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15 December 1993 A932789

Mr. Dennis M. Klimmek, Esq. Vice President and General Counsel Kemper Real Estate Management Company 3470 Mt. Diablo Road, Suite A200 P.O. Box 1459 Lafayette, California 94108-4482

SUBSURFACE INVESTIGATION AT THE HARBOR BAY LANDING SUBJECT:

SHOPPING CENTER, ALAMEDA, CALIFORNIA

Dear Mr. Klimmek:

Pursuant to your verbal request for proposal (RFP), Applied Geosciences Inc. is pleased to provide you with this report documenting the performance of a subsurface investigation in the vicinity of the Alameda Red Hanger Kleaners (ARHK) facility, which is located in the Harbor Bay Landing Shopping Center (site) on Island Drive in Alameda, California (Figure 1).

Information about this site was provided to Applied Geosciences Inc. in our meeting with you on 2 November 1993, was contained in a Phase I Investigation report prepared by PES Environmental, Inc. (1993), and was obtained by Applied Geosciences Inc. during a site visit performed on 5 November 1993.

The portion of the Harbor Bay Landing Shopping Center that was investigated consists of an area in the vicinity of ARHK, which is a dry cleaning facility that has operated on the site since 1979. As this facility uses tetrachloroethene, also known as perchloroethylene (PCE), in its operations, and due to the prevalence of documented environmental problems related to the operation of similar facilities at many locations, Kemper Real Estate Management Company requested Applied Geosciences Inc. to assess the likelihood that PCE had been released to the subsurface at this site.

The objective of the scope of work was to assess the likelihood that a release of PCE to the **OBJECTIVE** subsurface had occurred in the vicinity of the existing sewer lines.

The approach used to meet the objective included a review of background data and agency files to evaluate the most appropriate locations to collect soil and groundwater samples, and to perform a subsurface investigation that included collection and analysis of soil and groundwater samples for the presence of halogenated volatile organic compounds (VOCs), including PCE.



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Applied Geosciences Inc.

Soil borings were advanced on 24 November 1993 at four locations on-site that were judged likely to have been impacted in the event a release of PCE occurred in the immediate vicinity of either of the floor drains, or in the vicinity of sewer lines appearing to serve the facility. A total of thirteen soil samples were collected from the four borings. One boring (B1) was advanced in the vicinity of a floor drain located adjacent to the dry cleaning machine (floor drain F1). A second boring (B2) was advanced just outside the exterior wall of the facility at a distance of approximately five feet west (reportedly downgradient) of the second floor drain (floor drain F2; Figure 2).

As-built underground utility plans were not provided to Applied Geosciences Inc., nor were they readily available. The sewer piping materials, obstructions adjacent to clean-outs, and the configuration of the sewer lines precluded an accurate determination of the location of the sewer line that exited the rear of the ARHK facility. A "main" sewer line located approximately nine feet from, and parallel to, the rear wall of the ARHK facility was located by Cruz Brothers (Figure 2). The sewer line exiting the ARHK facility was judged by the underground utility locator to be located approximately as shown in Figure 2 ("inferred sewer line location"). Boring 3 was located downgradient of the area that contained the junction between the sewer line exiting the ARHK facility and the main sewer line, with boring B4 located approximately downgradient of these sewer line junctions, approximately 30 feet west of the rear of the ARHK facility.

Borings were advanced utilizing a portable Hydraulic Drive Sampling System operated by Precision Sampling Inc. of San Rafael, California. Utilizing this approach, continuous core samples were generated as each boring was advanced. Soil samples were collected in stainless steel liners housed within a split spoon sampler. Procedures used during the performance of the field investigations are summarized in Appendix A, Summary of Field Procedures; boring logs are included as Appendix B.

OVM readings were also taken within, and in the vicinity of, the borings. Although not calibrated to directly read PCE, OVM readings of 600 parts per million (ppm) and 900 ppm were observed at depths of approximately 6-inches and 9-inches BGS, respectively, in boring B1. The only other positive reading was observed downhole in boring B4 (1 ppm), after advancing the hole to a depth of approximately 4.5 feet BGS.

After achieving the final boring depths, the temporary monitoring wells were constructed. A one-inch diameter slotted PVC casing, serving as a "temporary well screen", was lowered into the borings. Five foot lengths of screened casing were installed in the generally silty sand fill overlying what was interpreted to be the native soil (bay mud) surface. Following purging of the wells, and upon recovery of a sufficient volume of water, a water sample was collected for laboratory analysis. Borings were then grouted by introducing the grout through the PVC casing as the casing was withdrawn from the hole. These activities are summarized in Appendix A, Summary of Field Procedures.

All sampling and hydraulic drive sampling equipment was washed prior to use in the initial boring and between subsequent borings to minimize the likelihood that cross-contamination

would occur. Chain-of-Custody procedures, including Chain-of-Custody forms, were used to document sample handling and transport from the time of sample collection, their temporary storage in a chilled ice chest, and delivery to a State-certified hazardous waste laboratory for analysis. Groundwater depth measurements were made from the ground surface and recorded for each boring, using a Solinst fluid level meter. These activities are also summarized in Appendix A, Summary of Field Procedures.

# LABORATORY ANALYTICAL RESULTS

Soil and groundwater samples were analyzed for the presence of VOCs in general accordance with EPA Method 8010 by a State-certified hazardous waste laboratory. Groundwater and soil samples were analyzed on a one week turnaround basis. Methylene chloride was reported by the laboratory to be present in soil samples "within normal laboratory background levels". The interpretation of Applied Geosciences Inc. that methylene chloride was a laboratory artifact (a "laboratory contaminant") was confirmed by the laboratory (Rayburn, 1993). Methylene chloride is therefore not discussed further in the text of this report. Several soil samples were reanalyzed by the laboratory because of problems with matrix interference, a phenomena that is common with samples collected in the immediate vicinity of San Francisco Bay. Accordingly, original and re-analysis results are presented in this report. These data are presented within the text of this report as two numbers separated by a slash (e.g., 23/32).

Soil analytical results are presented in Table 1; groundwater analytical results are presented in Table 2. Laboratory reports for the soil and groundwater samples analyzed are included as Appendix C.

### DISCUSSION

Some of the soil samples collected on-site have been reported to contain relatively low concentrations of PCE, trichloroethene (TCE) and/or cis-1,2-Dichloroethene (cis-1,2-DCE) (Table 1). The highest concentrations of PCE in soil have been reported in the two shallow samples collected from boring B1 (from 0.5 feet and 1.5 feet BGS). Neither TCE nor cis-1,2-DCE were reported in these two vadose (unsaturated) zone soil samples. Downhole OVM readings of 600 ppm and 900 ppm were obtained in boring B1 after drilling to depths of approximately 6-inches and 9-inches BGS, respectively. The OVM readings obtained in boring B1 suggest elevated PCE concentrations in soil gas exist in the vicinity of B1. It is the understanding of Applied Geosciences Inc. that significant concentrations of PCE may be present in the vapor phase, even when relatively low concentrations are reported in soil samples collected from the same locations (Izzo, 1993).

The next sample collected from boring B1 (which at 6 feet BGS was below the water table), was reported to contain similar concentrations of PCE as the shallower vadose zone sample, and was also reported to contain TCE.

The only other soil sample on-site that was reported to contain PCE was collected just below the groundwater table in boring B3. The reported PCE concentration in this sample was more than

an order of magnitude lower than was reported in the samples from B1, while the TCE concentrations were essentially the same. A breakdown product of TCE, cis-1,2-DCE, was reported for the first time in this sample, in essentially the same concentration as TCE. The low concentration of the apparent "primary" constituent (PCE), the proportionately higher concentration of an apparent "secondary" constituent (TCE), and the appearance of a further breakdown product (cis-1,2-DCE), suggest that this sample is located further from a point of entry of PCE to the subsurface than were samples collected from boring B1, since additional degradation would be expected to occur over time as the chemical constituents migrate. It is likely that the TCE and cis-1,2-DCE are degradation products of PCE. It is also likely that there has been a release of PCE to the subsurface in the vicinity of the floor drain (designated as F1 in Figure 2).

The concentrations of VOCs reported in soil samples collected on-site are considerably below soluble threshold limit concentrations (STLCs) and total threshold limit concentrations (TTLCs) established for TCE (204 ppm, and 2,040 ppm, respectively); STLCs and TTLCs have not been established for PCE or cis-1,2-DCE. Concentrations in soil are also considerably below regulatory levels established for comparison with Toxicity Characteristics Leaching Procedures (TCLP) results (0.7 ppm for PCE and 0.5 ppm for TCE [none have been established for cis-1,2-DCE]) especially since the reported concentrations are total concentrations. STLCs, TTLCs, and TCLPs are regulatory criteria used to assess whether or not a waste is hazardous. The reported concentrations of TCE are below those that typically result in a regulatory agency mandate for soil remediation; there is no standard for cis-1,2-DCE.

A groundwater sample collected from one of the four temporary monitoring wells constructed on-site during this investigation was reported to contain relatively low concentrations of PCE (B1-1W); samples collected from two wells were reported to contain TCE and cis-1,2-DCE (B1 and B3). It is likely that the TCE and cis-1,2-DCE in groundwater are degradation products of PCE.

PCE and TCE were reported in sample B1-1W at 5.5  $\mu$ g/L and 9.0  $\mu$ g/L, respectively. These concentrations are in excess of the EPA's MCL of  $5\mu$ g/L for both of these constituents. However, because the groundwater beneath the site is not a potential source of drinking water, it is the judgment of Applied Geosciences Inc. that the MCL is not the applicable regulatory criteria. Based on the next "most beneficial use" of the water beneath the site (as this saline water is not a potential source of drinking water), the applicable regulatory criteria would appear to be the water quality objectives (WQOs) for the protection of human health and for the protection of saltwater aquatic life, as established by the State Water Resources Control Board (SWRCB, 1993). WQOs for the VOCs reported in groundwater samples, which are 6.9  $\mu$ g/L and 92  $\mu$ g/L for PCE and TCE, respectively, have not been exceeded. WQOs have apparently not been established for cis-1,2-DCE. The concentrations of PCE and TCE reported in groundwater samples collected on-site are below WQOs established by the SWRCB. WQOs have not been established for cis-1,2-DCE. The reported concentrations of PCE and TCE in groundwater samples collected on-site are below those that typically result in a regulatory agency mandate for groundwater remediation.

The judgments, conclusions, and recommendations described in this report pertain to the conditions judged to be present or applicable at the time the work was performed. Future conditions may differ from those described herein and this report is not intended for use in future evaluations of the site unless an update is conducted by a consultant familiar with environmental assessments and/or subsurface investigations. Use of this report is provided to Kemper Real Estate Management Company for their exclusive use and shall be subject to the terms and conditions in the applicable contract between Kemper Real Estate Management Company and Applied Geosciences Inc. Any third party use, including use by Client's lender, of this report shall also be subject to the terms and conditions governing the work in the contract between Kemper Real Estate Management Company and Applied Geosciences Inc. Any unauthorized release or misuse of this report shall be without risk or liability to Applied Geosciences Inc.

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# **CONCLUSIONS**

Based on the information presented in this report, current regulatory guidelines, and the judgment of Applied Geosciences Inc., the following conclusions are presented:

- It is likely that there has been a release of PCE to the subsurface in the vicinity of the floor drain (designated as F1 in Figure 2);
- No clear evidence of PCE release was encountered except as noted above. However, the limited data for this site limit our confidence in judgments related to this observation;
- It is likely that the TCE and cis-1,2-DCE are degradation products of PCE;
- The reported concentrations of TCE are below those that typically result in a regulatory agency mandate for soil remediation; there is no standard for cis-1,2-DCE; and
- The concentrations of PCE and TCE reported in groundwater samples collected on-site are below WQOs established by the SWRCB. WQOs have not been established for cis-1,2-DCE. The reported concentrations of PCE and TCE in groundwater samples collected on-site are below those that typically result in a regulatory agency mandate for groundwater remediation.

# RECOMMENDATION

Based on the data and conclusions presented in this report, and the judgment of Applied Geosciences Inc., we recommend that legal counsel familiar with environmental issues review

this report with respect to any requirements for reporting that may exist with respect to the information presented.

It has been a pleasure working with you on this project. If you have any questions regrading this report, please feel free to contact either of us at your convenience at (408) 452-0262.

Very truly yours,

APPLIED GEOSCIENCES INC.

WILLIAM G. THEYSKENS, CEG 1486

Project Manager

WILLIAM P. NYLIN Regional Manager

cc: Mr. Frank Cantone, Contracts Administrator

Attachments

# References

PES Environmental, Inc., Preliminary Site Assessment, Harbor Bay Landing Shopping Center, Alameda, California, 18 October, 1993.

Izzo, Victor, RWQCB, Central Valley Region, personal communication, 3 December 1993.

\_\_\_\_\_, RWQCB, Central Valley Region, Dry cleaners- a major source of PCE in Ground Water, 27 March 1992.

Rayburn, C., Inchcape Testing Services, Anametrix Laboratories, verbal communication, 15 December 1993.

State Water Resources Control Board, 1993, California enclosed bays and estuaries plan, May 1993.

TABLE 1 HARBOR BAY **SOIL SAMPLES** 

# **VOLATILE ORGANIC COMPOUNDS PER EPA METHOD NO. 8010** (RESULTS IN MICROGRAMS/KILOGRAM)\*

	Sample	Date				
Sample i.d.	Location	Collected	Methylene Chloride	cis-1,2-Dichloroethene	Trichloroethene	Tetrachloroethene
B1-1-0.5	<b>B</b> 1	11/24/93	-1	-0.5	-0.5	34
B1-1-0.5***	<b>B</b> 1	11/24/93	-1	-0.5	-0.5	23
B1-2-1.5	<b>B</b> 1	11/24/93	-1	-0.5	-0.5	10
B1-3-6	<b>B</b> 1	11/24/93	-1	-0.5	2.4	9.9
B1-3-6***	B1	11/24/93	-1	-0.5	2.6	10
B1-4-9	B1	11/24/93	-1	-0.5	-0.5	-0.5
B2-1-2.5	B2	11/24/93	2.7**	-0.5	-0.5	-0.5
B2-1-2.5***	B2	11/24/93	5.7**	-0.5	-0.5	-0.5
B2-2-8	B2	11/24/93	2**	-0.5	-0.5	-0.5
B2-2-8***	B2	11/24/93	2.2**	-0.5	-0.5	-0.5
B2-3-9.5	B2	11/24/93	-1	-0.5	-0.5	-0.5
B2-4-10.5	B2	11/24/93	-1	-0.5	-0.5	-0.5
B3-1-3	B3	11/24/93	3.3**	-0.5	-0.5	-0.5
B3-2-5.5	B3	11/24/93	3.0**	2.2	2,4	0.81
B3-3-8	В3	11/24/93	-1	-0.5	<b>−</b> 0.5	-0.5
B4-1-3	В4	11/24/93	5.4**	-0.5	-0.5	-0.5
B4-1-3***	B4	11/24/93	2.5**	-0.5	-0.5	-0.5
B4-2-11	B4	11/24/93	-1	-0.5	-0.5	-0.5
					-	

Notes:

\* Negative (-) values represent detection limits above which concentrations were not reported.

\*\* Concentration reported is within normal laboratory background levels.

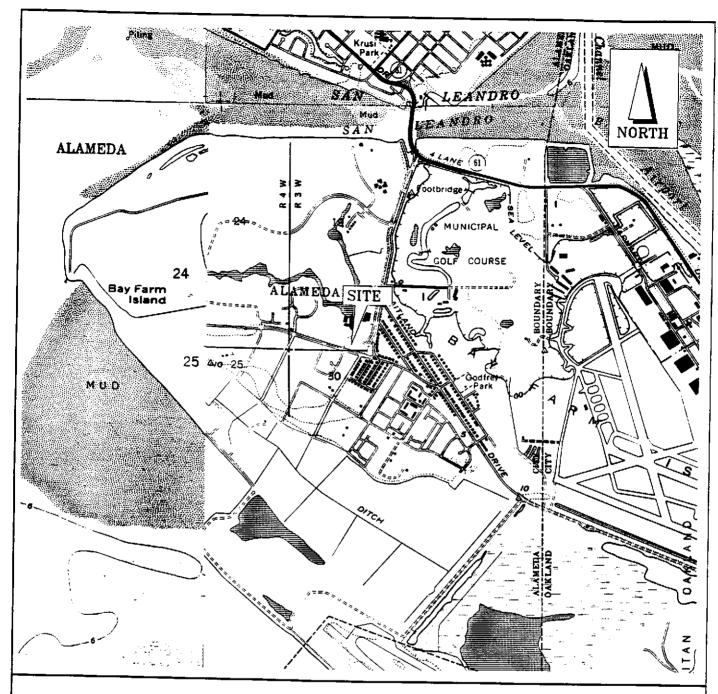
<sup>\*\*\*</sup> Samples were reanalyzed due to matrix interference.

TABLE 2
HARBOR BAY
GROUNDWATER SAMPLES
VOLATILE ORGANIC COMPOUNDS PER EPA METHOD NO. 8010
(RESULTS IN MICROGRAMS/LITER)\*

Sample i.d.	Sample Location	Date Collected	cis-1,2-Dichloroethene	Trichloroethene	Tetrachloroethene
B1-1W	<b>B</b> 1	11/24/93	19	9.0	5.5
B2-1W	<b>B2</b>	11/24/93	-0.5	-0.5	-0.5
B3-1W	В3	11/24/93	14	0.7	-0.5
B4-1W	<b>B</b> 4	11/24/93	-0.5	-0.5	-0.5

# Note:

<sup>\*</sup> Negative (-) values represent detection limits above which concentrations were not reported.

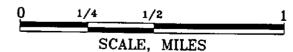


# NOTES:

- 1) BASE MAP FROM USGS SAN LEANDRO (1959), OAKLAND EAST (1959), OAKLAND WEST (1959), AND HUNTERS POINT (1956) QUADRANGLES 7.5 MINUTE SERIES (TOPOGRAPHIC). PHOTOREVISED 1980, 1980, 1980, AND 1968 RESPECTIVELY.
- 2) ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.



Quadrangle Location



APPLIED GEOSCIENCES INC.

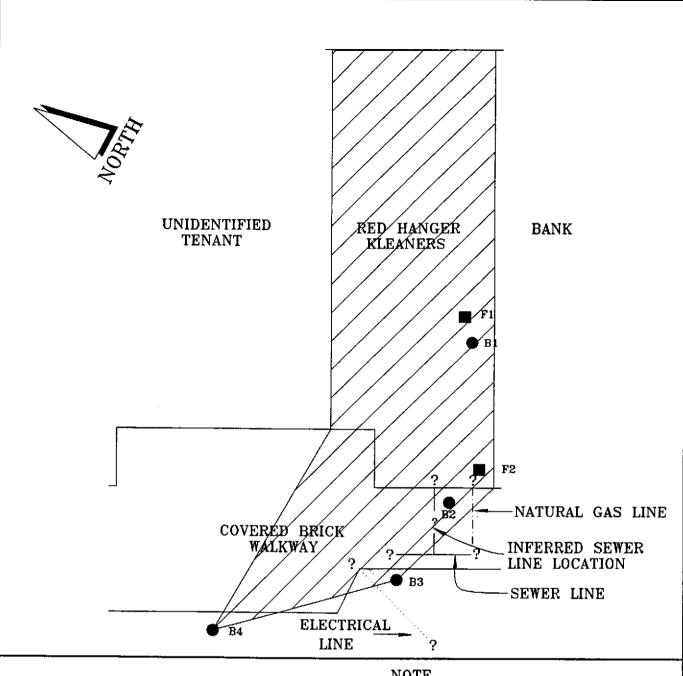
**Environmental Consultants** 



SITE LOCATION MAP

PROJECT NO. A932789

FIGURE 1



# **EXPLANATION:**

- **●**B1 DESIGNATION AND LOCATION OF SOIL BORING
- **F**1 DESIGNATION AND LOCATION OF FLOOR DRAIN

SITE

> **SCALE** 5 10

# NOTE

- ALL LOCATIONS AND DIMENSIONS 1) ARE APPROXIMATE.
- SITE PLAN GENERATED FROM 2) FIELD MEASUREMENTS PERFORMED BY APPLIED GEOSCIENCES INC. PERSONNEL.

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Environmental Consultants



SITE PLOT PLAN

PROJECT NO. A932789

FIGURE 2

# APPENDIX A SUMMARY OF FIELD PROCEDURES

# SUMMARY OF FIELD PROCEDURES

The procedures that were used for drilling borings, collecting soil samples, and installing, developing, and sampling the temporary groundwater monitoring wells, were as follows:

- A permit was acquired from the applicable regulatory agency ("Zone 7") prior to drilling borings and installing the temporary wells.
- The borings were advanced to depths of approximately 9.5 to 11.5 feet below the ground surface (BGS) surface using a portable hydraulic drive sampling system.
- The drilling and sampling equipment was steam-cleaned at the site prior to their use for each boring.
- Soil descriptions, sample type and depth, and related drilling information were recorded on a boring log under the supervision of a State-certified engineering geologist from Applied Geosciences Inc., using the Unified Soil Classification System (USCS).
- Soil samples were collected at minimum 5-foot depth intervals, at significant changes in lithology, based on field conditions, or wherever detailed lithologic or analytical information was desired, using either a California-modified split-barrel sampler or a smaller diameter split spoon sampler. (All samples submitted for laboratory analysis, with the exception of B-2-3-9.5 and B-2-4-10.5, were collected in 2-inch diameter stainless steel liners contained within the California-modified split-barrel sampler; the aforementioned two samples were collected in 1-inch diameter stainless steel liners contained within the smaller split-barrel sampler).
- The sampler was washed between sampling intervals using a high pressure hot water washer.
- Soil samples were collected in 6-inch long stainless steel liners located inside the split spoon samplers.
- The samplers were driven using a portable hydraulic drive sampling system.
- Following retrieval of the sampler, selected samples were removed from the sampler, the ends covered with teflon sheets, and capped with PVC end caps. Each sample was labeled with the sample number, depth of collection, date, and project number. With respect to soil sample designations, the first number indicates the boring from which the sample was collected, the second indicates the sequence in which the samples were collected within the boring, and the third number indicates the approximate depth of the top of the sample with respect to the ground surface.
- Soil in sample liners that were not selected for submission to the laboratory for potential analysis tube was used to describe the stratigraphy encountered and/or to measure volatile

organic compounds (VOCs). Approximately half the soil contained in selected sample liners was removed within the confines of a sealed ziplock baggie. The baggie was set aside in approximately isothermal conditions to allow organic vapors, if present, to accumulate in the baggie around the sampled soil. The air within the baggie was then sampled using an Hnu organic vapor meter (OVM) equipped with a 10.2 Ev probe calibrated for benzene. The probe was inserted through a hole made in the baggie; the highest measurement indicated is recorded on the boring log. VOC concentrations were, however, not indicated using this technique.

- Samples retained for laboratory analysis were placed in individual ziplock bags and stored on ice in an insulated chest cooled to a temperature of approximately 4 degrees Celsius.
- Samples were delivered to the laboratory within 24 hours of collection. Sample handling, transport, and delivery to the laboratory were performed using chain-of-custody procedures and forms.
- Soil waste generated during the drilling operations were stored on-site in a sealed, labeled, 5- gallon drum pending receipt of laboratory results. Disposal of the soil in accordance with current regulatory guidelines, based on the laboratory results, is the responsibility of the client.
- The temporary groundwater monitoring wells were constructed of flush-jointed, threaded, 1-inch ID Schedule 40 PVC. Slotted casing consisted of 0.020-inch machined slots.
- The bottom of the wells were placed at depths of approximately 9.5 to 11.5 feet below the ground surface, based on our current understanding that the depth to groundwater is approximately 5 to 6 feet BGS, and that clays interpreted to be native (bay mud) were encountered at depths of approximately 9.5 to 11.5 feet below the ground surface. The wells were screened for intervals of 5 feet in length. Blank casing was used to construct the remainder of the well to the ground surface.
- The well casing was steam cleaned at the site prior to installation.
- Each temporary well was developed by purging water with a peristaltic pump until approximately two to three casing volumes were removed and turbidity of the removed water appeared to have decreased to an acceptable level (water was observed to be relatively free of suspended sediment). New lengths of Tygon tubing were used for each well.
- Water recovered from the temporary wells was stored on-site in sealed, labeled, 55-gallon drums. Disposal of the purgewater in accordance with current regulatory guidelines, based on the laboratory results, is the responsibility of the client.
- Following the completion of the groundwater sampling activities, the casings were removed, and the soil borings were backfilled with a cement grout.

APPENDIX B

**BORING LOGS** 

PROJECT ▷ HARBOR BAY		Ī			P	ROJE	CT N	UMBER	⊳ A93278	39
LOGGED BY > Bill Theyskens			=	<b>,</b>	s	TART	DAT	E > 2	4 November	r 1993
CHECKED BY ▷ Jon Lovegreen			APPLIED BOSCIENCES INC.  COMPLETION DATE > 24 November 1993							
GROUND SURFACE ELEVATION DATUM (FT-M	SL) Þ			DRI	LLIN	G COI	MPAN	Y Þ P	recision Sa	mpling
DRILLING EQUIPMENT > Portable Hydrau	ic Drive	Sam	pling	Syst	em					
BORING DEPTH (FT) > 9.5 WELL DEPT	H (FT)	> N/	'A		WATI	ER DI	ЕРТН	(FT)-Initia	l: <b>6.1</b>	Completion: 6.1
WELL MATERIALS ▷ N/A WELL SCREEN INTERVAL (FT) ▷					_(FT) ▷	N/A TO N/A				
WELL CASING ELEVATION (FT-MSL) ▷ N/	<b>\</b>				OVM.	/OVA	<b>D</b>	Hnu		•
BACKFILL MATERIAL > Cement Grout									***	
£ LITHOLOGY				뒫	(РРМ)		SAMI	PLE		
DESCRIPTION		GRAPHIC	MELL	BLOW COUNT	DUM/OUR (F	RECOVERY %	TYPE	NUMBER	(	COMMENTS
Concrete slab underlain by 1 to 2 inches of grave Yellowish gray (5Y8/1), damp, medium-dense, medium-grained SAND; well sorted; abundant shell fragments (SP).  -contains some clay at 2.5 feet-Becomes light olive gray (5Y6/1), moist, dense, with abundant shell fragments at 3 feet.  Light olive gray (5Y6/1) very moist, dense, Silty SAND(SM); grading to a wet, fine sand toward feet.  Olive gray (5Y4/1), wet, stiff, Silty CLAY; with some fine-grained sand(CL)("BAY MUD")  Boring terminated at 9.5 feet below ground surface.	6				600			B1-3-0		ment encountered at 7 ing to driller.)
BORING DESIGNATION  B1		BOF	RIN	G L	.OG	<u> </u>	$\top$	PAGE NU 1 OI		FIGURE NUMBER

PROJ	ECT ▷ HARBOR BAY		_		P	ROJE	CT N	JMBER	⊳ A93278	39
LOG	GED BY ▷ Bill Theyskens	١.	=	<b>;</b>	s	TART	DAT	E Þ 24	November	r 1993
CHE	CKED BY ▷ Jon Lovegreen		APPLIED DSCIENCES INC.  COMPLETION DATE > 24 November 1993							vember 1993
GRO	UND SURFACE ELEVATION DATUM (FT-MSL)			DRII	LINC	3 COY	/IPAN	Y > P	recision Sa	ımpling
DRIL	LING EQUIPMENT > Portable Hydraulic Drive	Sam	pling	Syste	m					
BORI	ING DEPTH (FT) > 11.0 WELL DEPTH (FT)	⊳ N	/A	١,	VATI	ER DE	PTH	(FT)-Initia	: 5.5	Completion: 5.5
WELL MATERIALS ▷ N/A WELL SCREEN INTERVAL (FT) ▷ N/A TO N/A							N/A TO N/A			
WELL	L CASING ELEVATION (FT-MSL) > N/A			7	)VM	/OVA	<b>&gt;</b>	Hnu		
BACE	KFILL MATERIAL D Cement Grout									
FT)	LITHOLOGY			Ę	(РРМ)		SAMI	PLE		
ОЕРТН (	DESCRIPTION	GRAPHIC	WELL	BLOW COUNT	OUM/OUA (F	RECOVERY %	TYPE	NUMBER	(	COMMENTS
5	Yellowish gray (5Y8/1), damp, medium dense, medium-grained SAND; minor silt, shells(SP).  with minor course sand at 3 feet-  Yellowish gray (5Y7/2), and very moist, at 5 feet.  Mottled Olive Gray(5Y4/1) and Grayish Black(N2), moist, stiff, Silty CLAY; abundant organics(CH).  Olive gray(5Y4/1), wet, medium dense, medium grained SAND; no fines(SP).  Mottled olive gray(5Y4/1) and grayish black(N2), soft to firm, wet, Silty CLAY(CH).  Becomes grayish brown(5YR3/2), and firm to stiff at 10.5 feet.  Boring terminated at 11 feet below the ground surface.							B2-3-9.5	dry. <1 Hnu res down-hole.  Some silt at siltier).	tween 2.5 and 3 feet, adings on samples and t 9.5 feet (grading
   	BORING DESIGNATION B2	BO	RIN	G L	OG			PAGE NU		FIGURE NUMBER

PROJECT ▷ HARBOR BAY		-		7	P	ROJE	CT NI	JMBER	⊳ A93278	39		
LOGGED BY D Bill Theyskens		Ψ, Δ1	PPLI	<b>₹</b>	s	START DATE ▷ 24 November 1993						
CHECKED BY ▷ Jon Lovegreen				NCES	c	COMPLETION DATE > 24 November 1993						
GROUND SURFACE ELEVATION DATUM (FT-MSL)	) ▷		DRILLING COMPANY > Precision Sampling						umpling			
DRILLING EQUIPMENT > Portable Hydraulic	Drive S	amŗ	ling	Syste	em.	<del></del>						
BORING DEPTH (FT) > 9.5 WELL DEPTH	(FT) >	N/.	A	,	WATI	ER DE	PTH	(FT)-Initia	l: 5.6	Completion: 5.6		
WELL MATERIALS ▷ N/A				,	WELI	SCRI	EEN I	NTERVAI		N/A TO N/A		
WELL CASING ELEVATION (FT-MSL) ▷ N/A					OVM	/OVA	<b>&gt;</b>	Hnu				
BACKFILL MATERIAL D Cement Grout		•							<del>"</del>			
c LITHOLOGY				F	(РРМ)		SAMI	'LE				
ETHOLOGY  E DESCRIPTION		GRAPHIC	WELL	BLOW COUNT	OUM/OUA (P	RECOVERY %	TYPE	NUMBER		COMMENTS		
Olive gray(5Y4/1), wet, soft, Silty CLAY(CH).  Light olive gray (5Y5/2), moist, dense, medium grained SAND(SP).  Mottled olive gray(5Y4/1) and olive black(N2), firm to stiff, wet Silty CLAY(CH).  Becomes grayish brown(5Y3/2) with grayish black(N2) mottling, moist, and stiff at 8.75 feet.  Olive gray(5Y3/2), wet, dense, medium-grained SAND(SP) at 9.25 feet.  Boring terminated at 9.5 feet below the ground surface.								B3-2-5.5		een to 11.5 feet. (Soft etween 9.5 and 11.5 ller)		
BORING DESIGNATION B3	B	OF	RIN	G L	OG	<u> </u>		PAGE NU		FIGURE NUMBER		

		_				_				
PROJECT ▷ HARBOR BAY			4		P	ROJE	CT N	JMBER	⊳ A93278	39
LOGGED BY > Anthony Ortega			PPLI	<b>;</b> 20	\$	FART	DAT	E ▷ 2/	November	1993
CHECKED BY ▷ Jon Lovegreen				NCES	COMPLETION DATE > 24 November 1993					
GROUND SURFACE ELEVATION DATUM (FT-M	SL) Þ			DRI	LINC	COM	IPAN	Y Þ P	recision Sa	mpling
DRILLING EQUIPMENT Dortable Hydrau	lic Drive	Sam	oling	Syste	em					
BORING DEPTH (FT) > 11.5 WELL DEPT	H (FT)	> N/	A	,	WATI	R DE	РТН	(FT) Initia	t 5.2	Completion: 5.2
WELL MATERIALS ▷ N/A				,	WELL	SCRE	EEN I	NIERVAI	. (FT) ▷	N/A TO N/A
WELL CASING ELEVATION (FT-MSL) ▷ N/A	<b>\</b>				OVM	OVA	<b>D</b>	Hnu		
BACKFILL MATERIAL D Cement Grout			,							
£ LITHOLOGY				Ę	(PPM)		SAMI	PLE		
		H	WELL	COUNT		ERY	Й	ER	C	COMMENTS
DESCRIPTION		GRAPHIC	3	BLOW	AUO/MUC	RECOVERY %	TYPE	NUMBER	ı	
Yellowish gray(5Y7/2), damp, loose,					ŏ	<u> </u>	_			
medium-grained Silty SAND(SM).	Ξ									
‡	-						<b></b>	B4-1-3		
s <del>=</del>	=				1					
Becomes olive gray (5Y4/1) at 6 feet.	-									
主	=									
<del>-</del>	-								Some organ	iic material in sampler.
-with some silt at 10 feet-	_ 								Sampler dre	opped approximately
Moderate brown (5YR3/4), moist, stiff			////				B4	Dark	Dark yellow	et under its own weight. yellowish brown (10YR4/2),
CLAY(CL).	1								moist, loose sampler.	SAND in tip of
Boring terminated at 11.5 feet below the ground	<del></del>								•	
surface.										
		ļ								
BORING DESIGNATION		BOF	RIN	G L	OG	ì		PAGE N		FIGURE NUMBER

# APPENDIX C

LABORATORY REPORTS AND CHAIN-OF-CUSTODY FORMS



# Inchcape Testing Services **Anametrix Laboratories**

1961 Concourse Drive Suite E San Jose, CA 95131 Tel: 408-432-8192 Fax: 408-432-8198

MR. ALEX GALLEGO APPLIED GEOSCIENCES INC

1641 NORTH FIRST STREET SUITE 235

SAN JOSE, CA 95112

Workorder # Date Received: 11/24/93

: 9311323

Project ID : A932789

Purchase Order: N/A

The following samples were received at Anametrix, Inc. for analysis :

ANAMETRIX ID	CLIENT SAMPLE ID
9311323-1	B1-1-0.5
9311323-2	B1-2-1.5
9311323-3	B1-3-6
9311323-4	B1-4-9
9311323-5	B2-1-2.5
9311323-6	B2-2-8
9311323-7	B2-3-9.5
9311323-8	B2-4-10.5
9311323-9	B3-1-3
9311323-10	B3-2-5.5
9311323-11	B3-3-8
9311323-12	B4-2-11
9311323-13	B4-1-3

This report consists of 35 pages not including the cover letter, and is organized in sections according to the specific Anametrix laboratory group or section which performed the analysis(es) and generated the The Report Summary that precedes each section will help you determine which Anametrix group is responsible for those test results, and will bear the signatures of the department supervisor and the chemist who have reviewed the analytical data. Please refer all questions to the department supervisor who signed the form.

Anametrix is certified by the California Department of Health Services (DHS) to perform environmental testing under Certificate Number 1234. A detailed list of the approved fields of testing can be obtained by calling our office, or the DHS Environmental Laboratory Accreditation Program at (415)540-2800.

If you have any further questions or comments on this report, please give us a call as soon as possible. Thank you for using Anametrix.

Sarah Schoen, Ph.D. Laboratory Director



# ANAMETRIX REPORT DESCRIPTION GC

# Organic Analysis Data Sheets (OADS)

OADS forms contain tabulated results for target compounds. The OADS are grouped by method and, within each method, organized sequentially in order of increasing Anametrix ID number.

# Surrogate Recovery Summary (SRS)

SRS forms contain quality assurance data. An SRS form will be printed for each method, <u>if</u> the method requires surrogate compounds. They will list surrogate percent recoveries for all samples and any method blanks. Any surrogate recovery outside the established limits will be flagged with an "\*", and the total number of surrogates outside the limits will be listed in the column labelled "Total Out".

# Matrix Spike Recovery Form (MSR)

MSR forms contain quality assurance data. They summarize percent recovery and relative percent difference information for matrix spikes and matrix spike duplicates. This information is a statement of both accuracy and precision. Any percent recovery or relative percent difference outside established limits will be flagged with an "\*", and the total number outside the limits will be listed at the bottom of the page. Not all reports will contain an MSR form.

### Qualifiers

Anametrix uses several data qualifiers (0) in its report forms. These qualifiers give additional information on the compounds reported. They should help a data reviewer to verify the integrity of the analytical results. The following is a list of qualifiers and their meanings:

- U Indicates that the compound was analyzed for, but was not detected at or above the specified reporting limit.
- B Indicates that the compound was detected in the associated method blank.
- J Indicates that the compound was detected at an amount below the specified reporting limit. Consequently, the amount should be considered an approximate value. Tentatively identified compounds will always have a "J" qualifier because they are not included in the instrument calibration.
- E Indicates that the reported amount exceeded the linear range of the instrument calibration.
- D Indicates that the compound was detected in an analysis performed at a secondary dilution.

Absence of a qualifier indicates that the compound was detected at a concentration at or above the specified reporting limit.

### REPORTING CONVENTIONS

- Due to a size limitation in our data processing step, only the first eight (8) characters of your project ID and sample ID will be printed on the report forms. However, the report cover letter and report summary pages display up to twenty (20) characters of your project and sample IDs.
- Amounts reported are gross values, i.e., not corrected for method blank contamination.

# REPORT SUMMARY ANAMETRIX, INC. (408)432-8192

MR. ALEX GALLEGO

APPLIED GEOSCIENCES INC 1641 NORTH FIRST STREET SUITE 235

SAN JOSE, CA 95112

Workorder # : 9311323 Date Received : 11/24/93 Project ID : A932789 Purchase Order: N/A

Department : GC

Sub-Department: VOA

# SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9311323- 1	B1-1-0.5	SOIL	11/24/93	8010
9311323- 2	B1-2-1.5	SOIL	11/24/93	8010
9311323- 3	B1-3-6	SOIL	11/24/93	8010
9311323- 4	B1-4-9	SOIL	11/24/93	8010
9311323- 5	B2-1-2.5	SOIL	11/24/93	8010
9311323- 6	B2-2-8	SOIL	11/24/93	8010
9311323- 7	B2-3-9.5	SOIL	11/24/93	8010
9311323- 8	B2-4-10.5	SOIL	11/24/93	8010
9311323- 9	B3-1-3	SOIL	11/24/93	8010
9311323-10	B3-2-5.5	SOIL	11/24/93	8010
9311323-11	B3-3-8	SOIL	11/24/93	8010
9311323-12	B4-2-11	SOIL	11/24/93	8010
9311323-13	B4-1-3	SOIL	11/24/93	8010

# REPORT SUMMARY ANAMETRIX, INC. (408)432-8192

MR. ALEX GALLEGO APPLIED GEOSCIENCES INC 1641 NORTH FIRST STREET SUITE 235 SAN JOSE, CA 95112

Workorder # : 9311323 Date Received : 11/24/93 Project ID : A932789 Purchase Order: N/A

Department : GC Sub-Department: VOA

# QA/QC SUMMARY :

- The amount of methylene chloride reported for samples B2-1-2.5, B2-2-8, B3-1-3, B3-2-5.5 and B4-1-3 is within normal laboratory background levels.

- Due to matrix interferences the surrogate recoveries of several samples are outside of Anametrix control limits for EPA Method 8010. Similar results were obtained upon re-analysis of these samples and both analyses have been reported. The re-analyzed samples have been designated with an "r" at the end of Anametrix sample I.D..

M. Hasslinian 12/10/93 Department Supervisor Date

Chemist

ス*川レー* Date

Project ID : A932789
Cample ID : B1-1-0.5
Matrix : SOIL
Date Sampled :11/24/93
Date Analyzed :12/6/93
Enstrument ID : AD15

Anametrix ID : 9311323-01
Analyst : 75

Supervisor

Dilution Factor : 1.0 Conc. Units : ug/Kg

Anametrix ID : 93113231R : A932789

Project ID Sample ID Analyst : 04 : B1-1-0.5 : sh Supervisor : SOIL Matrix

Date Sampled :11/24/93
Date Analyzed :12/6/93
Instrument ID : AD15 Dilution Factor : Conc. Units : ug/Kg

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
75-71-8 74-87-3 75-01-4 74-83-9 75-00-3 75-69-4 76-13-1 75-35-4 75-35-4 75-34-3 156-59-2 67-66-3 71-55-6 56-23-5 107-06-2 79-01-6 78-87-5 75-27-4 110-75-8 10061-01-5 10061-02-6 79-00-5 127-18-4 124-48-1 108-90-7 75-25-2 79-34-5 541-73-1 106-46-7 95-50-1	Dichlorodifluoromethane Chloromethane Vinyl chloride Bromomethane Chloroethane Trichlorofluoromethane Trichlorotrifluoroethane 1,1-Dichloroethene Methylene chloride trans-1,2-Dichloroethene 1,1-Dichloroethane cis-1,2-Dichloroethene Chloroform 1,1,1-Trichloroethane Carbon tetrachloride 1,2-Dichloroethane Trichloroethene 1,2-Dichloropropane Bromodichloromethane 2-Chloroethylvinylether cis-1,3-Dichloropropene trans-1,3-Dichloropropene 1,1,2-Trichloroethane Tetrachloroethene Dibromochloromethane Chlorobenzene Bromoform 1,1,2,2-Tetrachloroethane 1,3-Dichlorobenzene 1,4-Dichlorobenzene 1,2-Dichlorobenzene	0.000000000000000000000000000000000000	23. 23. 23. 23.	מממממממממממממממממממממממ

: A932789 Anametrix ID : 9311323-02

Project ID
Cample ID
Catrix
Date Sampled
Date Analyzed : B1-2-1.5 Analyst : Ze : SOIL Supervisor : 12h

:11/24/93 :12/ 2/93 : AD15 Dilution Factor : 1.0 instrument ID Conc. Units : ug/Kg

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
75-71-8 74-87-3 75-01-4 74-83-9 75-00-3 75-69-4 76-13-1 75-35-4 75-35-4 75-35-2 156-60-5 75-55-6 56-53-5 107-06-2 79-01-6 78-87-5 10-75-8 10061-01-5 10061-02-6 79-00-5 127-18-4 124-48-1 108-90-7	Dichlorodifluoromethane Chloromethane Vinyl chloride Bromomethane Chloroethane Trichlorofluoromethane Trichlorotrifluoroethane 1,1-Dichloroethene Methylene chloride trans-1,2-Dichloroethene 1,1-Dichloroethane cis-1,2-Dichloroethene Chloroform 1,1,1-Trichloroethane Carbon tetrachloride 1,2-Dichloroethane Trichloroethane Trichloroethene 1,2-Dichloropropane Bromodichloromethane 2-Chloroethylvinylether cis-1,3-Dichloropropene trans-1,3-Dichloropropene 1,1,2-Trichloroethane Tetrachloroethene Dibromochloromethane Chlorobenzene	1.00 50 50 50 50 50 50 50		מם מממממממממממממממממממ
75-25-2 79-34-5 541-73-1 106-46-7 95-50-1	Bromoform  1,1,2,2-Tetrachloroethane  1,3-Dichlorobenzene  1,4-Dichlorobenzene  1,2-Dichlorobenzene	.50 .50 .50	ND ND ND ND	U U U

Anametrix ID : 9311323-03 : A932789

Project ID Sample ID : 29 : 24 Analyst : B1-3-6 Matrix
Date Sampled
Date Analyzed
Instrument ID Supervisor : SOIL

:11/24/93 :12/ 6/93 : AD15 Dilution Factor : 1.0

Conc. Units : ug/Kg

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
75-71-8 74-87-3 75-01-4 74-83-9 75-00-3 75-69-4 76-13-1 75-35-4 75-35-4 75-34-3 156-59-2 67-66-3 71-55-6 56-23-5 107-06-2 79-01-6 78-87-5 75-27-4 110-75-8 10061-02-6 79-00-5 127-18-4 124-48-1 108-90-7 75-25-2 79-34-5 541-73-1 106-46-7 95-50-1	Dichlorodifluoromethane Chloromethane Vinyl chloride Bromomethane Chloroethane Trichlorofluoromethane Trichlorotrifluoroethane 1,1-Dichloroethene Methylene chloride trans-1,2-Dichloroethene 1,1-Dichloroethane cis-1,2-Dichloroethene Chloroform 1,1,1-Trichloroethane Carbon tetrachloride 1,2-Dichloroethane Trichloroethene 1,2-Dichloropropane Bromodichloromethane 2-Chloroethylvinylether cis-1,3-Dichloropropene trans-1,3-Dichloropropene 1,1,2-Trichloroethane Tetrachloroethene Dibromochloromethane Chlorobenzene Bromoform 1,1,2,2-Tetrachloroethane 1,3-Dichlorobenzene 1,4-Dichlorobenzene 1,2-Dichlorobenzene	.500 000 000 000 000 000 000 000 000 000	89999999999999999999999999999999999999	ממממממ מטממממ מממממממממממם

Anametrix ID : 93113233R Analyst : 75 Supervisor : 12

Project ID : A932789
Sample ID : B1-3-6
Satrix : SOIL
Date Sampled :11/24/93
Date Analyzed :12/6/93
Instrument ID : AD15

Dilution Factor : Conc. Units : ug/Kg

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
75-71-8 74-87-3 75-01-4 74-83-9 75-00-3 75-69-4 76-13-1 75-35-4 75-34-3 156-59-2 156-56-3 71-55-6 56-23-5 107-06-2 79-01-6 78-87-5 107-75-8 10061-01-5 10061-02-6 79-08-4 110-75-8 10061-01-5 10061-02-6 79-08-4 1108-90-7 75-25-2 79-34-5 541-73-1 106-46-7 95-50-1	Dichlorodifluoromethane Chloromethane Vinyl chloride Bromomethane Chloroethane Trichlorofluoromethane Trichlorotrifluoroethane 1,1-Dichloroethene Methylene chloride trans-1,2-Dichloroethene 1,1-Dichloroethane cis-1,2-Dichloroethene Chloroform 1,1,1-Trichloroethane Carbon tetrachloride 1,2-Dichloroethane Trichloroethene 1,2-Dichloropropane Bromodichloromethane 2-Chloroethylvinylether cis-1,3-Dichloropropene trans-1,3-Dichloropropene 1,1,2-Trichloroethane Tetrachloroethene Dibromochloromethane Chlorobenzene Bromoform 1,1,2,2-Tetrachloroethane 1,3-Dichlorobenzene 1,4-Dichlorobenzene 1,2-Dichlorobenzene	00000000000000000000000000000000000000	86000000000000000000000000000000000000	מממממ מממממ ממממממממממממממ

Anametrix ID : 9311323-04 : A932789

Project ID Sample ID Sh Analyst : B1-4-9 Supervisor : SOIL Matrix

Date Sampled :11/24/93
Date Analyzed :12/ 2/93
Instrument ID : AD15 Date Sampled Date Analyzed 1.0 Dilution Factor :

Conc. Units : ug/Kg

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
75-71-8 74-87-3 75-01-4 74-83-9 75-00-3 75-69-4 76-13-1 75-35-4 75-09-2 156-60-5 75-34-3 156-59-2 67-66-3 71-55-6 56-23-5 107-06-2 79-01-6 78-87-5 75-27-4 110-11-5 10061-02-6 79-00-5 127-18-4 124-48-1 108-90-7 75-25-2 79-34-5 541-73-1 106-46-7 95-50-1	Dichlorodifluoromethane Chloromethane Vinyl chloride Bromomethane Chloroethane Trichlorofluoromethane Trichlorotrifluoroethane 1,1-Dichloroethene Methylene chloride trans-1,2-Dichloroethene 1,1-Dichloroethane cis-1,2-Dichloroethene Chloroform 1,1,1-Trichloroethane Carbon tetrachloride 1,2-Dichloroethane Trichloroethane Trichloroethene 1,2-Dichloropropane Bromodichloromethane 2-Chloroethylvinylether cis-1,3-Dichloropropene trans-1,3-Dichloropropene 1,1,2-Trichloroethane Tetrachloroethene Dibromochloromethane Chlorobenzene Bromoform 1,1,2,2-Tetrachloroethane 1,3-Dichlorobenzene 1,4-Dichlorobenzene 1,2-Dichlorobenzene	1.5000000000000000000000000000000000000	888888888888888888888888888888888888888	מספספספספספספסססססססססססססססססססס
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Project ID : A932789
Sample ID : B1-4-9
Latrix : SOIL
Date Sampled :11/24/93 Anametrix ID : 93113234R Analyst : 75 Supervisor : 25 Date Sampled :11/24/93
Date Analyzed :12/ 7/93
Instrument ID : AD15

Dilution Factor : 1.0

Conc. Units : ug/Kg

: 9311323-05 Anametrix ID Project ID : A932789

Sample ID 2 Analyst : B2-1-2.5 Supervisor : SOIL Matrix

:11/24/93 :11/30/93 : AD15 Date Sampled
Date Analyzed 1.0 Dilution Factor :

Conc. Units : ug/Kg Instrument ID

			·	<del>,</del>
CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
75-71-8	Dichlorodifluoromethane	1.0	ND	U
74-87-3	Chloromethane	1.0	ND	U
75-01-4	Vinyl chloride	.50	ND	U
74-83-9	Bromomethane	.50	ND	U
75-00-3	Chloroethane	.50	ND	Ū
75-69-4	Trichlorofluoromethane	.50	ND	ַ
76-13-1	Trichlorotrifluoroethane	.50	ND	U
75-35-4	1,1-Dichloroethene	.50	ND	U
75-09-2	Methylene chloride	1.0	2.7	
156-60-5	trans-1,2-Dichloroethene	.50	ND	U
75-34-3	1,1-Dichloroethane	.50	ND	U
156-59-2	cis-1,2-Dichloroethene	.50	ND	U
67-66-3	Chloroform	.50	ЙD	U
71-55-6	1,1,1-Trichloroethane	.50	ND	U
56-23-5	Carbon tetrachloride	.50	ND	ū
107-06-2	1,2-Dichloroethane	.50	ND	<u>u</u>
79-01-6	Trichloroethene	.50	ND	ט
78-87-5	1,2-Dichloropropane	.50	ND	ַ
75-27-4	Bromodichloromethane	.50	ND	<u>ת</u>
110-75-8	2-Chloroethylvinylether	1.0	ND	U
10061-01-5	cis-1,3-Dichloropropene	.50	ND	ש
10061-02-6	trans-1,3-Dichloropropene	.50	ND	ַ
79-00-5	1,1,2-Trichloroethane	.50	ND	บ
127-18-4	Tetrachloroethene	.50	ND	ŭ
124-48-1	Dibromochloromethane	.50	ND	U
108-90-7	Chlorobenzene	.50	ND	U
75-25-2	Bromoform	.50	ND	U
79-34-5	1,1,2,2-Tetrachloroethane	.50	ND	U
541-73-1	1,3-Dichlorobenzene	.50	ND	U
106-46-7	1,4-Dichlorobenzene	.50	ND	U
95-50-1	1,2-Dichlorobenzene	.50	ND	שׁ
		<u> </u>		.

Anametrix ID : 93113235R

Project ID : A932789
Cample ID : B2-1-2.5
Latrix : SOIL
Date Sampled :11/24/93 Analyst : Zy Supervisor : X atrix : SOIL

Date Sampled :11/24/93

Date Analyzed :12/ 2/93

Instrument ID : AD15

Dilution Factor : 1.0 Conc. Units : ug/Kg

1				
CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
75-71-8 74-87-3 75-83-9 75-83-9 75-69-4 76-35-4 75-60-3 75-60-3 75-66-3 75-56-63-2 75-66-3 71-23-5 107-01-5 107-01-5 10061-02-6 79-00-5 124-48-1 108-25-34-1 108-25-34-1 108-25-34-1 108-25-34-1 108-5-5-1 106-5-34-1 108-5-34-1 108-5-5-1	Dichlorodifluoromethane Chloromethane Vinyl chloride Bromomethane Chloroethane Trichlorofluoromethane Trichlorotrifluoroethane 1,1-Dichloroethene Methylene chloride trans-1,2-Dichloroethene 1,1-Dichloroethane cis-1,2-Dichloroethene Chloroform 1,1,1-Trichloroethane Carbon tetrachloride 1,2-Dichloroethane Trichloroethene 1,2-Dichloropropane Bromodichloromethane 2-Chloroethylvinylether cis-1,3-Dichloropropene trans-1,3-Dichloropropene 1,1,2-Trichloroethane Tetrachloroethene Dibromochloromethane Chlorobenzene Bromoform 1,1,2,2-Tetrachloroethane 1,3-Dichlorobenzene 1,4-Dichlorobenzene 1,2-Dichlorobenzene	00000000000000000000000000000000000000	7 5 5 5 7 7 7 7 7 7	מממממממממממממממממ ממממממ
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Anametrix ID : 9311323-06 : A932789

Project ID Sample ID : Zeg : B2-2-8 Analyst Supervisor : SOIL Matrix

Date Sampled :11/24/93
Date Analyzed :11/30/93
Instrument ID : AD15 Dilution Factor :

Conc. Units : ug/Kg

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
75-71-8 74-87-3 75-01-4 74-83-9 75-00-3 75-69-4 76-13-1 75-35-4 75-35-4 75-35-3 156-59-2 156-60-5 75-55-6 56-23-5 107-06-2 79-01-6 78-87-5 107-75-8 10061-01-5 10061-02-6 79-00-5 127-18-4 124-48-1 108-90-7 75-25-2 79-34-5 541-73-1 106-46-7 95-50-1	Dichlorodifluoromethane Chloromethane Vinyl chloride Bromomethane Chloroethane Trichlorofluoromethane Trichlorotrifluoroethane 1,1-Dichloroethene Methylene chloride trans-1,2-Dichloroethene 1,1-Dichloroethane cis-1,2-Dichloroethene Chloroform 1,1,1-Trichloroethane Carbon tetrachloride 1,2-Dichloroethane Trichloroethane Trichloroethene 1,2-Dichloropropane Bromodichloromethane 2-Chloroethylvinylether cis-1,3-Dichloropropene trans-1,3-Dichloropropene 1,1,2-Trichloroethane Tetrachloroethene Dibromochloromethane Chlorobenzene Bromoform 1,1,2,2-Tetrachloroethane 1,3-Dichlorobenzene 1,4-Dichlorobenzene 1,2-Dichlorobenzene	1.5000000000000000000000000000000000000	0 2 2 2 2 2 2 2 2 3 3 3 3 4 3 4 3 4 3 3 3 3	מממממממממממממממממממ מממממממ

Project ID : A932789
Cample ID : B2-2-8
atrix : SOIL
Date Sampled :11/24/93
Date Analyzed :12/ 2/93
Instrument ID : AD15 Anametrix ID : 93113236R Analyst : Z Supervisor : Z

Dilution Factor :

Conc. Units : ug/Kg

CAS No.   COMPOUND NAME   REPORTING LIMIT   DETECTED   Q	1				
74-87-3         Chloromethane         1.0         ND         U           75-01-4         Vinyl chloride         .50         ND         U           74-83-9         Bromomethane         .50         ND         U           75-00-3         Chloroethane         .50         ND         U           75-69-4         Trichlorofluoromethane         .50         ND         U           76-13-1         Trichloroethane         .50         ND         U           75-35-4         1,1-Dichloroethene         .50         ND         U           75-09-2         Methylene chloride         1.0         2.2           156-60-5         trans-1,2-Dichloroethene         .50         ND         U           75-34-3         1,1-Dichloroethane         .50         ND         U           67-66-3         Chloroform         .50         ND         U           71-55-6         1,1,1-Trichloroethane         .50         ND         U           70-06-2         1,2-Dichloroethane         .50         ND         U           79-01-6         Trichloroethene         .50         ND         U           75-27-4         Bromodichloromethane         .50         ND <t< td=""><td>CAS No.</td><td>COMPOUND NAME</td><td></td><td></td><td>Q</td></t<>	CAS No.	COMPOUND NAME			Q
106-46-7	75-71-8 74-87-3 75-01-4 74-83-9 75-00-3 75-69-4 76-13-1 75-35-4 75-35-4 75-35-34-3 156-59-2 67-66-3 71-55-6 56-23-5 107-06-2 79-01-6 78-87-5 75-27-4 110-75-8 10061-01-5 10061-02-6 79-00-5 127-18-4 124-48-1 108-90-7 75-25-2 79-34-5 541-73-1 106-46-7	Dichlorodifluoromethane Chloromethane Vinyl chloride Bromomethane Chloroethane Trichlorofluoromethane Trichlorotrifluoroethane 1,1-Dichloroethene Methylene chloride trans-1,2-Dichloroethene 1,1-Dichloroethane cis-1,2-Dichloroethene Chloroform 1,1,1-Trichloroethane Carbon tetrachloride 1,2-Dichloroethane Trichloroethene 1,2-Dichloropropane Bromodichloromethane 2-Chloroethylvinylether cis-1,3-Dichloropropene trans-1,3-Dichloropropene 1,1,2-Trichloroethane Tetrachloroethene Dibromochloromethane Chlorobenzene Bromoform 1,1,2,2-Tetrachloroethane 1,3-Dichlorobenzene 1,4-Dichlorobenzene	00000000000000000000000000000000000000	2.2 2.2 2.2 2.2 2.2 2.2 2.2 2.2 2.2 2.2	מממממממממממממממממ ממממממם

Project ID Sample ID : A932789 : B2-3-9.5

: SOIL Matrix

Date Sampled :11/24/93
Date Analyzed :12/6/93
Instrument ID : AD15

Anametrix ID : 9311323-07

Analyst Supervisor

Dilution Factor : Conc. Units : ug/Kg

				,
CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
75-71-8 74-87-3 75-01-4 74-83-9 75-00-3 75-69-4 76-13-1 75-35-4 75-35-4 75-34-3 156-59-2 156-60-5 75-34-3 156-59-2 67-66-3 71-55-6 56-23-5 107-06-2 79-01-6 78-87-5 75-27-4 110-75-8 10061-01-5 10061-02-6 79-00-5 127-18-4 124-48-1 108-90-7 75-25-2 79-34-5 541-73-1 106-46-7 95-50-1	Dichlorodifluoromethane Chloromethane Vinyl chloride Bromomethane Chloroethane Trichlorofluoromethane Trichlorotrifluoroethane 1,1-Dichloroethene Methylene chloride trans-1,2-Dichloroethene 1,1-Dichloroethane cis-1,2-Dichloroethene Chloroform 1,1,1-Trichloroethane Carbon tetrachloride 1,2-Dichloroethane Trichloroethene 1,2-Dichloropropane Bromodichloromethane 2-Chloroethylvinylether cis-1,3-Dichloropropene trans-1,3-Dichloropropene 1,1,2-Trichloroethane Tetrachloroethene Dibromochloromethane Chlorobenzene Bromoform 1,1,2,2-Tetrachloroethane 1,3-Dichlorobenzene 1,4-Dichlorobenzene 1,2-Dichlorobenzene	1.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00	888888888888888888888888888888888888888	ממממממממממממממממממממממממ

Project ID Sample ID : A932789 Anametrix ID : 93113237R

: B2-3-9.5 Analyst 137 : SOIL Matrix Supervisor

Date Sampled :11/24/93
Date Analyzed :12/6/93
Instrument ID : AD15 Dilution Factor : Conc. Units : ug/Kg

REPORTING AMOUNT CAS No. COMPOUND NAME LIMIT DETECTED Q Dichlorodifluoromethane \_\_\_\_ 75-71-8 1.0 ND Ū 74 - 87 - 3Chloromethane
Vinyl chloride 1.0 U ND75-01-4 .50 U ND74-83-9 Bromomethane .50 U ND Chloroethane \_ 75-00-3 .50 ND U Trichlorofluoromethane 75-69-4 .50 ND U Trichlorotrifluoroethane\_\_\_\_ 76-13-1 .50 ND U 75-35-4 1,1-Dichloroethene Methylene chloride .50 ND U 75-09-2 ND U 1.0 trans-1,2-Dichloroethene\_\_\_\_ 156-60-5 .50 ND U 1,1-Dichloroethane cis-1,2-Dichloroethene 75-34-3 .50 U ND 156-59-2 .50 ND U 67-66-3 Chloroform .50 ND U 1,1,1-Trichloroethane 71-55-6 .50 ND U Carbon tetrachloride\_\_\_\_ 56-23-5 .50 U ND 1,2-Dichloroethane\_\_\_\_ 107-06-2 .50 U ND 79-01-6 Trichloroethene Ū .50 ND 1,2-Dichloropropane Bromodichloromethane 78-87-5 .50 U ND 75-27-4 U . 50 ND 110-75-8 2-Chloroethylvinylether \_\_\_\_ cis-1,3-Dichloropropene \_\_\_\_ U 1.0 ND 10061-01-5 .50 U ND trans-1,3-Dichloropropene 10061-02-6 .50 ND U 1,1,2-Trichloroethane 79-00-5 .50 ND U Tetrachloroethene 127-18-4 U .50 ND124-48-1 Dibromochloromethane U .50 ND Chlorobenzene \_\_\_\_\_ 108-90-7 .50 U ND75-25-2 Bromoform U .50 ND 1,1,2,2-Tetrachloroethane 79-34-5 U .50 ND 541-73-1 1,3-Dichlorobenzene Ū .50 ND 106-46-7 1,4-Dichlorobenzene U .50 ND 1,2-Dichlorobenzene 95-50-1 .50 ND U

: A932789 Project ID Sample ID : B2-4-10.

: SOIL

Matrix Date Sampled :11/24/93
Date Analyzed :12/6/93
Instrument ID : AD15

Anametrix ID : 9311323-08

Analyst Supervisor

1.0 Dilution Factor : Conc. Units : ug/Kg

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
75-71-8 74-87-3 75-01-4 74-83-9 75-00-3 75-69-4 76-13-1 75-35-4 75-09-2 156-60-5 75-34-3 156-59-2 67-66-3 71-55-6 56-23-5 107-06-2 79-01-6 78-87-5 107-75-8 10061-01-5 10061-02-6 79-00-5 127-18-4 124-48-1 108-90-7 75-25-2 79-34-5 541-73-1 106-46-7	Dichlorodifluoromethane Chloromethane Vinyl chloride Bromomethane Chloroethane Trichlorofluoromethane Trichlorotrifluoroethane 1,1-Dichloroethene Methylene chloride trans-1,2-Dichloroethene 1,1-Dichloroethane cis-1,2-Dichloroethene Chloroform 1,1,1-Trichloroethane Carbon tetrachloride 1,2-Dichloroethane Trichloroethene 1,2-Dichloropropane Bromodichloromethane 2-Chloroethylvinylether cis-1,3-Dichloropropene trans-1,3-Dichloropropene 1,1,2-Trichloroethane Tetrachloroethene Dibromochloromethane Chlorobenzene Bromoform 1,1,2,2-Tetrachloroethane 1,3-Dichlorobenzene 1,4-Dichlorobenzene	1.5500000000000000000000000000000000000	888888888888888888888888888888888888888	ממממממממממממממממממממממ

Anametrix ID : 93113238R

Project ID : A932789
Cample ID : B2-4-10
Latrix : SOIL
Date Sampled :11/24/93
Date Analyzed :12/6/93
Chstrument ID : AD15 25 : B2-4-10. Analyst Supervisor

Dilution Factor : 1.0 Conc. Units : ug/Kg

Project ID Sample ID : A932789 : B3-1-3

Matrix : SOIL

Date Sampled :11/24/93
Date Analyzed :11/30/93
Instrument ID : AD15

Anametrix ID : 9311323-09

Analyst Sh Supervisor

Dilution Factor :

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
75-71-8 74-87-3 75-01-4 74-83-9 75-00-3 75-69-4 76-13-1 75-35-4 75-35-4 75-34-3 156-59-2 67-66-3 71-55-6 56-23-5 107-06-2 79-01-6 78-87-5 75-27-4 110-75-8 10061-01-5 10061-02-6 79-00-5 127-18-4 1108-90-7 75-25-2 79-34-5 541-73-1 106-46-7 95-50-1	Dichlorodifluoromethane Chloromethane Vinyl chloride Bromomethane Chloroethane Trichlorofluoromethane Trichlorotrifluoroethane 1,1-Dichloroethene Methylene chloride trans-1,2-Dichloroethene 1,1-Dichloroethane cis-1,2-Dichloroethene Chloroform 1,1,1-Trichloroethane Carbon tetrachloride 1,2-Dichloroethane Trichloroethene 1,2-Dichloropropane Bromodichloromethane 2-Chloroethylvinylether cis-1,3-Dichloropropene trans-1,3-Dichloropropene 1,1,2-Trichloroethane Tetrachloroethene Dibromochloromethane Chlorobenzene Bromoform 1,1,2,2-Tetrachloroethane 1,3-Dichlorobenzene 1,4-Dichlorobenzene 1,2-Dichlorobenzene	.50 00 00 00 00 00 00 00 00 00 00 00 00 0	3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	מסמממממממממממממממממ ממממממם

Project ID : A932789
Sample ID : B3-2-5.5
Matrix : SOIL
Date Sampled :11/24/93
Date Analyzed :11/30/93
Instrument ID : AD15

Anametrix ID : 9311323-10 Analyst : 7 Supervisor : 7

Dilution Factor : Conc. Units : ug/Kg

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
75-71-8 74-87-3 75-01-4 74-83-9 75-00-3 75-69-4 76-13-1 75-35-4 75-39-2 156-60-5 75-34-3 156-59-2 67-66-3 71-55-6 56-23-5 107-06-2 79-01-6 78-87-5 75-27-4 110-75-8 10061-01-5 10061-02-6 79-00-5 127-18-4 124-48-1 108-90-7 75-25-2 79-34-5 541-73-1 106-46-7 95-50-1	Dichlorodifluoromethane Chloromethane Vinyl chloride Bromomethane Chloroethane Trichlorofluoromethane Trichlorotrifluoroethane 1,1-Dichloroethene Methylene chloride trans-1,2-Dichloroethene 1,1-Dichloroethane cis-1,2-Dichloroethene Chloroform 1,1,1-Trichloroethane Carbon tetrachloride 1,2-Dichloroethane Trichloroethene 1,2-Dichloropropane Bromodichloromethane 2-Chloroethylvinylether cis-1,3-Dichloropropene trans-1,3-Dichloropropene 1,1,2-Trichloroethane Tetrachloroethene Dibromochloromethane Chlorobenzene Bromoform 1,1,2,2-Tetrachloroethane 1,3-Dichlorobenzene 1,4-Dichlorobenzene 1,2-Dichlorobenzene	1.5000000000000000000000000000000000000	<ul><li></li></ul>	מפממממ מממממ מספם מט ממטטממט

Anametrix ID : 9311323-11 : A932789

Project ID Sample ID S. S. Analyst : B3-3-8 Supervisor : SOIL Matrix

Date Sampled :11/24/93
Date Analyzed :12/ 7/93
Instrument ID : AD15 Dilution Factor :

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CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
75-71-8 74-87-3 75-01-4 74-83-9 75-00-3 75-69-4 76-13-1 75-35-4 75-09-2 156-60-5 75-34-3 156-59-2 67-66-3 71-55-6 56-23-5 107-06-2 79-01-6 78-87-5 75-27-4 110-75-8 10061-01-5 10061-02-6 79-00-5	Dichlorodifluoromethane Chloromethane Vinyl chloride Bromomethane Chloroethane Trichlorofluoromethane Trichlorotrifluoroethane 1,1-Dichloroethene Methylene chloride trans-1,2-Dichloroethene 1,1-Dichloroethane cis-1,2-Dichloroethene Chloroform 1,1,1-Trichloroethane Carbon tetrachloride 1,2-Dichloroethane Trichloroethene 1,2-Dichloropropane Bromodichloromethane 2-Chloroethylvinylether cis-1,3-Dichloropropene trans-1,3-Dichloropropene 1,1,2-Trichloroethane	1.0 1.0 .50 .50 .50 .50 .50 .50 .50 .50 .50	ND N	מממממממממממממממממ
127-18-4 124-48-1 108-90-7 75-25-2 79-34-5 541-73-1 106-46-7 95-50-1	Tetrachloroethene Dibromochloromethane Chlorobenzene Bromoform 1,1,2,2-Tetrachloroethane 1,3-Dichlorobenzene 1,4-Dichlorobenzene 1,2-Dichlorobenzene	.50 .50 .50 .50	ND ND ND ND ND ND	מממטט

Project ID : A932789
Sample ID : B4-2-11
Matrix : SOIL
Date Sampled :11/24/93
Date Analyzed :12/ 2/93
Instrument ID : AD15

Anametrix ID : 9311323-12 Analyst : 12, Supervisor : 12

Dilution Factor : 1.0 Conc. Units : ug/Kg

T T				
CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
75-71-8 74-87-3 75-01-4 74-83-9 75-00-3 75-69-4 76-13-1 75-35-4 75-09-2 156-60-5 75-34-3 156-59-2 67-66-3 71-55-6 56-23-5 107-06-2 79-01-6 78-87-5 75-27-4 110-75-8 10061-01-5 10061-02-6 79-00-5 127-18-4 124-48-1 108-90-7 75-25-2 79-34-5 541-73-1 106-46-7 95-50-1	Dichlorodifluoromethane Chloromethane Vinyl chloride Bromomethane Chloroethane Trichlorofluoromethane Trichlorofluoromethane 1,1-Dichloroethene Methylene chloride trans-1,2-Dichloroethene 1,1-Dichloroethane cis-1,2-Dichloroethene Chloroform 1,1,1-Trichloroethane Carbon tetrachloride 1,2-Dichloroethane Trichloroethene 1,2-Dichloropropane Bromodichloromethane 2-Chloroethylvinylether cis-1,3-Dichloropropene trans-1,3-Dichloropropene 1,1,2-Trichloroethane Tetrachloroethene Dibromochloromethane Chlorobenzene Bromoform 1,1,2,2-Tetrachloroethane 1,3-Dichlorobenzene 1,4-Dichlorobenzene 1,2-Dichlorobenzene	1.5000000000000000000000000000000000000	688888888888888888888888888888888888888	מממממממממממממממממממממממממ

Anametrix ID : 9311323-13 : A932789

Project ID Sample ID : 25 Analyst : B4-1-3 Supervisor : SOIL Matrix

Date Sampled :11/24/93
Date Analyzed :11/30/93
Instrument ID : AD15 1.0 Dilution Factor :

				<del></del> 1
CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
75-71-8 74-87-3 75-01-4 74-83-9 75-00-3 75-69-4 76-13-1 75-35-4 75-35-4 75-35-3 156-59-2 67-66-3 71-55-6 56-23-5 107-06-2 79-01-6 78-87-5 75-27-4 110-75-8 10061-01-5 10061-02-6 79-00-5 127-18-4 124-48-1 108-90-7 75-25-2 79-34-5 541-73-1 106-46-7 95-50-1	Dichlorodifluoromethane Chloromethane Vinyl chloride Bromomethane Chloroethane Trichlorofluoromethane Trichlorotrifluoroethane 1,1-Dichloroethene Methylene chloride trans-1,2-Dichloroethene 1,1-Dichloroethane cis-1,2-Dichloroethene Chloroform 1,1,1-Trichloroethane Carbon tetrachloride 1,2-Dichloroethane Trichloroethane Trichloroethane 2-Chloroethene 1,2-Dichloropropane Bromodichloromethane 2-Chloroethylvinylether cis-1,3-Dichloropropene trans-1,3-Dichloropropene 1,1,2-Trichloroethane Tetrachloroethene Dibromochloromethane Chlorobenzene Bromoform 1,1,2,2-Tetrachloroethane 1,3-Dichlorobenzene 1,4-Dichlorobenzene 1,2-Dichlorobenzene	.50	2.5 2.5 2.5 2.5 2.5 2.5 2.5 2.5 2.5 2.5	ממממחממממממממממממממ ממממממ

Project ID Sample ID Natrix Date Sampled : A932789 : B4-1-3 : SOIL

:11/24/93 :12/ 2/93 : AD15

Date Analyzed Instrument ID Anametrix ID : 931132313R Analyst : 22

Supervisor

Dilution Factor :

	<del>                                     </del>	T		T
CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
75-71-8 74-87-3 75-01-4 74-83-9 75-00-3 75-69-4 76-13-1 75-69-2 156-34-3 156-5-6 75-66-3 71-55-6 56-23-5 107-06-2 79-01-6 78-87-5 10061-02-6 79-00-5 127-18-4 1108-90-7 75-25-2 79-34-5 541-73-1 106-46-7 95-50-1	Dichlorodifluoromethane Chloromethane Vinyl chloride Bromomethane Chloroethane Trichlorofluoromethane Trichlorotrifluoroethane 1,1-Dichloroethene Methylene chloride trans-1,2-Dichloroethene 1,1-Dichloroethane cis-1,2-Dichloroethene Chloroform 1,1,1-Trichloroethane Carbon tetrachloride 1,2-Dichloroethane Trichloroethane Trichloroethene 1,2-Dichloropropane Bromodichloromethane 2-Chloroethylvinylether cis-1,3-Dichloropropene trans-1,3-Dichloropropene trans-1,3-Dichloropropene 1,1,2-Trichloroethane Tetrachloroethene Dibromochloromethane Chlorobenzene Bromoform 1,1,2,2-Tetrachloroethane 1,3-Dichlorobenzene 1,4-Dichlorobenzene 1,2-Dichlorobenzene	1.000000000000000000000000000000000000	4 5 5 888888 88888888888888888888888888	מממממממממממממממממממ ממממממם

Anametrix ID : BN3001I1 : A93278

Project ID Sample ID : 74 : sh Analyst : VBLKA1 Supervisor : SOIL Matrix

Date Sampled : 0/0/0
Date Analyzed :11/30/93
Instrument ID : AD15 Dilution Factor :

	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
CAS No.	COMPOUND WARE			
75-71-8	Dichlorodifluoromethane	1.0	ND	Ü
74-87-3	Chloromethane	1.0	ND	U
75-01-4	Chloromethane Vinyl chloride	.50	ND	<u>u</u>
74-83-9	Bromomethane	, 50	ND	Ū
75-00-3	Chloroethane	.50	ND	<u>u</u>
75-69-4	Trichlorofluoromethane	.50	ND	U
76-13-1	Trichlorotrifluoroethane	.50	ND	U
75-35-4	1.1-Dichloroethene	.50	ND	U
75-09-2	Methylene chloride	1.0	3.4	1
156-60-5	trans-1,2-Dichloroethene	.50	ND	Ū
75-34-3		.50	ND	ŭ
156-59-2	1,1-Dichloroethane cis-1,2-Dichloroethene	.50	ND	U
67-66-3	G1-1	.50	ND	U
71-55-6	1,1,1-Trichloroethane	.50	ND	U
56-23-5	Carbon tetrachloride	.50	ND	שׁ
107-06-2	1,2-Dichloroethane	.50	ND	l G
79-01-6	Trichloroethene	.50	ND	
78-87-5	1,2-Dichloropropane	.50	ND	Ŭ
75-27-4	Bromodichloromethane	.50	ND	U
110-75-8	2-Chloroethylvinylether	1.0	ND	lμ
10061-01-5	cis-1,3-Dichloropropene	.50	ND	บ
10061-02-6	trans-1,3-Dichloropropene	.50	ND	บ
79-00-5	1,1,2-Trichloroethane	.50	ND	บั
127-18-4	Tetrachloroethene	.50	ND	Ü
124-48-1	Dibromochloromethane	.50	ND	បើ
108-90-7	Chlorobenzene	.50	ND	บี
75-25-2	Bromoform	.50	ND	Ü
79-34-5	1,1,2,2-Tetrachloroethane	.50	ND	Ü
541-73-1	1,3-Dichlorobenzene	.50	ND	Ü
106-46-7	1,4-Dichlorobenzene	.50	ND	l ti
95-50-1	1,2-Dichlorobenzene	.50	ND	1

Project ID : A93278
Sample ID : VBLKA2

Anametrix ID : BD0205I1
Analyst : U7
Supervisor : L Matrix Date Sampled Tatrix : SOIL

Date Sampled : 0/ 0/ 0

Date Analyzed : 12/ 2/93

Instrument ID : AD15

Dilution Factor : Conc. Units : ug/Kg 1.0

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
CAS No.  75-71-8 74-87-3 75-01-4 74-83-9 75-09-4 76-13-1 75-69-4 76-35-4 75-60-5 75-59-2 156-60-3 71-55-6 56-23-5 107-06-2 79-01-6 78-87-5 107-06-2 79-01-6 79-00-5 127-18-4 1108-90-7 75-25-2 79-34-5 541-73-1 106-46-7 95-50-1	Dichlorodifluoromethane Chloromethane Vinyl chloride Bromomethane Chloroethane Trichlorofluoromethane Trichlorotrifluoroethane 1,1-Dichloroethene Methylene chloride trans-1,2-Dichloroethene 1,1-Dichloroethane cis-1,2-Dichloroethene Chloroform 1,1,1-Trichloroethane Carbon tetrachloride 1,2-Dichloroethane Trichloroethane Trichloroethene 1,2-Dichloropropane Bromodichloromethane 2-Chloroethylvinylether cis-1,3-Dichloropropene trans-1,3-Dichloropropene 1,1,2-Trichloroethane Tetrachloroethene Dibromochloromethane Chlorobenzene Bromoform 1,1,2,2-Tetrachloroethane 1,3-Dichlorobenzene 1,4-Dichlorobenzene 1,2-Dichlorobenzene	1.00 1.50 1.50 1.50 1.50 1.50 1.50 1.50	2 . 4 E E E E E E E E E E E E E E E E E E	

: BD0502I1 Anametrix ID : A93278

Project ID Sample ID Sample ID : VBLKA3
Matrix : SOIL
Date Sampled : 0/ 0/ 0
Date Analyzed :12/ 5/93
Instrument ID : AD15 The state of the s Analyst Supervisor

1.0 Dilution Factor :

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
CAS No.  75-71-8 74-87-3 75-01-4 74-83-9 75-00-3 75-69-4 76-13-1 75-35-4 75-09-2 156-60-5 75-34-3 156-59-2 67-66-3 71-55-6 56-23-5 107-06-2 79-01-6 78-87-5 75-27-4	Dichlorodifluoromethane Chloromethane Vinyl chloride Bromomethane Chloroethane Trichlorofluoromethane Trichlorotrifluoroethane 1,1-Dichloroethene Methylene chloride trans-1,2-Dichloroethene 1,1-Dichloroethane cis-1,2-Dichloroethene Chloroform 1,1,1-Trichloroethane Carbon tetrachloride 1,2-Dichloroethane Trichloroethane Trichloroethane Trichloroethane Trichloroethane Trichloroethane Trichloroethane Trichloroethane Trichloroethane			מממממממממממממממ
110-75-8 10061-01-5 10061-02-6 79-00-5 127-18-4 124-48-1 108-90-7 75-25-2 79-34-5 541-73-1 106-46-7 95-50-1	2-Chloroethylvinylether cis-1,3-Dichloropropene trans-1,3-Dichloropropene 1,1,2-Trichloroethane Tetrachloroethene Dibromochloromethane Chlorobenzene Bromoform 1,1,2,2-Tetrachloroethane 1,3-Dichlorobenzene 1,4-Dichlorobenzene 1,2-Dichlorobenzene	.50 .50 .50 .50 .50	ND N	<u>מפטטטטטטטטטטטטטטטטטטטטטטטטטטטטטטטטטטטט</u>

Project ID : A93278
Sample ID : VBLKA4
Matrix : SOIL
Date Sampled : 0/0/0
Date Analyzed :12/6/93
Instrument ID : AD15 Anametrix ID : BD0602I1
Analyst : 39
Supervisor : 34

Dilution Factor :

CAS No.   COMPOUND NAME   REPORTING LIMIT   DETECTED   Q
74-87-3         Chloromethane         1.0         ND         U           75-01-4         Vinyl chloride         .50         ND         U           74-83-9         Bromomethane         .50         ND         U           75-00-3         Chloroethane         .50         ND         U           75-69-4         Trichlorofluoromethane         .50         ND         U           75-35-4         Trichloroethene         .50         ND         U           75-09-2         Methylene chloride         1.0         ND         U           156-60-5         trans-1,2-Dichloroethene         .50         ND         U           75-34-3         1,1-Dichloroethane         .50         ND         U           156-60-5         trans-1,2-Dichloroethene         .50         ND         U           67-66-3         Chloroform         .50         ND         U           156-59-2         cis-1,2-Dichloroethane         .50         ND         U           67-66-3         Chloroethane         .50         ND         U           107-06-2         1,2-Dichloroethane         .50         ND         U           79-01-6         Trichloroethane         .50 <t< td=""></t<>

: BD0703I1 Project ID Sample ID Anametrix ID : A93278

Analyst : 29 : VBLKA5 Supervisor : SOIL Matrix

: 0/ 0/ 0 :12/ 7/93 : AD15 Date Sampled Date Analyzed Dilution Factor : Conc. Units : ug/Kg 1.0

Instrument ID

			<del></del>	<del></del>
CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
75-71-8	Dichlorodifluoromethane	1.0	ND	υ
74-87-3	Chloromethane	1.0	ND	U
75-01-4	Vinyl chloride	.50	ND	U
74-83-9	Bromomethane	.50	ND	U
75-00-3	Chloroethane	.50	ND	Ū
75-69-4	Trichlorofluoromethane	.50	ND	ប
76-13-1	Trichlorotrifluoroethane	.50	ND	U
75-35-4	1,1-Dichloroethene	.50	ND	U
75-09-2	Methylene chloride	1.0	ND	U
156-60-5	trans-1,2-Dichloroethene	.50	ND	U
75-34-3	1,1-Dichloroethane	.50	ND	U
156-59-2	cis-1,2-Dichloroethene	.50	ND	<u>ע</u>
67-66-3	Chloroform	.50	ND	ַ
71-55-6	1,1,1-Trichloroethane	.50	ND	U
56-23-5	Carbon tetrachloride	.50	ND	ַ
107-06-2	1,2-Dichloroethane	.50	ND	ប្រ
79-01-6	Trichloroethene	.50	ND	<u>מ</u>
78 <b>-</b> 87-5	1,2-Dichloropropane	.50	ND	U
75-27-4	Bromodichloromethane	.50	ND	ש
110-75-8	2-Chloroethylvinylether	1.0	ND	ប្រ
10061-01-5	cis-1,3-Dichloropropene	.50	ND	U
10061-02-6	trans-1,3-Dichloropropene	.50	ND	<u>n</u>
79-00-5	1,1,2-Trichloroethane	.50	ND	U
127-18-4	Tetrachloroethene	.50	ND	U
124-48-1	Dibromochloromethane	.50	ND	U
108-90-7	Chlorobenzene	.50	ND	U
75-25-2	Bromoform	.50	ND	Ţ
79-34-5	1,1,2,2-Tetrachloroethane	.50	ND	U
541-73-1	1,3-Dichlorobenzene	.50	ND	បូ
106-46-7	1,4-Dichlorobenzene	.50	ND	U
95-50-1	1,2-Dichlorobenzene	.50	ND	١٠
				.

# SURROGATE RECOVERY SUMMARY -- EPA METHOD 8010 ANAMETRIX, INC. (408) 432-8192

Project ID : A932789 Matrix : SOLID

Anametrix ID : 9311323

Analyst : 'M'
Supervisor : A

	SAMPLE ID	SU1	SU2	SU3
1	VBLKA1	75	80	74
2	B2-1-2.5	68	61 *	47 *
2	B2-2-8	47 *	46 *	20 *
4	B3-1-3	75	78	57
5	B3-2-5.5	79	84	74
4 5 6 7	B4-1-3	67	48 *	34 *
7	VBLKA2	68	75	54
8	B1-2-1.5	71	76	5 <b>5</b>
9	B2-2-8	56 *	6 <b>6</b> *	55
10	B1-4-9	48 *	52 *	43 *
11	B2-1-2.5	62 *	72	55
12	B4-2-11	75	81	54
13	B4-1-3	51 *	39 *	35 *
14	VBLKA3	79	91	76
15	B2-3-9.5	65	62 *	28 *
16	B2-4-10.	63 *	51 *	24 *
17	VBLKA4	79	96	87
18	B1-1-0.5	33 *	35 *	25 *
19	B1-3-6	55 *	58 *	36 *
20	B2-3-9.5	58 *	55 *	39 *
21 22	B2-4-10.	41 *	37 *	31 *
22	B1-1-0.5	60 *	81	31 *
23	B1-3-6	66	73	51 *
24	VBLKA5	71	80	71
25	B3-3-8	79	88	58
26	B1-4-9	55 *	60 *	40 *
27				
28				
29				
30			!	

			QC	LIMITS
CIII	_	Bromochloromethane	160	5-114)
			,	,
SU2	=	1-Chloro-2-fluorobenze	(67	7-125)
SU3	=	2-Bromochlorobenzene	(53	3-132)

<sup>\*</sup> Values outside of Anametrix QC limits

#### LABORATORY CONTROL SAMPLE EPA METHOD 601/8010 ANAMETRIX, INC. (408)432-8192

Anametrix I.D.: MN3001I1
Analyst
Supervisor Sample I.D. : LABORATORY CONTROL SAMPLE
Matrix : SOIL
SDG/Batch : 11323
Date analyzed : 11/30/93 Supervisor Instrument I.D.: HP15

COMPOUND	SPIKE AMOUNT (ug/Kg)	AMOUNT RECOVERED (ug/Kg)	PERCENT RECOVERY	%RECOVERY LIMITS
Trichlorotrifluoroethane 1,1-Dichloroethene trans-1,2-Dichloroethene 1,1-Dichloroethane cis-1,2-Dichloroethene 1,1,1-Trichloroethane Trichloroethene Tetrachloroethene Chlorobenzene 1,3-Dichlorobenzene 1,4-Dichlorobenzene 1,2-Dichlorobenzene	10 10 10 10 10 10 10 10 10 10	8.5 8.0 8.7 9.4 9.3 8.1 9.0 8.8 8.7 7.6 7.1	85% 80% 87% 94% 93% 81% 90% 88% 76% 71% 72%	57 - 123 56 - 118 60 - 116 69 - 119 68 - 108 65 - 111 67 - 112 55 - 124 67 - 124 63 - 120 65 - 120 70 - 114

<sup>\*</sup> Limits based on data generated by Anametrix, Inc., November, 1993.

#### LABORATORY CONTROL SAMPLE EPA METHOD 601/8010 ANAMETRIX, INC. (408) 432-8192

Anametrix I.D.: MD020111

Sample I.D. : LABORATORY CONTROL SAMPLE
Matrix : SOIL
SDG/Batch : 11323 Analyst : th Supervisor : A Instrument I.D.: HP15 Date analyzed : 12/02/93

COMPOUND	SPIKE AMOUNT (ug/Kg)	AMOUNT RECOVERED (ug/Kg)	PERCENT RECOVERY	RECOVERY LIMITS
Trichlorotrifluoroethane 1,1-Dichloroethene trans-1,2-Dichloroethene	10 10 10	9.1 8.7 9.2	91% 87% 92%	57 - 123 56 - 118 60 - 116
1,1-Dichloroethane cis-1,2-Dichloroethene 1,1,1-Trichloroethane	10 10	10.3 10.2	103% 102%	69 - 119 68 - 108
Trichloroethene Tetrachloroethene	10 10 10	9.5 9.6 9.2	95% 96% 92%	65 - 111 67 - 112 55 - 124
Chlorobenzene 1,3-Dichlorobenzene 1,4-Dichlorobenzene	10 10 10	9.4 8.2	94% 82%	67 - 124 63 - 120
1,2-Dichlorobenzene	10	7.7 8.0	77 <b>%</b> 80%	65 - 120 70 - 114

<sup>\*</sup> Limits based on data generated by Anametrix, Inc., November, 1993.

# LABORATORY CONTROL SAMPLE EPA METHOD 601/8010 ANAMETRIX, INC. (408)432-8192

Sample I.D. : LABORATORY CONTROL SAMPLE Anametrix I.D. : MD050111

Matrix : SOIL Analyst Supervisor : The Date analyzed : 12/05/93 Instrument I.D.: HP15

COMPOUND	SPIKE AMOUNT (ug/Kg)	AMOUNT RECOVERED (ug/Kg)	PERCENT RECOVERY	%RECOVERY LIMITS
Trichlorotrifluoroethane 1,1-Dichloroethene trans-1,2-Dichloroethene 1,1-Dichloroethane cis-1,2-Dichloroethene 1,1,1-Trichloroethane Trichloroethene Tetrachloroethene Chlorobenzene 1,3-Dichlorobenzene 1,4-Dichlorobenzene 1,2-Dichlorobenzene	10 10 10 10 10 10 10 10 10 10	8.9 8.5 9.2 9.9 9.8 8.7 9.0 9.3 7.8 7.5	89% 85% 92% 99% 98% 87% 99% 93% 73% 75%	57 - 123 56 - 118 60 - 116 69 - 119 68 - 108 65 - 111 67 - 112 55 - 124 67 - 124 63 - 120 65 - 120 70 - 114

<sup>\*</sup> Limits based on data generated by Anametrix, Inc., November, 1993.

#### LABORATORY CONTROL SAMPLE EPA METHOD 601/8010 ANAMETRIX, INC. (408) 432-8192

Anametrix I.D.: MD060111

Sample I.D. : LABORATORY CONTROL SAMPLE
Matrix : SOIL
SDG/Batch : 11323 Analyst Supervisor Date analyzed : 12/06/93 Instrument I.D.: HP15

COMPOUND	SPIKE AMOUNT (ug/Kg)	AMOUNT RECOVERED (ug/Kg)	PERCENT RECOVERY	%RECOVERY LIMITS
Trichlorotrifluoroethane 1,1-Dichloroethene trans-1,2-Dichloroethene 1,1-Dichloroethane cis-1,2-Dichloroethene 1,1,1-Trichloroethane Trichloroethene	10 10 10 10 10	9.4 8.7 9.2 9.5 9.8 9.3	94% 87% 92% 95% 98% 93%	57 - 123 56 - 118 60 - 116 69 - 119 68 - 108 65 - 111
Tetrachloroethene Tetrachloroethene Chlorobenzene 1,3-Dichlorobenzene 1,4-Dichlorobenzene 1,2-Dichlorobenzene	10 10 10 10 10	9.7 9.6 9.3 8.1 8.2 8.0	97% 96% 93% 81% 82% 80%	67 - 112 55 - 124 67 - 124 63 - 120 65 - 120 70 - 114

<sup>\*</sup> Limits based on data generated by Anametrix, Inc., November, 1993.

# LABORATORY CONTROL SAMPLE EPA METHOD 601/8010 ANAMETRIX, INC. (408)432-8192

Anametrix I.D.: MD0701I1
Analyst
Supervisor: Sample I.D. : LABORATORY CONTROL SAMPLE Matrix : SOIL : SOIL Matrix Matrix : SOIL SDG/Batch : 11323 Supervisor Instrument I.D.: HP15 Date analyzed : 12/07/93

COMPOUND	SPIKE AMOUNT (ug/Kg)	AMOUNT RECOVERED (ug/Kg)	PERCENT RECOVERY	%RECOVERY LIMITS
Trichlorotrifluoroethane 1,1-Dichloroethene trans-1,2-Dichloroethene 1,1-Dichloroethane cis-1,2-Dichloroethene 1,1,1-Trichloroethane Trichloroethene Tetrachloroethene Chlorobenzene 1,3-Dichlorobenzene 1,4-Dichlorobenzene 1,2-Dichlorobenzene	10 10 10 10 10 10 10 10 10 10	8.4 8.0 8.9 10.1 10.4 8.9 9.7 9.2 10.2 10.1 9.2	84% 80% 89% 101% 104% 89% 97% 92% 102% 101% 92% 108%	57 - 123 56 - 118 60 - 116 69 - 119 68 - 108 65 - 111 67 - 112 55 - 124 67 - 124 63 - 120 65 - 120 70 - 114

<sup>\*</sup> Limits based on data generated by Anametrix, Inc., November, 1993.



# APPLIED GEOSCIENCES INC.

9311373

# CHAIN-OF-CUSTODY RECORD

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# Inchcape Testing Services Anametrix Laboratories

1961 Concourse Drive Suite E San Jose, CA 95151 Tel: 408-452-8192 Fax: 408-432-8198

MR. ALEX GALLEGO APPLIED GEOSCIENCES INC 1641 NORTH FIRST STREET SUITE 235 SAN JOSE, CA 95112

Workorder # : 9311324
Date Received : 11/24/93
Project ID : A932789

Purchase Order: N/A

The following samples were received at Anametrix, Inc. for analysis :

ANAMETRIX ID	CLIENT SAMPLE ID
9311324- 1	B1-1W
9311324- 2	B2-1W
9311324- 3	B3-1W
9311324- 4	B4-1W
9311324- 5	TB1-1W
9311324- 6	BL1-1W

This report consists of 13 pages not including the cover letter, and is organized in sections according to the specific Anametrix laboratory group or section which performed the analysis(es) and generated the data. The Report Summary that precedes each section will help you determine which Anametrix group is responsible for those test results, and will bear the signatures of the department supervisor and the chemist who have reviewed the analytical data. Please refer all questions to the department supervisor who signed the form.

Anametrix is certified by the California Department of Health Services (DHS) to perform environmental testing under Certificate Number 1234. A detailed list of the approved fields of testing can be obtained by calling our office, or the DHS Environmental Laboratory Accreditation Program at (415)540-2800.

If you have any further questions or comments on this report, please give us a call as soon as possible. Thank you for using Anametrix.

Sarah Schoen, Ph.D. Laboratory Director 12-01-93

Date



# ANAMETRIX REPORT DESCRIPTION GC

# Organic Analysis Data Sheets (OADS)

OADS forms contain tabulated results for target compounds. The OADS are grouped by method and, within each method, organized sequentially in order of increasing Anametrix ID number.

# Surrogate Recovery Summary (SRS)

SRS forms contain quality assurance data. An SRS form will be printed for each method,  $\underline{if}$  the method requires surrogate compounds. They will list surrogate percent recoveries for all samples and any method blanks. Any surrogate recovery outside the established limits will be flagged with an "\*", and the total number of surrogates outside the limits will be listed in the column tabelled "Total Out".

# Matrix Spike Recovery Form (MSR)

MSR forms contain quality assurance data. They summarize percent recovery and relative percent difference information for matrix spikes and matrix spike duplicates. This information is a statement of both accuracy and precision. Any percent recovery or relative percent difference outside established limits will be flagged with an "\*", and the total number outside the limits will be listed at the bottom of the page. Not all reports will contain an MSR form.

#### **Oualifiers**

Anametrix uses several data qualifiers (Q) in its report forms. These qualifiers give additional information on the compounds reported. They should help a data reviewer to verify the integrity of the analytical results. The following is a list of qualifiers and their meanings:

- U Indicates that the compound was analyzed for, but was not detected at or above the specified reporting limit.
- Indicates that the compound was detected in the associated method blank.
- J Indicates that the compound was detected at an amount below the specified reporting limit. Consequently, the amount should be considered an approximate value. Tentatively identified compounds will always have a "J" qualifier because they are not included in the instrument calibration.
- E Indicates that the reported amount exceeded the linear range of the instrument calibration.
- D Indicates that the compound was detected in an analysis performed at a secondary dilution.

Absence of a qualifier indicates that the compound was detected at a concentration at or above the specified reporting limit.

#### REPORTING CONVENTIONS

- Due to a size limitation in our data processing step, only the first eight (8) characters of your project 1D and sample ID will be printed on the report forms. However, the report cover letter and report summary pages display up to twenty (20) characters of your project and sample IDs.
- Amounts reported are gross values, i.e., not corrected for method blank contamination.

# REPORT SUMMARY ANAMETRIX, INC. (408)432-8192

MR. ALEX GALLEGO

APPLIED GEOSCIENCES INC

1641 NORTH FIRST STREET SUITE 235 SAN JOSE, CA 95112

Workorder # : 9311324 Date Received : 11/24/93 Project ID : A932789

Purchase Order: N/A Department : GC Sub-Department: VOA

# SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9311324- 1	B1-1W	WATER	11/24/93	8010
9311324- 2	B2-1W	WATER	11/24/93	8010
9311324- 3	B3-1W	WATER	11/24/93	8010
9311324- 4	B4-1W	WATER	11/24/93	8010
9311324- 5	TB1-1W	WATER	11/24/93	8010
9311324- 6	BL1-1W	WATER	11/24/93	8010

# REPORT SUMMARY ANAMETRIX, INC. (408)432-8192

MR. ALEX GALLEGO

APPLIED GEOSCIENCES INC

1641 NORTH FIRST STREET SUITE 235

SAN JOSE, CA 95112

Workor

Date R

Projec

Purcha

Workorder # : 9311324 Date Received : 11/24/93 Project ID : A932789 Purchase Order: N/A

Department : GC Sub-Department: VOA

# QA/QC SUMMARY :

- No QA/QC problems encountered for samples.

M. Hassenian 12/1/93 Department Supervisor Date Tay hi Memorzadeh 12/01/93 Chemist Date

Anametrix ID : 9311324-01 Analyst : TM Project ID : A932789
Cample ID : B1-1W

atrix : WATER
Date Sampled :11/24/93
Date Analyzed :11/30/93
Instrument ID : HP24 Supervisor : ~તું

Dilution Factor : Conc. Units : ug/L 1.0

		<u> </u>	····	<del> </del>
CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
75-71-8 74-87-3 75-01-4 74-83-9 75-00-3 75-69-4 76-13-1 75-35-4 75-36-3 75-60-5 75-56-34-3 156-55-6 56-34-5 107-06-2 79-01-6 78-87-5 10-75-8 10061-02-6 79-00-5 127-18-4 110-75-8 10061-02-6 79-00-5 127-18-4 124-48-1 108-90-7 75-25-2 79-34-5 541-73-1 106-46-7 95-50-1	Dichlorodifluoromethane Chloromethane Vinyl chloride Bromomethane Chloroethane Trichlorofluoromethane Trichlorotrifluoroethane 1,1-Dichloroethene Methylene chloride trans-1,2-Dichloroethene 1,1-Dichloroethane cis-1,2-Dichloroethene Chloroform 1,1,1-Trichloroethane Carbon tetrachloride 1,2-Dichloroethane Trichloroethene 1,2-Dichloropropane Bromodichloromethane 2-Chloroethylvinylether cis-1,3-Dichloropropene trans-1,3-Dichloropropene 1,1,2-Trichloroethane Tetrachloroethene Dibromochloromethane Chlorobenzene Bromoform 1,1,2,2-Tetrachloroethane 1,3-Dichlorobenzene 1,4-Dichlorobenzene 1,2-Dichlorobenzene	1.555555555555555555555555555555555555	9. 0. 5. 19. 0. 5. 19. 0. 5. 19. 0. 5.	ממממממ ממממממ ממממ מממממממממ

Anametrix ID : 9311324-02

Project ID : A932789 Analyst Supervisor : 7 M : B2-1W Sample ID : 2

Matrix : WATER
Date Sampled :11/24/93
Date Analyzed :11/30/93
Instrument ID : HP24 Dilution Factor : 1.0 Conc. Units : ug/L

AMOUNT REPORTING DETECTED 0 LIMIT COMPOUND NAME CAS No. U ND 1.0 Dichlorodifluoromethane \_\_\_\_ 75-71-8 U 1.0 NDChloromethane 74-87-3 U ND .50 75-01-4 Vinyl chloride\_\_\_\_ U .50 ND Bromomethane \_\_\_\_\_ 74-83-9 U .50 ND Chloroethane 75-00-3 U .50 ND Trichlorofluoromethane 75-69-4 Trichlorofluoromethane\_\_\_\_\_Trichlorotrifluoroethane\_\_\_\_ .50 Ū ND76-13-1 Ū .50 ND1.1-Dichloroethene 75-35-4 U ND 1.0 Methylene chloride 75-09-2 U .50 NDtrans-1,2-Dichloroethene 156-60-5 U .50 ND1,1-Dichloroethane 75 - 34 - 3 U ND .50 cis-1,2-Dichloroethene\_\_\_\_ 156-59-2 U .50 ND Chloroform 67-66-3 Ŭ .50 ND1,1,1-Trichloroethane \_\_\_\_\_ 71-55-6 U .50 ND 56-23-5 Carbon tetrachloride\_\_\_\_\_ U .50 ND 1,2-Dichloroethane\_\_\_\_\_ 107-06-2 U .50 ND Trichloroethene 79-01-6 U ND .50 1,2-Dichloropropane 78 - 87 - 5 U ND .50 Bromodichloromethane \_\_\_\_ 75-27-4 U 1.0 ND 2-Chloroethylvinylether \_\_\_\_ cis-1,3-Dichloropropene \_\_\_ 110-75-8 U .50 ND 10061-01-5 U .50 NDtrans-1,3-Dichloropropene \_\_\_ 10061-02-6 U .50 ND 1,1,2-Trichloroethane \_\_\_\_\_ 79-00-5 .50 U ND Tetrachloroethene 127-18-4 U .50 ND Dibromochloromethane\_\_\_\_\_ 124-48-1 U ND .50 Chlorobenzene \_\_\_\_\_ 108-90-7 U .50 ND Bromoform 75-25-2 U .50 ND 1,1,2,2-Tetrachloroethane 79-34-5 U .50 ND 1,3-Dichlorobenzene 541-73-1 1,4-Dichlorobenzene .50 ND U 106-46-7 ND U .50 1,2-Dichlorobenzene 95-50-1

Project ID : A932789

ample ID : B3-1W

Matrix : WATER

Date Sampled :11/24/93

ate Analyzed :11/30/93

Instrument ID : HP24 Anametrix ID : 9311324-03 Analyst : TM Supervisor : A

Dilution Factor : 1.0

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
75-71-8 74-87-3 75-01-4 74-83-9 75-00-3 75-69-4 76-13-1 75-35-4 75-09-2 156-60-5 75-34-3 156-59-2 67-66-3 71-55-6 56-23-5 107-06-2 79-01-6 78-87-5 75-27-4 110-75-8 10061-01-5 10061-02-6 79-00-5 127-18-4 124-48-1 108-90-7 75-25-2 79-34-5 541-73-1 106-46-7 95-50-1	Dichlorodifluoromethane Chloromethane Vinyl chloride Bromomethane Chloroethane Trichlorofluoromethane Trichlorotrifluoroethane 1,1-Dichloroethene Methylene chloride trans-1,2-Dichloroethene 1,1-Dichloroethane cis-1,2-Dichloroethene Chloroform 1,1,1-Trichloroethane Carbon tetrachloride 1,2-Dichloroethane Trichloroethene 1,2-Dichloropropane Bromodichloromethane 2-Chloroethylvinylether cis-1,3-Dichloropropene trans-1,3-Dichloropropene 1,1,2-Trichloroethane Tetrachloroethene Dibromochloromethane Chlorobenzene Bromoform 1,1,2,2-Tetrachloroethane 1,3-Dichlorobenzene 1,4-Dichlorobenzene 1,2-Dichlorobenzene	00000000000000000000000000000000000000	的复数的现在分词。 14	מממממממממממ ממממ ממממממממ

: 9311324-04 Anametrix ID : A932789 Project ID

:TM Analyst : B4-1W Sample ID Supervisor : WATER Matrix

1.0 Dilution Factor :

Date Sampled :11/24/93
Date Analyzed :11/30/93
Instrument ID : HP24 Conc. Units : ug/L

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
75-71-8 74-87-3 75-01-4 74-83-9 75-00-3 75-69-4 76-13-1 75-35-4 75-09-2 156-60-5 75-34-3 156-59-2 67-66-3 71-55-6 56-23-5 107-06-6 78-87-5 75-27-4 110-75-8 10061-01-5 10061-02-6 79-00-5 127-18-4 124-48-1 108-90-7 75-25-2 79-34-5 541-73-1 106-46-7 95-50-1	Dichlorodifluoromethane Chloromethane Vinyl chloride Bromomethane Chloroethane Trichlorofluoromethane Trichlorotrifluoroethane 1,1-Dichloroethene Methylene chloride trans-1,2-Dichloroethene 1,1-Dichloroethane cis-1,2-Dichloroethene Chloroform 1,1,1-Trichloroethane Carbon tetrachloride 1,2-Dichloroethane Trichloroethane Trichloroethane Trichloroethene 1,2-Dichloropropane Bromodichloromethane 2-Chloroethylvinylether cis-1,3-Dichloropropene trans-1,3-Dichloropropene 1,1,2-Trichloroethane Tetrachloroethene Dibromochloromethane Chlorobenzene Bromoform 1,1,2,2-Tetrachloroethane 1,3-Dichlorobenzene 1,4-Dichlorobenzene 1,2-Dichlorobenzene	1.50 0.50 0.50 0.50 0.50 0.50 0.50 0.50	255555555555555555555555555555555555555	מממממממממממממממממממממממ

Anametrix ID : 9311324-05 Analyst : TM : A932789

Project ID ample ID matrix ample ID : TB1-1W
matrix : WATER
Date Sampled :11/24/93
nstrument ID : HP24 Supervisor ·sh

Dilution Factor : 1.0

	DETECTED Q
74-87-3	

: A932789

Anametrix ID : 9311324-06
Analyst : TM
Supervisor : A Project ID Sample ID : BL1-1W : WATER Matrix

Date Sampled :11/24/93
Date Analyzed :11/30/93
Instrument ID : HP24 Dilution Factor : 1.0

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
75-71-8 74-87-3 75-01-4 74-83-9 75-00-3 75-69-4 76-13-1 75-35-4 75-09-2 156-60-5 75-34-3 156-59-2 67-66-3 71-55-6 56-23-5 107-06-2 79-01-6 78-87-5 75-27-4 110-75-8 10061-01-5 10061-01-5 10061-02-6 79-00-5 127-18-4 124-48-1 108-90-7 75-25-2 79-34-5 541-73-1 106-46-7 95-50-1	Dichlorodifluoromethane Chloromethane Vinyl chloride Bromomethane Chloroethane Trichlorofluoromethane Trichlorotrifluoroethane 1,1-Dichloroethene Methylene chloride trans-1,2-Dichloroethene 1,1-Dichloroethane cis-1,2-Dichloroethene Chloroform 1,1,1-Trichloroethane Carbon tetrachloride 1,2-Dichloroethane Trichloroethene 1,2-Dichloropropane Bromodichloromethane 2-Chloroethylvinylether cis-1,3-Dichloropropene trans-1,3-Dichloropropene 1,1,2-Trichloroethane Tetrachloroethene Dibromochloromethane Chlorobenzene Bromoform 1,1,2,2-Tetrachloroethane 1,3-Dichlorobenzene 1,4-Dichlorobenzene 1,2-Dichlorobenzene	.50 .50 .50 .50 .50 1.0 .50	888888888888888888888888888888888888888	ממסממממממממממממממממממממ

: A93278 : VBLKB1 Anametrix ID : BN3002I1

Project ID ample ID Matrix Analyst : TM Supervisor : A Matrix : WATER
Date Sampled : 0/ 0/ 0
Pate Analyzed :11/30/93
Instrument ID : HP24

Dilution Factor : Conc. Units : ug/L 1.0

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
75-71-8 74-87-3 75-01-4 74-83-9 75-00-3 75-69-4 76-13-1 75-35-4 75-09-2 156-60-5 75-34-3 156-59-2 156-63-3 71-55-6 56-23-5 107-06-2 79-01-6 78-87-5 75-27-4 110-75-8 10061-01-5 10061-02-6 79-00-5 127-18-4 124-48-1 108-90-7 75-25-2 79-34-5 541-73-1 106-46-7	Dichlorodifluoromethane Chloromethane Vinyl chloride Bromomethane Chloroethane Trichlorofluoromethane Trichlorotrifluoroethane 1,1-Dichloroethene Methylene chloride trans-1,2-Dichloroethene 1,1-Dichloroethane cis-1,2-Dichloroethene Chloroform 1,1,1-Trichloroethane Carbon tetrachloride 1,2-Dichloroethane Trichloroethene 1,2-Dichloropropane Bromodichloromethane 2-Chloroethylvinylether cis-1,3-Dichloropropene trans-1,3-Dichloropropene 1,1,2-Trichloroethane Tetrachloroethene Dibromochloromethane Chlorobenzene Bromoform 1,1,2,2-Tetrachloroethane 1,3-Dichlorobenzene 1,4-Dichlorobenzene	1.000000000000000000000000000000000000		מממממממממממממממממממממ ע
95-50-1	1,2-Dichlorobenzene	.50	ND	Ŭ

# SURROGATE RECOVERY SUMMARY -- EPA METHOD 8010 ANAMETRIX, INC. (408)432-8192

Project ID : A932789 Matrix : LIQUID Anametrix ID: 9311324

Analyst Supervisor : A

	SAMPLE ID	SU1	SU2	SU3
12345678910112 13415678920222324 252222222222222222222222222222222	VBLKB1 B2-1W B2-1WMS B2-1WMSD B1-1W B3-1W B4-1W TB1-1W BL1-1W	67 72 81 83 89 85 70 70 67	83 88 92 96 92 89 90 88 86	82 86 92 93 89 85 87 86 85
27 28				
29 30				

# QC LIMITS

SU1 = Bromochloromethane (56-99) SU2 = 1-Chloro-2-fluorobenze (73-110) SU3 = 2-Bromochlorobenzene (65-108)

\* Values outside of Anametrix QC limits

# MATRIX SPIKE RECOVERY FORM -- EPA METHOD 8010 ANAMETRIX, INC. (408)432-8192

roject ID ample ID : A932789

Anametrix ID : 9311324-02

: B2-1W WATER Matrix

Analyst : TM Supervisor : TM

ate Sampled :11/24/93 ate Analyzed :11/30/93 Instrument ID : HP24

COMPOUND	SPIKE ADDED (ug/L )	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L )	MS % REC	%REC LIMITS
Trichlorotrifluoroethan 1,1-Dichloroethene trans-1,2-Dichloroethen 1,1-Dichloroethane cis-1,2-Dichloroethene 1,1,1-Trichloroethane Trichloroethene Tetrachloroethene Chlorobenzene 1,3-Dichlorobenzene 1,4-Dichlorobenzene 1,2-Dichlorobenzene	10.0	.0.00.00.00.00.00.00.00.00.00.00.00.00.	8.4 9.9 9.7 10.5 10.4 10.0 10.3 9.9 9.6 9.9 9.8 10.1	84 99 97 105 104 100 103 99 96 99	42-111 47-128 63-110 72-128 62-126 65-128 64-115 64-111 75-124 68-119 72-125 70-131

COMPOUND	SPIKE ADDED (ug/L )	MSD CONCENTRATION (ug/L )	MSD % REC	% RPD	RPD LIMITS	%REC LIMITS
Trichlorotrifluoroethan 1,1-Dichloroethene_ trans-1,2-Dichloroethen 1,1-Dichloroethane cis-1,2-Dichloroethene 1,1,1-Trichloroethane Trichloroethene Tetrachloroethene Chlorobenzene 1,3-Dichlorobenzene 1,4-Dichlorobenzene 1,2-Dichlorobenzene	10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0	7.5 9.1 9.8 9.8 9.3 9.3 9.3 9.3	75 91 991 998 993 993 993 993	11 7 6 7 6 8 10 6 3 5 5	25 25 25 25 25 25 25 25 25 25 25 25 25	42-111 47-128 63-110 72-128 62-126 65-128 64-115 64-111 75-124 68-119 72-125 70-131

<sup>\*</sup> Value is outside of Anametrix QC limits

RPD: 0 out of 12 outside limits Spike Recovery: 0 out of 24 outside limits

GC/VOA - PAGE 11

#### LABORATORY CONTROL SAMPLE EPA METHOD 601/8010 ANAMETRIX, INC. (408)432-8192

Sample I.D. : LABORATORY CONTROL SAMPLE Anametrix I.D.: MN3001I1

Analyst :Tm Matrix : WATER SDG/Batch : 1123311324 Date analyzed : 11/30/93 Instrument I.D.: HP24

COMPOUND	SPIKE AMOUNT (ug/L)	AMOUNT RECOVERED (ug/L)	PERCENT RECOVERY	%RECOVERY LIMITS
Trichlorotrifluoroethane 1,1-Dichloroethene trans-1,2-Dichloroethene 1,1-Dichloroethane cis-1,2-Dichloroethene 1,1,1-Trichloroethane Trichloroethene	10 10 10 10 10	8.2 9.9 9.7 10.5 10.6 10.0	82% 99% 97% 105% 106% 100%	65 - 116 64 - 125 77 - 113 85 - 129 78 - 130 83 - 125 76 - 124
Tetrachloroethene Chlorobenzene 1,3-Dichlorobenzene 1,4-Dichlorobenzene 1,2-Dichlorobenzene	10 10 10 10 10	9.7 9.7 9.9 9.8 10.0	97% 97% 99% 98% 100%	80 - 118 81 - 130 82 - 115 85 - 122 86 - 122

<sup>\*</sup> Limits based on data generated by Anametrix, Inc., November, 1993.

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APPLIE	ED GEO	SCIENC	ES INC

# 329 €

# CHAIN OF CUSTODY RECORD

SHIPMENT NO.:\_\_\_\_

PAGE 4 OF Z

DATE " 124193

PROJECT NAME: HARBOR BAY

Sample Number	Location	Type of	Sample	Type of Container	Type	of Preservation	Analysis Required
Sumple Hombet	Cocation	Material	Method	Type of Container	Temp	Chemical	- WusiAziz Mednited
31-100	Bi	WATER	TYGON TUBO	40 ml voa @ 3	ILE		6010
52-LW.	82					1	
33-1W ·	B3					1	
54-1W	B4						(
1B1-1W	TEI						
3L1-1W	BLI	(	////			<del></del>	<u> </u>
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Special Shipment / Handling / Storage Requirements: +NO CHARGEON BLINK 5 LOW

Rush!

\* Note - This does not constitute authorization to proceed with analysis