81-7	ND	2
4-Bromophenyl phenyl ether	101-55-3	ND	2
Butylbenzyl phthalate	85-68-7	ND	2
4-Chloroaniline	106-47-8	ND	2
2-Chloronaphthalene	91-58-7	ND	2
4-Chlorophenyl phenyl ether	7005-72-3	ND	2
Chrysene	218-01-9	ND	2
Dibenzo(a,h)anthracene	53-70-3	ND	2
Dibenzofuran	132-64-9	ND	2
Di-n-butylphthalate	84-74-2	ND	2
1,2-Dichlorobenzene	95-50-1	ND	2
1,3-Dichlorobenzene	541-73-1	ND	2
1,4-Dichlorobenzene	106-46-7	ND	2
3,3'-Dichlorobenzidine	91-94-1	ND	2
Diethylphthalate	84-66-2	ND	2
Dimethylphthalate	131-11-3	ND	2
2,4-Dinitrotoluene	121-14-2	ND	2
2,6-Dinitrotoluene	606-20-2	ND	2
Di-n-octylphthalate	117-84-0	ND	2
Fluoranthene	206-44-0	ND	2
Fluorene	86-73-7	ND	2
Hexachlorobenzene	118-74-1	ND	2
Hexachlorobutadiene	87-68-3	ND	2

RPT. LIMIT = Reporting Limit
ND = Not Detected at or above indicated Reporting Limit

3249 Fitzgerald Road • Rancho Cordova, CA 95742 • Fax (916) 638-4510 • (916) 638-7301

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: Base/Neutral Extractables (cont.), EPA Method 8270

CLIENT: Geomatrix Consultants
1 Market Plaza
Spear Street Tower, Ste. 717
San Francisco, CA 94105
Project: 1459.04

Project No.: 1459.04
Contact: I. Khalil
Phone:

AEMC Contact: M. Jaeger

Date Sampled: 8/28/90
Date Received: 8/28/90
Date Extracted: 8/28/90
Date Analyzed: 8/28/90
Date Reported: 8/29/90
Client Sample I.D.: SP-5

Job No.: 795253
COC Log No.: 4142

AEMC I.D.: L5253-1
Batch No.: 6146
Matrix: Soil

Analyte	CAS #	Concentration (mg/kg)	Rpt. Limit (mg/kg)
Hexachlorocyclopentadiene	77-47-4	ND	2
Hexachloroethane	67-72-1	ND	2
Indeno(1,2,3-c,d)pyrene	193-39-5	ND	2
Isophorone	78-59-1	ND	2
2-Methylnaphthalene	91-57-6	ND	2
Naphthalene	91-20-3	ND	2
2-Nitroaniline	88-74-4	ND	2
3-Nitroaniline	99-09-2	ND	2
4-Nitroaniline	100-01-6	ND	2
Nitrobenzene	98-95-3	ND	2
N-Nitrosodiphenylamine	86-30-6	ND	2
N-Nitroso-di-n-propylamine	621-64-7	ND	2
Phenanthrene	85-01-8	ND	2
Pyrene	129-00-0	ND	2
1,2,4-Trichlorobenzene	120-82-1	ND	2

RPT. LIMIT = Reporting Limit
ND = Not Detected at or above indicated Reporting Limit

3249 Fitzgerald Road • Rancho Cordova, CA 95742 • Fax (916) 638-4510 • (916) 638-7301

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: Acid Extractables, EPA Method 8270

CLIENT: Geomatrix Consultants
1 Market Plaza
Spear Street Tower, Ste. 717
San Francisco, CA 94105
Project: 1459.04

Project No.: 1459.04
Contact: I. Khalil
Phone:

AEMC Contact: M. Jaeger

Date Sampled: 8/28/90
Date Received: 8/28/90
Date Extracted: 8/28/90
Date Analyzed: 8/28/90
Date Reported: 8/29/90
Client Sample I.D.: SP-5

Job No.: 795253
COC Log No.: 4142

AEMC I.D.: L5253-1
Batch No.: 6146
Matrix: Soil

Analyte	CAS #	Concentration (mg/kg)	Rpt. Limit (mg/kg)
Benzoic Acid	65-85-0	ND	2
4-Chloro-3-methylphenol	59-50-7	ND	2
2-Chlorophenol	95-57-8	ND	2
2,4-Dichlorophenol	120-83-2	ND	2
2,4-Dimethylphenol	105-67-9	ND	2
2,4-Dinitrophenol	51-28-5	ND	2
2-Methyl-4,6-dinitrophenol	534-52-1	ND	2
2-Methylphenol	95-48-7	ND	2
4-Methylphenol	106-44-5	ND	2
2-Nitrophenol	88-75-5	ND	2
4-Nitrophenol	100-02-7	ND	2
Pentachlorophenol	87-86-5	ND	2
Phenol	108-95-2	ND	2
2,4,5-Trichlorophenol	95-95-4	ND	2
2,4,6-Trichlorophenol	88-06-2	ND	2

RPT. LIMIT = Reporting Limit
ND = Not Detected at or above indicated Reporting Limit

3249 Fitzgerald Road • Rancho Cordova, CA 95742 • Fax (916) 638-4510 • (916) 638-7301

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: Base/Neutral Extractables, EPA Method 8270

CLIENT: Geomatrix Consultants
1 Market Plaza
Spear Street Tower, Ste. 717
San Francisco, CA 94105
Project: 1459.04

Project No.: 1459.04
Contact: I. Khalil
Phone:

AEMC Contact: M. Jaeger

Date Sampled: 8/28/90
Date Received: 8/28/90
Date Extracted: 8/28/90
Date Analyzed: 8/28/90
Date Reported: 8/29/90
Client Sample I.D.: SP-6

Job No.: 795253
COC Log No.: 4142

AEMC I.D.: L5253-2
Batch No.: 6146
Matrix: Soil

Surrogate	CAS #	Spike Conc. (mg/kg)	Recovery (percent)
Phenol-d6	d108-95-2	20	78%
2-Fluorophenol	367-12-4	20	81%
2,4,6-Tribromophenol	118-79-6	20	71%
Nitrobenzene-d5	d98-95-3	20	68%
2-Fluorobiphenyl	321-60-8	20	58%
Terphenyl-d14	d92-94-4	20	83%

Analyte	CAS #	Concentration (mg/kg)	Rpt. Limit (mg/kg)
Acenaphthene	83-32-9	ND	2
Acenaphthylene	208-96-8	ND	2
Anthracene	120-12-7	ND	2
Benzo(a)anthracene	56-55-3	ND	2
Benzo(b)fluoranthene	205-99-2	ND	2
Benzo(k)fluoranthene	207-08-9	ND	2
Benzo(g,h,i)perylene	191-24-2	ND	2
Benzo(a)pyrene	50-32-8	ND	2
Benzyl alcohol	100-51-6	ND	2
Bis(2-chloroethoxy)methane	111-91-1	ND	2
Bis(2-chloroethyl)ether	111-44-4	ND	2
Bis(2-chloroisopropyl)ether	108-60-1	ND	2
Bis(2-ethylhexyl)phthalate	117-81-7	ND	2
4-Bromophenyl phenyl ether	101-55-3	ND	2
Butylbenzyl phthalate	85-68-7	ND	2
4-Chloroaniline	106-47-8	ND	2
2-Chloronaphthalene	91-58-7	ND	2
4-Chlorophenyl phenyl ether	7005-72-3	ND	2
Chrysene	218-01-9	ND	2
Dibenzo(a,h)anthracene	53-70-3	ND	2
Dibenzofuran	132-64-9	ND	2
Di-n-butylphthalate	84-74-2	ND	2
1,2-Dichlorobenzene	95-50-1	ND	2
1,3-Dichlorobenzene	541-73-1	ND	2
1,4-Dichlorobenzene	106-46-7	ND	2
3,3'-Dichlorobenzidine	91-94-1	ND	2
Diethylphthalate	84-66-2	ND	2
Dimethylphthalate	131-11-3	ND	2
2,4-Dinitrotoluene	121-14-2	ND	2
2,6-Dinitrotoluene	606-20-2	ND	2
Di-n-octylphthalate	117-84-0	ND	2
Fluoranthene	206-44-0	ND	2
Fluorene	86-73-7	ND	2
Hexachlorobenzene	118-74-1	ND	2
Hexachlorobutadiene	87-68-3	ND	2

RPT. LIMIT = Reporting Limit
ND = Not Detected at or above indicated Reporting Limit

3249 Fitzgerald Road • Rancho Cordova, CA 95742 • Fax (916) 638-4510 • (916) 638-7301

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: Base/Neutral Extractables (cont.), EPA Method 8270

CLIENT: Geomatrix Consultants
1 Market Plaza
Spear Street Tower, Ste. 717
San Francisco, CA 94105
Project: 1459.04

Project No.: 1459.04
Contact: I. Khalil
Phone:

AEMC Contact: M. Jaeger

Date Sampled: 8/28/90
Date Received: 8/28/90
Date Extracted: 8/28/90
Date Analyzed: 8/28/90
Date Reported: 8/29/90
Client Sample I.D.: SP-6

Job No.: 795253
COC Log No.: 4142

AEMC I.D.: L5253-2
Batch No.: 6146
Matrix: Soil

Analyte	CAS #	Concentration (mg/kg)	Rpt. Limit (mg/kg)
Hexachlorocyclopentadiene	77-47-4	ND	2
Hexachloroethane	67-72-1	ND	2
Indeno(1,2,3-c,d)pyrene	193-39-5	ND	2
Isophorone	78-59-1	ND	2
2-Methylnaphthalene	91-57-6	ND	2
Naphthalene	91-20-3	ND	2
2-Nitroaniline	88-74-4	ND	2
3-Nitroaniline	99-09-2	ND	2
4-Nitroaniline	100-01-6	ND	2
Nitrobenzene	98-95-3	ND	2
N-Nitrosodiphenylamine	86-30-6	ND	2
N-Nitroso-di-n-propylamine	621-64-7	ND	2
Phenanthrene	85-01-8	ND	2
Pyrene	129-00-0	ND	2
1,2,4-Trichlorobenzene	120-82-1	ND	2

RPT. LIMIT = Reporting Limit
ND = Not Detected at or above indicated Reporting Limit

3249 Fitzgerald Road • Rancho Cordova, CA 95742 • Fax (916) 638-4510 • (916) 638-7301

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: Acid Extractables, EPA Method 8270

CLIENT: Geomatrix Consultants
1 Market Plaza
Spear Street Tower, Ste. 717
San Francisco, CA 94105
Project: 1459.04

Project No.: 1459.04
Contact: I. Khalil
Phone:

AEMC Contact: M. Jaeger

Date Sampled: 8/28/90
Date Received: 8/28/90
Date Extracted: 8/28/90
Date Analyzed: 8/28/90
Date Reported: 8/29/90
Client Sample I.D.: SP-6

Job No.: 795253
COC Log No.: 4142

AEMC I.D.: L5253-2
Batch No.: 6146
Matrix: Soil

Analyte	CAS #	Concentration (mg/kg)	Rpt. Limit (mg/kg)
Benzoic Acid	65-85-0	ND	2
4-Chloro-3-methylphenol	59-50-7	ND	2
2-Chlorophenol	95-57-8	ND	2
2,4-Dichlorophenol	120-83-2	ND	2
2,4-Dimethylphenol	105-67-9	ND	2
2,4-Dinitrophenol	51-28-5	ND	2
2-Methyl-4,6-dinitrophenol	534-52-1	ND	2
2-Methylphenol	95-48-7	ND	2
4-Methylphenol	106-44-5	ND	2
2-Nitrophenol	88-75-5	ND	2
4-Nitrophenol	100-02-7	ND	2
Pentachlorophenol	87-86-5	ND	2
Phenol	108-95-2	ND	2
2,4,5-Trichlorophenol	95-95-4	ND	2
2,4,6-Trichlorophenol	88-06-2	ND	2

RPT. LIMIT = Reporting Limit
ND = Not Detected at or above indicated Reporting Limit

3249 Fitzgerald Road • Rancho Cordova, CA 95742 • Fax (916) 638-4510 • (916) 638-7301

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: Base/Neutral Extractables, EPA Method 8270

CLIENT: Geomatrix Consultants
1 Market Plaza
Spear Street Tower, Ste. 717
San Francisco, CA 94105
Project: 1459.04

Project No.: 1459.04
Contact: I. Khalil
Phone:

AEMC Contact: M. Jaeger

Date Sampled: 8/28/90
Date Received: 8/28/90
Date Extracted: 8/28/90
Date Analyzed: 8/28/90
Date Reported: 8/29/90
Client Sample I.D.: Method Blank

Job No.: 795253
COC Log No.: 4142

AEMC I.D.: L5253-MB
Batch No.: 6146
Matrix: Soil

Surrogate	CAS #	Spike Conc. (mg/kg)	Recovery (percent)
Phenol-d6	d108-95-2	20	87%
2-Fluorophenol	367-12-4	20	88%
2,4,6-Tribromophenol	118-79-6	20	58%
Nitrobenzene-d5	d98-95-3	20	77%
2-Fluorobiphenyl	321-60-8	20	79%
Terphenyl-d14	d92-94-4	20	97%

Analyte	CAS #	Concentration (mg/kg)	Rpt. Limit (mg/kg)
Acenaphthene	83-32-9	ND	2
Acenaphthylene	208-96-8	ND	2
Anthracene	120-12-7	ND	2
Benzo(a)anthracene	56-55-3	ND	2
Benzo(b)fluoranthene	205-99-2	ND	2
Benzo(k)fluoranthene	207-08-9	ND	2
Benzo(g,h,i)perylene	191-24-2	ND	2
Benzo(a)pyrene	50-32-8	ND	2
Benzyl alcohol	100-51-6	ND	2
Bis(2-chloroethoxy)methane	111-91-1	ND	2
Bis(2-chloroethyl)ether	111-44-4	ND	2
Bis(2-chloroisopropyl)ether	108-60-1	ND	2
Bis(2-ethylhexyl)phthalate	117-81-7	ND	2
4-Bromophenyl phenyl ether	101-55-3	ND	2
Butylbenzyl phthalate	85-68-7	ND	2
4-Chloroaniline	106-47-8	ND	2
2-Chloronaphthalene	91-58-7	ND	2
4-Chlorophenyl phenyl ether	7005-72-3	ND	2
Chrysene	218-01-9	ND	2
Dibenzo(a,h)anthracene	53-70-3	ND	2
Dibenzofuran	132-64-9	ND	2
Di-n-butylphthalate	84-74-2	ND	2
1,2-Dichlorobenzene	95-50-1	ND	2
1,3-Dichlorobenzene	541-73-1	ND	2
1,4-Dichlorobenzene	106-46-7	ND	2
3,3'-Dichlorobenzidine	91-94-1	ND	2
Diethylphthalate	84-66-2	ND	2
Dimethylphthalate	131-11-3	ND	2
2,4-Dinitrotoluene	121-14-2	ND	2
2,6-Dinitrotoluene	606-20-2	ND	2
Di-n-octylphthalate	117-84-0	ND	2
Fluoranthene	206-44-0	ND	2
Fluorene	86-73-7	ND	2
Hexachlorobenzene	118-74-1	ND	2
Hexachlorobutadiene	87-68-3	ND	2

RPT. LIMIT = Reporting Limit
ND = Not Detected at or above indicated Reporting Limit

3249 Fitzgerald Road • Rancho Cordova, CA 95742 • Fax (916) 638-4510 • (916) 638-7301

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: Base/Neutral Extractables (cont.), EPA Method 8270

CLIENT: Geomatrix Consultants
1 Market Plaza
Spear Street Tower, Ste. 717
San Francisco, CA 94105
Project: 1459.04

Project No.: 1459.04
Contact: I. Khalil
Phone:

AEMC Contact: M. Jaeger

Date Sampled: 8/28/90
Date Received: 8/28/90
Date Extracted: 8/28/90
Date Analyzed: 8/28/90
Date Reported: 8/29/90
Client Sample I.D.: Method Blank

Job No.: 795253
COC Log No.: 4142

AEMC I.D.: L5253-MB
Batch No.: 6146
Matrix: Soil

Analyte	CAS #	Concentration (mg/kg)	Rpt. Limit (mg/kg)
Hexachlorocyclopentadiene	77-47-4	ND	2
Hexachloroethane	67-72-1	ND	2
Indeno(1,2,3-c,d)pyrene	193-39-5	ND	2
Isophorone	78-59-1	ND	2
2-Methylnaphthalene	91-57-6	ND	2
Naphthalene	91-20-3	ND	2
2-Nitroaniline	88-74-4	ND	2
3-Nitroaniline	99-09-2	ND	2
4-Nitroaniline	100-01-6	ND	2
Nitrobenzene	98-95-3	ND	2
N-Nitrosodiphenylamine	86-30-6	ND	2
N-Nitroso-di-n-propylamine	621-64-7	ND	2
Phenanthrene	85-01-8	ND	2
Pyrene	129-00-0	ND	2
1,2,4-Trichlorobenzene	120-82-1	ND	2

RPT. LIMIT = Reporting Limit
ND = Not Detected at or above indicated Reporting Limit

3249 Fitzgerald Road • Rancho Cordova, CA 95742 • Fax (916) 638-4510 • (916) 638-7301

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: Acid Extractables, EPA Method 8270

CLIENT: Geomatrix Consultants
1 Market Plaza
Spear Street Tower, Ste. 717
San Francisco, CA 94105
Project: 1459.04

Project No.: 1459.04
Contact: I. Khalil
Phone:

AEMC Contact: M. Jaeger

Date Sampled: 8/28/90
Date Received: 8/28/90
Date Extracted: 8/28/90
Date Analyzed: 8/28/90
Date Reported: 8/29/90
Client Sample I.D.: Method Blank

Job No.: 795253
COC Log No.: 4142

AEMC I.D.: L5253-MB
Batch No.: 6146
Matrix: Soil

Analyte	CAS #	Concentration (mg/kg)	Rpt. Limit (mg/kg)
Benzoic Acid	65-85-0	ND	2
4-Chloro-3-methylphenol	59-50-7	ND	2
2-Chlorophenol	95-57-8	ND	2
2,4-Dichlorophenol	120-83-2	ND	2
2,4-Dimethylphenol	105-67-9	ND	2
2,4-Dinitrophenol	51-28-5	ND	2
2-Methyl-4,6-dinitrophenol	534-52-1	ND	2
2-Methylphenol	95-48-7	ND	2
4-Methylphenol	106-44-5	ND	2
2-Nitrophenol	88-75-5	ND	2
4-Nitrophenol	100-02-7	ND	2
Pentachlorophenol	87-86-5	ND	2
Phenol	108-95-2	ND	2
2,4,5-Trichlorophenol	95-95-4	ND	2
2,4,6-Trichlorophenol	88-06-2	ND	2

RPT. LIMIT = Reporting Limit
ND = Not Detected at or above indicated Reporting Limit

3249 Fitzgerald Road • Rancho Cordova, CA 95742 • Fax (916) 638-4510 • (916) 638-7301

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: Base/Neutral/Acid Extractables, EPA Method 8270

CLIENT: Geomatrix Consultants
1 Market Plaza
Spear Street Tower, Ste. 717
San Francisco, CA 94105
Project: 1459.04

Project No.: 1459.04
Contact: I. Khalil
Phone:

AEMC Contact: M. Jaeger

Date Sampled: 8/28/90
Date Received: 8/28/90
Date Extracted: 8/28/90
Date Analyzed: 8/28/90
Date Reported: 8/29/90

Job No.: 795253
COC Log No.: 4142

AEMC I.D.: L5253
Batch No.: 6146
Matrix: Soil

Surrogate	Cas #	Spike Conc. (mg/kg)	MS %Rec	MSD %Rec
Phenol-d6	d108-95-2	100	77%	77%
2-Fluorophenol	367-12-4	100	81%	85%
2,4,6-Tribromophenol	118-76-6	100	71%	77%
Nitrobenzene-d5	98-95-3	100	73%	74%
2-Fluorobiphenyl	321-60-80	100	62%	56%
Terphenyl-d14	92-94-4	100	79%	73%

Analyte Base	Spike Conc. (mg/kg)	MS %Rec	MSD %Rec	Duplicate RPD
1,2,4-Trichlorobenzene	100	65%	66%	1%
Acenaphthene	100	57%	51%	11%
2,4-Dinitrotoluene	100	53%	56%	5%
Pyrene	100	65%	58%	11%
N-Nitroso-di-n-propylamine	100	73%	71%	3%
1,4-Dichlorobenzene	100	60%	57%	5%

Analyte Acid	Spike Conc. (mg/kg)	MS %Rec	MSD %Rec	Duplicate RPD
Pentachlorophenol	100	53%	63%	17%
Phenol	100	71%	70%	1%
2-Chlorophenol	100	83%	82%	1%
4-Chloro-3-methylphenol	100	75%	79%	5%
4-Nitrophenol	100	66%	67%	1%

MS = Matrix Spike
MSD = Matrix Spike Duplicate
% REC = Percent Recovery
RPD = Relative Percent Difference

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: Base/Neutral/Acid Extractables, EPA Method 8270

CLIENT: Geomatrix Consultants
1 Market Plaza
Spear Street Tower, Ste. 717
San Francisco, CA 94105
Project: 1459.04

Project No.: 1459.04
Contact: I. Khalil
Phone:

AEMC Contact: M. Jaeger

Date Sampled: 8/28/90
Date Received: 8/28/90
Date Extracted: 8/28/90
Date Analyzed: 8/28/90
Date Reported: 8/29/90

Job No.: 795253
COC Log No.: 4142

AEMC I.D.: L5253
Batch No.: 6146

Analyte Base	LCS Conc. (mg/L)	LCS %Rec
1,2,4-Trichlorobenzene	100	86%
Acenaphthene	100	73%
2,4-Dinitrotoluene	100	67%
Pyrene	100	121%
N-Nitroso-di-n-propylamine	100	98%
1,4-Dichlorobenzene	100	84%

Analyte Acid	LCS Conc. (mg/L)	LCS %Rec
Pentachlorophenol	100	56%
Phenol	100	104%
2-Chlorophenol	100	107%
4-Chloro-3-methylphenol	100	93%
4-Nitrophenol	100	70%

LCS = Laboratory Control Standard
% Rec = Percent Recovery

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

Geomatrix Consultants
1 Mkt. Plaza, Spear St.#717
San Francisco, CA 94105

08/30/90

Attn: I. Khalil

Re: Project: 1459.04
AEMC Lab Reference No.: L5241 Project No.: 1459.04
Date Samples Received: 08/26/90 Job No.: 795241
No. Samples Received: 4 Soil samples

These samples were received by AEMC in a chilled state, intact, and accompanied by chain-of-custody documentation.

The above referenced samples were analyzed as follows:

No. of Samples	Analysis
4	Extractable Organics by GC-MS (BNA's)

Method 8270 surrogate standard (2-Fluorophenol) recovery data could not be generated for sample "SP-4" due to the presence of a significant concentration of mineral spirits in this sample.

Analytical results are attached to this letter. Please call if we can provide additional assistance.

Sincerely,

George Hampton
Laboratory Director

3249 Fitzgerald Road • Rancho Cordova, CA 95742 • Fax (916) 638-4510 • (916) 638-7301

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: Base/Neutral Extractables, EPA Method 8270

CLIENT: Geomatrix Consultants
1 Market Plaza
Spear Street Tower, Ste. 717
San Francisco, CA 94105
Project: 1459.04

Project No.: 1459.04
Contact: I. Khalil
Phone:

AEMC Contact: M. Jaeger

Date Sampled: 8/25/90
Date Received: 8/26/90
Date Extracted: 8/26/90
Date Analyzed: 8/27/90
Date Reported: 8/29/90
Client Sample I.D.: SP-1

Job No.: 7[illegible]5241
COC Log No.: 4121

AEMC I.D.: L5241-1
Batch No.: 6128
Matrix: Soil

Surrogate	CAS #	Spike Conc. (mg/kg)	Recovery (percent)
Phenol-d6	d108-95-2	20	83%
2-Fluorophenol	367-12-4	20	85%
2,4,6-Tribromophenol	118-79-6	20	98%
Nitrobenzene-d5	d98-95-3	20	70%
2-Fluorobiphenyl	321-60-8	20	63%
Terphenyl-d14	d92-94-4	20	91%

Analyte	CAS #	Concentration (mg/kg)	Rpt. Limit (mg/kg)
Acenaphthene	83-32-9	ND	2
Acenaphthylene	208-96-8	ND	2
Anthracene	120-12-7	ND	2
Benzo(a)anthracene	56-55-3	ND	2
Benzo(b)fluoranthene	205-99-2	ND	2
Benzo(k)fluoranthene	207-08-9	ND	2
Benzo(g,h,i)perylene	191-24-2	ND	2
Benzo(a)pyrene	50-32-8	ND	2
Benzyl alcohol	100-51-6	ND	2
Bis(2-chloroethoxy)methane	111-91-1	ND	2
Bis(2-chloroethyl)ether	111-44-4	ND	2
Bis(2-chloroisopropyl)ether	108-60-1	ND	2
Bis(2-ethylhexyl)phthalate	117-81-7	ND	2
4-Bromophenyl phenyl ether	101-55-3	ND	2
Butylbenzyl phthalate	85-68-7	ND	2
4-Chloroaniline	106-47-8	ND	2
2-Chloronaphthalene	91-58-7	ND	2
4-Chlorophenyl phenyl ether	7005-72-3	ND	2
Chrysene	218-01-9	ND	2
Dibenzo(a,h)anthracene	53-70-3	ND	2
Dibenzofuran	132-64-9	ND	2
Di-n-butylphthalate	84-74-2	ND	2
1,2-Dichlorobenzene	95-50-1	ND	2
1,3-Dichlorobenzene	541-73-1	ND	2
1,4-Dichlorobenzene	106-46-7	ND	2
3,3'-Dichlorobenzidine	91-94-1	ND	2
Diethylphthalate	84-66-2	ND	2
Dimethylphthalate	131-11-3	ND	2
2,4-Dinitrotoluene	121-14-2	ND	2
2,6-Dinitrotoluene	606-20-2	ND	2
Di-n-octylphthalate	117-84-0	ND	2
Fluoranthene	206-44-0	ND	2
Fluorene	86-73-7	ND	2
Hexachlorobenzene	118-74-1	ND	2
Hexachlorobutadiene	87-68-3	ND	2

RPT. LIMIT = Reporting Limit
ND = Not Detected at or above indicated Reporting Limit

3249 Fitzgerald Road • Rancho Cordova, CA 95742 • Fax (916) 638-4510 • (916) 638-7301

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: Base/Neutral Extractables (cont.), EPA Method 8270

CLIENT: Geomatrix Consultants
1 Market Plaza
Spear Street Tower, Ste. 717
San Francisco, CA 94105
Project: 1459.04

Project No.: 1459.04
Contact: I. Khalil
Phone:

AEMC Contact: M. Jaeger

Date Sampled: 8/25/90
Date Received: 8/26/90
Date Extracted: 8/26/90
Date Analyzed: 8/27/90
Date Reported: 8/29/90
Client Sample I.D.: SP-1

Job No.: 795241
COC Log No.: 4121

AEMC I.D.: L5241-1
Batch No.: 6128
Matrix: Soil

Analyte	CAS #	Concentration (mg/kg)	Rpt. Limit (mg/kg)
Hexachlorocyclopentadiene	77-47-4	ND	2
Hexachloroethane	67-72-1	ND	2
Indeno(1,2,3-c,d)pyrene	193-39-5	ND	2
Isophorone	78-59-1	ND	2
2-Methylnaphthalene	91-57-6	ND	2
Naphthalene	91-20-3	ND	2
2-Nitroaniline	88-74-4	ND	2
3-Nitroaniline	99-09-2	ND	2
4-Nitroaniline	100-01-6	ND	2
Nitrobenzene	98-95-3	ND	2
N-Nitrosodiphenylamine	86-30-6	ND	2
N-Nitroso-di-n-propylamine	621-64-7	ND	2
Phenanthrene	85-01-8	ND	2
Pyrene	129-00-0	ND	2
1,2,4-Trichlorobenzene	120-82-1	ND	2

RPT. LIMIT = Reporting Limit
ND = Not Detected at or above indicated Reporting Limit

3249 Fitzgerald Road • Rancho Cordova, CA 95742 • Fax (916) 638-4510 • (916) 638-7301

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: Acid Extractables, EPA Method 8270

CLIENT: Geomatrix Consultants
1 Market Plaza
Spear Street Tower, Ste. 717
San Francisco, CA 94105
Project: 1459.04

Project No.: 1459.04
Contact: I. Khalil
Phone:

AEMC Contact: M. Jaeger

Date Sampled: 8/25/90
Date Received: 8/26/90
Date Extracted: 8/26/90
Date Analyzed: 8/27/90
Date Reported: 8/29/90
Client Sample I.D.: SP-1

Job No.: 795241
COC Log No.: 4121

AEMC I.D.: L5241-1
Batch No.: 6128
Matrix: Soil

Analyte	CAS #	Concentration (mg/kg)	Rpt. Limit (mg/kg)
Benzoic Acid	65-85-0	ND	2
4-Chloro-3-methylphenol	59-50-7	ND	2
2-Chlorophenol	95-57-8	ND	2
2,4-Dichlorophenol	120-83-2	ND	2
2,4-Dimethylphenol	105-67-9	ND	2
2,4-Dinitrophenol	51-28-5	ND	2
2-Methyl-4,6-dinitrophenol	534-52-1	ND	2
2-Methylphenol	95-48-7	ND	2
4-Methylphenol	106-44-5	ND	2
2-Nitrophenol	88-75-5	ND	2
4-Nitrophenol	100-02-7	ND	2
Pentachlorophenol	87-86-5	ND	2
Phenol	108-95-2	ND	2
2,4,5-Trichlorophenol	95-95-4	ND	2
2,4,6-Trichlorophenol	88-06-2	ND	2

RPT. LIMIT = Reporting Limit
ND = Not Detected at or above indicated Reporting Limit

3249 Fitzgerald Road • Rancho Cordova, CA 95742 • Fax (916) 638-4510 • (916) 638-7301

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: Base/Neutral Extractables, EPA Method 8270

CLIENT: Geomatrix Consultants
1 Market Plaza
Spear Street Tower, Ste. 717
San Francisco, CA 94105
Project: 1459.04

Project No.: 1459.04
Contact: I. Khalil
Phone:

AEMC Contact: M. Jaeger

Date Sampled: 8/25/90
Date Received: 8/26/90
Date Extracted: 8/26/90
Date Analyzed: 8/27/90
Date Reported: 8/29/90
Client Sample I.D.: SP-2

Job No.: 795241
COC Log No.: 4121

AEMC I.D.: L5241-2
Batch No.: 6128
Matrix: Soil

Surrogate	CAS #	Spike Conc. (mg/kg)	Recovery (percent)
Phenol-d6	d108-95-2	20	83%
2-Fluorophenol	367-12-4	20	84%
2,4,6-Tribromophenol	118-79-6	20	84%
Nitrobenzene-d5	d98-95-3	20	70%
2-Fluorobiphenyl	321-60-8	20	64%
Terphenyl-d14	d92-94-4	20	92%

Analyte	CAS #	Concentration (mg/kg)	Rpt. Limit (mg/kg)
Acenaphthene	83-32-9	ND	2
Acenaphthylene	208-96-8	ND	2
Anthracene	120-12-7	ND	2
Benzo(a)anthracene	56-55-3	ND	2
Benzo(b)fluoranthene	205-99-2	ND	2
Benzo(k)fluoranthene	207-08-9	ND	2
Benzo(g,h,i)perylene	191-24-2	ND	2
Benzo(a)pyrene	50-32-8	ND	2
Benzyl alcohol	100-51-6	ND	2
Bis(2-chloroethoxy)methane	111-91-1	ND	2
Bis(2-chloroethyl)ether	111-44-4	ND	2
Bis(2-chloroisopropyl)ether	108-60-1	ND	2
Bis(2-ethylhexyl)phthalate	117-81-7	ND	2
4-Bromophenyl phenyl ether	101-55-3	ND	2
Butylbenzyl phthalate	85-68-7	ND	2
4-Chloroaniline	106-47-8	ND	2
2-Chloronaphthalene	91-58-7	ND	2
4-Chlorophenyl phenyl ether	7005-72-3	ND	2
Chrysene	218-01-9	ND	2
Dibenzo(a,h)anthracene	53-70-3	ND	2
Dibenzofuran	132-64-9	ND	2
Di-n-butylphthalate	84-74-2	ND	2
1,2-Dichlorobenzene	95-50-1	ND	2
1,3-Dichlorobenzene	541-73-1	ND	2
1,4-Dichlorobenzene	106-46-7	ND	2
3,3'-Dichlorobenzidine	91-94-1	ND	2
Diethylphthalate	84-66-2	ND	2
Dimethylphthalate	131-11-3	ND	2
2,4-Dinitrotoluene	121-14-2	ND	2
2,6-Dinitrotoluene	606-20-2	ND	2
Di-n-octylphthalate	117-84-0	ND	2
Fluoranthene	206-44-0	ND	2
Fluorene	86-73-7	ND	2
Hexachlorobenzene	118-74-1	ND	2
Hexachlorobutadiene	87-68-3	ND	2

RPT. LIMIT = Reporting Limit
ND = Not Detected at or above indicated Reporting Limit

3249 Fitzgerald Road • Rancho Cordova, CA 95742 • Fax (916) 638-4510 • (916) 638-7301

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: Base/Neutral Extractables (cont.), EPA Method 8270

CLIENT: Geomatrix Consultants
1 Market Plaza
Spear Street Tower, Ste. 717
San Francisco, CA 94105
Project: 1459.04

Project No.: 1459.04
Contact: I. Khalil
Phone:

AEMC Contact: M. Jaeger

Date Sampled: 8/25/90
Date Received: 8/26/90
Date Extracted: 8/26/90
Date Analyzed: 8/27/90
Date Reported: 8/29/90
Client Sample I.D.: SP-2

Job No.: 795241
COC Log No.: 4121

AEMC I.D.: L5241-2
Batch No.: 6128
Matrix: Soil

Analyte	CAS #	Concentration (mg/kg)	Rpt. Limit (mg/kg)
Hexachlorocyclopentadiene	77-47-4	ND	2
Hexachloroethane	67-72-1	ND	2
Indeno(1,2,3-c,d)pyrene	193-39-5	ND	2
Isophorone	78-59-1	ND	2
2-Methylnaphthalene	91-57-6	ND	2
Naphthalene	91-20-3	ND	2
2-Nitroaniline	88-74-4	ND	2
3-Nitroaniline	99-09-2	ND	2
4-Nitroaniline	100-01-6	ND	2
Nitrobenzene	98-95-3	ND	2
N-Nitrosodiphenylamine	86-30-6	ND	2
N-Nitroso-di-n-propylamine	621-64-7	ND	2
Phenanthrene	85-01-8	ND	2
Pyrene	129-00-0	ND	2
1,2,4-Trichlorobenzene	120-82-1	ND	2

RPT. LIMIT = Reporting Limit
ND = Not Detected at or above indicated Reporting Limit

3249 Fitzgerald Road • Rancho Cordova, CA 95742 • Fax (916) 638-4510 • (916) 638-7301

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: Acid Extractables, EPA Method 8270

CLIENT: Geomatrix Consultants
1 Market Plaza
Spear Street Tower, Ste. 717
San Francisco, CA 94105
Project: 1459.04

Project No.: 1459.04
Contact: I. Khalil
Phone:

AEMC Contact: M. Jaeger

Date Sampled: 8/25/90
Date Received: 8/26/90
Date Extracted: 8/26/90
Date Analyzed: 8/27/90
Date Reported: 8/29/90
Client Sample I.D.: SP-2

Job No.: 795241
COC Log No.: 4121

AEMC I.D.: L5241-2
Batch No.: 6128
Matrix: Soil

Analyte	CAS #	Concentration (mg/kg)	Rpt. Limit (mg/kg)
Benzoic Acid	65-85-0	ND	2
4-Chloro-3-methylphenol	59-50-7	ND	2
2-Chlorophenol	95-57-8	ND	2
2,4-Dichlorophenol	120-83-2	ND	2
2,4-Dimethylphenol	105-67-9	ND	2
2,4-Dinitrophenol	51-28-5	ND	2
2-Methyl-4,6-dinitrophenol	534-52-1	ND	2
2-Methylphenol	95-48-7	ND	2
4-Methylphenol	106-44-5	ND	2
2-Nitrophenol	88-75-5	ND	2
4-Nitrophenol	100-02-7	ND	2
Pentachlorophenol	87-86-5	ND	2
Phenol	108-95-2	ND	2
2,4,5-Trichlorophenol	95-95-4	ND	2
2,4,6-Trichlorophenol	88-06-2	ND	2

RPT. LIMIT = Reporting Limit
ND = Not Detected at or above indicated Reporting Limit

3249 Fitzgerald Road • Rancho Cordova, CA 95742 • Fax (916) 638-4510 • (916) 638-7301

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: Base/Neutral Extractables, EPA Method 8270

CLIENT: Geomatrix Consultants
1 Market Plaza
Spear Street Tower, Ste. 717
San Francisco, CA 94105
Project: 1459.04

Project No.: 1459.04
Contact: I. Khalil
Phone:

AEMC Contact: M. Jaeger

Date Sampled: 8/25/90
Date Received: 8/26/90
Date Extracted: 8/26/90
Date Analyzed: 8/27/90
Date Reported: 8/29/90
Client Sample I.D.: SP-3

Job No.: 795241
COC Log No.: 4121

AEMC I.D.: L5241-3
Batch No.: 6128
Matrix: Soil

Surrogate	CAS #	Spike Conc. (mg/kg)	Recovery (percent)
Phenol-d6	d108-95-2	20	67%
2-Fluorophenol	367-12-4	20	101%
2,4,6-Tribromophenol	118-79-6	20	96%
Nitrobenzene-d5	d98-95-3	20	52%
2-Fluorobiphenyl	321-60-8	20	66%
Terphenyl-d14	d92-94-4	20	87%

Analyte	CAS #	Concentration (mg/kg)	Rpt. Limit (mg/kg)
Acenaphthene	83-32-9	ND	2
Acenaphthylene	208-96-8	ND	2
Anthracene	120-12-7	ND	2
Benzo(a)anthracene	56-55-3	ND	2
Benzo(b)fluoranthene	205-99-2	ND	2
Benzo(k)fluoranthene	207-08-9	ND	2
Benzo(g,h,i)perylene	191-24-2	ND	2
Benzo(a)pyrene	50-32-8	ND	2
Benzyl alcohol	100-51-6	ND	2
Bis(2-chloroethoxy)methane	111-91-1	ND	2
Bis(2-chloroethyl)ether	111-44-4	ND	2
Bis(2-chloroisopropyl)ether	108-60-1	ND	2
Bis(2-ethylhexyl)phthalate	117-81-7	ND	2
4-Bromophenyl phenyl ether	101-55-3	ND	2
Butylbenzyl phthalate	85-68-7	ND	2
4-Chloroaniline	106-47-8	ND	2
2-Chloronaphthalene	91-58-7	ND	2
4-Chlorophenyl phenyl ether	7005-72-3	ND	2
Chrysene	218-01-9	ND	2
Dibenzo(a,h)anthracene	53-70-3	ND	2
Dibenzofuran	132-64-9	ND	2
Di-n-butylphthalate	84-74-2	ND	2
1,2-Dichlorobenzene	95-50-1	ND	2
1,3-Dichlorobenzene	541-73-1	ND	2
1,4-Dichlorobenzene	106-46-7	ND	2
3,3'-Dichlorobenzidine	91-94-1	ND	2
Diethylphthalate	84-66-2	ND	2
Dimethylphthalate	131-11-3	ND	2
2,4-Dinitrotoluene	121-14-2	ND	2
2,6-Dinitrotoluene	606-20-2	ND	2
Di-n-octylphthalate	117-84-0	ND	2
Fluoranthene	206-44-0	ND	2
Fluorene	86-73-7	ND	2
Hexachlorobenzene	118-74-1	ND	2
Hexachlorobutadiene	87-68-3	ND	2

RPT. LIMIT = Reporting Limit
ND = Not Detected at or above indicated Reporting Limit

3249 Fitzgerald Road • Rancho Cordova, CA 95742 • Fax (916) 638-4510 • (916) 638-7301

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: Base/Neutral Extractables (cont.), EPA Method 8270

CLIENT: Geomatrix Consultants
1 Market Plaza
Spear Street Tower, Ste. 717
San Francisco, CA 94105
Project: 1459.04

Project No.: 1459.04
Contact: I. Khalil
Phone:

AEMC Contact: M. Jaeger

Date Sampled: 8/25/90
Date Received: 8/26/90
Date Extracted: 8/26/90
Date Analyzed: 8/27/90
Date Reported: 8/29/90
Client Sample I.D.: SP-3

Job No.: 795241
COC Log No.: 4121

AEMC I.D.: L5241-3
Batch No.: 6128
Matrix: Soil

Analyte	CAS #	Concentration (mg/kg)	Rpt. Limit (mg/kg)
Hexachlorocyclopentadiene	77-47-4	ND	2
Hexachloroethane	67-72-1	ND	2
Indeno(1,2,3-c,d)pyrene	193-39-5	ND	2
Isophorone	78-59-1	ND	2
2-Methylnaphthalene	91-57-6	ND	2
Naphthalene	91-20-3	ND	2
2-Nitroaniline	88-74-4	ND	2
3-Nitroaniline	99-09-2	ND	2
4-Nitroaniline	100-01-6	ND	2
Nitrobenzene	98-95-3	ND	2
N-Nitrosodiphenylamine	86-30-6	ND	2
N-Nitroso-di-n-propylamine	621-64-7	ND	2
Phenanthrene	85-01-8	ND	2
Pyrene	129-00-0	ND	2
1,2,4-Trichlorobenzene	120-82-1	ND	2

RPT. LIMIT = Reporting Limit
ND = Not Detected at or above indicated Reporting Limit

3249 Fitzgerald Road • Rancho Cordova, CA 95742 • Fax (916) 638-4510 • (916) 638-7301

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: Acid Extractables, EPA Method 8270

CLIENT: Geomatrix Consultants
1 Market Plaza
Spear Street Tower, Ste. 717
San Francisco, CA 94105
Project: 1459.04

Project No.: 1459.04
Contact: I. Khalil
Phone:

AEMC Contact: M. Jaeger

Date Sampled: 8/25/90
Date Received: 8/26/90
Date Extracted: 8/26/90
Date Analyzed: 8/27/90
Date Reported: 8/29/90
Client Sample I.D.: SP-3

Job No.: 795241
COC Log No.: 4121

AEMC I.D.: L5241-3
Batch No.: 6128
Matrix: Soil

Analyte	CAS #	Concentration (mg/kg)	Rpt. Limit (mg/kg)
Benzoic Acid	65-85-0	ND	2
4-Chloro-3-methylphenol	59-50-7	ND	2
2-Chlorophenol	95-57-8	ND	2
2,4-Dichlorophenol	120-83-2	ND	2
2,4-Dimethylphenol	105-67-9	ND	2
2,4-Dinitrophenol	51-28-5	ND	2
2-Methyl-4,6-dinitrophenol	534-52-1	ND	2
2-Methylphenol	95-48-7	ND	2
4-Methylphenol	106-44-5	ND	2
2-Nitrophenol	88-75-5	ND	2
4-Nitrophenol	100-02-7	ND	2
Pentachlorophenol	87-86-5	ND	2
Phenol	108-95-2	ND	2
2,4,5-Trichlorophenol	95-95-4	ND	2
2,4,6-Trichlorophenol	88-06-2	ND	2

RPT. LIMIT = Reporting Limit
ND = Not Detected at or above indicated Reporting Limit

3249 Fitzgerald Road • Rancho Cordova, CA 95742 • Fax (916) 638-4510 • (916) 638-7301

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: Base/Neutral Extractables, EPA Method 8270

CLIENT: Geomatrix Consultants
1 Market Plaza
Spear Street Tower, Ste. 717
San Francisco, CA 94105
Project: 1459.04

Project No.: 1459.04
Contact: I. Khalil
Phone:

AEMC Contact: M. Jaeger

Date Sampled: 8/25/90
Date Received: 8/26/90
Date Extracted: 8/26/90
Date Analyzed: 8/27/90
Date Reported: 8/29/90
Client Sample I.D.: SP-4

Job No.: 795241
COC Log No.: 4121

AEMC I.D.: L5241-4
Batch No.: 6128
Matrix: Soil

Surrogate	CAS #	Spike Conc. (mg/kg)	Recovery (percent)
Phenol-d6	d108-95-2	20	85%
2-Fluorophenol	367-12-4	20	NR
2,4,6-Tribromophenol	118-79-6	20	101%
Nitrobenzene-d5	d98-95-3	20	42%
2-Fluorobiphenyl	321-60-8	20	62%
Terphenyl-d14	d92-94-4	20	94%

Analyte	CAS #	Concentration (mg/kg)	Rpt. Limit (mg/kg)
Acenaphthene	83-32-9	ND	2
Acenaphthylene	208-96-8	ND	2
Anthracene	120-12-7	ND	2
Benzo(a)anthracene	56-55-3	ND	2
Benzo(b)fluoranthene	205-99-2	ND	2
Benzo(k)fluoranthene	207-08-9	ND	2
Benzo(g,h,i)perylene	191-24-2	ND	2
Benzo(a)pyrene	50-32-8	ND	2
Benzyl alcohol	100-51-6	ND	2
Bis(2-chloroethoxy)methane	111-91-1	ND	2
Bis(2-chloroethyl)ether	111-44-4	ND	2
Bis(2-chloroisopropyl)ether	108-60-1	ND	2
Bis(2-ethylhexyl)phthalate	117-81-7	ND	2
4-Bromophenyl phenyl ether	101-55-3	ND	2
Butylbenzyl phthalate	85-68-7	ND	2
4-Chloroaniline	106-47-8	ND	2
2-Chloronaphthalene	91-58-7	ND	2
4-Chlorophenyl phenyl ether	7005-72-3	ND	2
Chrysene	218-01-9	ND	2
Dibenzo(a,h)anthracene	53-70-3	ND	2
Dibenzofuran	132-64-9	ND	2
Di-n-butylphthalate	84-74-2	ND	2
1,2-Dichlorobenzene	95-50-1	ND	2
1,3-Dichlorobenzene	541-73-1	ND	2
1,4-Dichlorobenzene	106-46-7	ND	2
3,3'-Dichlorobenzidine	91-94-1	ND	2
Diethylphthalate	84-66-2	ND	2
Dimethylphthalate	131-11-3	ND	2
2,4-Dinitrotoluene	121-14-2	ND	2
2,6-Dinitrotoluene	606-20-2	ND	2
Di-n-octylphthalate	117-84-0	ND	2
Fluoranthene	206-44-0	ND	2
Fluorene	86-73-7	ND	2
Hexachlorobenzene	118-74-1	ND	2
Hexachlorobutadiene	87-68-3	ND	2

RPT. LIMIT = Reporting Limit
ND = Not Detected at or above indicated Reporting Limit
NR = Not Reportable, see report cover-letter for explanation.

3249 Fitzgerald Road • Rancho Cordova, CA 95742 • Fax (916) 638-4510 • (916) 638-7301

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: Base/Neutral Extractables (cont.), EPA Method 8270

CLIENT: Geomatrix Consultants
1 Market Plaza
Spear Street Tower, Ste. 717
San Francisco, CA 94105
Project: 1459.04

Project No.: 1459.04
Contact: I. Khalil
Phone:

AEMC Contact: M. Jaeger

Date Sampled: 8/25/90
Date Received: 8/26/90
Date Extracted: 8/26/90
Date Analyzed: 8/27/90
Date Reported: 8/29/90
Client Sample I.D.: SP-4

Job No.: 795241
COC Log No.: 4121

AEMC I.D.: L5241-4
Batch No.: 6128
Matrix: Soil

Analyte	CAS #	Concentration (mg/kg)	Rpt. Limit (mg/kg)
Hexachlorocyclopentadiene	77-47-4	ND	2
Hexachloroethane	67-72-1	ND	2
Indeno(1,2,3-c,d)pyrene	193-39-5	ND	2
Isophorone	78-59-1	ND	2
2-Methylnaphthalene	91-57-6	ND	2
Naphthalene	91-20-3	ND	2
2-Nitroaniline	88-74-4	ND	2
3-Nitroaniline	99-09-2	ND	2
4-Nitroaniline	100-01-6	ND	2
Nitrobenzene	98-95-3	ND	2
N-Nitrosodiphenylamine	86-30-6	ND	2
N-Nitroso-di-n-propylamine	621-64-7	ND	2
Phenanthrene	85-01-8	ND	2
Pyrene	129-00-0	ND	2
1,2,4-Trichlorobenzene	120-82-1	ND	2

RPT. LIMIT = Reporting Limit
ND = Not Detected at or above indicated Reporting Limit

3249 Fitzgerald Road • Rancho Cordova, CA 95742 • Fax (916) 638-4510 • (916) 638-7301

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: Acid Extractables, EPA Method 8270

CLIENT: Geomatrix Consultants
1 Market Plaza
Spear Street Tower, Ste. 717
San Francisco, CA 94105
Project: 1459.04

Project No.: 1459.04
Contact: I. Khalil
Phone:

AEMC Contact: M. Jaeger

Date Sampled: 8/25/90
Date Received: 8/26/90
Date Extracted: 8/26/90
Date Analyzed: 8/27/90
Date Reported: 8/29/90
Client Sample I.D.: SP 4

Job No.: 795241
COC Log No.: 4121

AEMC I.D.: L5241-4
Batch No.: 6128
Matrix: Soil

Analyte	CAS #	Concentration (mg/kg)	Rpt. Limit (mg/kg)
Benzoic Acid	65-85-0	ND	2
4-Chloro-3-methylphenol	59-50-7	ND	2
2-Chlorophenol	95-57-8	ND	2
2,4-Dichlorophenol	120-83-2	ND	2
2,4-Dimethylphenol	105-67-9	ND	2
2,4-Dinitrophenol	51-28-5	ND	2
2-Methyl-4,6-dinitrophenol	534-52-1	ND	2
2-Methylphenol	95-48-7	ND	2
4-Methylphenol	106-44-5	ND	2
2-Nitrophenol	88-75-5	ND	2
4-Nitrophenol	100-02-7	ND	2
Pentachlorophenol	87-86-5	2	2
Phenol	108-95-2	ND	2
2,4,5-Trichlorophenol	95-95-4	4	2
2,4,6-Trichlorophenol	88-06-2	ND	2

RPT. LIMIT = Reporting Limit
ND = Not Detected at or above indicated Reporting Limit

3249 Fitzgerald Road • Rancho Cordova, CA 95742 • Fax (916) 638-4510 • (916) 638-7301

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: Base/Neutral Extractables, EPA Method 8270

CLIENT: Geomatrix Consultants
1 Market Plaza
Spear Street Tower, Ste. 717
San Francisco, CA 94105
Project: 1459.04

Project No.: 1459.04
Contact: I. Khalil
Phone:

AEMC Contact: M. Jaeger

Date Sampled: 8/25/90
Date Received: 8/26/90
Date Extracted: 8/26/90
Date Analyzed: 8/27/90
Date Reported: 8/29/90
Client Sample I.D.: Method Blank

Job No.: 795241
COC Log No.: 4121

AEMC I.D.: L5241-MB
Batch No.: 6128
Matrix: Soil

Surrogate	CAS #	Spike Conc. (mg/kg)	Recovery (percent)
Phenol-d6	d108-95-2	20	91%
2-Fluorophenol	367-12-4	20	76%
2,4,6-Tribromophenol	118-79-6	20	82%
Nitrobenzene-d5	d98-95-3	20	70%
2-Fluorobiphenyl	321-60-8	20	62%
Terphenyl-d14	d92-94-4	20	78%

Analyte	CAS #	Concentration (mg/kg)	Rpt. Limit (mg/kg)
Acenaphthene	83-32-9	ND	2
Acenaphthylene	208-96-8	ND	2
Anthracene	120-12-7	ND	2
Benzo(a)anthracene	56-55-3	ND	2
Benzo(b)fluoranthene	205-99-2	ND	2
Benzo(k)fluoranthene	207-08-9	ND	2
Benzo(g,h,i)perylene	191-24-2	ND	2
Benzo(a)pyrene	50-32-8	ND	2
Benzyl alcohol	100-51-6	ND	2
Bis(2-chloroethoxy)methane	111-91-1	ND	2
Bis(2-chloroethyl)ether	111-44-4	ND	2
Bis(2-chloroisopropyl)ether	108-60-1	ND	2
Bis(2-ethylhexyl)phthalate	117-81-7	ND	2
4-Bromophenyl phenyl ether	101-55-3	ND	2
Butylbenzyl phthalate	85-68-7	ND	2
4-Chloroaniline	106-47-8	ND	2
2-Chloronaphthalene	91-58-7	ND	2
4-Chlorophenyl phenyl ether	7005-72-3	ND	2
Chrysene	218-01-9	ND	2
Dibenzo(a,h)anthracene	53-70-3	ND	2
Dibenzofuran	132-64-9	ND	2
Di-n-butylphthalate	84-74-2	ND	2
1,2-Dichlorobenzene	95-50-1	ND	2
1,3-Dichlorobenzene	541-73-1	ND	2
1,4-Dichlorobenzene	106-46-7	ND	2
3,3'-Dichlorobenzidine	91-94-1	ND	2
Diethylphthalate	84-66-2	ND	2
Dimethylphthalate	131-11-3	ND	2
2,4-Dinitrotoluene	121-14-2	ND	2
2,6-Dinitrotoluene	606-20-2	ND	2
Di-n-octylphthalate	117-84-0	ND	2
Fluoranthene	206-44-0	ND	2
Fluorene	86-73-7	ND	2
Hexachlorobenzene	118-74-1	ND	2
Hexachlorobutadiene	87-68-3	ND	2

RPT. LIMIT = Reporting Limit
ND = Not Detected at or above indicated Reporting Limit

3249 Fitzgerald Road • Rancho Cordova, CA 95742 • Fax (916) 638-4510 • (916) 638-7301

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: Base/Neutral Extractables (cont.), EPA Method 8270

CLIENT: Geomatrix Consultants
1 Market Plaza
Spear Street Tower, Ste. 717
San Francisco, CA 94105
Project: 1459.04

Project No.: 1459.04
Contact: I. Khalil
Phone:

AEMC Contact: M. Jaeger

Date Sampled: 8/25/90
Date Received: 8/26/90
Date Extracted: 8/26/90
Date Analyzed: 8/27/90
Date Reported: 8/29/90
Client Sample I.D.: Method Blank

Job No.: 795241
COC Log No.: 4121

AEMC I.D.: L5241-MB
Batch No.: 6128
Matrix: Soil

Analyte	CAS #	Concentration (mg/kg)	Rpt. Limit (mg/kg)
Hexachlorocyclopentadiene	77-47-4	ND	2
Hexachloroethane	67-72-1	ND	2
Indeno(1,2,3-c,d)pyrene	193-39-5	ND	2
Isophorone	78-59-1	ND	2
2-Methylnaphthalene	91-57-6	ND	2
Naphthalene	91-20-3	ND	2
2-Nitroaniline	88-74-4	ND	2
3-Nitroaniline	99-09-2	ND	2
4-Nitroaniline	100-01-6	ND	2
Nitrobenzene	98-95-3	ND	2
N-Nitrosodiphenylamine	86-30-6	ND	2
N-Nitroso-di-n-propylamine	621-64-7	ND	2
Phenanthrene	85-01-8	ND	2
Pyrene	129-00-0	ND	2
1,2,4-Trichlorobenzene	120-82-1	ND	2

RPT. LIMIT = Reporting Limit
ND = Not Detected at or above indicated Reporting Limit

3249 Fitzgerald Road • Rancho Cordova, CA 95742 • Fax (916) 638-4510 • (916) 638-7301

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: Acid Extractables, EPA Method 8270

CLIENT: Geomatrix Consultants
1 Market Plaza
Spear Street Tower, Ste. 717
San Francisco, CA 94105
Project: 1459.04

Project No.: 1459.04
Contact: I. Khalil
Phone:

AEMC Contact: M. Jaeger

Date Sampled: 8/25/90
Date Received: 8/26/90
Date Extracted: 8/26/90
Date Analyzed: 8/27/90
Date Reported: 8/29/90
Client Sample I.D.: Method Blank

Job No.: 795241
COC Log No.: 4121

AEMC I.D.: L5241-MB
Batch No.: 6128
Matrix: Soil

Analyte	CAS #	Concentration (mg/kg)	Rpt. Limit (mg/kg)
Benzoic Acid	65-85-0	ND	2
4-Chloro-3-methylphenol	59-50-7	ND	2
2-Chlorophenol	95-57-8	ND	2
2,4-Dichlorophenol	120-83-2	ND	2
2,4-Dimethylphenol	105-67-9	ND	2
2,4-Dinitrophenol	51-28-5	ND	2
2-Methyl-4,6-dinitrophenol	534-52-1	ND	2
2-Methylphenol	95-48-7	ND	2
4-Methylphenol	106-44-5	ND	2
2-Nitrophenol	88-75-5	ND	2
4-Nitrophenol	100-02-7	ND	2
Pentachlorophenol	87-86-5	ND	2
Phenol	108-95-2	ND	2
2,4,5-Trichlorophenol	95-95-4	ND	2
2,4,6-Trichlorophenol	88-06-2	ND	2

RPT. LIMIT = Reporting Limit
ND = Not Detected at or above indicated Reporting Limit

3249 Fitzgerald Road • Rancho Cordova, CA 95742 • Fax (916) 638-4510 • (916) 638-7301

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: Base/Neutral/Acid Extractables, EPA Method 8270

CLIENT: Geomatrix Consultants
1 Market Plaza
Spear Street Tower, Ste. 717
San Francisco, CA 94105
Project: 1459.04

Project No.: 1459.04
Contact: I. Khalil
Phone:

AEMC Contact: M. Jaeger

Date Sampled: 8/25/90
Date Received: 8/26/90
Date Extracted: 8/26/90
Date Analyzed: 8/27/90
Date Reported: 8/29/90

[illegible] No.: 795241
[illegible] Log No.: 4121

[illegible] I.D.: L5241
[illegible] No.: 6128
[illegible]: Soil

Surrogate	Cas #	Spike Conc. (mg/kg)	MS %Rec	MSD %Rec
Phenol-d6	d108-95-2	20	79%	83%
2-Fluorophenol	367-12-4	20	85%	76%
2,4,6-Tribromophenol	118-76-6	20	91%	90%
Nitrobenzene-d5	98-95-3	20	75%	77%
2-Fluorobiphenyl	321-60-80	20	64%	65%
Terphenyl-d14	92-94-4	20	78%	71%

Analyte Base	Spike Conc. (mg/kg)	MS %Rec	MSD %Rec	Duplicate RPD
1,2,4-Trichlorobenzene	20	66%	66%	0%
Acenaphthene	20	58%	60%	3%
2,4-Dinitrotoluene	20	65%	69%	6%
Pyrene	20	64%	57%	10%
N-Nitroso-di-n-propylamine	[illegible]0	83%	84%	1%
1,4-Dichlorobenzene	[illegible]0	60%	62%	3%

Analyte Acid	Spike Conc. (mg/kg)	MS %Rec	MSD %Rec	Duplicate RPD
Pentachlorophenol	20	94%	88%	7%
Phenol	20	73%	71%	3%
2-Chlorophenol	20	83%	80%	4%
4-Chloro-3-methylphenol	20	80%	78%	2%
4-Nitrophenol	20	46%	45%	2%

MS = Matrix Spike
MSD = Matrix Spike Duplicate
% REC = Percent Recovery
RPD = Relative Percent Difference

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: Base/Neutral/Acid Extractables, EPA Method 8270

CLIENT: Geomatrix Consultants
1 Market Plaza
Spear Street Tower, Ste. 717
San Francisco, CA 94105
Project: 1459.04

Project No.: 1459.04
Contact: I. Khalil
Phone:

AEMC Contact: M. Jaeger

Date Sampled: 8/25/90
Date Received: 8/26/90
Date Extracted: 8/26/90
Date Analyzed: 8/27/90
Date Reported: 8/29/90

Job No.: 795241
COC Log No.: 4121

AEMC I.D.: L5241
Batch No.: 6128

Analyte Base	LCS Conc. (mg/L)	LCS %Rec
1,2,4-Trichlorobenzene	20	86%
Acenaphthene	20	73%
2,4-Dinitrotoluene	20	67%
Pyrene	20	121%
N-Nitroso-di-n-propylamine	20	98%
1,4-Dichlorobenzene	20	84%

Analyte Acid	LCS Conc. (mg/L)	LCS %Rec
Pentachlorophenol	20	56%
Phenol	20	104%
2-Chlorophenol	20	107%
4-Chloro-3-methylphenol	20	93%
4-Nitrophenol	20	70%

LCS = Laboratory Control Standard
% Rec = Percent Recovery

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

Geomatrix Consultants
1 Mkt. Plaza, Spear St.#717
San Francisco, CA 94105

08/30/90

Attn: Khalil

Re: Project: 1459.04
AEMC Lab Reference No.: L5254 Project No.: 1459.04
Date Samples Received: 08/28/90 Job No.: 795254
No. Samples Received: 3 Wipe samples

These samples were received by AEMC in a chilled state, intact, and accompanied by chain-of-custody documentation.

The above referenced samples were analyzed as follows:

No. of Samples	Analysis
2	Extractable Organics by GC-MS (BNA's)

Analytical results are attached to this letter. Please call if we can provide additional assistance.

Sincerely,

George Hampton
Laboratory Director

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: Base/Neutral/Acid Extractables, EPA Method 8270

CLIENT: Geomatrix Consultants
1 Market Plaza
Spear Street Tower, Ste. 717
San Francisco, CA 94105
Project: 1459.04

Project No.: 1459.04
Contact: I. Khalil
Phone:

AEMC Contact: M. Jaeger

Date Sampled: 8/28/90
Date Received: 8/28/90
Date Extracted: 8/29/90
Date Analyzed: 8/29/90
Date Reported: 8/30/90
Client Sample I.D.: Blank

Job No.: 795254
COC Log No.: 4143

AEMC I.D.: L5254-1
Batch No.: 6147
Matrix: Wipe

Surrogate	CAS #	Spike Conc. (ug/wipe)	Recovery (percent)
Phenol-d6	d108-95-2	100	69%
2-Fluorophenol	367-12-4	100	53%
2,4,6-Tribromophenol	118-79-6	100	73%
Nitrobenzene-d5	d98-95-3	100	59%
2-Fluorobiphenyl	321-60-8	100	64%
Terphenyl-d14	d92-94-4	100	72%

Analyte	CAS #	Concentration (ug/wipe)	Rpt. Limit (ug/wipe)
Pentachlorophenol	87-86-5	ND	50
2,4,5-Trichlorophenol	95-95-4	ND	10

RPT. LIMIT = Reporting Limit
ND = Not Detected at or above indicated Reporting Limit

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: Base/Neutral/Acid Extractables, EPA Method 8270

CLIENT: Geomatrix Consultants
1 Market Plaza
Spear Street Tower, Ste. 717
San Francisco, CA 94105
Project: 1459.04

Project No.: 1459.04
Contact: I. Khalil
Phone:

AEMC Contact: M. Jaeger

Date Sampled: 8/28/90
Date Received: 8/28/90
Date Extracted: 8/29/90
Date Analyzed: 8/29/90
Date Reported: 8/30/90
Client Sample I.D.: WP-6

Job No.: 795254
COC Log No.: 4143

AEMC I.D.: L5254-2
Batch No.: 6147
Matrix: Wipe

Surrogate	CAS #	Spike Conc. (ug/wipe)	Recovery (percent)
Phenol-d6	d108-95-2	100	32%
2-Fluorophenol	367-12-4	100	66%
2,4,6-Tribromophenol	118-79-6	100	95%
Nitrobenzene-d5	d98-95-3	100	67%
2-Fluorobiphenyl	321-60-8	100	78%
Terphenyl-d14	d92-94-4	100	112%

Analyte	CAS #	Concentration (ug/wipe)	Rpt. Limit (ug/wipe)
Pentachlorophenol	87-86-5	ND	50
2,4,5-Trichlorophenol	95-95-4	ND	10

RPT. LIMIT = Reporting Limit
ND = Not Detected at or above indicated Reporting Limit

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: Base/Neutral/Acid Extractables, EPA Method 8270

CLIENT: Geomatrix Consultants
1 Market Plaza
Spear Street Tower, Ste. 717
San Francisco, CA 94105
Project: 1459.04

Project No.: 1459.04
Contact: I. Khalil
Phone:

AEMC Contact: M. Jaeger

Date Sampled: 8/28/90
Date Received: 8/28/90
Date Extracted: 8/29/90
Date Analyzed: 8/29/90
Date Reported: 8/30/90
Client Sample I.D.: WP-7

Job No.: 795254
COC Log No.: 4143

AEMC I.D.: L5254-3
Batch No.: 6147
Matrix: Wipe

Surrogate	CAS #	Spike Conc. (ug/wipe)	Recovery (percent)
Phenol-d6	d108-95-2	100	78%
2-Fluorophenol	367-12-4	100	62%
2,4,6-Tribromophenol	118-79-6	100	92%
Nitrobenzene-d5	d98-95-3	100	64%
2-Fluorobiphenyl	321-60-8	100	77%
Terphenyl-d14	d92-94-4	100	108%

Analyte	CAS #	Concentration (ug/wipe)	Rpt. Limit (ug/wipe)
Pentachlorophenol	87-86-5	ND	50
2,4,5-Trichlorophenol	95-95-4	ND	10

RPT. LIMIT = Reporting Limit
ND = Not Detected at or above indicated Reporting Limit

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: Base/Neutral/Acid Extractables, EPA Method 8270

CLIENT: Geomatrix Consultants
1 Market Plaza
Spear Street Tower, Ste. 717
San Francisco, CA 94105
Project: 1459.04

Project No.: 1459.04
Contact: I. Khalil
Phone:

AEMC Contact: M. Jaeger

Date Sampled: 8/28/90
Date Received: 8/28/90
Date Extracted: 8/29/90
Date Analyzed: 8/29/90
Date Reported: 8/30/90
Client Sample I.D.: Method Blank

Job No.: 795254
COC Log No.: 4143

AEMC I.D.: L5254-MB
Batch No.: 6147
Matrix: Wipe

Surrogate	CAS #	Spike Conc. (ug/wipe)	Recovery (percent)
Phenol-d6	d108-95-2	100	80%
2-Fluorophenol	367-12-4	100	65%
2,4,6-Tribromophenol	118-79-6	100	71%
Nitrobenzene-d5	d98-95-3	100	67%
2-Fluorobiphenyl	321-60-8	100	59%
Terphenyl-d14	d92-94-4	100	79%

Analyte	CAS #	Concentration (ug/wipe)	Rpt. Limit (ug/wipe)
Pentachlorophenol	87-86-5	ND	50
2,4,5-Trichlorophenol	95-95-4	ND	10

RPT. LIMIT = Reporting Limit
ND = Not Detected at or above indicated Reporting Limit

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: Base/Neutral/Acid Extractables, EPA Method 8270

CLIENT: Geomatrix Consultants
1 Market Plaza
Spear Street Tower, Ste. 717
San Francisco, CA 94105
Project: 1459.04

Project No.: 1459.04
Contact: I. Khalil
Phone:

AEMC Contact: M. Jaeger

Date Sampled: 8/28/90
Date Received: 8/28/90
Date Extracted: 8/29/90
Date Analyzed: 8/29/90
Date Reported: 8/30/90

Job No.: 795254
COC Log No.: 4143

AEMC I.D.: L5254
Batch No.: 6147
Matrix: Wipe

Surrogate	Cas #	Spike Conc. (ug/wipe)	MBS %Rec	MBSD %Rec
Phenol-d6	d108-95-2	100	77%	74%
2-Fluorophenol	367-12-4	100	69%	67%
2,4,6-Tribromophenol	118-76-6	100	79%	76%
Nitrobenzene-d5	98-95-3	100	72%	70%
2-Fluorobiphenyl	321-60-80	100	77%	79%
Terphenyl-d14	92-94-4	100	92%	92%

Analyte Base	Spike Conc. (ug/wipe)	MBS %Rec	MBSD %Rec	Duplicate RPD
1,2,4-Trichlorobenzene	100	67%	65%	3%
Acenaphthene	100	67%	68%	1%
2,4-Dinitrotoluene	100	46%	47%	2%
Pyrene	100	88%	88%	0%
N-Nitroso-di-n-propylamine	100	72%	69%	4%
1,4-Dichlorobenzene	100	66%	65%	2%

Analyte Acid	Spike Conc. (ug/wipe)	MBS %Rec	MBSD %Rec	Duplicate RPD
Pentachlorophenol	100	40%	35%	13%
Phenol	100	72%	71%	1%
2-Chlorophenol	100	79%	81%	4%
4-Chloro-3-methylphenol	100	69%	69%	0%
4-Nitrophenol	100	52%	52%	0%

MBS = Method Blank Spike
MBSD = Method Blank Spike Duplicate
% REC = Percent Recovery
RPD = Relative Percent Difference

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: Base/Neutral/Acid Extractables, EPA Method 8270

CLIENT: Geomatrix Consultants
1 Market Plaza
Spear Street Tower, Ste. 717
San Francisco, CA 94105
Project: 1459.04

Project No.: 1459.04
Contact: I. Khalil
Phone:

AEMC Contact: M. Jaeger

Date Sampled: 8/28/90
Date Received: 8/28/90
Date Extracted: 8/29/90
Date Analyzed: 8/29/90
Date Reported: 8/30/90

Job No.: 795254
COC Log No.: 4143

AEMC I.D.: L5254
Batch No.: 6147

Analyte Base	LCS Conc. (ug/L)	LCS %Rec
1,2,4-Trichlorobenzene	100	86%
Acenaphthene	100	73%
2,4-Dinitrotoluene	100	67%
Pyrene	100	121%
N-Nitroso-di-n-propylamine	100	98%
1,4-Dichlorobenzene	100	84%

Analyte Acid	LCS Conc. (ug/L)	LCS %Rec
Pentachlorophenol	100	56%
Phenol	100	104%
2-Chlorophenol	100	107%
4-Chloro-3-methylphenol	100	93%
4-Nitrophenol	100	70%

LCS = Laboratory Control Standard
% Rec = Percent Recovery

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

Geomatrix Consultants
1 Mkt. Plaza, Spear St.#717
San Francisco, CA 94105

08/30/90

Attn: I. Khalil

Re: Project: 1459.04
AEMC Lab Reference No.: L5242 Project No.: 1459.04
Date Samples Received: 08/27/90 Job No.: 795242
No. Samples Received: 4 Wipe samples

These samples were received by AEMC in a chilled state, intact, and accompanied by chain-of-custody documentation.

The above referenced samples were analyzed as follows:

No. of Samples	Analysis
4	Extractable Organics by GC-MS (BNA's)

Analytical results are attached to this letter. Please call if we can provide additional assistance.

Sincerely,

George Hampton
Laboratory Director

3249 Fitzgerald Road • Rancho Cordova, CA 95742 • Fax (916) 638-4510 • (916) 638-7301

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: Base/Neutral/Acid Extractables, EPA Method 8270

CLIENT: Geomatrix Consultants
1 Market Plaza
Spear Street Tower, Ste. 717
San Francisco, CA 94105
Project: 1459.04

Project No.: 1459.04
Contact: I. Khalil
Phone:

AEMC Contact: M. Jaeger

Date Sampled: 8/26/90
Date Received: 8/27/90
Date Extracted: 8/27/90
Date Analyzed: 8/28/90
Date Reported: 8/29/90
Client Sample I.D.: Blank

Job No.: 795242
COC Log No.: 4119

AEMC I.D.: L5242-1
Batch No.: 6130
Matrix: Wipe

Surrogate	CAS #	Spike Conc. (ug/wipe)	Recovery (percent)
Phenol-d6	d108-95-2	100	58%
2-Fluorophenol	367-12-4	100	45%
2,4,6-Tribromophenol	118-79-6	100	101%
Nitrobenzene-d5	d98-95-3	100	42%
2-Fluorobiphenyl	321-60-8	100	56%
Terphenyl-d14	d92-94-4	100	80%

Analyte	CAS #	Concentration (ug/wipe)	Rpt. Limit (ug/wipe)
Pentachlorophenol	87-86-5	ND	50
2,4,5-Trichlorophenol	95-95-4	ND	10

RPT. LIMIT = Reporting Limit
ND = Not Detected at or above indicated Reporting Limit

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: Base/Neutral/Acid Extractables, EPA Method 8270

CLIENT: Geomatrix Consultants
1 Market Plaza
Spear Street Tower, Ste. 717
San Francisco, CA 94105
Project: 1459.04

Project No.: 1459.04
Contact: I. Khalil
Phone:

AEMC Contact: M. Jaeger

Date Sampled: 8/26/90
Date Received: 8/27/90
Date Extracted: 8/27/90
Date Analyzed: 8/28/90
Date Reported: 8/29/90
Client Sample I.D.: WP-1

Job No.: 795242
COC Log No.: 4119

AEMC I.D.: L5242-2
Batch No.: 6130
Matrix: Wipe

Surrogate	CAS #	Spike Conc. (ug/wipe)	Recovery (percent)
Phenol-d6	d108-95-2	100	63%
2-Fluorophenol	367-12-4	100	49%
2,4,6-Tribromophenol	118-79-6	100	97%
Nitrobenzene-d5	d98-95-3	100	50%
2-Fluorobiphenyl	321-60-8	100	71%
Terphenyl-d14	d92-94-4	100	94%

Analyte	CAS #	Concentration (ug/wipe)	Rpt. Limit (ug/wipe)
Pentachlorophenol	87-86-5	ND	50
2,4,5-Trichlorophenol	95-95-4	ND	10

RPT. LIMIT = Reporting Limit
ND = Not Detected at or above indicated Reporting Limit

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: Base/Neutral/Acid Extractables, EPA Method 8270

CLIENT: Geomatrix Consultants
1 Market Plaza
Spear Street Tower, Ste. 717
San Francisco, CA 94105
Project: 1459.04

Project No.: 1459.04
Contact: I. Khalil
Phone:

AEMC Contact: M. Jaeger

Date Sampled: 8/26/90
Date Received: 8/27/90
Date Extracted: 8/27/90
Date Analyzed: 8/28/90
Date Reported: 8/29/90
Client Sample I.D.: WP-2

Job No.: 795242
COC Log No.: 4119

AEMC I.D.: L5242-3
Batch No.: 6130
Matrix: Wipe

Surrogate	CAS #	Spike Conc. (ug/wipe)	Recovery (percent)
Phenol-d6	d108-95-2	100	72%
2-Fluorophenol	367-12-4	100	57%
2,4,6-Tribromophenol	118-79-6	100	93%
Nitrobenzene-d5	d98-95-3	100	60%
2-Fluorobiphenyl	321-60-8	100	76%
Terphenyl-d14	d92-94-4	100	95%

Analyte	CAS #	Concentration (ug/wipe)	Rpt. Limit (ug/wipe)
Pentachlorophenol	87-86-5	ND	50
2,4,5-Trichlorophenol	95-95-4	ND	10

RPT. LIMIT = Reporting Limit
ND = Not Detected at or above indicated Reporting Limit

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: Base/Neutral/Acid Extractables, EPA Method 8270

CLIENT: Geomatrix Consultants
1 Market Plaza
Spear Street Tower, Ste. 717
San Francisco, CA 94105
Project: 1459.04

Project No.: 1459.04
Contact: I. Khalil
Phone:

AEMC Contact: M. Jaeger

Date Sampled: 8/26/90
Date Received: 8/27/90
Date Extracted: 8/27/90
Date Analyzed: 8/28/90
Date Reported: 8/29/90
Client Sample I.D.: WP-3

Job No.: 795242
COC Log No.: 4119

AEMC I.D.: L5242-4
Batch No.: 6130
Matrix: Wipe

Surrogate	CAS #	Spike Conc. (ug/wipe)	Recovery (percent)
Phenol-d6	d108-95-2	100	81%
2-Fluorophenol	367-12-4	100	66%
2,4,6-Tribromophenol	118-79-6	100	101%
Nitrobenzene-d5	d98-95-3	100	63%
2-Fluorobiphenyl	321-60-8	100	76%
Terphenyl-d14	d92-94-4	100	100%

Analyte	CAS #	Concentration (ug/wipe)	Rpt. Limit (ug/wipe)
Pentachlorophenol	87-86-5	ND	50
2,4,5-Trichlorophenol	95-95-4	17	10

RPT. LIMIT = Reporting Limit
ND = Not Detected at or above indicated Reporting Limit

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: Base/Neutral/Acid Extractables, EPA Method 8270

CLIENT: Geomatrix Consultants
1 Market Plaza
Spear Street Tower, Ste. 717
San Francisco, CA 94105
Project: 1459.04

Project No.: 1459.04
Contact: I. Khalil
Phone:

AEMC Contact: M. Jaeger

Date Sampled: 8/26/90
Date Received: 8/27/90
Date Extracted: 8/27/90
Date Analyzed: 8/28/90
Date Reported: 8/29/90
Client Sample I.D.: WP-4

Job No.: 795242
COC Log No.: 4119

AEMC I.D.: L5242-5
Batch No.: 6130
Matrix: Wipe

Surrogate	CAS #	Spike Conc. (ug/wipe)	Recovery (percent)
Phenol-d6	d108-95-2	100	78%
2-Fluorophenol	367-12-4	100	60%
2,4,6-Tribromophenol	118-79-6	100	101%
Nitrobenzene-d5	d98-95-3	100	60%
2-Fluorobiphenyl	321-60-8	100	76%
Terphenyl-d14	d92-94-4	100	109%

Analyte	CAS #	Concentration (ug/wipe)	Rpt. Limit (ug/wipe)
Pentachlorophenol	87-86-5	ND	50
2,4,5-Trichlorophenol	95-95-4	ND	10

RPT. LIMIT = Reporting Limit
ND = Not Detected at or above indicated Reporting Limit

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: Base/Neutral/Acid Extractables, EPA Method 8270

CLIENT: Geomatrix Consultants
1 Market Plaza
Spear Street Tower, Ste. 717
San Francisco, CA 94105
Project: 1459.04

Project No.: 1459.04
Contact: I. Khalil
Phone:

AEMC Contact: M. Jaeger

Date Sampled: 8/26/90
Date Received: 8/27/90
Date Extracted: 8/27/90
Date Analyzed: 8/28/90
Date Reported: 8/29/90
Client Sample I.D.: Method Blank

Job No.: 795242
COC Log No.: 4119

AEMC I.D.: L5242-MB
Batch No.: 6130
Matrix: Wipe

Surrogate	CAS #	Spike Conc. (ug/wipe)	Recovery (percent)
Phenol-d6	d108-95-2	100	48%
2-Fluorophenol	367-12-4	100	40%
2,4,6-Tribromophenol	118-79-6	100	81%
Nitrobenzene-d5	d98-95-3	100	48%
2-Fluorobiphenyl	321-60-8	100	57%
Terphenyl-d14	d92-94-4	100	85%

Analyte	CAS #	Concentration (ug/wipe)	Rpt. Limit (ug/wipe)
Pentachlorophenol	87-86-5	ND	50
2,4,5-Trichlorophenol	95-95-4	ND	10

RPT. LIMIT = Reporting Limit
ND = Not Detected at or above indicated Reporting Limit

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: Base/Neutral/Acid Extractables, EPA Method 8270

CLIENT: Geomatrix Consultants
1 Market Plaza
Spear Street Tower, Ste. 717
San Francisco, CA 94105
Project: 1459.04

Project No.: 1459.04
Contact: I. Khalil
Phone:

AEMC Contact: M. Jaeger

Date Sampled: 8/26/90
Date Received: 8/27/90
Date Extracted: 8/27/90
Date Analyzed: 8/28/90
Date Reported: 8/29/90

Job No.: 795242
COC Log No.: 4119

AEMC I.D.: L5242
Batch No.: 6130
Matrix: Wipe

Surrogate	Cas #	Spike Conc. (ug/wipe)	MBS %Rec	MBSD %Rec
Phenol-d6	d108-95-2	100	77%	78%
2-Fluorophenol	367-12-4	100	75%	78%
2,4,6-Tribromophenol	118-76-6	100	96%	90%
Nitrobenzene-d5	98-95-3	100	74%	75%
2-Fluorobiphenyl	321-60-80	100	63%	64%
Terphenyl-d14	92-94-4	100	77%	74%

Analyte Base	Spike Conc. (ug/wipe)	MBS %Rec	MBSD %Rec	Duplicate RPD
1,2,4-Trichlorobenzene	100	68%	66%	3%
Acenaphthene	100	58%	58%	0%
2,4-Dinitrotoluene	100	66%	66%	0%
Pyrene	100	64%	61%	5%
N-Nitroso-di-n-propylamine	100	79%	78%	1%
1,4-Dichlorobenzene	100	62%	62%	0%

Analyte Acid	Spike Conc. (ug/wipe)	MBS %Rec	MBSD %Rec	Duplicate RPD
Pentachlorophenol	100	111%	100%	10%
Phenol	100	72%	74%	3%
2-Chlorophenol	100	82%	84%	2%
4-Chloro-3-methylphenol	100	81%	79%	2%
4-Nitrophenol	100	49%	55%	11%

MBS = Method Blank Spike
MBSD = Method Blank Spike Duplicate
% REC = Percent Recovery
RPD = Relative Percent Difference

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

ANALYSIS REPORT: Base/Neutral/Acid Extractables, EPA Method 8270

CLIENT: Geomatrix Consultants
1 Market Plaza
Spear Street Tower, Ste. 717
San Francisco, CA 94105
Project: 1459.04

Project No.: 1459.04
Contact: I. Khalil
Phone:

AEMC Contact: M. Jaeger

Date Sampled: 8/26/90
Date Received: 8/27/90
Date Extracted: 8/27/90
Date Analyzed: 8/28/90
Date Reported: 8/29/90

Job No.: 795242
COC Log No.: 4119

AEMC I.D.: L5242
Batch No.: 6130

Analyte	LCS Conc. (ug/L)	LCS %Rec
Base		
1,2,4-Trichlorobenzene	100	86%
Acenaphthene	100	73%
2,4-Dinitrotoluene	100	67%
Pyrene	100	121%
N-Nitroso-di-n-propylamine	100	98%
1,4-Dichlorobenzene	100	84%

Analyte	LCS Conc. (ug/L)	LCS %Rec
Acid		
Pentachlorophenol	100	56%
Phenol	100	104%
2-Chlorophenol	100	107%
4-Chloro-3-methylphenol	100	93%
4-Nitrophenol	100	70%

LCS = Laboratory Control Standard
% Rec = Percent Recovery

South Carolina Department of Health and Environmental Control

Bureau of Solid & Hazardous Waste Mgt.
2600 Bull Street, Columbia, SC 29201
Phone (803) 734-5200
Emergency & Holidays: (803)253-6488

PLEASE PRINT or TYPE (Form designed for use on elite [12-pitch] typewriter) Form Approved. OMB No. 2050-0039 Expires 9-30-9

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's U.S. EPA ID No. CAD981427131 Manifest Document No. 00001
2. Page 1 of 1
Information in the shaded areas is not required by Federal law, but is by State law

3. Generator's Name and Mailing Address
KAISER PERMANENTE MEDICAL CENTER
280 W. McARTHUR BOULEVARD
OAKLAND, CA
4. Generator's Phone (415) 596-6603

A. State Manifest Document Number
B. State Generator's ID

5. Transporter 1 Company Name: STAMCO, INC.
6. U.S. EPA ID Number: CAD063547996
C. State Transporter's ID
D. Transporter's Phone: (800) 759-4211

7. Transporter 2 Company Name
8. U.S. EPA ID Number
E. State Transporter's ID
F. Transporter's Phone

9. Designated Facility Name and Site Address
ThermalKEM Inc.
2324 Vernesdale Road
Rock Hill, SC 29730
10. U.S. EPA ID Number: SCD044423333
G. State Facility's ID
H. Facility's Phone: 803-324-5310

11. U.S. DOT Description (including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste Number
a. HAZARDOUS MATERIAL SOLID, N.O.S. ORM-E, NA9188	015	DM	23	T	7777
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above
a. ST-0006-3612
b. ST-
c. ST-
d. ST-

K. Handling Codes for Wastes Listed Above: D09

15. Special Handling Instructions and Additional Information
As of 9-25-90 this will be classified as D037 & D041
SAN 94155

EMERGENCY & BILLING CONTACT
HAZARDOUS MATERIAL SERVICES
P. O. BOX 705
COALINGA, CA 93210
(209) 935-1508 #10034

Public reporting burden for this collection of information is estimated to average .37 minutes for generators, 15 minutes for transporters, and 1 minutes for treatment storage and disposal facilities. This includes time for reviewing instructions, gathering data, and completing and reviewing the form. Send comments regarding the burden estimate, including suggestions for reducing this burden, to Chief, Information Policy Branch, PM-223 U.S. Environmental Protection Agency, 401 M St. S.W. Washington, D.C. 20460, and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, D.C. 20503.

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations and the laws of the State of South Carolina.
If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Month	Day	Year
KENNETH U. AYERS		08	24	90

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
John Reedy	John Reedy	08	24	90

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

19. Discrepancy Indication Space
a. lbs. c. lbs.
b. lbs. d. lbs.

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month	Day	Year
Samuel Durham	Samuel Durham	08	30	90

South Carolina Department and Environmental Control

2600 Bull Street Columbia, SC 29201
Phone: (803) 734-5200
Emergency & Holidays: (803)253-6488

PLEASE PRINT or TYPE (Form designed for use on elite (12-pitch) typewriter) Form Approved. OMB No. 2050-0039 Expires 9-30-9

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's U.S. EPA ID No. C A D 9 8 1 4 2 7 1 3 | Manifest Document No. 0 0 0 0 5 | 2. Page 1 of 1 | Information in the shaded areas is not required by Federal law, but is by State law.

3. Generator's Name and Mailing Address
KAISER PERMANENTE MEDICAL CENTER
280 W. McARTHUR BOULEVARD
OAKLAND, CA
Generator's Phone (415) 596-6603

A. State Manifest Document Number

B. State Generator's ID

4. Transporter 1 Company Name
STAMCO, INC.

5. U.S. EPA ID Number
C A D 0 6 3 5 4 7 9 9 6

C. State Transporter's ID

D. Transporter's Phone (800) 759-4211

6. Transporter 2 Company Name

7. U.S. EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

8. Designated Facility Name and Site Address
ThermalKEM Inc.
2324 Vernesdale Road
Rock Hill, SC 29730

9. U.S. EPA ID Number
S C D 0 4 4 4 4 2 3 3 3

G. State Facility's ID

H. Facility's Phone
803-324-5310

11. U.S. DOT Description (including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste Number
a. HAZARDOUS MATERIAL SOLID, N.O.S. ORM-E, NA9188	1	D T	25	T	7 7 7 7
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above
a. S T - 0 0 0 0 6 - 3 6 1 2
b. S T - - -
c. S T - - -
d. S T - - -

K. Handling Codes for Wastes Listed Above
a. D 9

15. Special Handling Instructions and Additional Information
As of 9-25-90 this will be classified as D037 & D041
SAN 9 4 1 4 9

EMERGENCY & BILLING CONTACT
HAZARDOUS MATERIAL SERVICES
P. O. BOX 705
COALINGA, CA 93210 #1035
(209) 935-1508

Public reporting burden for this collection of information is estimated to average 37 minutes for generators, 15 minutes for transporters, and 15 minutes for treatment storage and disposal facilities. This includes time for reviewing instructions, gathering data, and completing and reviewing the form. Send comments regarding the burden estimate, including suggestions for reducing this burden, to Chief, Information Policy Branch, PM-223, U.S. Environmental Protection Agency, 401 M St. S.W., Washington, D.C. 20460, and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, D.C. 20503.

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations and the laws of the State of South Carolina.
If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: KENNETH U. AYERS
Signature:
Month Day Year: 08 25 90

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: John Wichtendahl
Signature:
Month Day Year: 08 25 90

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name:
Signature:
Month Day Year:

19. Discrepancy Indication Space
a. 50000 lbs. c. lbs.
b. lbs. d. lbs.

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: Samuel Dinkins
Signature:
Month Day Year: 08 29 90

South Carolina Department of Health and Environmental Control

Bureau of Solid & Hazardous Waste Mgt.
2600 Bull Street, Columbia, SC 29201
Phone. (803) 734-5200
Emergency & Holidays: (803)253-6488

PLEASE PRINT or TYPE (Form designed for use on elite (12-pitch) typewriter) Form Approved. OMB No. 2050-0039 Expires 9-30-9

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's U.S. EPA ID No. C A D 9 8 1 4 2 7 1 3 1 | Manifest Document No. 0 0 0 0 4 | 2. Page 1 of 1 | Information in the shaded areas is not required by Federal law, but is by State law.

3. Generator's Name and Mailing Address
KAISER PERMANENTE MEDICAL CENTER
280 W. McARTHUR BOULEVARD
OAKLAND, CA
4. Generator's Phone (415) 596-6603

A. State Manifest Document Number

B. State Generator's ID

5. Transporter 1 Company Name: Jim Chism Trucking
6. U.S. EPA ID Number: C A D 9 8 0 5 8 4 8 4 7
C. State Transporter's ID
D. Transporter's Phone (209) 867-4854

7. Transporter 2 Company Name
8. U.S. EPA ID Number
E. State Transporter's ID
F. Transporter's Phone

9. Designated Facility Name and Site Address
ThermalKEM Inc.
2324 Vernesdale Road
Rock Hill, SC 29730
10. U.S. EPA ID Number: S C D 0 4 4 4 4 2 3 3 3
G. State Facility's ID
H. Facility's Phone 803-324-5310

11. U.S. DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste Number
a. HAZARDOUS MATERIAL SOLID, N.O.S. ORM-E, NA9188	1 1	DT	25	T	7 7 7 7
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above
a. S T - 0 0 0 0 6 - 3 6 1 2
b. S T - - c. S T - - d. S T - -

K. Handling Codes for Wastes Listed Above: 909

15. Special Handing Instructions and Additional Information
As of 9-25-90, this will be classified as D037 & D041
SAN 9 4 1 4 8

EMERGENCY & BILLING CONTACT
HAZARDOUS MATERIAL SERVICES
P. O. BOX 705
COALINGA, CA 93210
(209) 935-1508 #10035

Public reporting burden for this collection of information is estimated to average 30 minutes for generators, 15 minutes for transporters, and 15 minutes for treatment storage and disposal facilities. This includes time for reviewing instructions, gathering data, and completing and reviewing the form. Send comments regarding the burden estimate, including suggestions for reducing the burden, to Chief, Information Policy Branch PM-223 U.S. Environmental Protection Agency, 401 M St. S.W., Washington, D.C. 20460, and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, D.C. 20503

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations and the laws of the State of South Carolina.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: KENNETH U. AYERS | Signature | Month 08 Day 25 Year 90

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Joe Hernandez | Signature | Month 08 Day 25 Year 90

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name | Signature | Month Day Year

19. Discrepancy Indication Space
a. lbs. c. lbs.
b. lbs. d. lbs.

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: Robert Simpson | Signature | Month 08 Day 30 Year 90

South Carolina Department of Health and Environmental Control

Bureau of Solid & Hazardous Waste Mgt.
2600 Bull Street, Columbia, SC 29201
Phone: (803) 734-5200
Emergency & Holidays: (803)253-6488

PLEASE PRINT or TYPE (Form designed for use on elite (12-pitch) typewriter) Form Approved. OMB No. 2050-0039 Expires 9-30-9

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's U.S. EPA ID No. C A D 9 8 1 4 2 7 1 3 1 | Manifest Document No. 0 0 0 0 3 | 2. Page 1 of 1 | Information in the shaded areas is not required by Federal law, but is by State law

3. Generator's Name and Mailing Address
KAISER PERMANENTE MEDICAL CENTER
280 W. McARTHUR BOULEVARD
OAKLAND, CA
4. Generator's Phone (415) 596-6603

A. State Manifest Document Number

B. State Generator's ID

5. Transporter 1 Company Name: Jim Chism Trucking
6. U.S. EPA ID Number: C A D 9 8 0 5 8 4 8 8 7
C. State Transporter's ID
D. Transporter's Phone (209) 867-4854

7. Transporter 2 Company Name
8. U.S. EPA ID Number
E. State Transporter's ID
F. Transporter's Phone

9. Designated Facility Name and Site Address
ThermalKEM Inc.
2324 Vernesdale Road
Rock Hill, SC 29730
10. U.S. EPA ID Number: S C D 0 4 4 4 4 2 3 3 3
G. State Facility's ID
H. Facility's Phone 803-324-5310

11. U.S. DOT Description (including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste Number
a. HAZARDOUS MATERIAL SOLID, N.O.S. ORM-E, NA9188	1	DT	22 25	T	7777
b. HAZARDOUS MATERIAL Solid N.O.S. ORM-E NA 9188	10	DM	3	T	7777
c.					
d.					

J. Additional Descriptions for Materials Listed Above
a. S T - 0 0 0 0 6 - 3 6 1 2
b. S T - 0 0 0 0 6 - 3 6 1 2
c. S T -
d. S T -

K. Handling Codes for Wastes Listed Above: T09

15. Special Handling Instructions and Additional Information
As of 9-25-90, this will be classified as D037 & D041
SAN 9 4 1 4 7

EMERGENCY & BILLING CONTACT
HAZARDOUS MATERIAL SERVICES
P. O. BOX 705
COALINGA, CA 93210
(209) 935-1508
#10036

Public reporting burden for this collection of information is estimated to average .37 minutes for generators, 15 minutes for transporters, and 1.0 minutes for treatment storage and disposal facilities. This includes time for reviewing instructions, gathering data, and completing and reviewing the forms. Send comments regarding the burden estimate, including suggestions for reducing this burden, to Chief, Information Policy Branch, PM-223 U.S. Environmental Protection Agency, 401 M St. S.W. Washington, D.C. 20460, and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, D.C. 20503.

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations and the laws of the State of South Carolina.
If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Month	Day	Year
KENNETH U. AYERS		08	25	90

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
Fred Christian		08	25	90

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

19. Discrepancy Indication Space
a. lbs. c. lbs.
b. lbs. d. lbs.

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Typed or Printed Name: Samuel Durham Signature: Samuel Durham Month 08 Day 30 Year 90

South Carolina Department of Health and Environmental Control

Bureau of Solid & Hazardous Waste Mgt.
2600 Bull Street, Columbia, SC 29201
Phone: (803) 734-5200
Emergency & Holidays: (803)253-6488

PLEASE PRINT or TYPE — Form designed for use on elite (12-pitch) typewriter — Form Approved. OMB No. 2050-0039 Expires 9-30-9

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's U.S. EPA ID No. C A D 9 8 1 4 2 7 1 3 1 — Manifest Document No. 0 0 0 0 2 — 2. Page 1 of 1 — Information in the shaded areas is not required by Federal law, but is by State law

3. Generator's Name and Mailing Address
KAISER PERMANENTE MEDICAL CENTER
280 W. McARTHUR BOULEVARD
OAKLAND, CA
4. Generator's Phone (415) 596-6603

A. State Manifest Document Number

B. State Generator's ID

5. Transporter 1 Company Name: Jim Chism Trucking
6. U.S. EPA ID Number: C A D 9 8 0 5 8 4 8 1 7
C. State Transporter's ID
D. Transporter's Phone: (209) 867-4854

7. Transporter 2 Company Name
8. U.S. EPA ID Number
E. State Transporter's ID
F. Transporter's Phone

9. Designated Facility Name and Site Address
ThermalKEM Inc.
2324 Vernadale Road
Rock Hill, SC 29730
10. U.S. EPA ID Number: S C D 0 4 4 4 4 2 3 3 3
G. State Facility's ID
H. Facility's Phone: 803-324-5310

11. U.S. DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste Number
a. HAZARDOUS MATERIAL SOLID, N.O.S. ORM-E, NA9188	1	DT	25	T	7777
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above
a. S T - 0 0 0 0 6 - 3 6 1 2
b. S T -
c. S T -
d. S T -

K. Handling Codes for Wastes Listed Above: 709

15. Special Handling Instructions and Additional Information
As of 9-25-90, this will be classified as D037 & D041
SAN 9 4 1 4 6

EMERGENCY & BILLING CONTACT
HAZARDOUS MATERIAL SERVICES
P. O. BOX 705
COALINGA, CA 93210
(209) 935-1508 #10032

Public reporting burden for this collection of information is estimated to average 30 minutes for generators, 15 minutes for transporters, and 15 minutes for treatment storage and disposal facilities. This includes time for reviewing instructions, gathering data, and completing and reviewing the form. Send comments regarding the burden estimate, including suggestions for reducing this burden, to Chief, Information Policy Branch, PM-223 U.S. Environmental Protection Agency, 401 M St. S.W., Washington, D.C. 20460, and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, D.C. 20503.

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations and the laws of the State of South Carolina.
If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: KENNETH U. AYERS — Signature — Month Day Year: 08 25 90

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Gene Wells — Signature: Gene Wells — Month Day Year: 08 25 90

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name — Signature — Month Day Year

19. Discrepancy Indication Space
a. lbs. c. lbs.
b. lbs. d. lbs.

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: Robert L. Simpson — Signature: Robert L. Simpson — Month Day Year: 08-30-90

South Carolina Department of Health and Environmental Control

Bureau of Solid & Hazardous Waste Mgt
2600 Bull Street, Columbia, SC 29201
Phone. (803) 734-5200
Emergency & Holidays: (803)253-6488

PLEASE PRINT or TYPE (Form designed for use on elite (12-pitch) typewriter) Form Approved. OMB No. 2050-0039 Expires 9-30-9

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's U.S. EPA ID No. C A D 9 8 1 4 2 7 1 3 Manifest Document No. 0 0 0 1 0
2. Page 1 of 1
Information in the shaded areas is not required by Federal law, but is by State law

3. Generator's Name and Mailing Address
KAISER PERMANENTE MEDICAL CENTER
280 W. McARTHUR BOULEVARD
OAKLAND, CA
4. Generator's Phone (415) 596-6603

A. State Manifest Document Number
B. State Generator's ID

5. Transporter 1 Company Name: STAMCO, INC.
6. U.S. EPA ID Number: C A D 0 6 3 5 4 7 9 9 6
C. State Transporter's ID
D. Transporter's Phone (800) 759-4211

7. Transporter 2 Company Name
8. U.S. EPA ID Number
E. State Transporter's ID
F. Transporter's Phone

9. Designated Facility Name and Site Address
ThermalKEM Inc.
2324 Vernesdale Road
Rock Hill, SC 29730
10. U.S. EPA ID Number: S C D 0 4 4 4 4 2 3 3 3
G. State Facility's ID
H. Facility's Phone 803-324-5310

11. U.S. DOT Description (including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste Number
a. HAZARDOUS MATERIAL SOLID, N.O.S. ORM-E, NA9188	1	DT	00017	T	7777
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above
a. ST-00006-3612
b. ST-
c. ST-
d. ST-

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
As of 9-25-90 this will be classified as D037 & D041
SAN 94154

EMERGENCY & BILLING CONTACT
HAZARDOUS MATERIAL SERVICES
P. O. BOX 705
COALINGA, CA 93210
(209) 935-1508
#10047

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations and the laws of the State of South Carolina.
If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: Kenneth U. Ayers | Signature: [signature] | Month Day Year: 08 26 90

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name | Signature | Month Day Year

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name: Michael Walsh | Signature: [signature] | Month Day Year: 08 ?? 90

19. Discrepancy Indication Space
a lbs. c lbs.
b lbs. d lbs.

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: Mike McABEE | Signature: Mike McAbee | Month Day Year: 8 30 9

South Carolina Department of Health and Environmental Control

Bureau of Solid & Hazardous Waste Mgt.
2600 Bull Street, Columbia, SC 29201
Phone (803) 734-5200
Emergency & Holidays: (803)253-6488

PLEASE PRINT or TYPE (Form designed for use on elite (12-pitch) typewriter) Form Approved. OMB No. 2050-0039 Expires 9-30-9

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's U.S. EPA ID No. C A D 9 8 1 4 2 7 1 3 1 | Manifest Document No. 0 0 0 0 0 | 2. Page 1 of 1 | Information in the shaded areas is not required by Federal law, but is by State law

3. Generator's Name and Mailing Address
KAISER PERMANENTE MEDICAL CENTER
280 W. McARTHUR BOULEVARD
OAKLAND, CA
4. Generator's Phone (415) 596-6603

A. State Manifest Document Number

B. State Generator's ID

5. Transporter 1 Company Name: STAMCO, INC.
6. U.S. EPA ID Number: C A D 0 6 3 5 4 7 9 9 6
C. State Transporter's ID
D. Transporter's Phone (800) 759-4211

7. Transporter 2 Company Name
8. U.S. EPA ID Number
E. State Transporter's ID
F. Transporter's Phone

9. Designated Facility Name and Site Address
ThermalKEM Inc.
2324 Vernesdale Road
Rock Hill, SC 29730
10. U.S. EPA ID Number: S C D 0 4 4 4 4 2 3 3 3
G. State Facility's ID
H. Facility's Phone 803-324-5310

11. U.S. DOT Description (including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste Number
a. HAZARDOUS MATERIAL SOLID, N.O.S. ORM-E, NA9188		D T	25	T	7 7 7 7
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above
a. S T - 0 0 0 0 6 - 3 6 1 2
b. S T -
c. S T -
d. S T -

K. Handling Codes for Wastes Listed Above: 409

15. Special Handling Instructions and Additional Information
As of 9-25-90 this will be classified as D037 & D041
SAN 9 4 1 5 3

EMERGENCY & BILLING CONTACT
HAZARDOUS MATERIAL SERVICES
P. O. BOX 705
COALINGA, CA 93210 #10050
(209) 935-1508

Public reporting burden for this collection of information is estimated to average 37 minutes for generators, 15 minutes for transporters, and 10 minutes for treatment storage and disposal facilities. This includes time for reviewing instructions, gathering data, and completing and reviewing the form. Send comments regarding the burden estimate, including suggestions for reducing the burden, to Chief, Information Policy Branch PM-223 U.S. Environmental Protection Agency, 401 M St. S.W. Washington, D.C. 20460, and to the Office of Information and Regulation Affairs, Office of Management and Budget, Washington, D.C. 20503

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations and the laws of the State of South Carolina.
If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Month	Day	Year
KENNETH U. AYERS		0 8	2 6	9 0

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
		0 8	2 6	9 0

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

19. Discrepancy Indication Space
a. lbs. c. lbs.
b. lbs. d. lbs.

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in item 19.

Printed/Typed Name	Signature	Month	Day	Year
MIKE McABEE		8	30	90

South Carolina Department of Health and Environmental Control #5

Bureau of Solid & Hazardous Waste Mgt.
2600 Bull Street, Columbia, SC 29201
Phone: (803) 734-5200
Emergency & Holidays: (803)253-6488

PLEASE PRINT or TYPE (Form designed for use on elite (12-pitch) typewriter) Form Approved. OMB No. 2050-0039 Expires 9-30-9

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's U.S. EPA ID No. C A D 9 8 1 4 2 7 1 3 1 | Manifest Document No. 0 0 0 0 8 | 2. Page 1 of 1 | Information in the shaded areas is not required by Federal law, but is by State law

3. Generator's Name and Mailing Address
KAISER PERMANENTE MEDICAL CENTER
280 W. McARTHUR BOULEVARD
OAKLAND, CA
4. Generator's Phone (415) 596-6603

A. State Manifest Document Number

B. State Generator's ID

5. Transporter 1 Company Name
STAMCO, INC.

6. U.S. EPA ID Number
C A D 0 6 3 5 4 7 9 9 6

C. State Transporter's ID

D. Transporter's Phone (800) 759-4211

7. Transporter 2 Company Name

8. U.S. EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
ThermalKEM Inc.
2324 Vernesdale Road
Rock Hill, SC 29730

10. U.S. EPA ID Number
S C D 0 4 4 4 4 2 3 3 3

G. State Facility's ID

H. Facility's Phone
803-324-5310

11. U.S. DOT Description (including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste Number
a. HAZARDOUS MATERIAL SOLID, N.O.S. ORM-E, NA9188	1	D T	25	T	7 7 7 7
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above
a. S T - 0 0 0 0 6 - 3 6 1 2
c. S T -
b. S T -
d. S T -

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
As of 9-25-90 this will be classified as D037 & D041
SAN 9 4 1 5 2

EMERGENCY & BILLING CONTACT
HAZARDOUS MATERIAL SERVICES
P. O. BOX 705
COALINGA, CA 93210 #10049
(209) 935-1508

Public reporting burden for the collection of information is estimated to average .37 minutes for generators, 15 minutes for transporters, and minutes for treatment storage and disposal facilities. This includes time for reviewing instructions, gathering data, and completing and reviewing the form. Send comments regarding the burden estimate, including suggestions for reducing the burden, to Chief, Information Policy Branch, PM-223, U.S. Environmental Protection Agency, 401 M St. S.W., Washington, D.C. 20460, and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, D.C. 20503

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations and the laws of the State of South Carolina.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Month	Day	Ye
KENNETH U. AYERS		0 8	2 6	9

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Ye
James Hutchison	James Hutchison	0 8	2 6	9

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Ye

19. Discrepancy Indication Space

a. lbs. c. lbs.
b. lbs. d. lbs.

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19. MC

Printed/Typed Name	Signature	Month	Day	Y
MIKE MEABEE	Mike McAbee	08	30	9

South Carolina ... and Environmental Control

Phone: (803) 734-5200
Emergency & Holidays: (803)253-6488

PLEASE PRINT or TYPE (Form designed for use on elite (12-pitch) typewriter)

Form Approved. OMB No. 2050-0039 Expires 9-30-9

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's U.S. EPA ID No. CAD981427131 Manifest Document No. 00007
2. Page 1 of 1
Information in the shaded areas is not required by Federal law, but is by State law.

A. State Manifest Document Number

Generator's Name and Mailing Address
KAISER PERMANENTE MEDICAL CENTER
280 W. McARTHUR BOULEVARD
OAKLAND, CA 94609

B. State Generator's ID

Generator's Phone (415) 596-6603

C. State Transporter's ID

Transporter 1 Company Name
STAMCO, INC.

6. U.S. EPA ID Number
CAD063547996

D. Transporter's Phone (800) 759-4211

Transporter 2 Company Name

8. U.S. EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

Designated Facility Name and Site Address
ThermalKEM Inc.
2324 Vernesdale Road
Rock Hill, SC 29730

10. U.S. EPA ID Number
SCD044442333

G. State Facility's ID

H. Facility's Phone
803-324-5310

11. U.S. DOT Description (including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste Number
HAZARDOUS MATERIAL SOLID, N.O.S. ORM-E, NA9188	1	DT	26	T	7777

J. Additional Descriptions for Materials Listed Above
a. ST-00006-3612
c. ST-
b. ST-
d. ST-

K. Handling Codes for Wastes Listed Above
709

15. Special Handling Instructions and Additional Information
As of 9-25-90 this will be classified as D037 & D041

SAN 9415

EMERGENCY & BILLING CONTACT
HAZARDOUS MATERIAL SERVICES
P. O. BOX 705
COALINGA, CA 93210
(209) 935-1508 #10038

Public reporting burden for this collection of information is estimated to average 37 minutes for generators, 15 minutes for transporters, and 10 minutes for treatment storage and disposal facilities. This includes time for reviewing instructions, gathering data, and completing and reviewing the form. Send comments regarding the burden estimate, including suggestions for reducing this burden, to Chief, Information Policy Branch, PM-223, U.S. Environmental Protection Agency, 401 M St. S.W., Washington, D.C. 20460, and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, D.C. 20503.

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations and the laws of the State of South Carolina.
If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: KENNETH U. AYERS
Signature:
Month Day Year: 08 26 90

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: VIRGIL GIBSON
Signature:
Month Day Year: 08 26 90

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name:
Signature:
Month Day Year:

19. Discrepancy Indication Space
a. 52000 lbs. c. lbs.
b. lbs. d. lbs.

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: Samuel Dishon
Signature: Samuel Dishon
Month Day Year: 08 30 90

South Carolina Department of Health and Environmental Control

Bureau of Solid & Hazardous Waste Mgt.
2600 Bull Street, Columbia, SC 29201
Phone: (803) 734-5200
Emergency & Holidays: (803)253-6488

PLEASE PRINT or TYPE (Form designed for use on elite (12-pitch) typewriter) Form Approved. OMB No. 2050-0039 Expires 9-30-9

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's U.S. EPA ID No. CAD981427131 — Manifest Document No. 000006
2. Page 1 of 1
Information in the shaded areas is not required by Federal law, but is by State law

3. Generator's Name and Mailing Address
KAISER PERMANENTE MEDICAL CENTER
280 W. McARTHUR BOULEVARD
OAKLAND, CA
4. Generator's Phone (415) 596-6603

A. State Manifest Document Number
B. State Generator's ID

5. Transporter 1 Company Name: STAMCO, INC.
6. U.S. EPA ID Number: GAD063547996
C. State Transporter's ID
D. Transporter's Phone: (800) 759-4211

7. Transporter 2 Company Name
8. U.S. EPA ID Number
E. State Transporter's ID
F. Transporter's Phone

9. Designated Facility Name and Site Address
ThermalKEM Inc.
2324 Vernesdale Road
Rock Hill, SC 29730
10. U.S. EPA ID Number: SCD044442333
G. State Facility's ID
H. Facility's Phone: 803-324-5310

11. U.S. DOT Description (including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste Number
a. HAZARDOUS MATERIAL SOLID, N.O.S. ORM-E, NA9188	1	DT	25	T	7777
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above
a. ST-00006-3612
b. ST-
c. ST-
d. ST-

K. Handling Codes for Wastes Listed Above: T09

15. Special Handling Instructions and Additional Information
As of 9-25-90 this will be classified as D037 & D041
SAN 9415.0

EMERGENCY & BILLING CONTACT
HAZARDOUS MATERIAL SERVICES
P. O. BOX 705
COALINGA, CA 93210
(209) 935-1508 #10033

Public reporting burden for this collection of information is estimated to average: 37 minutes for generators, 15 minutes for transporters, and 12 minutes for treatment storage and disposal facilities. This includes time for reviewing instructions, gathering data, and completing and reviewing the form. Send comments regarding the burden estimate, including suggestions for reducing the burden, to Chief, Information Policy Branch PM-223, U.S. Environmental Protection Agency, 401 M St. S.W., Washington, D.C. 20460, and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, D.C. 20503

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations and the laws of the State of South Carolina.
If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: KENNETH U. AYERS — Signature — Month Day Year: 08 26 90

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: AARON ASMAN — Signature — Month Day Year: 08 25 90

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name — Signature — Month Day Year

19. Discrepancy Indication Space
a. lbs. c. lbs.
b. lbs. d. lbs.

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: Samuel D. Wham — Signature — Month Day Year: 08 30 90