Wenatchee Landfill Targeted Brownfields Assessment Report Wenatchee, Washington TDD: 98-11-0007

Contract: 68-W6-0008 June 2000

Region 10

START

Superfund Technical Assessment and Response Team

Submitted To: Joanne LaBaw, Task Monitor United States Environmental Protection Agency 1200 Sixth Avenue Seattle, WA 98101

WENATCHEE LANDFILL TARGETED BROWNFIELDS ASSESSMENT REPORT WENATCHEE, WASHINGTON

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LIST OF ACRONYMS

<u>Acronym</u>	<u>Definition</u>	evaluation of the contract of
bgs	below ground surface	and the second of the second o
CFR	Code of Federal Regulations	mp (1.00)
CLARC	Cleanup Levels and Risk Calculations	inari Pini
CL Pesticides	Chlorinated Pesticides	
CLP	Contract Laboratory Program	
CLPAS	Contract Laboratory Program Analytical Service	
DDD	4,4-dichlorodiphenyldichloroethane	
DDE	4,4-dichlorodiphenyldichloroethylene	
DDT	4,4-dichlorodiphenyltrichloroethane	887 JAT
DQOs	data quality objectives	
DUP	duplicate services of products address the service with	
E & E	Ecology & Environment, Inc.	
EPA	United States Environmental Protection Agency	
. F	Fahrenheit	
Geoprobe TM	Geoprobe™ direct-push sampler	
IDW	investigation-derived waste	desir da
· J	The associated numerical value is an estimated quantity	oneria Meria
MCL Personal Sweet S	maximum contaminant level	
μg/L	micrograms per Liter	the contract of the contract o
μg/kg	micrograms per kilogram	
mg/kg	milligrams per kilogram	
MTCA	Model Toxics Control Act	20 A GMM
MS	matrix spike	
MSD	matrix spike duplicate	
PA	Preliminary Assessment	
PCDDs	polychlorinated dibenzo-dioxins	
PCDFs	polychlorinated dibenzo-furans	
PCBs	polychlorinated biphenyls	
PRGs	Preliminary Remediation Goals	
PWD	Public Works Department	

LIST OF ACRONYMS (CONTINUED)

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<u>Acronym</u>	<u>Definition</u>	esinelistl	anamay .
QA	quarity apparation	anorg world in the	· Paris
QC	quality control काल्यामा क्रिकेट		
%R	percent recovery snowship in all box sla	rad genació	, MAII).
R	the sample results are rejected	Chlorinaest	CL Pesticides
RPD	Relative Percent Difference	iel suranu?	9.10
SQAP	Sampling and Quality Assurance Plan	in Lienana)	EAS.
START	Superfund Technical Assessment and Respons		COO
SVOC	semivolatile organic compounds is the castlest	egrabisis A.A.	accent and a second
TAL	Target Analyte List		i naki
TBA	Targeted Brownfields Assessment	yillam stab	DOWE
TCLP	Toxicity Characteristic Leaching Procedure	associates	WITE .
TEQ	Toxic Equivalent Quantity	S. B. cychoo?	
the Historical Landfill	Chelan County Worthen Street Municipal Lan	dfill	A
the site	the Wenatchee Landfill site	traditional a	
the City	the City of Wenatchee	Fisiemps O	. Property
TM	task monitor	acinginavid	WOI
U	the associated numerical value is the sample q	uantitation limit	
UJ	the detection limit is estimated because quality	control criteria were	e not met
USGS	United States Geological Survey	g simengelimi	110
VOC	volatile organic compounds	e essangiration	V.5484.
WDOE	Washington Department of Ecology	og stakty Wint	WAYNER.
WRCC	Western Regional Climate Center	AMERICAN AND AND AND AND AND AND AND AND AND A	2000年1月1日 文、金貨幣
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WENATCHEE LANDFILL TARGETED BROWNFIELDS ASSESSMENT REPORT WENATCHEE, WASHINGTON

1. INTRODUCTION

Pursuant to United States Environmental Protection Agency (EPA) Superfund Technical Assessment and Response Team (START) Contract No. 68-W6-0008 and Technical Direction Document No. 98-11-0007, Ecology and Environment, Inc., (E & E) performed a Targeted Brownfields Assessment (TBA) at the Wenatchee Landfill site located in Wenatchee, Washington. The EPA's Brownfields Economic Redevelopment Initiative is designed to empower states, cities, tribes, communities, and other stakeholders in economic redevelopment to work together in a timely manner to prevent, assess, safely clean up, and sustainably reuse brownfields sites.

The City of Wenatchee Public Works Department (PWD) owns the property and operates on site. The City is considering the sale of the property for use as business office space and therefore requested a TBA.

This TBA consisted of limited on-site sampling at potential contaminant source areas for site characterization purposes. This report outlines the technical and analytical approaches that were employed by the START during TBA fieldwork and characterizes actual contaminants detected.

WENATOMER LANDSONS. TARGETED BROWNING DEPORT WENATOMER, WASHINGTON

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Pursuant to United States Environmental Projection Agency (EPA) Supported Technical Assessment and Response Team (START) Contract No. 68-W65003 and Technical Direction Decument Mor48-11 49007, Evology and Edvironment, Inc. (E. & F.) performed a "argeied Enounfields Assessment (FBA) at the Wattachield Indiative Londriff in Wenetcher, Washington The EPA Strawnfields Leonovic Redevelopment Initiative is accigned in empower states, cities, tribes, communities and other strawholders in schedule radevelopment to west regether in a timely named to prevent, assess, saledy create and sixualizably remain brownfields area.

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The information and descriptions provided in this section are based on a review of previous more investigations and a START site visit conducted on March 22, 1999.

2.1 SITE LOCATION AND DESCRIPTION AND DESCRIPTION AND DESCRIPTION OF THE PROPERTY AND THE P

The site is located at 25 North Worthen Street in Wenatchee, Washington (Figure 2-1), at latitude 47° 25' 35" North and longitude 120° 18' 25" West in Section 3, Township 22N, Range 20E, Willamette Meridian (USGS 1966).

The former Chelan County Worthen Street Municipal Landfill (the Historical Landfill) covered approximately 6 acres and is located adjacent to the Columbia River. The unlined Historical Landfill is located on the City of Wenatchee PWD and adjacent wastewater treatment plant property (WDOE 1985). The Historical Landfill occupies approximately 1.5 acres of the approximately 3:34 acres of mostly paved PWD property that also includes office, storage, and equipment maintenance buildings (Figure 2-2). The PWD constructed the office building in 1958. The storage and equipment maintenance buildings were constructed in the early 1970s after the closure and subsequent filling of the Historical Landfill. The Historical Landfill is located in the northeast and northwest portion of the PWD property and is covered by pavement and the storage building (Figure 2-2). Groundwater flow from the site is east toward the Columbia River. Seasonal groundwater fluctuations are expected to range from 10 to 30 feet bgs (WDOE 1985). The drainage area for the site likely consists of only the 3.34 acres of PWD property because of barriers such as sidewalks and curbs surrounding the property. The PWD property is generally flat with minimal slope except for the outline of the Historical Landfill, which is defined by settling of the pavement (approximately 4 to 6 inches below grade) in the PWD parking lot (Figure 2-2). The entire site is paved, and surface water runoff travels via sheet flow along the pavement to the six surface water collection points (Figure 2-2). All storm drains lead to an outfall at Riverfront Park and into the Columbia River. Any spills from current operations would likely flow into these collection points and therefore would not impact local groundwater.

The PWD property is fenced with two gated entrances along North Worthen Street. The land uses within 1 mile of the site are mainly industrial, commercial, recreational, and residential. Industrial

and commercial uses include shopping in the downtown retail district of Wenatchee, agricultural product processing, and operations at the wastewater treatment plant. Recreational activities include the use of Riverfront Park for walking and jogging and the Columbia River, which is used for boating and fishing. A total of 5,142 residences with 11,194 people are within 1 mile of the site (EPA 1999). The nearest residences are located approximately 0.25 mile west of the site. Under current conditions, there is little potential for direct contact with one site soils and inhalation of windblown dust because of the pavement covering the Historical Landfill.

2.2 WENATCHEE REGIONAL CONDITIONS OF THE THE TWO PROPERTY OF THE PROPERTY OF T

Wenatchee is located in central Washington in the Cascade Mountains at an elevation of 620 to 900 feet (USGS 1966). The average temperatures in January range from 21.2° to 33.5° Fahrenheit (°F) and in July range from 60.1° to 87.1°F. Annual precipitation is 8.58 inches, with 33.0 inches of snowfall (WRCC 1999). The flood hazard due to the proximity of the site to the Columbia River is moderate as the site is located partially within a 100-year flood plain (WDOE 1985).

The primary municipal water supplies (approximately 99.99 percent) within the city are provided by the City of Wenatchee Water Department and the Chelan County Public Utilities Department water system (Curry 1999). These public systems draw water from an aquifer located on the east side of the Columbia River approximately 6 miles north of the site and east of the Rocky Reach Dam. Public water is treated and piped throughout the city (Curry 1999; Erickson 1999; Walker 1999). Groundwater at the site is not used for drinking water. All known wells within 3 miles of the site are located across the Columbia River, which serves as a hydrological barrier (WDOE 1985). The nearest known drinking water well is located 0.5 miles east of the site.

2.3 SITE OWNERSHIP HISTORY Date grations were extend than extendible and how entrued to deut the

The Historical Landfill began operations in 1952 as a municipal landfill owned and operated by the City (WDOE 1985). The Historical Landfill ceased operations in the early 1970s. The City has owned the property since 1952, however, ownership before that date is unknown.

2.4 SITE OPERATIONS AND WASTE CHARACTERISTICS

The Historical Landfill operated from 1952 until the early 1970s (EPA 1981). Site operations included disposal and occasional open burning of residential solid wastes. There are no records of hazardous material disposal (WDOE 1985), trash separation areas, or specific burn pit locations within

the landfill. Waste monitoring records were not maintained during operation of the Historical Landfill, therefore suspected potential contaminants of concern include volatile organic compounds (VOCs); semivolatile organic compounds (SVOCs); chlorinated pesticides (CL) Pesticides)/polychlorinated biphenyls (PCBs); Target Analyte List (TAL) metals, and, based on the reported incineration of on-site waste, polychlorinated dibenzo-dioxins (PCDDs) and polychlorinated dibenzo-furans (PCDFs).

solid wastes was disposed of at the Bischrisal Landill. If outsimants associated with

Landtill area a mecantially impacted from the Historical Landtill. Potential contamination

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No records of hazardous wastes were found during a non-sampling Preliminary Assessment (PA) conducted at the Historical Landfill in 1985 by the WDOE. No leachate was observed migrating from the Historical Landfill during the PA (WDOE 1985), and groundwater was estimated to range between 10 and 30 feet below ground surface (bgs). Garburgail (Ultracional) encarati (1977

concern anclade VOCs, SVOCs, OL Pesticides/PCBs, V.

of concess identified FOU. NEW MEMBERSHOPP CREENING

START Site Visit

On March 22, 1999, the EPA task monitor (TM) and START project manager conducted a site visit and interviewed City personnel, including the director of the Department of Community Development and the Street/Fleet and Facilities manager for the PWD, to collect information regarding historical, current, and potential future use of the property. The EPA and START personnel toured the property with the City personnel and observed the approximate outline of the Historical Landfill based on the settling in the pavement as described by City employees (Woodke 1999). Most of the historical site usage information was obtained from the PA Report (WDOE 1985).

2.4.3 Potential Future Property Uses

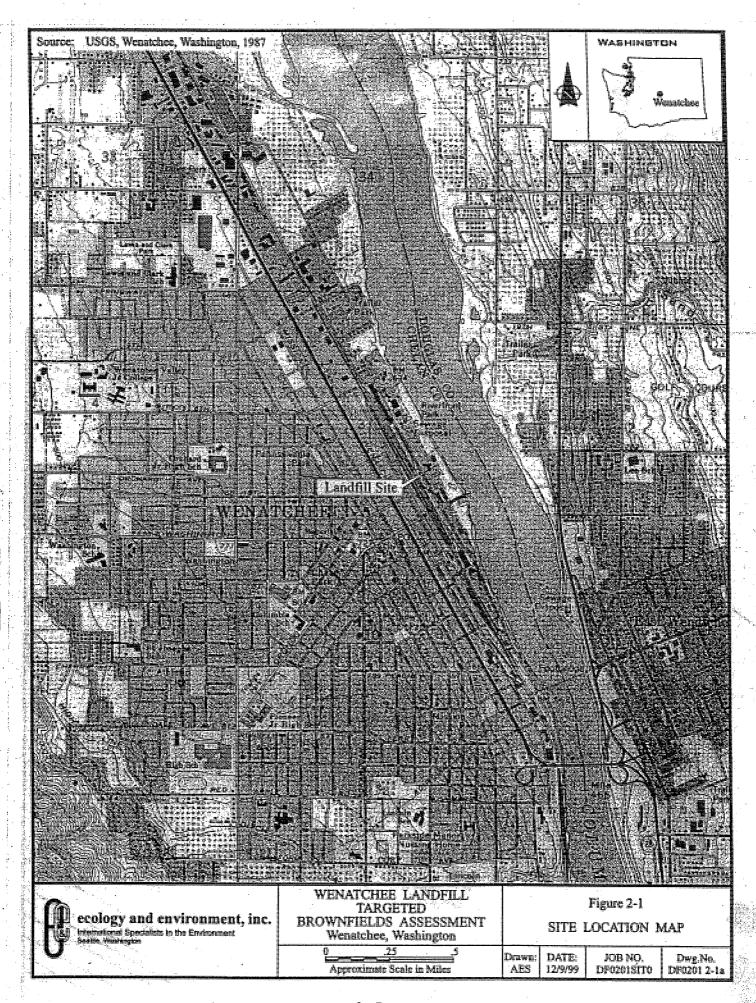
City personnel have indicated that the PWD property may be sold to outside parties interested in redeveloping the property, potentially as a business park or hotel location (Woodke 1999), however specific information on potential development(s) at the PWD property have not been provided to the START.

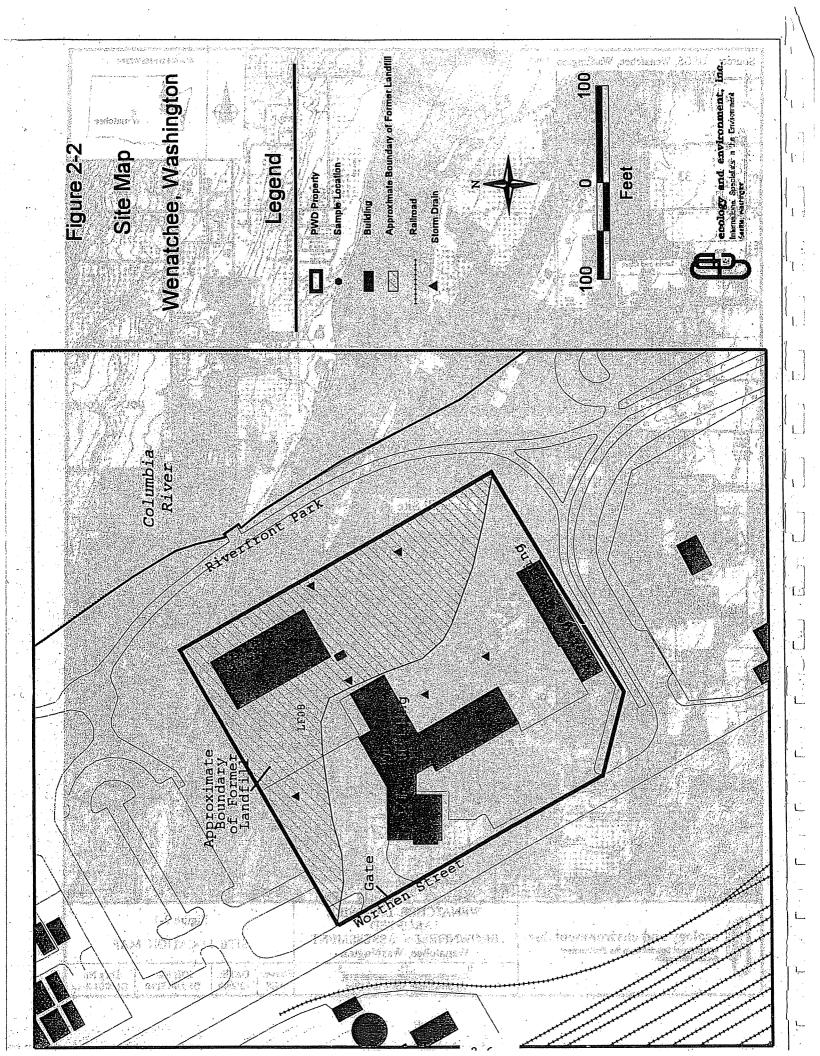
2.4.4 **Areas of Potential Contamination**

Sampling was conducted at those areas considered to be potential contamination sources and at on-site areas that may have been contaminated through migration of hazardous substances from sources on site. Based on a review of background information and discussions with site representatives, the following areas were planned for evaluation under the Wenatchee Landfill TBA:

the landfill. Waste monitoring records were not encentained during operation of the Historical Landfill.

- Historical Landfill Soil/Waste: An unknown quantity of undocumented domestic solid hossing wastes was disposed of at the Historical Landfill. Burning of wastes also was below to a documented. Potential contaminants of concern include VOCs, SVOCs, CL. Pesticides/PCBs, TAL metals, and PCDDs/PCDFs;
 - Historical Landfill Groundwater: An unknown quantity of undocumented domestic solid wastes was disposed of at the Historical Landfill. Contaminants associated with the solid waste are potentially migrating to groundwater. Potential contaminants of concern include VOCs, SVOCs, CL Pesticides/PCBs, TAL metals, and PCDDs/PCDFs;
- PWD Property (Non-Landfill) Soil: Soil on the PWD property outside of the Historical Landfill area may be impacted by leachate migrating from the Historical Landfill contaminants of concern include VOCs, SVOCs, CL Pesticides/PCBs, TAL metals, and PCDDs/PCDFs;
 - PWD Property (Non-Landfill) Groundwater: Groundwater from the Historical Landfill area is potentially impacted from the Historical Landfill. Potential contaminants of concern include VOCs, SVOCs, CL Pesticides/PCBs, TAL metals, and PCDDs/PCDFs; and
 - Riverfront Park Seeps: Because of the proximity of the site to the Columbia River, value on taminants from the Historical Landfill campotentially leach downgradient to the site of the si
 - Logic very country and and the control of the contr
 - Thy personaled have indicated that the PWD property may be sold to outside parties interested in converted in the property, placetistly as a basiness park in house location (W. other 1999), housever specific information on priented description of priented description of priented as the PWD property have not been proyed at mine.
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 - Sampling was conducted at more near considered in be pountial consensum sources and an one-time sources in a successful may have been contended in instances of because with six feet contended on a feet of the April 19 and the analysis and the above of the April 19 and the analysis of the April 19 and the analysis of the April 19 and the April 1





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3.1 FIELD ACTIVITIES

based on household use of appendiment as a drinking with sunce TBA field activities were conducted at the site during the weeks of June 28 and July 5, 1999 Photographic documentation of site activities is presented in Appendix A. All sampling was conducted in accordance with the EPA-approved Sampling and Quality Assurance Plan (SQAP) dated June 23. 1999 (E & E 1999). Deviations from the SQAP included not collecting samples at Riverfront Park seeps because seeps were not present at the time of sample collection. The Sample Plan Alteration Form summarizes these deviations (Appendix B). Quality assurance (QA)/quality control (QC) information, laboratory analytical data, and QA review memoranda are provided in Appendix C. Global Positioning System coordinates were obtained for locations of all samples collected during the TBA and are provided in Appendix D. designations and color in this 200 for compagnitions and a house and resident address of the production of the production of the compagnition of the production of the compagnition of the

3.2 REGULATORY STANDARDS AND REPORTING

The goals of TBAs are to empower states, cities, tribes, communities, and other stakeholders in economic redevelopment to work together in a timely manner to prevent, assess, safely clean up, and sustainably reuse brownfields. In order to interpret analytical results, conservative screening levels and background concentrations were used for comparison. and additioned our error alocates That have a

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Both Washington Department of Ecology (WDOE) Model Toxics Control Act (MTCA) cleanup levels (WDOE 1996) and EPA Region 9 Preliminary Remediation Goals (PRGs) were used as conservative, screening levels to assess whether contaminants present pose a potential threat to human health under a variety of exposure conditions. Residential concentrations were used preferentially for evaluation purposes for maximum beneficial uses of the property. The industrial concentrations also were provided for informational purposes and were used as an alternative cleanup goal for soils.

Washington MTCA levels are presented according to three categories: Methods A, B, and C. Method A levels are generally the most conservative, may or may not be risk-based, and are intended for use at simple sites with a limited number of contaminants. Method A values are available for groundwater (assuming human consumption), residential soil, and industrial soil. Generally, if a Method A value is available for a given contaminant, it should be used as the screening level for that

contaminant. However, some Method A values may be inappropriate at a given site because they are based on pathways that are not important (e.g., migration to groundwater). When the Method A value is determined to be inappropriate, then the corresponding Method B or Method C value should be used for residential or industrial scenarios, respectively.

Method B levels are based on residential land use; consequently, groundwater cleanup levels are based on household use of groundwater as a drinking water source while soil levels assume high frequency of contact in a residential setting. Method B cleanup levels account for exposures to children. Method B cleanup levels correspond to a one in 1,000,000 excess lifetime cancer risk for carcinogens or a hazard quotient of 1 for noncarcinogens. (A hazard quotient is a ratio between the level to which someone may be exposed to a contaminant in the environment and the level deemed "safe" by regulatory agencies. This "safe" exposure level is usually referred to as a reference dose or reference concentration.)

Method C levels are based on commercial or industrial land use; consequently, soil and groundwater cleanup levels are based on adult contact only. The risk levels for Method C are an excess lifetime cancer risk of one in 100,000 for carcinogens and a hazard quotient of 1 for noncarcinogens. While MTCA has provided tables of Method B and C values in their Cleanup Levels and Risk Calculations (CLARC) tables, the equations used to derive these levels are provided in Chapter 173-340 Washington Administrative Code so that levels for existing chemicals in the table or additional chemicals can be calculated as new toxicity data becomes available. Because of the limited scope of the TBA, levels available in the 1996 version of the CLARC table were used where available.

When MTCA levels were not available, the most recent EPA Region 9 PRG table (EPA 1999b) was used as the source of screening levels. EPA Region 9 PRGs are risk-based levels that are useful as screening values at sites to determine whether levels of contaminants pose a potential threat to human health. PRGs are based on an excess lifetime cancer risk of one in 1,000,000 for carcinogens and a hazard quotient of 1 for noncarcinogens. Soil PRGs are available for residential exposure scenarios (including children) and industrial exposure scenarios (adults only). Tap water PRGs can be used for comparison to groundwater, assuming the groundwater is used for domestic purposes in a residential exposure setting (i.e., drinking, washing clothing and dishes, bathing, etc.).

At the EPA TM's direction, site-specific background samples were not collected, however metals results were compared to Washington State natural background levels as listed in *Natural Background Soil Metals Concentrations in Washington State*, Toxics Cleanup Program, WDOE, October, 1994 (WDOE 1994).

For this section's analytical summary tables, analytical concentrations were evaluated using the following guidelines: a real respectively and her replaced the following discuss Artis) and provide the

- dato su dikim kraliquins Essas seri-dare de ripestes tran (^{se} poli igosili) i digravo designocati. ^{Est}adorigas c Analytes that were not detected in any sample within a given medium were deleted from the table; gyard Sil co Bil Some leggi veril Sil an Bil leggi vech Sil (g) bil régi
 - All detected analytes were bolded;
- nut except to roll transcent leave senting beautiful bus anone look sections industrials. Analytes detected at concentrations above one or more screening levels or Washington State natural background levels were considered elevated and are underlined; and explains
 - In the absence of applicable screening levels, analytical concentrations were included in the tables but could not be quantitatively evaluated. has taken young their pays a making ob

en she side was saveged collection, one houghpies were beachilled in his the mostere grown. Based on EPA, Region 10, policy, evaluation of aluminum, calcium, iron, magnesium, potassium, and sodium (i.e., common earth crust metals) generally is employed only in water mass tracing, which is beyond the scope of this report. Additionally, calcium, iron, magnesium, potassium, and sodium are not associated with toxicity to humans under normal circumstances (EPA 1996c). For these reasons, these elements are not discussed in the report.

atrumi da bem galdus band andikli haddilada " stappaka da aning tomakida sesar adquar vonadomunati 3.3 ANALYTICAL PROTOCOL, SAMPLING METHODS, AND RATIONALE

This section describes the subsurface soil and groundwater sample collection conducted for the TBA. Surface soil samples were not collected due to the presence of pavement throughout the site. Following collection, all samples were stored in iced coolers and maintained under chain of custody. Forty-six samples, excluding QA samples (rinsate blanks and trip blanks), were collected during the TBA. Sample types and the methods of collection are described below. Sample locations were determined based on background information and were designed to investigate the areas of concern identified in Section 2.4.4. A list of all samples collected for laboratory analysis during the TBA is presented in Table 3-1. Alphanumeric identification numbers applied to each sample location (e.g., LF01) are the sample location identifiers used in the report. Approximate sample locations are shown in Figure 3-1. har, Attitud for this law or and a contraction of the second of the second of

3.3.1 Subsurface Soil Sampling

Subsurface soil samples, mixed with varying amounts of landfill waste and designated as soil samples in this report, were analyzed for combinations of the following parameters as specified in the approved SQAP: VOCs (Contract Laboratory Program Analytical Service [CLPAS] OLM03.2), SVOCs (CLPAS OLM03.2), CL Pesticides/PCBs (CLPAS OLM03.2), TAL metals (CLPAS TLM04.0), and PCDDs/PCDFs (EPA SW-846 Method 8290). Subsurface soil samples were collected using a GeoprobeTM direct-push sampler (GeoprobeTM) and split-spoon stainless steel samplers with acetate liners. The samples were collected at the designated depths (except as noted in Table 3-1) of 0 to 4 feet bgs, 8 to 12 feet bgs, 18 to 22 feet bgs, and 28 to 32 feet bgs; were homogenized thoroughly using dedicated stainless steel spoons and dedicated stainless steel bowls (except for aliquots for VOC analyses, which were placed directly into the sample containers); and were placed into prelabeled sample containers using the same dedicated stainless steel spoons. The GeoprobeTM sampler was decontaminated with soapy water and rinsed with a steam cleaner between sample locations as outlined in the SQAP. After sample collection, the boreholes were backfilled with bentonite grout.

3.3.2 Groundwater Sampling

The groundwater samples were analyzed for the following parameters as specified in the approved SQAP: VOCs (CLPAS OLM03.2), SVOCs (CLPAS OLM03.2), CL Pesticides/PCBs (CLPAS OLM03.2), TAL metals (CLPAS ILM04.0), and PCDDs/PCDFs (EPA SW-846 Method 8290). Groundwater samples were collected using the GeoprobeTM, dedicated Teflon-lined tubing, and an inertia pump with a check valve attached. The groundwater seep samples that were planned to be collected from Riverfront Park were not collected because of the absence of observable seeps. The check valves went through a six-step decontamination process between sample locations as outlined in the SQAP. Groundwater was pumped directly into the prelabeled sample containers and then preserved as appropriate. After sample collection, the boreholes were backfilled with bentonite grout. The abandonment of each borehole that reached groundwater was observed by a registered State of Washington Professional Engineer.

3.4 SAMPLING ACTIVITIES AND ANALYTICAL RESULTS

Samples collected during the TBA were analyzed for the parameters listed in Table 3-1. Sample collection depths are also provided in Table 3-1.

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3.4.1 Landfill Area

Subsurface soil samples were collected from ten soil borings (locations LF01 through LF03 and LF07 through LF13) in the Historical Landfill area on the PWD property (Figure 3-1). Two to four soil samples were collected from each borehole location depending on sample recovery. Subsurface soil

sample results are provided in Table 3-2 and a summary of subsurface soil results compared to screening levels is provided in Table 3-3. Groundwater samples were collected from three soil borings (LF02, LF03, and LF11). Groundwater sample results are provided in Table 3-4 and a summary of groundwater results compared to screening levels is provided in Table 3-5.

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3.4.1.1 Subsurface Soil Samples

A total of 33 subsurface soil samples were collected from the Historical Landfill area. Six VOCs, 17 SVOCs, 15 CL Pesticides, two PCBs, 17 TAL metals, and 15 PCDD/PCDF congeners were detected in the subsurface soil samples. Screening levels were exceeded in 26 of 33 samples. The following analytes exceeded one or more screening level concentrations:

Analyte	Sample Locations with Exceedances		Exceedance Concentration Range	
Chrysene	One		540 μg/kg	
Arsenic	Four		20.7 to 43.9 mg/kg	nie sie sie sie sie sie sie sie sie sie s
Beryllium	Twenty six		0.24 to 0.68 mg/kg	mered
Lead	Two Date of The C		385 to 437 mg/kg	erias Alvinos.

Each of the subsurface soil sample screening level exceedances were greater than the applicable residential standards but were less than the applicable industrial standards. Due to the single exceedance of chrysene at a depth of 8 to 12 feet bgs, chrysene does not appear to warrant additional investigation. The inorganic exceedances occurred throughout the property. The beryllium exceedances are all below the Washington State natural background average of 2 mg/kg as listed in Natural Background Soil Metals Concentrations in Washington State, Toxics Cleanup Program, WDOE, October, 1994 (WDOE 1994). Because the site is likely to be developed for commercial purposes in the future and because contamination is present in the subsurface samples, additional evaluation is not warranted at this time. However, if future development results in transport of subsurface contamination to the surface and if the land use changes, additional evaluation should be performed to ensure that contamination does not pose a health risk under new land uses.

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3.41.2° Groundwater Samples

Three groundwater samples were collected from the Historical Landfill area. Eight VOCs, seven SVOCs, two CL Pesticides, one PCB, 16 TAL metals, and four PCDD/PCDF congeners were detected in the groundwater samples. Screening levels were exceeded at all three locations. The following analytes exceeded one or more screening level concentrations:

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Analyte Sample Locations with	Booffoo grew golgmas lios godinadus EE In Insor A Exceedance Concentration Range TALLY FILE ONT SERVICE TO ELECTRONICA DE LA CONTRE DEL CONTRE DE LA CONTRE DEL CONTRE DE LA CONTRE DEL CONTRE DE LA CONTRE DE LA CONTRE DEL CONTRE DEL CONTRE DE LA CONTRE DE LA CONTRE DEL
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	ollowing analyses excueded of all 0.20 is accoming level of
4,4'-DDD One	1.3 μg/L
4,4'-DDE One	merce in Execution
Aroclor 1260 One	0.41 μg/L
Arsenic	7.1 to 45.6 μg/L
Barium Two Control	1,330 to 1,930 μg/L
Beryllium Two	0.82 to 2 μg/L
Cadmium One	5.2 μg/L
Chromium and node to Three consideration	have generated ship 74.9 to 541 µg/L as off to food
as a later a large me and I as much the true transporters for any transports of the	ident stated type out and read each med reschants telluctures. 16.5 to 487 µg/L to 16.5 to 487 µg/L to 16.5 to 487 µg/L to 16.5 to 16.
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	Consecutivations in Maylanguage 1,29,6-1, with Chauman Progr
	g increasing not not 22-ug/Lad as visit in our our council
ned the free ion is not veneralized at this time.	continuation is present in the submittace samplies, adding

Each of the groundwater sample screening level exceedances were greater than MTCA Method.

A or B residential levels. These exceedances may not be significant if groundwater does not represent an exposure medium for current or future receptors. Groundwater underlying the site is not currently used as a domestic water supply and does not appear to be hydrologically connected to an aquifer used for drinking water. Therefore, additional consideration of groundwater contamination may not be required at this time.

3.4.2 Non-Landfill Area

Subsurface soil samples were collected from four soil borings (locations LF04, LF05, LF06, and LF14) on PWD property away from the Historical Landfill (Figure 3-1). Two to four soil samples were collected from each borehole location depending on sample recovery. Subsurface soil sample results are provided in Table 3-6 and a summary of subsurface soil results compared to screening levels is provided in Table 3-7. Groundwater samples were collected from two soil borings (LF04 and LF14).

Groundwater sample results are provided in Table 3-8 and a summary of groundwater results compared to screening levels is provided in Table 3-9.

taval, gainea de anom su uno hidrancia, arquira variabacime ban horistaccia laval gainea de la 3.4.2.1 Subsurface Soil Samples

A total of eight subsurface soil samples were collected from the non-landfill area. Sample LF06SB04B was collected from approximately the same location and depth as sample LF06SB04 and was submitted only for PCDD/PCDF analysis in the absence of a PCDD/PCDF aliquot for location LF06SB04. Two VOCs, 20 SVOCs, three CL Pesticides, 16 TAL metals, and eight PCDD/PCDF congeners were detected in the subsurface soil samples. Screening levels were exceeded at all eight locations. The following analytes, including frequency of screening level exceedance and concentration ranges, exceeded one or more screening level concentrations:

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<u>Analyte</u>	Sample Locations with Exceedances	Exceedance Concentra	tion Range
Beryllium	Eight .	0.25 to 0.36 mg/kg	West 1
Benzo(a)anthracer	ne _{sta} (c. One. (c.)	2,200 μg/kg	meropani
Benzo(a)pyrene	One (1)	1,100 μg/kg	· Signatural services
Benzo(b)fluoranth	ene One	1,200 µg/kg	etti pates V
Chrysene	One	3,200 μg/kg	
Dibenz(a,h)anthra	cene One and a material population of gridings to	420 μg/kg	hadaet .
Indeno(1,2,3-cd)p	ca come distinct a secretaries de sus que esta yrene One e secretaries sus que dessida en dessidad.	1,200 μg/kg	ureniale († 1600) 1886 - Janes Janes

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The beryllium exceedances are all below the Washington State natural background average of 2 mg/kg as listed in *Natural Background Soil Metals Concentrations in Washington State*, Toxics Cleanup Program, WDOE, October, 1994 (WDOE 1994). Each of the subsurface soil sample screening level exceedances were greater than the applicable residential standards but were less than the applicable

industrial standards. Each organic analyte exceedance occurred at sample location LF14 at 8 to 12 feet bgs. Due to the isolated exceedance results and because detected concentrations were less than industrial levels, soil in the non-landfill area does not appear to warrant additional investigation.

3.4.2.2 Groundwater Samples

Two groundwater samples were collected from the non-landfill area. Five VOCs, two CL Pesticides, one PCB, 15 TAL metals, and two PCDF congeners were detected in the groundwater samples. Screening levels were exceeded at both locations. The following analytes, including frequency of screening level exceedance and exceedance ranges, exceeded one or more screening level concentrations:

A total of eight subsurface soft samples were contested from the non-isuallitt area. Sample

to bossion was enfound from appearing the same location and depth as ample LFASEBA and Analyte Sample Locations with Exceedances Exceedance Concentration Range Methylene Chloride, response and a second of the contract of t Aroclored 260 to behavior One chivel polymatic colemns for such 37/4 pg/Lth in bandom and analysis or Arsenicusonop beg simple Two layer genesate to vocement grains 1818 to 28:4 ug/Lvaled at T. grainsoct zano tennaciono de vel 1/390 to 1.930 üg/Lid bateccoro . Leguer Barium Two $2.8 \,\mu g/L$ Beryllium Two tsocation of the 2012 234 to 762 μg/L 想起:加速点: Chromium water the condition of the cond munHv10ft 2/\20 Two 45.1 to 86.3 μg/L Lead 5,190 to 6,240 µg/L Two Off Manganese One (iii)!... Britan (a)(a) mainiff 565 μg/L Nickel 155 to 222 μg/L मार्गिक कार्या क्षेत्र के विश्वासी *Two (*()*) 1 Vanadium 3,200 HEAR

Each of the groundwater sample screening level exceedances were greater than MTCA Method. A or B residential levels. These exceedances may not be significant if groundwater does not represent an exposure medium for current or future receptors. Groundwater underlying the site is not currently used as a domestic water supply and does not appear to be hydrologically connected to an aquifer used for drinking water. Therefore, additional consideration of groundwater contamination may not be required at this time.

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Date Ti	Time	Station ID	Matrix	Depth.	Sample Description	Analyses
	0080	LF01TB00	Water	N/A	British Company of the Company of th	A. O. S.
80. 66/67/9	0080	LF01TB01	Water	· N/A	recover seen Trip blank and con-	CVI CMANNE ACTOR TO VOCE
6/56/99 05	0930	LF01SB04	Subsurface Subsurface	0' - 4' bgs	Dry gray to brown sand/gravel fill	TAL metals, VOCs, SVOCs, CL Pesticides/PCBs, PCDDs/PCDFs
6/29/99 10	1000	LF01SB12	Subsurface soils	· 8' - 12' bgs	Moist brown sand with silf and gravel; Red brick 9-10; Wood at 10.	TAL metals, VOCs, SVOCs, CL Pesticides/PCBs, PCDDs/PCDFs
6/29/99 10	1030	LF01SB22	Subsurface soil	18' - 22' bgs	Dry gray clay 18'; medium brown sand 19 - 20'; fine gray sand 22'	TAL metals, VOCs, SVOCs, CL-Pesticides/PCBs, PCDDs/PCDFs
6/29/99 11	1120	LF02SB04	Subsurface soil	0' - 4' bgs	Dry brown sand, little silt	TAL metals, VOCs, SVOCs, CL Pesticides/PCBs, PCDDs/PCDFs
6/29/99	1145	LE02SB12	Subsurface soil	8; - 12' bgs	Dry brown silt and sand, clay to 9°; dry-white coarse sand 9′ - 10°; dry brown silt and sand 10′ - 11′	TAL metals, VOCs, SVOCs, CL Pesticides/PCBs, PCDBs/PCDFs
12 66/56/9	1215	LF02SB22	Subsurface soil	18' - 22' bgs	Dry brown/gray sand	TAL metals, VOCs, SVOCs, CL Pesticides/PCBs, PGDDs/PCDFs
6/29/99 14	1430	LF02SB32	Subsurface soil	28' - 32' bgs	Dry brown/gray sand	TAL metals, VOCs, SVOCs, CL Pesticides/PCBs,
6/29/99 1:	1545	LF02GW32	Groundwater	32' bgs	Groundwater	TAL metals, VOCs, SVOCs, CL Pesticides/PCBs, PGDDs/PCDFs.
50 66/02/9	0060	LF03SB04	Subsurface soil	0' - 4' bgs	Dry brown and gray sand with gravel	TAL metals, VOCs, SVOCs, CL Pesticides/PCBs, PCDDs/PCDFs
50 66/02/9	0920	LF03SB12	Subsurface soil	8' - 12' bgs	Brown sand, little gravel, clay, and silt; wood fragments 10:-10:5:	TAL metals, VOCs, SVOCs, CL Pesticides/PCBs, PCDDs/PCDFs
21 66/0٤/9	1740	LF03SB22	Subsurface soil	18' - 22' bgs	Dry black sand, rocks, and wood; wet at 22'; some garbage debris	TAL metals, VOGS, SVOGS, CL Pesticides/PCBs
6/30/99	1800	LF03SB32	Subsurface soil	28'-32' bgs	Wet black organic sand with brown sand at 30 grading to gray sand at bottom; few fines	TAL metals, VOCs, SyOCs, CL Pesticides/PCBs, PCDDs/PCDFs.
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	es remine		To any professional control of the c		WENATCHEE, WASHINGTON	And the second state of the second se
Date	Time	Station ID	Matrix	Depth 😤	Sample Descriptions	THE CONTROL ALTANIA YSES IN LEARNING THE DE
6/30/9	1900	LF03GW32	Groundwater	32' bgs	15. Open and the second	TAL metals, VOCs, SVOCs, CL Pesticides/PCBs,
66/02/9	0001	LF04SB04.	Subsurface soil	0' - 4' bgs	Dry brown sand little silt, trace gravel	TAL metals, VOCs, SVOGs, CL. Pesticides/PCBs,
6/30/9	1145	LF04SB12	Subsurface soil the	8' - 12' bgs	Dry brown sand, trace silt and gravel	TAL metals, VOCs, SVOCs, CL. Pesticides/PCBs,
66/06/9	1400	LF04GW24	Groundwater	24' bgs	Groundwater	VOCs, SVOCs, CL. Pesticides/PCBs, TAL metals,
66/1/2	1100	LF05SB04	Subsurface soff	0' - 4' bgs	Dry brown sand with gravel	TAL metals, VOCs, SVOCs, CL, Pesticides/PCBs
7/1/99	11140	LF05SB12	Subsurface soil	8' - 12' bgs	Dry brown sand with gravel	TAL metals, VOCs, SVIGGS, GL Pesticides/PCBs
6/30/99	0830	LF01TB02	Water	N/A	and providing blank and 10, 116.	VOCS
66/06/9	0830	LFOITBOS	Water	N/A	Trp blank	CAT DECEMBER A CATALOGUE AND
66/1/2	1240	LF06SB04	Subsurface soil	0 - 4' bgs	Dry brown sand with little gravel	TAL metals, VOCs, SVOGs, CL Pesticides/PCBs-
66/1/2	1330	LF06SB12	Subsurface soil	8' - 12' bgs	Dry brown sand with trace gravel	TAL metals, VOCs, SVOCS, CL Pesticides/PCBs
66/1/	1415	LF07SB04	Subsurface Soils :	0' - 4' bgs	Brown sand with gravel; little glass and paper from 31 - 3.5	TAL metals, VOCs, SVOCs, CL Pesticides/PCBs
4/1/26	1445	LF07SB12	Subsurface Soil	8' - 12' bgs	Dry brown sand with gravel; Styrofoam and paper 8: -10.5' at	TAL metals, VOCs, SVOCs, CL. Pesticides/PCBs
66/1/4	1455	LF07SB22	Subsurface	18' - 22' bgs	Dry brown sand with grayel; wood chips and paper; Wet below 20:	TAL metals, VOCs, SVOCs, CL Pesticides/PCBs
66/1/2	1620	LF08SB04	Subsurface soil	0'-4'bgs	Dry brown sand trace gravel and silt	TAL metals, VOCs, SVOCs, CL Pesticides/PCBs
7/1/99	1710	LF08SB12	Subsurface soil	8'-12' bgs	Dry brown sand, gravel and silt 1	TAL metals, VOCs, SVOCs, CL Pesticides/PCBs
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Key is at the end of the table.

		Analyses beneficial	TAL metals, VOCs, SVOCs, CL Pesticides/PCBs	TAL metals, VOC5, SVOCs, CL Pesticides/PCBs	TAL/metals, VOCs, SVOCs, CL. Pesticides/PCBs, PCDDs/PCDFs	TAL metals, VOCs, SVOCs, CL Pesticides/PCBs	TAL metals, VOCs, SVOCs, CL Pesticides/PCBs, PCDDs/PCDFs	SOOR SOOR SOOR SOOR SOOR SOOR SOOR SOOR	TAL metals, VOCs, SVOCs, CL Pesticides/PCBs,	TAL metals, VOCs, SVOCs, CL Pesticides/PCBs,	TAL metals, VOCs, SVOCs, CL Pesticides/PCBs,	TAL: metals, VOCs, SVOCs, CL Pesticides/PCBs,	TAL metals, VOGS, SVOGS, CL Pesticides/PCBs,	TAL metals, VOGS; SVOCS, CL Pesticides/PCBs,	TAL metals, VOCs, SVOCs, CL Pesticides/PCBs, PCDDs/PCDFs	Ss, SVOCs, (
Table 3-1 (CONTINUED)	SAMPLE COLLECTION INFORMATION WENATCHEF, WASHINGTON	Sample Description	Rinsate blank	Rinsate blank	Dry brown sand, gravel and silt	Dry brown sand, gravel and silt	drough the second secon	TIP blank	Dry brown and gray sand	Dry dark gray/black sand with brown and white glass; charcoal 9' + 11'	Dry gray sand and gravel to cobbles	Groundwater	**Dry dark gray sand with a small interval	Woist dark gray sandy loam	Dry gray sandy silt 18° 20'; white quartzitic sand 20' - 20.5'; poorly sorted gray sand 20.5' - 22'	Dry quartzitic gravel and very fine well-sorted sand. Geoprobe PM refusal at 29	transfer Trip blank 🐇 🕾 😅	HVIVAHEORNA HEEK LA LEOD
	200 mg	Depth	1 6	N/A	0'-4' bgs	8-12 bgs	24' bgs	N/A	0' - 4' bgs	8' - 12' bgs	18' - 22' bgs	24' bgs	0' - 4' bgs	8' - 12' bgs	18' - 22' bgs	25'-29' bgs	N/A	
	2000年	Matrix	Sec. Water	Water	Subsurface	Subsurface	Groundwater	Water	Subsurface	Subsurface	Subsurface	Groundwater	Subsurface Soil	Subsurface soil?	Subsurface	Subsurface	Water	
		Station ID	LF01RB00	LF01RB01	LF14SS00	LF14SB08	LF14GW24	I FOITB04	LF11SS00	LF11SB12	LF11SB22	LF11GW24	LF12SB04	LF12SB12	LF12SB22	LEI2SB29	LF01TB05	table.
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				LE COL	LECTION THEE, WA	SAMPLE COLLECTION INFORMATION WENATCHEE, WASHINGTON	HON		Section of the sectio	
Date Time	e Station ID	Matrix	Depth.		Sample Description	scription		A STATE OF THE STA	Analyses	
0091 66/6/L) LF011DWA	Water	N/A		Investigation-derived waste	erived waste		L metals, VOC	TAL metals, VOCs, SVOCs, CL Pesticides/PGBs	esticides/PCBs
1/9/99 1605	1605 LF011DWB	Water	N/A		Investigation-derived waste	erived waste	380 TEA	VL metals, VOC	TAL metals, VOCs, SVOCs, CL. Pesticides/PCBs	esticides/PCBs
" The soil samples v	The soil samples were composite samples except as listed in	es except as listed in	n Section 3.3.1 for the VOC aliquots	or the VOC a	aliquots				Service Services	- 200 - 200 - 200 - 200 - 200
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CLP	CLP == Contract Laboratory Program == Thirted States Environmental Protection	ory Program.	n Agency		The state of the s			Z.		
Geoprobe™	Geoprobe TM = Geoprobe TM direct-push sampler.	t-push sampler.	ii (16 cillo).	2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	100 m		Pres.	3 68	The state of the s	750
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PCBs	= Polychlorinated b	iphenyls.	And the second s			C 384		1000		
PCDDs	= Polychlorinated d = Polychlorinated d	ibenzo-dioxins. ibenzo-firans		ess.				Company of the Compan	Control of the contro	And the second s
Svocs	= Semivolatile organic compounds.	nic compounds.					A Marie Control of the Control of th	And the second s	Control of the contro	
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				Table 3-2					
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Ę	LANDFILL SI		ACE SOIL WENAT	JBSURFACE SOIL SAMPLE ANALYTICAL RESULTS SUMMARY WENATCHEE, WASHINGTON	IALYTICAI HINGTON	RESULTS	SUMMARY		· .
	Residential	Industrial							
LOCATION ID	Cleanup	Cleanup	LF01SB04		LF01SB22	LF02SB04	LF02SB12	LF02SB22	LF02SB32
рертн	Standards	Standards	0 - 4 ft bgs	.8 - 12 ft bgs	18 - 22 ft bgs	0 - 4 ft bgs	8 - 12 ft bgs	18 - 22 ft bgs	28 - 32 It pgs
VOCs (µg/kg)									
2-Butanone	6,900,000 ^d	27,000,000 ^d	4 J	3.1	13 J	2 J	11 U	31	
Acetone	8,000,000 ^b	350,000,000	32 U	14 U	150 U	12 U	11 U	110	11 U
Benzene	500ª	500ª	11 U	12 U	14 U	11 U	11 U	13 U	. 11 U
Chlorobenzene	1,600,000 ^b	70,000,000°	11 U	12 U	14 U	11 U	11·U	4 J	11 U
Ethylbenzene	20.000		11 U	2 J	14 U	11 U	11 U	f 8	11 U
Xvlene (total)	20,000	20.000	3.5	14	14 U	2 J	2 J	43	11 U
(1)	200								
SVIKS (19 Kg)			350 UJ	f 66	460 U	350 U	350 U	420 U	380 U
A-memyniapiiniaiciic	4 800 000 k	210 000 000	350 UJ	400 UJ	460 U	350 U	350 U	420 U	O 08E
		≟ا ا	350 UJ	400 UJ	460 U	350 U	350 U	420 U	380 U
Benzo(a)nvrene		i , 2	58 J	400 UJ	460 U	. 350 U	350 U	44 J	380 U
thene		1	350 UJ	400 UJ	460 U	350 U	350 U	48 J	380 U
Benzo(k)fluoranthene a studio a series	-	18,000	350 UJ	400 UJ	460 U	350 U	350 U	48 J	380 U
Bis(2-ethylhexyl)phthalate	100	9 370.000	f 06	460 J	460 U	350 U	350 U	120 J	380 U
Butvibenzylphthalate		· -	350 UJ	400 UJ	460 U	350 U	350 U	420 U	380 U
Carbazole	50,000°		350 UJ	400 UJ	460 U	350 U	350 U	420 U	380 U
		18,000°	350 UJ	£ 77 J	460 U	350 U	350 U	. 420 U	380 U
Di-n-butylphthalate	8,000,000°	33	350 UJ	400 UJ	460 U	350 U	350 U	420 U	380 U
Dimethylonthalate		350,000,000	350 UJ	400 UJ	460 U	350 U	350 U	420 U	380 U
Fluoranthene	-	-	350 UJ	f 09	460 U	വ 058	350.U	2000 481JB	anciona.
Fluorene		140,000,000	350 UJ	£05	7 460 U	ัก 0ระ	350 U∍	≳∆∵ ∕420;U ,	Maride C
Nanhthalene		3 200 000 140 000 000	350 UJ	T 091	460 U	ົນ 05E	350 U	420 U	∩ 08£
-			350.03	140.5	160 U	-1-05E	F 08	received 420 hu	19.08E
Enelialiunene Pyrene	2 400 000 ^b 10	105 000 000	59 J		460 U	350 U	52 J	S7 J	380 U
Key is at the end of the table.	200000	200000000000000000000000000000000000000	the second of the second of the second	· · · · · · · · · · · · · · · · · · ·	A contract the second of the second	E BOOK NEW TOTAL			
an ma	•		## ##	Control of the Contro					
	All the second of the second o		program of the state of the sta		Andrews and the second state of the second sta	en e	And the state of t	en de de la companya de la companya Companya de la companya de la compa	e producer a producer e con esta esta especial de la constanta de la constanta de la constanta de la constanta

CALP	5 (1) (2) (3) (4) (4) (4) (4) (4) (4) (4) (4) (4) (4			Table	Table 3-2 (CONTINUED)	NUED)				
COCATION DEPTH Residential Industrial		LANDRIEL		ACE SOIL	SAMPLEAD	ALYTICA.	L RESULTS	SUMMAR		The reservation of the
CLP INORGANIC NUMBER Reidenful Industrial Industrial LEGISBIG		And the second s	en e	WENAT	CHEE, WAS	HINGTON	The second secon	1.00 miles	10. 10. 10. 10. 10. 10. 10. 10. 10. 10.	
Coloration Discretion Lébussida Lebussida Lebu	CLP INORGANIC NUMBER	R Residential	Ĭ	The second secon		Parket in the second se		**		Section of the Sectio
DEPTH Standards Standards 0-4ft/bgs 88-12ft/bgs 48-12ft/bgs 88-12ft/bgs 18-24ft/bgs 18-24ft/bgs 18-24ft/bgs 18-24ft/bgs 18-24ft/bgs 18-24ft/bgs 18-24ft/bgs 47-12g 239-3 47-12g 239-3 47-12g 239-3 47-12g 239-3 47-12g 239-3	LOCATION ID	9	Cleanup	LF0ISB04	_LF01SB12	LF01SB22				
Pesticide of Politics Pesticide of Politics 4170° 247,000° 21 86 81 48 47 220 J 44 45 44 45 45 46 47 47 47 47 44	DEPUH	Standards	S	0 - 4 ft hgs	8-12 ft bgs	18 - 22 ft bgs	0	8 = 12 ft bgs	18 - 22 ft bgs	
44-DDD 4,170° 547,00° 210 86 81 48 47 220 J 44 44-DDD 2,940° 386,000° 12 100 6,13 35 23 180 7 44-DDF 1,000° 3,000° 2,49 3,40 18 J 18 J 18 1 Activing 1,89° 7,720° 2,49 2,40 18 U 18 U </td <th></th> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>										
4,4DDE 2,940° 386,000° 121 100 431		4,170 ^b	547,000"	17	98	1.8	48	14.47	230 J	r 16:0
4,4-DDT 1,000% 5,000% 43 460 U 3.6 J 3.5 J 52 18 9 Aldrin 88.8° 7,720° 21 J 20 U 24 U 1,8 U 18 U 44 U 18 U	4,4-DDE	2,940 ^b	386,000°	The state of the s	100	е 19	42	23	. 081	f 28.0
Aldrin 58.8° 7,720° 21.9° 2.0 ° 2.4 ° 1.8 ° 1.8 ° 4.4 ° Alpina-EHC 159° 20,800° 1.8 ° 4.5 1.1 ° 3.7 ° 1.8 ° 4.4 ° Alpina-chlordane 769° 10,1000° 1.8 ° 4.5 1.1 ° 3.7 ° 1.8 ° 4.4 ° Arcolori 224 1,1000° 1.8 ° 4.0 ° 4.6 ° 3.5 ° 3.5 ° 8.5 ° Arcolori 234 1,1000° 1.8 ° 4.0 ° 4.6 ° 3.5 ° 3.5 ° 8.5 ° Better EHC 3.5 ° 7.2 ° 1.8 ° 2.0 ° 2.4 ° 1.8 ° 3.5 ° 3.5 ° Dickrim 3.5 ° 8.2 ° 7.1 ° 4.6 ° 3.5 ° 3.5 ° 3.5 ° Bridgin 4.0 ° 3.5 ° 3.5 ° 3.5 ° 3.5 ° 3.5 ° 3.5 ° Bridgin 3.0 ° 3.5 ° 3.5 ° 3.5 ° 3.5 ° 3.5 ° 3.5 ° Bandrin 3.0 ° 3.0 °	4,4"DDT	1,000	1	43	Ω 0.P	3.0 J	3.5 J	75	- 18	0.67 J
Alpha-BHC 159b 20,800° 118 U 1.8 U 1.8 U 44 U Alpha-bHC 769° 10,1000° 18 U 44.5 11.1 37 J 1.18 U 61.3 Acolorizat 1,000° 10,000° 18 U 45.1 11.4 35 U 18 U Acolorizat 1,000° 10,000° 18 U 35 U 35 U 85 U Acclarizat 1,000° 10,000° 18 U 22.3 24 U 18 U 18 U 55 U Deleta-BHC 55.6 72,900° 18 U 22.3 24 U 18 U 18 U 50 J Deleta-BHC 55.6 77.10 2.2 U 18 U 18 U 50 J Deleta-BHC 62.5° 8.200° 5.6 77.1 18 U 18 U 50 J Ender BHC 62.5° 8.200° 5.6 77.1 4.6 U 3.5 U 18 U Ender BHC 1.0 4.0 4.6 U 3.5 U 3.5 U 8.5 U <td< td=""><th>Aldrin</th><td>58.8_b</td><td></td><td>21.0</td><td>2.0 U</td><td>2,4 U</td><td>Ω 8.Γ</td><td>Ω 8.1</td><td>78.</td><td>19.0</td></td<>	Aldrin	58.8 _b		21.0	2.0 U	2,4 U	Ω 8.Γ	Ω 8.1	78.	19.0
Alphae-bliordaine 769b 101,000° 18 U 45 U 11 J 37 J 118 U 61 J 76 J 118 U 35 U 35 U 35 U 35 U 40 U 46 U 35 U 35 U 35 U 35 U 35 U 40 U 46 U 35	Alpha-BHC	159 ^b	20,800°	Π.8.1	7.0 M	2.4 U	Λ 8.1	1.8.L	4.4 U	Ω 6:1
Aroclor1242 1,000° 10,000° 35 U 40 U 46 U 35 U 35 U 85 U Aroclor1234 1,000° 10,000° 35 U 40 U 46 U 35 U 35 U 85 U Delta-BHC 556° 72,900° 18 U 22 J 24 U 18 U 18 U 51 Delta-BHC 62.5° 8,200° 56 7.1 J 46 U 18 U 18 U 51 Endosulfan 62.5° 8,200° 56 7.1 J 46 U 18 U 18 U 51 Endosulfan 1,000° 1,000,000° 56 7.1 J 46 U 35 U 35 U Endrin aldelyde . 1,050,000° 9.0 J 4.0 U 4.6 U 35 U 35 U Bendrin kelone . . 1,1 J 4.0 U 4.6 U 35 U 35 U Brins kelone 1,1 J 4.6 U 35 U 35 U Antinorizatio (signkg) . .	Alpha-chlordane	_q 69 <i>L</i>	101,000	1.8 U	4.5	C III	3.7 J	1.8 T	r 1.9	U 6.1
Accolor/1254 1,000% 1,000% 35 U 35 U 35 U 85 U 85 U Beat-BHC 556° 72,000° 18 U 22 J 18 U 18 U 5.0 Delta-BHC 5.56° 7.200° 18 U 18 U 18 U 18 U 5.0 Delta-BHC 5.56° 8,200° 5.20 7.1 J 4.6 U 18 U 18 U 5.0 Delta-BHC 5.5° 8,200° 5.2 2.0 U 2.4 U 1.8 U 1.8 U 5.0 Endosulfan 6.5.8° 8,200° 5.2 2.0 U 4.6 U 3.5 U 3.5 U 8.5 U Endrin 8.6 U 3.5 U 3.5 U 3.5 U 8.5 U 8.5 U Endrin 8.6 U 3.5 U 4.6 U 3.5 U 3.5 U 8.5 U Endrin 8.6 U 3.5 U 3.5 U 3.5 U 8.5 U 8.5 U Endrin 18.0 U 4.6 U 3.5 U 3.5 U 8.5 U 8.5 U Endri	Aroclor1242	1,000	10,000	35 U	3 % 40 U	46 U	1 SE SE €	35 U	A 58 🗆 🔅	∩ 8č 🔗 🗆
Beta-BHC 556° 72,900° 18 U 22 J 24 U 18 U 18 U 55 J Delta-BHC — <th></th> <td>1,000</td> <td>10,000</td> <td>35 U</td> <td>40 U</td> <td>46 U</td> <td>35 Π</td> <td>35 U</td> <td>1 S8 U</td> <td>38 U</td>		1,000	10,000	35 U	40 U	46 U	35 Π	35 U	1 S8 U	38 U
Delta-BHC -		556	72,900°	1.8 U	2.2 J	2.4 U	1.8 U	Ω 8 Ι	5 J	Ω 61
Dieldrin 62.5° 8200° 5.6° 7.1 J 4.6 U 4.9 J 3.5 U 21 3.8 J Endosulfan I - <				1.8 U	2.0 U	2:4 U		Ω 8.1		∑ 1.9 U
lifan I 480,000 ^b 21,000,000 ^c 522 2.0 U 2.4 U 3.5 U 3.5 U 3.5 U 8.5 U ulfan sulfate -		62.5 ^b		5.6	11'2)	4.6 U	6.4.9	3.5 U	0.01	3.8
lifan sulfate - <	Endosulfan I	480,000 ^b		5.2	2.0 U	2.4 U	Π 8.Γ	U 8:1		1.9
100° 100°	Endosulfan sulfate		######################################	4.9 J	∜:⊹4.0 U	4.6 U	Ω 5.E	0,335 U	N 5.8	3.8 U
aldehyde - 3.5 U 4.0 U 4.6 U 3.5 U 4.6 J 8.5 U 8.5 U ketone - 11 J 4.0 U 4.6 U 3.5 U 3.5 U 8.5 U 8.5 U a chlordane - 1.9 J 7.6 J 1.8 J 3.0 8.5 U 8.5 U my 30 ⁴ 750 ⁴ R R	Endrin	24,000 ^b		106	40 U	4.6 U	Ω S ϵ	U 3.5 U	8.5 U	3.8 U
ketone - 11.9 J 4.0 U 4.6 U 3.5 U 3.5 U 8.5 U inics (tig/ke) - 1.9 J 7.6 J 1.8 J 3.0 2.0 J 13 inics (tig/ke) 30 ^d 750 ^d R R R R R R iny 5,600 b 245,000 c 92.1 112 202 94.8 92.9 19.4 J Ing. im 2.2 10.0° 0.11 U 0.24 J 0.12 U 0.11 U	Endrin aldehyde		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	3.5 U	4.0 U	4.6 U	3.5 U	4.6 J	8.5 U	3.8 U
a chlordane 1.9 J 7.6 J 18 J 3:0 2:0.5 13 13 mix 3.0° 7.50° R	Endrin ketone	Section Assessment Section 2	3 - 73 B	\mathbf{H}	Δ0.0.	4.6 U	3.5 U	3.5 U	8.5 U	3.8 U
my 30 ⁴ 750 ⁴ R R <th< td=""><th>Gamma chlordane</th><td>The control of the second of t</td><td></td><td>1.9 J</td><td>L 9.2</td><td>T 8 J</td><td>3,0</td><td>2.0.1</td><td>المار المراقع المراقع في المراقع المر</td><td>U 6 I</td></th<>	Gamma chlordane	The control of the second of t		1.9 J	L 9.2	T 8 J	3,0	2.0.1	المار المراقع المراقع في المراقع المر	U 6 I
may 30^4 750^4 R R R	Inorganics (pg/kg)									
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	Antimony	906	_p 05Z	R	R	R.	R	R	$\mathbb{R}^{\frac{1}{2}}$	A. W. J. R.
im 2.265,000 or 5,5000 or		20	200.0	F 2.3	L E'L	7.11	1.9.1	£ 9'9	19.4 J	3.9 J
um 0.233° 30.5° 0.26 T 0.24 T 0.24 T 0.24 T 0.24 T 0.27 T 0.11 T	Barium	- 5,600 ^b	245,000	92.1	112	202	94.8	6.26	137	169
Imm 2.° 10.0° 0.11 U 0.12 U 0.11 U 0.11 U 0.13 U 0.13 U um 100° 500.0° 20.4 22.8 62.5 18.4 19.1 26 3,300° 29,000° 68.7 6.4 U 13.7 6.9 U 6.7 J 7.9 J	Beryllium	0.233	30.5	<u>0.26</u> J	<u>0.24</u> J	<u>0.34</u> J	0.29 J	<u>0.24</u> J	0.27 J	<u>0.49</u> J
mm 100° 500.0° 22.8 62.5 18.4 19.1 26	Cadmium	2.	10.01	0.11.0	0.27 J	0.12 U	0.11 U	U.11 U	0.13 U	0.13 U
3,500° 2,5000° 6.7 6.8 J	Chromium	100"	500.0	20.4	22.8	62.5	18.4	19.1	26	29.7
	Cobalt	, 002 '€	_p 000'67	L 8'9	64.3	13.7	r 69	f L'9	7.9 J	14.7

			Table	Table 3.7 (CONTINIED	NIED				
	LANDFILL ST		ACE SOIL S	SAMPLEAN	ALYTICAL	BSURFACE SOIL SAMPLE ANALYTICAL RESULTS SUMMARY	SUMMARY		The state of the s
Commence of the commence of th	Section of the sectio		WENATO	WENATCHEE, WASHINGTON	HINGTON	A Company of the comp	Santa Caracana and	Total	The second secon
CLP ENORGANIC NUMBER	Residential	Industrial	5 To 10 To 1			en Ar Ar Man	· · · · · · · · · · · · · · · · · · ·	13.20 E V	1.4.4
LOCATION D	Cleanup	Cleanup	LF01SB04		_LF01SB22		LF02SB12		LF02SB32
DIPPHE	Standards	Standards	-0-4ft bgs	8-12 ft bgs	18 - 22 ft bgs	0 - 4 ft bgs	8 - 12 ft bgs	8-12 ft bgs- 1822 ft bgs-	28 - 32 ft bgs
Inorganics (112/Kg)									
Copper	-2,960 ^b -	130,000	791	20.2	40.3		14.5	24.2	26.2
I ead	250€	1,000.0ª	64.6 J	103 J	39.3.J	1779	L 8.62	r 27	24.3 J
Manganese		Y	- 316	344	462	349	308	420	1,780
Mercury and Property of the Pr	1.0	1	0.13	ົນ 50:0	0.06 U	0.05 U	D-50:0	−\n^90°0	0.06·U
Nickel	1 600 ^b	70.000€	14.9	15.0	6.19	13.7	12.0	23.6	31.5
Selenium	400p	17,500	1.4.0	U.7.U	2.5 U	1.5.U	1.4 U	2.3	2.2
SHVEL	400p	17.500°	0.56 J	0.69 J	1.2 J	0.64.3	0.62.4	RTT	1.3.0
That in the second seco	5.6b	245	0.87 J		1.70	1.0.1	0.96.0	D 66.0	2.1.4
Vanadum	260 ⁶	24.500	36.2	37.4	71.8	35.8	35.612	41.2	74.1
Aid Company of the Co	24 000 ^b	1.050.000	58.0 J	93.2 J	120 J	J. 6'65	54.7 U	186 ² J	73.0 J
Bioxins/Furans (ng/kg)									
1.934678HnGDD			17.823 J	55,530	17.605	8.273	6.546	67.457	0.374
1 7 3 4 6 7 8 HnCDF		CENTER OF	3.854 J	11.487	12.375	2.586	2.736 J	ু 20.229 এই) 0.095 U
1.5.3.4.7.8.9ªHn@DF			. 1.776 U	0,694 U	1.629 J	. 0.274 U	0.642 U	1.393	0.133 U
1.2-2-11.15-2-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1			0.581 U.	3.754 J	1.183 U	0.273 U	. 0.290 U.	. 1.471 U	0.200 U
1 2 3 4 7 8-HxCDF	The state of the s	THE TAXABLE STREET	2.749.1	4.377.1	13.473 J	2.354 J	2.168 J	8.953 J	0.091-U
1 2 3 6 7 8-HXCDD	大大の大学の一大学の大学の大学の大学の大学の大学の大学の大学の大学の大学の大学の大学の大学の大	And the second second second second		1.329 J	0.797 U	0.184-U	0.195 U		0.135°U
1.23678=HXCDF	A demonstration of the second	からない 大	0.557 U	0.176 U	0.565 U	0.461 U	0.433 U	1.055 J	0.068 U
1.2.3.7.8.9-HxCDD	Artika da arangan na	The state of the s	. 0.449 U	0.181⊬U	0.913 U	0.211 U	0.224 U	0.870	0.155:U
1.2.3.7.8 PeCDD	OMLE T		0.530 ₪	1.027 JE	7 1.975 U	0.243 U	0.398 U	0.775 U	0.180 U
2.3.4.6.7.8-HXCDF			0,652 U	0.206 U	1.044	0.730 U	0.506 U	1361	0.080 U
2 3 4 7 8-PeCDF	が対象である。	在第二次的 1000 mm	. 0.538 UJ	0.372 U	1.693	0.209 U	0.301 J	1.851 J	0.093 U
2.3.7.8-TCDD	の 日本の 日本の 日本の 日本の 日本の 日本の 日本の 日本の 日本の 日本	(1) (1) (1) (1) (1) (1) (1) (1) (1) (1)	. 1.90€.U	1.119 J	7 0.251 U	0.144 U	0.388 J	0.322.U	0.097-U-
2 3 7 %-TCDF	がある。 では、 では、 では、 では、 では、 では、 では、 では、	· · · · · · · · · · · · · · · · · · ·	0.224 UJ	0.7219	1.705	0.499	0.3798	1:880	0.414
0@DD	The state of the s	A CONTRACTOR OF THE CONTRACTOR	T-610.8-1	756.461	269:807	79.196	71:891	827.747	3.764 U
OCDF	M. Const. Grant of M.	And the second of the second	5.307	23.689	30.361	3.743	4.122	53.484	0.212 U
Total toxicity equivalency	6.67 ^b	875°	0.675	4.03	3.09	0.432	0.924	4.28	0.045
Key is at the end of the table.							•		

	CANDFILL S		UBSURFACE SOIL SAMPLE ANALYTICAL RESULTS SUMMARY	AMPLEAN	AL YILICAL	RESULTS	SUMMARY		
Application of the control of the co	Andrew Street,	THE STATE OF	WENATCHEE		WASHINGTON	in in the second se	A Comment of the Comm	And the second s	A. A.B.
	Residential	Industrial	京 新教館		A SECTION OF THE RESERVE OF THE RESE	A STATE OF THE STA	1 1 1 1 1 1 1 1 1	A TO THE REAL PROPERTY OF THE PARTY OF THE P	e filozof ().
LOCATION ID	Cleanup	Cleanup	A44		LF03SB22	- LF03SB32	-LF07SB04-	LF07SB12	LF07SB22
DEPTH.	Standards	Standards	0-4ft bgs	8-12 ft bgs	18 - 22 ft bgs	28 - 32 ft bgs	0 - 4 ft bgs	8 - 12 ft bgs	18 - 22 ft bgs
VOCs (ug/kg)									
2-Butanone	9000,000	27,000,000 ^d	78	32	21	76	0.0	State and according to the state of the stat	C0L.
Acefone	8 000 000 35	35	120	100	150	130	11 0	72 U	
Benzene	\$00\$		Ω,11	12 U	18 U	13 U	11.0	ΩT	12 U
Chlorobenzene	1.600.000	70	n I K	12 U	18 U	TI	1.31T	DIL	12 U
Fthylbenzene	+-	,	n III	12 D	18 U	13.0		Diff.	12 U
Vilene (fotel)	20,000	30,000	0.11	12 U	18-L	13 U	A. Harmon and	n-H-	12 U
Ayieiie (ioiai)	7.03000	- ZO3000 - 1			e de la companya de l	A Company of the Comp	4 (C. 18) (C. 18)		
SVOCs (19/kg)			11.035	380 II	1 000	11 004	720 U	F 99	58.3
2-Methylnaphthalene	10 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		11 096	2000 C	01.1	11.UCP	11-062	11.055	410 U
Acenaphthene	4,800,000	71	O 000	in hoc	٠ ٢	2 L	27 000	0.000	11 017
Anthracene	24,000,000 ^b	100,000,000	360 U	380 U	91 J	420 O	<u>07/</u> 07/	n nec	014
Benzo(a)pyrene	137	18,000	360 U	380 U	420 ሀፓ	420 U	720_0	350 U	410 U
Benzo(6) fluoranthene	137°	18,000	Û 09E	380 U	. 420 UJ	420 U	U 027	54 J	410 U
Benzo(k)fluoranthene	(137°	-18.000°	J 09E	380 U	420 UJ	420 U	U_027	Ω οςέ	410 U
Ris(2-ethylhexyl)phthalate	71.400b	\$9.370.000°	.620	380 U	4,900 J	140 2	720 U	C 0.EE	270 J
Birtylhenzylohthalate	16 000 000 ^b 7		U 09E	1380 U	1,600 J	420 U	320 J	1350 U	410 U
Carbazole	50 000 P		J 05E	J 086	L 061	420 U	720 UJ	Ω 05E	410 U
Chrysene	137	18,000	J 09E	57 J	120 J	420 U	720 U	Ω 0Śε`	410 U
Di-n-butylohthalate	8 000:000	ím	D 09E	U 08E	T 051	420 U	720 U	ີ 320 ປ	410 U
Dimethylphthalate	SO DOD DOD	c	D 09E	380 U	420 UJ	420 U	U 027	0.05E	410 U
Finoranthone	3 200 000	1	360 U	380 U	210 J	420 U	120 J	350 U	410 U
Fluorene	3,000,000	1 -	360 U	380 U	L 0EI	420 U	720 U	ມ 03E	410 U
Nanhthalane	4000 000 E	. 2	360 U	380 U	1 091	420 U	720 U	54.3	410 U
	00060076		11 098	380 U	610 J	420 U	720 U	38 J	66 J
	The state of the s	100 000 101	11 098	39.J	C 052	420 U	210 J	1 6L	410

			CLT-LL	Table 3 2 (CONTINED	NITEDIA				
			TADIC	11 kiloo) 4-6	(Mary)			•	
LANDFILLSI	ANDFILL		ACE SOIL S	SAMPLEAN	ALYTICAL	RESULTS	BSURFACE SOIL SAMPLE ANALYTICAL RESULTS SUMMARY	The content of the co	in the second se
and the second s			WENATO	WENATIOHIER WASHINGFION	HINGTON			1	\$ \$10 E
CLP INORGANIC NUMBER	Residential	Industrial	· · · · · · · · · · · · · · · · · · ·	A TO SE		F-755		H. Control	1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1
EOGATIONID	Cleanup	Cleanup	LF03SB04	LF03SB12	LF03SB22	LF03SB32	Ţ	LF07SB12	LF07SB22
DEPTH	Standards S	Standards	0 = 4 ft bgs	8 - 12 ft bgs	18 - 22 ft bgs	28 - 32 ft bgs	: 0 - 4 ft bgs :	8 - 12 ft bgs	18 - 22 ft bgs
Pesticides/PCBs (µg/kg)									
44-DDD	4,170°	547,000°	38	120		0.51 J	13 08 15 15 15 15 15 15 15 15 15 15 15 15 15	Transfer	11000
4,4 DDE 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.	2,940 ^b	172.75	97	210	1.26	1 E9:0	126 miles	180 C	33
434 EDDT	1,000	\$,000	8.5	8.7	93,J	3 442 Same	LEL.	a uz	5.9.3
Aldrin	58.8 ^b	inter out	1.8 U	4.0 U	2.2.0	D 72	<u>'∆'8'1</u>	л'8 1 ∷	
Alpha-BHC	1596	20,800	Π81	40 U	22.J	0.22 U	D 8.1	1.8.1	4.2
Alpha-chlordane	7696	101,000	1.8 U	400	L96	7,7 U	JO 8.1	1.8 U	21.0
Aroclor1242	1,000	10,000	36 U	ΔT	42 U	42,U	19g	35,U	\$
Aroclor 1254	1,000	10,000	36 U.	\tilde{D}	470	42,U	1 9E	35, U	40 J
Beta-BHC	∴ 556³\:	72,900	1.8 U	40.0	16.0	72 U	.Ω'8'L	3,4,1	10.7
Delta-BHC*	利用的数字	00,005,008	1.8 U.	4.0 U	22 U.	2.2 U	`\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	1.8 U	2.1.0
Dieldrin	62.5 ^b (_8,200 [€]	T.9	ESL	10.1	4.2.U		3.5 U	4.1.U
Endosulfan J	480,000 ^b	21,000,000	Π81	40 U	2.2 U	ΛZZ	_ 1.8.U ∵	1.8 U	-2.1 U
Endosulfan sulfate			3.6 U	7.7 U	11.1	4.2 U	3.7.1	3.5 U	4.1 U
Endring Ages	24,000b	1,050,000	3.6 U	$0.6L_{\odot}$, 4.2 U	0.97 J	3.6.0	13.5.D	4.1.0
Endrin aldehyde	The state of the s	Market State of the	3.6 U	0.12	4.2 U	4.2 U	and money in a first	3.5 U	4.1.U
Endrin ketone	A Total Control of the Control of th	A Complete Company of the Complete Comp	3.6-1	1.2.D	4.2 U	4.2 U	8	3.5.U	4150
Gamma chlordane			1.8 U	2.2.1	181	2.2 U	1.8 U	1.8 U	2.1.0
Inorganics (µg/kg)									
Antimony	- 304	-20 ₄		R	-25J	R	.R	1.7.0	2.9 J
Arsenic	20	_ 200:0	20.7 J	43.9 J	9.3 J	1.6 J	<u>28.9 J</u> ∁	12.13	13.4.J
Banum	· 5,600b	245,000	9:68	971	182	137	94.2	5:66	284
Beryffium	0.233 ^b	- 30.S _e	0.23-J	<u>0.36</u> J	_0.16 J	1 ₹€0	T 000	0.28.1	<u>0.33</u> J
Cadmium	. 2	10.04	CILO.	0.44 J	0.24 J	D. EI'0	-0.11.0	_A_U	T. Land
Chromium	100ª	.500.0ª	12.0	17.5 E	28.8	16I	17.3	19.4	28.2
Cobalt	13,000 P	(0.0)	.e. € 6.6 J ≡	6.6 J	. 8.8 Л	P071	P 89	F 29	8.7 J
Key is at the end of the table.									

			Table	Table 3-2 (CONTINUED	NUED)		· ·		1
Appendix in a section dependent of the section of t	The second secon					9.			Service Commission (Commission Commission Co
	ANDFILL		ACE SOIL S	JBSURFACE SOIL SAMPLE ANALYTICAI	VALYTICA	~	RESULTS SUMMARY	Z SS SS Z	And the second s
1	and the second s	The state of the s	WENATO	WENATCHEE, WASHINGTON	HINGTON		- 3 - 3	350 13	12 S.
CLP-INORGANIC NUMBER	Residential	Industrial		学生安全		· · · · · · · · · · · · · · · · · · ·	246.93	1 1 OSE	
LOCATION ID	Cleanup	Cleanup	LF03SB04	LF03SB12	LF03SB22	LF03SB32	LF07SB04	ΕO	LF07SB22
THE PHOTO CONTRACTOR OF THE PROPERTY OF THE PR	11:37	44	0 - 4 ft bgs	8 = 12 ft bgs	18 - 22 ft bgs	28 - 32 ft bgs	0 - 4 ft bgs	8 - 12 ft bgs	18 - 22 ft bgs
Inorganics (prg/kg)									
Copper	2,960 ^b	130,000	151	15.3	35.8		13.0	radio file f actoria and the second	85.7
Lead	250ª	_1,000.0ª	88.8 J	<u>ī 382</u>	165 J	[3.2.J	132	35.6	437
Manganese	-11,200 ^b	490,000	395	420	377	547	352	576	477
Mercury	1.0	1.0	0.05 U	ก 50:0	0.06 U	0.06 U	-0.05-U-	∙Й-≶0'0	0.08 J
Nickel	1,600	70,000°	13.0	12.8	23.3	26.4	_76.8 J−	P 9.22	30.5 J
Selenium	400b	17,500°	J. 5.1	\mathbf{n}'	7.6 U	A 8 L	and a Salpana and a same	er og samt for fine en en en en en en	2.2
Silver	400°	17,500°	0.79 J	0.71.5	T. 67, 1997	0.93 J	r 69:0	0.84 J	1.6.1
Thallium	5.6 ^b	245°	0.71 U	P. C. Line	2.2 J	14.	U 07.0	Δ-1 <i>L</i> :0	1.0 J
Vanadium	- 560 ^b	24,500	35.6	36.4	A	-909	33.4	34.8	43.8
Zinc	24,000 ^b	1.050,000	57.1 J	227 J	248 J	£ 0.69	78.3	091	505
Dioxins/Furans (ne/kg)									
123.4.6.7.8-HpCDD			25.827	8.306	NA	1:001	NA	NA	NA
1,2,3,4,6,7,8-HpCDF			5.727	3.609	NA	U 060.0	NA	NA	ŊĀ
1,2,3,4,7,8,9-HpCDF	50 484g 3		0.940 U	0/370 U	NA	0.127 U	NA	NA	NA
1,2,3,4,7,8-HxCDD	\$175.00 I	1 *******	0,414 U	0,259 U	NA	0,145, U	NA	NA	NA
1,2,3,4,7,8-HxCDF	A STATE OF THE STA		3.382 J	1.630 J	,NA,	0.096, U	NA	NA:	NA
1,2,3,6,7,8-HxCDD	director	alt Alliannes of the same	0.279 U	0.174 U	NA	0.098, U	NA	NA	NA
1,2,3,6,7,8-HxCDF	gad galans new jakit bilansanist di sin Tangan jakit		0.190 U	0.133 U	NA	0.072 U	NA	NA	NA
1,2,3,7,8,9-HxCDD	A 144 (A 144)		0.320 U	0.200 U	NA	0.112 U	NA-	NA	NA
1,2,3,7,8-PeCDD	(1) (1) (1) (1) (1) (1) (1) (1) (1) (1)		0,384 U	0.280 U	NA	0.102 U	NA	NA	NA
2,3,4,6,7,8-HxCDF			0.222 U	0.156 U	NA	0.084 U	NA	NA	NA
2,3,4,7,8-PeCDF	114		0.265 U	0.123 U	NA	. 0.077 U	NA	NA	NA
2,3,7,8-TCDD			0.175 U	0.183 U	NA	0.091 U	NA	NA	NA
2,3,7,8-TCDF		A Section of the second section of the section of the second section of the section of the second section of the section o	0.200 U	U £71.0	NA	0.417	NA	NA	NA
OCDD-		***********************************	.356.889 J	67.347	NA	7.548 U	NA	NA	NA
OCDF	_	•	15.725	7.591	Ν̈́A	0.168 U	NA	NA	NA
Total toxicity equivalency	6.67 ^b	875°	1.02	0.357	NA	0.001	NA	NA	NA

State Market and the state of t			Table	Table 3-2 (CONTINUED	INUED)		, v		
LANDEIL SUB	ANDRICE		ACE SOIL	SURFACE, SOIL-SAMPLE, ANALYTICAL RESUIETS SUMMARY	VALVTIČA	S RESULTS	SUMMARY		
And the second of the second o	Carry Spirite and Carporate Spirite Sp	A Company of the Comp	WENAT	<u>WENATCHEE, WASHINGTON</u>	HINGTON		A Section of the sect	And the state of t	And the second s
Apple of the control		Industrial	A 400	7	1 Commence Com	THE PERSON NAMED IN		Halon September 2007 2007 2007 2007 2007 2007 2007 200	7A
ПОСАТІОМ В	Cleanup	Cleanup-	LF08SB04	LF08SB12	LF11SS00	LF11SB12	LF11SB22	LF12SB04	LF12SB12
DOPARA	Standards Star	Standards	0 - 4 ft bgs	8-12 ft bgs	0 - 4 ft bgs	8 - 12 ft bgs	18 - 22 ft bgs	10 - 4 ft bgs	8 - 12 ft bgs
VOCs (µgkg)									
2-Butanone	6,900,000 ⁴	27,000,000 ^d		0.6	21 U		$\mathbf{\Omega}$ III	[mar	16
Acetone & C. P.	8,000,000 ^b	350,000,000	m li	A Company	100 T	n si	43	49 <u>.</u> U-	37.U
Benzene	2004		mar y	n zi	A A				2.7
Chlorobenzene	1,600,000 ^b	70,000,000	MIF.	12 U	MIL.	Inch!	N/II	UNI	12 U
Ethylbenzene	20,000	20,000ª) M (H)	12.U	1) DHIIO	DUIT	D.81	24
Xylene (fotal)	20,000	20,000	n II.	(12.U		rnells	U.ll.	M. H. T.	90
SVOCs (µg/kg)									
2-Methylnaphthalene	1		350 U	410 U	290 J	94 J	J 056	1098	120.1
Acenaphthene	4,800,000 ^b	210,000,000	350 U	410 U	350 U	380 U	0.05E	_09€	400 U
Anthracene constitution of the constitution of	24,000,000 ^b 100,00	100,000,000	350 U	410 U	D-05E	-0.08E	-D-056		400-U
Benzo(a)pyrene	137	18,000	350 U.	410 U	.0.05E	1 08E	-0.05E	D-09E-	-400 U
Berizo(b)fluoranthene	_	18,000	O 056	710°C	J-056	52 J	350 D	1.09E	L 001
Berizo(k)fluoranthene	1376	118	350 U	410 0	350 U	0.08E	350 U	-1-09E	-1-L-8
Bis(2-ethylhexyl)phthalate	71,400 ^b	-9,370,000	F 98	£89	77.7	300°	230 J	64·J:-	820
Butylbenzylphthalate		700,000,000	0.05E	410 U	ก 056	-0380-D-	350 U	-0.09E	92.J
Carbazole	-50,000 ^b	-6,560,000	350 U	410.U	0.05E	Д 086	350 U	Ё.09€	400-U
Chrysene and the contract of t	137	18,000	350 <u>_U</u> -		-0.05E	Talk maring and property	350-Un	360 U	-130 J-
Di-n-butylphthalate	-8,000,000 ⁶ 350,00	350,000,000	D_05E-	410 U	Ω-05E	-11-08E	<u> 350 U</u>	- 109€	£ 05
Dimethylphthalate	80,000,000	80,000,000 350,000,000	350 U	410 U	350 U	380 U	350 U	_0.09€	400 U
Fluoranthene	3,200,000 ^b 140,00	140,000,000	350 U	410 Π	1056	L001	350 U	D 09E	75.3
Fluorence	3,200,000 140,00	140,000,000	350 U	410 U	140 J	n 08E	350 U	10.09E	400 U
Naphthalene	3,200,000 ^b 140,00	140,000,000	350 U	410 U	48 J	150 J	350 U	360 U	170 J
Phenanthrene	•		.350±U≅	410 U	250 U	€ 92 J	350 U	360 U	85 J
Pyřene	$ 2,400,000^{b} 105,00$	105:000:000	1.0 OSE	.∩.01 ≯ ⊹ ∴	r 9£	120 J	: ; : 350 U∍	Ω 09E	J 06
Key is at the end of the table.						7			

			Table	Table 3-2 (CONTINUED	NUED)				
							X C Y J W C Y J W C X Y W C X		
The property of the contract o	ANDRIEL		ACE SOIL SAME WENATCHEE		SE ANALY HEAL WASHINGTON	-KESULI-IS	SUMMAKI		
CLP INORGANIC NUMBER	Residential	Industrial	Established States	A Property of the second	Territoria de la compansión de la compan	a leg garage a la la company de la company d	The Company of the Company	Section of Section of the section of	Manual State of the State of th
LOCATION ID		Cleanup	LF08SB04	LF08SB12	LF11SS00	LF11SB12	LF11SB22	LF12SB04	LF12SB12
DEPTH	Standards	Standards	0 - 4 ft bgs	8 - 12 ft bgs	0 - 4 ft bgs	8 - 12 ft bgs	18 - 22 ft bgs	0 - 4 ft bgs	8 = 12 ft bgs
Pesticides/PCBs (HE/RE)									
4.4-DDD	4.170°	547,000		001	37	16.65	j	123000	0.3746
441DB	2.940 ^b	386,000	52	24	11.	4180	7.6.7	54	96
4.4.DDT	1.000	5.000ª	3.5 U	7.2.J) 3.5.U	T. 1. 2. 3. 1. 1.	1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1	1.7.2.J	4.1.1
Aldring	58.8p		1.8 U	2.1.0	À 8.1	2.0-A	J. 8. L	-1.9.U	2.1.0
Alpha-BHC	159 ^b	20.800	U.8 U	2.1 U	D.8.1		<u> </u>	ገ 6.ፒ	2.1.0
Aloha-chlordane	⁶⁹ L	101.000	2.0	26 J	5.5 J	2.0 ∪	ப் 8.1	U) (0.1	3.4.0
Aroclor1242	1.000	10,000ª	35 U	41 U	1 35 M	0 86 E	0 58335 O	1 98/08/0	150 J
Aroclor 254	60	盖	35 U	41 U	35 U	38 U	35 U	36 U	40 U
Bera-BHC	556		1.8.U	3.3 J	Л 6 Г	4.1.5	U.8.U	1.9 U	2.1 U
Dalfa BHC		A CANADA CANADA	1.8 U	2.1 U	1.8 U	2.0 U	37 1.8 U	1.9 U	2.1 U
Dieldrin	62.5 ^b	8 200	1.6 J	.5.8 J	2.7.3	1.1.1	N 3.5 U	3.6 U	4.2
Endosulfan I	480 000 ^b	21,000,000	ा 8'1	1.2.1 U	1.8 U	2.0 J	ា 8.ប	⊘>1.9 U	
Findosiulfan sulfate	•		3.5 U	4.1 U	≥ //3.5 U	₹3.8 €	€3.3.5 V	<u>0.33.6 U</u>	4.0 Ū
Endrin	24,000 ^b	1,050,000°	3.5 U	₩.1 W	a.5 U	ћ 8.Е	0:95 J	3.6 Ų	₹ 4.0 U
Endrin aldehyde			9.5 U	3 4.1 U		3.8 U	3.5 Ü	3.6 U	4.0 U
Endrin Ketone	The second secon	The state of the s	J. 5.5 U	4.1 U	3.5 U	3.8 U	., ,3.5 U	3.6 U	4.0 U
Gamma chlordane	de la companya de la	Samuel management of the second	2.6 J	78.	6.2.1	2.6	1.8 U	1.6.L	4.6
Inorganics (1197/kg)									
Antimony	304	20 _q	The second secon	R	property of the second section of the second	F 0.1	The St. Joseph School of the Park		R
Arsenic	1 (A)	1 1	L17	7.4 J	£ 5.9	7.1.1	4.6 J	6.3 J	13.6 J
Barium		245.000	93.5	394	102	120	196	92.8	100
BerVlium	0.233 ^b	30.5°	0.32 J	0.48 J	0.25.J	0.23 J	0.21 J	r <u>98-0</u>	<u>0.46</u> J
Cadmium	2.50	10.0ª	0.11 ช	0.11 U	0.11 U	0.24 J	0.11 U	0.11 U	0.12 U
Chromium	100	500.0ª	21.6	34.9	21:6J	21.4 J	18.3 J	18.7 J	
Cobalt	3300 ^d	108 141	. 6.8 J	8.6 J	L89	r 9'9	£7.9	6.7 J	7.1 ਸੂੰ
Key is at the end of the table.									bite

			Table	Table 3-2 (CONTINUED	INUED)				
	LANDEIEL	SUBSURF.	ACE SOIL 6	SAMPLEAL	VALYTIGA	SSURFACE SOIL SAMPLE ANALYTICAL RESULTS SIIMMARW	SIIMMARV		Control of the contro
The second commencement of the second commenceme	Andrewson of the second	Marine Carlotte	WENATO	WENATCHEE, WASHINGTON	HINGTON	A ST. LA.	The state of the s	The second	
CLP INORGANIC NUMBER	Residential	[Industrial]	1000年	13.	ego eg ego	· · · · · · · · · · · · · · · · · · ·	Penson Signal Units Translation	Parcel of the pa	ogga eg. 19 Perd mile v
OND	Cleanup		LF08SB04	LF08SB12	3	LF11SB12.	LF11SB22	LF12SB04	LF12SB12
DEPOSIT	Standards	Standards	-04 ft bgs	8 - 12 ft hgs	0-4 ft hgs	8 - 12 ft bgs	18 - 22 ft bgs	0 = 4 ft bgs	8 - 12 ft bgs
Inorganics (pg/kg)									
CODDET Street the street of th	2,960 ^b	130°000°	191	15.65	26.3	42.9	73.7	15.5	6.77
Lead	250ª	1,000,0	92.3	164	230.J	104.3	20.2 J	35.5 J	121 T
Manganese	11,200 ^b	490,000	313	353	310	299	201	560	284
Mercury	1.0	1.0	0.05 <u>, U</u>	U-0.05 U	0:05 U	1 5 060	0.05 U	0.05 U	-0.06-U
Nickel.	1,600 ⁶	70,000°	14.5.1	26.2.3	18.2	27.6	19.8	14.3 0	15.4
Selenium	400	17,500	1.6	1.9	1.6	1.7.	154%	1.5.0	1.77.1
Significant Assistant PAIIS	400 ^b	17,500°	0.87 J	rit	1.92.0	1.3.7	0.77.3	0.75 J	1.0.1
Thallium		245	£ 86.0	<u> 16</u> 3	1.13	1.0.1	VILLO	0.99 J	0.77.U
Vanadium	- 260 ^b	24,500	32.7	41.2	31.8	37.4	34.1 2	34.1 9 8	32.8
2000 September 1 S	24,000 ^b	-1,05	59.4	151	T 8'96	769 T	80.7 J	50.5 J	134 J
Dioxins/Furans (ng/kg)									
1,2,3,4,6,7,8-HpCDD	Commence of the Commence of th		NA.	NA.	51.369	106.124 J	1.333.1	44.210.5	. 55.006
1,0,3,4,6,7,8-HpCDF	A STATE OF THE PROPERTY OF THE PARTY OF THE	A Commence of the Commence of	. NA ≒	NA	11.381	23.511	1 0.553 P) 0.857³U∗	7.549
1,2,3,4,7,8,9-нрсог		THE STATE OF	NA!	NA	2.036 U	1.656 U	0.225 U	1.207 U	0.904 U
1,2,3,4,7,8=HxCDD	ही हिंदी हैंग हैंग 1	(4) (4) (4) (4) (4) (4) (4) (4) (4) (4)	. NA ⊹	NA .	0.602 U	1.205 贝	0.413 U	U.760.1	1.120 U
1,2,3,4,7,8-HxCDF	The state of the s	The second secon	NA.	NA ,	25.284 J	4.127.5	1.521 J	0.571 U	1.706 J
1,2,3,6,7,8 HxCDD	を できる	Control of the second s	NA	NA	1.712-J	2.254 J	0.278 U	0.739 U	0.754-U
1,2,3,6,7,8-HxCDF	7 i	Committee of the second	NA	NA -	1.173	1.144 U	0.185 U	0.428 U	0.766 U
1,2,3,7,8,9-HxCDD	Salah Control of the	Allegator in the state of the s	NA	NA	1.744 J	U 026.0	0.319 U	0.847 U	0.864°U
1,2,3,7,8 PeCDD	10 mm	ながらから	NA	NA	U.866.0	0.694-U	0.340 U	0.660°U	0.930 U
2,3,4,6,7,8-HxCDF			NA	NA	3.079	1.337 U	0.217 U	0.500 U	0.895 U
2,3,4,7,8-PeCDF	The state of the s	3. 不可以提供的 (1) 10 10 10 10 10 10 10 10 10 10 10 10 10	, NA	NA	.0.543 U	U.0830.U	0.257.U	0.663 U	0.428 U
3,3,7,8-TIGDD:«		大学の大学の大学の大学の大学の大学の大学の大学の大学の大学の大学の大学の大学の大	NA.	NA	0.331.U	0.553 U	0,308 U	0.369 U.	, 0.413 U
2,3,7,8-TCDF	PARTY STATES	2. 2. 2. 2. 2. 3. 3. 3. 4. 5. 5. 6. 6. 6. 6. 6. 6. 6. 6. 6. 6	NA	ΝA	3.6197	0.341 U	0.148 U	0.288 U	0.328 UJ
(IGO)	Andreas de la companya de la company	The Continue of the second of	NA.	NA	386.564 J	1,255.142 J	8.960	373.338 J	649.029
OCDF	error central participants		NA	NA.	19.036 J	35.485 J	0.423 U	8.921 J	28.63
Total toxicity equivalency	6.67 ^b	875°	NA	NA	4.332	3.225	0.180	0.824	1.474
Key is at the end of the table.			Carlotte A	The state of the second second	等等的 100 mm 100			14.	
	e to be designed to the second	A chair to Sensing when a constitution	ATT VE TO STANKE STRIKE AND	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	The State of the S	Control of the Contro	The second state of the second	and the second s	The second secon

Continued Carbon	1 11 11									-
TON ID Residential Industrial Residential Residential Industrial Residential Industrial Residential Residential Residential Industrial Residential Residential Industrial Residential Industrial In		CANDFILL		ACE SOIL	SAMPLE AD	VALYTICAL	L RESULTS	SUMMAR		
TON ID Residential Industrial Industri			The first	WENAT	CHEE, WAS	HINGTON	American Company of the Company of t	and the second s		\$1.00 m
TION ID Cleaning Legisba2 Legisb2 Le	The second secon	Residential		· 新年 新		一种工作	Angeres Services Services Services	engene legi eng eng enge ken ken	annes Franc Sant Gran Gran Taga	Free control of the c
Harden Standards Standards 18 - 22 ft bgs 25 - 29 ft bgs 6 - 4 ft bgs	LOCATION ID	Cleanup	Cleanup	LF12SB22	LF12SB29	LF13SB04	LF13SB12	LF13SB22	LF13SB32	LF09SB04
Control Cont	DEPTH	Standards	Standards	18 - 22 ft bgs	25-	0 - 4 ft bgs	8 - 12 ft bgs		24 - 25 ft bgs	
rone (s,200,000) 27,000,000 (10 U 12 U 11 U 15 U 12 U 12 U 12 U 12 U 12	VOCs (µg/kg)		IXXII							
e control 8,000,000° 130,000,000° 130,000 130,000 130,000 130,000 130,000 120,	2-Butanone	-000,000;	14	10 O.	ng transport	MRL	M-SI	MIL.	Merchanian marketine	T 07
remarker 500° 500° 70,000,000° 10 U 12 U 11 U 15 U 11 U 12 U 11 U 12 U 11 U 15 U 11 U 12 U 12 U 11 U 15 U 11 U 12 U	Acetone	8,000,000	m	U EI	,14 U	0.11	U SI	- 新世氏版		
Containe	Вепzепе	500	Ne.	$\dot{\Omega}$ OF	612 U	0.11	15 U	DW.	12 U	à II
Control 20,000° 20,00°	Chlorobenzene	1,600,000 ^b	-	0	er for One research with a part shall	n II	15-0	9-11	12 U	ā.11
Stilight	Ethylbenzene	20,000	٦	Ω or ε	12 U	A L	ብ \$1	Д Т		
Applitude	Xylene (total)	20,000	20,000ª	1	12 U	n 11 ×	ሰ ያነ 🧢	<u> </u>	_{FUN} 12 W	ЙИ
without and the line ±										
inthene displayed by the control of	ene	E W. C. That were		350 U	_06€ €	350 U	∩ 005	D 078	_0.8€⊠	350 U
cene 24,000,000° 100,000,000° 10	Acenaphthene	4,800,000 ^b		950 U	D 066	350 U	ก 606	370 U	∯ 380 U	350 U
a)pyrene 137b 18,000° 350 U 390 U 350 U 500 U 370 U 380 U 380 U 350 U 350 U 370 U 370 U 380 U 380 U 370 U 380 U 370 U 370 U 370 U 380 U 370 U 370 U 370 U 370 U 380 U 370 U 370 U 370 U 370 U 370 U 380 U 370 U 37	Anthracene	24,000,000 ^b	_	350 U	വ 066	350 U	N 005	07€	ற் 088	350 U
hylhocanthene 137° 118,000° 350 U 390 U 350 U 350 U 370 U 370 U 370 U 380 U 18,000° 150° U 350 U	Benzo(a)pyrene	-137b	477	350 U	D 068	350 U		370 U		350 U
tyl/Incranthene 1/37b 1/8,000° 350 U 370 U 380 U tty/Ihexyl/phthalate 16,000,000° 70,000,000° 70,000,000° 350 U 350 U 350 U 370 U 380 U ne 137° 18,000,000° 350 U 350 U 350 U 370 U 380 U ne 137° 18,000,000° 350 U 350 U 350 U 370 U 380 U trylphthalate 8,000,000° 350,000,000 350 U 350 U 350 U 370 U 370 U 380 U sthene 3,200,000° 350,000,000 350 U 350 U 350 U 370 U 370 U 380 U e 3,200,000° 140,000,000 350 U 350 U 350 U 350 U 350 U 370 U 370 U 380 U e 3,200,000° 140,000,000 350 U 350 U 350 U 350 U 370 U 370 U e 3,200,000° 140,	Benzo(b)fluoranthene	137°	18,000	350 U	ភ ០៤៩	350 U	០ 005	J 07.8	் 380 ம்	350 U
thylhealate 71,400° 9,370,000° 350 V	Benzo(k)fluoranthene	137b	18,000	350 U	Ω 06€	350 U	ù 005<	370 U	ற் 088	9.05E
nnzylphthalate 16,000,000b 700,000,000b 350 U 350 U 350 U 350 U 370 U 380 U 380 U ole 50,000b 6,560,000c 350 U 350 U 350 U 370 U 380 U 380 U ne 13.7b 18,000 350 U 350 U 350 U 350 U 380 U 380 U stylphthalate 8,000,000b 350,000,000 350 U 350 U 350 U 370 U 370 U 380 U ylphthalate 80,000,000b 140,000,000 350 U 350 U 350 U 370 U 370 U 380 U c 3,200,000b 140,000,000 350 U 350 U 350 U 350 U 370 U 370 U 380 U de 3,200,000b 140,000,000 350 U 350 U 500 U 370 U 380 U 380 U de 3,200,000b 140,000,000 350 U 350 U 500 U 370 U 370 U 380 U de 2,400,000b 105,000,000 350 U </td <td>Bis(2-ethylhexyl)phthalate</td> <td>71,400^b</td> <td>9,370,000°</td> <td>€ 05</td> <td>44 J</td> <td>41.3</td> <td>r 68</td> <td>49. J</td> <td>₩43 J</td> <td>64 J</td>	Bis(2-ethylhexyl)phthalate	71,400 ^b	9,370,000°	€ 05	44 J	41.3	r 68	49. J	₩43 J	64 J
ole 56,000 % 6,560,000 % 350 U 350 U 350 U 350 U 350 U 370 U 370 U 380 U ne 13.7 % 18,000 % 350 W 350 W 350 W 350 W 370 W 380 W 380 W yphthalate 8,000,000 % 350,000,000 350 W	Butylbenzylphthalate	16,000,000 ^b	-	350 U	n 06€ ≒	350 U	n 005	ភា ០/៩	À 08€	350 U
ne 137° 18,000° 350 U 350 U 500 U 370 U 380 U ntylphthalate 8,000,000° 350,00° 350 U 350 U 350 U 370 U 380 U 380 U ylphthalate 80,000,000° 350,00° 350 U 380	Garbazole	50,000°		350 U	្ឋ 068	350 U	T 005	A 028	े 380 U	ัก '05E
httphthalate 8,000,000° 350,000,000° 350. U 370. U 370. U 380. U ithere 3,200,000° 140,000,000 350. U -390. U 350. U 350. U 380. U <td>Chrysene</td> <td>137</td> <td>18,000</td> <td>350 U</td> <td>ฏ 06€ ≅</td> <td>350 U</td> <td>n 005</td> <td>Ū 07£≘≅</td> <td>ሷ 08ይ</td> <td>350 U</td>	Chrysene	137	18,000	350 U	ฏ 06€ ≅	350 U	n 005	Ū 07£≘≅	ሷ 08ይ	350 U
Alphthalate 80;000,000° 350,000,000 350 U	Di-n-butylphthalate	8,000,000°	<u></u>	्रो 05हर र	D 06E	350 U	் 500 ம	À 0/8	ù 08€	∯ 05€.∂
thene 3,200,000 b 140,000,000 b 350 U 380 U <td>Dimethylphthalate</td> <td>80,000,000</td> <td>£</td> <td>ัก 058</td> <td>Д 06€</td> <td>320 U</td> <td>D 005</td> <td>ກ 0/2€.</td> <td>f 08</td> <td>350 U</td>	Dimethylphthalate	80,000,000	£	ัก 058	Д 06€	320 U	D 005	ກ 0/2€.	f 08	350 U
le 350 U 500 U 370 U 380 U 380 U 350 U 350 U 370 U 380 U 140,000,000 U 350 U 380 U 370 U 380 U 380 U 380 U 370 U 370 U 380 U 3	Fluoranthene	3,200,000 ^b	140,000,000	350 U	330 U	350 U	∵ 500 U	370 U	380 U	350 U
alene 3,200,000 ^b 140,000,000 350 U 350 U 500 U 370 U 380 U	Fluorene	3,200,000°	-	ብ 058		350 U	1: 500 U	. 370 U	J 08E	350 U
threne 2.400.000 105,000,000 350 U 380 U 380 U 380 U 380 U 380 U 380 U	Naphthalene	3,200,000 ^b		350 U	ப் 068	D 056	ሷ 005	370 U	Ů 08€	350 U
2,400,000 ⁶ 105,000,000 50 **350 0 390 0 380 U 380 U 380 U	Phenanthrene	The second secon		350 U	JO 06E	350 U	500 U.	370 U	-980-U-	350 U
	Pyrene	2,400,000 ^b		350 U	ி 068	350 U	500 U	370 U	U 08E	350 U

			Ta	ble 3-2	Table 3-2 (CONTINUED)	NOED)				
LANDRILLS	ANDRILLS		ACE SOIL WENA	LSAM	PLE AN F WAS	SAMPLE ANALYTICA Peher Washington		SUMMAR	UBSURFACE SOIL SAMPLE ANALYTICAL RESULTS SUMMARY WFNATCHER WASHINGTON	
GOPINORGANICALION	Residential	[hdustrial]	OMIGIAN						A Company of the second has been a second to the second of	Allender estanguites and the second
LOCATION ID	Cleanup	Cleanup	LF12SB22	223	LF12SB29	LF13SB04	LF13SB12	LF13SB22	LF13SB32	LF09SB04
DEPARIM	Standards	Standards	18-22 ft bgs	.gs 25 -	25 - 29 ft.bgs	0 - 4 ft bgs	8 - 12 ft bgs	18 - 22 ft bgs	s 24 - 25 ft bgs	sgq 13 E - 0
Pesticides/PCBs (µg/kg)										
4.4.DDD 10111	4,170°	547,000°	î j	andoni III	3.9 U	14	<u>1</u> 0005	3.2.1	NA.	2.7.J
4,4-DDE	2,940 ^b	386,000°	18	raciação raciação racia racia	3.9 U	28	2.2.J	4.8	NA:	· (°6'9
4,4:DDT	1,000	5,000	7.4		2.1.3	0,2.€	0.0 J	f 68.0	NA	2.6J
Aldring	58.8 ₆	7,720	1.8	N. 8.	2.0 ₪	1.8.U	2.6 U	1.9 U	NA:	1.8.U
Alpha-BHC	1590	20,800	∩ 8·I	n n	2.0⊴U	1.8.U	2.6 _(U)	1.9 W	II NAN I	N.8.U
Alpha-chlordane	, 769 ⁶	101,000	1.8 U	D.	2.0 U	1.8 U	2.6 U	N-6.I	NA	1.8.U
Aroclor 1242 Designation	1,000	10,000	35 U	O.	39 U	35.U	D-05	37.0	NACO	Nc5E
Aroclor1254	1,000	10,000	35 _. U	n.	39.E	35.U	D 05	37.0	NASS	35.U
Beta-BHC	556 ^b	172,900°	1.8 U	1	2.0 U	1.8 U	2.6 U	1.9 U	NA	2.3.J
Delta BHC **	WING HO!	ELGROUPS HIS	i.8:U	O. L. S.	2.0∜U	1.8.Ū	2.6rU	1.9.U	Straines grant tunck	1.8 U
Dieldrin magnesie	. 62.5 ^b ∵	8,200	13.5 U	Đ	3.9 U	3.5.U	5.0,U	17.U	NA.	3.5 _. U
EndosulfanT	480,000 ^b	21,000,000°	1.8.1	U	2.0 ₪	1.8 ሀ	2.6.0	0.6.1	NAS:	1.8 U
Endosulfan sulfate	1		3.5 U	U	3.9 U	3,5 U	5.0.U	3.7 U	NA	N 5.E
Enden :	24,000 ^b	1,050,000	5.5		L'08.0	3.5 U	, 3.0,U	3.7,0	fill i	3.5 U
Endrin aldehyde			3.5 U	U.L	3.9 U	3.5 U	The second secon	1 2	, NA	3.5.U
Endrin Ketone	A COLUMN	Same of the second	0.65 J	Transferred Age	3.9 U	3.5 Ū		Salah Sa	and the same of	9.5 U
Gamma chlordane	And the second s	April 2 September 10 September 2 mars	1.8	.8 U	-2.0 U	1.8 U	2.6 U	D:6:1	NA.	1,8.U
Inorganics (112/kg)										
Antimony		7504	R	R		T.8.T.	The second secon	131	Kerten	10 to
Arsenio	204	200:04	P 78	ı	0.68 U	41.41	6.1.3	7.0 J	0.69 UJ	27.T
Banum	-5.600 ^b	245,000	70.4		52.8	104	130	93.0	80.6	901
Beryllium	0,233	30.5	0.70	B	0.22.3	<u> 7897</u> −	0.53 J	2.43 J	* * * * * * * * * * * * * * * * * * *	<u>0.31</u> J
Cadmium	28	10:01	Ω 11.0	Û.	0.11.0	0.11.U	0.11 U	0.11.0	0.12 U	0.11 Ω
Chromium	100ª	500.0	F 8.8		16.8 J	45.8	31.6	24.8	30.2	17.0
Cobalt	33300d E	_ 29,000 ₄	1.5.1	J	. 6.6 J	7.50	F 183J	1092 US 3	6.5 J	6.6 J
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			Tabl	Table 3-2 (CONTINUED	INUED)				
The Control of the Co	LANDFILLS	SUBSURE	ACE SOIL SAMP WENATCHEE		LE ANALYTICA WASHINGTON	RESULTS	SUMMAR		
CLP INORGANIC NUMBER	Residential	Industrial	The state of the s	the state of the s	در د	A Company of the Comp	A Commission and the commission of the commissio	2000 A	
LOCATION ID	Cleanup		_		LF13SB04	_ LF13SB12_	LF13SB22	LF13SB32	LF09SB04
	Standards	Standards	18 - 22 ft bgs	25-29 ft bgs	. 0 - 4 ft bgs	8 - 12 ft hgs	18 - 22 ft bgs	24-25 ft bgs	0 - 3 ft bgs
Inorganics (pg/kg)									
Copper	2,960 ^b	130,000	0.01	22.7	21.4	15.8	16.5	9.4	15.1
Lead	250	1,000.04	18.3 J	4.5 J	39.6	8.7	18.7	3.5	23.4
Manganese	11,200 ^b	490,000°	220	217	401	251	283	242	284
Mercury	1.0	1.0ª	ு 0.06 U	0.06 U	ា 20:0	0.06 Us	0.06 U	U 90.0	0.05 U
Nickel	1,600 ^b	_70,000€	11.4	11.3 34	26.2.J	18.1 J	26.6 J	((17.1 J	23.5 J
Selenium	400b	17,500°	06.0	1.3	≨ ≨ § 2.03° to	1.9	1.5	1.5	1.1
Silver	400p	17,500°	0.43 J	0.72 J	ੰ 0.99 J	0.81 J	0.71 J	् <u></u> 0.71 J	09.0
Thallium	5.6 ^b	245°	∩ 69.0	0.74 U	1.5 1.5	9 0 1.2 J	1.0 J	1.0 J	0.70 U
Vanadium	260 ^b	24,500°	23.8	34.1		46.3	33.5	40	24.7
Zinc	24,000 ^b	1,050,000°	43.3 J	44 J	72.7	53.6	77.2	6 N 39.7	50.8
Dioxies/Furans (ng/kg)									
1,2,3,4,6,7,8-HpCDD			2.489 J	NA .	0.511 U	3.448	NA *	NA NA	NA
1,2,3,4,6,7,8-HpCDF	-		0.591	NA	0.505 U	0.405 J	NA	NA	NA
1,2,3,4,7,8,9-HpCDF		A CONTRACTOR OF THE PARTY OF TH	0.354 U	NA	0.712 U	3 1	NA	NA	NA
1,2,3,4,7,8-HxCDD	The second secon	The state of the s	0.457_U	NA	0.617 U	Ĭ	NA	NA NA	NA
1,2,3,4,7,8-HxCDF		The second section of the second sections of the second section section sections of the second section section section sections and the second section	0,348 U	NA	L.012 J	0.168 U	NA	NA	NA
			0.308 U	NA	0.415 U	0.295	NA	NA	NA
1,2,3,9,7,8-FIXCDF	Charles and All the Angelong control was	The state of the s	0.201 U	NA NA	0.340 U	0.120 U	NA NA	NA NA	NA AN
1,2,3,7,8-PeCDD	and the second second second second	Capti ma Sparenga i saranna	0.303 U.	NA	U 878 U	0.22T U	NA	NA	NA
2,3,4,6,7,8-HxCDF	To Charles and the Charles of the Ch		0.305 U	NA	∵ 0.398-U	0.147 U	NA	NA	NA
2,3,4,7,8-PeCDF			0.210 U	NA	0.235 U	0.165 U	NA.	NA	NA
2,3,7,8-TCDD			0.370 U	NA.	0.408 U	0.164 U	NA	NA.	NA
2,3,7,8-TCDF	- 200 E	Enfort Spreed	0.421 UJ	NA	0.305 U	0.146 U	NA.	NA NA	NA
ОСДД	•		34.759	NA	12.649	37.974	NA	NA	NA
OCDF	-		1.357 U	NA NA	. 0.634 U	1.157	NA	NA	NA
Total toxicity equivalency	6.67 ^b	875	0.067	NA C	0.114	0.107	N. NA	NA	ŅA
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		anie 3-2 (C	I able 3-2 (COIN I IINUED)	5			
LANDFILL SUBSU	RFACE SO	OIL SAMPI	LEANALY	TICAL RES	SUBSURFACE SOIL SAMPLE ANALYTICAL RESULTS SUMMARY	MMARY	
	WE	ATCHEE,	WENATCHEE, WASHINGTON	TON	- The second of	40	
integer (rista)	Residential	Residential Industrial	Andrews Commencer	Anguaring and An	Abrama ay maa ahay maada aanay madaa sa ay ahay aha	Server of the control	A Land
LOCATION ID	Cleanup	Cleanup	LF09SB12	LF09SB22	LF10SB04	LF10SB12	5.54 5.54
DEPTH	Standards	10 12 77	8 - 12 ft bgs	, W. J. 174	18-21 ft bgs 0-4 ft bgs.	8 - 12 ft bgs-	
VOCs (µg/kg)							A A C
2-Butanone	6,900,000	$[27,000,000^{4}]$	Medillorengeness	15-UI	M-H	(13.03)	
Acetone	8,000,000°	8,000,000,350,000,000	62 U	37 U	0.84	13 U	7. 6.4
Benzene	500°		11 U	(3€ (12 U)	ម្រាប	13 U	12.77
Chlorobenzene	1,600,000 ^b	70,000,000°	Ω II	12 U	n II	13 U	
Ethylbenzene.	20,000	20,000	U.11	12 U	n II	-N-EI	A STATE OF THE STA
Xylene (total)	20,000	20,000	A-H	0-71	A. A. Carrier	A.E.L.	
SVOCs (µg/kg)							
2-Methylnaphthalene	h -	""	360 U	O 068	750 J	160 J	
Acenaphthene	4,800,000 ^b	4,800,000 210,000,000	360 U	390 U	350 UJ	420 U	
Anthracene	24,000,000 ^b	100,000,000	Ω 09ε 🔯	390 U	ुर 350 UJ	12.7 420 U	
Benzo(a)pyrene	137 ^b	18,000°	N 09€ 🗆	390 U	्र 350 UJ	107 FEE	A STATE OF THE PARTY OF THE PAR
Benzo(b)fluoranthene	137 ^b	18,000°	U 09€0 W	1 390 U	∴ 3350 UJ	(10 %420 U	
Benzo(k)fluoranthène	(). 137°	_18,000°	€ 23 360 U	390 U	# %3 €350 UI	531 1420 U	1 4 M
Bis(2-ethylhexyl)phthalate	71,400°	9;370,000°	J 360 U	3.02,400	🕦 350 UJ	420 U	A Total Control of the Control of th
Butylbenzylphthalate		16,000,000 700,000,000	11 360 U	∩ 06€	1350 UJ	3€ 2.4 20 U	F- 1
Carbazole	50,000 ^b	6,560,000°	ുളൂ ′360 U	390 U	ുള്ള 1350 UJ	⊈36 (1420 U	13 8 13 A
Chrysene	137°	18,000	38.3 360 U	∜⊹: 390 U	350 UJ	383 <u>540</u>	
Di-n-butylphthalate	8,000,000°	350,000,000	∵ 360 U	390 U	, 350 UJ	181 420 U	Section of the second
Dimethylphthalate	80,000,000	80,000,000 ^b 350,000,000	N 098	390 U	350 UI	7 420 U	
Fluoranthene	3,200,000 ^b	140,000,000	360 U	390 U	350 UJ	420 U	
Fluorene	3,200,000 ^b	140,000,000	360 U	390 U	350 (U)	420 U	
Naphthalene	3,200,000 ^b		360 U	390 U	180°T	TOOT	
Phenanthrene	A A A A A A A A A A A A A A A A A A A		-360 U	- 1300 N	350 UJ	420 U	The second of the second
Pyrene	2,400,000 ^b	2,400,000 ^b 105,000,000	360 U	390 U	49 J	97 J	

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一年の一日の一日の一日の一日の一日の一日の一日の一日の一日の一日の一日の一日の一日の		ו מחוב א-ר (י	CONTRACE			1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -
LANDFILL SUBSURFACE SOIL SAMPLE ANALYTICAL RESULTS SUMMARY	JRFACE S	OILSAMP	LE ANALY	TICAL RES	ULTS SUM	MARY
The first of the second of the	WEI	<u>NATCHEE</u>	WENATCHEE, WASHINGTON	TON	The state of the s	
CLP INORGANIC NUMBER		<u>. </u>	de la companya de la	The second secon	Table of the second of the sec	がないのでは、
LOCATION ID	Cleanup		LF09SB12	LF09SB22	LF10SB04	LF10SB12
DEPIH	Standards	Standards	8 - 12 ft bgs	18-21 ft bgs	0-4 ft bgs	8 - 12 ft bgs
Pesticides/PCBs (µg/kg)						g
4,4±DBD	4,170 ^b	547,000	90	Ω 6.E	91	44
4,4'DDE	2,940 ^b	1	24	3.9 U	12	25
441DT	1,000	1	7.2 U	3.9 U	-1 S.E	4.3 U
Aldrin	58.8 _b	7,720°	3.7.U	2.0 U	1.8 U	2.2 U
Alpha-BHC	159 ⁶	20,800	3.7 U	2 U	1.8 U	2.2 U
Alpha-chlordane	769 ^b	101,000	3.7 U	2.0 UJ	U.8.U	3.9 U
Aroclor1242	1,000	10,000	72 U	139 U	35 U	18 V 43 U
Aroclor1254	1,000	10,000	72 U	39.U	35 U	43 U
Beta-BHC	556°	72,900	3.7 U	2.0 U	1.8 U	2.2 U
Delta-BHC	and the second s	e Stanen Zahemina masmasina A Strick in india	3.7 U	2.0 U	1.8 U	2.2 11
Dieldrin	62.5 ^b	8,200°	7.2 U	3.9 U	3.5 U	7 4.3 U
Endosulfan I	480,000 ^b	21,000,000	3.7 U	2.0 U	1.8 U	2.2 U
Endosulfan sulfate	Service Servic	1 1 1 1 1 1 1 1	7.2 U	3.9 U	3.5 U	4.3 U
Endrin	24,000 ^b	1,050,000°	7.2 U	3.9 U	3.5 U	. 4.3 U
Endrin aldehyde	- : - : - : : : : : : : : : : : : : : :		7.2 U	U 9.€ ≅ 31	3.5 U	4.3 U
Endrin ketone	-	10.90	7.2 U	3.9 U	J. S. E	4.3 U
Gamma chlordane	Charles of the common of the charles	instruction and the services of the services o	2.4 J	2.0 U	0.60 J	4.6 J
Inorganics (µg/kg)						
Antimony	30 _d		0.88 J	R	R	4.3 J
Arsenic	204	200.0	8.0 J	T 6.T	5.3	9.1
Barium	. 5,600 ^b	245,000°	141	152	94.5	106
Beryllium	0,233 ^b	30.5	<u>0.41</u> J		0.19	<u>0.30</u> J
Cadmum	2ª	10.0¶	0.11 U	0.11 U	0.11 U	0.11 U
Chromium	100°	.500.04	28.9	40.5	24.6 J	22.4 J
Cobalt	3,300 ^d	29,000 ⁴	8.2 J	€4.0	7.50	7.0 J
Key is at the end of the table.						Sopia printer

	F	able 3-2 (C	Table 3-2 (CONTINUED)			
I ANDRILL SUBSURFACE SOIL SAMPLE ANALYTICAL RESULTS SUMMARY	REACE SO	IL SAMP	LEANALYT	TCAL REST	JLTS SUMN	IARY
Application of the first of the second contract of the second contra	WEN	ATCHEE,	WENATCHEE, WASHINGTON	LON	OA PA	5 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9
CLP INORGANIC NUMBER	Residential	Industrial		****		
LOCATION ID			LF09SB12	LF09SB22	5 5	LF IUS BIZ
DEPARTMENT OF THE PROPERTY OF	Standards	Standards	8 = 12 ft bgs	18 - 21 ft bgs	0 - 4 TC bgs	sga 11 71 - 8
norganies (ug/kg)						
Copper	_2,960 ^b	130,000	34.4	15.3	16.5	19.1
eads with the same and the same	250	1.000.1	81.5	5.3	33.8.1	97.6 J
Vanoanese	11 200 ^b	490,000	315	906	320 J	388.1
Merchina (1977)	1.0	1.01	L 80.0	0.05 U		0.05 U
Nickel Control of the	1,600 ^b	70,000	25.2 J	34.8 J	19.2	17.6
Selentuma	400p	17.500°	1.7	27. 13	1.9 UJ	1.6 WJ
and the Land Inc.	400p	17.500	T T	ਂ 0.89 J	0.72 J	1.3.7
And the state of t	15.6b	245°	1.3 J	0.89 J	0.90 J	0.99 J
A Company of the property of t	560 ^b	24 500	43.7	43.8	38.2	38.7
A STATE OF THE PROPERTY OF THE	24.000 ^b	-1-050-000	163	41.5	48.6 J	68.7.J
Diasing (Rugane (11974)						
1 000 X 2 7 01 E C D D			NA	∴ 0.315 U	4.648	45.687
1,2,5,4,0,7,0-mpCDF			NA	0.211 U	1.951	10.253
1,2,3,4,0,7,0511PCD1 1,2,3,4,0,7,00 HAGDR	•		NA NA	∩ 0.297 UE	™ 0.897 U	े 1.729 U
1,2,5,4,7,9,7,11,0001 1,2,3,4,7,9,HxCDD	42		NA NA	, 0.325 U	0.687 U	2.461 J
1,2,5,1,4,1,8,1,10DF	A Company of the State of the S	The state of the s	. NA	0.232 U	0.636 U	3.476 J
1 2 a 6 7 8-HXCDD	Approximate the company of the compa	And the second second	NA	0.219 U	0.463 U	0.521 0
1 2 3 6 7 8 HXCDF	A STATE OF THE PARTY OF THE PAR		NA	0.174.U	0.477 U	0.770
1 2 3 7 8 9 HXCDD	Total and the second se	The second second	NA.	0.251 U	U. Vec. U	0.750.0
1.2.3.7.8 PeCDD			NA	0.367 U	0.414 U	0.090 U
2 3 4 6 7.8-HXCDF	•	•	NA	0.203 U	U. 8CC.U	0.727.0
2.3.4.7/8 PeCDF			NA.	0,182.U	0.485 U	0.403 U
2 7 8 TCDD	前のは (10mm) (10		NA	0.293 U	0.355 ປ	0.405 ພ
2,2,3,3,5 7,3,7,8,TCDF		· · · · · · · · · · · · · · · · · · ·	NA NA	0.181 U	0.258 U	0.383 U
		· · · · · · · · · · · · · · · · · · ·	NA	4.186	39.274	698.404
OCDF	an left metal production on the best to	The second of the second of	NA	0.377.U	5.248	34.709.
Total toxicity equivalency	6.67	875°	NA	0.004	0.111	1.886
Key is at the end of the table.		7 2 2 2 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	五字 五字 50 cm			
Construction of the constr	A The state of the	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		1000000000000000000000000000000000000	AND THE PERSON OF THE PERSON O	

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d EPA, Region 9, PRG.	9.	E42 - 38			And the second section of the section of th	Secretarian Comments of the Co	
Bold type indicates concentrations above sample quantitation limits or detection limits.	sample quantitation	n limits or detection	on limits.		Control of the second	The State of the	
Underline indicates concentrations above	ions above one or more comparison standards.	arison standards.	generalis Visites	Vinda State	The second of th	A Comment of the comm	And the second s
The second secon					The second secon		
	The second of th	The second secon					
= Below ground surface. = Contract Laboratory Program.	The state of the s			The same of the same of the same of the			carifort.
= United States Environmental Protection Agency.	n Agency.		San Suspen	A Company of the Comp	With the second second		
= Feet = Identification		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		A Company of the Comp	The state of the s	Commence and the commence of t	
= The analyte was positively identified.	The associated numerical value is an	nerical value is ar	n estimate.		The second secon		
= Microgramsper kilogram.		or and a second		The second second	· · · · · · · · · · · · · · · · · · ·	Carlotte Comments	
= Not analyzeu = Nanograms per Kilogram	The second secon			and the second s			
= Polychlorinated biphenyls:		Section of the sectio	13.7%	The state of the s	The Control of the Co		The state of the s
= Freimmary a cinculation, goal. = Rejected	The state of the s			The second section of the sect	A Section of the sect		COLUMN CO
= Semivolatile organic compounds.	terrende et en	A STATE OF THE PARTY OF THE PAR		The second secon	The second secon		ACTION TO THE
= Not defended. = The associated numerical value is an estimate of the quantitation limit of the analyte in this sample.	estimate of the quan	ntitation limit of th	he analyte in this s	ample,	A STATE OF THE STA	A Commence of the Commence of	in the second se
= Volatile organic compounds.				Management of the second		The state of the s	
= Washington Department of Ecology.							
Commence of the control of the contr	A company of the comp						
And the second s			The second secon		To Carlo Sale A 1988	The state of the s	AS JOSE TO GARD
Andrew School Communication and Communication of the Company of the Communication of the Comm	A CONTRACTOR OF THE PROPERTY O			The second secon	The state of the s	The state of the s	
Of the first of th			Aller of the state	to the second se	The state of the s	98	
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i Street	でを持えて			TOPICS TO SERVICE SERVICE	West of the second		State on the
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			17.		William of the control of the contro		
parent visit in the second			All the second s			(A) 数据 (A)	`
iliano e		•					
`1							

WDOE Method A cleanup level.

			,						
					Table 3-3	3-3			
		LANDFIL	T SUBS	URFACE SO	IL SAMP	LE SCREENI	LANDFILL SUBSURFACE SOIL SAMPLE SCREENING LEVEL SUMMARY	IMARY	
				WENA	rchee, v	WENATCHEE, WASHINGTON		Residential	Industrial
			Range of Detection		Frequency	Frequency of Exceedence of	Screening Level	Cleanup Standards	Cleanup Standards
	Analyte	ນ	Limits	Concentrations*	of Detection	Screening Level			
•	NOC	VOCS (((E/Kg)), (1)		1 40	16/32	0 / 32	EPA Region 9 PRG		27,000,000 ^d
	2-Butanone	none	17 - 01	13 - 170	7/32	0/32	MTCA Method B	9	350,000,000
	Acetone	96	10 - 130	71-04	1/32	0/32	MTCA Method A	500	500
	Benzene	henzene	10-10	1.4	2/32	0/32	MTCA Method B	1,600,000°	70,000,000
	Cnior	Chionzone	10-18	2 - 24	4/32	0/32	MTCA Method A	20,000	20,000
	Etmy	Emylociicale	10-18		8/32	0/32	MTCA Method A	20,000	20,000
		- 11	TO TO TO						
	O MS			05/105/105	1 9/32	NA	NA	NA	NA
		2-Methylnaphthalene	350 - 720	to set (* Oddestate)		(4) (1) (1) (1) (1) (1) (1) (1)	MTCA Method B	-4,800,000 ^b	210,000,000
	Acena	Acenaphthene	350 - 720	10		_	MTCA Method B	24,000,000 ^b	100,000,000
5 (NO) 1		Anthracene	350 - 720	71.	3/32	0/32	MTCA Method B	137 ^b	18,000
	Benze	Benzo(a)pyrene	350 - 720	100	4/32	0 / 32	MTCA Method B	137 ^b	18,000
	Benzo	Benzo(b)fluoranthene	350 - 720	40 - 100	2/32	0/32	MTCA Method B	137 ^b	18,000€
		Benzo(k)fluoranthene	350 - 720	48 - 87	23/32	0/32	MTCA Method B	71,400 ^b	
	Bis(2	Bis(2-ethylhexyl)piiulalaic	350 - 720	4		0/32	MTCA Method B	16,000,000 ^b	7
20	1967	Butylbenzylphthalate	350 - 720			0/32	MTCA Method B	50,000 ^b	6,560,000
		Carbazole	350 - 720	57.540	6/32	1 / 32	MTCA Method B	137 ^b	
		halate	350 720	50-150	2/32	0 / 32	MTCA Method B	8,000,000	
F)	5	Di-n-butyipiniaac	330 - 020	_	1/32	0/32	MTCA Method B	80,000,000	
9	O I	Dimethylphthalate	350 - 720	8	6/32	0/32	MTCA Method B	3,200,000	
ř.	Fluo	Fluoranthene	350 - 720	2000年	3/32	0/32	MTCA Method B		
**************************************			350 - 026	1 %	W / 32	0/32	MTCA Method B	3,2	140,
		Vaphthalene	350 - 720	1	7/32	0/32	NA	NA	¥N N
The Carlotte and		Phenanthrene	350 - 720		13 / 32	0/32	MTCA Method B	2,400,000 ^b	105,000,000
TOWNER PERSON		Pyrene	270 - 000						
		Key at end or me table.	, .,					1	

		Tab	le 3-3 (CO	Table 3-3 (CONTINUED)			
LANDF	FILL SUB	SURFACESO	OIL SAMP	LE SCREEN	LANDFILL SUBSURFACE SOIL SAMPLE SCREENING LEVEL SUMMARX	AMARY	
7		WENA	TCHEE, V	WENATCHEE, WASHINGTON	N	Desire	1,140
· · · · · · · · · · · · · · · · · · ·	Kange of	Kange of	The state of the state of	Frequency of	Total Control of the	Kesideniiai	Cleans
Δnalvie 32	Detection Limits	Concentrations* of Detection	rrequency of Detection	Exceedence of Screening Level	Source	Standards	Standards
Pesticides/R@Bst(lbg/Rg				经制度联票的国际管法院			
4,4'-DDD	1.8-9.6	0.51 - 660	27/32	0/32	MTCA Method B	4,170 ^b	547,000°
4,4"DDE	1.8 - 9.6	0.63 - 210	29/32	0/32	MTCA Method B	2,940 ^b	386,000°
4,4-DDT	1.8 = 9.6	0.67 - 52	22 / 32	0/32	MTCA Method A	1,000ª	5,000
Aldrin	1.8 - 9.6	2.18.2	2732	0 / 32	MTCA Method B	58.8 _b	7,720°
Alpha-BHC	1.8 - 9.6	4.2 - 22	2/32	0/32	MTCA Method B	159 ^b	20,800°
Alpha-chlordane	1.8 - 9.6	1.11-26	9//32	(0/32	MTCA Method B	769 ^b	101,000
Aroclor 1242	35-190	120L	1/32	0/32	MTCA Method A	1,000"	10,000
Aroclor1254	35-190	40 - 470	2/32	.0//32	MTCA Method A	1,000	10,000
Beta-BHC	9.6-8.1	2.2 = 16	8/32	0/32	MTCA Method B	ୃ ୨୧୧	⁻72,900°
Delta-BHC	1.8 - 9.6	The King Community of the Control of	1/32	NA.	William and the second	NA	NA
Dieldrin	3.5-19	1.1.21	13/32	0//32	MTCA Method B	62.5°	8,200°
Endosulfan I	1.8 - 9.6	2.0 - 51	3/32	0/32	MTCA Method B	480,000 ^b	21,000,000
Endosulfan sulfate	3.5 - 19	3.7:11	-3/32	· NA	N. N	N.A	NA
Endrin	3.5-19	0.80-9.0	5/32	0 // 32	MTCA Method B	24,000°	1,050,000
Endrin aldehyde	3.5-19	4.6-5.4	(52//32)	. NA	WANT OF	NA	NA N
Endrin ketone	3.5-19	,0.65 - 11	.4/32	, NA	Service WAGE	NA	NA
Gamma chlordane	1.8-96	0.60-28	16/32	NA	The second secon	NA.	ŊĄ
Inorganies (mg/kg)							
Antimony	0.60 - 0.88	0.88 = 4.3	9/32	0732	EPA Region 9 PRG	304	750 ^d
Arsenic	0.66 - 0.89	1.6 - 43.9	30/32	4 / 32	MTCA Method A	20ª	200:0
Barium	0.14 - 0.21	52.8 - 394	33 / 32.	0/32	MTCA Method B	5,600 ^b	245,000
Beryllium	0.08 - 0.21	0.16 - 0.68	33 / 32	24 / 32	MTCA Method B	0.233 ^b	30.5°
Cadmium	0.10 - 0.11	0.24 - 1.2	5/32	0 / 32	MTCA Method A	2.0	10.04
Chromium	0.20 - 0.30	8.8 - 62.5	32/32	0/32	MTCA Method A	100ª	500.0
Cobalt	0.44 - 0.67	4.5 - 14.7	32//32	0//32	EPA Region 9 PRG	_p 00£fs	29,000 ^d
Var. of and of the table							

		Tal	ole 3-3 (CO	Table 3-3 (CONTINUED)			
Sicral help of Labour 19 Labour							The state of the s
LANDK		SURFACES	JIL SAIVIE	LE SCREEN	ANDRILL'S UBSURFACE SOLD SAMPLE SCREENING EEVEL SUMMARY	IMAKY	3.5 GW.
THE STATE OF THE S	10.W-93	WENA	I CHEES, V	WENATCHEE, WASHINGTON		3 (1965)	j 489.0,
	Range of	Range of		Frequency of		Residential	Industrial
Analyte The second seco	Detection Limits	Soncentrations* of Detection	Frequency of Detection	Exceedence of Screening Level	Screening Level	Cleanup Standards	Cleanup Standards
Triorganics ((mg/kg)							
Copper	0.50 - 0.76	9.4 - 85.7	32732	07.32	MTCA Method B	2,960 ⁶	130,000
Lead	0.34=0.52	3.5-437	32//32	2//32	MTCA Method A	250	1,000.0
Manganese	0.12 - 0.18	201-1780	32 // 32	0/32	MTCA Method B	11,200	-490,000°
Wercury France	0.050.06	0.08 - 0.90	4.//32	0 / 32	MTCA Method A	1.01	- 1.0 <mark>0</mark> -1
Niekelin systematic	0.50-0.76	11.3 261:9	32./32.8	0 / 32	MTCA Method B	1,600	70,000
Selenium	1.1-2.7	0.90 2.3	21/32	0 //32	MTCA Method B	400b	17,5005
Silver	0.28 - 0.42	0.43-1.6	32 / 32	0/32	MTCA Method B	400¢	17,500°
Thallium	0.65-0.88	0.87 = 2.2	24/32	0 //32	MTCA Method B	;9:€	245€ U
Vanadium	0.28 - 0.42	028 - 0 42 23.8 - 74.1	32/32	0/32	MTCA Method B	5-909S	24,500°
Zine	0.48 - 0.73	39.7-505	-32 (-32	0/32	MTCA Method B	24,000	1,050,000
Dioxins/Aurans (ng/kg)							
[12;3;4;6;7;8:HpCDD	0.32-0.51	0.374 - 106.124	19//21	ŅĀ	a to the second of the second	NASS	J. NA
1,2,3,4,6,7,8-HpCDF	0.09-2.4	0.405 - 23.511	16/21	NA .	NA September 1	NA	N.A
1,2,3,4,7,8,9:HpCDF	0.13 - 2.0	1.393 - 1.629	2 /21	NA :	A CALCINARY SENT B	NAto,	NAC
11.2,3,4,7,8-HxCDD	0.14=1.2	0.14 = 1.2 2.461 - 3.754	2 (21)	NA	W. C. N. A. CHOSTON	NA	NA
1,2,3,4,7,8-HxCDF	0.09 - 0.64	0,09 = 0.64 1.012 - 25,284		NA	NA.	NA	NA
1;2,3,6,7,8-HxCDD	8.0 = 60.0	0.09 - 0.8 0.295 - 2.254		NA.	and the second and NA second and are	NA	NA
112,3,6,7,8-HxCDF	0.07 - 1.1	1,055 - 1,173	2/21	NA	The second second	NA.	NA
1,2,3,7,8,9-HxCDD	0.1-2.2	0.870 - 1.744	2721	NA	YV	NA	NA
1,2,3.7,8-PeCDD	0.1-2.0	1,027	1/21	NA	A NASTURE	NA	NA
2,3,4,6,7,8-HxCDF	6.0-80.0	1.044 = 3.079	3 / 21	NA	NA	NA	NA
2,3,4,7,8-PeCDF	0.08 - 4.8	0.301-1.851	37/21	WALL TON	NATE:	NA	NApe
2,3,7,8-TCDD	0:09 - 0:55	0.09 - 0.55 - 0.388 - 1.119	2/21	NA	. Zersnare frac	(NATOR)	. NA

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LANDPOLLORONOVATER SAFELL ANALYZICAL RESULTS SUSMIARY

	.RY	Residential Industrial Cleanup Cleanup Standards Standards		NA NA	NA NA	NA NA	6.67		. S.				pole which quesa arrange						ENT A	
	LANDFILL SUBSURFACE SOIL SAMPLE SCREENING LEVEL SUMMARY WENATCHEE, WASHINGTON	Screening Level Cit		NA	N	NA	MTCA Method B. 6		Section 1 sectio	The second secon	and and any open and an angle of the state o			e grande and see gran		e de la companya de l	engan ya seben Marangan santa Marangan santa Marangan santa Marangan santa Marangan santa Marangan santa Marangan santa Marangan santa	ente es como como como como como como como com	PLA PACE DE PACE DE PA	ornos Sinal Sinal Sinal Sinal
Table 3-3 (CONTINUED)	ACE SOIL SAMPLE SCREENING WENATCHEE, WASHINGTON	Frequency of Exceedence of		NA NA	errain.	NA	- 0/21	Jered estimated quantities					(O)			endersone desidence desidence designation	enginalista			
Table 3-3 (0	RFACE SOIL SAN WENATCHEE	Range of		0.3798-3.6197 8 / 21	4 186 - 1255.142 19/21	1.157 - 53,484 16//21	0,001-4.332	detection limits are consi				on Agency.	1000 1000 1000 1000 1000 1000							
	NDFILL SUBSUR	Range of Detection		0.12 - 0.42	15.9	0.16 - 12.0	luivalency 0.0	trations less than the associated detection limits are considered estimated quantities. A cleanup level. B. channin level	C cleanup level.			d-States Environmental-Protecti	er kilogram. r kilogram. Control Act.	= Not analyzed. = Nanograms per kilogram.	 Polychlorinated biphenyls: Preliminary remediation goal. 	= Semivolatile organic compounds	ngton Department of Ecology			
	LA		(Entra)	2,3,7,8-TCDF	OCDD	OCDF		* Detected concentration WDOE Method A cle WDOE Method B.cle			Key.	EPA = United-Star	= Micro = Millip A = Mode	NA = Not analyzed. ng/kg = Nanograms pe	C C	SVOCs = Semivolati	= Volati = Washi	endaga ekindekan di en artiga paratek etanok filmadi ekindek etanok etanok ekindek etanok etanok ekindek	TENETS TO THE TOTAL STATE OF THE	Salahan Salahan Salahan Salahan Masa Masa Masa Masa Masa Masa Masa Ma

Table 3-4

LANDFILL GROUNDWATER SAMPLE ANALYTICAL RESULTS SUMMARY WENATCHEE, WASHINGTON

	Groundwater			
LOCATION ID	Cleanup	LF02GW32	LF03GW32	LF11GW24
DEPTH	Standards	32 ft bgs	32 ft∥bgs	24 ft bgs
VOCs (μg/L)				
1,2-Dichloroethane	0.481 ^b	10 U	100 U	
Acetone	800 _р	2 J	130	10 U
Benzene	5ª	2 J	100 U	10 U
Carbon Disulfide	800 _p	2 J	100 U	ו 10 ט
Chlorobenzene	160 ^b	5 J	100 U	₩10 U 🦂
Methylene Chloride	5ª	10 U	<u>420</u>	> 10 U
Tetrachloroethene	.5ª	10 U	100 U	1 J
Xylene (total)	20ª	2 J	100 U	10 U
SVOCs (µg/L)				
2-Methylnaphthalene	-	10 U	≨ 2 J	10 U
2-Methylphenol	800 _p	5 J	∉‡ 10 U ∵	De la loui
4-Methylphenol	80 _p	3 J	14J	10 U
Bis(2-ethylhexyl)phthalate	6.25 ^b	10 U	∯ 6 J	10 U
Diethylphthalate	12,800 ^b	10 U	2 J	3 J
Naphthalene	320 ^b	1 J	# 3 J =	- i ∷ (⊕10 U ∄
Phenol	9,600 ^b	3 J	≘ 10.Ų	C ≃ 10 U
Pesticides/PCBs (µg/L)				
4,4'-DDD	0.365 ^b	0.10 U	<u>1.3</u> J	0.041 J
4,4'-DDE	0.257 ^b	0.10	<u>0.61</u> J	四(10 U 8
Aroclor1260	0.1ª	1.0 U	: 1.0 U.	ু <u>0.41</u> ট
Inorganies (µg/L)				
Antimony	(15°	6.8 J	3 UJ	3.0 UJ.,
Arsenic 5 5 4 5	5ª s	<u>27.5</u>	45.6	7.1.J
Barium 3 1 1 2	1,120 ^b	<u>1,330</u> J _↓	<u>1.930</u> J	621 J
Beryllium \$ 5 m	0.0203 ^b	0.40 U	2 J	<u>0.82</u> J
Cadmium	7 5°	2.4 J	5.2	1.1 J
Chromium	50°	<u>74.9</u>	370	541
Cobalt	2,200°	38.9 J∄	64.8	30.8 J
Copper		69.1	200	92.1
Lead	5ª	<u>130</u> J	487 J	<u> 16.5</u> J
Manganese 결공공	2,240 ^b a	1,880 J	2,430 J	- 2,470 J
Mercury	2ª	0.16 J	0.45	0.10 UJ
Nickel	320 ^b	73.3	306	363
Selenium	80 ^b	5.8 J	19.7 J	5.8 J
Silver	80 ^b	1.4 UJ	4.2 J	1.4 UJ

Key is at the end of the table.

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	Table 3-4 (CONTINUEL))		i otyt. Sistematika
LAN	DFILL GROU	INDWATER	SAMPLE	() () () () () () () () () ()	andernoldriG
ANA	LYTICAL R	ESULTS SUI	MMARY	i i (g) Garagan karasakara	- SER.)
A MATHER A COTTAL J.	VENATCHEI	E, WASHING	TON	e 01 [a]	5/1998
y 63 (1997) 145 145 145 145 145 145 145 145 145 145	Groundwater			i ou j	Brithmei(Leur
LOCATION ID	© Cleanup	LF02GW32	LF03GW32		2455466C020
DEPTH where Access.	Standards	5 32 ft bgs	32 ft bgs	24 ft bgs	Politically
Inorganics (µg/L)					amestercinalities
Vanadium	112 ^b	66.2	<u>192</u>	96.9	reporte di Suma de La companya de l La companya de la companya de
Zinc	4,800 ^b	551 J	2,600 J	140 J	
Dioxins/Furans (pg/L)					
1,2,3,4,6,7,8-HpCDF	1 5 6 - 1 8 1	6.746 UJ	32.134 J	4.390 U	Louis Kalunia
1,2,3,4,7,8-HxCDF	er granningstein angere segment. If the Thirty Tells	6.531 UJ	11.583 J	2.998 U	indical march stage and the second se
OCDD	orden and service superior service from the service of the service	433:420-UJ	1,037.870	13.882-U	na rain ista a figura de la composición del composición de la comp
OCDF	er u skriver kanne en skriveteinska	11.998 UJ	2122.027	3.598 U	Jang Britana (1965) Algunda (1965) Silipina kabaran kapina kababana (1965) Silipina kababan (1965)
Total Toxicity Equivalency	- 0.583 ^b	0.000	<u>1.6</u> .	0.000	. The College of the
a = WDOE Method A clea	nup level.	Martine and the second of the second	and the state of t		SELL.
A WARREST A TIME	A Sandara da Sandara d		and the second second second second second second		CATAR
b = WDOE Method B clea	nup level.	e ENS Comment of the Adjustic Comment of the Commen		and the second s	EUG:
c = EPA, Region 9, PRG (bgs = Below ground surface	Tap Water).	- 1. N States and and Americans	(b.) Para paramanan kanangan	er en	OBY Profit
bgs = Below ground surface. CLP = Contract Laboratory Pi	ogram.				
EPA = United States Environn		ency.	1	and grant and a second a second and a second and a second and a second and a second a second and	Tilled 115 :
ft = Feet. ID = Identification.				of District Address Community of Address and Address of	erregaris esperante regions, principal dispersa per per de la companya de la companya de la companya de la comp La companya de la co
J = The analyte was positive	ely identified. The	associated numerical	value is an estimate	the first of the control of the cont	TIZZZ
mg/L = Micrograms per liter.	The contraction of the contracti	etigtem vermentmeter einst dette til ett flattet processe i en et	in and the State and Commission between the services and the services of the s	all to the first of the second se	mon campangle of color
NA = Not analyzed. pg/L = Picograms per liter.	de Marie e de Marie de la competition della comp	en en general de la companya de la c En la companya de la En la companya de la	Addition to the control of the control of	and the standard was expected the good.	ورايدك ويتواري أوروش بمسرو فأسافك ويرووا ويتوارد
PCBs = Polychlorinated biphen			S. A. A.		interest
PRG = Preliminary remediation	yls.		Marie de la companya	rang da pandid ne rang rang managar	derenkeld States and services
SVOC = Semivolatile organic co	n goal.		The service of the expendence of the service of the	energi da paradal en consegui decembra esperador la estada la esperador de la esperad	1923641 20443 (5) 10443 (5) 1044 (1)
	n goal.			and a second of the second of	449.564 274.63 (3 156.63 (3)
UJ = The associated numeric	n goal. ompounds. cal value is an estima	ite of the quantitatio	ii limit of the analyte	in this sample.	FILE STATES
VOCs - Volatile organic compo	n goal. ompounds. cal value is an estima ounds.		Programme Constraints and Constraints and Constraints and Constraints and Constraints and Constraints and Const	in this sample:	1.1 La action of the malace stage contraction
VOCs = Volatile organic compo WDO □= Washington Departme	in goal. ompounds. cal value is an estima ounds. nt of Ecology.				12 San San San San San San San San San San
VOCs = Volatile organic compo WDO □= Washington Departme	in goal. compounds. cal value is an estimation cunds. nt of Ecology.	The second s Second second se			113 - San
VOCs = Volatile organic compo WDO ©≅Washington Departme	in goal. compounds. cal value is an estimation cunds. nt of Ecology.				1.15 San an share
VOCs = Volatile organic compo WDO ©≅Washington Departme	in goal. compounds. cal value is an estimation of Ecology.				11 1920-1102 1102-1103 1103-1103 1103-1103 1103-1103 1103-1103
VOCs = Volatile organic compo WDO □= Washington Departme	in goal. compounds. cal value is an estimation of Ecology.				1947-1945) 1947-1945) 1945 1945 1948-194

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Togas.

Table 3-3	•	

LANDFILL GROUNDWATER SAMPLE SCREENING LEVEL SUMMARY WENATCHEE, WASHINGTON

		WENATCH	EE, WASH			
	Range of	Range of		Frequency of	·	Groundwater
	Detection	Detected	Frequency of	Exceedence of	Screening Level	Cleanup
Analyte street street	Elmits	Concentrations*	Detection	Screening Level	Source	Standards
VOICE (Fg/L)						
1,2-Dichloroethane	10 - 100	1 191 41 - 44	rand/Barre	47.3 1.7.3 Territ	MTCA Method B	0.481 ^b
Acetone	10 - 100	/ (2,-130 <i>- 5</i>)	Pr 2/3 ag	TATEO/3-100	MTCA Method B	∦ 800 _P
Benzene	10 - 100	A2TOM	HEALING THE	HOTO/314	MTCA Method A	∫ 5ª
Carbon Disulfide	10 - 100	2	173	637/31/0/31/	MTCA Method B	800 ^b
Chlorobenzene	10 - 100	Waswis I se	70M/3	ஞாச்ச்≘0.73	MTCA-Method B	160 ^b
Methylene Chloride	10-100	420	11/3	bishcij/3	MTCA Method A	5 "
Tetrachloroethene	10 - 100	1	1/3	0/3	MTCA Method A	5ª ·
Xylene (total)	10 - 100	2	1/3	0/3	MTCA Method A	20ª
SV(QCS(DVL)						
2-Methylnaphthalene	10	. 2	1/3		NA .	NA NA
2-Methylphenol	10	MILLS LU	1/3	0/3	MTCA Method B	800 ^b
4-Methylphenol	10	1-3	2/3		MTCA Method B	80 ^b
Bis(2-ethylhexyl)phthalate	emedica integral O astronistant	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1/3	0/3	MTCA Method B	6.25 ^b
Diethylphthalate	10	2-3	11/11/2/3	20.02 073	MTCA Method B	12,800 ^b
Naphthalene	76.20110 2021 2021	201 yal 1,-3	2/3	0/3	MTCA Method B	320 ^b
Phenol	10	shuk i3 ustran sh u	garau 17/3 to en	1 10 10 10 10 10 10 10 10 10 10 10 10 10	MTCA Method B	9,600 ^b
Pesticides/PCBs (ug/E)						
4,4' - DDD	0.098 - 0.11	0.041 - 1.3	2/3	1/3.	MTCA Method B	0.365 ^b
4,4'-DDE	0.098 - 0.11	0.10 - 0.61	2/3	1773	MTCA Method B	0.257 ^b
Aroclor1260	0.98 - 1.1	0.41	1/3	3 1 1 1 3 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	MTCA Method A	5 0.1ª
Inorganies (ug/L)						
Antimony	3	6.8	1 / ₂ 3 s ₃ A	oiz sir 0/3 migai	EPA Region 9 PRG	
Arsenic	3	7.1 - 45.6	3/3	3/3	MTCA Method A	5°
Barium	0.7	+ ca621 + 1930 su	. Ze be 3,4c3	Bottet 2: 1/13 resoites	MTCA Method B	1,120 ^b
Beryllium	0.4	0.82 - 2	2/3		MTCA Method B	0.0203 ^b
Cadmium	12.6	1.1 - 5.2	3/3	1/3	MTCA Method A	2.7
Chromium	1	74.9 - 541	3/3	3 / 3 stypest	MTCA Method A	50ª
Cobalt	2.2	30.8 - 64.8	3/3	0/3	EPA Region 9 PRO	
Copper	2.5	69.1 - 200	3/3	0/3	MTCA Method B	
Lead	1.7.	16.5 - 487	3/3 am	37,3	MTCA Method A	5ª
Manganese	0.6	1880 - 2470	3/3	журы 2 / 3 Агада	MTCA Method B	
Mercury	0.1	0.16 - 0.45	2/3	0/3	MTCA Method A	
Nickel	2.5	73.3 - 363	3/3	1/3	MTCA Method B	
Selenium	2,3	5.8 - 19.7	3/3	0/3	MTCA Method B	
Silver	1.4	1.4 - 4.2	2/3	0/3	MTCA Method B	
Vanadium	1.4	66.2 - 192	3/3	1/3	MTCA Method B	112 ^b
Zinc	2.4	140 - 2600	3/3	0/3	MTCA Method B	4,800 ^b

Key at end of the table.

Table 3-5 (CONTINUED)

LANDFILL GROUNDWATER SAMPLE SCREENING LEVEL SUMMARY WENATCHEE, WASHINGTON

	Range of	Range of	- American Company of State	Frequency of	1996 All the second recognitive and the second seco	Groundwater
	Detection	Detected	Frequency of	Exceedence of	Screening Level	СІеапир
Analyte	Limits	Concentrations*	Detection	Screening Level	Source	Standards
Dioxins/Eurans (pg/Li)						
1,2,3,4,6,7,8-HpCDF	1.7 - 8.4	32.134			NA LL	NA .
1,2,3,4,7,8-HxCDF	2.1 - 6.5	11.583	1 = 1:/3:- ·	ONA CL	NA (NA .
OCDD	9.7 - 516	1037.870	[] 3 [] 3 [2	NA -	INA -	NA NA
OCDF	3.4 - 12	122.027	1/3	NA	NA .	NA
Total toxicity equivalency		1,6	1/1	I/I	MTCA Method B	0.583 ^b

^{*} Detected concentrations less than the associated detection limits are considered estimated quantities.

Key:

United States Environmental Protection Agency.
Model Toxics Control Act.
Micrograms per liter.
Picograms per liter. **EPA**

MTCA

μg/L pg/L PRG = Preliminary remediation goal.

WDOE Method A cleanup level.

b WDOE Method B cleanup level.

^c EPA, Region 9, PRG.

					Table 3-6						and the second s
	-	PITELIC WO	RKS DEPA	RTMENT	PROPERT	Y SUBSUR	FACE SO	WORKS DEPARTMENT PROPERTY SUBSURFACE SOIL SAMPLE	samoline en marie en	nen sards Seesse A	ristanova VIII 4 S
	4		AN	ANALYTICAL RESULTS SUMMARY WENATCHEE, WASHINGTON	RESULTS IEE, WASI	SUMMA!	ξĶ	7. 19. 1972 : 1966)	galania gagarang Tapa Tapa Tapanan normala Tapanan normala Tapanan normala Tapanan normala		Sustainings The OV:
	Decidential	Industrial						-	pinyan Painta Painta Painta		y (
or Morrison :	Cleanin	Cleanun	LF04SB04	LF04SB12	LF05SB04	LF05SB12	LF06SB04	_	LF14SS00	LF14SB08	
LOCATION ID	Standards	Standards	0-4 ft bgs	8 - 12 ft bgs	0-4ft bgs	8 - 12 ft bgs	0 - 4 ft bgs	8 - 12 ft bgs	0 - 4 ft bgs	8-12 if bgs	0 - 4 If bgs
1.0								₩			
VOC 1 III AEI	6 900 000 a	27,000,000 ^d	11.0	11.0	2 J	11 U	11 U	T 6	D.II	30 O	NA
Anatona	9 000 000 8	350 000 000	D II	11 U	. 11 U	11 U	34	51 [E]	11011	10 O	NA
Acelone	0,000,000,0										
SVOCs (hg/g)			180 11	360 U	350 UJ	350 UJ	350 U	55.3	350¦U	54:1	NA
2-Methylnaphthalene	•		11 056	Π 006	U 068	880 UJ	O 068	940	890¦U	860°U	NA
4-Nitroaniline	4 000 000	210 000 000	380 U	360 U	350 UJ	350 UJ	350 U	380-0 ⊡	> 350 U	3010	NA
Accitabilitions	4,000,000	105,000,000	380 U	360 U	350 UJ	350 UI	350 U	380≩0	350 U	1,500	-NA
Anunacene	24,000,000	4000, EUI	380 U	360 U	350 UJ	350 UJ	350 U	42.3	51.1	3,200	NA
Benzo(a)anunacene	13.7 dec.	18 000	380 U	360 U	350 UJ	350.UJ	350 U	380 U	93 J	2,200	NA
Benzo(a)pyrene	15.	18,000	380 U	360 U	350 UJ	350 UJ	350 U	380 ₪	95 J	<u>1.100</u>	NA
Benzo(b)fluoranthene	137	18,000	380 11	360 U	350 UJ	350 UJ	350 U	380∶€	120 J	480	NA
Benzo(g,h,1)perylene	quei	18 000°	380 U	360 U	350 UJ	350 UI	350 U	380 U	350 U	<u>1,200</u>	Y Y
Benzo(k)iluoraliulelle	door :	0.370.000	380 U	360 U	5,200 J	320 J	24 J	380 U	- 580	39 J	NA
Bis(2-ethylnexyl)pnmalate	/1,400	7,500,000°	380 U	360 U	350 UJ	350 UJ	350 U	์กั∵08€	350 U	1,200	NA
Carbazole	16,000,000	000,000,	380 11	360 U	350 UJ	350 UJ	350 U	© [] 19	P 65	<u>3,200</u>	NA
Chrysene	137°	18,000	280 11	360 11	350 UJ	350 UJ	L 071	52.1	350 U	340 U	NA
Di-n-butylphthalate	8,000,000		2000	11 098	350 UJ	350 UJ	350 U	380 U	350 U	210 J	NA
Dibenzofuran	1,100,000	킼	280 11	360 11	350 UJ	350 UJ	350 U	380 U	350 U	420	NA
Dibenz(a,h)anthracene	137"	18,000	380 0	O 098	350 UJ	350 UJ	350 U	· f 89	140.1	€400 €	NA
Fluoranthene	3,200,000	1	380 11	360 U	350 UI	350 UJ	350 U	380 D	. 03€ U	300 €	NA
Fluorene	3,200,000	140,000	380 11	360 U	350 UJ	350 UI	350 U	O 08€	P 19	1.200	NA
Indeno(1,2,3-cd)pyrene	137"	18,000	0.005	350 11	350 111	ID 05E	350 U	F 09	L 89.	5,600	NA-
Phenanthrene	ı	_	1	360 11	250 TH	350 111	350 U	5 R 011& 8	190 J	6,200	NA.
Pyrene	2,400,000 ^b	105,000,000°	380 0	300 0	20 000						
Pesticides/PCBs (119/kg		~~*				1136	210	230 = =	: 9.5	4.6	NA
4.4-DDD	4,170 ^b	547,000°	26	17	·°.	o Co	1.1				Ϋ́
4 4'-DDF		386,000°	09	15	0.9			70	2.		. VV
4 4-DDT	1,000	5,000 ^a	7.2	2.6 J	4.5	3.5 U	3.9 J	5.8.9	â	. V.A.	7747
Key is at the end of the table.	***					1) (13 2) (1 2) (3 2) (3 2) (4)	,209 	PEN Sisti Dusw Dow	io 100 100 100	THE STATE OF	Committee Committee
						14 14 14 14	ig ig	A CONTRACTOR OF THE PARTY OF TH	And the second s		A Committee of the comm

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		, . ·		Table 3	Table 3-6 (CONTINUED)	NUED)					,•
		PUBLIC WO	IC WORKS DEPARTMENT PROPERTY SUBSURFACE SOIL SAMPLE	ARTMENT	PROPER	ry subsui	REACE SO	IL SAMPL	Щ		
			AN	ALYTICA WENATCI	ALYTICAL RESULTS SUMMA WENATCHEE, WASHINGTON	ANALYTICAL RESULTS SUMMARY WENATCHEE, WASHINGTON	RY	•			
	Residential	Industrial			一直经验						
LOCATION ID	Cleanup		LF04SB04	LF04SB12	LF05SB04	LF05SB12	LF06SB04	LF06SB12	LF14SS00	LF14SB08	LF06SB04E
DEPTH	Standards	Standards	0 - 4 ft bgs	8-12 ft bgs	0 - 4 ft bgs	8 - 12 ft bgs	0 - 4 ft bgs	8 - 12 ft bgs	0-4 ft bgs	8 - 12 ft bgs	0 - 4 ft bgs
Inorganics (µg/kg)											
Antimony	30,000	750,000 ^d	R	R	R	R	Я	R	R	R	NA
Arsenic	20ª	200.0ª	28.7 J	5.0 J	3.4 J	2.9 J	15.9 J	18.8 J	17.4 J	4.2 J	NA
Barium	5,600 ^b	245,000°	85.5	82.2	105	119	7.66	92.9	149	78.5	NA
Beryllium	0.233 ^b	30.5°	0.34 J	0.27 J	0.29 J	0.25 J	0.25 J	0.36 J	0.36 J	0.35 J	NA
Chromium	100 ^a	500.0ª	15.2	17.2	31.6	28.5	19.8	19.5	25.3 J	20.7 J	NA
Cobalt	3,300 ^d	29,000 ^d	£ 8.9	6.5 J	9.2 J	8.1 J	8.1 J	6.6 J	8.9 J	6.2 J	NA
Copper	2,960 ^b	130,000	14.7	17.0	20.8	19.7	30.2	17.0	18.1	13.8	NA
Lead	250ª	1,000.0ª	134 J	23.0 J	10.2 J	8.9 J	130 J	162 J	71.2 J	17.0 J	NA
Manganese	11,200 ^b	490,000°	337	345	360	340	348	333	410	343	NA
Mercury	1.0 ^a	1.0ª	0.05 U	0.16	0.05 J	0.05 U	0.05 U	0.06 U	0.05 U	0.43	NA
Nickel	1,600 ^b	70,000€	11.7	12.7	23.3	23.3	19.7	14.1	15.6	13.7	NA
Selenium	400p	17,500	1.5 U	15 U	2.0 U	1.9 U	1.6 U	1.5 U	1.5	1.9	NA
Silver	400 ^b	17,500°	0.73 J	0.74 J	0.77 J	0.70 J	0.70 J	0.78 J	₽8.0	0.77	NA
Thallium	5.6 ^b	245 ^c	1.1 J	1.2 J	1.1 J	1.1 J	0.72 J	1.4 J	f 86.0	1.3 J	NA
Vanadium	260 ^b	24,500°	37.0	36.2	45.6	40.7	39.4	36.5	47.7	33.7	NA
Zinc	9	1,050,000°	58.6 J	79.0 J	59.5 J	53.1 J	76.9 J	84.0 .1	63.7 J	90.3 .J	· NA.
Dioxins/Furans (ng/kg)											
1,2,3,4,6,7,8-HpCDD	•		1.833	1.014	NA	NA	NA	NA	5.513	0.400 U	2.931
1,2,3,4,6,7,8-HpCDF		•	0.627 J	2.034	NA	NA	NA	NA	1.834	0.218 U	1.364
1,2,3,4,7,8-HxCDD	ı	1	0.154 U	0.135 U	NA	NA	NA	NA	0.567	0.357 U	0.466 U
1,2,3,4,7,8-HxCDF	1 - 5 - 12 - 42 - 14 - 15	्रिक्षक ्र	1.022 J	1.282 J	NA	NA	NA	NA	13.630 J	0.233 U	0.997 J
1,2,3,6,7,8-HxCDF	10.2	•	0.196 U	0.140 U	NA	NA	NA	NA	0.902 J		0.273 U
2,3,4,7,8-PeCDF	ŧ.	•	0.113 U	0.114 U	NA	NA	NA	NA	0.359 J	0.233 U	0.217 U
ocdd	ı	•	15.904 U	9.754 U	NA	NA	NA	NA	49.865		18.653
OCDF	•		1.129	0.925 J	NA	NA	NA	NA	4.353	0.351 U	1.488
Total Toxicity Equivalency	∘ ₁ _q ∠9:9	875°	0.128	0.159	NA	NA	NA	NA	1.756	0.001	0.163
Key is at the end of the table.		Control of the contro	the second of the second								

WDOE Method A cleanup level.

WDOE Method B cleanup level. WDOE Method C cleanup level.

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EPA, Region 9, PRG.

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A. A	5	VTGGGGGTNTWTGAGGGGATOVY OF TOTAL	TC DEDAD	TAMENT DD	DEDTV		
	E IBSURE,	ACE SOIL SA	MPLE SCI	SEENING LE	SUBSURFACE SOIL SAMPLE SCREENING LEVEL SUMMARY	A Selection	
学生 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		WENA	TCHEE, W	WENATCHEE, WASHINGTON	THE STREET	ele Germania Strate en managen en e	Section and the Contraction of t
	Range of	Range of		Frequency of	The second of the second secon	Residential	Industrial
	Detection	Detected	Frequency of		Screening Level	Cleanup	Cleanup
Analyte	Limits	Concentrations*	Detection	Screening Level	Source	Standards	Standards
VOCs (µg/kg)	100000	The second secon	The second secon	A Section of the second section of the section of the second section of the section of the second section of the section	eder in the September of the September o	A STATE CONTRACTOR	Section of the second
2-Butanone	10 - 21	2-9-3	2 /.8	8.7.0	EPA Region 9 PRG	6,900,000 ^d	27,000,000 ^d
Acetone	10 - 150	34 -51	2/8	8 7 0	MTCA Method B	8,000,000°	350,000,000
SVOCs (µg/kg)		· · · · · · · · · · · · · · · · · · ·	E SE E SE	Francisco - Antonio Carlos Carlos (Antonio Carlos C	Section of the second section of the section o	185. 15	Total State of
епе	350 - 720	54-55	2.78	NA	A market and the second of the	ŊĄ	NA.
August 1	350 - 720	940	8/1	NA	and the second of the second o	NA	NA
Acenaphthene 3	350720	410	8/1	8/0	MTCA Method B	4,800,000 ⁵	210,000,000 ^b
Anthracene	350-720	1500	8/1	8/0	MTCA Method B	24,000,000 ^b	105,000,000 ^b
Benzo(a)anthracene	350 - 720	42 - 3200	3 / 8	871	MTCA Method B	137	18,000 ^b
Benzo(a)pyrene	350 - 720	93 - 2200	2/8	8/1	MTCA Method B.	137	18,000°
Benzo(b)fluoranthene	350 - 720	. 95 - 1100	2/8	17.8	MTCA Method B	137 ^b	18,000°
Benzo(g,h,i)perylene	350 - 720	120 - 480	2/8	NA	Service NA from Service	NA.	NA
	350 - 720	1200	1/8	0 / 8	MTCA Method B	137	18,000°
Bis(2-ethylhexyl)phthalate 3	350 - 720	54 - 5200	8//5	89'0	MTCA Methôd B	71,400 ^b	9,370,000
Carbazole 3	350 - 720	1200	1/8	8:/ 0	MTCA Method B	16,000,000 ^b	7,000,000°
Chrysene	350 - 720	59 - 3200	3 / 8	8/10	MTCA Method B	₹137½	18,000°
Di-n-butylphthalate 3	350 - 720	52 - 170	2/8	8/0	MTCA Method B	8,000,000 ^b	350,000,000
	350 - 720		1/8	8//0	EPA Region 9 PRG	1,100,000 ^d	10,000,000
Dibenz(a,h)anthracene	350 - 720	420	8/1	8/4	MTCA Method B	ો 137 ⁶ ું	18,000°
	350 - 720	68 - 6400	3/8	8/0	MTCA Method B	3,200,000 ^b	140,000,000
	350-720	360	8/-1	8/0	MTCA Method B	3,200,000 ^b	140,000
Indeno(1,2,3-cd)pyrene	350 - 720	67 = 1200	2 / 8	8/1	MTCA Method B	137 ^b	18,000€
Phenanthrene 3.	350 - 720	0095 - 09	3/8	NA.	> CONTRACTOR NA	NA	NA
,	350 - 720	110 - 6200	3/8	8/0	MTCA Method B	2,400,000°	105,000,000

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The state of the s	SUBSURE	CE SOIL'SA	WPLESCH	REFUING LE	SUBSURFACE SOIL SAVPLE SCREENING LEVEL STIVINARY	40	TOTAL
	Control of the second	WENA	TCHEE, W	WENATCHEE, WASHINGTON			
The second secon	Range of	Range of	10 A	Frequency of	サラ シードス くうきがら	Residentia	Industrial
はない。	Detection	Detected	Frequency of	Exceedence of	Screening Level	Cleanup	Cléanup
Analyte	Limits	Concentrations*	Detection	Screening Level	Source and	Standards	Standards
Pesticides/PCBs (µg/kg)	HE WE'S	1. 电影·丁二峰	· 第十章	1. 独身	I MUCHINAMIA	Latinations,	man, wan, see
44-DDD	9.6-81	4.6 - 230	1/8	≥8/0	MTCA Method B	4,170°	547,000
44-DDE	9.6 - 8.1	1.9573	2/1/8	±8/30	MTCA Method B	2,940	386,000
4,4-DDT ASSESSMENT	9.6 - 8.1	2.0-19	77.85	∴8/.0	MTCA:Method:A	1,000%	.≤\$;000∯!>
Inorganics (mg/kg)	ar wit	1. T. S.		医18	A biolatick Action 1	ing of the second	i stoon.
Antimony	88.0 - 09.0	The second secon		in a contract of the contract	EPA-Region 9 PRG	30,000	750,000 ^d
Arsenic	0.66 - 0.89	2.9-28.7	8/8	8/0	MTCA Method A	208.5	200.0
Bartum	0.14 - 0.21	78.5 - 149	8/,8	87,0	MTCA Method B	5,600	245,000°
Beryllium	0.08 - 0.21	0.25 - 0.36	8/8	87,8	MTCA Method B	0.233 ^b	30.5
Chromium	0.20 - 0.30	15.2 - 31.6	8/8	8 / 0	MTCA Method A	100	500.0
Cobalt contractions	0.44 - 0.67	6.2 - 9.2	. 8/8	07.8	EPA Region 9 PRG	3,300	_29,000⁴
Copper	0.50 - 0.76	13.8 - 30.2	8 / 8	8./-0	MTCA-Method-B-	-2,960 ^b	130,000
Egad.	0.34 - 0.52	8.9 - 162	8/8	8/_0	MTCA Method A	250	-1,000:0ª-
Manganese	0.12 - 0.18	333,-410	8/8	0,78	MTCA Method B	7.11,200°	490,000°
Mercury	90:0 - 50:0	0.05 = 0.43	3 / 8	0.78	MTCA Method A	ENEOPON.	1110,000
Nickel	0.50 - 0.76	11.7 - 23.3	8/8	0 / 8	MTCA Method B	1,600 ^b	70,000
Selenium	1.1 - 2.7	1.5-1.9	2//8	0 / 8	MTCA Method B	400b	.17,500
Silver	0.28 - 0.42	0.70 - 0.86	∍ ∵8//8 = 1	1. 13×-0./800-01	MTCA Method B	400bm	17,500%
Thallium	88:0=59:0	0.72 = 1.4	87.8	0 / 8	MTCA Method B	2.6 ⁶	245°
Vanadium	0.28 - 0.42	33.7 - 47.7	8 / 8	8/0	MTCA Method B	260°	24,500°
Zinc	0.48 - 0.73	53.f - 90.3	8/8	8/0	MTCA Method B	24,000 ^b	$1,050,000^{c}$

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		Industria	Cleanup Standards	least.	NA	\	A A	NA	NA	NA	NA	NA						ione Vivo		aj (178	i j					
						官	NA.			61			usi ieb	aun mili mei								American services and the services of the serv			1	
٠	RY	<u> </u>	Cleanup Standards		NA :	NA.	INA	NA	NA	NA	ŅĀ	NA	QQ:	artikation September 1931 Temperatur		generalista 	er flam i fragen Geografia et distri Geografia e distribu	entre entre entre	SERVICES			employed the second of the sec				
	PUBLIC WORKS DEPARTMENT PROPERTY BSURFACE SOIL SAMPLE SCREENING LEVEL SUMMARY WENATCHEE, WASHINGTON		Screening Level Source		NA	NA	NA	ΝΆ	NA	ŊĄ	ΝA	ΝA	のの意識を表した。						. See			editional to the control of the specimens of the control of the specimens of the control of the				
TINUED)	PUBLIC WORKS DEPARTMENT PROPERTY FACE SOIL SAMPLE SCREENING LEVEL SU WENATCHEE, WASHINGTON	Frequency of	Exceedence of Screening Level		NA	NA	NA -	NA	NA	NA.	NA	N.A.	are considered estimated quantities											· · · · · · · · · · · · · · · · · · ·		
Table 3-7 (CONTINUED	KS DEPARTAMPLE SCR TCHEE, WA		Frequency of Detection		4/5	4 /5		4 / 5	5/1	1 1/15	3/5	4 / 5	s are considered es	The State of the S	The state of the s	er desembles	egi (27th 2017 2017 2017 2017	endo Plusel Prosent Prosent						
Tat	UBLIC WOR ACE SOIL SA WENA	Range of	Detected Concentrations*	en e	1.014 - 5.513	0.627 - 2.034	0.567	0.997 - 13,630	0.902	0.359	1.293 - 49.865	0.925 - 4.353	n the associated detection limits	Same		d d este distribuição este distribuição	ng ar na Sagaga Manari ya Sagar Manari ya Manari Manari ya Manari	in agreeme property of the control o	ection Agency.							
	P) SUBSURF	Range of	Detection	1500	0.32-0.51	0.09 - 2.4	0.14 - 1.2	0.09 - 0.64	0.07 - 1.1	0.08 - 4.8	3.7-15.9	0.16 - 12.0	than the associ	Şel.	vel.	76	en e	Samuel Samuel	ironmental Prot	ilogram.	ogram. itrol Act.		logram. iphenyls.	liation goal.	nic compounds.	Ullipounds.
			Analysis of the Analysis of th	Dioxins/Furans (ng/kg)	1,2,3,4,6,7,8-HpCDD	1,2,3,4,6,7,8-HpCDF	1,2,3,4,7,8-HxCDD	1,2,3,4,7,8-HxCDF	1,2,3,6,7,8-HxCDF	2,3,4,7,8-PeCDF	ОСОО	OCDF	* Detected concentrations less that	 WDOE Metfiod A cleanup level. 	b WDOE Method B cleanup level.	 WDOE Method C cleanup level. 	" EPA, Region 9, PRG	Key:	EPA = United States Environmental Protection		mg/kg = Milligrams per Kilogra MTCA = Model Toxics Control		ng/kg = Nanograms per Knogram. PCBs = Polychlorinated biphenyls.		SVOCs = Semivolatile organic compounds.	

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TABLE 3-8

PUBLIC WORKS DEPARTMENT PROPERTY GROUNDWATER SAMPLE

ANALYTICAL RESULTS SUMMARY WENATCHEE, WASHINGTON

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	Groundwate	Elelele	
LOCATION ID	Cleanup	LF04GW24	
DEPTH	Standards	24 ft bgs	24 ft bgs
VOCs(µg/L)			
2-Butanone	4,800 ^b	5- 5- 3-J	5 € 10 U
Acetone	800b	18	10 U
Benzene	5ª [117	10 U
Methylene Chloride	5° 5	<u>23</u>	10 U
Toluene	40ª	2 J.	10 U
Pesticides/PCBs(µg/	L)		
4,4'-DDD	0.365 ^b	0.040 J	
4,4'-DDE	0.257 ^b	0.036 J	0.11 U
Aroclor1260	0.1	1.0 U	0.37 J
Inorganics(µg/L)			
Arsenic	5 ^a	28.4	18.3
Barium	1,120 ^b	1,390 J	1,930 J
Beryllium	0.0203 ^b		2.8 J
Cadmium	5 ⁸	2.1 J	2.0/J
Chromium	50°	- <u>762</u> +	234
Cobalt	2,200°	83.7	90.0
Copper	592 ^b	324	238
Lead 🤵	5	86.3 J	्रि <u>45.1</u> J
Manganese	2,240 ^b	<u>5,190</u> J	6,240 J
Mercury	2ª	0.24	0.16
Nickel //	320 ^b	<u>565</u>	283
Selenium	80°	16.6 J	7.5 J
Silver	80 ^b	4.6 J	3.3 J
251. (EAS), F. 2211. Sect.	₹ a1128 -	222	155 K
Zinc	4,800 ⁶	1,160 J	333.1
Dioxins/Furans(pg/	L)		
1,2,3,4,6,7,8-HpCDF		4:542 J	
OCDF ®		16.634	3.355 U.
Total Toxicity Equiva	len 0.583 ^b	0.0062	=0.000

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WDOE Method A cleanup level:

b WDOE Method B cleanup level.

Note: Bold type indicates concentrations above sample quantitation limits or detection limits.

	Underline indicates concen	trations above or	e or more compar	ison standards.	Nationijo	76.
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J NA	The analyte was positively Not analyzed.	/ identified. I ne	associated nomen	Coal Value is all com	OGT UT	And the second of the second o
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Table 3-9

PUBLIC WORKS DEPARTMENT PROPERTY and a cost big ? GROUNDWATER SAMPLE SCREENING LEVEL SUMMARY WENATCHEE, WASHINGTON

	Range of	Range of		Frequency of		Groundwater
	Detection	Detected	Frequency of	Exceedence of	Screening Level	म ्रCleanup
Analyte	Limits	Concentrations	Detection	Screening Level	seed and Source of the	*Standards
VOCs (µg/L)						
2-Butanone	10 - 100	3	1/2	0/2	MTCA Method B	[#] 4,800 ^b
Acetone	10 - 100	ilips as a l 8 alay ins	::::::::::::::::::::::::::::::::::::::	off h0.62 historia	MTCA Method B	800 ^b
Benzene	10 - 100	1	1/2	0/2	MTCA Method A	.∧.4 5ª
Methylene Chloride	10 - 100	23	1/2	1/2	MTCA Method A	√36 5ª
Toluene	10 - 100	2	1/2	0/2	MTCA Method A	40ª
Pesticides/PCBs (μ	g/L)					
4,4'-DDD	0.098 - 0.11	0.040	1/2	0/2	MTCA Method B	0.365 ^b
4,4'-DDE	0.098 - 0.11	0.036	1/2	0/2 ಮಹಾರ		∜ 0.257 ^b
Aroclor1260	0.98 - 1.1	0.37	1/2	1/2	MTCA Method A	0.1ª
Inorganics (µg/L)						
Arsenic	3	18.3 - 28.4	2/2	2/2	MTCA Method A	5ª
Barium	0.7	1390 - 1930	2/2	2/2	MTCA Method B	1,120 ^b
Beryllium	0.4	2.8	2/2	2/2	MTCA Method B	0.0203 ^b
Cadmium	12.6	2.0 - 2.1	2/2	0/2	MTCA Method A	5ª
Chromium	1	234 - 762	2/2	2/2	MTCA Method A	50ª
Cobalt	2.2	83.7 - 90.0	2/2	0/2	EPA Region 9 PRG	2,200°
Copper	2.5	238 - 324	2/2	0/2	MTCA Method B	592 ^b
Lead	1.7	45.1 - 86.3	2/2	2/2	MTCA Method A	5ª
Manganese	0.6	5190 - 6240	2/2	2/2	MTCA Method B	2,240 ^b
Mercury	0.1	0.16 - 0.24	2/2	0/2	MTCA Method A	2ª
Nickel	2.5	283 - 565	2/2	1/2	MTCA Method B	320 ^b
Selenium	2.3	7.5 - 16.6	2/2	0/2	MTCA Method B	80 _p
Silver	1.4	3.3 - 4.6	2/2	0/2	MTCA Method B	80 ^b
Vanadium	1.4	155 - 222	2/2	2/2	MTCA Method B	112 ^b
Zinc	2.4	333 - 1160	2 / 2	0/2	MTCA Method B	4,800 ^b
Dioxins/Furans (pg						
1,2,3,4,6,7,8-HpCDF	1.7 - 8.4	4.542	1/2	NA NA	NA NA	NA NA
OCDF	3.4 - 12	16.634	1/2	NA NA	NA NA	NA

^{*} Detected concentrations less than the associated detection limits are considered estimated quantities

Key:

= United States Environmental Protection Agency.

MTCA = Model Toxics Control Act.

μg/L = Micrograms per liter.
pg/L = Picograms per liter.
PCBs = Polychlorinated biphenyls.

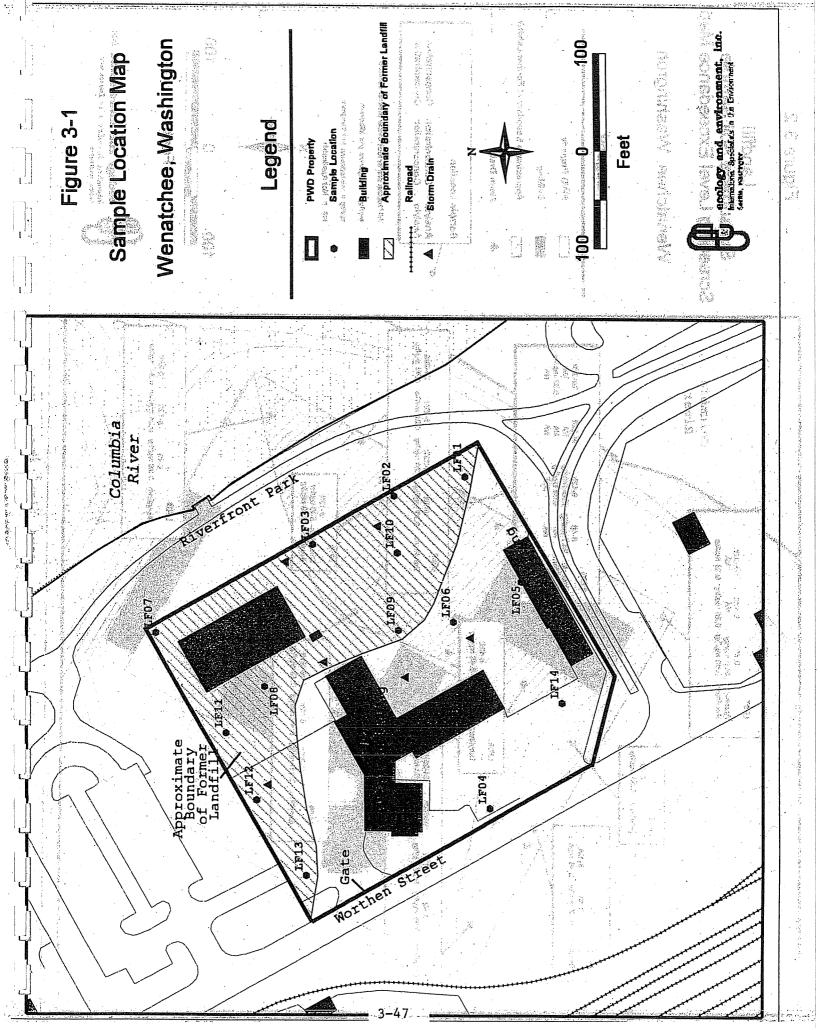
PRG = Preliminary remediation goal.

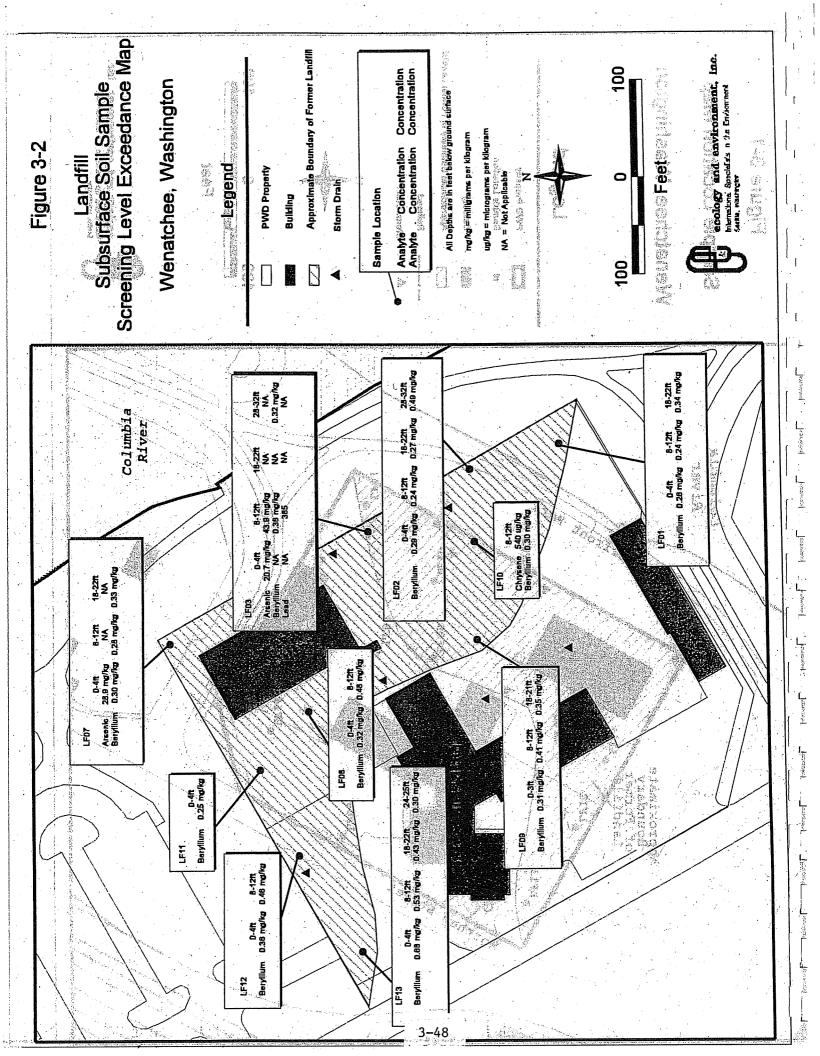
VOCs = Volatile organic compounds.

^{*} WDOE Method A cleanup level.

^b WDOE Method B cleanup level.

c EPA, Region 9, PRG.



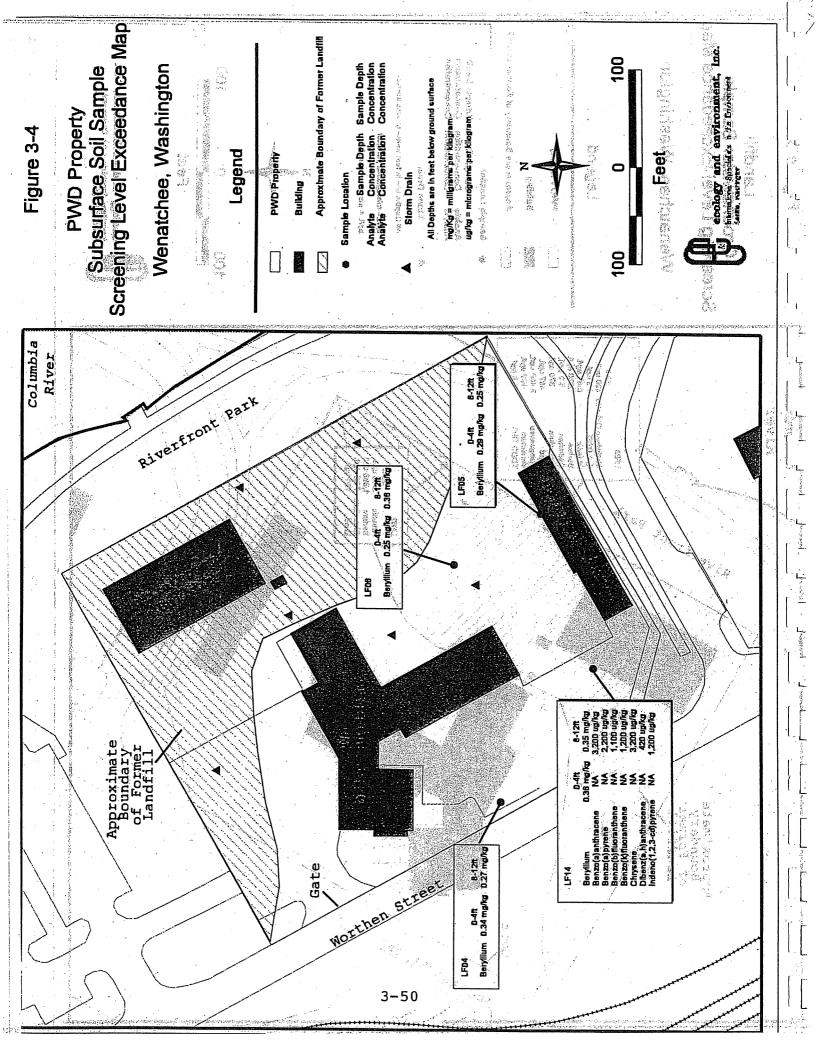


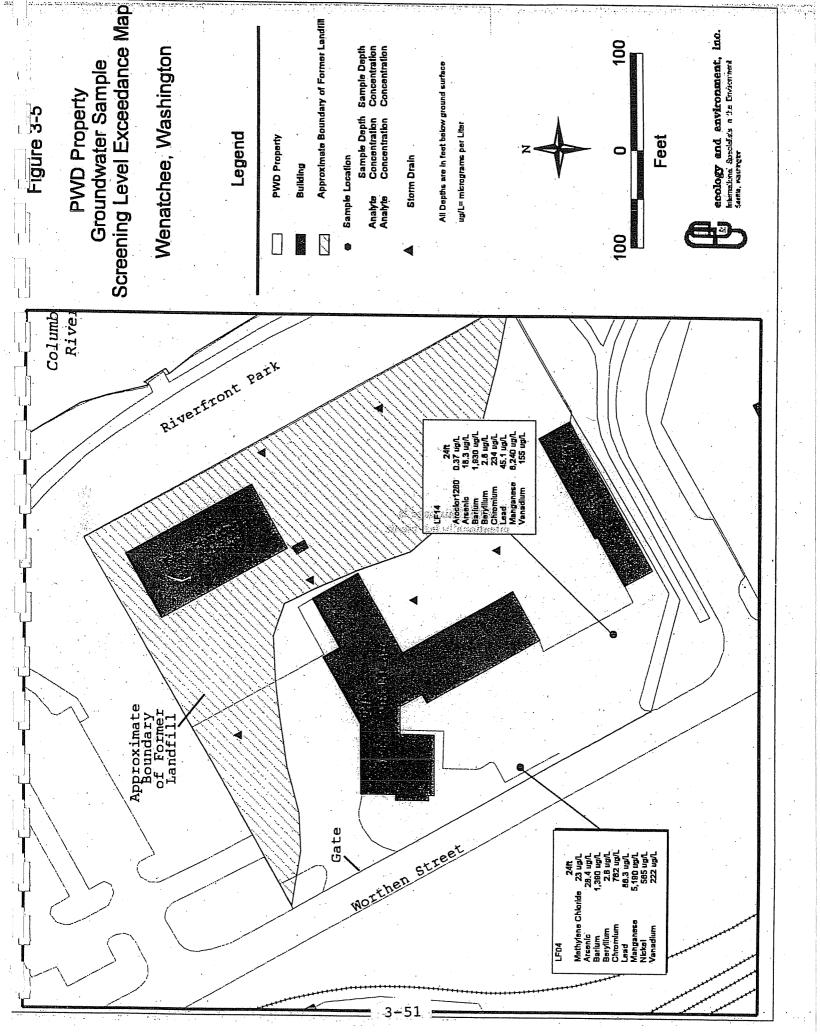
Approximate Boundary of Former Landfill Analyte Concentration Concentration Analyte Concentration Concentration Analyte Concentration Concentration V UOIL = mbrodrams por Citor All Depths are in feet below ground surface when handly what such a sweething to 上一個一人不知為其語 為自由我有者為養養 THE PARTY OF THE PARTY OF Figure 5-5 pg/L = pleagrams per Litter Landfill Legend PWD Property Feet Sample Location **Stórm Drain** 0 Building SERVICE TOTAL では必要が BOOKE TOO 32 ft 420 ug/L 1.3 ug/L 1.830 ug/L 37 ug/L 182 ug/L 182 ug/L 182 ug/L Methylene Choride 4, 4,4.000.
Arenio Barium 1, Cadmium Chromium Chromium Chromium Chromium Chromium Chromium Chromium Chromium Chromium TCDD TEQ Columbia River 城市 衛 i. 27.5 ug/L 1.330 ug/L 7.749 ug/L 130 ug/L さいない のかい ないのかい ないのう Rivertront Park Arcento Berlum Chromlum Lead 遊 Approximate Boundary of Former Landfill Gate Worthen Stree 3 - 49

Groundwater Sample Screening Level Exceedance Map

Wenatchee, Washington

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4. CLEANUP OPTIONS AND COSTS

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The City is interested in potentially selling the PWD property to developers for potential use as a business park or hotel location. The following information is presented based on current site conditions.

As changes occur at the site, the information presented in this report should be modified as necessary to support appropriate exposure scenarios.

For the purposes of this report, conclusions have been drawn with respect to potential source areas under the assumption that the property will be developed as a business park or hotel park, therefore applicable MTCA and EPA Region 9 PRG industrial standards were considered with respect to soil contamination. Washington State natural background metals concentrations were also used to evaluate site conditions.

The cost estimate below is based on the recommended action and assumptions outlined in the following sections and were primarily obtained from Environmental Remediation Cost Data - Unit Price, 6th Annual Edition, R. S. Means and Company and Talisman Partners, Ltd. (Means 2000a), and Site Work and Landscape Cost Data, 19th Annual Edition, R. S. Means and Company (Means 2000b). The quantities assumed below are conservative; costs may be less than estimated based on the actual conditions or if certain recommended activities are determined unnecessary. Recommended options at the PWD property include: 1) continued use of the property and buildings as they currently exist; and 2) soil excavation and subsequent backfill in the landfill area. The PWD property can be operated as a business park or hotel with no cleanup actions performed. Human contact with the subsurface soils is prevented by the pavement covering the property. WDOE MTCA industrial standards apply to this use; none of the industrial standards were exceeded in samples collected during the TBA. A discussion of the current subsurface structural integrity at the site relating to future redevelopment is beyond the scope of this TBA, however information relating to excavation and backfilling is discussed below. This no-action alternative will be retained for further evaluation to serve as a baseline against which the cleanup alternative can be compared. Excavation and/or backfilling should be coordinated during the same field effort to reduce mobilization and demobilization charges and to expedite the work. Appendix E provides a detailed cost summary for the proposed cleanup option.

4.1 LANDFILL EXCAVATION AND BACKFILL

The excavation of soil down to native material in the landfill (estimated to be 30 feet bgs throughout the landfill for this TBA) is recommended if future development occurs on that portion of the PWD property. This recommendation is made because building or parking lot construction would likely require the use of structural fill. Based on the contaminants and concentrations found during the TBA, it is believed that the excavated landfill material could be disposed of as non-hazardous waste. In order for the materials to be classified as a hazardous waste, they must meet the criteria outlined in 40 Code of mission of the content Federal Regulations (CFR) Part 261. A solid waste exhibits the characteristic of toxicity if, using the toxicity characteristic leaching procedure (TCLP; Test Method 1311 in Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, EPA Publication SW-846), the representative sample of the waste contains any of the contaminants listed in Table 1 of 40 CFR Part 261.24 at a concentration equal to or greater than the respective value given in that table. Although the TCLP was not performed on any of the samples, a correlation can be made between the expected TCLP concentrations and the actual total contaminant concentration detected by dividing the total concentration by 20 to obtain the approximate TCLP concentration. Table 1 in 40 CFR Part 261.24 lists maximum allowable TCLP concentrations; none of the TBA samples had analytes that appeared to approximate TCLP concentration limits. Due to the potential for unknown materials to be contained in the excavated soil/landfill material, treatment and on-site reuse of the excavated material is not recommended. The START estimates the cost of disposal of non-hazardous waste to be \$50 per ton. Detailed cost information per unit of work is provided in Appendix E. Approximately 70 percent of the estimated \$7,412,848 for this cleanup alternative are allocated to disposal of the excavated materials; costs for this portion of the cleanup may be significantly lower if disposal through the local municipal landfill is coordinated with other City departments. For the purposes of this option, all of the landfill material is excavated to the boundaries of the PWD property and is backfilled with structural fill material (e.g., crushed rock) because most construction activities would likely require the use of structural fill. Any worker exposures to contaminated soils during excavation or backfilling should not result in adverse health effects because contaminant levels were less than Method C (industrial) cleanup levels. aginato effectation amings inflicand a se o rice or neithidely restrict not besiden in this evinements

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5. CONCLUSIONS AND RECOMMENDATIONS

Thirty-three subsurface soil samples were collected from the Historical Landfill area and eight subsurface soil samples were collected from the non-Landfill area. Screening levels were exceeded in 26 Landfill area samples and at all eight non-Landfill locations. Each of the subsurface soil sample screening level exceedances were greater than the applicable residential standards but were less than the applicable industrial standards. Because the site is likely to be developed for commercial purposes in the future and because the contamination is present below the asphalt paving, additional evaluation is not warranted at this time. However, if future development results in transport of subsurface contamination to the surface and if the land use changes, additional evaluation should be performed to ensure that contamination does not pose a health risk under new land uses.

Three groundwater samples were collected from the Historical Landfill area and two groundwater samples were collected from the non-Landfill area. Screening levels were exceeded at all five groundwater sample locations. Each of the groundwater sample screening level exceedances were greater than MTCA Method A or B residential levels. These exceedances may not be significant if groundwater does not represent an exposure medium for current or future receptors. Groundwater underlying the site is not currently used as a domestic water supply and does not appear to be hydrologically connected to an aquifer used for drinking water. Therefore, additional consideration of groundwater contamination may not be required at this time.

The City is interested in potentially selling the current PWD property to outside interests for development into business park or hotel. Several analytes were detected at concentrations greater than WDOE MTCA or EPA Region 9 PRG levels at various locations and depths throughout the PWD property, however, due to pavement covering the Historical Landfill area preventing a pathway for human exposure, no further action at the property is recommended for continued use of the facility in its current state. If improvements are planned for the Historical Landfill area of the PWD property, excavation and disposal of the landfill materials as non-hazardous materials is recommended, followed by the backfilling with structural fill material.

As listed in Section 4 and Appendix E, options for future use of the property vary from \$0 to over \$7,000,000, with several cost and cleanup options available between these amounts. The goal of

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each option is to minimize human exposure to potentially contaminated soils while maximizing the use of the PWD property as a commercial development.

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Thirty-three subsertace soft samples were collected from the historical Landfill area. Screening levels were exceeded in 26 Landfill area samples and at all eight non-Landfill locations. Each of the subsurface soft sample surrently area samples and at all eight non-Landfill locations. Each of the subsurface soft sample surrently applicable included has been been than the applicable included and received the sample is likely to be developed for commercial outgoing in the future and because the contamination is present below the acidate prong, additional evaluation is not warranted at this time. However, if future developing it results in transport of subsurface contamination to the surface and if the land use changes, additional evaluation should be performed to ensure that contamination does not if the land use changes, additional evaluation should be performed to ensure that

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The City is interested in potentially calling the current PWD or party in outside intercars for development into business park or hole). Several adaptions consequently and depths throughout the PWD WINDE MTCA or EPA Region 9 1930 foreits at across lacations and depths throughout the PWD currently, however, due to passengent covering the Historical Landfill are precising a pathway for burnan explanate, no further action at the property is recommended for continued and of the facility in its current state. If improvements are plantfied for the Historical Lawfull area of the PWD process; exception and disposal of the landfill are founds as non-tialscripe reserved. Schommended, followed by the backlifted with structural fill meterals.

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APPENDIX A

PHOTOGRAPHIC DOCUMENTATION

PHOTOGRAPH IDENTIFICATION SHEET

Camera Serial #: Disposable Camera Lens Type: 35 mm

TDD #: 98-11-0007 Site Name: Wenatchee Landfill Brownfields

Photo Number	Date 🥖	Time	Taken By	Description
1-1	6/29/99	0925	≕SG	Sample LF01SB04 core; facing South
1-2	6/29/99	0930 🕾	atir SG ;	Sample LF01SB04 (sand and gravel); facing South
1-3	6/29/99	0955	∜:∈ SG ∴	Sample LF01SB12 core (brick and wood material); facing South
1-4	6/29/99	1000 //	_≠ SG : ⊅	Sample LF01SB12; facing South
1-5	6/29/99	⊴1030 ⋅⋅⋅	at SG∷ i	Sample LF01SB22 core; facing South
1-6	6/29/99	1030	::::S G :	Sample location LF01; facing West
1-7	6/29/99	1110	a∄ SG ∃≟	Sample location LF02; facing West-Southwest
1-8	6/29/99	1115	∉ SG ∈	Sample LF02SB04 core; facing East
1-9	6/29/99	.1120	SG	Sample LF02SB04; facing West
1-10	6/29/99	1140	:::SG::+	Sample LF02SB12 core; facing East
1-11	6/29/99	1145	SG	Sample LF02SB12; facing West
1-12	6/29/99	∄1210	⊹SG	Sample LF02SB22 core; facing East
1-13	6/29/99	1215	SG	Sample LF02SB22; facing West
1-14	6/29/99	1425	∌⊹SG.⊹	Sample LF02SB32 core; facing Southeast
1-15	6/29/99	1430	∉isg∷	Sample LF02SB32; facing East
1-16	6/30/99	0845	:SG	Sample location LF03; facing West
1-17	6/30/99	⊴≟0850 : :	-⊭≀SG ⊞1	Sample LF03SB04 core; facing Southeast
1-18	6/30/99	0858	⊹SG □	Sample LF03SB04; facing South
1-19	6/30/99	0915	⊭∴SG /⊬:	Sample LF03SB12 core; facing South
1-20	6/30/99	0933∜	∉ SG ∴	Sample location LF04SB in the non-landfill area; facing South
1-21	6/30/99	-0950	, SG	Sample LF04SB04 core; facing North
1-22	6/30/99	0958	⊹:SG ∜	Sample LF04SB04; facing North
1-23	6/30/99	1145	⊭⊹SG	Sample LF04SB12 core; facing North
1-24	6/30/99	1150	⊹SG	Sample LF04SB12; facing North
1-25	6/30/99	1735	SG	Sample LF03SB22 core; facing South
1-26	6/30/99	1805	g SG 🗆	Sample LF03SB32 core; facing South
1-27	6/30/99	1810	SG	Sample LF03SB32 core; facing South
2-1	7/1/99	0950	∵CG	Sample LF03SB22 core; facing South
2-2	7/1/99	1020	CG	Sample LF03SB22; facing South

PHOTOGRAPH IDENTIFICATION SHEET

Camera Serial #: Disposable Camera

Lens Type: 35 mm

Site Name: Wenatchee Landfill Brownfields

Photo Number	Date	Time «	Taken By	Description	
2-3	7/1/99	1047	//CG (4/)	Sample location LF05 area; facing Southeast	
2-4	7/1/99	4-1105 <i>5</i> g	-⊬ CG +∂	Sample:LF05SB04; facing South	
2-5	-,7/1/99 -	7 1125 :	∵ CG ∷	Sample LF05SB12 core; facing South	
2-6	7/1/99	1245	a(CG . ∷	Sample LF06SB04; facing North	
2-7	7/1/99	-1255 ;-	-∠CG ∷	Sample location LF06; facing West	
2-8	7/1/99	4410	;: CG :::	Sample:location LF07; facing Northeast	1 Oct 1
2-9	7/1/99	. 1411	:CG	Sample location LF07; facing Northwest	
2-10	7/1/99	- 1430	CG :	Sample LF07SB04; facing South	
2-11	7/1/99	1440	(a)CG (a)	Sample LF07SB12 core; facing South	
2-12	7/1/99	1455	CG =	Sample LF07SB12; facing South	
2-13	7/1/99	1520	· ·CG:	Sample LF07SB22; facing South	
2-14	7/1/99	:1613	- CG	Sample location LF08; facing Northeast	
2-15	7/1/99	1614	CG	Sample location LF08; facing Northwest	
2-16	7/8/99	1635	CG:	Sample LF08SB04; facing North	
3-1	7/6/99	1630.	:::SL::0:	Sample LF14SS00; facing West	Manual and an artifaction of the second of t
3-2	7/6/99	1730 a	- SIL, , ,	Sample LF14SB08; facing West	
3-3	7/7/99	:::1020 :	:::SL, :::	Sample location LF14; facing Northeast	J. Ville B.
3-4	<i>71</i> 7/99	1440 ::	SE 🚐	Sample LF11SS00; facing North	The Control of the Co
3-5	7/799	1500	SL -1.1	Sample LF11SB08; facing North	
3-6	. 7/7/99	1550	13 SL	Sample LF11SB22; facing North	
3-7	7/8//99	: 1615	SL(+()	Sample location LF11; facing Southwest	
3-8	7/8/99	0915-7	"SL.	Sample LF12SS04; facing East	
3-9	7/8/99	-0950	: .SL	Sample LF12SS22; facing East	
3-10	7/8/99	1010 🛩	:::[SIL :]:[Sample LF12SB12; facing East	
3-11	7/8/99	;;1020 ;;	SL	Sample LF12SB29; facing East	
3-12	7/8/99	1400 :	:-:SL::::	Sample LF13SS03; facing East	E LEVEL AND A STATE OF THE STAT
3-13	7/8/99	1420 i	$\mathbb{F}_{\mathbb{F}}^{n}(SL_{\mathbb{F}}^{n})$	Sample LF13SB12; facing East	A Solution of the second of th
4-1	7/8/99	- 1020 ±	ii -SI	Sample LF13SB22; facing East	Fill Cont.
4-2	7/9/99	0943	SL :	Sample LF09SB04; facing North	

PHOTOGRAPH IDENTIFICATION SHEET

Camera Serial #: Disposable Camera Lens Type: 35 mm

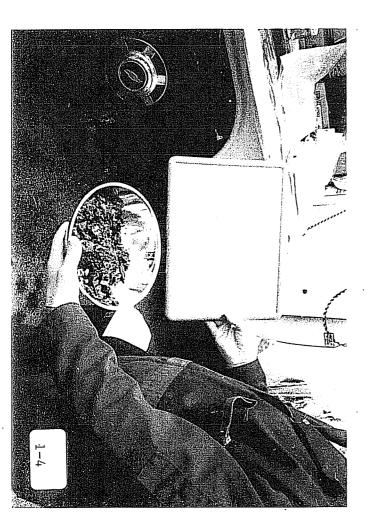
TDD #: 98-11-0007 Site Name: Wenatchee Landfill Brownfields

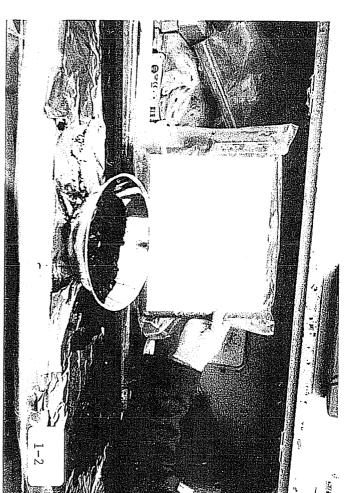
Photo Number	Date	Time	Taken By	Description
4-3	7/9/99	0950	SL	Sample LF13SB12; facing North
4-4	7/9/99	0957	∫ SL	Rinsate sample collection; facing South
4-5	7/9/99	1005	SL	Sample LF09SB04; facing West
4-6	7/9/99	1010	SL	Sample LF09SB22; facing West

Key:

Charlie Gregory Susan Gardner CG SG SL Susan Lipinski

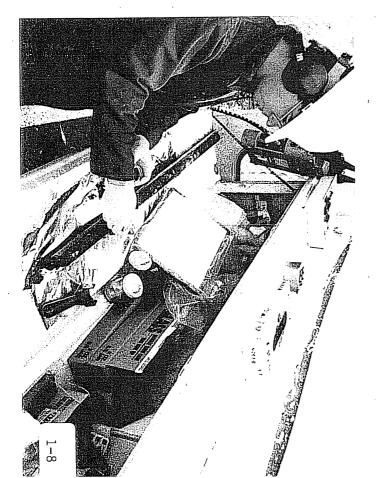


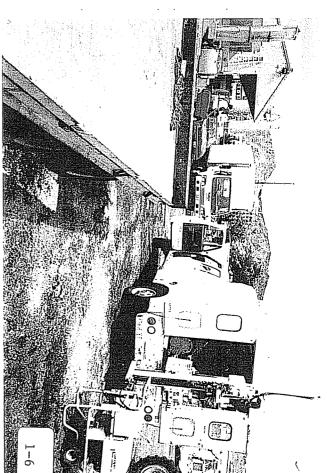






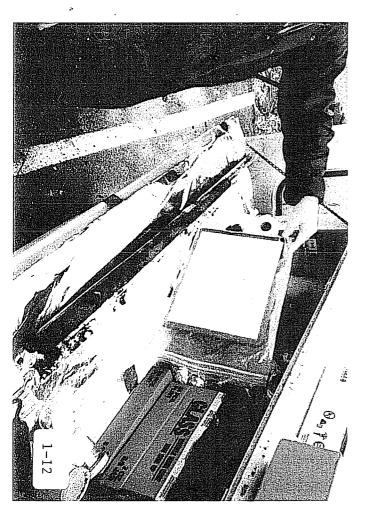


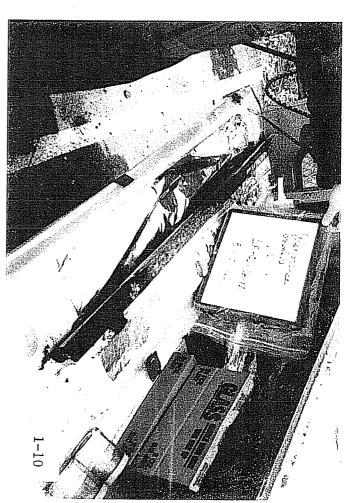


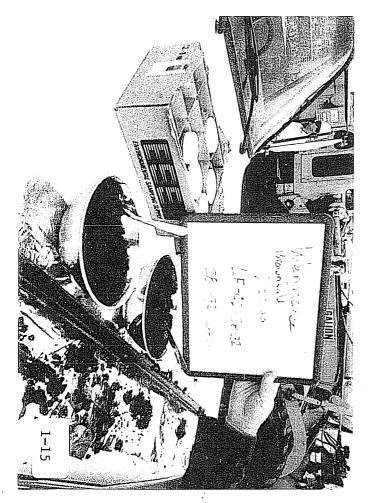


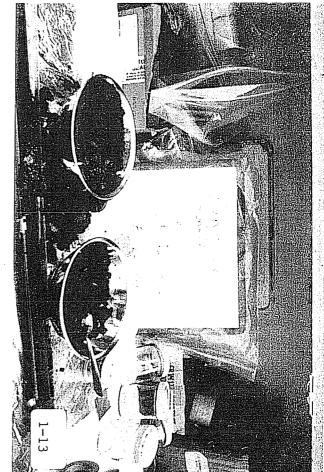


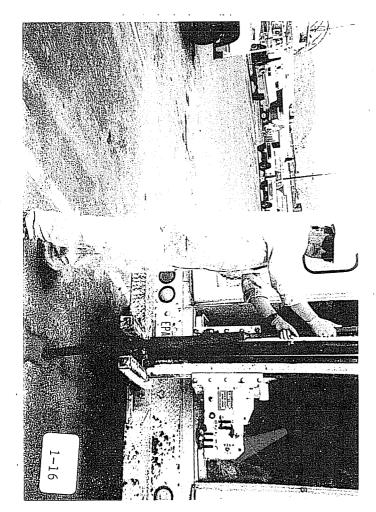


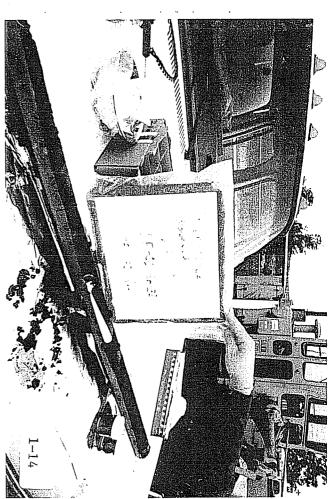


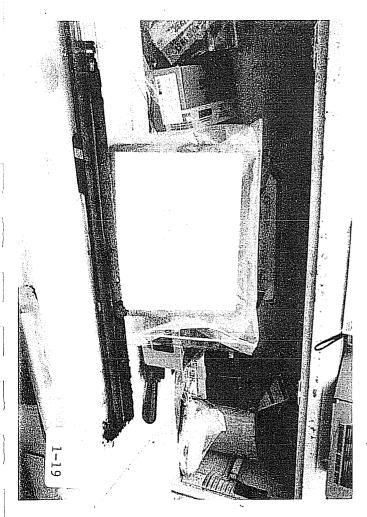




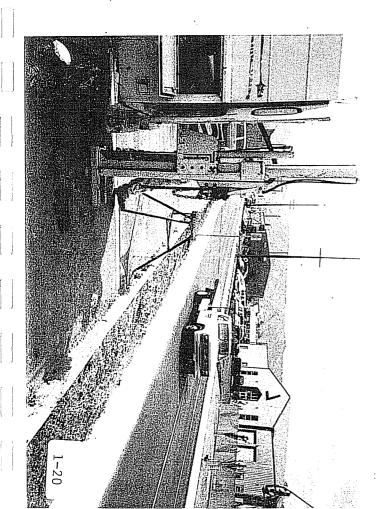


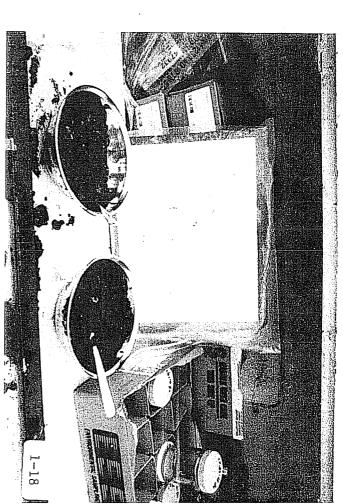


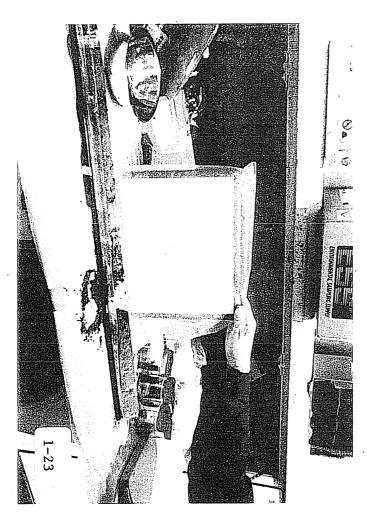


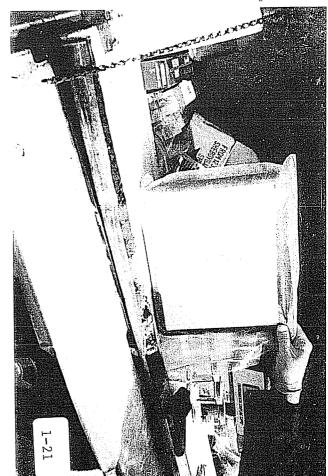




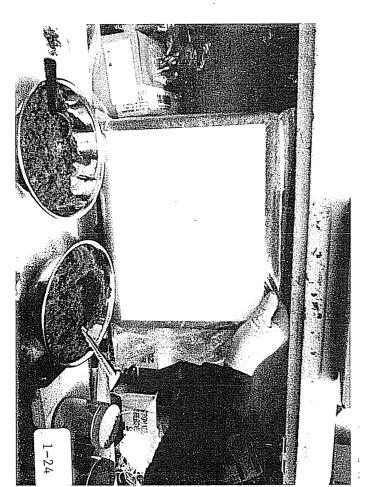


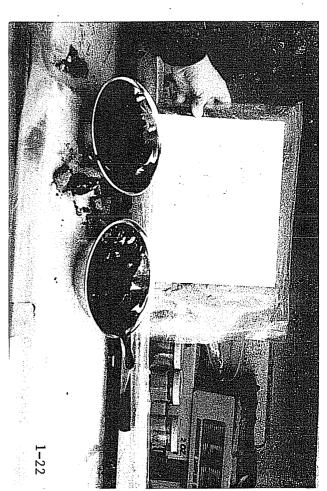


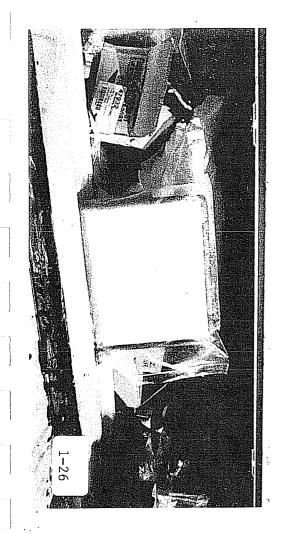




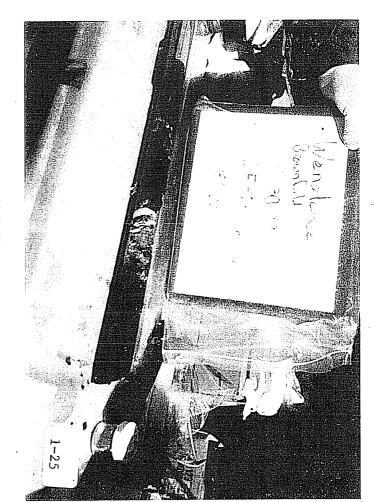


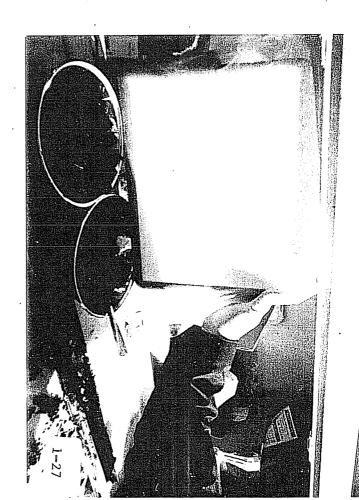


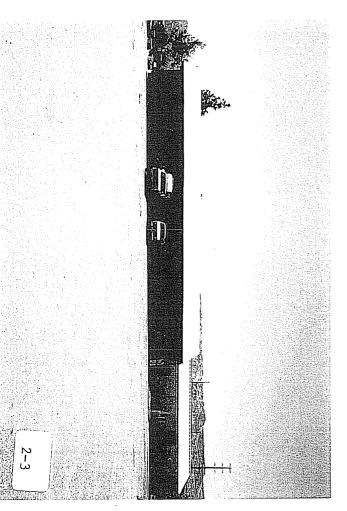


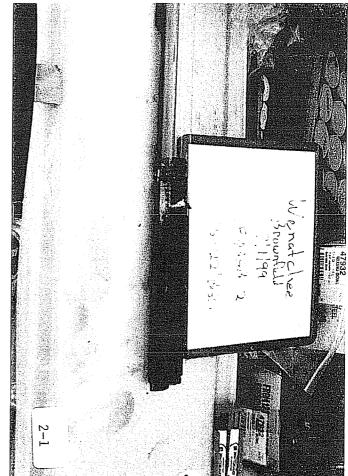


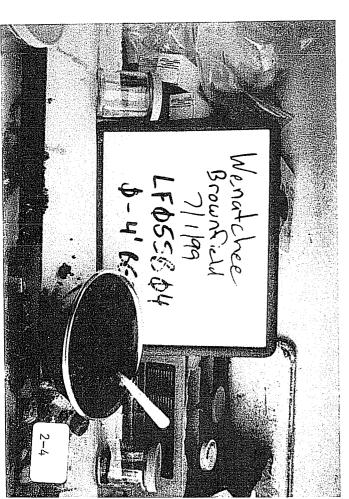


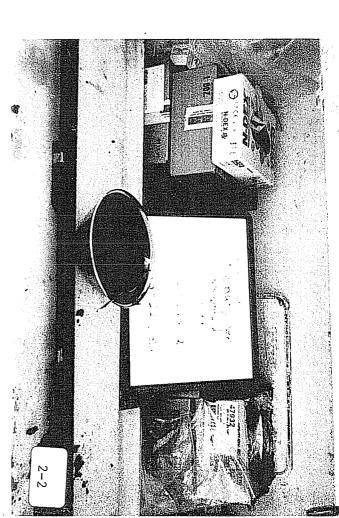


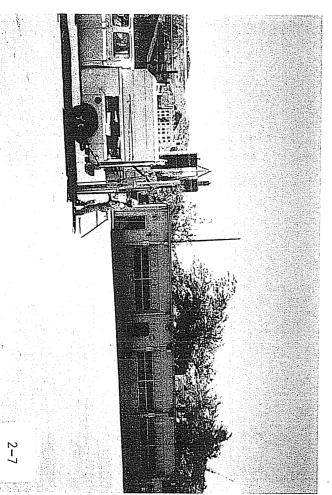




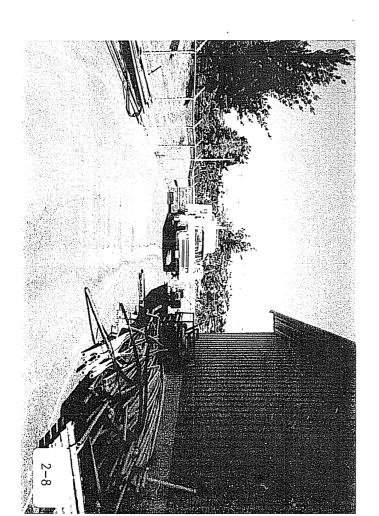


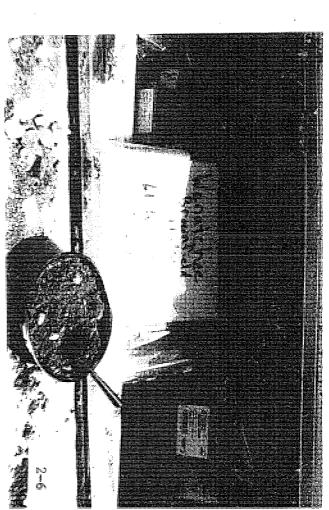


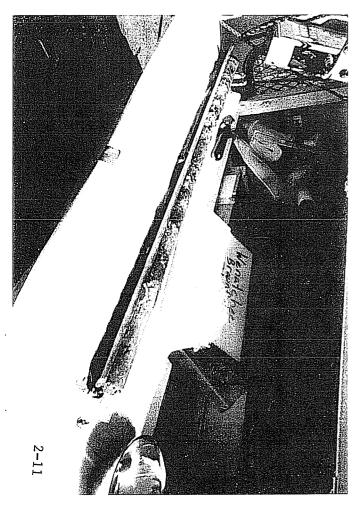


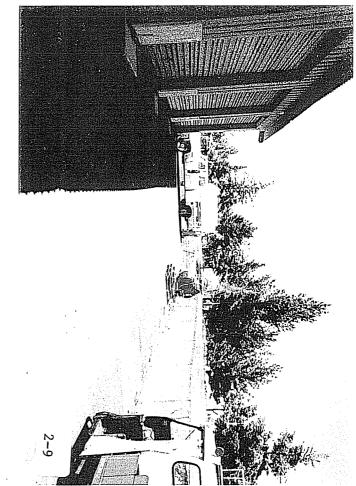


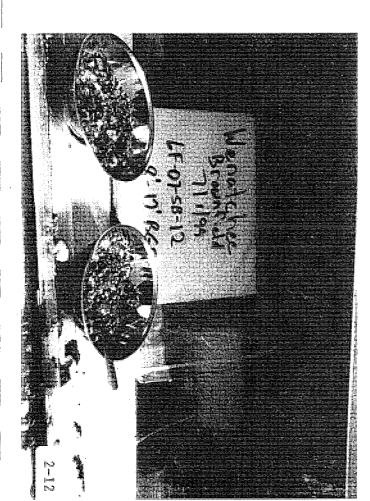


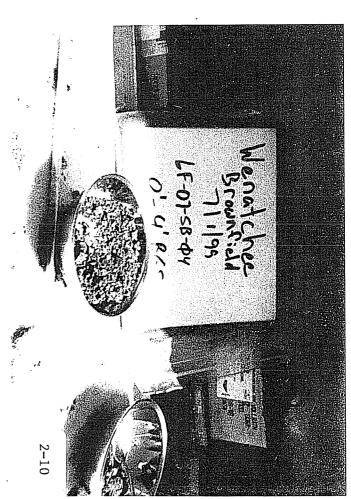


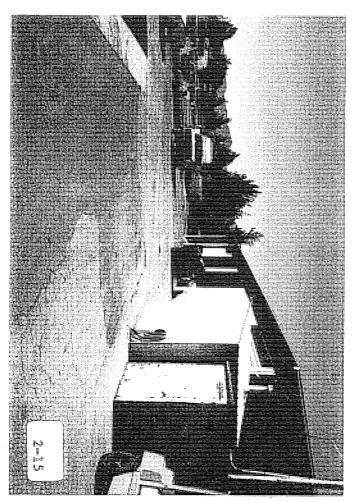


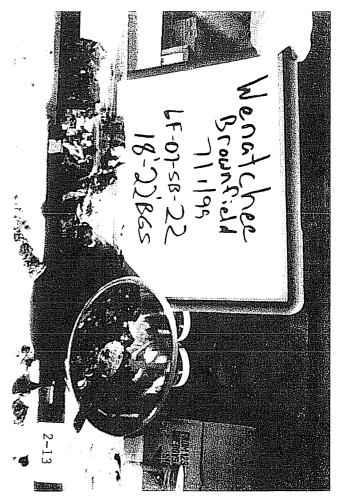


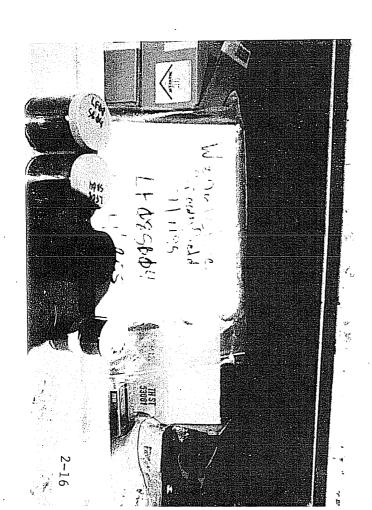


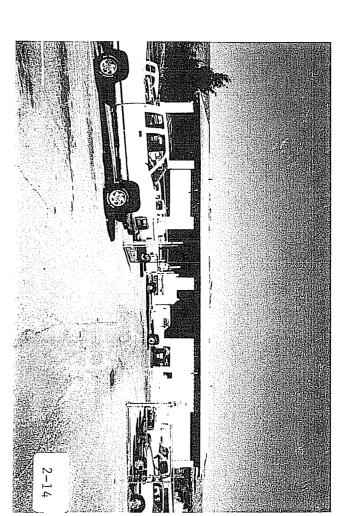


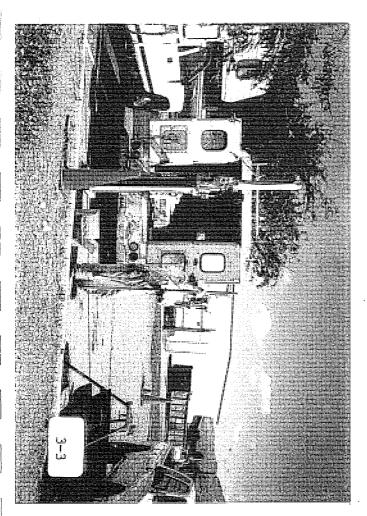


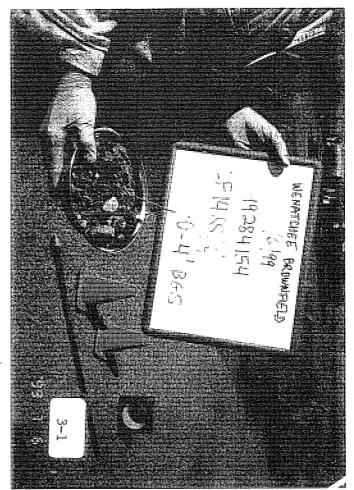




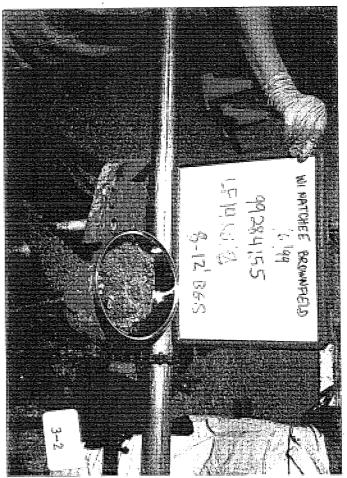


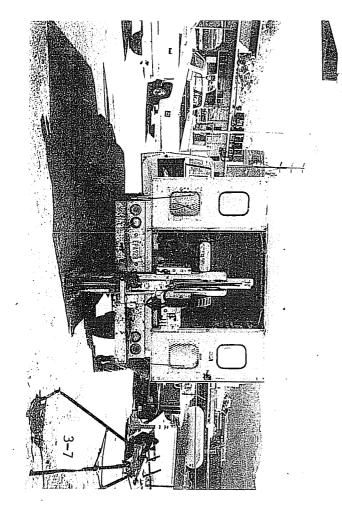


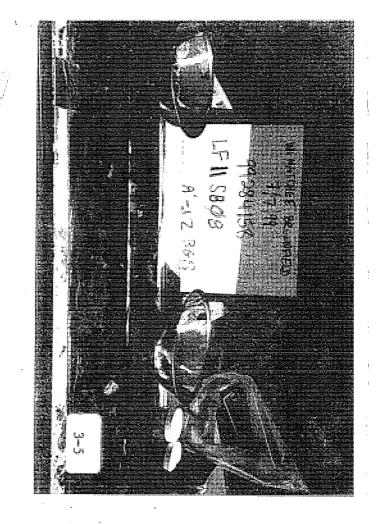


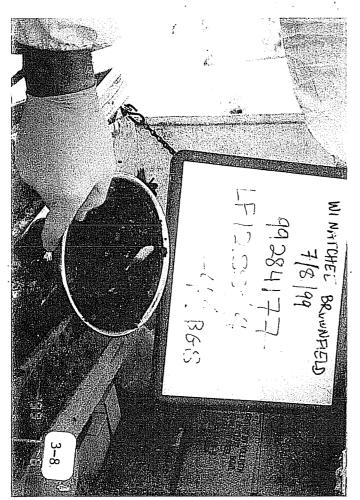


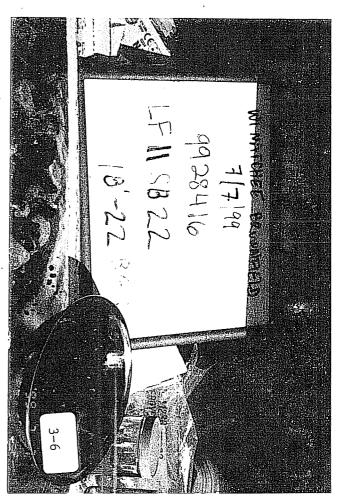




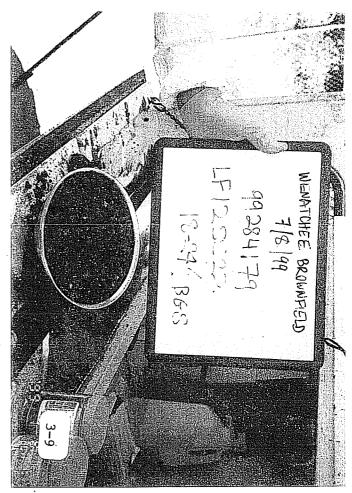




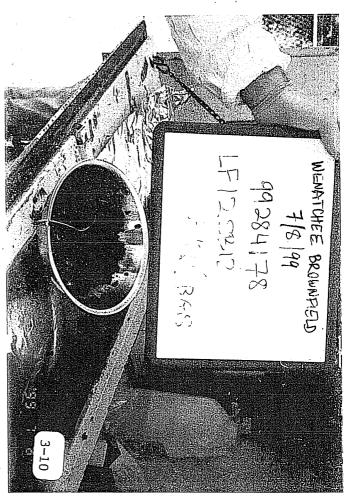


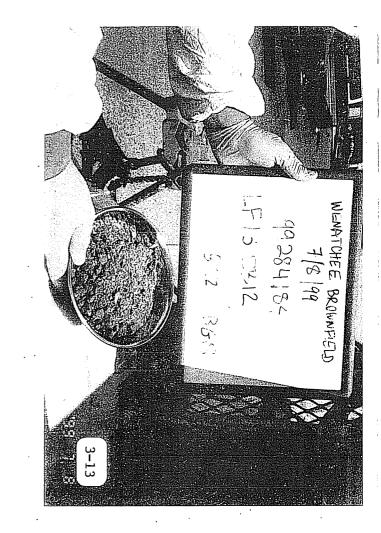




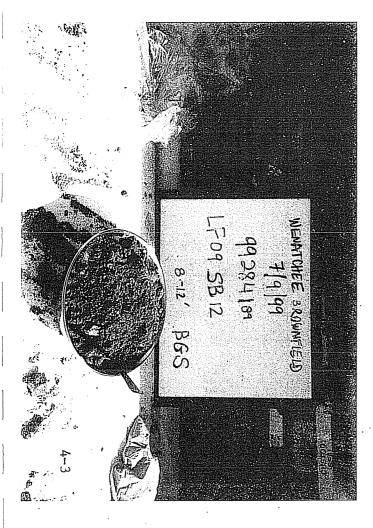


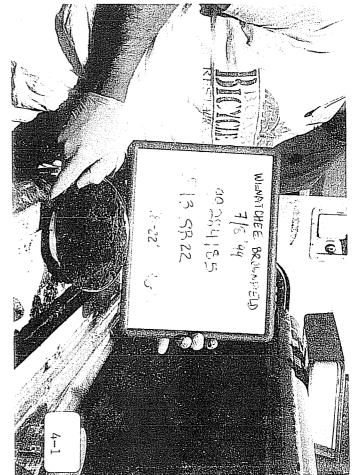


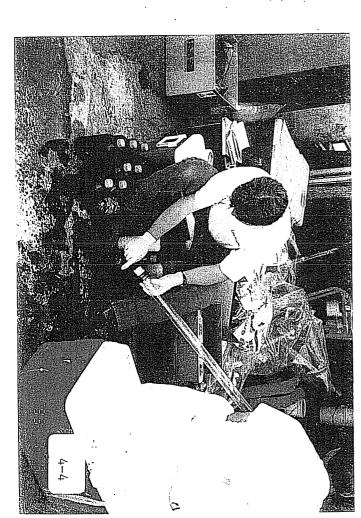




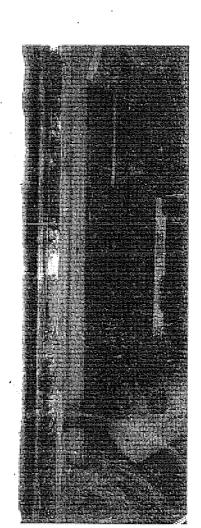
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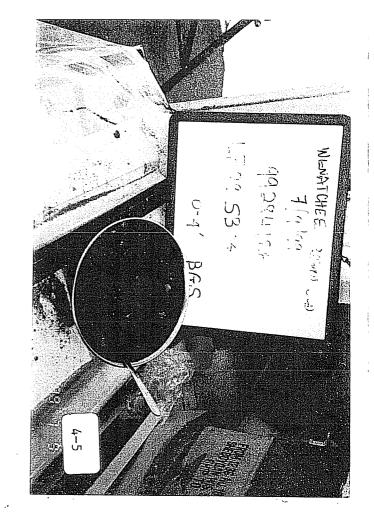


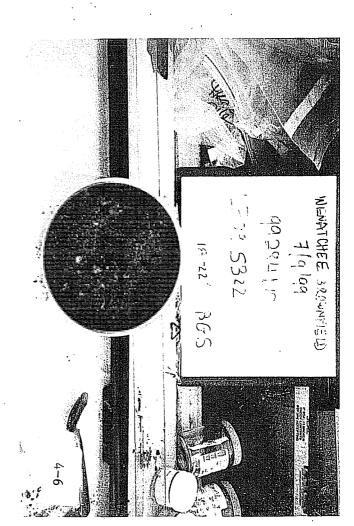












SAMPLE ID	MATRIX	INTERNAL STANDARD	%R	QC LIMITS
99274109	Water	¹³ C-1,2,3,4,7,8-HxCDF	17.24	28 - 136 %
99274109	Water	¹³ C-1,2,3,4,6,7,8-HpCDF	19.20	28 - 143 %
99274109	Water	¹³ C-1,2,3,4,7,8,9-HpCDF	20.22	26 - 138 %
99274110	Soil	¹³ C-OCDD	21.41	40 - 135 %
99274114	Water	¹³ C-2,3,7,8-TCDD	23.33	. 25 - 164 %
99274114	Water	¹³ C-1,2,3,7,8-PeCDD	15.23	25 - 181 %
99274114	Water	¹³ C-1,2,3,4,7,8-HxCDD	18.42	32 - 141 %
99274114	Water	¹³ C-1,2,3,6,7,8-HxCDD	20.63	28 - 130 %
99274114	Water	¹³ C-2,3,7,8-TCDF	17.46	24 - 169 %
99274114	Water	¹³ C-1,2,3,7,8-PeCDF	14.72	24 - 185 %
99274114	Water	¹³ C-2,3,4,7,8-PeCDF	13.15	21 - 178 %
99274114	Water	¹³ C-1,2,3,4,7,8-HxCDF	20.31	26 - 152 %
99274114	Water	¹³ C-1,2,3,7,8,9-HxCDF	20.51	26 - 123 %
99274114	Water	¹³ C-2,3,4,6,7,8-HxCDF	17.38	29 - 147 %
99274114	Water	¹³ C-1,2,3,4,7,8-HxCDF	16.55	28 - 136 %
99274114	Water	¹³ C-1,2,3,4,6,7,8-HpCDF	16.77	28 - 143 %
99274114	Water	¹³ C-1,2,3,4,7,8,9-HpCDF	20.50	26 - 138 %

TCDD = Tetrachlorodibenzodioxin.

PeCDD = Pentachlorodibenzodioxin.

HxCDD = Hexachlorodibenzodioxin.

HpCDD = Heptachlorodibenzodioxin.

OCDD = Octachlorodibenzodioxin.

TCDF = Tetrachlorodibenzofuran.

PeCDF = Pentachlorodibenzofuran.

HxCDF = Hexachlorodibenzofuran.

HpCDF = Heptachlorodibenzofuran.

Quantitation limits and positive results for associated analytes were flagged as estimated (UJ or J).

VI Surrogate Recoveries: Not Applicable.

Surrogates were not required for this method. Clean-up standard 37Cl-2,3,7,8-TCDD was added to all samples and QC samples. The clean-up standard recoveries were acceptable.

VII Duplicate Sample Analysis: Not Applicable.

Duplicate sample analyses were not performed and no action was taken on this basis.

BLANK ID	MATRIX	COMPOUND	CONC.	ASSOCIATED SAMPLES
DBLK3	Water	1,2,3,4,6,7,8-HpCDD	8.531 pg/L	***
DBLK3	Water	OCDD	105.765 pg/L	***

CONC. = Concentration.

 $\label{eq:hpcdd} HpCDD = Heptachlorodibenzodioxin.$

OCDD = Octachlorodibenzodioxin.

- * Samples 99274102 through 99274106.
- ** Samples 99274107, 99274108, 99274110, 99274111, 99274113, 99274115, and 99274116.
- *** Samples 99274109, 99274114, and 99274117.

Reported levels of the above compounds in the associated samples were qualified as non-detect (U), due to the concentration were below five times the concentration value in the blank. The TEF factor was also corrected by the reviewer because of blank contamination.

V Internal Standards: Satisfactory.

All internal standard (IS) ion abundance ratios were within method QC limits. All IS percent recovery (%R) values were within the QC limits, except:

SAMPLE ID	MATRIX	INTERNAL STANDARD	%R	QC LIMITS
99274102	Soil	¹³ C-1,2,3,4,6,7,8-HpCDD	30.09	40 - 135 %
99274102	Soil	¹³ C-OCDD	20.22	40 - 135 %
99274102	Soil	¹³ C-2,3,7,8-TCDF	38.96	40 - 135 %
99274102	Soil·	¹³ C-1,2,3,7,8-PeCDF	36.68	40 - 135 %
99274102	Soil	¹³ C-1,2,3,4,6,7,8-HpCDF	25.36	40 - 135 %
99274109	Water	¹³ C-2,3,7,8-TCDD	19.95	25 - 164 %
99274109	Water	¹³ C-1,2,3,7,8-PeCDD	16.96	25 - 181 %
99274109	Water	¹³ C-1,2,3,4,7,8-HxCDD	18.49	32 - 141 %
99274109	Water	¹³ C-1,2,3,6,7,8-HxCDD	21.14	28 - 130 %
99274109	Water	¹³ C-1,2,3,4,6,7,8-HpCDD	21.71	23 - 140 %
99274109	Water	¹³ C-OCDD	17.82	17 - 157 %
99274109	Water	¹³ C-2,3,7,8-TCDF	13.84	24 - 169 %
99274109	Water	¹³ C-1,2,3,7,8-PeCDF	17.21	24 - 185 %
99274109	Water	¹³ C-2,3,4,7,8-PeCDF	13.84	21 - 178 %
99274109	Water	¹³ C-1,2,3,4,7,8-HxCDF	19.95	26 - 152 %
99274109	Water	¹³ C-1,2,3,7,8,9-HxCDF	20.31	26 - 123 %
99274109	Water	¹³ C-2,3,4,6,7,8-HxCDF	20.88	29 - 147 %

II Instrument Performance: Acceptable.

A performance check solution was analyzed at the beginning of each 12-hour sample analysis period. The minimum resolving power of 10,000 was attained. The valley between 2,3,7,8-TCDD and the peaks representing all other TCDD isomers was ≤ 25 % in the window defining mix solution. All ion abundance and retention time criteria were met in all calibration standards.

III Calibration

A. Initial Calibration: Acceptable.

A 5-point initial calibration was performed with all Relative Standard Deviations (RSDs) less than 20 % for the unlabeled target analytes and less than 30 % for the labeled internal standards. All ion abundance ratios, signal-to-noise (s/n) ratios, and retention times were within method QC limits.

B. Continuing Calibration: Acceptable.

A continuing calibration was analyzed at the start of each 12-hour period. The % valley between 2,3,7,8-TCDD and the closest TCDF isomer was less than 25 %. The retention times for all of the furan and dioxin homologues were established and properly labeled from the first to the last eluters. All ion abundance and s/n ratios were within method QC limits. All % difference (%D) values were less than 30 % for the labeled internal standards and less than 20 % for the unlabeled target analytes, except for the following:

DATE	TIME	MATRIX	COMPOUND	%D	ASSOCIATED SAMPLES	
7/19/99	2212	Soil	¹³ C-OCDD (IS)	33.12	· *	
7/23/99	2000	Soil	2,3,7,8-TCDF	24.50	99274114	
7/30/99	2211	Soil	2,3,7,8-TCDF	21.50	99274110RE	

CONC. = Concentration.

OCDD = Octachlorodibenzodioxin.

TCDF = Tetrachlorodibenzofuran.

The quantitation limit for 2,3,7,8-TCDD in the samples 99274114 were qualified as estimated (UJ). No action was taken for the internal standard (IS) %D value outlier or for the 2,3,7,8-TCDF %D outlier in sample 99274110RE.

IV Blanks: Satisfactory.

The frequency of analysis of laboratory blanks was met. No target analytes were detected in any blanks, except for the following:

BLANK ID	MATRIX	COMPOUND .	CONC.	ASSOCIATED SAMPLES
DBLK1	Soil	OCDD	1.461 ng/kg	*
DBLK2	Soil	OCDD	1.550 ng/kg	**

^{*} Samples 99274102 through 99274106.



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International Specialists in the Environment

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MEMORANDUM

DATE:

September 1, 1999

TO:

Mark Woodke, START-Project Manager, Seattle, WA

FROM:

David A. Ikeda, Chemist, E & E, Seattle, WA

(Leatta Dahlhoff, Chemist, E & E, Seattle, WA)

SUBJ:

THRU:

Organic Data Quality Assurance Review, Wenatchee Brownfields Site,

Wenatchee, Washington

REF:

TDD: 98-11-0007

PAN: CK-07-01-SI-DM

The data quality assurance review of three water samples and twelve soil samples collected from the Wenatchee Brownfields site located in Wenatchee, Washington, has been completed. Analysis for Polychlorinated Dibenzodioxins (PCDDs) and Polychlorinated Dibenzofurans (PCDFs) following EPA Method 8290 for soil samples and EPA Method 1613B for water samples were performed by Southwest Laboratory of Oklahoma, Broken Arrow, Oklahoma.

The samples were numbered:

Soil:	99274102	99274103	99274104	99274105	99274106
	99274107	99274108	99274110	99274111	99274113

99274115 99274116

Water: 99274109 99274114 99274117

Data Qualifications:

I Holding Time: Acceptable.

The samples were maintained at 9°C, which is slightly higher than the required 4°C (± 2°C), however due to the stable nature of the analytes, no qualifications were applied to the samples by the reviewer. The samples were collected June 29 and 30, 1999, extracted by July 21, 1999, and analyzed by July 29, 1999, therefore meeting QC criteria of less than 30 days for soil samples and 7 days for water samples between collection and extraction and less than 45 days for soil samples and 40 days for water samples between extraction and analysis.

Note: This page is intentionally left blank.

Trip Blanks

Trip blanks met the frequency criteria. The following contaminants were detected in the trip blanks: methylene chloride, acetone, chloroform, bromodichloromethane, and dibromochloromethane. Sample results less than 10 times the associated trip blank contaminant concentrations were qualified as not detected (U).

Rinsate Blanks

Rinsate blanks met the frequency criteria. The following contaminants were detected in the rinsate blanks:

Inorganics:

antimony, cadmium, chromium, lead, manganese, nickel, thallium, and

zinc; and

VOCs:

acetone.

In order to attain the level of contamination detected in the rinsate blanks, gross contamination would need to be present on the field or laboratory equipment. Several of the contaminants detected in the rinsates also were present in the laboratory blanks and may be associated with laboratory contamination. Additionally, the rinsate water, obtained from the Wenatchee PWD, may have been contaminated. Sample results for the above-listed analytes should be viewed with caution.

Comparability

Comparability is a qualitative parameter expressing the confidence with which one data set can be compared to another. Data produced for this site followed applicable field sampling techniques and specific analytical methodology. The DQO for comparability of 90 percent was met.

LABORATORY QUALITY ASSURANCE/QUALITY CONTROL PARAMETERS

The laboratory data also were reviewed for holding times, laboratory blank samples, trip blank samples, and rinsate blank samples. These QA/QC parameters are summarized below. In general, the laboratory and field QA/QC parameters were considered acceptable.

Holding Times

Approximately 6.3 percent of the data were qualified as estimated quantities (J or UJ) based on holding time QC outliers.

Laboratory Blanks

All laboratory blanks met the frequency criteria. The following contaminants of concern were detected in the laboratory blanks:

Inorganics:

barium, manganese, and selenium;

PCDDs/PCDFs:

1,2,3,4,6,7,8-HpCDD, and OCDD;

CL Pesticides:

4,4'-DDD, 4,4'-DDE, 4,4'-DDT, endrin, alpha-BHC, beta-BHC,

heptachlor, aldrin, heptachlor epoxide, endrin aldehyde,

gamma-chlordane, and methoxychlor;

SVOCs:

phenol, bis(2-ethylhexyl)phthalate, and di-n-butylphthalate; and

VOCs:

acetone, methylene chloride, 4-methyl-2-pentanone, 2-hexanone, and

2-butanone.

Any associated sample result less than five times the blank contamination (10 times for common laboratory contaminants) was qualified as not detected (U). See the data QA memoranda (Appendix C) for sample results that were qualified based on blank contamination.

Precision

Precision measures the reproducibility of the sampling and analytical methods. Laboratory and field precision is defined as the relative percent difference (RPD) between duplicate sample analyses. The laboratory duplicate samples or MS/MSD samples measure the precision of the analytical method.

The RPD values were reviewed for all laboratory analyses. Approximately 1 percent of the sample results were qualified as estimated quantities (J) based on duplicate RPD QC outliers. Overall, the project DQO for accuracy of 90 percent was met.

Accuracy

Accuracy measures the reproducibility of the sampling and analytical methodology. Laboratory accuracy is defined as the surrogate spike percent recovery (%R) for each VOC, SVOC, CL Pesticide/PCB, or PCDD/PCDF analysis or the matrix spike %Rs. The surrogate %R values were reviewed for all appropriate sample analyses. Approximately 0.8 percent of the sample results were rejected (R) based on surrogate QC outliers.

The matrix spike %R values were reviewed for all MS and MSD analyses. Approximately 0.7 percent of the data were qualified as estimated (J or UJ), and approximately 0.2 percent of the data were rejected (R) based on MS/MSD recoveries. Overall, the project DQO for accuracy of 90 percent was met.

Completeness

Data completeness is defined as the percentage of usable data (usable data divided by the total possible data). All laboratory data were reviewed for data validation and usability. Approximately 99.8 percent of the Wenatchee Landfill TBA data were determined to be usable, therefore, the project DQO for completeness of 90 percent was met. Samples were not collected from Riverfront Park seeps because no seeps were found during the TBA.

Representativeness

Data representativeness expresses the degree to which sample data accurately and precisely represent a characteristic of a population, parameter variations at a sampling point, or environmental condition. The number and selection of samples were determined in the field to account accurately for site variations and sample matrices. The DQO for representativeness of 90 percent was met.

Program Statement of Work for Organic Analyses (EPA 1991b), and all PCDD/PCDF analyses were performed by Southwest Laboratory of Oklahoma, Broken Arrow, Oklahoma, a commercial laboratory, following EPA SW-846 Method 8290.

Data qualifiers were applied as necessary according to the following guidance documents:

- Region 10 SOP for the Validation of Polychlorinated Dibenzo-dioxin (PCDD) and Polychlorinated Dibenzo-furan (PCDF) Data (EPA 1996a);
- Contract Laboratory Program National Functional Guidelines for Inorganic Data Review (EPA 1994b); and
- Contract Laboratory Program National Functional Guidelines for Organic Data Review (EPA 1994c).

In the absence of other QC guidance, laboratory- and/or method-specific QC limits also were utilized to apply qualifiers to the data. Copies of the data QA memoranda are included in Appendix C.

SATISFACTION OF DATA QUALITY OBJECTIVES

The following EPA (1993) guidance document was used to establish data quality objectives (DQOs) for this TBA:

 Data Quality Objectives Process for Superfund, Interim Final Guidance, EPA 540-R-93-071.

The EPA TM determined that the definitive data without error and bias determination criteria would be used for the sampling and analyses conducted during the field activities. The data quality achieved during the fieldwork produced sufficient data that met the DQOs in the SQAP (E & E 1999).

A discussion of the objectives that were accomplished is presented in the following sections.

PROJECT-SPECIFIC DATA QUALITY OBJECTIVES

The laboratory data were reviewed to ensure that DQOs for the project were met. The following describe the laboratories' ability to meet project DQOs for precision, accuracy, and completeness and the field team's ability to meet project DQOs for representativeness and comparability. The laboratories and the field team were able to meet the DQOs for the project.

DISCUSSION OF QUALITY ASSURANCE/QUALITY CONTROL

QA/quality control (QC) data are necessary to determine precision and accuracy and to demonstrate the absence of interferences and/or contamination of sampling equipment, glassware, and reagents. Specific QC requirements for laboratory analyses are incorporated in the analytical methods performed by the laboratory. Additional QC requirements are provided in the EPA Contract Laboratory Program Statement of Work for Inorganic Analyses (EPA 1991a) and EPA Contract Laboratory Program Statement of Work for Organic Analyses (EPA 1991b). These QC requirements or equivalent requirements were followed for analytical work in the Wenatchee Landfill TBA.

QUALITY ASSURANCE/QUALITY CONTROL SAMPLES

A minimum of one matrix spike (MS)/matrix spike duplicate (MSD) sample for VOC, SVOC, CL Pesticide/PCB, and PCDD/PCDF analyses, and one MS/duplicate (DUP) for inorganic analyses, were designated per 20 samples collected for each matrix sample during the project.

Eight trip blank samples (at a rate of one trip blank per cooler of VOC samples) were shipped to the laboratories. Three rinsate samples (at a rate of one per 20 samples collected from each piece of nondedicated sampling equipment) from the decontaminated GeoprobeTM rods with acetate liners were submitted for the project. Detected analytes in the trip blank and rinsate blank samples are included in the QA/QC samples analytical results summary table at the end of this Appendix.

The laboratories analyzed several QC samples for QA purposes according to EPA methods. The analyzed QC samples included initial and continuing calibrations, trip and method blanks, MSs, DUPs, and laboratory control samples.

DATA VALIDATION

EPA chemists reviewed and validated data from analyses performed by Contract Laboratory Program (CLP) laboratories. These analyses consisted of VOCs, SVOCs, CL Pesticide/PCBs, and TAL metals. START chemists validated PCDD/PCDF data from the START-subcontracted laboratory and performed a validation check on the EPA-generated QA memoranda.

All samples were collected following the guidance of the SQAP (E & E 1999) for the field activities. All inorganic analyses were performed by a CLP laboratory following the EPA Contract Laboratory Program Statement of Work for Inorganic Analyses (EPA 1991a), all VOC, SVOC, and CL Pesticide/PCB analyses were performed by CLP laboratories following the EPA Contract Laboratory

APPENDIX B

SAMPLE PLAN ALTERATION FORM

SAMPLE PLAN ALTERATION FORM

Project Name and Number:	Wenatchee Landfill Targeted Brownfield Assess	sment TDD 98-11-0007
3.5 1.1 - 1 - 01adi Car		
Material to be Sampled: Gro	oundwater seeps	
•		
Measurement Parameters: V	olatile Organic Compounds, Semivolatile Organ	nic Compounds, Chlorinated
Pesticides/Polychlorinated I	Biphenyls, Target Analyte List Metals, polychlor	rinated dibenzo-dioxins and
polychlorinated dibenzo-fur	ans	
Standard Procedure for Field	d Collection & Laboratory Analysis (cite referer	nces): EPA SW-846
(laboratory analyses)		
(Huorator) unarious		
Reason for Change in Field	Procedure or Analytical Variation: Seeps were r	not located.
·		
Variation from Field or Ana	alytical Procedure: Not applicable	
Special Equipment, Materia	als, or Personnel Required: None	
CONTACT	APPROVED SIGNATURE	DATE
Initiator:		
START PL:		
EPA TM:		
EPA QA Officer:		

APPENDIX C

QUALITY ASSURANCE/QUALITY CONTROL INFORMATION
AND DATA VALIDATION MEMORANDA

VIII Matrix Spike/Matrix Spike Duplicates: Satisfactory.

Matrix spike percent spike recovery (%R) values were within QC limits, except for the following:

SAMPLE ID	MATRIX	ANALYTE	%R	QC LIMITS
99274102MS	Soil	OCDD	44.1	50 - 150 %
99274102MSD	Soil	OCDD	20.2	50 - 150 %

OCDD = Octachlorodibenzodioxin.

The result for OCDD was flagged as estimated (J) in sample 99274102.

The relative percent difference (RPD) values between the matrix spike and matrix spike duplicate were within QC limits, except:

SAMPLE ID	MATRIX	ANALYTE	RPD	QC LIMITS
99274102	Soil	OCDD	74.3	50

OCDD = Octachlorodibenzodioxin.

The sample result for OCDD was flagged as estimated (J) in sample 99284102.

IX Analytical Sequence: Acceptable.

All of the standards, blanks, samples and QC samples were analyzed in accordance with the method-specified analytical sequence.

X Laboratory Control Sample (LCS) Analyses: Acceptable.

A spiked blank was extracted and analyzed with each sample delivery group (SDG). The recoveries for the target compounds and internal standards for the LCS met the acceptance criteria. None of the data were qualified on this basis.

XI Compound Identification: Acceptable.

For analytes with isotopically labeled standards, the retention times of the sample quantitation ions maximized within -1 to +3 seconds of the isotopically labeled standard ions. Several samples had ratios for the quantitation ion integrated ion currents outside the method QC limits, the laboratory qualified these sample results as estimated maximum possible concentrations (X or I). The reviewer changed the laboratory qualifiers "X" and "I" to "J" (estimated).

XII Compound Quantitation and Detection Limits: Acceptable.

All of the samples were analyzed at the project required quantitation limits. Some of the totals reported were corrected by the reviewer due to adjustments that had to be made because of contamination in a blank or miscalculations. All of the compounds were calculated off the primary column, DB5, except for TCDF, which was calculated from a second column. All of the detected target compounds were within the linear calibration range.

XIII Laboratory Contact: Required

The laboratory was contacted on August 31, 1999, for a discrepancy with the MS and MSD summary form for 99274109. The laboratory accidently submitted an additional MS/MSD recovery form with the wrong results, the correct forms were in the data package and the percent recovery values were verified.

XIV Overall Assessment of Data for Use

The overall usefulness of the data is based on the criteria outlined in EPA Method 8290 and the OSWER Directive "Quality Assurance/Quality Control Guidance for Removal Activities, Sampling QA/QC Plan and Data Validation Procedures" (EPA/540/G-90/004). Based upon the information provided, the data are acceptable for use with the above stated data qualifications.

Data Qualifiers and Definitions

- U The material was analyzed for but was not detected. The associated numerical value is the sample quantitation limit.
- J The associated numerical value is an estimated quantity because the reported concentrations were less than the contract required detection limits or because quality control criteria limits were not met.
- UJ The material was analyzed for, but not detected. The reported detection limit is estimated because Quality Control criteria were not met.

CLIENT ID.

PCDD/PCDF ANALYSIS DATA SHEET Use for Sample and Blank Results

99274102

Lab Name: Southwest Lab. of Oklahoma Episode No.: 39261

Lab Code: SWL Case No.:

SDG No.:

Lab Sample ID: 39261.01

Client Name: E&E-WA

Sample Wt/Vol: 12.14 g or mL: g

Matrix (aqueous/solid/leachate): solid

Initial Calibration Date:

Sample Receipt Date: 07-02-99

Instrument ID: AutoSpec

Ext. Date: 07-06-99

GC Column:DB-5

Ext. Vol(ul):20.0

Inj. Vol(ul):2.0

Sample Data Filename: A105197#7

Analysis Date: 19-JUL-99 Time: 19:45:51

Blank Data Filename: A105197#2

Dilution Factor: 1

Cal. Ver. Data Filename: A105197#1

Concentration Units (pg/L or ng/Kg dry weight): ng/Kg

% Moisture: 6.9

	CONCENTRATION	DETECTION	Qual.	ION ABUND.	RRT	MEAN
ANALYTE	FOUND	LIMIT	(1)	RATIO (2)	(2)	RRF
2,3,7,8-TCDD	· •	0.306	υ	*	* *	1.48
1,2,3,7,8-PeCDD		0.530	ט	*	*	1.11
1,2,3,4,7,8-HxCDD	*	0.581	U	*	· *	0.74
1,2,3,6,7,8-HxCDD	*	0.391	Ū	*	*	1.10
1,2,3,7,8,9-HxCDD	*	0.449	U	*	*	0.96
1,2,3,4,6,7,8-HpCI	D 17.823	1.421	ゴ	1.04	1.000	1.14
OCDD	178.019	1.126	ょ	0.92	1.000	1.11
2.3,7,8-TCDF	#	0.224	05	. *	*	1.15
1,2,3,7,8-PeCDF	*	. 0.532	U 3	*	*	0.98
2,3,4,7,8-PeCDF	*	0.538	บゴ	*	*	0.97
1,2,3,4,7,8-HxCDF	2.749	0.743	ゴ	1.02	1.000	1.03
1,2,3,6,7,8-HxCDF	. **	0.557	ับ	*	*	1.38
1,2,3,7,8,9-HxCDF	*	0.882	Ū	*	*	0.87
2,3,4,6,7,8-HxCDF	*	0.652	U	*	*	1.18
1,2,3,4,6,7,8-HpC		1.261	T	0.83	1.000	1.44
1,2,3,4,7,8,9-HpC		1.776	ប៊	*	, #r	1.02
OCDF	5.307	1.674		0.88	1.003	1.21
Total Tetra-Dioxi	ns *	0.306	υ			
Total Penta-Dioxi	•	0.530	U			· ·
Total Hexa-Dioxin		0.391	U			
Total Hepta-Dioxi	ns 35.374	1.421		•		
Total Tetra-Furan		0.224				
Total Penta-Furan		0.538				
Total Hexa-Furans		0.557			•	
Total Hepta-Furan		1.261	U			
(a) Our life one . 13		tootod'. Y	c. T 171	MDC C - 118	e value	

(1) Qualifiers: U and * - not detected; X & I - EMPC. C - use value from second column analysis. B - possible blank contamination.

(2) RRTs and ion ratios are specified in Tables 11 and 8, Method 8290.



USEPA, ITD 1DFB

EPA SAMPLE NO.

PCDD/PCDF TOXICITY EQUIVALENCE SUMMARY Use for Sample and Blank Results

99274102

Lab Name: SOUTHWEST LAB. OF OKLAHOMA

Episode No.: 39261

Client Name: E&E-WA

Lab Sample ID: 39261.01

Matrix (aqueous/solid/leachate): solid

Sample Wt/Vol: 12.14 g or mL: g

Sample Receipt Date: 07-02-99

Initial Calibration Date:

Ext. Date: 07-06-99 Shift:

Instrument ID: AutoSpec

Analysis Date: 19-JUL-99 Time: 19:45:51

GC Column ID: DB-5

Extract Volume(ul): 20.0

Sample Data Filename: A105197#7

Injection Volume(ul): 2.00

Blank Data Filename: A105197#2

Dilution Factor: 1

Cal. Ver. Data Filename: A105197#1

Concentration Units (pg/L or ng/Kg dry weight): ng/Kg % Moisture: 6.9

	CONCENTRATION	TEF(1)	TEF-ADJUSTED CONCENTRATION
2,3,7,8-TCDD 1,2,3,7,8-PeCDD 1,2,3,4,7,8-HxCDD 1,2,3,6,7,8-HxCDD 1,2,3,7,8,9-HxCDD 1,2,3,4,6,7,8-HpCDD OCDD 2,3,7,8-TCDF 1,2,3,7,8-PeCDF 2,3,4,7,8-PeCDF 1,2,3,4,7,8-HxCDF 1,2,3,6,7,8-HxCDF 1,2,3,7,8,9-HxCDF 1,2,3,4,6,7,8-HxCDF 1,2,3,4,6,7,8-HxCDF 1,2,3,4,6,7,8-HyCDF 1,2,3,4,6,7,8-HpCDF 1,2,3,4,7,8,9-HpCDF 1,2,3,4,7,8,9-HpCDF OCDF	CONCENTRATION * * * 17.82 178.02 * * 2.75 * 3.85 5.31	X 1.0 X 0.5 X 0.1 X 0.1 X 0.01 X 0.001 X 0.05 X 0.5 X 0.5 X 0.1 X 0.1 X 0.1 X 0.1 X 0.1 X 0.1 X 0.1 X 0.1 X 0.1 X 0.1	
		*T	otal: 3.1060+00 8

(1) Taken from 'Interim Procudures for Estimating Risks Associated with Exposures to Mixtures of Chlorinated Dibenzo-p-Dioxin and -Dibenzofurans (CDDs and CDFs) and 1989 Udate(EPA/625/3-89/016, March 1989.

* Total TEF is calculated by summing up all positively identified isomers of each homologous series. 6/90

CLIENT ID.

PCDD/PCDF ANALYSIS DATA SHEET Use for Sample and Blank Results

99274103

Lab Name: Southwest Lab. of Oklahoma Episode No.: 39261

Lab Code: SWL Case No.:

SDG No.:

Lab Sample ID: 39261.02

Client Name: E&E-WA

Sample Wt/Vol: 13.37 g or mL: g

Matrix (aqueous/solid/leachate): solid

Initial Calibration Date:

Sample Receipt Date: 07-02-99

Instrument ID: AutoSpec

GC Column:DB-5

Ext. Vol(ul):20.0

Ext. Date: 07-06-99

Inj. Vol(ul):2.0

Sample Data Filename: A105197#3

Analysis Date: 19-JUL-99 Time: 16:30:42

Blank Data Filename: A105197#2

Dilution Factor: 1

Cal. Ver. Data Filename: A105197#1

Concentration Units (pg/L or ng/Kg dry weight): ng/Kg

% Moisture: 17.35

ANALYTE	CONCENTRATION FOUND	DETECTION LIMIT	Qual. (1)	ION ABUND. RATIO (2)	RRT (2)	MEAN RRF
2,3,7,8-TCDD	1.119	0.201	5	0.98	1.002	1.48
1,2,3,7,8-PeCDD	1.027	0.323	5	2.91	1.000	1.11
1,2,3,4,7,8-HxCDD	3.754	0.576	5	5.36	0.998	0.74
1,2,3,6,7,8-HxCDD	1.329	0.388	ゴ	0.87	1.001	1.10
1,2,3,7,8,9-HxCDD		0.181	U	*	*	0.96
1,2,3,4,6,7,8-HpC	DD 55.530	1.219		1.06	1.001	1.14
OCDD	756.461	0.444		0.89	1.000	1.11
2,3,7,8-TCDF ⁸	SEER TO 3 A77	0.199	<u>—е ў</u>	0.74	1.002	1.15
1,2,3,7,8-PeCDF	s econo continu" *	0.367	ָּט יי	3/47 0.74	* * *	0.98
2,3,4,7,8-PeCDF	*	0.372	U	· 🖈 .	*	0.97
1,2,3,4,7,8-FECDF	4.377	0.235	5	1.25	1.001	1.03
1,2,3,6,7,8-HxCDF	*	0.176	2	*	*	1.38
1,2,3,7,8,9-HxCDF	•	0.279	Ū	*	* *	0.87
1,2,3,7,6,9-fxCDF	*	0.206	U	*	* *	1.18
2,3,4,6,7,8-HxCDF	DF 11.487	0.493	* ;	1.02	1.000	1.44
1,2,3,4,6,7,8-HpC		0.694	U	*	*	1.02
1,2,3,4,7,8,9-HpC	23.689	0.616	_	0.85	1.003	1.21
					•	•
Total Tetra-Dioxi		0.201	Ŭ			
Total Penta-Dioxi	ins *	0.323	Ū			
Total Hexa-Dioxi	ns *	0.388	U .	•	٠	
Total Hepta-Diox:	ins 111.317	1.219		* *		
Total Tetra-Fura	ns 12.054	0.199				
Total Penta-Fura				•	. ,	
Total Hexa-Furan		0.176				•
motel Wents-Fursi	ne · 11.487	0.493				
(1) Ouslifiers: II	and * - not de	etected: X	& I - E	EMPC. C - us	e varue	

(1) Qualifiers: U and * - not detected; from second column analysis. B - possible blank contamination.

(2) RRTs and ion ratios are specified in Tables 11 and 8, Method 8290.

USEPA - ITD

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AATS/SWOK, INC. 2378-TCDF ANALYSIS DATA SHEET Use for Sample and Blank Results

99274103

CLIENT ID

Client Name: E&E-WA

Lab Sample ID: 39261.02

Matrix (aqueous/solid/leachate): solid Sample Wt/Vol: 13.37 g or mL: g

Sample Receipt Date: 07/02/99

Initial Calibration Date: 05/13/99

Ext. Date: 07/06/99

Instrument ID: 70S

Analysis Date: 20-JUL-99 Time: 19:04:45

GC Column ID: SP2331

Extract Volume (uL): 20.0

Sample Data Filename: S104227#14

Injection Volume (uL): 2.0

Blank Data Filename: S104227#13

Dilution Factor: 1

Cal. Ver. Data Filename: S104227#12

Concentration Units (pg/L or ng/Kg dry weight): ng/Kg % Moisture: 17.35

ANALYTE	CONCENTRATION FOUND	DETECTION LIMIT	EMPC	ION ABUND. RATIO (1)	RRT (1)
2,3,7,8-TCDF	***	0.7219	#	*	*
INT. STANDARD	SPIKE CONCENTRATION	CONCENT. FOUND	RECOV.	ION ABUND. RATIO (2)	RRT (1)
13C-2,3,7,8-TCDF	1000	618.75	61.87	0.76	1.16
CLEANUP STANDARD					
37C1-2,3,7,8-TCDD	800	432.64	54.08		0.99

NOTE: Concentrations, EMPCs, and EDL are calculated on a dry weight basis.

TCDDF1I



USEPA, ITD

EPA SAMPLE NO.

PCDD/PCDF TOXICITY EQUIVALENCE SUMMARY Use for Sample and Blank Results

99274103

Lab Name: SOUTHWEST LAB. OF OKLAHOMA

Episode No.: 39261

Client Name: E&E-WA

Lab Sample ID: 39261.02

Matrix (aqueous/solid/leachate): solid

Sample Wt/Vol: 13.37 g or mL: g

Sample Receipt Date: 07-02-99

Initial Calibration Date:

Ext. Date: 07-06-99 Shift:

Instrument ID: AutoSpec

Analysis Date: 19-JUL-99 Time: 16:30:42

GC Column ID: DB-5

Extract Volume(ul): 20.0

Sample Data Filename: A105197#3

Injection Volume(ul): 2.00

Blank Data Filename: A105197#2

Dilution Factor: 1

Cal. Ver. Data Filename: A105197#1

Concentration Units (pg/L or ng/Kg dry weight): ng/Kg % Moisture: 17.35

	CONCENTRATION	TEF(1)	TEF-ADJUSTED CONCENTRATION	
		X 1.0	1.12e+00	
2,3,7,8-TCDD	1.12	•	5.13e-01	
1,2,3,7,8-PeCDD	1.03	X 0.5	3.75e-01	
1,2,3,4,7,8-HxCDD	3.75	X 0.1		
1,2,3,6,7,8-HxCDD	1.33	X 0.1	1.33e-01	
1,2,3,7,8,9-HxCDD	*	X 0.1		
1,2,3,4,6,7,8-HpCDD	55.53	X 0.01	5.55e-01	-
OCDD	756.46	x 0.001	7.56e-01	~
2,3,7,8-TCDF	ND 1-48	X_0.1	1:48e-01	व विशिव
1,2,3,7,8-PeCDF	*	X 0.05	*	
2,3,4,7,8-PeCDF	*	X 0.5	*	
1,2,3,4,7,8-HxCDF	4.38	X 0.1	4.38e-01	
1,2,3,6,7,8-HxCDF	*	X 0.1	, . *	
1,2,3,7,8,9-HxCDF	• *	x 0.1	*	
2,3,4,6,7,8-HxCDF	★	x 0.1	*	
	11.49	X 0.01	1.15e-01	
1,2,3,4,6,7,8-HpCDF	*	X 0.01	, *	
1,2,3,4,7,8,9-HpCDF	23.69	X 0.001	2.37e-02	
OCDF	23.69	n 0.002	واداه ح	٩
		*T	otal: 7:8120+00	•
		. •	4. 03·e 00	

(1) Taken from 'Interim Procudures for Estimating Risks Associated with Exposures to Mixtures of Chlorinated Dibenzo-p-Dioxin and -Dibenzofurans (CDDs and CDFs) and 1989 Udate(EPA/625/3-89/016, March 1989.'

* Total TEF is calculated by summing up all positively identified isomers of each homologous series.



Form 1

CLIENT ID.

PCDD/PCDF ANALYSIS DATA SHEET Use for Sample and Blank Results

99274104

Lab Code: SWL Case No.:

SDG No.:

Lab Sample ID: 39261.03

Client Name: E&E-WA

Sample Wt/Vol: 13.05 g or mL: g

Matrix (aqueous/solid/leachate): solid

Initial Calibration Date:

Sample Receipt Date: 07-02-99

Instrument ID: AutoSpec

Ext. Date: 07-06-99

GC Column:DB-5

Ext. Vol(ul):20.0 Inj. Vol(ul):2.0

Sample Data Filename: A105197#4

Analysis Date: 19-JUL-99 Time: 17:19:29

Blank Data Filename: A105197#2

Dilution Factor: 1

Cal. Ver. Data Filename: A105197#1

Concentration Units (pg/L or ng/Kg dry weight): ng/Kg

% Moisture: 16.36

• :		DETECTION	Qual.	ION ABUND.	RRT	MEAN
	CONCENTRATION		(1)	RATIO (2)	(2)	RRF
ANALYTE	FOUND	LIMIT	(±).	101110 (-)	•-•	
ı		0.053	Ū	*	*	1.48
2,3,7,8-TCDD		0.251	บ	*	* *	1.11
1,2,3,7,8-PeCDD	* .	1.975	υ·	*	*	0.74
1,2,3,4,7,8-HxCDI	*	1.183	-	*	*	1.10
1,2,3,6,7,8-HxCDI	* .	0.797	U	•	*	0.96
1,2,3,7,8,9-HxCDI	*	0.913	Ŭ	- 00	1.000	1.14
1,2,3,4,6,7,8-Hp	CDD 17.605	0.338		1.08	1.000	1.11
CODD	269.807	0.249		0.88		1.15
	FER TO THE 4 179	0.267	<u>C_</u> #,	/·· 0.80	1.002	0.98
1,2,3,7,8-PeCDF	second column +	0.202	ט ייי	•		0.90
2,3,4,7,8-PeCDF	1.693	0.204		1.67	1.030	
1,2,3,4,7,8-HxCD		0.753	ゴ	1.19	1.001	1.03
1,2,3,4,7,8-11xCD		0.565	ับ	*	*	1.38
1,2,3,6,7,8-HxCD	* = *	0.894	σ	*	*	0.87
1,2,3,7,8,9-HxCD	F 1.044	0.660	•	1.09	1.019	1.18
2,3,4,6,7,8-HxCD	•	0.857		1.06	1.000	1.44
1,2,3,4,6,7,8-Hp		1.207	Q	0.84	1.035	1.02
1,2,3,4,7,8,9-Hp	30.361	0.344	_	0.82	1.003	1.21
OCDF ·	30.361	0.544				•
•		0.251				
Total Tetra-Diox	ins 1.104	1.975	υ.	•		
Total Penta-Diox	TIIS	0.797	บ			•
Total Hexa-Dioxi	ns	T. 7				
Total Hepta-Diox	cins 34.743	0.338				
Total Tetra-Fura	ans 35.948	0.267	1 1			
Total Penta-Fura	ans 23.230	0.204	•			
Total Hexa-Fura	ns 14.984	0.565			. "	:
Total Hepta-Fura	40 775	0.857	·		a velve	•
(1) Oualifiers: 1	g and * - not de	etected; X	& I - F	MPC. C - us	nation	

from second column analysis. B - possible blank contamination. (2) RRTs and ion ratios are specified in Tables 11 and 8, Method 8290.



NOTE: Concentrations, EMPCs, and EDL are calculated on a dry weight basis.

570.66

800

71.33

CLEANUP STANDARD

37C1-2,3,7,8-TCDD

73

TCDDF1I

0.99

USEPA, ITD 1DFB

EPA SAMPLE NO.

PCDD/PCDF TOXICITY EQUIVALENCE SUMMARY Use for Sample and Blank Results

99274104

Lab Name: SOUTHWEST LAB. OF OKLAHOMA

Episode No.: 39261

Client Name: E&E-WA

Lab Sample ID: 39261.03

Matrix (aqueous/solid/leachate): solid

Sample Wt/Vol: 13.05 g or mL: g

Sample Receipt Date: 07-02-99

Initial Calibration Date:

Ext. Date: 07-06-99 Shift:

Instrument ID: AutoSpec

Analysis Date: 19-JUL-99 Time: 17:19:29

GC Column ID: DB-5

Extract Volume(ul): 20.0

Sample Data Filename: A105197#4

Injection Volume(ul): 2.00

Blank Data Filename: A105197#2

Dilution Factor: 1

Cal. Ver. Data Filename: A105197#1

Concentration Units (pg/L or ng/Kg dry weight): ng/Kg % Moisture: 16.36

	CONCENTRATION	+ \	F-ADJUSTED CENTRATION
2,3,7,8-TCDD 1,2,3,7,8-PeCDD 1,2,3,4,7,8-HxCDD 1,2,3,6,7,8-HxCDD 1,2,3,4,6,7,8-HxCDD 0CDD 2,3,7,8-TCDF 1,2,3,7,8-PeCDF 2,3,4,7,8-PeCDF 1,2,3,4,7,8-HxCDF 1,2,3,6,7,8-HxCDF 1,2,3,6,7,8-HxCDF 1,2,3,4,6,7,8-HxCDF 1,2,3,4,6,7,8-HxCDF 1,2,3,4,6,7,8-HxCDF 1,2,3,4,6,7,8-HxCDF 1,2,3,4,6,7,8-HyCDF 1,2,3,4,6,7,8-HyCDF	17.60 269.81 1.705 4.18 1.69 13.47 * 1.04 12.38 1.63 30.36	X 1.0 X 0.5 X 0.1 X 0.1 X 0.01 X 0.001 X 0.05 X 0.5 X 0.1 X 0.1 X 0.1 X 0.1 X 0.01 X 0.01 X 0.01 X 0.01 X 0.001 X 0.001	* 1.76e-01 2.70e-01 4.18e-01 4.18e-01 1.35e+00 * 1.04e-01 1.24e-01 1.63e-02 3.04e-02 Q q(3\qq 9.179e+00
			3.09 @ OO

⁽¹⁾ Taken from 'Interim Procudures for Estimating Risks Associated with Exposures to Mixtures of Chlorinated Dibenzo-p-Dioxin and -Dibenzofurans (CDDs and CDFs) and 1989 Udate (EPA/625/3-89/016, March 1989.

^{*} Total TEF is calculated by summing up all positively identified isomers of each homologous series. 6/90

CLIENT ID.

PCDD/PCDF ANALYSIS DATA SHEET Use for Sample and Blank Results

99274105

Lab Name: Southwest Lab. of Oklahoma Episode No.: 39261

Lab Code: SWL Case No.:

SDG No.:

Lab Sample ID: 39261.04

Client Name: E&E-WA

Sample Wt/Vol: 12.94 g or mL: g

Sample Receipt Date: 07-02-99

Instrument ID: AutoSpec

Ext. Date: 07-06-99

GC Column:DB-5

Ext. Vol(ul):20.0 Inj. Vol(ul):2.0

Sample Data Filename: A105197#5

Analysis Date: 19-JUL-99 Time: 18:08:17 Blank Data Filename: A105197#2

Dilution Factor: 1

Cal. Ver. Data Filename: A105197#1

Concentration Units (pg/L or ng/Kg dry weight): ng/Kg

% Moisture: 7.47

ANALYTE	CONCENTRATION	DETECTION LIMIT	Qual. (1)	ION ABUND. RATIO (2)	RRT (2)	MEAN RRF
ANALITE	100112			* \$		
2,3,7,8-TCDD	*	0.144	ช	* .	. *	1.48
1,2,3,7,8-PeCDD	*	0.243	U .	*	*	1.11
1,2,3,4,7,8-HxCDD	*	0.273	U	*	*	0.74
1,2,3,6,7,8-HxCDD	*	0.184	ט	*	*	1.10
1,2,3,7,8,9-HxCDD	•	0.211	บ	*	*	0.96
1,2,3,4,6,7,8-HpC	DD 8.273	0.173	•	1.09	1.000	1.14
OCDD	79.196	0.293		,,0.94	1.000	1.11
2,3,7,8-TCDF	REFER TO 0 467	0.197	e-@	96180.84	1.001	1.15
1,2,3,7,8-PeCDF	THE SECOND COLUMN	0.207	ט	*	**	0.98
1,2,3,1,6-FECDE	*	0.209	ט '	*	*	0.97
2,3,4,7,8-PeCDF	2.354	0.615	· 55	1.16	1.001	1.03
1,2,3,4,7,8-HxCDF	*	0.461	ับ	*	*	1.38
1,2,3,6,7,8-HxCDF	*	0.730	Ū	*	*	0.87
1,2,3,7,8,9-HxCDF	•	0.539	ΰ.	· *	*	1.18
2,3,4,6,7,8-HxCDF	nr 2.586	0.194		1.13	1.001	1.44
1,2,3,4,6,7,8-HpC		0.274	υ.	*	* *	1.02
1,2,3,4,7,8,9-Hp0	3.743	0.273		0.81	1.004	1.21
OCDF	3.743	0.2.5	•		•	•
		0.144	σ			
Total Tetra-Dioxi		0.243	Ū			
		0.184				,
Total Hexa-Dioxin		0.173		•		
Total Hepta-Diox:				•		
Total Tetra-Fura		= -		•		
Total Penta-Fura	the state of the s	0.461		•	•	
Total Hexa-Furan	_	0.194				•
Total Hepta-Fura		V.134.	c. T _ Y	EMPC. C - us	e value	:
(1) Oualifiers: U	and * - not do	ececcea; A	or T T			

from second column analysis. B - possible blank contamination.

(2) RRTs and ion ratios are specified in Tables 11 and 8, Method 8290. 8290F1



USEPA - ITD

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AATS/SWOK, INC. 2378-TCDF ANALYSIS DATA SHEET Use for Sample and Blank Results CLIENT ID 99274105

Lab Name: Southwest Lab. of Oklahoma Episode No.: 39261

Client Name: E&E-WA

Lab Sample ID: 39261.04

Matrix (aqueous/solid/leachate): solid Sample Wt/Vol: 12.94 g or mL: g

Sample Receipt Date: 07/02/99

Initial Calibration Date: 05/13/99

Ext. Date: 07/06/99

Instrument ID: 70S

Analysis Date: 20-JUL-99 Time: 20:18:30

GC Column ID: SP2331

Extract Volume (uL): 20.0 Sample Data Filename: S104227#16

Injection Volume (uL): 2.0

Blank Data Filename: S104227#13

Dilution Factor: 1

Cal. Ver. Data Filename: S104227#12

Concentration Units (pg/L or ng/Kg dry weight): ng/Kg % Moisture: 7.47

COMCCHET GOLD				* *	
ANALYTE	CONCENTRATION FOUND	DETECTION LIMIT	EMPC	ION ABUND. RATIO (1)	RRT (1)
2,3,7,8-TCDF	0.499	0.1857	_	0.83	1.001
INT. STANDARD	SPIKE CONCENTRATION	CONCENT. FOUND	RECOV.	ION ABUND. RATIO (2)	RRT (1)
13C-2,3,7,8-TCDF	1000	673.86	67.39	0.75	1.16
CLEANUP STANDARD			• •		
37C1-2.3.7.8-TCDD	800	544.60	68.08	•	0.99

NOTE: Concentrations, EMPCs, and EDL are calculated on a dry weight basis.

USEPA, ITD 1DFB

EPA SAMPLE NO.

PCDD/PCDF TOXICITY EQUIVALENCE SUMMARY Use for Sample and Blank Results

99274105

Lab Name: SOUTHWEST LAB. OF OKLAHOMA

Episode No.: 39261

Client Name: E&E-WA

Lab Sample ID: 39261.04

Matrix (aqueous/solid/leachate): solid

Sample Wt/Vol: 12.94 g or mL: g

Sample Receipt Date: 07-02-99

Initial Calibration Date:

Ext. Date: 07-06-99 Shift:

Instrument ID: AutoSpec

Analysis Date: 19-JUL-99 Time: 18:08:17 GC Column ID: DB-5

Extract Volume(ul): 20.0

Sample Data Filename: A105197#5

Injection Volume (ul): 2.00

Blank Data Filename: A105197#2

Dilution Factor: 1

Cal. Ver. Data Filename: A105197#1

% Moisture: 7.47 Concentration Units (pg/L or ng/Kg dry weight): ng/Kg

	•		•	
	CONCENTRATION	TEF(1)	TEF-ADJUSTED CONCENTRATION	
* ***	• .			
• • • • • • • • • • • • • • • • • • •	* ·	X 1.0	*	
2,3,7,8-TCDD	•	X 0.5	*	•
1,2,3,7,8-PeCDD	• •		•	
1,2,3,4,7,8-HxCDD		X 0.1		
1,2,3,6,7,8-HxCDD	* * * * * * * * * * * * * * * * * * *	X 0.1	*	
1,2,3,7,8,9-HxCDD	*	X 0.1	*	
	8.27	X 0.01	8.27e-02	
1,2,3,4,6,7,8-HpCDD			7.92e-02	
OCDD	79.20	Q4/3/94 X 0.001	4.67e-03-	0.49 ×10-2
2,3,7,8-TCDF	0.499 8.47		+	
1,2,3,7,8-PeCDF	*	X 0.05	Ţ.,	•
2,3,4,7,8-PeCDF	*	X 0.5	▼	*
1,2,3,4,7,8-HxCDF	2.35	X 0.1	2.35e-01	
	+	x 0.1	*	
1,2,3,6,7,8-HxCDF	1.0	x 0.1	*	
1,2,3,7,8,9-HxCDF	•	,	•	
2,3,4,6,7,8-HxCDF	±	X 0.1	S 50- 00	
1,2,3,4,6,7,8-HpCDF	2.59	x 0.01	2.59e-02	
1,2,3,4,7,8,9-HpCDF	*	X 0.01	*	
	3.74	X 0.001	3.74e-03	
OCDF	J / T		D .415 199	•
	•	*	Total: 2.165e+00	
			4.24 e 01	•

(1) Taken from 'Interim Procudures for Estimating Risks Associated with Exposures to Mixtures of Chlorinated Dibenzo-p-Dioxin and -Dibenzofurans (CDDs and CDFs) and 1989 Udate(EPA/625/3-89/016, March 1989.

* Total TEF is calculated by summing up all positively identified isomers of each homologous series. 6/90



Form 1

CLIENT ID.

PCDD/PCDF ANALYSIS DATA SHEET Use for Sample and Blank Results 99274106

Lab Code: SWL Case No.:

SDG No.: Lab Sample ID: 39261.05

Client Name: E&E-WA

Sample Wt/Vol: 11.76 g or mL: g

Matrix (aqueous/solid/leachate): solid

Initial Calibration Date:

Sample Receipt Date: 07-02-99

Instrument ID: AutoSpec

Ext. Date: 07-06-99

GC Column:DB-5

Ext. Vol(ul):20.0 Inj. Vol(ul):2.0

Sample Data Filename: A105197#6

Analysis Date: 19-JUL-99 Time: 18:57:04 Blank Data Filename: A105197#2

Dilution Factor: 1

Cal. Ver. Data Filename: A105197#1

Concentration Units (pg/L or ng/Kg dry weight): ng/Kg % Moisture: 5.59

	CONCENTRATION	DETECTION	Qual.	ION ABUND.	RRT	MEAN
ANALYTE	FOUND	LIMIT	(1)	RATIO (2)	(2)	RRF
	0.388	0.228	5	0.58	1.001	1.48
2,3,7,8-TCDD	0.500	0.398	ט	*	*	1.11
1,2,3,7,8-PeCDD		0.290	Ū	*	*	0.74
1,2,3,4,7,8-HxCDD		0.195	. ם	*	*	1.10
1,2,3,6,7,8-HxCDD		0.224	Ū	*	*	0.96
1,2,3,7,8,9-HxCDD		0.483		1.07	1.000	1.14
1,2,3,4,6,7,8-HpC	DD 6.546	0.411		0.88	1.000	1.11
OCDD	71.891	0.411		17hr 0.88	1.002	1.15
	ECOND COLUMN 876		ີ U.	*	*	0.98
1,2,3,7,8-PeCDF	. *	0.213	5	1.07	1.031	0.97
2,3,4,7,8-PeCDF	0.301	0.215		1.11	1.000	1.03
1,2,3,4,7,8-HxCDF	2.168	0.578	5	+	*	1.38
1,2,3,6,7,8-HxCDF	· **	0.433	Ŭ	- -	*	0.87
1,2,3,7,8,9-HxCDF	* *	0.686	. ប		*	1.18
2,3,4,6,7,8-HxCDF	r y	0.506	ט		1.000	1.44
1,2,3,4,6,7,8-HpC	DF 2.736	0.456	· 5	1.25	1.000	1.02
1,2,3,4,7,8,9-HpC	DF *	0.642	ָ ע		1.003	1.21
OCDF	4.122	0.669		0.81	1.003	1.21
Total Tetra-Dioxi	- · · · · · · · · · · · · · · · · · · ·	0.228	U			•
		0.398	Ū			
Total Penta-Dioxi		0.195	σ.	,		÷
Total Hexa-Dioxin		0.483				
Total Hepta-Diox		0.173			•	
Total Tetra-Fura		0.215			a Égit	
Total Penta-Fura		0.433			1. A. M. M.	
Total Hexa-Furan		0.456	TT	•		
Total Hepta-Fura		etected; X	_	empc. C - u	se value	
(1) Qualifiers: U	and * - not de	etected; v	C T - 1		ation	

from second column analysis. B - possible blank contamination.

(2) RRTs and ion ratios are specified in Tables 11 and 8, Method 8290.



ANALYTE .

2,3,7,8-TCDF

INT. STANDARD

13C-2,3,7,8-TCDF

CLEANUP STANDARD

37C1-2,3,7,8-TCDD

NOTE: Concentrations, EMPCs, and EDL are calculated on a dry weight basis.

0.3798

SPIKE

CONCENTRATION

1000

800

CONCENT.

FOUND

660.91

404.39

TCDDF1I

RRT

(1)

1.16

0.99

ION ABUND.

RATIO (2)

0.75

RECOV.

윰

66.09

50.55

USEPA, ITD 1DFB

EPA SAMPLE NO.

PCDD/PCDF TOXICITY EQUIVALENCE SUMMARY Use for Sample and Blank Results

99274106

Lab Name: SOUTHWEST LAB. OF OKLAHOMA

Episode No.: 39261

Client Name: E&E-WA

Lab Sample ID: 39261.05

Matrix (aqueous/solid/leachate): solid

Sample Wt/Vol: 11.76 g or mL: g

Sample Receipt Date: 07-02-99

Initial Calibration Date:

Instrument ID: AutoSpec

Ext. Date: 07-06-99 Shift:

Analysis Date: 19-JUL-99 Time: 18:57:04

GC Column ID: DB-5

Extract Volume(ul): 20.0

Sample Data Filename: A105197#6

Blank Data Filename: A105197#2

Injection Volume(ul): 2.00

Cal. Ver. Data Filename: A105197#1

Dilution Factor: 1

% Moisture: 5.59

Concentration Units (p	g/L or ng/Kg dry we:	ight): ng/Kg %	Moisture: 5.59	
	CONCENTRATION	TEF(1)	TEF-ADJUSTED CONCENTRATION	
2,3,7,8-TCDD 1,2,3,7,8-PeCDD 1,2,3,4,7,8-HxCDD 1,2,3,6,7,8-HxCDD 1,2,3,4,6,7,8-HpCDD 0CDD 2,3,7,8-TCDF 1,2,3,7,8-PeCDF 1,2,3,4,7,8-PeCDF 1,2,3,4,7,8-HxCDF 1,2,3,6,7,8-HxCDF 1,2,3,7,8,9-HxCDF 2,3,4,6,7,8-HxCDF 1,2,3,4,6,7,8-HpCDF 1,2,3,4,6,7,8-HpCDF 1,2,3,4,6,7,8-HpCDF 1,2,3,4,7,8,9-HpCDF 1,2,3,4,7,8,9-HpCDF	0.39 * * 6.55 71.89 0.30 2.17 * 2.74 * 4.12	X 1.0 X 0.5 X 0.1 X 0.1 X 0.01 X 0.001 X 0.05 X 0.5 X 0.1 X 0.1 X 0.1 X 0.1 X 0.01 X 0.01 X 0.01	3.88e-01 * 6.55e-02 7.19e-02 8.76e-02 * 1.51e-01 2.17e-01 * 2.74e-02 4.12e-03 Q 919199	3 a ls Ira
		#.T.	9.24 € 01	

⁽¹⁾ Taken from 'Interim Procudures for Estimating Risks Associated with Exposures to Mixtures of Chlorinated Dibenzo-p-Dioxin and -Dibenzofurans (CDDs and CDFs) and 1989 Udate(EPA/625/3-89/016, March 1989.'

^{*} Total TEF is calculated by summing up all positively identified isomers of each homologous series. 6/90

CLIENT ID.

PCDD/PCDF ANALYSIS DATA SHEET Use for Sample and Blank Results

99274107

Lab Name: Southwest Lab. of Oklahoma

Episode No.: 39261

Lab Code: SWL Case No.:

SDG No.:

Lab Sample ID: 39261.06

Client Name: E&E-WA

Sample Wt/Vol: 14.17

g or 吡: g

Matrix (aqueous/solid/leachate): solid

Initial Calibration Date: 07-01-99

Sample Receipt Date: 07-02-99

Instrument ID: AutoSpec

Ext. Date: 07-06-99

GC Column:DB-5

Ext. Vol(ul):20.0

Inj. Vol(ul):2.0

Sample Data Filename: Al05201#3

Analysis Date: 20-JUL-99 Time: 12:31:06

Blank Data Filename: A105201#2

Dilution Factor: 1

Cal. Ver. Data Filename: A105201#1

ANALYTE	CONCENTRATION FOUND	DETECTION LIMIT	Qual. (1)	ION ABUND. RATIO (2)	RRT (2)	MEAN RRF
		0.322	U	*	*	1.48
2,3,7,8-TCDD	· *		ָ ט	*	*	1.11
1,2,3,7,8-PeCDD	*	0.775	ττ	*	*	0.74
1,2,3,4,7,8-HxCDD		0.471		1.34	1.001	1.10
1,2,3,6,7,8-HxCDD	1.713	0.317		1.19	1.009	0.96
1,2,3,7,8,9-HxCDD	0.870	0.364		1.02	1.000	1.14
1,2,3,4,6,7,8-HpC	DD 67.457	0.799	4	0.94	1.000	1.11
OCDD	827.747	0.318	cry XI.	dik 0.72	1.002	1.15
2,3,7,8-TCDF PEF2	SECOND COLUMN +	0.280		117K · U . /2	1.002	0.98
1,2,3,7,0-26002		0.240	U.	1.29	1.030	0.97
2,3,4,7,8-PeCDF	1.851	0.242	প্র	1.22	1.001	1.03
1,2,3,4,7,8-HxCDF	8.953	0.478	4	1.03	1.003	1.38
1,2,3,6,7,8-HxCDF	1.055	0.358		1.03	1.005	0.87
1,2,3,7,8,9-HxCDF	• •	0.567	บ		1.019	1.18
2,3,4,6,7,8-HxCDF	1.361	0.419		1.09	1.000	1.44
1,2,3,4,6,7,8-HpC	DF 20.229	0.251		1.01	1.000	1.02
1,2,3,4,7,8,9-HpC	DF 1.393	0.354	•	1.07		1.02
OCDF	53.484	0.412		0.86	1.003	1.21
Total Tetra-Dioxi	ne *.	0.322	U .	-		
Total Penta-Diox:		0.775	U	. '	•	
Total Hexa-Dioxi		0.317				
		0.799	•			
Total Hepta-Diox		0.280				.*
Total Tetra-Fura Total Penta-Fura		0.242				
		0.358				
Total Hexa-Furan		0.251		•		
Total Hepta-Fura (1) Qualifiers: U		etected: X	& I - !	EMPC. C - us	e value	

from second column analysis. B - possible blank contamination.

(2) RRTs and ion ratios are specified in Tables 11 and 8, Method 8290.

NOTE: Concentrations, EMPCs, and EDL are calculated on a dry weight basis.

607.44

563.95

1000

800

13C-2,3,7,8-TCDF

CLEANUP STANDARD

37C1-2,3,7,8-TCDD

60.74 0.77

70.49

TCDDF1I

1.16

0.99

USEPA, ITD 1DFB

EPA SAMPLE NO.

PCDD/PCDF TOXICITY EQUIVALENCE SUMMARY
Use for Sample and Blank Results

99274107

Lab Name: SOUTHWEST LAB. OF OKLAHOMA

Episode No.: 39261

Client Name: E&E-WA

Lab Sample ID: 39261.06

Matrix (aqueous/solid/leachate): solid

Sample Wt/Vol: 14.17 g or mL: g

Sample Receipt Date: 07-02-99

Initial Calibration Date: 07-01-99

Sample Receipt Date. 0: 02 05

Instrument ID: AutoSpec

Ext. Date: 07-06-99 Shift:

Analysis Date: 20-JUL-99 Time: 12:31:06

GC Column ID: DB-5

Extract Volume(ul): 20.0

Sample Data Filename: A105201#3

Injection Volume(ul): 2.00

Blank Data Filename: A105201#2

Dilution Factor: 1

Cal. Ver. Data Filename: A105201#1

Concentration Units (pg/L or ng/Kg dry weight): ng/Kg % Moisture: 20.68

	CONCENTRATION	TEF (1)	TEF-ADJUSTED CONCENTRATION
2,3,7,8-TCDD 1,2,3,7,8-PeCDD 1,2,3,4,7,8-HxCDD 1,2,3,6,7,8-HxCDD 1,2,3,4,6,7,8-HxCDD 1,2,3,4,6,7,8-HpCDD CCDD 2,3,7,8-TCDF 1,2,3,7,8-PeCDF 2,3,4,7,8-PeCDF 1,2,3,4,7,8-HxCDF 1,2,3,6,7,8-HxCDF 1,2,3,6,7,8-HxCDF 1,2,3,4,6,7,8-HxCDF 1,2,3,4,6,7,8-HxCDF 1,2,3,4,6,7,8-HyCDF 1,2,3,4,6,7,8-HpCDF 1,2,3,4,6,7,8-HpCDF 1,2,3,4,6,7,8-HpCDF	1.71 0.87 67.46 827.75 1.85 8.95 1.06 * 1.36 20.23 1.39 53.48	X 1.0 X 0.5 X 0.1 X 0.1 X 0.01 X 0.001 X 0.005 X 0.5 X 0.5 X 0.1 X 0.1 X 0.1 X 0.01 X 0.01 X 0.01 X 0.01 X 0.01 X 0.01 X 0.01	* 1.71e-01 8.70e-02 6.75e-01 8.28e-01 5.17e-01 0.188 9.26e-01 8.95e-01 1.06e-01 2.02e-01 1.39e-02 5.35e-02 0 9(3(9) al: 1.191e+01
		*100	4.20 e00

(1) Taken from 'Interim Procudures for Estimating Risks Associated with Exposures to Mixtures of Chlorinated Dibenzo-p-Dioxin and -Dibenzofurans (CDDs and CDFs) and 1989 Udate(EPA/625/3-89/016, March 1989.'

* Total TEF is calculated by summing up all positively identified isomers of each homologous series. 6/90

Form :

CLIENT ID.

PCDD/PCDF ANALYSIS DATA SHEET Use for Sample and Blank Results

99274108

Lab Name: Southwest Lab. of Oklahoma

Episode No.: 39261

Lab Code: SWL Case No.:

SDG No.:

Lab Sample ID: 39261.07

Client Name: E&E-WA

Sample Wt/Vol: 16.50

g or mL: g

Matrix (aqueous/solid/leachate): solid

Initial Calibration Date: 07-01-99

Sample Receipt Date: 07-02-99

Instrument ID: AutoSpec

Ext. Date: 07-06-99

GC Column:DB-5

Ext. Vol(ul):20.0

Inj. Vol(ul):2.0

Sample Data Filename: A105201#4

Analysis Date: 20-JUL-99 Time: 13:19:52

Blank Data Filename: A105201#2

Dilution Factor: 1

Cal. Ver. Data Filename: A105201#1

Concentration Units (pg/L or ng/Kg dry weight): ng/Kg

% Moisture: 25.45

	CONCENTRATI	ON	DETECTION	Qual.	ION ABUND		MEAN
ANALYTE	FOUND		LIMIT	(1)	RATIO (2) (2)	RRF
2,3,7,8-TCDD		*	0.097	U .	*	*	1.48
1,2,3,7,8-PeCDD		*	0.180	U ·	*	*	1.11
1,2,3,4,7,8-HxCDD		* -	0.200	ט	*	*	0.74
1,2,3,6,7,8-HxCDD		*	0.135	U	*	*	1.10
1,2,3,7,8,9-HxCDD		*	0.155	ֹי ט	*	*.	0.96
1,2,3,4,6,7,8-HpC		74	0.149		1.15	1.001	1.14
OCDD	3.70		0.198	u_	0.94	1.000	1.11
2,3,7,8-TCDF 565			0.130	-cx 0	વિદેશ . 59	1.002	1.15
1,2,3,7,8-PeCDF C		*	0.092	U	. *	* '	0.98
2,3,4,7,8-PeCDF	RECOURT	*	0.093	Ū	*	*	0.97
1,2,3,4,7,8-HxCDF	r y di in in we	*	0.091	ซ	*	*	1.03
1,2,3,4,7,8-HxCDF		*	0.068	Ū	*	*	1.38
		*	0.108	ับ	*	*	0.87
1,2,3,7,8,9-HxCDF		*	0.080	u	*	*	1.18
2,3,4,6,7,8-HxCDF		*	0.095	. U	*	. *	1.44
1,2,3,4,6,7,8-HpC		. =	0.033	U	*	*	1.02
1,2,3,4,7,8,9-HpC	:DF		0.212	ם י	*	*	1.21
OCDF	· · · · · · · · · · · · · · · · · · ·	*	0.212	U	•		
			0.007	บ		\$.	
Total Tetra-Dioxi		*	0.097	-		٠	•
Total Penta-Dioxi		* .	0.180	ָּט			• •
Total Hexa-Dioxin		*	0.135	ช			
Total Hepta-Dioxi		74	0.149			. The second	
Total Tetra-Furar	ns	*	0.130	U	to the same		20 B 30 8
Total Penta-Furar	ns	±	0.093	ט			1
Total Hexa-Furans	5, .	*	0.068	U	•		
Total Hepta-Fura	ns	*	0.095	U			
(1) Qualifiers: U	and * - not	: de	etected; X	& I - E	MPC. C - u	ise value	

(1) Qualifiers: U and * - not detected; X & I - EMPC. C - use value from second column analysis. B - possible blank contamination.

(2) RRTs and ion ratios are specified in Tables 11 and 8, Method 8290. 8290F1



NOTE: Concentrations, EMPCs, and EDL are calculated on a dry weight basis.

565.65

800

37C1-2,3,7,8-TCDD

70.71

0.99

USEPA, ITD 1DFB

EPA SAMPLE NO.

PCDD/PCDF TOXICITY EQUIVALENCE SUMMARY Use for Sample and Blank Results

99274108

Lab Name: SOUTHWEST LAB. OF OKLAHOMA

Analysis Date: 20-JUL-99 Time: 13:19:52

HOMA Episode No.: 39261

Client Name: E&E-WA

Lab Sample ID: 39261.07

Matrix (aqueous/solid/leachate): solid

Sample Wt/Vol: 16.50 g or mL: g

Sample Receipt Date: 07-02-99

Initial Calibration Date: 07-01-99

Ext. Date: 07-06-99 Shift:

Instrument ID: AutoSpec

GC Column ID: DB-5

Extract Volume(ul): 20.0

Sample Data Filename: A105201#4

Injection Volume (ul): 2.00

Blank Data Filename: A105201#2

Dilution Factor: 1

Cal. Ver. Data Filename: A105201#1

Concentration Units (pg/L or ng/Kg dry weight): ng/Kg % Moisture: 25.45

		•		
	CONCENTRATION	TEF(1)	TEF-ADJUSTED CONCENTRATION	
		X 1.0	•	
2,3,7,8-TCDD	•	X 0.5	•	
1,2,3,7,8-PeCDD		X 0.1	•	
1,2,3,4,7,8-HxCDD	<u>.</u>	X 0.1		
1,2,3,6,7,8-HxCDD				
1,2,3,7,8,9-HxCDD	_	X 0.1	3.74e-03	
1,2,3,4,6,7,8-HpCDD	0.37	X 0.01	046 2.76e-03 ND	8.0
OCDD	ND3.76 @ 1387	X 0.001	045 2-100-02 0.04	94
2,3,7,8-TCDF	0.414 0.27 0 +klm	X 0.1	09/3 (11 2.09e 02 0.04	•
1,2,3,7,8-PeCDF	*	X 0.05		
2,3,4,7,8-PeCDF	*	x 0.5		
1,2,3,4,7,8-HxCDF	#	X 0.1		
1,2,3,6,7,8-HxCDF	n 🖈	X 0.1	*	•
1,2,3,7,8,9-HxCDF	*	X 0.1	*	
2,3,4,6,7,8-HxCDF	*	X 0.1	.	
1,2,3,4,6,7,8-HpCDF	*	X 0.01	•	
1,2,3,4,7,8,9-HpCDF	★	X 0.01	•	
OCDF	tang at a samatan na ka	X 0.001	*	
-		el e	D 9/3/99	
		*	Total: 2.843e-02	
			4,51e-02	

(1) Taken from 'Interim Procudures for Estimating Risks Associated with Exposures to Mixtures of Chlorinated Dibenzo-p-Dioxin and -Dibenzofurans (CDDs and CDFs) and 1989 Udate(EPA/625/3-89/016, March 1989.'

* Total TEF is calculated by summing up all positively identified isomers of each homologous series.

6/90

gla gla

CLIENT ID.

PCDD/PCDF ANALYSIS DATA SHEET Use for Sample and Blank Results

99274109

Lab Name: Southwest Lab. of Oklahoma

Episode No.: 39261

Lab Code: SWL Case No.:

SDG No.:

Lab Sample ID: 39261.08

Client Name: E&E-WA

Sample Wt/Vol: 1000

g or mL: mL

Matrix (aqueous/solid/leachate): aqueous Initial Calibration Date: 07-22-99

Sample Receipt Date: 07-02-99

Instrument ID: AutoSpec

Ext. Date: 07-06-99

GC Column:DB-5

Ext. Vol(ul):20.0 Inj. Vol(ul):2.0

Sample Data Filename: A105209#10

Analysis Date: 22-JUL-99 Time: 18:25:23

Blank Data Filename: A105209#9

Dilution Factor: 1

Cal. Ver. Data Filename: A105209#1

Concentration Units (pg/L or ng/Kg dry weight): pg/L

% Moisture:

analyte	CONCENTRATION FOUND	DETECTION LIMIT	Qual. (1)	ION ABUND. RATIO (2)		MEAN RRF
,				*	*	1.37
2,3,7,8-TCDD	*	11.861	ūσ	*	*	1.17
1,2,3,7,8-PeCDD	*	6.310	บฮ	-	*	1.10
1,2,3,4,7,8-HxCDI	*	6.240	្ប្រ		*	0.99
1,2,3,6,7,8-HxCDI	*	5.834	ט ָש		-	1.09
1,2,3,7,8,9-HxCDI	· *	5.708	U	*		1.21
1,2,3,4,6,7,8-Hp	CDD 45.793	6.505	UJ	1.07	1.000	•
OCDD	433.420	16.434	US			1.28
2,3,7,8-TCDF	*	13.464	US	*	*	1.15
1,2,3,7,8-PeCDF	*	4.135	บ 5	*	*	1.01
2,3,4,7,8-PeCDF	*	4.790	こりつ	*	*	1.07
1,2,3,4,7,8-HxCD	* · ਜ	6.531	ប	* .	* ,	1.16
1,2,3,4,7,0-11xcb	- ធ *	6.387	UJ	* #	*	1.08
1,2,3,6,7,8-HxCD	ਦ ਹਾ ★	7.899	ប្រ	*	*	1.14
1,2,3,7,8,9-HxCD	ਦ ਯਾ '≭	7.268	บจ	*	*	1.13
2,3,4,6,7,8-HxCD	ann t	6.746	. us	*	*	1.35
1,2,3,4,6,7,8-Hp	CDr *	8.435	υS	*	*	1.40
1,2,3,4,7,8,9-Hp	*	11.998	ฃัጛ	* *	*:	1.45
OCDF	· · · ·	11.550	_		· 	
Total Tetra-Diox	ring *	11.861	. ช		,	-
Total Penta-Diox		6.310	ับ			
Total Hexa-Dioxi		5.834	U		•	
Total Hepta-Diox		6.505		•	•	
		13.464	U			
Total Tetra-Fura		4.790	U			
Total Penta-Fura		6.387	. ប			
Total Hexa-Fura	0.040	6 746				
Total Hepta-Fura						

eds value (1) Qualifier U indicates not detected; from second column analysis. The B indicates possible blank contamination.

(2) RRTs and ion ratios are specified in Tables 2 and 9, Method 1613.

RFP C500273T1



USEPA, ITD 1DFB

EPA SAMPLE NO.

PCDD/PCDF TOXICITY EQUIVALENCE SUMMARY Use for Sample and Blank Results

99274109

Lab Name: SOUTHWEST LAB. OF OKLAHOMA

Episode No.: 39261

Client Name: E&E-WA

Lab Sample ID: 39261.08

Matrix (aqueous/solid/leachate): aqueous

Sample Wt/Vol: 1000 g or mL: mL

Sample Receipt Date: 07-02-99

Initial Calibration Date: 07-22-99

Ext. Date: 07-06-99 Shift:

Instrument ID: AutoSpec

Analysis Date: 22-JUL-99 Time: 18:25:23

GC Column ID: DB-5

Extract Volume(ul): 20.0

Sample Data Filename: A105209#10

Injection Volume(ul): 2.00

Blank Data Filename: A105209#9

Dilution Factor: 1

Cal. Ver. Data Filename: A105209#1

Concentration Units (pg/L or ng/Kg dry weight): pg/L % Moisture:

	CONCENTRATION	TEF (1)	TEF-ADJUSTED CONCENTRATION	•
2,3,7,8-TCDD 1,2,3,7,8-PeCDD 1,2,3,4,7,8-HxCDD 1,2,3,6,7,8-HxCDD 1,2,3,7,8,9-HxCDD 1,2,3,4,6,7,8-HpCDD OCDD 2,3,7,8-TCDF 1,2,3,7,8-PeCDF 2,3,4,7,8-PeCDF 1,2,3,4,7,8-HxCDF 1,2,3,6,7,8-HxCDF 1,2,3,7,8,9-HxCDF 1,2,3,4,6,7,8-HxCDF 1,2,3,4,6,7,8-HxCDF 1,2,3,4,6,7,8-HyCDF 1,2,3,4,6,7,8-HpCDF 1,2,3,4,6,7,8-HpCDF	# * * * * * * * * * * * * * * * * * * *	X 1.0 X 0.5 X 0.1 X 0.1 X 0.01 X 0.001 X 0.05 X 0.5 X 0.1 X 0.1 X 0.1 X 0.1 X 0.1 X 0.01 X 0.01 X 0.01 X 0.01 X 0.01 X 0.01	** ** ** ** ** ** ** ** ** **	@ 46 ke

*Total: 1-370e+00 All)

^{*} Total TEF is calculated by summing up all positively identified isomers of each homologous series.



⁽¹⁾ Taken from 'Interim Procudures for Estimating Risks Associated with Exposures to Mixtures of Chlorinated Dibenzo-p-Dioxin and -Dibenzofurans (CDDs and CDFs) and 1989 Udate(EPA/625/3-89/016, March 1989.'

CLIENT ID.

PCDD/PCDF ANALYSIS DATA SHEET Use for Sample and Blank Results

99274110

Lab Name: Southwest Lab. of Oklahoma

Lab Sample ID: 39261.11

Lab Code: SWL Case No.:

SDG No.:

Client Name: E&E-WA

Sample Wt/Vol: 10.99 g or mL: g

Matrix (aqueous/solid/leachate): solid

Initial Calibration Date: 07-01-99

Sample Receipt Date: 07-02-99

Instrument ID: AutoSpec

Ext. Date: 07-06-99

GC Column:DB-5

Episode No.: 39261

Ext. Vol(ul):20.0 Inj. Vol(ul):2.0

Sample Data Filename: A105201#5

Analysis Date: 20-JUL-99 Time: 14:08:39 Blank Data Filename: A105201#2

Dilution Factor: 1

Cal. Ver. Data Filename: A105201#1

Concentration Units (pg/L or ng/Kg dry weight): ng/Kg

% Moisture: 7.85

ANALYTE	CONCENTRATION FOUND	DETECTION LIMIT	Qual. (1)	ION ABUND. RATIO (2)	RRT (2)	MEAN RRF
	.`	0.175	u ·	*	*	1.48
2,3,7,8-TCDD	*	0.175	ם	*	*	1.11
1,2,3,7,8-PeCDD			ซ	•	*	0.74
1,2,3,4,7,8-HxCDD		0.414	. 0	•	·.	1.10
1,2,3,6,7,8-HxCDD		0.279	ט		*	0.96
1,2,3,7,8,9-HxCDD	*	0.320	U	1.08	1.000	1.14
1,2,3,4,6,7,8-HpC	DD 25.827	0.612			1.000	1.11
OCDD	356.889	1.003	בַ י	0.99	1.000	1.15
2,3,7,8-TCDF	*	0.200	ד		*	0.98
1,2,3,7,8-PeCDF	#	0.262	\mathbf{U}_{+}	. *	*	
2,3,4,7,8-PeCDF	*	0.265	U			0.97
1,2,3,4,7,8-HxCDF	3.382	0.253	ゴ	1.05	1.000	1.03
1,2,3,6,7,8-HxCDF	*	0.190	U	*	*	1.38
1,2,3,7,8,9-HxCDF		0.300	ד	*	*	0.87
2,3,4,6,7,8-HxCDF		0.222	U	* .	*	1.18
1,2,3,4,6,7,8-HpC	DF 5.727	0.668	•	0.96	1.000	1.44
1,2,3,4,7,8,9-HpC	DF *	0.940	ט	*	*	1.02
OCDF	15.725	1.068		0.80	1.004	1.21
Total Tetra-Dioxi	.ns *	0.175	ט			
Total Penta-Dioxi		0.384	บ	* .		
Total Hexa-Dioxir		0.279	บ			
Total Hepta-Dioxi		0.612				
Total Tetra-Furar		0.200				
Total Penta-Furar		0.265				•
Total Hexa-Furans		0.190				
Total Hepta-Fura		0.668				
(1) Qualifiers: U			& I - E	MPC. C - us	e value	

from second column analysis. B - possible blank contamination.

(2) RRTs and ion ratios are specified in Tables 11 and 8, Method 8290. 8290F1



USEPA, 1DFB

EPA SAMPLE NO.

PCDD/PCDF TOXICITY EQUIVALENCE SUMMARY Use for Sample and Blank Results

99274110

Lab Name: SOUTHWEST LAB. OF OKLAHOMA

Client Name: E&E-WA

Matrix (aqueous/solid/leachate): solid

Sample Receipt Date: 07-02-99

Ext. Date: 07-06-99 Shift:

Analysis Date: 20-JUL-99 Time: 14:08:39

Extract Volume(ul): 20.0

Injection Volume(ul): 2.00

Dilution Factor: 1

Episode No.: 39261

Lab Sample ID: 39261.11

Sample Wt/Vol: 10.99 g or mL: g

Initial Calibration Date: 07-01-99

Instrument ID: AutoSpec

GC Column ID: DB-5

Sample Data Filename: A105201#5

Blank Data Filename: A105201#2

Cal. Ver. Data Filename: A105201#1

% Moisture: 7.85 Concentration Units (pg/L or ng/Kg dry weight): ng/Kg

	CONCENTRATION	TEF (1)		TEF-ADJUSTED CONCENTRATION	
	*		X 1.0	*	
2,3,7,8-TCDD	*		X 0.5	*	
1,2,3,7,8-PeCDD	· •		X 0.1	*	
1,2,3,4,7,8-HxCDD	•		X 0.1	*	
1,2,3,6,7,8-HxCDD			X 0.1	*	
1,2,3,7,8,9-HxCDD	0= 00		x 0.01	2.58e-01	
1,2,3,4,6,7,8-HpCDD	25.83	10	X 0.001	3.57e-01	
OCDD	356.89		X 0.1	*	
2,3,7,8-TCDF	*		· · ·	· · · · · · · · · · · · · · · · · · ·	
1,2,3,7,8-PeCDF	*		x 0.05		
2,3,4,7,8-PeCDF	ranga 🛊 🔻 🔻		X 0.5	3.38e-01	
1,2,3,4,7,8-HxCDF	3.38		X 0.1	3.362-01	
1,2,3,6,7,8-HxCDF	*	•	X 0.1	\mathbb{I}_{+} , \mathbb{I}_{+}	
1,2,3,7,8,9-HxCDF	•		X 0.1	ਸ	
1,2,3,7,8,9-11CDF	sa ¹		X 0.1	*	
2,3,4,6,7,8-HxCDF	5.73		X 0.01	5.73e-02	
1,2,3,4,6,7,8-HpCDF	*		X 0.01	ta da antigara	
1,2,3,4,7,8,9-HpCDF	15.72		X 0.001	1.57e-02	
OCDF	15.72			का निर्व	
		:		*Total: 3-3566-00	
			· Paragraphic	1.02 e00	

⁽¹⁾ Taken from 'Interim Procudures for Estimating Risks Associated with Exposures to Mixtures of Chlorinated Dibenzo-p-Dioxin and -Dibenzofurans (CDDs and CDFs) and 1989 Udate (EPA/625/3-89/016, March 1989.

^{*} Total TEF is calculated by summing up all positively identified isomers of each homologous series. 6/90



CLIENT ID.

PCDD/PCDF ANALYSIS DATA SHEET Use for Sample and Blank Results

99274111

Lab Name: Southwest Lab. of Oklahoma

Episode No.: 39261

Lab Code: SWL Case No.:

SDG No.:

Lab Sample ID: 39261.12

Client Name: E&E-WA

Sample Wt/Vol: 11.84 g or mL: g

Matrix (aqueous/solid/leachate): solid

Initial Calibration Date: 07-01-99

Sample Receipt Date: 07-02-99

Instrument ID: AutoSpec

Ext. Date: 07-06-99

GC Column:DB-5

Ext. Vol(ul):20.0

Inj. Vol(ul):2.0

Sample Data Filename: A105201#6

Analysis Date: 20-JUL-99 Time: 14:57:27

Blank Data Filename: A105201#2

Dilution Factor: 1

Cal. Ver. Data Filename: A105201#1

Concentration Units (pg/L or ng/Kg dry weight): ng/Kg

% Moisture: 11.29

	CONCENTRATION	DETECTION	Qual.	ION ABUND.	RRT	MEAN
ANALYTE	FOUND	LIMIT	(1)	RATIO (2)	(2)	RRF
		0.183	υ	*	*	1.48
2,3,7,8-TCDD		0.280	บ	. *	· *	1.11
1,2,3,7,8-PeCDD		0.259	ט	*	*	0.74
1,2,3,4,7,8-HxCDD	* *		ט	*	*	1.10
1,2,3,6,7,8-HxCDD		0.174 0.200	ប	*	*	0.96
1,2,3,7,8,9-HxCDD			U .	1.10	1.001	1.14
1,2,3,4,6,7,8-HpC	DD 8.306	0.178		0.96	1.000	1.11
OCDD	67.347	0.310	**	. *	*	1.15
2,3,7,8-TCDF	*	0.173	Ū	*	*	0.98
1,2,3,7,8-PeCDF	. *	0.121	U	. *	*	0.97
2,3,4,7,8-PeCDF	*	0.123	ַס			1.03
1,2,3,4,7,8-HxCDF	1.630	0.178	5	1.17	1.001	
1,2,3,6,7,8-HxCDF	, *	0.133	U	. *		1.38
1,2,3,7,8,9-HxCDF	* *	0.211	ט	*	*	0.87
2,3,4,6,7,8-HxCDF	*	0.156	ָ ע	*	*	1.18
1,2,3,4,6,7,8-HpC	DF 3.609	0.263		1.07	1.000	1.44
1,2,3,4,7,8,9-HpC	DF *	0.370	ט	* *	*	1.02
OCDF	7.591	0.417		0.86	1.004	1.21
Total Tetra-Dioxi	ins *	0.183	ט			•
Total Penta-Diox:		0.280	ט			
Total Hexa-Dioxi		0.174	ט			
Total Hepta-Diox:		0.178				
Total Tetra-Fura		0.173				
Total Penta-Fura		0.123				
Total Hexa-Furan		0.133	ט			
		0.263	-	•		
Total Hepta-Fura (1) Oualifiers: U	ns 3.609	etected: X	c T - E	MPC. C - us	e value	

(1) Qualifiers: U and * - not detected; X & I - EMPC. C - use value from second column analysis. B - possible blank contamination.

(2) RRTs and ion ratios are specified in Tables 11 and 8, Method 8290. 8290F1



USEPA, ITD 1DFB

EPA SAMPLE NO.

PCDD/PCDF TOXICITY EQUIVALENCE SUMMARY Use for Sample and Blank Results

99274111

Lab Name: SOUTHWEST LAB. OF OKLAHOMA

Episode No.: 39261

Client Name: E&E-WA

Lab Sample ID: 39261.12

Matrix (aqueous/solid/leachate): solid

TO SEPPORT T

Sample Wt/Vol: 11.84 g or mL: g

Sample Receipt Date: 07-02-99

Initial Calibration Date: 07-01-99

Ext. Date: 07-06-99 Shift:

Instrument ID: AutoSpec

Analysis Date: 20-JUL-99 Time: 14:57:27

GC Column ID: DB-5

Extract Volume(ul): 20.0

Sample Data Filename: A105201#6

Injection Volume(ul): 2.00

Blank Data Filename: A105201#2

Dilution Factor: 1

Cal. Ver. Data Filename: A105201#1

Concentration Units (pg/L or ng/Kg dry weight): ng/Kg % Moisture: 11.29

	CONCENTRATION	TEF (1)	TEF-ADJUSTED CONCENTRATION
2,3,7,8-TCDD 1,2,3,7,8-PeCDD 1,2,3,4,7,8-HxCDD 1,2,3,6,7,8-HxCDD 1,2,3,4,6,7,8-HxCDD 1,2,3,4,6,7,8-HpCDD OCDD 2,3,7,8-TCDF 1,2,3,7,8-PeCDF 2,3,4,7,8-PeCDF 1,2,3,4,7,8-HxCDF 1,2,3,6,7,8-HxCDF 1,2,3,7,8,9-HxCDF	* * * * * * * * 8.31 67.35 * * 1.63 * *	X 1.0 X 0.5 X 0.1 X 0.1 X 0.1 X 0.01 X 0.001 X 0.1 X 0.05 X 0.5 X 0.1 X 0.1 X 0.1	CONCENTRATION * * * * 8.31e-02 6.73e-02 * 1.63e-01 * *
2,3,4,6,7,8-HxCDF 1,2,3,4,6,7,8-HpCDF 1,2,3,4,7,8,9-HpCDF OCDF	3.61 * 7.59	X 0.1 X 0.01 X 0.01 X 0.001	3.61e-02 * 7.59e-03

(1) Taken from 'Interim Procudures for Estimating Risks Associated with Exposures to Mixtures of Chlorinated Dibenzo-p-Dioxin and -Dibenzofurans (CDDs and CDFs) and 1989 Udate(EPA/625/3-89/016, March 1989.'

* Total TEF is calculated by summing up all positively identified isomers of each homologous series. 6/90



PCDD/PCDF ANALYSIS DATA SHEET Use for Sample and Blank Results

CLIENT ID.

Lab Name: Southwest Lab. of Oklahoma Episode No.: 39261

Lab Code: SWL Case No.:

SDG No.:

Lab Sample ID: 39261.16

Client Name: E&E-WA

Sample Wt/Vol: 16.16

g or mL: g

Matrix (aqueous/solid/leachate): solid

Initial Calibration Date: 07-01-99

Sample Receipt Date: 07-02-99

Instrument ID: AutoSpec

Ext. Date: 07-06-99

GC Column:DB-5

Ext. Vol(ul):20.0

Inj. Vol(ul):2.0

Sample Data Filename: A105201#9

Analysis Date: 20-JUL-99 Time: 17:23:50

Blank Data Filename: A105201#2

Dilution Factor: 1

Cal. Ver. Data Filename: A105201#1

Concentration Units (pg/L or ng/Kg dry weight): ng/Kg

% Moisture: 23.81

•	CONCENTRATION	DETECTION	Qual.	ION ABUND.	RRT	MEAN
		LIMIT	(1)	RATIO (2)	(2)	RRF
ANALYTE	FOUND	HIMT	\ - /		•	
		0.091	U.	*	*	1.48
2,3,7,8-TCDD	*	0.102	บ	*	*	1.11
1,2,3,7,8-PeCDD	*	0.102	บ	*	*	0.74
1,2,3,4,7,8-HxCDD	*	,	υ.		*	1.10
1,2,3,6,7,8-HxCDD	*	0.098	ប	*	*	0.96
1,2,3,7,8,9-HxCDD	*	0.112	U	0.92	1.000	1.14
1,2,3,4,6,7,8-HpC	DD 1.091	0.148	u	0.96	1.000	1.11
OCDD	7.548	0.212 	L(3kc City	0.99	1.001	1.15
2,3,7,8-TCDF PLEER	ECOND COLUMN #	0.100	- CIL	U. 55	*	0.98
1,2,3,7,8-PeCDF	#	0.076	U		*	0.97
2,3,4,7,8-PeCDF	. *	0.077	<u>u</u>		*	1.03
1,2,3,4,7,8-HxCDF	*	0.096	<u>U</u>		*	1.38
1,2,3,6,7,8-HxCDF	. *	0.072	. U	_	•	0.87
1,2,3,7,8,9-HxCDF	*	0.114	. บ		*	1.18
2,3,4,6,7,8-HxCDF	• J ★	0.084	Ŭ			1.44
1,2,3,4,6,7,8-HpC	DF *	0.090	Ū		*	1.02
1,2,3,4,7,8,9-HpC	DF *	0.127	บ			1.21
OCDF	*	0.168	บ	¥	•	1.21
	•	• •				•
Total Tetra-Dioxi	ins *	0.091	U			
Total Penta-Dioxi		0.102	Ω.			
Total Hexa-Dioxis	o.252	0.098		• .		
Total Hepta-Diox:		0.148				
Total Tetra-Fura		0.100	U			
Total Penta-Fura		0.077	U			
		0.072	·υ			
Total Hexa-Furan	*	0.090	บ	•	-	•
Total Hepta-Fura	na + not d	etected: X	- I 3	EMPC. C - us	se value	

(1) Qualifiers: U and * - not detected; X & I - EMPC. from second column analysis. B - possible blank contamination.

(2) RRTs and ion ratios are specified in Tables 11 and 8, Method 8290.



rs/swl ok 22-jul-	-1999	Page 1			
		USEPA - ITI)		Page 8
		AATS/SWOK, IN			NT ID
· · · · · · · · · · · · · · · · · · ·	2378-TC Use for	DF ANALYSIS I Sample and B	DATA SHEET Lank Resu	lts 9927	4113
Lab Name: Southwe	st Lab. of Oklaho	ma Episodo	e No.: 39	261	
Client Name: E&E-	AW		Lab Sam	ple ID: 39261	1.16
Matrix (aqueous/s	olid/leachate): s	olid Sam	ple Wt/Vo	1: 16.15 g o	r mL: g
. Sample Receipt Da	te: 07/02/99	Init	ial Calib	ration Date:	05/13/9
Ext. Date: 07/06/	99		Instru	ment ID: 70S	
Analysis Date: 21	-JUL-99 Time: 16:	35:02	GC CC	lumn ID: SP2	331
Extract Volume (u	L): 20.0	sample	Data Fil	ename: S1042	30#9
Injection Volume	(uL): 2.0	Blank	Data Fi	ename: S1042	27#13
Dilution Factor:	1	Cal. Ver.	Data Fi	lename: S1042	30#2
Concentration Uni	ts (pg/L or ng/Ko	dry weight)	: ng/Kg	% Moisture:	23.81
ANALYTE	CONCENTRATION FOUND	DETECTION LIMIT	EMPC	ION ABUND. RATIO (1)	RRT (1)
2,3,7,8-TCDF	0.417	0.1407		0.73	1.001
	SPIKE	CONCENT.	RECOV.	ION ABUND.	RRT

NOTE: Concentrations, EMPCs, and EDL are calculated on a dry weight basis.

CONCENT. FOUND

742.94

547.60

1000

800

CONCENTRATION

INT. STANDARD

13C-2,3,7,8-TCDF

CLEANUP STANDARD

37C1-2,3,7,8-TCDD

68.45

RATIO (2)

1.16

TCDDF1I



USEPA, ITI 1DFB

EPA SAMPLE NO.

PCDD/PCDF TOXICITY EQUIVALENCE SUMMARY Use for Sample and Blank Results

99274113

Lab Name: SOUTHWEST LAB. OF OKLAHOMA

Episode No.: 39261

Client Name: E&E-WA

Lab Sample ID: 39261.16

Matrix (aqueous/solid/leachate): solid

Sample Wt/Vol: 16.16 g or mL: g

Sample Receipt Date: 07-02-99

Initial Calibration Date: 07-01-99

Ext. Date: 07-06-99 Shift:

Instrument ID: AutoSpec

Analysis Date: 20-JUL-99 Time: 17:23:50

GC Column ID: DB-5

Extract Volume(ul): 20.0

Sample Data Filename: A105201#9

Injection Volume (ul): 2.00

Blank Data Filename: A105201#2

Dilution Factor: 1

Cal. Ver. Data Filename: A105201#1

Concentration Units (pg/L or ng/Kg dry weight): ng/Kg % Moisture: 23.81

	CONCENTRATION	TEF(1)	TEF-ADJUSTED CONCENTRATION		
2,3,7,8-TCDD	*	X 1.0	*		
1,2,3,7,8-PeCDD	#	X 0.5	. •	• '	
1,2,3,4,7,8-HxCDD	*	X 0.1	.★.		
1,2,3,6,7,8-HxCDD	±	X 0.1	\$		
1,2,3,7,8,9-HxCDD	**	X 0.1	*		
1,2,3,4,6,7,8-HpCDD	1.09	X 0.01	ມ _{ິດ} 1.09e-02	- 4/95	
OCDD	NO 7.55	X 0.001 -	9/3/71 7.55e-03	- 0.0419	
2,3,7,8-TCDF	0.4170.38	X 0.1	3.83e-02		
1,2,3,7,8-PeCDF	*	X 0.05	*		
2,3,4,7,8-PeCDF	*	X 0.5		•	
1,2,3,4,7,8-HxCDF	*	X 0.1	*		
1,2,3,6,7,8-HxCDF	*	X 0.1	*		
1,2,3,7,8,9-HxCDF	*	X 0.1	*		
2,3,4,6,7,8-HxCDF	*	X 0.1	. *		
1,2,3,4,6,7,8-HpCDF	*	X 0.01			
1,2,3,4,7,8,9-HpCDF	* · · · · ·	X 0.01	*	•	
OCDF	*	X 0.001		,	
		* T	otal: 9.082e-02	<u>r</u> 9	

- (1) Taken from 'Interim Procudures for Estimating Risks Associated with Exposures to Mixtures of Chlorinated Dibenzo-p-Dioxin and -Dibenzofurans (CDDs and CDFs) and 1989 Udate(EPA/625/3-89/016, March 1989.'
 - * Total TEF is calculated by summing up all positively identified isomers of each homologous series.

 6/90

409 e-02

Form 1

PCDD/PCDF ANALYSIS DATA SHEET Use for Sample and Blank Results CLIENT ID.

99274114

Lab Name: Southwest Lab. of Oklahoma Episode No.: 39261

Lab Code: SWL Case No.:

SDG No.:

Lab Sample ID: 39261.17

Client Name: E&E-WA

Sample Wt/Vol: 980 g or mL: mL

Matrix (aqueous/solid/leachate): aqueous Initial Calibration Date: 07-22-99

Sample Receipt Date: 07-02-99

Instrument ID: Autospec

Ext. Date: 07-06-99

GC Column:DB-5

Ext. Vol(ul):20.0 Inj. Vol(ul):2.0

Sample Data Filename: A105212#5

Analysis Date: 23-JUL-99 Time: 12:41:53 Blank Data Filename: A105209#9

Dilution Factor: 1

Cal. Ver. Data Filename: A105212#3

Concentration Units (pg/L or ng/Kg dry weight): pg/L

% Moisture:

	CONCENTRATION	DETECTION	Qual.	ION ABUND.	RRT	MEAN
ANALYTE	FOUND	LIMIT	(1)	RATIO (2)	(2)	RRF
		7.185	บร	*	* ,	1.37
2,3,7,8-TCDD	*	8.081	บี่จี	*	*	1.17
1,2,3,7,8-PeCDD	*	7 7 7 7	כ ט	*	*	1.10
1,2,3,4,7,8-HxCDD		6.714	U 3	*	*	0.99
1,2,3,6,7,8-HxCDD	*	6.137	U	*	*	1.09
1,2,3,7,8,9-HxCDD		6.071	DEY U	1.18	1.000	1.21
1,2,3,4,6,7,8-HpCI	D 82.339	4.611	ABY U	0.90	1.000	1.28
OCDD	1037.870	8.595		* .	*	1.15
2,3,7,8-TCDF		9.639	<u>n</u> 2	*	*	1.01
1,2,3,7,8-PeCDF	*	5.047	υ Συ	*	*	1.07
2,3,4,7,8-PeCDF	*	4.730		1.18	1.001	1.16
1,2,3,4,7,8-HxCDF	11.583	7.189	75	*	*	1.08
1,2,3,6,7,8-HxCDF	*	7.180	02 02	*	*	1.14
1,2,3,7,8,9-HxCDF	*	11.485	บูว	*	*	1.13
2,3,4,6,7,8-HxCDF	*	9.034	. 25 	1.16	1.000	1.35
1,2,3,4,6,7,8-HpC	DF 32.134	5.919		1.10	*	1.40
1,2,3,4,7,8,9-HpC	DF *	9.575	.02	0.87	1.003	1.45
OCDF	122.027	9.004		0.67	1.005	,— •
Total Tetra-Dioxi	ns. *	7.185	U			
Total Penta-Dioxi		8.081	บ	•	•	
Total Hexa-Dioxin		6.137	Ū		•	
Total Hepta-Dioxi	ns 151.974	4.611				
Total Tetra-Furan	_	9.639	ט		e de la companya della companya della companya de la companya della companya dell	
Total Penta-Furar		4.730	U		•	
Total Hexa-Furans		7.180		*		
	- 20 124	5.919		* **		
Total Hepta-Furar	ndicates not de	etected; Th	e X & l	indicates	EMPC. Th	e C nee

from second column analysis. The B indicates possible blank contamination. (1) Qualifier U indicates no

(2) RRTs and ion ratios are specified in Tables 2 and 9, Method 1613.

RFP C500273T1



USEPA, ITE 1DFB

EPA SAMPLE NO.

PCDD/PCDF TOXICITY EQUIVALENCE SUMMARY Use for Sample and Blank Results

99274114

Lab Name: SOUTHWEST LAB. OF OKLAHOMA

Episode No.: 39261

Client Name: E&E-WA

Lab Sample ID: 39261.17

Matrix (aqueous/solid/leachate): aqueous

Sample Wt/Vol: 980

g or mL: mL

Initial Calibration Date: 07-22-99

Sample Receipt Date: 07-02-99

.

Ext. Date: 07-06-99 Shift:

Instrument ID: Autospec

Analysis Date: 23-JUL-99 Time: 12:41:53

GC Column ID: DB-5

Extract Volume(ul): 20.0

Sample Data Filename: A105212#5

Injection Volume(ul): 2.00

Blank Data Filename: A105209#9

Dilution Factor: 1

Cal. Ver. Data Filename: A105212#3

Concentration Units (pg/L or ng/Kg dry weight): pg/L % Moisture:

	CONCENTRATION	TEF(1)	TEF-ADJUSTED CONCENTRATION	
2,3,7,8-TCDD 1,2,3,7,8-PeCDD 1,2,3,4,7,8-HxCDD 1,2,3,6,7,8-HxCDD 1,2,3,4,6,7,8-HpCDD 0CDD 2,3,7,8-TCDF 1,2,3,7,8-PeCDF 2,3,4,7,8-PeCDF 1,2,3,4,7,8-HxCDF 1,2,3,6,7,8-HxCDF 1,2,3,7,8,9-HxCDF 1,2,3,4,6,7,8-HxCDF 1,2,3,4,6,7,8-HxCDF 1,2,3,4,6,7,8-HpCDF 1,2,3,4,6,7,8-HpCDF 1,2,3,4,6,7,8-HpCDF	* * * * * * * * * * * * *	X 1.0 X 0.5 X 0.1 X 0.1 X 0.01 X 0.001 X 0.05 X 0.5 X 0.1 X 0.1 X 0.1 X 0.1 X 0.1 X 0.01 X 0.01 X 0.01 X 0.01 X 0.01	* * * * * * * * * * * * *	ठ नीउरिव ठ नाउरित
OCDF	122.03		رم ایرامه otal: 6:6898+00 ارد0 و	

- (1) Taken from 'Interim Procudures for Estimating Risks Associated with Exposures to Mixtures of Chlorinated Dibenzo-p-Dioxin and -Dibenzofurans (CDDs and CDFs) and 1989 Udate(EPA/625/3-89/016, March 1989.'
 - * Total TEF is calculated by summing up all positively identified isomers of each homologous series.

Form 1

CLIENT ID.

PCDD/PCDF ANALYSIS DATA SHEET Use for Sample and Blank Results

99274115

Lab Code: SWL Case No.:

SDG No.:

Lab Sample ID: 39261.13

Client Name: E&E-WA

Sample Wt/Vol: 15.78 g or mL: g

Matrix (aqueous/solid/leachate): solid

Initial Calibration Date: 07-01-99

Sample Receipt Date: 07-02-99

Instrument ID: AutoSpec

Ext. Date: 07-06-99

GC Column:DB-5

Ext. Vol(ul):20.0

Inj. Vol(ul):2.0

Sample Data Filename: A105201#7

Analysis Date: 20-JUL-99 Time: 15:46:15

Blank Data Filename: A105201#2

Dilution Factor: 1

Cal. Ver. Data Filename: A105201#1

Concentration Units (pg/L or ng/Kg dry weight): ng/Kg

% Moisture: 8.64

		DETECTION	Qual.	ION ABUND.	RRT	MEAN
ANALYTE	CONCENTRATION FOUND	LIMIT	(1)	RATIO (2)	(2)	RRF
			บ	. *	*	1.48
2,3,7,8-TCDD	*	0.116	ָ ד		* :	1.11
1,2,3,7,8-PeCDD	*	0.187			*	0.74
1,2,3,4,7,8-HxCDD	· · · · · · · · · · · · · · · · · · ·	0.154	์ บ	•	. *	1.10
1,2,3,6,7,8-HxCDD	nata e na Konton 🖣 na	0.104	_		*	0.96
1,2,3,7,8,9-HxCDD		0.119	ប	1.00	1.001	1.14
1,2,3,4,6,7,8-HpC	DD 1.833	0.281		~ 0.98	1.000	1.11
OCDD	15.904	0.296		. U. 96	*	1.15
2,3,7,8-TCDF	★	0.120	. U	-	•	0.98
1,2,3,7,8-PeCDF	range in the state of the state	0.112	. บ		*	0.97
2,3,4,7,8-PeCDF	*	0.113	บ	- 40	1.000	1.03
1,2,3,4,7,8-HxCDF	1.022	0.262	- 3	1.40	1.000	1.38
1,2,3,6,7,8-HxCDF	*	0.196	U-	* .		0.87
1,2,3,7,8,9-HxCDE	*	0.311	U	*	_	1.18
2,3,4,6,7,8-HxCDI	*	0.230	U			1.44
1,2,3,4,6,7,8-Hp0	O.627	0.183	. 5	0.80	1.000	1.02
1,2,3,4,7,8,9-Hp(ODF *	0.258	บ	*		1.02
OCDF	1.129	0.326		0.86	1.004	1.21
	*	0.116	U			.·
Total Tetra-Diox	ins *	0.187	บ			
Total Penta-Diox	ns 0.677			•	,	
Total Hexa-Dioxi	= :		100	1.0		
Total Hepta-Diox			20		3	
Total Tetra-Fura				the Mark State		
Total Penta-Fura		0.115				
Total Hexa-Furan	4.008	0.193	TT			1.1.
Total Hepta-Fura	ns "			EMPC. C - u	se value	
/// Analifiare [i and * - not Q	etected; A	Œ <u> </u>			

(1) Qualifiers: U and * - not detec from second column analysis. B - possible blank contamination.

(2) RRTs and ion ratios are specified in Tables 11 and 8, Method 8290.

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AATS/SWOK, INC. 2378-TCDF ANALYSIS DATA SHEET Use for Sample and Blank Results CLIENT ID

99274115

Lab Name: Southwest Lab. of Oklahoma Episode No.: 39261

Client Name: E&E-WA

Lab Sample ID: 39261.13

Matrix (aqueous/solid/leachate): solid

Sample Wt/Vol: 15.78 g or mL: g

Sample Receipt Date: 07/02/99

Initial Calibration Date: 05/13/99

Ext. Date: 07/06/99

Instrument ID: 70S

Analysis Date: 21-JUL-99 Time: 15:21:19

GC Column ID: SP2331

% Moisture: 8.64

Extract Volume (uL): 20.0

Sample Data Filename: S104230#7

Injection Volume (uL): 2.0

Blank Data Filename: S104227#13

Dilution Factor: 1

Cal. Ver. Data Filename: S104230#2

Concentration Units (pg/L or ng/Kg dry weight): ng/Kg ION ABUND. RRT DETECTION EMPC CONCENTRATION RATIO (1) (1)LIMIT FOUND ANALYTE

2,3,7,8-TCDF

0.1662

ION ABUND. RRT RECOV. CONCENT. SPIKE RATIO (2) FOUND (1) INT. STANDARD CONCENTRATION

62.59 0.77 625.86 1000 13C-2,3,7,8-TCDF

CLEANUP STANDARD

0.99 800 406.53 50.82 37C1-2,3,7,8-TCDD

NOTE: Concentrations, EMPCs, and EDL are calculated on a dry weight basis.

TCDDF1I

USEPA, ITD 1DFB

EPA SAMPLE NO.

PCDD/PCDF TOXICITY EQUIVALENCE SUMMARY Use for Sample and Blank Results

99274115

Lab Name: SOUTHWEST LAB. OF OKLAHOMA

Analysis Date: 20-JUL-99 Time: 15:46:15

Episode No.: 39261

Client Name: E&E-WA

Lab Sample ID: 39261.13

Matrix (aqueous/solid/leachate): solid

Sample Wt/Vol: 15.78 g or mL: g

Sample Receipt Date: 07-02-99

Initial Calibration Date: 07-01-99

Ext. Date: 07-06-99 Shift:

Instrument ID: AutoSpec

GC Column ID: DB-5

Extract Volume(ul): 20.0

Sample Data Filename: A105201#7

Injection Volume(u1): 2.00

Blank Data Filename: A105201#2

Dilution Factor: 1

Cal. Ver. Data Filename: A105201#1

Concentration Units (pg/L or ng/Kg dry weight): ng/Kg % Moisture: 8.64

	CONCENTRATION TEF(1)		TEF-ADJUSTED CONCENTRATION		
2,3,7,8-TCDD 1,2,3,7,8-PeCDD 1,2,3,4,7,8-HxCDD 1,2,3,6,7,8-HxCDD 1,2,3,4,6,7,8-HxCDD 0CDD 2,3,7,8-TCDF 1,2,3,4,7,8-PeCDF 2,3,4,7,8-PeCDF 1,2,3,4,7,8-HxCDF 1,2,3,6,7,8-HxCDF 1,2,3,7,8,9-HxCDF 1,2,3,4,6,7,8-HxCDF 1,2,3,4,6,7,8-HxCDF 1,2,3,4,6,7,8-HyCDF 1,2,3,4,6,7,8-HyCDF 1,2,3,4,6,7,8-HyCDF	1.83 pi 15.90 * * 1.02 * 0.63	X 1.0 X 0.5 X 0.1 X 0.1 X 0.01 X 0.01 X 0.05 X 0.5 X 0.1 X 0.1 X 0.1 X 0.1 X 0.1 X 0.1 X 0.1	* * * * * * * * 1.83e-02 1.59e-02 * * * * 1.02e-01 * * * 6.27e-03 * 1.13e-03	- O 2/3/09	
OCDF	1.13	X 0.001	otal: 8.093e-01		

(1) Taken from 'Interim Procudures for Estimating Risks Associated with Exposures to Mixtures of Chlorinated Dibenzo-p-Dioxin and -Dibenzofurans (CDDs and CDFs) and 1989 Udate(EPA/625/3-89/016, March 1989.'

* Total TEF is calculated by summing up all positively identified isomers of each homologous series.

9/3/25

CLIENT ID.

PCDD/PCDF ANALYSIS DATA SHEET Use for Sample and Blank Results

99274116

Lab Name: Southwest Lab. of Oklahoma

Episode No.: 39261

Lab Code: SWL Case No.:

SDG No.:

Lab Sample ID: 39261.14

Client Name: E&E-WA

Sample Wt/Vol: 14.85 g or mL: g.

Initial Calibration Date: 07-01-99

Matrix (aqueous/solid/leachate): solid

Sample Receipt Date: 07-02-99

Instrument ID: AutoSpec

Ext. Date: 07-06-99

GC. Column: DB-5

Ext. Vol(ul):20.0

Inj. Vol(ul):2.0

Sample Data Filename: A105201#8

Analysis Date: 20-JUL-99 Time: 16:35:02

Blank Data Filename: A105201#2

Dilution Factor: 1

Cal. Ver. Data Filename: A105201#1

Concentration Units (pg/L or ng/Kg dry weight): ng/Kg

% Moisture: 6.82

	CONCENTRATION	DETECTION	Qual.	ION ABUND.	RRT	MEAN
ANALYTE	FOUND	LIMIT	.(1)	RATIO (2)	(2)	RRF
2,3,7,8-TCDD	, , , , ,	0.099	υ	*	*	1.48
1,2,3,7,8-PeCDD	*	0.125	U	*	*	1.11
1,2,3,4,7,8-HxCDD	*	0.135	Ū	*	*	0.74
1,2,3,6,7,8-HxCDD	*	0.091	Ψ.	* *	*	1.10
1,2,3,7,8,9-HxCDD	*	0.104	ט (*	*	0.96
1,2,3,4,6,7,8-HpCD	D 1.014	0.194	٠,	1.14	1.001	1.14
OCDD	9.754	0.237	· U	0.93	1.000	1.11
2,3,7,8-TCDF	*	0.162	Ū	*	*	1.15
1,2,3,7,8-PeCDF	*	0.113	υ	, *	*	0.98
2,3,4,7,8-PeCDF	*	0.114	ับ	*.	★-	0.97
1,2,3,4,7,8-HxCDF	1.282	0.187	り	1.19	1.001	1.03
1,2,3,6,7,8-HxCDF	*	0.140	ָ ט	*	*	1.38
1,2,3,7,8,9-HxCDF	*	0.222	U	*	*	0.87
2.3.4.6.7.8-HxCDF	★	0.164	T	•	*	1.18
1,2,3,4,6,7,8-HpCD	F 2.034	0.126	•"	1.08	1.000	1.44
1,2,3,4,7,8,9-HpCD		0.177	υ.	* 🕏	*	1.02
OCDF	0.925	0.279	J	1.07	1.003	1.21
Total Tetra-Dioxir	ıs *	0.099	ט .			
Total Penta-Dioxir		0.125	U .			
Total Hexa-Dioxins	•	0.091	. ט		•	•
Total Hepta-Dioxin	ns 1.014	0.194			•	
Total Tetra-Furans		0.162	U	•		
Total Penta-Furan		0.114				
Total Hexa-Furans	3.311	0.140				•
Total Hepta-Furan	s 3.832	0.126		•		
4-1		tastas. V	c T _ T	MDC C - 119	e value	

(1) Qualifiers: U and * - not detected; X & I - EMPC. C - use value from second column analysis. B - possible blank contamination.

(2) RRTs and ion ratios are specified in Tables 11 and 8, Method 8290.



NOTE: Concentrations, EMPCs, and EDL are calculated on a dry weight basis.

FOUND

582.74

550.98

SPIKE

CONCENTRATION

1000

800

INT. STANDARD

13C-2,3,7,8-TCDF

37C1-2,3,7,8-TCDD

CLEANUP STANDARD

TCDDF1I

(1)

0.99

RATIO (2)

0.73

윰

58.27

68.87

USEPA, ITI 1DFB

EPA SAMPLE NO.

PCDD/PCDF TOXICITY EQUIVALENCE SUMMARY Use for Sample and Blank Results

99274116

Lab Name: SOUTHWEST LAB. OF OKLAHOMA

Episode No.: 39261

Client Name: E&E-WA

Lab Sample ID: 39261.14

Matrix (aqueous/solid/leachate): solid

Sample Wt/Vol: 14.85 g or mL: g

Sample Receipt Date: 07-02-99

Initial Calibration Date: 07-01-99

Ext. Date: 07-06-99 Shift:

Instrument ID: AutoSpec

Analysis Date: 20-JUL-99 Time: 16:35:02

GC Column ID: DB-5

Extract Volume (ul): 20.0

Sample Data Filename: A105201#8

Injection Volume(ul): 2.00

Blank Data Filename: A105201#2

Dilution Factor: 1

Cal. Ver. Data Filename: A105201#1

Concentration Units (pg/L or ng/Kg dry weight): ng/Kg % Moisture: 6.82

			*	
	CONCENTRATION	TEF(1)	TEF-ADJUSTED CONCENTRATION	
•				
2,3,7,8-TCDD	*	X 1.0	. •	
1,2,3,7,8-PeCDD	*	X 0.5	*	
1,2,3,4,7,8-HxCDD	*	x 0.1	#	
1,2,3,6,7,8-HxCDD	*	X 0.1	*	
1,2,3,7,8,9-HxCDD	*	X 0.1	*	
1,2,3,4,6,7,8-HpCDD	1.01	X 0.01	∧© 1.01e-02	0 9/3/95
OCDD	NO 9.75	X 0.001	9.75e-03	4,70
2,3,7,8-TCDF	*	X 0.1	*	
1,2,3,7,8-PeCDF	*	X 0.05	*	
2,3,4,7,8-PeCDF	*	X 0.5	*	
1,2,3,4,7,8-HxCDF	1.28	X 0.1	1.28e-01	
1,2,3,6,7,8-HxCDF	*	X 0.1	• •	,
1,2,3,7,8,9-HxCDF	*	X 0.1	*	•
2,3,4,6,7,8-HxCDF	*	X 0.1	· · · · · · · · · · · · · · · · · · ·	•
1,2,3,4,6,7,8-HpCDF	2.03	X 0.01	2.03e-02	•
1,2,3,4,7,8,9-HpCDF	*	X 0.01	*	
OCDF	0.93	X 0.001	9.25e-04	
	•	*T	0 9/3/2, otal: 5.185e-01	
•		_	1.59e-	O (

- (1) Taken from 'Interim Procudures for Estimating Risks Associated with Exposures to Mixtures of Chlorinated Dibenzo-p-Dioxin and -Dibenzofurans (CDDs and CDFs) and 1989 Udate (EPA/625/3-89/016, March 1989.'
 - * Total TEF is calculated by summing up all positively identified isomers of each homologous series.

 6/90

Form 1

CLIENT ID.

PCDD/PCDF ANALYSIS DATA SHEET Use for Sample and Blank Results

99274117

Lab Name: Southwest Lab. of Oklahoma

Episode No.: 39261

Lab Code: SWL Case No.:

SDG No .:

Lab Sample ID: 39261.15

Client Name: E&E-WA

Sample Wt/Vol: 1000

g or mL: mL

Matrix (aqueous/solid/leachate): aqueous Initial Calibration Date: 07-22-99

Sample Receipt Date: 07-02-99

Instrument ID: AutoSpec

Ext. Date: 07-06-99

GC Column:DB-5

Ext. Vol(u1):20.0

Inj. Vol(ul):2.0

Sample Data Filename: A105209#8

Analysis Date: 22-JUL-99 Time: 16:47:55 Blank Data Filename: A105209#9

Dilution Factor: 1

Cal. Ver. Data Filename: A105209#1

Concentration Units (pg/L or ng/Kg dry weight): pg/L

% Moisture:

ANALYTE	CONCENTRATION FOUND	DETECTION LIMIT	Qual.	ION ABUND. RATIO (2)	RRT (2)	MEAN RRF
	•	3.111	ប	*	*	1.37
2,3,7,8-TCDD	*		บ	* *	*	1.17
1,2,3,7,8-PeCDD		2.122	Ū	*	* ,	1.10
1,2,3,4,7,8-HxCDD	*	2.400	์ บ	*	*	0.99
1,2,3,6,7,8-HxCDD	* .	2.220	บ	*	*	1.09
1,2,3,7,8,9-HxCDD	*	2.181	น	1.04	1.000	1.21
1,2,3,4,6,7,8-HpC	DD 43.473	3.227		0.95	1.000	1.28
OCDD	515. <u>9</u> 80	2.810	<u>u</u>	U.93	*	1.15
2,3,7,8-TCDF	*	3.973	บ.		•	1.01
1,2,3,7,8-PeCDF	*	1.898	. U		*	1.07
2,3,4,7,8-PeCDF	*	1.764	. D	•	*	1.16
1,2,3,4,7,8-HxCDF	*	2.085	U	*	*	1.08
1,2,3,6,7,8-HxCDF	*	2.096	U ·			1.14
1,2,3,7,8,9-HxCDF	• • •	2.642	σ	*	*	1.13
2,3,4,6,7,8-HxCDF	• *	2.008	Ü	. 		1.35
1,2,3,4,6,7,8-HpC	DF 4.542	2.641	典力	1.58	1.000	1.40
1,2,3,4,7,8,9-HpC	DF *	3.220	U		*	1.45
OCDF	16.634	3.516		0.86	1.004	1.45
Total Tetra-Dioxi	ins *	3.111	U			
Total Penta-Dioxi	ins *	2.122	ַס		•	
Total Hexa-Dioxi	ns *	2.220	Ū			
Total Hepta-Diox	ins 70.980	3.227		•		
Total Tetra-Fura		3.973	ט י			٠.
Total Penta-Fura		1.764	σ	and the second		•
		2.096	U		•	
Total Hexa-Furan		2 641	ט			*
Total Hepta-Fura		etected. Th	1 3 Y a	indicates	EMPC. The	. C nee

(1) Qualifier U indicates not detected; The X & I indicates EMPC. The C needs value from second column analysis. The B indicates possible blank contamination.

(2) RRTs and ion ratios are specified in Tables 2 and 9, Method 1613.

RFP C500273T1



EPA SAMPLE NO.

PCDD/PCDF TOXICITY EQUIVALENCE SUMMARY Use for Sample and Blank Results

99274117

Lab Name: SOUTHWEST LAB. OF OKLAHOMA

Episode No.: 39261

Client Name: E&E-WA

Lab Sample ID: 39261.15

Matrix (aqueous/solid/leachate): aqueous Sample Wt/Vol: 1000 g or mL: mL

Sample Receipt Date: 07-02-99

Initial Calibration Date: 07-22-99

Ext. Date: 07-06-99 Shift:

Instrument ID: AutoSpec

Analysis Date: 22-JUL-99 Time: 16:47:55

GC Column ID: DB-5

Extract Volume (ul): 20.0

Sample Data Filename: A105209#8

Injection Volume(ul): 2.00

Blank Data Filename: A105209#9

Dilution Factor: 1

Cal. Ver. Data Filename: A105209#1

Concentration Units (pg/L or ng/Kg dry weight): pg/L % Moisture:

	CONCENTRATION	TEF(1)	TEF-ADJUSTED CONCENTRATION	
2,3,7,8-TCDD 1,2,3,7,8-PeCDD	*	X 1.0 X 0.5	*	
1,2,3,4,7,8-HxCDD 1,2,3,6,7,8-HxCDD	*	X 0.1 X 0.1	*	
1,2,3,7,8,9-HxCDD 1,2,3,4,6,7,8-HpCDD	√D 43.47	νο ^X 0.1	4.35e-01	@ 9/3/99
OCDD 2,3,7,8-TCDF	μη <u>515.98</u> *	X 0.01 X 0.1	5.16e-01	۲۰۱۱ م
1,2,3,7,8-PeCDF 2,3,4,7,8-PeCDF	*	X 0.05 X 0.5	*	
1,2,3,4,7,8-HxCDF 1,2,3,6,7,8-HxCDF	*	X 0.1 X 0.1 X 0.1	*	
1,2,3,7,8,9-HxCDF 2,3,4,6,7,8-HxCDF	* *	X 0.1 X 0.1 X 0.01	* 4.54e-02	
1,2,3,4,6,7,8-HpCDF 1,2,3,4,7,8,9-HpCDF	4.54 * 16.63	X 0.01 X 0.001	1.66e-02	••
OCDF	10.03	•	tal: 1 .288e+00	
		. –	1-20-e-07	<u>.</u>

- (1) Taken from 'Interim Procudures for Estimating Risks Associated with Exposures to Mixtures of Chlorinated Dibenzo-p-Dioxin and -Dibenzofurans (CDDs and CDFs) and 1989 Udate(EPA/625/3-89/016, March 1989.
 - * Total TEF is calculated by summing up all positively identified isomers of each homologous series. 6/90





ecology and environment, inc.

International Specialists in the Environment

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MEMORANDUM

DATE:

August 26, 1999

TO:

Mark Woodke, START-Project Manager, Seattle, WA

FROM:

David Ikeda, Chemist, E & E, Seattle, WA

THRU:

Lestta Dahlhoff, Chemist, E & E, Seattle, WA

SUBJ:

Organic Data Quality Assurance Review, Wenatchee Brownfields Site,

Wenatchee, Washington

REF:

TDD: 98-11-0007

PAN: CK-07-01-SI-DM

The data quality assurance review of two waters sampless and eight soil samples collected from the Wenatchee Brownfields site located in Wenatchee, Washington, has been completed. Analysis for Polychlorinated Dibenzodioxins (PCDDs) and Polychlorinated Dibenzofurans (PCDFs) following EPA Method 8290 for soil samples and EPA Method 1613B for water samples were performed by Southwest Laboratory of Oklahoma, Broken Arrow, Oklahoma.

The samples were numbered:

Soil:

99284154

99284158

99284160

99284178

99284155

99284159

99284177

99284179

Water:

99284156

99284161

Data Qualifications:

I Holding Time: Acceptable.

The samples were collected July 6, 7, and 8, 1999; maintained at 4°C (± 2°C); extracted by July 30, 1999; and analyzed by August 5, 1999, therefore meeting QC criteria of less than 30 days for soil samples and 7 days for water samples between collection and extraction and less than 45 days for soil samples and 40 days for water samples between extraction and analysis.

II Instrument Performance: Acceptable.

A performance check solution was analyzed at the beginning of each 12-hour sample analysis period. The minimum resolving power of 10,000 was attained. The valley between 2,3,7,8-tetrachlorodibenzodioxin (2,3,7,8-TCDD) and the peaks representing all other TCDD isomers was \leq 25 % in the window defining mix solution. All ion abundance and retention time criteria were met in all calibration standards.

III Calibration

A. Initial Calibration: Acceptable.

A 5-point initial calibration was performed with all Relative Standard Deviations (RSDs) values less than 20 % for the unlabeled target analytes and less than 30 % for the labeled internal standards. All ion abundance ratios, signal-to-noise (s/n) ratios, and retention times were within method QC limits.

B. Continuing Calibration: Acceptable.

A continuing calibration was analyzed at the start of each 12-hour period. The percent valley between 2,3,7,8-TCDD and the closest tetrachlorodibenzofuran (TCDF) isomer was less than 25 %. The retention times for all of the furan and dioxin homologues were established and properly labeled from the first to the last eluters. All ion abundance and s/n ratios were within method QC limits. All percent differences values were less than 30 % for the labeled internal standards and less than 20 % for the unlabeled target analytes.

IV Compound Quantitation and Detection Limits: Acceptable.

All of the samples were analyzed at the project required quantitation limits. Some of the totals reported were corrected by the reviewer due to adjustments that had to be made because of blank contamination. All of the compounds, except TCDF, were calculated off the primary column, DB5. All TCDF concentrations were confirmed and quantitated by a second column, SP2331. All of the detected target compounds were within the linear calibration range.

V Blanks: Satisfactory.

The frequency of analysis of laboratory blanks was met. No target analytes were detected in any blanks, except for the following:

BLANK ID	MATRIX	COMPOUND	CONC.	ASSOCIATED SAMPLES
DBLK2	Water	OCDD	10.246 pg/L	99284156 and 99284161
DBLK3	Soil	1,2,3,4,6,7,8-HpCDD	0.669 ng/kg	99284154RE and 99284158RE
DBLK3	Soil	OCDD	8.094 ng/kg	99284154RE and 99284158RE

CONC. = Concentration.

HpCDD = Heptachlorodibenzodioxin.

OCDD = Octachlorodibenzodioxin.

The OCDD detected in the associated samples 992844156 and 992844161 were qualified as non-detect, "U", due to the concentration being less than 5 times the value in the blank. The TEF factor was also corrected by the reviewer because of blank contamination.

VI Analytical Sequence: Acceptable.

All of the standards, blanks, samples and QC samples were analyzed in accordance with the method-specified analytical sequence.

VII Internal Standards: Satisfactory.

All internal standard (IS) ion abundance ratios were within method QC limits. All IS percent recovery (%R) values were within the QC limits, except:

SAMPLE ID	MATRIX	INTERNAL STANDARD	%R	QC LIMITS
99284154RE	Soil	¹³ C-2,3,7,8-TCDF	36.05	40 - 135 %
99284158RE	Soil	¹³ C-OCDD	21.93	40 - 135 %
99284159	Soil	¹³ C-1,2,3,4,6,7,8-HpCDD	39.81	40 - 135 %
99284159	Soil	¹³ C-OCDD	31.13	40 - 135 %
99284177	Soil	¹³ C-OCDD	22.45	40 - 135 %
99284178	Soil	¹³ C-OCDD	38.5 4	40 - 135 %
99284178	Soil	¹³ C-2,3,7,8-TCDF	34.00	40 - 135 %
99284179	Soil	¹³ C-2,3,7,8-TCDF	26.04	40 - 135 %

TCDF = Tetrachlorodibenzofuran.

HpCDD = Heptachlorodibenzodioxon.

OCDD = Octachlorodibenzodioxon.

Quantitation limits and positive results for associated analytes were flagged as estimated (UJ or J), except for 2,3,7,8-TCDF in sample 99284154RE. The TCDF result for sample 99284154RE was quantitated by a second column, and the IS was within QC limits.

VI Surrogate Recoveries: Not Applicable.

Surrogates were not required for this method. Clean-up standard 37Cl-2,3,7,8-TCDD was added to all samples and QC samples. The clean-up standard percent recovery values were acceptable.

VII Duplicate Sample Analysis: Not Applicable.

Duplicate sample analyses were not performed. No action was taken by the reviewer.

VIII Matrix Spike/Matrix Spike Duplicates: Satisfactory.

Matrix spike percent spike recovery (%R) values were within QC limits, except:

SAMPLE ID	MATRIX	ANALYTE	%R	QC LIMITS
99284154MS	Soil '	2,3,4,6,7,8-HxCDF	44.5	50 - 150 %

HxCDF = Hexachlorodibenzofuran.

The quantitation limit for 2,3,4,6,7,8-HxCDF was flagged as estimated (UJ) in sample 99284154RE.

The relative percent difference (RPD) values between the matrix spike and matrix spike duplicate were within QC limits, except:

SAMPLE ID	MATRIX	ANALYTE	RPD	QC LIMITS
99284158	Soil	1,2,3,4,7,8-HxCDF	76.3	50

HxCDF = Hexachlorodibenzofuran.

The sample results for 1,2,3,4,7,8-HxCDF were flagged as estimated (J) in sample 99284158.

IX Compound Identification: Acceptable.

For analytes with isotopically labeled standards, the retention times of the sample quantitation ions maximized within -1 to +3 seconds of the isotopically labeled standard ions. Several samples had ratios for the quantitation ion integrated ion currents outside the method QC limits, the laboratory qualified these sample results as estimated maximum possible concentrations (X or I). The reviewer changed the laboratory qualifiers "X" and "I" to "J" (estimated).

X Laboratory Control Sample (LCS) Analyses: Acceptable.

A spiked blank was extracted and analyzed with each sample delivery group (SDG). The percent recovery values for the target compounds and internal standards for the LCS met the acceptance criteria. None of the data were qualified on this basis.

XI Laboratory Contact: Required.

The laboratory was contacted on August 25, 1999 (see attached telephone log).

XII Overall Assessment of Data for Use

The overall usefulness of the data is based on the criteria outlined in EPA Method 8290 and the OSWER Directive "Quality Assurance/Quality Control Guidance for Removal Activities, Sampling QA/QC Plan and Data Validation Procedures" (EPA/540/G-90/004). Based upon the information provided, the data are acceptable for use with the above stated data qualifications.

Data Qualifiers and Definitions

altur bi sala

- U The material was analyzed for but was not detected. The associated numerical value is the sample quantitation limit.
- J The associated numerical value is an estimated quantity because the reported concentrations were less than the contract required detection limits or because quality control criteria limits were not met.
- UJ The material was analyzed for, but not detected. The reported detection limit is estimated because quality control criteria were not met.

TELEPHONE CONVERSATION

Person Talked T	TO JAYANT S	HRINGAR PL	IRE, PH	2	
Company <u></u> <i>幺</i> ω	LABORATORY OF	OKLAHOMA		Date <u>25 A</u>	<u> Lucust 1</u> 999
Phone Number_	918-251-2858	(F) X 25°	79	Time <u>(31</u> 8	
Job Name				Job No3	933.4
CONVERSATIO	N		. · . · . · . · . · . · . · . · . · . ·	· · · · · · · · · · · · · · · · · · ·	
	XTRACTION LOGS	FROM 7	136/99		
	Sample 206	•			t .
3) SAMPLE	39334.0123 (99)	28415422)	TOTAL P	PENTA FURAN	/ REPORTED
DATA	DOSS NOT MA	TCH THE	SPREAD	SHEET.	
•					
		. •			
	1+2) FA	YLD -0K			
ACTION	3) See	FAX O	alzelaa Shezt co	or count	27102
DISTRIBUTION					
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		Dy <u>s</u>	Davis	AKIO II	CEDA D

Form 1

CLIENT ID.

PCDD/PCDF ANALYSIS DATA SHEET Use for Sample and Blank Results

99284154 RE

Lab Name: Southwest Lab. of Oklahoma Episode No.: 39334

Lab Code: SWL Case No.: SDG No.: Lab Sample ID: 39334.01RE

Client Name: E&E-WA

Sample Wt/Vol: 10.57 g or mL: g

Matrix (aqueous/solid/leachate): solid Initial Calibration Date: 07/01/99

Sample Receipt Date: 07/09/99

Instrument ID: AutoSpec

Ext. Date: 07/30/99

GC Column:DB-5

Ext. Vol(u1):20.0

Inj. Vol(u1):2.0 Sample Data Filename: A105252#5

Analysis Date: 5-AUG-99 Time: 13:11:21 Blank Data Filename: A105252#2

Dilution Factor: 1

Cal. Ver. Data Filename: A105250#14

	CONCENTRATION		Qual.	ION ABUND.		MEAN RRF
ANALYTE	FOUND	LIMIT	(1)	RATIO (2)	(2)	RRF
0 0 7 0 7000	or and the second	0.242	U	*	*	1.48
2,3,7,8-TCDD	*	0.528	Ū	*	*	1.11
1,2,3,7,8-PeCDD	*	0.567	Ū	*	*	0.74
1,2,3,4,7,8-HxCDD	*	0.382	Ū	*	*	1.10
1,2,3,6,7,8-HxCDD		0.438	Ū	*	*	0.96
1,2,3,7,8,9-HxCDD		0.661		1.02	1.000	1.14
1,2,3,4,6,7,8-HpC		0.684		0.82	1.000	1.11
OCDD	49.865 *	0.365	U	*	* .	1.15
2,3,7,8-TCDF		0.516	Ü	*	· •	0.98
1,2,3,7,8-PeCDF	*		<u> </u>	0.90	1.029	0.97
2,3,4,7,8-PeCDF	0,359	0.522	7	1.07	1.000	1.03
1,2,3,4,7,8-HxCDF	13.630	0.989		0.97	1.006	1.38
1,2,3,6,7,8-HxCDF		0.742	· Ţ	• ÷ • • • • • • • • • • • • • • • • • •	*	0.87
1,2,3,7,8,9-HxCDF		1.174		*	*	1.18
2,3,4,6,7,8-HxCDF	*	0.867	υS	0.95	1.000	1.44
1,2,3,4,6,7,8-HpC	DF 1.834	0.621	**	U.95	*	1.02
1,2,3,4,7,8,9-HpC	CDF *	0.875	U	0.90	1.003	1.21
OCDF	4.353	0.736	•	0.90	1.005	1.21
makal Makas Diami	*	0.242	บ			
Total Tetra-Dioxi		0.528	U	• •		
Total Penta-Diox:		0.382		•		
Total Hexa-Dioxi		0.661				
Total Hepta-Diox		0.365				
Total Tetra-Fura	04 040	0.522				
Total Penta-Fura		0.742	U		• •	
Total Hexa-Furan	S	0.621	•			
Total Hepta-Fura	ns 1.834	0.02I 	. T F	MPC . C - 115	se value	•
(1) Qualifiers: U	and * - not de	etected; A o	olo bla	nk contami	nation.	
from second c	olumn analysis	. B - Dossii	Plec l	1 and 8. Me	ethod 8290	. 8290F1
(2) RRTs and ion	ratios are spec	Cilled in To	TDIES I	1 4114 07 11		

EPA SAMPLE NO.

Page 5 of 14

PCDD/PCDF TOXICITY EQUIVALENCE SUMMARY Use for Sample and Blank Results

99284154 RE

Lab Name: SOUTHWEST LAB. OF OKLAHOMA

Client Name: E&E-WA

Matrix (aqueous/solid/leachate): solid

Sample Receipt Date: 07/09/99

Ext. Date: 07/30/99 Shift:

Analysis Date: 5-AUG-99 Time: 13:11:21 GC Column ID: DB-5

Extract Volume(ul): 20.0

Romied Little

Injection Volume(u1): 2.00

Dilution Factor: 1

Episode No.: 39334

Lab Sample ID: 39334.01RE

Sample Wt/Vol: 10.57 g or mL: g

Initial Calibration Date: 07/01/99

Instrument ID: AutoSpec

Sample Data Filename: A105252#5

Blank Data Filename: A105252#2

Cal. Ver. Data Filename: A105250#14

Concentration Units (pg/L or ng/Kg dry weight): ng/Kg % Moisture: 6.81

	CONCENTRATION	TEF(1)	TEF-ADJUSTED CONCENTRATION
2,3,7,8-TCDD 1,2,3,7,8-PeCDD 1,2,3,4,7,8-HxCDD 1,2,3,6,7,8-HxCDD 1,2,3,4,6,7,8-HpCDD 0CDD 2,3,7,8-TCDF 1,2,3,4,7,8-PeCDF 2,3,4,7,8-PeCDF 1,2,3,4,7,8-HxCDF 1,2,3,6,7,8-HxCDF 1,2,3,6,7,8-HxCDF 1,2,3,4,6,7,8-HxCDF 1,2,3,4,6,7,8-HpCDF 1,2,3,4,6,7,8-HpCDF 1,2,3,4,6,7,8-HpCDF	* * 5.15 49.87 * 0.36 13.63 0.90 * 1.83 4.35	X 1.0 X 0.5 X 0.1 X 0.1 X 0.01 X 0.001 X 0.05 X 0.5 X 0.1 X 0.1 X 0.1 X 0.1 X 0.1 X 0.1 X 0.01 X 0.01 X 0.01 X 0.01 X 0.01 X 0.01	* 5.15e-02 4.99e-02 * 1.79e-01 1.36e+00 9.02e-02 * 1.83e-02 4.35e-03

Total: 1.756e+00

(1) Taken from 'Interim Procudures for Estimating Risks Associated with Exposures to Mixtures of Chlorinated Dibenzo-p-Dioxin and -Dibenzofurans (CDDs and CDFs) and 1989 Udate(EPA/625/3-89/016, March 1989.'

CLIENT ID.

PCDD/PCDF ANALYSIS DATA SHEET Use for Sample and Blank Results

99284155

Episode No.: 39334 Lab Name: Southwest Lab. of Oklahoma

Lab Code: SWL Case No.:

SDG No.:

Lab Sample ID: 39334.04

Client Name: E&E-WA

Sample Wt/Vol: 14.66

g or mL: g

Matrix (aqueous/solid/leachate): solid Initial Calibration Date: 07-01-99

Sample Receipt Date: 07-09-99

Instrument ID: AutoSpec

Ext. Date: 07-09-99

GC Column:DB-5

Ext. Vol(ul):20.0 Inj. Vol(ul):2.0

Sample Data Filename: A105224#3

Analysis Date: 28-JUL-99 Time: 22:54:41 Blank Data Filename: A105224#2

Dilution Factor: 1

Cal. Ver. Data Filename: A105222#14

Concentration Units (pg/L or ng/Kg dry weight): ng/Kg

% Moisture: 5.50

	CONCENTRATION	N DETECTION	Qual.	ION ABUND.	RRT	MEAN
ANALYTE	FOUND	LIMIT	(1)	RATIO (2)	(2)	RRF
2,3,7,8-TCDD	*	0.249	บ	*	*	1.48
1,2,3,7,8-PeCDD	*	0.357	U	* *	*	1.11
1,2,3,4,7,8-HxCDD	*	0.357	U	*	*	0.74
1,2,3,4,7,8-HXCDD	*	0.240	Ū	*	*	1.10
1,2,3,6,7,8-HxCDD	*	0.276	บ	*	*	0.96
1,2,3,7,8,9-HxCDD	*	0.400	Ū	*	* *	1.14
1,2,3,4,6,7,8-HpC	1.293		_	0.96	1.000	1.11
OCDD	1.293		· U	*	*	1.15
2,3,7,8-TCDF	*		U	*	. *	0.98
1,2,3,7,8-PeCDF	*		Ū	*	, *	0.97
2,3,4,7,8-PeCDF			Ū	* *	*	1.03
1,2,3,4,7,8-HxCDF	· · · · · · · · · · · · · · · · · · ·		บ	*	*	1.38
1,2,3,6,7,8-HxCDF			บ	*	* *	0.87
1,2,3,7,8,9-HxCDF	• *		บ	*	*	1.18
2,3,4,6,7,8-HxCDF			. п	* *	*	1.44
1,2,3,4,6,7,8-HpC	DF *		บ	*	*	1.02
1,2,3,4,7,8,9-HpC	DF *		. บ		*	1.21
OCDF	•	0.351	U			
Total Tetra-Dioxi	.ns	0.249	บ			
Total Penta-Dioxi		* 0.357	, U			•
Total Hexa-Dioxir		* 0.240	U	•		
Total Hepta-Diox		* 0.400	บ	•		
Total Tetra-Furar		* 0.271	บ			
Total Penta-Furar		* 0.233	U			
Total Hexa-Furans		* 0.174	U	•		
Total Hepta-Fura		* 0.218	บ	•		
(1) Ovalifiers: II		détected: X	& I - 1	EMPC. C - us	e value	

(1) Qualifiers: U and * - not detected; X & I - EMPC. C from second column analysis. B - possible blank contamination.

(2) RRTs and ion ratios are specified in Tables 11 and 8, Method 8290. 8290F1

USEPA, 1DFB

EPA SAMPLE NO.

PCDD/PCDF TOXICITY EQUIVALENCE SUMMARY Use for Sample and Blank Results

99284155

Lab Name: SOUTHWEST LAB. OF OKLAHOMA

Episode No.: 39334

Client Name: E&E-WA

Lab Sample ID: 39334.04

Matrix (aqueous/solid/leachate): solid

Sample Wt/Vol. 14.66 g or mL: g

Sample Receipt Date: 07-09-99

Initial Calibration Date: 07-01-99

Ext. Date: 07-09-99 Shift:

Instrument ID: AutoSpec

Analysis Date: 28-JUL-99 Time: 22:54:41

GC Column ID: DB-5

Extract Volume(ul): 20.0

Sample Data Filename: A105224#3

Injection Volume(ul): 2.00

герсурунд двен

Blank Data Filename: A105224#2

Dilution Factor: 1

Cal. Ver. Data Filename: A105222#14

% Moisture: 5.50 Concentration Units (pg/L or ng/Kg dry weight): ng/Kg

	CONCENTRATION	TEF(1)	TEF-ADJUSTED CONCENTRATION
·	*	x 1.0	*
2,3,7,8-TCDD	•	x 0.5	` *
1,2,3,7,8-PeCDD	<u>.</u>	x 0.1	*
1,2,3,4,7,8-HxCDD	*	x 0.1	***
1,2,3,6,7,8-HxCDD	•	x 0.1	*
1,2,3,7,8,9-HxCDD	•	x 0.01	*
1,2,3,4,6,7,8-HpCDD	1.29	X 0.001	1.29e-03
OCDD	*	x 0.1	*
2,3,7,8-TCDF	<u>.</u> .	X 0.05	*
1,2,3,7,8-PeCDF	· ·	x 0.5	*
2,3,4,7,8-PeCDF	*	X 0.1	*
1,2,3,4,7,8-HxCDF	•	x 0.1	* '
1,2,3,6,7,8-HxCDF		x 0.1	*
1,2,3,7,8,9-HxCDF		x 0.1	*
2,3,4,6,7,8-HxCDF	· · · · · · · · · · · · · · · · · · ·	57	* * * * * * * * * * * * * * * * * * *
1,2,3,4,6,7,8-HpCDF	*	X 0.01	*
1,2,3,4,7,8,9-HpCDF		x 0.01	*
OCDF	*	X 0.001	

Total: 1.293e-03

(1) Taken from 'Interim Procudures for Estimating Risks Associated with Exposures to Mixtures of Chlorinated Dibenzo-p-Dioxin and -Dibenzofurans (CDDs and CDFs) and 1989 Udate(EPA/625/3-89/016, March 1989.

Form 1

CLIENT ID.

PCDD/PCDF ANALYSIS DATA SHEET Use for Sample and Blank Results

Lab Name: Southwest Lab. of Oklahoma

Episode No.: 39334

Lab Code: SWL Case No.:

SDG No.:

Lab Sample ID: 39334.05

Client Name: E&E-WA

Sample Wt/Vol: 1050 g or mL: mL

Matrix (aqueous/solid/leachate): aqueous Initial Calibration Date: 07/22/99

Sample Receipt Date: 07/09/99

Instrument ID: AutoSpec

Ext. Date: 07/14/99

GC Column: DB-5

Ext. Vol(u1):20.0

Inj. Vol(u1):1.0

Sample Data Filename: A105222#6

Analysis Date: 28-JUL-99 Time: 13:37:16

Blank Data Filename: A105222#4

Dilution Factor: 1

Cal. Ver. Data Filename: A105222#2

Concentration Units (pg/L or ng/Kg dry weight): pg/L % Moisture:

•	CONCENTRATION	DETECTION	Qual.	ION ABUND. RATIO (2)	RRT (2)	MEAN RRF
ANALYTE	FOUND	LIMIT	(1)	RATIO (2)	(2)	
0 2 7 0 MCDD	*	3.871	U	*	*	1.37
2,3,7,8-TCDD	*	3.886	Ū.	*	. *	1.17
1,2,3,7,8-PeCDD	*	5.224	Ŭ	*	.*	1.10
1,2,3,4,7,8-HxCDD		4.515	Ü	*	*	0.99
1,2,3,6,7,8-HxCDD	*	4.530	Ü	*	*	1.09
1,2,3,7,8,9-HxCDD	•	3.437	Ü	*	*	1.21
1,2,3,4,6,7,8-HpCl	טט 12.157	3.939	ŭ	0.83	1.000	1.28
OCDD	12.13/	3.966	Ü	*	*	1.15
2,3,7,8-TCDF	*	2.185	ับ	*	*	1.01
1,2,3,7,8-PeCDF	*	2.017	Ü	*	*	1.07
2,3,4,7,8-PeCDF		3.064	Ü.	*	*	1.16
1,2,3,4,7,8-HxCDF	•	2.977	Ü	*	*	1.08
1,2,3,6,7,8-HxCDF	*	4.254	Ü	*	* .	1.14
1,2,3,7,8,9-HxCDF		3.267	Ü	*	*	1.13
2,3,4,6,7,8-HxCDF		2.912	Ü	· *	*	1.35
1,2,3,4,6,7,8-HpC		4.018	บ	*	.>★	1.40
1,2,3,4,7,8,9-HpC	DF *	3.355	Ü	*	* *	1.45
OCDF		3.333	J		•	
Total Tetra-Dioxi	ns *	3.871	Ū			
Total Penta-Dioxi		3.886	Ŭ			
Total Hexa-Dioxin		4.515	Ü			
Total Hepta-Dioxi	_	3.437	Ŭ			
Total Tetra-Furar		3.966	บ			
Total Penta-Furar	a.	2.017	· U			
Total Hexa-Furans		2.977	U			
Total Hepta-Furar	_	2.912	. U		,	
Total hepta-raia		+ + 3 . Ob -	W C T	indicator	ביאים ייטאים	C need

(1) Qualifier U indicates not detected; The X & I indicates EMPC. The C needs value from second column analysis. The B indicates possible blank contamination.

(2) RRTs and ion ratios are specified in Tables 2 and 9, Method 1613.

ITD USEPA, 1DFB

EPA SAMPLE NO.

PCDD/PCDF TOXICITY EQUIVALENCE SUMMARY Use for Sample and Blank Results

99284156

Lab Name: SOUTHWEST LAB. OF OKLAHOMA

Episode No.: 39334

Client Name: E&E-WA

Lab Sample ID: 39334.05

Matrix (aqueous/solid/leachate): aqueous

Sample Wt/Vol: 1050 g or mL: mL

Sample Receipt Date: 07/09/99

Initial Calibration Date: 07/22/99

Instrument ID: AutoSpec

Ext. Date: 07/14/99 Shift:

GC Column ID: DB-5

Analysis Date: 28-JUL-99 Time: 13:37:16

Sample Data Filename: A105222#6

Extract Volume(ul): 20.0

Blank Data Filename: A105222#4

Injection Volume(ul): 2.00

Cal. Ver. Data Filename: A105222#2

Dilution Factor: 1

Concentration Units (pg/L or ng/Kg dry weight): pg/L % Moisture:

	CONCENTRATION	TEF(1)	TEF-ADJUSTED CONCENTRATION
2,3,7,8-TCDD 1,2,3,7,8-PeCDD 1,2,3,4,7,8-HxCDD 1,2,3,6,7,8-HxCDD 1,2,3,7,8,9-HxCDD 1,2,3,4,6,7,8-HpCDD 0CDD 2,3,7,8-TCDF 1,2,3,7,8-PeCDF 2,3,4,7,8-PeCDF 1,2,3,4,7,8-HxCDF 1,2,3,6,7,8-HxCDF 1,2,3,7,8,9-HxCDF 2,3,4,6,7,8-HxCDF 1,2,3,4,6,7,8-HpCDF 1,2,3,4,6,7,8-HpCDF 1,2,3,4,6,7,8-HpCDF 1,2,3,4,6,7,8-HpCDF	* * * * * * * * * * * * * * * * * * *	X 1.0 X 0.5 X 0.1 X 0.1 X 0.01 X 0.001 X 0.01 X 0.05 X 0.5 X 0.1 X 0.1 X 0.1 X 0.1 X 0.01 X 0.01 X 0.01 X 0.01	# # # # # # # # # # # # # # # # # # #
		· · · · · · · · · · · · · · · · · · ·	Total: 1.216e-02

- (1) Taken from 'Interim Procudures for Estimating Risks Associated with Exposures to Mixtures of Chlorinated Dibenzo-p-Dioxin and -Dibenzofurans (CDDs and CDFs) and 1989 Udate(EPA/625/3-89/016, March 1989.
 - * Total TEF is calculated by summing up all positively identified isomers of each homologous series. 6/90

Form 1

CLIENT ID.

PCDD/PCDF ANALYSIS DATA SHEET Use for Sample and Blank Results

99284158 RE

Lab Name: Southwest Lab. of Oklahoma

Episode No.: 39334

Lab Code: SWL Case No.:

SDG No.:

Lab Sample ID: 39334.06RE

Client Name: E&E-WA

Sample Wt/Vol: 10.46

g or mL: g

Matrix (aqueous/solid/leachate): solid

Initial Calibration Date: 07/01/99

Sample Receipt Date: 07/09/99

Instrument ID: AutoSpec

Ext. Date: 07/30/99

GC Column: DB-5

Ext. Vol(u1):20.0

Inj. Vol(ul):2.0

Sample Data File name: A105253#1

Analysis Date: 5-AUG-99 Time: 17:31:06 Blank Data Filename: A105252#2

Dilution Factor: 1

Cal. Ver. Data Filename: A105250#14

Concentration Units (pg/L or ng/Kg dry weight): ng/Kg

% Moisture: 7.42

	CONCENTRATION	DETECTION	Qual.	ION ABUND.	RRT	MEAN RRF	
ANALYTE	FOUND	LIMIT	(1)	RATIO (2)	(2)	KKP	
·	•	0.331	U	*	. *	1.48	
2,3,7,8-TCDD	. *.	0.998	บ	*	*	1.11	
1,2,3,7,8-PeCDD		0.602	. ប	. *	. *	0.74	
1,2,3,4,7,8-HxCDD	_ ;	· ·	_	0.71	1.000	1.10	
1,2,3,6,7,8-HxCDD	1.712	0.405	ュ	1.99	1.009	0.96	ŧ
1,2,3,7,8,9-HxCDD	1.744	0.465	ゴ			1.14	
1,2,3,4,6,7,8-HpC	DD 51.369	1.705		1.09	1.000		
OCDD	386.564	1.608	5	0.91	1.001	1.11	
2,3,7,8-TCDF	**			0.79	1.002	1.15	
1,2,3,7,8-PeCDF	*	0.537	U .	*	*	0.98	
2,3,4,7,8-PeCDF	*	0.543	Ŭ	*	*	0.97	
1,2,3,4,7,8-HxCDF	25.284	0.632	5	1.15	0.999	1.03	
1,2,3,6,7,8-HxCDF	•	0.474		1.33	1.003	1.38	
1,2,3,7,8,9-HxCDF	· ·	0.750	U	*	*	0.87	
2,3,4,6,7,8-HxCDF	3.079	0.554		1.12	1.019	1.18	•
1,2,3,4,6,7,8-HpC		1.446		0.98	1.000	1.44	
1,2,3,4,6,7,6-npc		2.036	ប	* '	*	1.02	
1,2,3,4,7,8,9-HpC OCDF	19.036	1.979	5	0.74	1.004	1.21	
OCDI							,
Total Tetra-Dioxi	ins 2.580	0.331			• •		
Total Penta-Dioxi		0.998	U				
Total Hexa-Dioxi		0.405	•				
Total Hepta-Diox:	- -	1.705					
Total Tetra-Fura		0.397		•			
Total Penta-Fura	· - -	0.543	•				
Total Hexa-Furan	, •	0.474					
Total Hepta-Fura		1.446	•				•
(1) Qualifiers: U		tected: X A	. т – म	MPC. C - us	e value	,	
(1) Qualifiers: U	-lum - not de	P - possil	ole bla	nk contamin	ation.		

from second column analysis. B - possible blank contamination.

** SEL SECOND COLUMN

(2) RRTs and ion ratios are specified in Tables 11 and 8, Method 8290.

ONANTI TATION

ANALYSIS FOR

USEPA, ITD 1DFB

Page 10 of 14

EPA SAMPLE NO.

PCDD/PCDF TOXICITY EQUIVALENCE SUMMARY Use for Sample and Blank Results

99284158 RE

Lab Name: SOUTHWEST LAB. OF OKLAHOMA

Client Name: E&E-WA

Matrix (aqueous/solid/leachate): solid

Sample Receipt Date: 07/09/99

Ext. Date: 07/30/99 Shift:

Analysis Date: 5-AUG-99 Time: 17:31:06

Extract Volume(u1): 20.0

Injection Volume(u1): 2.00

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Dilution Factor: 1

Episode No.: 39334

Lab Sample ID: 39334.06RE

Sample Wt/Vol: 10.46 g or mL: g

Initial Calibration Date: 07/01/99

Instrument ID: AutoSpec

GC Column ID: DB-5

Sample Data Tilename: A105253#1

Blank Data Filename: A105252#2

Cal. Ver. Data Filename: A105250#14

Concentration Units (pg/L or ng/Kg dry weight): ng/Kg % Moisture: 7.42

	CONCENTRATION	TEF(1)	TEF-ADJUSTED CONCENTRATION
2,3,7,8-TCDD 1,2,3,7,8-PeCDD 1,2,3,4,7,8-HxCDD 1,2,3,6,7,8-HxCDD 1,2,3,7,8,9-HxCDD 1,2,3,4,6,7,8-HpCDD OCDD 2,3,7,8-TCDF 1,2,3,7,8-PeCDF 2,3,4,7,8-HxCDF 1,2,3,6,7,8-HxCDF 1,2,3,6,7,8-HxCDF 1,2,3,4,6,7,8-HxCDF 1,2,3,4,6,7,8-HxCDF 1,2,3,4,6,7,8-HpCDF 1,2,3,4,6,7,8-HpCDF 1,2,3,4,6,7,8-HpCDF	1.71 1.74 51.37 386.56 ND-2.00 ** 25.28 1.17 * 3.08 11.38 *	X 1.0 X 0.5 X 0.1 X 0.1 X 0.01 X 0.001 X 0.001 X 0.1 X 0.1 X 0.1 X 0.1 X 0.1 X 0.1 X 0.01 X 0.01 X 0.01 X 0.01 X 0.01	1.71e-01 1.74e-01 5.14e-01 3.87e-01 2.00e-01

Total: 4.5320+00 @ 8/26/99 4:332 E+00

(1) Taken from 'Interim Procudures for Estimating Risks Associated with Exposures to Mixtures of Chlorinated Dibenzo-p-Dioxin and -Dibenzofurans (CDDs and CDFs) and 1989 Udate(EPA/625/3-89/016, March 1989.

NOTE: Concentrations, EMPCs, and EDL are calculated on a dry weight basis.

447.84

37C1-2,3,7,8-TCDD 800

55.98

TCDDF1I



0.99

CLIENT ID.

PCDD/PCDF ANALYSIS DATA SHEET Use for Sample and Blank Results

99284159

Lab Name: Southwest Lab. of Oklahoma Episode No.: 39334

Lab Code: SWL Case No.:

SDG No.:

Lab Sample ID: 39334.09

Client Name: E&E-WA

Sample Wt/Vol: 14.51

g or mL: g

Matrix (aqueous/solid/leachate): solid Initial Calibration Date: 07-01-99

Sample Receipt Date: 07-09-99

Instrument ID: AutoSpec

GC Column:DB-5

Ext. Date: 07-09-99 Ext. Vol(ul):20.0

Inj. Vol(ul):2.0

Sample Data Filename: A105224#4

Analysis Date: 28-JUL-99 Time: 23:43:27 Blank Data Filename: A105224#2

Dilution Factor: 1

Cal. Ver. Data Filename: A105222#14

Concentration Units (pg/L or ng/Kg dry weight): ng/Kg

% Moisture: 15.47

ANALYTE	ONCENTRATION FOUND	DETECTION LIMIT	Qual. (1)	ION ABUND. RATIO (2)	RRT (2)	MEAN RRF
FILTER				1. 4	*	1.48
2,3,7,8-TCDD	*	0.553	. U	<u>.</u>	, *	1.11
1,2,3,7,8-PeCDD	*	0.694	U .	·	*	0.74
1,2,3,4,7,8-HxCDD	*	1.205	U	-	1.000	1.10
1,2,3,6,7,8-HxCDD	2.254	0.811	ゴ	2.54	*	0.96
1,2,3,7,8,9-HxCDD	*	0.930	ប		1.000	1.14
1,2,3,4,6,7,8-HpCDI	106.124	2.437	3	1.10	1.000	1.11
OCDD	1255.142	0.681	ッ	0.93	*	1.15
2,3,7,8-TCDF	*	0.341	ุ ∵บ		*	0.98
1,2,3,7,8-PeCDF	. *	0.524	บ	*	*	0.97
2,3,4,7,8-PeCDF	* .	0.530	บ		1.000	1.03
1,2,3,4,7,8-HxCDF	4.127	1.525	ゴ .	1.30	*	1.38
1,2,3,4,7,8 HxCDF	*	1.144	ប	*	*	0.87
1,2,3,7,8,9-HxCDF	*	1.810	ับ	*	*	1.18
2,3,4,6,7,8-HxCDF	*	1.337	U	*		1.44
2,3,4,6,7,8-HACDI	F 23.511	1.176		0.96	1.000	1.02
1,2,3,4,6,7,8-HpCI		1.656	ָּט	*		1.21
1,2,3,4,7,8,9-HpCI	35.485	1.409	ゴ	0.90	1.003	1.21
OCDF	32,000		*			
Total Tetra-Dioxi	*	0.553	U.			•
Total Tetra-Dioxin	19. *	0.694	ับ			
Total Penta-Dioxin	*	0.811	ប			•
Total Hexa-Dioxin	ns 226.210	2.437		•		
Total Hepta-Dioxi		0.341	•			
Total Tetra-Furan		0.530				
Total Penta-Furan					•	
Total Hexa-Furans		1 176				
Total Hepta-Furan	and * = not d	etected; X	- I 3	EMPC. C - u	se value	,

(1) Qualifiers: U and * - not de from second column analysis. B - possible blank contamination.

(2) RRTs and ion ratios are specified in Tables 11 and 8, Method 8290.



USEPA, ITD 1DFB

EPA SAMPLE NO.

PCDD/PCDF TOXICITY EQUIVALENCE SUMMARY Use for Sample and Blank Results

99284159

Lab Name: SOUTHWEST LAB. OF OKLAHOMA

Episode No.: 39334

Client Name: E&E-WA

Lab Sample ID: 39334.09

Matrix (aqueous/solid/leachate): solid

Sample Wt/Vol: 14.51 g or mL: g

Sample Receipt Date: 07-09-99

Initial Calibration Date: 07-01-99

Instrument ID: AutoSpec

Ext. Date: 07-09-99 Shift:

Analysis Date: 28-JUL-99 Time: 23:43:27

GC Column ID: DB-5

Extract Volume(ul): 20.0

Sample Data Filename: A105224#4

Injection Volume(ul): 2.00

Blank Data Filename: A105224#2

Dilution Factor: 1

Cal. Ver. Data Filename: A105222#14

Concentration Units (pg/L or ng/Kg dry weight): ng/Kg % Moisture: 15.47

	CONCENTRATION	TEF (1)	TEF-ADJUSTED CONCENTRATION
	•	X 1.0	*
2,3,7,8-TCDD	<u>.</u>	X 0.5	*
1,2,3,7,8-PeCDD		X 0.1	*
1,2,3,4,7,8-HxCDD			2.25e-01
1,2,3,6,7,8-HxCDD	2.25	X 0.1	2.256-01
1,2,3,7,8,9-HxCDD	*	X 0.1	1.0500
1,2,3,4,6,7,8-HpCDD	106.12	X 0.01	1.06e+00
OCDD	1255.14	X 0.001	1.26e+00
2,3,7,8-TCDF	, *	X 0.1	*
1,2,3,7,8-PeCDF	*	X 0.05	*
2,3,4,7,8-PeCDF	*	X 0.5	* '
	4.13	x 0.1	4.13e-01
1,2,3,4,7,8-HxCDF	*. 13	X 0.1	*
1,2,3,6,7,8-HxCDF	<u>.</u>	X 0.1	· *
1,2,3,7,8,9-HxCDF	-	X 0.1	*
2,3,4,6,7,8-HxCDF		•	2.35e-01
1,2,3,4,6,7,8-HpCDF	23.51	X 0.01	2.336-01
1,2,3,4,7,8,9-HpCDF	*	X 0.01	7 55- 00
OCDF	35.48	X 0.001	3.55e-02
	•		*

Total: 3.225e+00

(1) Taken from 'Interim Procudures for Estimating Risks Associated with Exposures to Mixtures of Chlorinated Dibenzo-p-Dioxin and -Dibenzofurans (CDDs and CDFs) and 1989 Udate(EPA/625/3-89/016, March 1989.'

USEPA - ITD

Page 6 of 7

AATS/SWOK, INC. 2378-TCDF ANALYSIS DATA SHEET Use for Sample and Blank Results

99284159

CLIENT ID

Client Name: E&E-WA

Lab Sample ID: 39334.09RE

Matrix (aqueous/solid/leachate): solid Sample Wt/Vol: 10.18 g or mL: g

Sample Receipt Date: 07/09/99

Initial Calibration Date: 05/13/99

Ext. Date: 07/30/99

Instrument ID: 70S

Analysis Date: 10-AUG-99 Time: 20:48:18

GC Column ID: SP2331

Extract Volume (uL): 20.0

Sample Data Filename: S104247#6

Injection Volume (uL): 2.0

Blank Data Filename: S104247#2

Dilution Factor: 1

Cal. Ver. Data Filename: S104247#1

Concentration Units (pg/L or ng/Kg dry weight): ng/Kg % Moisture: 15.47

ANALYTE	CONCENTRATION FOUND	DETECTION LIMIT	EMPC	ION ABUND. RATIO (1)	RRT (1)
2,3,7,8-TCDF	*	3.0769	*	*	*
INT. STANDARD	SPIKE CONCENTRATION	CONCENT. FOUND	RECOV.	ION ABUND. RATIO (2)	RRT (1)
13C-2,3,7,8-TCDF	1000	467.94	46.79	0.77	1.16
CLEANUP STANDARD	Tanana kanana kanan		•		
37C1-2,3,7,8-TCDD	800	444.47	55.56		0.99

NOTE: Concentrations, EMPCs, and EDL are calculated on a dry weight basis.

Form '

PCDD/PCDF ANALYSIS DATA SHEET _____

PCDD/PCDF ANALYSIS DATA SHEET
Use for Sample and Blank Results

99284160

Lab Code: SWL Case No.: SDG No.: Lab Sample ID: 39334.10

Client Name: E&E-WA Sample Wt/Vol: 17.85 g or mL: g

Sample Receipt Date: 07-09-99 Instrument ID: AutoSpec

Ext. Date: 07-09-99 GC Column:DB-5

Ext. Vol(ul):20.0 Inj. Vol(ul):2.0 Sample Data Filename: A105224#5

Apalysis Date: 29-JUL-99 Time: 00:32:13 Blank Data Filename: A105224#2

Dilution Factor: 1 Cal. Ver. Data Filename: A105222#14

Concentration Units (pg/L or ng/Kg dry weight): ng/Kg % Morsture: 10.53

	CONCENTRATION	DETECTION	Qual.	ION ABUND.	RRT	MEAN
ANALYTE	FOUND	LIMIT	· (1)	RATIO (2)	(2)	RRF
2,3,7,8-TCDD	*	0.308	U	* *	*.	1.48
1,2,3,7,8-PeCDD	*	0.340	U	*	*	1.11
1,2,3,4,7,8-HxCDD	*	0.413	U,	*	*	0.74
1,2,3,6,7,8-HxCDD	*	0.278	U	*	*	1.10
1,2,3,7,8,9-HxCDD	. *	0.319	U	*	. *	0.96
1,2,3,4,6,7,8-HpCD	D 1.333	0.259	7	0.82	1.000	1.14
OCDD	8.960	0.334		0.87	1.000	1.11
2,3,7,8-TCDF	*	0.148	Ū	*	*	1.15
1,2,3,7,8-PeCDF	.*	0.254	Ū	, *	*	0.98
2,3,4,7,8-PeCDF	*	0.257	U	*	. *	0.97
1,2,3,4,7,8-HxCDF	1.521	0.247	、ゴ	1.05	1.000	1.03
1,2,3,6,7,8-HxCDF	* .	0.185	· U	*	*	1.38
1,2,3,7,8,9-HxCDF	*	0.294	U	*	*	0.87
2,3,4,6,7,8-HxCDF	*	0.217	U	* *	*	1.18
1,2,3,4,6,7,8-HpCI	OF 0.553	0.160		1.10	1.000	1.44
1,2,3,4,7,8,9-HpCI	* אר	0.225	บ	*	*	1.02
OCDF	*	0.423	U	*	*	1.21
Total Tetra-Dioxi	ne *	0.308	U			
Total Penta-Dioxi		0.340	ΰ.			
		0.278	ŢŢ			•
Total Hexa-Dioxin		0.259	Ţ.			•
Total Hepta-Dioxi		0.148	•	·	•	
Total Tetra-Furan		0.257			•	
Total Penta-Furan	1.252	0.185	,			
Total Hexa-Furans		0.160				•
Total Hepta-Furan			ьт - E	MPC. C - us	e value	
(1) Qualifiers: U	and * - not de	scected, w				

(1) Qualifiers: U and * - not detected; X & I - EMPC. C - use value from second column analysis. B - possible blank contamination.

(2) RRTs and ion ratios are specified in Tables 11 and 8, Method 8290. 8290F1



USEPA,

EPA SAMPLE NO.

PCDD/PCDF TOXICITY EQUIVALENCE SUMMARY Use for Sample and Blank Results

99284160

Lab Name: SOUTHWEST LAB. OF OKLAHOMA

Episode No.: 39334

Client Name: E&E-WA

Lab Sample ID: 39334.10

Matrix (aqueous/solid/leachate): solid

Sample Wt/Vol: 17.85 g or mL: g

Sample Receipt Date: 07-09-99

Initial Calibration Date: 07-01-99

Instrument ID: AutoSpec

Ext. Date: 07-09-99 Shift:

Analysis Date: 29-JUL-99 Time: 00:32:13

reduct files

GC Column ID: DB-5

Extract Volume(ul): 20.0

Sample Data Filename: A105224#5

Injection Volume(ul): 2.00

Blank Data Filename: A105224#2

Dilution Factor: 1

Cal. Ver. Data Filename: A105222#14

Concentration Units (pg/L or ng/Kg dry weight): ng/Kg % Moisture: 10.53

	CONCENTRATION	TEF(1)	TEF-ADJUSTED CONCENTRATION
•		X 1.0	*
2,3,7,8-TCDD	. *		*
1,2,3,7,8-PeCDD	*	X 0.5	···
1,2,3,4,7,8-HxCDD	*	X 0.1	
1,2,3,6,7,8-HxCDD	*	X 0.1	*
	*	X 0.1	* .
1,2,3,7,8,9-HxCDD	1.33	x 0.01	1.33e-02
1,2,3,4,6,7,8-HpCDD		X 0.001	8.96e-03
OCDD .	8.96	x 0.1	*
2,3,7,8-TCDF	*	 - ·	*
1,2,3,7,8-PeCDF	*	x 0.05	•
2,3,4,7,8-PeCDF	*	X 0.5	
1,2,3,4,7,8-HxCDF	1.52	X 0.1	1.52e-01
	*	X 0.1	*
1,2,3,6,7,8-HxCDF	*	x 0.1	, ★ , ,
1,2,3,7,8,9-HxCDF	• •	X 0.1	*
2,3,4,6,7,8-HxCDF		X 0.01	5.53e-03
1,2,3,4,6,7,8-HpCDF	0.55		*
1,2,3,4,7,8,9-HpCDF	*	X 0.01	
OCDF	*	X 0.001	•
OCDI			1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

Total: 1.799e-01

⁽¹⁾ Taken from 'Interim Procudures for Estimating Risks Associated with Exposures to Mixtures of Chlorinated Dibenzo-p-Dioxin and -Dibenzofurans (CDDs and CDFs) and 1989 Udate (EPA/625/3-89/016, March 1989.

Page 5 of

Form 1

CLIENT ID.

PCDD/PCDF ANALYSIS DATA SHEET Use for Sample and Blank Results

99284161

Lab Name: Southwest Lab. of Oklahoma

Episode No.: 39334

Lab Code: SWL Case No.:

SDG No.:

Lab Sample ID: 39334.11

Client Name: E&E-WA

Sample Wt/Vol: 1050

g or mL: mL

Matrix (aqueous/solid/leachate): aqueous Initial Calibration Date: 07/22/99

Sample Receipt Date: 07/09/99

Instrument ID: AutoSpec

GC Column:DB-5

Ext. Date: 07/14/99

Ext. Vol(ul):20.0

Inj. Vol(ul):1.0 Sample Data Filename: A175222#7

Analysis Date: 28-JUL-99 Time: 14:26:01 Blank Data Filename: A105222#4

Dilution Factor: 1

Cal. Ver. Data Filename: A105222#2

Concentration Units (pg/L or ng/Kg dry weight): pg/L % Moisture:

ANALYTE	CONCENTRATION FOUND	DETECTION LIMIT	Qual.	ION ABUND. RATIO (2)	RRT (2)	MEAN RRF
ANADITE	•		U	*	*	1.37
2,3,7,8-TCDD	*	4.476	IJ	*	*	1.17
1,2,3,7,8-PeCDD	*	4.648	U	*	*	1.10
1,2,3,4,7,8-HxCDI	*	3.617	U	*	*	0.99
1,2,3,6,7,8-HxCDI) · · · · · · · · · · · · · · · · · · ·	3.164	Ü	· *	*	1.09
1,2,3,7,8,9-HxCDI	D / "	3.182	U	*	*	1.21
1,2,3,4,6,7,8-Hp	CDD *	9.886		1.43	1.000	1.28
OCDD	13.882	6.829	V	¥.	*	1.15
2,3,7,8-TCDF	*	4.522	. U	*	*	1.01
1,2,3,7,8-PeCDF	*	2.242	U	*	*	1.07
2,3,4,7,8-PeCDF	*	2.237	U .	*	*	1.16
1,2,3,4,7,8-HxCD	F *	2.998	U	*	*	1.08
1,2,3,4,7,8-HxCD	- T	2.826	Ŭ	*	*	1.14
1,2,3,7,8,9-HxCD	- ਸ	4.309	U	. *	*	1.13
1,2,3,7,8,9-11xCL	יבי ידי *	3.139	U		*	1.35
2,3,4,6,7,8-HxCD	CDE *	4.390	. U	*	*	1.40
1,2,3,4,6,7,8-Hr	CDF *	6.411	Ū	· *		
1,2,3,4,7,8,9-Hg	*	3.598	U	*	*	1.45
	* =	4.476	U			•
Total Tetra-Dio	Kins		. ប			
Total Penta-Dio	xins		บ			
Total Hexa-Diox	ıns	9.886	บ			
Total Hepta-Dio	xins	4.522	Ü			
Total Tetra-Fur	ans	2.237	Ū			
Total Penta-Fur	ans	* 2.237 * 2.826	Ū	•		
Total Hexa-Fura	ns		ΤŢ	•		
Total Hepta-Fur	ans	* 4.390		T indicates	EMPC. T	he C need
Total Hepta-Fur	indicates not	detected; Tr	16 Y &	- reacible	blank co	ntaminat:

ds valu from second column analysis. The B indicates possible blank contamination. (1) Qualifier U

(2) RRTs and ion ratios are specified in Tables 2 and 9, Method 1613.

1DFB EPA SAMPLE NO.

PCDD/PCDF TOXICITY EQUIVALENCE SUMMARY Use for Sample and Blank Results

99284161

Lab Name: SOUTHWEST LAB. OF OKLAHOMA

Episode No.: 39334

Client Name: E&E-WA

Lab Sample ID: 39334.11

Matrix (aqueous/solid/leachate): aqueous Sample Wt/Vol: 1050

g or mL: mL

Sample Receipt Date: 07/09/99

Initial Calibration Date: 07/22/99

Instrument ID: AutoSpec

Ext. Date: 07/14/99 Shift:

Analysis Date: 28-JUL-99 Time: 14:26:01

GC Column ID: DB-5

Extract Volume(ul): 20.0

Sample Data Filename: A105222#7

Blank Data Filename: A105222#4

Injection Volume(ul): 2.00

Cal. Ver. Data Filename: A105222#2

Dilution Factor: 1

Concentration Units (pg/L or ng/Kg dry weight): pg/L % Moisture:

	CONCENTRATION	TEF(1)	TEF-ADJUSTED CONCENTRATION	
2,3,7,8-TCDD 1,2,3,7,8-PeCDD 1,2,3,4,7,8-HxCDD 1,2,3,7,8,9-HxCDD 1,2,3,4,6,7,8-HpCDD 0CDD 2,3,7,8-TCDF 1,2,3,7,8-PeCDF 2,3,4,7,8-PeCDF 1,2,3,4,7,8-HxCDF 1,2,3,6,7,8-HxCDF 1,2,3,7,8,9-HxCDF 1,2,3,4,6,7,8-HxCDF 1,2,3,4,6,7,8-HxCDF 1,2,3,4,6,7,8-HxCDF 1,2,3,4,6,7,8-HpCDF 1,2,3,4,7,8,9-HpCDF 0CDF	* * * * * * * * * * * * * * * * * * *	X 1.0 X 0.5 X 0.1 X 0.1 X 0.01 X 0.001 X 0.05 X 0.5 X 0.1 X 0.1 X 0.1 X 0.1 X 0.1 X 0.1 X 0.1 X 0.01 X 0.01 X 0.01 X 0.01 X 0.01 X 0.01	1.39e-02 * * * * * * * * * * * * * * * * *	Ø22/49
			*Total: 1.388e-02	911/199

- (1) Taken from 'Interim Procudures for Estimating Risks Associated with Exposures to Mixtures of Chlorinated Dibenzo-p-Dioxin and -Dibenzofurans (CDDs and CDFs) and 1989 Udate(EPA/625/3-89/016, March 1989.
 - Total TEF is calculated by summing up all positively identified isomers of each homologous series. 6/90



PCDD/PCDF ANALYSIS DATA SHEET Use for Sample and Blank Results 99284177

Lab Name: Southwest Lab. of Oklahoma

Episode No.: 39334

Lab Code: SWL Case No.:

SDG No.:

Lab Sample ID: 39334.12

Client Name: E&E-WA

Sample Wt/Vcl: 15.31 g or mL: g

Matrix (aqueous/solid/leachate): solid

Initial Calibration Date: 07-01-99

Sample Receipt Date: 07-09-99

Instrument ID: AutoSpec

GC Column:DB-5

Ext. Vol(ul):20.0 Inj. Vol(ul):2.0

Ext. Date: 07-09-99

Sample Data Filename: A105224#6

Analysis Date: 29-JUL-99 Time: 01:20:58

Blank Data Filename: A105224#2

Dilution Factor: 1

Cal. Ver. Data Filename: A105222#14

Concentration Units (pg/L or ng/Kg dry weight): ng/Kg

% Moisture: 9.70

ANALYTE	CONCENTRATION FOUND	DETECTION LIMIT	Qual. (1)	ION ABUND. RATIO (2)	RRT (2)	MEAN RRF
THU MILL		· ·	••	•	*	1.48
2,3,7,8-TCDD	*	0.369	<u>U</u>	+	*	1.11
1,2,3,7,8-PeCDD	*	0.660	U	*	*	0.74
1,2,3,4,7,8-HxCDD	*	1.097	U	*	*	1.10
1,2,3,6,7,8-HxCDD	*	0.739	U	. •	*	0.96
1,2,3,7,8,9-HxCDD	*	0.847	υ.	1.20	1.000	1.14
1,2,3,4,6,7,8-HpCI	DD 44.210	1.439	, 5 <u>.</u>	0.96	1.000	1.11
OCDD	373.338	1.934	5	*	*	1.15
2,3,7,8-TCDF	*	0.288	U	*	*	0.98
1,2,3,7,8-PeCDF	, *	0.655	ប	*	*	0.97
2,3,4,7,8-PeCDF	*	0.663	U	*	*	1.03
1,2,3,4,7,8-HxCDF	*	0.571	U	*	*	1.38
1,2,3,6,7,8-HxCDF	*	0.428	ซ		*	
1,2,3,7,8,9-HxCDF	*	0.678	บ	*	*	1.18
2,3,4,6,7,8-HxCDF	* *	0.500	U	*	*	1.44
1,2,3,4,6,7,8-HpC	* च रा	0.857	Ü	*	*	1.02
1,2,3,4,7,8,9-HpC	DF *	1.207	ע	*		1.02
0CDF	8.921	1.405	3	1.18	1.004	1.21
Total Tetra-Dioxi	ne *	0.369	ับ		•	
Total Penta-Dioxi	*	0.660	บ		•	•
Total Hexa-Dioxir	*	0.739	ប			
Total Hexa-Dioxii	ins 35.585	1.439		•	•	
Total Hepta-Diox		0.288				
Total Tetra-Furar						
Total Penta-Fura			ប			
Total Hexa-Furan Total Hepta-Fura		0.957	- T '1	EMPC. C - us	se value	
/1\ Ouelifiers: II	and * - not d	etectea; X	α T _ ,			

from second column analysis. B - possible blank contamination. (1) Qualifiers: U and * - not de

(2) RRTs and ion ratios are specified in Tables 11 and 8, Method 8290.



ITD USEPA. 1DFB

EPA SAMPLE NO.

PCDD/PCDF TOXICITY EQUIVALENCE SUMMARY Use for Sample and Blank Results

99284177

Lab Name: SOUTHWEST LAB. OF OKLAHOMA

Episode No.: 39334

Client Name: E&E-WA

Lab Sample ID: 39334.12

Matrix (aqueous/solid/leachate): solid

Sample wt/Vol: 15.31 g or mL: g

Sample Receipt Date: 07-09-99

Initial Calibration Date: 07-01-99

Ext. Date: 07-09-99 Shift:

Instrument ID: AutoSpec

Analysis Date: 29-JUL-99 Time: 01:20:58

GC Column ID: DB-5

Extract Volume(ul): 20.0

Sample Data Filename: A105224#6

Injection Volume(ul): 2.00

ರ್ಗಳಿಕ ತಥ ಕಡಿಸಿಕು

Blank Data Filename: A105224#2

Dilution Factor: 1

Cal. Ver. Data Filename: A105222#14

Concentration Units (pg/L or ng/Kg dry weight): ng/Kg % Moisture: 9.70

oncentration only				
	CONCENTRATION	TEF(1)	TEF-ADJUSTED CONCENTRATION	
2,3,7,8-TCDD 1,2,3,7,8-PeCDD 1,2,3,4,7,8-HxCDD 1,2,3,6,7,8-HxCDD 1,2,3,7,8,9-HxCDD 1,2,3,4,6,7,8-HpCDD OCDD 2,3,7,8-TCDF 1,2,3,7,8-PeCDF 2,3,4,7,8-PeCDF 1,2,3,4,7,8-HxCDF 1,2,3,6,7,8-HxCDF 1,2,3,7,8,9-HxCDF 1,2,3,4,6,7,8-HxCDF 2,3,4,6,7,8-HxCDF	* * 44.21 373.34 * * * * * * * * * * * * *	X 1.0 X 0.5 X 0.1 X 0.1 X 0.01 X 0.001 X 0.05 X 0.5 X 0.1 X 0.1 X 0.1 X 0.1 X 0.1 X 0.01 X 0.01		
1,2,3,4,7,8,9-HpCDF OCDF	8.92	X 0.001	motal: 8 244e-01	

Total: 8.244e-01

(1) Taken from 'Interim Procudures for Estimating Risks Associated with Exposures to Mixtures of Chlorinated Dibenzo-p-Dioxin and -Dibenzofurans (CDDs and CDFs) and 1989 Udate(EPA/625/3-89/016, March 1989.

6/90



CLIENT ID.

PCDD/PCDF ANALYSIS DATA SHEET Use for Sample and Blank Results

99284178

Lab Code: SWL Case No.:

SDG No .:

Lab Sample ID: 39334.13

Client Name: E&E-WA

Sample Wt/Vol: 17.04 g or mL: g

Initial Calibration Date: 07-01-99

Matrix (aqueous/solid/leachate): solid

Instrument ID: AutoSpec

Sample Receipt Date: 07-09-99

Ext. Date: 07-09-99

GC Column:DB-5

Ext. Vol(ul):20.0 Inj. Vol(ul):2.0

Sample Data Filename: A105224#7

Analysis Date: 29-JUL-99 Time: 02:09:45

Blank Data Filename: A105224#2

Dilution Factor: 1

Cal. Ver. Data Filename: A105222#14

Concentration Units (pg/L or ng/Kg dry weight): ng/Kg

% Moisture: 18.00

ANALYTE	CONCENTRATION FOUND	DETECTION LIMIT	Qual. (1)	ION ABUND. RATIO (2)	RRT (2)	MEAN RRF
ANALITE			**	*	. *	1.48
2,3,7,8-TCDD	*	0.413	Ŭ	*	*	1.11
1,2,3,7,8-PeCDD	*	0.930	U	+	* *	0.74
1,2,3,7,8-FCCDD		1.120	ָ 		*	1.10
1,2,3,4,7,8-HxCDD	*	0.754	U	<u>.</u>	*	0.96
1,2,3,6,7,8-HxCDD	*	0.864	U		1.000	1.14
1,2,3,7,8,9-HxCDD	op 55.006	1.005		1.04	1.000	1.11
1,2,3,4,6,7,8-HpCI	649.029	0.837	ゴ	0.95	1.000	1.15
OCDD	04J.025 *	0.328	ប្រ	*	•	0.98
2,3,7,8-TCDF	*	0.423	· U	*	*	0.90
1,2,3,7,8-PeCDF	*	0.428	ប	*	*	
2.3.4.7.8-PeCDF		1.021	5	1.06	1.001	
1.2.3,4,7,8-HXCDF	1.706	0.766	ับ	*	*	1.38
1.2.3.6,7,8-HxCDF	·	1.212	. บ	*	*	0.87
1 2.3.7.8.9-HXCDF		0.895	ับ	*	*	1.18
2.3.4.6,7,8-HXCDF	" <u></u>	0.642		0.97	1.000	1.44
1 2 3 4 6 7 8 HPC	DF 1.343	0.842	U	. *	· *	1.02
1,2,3,4,7,8,9-HpC	CDF.		U	0.96	1.003	1.21
OCDF	28.630	1.216			•	
. 002		- 4-9	Ū	•		
Total Tetra-Diox	ins *	0.413	. U			
Total Penta-Diox	ins *	0.930	U	•		
Total Hexa-Dioxi	ns 5.664	0.754				
Total Hepta-Diox	ins 124,462	1.005				•
Total Repta-Dion		0.328	ט			
Total Tetra-Fura	ns *	0.428	U		•	
Total Penta-Fura	3.403	0.766				
Total Hexa-Furar	· · ·				***1***	•
Total Hepta-Fura			& I -]	EMPC. C - u	se varue	
(1) Qualifiers: U	J and * - not 0	B - poss	ible bla	ank contami	nation.	

(2) RRTs and ion ratios are specified in Tables 11 and 8, Method 8290. 8290F1

ITD USEPA, 1DFB

EPA SAMPLE NO.

		・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・	TOR STIMMARY
PCDD/PCDF TO	OXICITY EQ	OIAMPE	ACE DOLLE
ACDD/ ACDT TO	هــــــ	plank	Results
PCDD/PCDF TO	Sample and	DIGIN	KCD

99284178

Lab Name: SOUTHWEST LAB. OF OKLAHOMA

Episode No.: 39334

Client Name: E&E-WA

Lab Sample ID: 39334.13

Matrix (aqueous/solid/leachate): solid

Sample Wt/Vol: 17.04 g or mL: g

Sample Receipt Date: 07-09-99

Initial Calibration Date: 07-01-99

Instrument ID: AutoSpec

Ext. Date: 07-09-99 Shift:

GC Column ID: DB-5

Analysis Date: 29-JUL-99 Time: 02:09:45

Extract Volume(ul): 20.0

Sample Data Filename: A105224#7

Injection Volume(ul): 2.00

Blank Data Filename: A105224#2

Cal. Ver. Data Filename: A105222#14

Dilution Factor: 1

% Moisture: 18.00 Concentration Units (pg/L or ng/Kg dry weight): ng/Kg TEF-ADJUSTED

	CONCENTRATION	TEF (1)	CONCENTRATION
2,3,7,8-TCDD 1,2,3,7,8-PeCDD 1,2,3,4,7,8-HxCDD 1,2,3,6,7,8-HxCDD 1,2,3,4,6,7,8-HpCDD 0CDD 2,3,7,8-TCDF 1,2,3,7,8-PeCDF 2,3,4,7,8-PeCDF 1,2,3,4,7,8-HxCDF 1,2,3,6,7,8-HxCDF 1,2,3,7,8,9-HxCDF 1,2,3,4,6,7,8-HxCDF 1,2,3,4,6,7,8-HpCDF 1,2,3,4,6,7,8-HpCDF 1,2,3,4,6,7,8-HpCDF 1,2,3,4,7,8,9-HpCDF	* * 55.01 649.03 * * 1.71 * 7.55 * 28.63	X 1.0 X 0.5 X 0.1 X 0.1 X 0.01 X 0.001 X 0.05 X 0.5 X 0.1 X 0.1 X 0.1 X 0.1 X 0.01 X 0.01 X 0.01 X 0.01	* * 5.50e-01 6.49e-01 * 1.71e-01 * 7.55e-02 2.86e-02
		• /	Total: 1.474e+00

(1) Taken from 'Interim Procudures for Estimating Risks Associated with Exposures to Mixtures of Chlorinated Dibenzo-p-Dioxin and -Dibenzofurans (CDDs and CDFs) and 1989 Udate (EPA/625/3-89/016, March 1989.'

6/90



Form 1

PCDD/PCDF ANALYSIS DATA SHEET Use for Sample and Blank Results

CLIENT ID.

99284179

Lab Name: Southwest Lab. of Oklahoma

Episode No.: 39334

Lab Code: SWL Case No.:

SDG No.:

Lab Sample ID: 39334.14

Sample Wt/Vol: 17.22

g or mL: g

Client Name: E&E-WA

Matrix (aqueous/solid/leachate): solid

Initial Calibration Date: 07-01-99

Sample Receipt Date: 07-09-99

Instrument ID: AutoSpec GC Column:DB-5

Ext. Date: 07-09-99

Sample Data Filename: A105224#8

Ext. Vol(ul):20.0

Inj. Vol(ul):2.0

Blank Data Filename: A105224#2

Analysis Date: 29-JUL-99 Time: 02:58:32

Cal. Ver. Data Filename: A105222#14

Dilution Factor: 1

% Moisture: 8.50 Concentration Units (pg/L or ng/Kg dry weight): ng/Kg

Concentration Unit	CONCENTRATION FOUND	DETECTION LIMIT	Qual.	ION ABUND. RATIO (2)	RRT (2)	MEAN RRF
ANALYTE	FOUND .				*	1.48
· · · · · · · · · · · · · · · · · · ·	*	0.370	· U	*	*	1.11
2,3,7,8-TCDD	. *	0.303	U	*	*	0.74
1,2,3,7,8-PeCDD	<u> </u>	. 0.457	Ū	*	*	1.10
1,2,3,4,7,8-HxCD	± ±	0.308	Ŭ	*	*	0.96
1.2.3.6,7,8-HXCL	טנ	0.353	U	*	1.000	1.14
1,2,3,7,8,9-HxCI	2.489	0.590	5	1.26	1.000	1.11
1,2,3,4,6,7,8-Hg	34.759	0.607		0.90	1.000	1.15
OCDD	*	0.421	บปิ		<u>.</u>	0.98
2,3,7,8-TCDF	*	0.208	U	*	•	0.97
1,2,3,7,8-PeCDF	*	0.210	U	*.	• 🗓	1.03
2,3,4,7,8-PeCDF	*	0.348	บ	*	*	1.38
1,2,3,4,7,8-HXC	Dr *	0.261	Ū	*	*	0.87
1,2,3,6,7,8-HXC	DE *	0.413	U	*	*	1.18
1,2,3,7,8,9-HxC	Dr.	0.305	บ		1.000	1.44
2,3,4,6,7,8-HxC	IDCDF 0.591	0.251		1.12	*	1.02
1,2,3,4,6,7,8-H		0.354	. บ		1.004	1.21
1,2,3,4,7,8,9-F	1.357	0.474	か	109	1.004	
	•	0.370	ប	÷		
Total Tetra-Dic	oxins	0.303	บ			
Total Penta-Die	oxins	0.308	U			
Total Hexa-Dio	xins					
Total Hepta-Di	oxins 2.835	0.421	U			
Total Tetra-Fu	rans		์ บ			4
Total Penta-Fu	rans		. ก		* • •	
Total Hexa-Fur	ans				3	· .
Total Hepta-Fu	irans 2.193		c T -	EMPC. C - u	ise value	
(1) Qualifiers:	U and * - not	_ 0 - 0055	ible bl	ank contami	nation.	:03

from second column analysis. B - possible blank contamination. (2) RRTs and ion ratios are specified in Tables 11 and 8, Method 8290.

ITD USEPA, 1DFB

EPA SAMPLE NO.

PCDD/PCDF TOXICITY EQUIVALENCE SUMMARY Use for Sample and Blank Results

99284179

Lab Name: SOUTHWEST LAB. OF OKLAHOMA

Episode No.: 39334

Client Name: E&E-WA

Lab Sample ID: 39334.14

Matrix (aqueous/solid/leachate): solid

Sample Wt/Vol: 17.22 5 or mL: g

Sample Receipt Date: 07-09-99

Initial Calibration Date: 07-01-99

Ext. Date: 07-09-99 Shift:

Instrument ID: AutoSpec

Analysis Date: 29-JUL-99 Time: 02:58:32

GC Column ID: DB-5

Extract Volume(ul): 20.0

Sample Data Filename: A105224#8

Injection Volume(ul): 2.00

Blank Data Filename: A105224#2

Dilution Factor: 1

Cal. Ver. Data Filename: A105222#14

% Moisture: 8.50 Concentration Units (pg/L or ng/Kg dry weight): ng/Kg

	CONCENTRATION	TEF(1)	TEF-ADJUSTED CONCENTRATION
2,3,7,8-TCDD 1,2,3,7,8-PeCDD 1,2,3,4,7,8-HxCDD 1,2,3,6,7,8-HxCDD 1,2,3,4,6,7,8-HxCDD 0CDD 2,3,7,8-TCDF 1,2,3,4,7,8-PeCDF 2,3,4,7,8-PeCDF 1,2,3,4,7,8-HxCDF 1,2,3,6,7,8-HxCDF 1,2,3,6,7,8-HxCDF 1,2,3,4,6,7,8-HxCDF 1,2,3,4,6,7,8-HxCDF	* * 2.49 34.76 * * * * * 1.36	X 1.0 X 0.5 X 0.1 X 0.1 X 0.01 X 0.001 X 0.05 X 0.5 X 0.5 X 0.1 X 0.1 X 0.1 X 0.1 X 0.1 X 0.1 X 0.01 X 0.01 X 0.01 X 0.01 X 0.01	* * * * * * 2.49e-02 3.48e-02 * * * * * * * 5.91e-03 * 1.36e-03
OCDF	•		Total · 6.691e-02

Total: 6.691e-02

⁽¹⁾ Taken from 'Interim Procudures for Estimating Risks Associated with Exposures to Mixtures of Chlorinated Dibenzo-p-Dioxin and -Dibenzofurans (CDDs and CDFs) and 1989 Udate(EPA/625/3-89/016, March 1989.



ecology and environment, inc.

International Specialists in the Environment

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MEMORANDUM

DATE:

August 19, 1999

TO:

Mark Woodke, START-Project Manager, Seattle, WA

FROM:

Leatta Dahlhoff, Chemist, E & E, Seattle, WAMW

THRU:

David Ikeda, Chemist, E & E, Seattle, WA

SUBJ:

Organic Data Quality Assurance Review, Wenatchee Brownfields Site,

Wenatchee, Washington

REF:

TDD: 98-11-0007

PAN: CK-07-01-SI-DM

The data quality assurance review of one water and six soil samples collected from the Wenatchee Brownfields site located in Wenatchee, Washington, has been completed. Analysis for Polychlorinated Dibenzodioxins (PCDDs) and Polychlorinated Dibenzofurans (PCDFs) following EPA Method 8290 for soil samples and EPA Method 1613B for water samples were performed by Southwest Laboratory of Oklahoma, Broken Arrow, Oklahoma.

The samples were numbered:

99284183

99284184

99284187 ... 99284190

99284195

99284196

99284197

Data Qualifications:

Holding Time: Acceptable.

The samples were maintained at 4°C (± 2°C) and were collected July 8 and 9, 1999, were extracted on July 16, 1999, and were analyzed by July 30, 1999, therefore meeting QC criteria of less than 30 days for soil samples and 7 days for water samples between collection and extraction and less than 45 days for soil samples and 40 days for water samples between extraction and analysis.

II Instrument Performance: Acceptable.

A performance check solution was analyzed at the beginning of each 12-hour sample analysis period. The minimum resolving power of 10,000 was attained. The valley between 2,3,7,8-TCDD and the peaks representing all other TCDD isomers was ≤ 25 % in the window defining mix solution. All ion abundance and retention time criteria were met in all calibration standards.

III Calibration

A. Initial Calibration: Acceptable.

A 5-point initial calibration was performed with all Relative Standard Deviations (RSDs) less than 20 % for the unlabeled target analytes and less than 30 % for the labeled internal standards. All ion abundance ratios, signal-to-noise (s/n) ratios, and retention times were within method QC limits.

B. Continuing Calibration: Acceptable.

A continuing calibration was analyzed at the start of each 12-hour period. The % valley between 2,3,7,8-TCDD and the closest TCDF isomer was less than 25 %. The retention times for all of the furan and dioxin homologues were established and properly labeled from the first to the last eluters. All ion abundance and s/n ratios were within method QC limits. All % differences were less than 30 % for the labeled internal standards and less than 20 % for the unlabeled target analytes.

IV Compound Quantitation and Detection Limits: Acceptable.

All of the samples were analyzed at the project required quantitation limits. Some of the totals reported were corrected by the reviewer due to adjustments that had to be made because of contamination in a blank or miscalculations. All of the compounds were calculated off the primary column, DB5, except for TCDF in sample 99284197. The TCDF sample result for 97284197 was reported from the second analysis. The TEF factor was also corrected by the reviewer because TCDF was not detected in the sample. All of the detected target compounds were within the linear calibration range.

V Blanks: Satisfactory.

The frequency of analysis of laboratory blanks was met. Octachlorodibenzodioxin (OCDD) was detected in the method blank DFBLK2. The OCDD detected in the associated sample 99284195 (9.70 pg/L) was qualified as non-detect, "U", due to the concentration being less than 5 times the value in the blank (8.344 pg/L). The TEF factor was also corrected by the reviewer because of contamination in the blank.

VI Analytical Sequence: Acceptable.

All of the standards, blanks, samples and QC samples were analyzed in accordance with the method-specified analytical sequence.

VII Internal Standards: Acceptable.

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All internal standard ion abundance ratios were within method QC limits. All internal standard results were within the QC recovery limits of 40 % to 135 %.

VI Surrogate Recoveries: Not Applicable.

Surrogates were not required for this method. Clean-up standard 37Cl-2,3,7,8-TCDD was added to all samples and QC samples. The clean-up standard recoveries were acceptable.

VII Duplicate Sample Analysis: Not Applicable.

Duplicate sample analyses were not performed and no action was taken on this basis.

VIII Matrix Spike/Matrix Spike Duplicates: Not Performed.

Matrix spike analyses were not performed. The laboratory blank spike recoveries were within 50 % to 150 %. These recoveries were acceptable in the reviewers' professional judgment.

IX Compound Identification: Acceptable.

For analytes with isotopically labeled standards, the retention times of the sample quantitation ions maximized within -1 to +3 seconds of the isotopically labeled standard ions. Several samples had ratios for the quantitation ion integrated ion currents outside the method QC limits, the laboratory qualified these sample results as estimated maximum possible concentrations (X or I). The reviewer changed the laboratory qualifiers "X" and "I" to "J" (estimated).

X Laboratory Control Sample (LCS) Analyses: Acceptable.

A spiked blank was extracted and analyzed with each sample delivery group (SDG). The recoveries for the target compounds and internal standards for the LCS met the acceptance criteria. None of the data were qualified on this basis.

XI Laboratory Contact: Required

The laboratory was contacted on August 19, 1999, for a discrepancy with the Total TEF-adjusted concentration value for sample 99284184. The value on the Form I states 0.1807, however, the value calculated by the reviewer was 0.10721. The laboratory resubmitted a corrected TEF summary form.

XII Overall Assessment of Data for Use

The overall usefulness of the data is based on the criteria outlined in EPA Method 8290 and the OSWER Directive "Quality Assurance/Quality Control Guidance for Removal Activities, Sampling QA/QC Plan and Data Validation Procedures" (EPA/540/G-90/004). Based upon the information provided, the data are acceptable for use with the above stated data qualifications.

Data Qualifiers and Definitions

- U The material was analyzed for but was not detected. The associated numerical value is the sample quantitation limit.
- J The associated numerical value is an estimated quantity because the reported concentrations were less than the contract required detection limits or because quality control criteria limits were not met.

CLIENT ID.

PCDD/PCDF ANALYSIS DATA SHEET Use for Sample and Blank Results

99284183

Lab Name: Southwest Lab. of Oklahoma Episode No.: 39412

Lab Code: SWL Case No.:

SDG No.:

Lab Sample ID: 39412.01

Client Name: E&E-WA

Sample Wt/Vol: 10.32 g or mL: g

Matrix (aqueous/solid/leachate): solid

Initial Calibration Date: 07-01-99

Sample Receipt Date: 07-14-99

Instrument ID: AutoSpec

Ext. Date: 07-16-99

GC Column: DB-5

Ext. Vol(ul):20.0 Inj. Vol(ul):2.0 Sample Data Filename: A105231#5

Analysis Date: 30-JUL-99 Time: 02:19:42 Blank Data Filename: A105231#2

Dilution Factor: 1

Cal. Ver. Data Filename: A105229#6

Concentration Units (pg/L or ng/Kg dry weight): ng/Kg

% Moisture: 9.14

	CONCENTRATION	DETECTION	Qual.	ION ABUND.	RRT	MEAN
ANALYTE	FOUND	LIMIT	(1)	RATIO (2)	(2)	RRF
2,3,7,8-TCDD	*	0.408	ប	*	*	1.48
1,2,3,7,8-PeCDD	*	0.578	U .	*	*	1.11
1,2,3,4,7,8-HxCDD	*	0.617	Ū	*	*	0.74
1,2,3,6,7,8-HxCDD	*	0.415	Ū	*	* * *	1.10
1,2,3,7,8,9-HxCDD	* *	0.476	σ	•	*	0.96
1,2,3,4,6,7,8-HpCD	D *	0.511	ָ דַ י	* *	*	1.14
OCDD	12.649	0.796	i ka	0.96	1.000	1.11
2,3,7,8-TCDF	*	0.305	U	*	*	1.15
1,2,3,7,8-PeCDF	* *	0.232	υ	*	*	0.98
2,3,4,7,8-PeCDF	of the second second	0.235	ט י	· *	*	0.97
1,2,3,4,7,8-HxCDF	1.012		M	1.32	1.000	1.03
1,2,3,6,7,8-HxCDF	*	0.340	์ับ	. •	*	1.38
1,2,3,7,8,9-HxCDF	*	0.539	U	*	*	0.87
2,3,4,6,7,8-HxCDF	*	0.398	ប	*	*	1.18
1,2,3,4,6,7,8-HpCI)F ★	0.505	Ū	*	*	1.44
1,2,3,4,7,8,9-HpCI		0.712	ט	*	*	1.02
OCDF	*	0.634	U	*	*	1.21
		•	•	•		1.7
Total Tetra-Dioxin	ns *	0.408	U		•	
Total Penta-Dioxir		0.578	U			•
Total Hexa-Dioxins		0.415	· U.			
Total Hepta-Dioxi		0.511	•	•	•	
Total Tetra-Furans		0.305				
Total Penta-Furans		0.235				
Total Hexa-Furans		0.340	•			:
Total Hepta-Furan		0.505	. U			
(1) Qualifiers: II			L - E	MPC. C - use	e value	•

(1) Qualifiers: U and * - not detected; X & I - EMPC from second column analysis. B - possible blank contamination.

(2) RRTs and ion ratios are specified in Tables 11 and 8, Method 8290. 8290F1

EPA SAMPLE NO.

PCDD/PCDF TOXICITY EQUIVALENCE SUMMARY Use for Sample and Blank Results

99284183

Lab Name: SOUTHWEST LAB. OF OKLAHOMA

Episode No.: 39412

Client Name: E&E-WA

Lab Samplė ID: 39412.01

Matrix (aqueous/solid/leachate): solid

Sample Wt/Vol: 10.32 g or mL: g

Sample Receipt Date: 07-14-99

Initial Calibration Date: 07-01-99

.

Ext. Date: 07-16-99 Shift:

Instrument ID: AutoSpec

Analysis Date: 30-JUL-99 Time: 02:19:42

GC Column ID: DB-5

Extract Volume(ul): 20.0

Sample Data Filename: A105231#5

Injection Volume(ul): 2.00

Blank Data Filename: A105231#2

Dilution Factor: 1

Cal. Ver. Data Filename: A105229#6

Concentration Units (pg/L or ng/Kg dry weight): ng/Kg

% Moisture: 9.14

	CONCENTRATION	TEF (1)	TEF-ADJUSTED CONCENTRATION
2,3,7,8-TCDD	*	X 1.0	
1,2,3,7,8-PeCDD	*	X 0.5	
1,2,3,4,7,8-HxCDD	· *	X 0.1	
1,2,3,6,7,8-HxCDD	*	X 0.1	
1,2,3,7,8,9-HxCDD	· ±	X 0.1	
1,2,3,4,6,7,8-HpCDD	*	X 0.01	*
OCDD	12.65	X 0.001	1.26e-02
2,3,7,8-TCDF	*	X 0.1	1.266-02
1,2,3,7,8-PeCDF	*	X 0.05	
2,3,4,7,8-PeCDF	*	X 0.5	**
1,2,3,4,7,8-HxCDF	1.01	X 0.1	*;
1,2,3,6,7,8-HxCDF	*	X 0.1	1.01e-01
1,2,3,7,8,9-HxCDF	*	X 0.1	
2,3,4,6,7,8-HxCDF	*	X 0.1	₩
1,2,3,4,6,7,8-HpCDF	•	X 0.1 X 0.01	*
1,2,3,4,7,8,9-HpCDF	· .	· · · · · · · · · · · · · · · · · · ·	*
OCDF	*	X 0.01 X 0.001	. * *

Total: 1.139e-01

⁽¹⁾ Taken from 'Interim Procudures for Estimating Risks Associated with Exposures to Mixtures of Chlorinated Dibenzo-p-Dioxin and -Dibenzofurans (CDDs and CDFs) and 1989 Udate(EPA/625/3-89/016, March 1989.'

CLIENT ID.

PCDD/PCDF ANALYSIS DATA SHEET Use for Sample and Blank Results

99284184

Lab Name: Southwest Lab. of Oklahoma

Episode No.: 39412

Lab Code: SWL Case No.:

SDG No :

Lab Sample ID: 39412.02

Client Name: E&E-WA

Sample Wt/Vol: 10.47 g or mL: g

Sample Receipt Date: 07-14-99

Instrument ID: AutoSpec

Ext. Date: 07-16-99

GC Column:DB-5

Ext. Vol(ul):20.0

Inj. Vol(ul):2.0

Sample Data Filename: A105212#9

Analysis Date: 23-JUL-99 Time: 15:56:59

Blank Data Filename: A105212#7

Dilution Factor: 1

Cal. Ver. Data Filename: A105212#2

	CONCENTRATION	DETECTION	Qual.	ION ABUND.	RRT	MEAN
ANALYTE	FOUND	LIMIT	(1)	RATIO (2)	(2)	RRF
2,3,7,8-TCDD	*	0.164	ប	*	*	1.48
1,2,3,7,8-PeCDD	*	0.221	U	* ·	*	1.11
1,2,3,4,7,8-HxCDD	* *	0.249	U	*	*	0.74
1,2,3,6,7,8-HxCDD	0.295	0.167		1.30	1.000	1.10
1,2,3,7,8,9-HxCDD	*	0.192	U	*	*.	0.96
1,2,3,4,6,7,8-HpCI	DD 3.448	0.282		1.16	1.000	1.14
OCDD	37.974	0.233	•	0.89	1.000	1.11
2,3,7,8-TCDF	. * .	0.146	U .	*	, *	1.15
1,2,3,7,8-PeCDF	*	0.163	ับ	*	*	0.98
2,3,4,7,8-PeCDF	*	0.165	U	*	*	0.97
1,2,3,4,7,8-HxCDF	*	0.168	U	*	*	1.03
1,2,3,6,7,8-HxCDF	*	0.126	U	*	*	1.38
1,2,3,7,8,9-HxCDF	*	0.199	U	*	*	0.87
2,3,4,6,7,8-HxCDF	*	0.147	U	*	*	1.18
1,2,3,4,6,7,8-HpCI	OF 0.405)	0.092	MAKE	1.99	1.000	1.44
1,2,3,4,7,8,9-HpCI)F *	0.130	ับ	*	* '	1.02
OCDF	1.157	0.192		0.81	1.004	1.21
Total Tetra-Dioxin	ıs *	0.164	บ			
Total Penta-Dioxir	ıs *	0.221	Ū			
Total Hexa-Dioxins	0.295	0.167				
Total Hepta-Dioxin	ıs 5.838	0.282	· '\		•	• •
Total Tetra-Furans	*	0.146	ซ	•		
Total Penta-Furans	*	0.165	U			•
Total Hexa-Furans	0.496	0.126	=			
Total Hepta-Furans	*	0.092	u ,			
(1) Qualifiers, II		antal. V r	•	ma a	7	

⁽¹⁾ Qualifiers: U and * - not detected; X & I - EMPC. C - use value from second column analysis. B - possible blank contamination.

⁽²⁾ RRTs and ion ratios are specified in Tables 11 and 8, Method 8290.

PCDD/PCDF TOXICITY EQUIVALENCE SUMMARY Use for Sample and Blank Results

EPA SAMPLE NO.

99284184

Lab Name: SOUTHWEST LAB. OF OKLAHOMA

Client Name: E&E-WA

Matrix (aqueous/solid/leachate): solid

Sample Receipt Date: 07-14-99

Ext. Date: 07-16-99 Shift:

Analysis Date: 23-JUL-99 Time: 15:56:59

Extract Volume(ul): 20.0

Injection Volume (ul): 2.00

Dilution Factor: 1.

Episode No.: 39412

Lab Sample ID: 39412.02

Sample Wt/Vol: 10.47 g or mL: g

Initial Calibration Date: 07-01-99

Instrument ID: AutoSpec

GC Column ID: DB-5

Sample Data Filename: Al05212#9

Blank Data Filename: A105212#7

Cal. Ver. Data Filename: Al05212#2

Concentration Units (pg/L or ng/Kg dry weight): ng/Kg % Moisture: 14.35

	CONCENTRATION	TEF (1)	TEF-ADJUSTED CONCENTRATION
2,3,7,8-TCDD	*	X 1.0	
1,2,3,7,8-PeCDD	b	X 0.5	
1,2,3,4,7,8-HXCDD	# .	X 0.1	*
1,2,3,6,7,8-HxCDD 1,2,3,7,8,9-HxCDD	0.30	X 0.1	2.95e-02
1,2,3,4,6,7,8-HpCDD	*	X 0.1	tr
OCDD	3.45	X 0.01	3.45e-02
2,3,7,8-TCDF	37.97	X 0.001	3.80e-02
1,2,3,7,8-PeCDF	•	X 0.1	•
2,3,4,7,8-PeCDF	±	X 0.05	*
1.2,3,4,7,8-HxCDF	*	X 0.5 X 0.1	*
1,2,3,6,7,8-HxCDF	±	X 0.1	*
1,2,3,7,8,9-HxCDF	. •	X 0.1	· **
2,3,4,6,7,8-HxCDF	*	X 0.1	
1,2,3,4,6,7,8-HpCDF	0.40	X 0.01	4.05e-03
1,2,3,4,7,8,9-HpCDF OCDF	*	X 0.01	*
· ·	1.16	X 0.001	1.16e-03

*Total: 1.807e-01 1.076-1

- (1) Taken from 'Interim Procudures for Estimating Risks Associated with Exposures to Mixtures of Chlorinated Dibenzo-p-Dioxin and -Dibenzofurans (CDDs and CDFs) and 1989 Udate (EPA/625/3-89/016, March 1989.
 - * Total TEF is calculated by summing up all positively identified isomers of each homologous series.

6/90

CLIENT ID.

PCDD/PCDF ANALYSIS DATA SHEET Use for Sample and Blank Results 99284187

ab Name: Southwest Lab. of Oklahoma Episode No.: 39412

Lab Code: SWL Case No.:

SDG No.:

Lab Sample ID: 39412.03

Client Name: E&E-WA

Sample Wt/Vol: 10.10 g or mL: g

Matrix (aqueous/solid/leachate): solid

Initial Calibration Date: 07-01-99

Sample Receipt Date: 07-14-99

Instrument ID: AutoSpec

Ext. Date: 07-16-99

GC Column:DB-5

Ext. Vol(ul):20.0

Inj. Vol(ul):2.0 Sample Data Filename: A105231#6

Analysis Date: 30-JUL-99 Time: 03:08:27 Blank Data Filename: A105231#2

Dilution Factor: 1

Cal. Ver. Data Filename: A105229#6

Concentration Units (pg/L or ng/Kg dry weight): ng/Kg

% Moisture: 7.57

	CONCENTRATION	DETECTION	Qual. I	ON ABUND.	RRT	MEAN
ANALYTE	FOUND	LIMIT	(1)	RATIO (2)	(2)	RRF
2,3,7,8-TCDD	*****	0.273	U	*	*	1.48
1,2,3,7,8-PeCDD	*	0.358	ΰ.	. *	*	1.11
1,2,3,4,7,8-HxCDD	*	0.466	U	*	*	0.74
1,2,3,6,7,8-HxCDD	*	0.313	u	* *	*	1.10
1,2,3,7,8,9-HxCDD	*	0.359	.	*	*	0.96
1,2,3,4,6,7,8-HpCD	D 2.931	0.388	•	1.06	1.001	1.14
OCDD	18.653	0.416	•		1.000	1.11
2,3,7,8-TCDF	*	0.265	U-	*	,*	1.15
1,2,3,7,8-PeCDF	*	0.214	. ប	*	*	0.98
2,3,4,7,8-PeCDF	*	0.217	Ū	*	*	0.97
1,2,3,4,7,8-HxCDF	0.9975		AME	1.39	1.000	1.03
1,2,3,6,7,8-HxCDF	*	0.273	บ้	*	*	1.38
1,2,3,7,8,9-HxCDF	*	0.432	Ü	*	*	0.87
2,3,4,6,7,8-HxCDF	*	0.319	Ū	**	* '	1.18
1,2,3,4,6,7,8-HpCD	F 1.364	0.302		1.15	1.000	1.44
1,2,3,4,7,8,9-HpCD	· ·	0.426	. U	*	*	1.02
OCDF	1.488	0.425	,	0.89	1.003	1.21
Total Tetra-Dioxin	.s *	0.273	U.			
Total Penta-Dioxin	and the second s	0.358	U			
Total Hexa-Dioxins		0.313	_			
Total Hepta-Dioxin	'	0.388	•			
Total Tetra-Furans		0.265				
Total Penta-Furans		0.217				
Total Hexa-Furans	4.650	0.273				a i de la companya di salah d
Total Hepta-Furans		0.302		•		
(1) Qualifiers: U a			T - EMP	C. C - use	e value	

(1) Qualifiers: U and \star - not detected; X & I - EMPC. C - use value from second column analysis. B - possible blank contamination.

(2) RRTs and ion ratios are specified in Tables 11 and 8, Method 8290.

PCDD/PCDF TOXICITY EQUIVALENCE SUMMARY Use for Sample and Blank Results

EPA SAMPLE NO.

99284187

Sample Wt/Vol: 10.10 g or mL: g

Lab Name: SOUTHWEST LAB. OF OKLAHOMA Episode No.: 39412

Client Name: E&E-WA Lab Sample ID: 39412.03

Matrix (aqueous/solid/leachate): solid

Sample Receipt Date: 07-14-99 Initial Calibration Date: 07-01-99

Ext. Date: 07-16-99 Shift: Instrument ID: AutoSpec

Analysis Date: 30-JUL-99 Time: 03:08:27 GC Column ID: DB-5

Extract Volume(ul): 20.0 Sample Data Filename: A105231#6

Injection Volume (ul): 2.00 Blank Data Filename: A105231#2

Dilution Factor: 1 Cal. Ver. Data Filename: A105229#6

Concentration Units (pg/L or ng/Kg dry weight): ng/Kg % Moisture: 7.57

	CONCENTRATION	TEF (1)	TEF-ADJUSTED CONCENTRATION
2,3,7,8-TCDD	•	X 1.0	
1,2,3,7,8-PeCDD	*	X 0.5	*
1,2,3,4,7,8-HxCDD	±	X 0.1	
1,2,3,6,7,8-HxCDD	· 1	X 0.1	•
1,2,3,7,8,9-HxCDD	*	X 0.1	
1,2,3,4,6,7,8-HpCDD	2.93	X 0.01	2.93e-02
OCDD	18.65	X 0.001	1.87e-02
2,3,7,8-TCDF	*	X 0.1	*
1,2,3,7,8-PeCDF	*	X 0.05	*
2,3,4,7,8-PeCDF	. ★	X 0.5	· · · · · · · · · · · · · · · · · · ·
1,2,3,4,7,8-HxCDF	1.00	X 0.1	9.97e-02
1,2,3,6,7,8-HxCDF	,*	X 0.1	*
1,2,3,7,8,9-HxCDF	*	X 0.1	*
2,3,4,6,7,8-HxCDF	*	X 0.1	*
1,2,3,4,6,7,8-HpCDF	1.36	X 0.01	1.36e-02
1,2,3,4,7,8,9-HpCDF	*	X 0.01	*
OCDF	1.49	X 0.001	1.49e-03

Total: 1.628e-01

6/90

⁽¹⁾ Taken from 'Interim Procudures for Estimating Risks Associated with Exposures to Mixtures of Chlorinated Dibenzo-p-Dioxin and -Dibenzofurans (CDDs and CDFs) and 1989 Udate(EPA/625/3-89/016, March 1989.

CLIENT ID.

PCDD/PCDF ANALYSIS DATA SHEET Use for Sample and Blank Results

99284190

Lab Name: Southwest Lab. of Oklahoma

Episode No.: 39412

Lab Code: SWL Case No.:

SDG No.:

Lab Sample ID: 39412.04

Client Name: E&E-WA

Sample Wt/Vol: 10.04 g or mL: g

Matrix (aqueous/solid/leachate): solid

Initial Calibration Date: 07-01-99

Sample Receipt Date: 07-14-99

Instrument ID: AutoSpec

Ext. Date: 07-16-99

GC Column:DB-5

Ext. Vol(ul):20.0

Inj. Vol(ul):2.0

Sample Data Filename: A105231#7

Analysis Date: 30-JUL-99 Time: 03:57:14

Blank Data Filename: A105231#2

Dilution Factor: 1

Cal. Ver. Data Filename: A105229#6

Concentration Units (pg/L or ng/Kg dry weight): ng/Kg

% Moisture: 4.74

ANALYTE FOUND LIMIT (1) RATIO (2) (2) RRF 2,3,7,8-TCDD		CONCENTRATION	DETECTION	Qual.	ION ABUND.	RRT	MEAN
2,3,7,8-TCDD	ANALYTE				RATIO (2)	(2)	RRF
1,2,3,7,8-PeCDD		*	0.293	. υ	* .	*	1.48
1,2,3,4,7,8-HxCDD	2,3,7,8-1CDD	•		U	* *	*	1.11
1,2,3,4,7,8-HXCDD	1,2,3,7,8-PECUD	•		-	*	*	0.74
1,2,3,6,7,8-HXCDD	1,2,3,4,7,8-HXCDD			_	*	*	1.10
1,2,3,4,6,7,8-HpCDD	1,2,3,6,7,8-HXCDD				*	*	0.96
1,2,3,4,6,7,8-HPCDD OCDD 4,186 0.664 0.93 1.000 1.12 2,3,7,8-TCDF * 0.181 U * * 0.93 1.000 1.12 0.99 1.00 1.00 1.12 0.93 1.000 1.12 0.99 1.00 1.00 1.12 0.93 0.93 1.000 1.12 0.99 1.00 1.00 1.12 0.99 1.00 1.00 1.12 0.99 1.00 1.00 1.12 0.99 1.00 1.00 1.12 0.99 1.00 1.00 1.12 0.99 1.00 1.00 1.00 1.00 1.12 0.99 1.00 1.00 1.00 1.12 0.99 1.00 1.00 1.00 1.12 0.99 1.00 1.00 1.00 1.12 0.99 1.00 1.00 1.12 0.99 1.00 1.00 1.12 0.99 1.00 1.00 1.12 0.99 1.00 1.00 1.12 0.99 1.00 1.00 1.12 0.99 1.00 1.00 1.12 0.99 1.00 1.00 1.12 0.99 1.00 1.00 1.12 0.99 1.00 1.00 1.12 0.99 1.00 1.00 1.12 0.99 1.00 1.00 1.12 0.99 1.00 1.00 1.12 0.99 1.00 1.00 1.12 0.99 1.00 1.00 1.12 0.99 1.00 1.12 0.99 1.00 1.00 1.00 1.12 0.99 1.00 1.00 1.12 0.99 1.00 1.00 1.00 1.12 0.99 1.00 1.00 1.00 1.12 0.99 1.00 1.00 1.00 1.00 1.00 1.00 1.00	1,2,3,7,8,9-HXCDD			• -	*	*	1.14
OCDD 2,3,7,8-TCDF		טט •			0.93	1.000	1.11
2,3,7,8-TCDF 1,2,3,7,8-PeCDF 2,3,4,7,8-PeCDF 1,2,3,4,7,8-HxCDF 1,2,3,6,7,8-HxCDF 1,2,3,6,7,8-HxCDF 1,2,3,7,8,9-HxCDF 2,3,4,6,7,8-HxCDF 2,3,4,6,7,8-HxCDF 3,2,3,4,6,7,8-HpCDF 4 0.203 U * 1.1 4 1,2,3,4,6,7,8-HpCDF 5 0.203 U * 1.4 6,7,8-HpCDF 7 0.207 U * 1.0 7 0 1 Tetra-Dioxins 7 0.293 U 7 Total Tetra-Dioxins 7 0.293 U 7 Total Hexa-Dioxins 7 0.293 U 7 Total Hexa-Dioxins 8 0.367 U 7 Total Hepta-Dioxins 9 0.219 U 7 Total Hepta-Dioxins 1 0.315 U		4,186	•	TT	*	*	1.15
1,2,3,7,8-PeCDF 2,3,4,7,8-PeCDF 1,2,3,4,7,8-HxCDF 1,2,3,6,7,8-HxCDF 1,2,3,7,8,9-HxCDF 2,3,4,6,7,8-HxCDF 2,3,4,6,7,8-HxCDF 3,2,3,4,6,7,8-HyCDF 4 0.203 U * 1.1 4 1,2,3,4,6,7,8-HyCDF 4 0.211 U * 1.4 1,2,3,4,7,8,9-HyCDF 5 0.377 U * 1.0 1,2,3,4,7,8,9-HyCDF 7 0 1 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2		•			.	*	0.98
2,3,4,7,8-PeCDF	1,2,3,7,8-PeCDF				•	*	0.97
1,2,3,4,7,8-HxCDF 1,2,3,6,7,8-HxCDF 1,2,3,7,8,9-HxCDF 2,3,4,6,7,8-HxCDF 2,3,4,6,7,8-HxCDF 1,2,3,4,6,7,8-HpCDF 1,2,3,4,7,8,9-HpCDF CCDF Total Tetra-Dioxins Total Penta-Dioxins Total Hexa-Dioxins Total Heyta-Dioxins Total Hepta-Dioxins	2,3,4,7,8-PeCDF	ä.			•	. *	1.03
1,2,3,6,7,8-HxCDF	1,2,3,4,7,8-HxCDF	*				. *	1.38
1,2,3,7,8,9-HxCDF	1,2,3,6,7,8-HxCDF	*		•			0.87
2,3,4,6,7,8-HxCDF	1,2,3,7,8,9-HxCDF	*	•	_			1.18
1,2,3,4,6,7,8-HpCDF	2,3,4,6,7,8-HxCDF	*			Ŧ		
1,2,3,4,7,8,9-HpCDF	1,2,3,4,6,7,8-HpC	DF : *					
OCDF * 0.377 U Total Tetra-Dioxins * 0.293 U Total Penta-Dioxins * 0.367 U Total Hexa-Dioxins * 0.219 U Total Hepta-Dioxins * 0.315 U	1.2.3,4,7,8,9-HpC	DF *		. •		_	
Total Penta-Dioxins * 0.367 U Total Hexa-Dioxins * 0.219 U Total Hepta-Dioxins * 0.315 U		*	0.377	Ū	*		1.21
Total Penta-Dioxins * 0.367 U Total Hexa-Dioxins * 0.219 U Total Hepta-Dioxins * 0.315 U	Total Tetra-Dioxi	ns · *	0.293	υ			
Total Hexa-Dioxins * 0.219 U Total Hepta-Dioxins * 0.315 U	Total Penta-Dioxi	ns *	0.367	U			
Total Hepta-Dioxins * 0.315 U	metal Hava-Diovin	*		u U			
Total Repta-bloking	Total Nesta-Dioxi	ne *		U			
	Total Repta Dioxi	*	0.181	U	· · · · · · · · · · · · · · · · · · ·	•	
IUCAI ICCIA I GIALLE				σ			
Total Penta-Fulans				_	• •		
Total Hexa-Fulans				-			
Total Hepta-Furans * 0.211 U	Total Hepta-Furar	15		_	EMPC C - us	e value	

(1) Qualifiers: U and * - not detected; X & I - EMPC. C - use value from second column analysis. B - possible blank contamination.

(2) RRTs and ion ratios are specified in Tables 11 and 8, Method 8290. 8290F1

PCDD/PCDF TOXICITY EQUIVALENCE SUMMARY Use for Sample and Blank Results

99284190

EPA SAMPLE NO.

ab Name: SOUTHWEST LAB. OF OKLAHOMA

Episode No.: 39412

Client Name: E&E-WA

Lab Sample ID: 39412.04

Matrix (aqueous/solid/leachate): solid

Sample Wt/Vol: 10.04 g or mL: g

Sample Receipt Date: 07-14-99

Initial Calibration Date: 07-01-99

Ext. Date: 07-16-99 Shift:

Instrument ID: AutoSpec

Analysis Date: 30-JUL-99 Time: 03:57:14 GC Column ID: DB-5

Extract Volume(ul): 20.0

Sample Data Filename: A105231#7

Injection Volume(ul): 2.00

Blank Data Filename: A105231#2

Dilution Factor: 1

Cal. Ver. Data Filename: A105229#6

Concentration Units (pg/L or ng/Kg dry weight): ng/Kg % Moisture: 4.74

	CONCENTRATION	TEF(1)	TEF-ADJUSTED CONCENTRATION
2,3,7,8-TCDD	+	X 1.0	*
1,2,3,7,8-PeCDD	* .	X 0.5	*
1,2,3,4,7,8-HxCDD	*	X 0.1	<u>.</u> .
1,2,3,6,7,8-HxCDD	*	X 0.1	*
1,2,3,7,8,9-HxCDD		X 0.1	*
1,2,3,4,6,7,8-HpCDD	*	X 0.01	*
OCDD	4.19	X 0.001	4.19e-03
2,3,7,8-TCDF	*	X 0.1	*
1,2,3,7,8-PeCDF	*	X 0.05	*
2,3,4,7,8-PeCDF	*	X 0.5	
1,2,3,4,7,8-HxCDF	*	X 0.1	, *
1,2,3,6,7,8-HxCDF	.★	X 0.1	*
1,2,3,7,8,9-HxCDF	*	X 0.1	*
2,3,4,6,7,8-HxCDF	*	X 0.1	*
1,2,3,4,6,7,8-HpCDF	***	X 0.01	*
1,2,3,4,7,8,9-HpCDF	*	X 0.01	*
OCDF	*	X 0.001	*

Total: 4.186e-03

⁽¹⁾ Taken from 'Interim Procudures for Estimating Risks Associated with Exposures to Mixtures of Chlorinated Dibenzo-p-Dioxin and -Dibenzofurans (CDDs and CDFs) and 1989 Udate (EPA/625/3-89/016, March 1989.'

Form 1

CLIENT ID.

PCDD/PCDF ANALYSIS DATA SHEET Use for Sample and Blank Results

99284195

Lab Name: Southwest Lab. of Oklahoma Episode No.: 39412

Lab Code: SWL Case No.: SDG No.:

Lab Sample ID: 39412.05

Client Name: E&E-WA

Sample Wt/Vol: 1000

g or mL: mL

Matrix (aqueous/solid/leachate): aqueous Initial Calibration Date: 07/01/99

Sample Receipt Date: 07/14/99

Instrument ID: AutoSpec

Ext. Date: 07/16/99

GC Column:DB-5

Ext. Vol(ul):20.0

Inj. Vol(ul):2.0

Sample Data Filename: A105216#12

Analysis Date: 27-JUL-99 Time: 19:27:47

Blank Data Filename: A105216#3

Dilution Factor: 1

Cal. Ver. Data Filename: A105216#1

Concentration Units (pg/L or ng/Kg dry weight): pg/L

% Moisture:

7	NALYTE	CONCENTRATION FOUND	DETECTION LIMIT	Qual.	ION ABUND. RATIO (2)	RRT (2)	MEAN RRF
	2,3,7,8-TCDD	*	4.128	ט י	*	*	1.48
	1,2,3,7,8-PeCDD	<i>20</i> ★	3.268	U	*	*	1.11
	1,2,3,4,7,8-HxCDD	*	4.120	U	* .	*	0.74
	1,2,3,6,7,8-HxCDD	*	2.774	Ū	*	*	1.10
	1,2,3,7,8,9-HxCDD	*	3.180	. ប	*	*	0.96
	1,2,3,4,6,7,8-HpCI	D *	5.144	U,	* *	*	1.14
	OCDD	9.701	3.744	βV	0.92	1.001	1.11
	2,3,7,8-TCDF	*	4.340	ີ ປັ	*	*	1.15
	1,2,3,7,8-PeCDF	*	2.352	U	*	*	0.98
	2,3,4,7,8-PeCDF	*	2.378	U	*	*	0.97
•	1,2,3,4,7,8-HxCDF	*	2.432	Ū	*	*	1.03
	1,2,3,6,7,8-HxCDF	*	1.824	ט י	*	*	1.38
	1,2,3,7,8,9-HxCDF	. *	2.888	ט	*	*	0.87
	2,3,4,6,7,8-HxCDF	*	2.133	ט י	*	*	1.18
	1,2,3,4,6,7,8-HpCI)F *	1.652	U	*	*	1.44
	1,2,3,4,7,8,9-HpCI		2.327	U	*	*	1.02
	OCDF		3.998	U	*	* .	1.21
	Total Tetra-Dioxin	ns *	4.128	U	•		
	Total Penta-Dioxi	as , *	3.268	U	* *		
	Total Hexa-Dioxins	₹ *	2.774	ט		i 1 1	
	Total Hepta-Dioxi	ns *	5.144	ט	view and the a		
	Total Tetra-Furans	*	4.340	U,			
	Total Penta-Furans	s *	2.378	U			
	Total Hexa-Furans	*	1.824	U			
	Total Hepta-Furan	* *	1.652	U			

(1) Qualifiers: U and * - not detected; X & I - EMPC. C - use value from second column analysis. B - possible blank contamination.

(2) RRTs and ion ratios are specified in Tables 11 and 8, Method 8290.

ESW10-3-1379 Page 2 of 6

Initial Calibrations - Acceptable

One VOA, two SVOA and three Pest/PCB initial calibrations were performed. The initial calibrations met the SOW technical acceptance criteria.

Continuing Calibration Verification (CCVs) Standards

All of the CCVs met the criteria for frequency of analysis, the minimum response factor, the retention time and the percent differences (%Ds) criteria with the following exceptions:

 The %Ds for the following VOA compounds exceeded the QC limits and the associated results were qualified accordingly:

Date /Time of Analysis	Inst. i.d.	Compound	%D	Qualifier Detect/Non-detect
7/13/99 (08:31)	51	chloromethane 1,2-dichloroethane 1,2-dichloroethane-d4 (surr.)	-42.8 29.2 42.4	J/UJ J/none none
7/15/99 (10:10)	51	1,2-dichloroethane 1,1,1-trichloroethane 1,2-dichloroethane-d4 (surr.)	26.3 25.3 56.6	J/none none none

The %Ds for the following SVOA compounds exceeded the QC limits and the associated results were qualified accordingly:

Date /Time of Analysis	Inst. i.d.	Compound	%D	Qualifier Detect/Non-detect
7/12/99 (08:06)	66	hexachlorobenzene 3,3'-dichlorobenzidine 2,4,6-tribromophenol (surr.)	27.5 -35.5 32.1	J/none J/UJ none
7/12/99 (22:01)	66	4-nitrophenol 4-bromophenyl-phenylether hexachlorobenzene terphenyl-d14 (surr.) 2,4,6-tribromophenol (surr.)	-37.4 27.7 30.1 25.8 36.6	J/UJ J/none J/none none none
7/13/99 (11:13)	66	pentachlorophenol 3,3'-dichlorobenzidine 2,4,6-tribromophenol (surr.)	-28.8 48.4 33.0	J/UJ J/none none
7/14/99 (10:50)	66	2,4-dinitrophenol 3,3'-dichlorobenzidine	34.6 28.2	J/none J/none
7/15/99 (09:49)	66	2,4-dinitrophenol 2,4-dinitrotoluene 4,6-dinitro-2-methylphenol 2,4,6-tribromophenol (surr.)	31.6 28.4 25.5 34.8	J/none J/none none none
7/14/99 (23:38)	70	pentachlorophenol 2,4,6-tribromophenol (surr.)	-27.5 -28.8	J/UJ none
7/15/99 riseyci (18:08)	: :70 :par	pentachlorophenol	-38.3	J/UJ wat rectionment

ENVIRONMENTAL SERVICES ASSISTANCE I EAMS - WESTERN ZONE

LOCKHEED MARTIN

ESAT Region 10 Lockheed Martin 7411 Beach Drive East Port Orchard, WA 98366 Phone (360) 871-8723

DELIVERABLE NARRATIVE

DATE:

September 3, 1999

To:

Ginna Grepo-Grove, WAM, USEPA, Region 10

THROUGH:

Dave Dobb, Team Manager, ESAT Region 10

FROM:

Chris Pace, Task Lead, ESAT Region 10/

SUBJECT:

Data validation report for the volatile organic (VOA), semi-volatile organic (SVOA) and

pesticide/polychlorinated biphenyl (Pest/PCB) analysis of samples from the Wenatchee Brownfields

Site. Case: 27165 SDG: JW542

DOC:

ESW10-3-1379

PWO:

ESW72020

TDF:

3641

WA:

10-99-3-10

CC:

Gerald Dodo, RPO, USEPA, Region 10

Project File

The quality assurance (QA) review of 20 soil samples collected from the above referenced site has been completed. These samples were analyzed for VOA (16), SVOA (16) and Pest/PCB (20) in accordance with the USEPA Contract Laboratory Program (CLP) Statement of Work (SOW) for Organic Analyses (OLM03.2) by COMPUCHEM of Cary, NC.

DATA QUALIFICATIONS

The following comments refer to the laboratory performance in meeting the Quality Control Specifications outlined in the USEPA CLP SOW for Organic Analysis (OLM03.2), the USEPA CLP National Functional Guidelines for Organic Data Review (2/94) and the Region 10 Guidelines for CLP Data Review.

The conclusions presented herein are based on the information provided for the review.

Holding Time - Acceptable

All samples were preserved with ice prior to shipment. All of the samples met the method and technical (40 CFR 136) required holding times for all analyses. The Holding Times Summary listing the pertinent collection, extraction, and analysis dates is attached at the end of this validation report.

Instrument Performance - Acceptable

All of the GC and GC/MS systems met the SOW specified technical acceptance criteria prior to sample analyses, i.e., GC/MS performance checks, GC performance checks, retention times, response factors, and calibrations. The systems remained stable throughout the course of analyses. Instrument blanks were all clean and there were no indications of carry-over.



ecology and environment, inc.

interruptional Specialists in the Lovironment

500 Linst Inforstate Center, 999 Third Avenue

Scattle, Washington 98104

Fel. (206) 624-9537, Fox: (206) 621-9832

MEMORANDUM

DATE:

September 24, 1999

TO:

Mark Woodke, Project Manager, E & E, Seattle, WA

FROM:

Alasdair Turner, START-Chemist, E & E, Seattle, WA

SUBJ:

Inorganic Data Quality Assurance Summary Review, Wenatchee

Brownfields Site, Wenatchee, Washington.

REF:

TDD: 98-11-0007

PAN: CK0701SIDM

The data quality assurance summary review of 20 soil samples collected from the Wenatchee Brownfields Site in Wenatchee, Washington has been completed. Analysis for VOCs, SVOC, and Pest/PCBs (EPA CLP SOW for organic analysis OLM03.2) has been completed, and was performed by COMPUCHEM, of Cary, NC.

No discrepancies were noted.

USEPA, ITD 1DFB

EPA SAMPLE NO.

PCDD/PCDF TOXICITY EQUIVALENCE SUMMARY
Use for Sample and Blank Results

99284197

Lab Name: SOUTHWEST LAB. OF OKLAHOMA

Episode No.: 39412

Client Name: E&E-WA

Lab Sample ID: 39412.07

Matrix (aqueous/solid/leachate): solid

Sample Wt/Vol: 10.32 g or mL: g

Sample Receipt Date: 07-14-99

Initial Calibration Date: 07-01-99

Ext. Date: 07-16-99 Shift:

Instrument ID: AutoSpec

Analysis Date: 30-JUL-99 Time: 05:34:47

GC Column ID: DB-5

Extract Volume(ul): 20.0

Sample Data Filename: A105231#9

Injection Volume(ul): 2.00

Blank Data Filename: A105231#2

Dilution Factor: 1

Cal. Ver. Data Filename: A105229#6

Concentration Units (pg/L or ng/Kg dry weight): ng/Kg % Moisture: 23.55

	CONCENTRATION	TEF (1)	TEF-ADJUSTED CONCENTRATION	
2,3,7,8-TCDD	*	X 1.0	*	
1,2,3,7,8-PeCDD	*	X 0.5	*	
1,2,3,4,7,8-HxCDD	2.46	X 0.1	2.46e-01	•
1,2,3,6,7,8-HxCDD	.*	X 0.1	* 25	•
1,2,3,7,8,9-HxCDD	*	X 0.1	*	•
1,2,3,4,6,7,8-HpCDD	45.69	X 0.01	4.57e-01	•
OCDD	698.40	X 0.001	ио 6.98e-01	
2,3,7,8-TCDF	NO-2.50	 	2.50e-01 🔘	9/2/99
1,2,3,7,8-PeCDF	*	X 0.05	*	,
2,3,4,7,8-PeCDF	*	X 0.5	*	
1,2,3,4,7,8-HxCDF	3.48	X 0.1	3.48e-01	
1,2,3,6,7,8-HxCDF	* *	X 0.1	*	
1,2,3,7,8,9-HxCDF	*	X 0.1	*	
2,3,4,6,7,8-HxCDF	*	X 0.1	•	
1,2,3,4,6,7,8-HpCDF	10.25	X 0.01	1.03e-01	•
1,2,3,4,7,8,9-HpCDF	*	X 0.01	*	
OCDF	34.71	X 0.001	3.47e-02	

Total: 2.126000 0 9/2/19

3119199

⁽¹⁾ Taken from 'Interim Procudures for Estimating Risks Associated with Exposures to Mixtures of Chlorinated Dibenzo-p-Dioxin and -Dibenzofurans (CDDs and CDFs) and 1989 Udate(EPA/625/3-89/016, March 1989.'

Form 1

CLIENT ID. PCDD/PCDF ANALYSIS DATA SHEET

Use for Sample and Blank Results

99284197

Lab Name: Southwest Lab. of Oklahoma Episode No.: 39412

Lab Code: SWL Case No.: SDG No.: Lab Sample ID: 39412.07

Client Name: E&E-WA Sample Wt/Vol: 10.32 g or mL: g

Matrix (aqueous/solid/leachate): solid Initial Calibration Date: 07-01-99

Sample Receipt Date: 07-14-99 Instrument ID: AutoSpec

Ext. Date: 07-16-99 GC Column:DB-5

Ext. Vol(ul):20.0 Inj. Vol(ul):2.0 Sample Data Filename: A105231#9

Analysis Date: 30-JUL-99 Time: 05:34:47 Blank Data Filename: A105231#2

Dilution Factor: 1 Cal. Ver. Data Filename: A105229#6

	CONCENTRATION	DETECTION	Qual.	ION ABUND.	RRT	MEAN
ANALYTE	FOUND	LIMIT	(1)	RATIO (2)	(2')	RRF
2,3,7,8-TCDD	*	0.405	U .	*	*	1.48
1,2,3,7,8-PeCDD	*	0.696	Ū	*	*	1.11
1,2,3,4,7,8-HxCDD	2.4615	0.774	7A-	0.96	1.001	0.74
1,2,3,6,7,8-HxCDD	*	0.521	Ū	*	*	1.10
1,2,3,7,8,9-HxCDD	5 (C) 1 (M)	0.597	U -	*	*	0.96
1,2,3,4,6,7,8-HpCD	D 45.687	1.005	•	1.01	1.000	1.14
OCDD	698.404	1.044		0.89	1.000	1.11
2,3,7,8-TCDF	-2-499 N	ل 0.383 ل	C	0.72	1.002	1.15
1,2,3,7,8-PeCDF	*	0.458	U	*	*	0.98
2,3,4,7,8-PeCDF	*	0.463	Ū	• ★,	*	0.97
1,2,3,4,7,8-HxCDF	3.476 J	0.830	ZEN	1.21	1.000	1.03
1,2,3,6,7,8-HxCDF	*	0.622	์ บ	*	• •	1.38
1,2,3,7,8,9-HxCDF	* .	0.985	U	*	. *	0.87
2,3,4,6,7,8-HxCDF	• • • • • • • • • • • • • • • • • • •	0.727	U	*	*	1.18
1,2,3,4,6,7,8-HpCD	F 10.253	1.228		1.02	1.000	1.44
1,2,3,4,7,8,9-HpCL		1.729	U.	· 🛨	*	1.02
OCDF	34.709	1.162		0.91	1.004	1.21
Total Tetra-Dioxin	ıs *	0.405	U		•	
Total Penta-Dioxin	ıs *	0.696	U		•	
Total Hexa-Dioxins	3.775	0.521		•		•
Total Hepta-Dioxir	ns 89.484	1.005				
Total Tetra-Furans		0.383			· · ·	
Total Penta-Furans	32.742	0.463				
Total Hexa-Furans	10.454	0.622		*		
Total Hepta-Furans	46.088	1.228				
(1) Ounlificant II -		octod. V c	T 70	MDC C - 110	0.1123.10	

⁽¹⁾ Qualifiers: U and * - not detected; X & I - EMPC. C - use value from second column analysis. B - possible blank contamination.

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⁽²⁾ RRTs and ion ratios are specified in Tables 11 and 8, Method 8290. 8290Fl

EPA SAMPLE NO.

PCDD/PCDF TOXICITY EQUIVALENCE SUMMARY Use for Sample and Blank Results

99284196

Lab Name: SOUTHWEST LAB. OF OKLAHOMA

Episode No.: 39412

Client Name: E&E-WA

Lab Sample ID: 39412.06

Matrix (aqueous/solid/leachate): solid

Sample Wt/Vol: 10.42 g or mL: g

Sample Receipt Date: 07-14-99

Initial Calibration Date: 07-01-99

Ext. Date: 07-16-99 Shift:

Instrument ID: AutoSpec

Analysis Date: 30-JUL-99 Time: 04:46:01

GC Column ID: DB-5

Extract Volume(ul): 20.0

Sample Data Filename: A105231#8

Injection Volume(ul): 2.00

Blank Data Filename: A105231#2

Dilution Factor: 1

Cal. Ver. Data Filename: A105229#6

Concentration Units (pg/L or ng/Kg dry weight): ng/Kg % Moisture: 7.57

	· •		
	CONCENTRATION	TEF(1)	TEF-ADJUSTED CONCENTRATION
2,3,7,8-TCDD	*	X 1.0	*
1,2,3,7,8-PeCDD	1 1 ± • • • • • • • • • • • • • • • • •	X 0.5	•
1,2,3,4,7,8-HxCDD	*	X 0.1	•
1,2,3,6,7,8-HxCDD	*	X 0.1	*
1,2,3,7,8,9-HxCDD	*	X 0.1	*
1,2,3,4,6,7,8-HpCDD	4.65	X 0.01	4.65e-02
OCDD	39.27	X 0.001	3.93e-02
2,3,7,8-TCDF	*	X 0.1	*
1,2,3,7,8-PeCDF	*	X 0.05	*
2,3,4,7,8-PeCDF	*	X 0.5	*
1,2,3,4,7,8-HxCDF	*	X 0.1	*
1,2,3,6,7,8-HxCDF	*	X 0.1	*.
1,2,3,7,8,9-HxCDF	•	X 0.1	*
2,3,4,6,7,8-HxCDF	*	X 0.1	*
1,2,3,4,6,7,8-HpCDF	1.95	X 0.01	1.95e-02
1,2,3,4,7,8,9-HpCDF	*	X 0.01	*
OCDF	5.25	X 0.001	5.25e-03
			•

Total: 1.105e-03

⁽¹⁾ Taken from 'Interim Procudures for Estimating Risks Associated with Exposures to Mixtures of Chlorinated Dibenzo-p-Dioxin and -Dibenzofurans (CDDs and CDFs) and 1989 Udate (EPA/625/3-89/016, March 1989.'

CLIENT ID.

PCDD/PCDF ANALYSIS DATA SHEET Use for Sample and Blank Results

99284196

ab Name: Southwest Lab. of Oklahoma Episode No.: 39412

Lab Code: SWL Case No.:

SDG No.:

Lab Sample ID: 39412.06

Client Name: E&E-WA

Sample Wt/Vol: 10.42

g or mL: g

Matrix (aqueous/solid/leachate): solid

Initial Calibration Date: 07-01-99

Sample Receipt Date: 07-14-99

Instrument ID: AutoSpec

Ext. Date: 07-16-99

GC Column:DB-5

Ext. Vol(ul):20.0

Inj. Vol(ul):2.0 Sample Data Filename: A105231#8

Analysis Date: 30-JUL-99 Time: 04:46:01 Blank Data Filename: A105231#2

Dilution Factor: 1

Cal. Ver. Data Filename: A105229#6

Concentration Units (pg/L or ng/Kg dry weight): ng/Kg

% Moisture: 7.57

	CONCENTRATION	DETECTION	Qual.	ION ABUND.	RRT	MEAN
ANALYTE	FOUND	LIMIT .	(1)	RATIO (2)	(2)	RRF
2,3,7,8-TCDD	*	0.355	U	*	*	1.48
1,2,3,7,8-PeCDD	*	0.414	Ū	*	*	1.11
1,2,3,4,7,8-HxCDI	D *	0.687	Ū	*	*	0.74
1,2,3,6,7,8-HxCDI		0.463	U	* *	*	1.10
1,2,3,7,8,9-HxCDI		0.530	Ū	* *	*	0.96
1,2,3,4,6,7,8-Hp		0.857		1.14	1.000	1.14
OCDD	39.274	0.748		0.84	1.000	1.11
2,3,7,8-TCDF	*	0.258	Ü	*	*	1.15
1,2,3,7,8-PeCDF	*	0.480	Ū	*	* .	0.98
2,3,4,7,8-PeCDF	*	0.485	Ū	* :	*	0.97
1,2,3,4,7,8-HxCD	F *	0.636	. บั	*	*	1.03
1,2,3,6,7,8-HxCD		0.477	บ	*	*	1.38
1,2,3,7,8,9-HxCD	•	0.755	บ	*	*	0.87
2.3.4.6.7.8-HxCD	F *	0.558	U	*	*	1.18
1,2,3,4,6,7,8-Hp	CDF 1.951	0.637		1.09	1.000	1.44
1,2,3,4,7,8,9-Hp	CDF *	0.897	ָּט	*	*	1.02
OCDF	5.248	1.262		0.95	1.004	1.21
Total Tetra-Diox	ins *	0.355	U			•
Total Penta-Diox		0.414	ับ			
Total Hexa-Dioxi		0.463	•	•	•	
Total Hepta-Diox		0.857				
Total Tetra-Fura		0.258		,		
Total Penta-Fura		0.485		•		
Total Hexa-Furan		0.477				
Total Hepta-Fura	* .	0.637		,		
(1) Oualifiers: II	•		E T - E	MDC C - 1194	- value	

Qualifiers: U and * - not detected; X & I - EMPC. C - use value from second column analysis. B - possible blank contamination.

⁽²⁾ RRTs and ion ratios are specified in Tables 11 and 8, Method 8290. 8290F1

USEPA, ITD 1DFB

EPA SAMPLE NO.

PCDD/PCDF TOXICITY EQUIVALENCE SUMMARY Use for Sample and Blank Results

99284195

Lab Name: SOUTHWEST LAB. OF OKLAHOMA

Episode No.: 39412

Client Name: E&E-WA

Lab Sample ID: 39412.05

Matrix (aqueous/solid/leachate): aqueous Sample Wt/Vol: 1000

g or mL: mL

Sample Receipt Date: 07/14/99

Initial Calibration Date: 07/01/99

Ext. Date: 07/16/99 Shift:

Instrument ID: AutoSpec

Analysis Date: 27-JUL-99 Time: 19:27:47 GC Column ID: DB-5

Extract Volume (ul): 20.0

Sample Data Filename: A105216#12

Injection Volume (ul): 2.00

Blank Data Filename: A105216#3

Dilution Factor: 1

Cal. Ver. Data Filename: A105216#1

Concentration Units (pg/L or ng/Kg dry weight): pg/L % Moisture:

CONCENTRATION TEF(1) TEF-ADJUSTED CONCENTRATION	
2,3,7,8-TCDD	
1,2,3,7,8-PeCDD * X 0.5 *	
1,2,3,4,7,8-HxCDD * X 0.1 *	•
1,2,3,6,7,8-HxCDD * X 0.1 *	
1,2,3,7,8,9-HxCDD * X 0.1 *	
1,2,3,4,6,7,8-HpCDD * X 0.01 *	_
OCDD -9.70 -9.70e-03	1 30
2,3,7,8-TCDF * X 0.1 *	
1,2,3,7,8-PeCDF	***
2,3,4,7,8-PeCDF	
1,2,3,4,7,8-HxCDF	*
1,2,3,6,7,8-HxCDF * X 0.1 *	1.1
1,2,3,7,8,9-HxCDF * X 0.1 *	• • •
2,3,4,6,7,8-HxCDF * X 0.1 *	
1,2,3,4,6,7,8-HpCDF * X 0.01 *	
1,2,3,4,7,8,9-HpCDF * X 0.01 *	
OCDF	

*Total: 9.701e-03

40

6/90

⁽¹⁾ Taken from 'Interim Procudures for Estimating Risks Associated with Exposures to Mixtures of Chlorinated Dibenzo-p-Dioxin and -Dibenzofurans (CDDs and CDFs) and 1989 Udate (EPA/625/3-89/016, March 1989.'

^{*} Total TEF is calculated by summing up all positively identified isomers of each homologous series.

Data vanaanon керогі - Wenatchee Brownfields

Case No.: 27165 SDG: JW542

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Compound Quantitation and Detection Limits

All of the samples were analyzed at the contract required quantitation limits (CRQLs) with the following exceptions:

Pest/PCB samples JW570, JW571 and JW572 were analyzed at dilutions of 20X, 2X and 10X respectively, due to matrix interferences.

Target compounds that were detected at concentrations less than the CRQLs were qualified as estimated, "J". Detected compounds at concentrations over the calibration range were qualified as estimated, "J". Data users should consider these estimated compounds as the minimum amount present in the samples. It is also recommended that for these compounds, data users should utilize the concentrations reported from the dilution runs. All of the reported results were adjusted for sample amounts analyzed.

Blanks

Acetone and 2-hexanone were detected below the CRQL in the VOA blanks VBLKU4 and VBLKB9. Acetone and 2-hexanone detected in the samples at concentrations less than ten times the value in their associated blank(s) were qualified as non-detects, "U".

Methylene chloride was detected below the CRQL and acetone was detected slightly above the CRQL in the VOA blank VHBLKB7. Methylene chloride and acetone detected in the samples at concentrations less than ten times the value in their associated blank(s) were qualified as non-detects, "U".

Alpha-BHC, beta-BHC, heptachlor, aldrin, heptachlor epoxide, dieldrin, 4,4'-DDE, 4,4'-DDD, endosulfan sulfate, 4,4'-DDT, endrin aldehyde and gamma chlordane were detected below the CRQL in the Pest/PCB blank PBLKNX. Alpha-BHC, beta-BHC, heptachlor, aldrin, heptachlor epoxide, dieldrin, 4,4'-DDE, 4,4'-DDD, endosulfan sulfate, 4,4'-DDT, endrin aldehyde and gamma chlordane detected in the samples at concentrations less than five times the value in their associated blank(s) were qualified as non-detects, "U".

4,4'-DDE, endrin, 4,4'-DDT and methoxychlor were detected below the CRQL in the Pest/PCB blank PBLKNJ. 4,4'-DDE, endrin, 4,4'-DDT and methoxychlor detected in the samples at concentrations less than five times the value in their associated blank(s) were qualified as non-detects, "U".

Alpha-BHC was detected below the CRQL in the Pest/PCB blanks PBLKDJ and PBLKOJ. Alpha-BHC detected in the samples at concentrations less than five times the value in their associated blank(s) were qualified as non-detects, "U".

Alpha-BHC, dieldrin, 4,4'-DDE, 4,4'-DDD, endosulfan sulfate, 4,4'-DDT and gamma-chlordane were detected below the CRQL in the Pest/PCB blank PBLKXN. Alpha-BHC, dieldrin, 4,4'-DDE, 4,4'-DDD, endosulfan sulfate, 4,4'-DDT and gamma-chlordane detected in the samples at concentrations less than five times the value in their associated blank(s) were qualified as non-detects, "U".

Analytical Sequence - Acceptable

All of the standards, blanks, samples, and QC samples were analyzed in accordance with the SOW specified analytical sequence.

System Monitoring Compounds (SMC)/Surrogate Spikes

All of the VOA SMC recoveries met the applicable QC criteria with the following exception:

JP415

bromofluorobenzene 44%

JP415RE

toluene-d8 145%

Case No.: 27165 SDG: JW542

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The associated internal standard, chlorobenzene-d5, was low in both samples. Results for sample JP415 were qualified as estimated, "J/UJ". None of the results for sample JP415RE were qualified on the basis of SMC recovery.

All of the SVOA surrogates recoveries met the applicable QC criteria with the following exceptions:

JP413 2,4,6-tribromophenol 126%. None of the data were qualified on this basis.

All of the Pest/PCB surrogate spike recoveries met the applicable QC criteria (30-150%).

Matrix Spike/Matrix Spike Duplicate (MS/MSD)

VOA sample JW542 was utilized for MS/MSD analyses. The criteria for frequency of analysis, recoveries and RPDs were met for all analyses.

SVOA sample JW542 was utilized for MS/MSD analyses. The criteria for frequency of analysis, recoveries and RPDs were met for all analyses with the following exceptions:

The RPDs between JW542MS and JW542MSD were 47% for 4-chloro-3-methylphenol and 20% for acenaphthene.

Pest/PCB sample JW542 was utilized for MS/MSD analyses. The criteria for frequency of analysis, recoveries and RPDs were met for all analyses.

No data qualification was applied based on MS/MSD analysis.

Internal Standards

The acceptance criteria for internal standards (IS) are ±30 seconds for retention time (RT) shifts and -50% to +100% of the IS area as compared to the IS RT and area of the daily continuing calibration standard. All of the GC/MS analyses met the IS area and retention time shift criteria with following exceptions:

VOA JP415

chlorobenzene-d5 -58%

JP415RE

chlorobenzene-d5 -60%

Sample JP415 was already qualified on the basis of SMC recovery. Due to the low internal standard area the associated results of sample JP415RE were qualified as estimated, "J/UJ".

Compound Identification

All of the compounds detected in the GC/MS analyses were within the retention time windows, met the USEPA spectral matching criteria and were judged to be acceptable.

Single component pesticides and aroclors were qualified as follows: where %Ds (between two column concentrations) > 30% but ≤ 60% - detected results were qualified as estimated, "J"; %Ds > 60% with concentrations > CRQL - results were qualified as tentatively identified at the estimated concentration, "JN"; %Ds > 60% with concentrations < CRQL - results were qualified as non-detects, "U"; %Ds > 400% - results were qualified as non-detects with raised quantitation limit if > CRQL. In cases where %Ds < 60% with concentrations < CRQL and chromatographic interferences, the results were qualified as non-detects, "U". In cases where %Ds < 400% with concentrations > CRQL and chromatographic interferences, the results were qualified as tentatively identified at the estimated concentration, "JN".

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Case No.: 27165 SDG: JW542 ESW10-3-1379 Page 5 of 6

Tentatively Identified Compounds

Peaks that were detected in the samples at areas >10% of the internal standards and were not part of the target compound lists were identified as tentatively identified compounds (TICs). TICs that were both found in the sample and in the associated method blank(s) were qualified as unusable, "R." Peaks that were identified as common laboratory contaminants, solvent preservatives, column bleed or aldol condensation products were qualified as unusable, "R". The rest of the peaks identified as TICs were qualified "NJ", tentatively identified at an estimated concentration.

Laboratory Contact

The laboratory was contacted by Region 10 concerning the following items:

FORM VII PEST-1 is incomplete for PEM50 analyzed on 8/10/99 at 19:04.

Hard copies of all resubmissions will be sent to Region 10.

Overall Assessment

All of the samples were analyzed in accordance with the SOW specifications. The data, as qualified, are acceptable and can be used for all purposes.

Data Qualifiers

TT		The analyte was not detected at or above the reported result.
	_	I he analyte was not detected at or above the reported result
		inc analytic was not detected at or above the reported result.

The analyte was positively identified. The associated numerical result is an estimate.

R - The data are unusable for all purposes.

N - There is evidence the analyte is present in this sample.

JN - There is evidence that the analyte is present. The associated numerical result is an estimate.

UJ - The analyte was not detected at or above the reported estimated result. The associated numerical value is an estimate of the quantitation limit of the analyte in this sample.

Holding Time Summary - Case 27165

SDG: JW542

Sample Number	Collection Date	VTSR	VOA Analysis	SVOA Extraction	SVOA Analysis	Pest/PCB Extraction	Pest/PCB Analysis
ЈР411	7/8/99	7/9/99	7/15/99	7/9/99	7/14/99	7/9/99	8/11/99
JP412	7/8/99	7/9/99	7/15/99	7/9/99	7/13/99	7/9/99	8/11/99
JP413	7/8/99	7/9/99	7/15/99	7/9/99	7/14/99	7/9/99	8/11/99
JP415	7/8/99	7/10/99	7/15/99	7/12/99	7/15/99	7/13/99	8/11/99
JP416	7/8/99	7/10/99	7/15/99	7/12/99	7/15/99	7/13/99	8/11/99
JР417	7/8/99	7/10/99	7/15/99	7/12/99	7/15/99	7/13/99	8/11/99
JW542	. 7/1/99	7/3/99	7/13/99	7/8/99	7/13/99	7/8/99	8/11/99
JW545	7/1/99	7/3/99	7/13/99	7/8/99	7/13/99	7/8/99	8/11/99
JW546	7/1/99	7/3/99	7/13/99	7/8/99	7/13/99	7/8/99	8/11/99
JW564	7/1/99	7/3/99	7/13/99	7/8/99	7/13/99	7/8/99	8/11/99
JW565	7/1/99	7/3/99	7/13/99	7/8/99	7/13/99	7/8/99	8/11/99
JW570-	7/6/99	7/8/99	NA	NA	NA	7/9/99	8/11/99
JW571	7/6/99	7/8/99	NA	NA .	NA	7/9/99	8/11/99
JW572	7/6/99	7/8/99	NA	NA NA	NA	7/9/99	8/11/99
JW573	7/6/99	7/8/99	NA	NA	NA	7/9/99	8/11/99
JW574	7/6/99	7/8/99	7/15/99	7/9/99	7/14/99	7/9/99	8/11/99
JW575	7/6/99	7/8/99	7/15/99	7/9/99	7/14/99	7/9/99	8/11/99
JW578	7/7/99	7/9/99	7/15/99	7/9/99	7/14/99	7/9/99	8/11/99
JW579	<i>7/7/</i> 99	7/9/99	7/15/99	7/9/99	7/14/99	7/9/99	8/11/99
JW580	7/7/99	7/9/99	7/15/99	7/9/99	7/13/99	7/9/99	8/11/99
JW415RE	7/8/99	7/10/99	7/15/99	NA	NA	NA	NA.
JW575DL	7/6/99	7/8/99	NA	7/9/99	7/15/99	NA	NA
JP415DL	7/8/99	7/10/99	NA ·	NA	NA	7/13/99	8/13/99
JW542DL	7/1/99	7/3/99	NA	NA	NA NA	7/8/99	8/13/99
JW546DL	7/1/99	7/3/99	NA	NA	NA	7/8/99	8/13/99
JW565DL	7/1/99	7/3/99	NA	. NA	NA	7/8/99	8/13/99
JW570DL	7/6/99	7/8/99	NA	NA	NA	7/9/99	8/13/99
JW572DL	7/6/99	7/8/99	NA	NA	NA	7/9/99	8/13/99

Lab Name: COMPUCHEM Contract: 68D50004 JP411

Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JW542

Matrix: (goil/e-to-) GOTI

Matrix: (soil/water) SOIL Lab Sample ID: 950008

Sample wt/vol: 5.0 (g/mL) g Lab File ID: GH050008A51

Level: (low/med) LOW Date Received: 07/09/99

% Moisture: not dec. 18 Date Analyzed: 07/15/99

GC Column: EQUITY624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: ____(uL) Soil Aliquot Volume: (uL

CONCENTRATION UNITS:
CAS NO. COMPOUND (ug/L or ug/Kg) ug/Kg Q

74-87-3	· · · · · · · · · · · · · · · · · · ·				
75-01-4	74-87-3	Chloromethane		:	
75-09-2	74-83-9	Bromomethane	ŀ		
75-09-2	/5-01-4	Vinyl Chloride			
67-64-1	75-00-3	Chloroethane	, °	. 12	U
75-35-41,1-Dichloroethene 75-34-31,1-Dichloroethane 75-34-31,1-Dichloroethane 75-36-31,1-Dichloroethane 77-66-3	75-09-2	Methylene Chloride		12 3	ZU
75-35-41,1-Dichloroethene 75-34-31,1-Dichloroethane 75-34-31,1-Dichloroethane 75-36-31,1-Dichloroethane 77-66-3	67-64-1	Acetone		3'7	事以
75-35-41,1-Dichloroethene 75-34-31,1-Dichloroethane 75-34-31,1-Dichloroethane 75-36-31,1-Dichloroethane 77-66-3	75-15-0	Carbon Disulfide	1	1	J
540-59-01, 2-Dichloroethene 12 U 67-66-3Chloroform 12 U 107-06-21, 2-Dichloroethane 12 U 78-93-32-Butanone 9 J 71-55-61, 1, 1-Trichloroethane 12 U 56-23-5Carbon Tetrachloride 12 U 75-27-4Bromodichloromethane 12 U 78-87-51, 2-Dichloropropane 12 U 10061-01-5cis-1, 3-Dichloropropene 12 U 79-01-6Trichloroethane 12 U 12-448-1Dibromochloromethane 12 U 79-00-51, 1, 2-Trichloroethane 12 U 71-43-2Benzene 12 U 10061-02-6trans-1, 3-Dichloropropene 12 U 75-25-2Bromoform 12 U 108-10-14-Methyl-2-Pentanone 12 U 591-78-62-Hexanone 12 U 127-18-4Tetrachloroethane 12 U 108-88-3Toluene 12 U 108-89-7Chlorobenzene 12 U 100-41-4Styrene 12 U	75-35-4	1,1-Dichloroethene			ע
107-06-2	75-34-3	1,1-Dichloroethane	l .	12	ט
107-06-2	540-59-0	1,2-Dichloroethene (total)	1.	12	ט
78-93-32-Butanone 9 71-55-61,1,1-Trichloroethane 12 56-23-5Carbon Tetrachloride 12 75-27-4Bromodichloromethane 12 78-87-51,2-Dichloropropane 12 10061-01-5cis-1,3-Dichloropropene 12 79-01-6Trichloroethene 12 12-48-1Dibromochloromethane 12 79-00-51,1,2-Trichloroethane 12 71-43-2Benzene 12 10061-02-6trans-1,3-Dichloropropene 12 75-25-2Bromoform 12 108-10-14-Methyl-2-Pentanone 12 591-78-62-Hexanone 12 127-18-4Tetrachloroethene 12 79-34-51,1,2,2-Tetrachloroethane 12 108-88-3Toluene 12 108-88-3Chlorobenzene 12 100-41-4Ethylbenzene 12 100-42-5Styrene 12	67-66-3	Chloroform	· .	. 12	U
71-55-61,1,1-Trichloroethane 56-23-5Carbon Tetrachloride 75-27-4Bromodichloromethane 78-87-51,2-Dichloropropane 10061-01-5cis-1,3-Dichloropropene 79-01-6Trichloroethene 12 U 12 U 14-48-1Dibromochloromethane 12 U 17-43-2Benzene 10061-02-6trans-1,3-Dichloropropene 75-25-2Bromoform 108-10-14-Methyl-2-Pentanone 12 U 107-18-4Tetrachloroethene 12 U 12 U 13 U 14 U 15 U 15 U 16 U 17 U 17 U 18	107-06-2	1,2-Dichloroethane		12	ט
71-55-61,1,1-Trichloroethane 56-23-5Carbon Tetrachloride 75-27-4Bromodichloromethane 78-87-51,2-Dichloropropane 10061-01-5cis-1,3-Dichloropropene 79-01-6Trichloroethene 12 U 12-448-1Dibromochloromethane 79-00-51,1,2-Trichloroethane 71-43-2Benzene 10061-02-6trans-1,3-Dichloropropene 75-25-2Bromoform 108-10-14-Methyl-2-Pentanone 12 U 12 U 13 U 14 U 15 U 15 U 16 U 17 U 17 U 18 U 18 U 18 S S S S S S S S S S S S S S S S S S S	78-93-3	2-Butanone		9	J
56-23-5Carbon Tetrachloride 12 U 75-27-4Bromodichloromethane 12 U 78-87-51,2-Dichloropropane 12 U 10061-01-51,3-Dichloropropene 12 U 79-01-6Trichloroethene 12 U 124-48-1Dibromochloromethane 12 U 79-00-51,1,2-Trichloroethane 12 U 71-43-2Benzene 2 J 10061-02-6trans-1,3-Dichloropropene 12 U 75-25-2Bromoform 12 U 108-10-14-Methyl-2-Pentanone 12 U 591-78-62-Hexanone 12 U 127-18-4Tetrachloroethene 12 U 108-88-3Toluene 12 U 108-90-7Chlorobenzene 12 U 100-41-4	71-55-6	1,1,1-Trichloroethane			
75-27-4Bromodichloromethane 78-87-51,2-Dichloropropane 10061-01-5cis-1,3-Dichloropropene 79-01-6Trichloroethene 124-48-1Dibromochloromethane 79-00-51,1,2-Trichloroethane 71-43-2Benzene 10061-02-6trans-1,3-Dichloropropene 75-25-2Bromoform 108-10-14-Methyl-2-Pentanone 12 U 177-18-4Tetrachloroethene 12 U 18-90-7Toluene 108-90-7Chlorobenzene 100-41-4Ethylbenzene 100-42-5Styrene	56-23-5	Carbon Tetrachloride			
78-87-51, 2-Dichloropropane 12 U 10061-01-5cis-1, 3-Dichloropropene 12 U 79-01-6Trichloroethene 12 U 124-48-1Dibromochloromethane 12 U 79-00-51, 1, 2-Trichloroethane 12 U 71-43-2Benzene 2 J 10061-02-6trans-1, 3-Dichloropropene 12 U 75-25-2Bromoform 12 U 108-10-14-Methyl-2-Pentanone 12 U 591-78-62-Hexanone 12 U 127-18-4Tetrachloroethene 12 U 79-34-51, 1, 2, 2-Tetrachloroethane 12 U 108-88-3Toluene 12 U 108-90-7Chlorobenzene 12 U 100-41-4Styrene 12 U	75-27-4	Bromodichloromethane			
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124-48-1Dibromochloromethane 12 U 79-00-51,1,2-Trichloroethane 12 U 71-43-2Benzene 2 J 10061-02-6trans-1,3-Dichloropropene 12 U 75-25-2Bromoform 12 U 108-10-14-Methyl-2-Pentanone 12 U 591-78-62-Hexanone 12 U 127-18-4Tetrachloroethene 12 U 79-34-51,1,2,2-Tetrachloroethane 12 U 108-88-3Toluene 12 U 108-90-7Chlorobenzene 12 U 100-41-4Ethylbenzene 24 100-42-5Styrene 12 U	- 79-01-6	Trichloroethene			
79-00-51,1,2-Trichloroethane 71-43-2Benzene 10061-02-6trans-1,3-Dichloropropene 75-25-2Bromoform 108-10-14-Methyl-2-Pentanone 591-78-62-Hexanone 127-18-4Tetrachloroethene 79-34-51,1,2,2-Tetrachloroethane 108-88-3Toluene 108-90-7Chlorobenzene 100-41-4Ethylbenzene 100-42-5Styrene	124-48-1	Dibromochloromethane			
71-43-2	79-00-5	1 1 2-Trichloroethane			
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75-25-2Bromoform 108-10-14-Methyl-2-Pentanone 12 U 1591-78-62-Hexanone 127-18-4Tetrachloroethene 12 U 108-88-31,1,2,2-Tetrachloroethane 12 U 108-90-7Chlorobenzene 100-41-4Ethylbenzene 100-42-5Styrene	10061-02-6	trans-1_3-Dichloropropene			
108-10-14-Methyl-2-Pentanone 12 U 591-78-62-Hexanone 12 U 127-18-4Tetrachloroethene 12 U 79-34-51,1,2,2-Tetrachloroethane 12 U 108-88-3Toluene 12 U 108-90-7Chlorobenzene 12 U 100-41-4Ethylbenzene 24 U 100-42-5Styrene 12 U	75-25-2	Bromoform			
591-78-62-Hexanone 12 U 127-18-4Tetrachloroethene 12 U 79-34-51,1,2,2-Tetrachloroethane 12 U 108-88-3Toluene 12 U 108-90-7Chlorobenzene 12 U 100-41-4Ethylbenzene 24 U 100-42-5Styrene 12 U	108-10-1	4-Methyl-2-Pentanone	·	:	
127-18-4Tetrachloroethene 12 U 79-34-51,1,2,2-Tetrachloroethane 12 U 108-88-3Toluene 12 U 108-90-7Chlorobenzene 12 U 100-41-4Ethylbenzene 24 U 100-42-5Styrene 12 U	591-78-6	2-Hevanone			
79-34-51,1,2,2-Tetrachloroethane 108-88-3Toluene 108-90-7Chlorobenzene 100-41-4Ethylbenzene 100-42-5Styrene	127-18-4	Tetrachloroethene			
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108-90-7Chlorobenzene 12 U 100-41-4Ethylbenzene 24 100-42-5Styrene 12 U	108-88-3	T, I, Z, Z-TECTACHIOTOECHAHE			
100-41-4Ethylbenzene 24 100-42-5Styrene 12	108-90-7-	Chlorobongono	.		
100-42-5Styrene	100-41-4	Ethylbongono			1 - 1
1330-20-7Xylene (Total) 90 90	100-42-5-	Ctrions Ctrions	.		
1330-20-7Aylene (Total) 90 90	1330 30 B	Styrene			ן ט
	1330-20-/	xyteue (local)	.]	90	
			.		

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VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

JP411

Lab Name: COMPUCHEM

Contract: 68D50004

SAS No.:

SDG No.: JW542

Matrix: (soil/water) SOIL

Lab Sample ID: 950008

Sample wt/vol:

Lab Code: COMPU

5.0 (g/mL) g

Case No.: 27165

Lab File ID: gh050008a51

Level: (low/med) LOW

Date Received: 07/09/99

% Moisture: not dec. 18

Number TICs found: 25

Date Analyzed: 07/15/99

GC Column: EQUITY624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume:

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg

Number 1105 Found		,,	~5/5
CAS NUMBER	COMPOUND NAME	RT	EST. CONC.
1. 2. 3.	SUBSTITUTED CYCLOHEXANE SUBSTITUTED ALKANE SUBSTITUTED ALKANE UNKNOWN HYDROCARBON	19.76 19.98 20.09 20.30	18 10 26 14

	1 2.	SUBSTITUTED ALKANE	19.98	. •	10	J	
	3.	SUBSTITUTED ALKANE	20.09		26 3	J	. 1
	4.	UNKNOWN HYDROCARBON	20.30		14	J	
	5.	UNKNOWN CYCLIC HYDROCARBON	20.49		16	J	1
	6	SUBSTITUTED BENZENE	20.73		40 3	J	
	7.	SUBSTITUTED BENZENE	20.82		40	ן ן	
	8.	UNKNOWN CYCLIC HYDROCARBON	20.92		25	J	
	9.	SUBSTITUTED BENZENE	21.04		11	J	ľ
	10.	SUBSTITUTED BENZENE	21.21		97	J .	١,
	11.	SUBSTITUTED BENZENE	21.40		14	J	11
	12.	SUBSTITUTED BENZENE	21.50			J l	11
	13.	SUBSTITUTED BENZENE	21.67			J	
	14.	SUBSTITUTED BENZENE	21.90	•	34 1	J.	h
	15.	SUBSTITUTED BENZENE	21.96			J	
	16.	SUBSTITUTED BENZENE	22.19		8	J	1
٠	17.	SUBSTITUTED BENZENE	22.31		25	J	
	18.	SUBSTITUTED BENZENE	22.40	•	17	J	h
	19.	SUBSTITUTED BENZENE	22.56			J.	Ш
	20.	SUBSTITUTED BENZENE	22.78			J	L
	21.	SUBSTITUTED BENZENE	22.89			J i	
	22.	SUBSTITUTED BENZENE	22.96		25	J	
	23.	SUBSTITUTED BENZENE	23.07		19	J	\parallel
	24.	SUBSTITUTED BENZENE	23.27			J	1
	25.	SUBSTITUTED BENZENE	23.35		10	J₩	١,
	26.			•	.]		II
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	30.						\parallel
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FORM I VOA-TIC

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VOLATILE ORGANICS ANALYSIS DATA SHEET

Matrix: (soil/water) SOIL

JP412

Contract: 68D50004 Lab Name: COMPUCHEM

SDG No.: JW542 Case No.: 27165 SAS No.: Lab Code: COMPU Lab Sample ID: 950017

Lab File ID: GH050017A51 Sample wt/vol: 5.0 (g/mL) g

Date Received: 07/09/99 Level: (low/med) LOW

Date Analyzed: 07/15/99 % Moisture: not dec. 5

Dilution Factor: 1.0 GC Column: EQUITY624 ID: 0.53 (mm)

Soil Aliquot Volume: (uL Soil Extract Volume: (uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg CAS NO. COMPOUND 10 U 74-87-3-----Chloromethane · 10 U 74-83-9-----Bromomethane 10 U 75-01-4-----Vinyl Chloride_____ 10 U 75-00-3-----Chloroethane 10 2 1 U 75-09-2----Methylene Chloride 67-64-1-----Acetone 10 0 75-15-0-----Carbon Disulfide 75-35-4-----1,1-Dichloroethene 10 U 10 U 75-34-3-----1,1-Dichloroethane__ 540-59-0-----1,2-Dichloroethene (total) 10 U 10 U 67-66-3-----Chloroform 107-06-2----1,2-Dichloroethane 10 U 10 U 78-93-3-----2-Butanone 71-55-6-----1,1,1-Trichloroethane__ 10 U 56-23-5-----Carbon Tetrachloride 10 U 75-27-4-----Bromodichloromethane 10 U 78-87-5----1,2-Dichloropropane__ 10 U 10061-01-5----cis-1,3-Dichloropropene_ 10 U 79-01-6-----Trichloroethene 10 U 124-48-1-----Dibromochloromethane 10 U 79-00-5-----1,1,2-Trichloroethane_ 10 U 71-43-2----Benzene 10 U 10061-02-6----trans-1,3-Dichloropropene 10 U 75-25-2-----Bromoform 108-10-1----4-Methyl-2-Pentanone 10 U 10 U 591-78-6----2-Hexanone 10 U 127-18-4-----Tetrachloroethene

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10 U

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10 U

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FORM I VOA

79-34-5-----1,1,2,2-Tetrachloroethane_

108-88-3-----Toluene

108-90-7-----Chlorobenzene

100-41-4-----Ethylbenzene____ 100-42-5-----Styrene____

1330-20-7-----Xylene (Total)

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Lab Name: COMPUCHEM Contract: 68D50004 JP412

Lab Code: COMPU

Case No.: 27165

SAS No.:

SDG No.: JW542

Matrix: (soil/water) SOIL

Lab Sample ID: 950017

Sample wt/vol:

5.0 (g/mL) g

Lab File ID:

gh050017a51

Level: (low/med)

Date Received: 07/09/99

% Moisture: not dec. 5

Date Analyzed: 07/15/99

GC Column: EQUITY624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume:

Soil Aliquot Volume: (u

Number TICs found: 1

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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2.	ABORATORY ARTIFACT Lab Confamination	22.54	9	J R
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FORM I VOA-TIC

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VOLATILE ORGANICS ANALYSIS DATA SHEET

JP413 Contract: 68D50004

Lab Name: COMPUCHEM Lab Code: COMPU

Case No.: 27165

SAS No.:

SDG No.: JW542

Matrix: (soil/water) SOIL

Lab Sample ID: 950018

Sample wt/vol:

5.0 (g/mL) g

Lab File ID: GH050018A51

Level: (low/med)

LOW

Date Received: 07/09/99

Date Analyzed: 07/15/99

% Moisture: not dec. 15

GC Column: EQUITY624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Aliquot Volume: _____

CAS NO.

Soil Extract Volume: ____

COMPOUND

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg

1			
74-87-3Chloromethane	:	1.2	υ
74-87-3Bromomethane		12	.U
75-01-4Vinyl Chloride		12	υ.
75-01-4Villy1 Chioride		12	U
75-00-3Chioroechane		12 2	JU
75-09-2Methylene Chloride		14	J U B U
67-64-1Acetone		12	ับ
75-15-0Carbon Disulfide		12	Ū
75-35-41,1-Dichloroethene		12	Ū
75-34-31,1-Dichloroethane		12	
540-59-01,2-Dichloroethene (total)		12	
67-66-3Chloroform		12	
107-06-21,2-Dichloroethane		12	
78-93-32-Butanone			1 -
71-55-61,1,1-Trichloroethane		12	1 -
56-23-5Carbon Tetrachloride		12	
75-27-4Bromodichloromethane		12	U
78-87-51,2-Dichloropropane		12	U
10061-01-5cis-1,3-Dichloropropene		12	U
79-01-6Trichloroethene		12	U
124-48-1Dibromochloromethane		12	1
79-00-51,1,2-Trichloroethane	1	12	1 -
71-43-2Benzene		12	1 -
10061-02-6trans-1,3-Dichloropropene	1	12	_
75-25-2Bromoform		12	
108-10-14-Methyl-2-Pentanone		12	U
591-78-62-Hexanone	•	12	
127-18-4Tetrachloroethene	·	12	ָּע
79-34-51,1,2,2-Tetrachloroethane	- [12	: U
108-88-3Toluene	- '	12	יט
108-90-7Chlorobenzene		12	U
100-41-4Ethylbenzene			Ū
		12	- 1 -
100-42-5Styrene	-	12	- ; -
1330-20-7Xylene (Total)	-	غ. <u>د</u>	
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VOLATILE	ORGANICS	S ANALYSIS	DATA	SHEET
TENT	ATIVELY :	IDENTIFIED	COMPO	DUNDS

Lab Name: COMPUCHEM Contract: 68D50004 JP413

Lab Code: COMPU

Case No.: 27165

SAS No.:

SDG No.: JW542

Matrix: (soil/water) SOIL

Lab Sample ID: 950018

Sample wt/vol:

5.0 (g/mL) g

Lab File ID: gh050018a51

Level: (low/med)

Date Received: 07/09/99

% Moisture: not dec. 15

Date Analyzed: 07/15/99

GC Column: EQUITY624 ID: 0.53

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume:

Number TICs found: 0

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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FORM I VOA-TIC

Soil Aliquot Volume:

VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: COMPUCHEM Contract: 68D50004 JP415
Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JW542

Edb Code. Collect Cage No.: 27103 Bib No.: 550 No.: 6831

Matrix: (soil/water) SOIL Lab Sample ID: 950228

Sample wt/vol: 5.0 (g/mL) g Lab File ID: GH050228A51

Level: (low/med) LOW Date Received: 07/10/99

% Moisture: not dec. 24 Date Analyzed: 07/15/99

GC Column: EQUITY624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL)

de columningollitoza ib. 0.55 (mm)

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) ug/Kg Q

		· · · · · · · · · · · · · · · · · · ·
74-87-3Chloromethane	٠	13 07
74-83-9Bromomethane		13 U
75-01-4Vinyl Chloride		13 U
75-00-3Chloroethane		13 0 √ _
75-09-2Methylene Chloride		13 X X UJ
67-64-1Acetone		13 オメリカ 13 ままはユ 13 Uフ
75-15-0Carbon Disulfide	•	1'3 U'T
75-35-41,1-Dichloroethene		13 U
75-34-31,1-Dichloroethane		13 0
540-59-01,2-Dichloroethene (total)	· · :	13 U
67-66-3Chloroform		13 0
107-06-21,2-Dichloroethane		13 U
78-93-32-Butanone		13 U
71-55-61,1,1-Trichloroethane		13 ซี.
56-23-5Carbon Tetrachloride		13 0
75-27-4Bromodichloromethane		13 0
78-87-51,2-Dichloropropane		13 0
10061-01-5cis-1,3-Dichloropropene		13 0
79-01-6Trichloroethene	1	13 0
124-48-1Dibromochloromethane		13 0
79-00-51,1,2-Trichloroethane		13 0
71-43-2Benzene		13 0
10061-02-6trans-1,3-Dichloropropene		13 0
75-25-2Bromoform		13 0
108-10-14-Methyl-2-Pentanone		13 0
591-78-62-Hexanone		
127-18-4Tetrachloroethene		13 0
79-34-51,1,2,2-Tetrachloroethane		13 U
108-88-3Toluene		13 U
108-90-7Chlorobenzene		13 U
100-41-4Ethylbenzene		13 U
100-42-5Styrene		. 13 U
1330-20-7Xylene (Total)		13 U V
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VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO	SAMPLE NO	EPA
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Lab Name: COMPUCHEM	Contract: 68D50004
Lab Code: COMPU Case No.: 27165	SAS No.: SDG No.: JW542
Matrix: (soil/water) SOIL	Lab Sample ID: 950228
Sample wt/vol: 5.0 (g/mL) g	Lab File ID: gh050228a51
Level: (low/med) LOW	Date Received: 07/10/99
% Moisture: not dec. 24	Date Analyzed: 07/15/99
GC Column: EQUITY624 ID: 0.53 (mm)	Dilution Factor: 1.0
Soil Extract Volume:(uL)	Soil Aliquot Volume: (uI

Number TICs found: 2

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg

Cas number	COMPOUND NAME LABORATORY ARTIFACT Lab Conf.	RT :	EST. CONC.	Q R
	LABORATORY ARTIFACT	20.56 22.51	33	
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JP415RE Lab Name: COMPUCHEM Contract: 68D50004 Lab Code: COMPU SAS No.: SDG No.: JW542 Case No.: 27165 Matrix: (soil/water) SOIL Lab Sample ID: 950228 Sample wt/vol: 5.0 (g/mL) g Lab File ID: GR050228A51 Level: (low/med) Date Received: 07/10/99 LOW % Moisture: not dec. 24 Date Analyzed: 07/15/99 Dilution Factor: 1.0 GC Column: EQUITY624 ID: 0.53 (mm) Soil Extract Volume:____(uL) Soil Aliquot Volume: ____(uL

; CONCENTRATION UNITS:

COMPOUND CAS NO. (ug/L or ug/Kg) ug/Kg Q 74-87-3-----Chloromethane 13 U 74-83-9-----Bromomethane 13 U 75-01-4-----Vinyl Chloride 13 U 75-00-3-----Chloroethane 13 U 75-09-2----Methylene Chloride_ 13 U 67-64-1-----Acetone 13 \$ J\$ U 75-15-0-----Carbon Disulfide 75-35-4----1,1-Dichloroethene_ 13 U 75-34-3-----1,1-Dichloroethane U 13 540-59-0----1,2-Dichloroethene (total) U 67-66-3-----Chloroform 107-06-2----1,2-Dichloroethane 13 78-93-3----2-Butanone 13 U 71-55-6-----1,1,1-Trichloroethane_ 13 U 56-23-5-----Carbon Tetrachloride 13 U 75-27-4-----Bromodichloromethane 13 U 78-87-5----1,2-Dichloropropane 13 U 10061-01-5----cis-1,3-Dichloropropene 79-01-6-----Trichloroethene 13 U 124-48-1-----Dibromochloromethane 79-00-5----1,1,2-Trichloroethane 71-43-2-----Benzene 13 U 10061-02-6----trans-1,3-Dichloropropene 13 | U 75-25-2-----Bromoform 13 U 108-10-1----4-Methyl-2-Pentanone 13 U J 591-78-6----2-Hexanone 13 | U 127-18-4-----Tetrachloroethene . 13 U. 79-34-5----1,1,2,2-Tetrachloroethane 13 U 108-88-3-----Toluene 13 U 108-90-7-----Chlorobenzene 13 U 100-41-4-----Ethylbenzene 13 U 100-42-5----Styrene 13 I U 1330-20-7-----Xylene (Total) CP8-31-9

FORM I VOA

OLM03.0

VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

JP415RE Contract: 68D50004 Lab Name: COMPUCHEM SDG No.: JW542 Case No.: 27165 SAS No.: Lab Code: COMPU Lab Sample ID: 950228 Matrix: (soil/water) SOIL Lab File ID: gr050228a51 Sample wt/vol: 5.0 (g/mL) g Date Received: 07/10/99 Level: (low/med) LOW Date Analyzed: 07/15/99 % Moisture: not dec. 24 Dilution Factor: 1.0 GC Column: EQUITY624 ID: 0.53 (mm)

Soil Extract Volume: (uL)

CONCENTRATION UNITS:

Soil Aliquot Volume: ____

(ug/L or ug/Kg) ug/Kg Number TICs found: 3

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q =====
1. 71-23-8	1-PROPANOL LABORATORY ARTIFACT Lab Co.	11.50 20.57 22.51	8 313 35	NJ J R
4	HABORATORT ARTITACT			
6				:
8				
10.				
12.				
14. 15. 16.				
17				
19. 20.				
21. 22. 23.				
24. 25.				
26. 27.		137		
28.				
30.				

CP8-31-9

FORM I VOA-TIC

1A VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: COMPUCHEM

Contract: 68D50004

Lab Code: COMPU

Case No.: 27165 SAS No.: SDG No.: JW542

Matrix: (soil/water) SOIL Lab Sample ID: 950229

Sample wt/vol: 5.0 (g/mL) g Lab File ID: GH050229A51

Level: (low/med) LOW Date Received: 07/10/99

% Moisture: not dec. 7 Date Analyzed: 07/15/99

GC Column: EQUITY624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: ____(uL

CONCENTRATION UNITS:

(ug/L or ug/Kg) ug/Kg COMPOUND CAS NO. 11 U 74-87-3-----Chloromethane 11 U 74-83-9-----Bromomethane 11 U 75-01-4-----Vinyl Chloride 11 U 75-00-3-----Chloroethane 11 U 75-09-2-----Methylene Chloride____ // \$ \$\$4 11 U 67-64-1-----Acetone 75-15-0-----Carbon Disulfide 11 U 75-35-4----1,1-Dichloroethene 11 U 75-34-3-----1,1-Dichloroethane 540-59-0----1,2-Dichloroethene (total) 11 U 11 U 67-66-3-----Chloroform 107-06-2----1,2-Dichloroethane 11 U 78-93-3----2-Butanone 11 U 11 U 71-55-6----1,1,1-Trichloroethane_ 11 U 56-23-5-----Carbon Tetrachloride_ 11 U 75-27-4-----Bromodichloromethane 11 U 78-87-5----1,2-Dichloropropane 11 U 10061-01-5----cis-1,3-Dichloropropene 11 U 79-01-6-----Trichloroethene 11 U 124-48-1-----Dibromochloromethane 11 U 79-00-5-----1,1,2-Trichloroethane_ 71-43-2----Benzene 11 U 10061-02-6----trans-1,3-Dichloropropene_ 11 | U 75-25-2-----Bromoform 11 U 108-10-1----4-Methyl-2-Pentanone 11 U 591-78-6----2-Hexanone 11 U 11 U 127-18-4-----Tetrachloroethene 11 | U 79-34-5----1,1,2,2-Tetrachloroethane_ 11 U 108-88-3-----Toluene 11 U 108-90-7-----Chlorobenzene 100-41-4-----Ethylbenzene__ 11 U 11 U 100-42-5-----Styrene 1330-20-7-----Xvlene (Total) 11 U

UP 8-31-99

FORM I VOA

OLM03.0

VOLATILE ORGANICS ANALYSIS DATA SHEET

5.0 (g/mL) g

EPA SAMPLE NO.

gh050229a51

	: 1		V		DERITE TE	PD COMPOUNT			1		
Lab	Name:	COMPUCHEM		. :		Contract:	68D50004			JP416	
Lab	Code:	COMPU	Case	No.:	27165	SAS No		SDG	NO	TW542	

Lab File ID:

Soil Aliquot Volume:

Case No.: 27165 SAS No.: SDG No.: JW542 Matrix: (soil/water) SOIL

Lab Sample ID: 950229 Sample wt/vol:

Level: (low/med) LOW Date Received: 07/10/99

% Moisture: not dec. 7 Date Analyzed: 07/15/99

GC Column: EQUITY624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume:____(uL)

CONCENTRATION UNITS: Number TICs found: 2 (ug/L or ug/Kg) ug/Kg

LABORATORY ARTIFACT Lab Cord. 1 LABORATORY ARTIFACT 20.59 24 24 3. LABORATORY ARTIFACT 22.54 21 3	J- 1/ J- 1/ D- 1/ J- 1/ D- 1/
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CP 8-31-99

FORM I VOA-TIC

OLM03.0

1A VOLATILE ORGANICS ANALYSIS DATA SHEET

JP417 Contract: 68D50004 Lab Name: COMPUCHEM SDG No.: JW542 Case No.: 27165 SAS No.: Lab Code: COMPU Lab Sample ID: 950230 Matrix: (soil/water) SOIL Lab File ID: GH050230A51 5.0 (g/mL) gSample wt/vol: Date Received: 07/10/99 Level: (low/med) LOW Date Analyzed: 07/15/99 % Moisture: not dec. 34 Dilution Factor: 1.0 GC Column: EQUITY624 ID: 0.53 (mm) Soil Aliquot Volume: ____ Soil Extract Volume: (uL) CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg CAS NO. COMPOUND

74-87-3	15 15 15 15 15 15 15 15 15 15 15 15 15 1	
78-87-51,2-Dichloropropane	15 U 15 U 15 U 15 U 15 U 15 U 15 U 15 U	
108-88-3Toluene 108-90-7Chlorobenzene 100-41-4Ethylbenzene 100-42-5Styrene 1330-20-7Xylene (Total)	15 U 15 U 15 U 15 U 15 U	

FORM I VOA

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VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

		•			JP417
Lab Name: COMP	UCHEM	Contract:	68D50004	_	

Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JW542

Matrix: (soil/water) SOIL Lab Sample ID: 950230

Sample wt/vol: 5.0 (g/mL) gLab File ID: gh050230a51

Level: (low/med) LOW Date Received: 07/10/99

% Moisture: not dec. 34 Date Analyzed: 07/15/99

GC Column: EQUITY624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume:

CONCENTRATION UNITS: Number TICs found: 1 (ug/L or ug/Kg) ug/Kg

3.	Q	EST. CONC.	RT	COMPOUND NAME
2	-R	26	22.53	LABORATORY ARTIFACT Lab Conf.
3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9	•			
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FORM I VOA-TIC

Soil Aliquot Volume: ____(uL

JW542

Lab Name: COMPUCHEM Contract: 68D50004

Lab Name: COMPUCHEM Contract: 68D50004

Soil Extract Volume: (uL)

Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JW542

Matrix: (soil/water) SOIL Lab Sample ID: 949679

Sample wt/vol: 5.0 (g/mL) g Lab File ID: GH049679A51

Level: (low/med) LOW Date Received: 07/03/99

% Moisture: not dec. 7 Date Analyzed: 07/13/99

GC Column: EOUITY624 ID: 0.53 (mm) Dilution Factor: 1.0

CONCENTRATION UNITS:
CAS NO. COMPOUND (ug/L or ug/Kg) ug/Kg Q

11 0 5 74-87-3-----Chloromethane 74-83-9-----Bromomethane 11 U 75-01-4-----Vinyl Chloride 11 U 75-00-3-----Chloroethane 11 U 1/ g z u 34 B U 11 U 75-09-2-----Methylene Chloride____ 67-64-1-----Acetone 75-15-0-----Carbon Disulfide 75-35-4----1,1-Dichloroethene_ 11 | U 75-34-3-----1,1-Dichloroethane 11 U 540-59-0----1,2-Dichloroethene (total) 11 U 67-66-3-----Chloroform 11 U 107-06-2----1,2-Dichloroethane 11 U 78-93-3----2-Butanone_ 11 | U 71-55-6----1,1,1-Trichloroethane 11 U 56-23-5-----Carbon Tetrachloride 11 U 75-27-4----Bromodichloromethane 11 0 78-87-5-----1,2-Dichloropropane_ 11 U 10061-01-5----cis-1,3-Dichloropropene 11 U 79-01-6-----Trichloroethene 11 U 124-48-1-----Dibromochloromethane 11 U 11 U 79-00-5----1,1,2-Trichloroethane 71-43-2----Benzene 11 U 10061-02-6----trans-1,3-Dichloropropene 11 U 75-25-2----Bromoform 11 U 108-10-1----4-Methyl-2-Pentanone 11 U 591-78-6----2-Hexanone 11 U 127-18-4----Tetrachloroethene 11 | U 79-34-5----1,1,2,2-Tetrachloroethane 11 U 108-88-3-----Toluene 11 U 108-90-7-----Chlorobenzene 11 U 100-41-4-----Ethylbenzene__ 11 U 100-42-5----Styrene 11 U 1330-20-7-----Xylene (Total) 11 U UP 5-31-99

FORM I VOA

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EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

JW542 Contract: 68D50004

Lab	Name:	COMPUCHEM

MPUCHEM Contract:

SDG No.: JW542

Matrix: (soil/water) SOIL

Lab Code: COMPU Case No.: 27165

LOW

Lab Sample ID: 949679

Sample wt/vol:

5.0 (g/mL) g

Lab File ID: gh049679a51

Level: (low/med)

Date Received: 07/03/99

% Moisture: not dec. 7

Date Analyzed: 07/13/99

GC Column: EQUITY624 ID: 0.53 (mm)

mm) Dilution Factor: 1.0

SAS No.:

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL

Number TICs found: 2

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q.
	LABORATORY ARTIFACT Lab Cont.	20-60		=== <i>\bar{\bar{\bar{\bar{\bar{\bar{\bar{</i>
<u>.</u>	LABORATORY ARTIFACT V	$\frac{20.60}{22.56}$	3/	7
3	THEORET ARTIFACT	22.30	+ *	0- K
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FORM I VOA-TIC

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CP8.31-9"

Lab Name: COMPUCHEM Contract: 68D50004

Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JW542

Matrix: (soil/water) SOIL Lab Sample ID: 949690

Sample wt/vol: 5.0 (g/mL) g Lab File ID: GH049690A51

Level: (low/med) LOW Date Received: 07/03/99

% Moisture: not dec. 7 Date Analyzed: 07/13/99

GC Column: EQUITY624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: ____(uL) Soil Aliquot Volume: ____

CONCENTRATION UNITS:
CAS NO. COMPOUND (ug/L or ug/Kg) ug/Kg Q

CF 31-97

FORM I VOA

VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

Contract: 68D50004 Lab Name: COMPUCHEM

JW546

Lab Code: COMPU Case No.: 27165 SAS No.:

SDG No.: JW542

Matrix: (soil/water) SOIL

Lab Sample ID: 949691

Sample wt/vol:

5.0 (g/mL) g

Lab File ID: qh049691a51

Level: (low/med)

LOW

Date Received: 07/03/99

% Moisture: not dec. 20

Date Analyzed: 07/13/99

GC Column: EQUITY624 ID: 0.53

(mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume:

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg

Number TICs found: 18

CAS NUMBER	COMPOUND NAME	RT ,	EST. CONC.	Q
	=======================================	======		=====
1.	UNKNOWN HYDROCARBON	19.78	17	J /
2. 4551-51-3	1H-INDENE, OCTAHYDRO-, CIS-	20.04		NJ,
3.	UNKNOWN HYDROCARBON	20.11	28	JN
4.	UNKNOWN HYDROCARBON	20.30	7	J
5.	UNKNOWN HYDROCARBON	20.47	12	J
6.	UNKNOWN HYDROCARBON	20.71	19	J
7.	UNKNOWN HYDROCARBON	20.81	24	J
8.	UNKNOWN CYCLIC HYDROCARBON	20.92	33	J
9.	UNKNOWN CYCLIC HYDROCARBON	21.09		J
10.	UNKNOWN CYCLIC HYDROCARBON	21.25	21	J
11.	SUBSTITUTED BENZENE	21.41	22	J
12.	SUBSTITUTED CYCLOHEXANE	21.49	24	J
13.	SUBSTITUTED BENZENE	21.79		J
14.	DIETHYLBENZENE ISOMER	21.89	10	J
15.	DECAHYDRONAPHTHALENE ISOMER	22.04		J
16.	SUBSTITUTED BENZENE	22.41		J
17.	SUBSTITUTED BENZENE	22.56		J
18.	SUBSTITUTED BENZENE	22.90	18	JV
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FORM I VOA-TIC

Soil Aliquot Volume: ____(uL

VOLATILE ORGANICS ANALYSIS DATA SHEET

JW564 Lab Name: COMPUCHEM Contract: 68D50004 Lab Code: COMPU | Case No.: 27165 SAS No.: SDG No.: JW542 Matrix: (soil/water) SOIL Lab Sample ID: 949692 Sample wt/vol: Lab File ID: GH049692A51 5.0 (g/mī) g

Level: (low/med) LOW Date Received: 07/03/99

% Moisture: not dec. 7 Date Analyzed: 07/13/99

GC Column: EQUITY624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: ____(uL)

CONCENTRATION UNITS: CAS NO. COMPOUND (ug/L or ug/Kg) ug/Kg Q ·

11 U J 74-87-3-----Chloromethane 74-83-9-----Bromomethane 11 U 75-01-4-----Vinyl Chloride 11 U 75-00-3-----Chloroethane_ 11 U 75-09-2----Methylene Chloride 11 U 11 \$ \$BU 67-64-1-----Acetone 75-15-0-----Carbon Disulfide 75-35-4----1,1-Dichloroethene_ 11 U 75-34-3----1,1-Dichloroethane_ 540-59-0----1,2-Dichloroethene (total) 11 U 67-66-3-----Chloroform 11 | U 107-06-2----1,2-Dichloroethane 11 | U 78-93-3----2-Butanone 11 | U 71-55-6-----1,1,1-Trichloroethane 11 | U. 56-23-5-----Carbon Tetrachloride 11 U 75-27-4-----Bromodichloromethane 11 U 78-87-5----1, 2-Dichloropropane_ 11 | U 10061-01-5----cis-1,3-Dichloropropene 11 U 79-01-6-----Trichloroethene 11 U 124-48-1-----Dibromochloromethane 11 U 79-00-5----1,1,2-Trichloroethane 11 I U 71-43-2----Benzene 11 U 10061-02-6----trans-1,3-Dichloropropene 11 U 75-25-2-----Bromoform 108-10-1----4-Methyl-2-Pentanone 11 | U 591-78-6----2-Hexanone 11 U 127-18-4-----Tetrachloroethene 11 | U 79-34-5-----1,1,2,2-Tetrachloroethane 11 U 108-88-3-----Toluene 11 U 108-90-7-----Chlorobenzene 11 U 100-41-4-----Ethylbenzene 11 U 100-42-5------Styrene (Total) 11 U 11 U

FORM I VOA

1E VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

EPA	SAMPLE	NO
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Lab Name: COMPUCHEM	Contract: 68D50004
Lab Code: COMPU Case No.: 27165	SAS No.: SDG No.: JW542
Matrix: (soil/water) SOIL	Lab Sample ID: 949692
Sample wt/vol: 5.0 (g/mL) g	Lab File ID: gh049692a51
Level: (low/med) LOW	Date Received: 07/03/99
% Moisture: not dec. 7	Date Analyzed: 07/13/99
GC Column: EQUITY624 ID: 0.53 (mm)	Dilution Factor: 1.0
Soil Extract Volume: (uL)	Soil Aliquot Volume:(u

Number TICs found: 2

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q.
1. 2.	LABORATORY ARTIFACT Lab Cont. LABORATORY ARTIFACT	20.59 22.55	7 -6	J R
3. 4				
6				
8				
1				
4				
6. 7. 8.				
9.				
1. 2. 3.				
4.				
6. 7. 8.				
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CP8-31-99

FORM I VOA-TIC

OLMO3.0

JW565 Lab Name: COMPUCHEM Contract: 68D50004

Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JW542

Matrix: (soil/water) SOIL Lab Sample ID: 949693

Lab File ID: Sample wt/vol: 5.0 (g/mL) g GH049693A51

Level: (low/med) LOW Date Received: 07/03/99

% Moisture: not dec. 20 Date Analyzed: 07/13/99

Dilution Factor: 1.0 GC Column: EQUITY624 ID: 0.53 (mm)

Soil Aliquot Volume: Soil Extract Volume: (uL)

CAS NO. COMPOUND (ug/L or ug/Kg) ug/Kg 12 U J 74-87-3-----Chloromethane 74-83-9-----Bromomethane . 12 U 75-01-4-----Vinyl Chloride... 12 U 75-00-3-----Chloroethane 12 U

CONCENTRATION UNITS:

75-09-2----Methylene Chloride_ 13 67-64-1-----Acetone 19 34 75-15-0-----Carbon Disulfide 12 75-35-4----1,1-Dichloroethene 12 75-34-3----1,1-Dichloroethane 12 540-59-0----1,2-Dichloroethene (total) 67-66-3-----Chloroform 12 107-06-2----1,2-Dichloroethane 12 78-93-3----2-Butanone 3 71-55-6-----1,1,1-Trichloroethane_ 12 U

56-23-5-----Carbon Tetrachloride_ 75-27-4-----Bromodichloromethane 78-87-5----1,2-Dichloropropane 10061-01-5----cis-1,3-Dichloropropene

79-01-6-----Trichloroethene 124-48-1----Dibromochloromethane 79-00-5-----1,1,2-Trichloroethane

71-43-2-----Benzene 10061-02-6----trans-1,3-Dichloropropene

75-25-2-----Bromoform 108-10-1----4-Methyl-2-Pentanone

591-78-6----2-Hexanone 127-18-4-----Tetrachloroethene

79-34-5----1,1,2,2-Tetrachloroethane 108-88-3-----Toluene

108-90-7-----Chlorobenzene 100-41-4-----Ethylbenzene___

100-42-5-----Styrene 1330-20-7-----Xylene (Total) 12 U 12 U

J

12 U

12 U

UP 6-31-99

FORM I VOA

VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

	IDMINITABL	1 IDENTIFIED	COMPOUN		JW565
Lab Name:	COMPUCHEM	C. C	ontract:	68D50004	

Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JW542

Matrix: (soil/water) SOIL Lab Sample ID: 949693

Sample wt/vol: 5.0 (g/mL) g Lab File ID: gh049693a51

Level: (low/med) LOW Date Received: 07/03/99

% Moisture: not dec. 20 Date Analyzed: 07/13/99

GC Column: EQUITY624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: ____(uL) Soil Aliquot Volume: ____

Number TICs found: 2

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg

CAS NUMBER		RT	EST. CONC.	Q ======
· 2 · · · · · · · · · · · · · · · · · ·	LABORATORY ARTIFACT LABORATORY ARTIFACT	20.58 22.53	31 38	JR
4.				
6. 7. 8.				
9. 10. 11.				
12. 13.				
14. 15.				
17. 18. 19.				
20.		<u> </u>		
22. 23. 24.				
25. 26.				
27. 28. 29.				
30.				

CP8-31-99

FORM I VOA-TIC

OLMO3.0

Lab Name: COMPUCHEM Contract: 68D50004 JW574

Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JW542

Matrix: (soil/water) SOIL Lab Sample ID: 949971

Sample wt/vol: 5.0 (g/mL) g Lab File ID: GH049971A51

Level: (low/med) LOW Date Received: 07/08/99

% Moisture: not dec. 7 Date Analyzed: 07/15/99

GC Column: EQUITY624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: ____(uL) Soil Aliquot Volume: ____(uL

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg Q

11 U 74-87-3-----Chloromethane 11 U 74-83-9-----Bromomethane 75-01-4-----Vinyl Chloride 11 U 11 U // 2 JU // 4 JU 11 U 75-00-3-----Chloroethane 75-09-2----Methylene Chloride___ 67-64-1-----Acetone 75-15-0-----Carbon Disulfide 75-35-4-----1,1-Dichloroethene 11 U 75-34-3-----1,1-Dichloroethane 11 U 540-59-0-----1,2-Dichloroethene (total) 11 U 67-66-3-----Chloroform 11 U 11 U 107-06-2-----1,2-Dichloroethane___ 78-93-3----2-Butanone_ 11 U 71-55-6----1,1,1-Trichloroethane_ 11 U 56-23-5-----Carbon Tetrachloride 11 U 11 U 75-27-4-----Bromodichloromethane 11 U 78-87-5----1,2-Dichloropropane_ 10061-01-5----cis-1,3-Dichloropropene 11 U 11 U 79-01-6-----Trichloroethene 124-48-1-----Dibromochloromethane 79-00-5----1,1,2-Trichloroethane_ 11 U 71-43-2----Benzene 11 U 10061-02-6----trans-1,3-Dichloropropene 11 U 75-25-2-----Bromoform 11 U 108-10-1----4-Methyl-2-Pentanone 11 U 591-78-6----2-Hexanone 11 U 127-18-4----Tetrachloroethene 11 U 11 U 79-34-5----1,1,2,2-Tetrachloroethane 108-88-3-----Toluene 11 U 108-90-7-----Chlorobenzene 11 U 100-41-4-----Ethylbenzene 11 U 100-42-5-----Styrene 1330-20-7------Xylene (Total) 11 U

CA8-31-99

FORM I VCA

OLMO3.0

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VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

		IEMIAIIVE	IDENTIFIED COMPOUNDS	ا JW574
T - L	N7	COMPLICATION	C	0427-
цар	Name:	COMPUCHEM	Contract: 68D50004	,

Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JW542

Matrix: (soil/water) SOIL Lab Sample ID: 949971

Sample wt/vol: 5.0 (g/mL) g Lab File ID: gh049971a51

Level: (low/med) LOW Date Received: 07/08/99

% Moisture: not dec. 7
Date Analyzed: 07/15/99

GC Column: EQUITY624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (u

CONCENTRATION UNITS:
Number TICs found: 2 (ug/L or ug/Kg) ug/Kg

'AS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q ===
	LABORATORY ARTIFACT Lab Cont.	$\frac{20.59}{22.54}$	52 13	J /

•				
		2		
-				
•				
•				
	**			<u> </u>
•			***************************************	
•				<u> </u>
4				
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		1		

OF 31-99

FORM I VOA-TIC

Soil Aliquot Volume: (uL

Lab Name: COMPUCHEM Contract: 68D50004

Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JW542

Matrix: (soil/water) SOIL Lab Sample ID: 949972

Sample wt/vol: 5.0 (g/mL) g Lab File ID: GH049972A51

Level: (low/med) LOW Date Received: 07/08/99

% Moisture: not dec. 4 Date Analyzed: 07/15/99

GC Column: EQUITY624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL)

CONCENTRATION UNITS:
CAS NO. COMPOUND (ug/L or ug/Kq) ug/Kq Q

CAS NO.	COMPOUND (ug/L or ug	/Kg) ug/Ka	3 C	<u>)</u>
74-83-9 75-01-4 75-00-3 75-09-2 67-64-1 75-15-0 75-35-4 75-34-3 540-59-0 67-66-3 78-93-3 71-55-6 75-27-4 78-87-5 79-01-6 79-01-6 79-01-6 79-01-6 79-01-6 79-01-6 79-01-6 79-01-6 79-01-6 79-01-6 79-01-6 79-01-6 79-01-6 79-01-6 79-01-6 79-01-6 79-01-6 79-01-6 79-01-6 124-48-1 79-01-6 79-01-6 79-01-6 124-48-1 10061-02-6 75-25-2 108-10-1 108-88-3 108-88-3 100-41-4 100-42-5	Carbon Disulfide1,1-Dichloroethene1,2-Dichloroethene (total)Chloroform1,2-Dichloroethane1,2-Dichloroethane2-Butanone1,1-TrichloroethaneCarbon TetrachlorideBromodichloromethane1,2-Dichloropropanecis-1,3-DichloropropeneTrichloroetheneDibromochloromethane1,1,2-Trichloroethane1,1,2-TrichloroethaneBenzenetrans-1,3-DichloropropeneBromoform4-Methyl-2-Pentanone2-Hexanone1,1,2,2-TetrachloroethaneTolueneTolueneChlorobenzene	/Kg) ug/Kg		
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FORM I VOA

OLMO3.0

VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: COMPUCHEM Contract: 68D50004 JW575

Lab Code: COMPU Case No.: 27165 SAS No.:

SDG No.: JW542

Matrix: (soil/water) SOIL

Lab Sample ID: 949972

Sample wt/vol: 5.0 (g/mL) g

Lab File ID:

gh049972a51

Level: (low/med) LOW

Date Received: 07/08/99

% Moisture: not dec. 4

Date Analyzed: 07/15/99

GC Column: EQUITY624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume:

Number TICs found: 2

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q === ; =
2. 3.	LABORATORY ARTIFACT Lab Co.J. LABORATORY ARTIFACT	$\begin{array}{r} -20.59 \\ -22.54 \end{array}$	108 73	J. R
4. 5. 6.				
7				
9. 0. 1.				
2				
4. 5. 6.				
7 8				
9				
2				
5. 7.				

OLM03.0

FORM I VOA-TIC

JW578 Lab Name: COMPUCHEM Contract: 68D50004 Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JW542 Matrix: (soil/water) SOIL Lab Sample ID: 950019 Sample wt/vol: 5.0 (g/mL) gLab File ID: GH050019A51 Level: (low/med) LOW Date Received: 07/09/99 % Moisture: not dec. 7 Date Analyzed: 07/15/99 GC Column: EQUITY624 ID: 0.53 (mm) Dilution Factor: 1.0 Soil Extract Volume: (uL) Soil Aliquot Volume: CONCENTRATION UNITS: CAS NO. (ug/L or ug/Kg) ug/Kg Q COMPOUND 74-87-3-----Chloromethane 11 U 74-83-9-----Bromomethane 11 U 75-01-4-----Vinyl Chloride____ 11 U 75-00-3-----Chloroethane 11 U 75-09-2----Methylene Chloride 20 U 67-64-1-----Acetone 100 图记 75-15-0-----Carbon Disulfide 11 0 75-35-4----1,1-Dichloroethene 11 U 75-34-3-----1,1-Dichloroethane 11 U 540-59-0----1,2-Dichloroethene (total) 11 U 67-66-3-----Chloroform 11 U 107-06-2----1,2-Dichloroethane 11 U 78-93-3----2-Butanone 21 71-55-6----1,1,1-Trichloroethane_ 11 U 56-23-5-----Carbon Tetrachloride 11 U 75-27-4----Bromodichloromethane 11 U 78-87-5----1,2-Dichloropropane_ 11 U 10061-01-5----cis-1,3-Dichloropropene_ 11 U 79-01-6-----Trichloroethene 11 U 124-48-1-----Dibromochloromethane 11 U 79-00-5-----1,1,2-Trichloroethane_ 11 U 71-43-2-----Benzene 11 10061-02-6----trans-1,3-Dichloropropene 11 75-25-2-----Bromoform 11 U 108-10-1----4-Methyl-2-Pentanone J 1 591-78-6----2-Hexanone . 11 U 127-18-4-----Tetrachloroethene 11. Ū 79-34-5----1,1,2,2-Tetrachloroethane 11 U 108-88-3-----Toluene 4 J 108-90-7-----Chlorobenzene 11 100-41-4-----Ethylbenzene 17 100-42-5----Styrene 11 | 0 1330-20-7-----Xylene (Total) 46

FORM I VOA

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VOLATILE	ORGANIC	'S AN	ALYSIS	DATA	SHEET
	ATIVELY				

Lab Name: COMPUCHEM

Contract: 68D50004

JW578

Lab Code: COMPU Case No.: 27165 SAS No.:

SDG No.: JW542

Matrix: (soil/water) SOIL

Lab Sample ID: 950019

Sample wt/vol: 5.0 (g/mL) g

Lab File ID:

gh050019a51

Level: (low/med) LOW

Date Received: 07/09/99

% Moisture: not dec. 7

Date Analyzed: 07/15/99

GC Column: EQUITY624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume:

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg

Number TICs found: 5

CAS NUMBER	COMPOUND NAME	RT ;	EST. CONC.	Q
1.	SUBSTITUTED CYCLOHEXANE	20.10	8 	JN R
3. 4.	SUBSTITUTED BENZENE SUBSTITUTED BENZENE Lab Carl	20.82 21.22	8 6	JN ∫ JN ∫
6	LABORATORY ARTIFACT Car Gra-	22.54	23-	J K
8. 9.				
10.				
12.				
14.				***************************************
16. 17.				
18. 19.	-			
20.				
22				
24. 25. 26.				
27. 28.				
29				
JU.			***************************************	

FORM I VOA-TIC

OLMO3.0

JW579 Lab Name: COMPUCHEM Contract: 68D50004 Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JW542 Matrix: (soil/water) SOIL Lab Sample ID: 950020 Sample wt/vol: 5.0 (g/mL) gLab File ID: GR050020A51 Level: (low/med) LOW Date Received: 07/09/99 % Moisture: not dec. 13 Date Analyzed: 07/15/99 GC Column: EQUITY624 ID: 0.53 (mm) Dilution Factor: 1.0 Soil Extract Volume: ____(uL) Soil Aliquot Volume: ____(uI CONCENTRATION UNITS: COMPOUND CAS NO. (ug/L or ug/Kg) ug/Kg 74-87-3-----Chloromethane 11 U 74-83-9-----Bromomethane 11 U 75-01-4-----Vinyl Chloride___ 23 75-00-3-----Chloroethane_ 11 0 75-09-2-----Methylene Chloride 11 Z Z U 67-64-1-----Acetone 75-15-0-----Carbon Disulfide_ 11 U 75-35-4-----1,1-Dichloroethene .11 | U 75-34-3-----1,1-Dichloroethane
540-59-0----1,2-Dichloroethene (total) 11 U 67-66-3-----Chloroform 11 U 107-06-2----1,2-Dichloroethane 11 U 78-93-3----2-Butanone 1 J 71-55-6----1,1,1-Trichloroethane 11 U 56-23-5-----Carbon Tetrachloride 11 | U 75-27-4-----Bromodichloromethane 11 | U 78-87-5----1,2-Dichloropropane_ 11 | U 10061-01-5----cis-1,3-Dichloropropene 11 U 79-01-6-----Trichloroethene 11 U 124-48-1-----Dibromochloromethane 11 U 79-00-5----1,1,2-Trichloroethane 11 U 71-43-2----Benzene 11 U 10061-02-6----trans-1,3-Dichloropropene 11 U 75-25-2-----Bromoform 11 U 108-10-1----4-Methyl-2-Pentanone 11 | U 591-78-6----2-Hexanone 11 | U 127-18-4-----Tetrachloroethene 11 U 79-34-5----1,1,2,2-Tetrachloroethane 11 U 108-88-3-----Toluene 11 U 108-90-7-----Chlorobenzene 11 | U 100-41-4----Ethylbenzene 11 | U 100-42-5-----Styrene 1330-20-7------Xylene (Total) 11 U 11 U

FORM I VOA

VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

JW579	
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Lab Name: COMPUCHEM

Contract: 68D50004

Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JW542

Matrix: (soil/water) SOIL

Lab Sample ID: 950020

Sample wt/vol: 5.0 (g/mL) g

Lab File ID: qr050020a51

Level: (low/med) LOW

Date Received: 07/09/99

% Moisture: not dec. 13

Date Analyzed: 07/15/99

GC Column: EQUITY624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume:

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg

Number TICs found: 10

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q =====
1. 71-23-8 2. 3. 1678-92-8	1-PROPANOL UNKNOWN HYDROCARBON CYCLOHEXANE, PROPYLL LABORATORY ARTIFACT Lab Cond.	11.48 19.74 20.08	7 6 9	NJ J N NJ ⊤ R
5. 6. 7. 8. 9.	UNKNOWN HYDROCARBON UNKNOWN HYDROCARBON UNKNOWN HYDROCARBON SUBSTITUTED CYCLOHEXANE SUBSTITUTED BENZENE LABORATORY ARTIFACT	20.53 20.78 20.85 21.20 21.45 22.01	1989981	7V 7 7 7 7 8
11. 12. 13.	HABOKATOKI AKITIACI			
15. 16. 17. 18.				
20. 21. 22. 23. 24.				
25. 26. 27. 28. 29.				
30				

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FORM I VOA-TIC

OLMO3.0

Lab Name: COMPUCHEM Contract: 68D50004

Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JW542

Matrix: (soil/water) SOIL Lab Sample ID: 950021

Sample wt/vol: 5.0 (g/mL) g Lab File ID: GH050021A51

Level: (low/med) LOW Date Received: 07/09/99

% Moisture: not dec. 6 Date Analyzed: 07/15/99

GC Column: EQUITY624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (u)

CONCENTRATION UNITS:
CAS NO. COMPOUND (ug/L or ug/Kg) ug/Kg

•		,				
	Chloromethane	ន		11	U	
74-83-9	Bromomethane	· ·		11	U	- 1
75-01-4	Vinyl Chloride			11	U	Į
75-00-3	Chloroethane			11	Ū	- 1
	Methylene Chloride			// X	JU	ı
67-64-1				43	BU	l
	Carbon Disulfide	٠.		// Ā 43 11	υ ¬	- 1
	1,1-Dichloroethene			11	Ū	·
75-34-3	1,1-Dichloroethane			11	Ū.	l
540-59-0	1,2-Dichloroethene (total)	. .	·	11	Ū	
67-66-3	Chloroform	i .		11	Ū	
	1,2-Dichloroethane			11	Ū	
	2-Butanone			11	Ū	
	1,1,1-Trichloroethane			11	Ū.	
	Carbon Tetrachloride			11	Ü	.
	Bromodichloromethane			11	Ü	1
78-87-5	1,2-Dichloropropane		*	11	Ū	. 1
10061-01-5	cis-1,3-Dichloropropene			11	τī	
79-01-6	Trichloroethene			11		
	Dibromochloromethane			11	_	. 1
70-00-E	1,1,2-Trichloroethane			11	. –	
71-43-2	Parana			11		.
		ļ ·				·
75-25-2	trans-1,3-Dichloropropene			11	_	
				11	_	
T08-T0-T	4-Methyl-2-Pentanone			11	_	
	2-Hexanone			11		
	Tetrachloroethene			11	, -	
79-34-5	1,1,2,2-Tetrachloroethane			11	U	
108-88-3				11	U	
	Chlorobenzene			. 11	U	
	Ethylbenzene			11	_	
100-42-5].		11	U	
1330-20-7	Xylene (Total)			11	U	
				•		-

FORM I VOA

VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: COMPUCHEM Contract: 68D50004

Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JW542

Matrix: (soil/water) SOIL Lab Sample ID: 950021

Sample wt/vol: 5.0 (g/mL) g Lab File ID: gh050021a51

Level: (low/med) LOW Date Received: 07/09/99

% Moisture: not dec.: 6 Date Analyzed: 07/15/99

GC Column: EQUITY624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume:

CONCENTRATION UNITS:
Number TICs found: 12 (ug/L or ug/Kg) ug/Kg

	T T			· .
CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN HYDROCARBON	20.12	7	JN
-2.	LABORATORY ARTIFACT Las Cort.	20.58	22	J-R
3.	UNKNOWN HYDROCARBON	20.71	_ 7	ıΣ⁄V
4.	SUBSTITUTED CYCLOHEXANE UNKNOWN CYCLIC HYDROCARBON	20.89 21.09	12 5	J
6.	UNKNOWN ALKANE	21.46	19	J
7.	SUBSTITUTED ALKANE	21.74	15	J
8.	SUBSTITUTED ALKANE	21.95	7	J
10.	SUBSTITUTED BENZENE SUBSTITUTED CYCLOHEXANE	22.05 22.23	8 8	J V
41.	LABORATORY ARTIFACT Lab Co. N.	22.54	8	J.R.
12.	UNKNOWN ALKANE	23.08	10	J/V
14.				
15				
16.				
17				<u> </u>
19.				
20.				
21.				
23.				
24.				
25.				
26.				
28.	7.45 E. WAR			
29.				
30.				
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CP6-31-95

FORM T VOA-TTC

JP411

Lab Name: COMPUCHEM

Contract: 68D50004

Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JW542

Matrix: (soil/water) SOIL

Lab Sample ID: 950008

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: GH050008A66

Level: (low/med) LOW

Date Received: 07/09/99

Concentrated Extract Volume: 500(uL) Date Analyzed: 07/14/99

% Moisture: 18 decanted: (Y/N) N Date Extracted:07/09/99

Injection Volume: 2.0(uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.8

CAS NO.	COMPOUND	CONCENTRATION (ug/L or ug/Ko			Q	
95-57-8 541-73-1 106-46-7 95-50-1 95-48-7 108-60-1 106-44-5 621-64-7 98-95-3 98-95-3 105-67-9 111-91-1 120-83-2 111-91-1 120-83-2 111-91-1 120-83-2 91-20-3 106-47-8 91-20-3 106-47-8 91-57-6 91-57-6 91-57-6 91-58-7 91-58-7 91-58-7 91-58-7 91-58-7 91-58-7 91-58-7 91-58-7 91-58-7 91-58-7 91-58-7 91-58-7 91-58-7 91-58-7	-bis(2-Chloroethy -2-Chlorophenol -1,3-Dichlorobenz -1,4-Dichlorobenz -1,2-Dichlorobenz -2,2'-oxybis(1-Ch -4-Methylphenol -N-Nitroso-di-n-p -Hexachloroethane -Nitrobenzene -Isophorone -2-Nitrophenol -2,4-Dimethylphen -bis(2-Chloroetho -2,4-Dichlorophen -1,2,4-Trichlorob -Naphthalene -4-Chloroaniline -Hexachlorobutadi -4-Chloro-3-methy -2-Methylnaphthal -Hexachlorocyclop -2,4,6-Trichlorop -2,4,6-Trichlorop -2,4,5-Trichlorop -2,4,5-Trichlorop -2,4,5-Trichlorop -2,4,5-Trichlorop -2,4,5-Trichlorop -2,4,5-Trichlorop -2,4,5-Trichlorop -2,4,5-Trichlorop -2,6-Dinitrotolue -3-Nitroaniline	ene ene ene loropropane) ropylamine ol enzene ene lphenol ene entadiene chenol ene ene ene chenol ene	•	400 400 400 400 400 400 400 400 400 400	<u>ממממממממממממממממממממממממ</u> ממ	
			* •		l	

Lab Name: COMPUCHEM Contract: 68D50004

Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JW542

Matrix: (soil/water) SOIL Lab Sample ID: 950008

Sample wt/vol: 30.0 (g/mL) G Lab File ID: GH050008A66

Level: (low/med) LOW Date Received: 07/09/99

% Moisture: 18 decanted: (Y/N) N Date Extracted: 07/09/99

Concentrated Extract Volume: 500(uL) Date Analyzed: 07/14/99

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.8

CONCENTRATION UNITS: CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG 51-28-5-----2,4-Dinitrophenol 1000 U 100-02-7-----4-Nitrophenol____ 1000 U 132-64-9-----Dibenzofuran 400 U 121-14-2----2,4-Dinitrotoluene 400 U 84-66-2----Diethylphthalate 400 U 7005-72-3----4-Chlorophenyl-phenylether 400 U 86-73-7-----Fluorene 400 U 100-01-6----4-Nitroaniline 1000 U 534-52-1----4,6-Dinitro-2-methylphenol 1000 U 86-30-6----N-nitrosodiphenylamine (1) 400 U 101-55-3----4-Bromophenyl-phenylether____ 400 U 400 U 1000 U 85 J 400 U 118-74-1-----Hexachlorobenzene 87-86-5-----Pentachlorophenol 85-01-8------Phenanthrene 120-12-7-----Anthracene___ 86-74-8-----Carbazole 400 U 84-74-2-----Di-n-butylphthalate 50 J 206-44-0----Fluoranthene 75 J 129-00-0-----Pyrene 90 J 85-68-7-----Butylbenzylphthalate 92 J 91-94-1----3,3'-Dichlorobenzidine 400 U 56-55-3-----Benzo(a) anthracene 83 J 218-01-9-----Chrysene 130 J 117-81-7-----bis(2-Ethylhexyl)phthalate 820 117-84-0-----Di-n-octylphthalate 82 J 205-99-2----Benzo (b) fluoranthene 100 J 207-08-9-----Benzo(k) fluoranthene 87 J 50-32-8-----Benzo(a)pyrene 400 U 193-39-5----Indeno(1,2,3-cd)pyrene 84 J 53-70-3-----Dibenzo(a,h)anthracene 81 J 191-24-2----Benzo(g,h,i)perylene____ (1) - Cannot be separated from Diphenylamine UP9-1-99

FORM I SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

JP411

Lab Name: COMPUCHEM

Contract: 68D50004

Lab Code: COMPU

Case No.: 27165 SAS No.:

SDG No.: JW542

Matrix: (soil/water) SOIL

Lab Sample ID: 950008

Sample wt/vol:

Lab File ID: GH050008A66

30.0 (g/mL) G

Level: (low/med)

LOW.

Date Received: 07/09/99

% Moisture: 18 decanted: (Y/N) N

500 (uL)

Date Extracted:07/09/99

Concentrated Extract Volume:

Date Analyzed: 07/14/99

Injection Volume: 2.0(uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y

pH: 7.8

Number TICs found: 29

CONCENTRATION UNITS: , (ug/L or ug/Kg) UG/KG

1. TRIMETHYLBENZENE 2. SUBSTITUTED BENZENE 3. UNKNOWN 4. UNKNOWN 5. UNKNOWN 6. UNKNOWN 7. UNKNOWN 8. UNKNOWN 9.	6.03 6.70 10.08 14.82 15.15 15.81 16.27 16.52	340 370 440 280 240 400 2200	J
10. UNKNOWN 11. UNKNOWN 12. UNKNOWN 13. UNKNOWN 14. UNKNOWN 15. UNKNOWN 16. UNKNOWN 17. UNKNOWN 19. UNKNOWN 19. UNKNOWN 20. UNKNOWN 21. UNKNOWN 22. UNKNOWN 22. UNKNOWN 23. UNKNOWN 24. UNKNOWN 25. UNKNOWN 26. UNKNOWN 27. UNKNOWN 28. UNKNOWN 29. UNKNOWN	17.22 17.29 17.73 17.87 18.83 19.51 20.44 21.06 21.85 22.30 23.09 24.23 25.86 26.54 26.75 26.89 27.49 27.86 28.23	230 1100 220 160 210 210 210 210 210 310 320 330 740 230 610 390 290 590	המהמהמהמהמהמהמהמה המהמהמה

Of G-1-99 OLMO3.0

Lab Name: COMPUCHEM Contract: 68D50004

Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JW542

Matrix: (soil/water) SOIL Lab Sample ID: 950017

Sample wt/vol: 30.0 (g/mL) G Lab File ID: GH050017A66

Level: (low/med) LOW. Date Received: 07/09/99

% Moisture: 5 decanted: (Y/N) N Date Extracted:07/09/99

Concentrated Extract Volume: 500(uL) Date Analyzed: 07/13/99

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.8

CONCENTRATION UNITS:
CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG Q

350 U 108-95-2----Phenol 350 U 111-44-4-----bis(2-Chloroethyl)ether____ 350 U 95-57-8----2-Chlorophenol 350 U 541-73-1----1,3-Dichlorobenzene_ 350 U 106-46-7----1,4-Dichlorobenzene 350 U 95-50-1-----1,2-Dichlorobenzene___ 350 U 95-48-7----2-Methylphenol 108-60-1----2,2'-oxybis(1-Chloropropane) 350 U 106-44-5----4-Methylphenol 350 U 621-64-7----N-Nitroso-di-n-propylamine 350 l U 350 U 67-72-1-----Hexachloroethane 350 U 98-95-3----Nitrobenzene_ 350 U 78-59-1-----Isophorone 350 U 350 U 350 U 88-75-5----2-Nitrophenol 105-67-9-----2,4-Dimethylphenol___ 111-91-1-----bis(2-Chloroethoxy)methane 120-83-2-----2,4-Dichlorophenol_ 120-82-1----1,2,4-Trichlorobenzene_ 350 U 350 U 350 U 91-20-3-----Naphthalene 350 U 106-47-8-----4-Chloroaniline 350 U 87-68-3-----Hexachlorobutadiene 59-50-7----4-Chloro-3-methylphenol__ 350 U 350 U 91-57-6----2-Methylnaphthalene 77-47-4-----Hexachlorocyclopentadiene 350 U 350 U 88-06-2----2,4,6-Trichlorophenol___ 87.0 U 95-95-4----2,4,5-Trichlorophenol_ 350 U 91-58-7----2-Chloronaphthalene 88-74-4----2-Nitroaniline 870 U 350 U 131-11-3-----Dimethylphthalate 350 U 208-96-8-----Acenaphthylene 350 U 606-20-2----2,6-Dinitrotoluene 870 U 99-09-2----3-Nitroaniline 83-32-9-----Acenaphthene 350 U

FORM I SV-1

CH 99 OLMO3.0

Lab Name: COMPUCHEM Contract: 68D50004

Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JW542

Matrix: (soil/water) SOIL Lab Sample ID: 950017

Sample wt/vol: 30.0 (g/mL) G Lab File ID: GH050017A66

Level: (low/med) LOW Date Received: 07/09/99

% Moisture: 5 decanted: (Y/N) N Date Extracted:07/09/99

Concentrated Extract Volume: 500(uL) Date Analyzed: 07/13/99

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.8

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG CAS NO. COMPOUND 870 U 51-28-5----2,4-Dinitrophenol__ 100-02-7----4-Nitrophenol 870 U 350 U 350 U 132-64-9-----Dibenzofuran 121-14-2----2,4-Dinitrotoluene 84-66-2-----Diethylphthalate_ 350 U 7005-72-3----4-Chlorophenyl-phenylether ,350 U 86-73-7-----Fluorene 350 U 100-01-6-----4-Nitroaniline 870 U 534-52-1----4,6-Dinitro-2-methylphenol 870 U 86-30-6----N-nitrosodiphenylamine_(1)___ 350 U 101-55-3----4-Bromophenyl-phenylether 350 U 118-74-1-----Hexachlorobenzene 350 U 870 0丁 87-86-5----Pentachlorophenol 85-01-8-----Phenanthrene 350 U 120-12-7-----Anthracene 350 U 86-74-8-----Carbazole 350 U 84-74-2-----Di-n-butylphthalate____ 350 U 206-44-0----Fluoranthene 350 J U 129-00-0-----Pyrene 350 U 85-68-7-----Butylbenzylphthalate 91-94-1----3,3'-Dichlorobenzidine 350 U 350 U 56-55-3-----Benzo (a) anthracene 350 U 218-01-9-----Chrysene 350 U 117-81-7-----bis(2-Ethylhexyl)phthalate 50 J 117-84-0-----Di-n-octylphthalate 350 U 205-99-2----Benzo (b) fluoranthene 350 U 207-08-9-----Benzo(k) fluoranthene 350 U 50-32-8-----Benzo (a) pyrene 350 U 193-39-5-----Indeno(1,2,3-cd)pyrene 350 U 53-70-3-----Dibenzo(a,h)anthracene 350 U 191-24-2----Benzo(g,h,i)perylene____ 350 U

FORM I SV-2

(1) - Cannot be separated from Diphenylamine

09-1-99 9-1-91-MD3 0

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

JP412

Lab Name: COMPUCHEM

Contract: 68D50004

Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JW542

Matrix: (soil/water) SOIL

Lab Sample ID: 950017

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: GH050017A66

Level: (low/med) LOW

Date Received: 07/09/99

% Moisture: 5 decanted: (Y/N) N Date Extracted: 07/09/99

Concentrated Extract Volume: 500(uL) Date Analyzed: 07/13/99

Injection Volume: 2.0(uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.8

Number TICs found: 10

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
======================================	UNKNOWN (BC) blank Contamination UNKNOWN	 18.18 20.48 21.34 21.44 21.58 21.63 21.70 21.77	110 120 120 100 130 130 220	JD R JV J J J J J J
9. 10. 11. 12. 13. 14. 15. 16.	UNKNOWN UNKNOWN	21.86 22.32	220	
18. 19. 20. 21. 22. 23. 24. 25.				
26. 27. 28. 29.				

FORM I SV-TIC

Lab Name: COMPUCHEM Contract: 68D50004

Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JW542

Matrix: (soil/water) SOIL Lab Sample ID: 950018

Sample wt/vol: 30.0 (g/mL) G Lab File ID: GH050018A66

Level: (low/med) LOW Date Received: 07/09/99

% Moisture: 15 decanted: (Y/N) N Date Extracted:07/09/99

Concentrated Extract Volume: 500(uL) Date Analyzed: 07/14/99

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.6

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG

390 U 108-95-2----Phenol 390 U 111-44-4----bis(2-Chloroethyl)ether 95-57-8----2-Chlorophenol 390 U 541-73-1----1,3-Dichlorobenzene 390 l U 106-46-7----1,4-Dichlorobenzene_ 390 U 390 l U 95-50-1----1,2-Dichlorobenzene 95-48-7----2-Methylphenol 390 U 108-60-1----2,2'-oxybis(1-Chloropropane) 390 U 390 U 106-44-5----4-Methylphenol 390 U 621-64-7----N-Nitroso-di-n-propylamine 390 U 67-72-1-----Hexachloroethane 98-95-3----Nitrobenzene_ 390 U 78-59-1----Isophorone 390 U 88-75-5----2-Nitrophenol 390 U 390 U 105-67-9----2,4-Dimethylphenol 390 U 111-91-1----bis(2-Chloroethoxy)methane 390 U 120-83-2----2,4-Dichlorophenol 390 U 120-82-1----1,2,4-Trichlorobenzene_ 91-20-3-----Naphthalene 390 U 106-47-8----4-Chloroaniline 390 l U 87-68-3-----Hexachlorobutadiene 390 U 59-50-7----4-Chloro-3-methylphenol___ 390 U 91-57-6----2-Methylnaphthalene 390 U 77-47-4-----Hexachlorocyclopentadiene 390 U 88-06-2----2,4,6-Trichlorophenol 390 U 95-95-4----2,4,5-Trichlorophenol U 980 91-58-7----2-Chloronaphthalene___ 390 U 88-74-4----2-Nitroaniline 980 U 131-11-3-----Dimethylphthalate 390 U 208-96-8-----Acenaphthylene 390 U 606-20-2----2,6-Dinitrotoluene 390 U 99-09-2----3-Nitroaniline 980 U 83-32-9-----Acenaphthene__ 390 U

FORM I SV-1

U/ 99 OLMO3.0

JP413 Lab Name: COMPUCHEM Contract: 68D50004

Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JW542

Matrix: (soil/water) SOIL Lab Sample ID: 950018

30.0 (g/mL) GSample wt/vol: Lab File ID: GH050018A66

Level: (low/med) Date Received: 07/09/99

Date Extracted:07/09/99 % Moisture: 15 decanted: (Y/N) N

Concentrated Extract Volume: 500 (uL) Date Analyzed: 07/14/99

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.6

86-74-8-----Carbazole

129-00-0-----Pyrene

218-01-9-----Chrysene

206-44-0-----Fluoranthene

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG 51-28-5-----2,4-Dinitrophenol______ 100-02-7----4-Nitrophenol_____ 980 U 980 U 132-64-9-----Dibenzofuran 390 U 121-14-2----2,4-Dinitrotoluene____ 390 U 84-66-2----Diethylphthalate
7005-72-3----4-Chlorophenyl-phenylether 390 U 390 U 86-73-7-----Fluorene 390 U 100-01-6----4-Nitroaniline 980 U 534-52-1----4,6-Dinitro-2-methylphenol 980 U 86-30-6----N-nitrosodiphenylamine (1) 390 U 101-55-3----4-Bromophenyl-phenylether____ 390 U 118-74-1-----Hexachlorobenzene 390 U 87-86-5----Pentachlorophenol 980 U 85-01-8-----Phenanthrene 390 U 120-12-7-----Anthracene 390 U

117-81-7-----bis(2-Ethylhexyl)phthalate 117-84-0-----Di-n-octylphthalate 205-99-2----Benzo (b) fluoranthene

207-08-9-----Benzo(k) fluoranthene 50-32-8-----Benzo(a)pyrene

84-74-2----Di-n-butylphthalate

85-68-7-----Butylbenzylphthalate 91-94-1----3,3'-Dichlorobenzidine 56-55-3-----Benzo (a) anthracene

193-39-5----Indeno(1,2,3-cd)pyrene 53-70-3-----Dibenzo(a,h)anthracene

191-24-2----Benzo(g,h,i)perylene___ (1) - Cannot be separated from Diphenylamine

390 U

390 U

390 U 390 U 390 U 390 U

390 U

390 U

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390 U

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390 U

390 U

44 J

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

Contract: 68D50004 Lab Name: COMPUCHEM

JP413

Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JW542

Matrix: (soil/water) SOIL

Lab Sample ID: 950018

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: GH050018A66

Level: (low/med) LOW

Date Received: 07/09/99

% Moisture: 15 decanted: (Y/N) N Date Extracted:07/09/99

Concentrated Extract Volume: 500(uL) Date Analyzed: 07/14/99

Injection Volume: 2.0(uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.6

Number TICs found: 3

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	- EST. CONC.	Q
1. 2. 3.	UNKNOWN UNKNOWN AMIDE UNKNOWN	6.17 18.11 21.37	79 140 83	JN J
5				
9. 10. 11. 12.				
13. 14. 15. 16.				
18. 19. 20.				
22. 23. 24. 25.				
26. 27. 28. 29.				
30.				

OP 9-1-99

FORM I SV-TIC

JP415

Lab Name: COMPUCHEM Contract: 68D50004

Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JW542

Matrix: (soil/water) SOIL Lab Sample ID: 950228

Sample wt/vol: 30.1 (g/mL) G Lab File ID: GH050228B70

Level: (low/med) LOW Date Received: 07/10/99

% Moisture: 24 decanted: (Y/N) N Date Extracted:07/12/99

Concentrated Extract Volume: 500(uL) Date Analyzed: 07/15/99

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.3

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG Q

430 U 108-95-2----Phenol 111-44-4-----bis(2-Chloroethyl)ether 430 U 430 U 95-57-8-----2-Chlorophenol_ 430 U 541-73-1----1,3-Dichlorobenzene 430 U 106-46-7----1,4-Dichlorobenzene 430 U 95-50-1-----1,2-Dichlorobenzene 430 U 95-48-7----2-Methylphenol 430 U 108-60-1----2,2'-oxybis(1-Chloropropane) 430 U 106-44-5----4-Methylphenol 621-64-7----N-Nitroso-di-n-propylamine__ 430 U 430 U 67-72-1-----Hexachloroethane 430 U 98-95-3-----Nitrobenzene 430 U 78-59-1-----Isophorone 430 U 88-75-5----2-Nitrophenol 105-67-9-----2,4-Dimethylphenol 430 U 430 U 111-91-1-----bis(2-Chloroethoxy)methane 430 U 430 U 120-82-1-----1,2,4-Trichlorobenzene 430 U 91-20-3-----Naphthalene 430 U 106-47-8----4-Chloroaniline 430 U 87-68-3-----Hexachlorobutadiene 430 U 59-50-7----4-Chloro-3-methylphenol 430 U 91-57-6----2-Methylnaphthalene 430 U 77-47-4----Hexachlorocyclopentadiene 430 U 88-06-2----2,4,6-Trichlorophenol_ 1100 U 95-95-4----2,4,5-Trichlorophenol_ 91-58-7----2-Chloronaphthalene____ 88-74-4----2-Nitroaniline____ 430 U 1100 U 131-11-3-----Dimethylphthalate 430 U 430 U 208-96-8-----Acenaphthylene 430 U 606-20-2----2,6-Dinitrotoluene 1100 U 99-09-2----3-Nitroaniline 430 U 83-32-9-----Acenaphthene

FORM I SV-1

CP 99 OLMO3.0

Lab Name: COMPUCHEM Contract: 68D50004

Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JW542

Matrix: (soil/water) SOIL Lab Sample ID: 950228

Sample wt/vol: 30.1 (g/mL) G Lab File ID: GH050228B70

Level: (low/med) LOW Date Received: 07/10/99

% Moisture: 24 decanted: (Y/N) N Date Extracted:07/12/99

Concentrated Extract Volume: 500(uL) Date Analyzed: 07/15/99

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.3

CONCENTRATION UNITS:
CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG Q

51-28-52;4-Dinitrophenol 1100 100-02-74-Nitrophenol 1100 132-64-9Dibenzofuran 430	_
100-02-7	_
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L01-55-34-Bromophenyl-phenylether 430	Ŭ
118-74-1Hexachlorobenzene 430	
37-86-5Pentachlorophenol 1100	_
35-01-8Phenanthrene 430	-
	Ū
36-74-8Carbazole 430	U
34-74-2Di-n-butylphthalate 430	U
206-44-0Fluoranthene 75	J
	J
35-68-7Butylbenzylphthalate 430	U
91-94-13,3'-Dichlorobenzidine 430	Ū
66-55-3Benzo(a) anthracene 430	U .
	J.
17-81-7bis(2-Ethylhexyl)phthalate 77	J
.17-84-0Di-n-octylphthalate 430	U
05-99-2Benzo(b) fluoranthene 48	_
207-08-9Benzo(k) fluoranthene 430	
	Ū
193-39-5Indeno(1,2,3-cd)pyrene 430	_
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	Ω.
=== == ===============================	
- Cannot be separated from Diphenylamine	
M	10 10
U'	4-1

FORM I SV-2

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

JP415

Lab Name: COMPUCHEM

Contract: 68D50004

Lab Code: COMPU Case No.: 27165 SAS No.:

SDG No.: JW542

Matrix: (soil/water) SOIL

Lab Sample ID: 950228

Sample wt/vol: 30.1 (g/mL) G

Lab File ID:

GH050228B70

Level: (low/med) LOW

Date Received: 07/10/99

% Moisture: 24 decanted: (Y/N) N

Date Extracted: 07/12/99

Concentrated Extract Volume: 500(uL) Date Analyzed: 07/15/99

Injection Volume: 2.0(uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.3

Number TICs found: 31

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

			· · · · · · · · · · · · · · · · · · ·	
CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1	UNKNOWN (BC) blank Conf.	6.62	220	JB R
2.	UNKNOWN	10.82		
3.	UNKNOWN	10.82	360	
4.	UNKNOWN	10.89		
5.	UNKNOWN	12.39		J
6.	SUBSTITUTED PHENANTHRENE	14.54		
7.	SUBSTITUTED PHENANTHRENE	15.10		ני
8.	UNKNOWN	15.93		J
9.	DDE	16.08		ָ ט
10.	UNKNOWN	16.21		J
11.	UNKNOWN	16.48		<u>Б</u>
12.	UNKNOWN	16.91		J
13.	UNKNOWN	19.12		J
14.	UNKNOWN	19.93		J ·
15.	UNKNOWN	21.52	3000	<u>Б</u>
16.	UNKNOWN CARBOXYLIC ACID	22.16		
17.	UNKNOWN	22.60		
18.	UNKNOWN	22.80	330	
19. 83-47-6	.GAMMASITOSTEROL	23.24		
20.	UNKNOWN	23.55	1000	
21.	UNKNOWN	23.61	320	
22.	UNKNOWN	23.70		
23.	UNKNOWN	23.75		
24.	UNKNOWN	24.09	790	J
25. 1058-61-3	STIGMAST-4-EN-3-ONE	24.32	3400	
26.	UNKNOWN	24.69		
27.	UNKNOWN	24.80		J
28.	UNKNOWN	25.35		
29.	UNKNOWN	25.84		5
30.	UNKNOWN.	25.93		J
			500	
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U 9-1-99 OLM03.0

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

JP415

Lab Name: COMPUCHEM

Contract: 68D50004

Lab Code: COMPU Case No.: 27165 SAS No.:

SDG No.: JW542

Matrix: (soil/water) SOIL

Lab Sample ID: 950228

Sample wt/vol: 30.1 (g/mL) G

Lab File ID:

GH050228B70

Level: (low/med) LOW

Date Received: 07/10/99

% Moisture: 24

decanted: (Y/N) N

Date Extracted:07/12/99

Concentrated Extract Volume: 500(uL)

Date Analyzed: 07/15/99

Injection Volume: 2.0(uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.3

Number TICs found: 31

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
======================================	UNKNOWN	26.32	310	J.∕√
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OLM03.0

FORM I SV-TIC

Lab Name: COMPUCHEM Contract: 68D50004

Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JW542

Matrix: (soil/water) SOIL Lab Sample ID: 950229

Sample wt/vol: 30.0 (g/mL) G Lab File ID: GH050229B70

Level: (low/med) LOW Date Received: 07/10/99

% Moisture: 7 decanted: (Y/N) N Date Extracted: 07/12/99

Concentrated Extract Volume: 500(uL) Date Analyzed: 07/15/99

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.7

CAS NO.	CONCENTRATION (ug/L or ug/L)	
108-95-2- 111-44-4- 95-7-8-1- 106-46-7- 95-50-1 95-48-7 106-44-5- 621-64-7- 98-95-3 78-59-1 88-75-9-1 120-83-1 120-83-1 120-83-1 120-83-1 91-57-6 77-47-4 88-06-2 91-58-7 91-58-7 91-58-7 131-11-3-	COMPOUND (ug/L or ug/L	
606-20-2- 99-09-2	Acenaphthylene2,6-Dinitrotoluene3-NitroanilineAcenaphthene	350 U 350 U 890 U 350 U

FORM I SV-1

P-990LM03.0

Lab Name: COMPUCHEM Contract: 68D50004

Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JW542

T.1 C----1- TD. 050220

Matrix: (soil/water) SOIL Lab Sample ID: 950229

Sample wt/vol: 30.0 (g/mL) G Lab File ID: GH050229B70

Level: (low/med) LOW Date Received: 07/10/99

% Moisture: 7 decanted: (Y/N) N Date Extracted: 07/12/99

Concentrated Extract Volume: 500(uL) Date Analyzed: 07/15/99

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.7

CONCENTRATION UNITS:
CAS NO. COMPOUND (ug/L or ug/Kg) Ug/KG (

		1	
51-28-5	2,4-Dinitrophenol		890 U
100-02-7	4-Nitrophenol		890 U
132-64-9	Dibenzofuran		350 U
121-14-2	2,4-Dinitrotoluene		350 U
84-66-2	Diethylphthalate		350 U
7005-72-3	4-Chlorophenyl-phenylether		350 U
86-73-7	Fluorene		350 U
100-01-6	4-Nitroaniline		890 U
534-52-1	4,6-Dinitro-2-methylphenol		890 U
86-30-6	N-nitrosodiphenylamine (1)		350 U
101-55-3	4-Bromophenyl-phenylether		350 U
118-74-1	Hexachlorobenzene		350 U
87-86-5	Pentachlorophenol		890 U J
85-01-8	Phenanthrene		350 U
120-12-7	Anthracene	,	350 U
	Carbazole		350 U
84-74-2	Di-n-butylphthalate	,	350 U
	Fluoranthene	_	350 U
129-00-0	Pyrene		350 U
85-68-7	Butylbenzylphthalate	_	350 U
91-94-1	3,3'-Dichlorobenzidine	_	350 U
	Benzo(a) anthracene	_	350 U
218-01-9	Chrysene	_	350 U
117-81-7	bis(2-Ethylhexyl)phthalate	_	41 J
	Di-n-octylphthalate	_	350 U
	Benzo(b) fluoranthene	_	350 U
	Benzo(k) fluoranthene	_	350 U
50-32-8	Benzo(a)pyrene	_	350 U
	Indeno(1,2,3-cd)pyrene	_	350 U
	Dibenzo(a,h)anthracene	_	350 บ
191-24-2	Benzo(g,h,i)perylene	_	350 U
		_	

(1) - Cannot be separated from Diphenylamine

FORM I SV-2

9-1-71

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

JP416

Lab Name: COMPUCHEM

Contract: 68D50004

Lab Code: COMPU Case No.: 27165 SAS No.:

SDG No.: JW542

Matrix: (soil/water) SOIL

Sample wt/vol:

Lab File ID: GH050229B70

Level:

(low/med)

30.0 (g/mL) G

Date Received: 07/10/99

Lab Sample ID: 950229

LOW

Date Extracted:07/12/99

% Moisture: 7 decanted: (Y/N) N

Date Analyzed: 07/15/99

Injection Volume: 2.0(uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y

Concentrated Extract Volume: 500 (uL)

pH: 6.7

Number TICs found: 30

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

CAS NUMBER COMPOUND NAME	RT	EST. CONC.	Q
CAS NUMBER	17.39 17.53 17.73 17.97 18.17 18.35 18.44 18.68 18.91 18.98 19.25 19.32 19.54 19.54 19.86 19.86 19.86 20.79 20.79 21.46 22.09 21.46 22.17 22.88	1100 920 1500 970 1700 1200 1200 1100 1700 1300 920 2600 960 1500 2000 780 1300 1400 1000 1100 1000 980 1600 670 870 1200 760 840 730	

CP 9-1-99 OLM03.0

JP417
Lab Name: COMPUCHEM Contract: 68D50004

Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JW542

Matrix: (soil/water) SOIL Lab Sample ID: 950230

Sample wt/vol: 30.0 (g/mL) G Lab File ID: GH050230B70

Level: (low/med) LOW Date Received: 07/10/99

% Moisture: 34 decanted: (Y/N) N Date Extracted:07/12/99

Concentrated Extract Volume: 500(uL) Date Analyzed: 07/15/99

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.5

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG Q

108-95-2Phenol 111-44-4bis(2-Chloroethyl)ether 95-57-82-Chlorophenol 541-73-11,3-Dichlorobenzene 106-46-71,4-Dichlorobenzene 95-50-11,2-Dichlorobenzene 95-48-72-Methylphenol 108-60-12,2'-oxybis(1-Chloropropane) 106-44-54-Methylphenol 621-64-7Hexachloroethane 98-95-3Nitrobenzene 78-59-1Isophorone 88-75-52-Nitrophenol 105-67-92,4-Dimethylphenol 111-91-1bis(2-Chloroethoxy)methane 120-83-22,4-Dichlorophenol 120-82-11,2,4-Trichlorobenzene 91-20-3Naphthalene 106-47-84-Chloroaniline 87-68-3	500 500 500 500 500 500 500 500 500 500	
67-72-1Hexachloroethane 98-95-3Nitrobenzene 78-59-1Isophorone 88-75-52-Nitrophenol	500 500 500 500	U U U U
111-91-1bis(2-Chloroethoxy)methane 120-83-22,4-Dichlorophenol 120-82-11,2,4-Trichlorobenzene 91-20-3Naphthalene 106-47-84-Chloroaniline	500 500 500 500	ם ח ח
87-68-3Hexachlorobutadiene 59-50-74-Chloro-3-methylphenol 91-57-62-Methylnaphthalene 77-47-4Hexachlorocyclopentadiene 88-06-22,4,6-Trichlorophenol 95-95-42,4,5-Trichlorophenol		ם ם ם
91-58-72-Chloronaphthalene 88-74-42-Nitroaniline 131-11-3Dimethylphthalate 208-96-8Acenaphthylene	500 1200 500 500	ם ם ם
606-20-22,6-Dinitrotoluene 99-09-23-Nitroaniline 83-32-9Acenaphthene	500 1200 500	ם ם

FORM I SV-1

0. FOLMO3.0

JP417
Lab Name: COMPUCHEM Contract: 68D50004

Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JW542

Matrix: (soil/water) SOIL Lab Sample ID: 950230

Sample wt/vol: 30.0 (g/mL) G Lab File ID: GH050230B70

Level: (low/med) LOW Date Received: 07/10/99

% Moisture: 34 decanted: (Y/N) N Date Extracted:07/12/99

Concentrated Extract Volume: 500(uL) Date Analyzed: 07/15/99

Injection Volume: 2.0(uL) Dilution Factor: 1.0

injection volume: 2.0 (un)

GPC Cleanup: (Y/N) Y pH: 7.5

CONCENTRATION UNITS:

CA	S NO.	COMPOUND	(ug/L or ug	/Kg) UG/KG	3	Q	
10 13 12 84 70 86 10 53 86 10	0-02-7 2-64-9 1-14-2 05-72-3 -73-7 0-01-6 4-52-1 1-55-3 8-74-1	2,4-Dinitrophend 4-Nitrophend Dibenzofurand 2,4-Dinitrod 4-Chlorophend Fluorene 4-Nitroanil 4,6-Dinitrod N-nitrosoding 4-Bromophend Hexachlorod	ol		500		
85	-01-8	Phenanthren	e		500	Ū	
86	-74-8 -74-2	Anthracene Carbazole Di-n-butylp	hthalate		500 500 500	U U	
12	9-00-0	Fluoranthen Pyrene Butvlbenzyl				บ บ บ	
56	-55-3	Butylbenzyl 3,3'-Dichlo Benzo(a)ant Chrysene	robenzidine hracene		500 500 500	U	
11	.7-81-7 .7-84-0	bis(2-Ethyl Di-n-octylp	hexyl)phthalate hthalate	•		J U	
20 50)7-08-9)-32-8	Benzo (b) flu Benzo (k) flu Benzo (a) pyr	oranthene	-	500		
19 53)3-39-5 3-70-3	Indeno(1,2, Dibenzo(a,h Benzo(g,h,i	3-cd) pyrene .) anthracene	-	500	บ บ	
(1) -	Cannot be	e separated from	Diphenylamine	. 1	1 	,	1 G

JP417

Lab Name: COMPUCHEM

Contract: 68D50004

Lab Code: COMPU Case No.: 27165 SAS No.:

SDG No.: JW542

Matrix: (soil/water) SOIL

Lab Sample ID: 950230

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: GH050230B70

Level: (low/med) LOW

Date Received: 07/10/99

% Moisture: 34 decanted: (Y/N) N

Date Extracted:07/12/99

Concentrated Extract Volume: 500(uL)

Date Analyzed: 07/15/99

Injection Volume: 2.0(uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y

pH: 7.5

Number TICs found: 1

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
CAS NUMBER	COMPOUND NAME UNKNOWN (BC) i	RT		Q JB R
18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30.				

CP 9-1-99 OLM03.0

JW542

Lab Name: COMPUCHEM Contract: 68D50004

Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JW542

Matrix: (soil/water) SOIL Lab Sample ID: 949679

Sample wt/vol: 30.0 (g/mL) G Lab File ID: GH049679B66

Level: (low/med) LOW. Date Received: 07/03/99

% Moisture: 7 decanted: (Y/N) N Date Extracted: 07/08/99

Concentrated Extract Volume: 500 (uL) Date Analyzed: 07/13/99

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.0

CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG Q

350 U 108-95-2----Phenol 111-44-4-----bis(2-Chloroethyl)ether 350 U 350 U 95-57-8----2-Chlorophenol 541-73-1-----1,3-Dichlorobenzene____ 350 U 350 U 106-46-7----1,4-Dichlorobenzene 350 U 95-50-1----1,2-Dichlorobenzene 95-48-7----2-Methylphenol 350 U 108-60-1----2,2'-oxybis(1-Chloropropane) 350 U 350 U 106-44-5----4-Methylphenol 621-64-7----N-Nitroso-di-n-propylamine 350 U 350 U 67-72-1-----Hexachloroethane 350 U 98-95-3-----Nitrobenzene 350 U 78-59-1-----Isophorone_ 350 U 350 U 350 U 350 U 88-75-5----2-Nitrophenol 105-67-9-----2,4-Dimethylphenol 111-91-1-----bis(2-Chloroethoxy)methane__ 120-83-2----2,4-Dichlorophenol 120-82-1----1,2,4-Trichlorobenzene_ 350 U 350 U 91-20-3----Naphthalene 350 U 106-47-8-----4-Chloroaniline 350 U 87-68-3----Hexachlorobutadiene 59-50-7----4-Chloro-3-methylphenol 350 U 91-57-6----2-Methylnaphthalene 350 T 350 U 77-47-4-----Hexachlorocyclopentadiene 88-06-2----2,4,6-Trichlorophenol_ 350 U 95-95-4----2,4,5-Trichlorophenol_ 890 U 350 U 91-58-7----2-Chloronaphthalene 890 U 88-74-4----2-Nitroaniline 131-11-3-----Dimethylphthalate 350 U 350 U 208-96-8-----Acenaphthylene 606-20-2----2,6-Dinitrotoluene 350 U 99-09-2----3-Nitroaniline_ 890 U 350 U 83-32-9-----Acenaphthene

FORM I SV-1

C1-99 OLMO3.0

JW542
Lab Name: COMPUCHEM Contract: 68D50004

Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JW542

Matrix: (soil/water) SOIL Lab Sample ID: 949679

Sample wt/vol: 30.0 (g/mL) G Lab File ID: GH049679B66

Level: (low/med) LOW Date Received: 07/03/99

% Moisture: 7 decanted: (Y/N) N Date Extracted:07/08/99

Concentrated Extract Volume: 500(uL) Date Analyzed: 07/13/99

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.0

CONCENTRATION UNITS:
CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG

			·	
51-28-5	2,4-Dinitrophenol_		890 U	_
100-02-7	4-Nitrophenol		890 U	5
132-64-9	Dibenzofuran		350 U	
121-14-2	2,4-Dinitrotoluene		350 U	
84-66-2-	Diethylphthalate		350 U	
7005-72-3	4-Chlorophenyl-phenylether_		350 U	
86-73-7	4-Chrotophenyr-phenyrecher		350 U	
			890 U	
			890 U	
534-52-1	4,6-Dinitro-2-methylphenol			
86-30-6	N-nitrosodiphenylamine_(1)		350 U	
101-55-3	4-Bromophenyl-phenylether		350 U	
	Hexachlorobenzene	·	350 U	
87-86-5	Pentachlorophenol		890 ប	•
85-01-8	Phenanthrene		350 U	
120-12-7	Anthracene		350 U	
86-74-8	Carbazole		350 U	-
84-74-2	Di-n-butylphthalate		170 J	
206-44-0	Fluoranthene		350 U	
			350 U	
85-68-7	PyreneButylbenzylphthalate3,3'-Dichlorobenzidine		350 U	
91-94-1	3.3'-Dichlorobenzidire		350 U	
56-55-3	Benzo(a) anthracene		350 U	
218-01-9	Benzo(a) anthracene		350 U	
117-81-7	bis(2-Ethylhexyl)phthalate		54 J	
117-84-0	Di-n-octylphthalate		350 U	
205-99-2	Benzo(b) fluoranthene		350 U	
			350 U	
20/-08-9	Benzo(k) fluoranthene			
50-32-8	Benzo (a) pyrene	·	350 0	
173-37-5	Indeno(1,2,3-cd)pyrene	·	350 U	
53-70-3	Dibenzo(a,h)anthracene		350 U	
191-24-2	Benzo(g,h,i)perylene		350 U	
		·		
.) - Cannot be	separated from Diphenylamine			

Cannot be separated from Diphenylamine

(A) 9-1-9 TIMO3 (

JW542

Lab Name: COMPUCHEM

Contract: 68D50004

Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JW542

Matrix: (soil/water) SOIL

Lab Sample ID: 949679

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: GH049679B66

Level: (low/med) LOW

Date Received: 07/03/99

% Moisture: 7

decanted: (Y/N) N Date Extracted:07/08/99

Concentrated Extract Volume: 500(uL)

Date Analyzed: 07/13/99

Injection Volume: 2.0(uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.0

Number TICs found: 23

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

CP 9-1-99 OLM03.0

Lab Name: COMPUCHEM Contract: 68D50004

Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JW542

Matrix: (soil/water) SOIL Lab Sample ID: 949690

Sample wt/vol: 30:0 (g/mL) G Lab File ID: GH049690B66

Level: (low/med) LOW. Date Received: 07/03/99

% Moisture: 7 decanted: (Y/N) N Date Extracted: 07/08/99

Concentrated Extract Volume: 500(uL) Date Analyzed: 07/13/99

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.8

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG C

<u> </u>	3.		
108-95-2	Phonol		350 U
111-44-4	bis(2-Chloroethyl)ether	1	350 U
95-57-0	2-Chlorophenol		350 U
53-37-0 541-72 1	1,3-Dichlorobenzene		350 U
106-46-7	1,4-Dichlorobenzene		350 U
, 100-40-/	1,4-Dichlorobenzene		350 U
			350 U
100 60 1	2-Methylphenol2;2'-oxybis(1-Chloropropane)4-Methylphenol		350 U
106 44 5	Z;Z'-OXYDIS(I-CHIOTOPIOPAHE)		350 U
CO1 C4 7	4-Methyrphenor		350 U
021-04-/	N-Nitroso-di-n-propylamine		
0/-/2-1	Hexachioroethane		
70 50 1	Nitrobenzene		350 U
78-59-1	Isophorone		350 U
38-/5-5	2-Nitrophenol		350 U
105-67-9	2,4-Dimethylphenol	. [350 U
111-91-1	bis(2-Chloroethoxy)methane		350 U
120-83-2	2,4-Dichlorophenol1,2,4-TrichlorobenzeneNaphthalene4-Chloroaniline		350 U
120-82-1	1,2,4-Trichlorobenzene	•	350 U
91-20-3	Naphthalene		54 J
106-47-8	4-Chloroaniline	.	350 U
8/-68-3	Hexachiorobutadiene		350 U
59-50-7	4-Chloro-3-methylphenol		350 U
91-57-6	2-Methylnaphthalene		66 J
77-47-4	Hexachlorocyclopentadiene		350 U
88-06-2	2,4,6-Trichlorophenol		350 U
95-95-4	2,4,5-Trichlorophenol		890 U
91-58-7	2-Chloronaphthalene	,	350 U
88-74-4	2-Nitroaniline	·	890 U
131-11-3	Dimethylphthalate	- I	350 U
208-96-8	Acenaphthylene	1	350 U
606-20-2	2,6-Dinitrotoluene	-	350 U
99-09-2	3-Nitroaniline	-	890 U
83-32-9	Acenaphthene		350 U
	*	-	
		- !	

JW545

Lab Name: COMPUCHEM Contract: 68D50004

Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JW542

Matrix: (soil/water) SOIL Lab Sample ID: 949690

Sample wt/vol: 30.0 (g/mL) G Lab File ID: GH049690B66

Level: (low/med) LOW Date Received: 07/03/99

% Moisture: 7 decanted: (Y/N) N Date Extracted: 07/08/99

Concentrated Extract Volume: 500(uL) Date Analyzed: 07/13/99

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.8

CAS NO.	COMPOUND	CONCENTRATION (ug/L or ug/I	-	Q .
100-02-7 132-64-9 121-14-2 84-66-2 7005-72-3 86-73-7 100-01-6 534-52-1 86-30-6 101-55-3 118-74-1 87-86-5 85-01-8 120-12-7 86-74-8 206-44-0 129-00-0 129-00-0 129-00-0 117-81-7 117-84-0 117-84-0 205-99-2 207-08-9 193-39-5 191-24-2	4-Nitroaniline4,6-Dinitro-2-me4,6-Dinitro-2-meN-nitrosodipheny4-Bromophenyl-phHexachlorobenzenPentachlorophenoPhenanthreneCarbazoleCarbazoleFluoranthenePyreneButylbenzylphthal3,3'-DichloroberBenzo(a)anthrace	henylether	350 UU 350 UU 35	ייייייייייייייייייייייייייייייייייייי
		,	U	4-1-7

FORM I SV-2

OLMO3.0

Lab Name: COMPUCHEM

Contract: 68D50004

JW545

Lab Code: COMPU Case No.: 27165 SAS No.:

SDG No.: JW542

Matrix: (soil/water) SOIL

Lab Sample ID: 949690

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: GH049690B66

Level:

(low/med) LOW

Date Received: 07/03/99

% Moisture: 7 decanted: (Y/N) N

Date Extracted:07/08/99

Concentrated Extract Volume: 500(uL)

Date Analyzed: 07/13/99

Injection Volume: 2.0(uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y

pH: 7.8

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG Number TICs found: 30

	•			1
CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30.	UNKNOWN	6.14 20.17 20.36 20.59 20.80 20.94 21.20 21.23 21.38 21.45 21.71 21.74 21.83 21.88 21.99 22.02 22.30 22.48 22.55 22.64 22.78 22.92 23.13 23.18 23.30 23.50 23.69 23.78	330 540 320 860 760 1100 770 490 7600 830 650 720 900 730 730 730 730 730 730 730 7	

CP 9-1-99 OLM03.0

JW546 Lab Name: COMPUCHEM Contract: 68D50004

Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JW542

Matrix: (soil/water) SOIL Lab Sample ID: 949691

Sample wt/vol: 30.0 (g/mL) GLab File ID: GH049691B66

Date Received: 07/03/99 Level: (low/med) LOW:

% Moisture: 20 decanted: (Y/N) N Date Extracted:07/08/99

Concentrated Extract Volume: 500 (uL) Date Analyzed: 07/13/99

Dilution Factor: 1.0 Injection Volume: 2.0(uL)

GPC Cleanup: (Y/N) Y pH: 7.2

CONCENTRATION UNITS:
CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG

		· -
108-95-2Phenol	410	U
111-44-4bis(2-Chloroethyl)ether	410	
95-57-82-Chlorophenol	410	ΙŪ
541-73-11.3-Dichlorobenzene	410	Ū
106-46-71,4-Dichlorobenzene	410	Ū
95-50-11.2-Dichlorobenzene	410	1 -
95-50-11,2-Dichlorobenzene 95-48-72-Methylphenol	410	1 -
108-60-12,2'-oxybis(1-Chloropropane)	410	
106-44-54-Methylphenol	410	
621-64-7N-Nitroso-di-n-propylamine	410	
67-72-1Hexachloroethane	410	
98-95-3Nitrobenzene	410	
78-59-1Isophorone	410 410	1 -
88-75-52-Nitrophenol	410	1 -
105-67-92,4-Dimethylphenol	410 410	į –
111-91-1bis (2-Chloroethoxy) methane	410	1 ~
120-83-22,4-Dichlorophenol	410	1 -
120-82-11,2,4-Trichlorobenzene		1 -
91-20-3	410	1 -
91-20-3Naphthalene 106-47-84-Chloroaniline	410	
97.69 3 Tana al Janah de J	410	
87-68-3Hexachlorobutadiene	410	
59-50-74-Chloro-3-methylphenol	410	1 -
91-57-62-Methylnaphthalene	58	1 -
77-47-4Hexachlorocyclopentadiene	410	
88-06-22,4,6-Trichlorophenol	410	
95-95-42,4,5-Trichlorophenol	1000	U
91-58-72-Chloronaphthalene	410	U
88-74-42-Nitroaniline	1000	U
131-11-3Dimethylphthalate	410	U
208-96-8Acenaphthylene	410	U
000-40-4X.6-D1n1Er0E01Dene	410	U
99-09-23-Nitroaniline	1000	שׁוֹ
83-32-9Acenaphthene	410	
		1 .

JW546
Lab Name: COMPUCHEM Contract: 68D50004

Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JW542

Matrix: (soil/water) SOIL Lab Sample ID: 949691

Sample wt/vol: 30.0 (g/mL) G Lab File ID: GH049691B66

Level: (low/med) LOW Date Received: 07/03/99

% Moisture: 20 decanted: (Y/N) N Date Extracted:07/08/99

Concentrated Extract Volume: 500 (uL) Date Analyzed: 07/13/99

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.2

CONCENTRATION UNITS:
CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG

	(43, 4 55 43	, <u>_</u> ,			_	
51-28-5	2,4-Dinitrophenol			1000	IJ	
100-02-7	4-Nitrophenol	·		1000		-
132-64-9	Dibenzofuran			410		
	2,4-Dinitrotoluene	1		410		
84-66-2	Diethylphthalate	•		410		
7005-72-3	4-Chlorophenyl-phenylether	•		410		
86-73-7	Fluorene	•		410		
	4-Nitroaniline	-1	-	1000		
	4,6-Dinitro-2-methylphenol_	- .		1000		
86-30-6	N-nitrosodiphenylamine (1)	-	•	410	l .	
101-55-3	4-Bromophenyl-phenylether	•		410		
	Hexachlorobenzene	-		410		
	Pentachlorophenol	-		1000		
	Phenanthrene	-		66		
120-12-7	Anthracene	-		410		
86-74-8	Carbazole	-		410		
	Di-n-butylphthalate	-		410		
206-44-0	Fluoranthene	-		410		
129-00-0	Dyrane	-		410		
85-68-7	Butylbenzylphthalate	-		410		
91 - 94 - 1	3,3'-Dichlorobenzidine	-		410		
26-26-3	Benzo (a) anthracene	-	•	410		
218-01-0	Chrysene	- -		410		
117-81-7	bis(2-Ethylhexyl)phthalate	-		270		
117-84-0	Dis(Z-Ethylhexyl/phchalate	-	:	410		
205-99-2	Benzo (b) fluoranthene	-		410		
207-08-9	Benzo(k) fluoranthene	-		410		
50-32-8	Benzo(a) pyrene	-		410	_	
193-39-5	Indeno(1,2,3-cd)pyrene	-		410	Į.	
53-70-3	Dibenzo(a,h)anthracene	-		410	1 -	
	Benzo(g,h,i)perylene	-	•	410		
T) T - Q	Belizo (g, ii, i) per yreile	-		± T.O.	0	
- Cannot bo	separated from Diphenylamine	_			i	
caming be	separaced from premyramine				Λ	

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JW546

Lab Name: COMPUCHEM

Contract: 68D50004

Lab Code: COMPU Case No.: 27165 SAS No.:

SDG No.: JW542

Matrix: (soil/water) SOIL

Lab Sample ID: 949691

Sample wt/vol: 30.0 (g/mL) G

Lab File ID:

GH049691B66

Level: (low/med) LOW

Date Received: 07/03/99

% Moisture: 20

decanted: (Y/N) N

Date Extracted: 07/08/99

Concentrated Extract Volume: 500 (uL)

Date Analyzed: 07/13/99

Injection Volume: 2.0(uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y

pH: 7.2

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

	• 1				
Number	TICs	found:	24	•	

CAS NUMBER		COMPOUND NAME	RT	EST. CONC.	Q Q
	TATION	(DC) blank Cons	5.39	250	JB R
	UNICHOWN	(30)		350	
2.	UNKNOWN		6.00	430	
3.	UNKNOWN	blank Cont.	15.01	900	
<u> </u>	UNKNOWN	CARBOXYLIC ACID	15.19	3200	けずい
5.	UNKNOWN	and the second of the second o	16.38	380	
6.		CARBOXYLIC ACID	16.61	7100	
7.	UNKNOWN	CARBOXYLIC ACID	16.73	960	
8.	UNKNOWN		17.34	610) J
9.	UNKNOWN		18.36	230	ועו
LO.	UNKNOWN		21.65	510	ועונ
li.	UNKNOWN		21.87	360	
L2.	UNKNOWN		21.97	520	
L3.	UNKNOWN		22.20	440	
L4.	UNKNOWN		22.72	270	
L 4. L5.			22.99	310	
	UNKNOWN		22.33		
<u>.6.</u>	UNKNOWN		23.16	220	
L7.	UNKNOWN		23.44	3.60	
L8.	UNKNOWN		25.21	240	
L9.	UNKNOWN		26.53	240	
20.	UNKNOWN		27.21	200	
21.	UNKNOWN		27.65	420) J J
22.	UNKNOWN		28.16	170	וסוכ
23.	UNKNOWN		28.51	280	
24.	UNKNOWN		29.32		
25.	CIVICIONIA		25.32		
26.					-
27.			-		- I
	. <u> </u>				_
28.				.	_
29.			.	.	_
30.		.			

CP 9-1-99 OLM03.0

Lab Name: COMPUCHEM Contract: 68D50004

Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JW542

Matrix: (soil/water) SOIL Lab Sample ID: 949692

Sample wt/vol: 30.0 (g/mL) G Lab File ID: GH049692B66

Level: (low/med) LOW Date Received: 07/03/99

% Moisture: 7 decanted: (Y/N) N Date Extracted:07/08/99

Concentrated Extract Volume: 500(uL) Date Analyzed: 07/13/99

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.0

CONCENTRATION UNITS:
CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG Q

350 U 108-95-2----Phenol 111-44-4----bis(2-Chloroethyl)ether 350 U 95-57-8----2-Chlorophenol 350 U 350 U 541-73-1----1,3-Dichlorobenzene 106-46-7-----1,4-Dichlorobenzene_95-50-1-----1,2-Dichlorobenzene_ 350 U 350 U 95-48-7----2-Methylphenol 108-60-1----2,2'-oxybis(1-Chloropropane) 350 U 350 U 106-44-5----4-Methylphenol 350 U 621-64-7----N-Nitroso-di-n-propylamine 350 U 350 U 67-72-1-----Hexachloroethane 98-95-3-----Nitrobenzene 350 U 78-59-1-----Isophorone 350 U 88-75-5----2-Nitrophenol 350 U 105-67-9-----2,4-Dimethylphenol_ 350 U 111-91-1-----bis(2-Chloroethoxy)methane 350 U 120-83-2----2,4-Dichlorophenol___ 350 U 120-82-1-----1,2,4-Trichlorobenzene 350 U 91-20-3----Naphthalene 350 U 106-47-8----4-Chloroaniline 350 U 350 U 350 U 87-68-3-----Hexachlorobutadiene 59-50-7----4-Chloro-3-methylphenol____ 91-57-6----2-Methylnaphthalene 350 U 77-47-4-----Hexachlorocyclopentadiene___ 350 U 88-06-2----2,4,6-Trichlorophenol 350 U 95-95-4----2,4,5-Trichlorophenol____ 890 U 91-58-7----2-Chloronaphthalene 350 U 88-74-4----2-Nitroaniline 890 U 350 U 131-11-3-----Dimethylphthalate 208-96-8-----Acenaphthylene 350 U 606-20-2----2,6-Dinitrotoluene 350 U 99-09-2----3-Nitroaniline 890 U 83-32-9-----Acenaphthene 350 U

Lab Name: COMPUCHEM Contract: 68D50004

Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JW542

Matrix: (soil/water) SOIL Lab Sample ID: 949692

Sample wt/vol: 30.0 (g/mL) G Lab File ID: GH049692B66

Level: (low/med) LOW Date Received: 07/03/99

% Moisture: 7 decanted: (Y/N) N Date Extracted: 07/08/99

Concentrated Extract Volume: 500(uL) Date Analyzed: 07/13/99

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.0

CONCENTRATION UNITS:
CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG Q

.]	51-28-52,4-Dinitrophenol	The second second	890 U		
	100-02-74-Nitrophenol		890 U	「ゴー	
ı	132-64-9Dibenzofuran		350 T	Ţ	
	121-14-22,4-Dinitrotoluene	*	350 T	J	
	84-66-2Diethylphthalate		350 T	J !	i
	7005-72-34-Chlorophenyl-phenylether	•	350 0	J	ĺ
	86-73-7Fluorene	. • .	350 T	J	ĺ
	100-01-64-Nitroaniline		890 T	J	ĺ
- 1	534-52-14,6-Dinitro-2-methylphenol_		890 T		ĺ
- 1	86-30-6N-nitrosodiphenylamine (1)	the second of the second	350 T		
	101-55-34-Bromophenyl-phenylether		350 t	_	
·	110 74 1 Horrach orchonsone	٠.	350 t	-	
	118-74-1Hexachlorobenzene		890 1		
٠, ا	87-86-5Pentachlorophenol	l	350 1		
	85-01-8Phenanthrene		350 1		
	120-12-7Anthracene			J	l
•	86-74-8Carbazole		1	J	ŀ
	84-74-2Di-n-butylphthalate			-	l
	206-44-0Fluoranthene			J	١
	129-00-0Pyrene	•		J /	١
٠	85-68-7Butylbenzylphthalate		,	IJ.	١
l	91-94-13,3'-Dichlorobenzidine			IJ	١
.	56-55-3Benzo (a) anthracene	, i	350		١
ı	218-01-9Chrysene			Ü ,	١
	117-81-7bis(2-Ethylhexyl)phthalate			J	
	117-84-0Di-n-octylphthalate		350		
	205-99-2Benzo(b) fluoranthene		350		1
	207-08-9Benzo(k) fluoranthene		350	U	۱
	50-32-8Benzo(a)pyrene		350	Ū	١
	193-39-5Indeno(1,2,3-cd)pyrene		350	Ū	1
	53-70-3Dibenzo(a,h)anthracene	•	350	Ū ·	
	191-24-2Benzo(g,h,i)perylene	•	350		١
	191 2- 2 DC1140 (9) 11/1/ PC1/ 10110	•			
1-	1) - Cannot be separated from Diphenylamine	. 1	I .		. 1
١-	r, caminot be separated from bipmenyramine			ΔM .	

FORM I SV-2

GOWLIEC CLICK

OLM03.0

Lab Name: COMPUCHEM Contract: 68D50004 JW564

Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JW542

Matrix: (soil/water) SOIL

Lab Sample ID: 949692

Sample wt/vol:

30.0 (g/mL) G

Lab File ID: GH049692B66

Level: (low/med) LOW

Date Received: 07/03/99

% Moisture: 7 decanted: (Y/N) N

Date Extracted:07/08/99

Concentrated Extract Volume: 500(uL)

Date Analyzed: 07/13/99

Injection Volume: 2.0(uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.0

Number TICs found: 30

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

					·			
CAS NUMBER	*	COMPOUND	NAME		RT	EST.	CONC.	, Q
70 00 5		:=====:	=====		======	======		=====
1. 79-92-5 2.	CAMPHENE	<u> </u>			5.61		200	NJ,
3.	UNKNOWN		•	,	5.89		370	
	UNKNOWN	•			6.75		320	J
4. 5.	UNKNOWN				6.96		190	J
6.	UNKNOWN		•		10 08		260	J
7.	UNKNOWN				10.38		930	J
8.	UNKNOWN		•		10.49		320	J
9.	UNKNOWN	* -			10.56		320	J
10.	UNKNOWN			· .	10.68		220	J
11.	UNKNOWN				21.25		250	
12.	UNKNOWN				21.44		310	J
13.	UNKNOWN	• • •			21.69	•	700	J
14.	UNKNOWN				21.74		530	J
15.	UNKNOWN				21.81		50.0	J.
16.	UNKNOWN				21.97		1100	J
17.	UNKNOWN			•	22.30	•	. 550	J
18.	UNKNOWN				22.46	·	500	J
19.	UNKNOWN				22.53		490	
20.	UNKNOWN		•		22.62	•	370	<u>J</u>
21.	UNKNOWN				22.76	***	320	J
22.	UNKNOWN				22.88		290	
23.	UNKNOWN	•	•		23.02	. `	420	J]
23.	UNKNOWN			•	23.09		280	
25.	UNKNOWN	•			23.28		270	J
26.	UNKNOWN				23.48		320	J
27.	UNKNOWN				23.67		250	
28.	UNKNOWN				23.76		380	
29.	UNKNOWN			•	24.46		320	J
30.	UNKNOWN			* **	28.17		290	J
30.	UNKNOWN				29.10		390	JV

0 4-1-99

Lab Name: COMPUCHEM Contract: 68D50004

Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JW542

Matrix: (soil/water) SOIL Lab Sample ID: 949693

Sample wt/vol: 30.0 (g/mL) G Lab File ID: GH049693B66

Level: (low/med) LOW Date Received: 07/03/99

% Moisture: 20 decanted: (Y/N) N Date Extracted: 07/08/99

Concentrated Extract Volume: 500(uL) Date Analyzed: 07/13/99

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.7

CONCENTRATION UNITS:
CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG

							•
	108-95-2Phenol				410	Ū	• • •
-	111-44-4bis(2-Chloroethyl)ether				410	_	
	95-57-82-Chlorophenol		•	٠.	410	_	
l	541-73-11,3-Dichlorobenzene	•			410	_	
I	106-46-71,4-Dichlorobenzene				410		
l	95-50-11,2-Dichlorobenzene				410		
l	95-48-72-Methylphenol				410		
l	108-60-12,2'-oxybis(1-Chloropropane)	.;			410	ľ	
١	106-44-54-Methylphenol		•	•	66		
ı	621-64-7N-Nitroso-di-n-propylamine				410	1	
	67-72-1Hexachloroethane				410		
l	98-95-3Nitrobenzene		•	٠	410		•
١	78-59-1Isophorone				410	_	
l	88-75-52-Nitrophenol			. •	410		
	105-67-92,4-Dimethylphenol				410	_	
l	111-91-1bis(2-Chloroethoxy)methane				410	_	
	120-83-22,4-Dichlorophenol				410	-	
١	120-82-11,2,4-Trichlorobenzene				410	_	
	91-20-3Naphthalene				410		
	106-47-84-Chloroaniline				410		
	87-68-3Hexachlorobutadiene			, ,	410	ı –	
	59-50-74-Chloro-3-methylphenol				410	. –	
	91-57-62-Methylnaphthalene_			-	410	. –	
	77-47-4Hexachlorocyclopentadiene				410	_	
	88-06-22,4,6-Trichlorophenol				410	1 -	
	95-95-42.4.5-Trichlorophenol		:		1000	1	
	91-58-72-Chloronaphthalene				410		
	88-74-42-Nitroaniline				1000		
	131-11-3Dimethylphthalate				410	1	
	208-96-8Acenaphthylene				410	U	
	606-20-22.6-Dinitrotoluene				410	Ū	
	99-09-23-Nitroaniline		÷ .		1000	TT .	٠.
	83-32-9Acenaphthene				410	TT	
					0	١	
١,						ı	

Lab Name: COMPUCHEM Contract: 68D50004 JW565

Lab Code: COMPU Case No.: 27165 SAS No.:

SDG No.: JW542

Matrix: (soil/water) SOIL

Lab Sample ID: 949693

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: GH049693B66

Level: (low/med) LOW

Date Received: 07/03/99

% Moisture: 20 decanted: (Y/N) N Date Extracted: 07/08/99

Concentrated Extract Volume: 500(uL) Date Analyzed: 07/13/99

Injection Volume: 2.0(uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y

pH: 7.7

1000 U 100-02-74-Nitrophenol 1000 U 100-02-74-Nitrophenol 1000 U 132-64-9Dibenzofuran 410 U 410	CAS NO.	COMPOUND,	(ug/L or ug/Kg) UG/KG	Q
100-02-74-Nitrophenol	51-28-5	2 4-Dinitroph	enol	1000	TT
132-64-9	100-02-7	4-Nitrophenol			
121-14-22,4-Dinitrotoluene	132-64-9	Dibenzofuran			
84-66-2			luene		
7005-72-34-Chlorophenyl-phenylether 410 U 86-73-7Fluorene 410 U 534-52-14,6-Dinitro-2-methylphenol 1000 U 86-30-6N-nitrosodiphenylamine (1) 410 U 101-55-34-Bromophenyl-phenylether 410 U 118-74-1Hexachlorobenzene 410 U 87-86-5Pentachlorophenol 1000 U 85-01-8Phenanthrene 410 U 120-12-7Anthracene 410 U 84-74-2Din-butylphthalate 410 U 206-44-0Fluoranthene 410 U 129-00-0	84-66-2	Diethylphthal	ate.		
86-73-7	7005-72-3	4-Chloropheny	l-phenylether		
100-01-64-Nitroaniline	86-73-7	Fluorene			
534-52-14,6-Dinitro-2-methylphenol 1000 U 86-30-6N-nitrosodiphenylamine (1) 101-55-34-Bromophenyl-phenylether 410 U 118-74-1Hexachlorobenzene 410 U 87-86-5Pentachlorophenol 1000 U 85-01-8Phenanthrene 410 U 120-12-7Anthracene 410 U 86-74-8Carbazole 410 U 84-74-2Di-n-butylphthalate 410 U 206-44-0	100-01-6	4-Nitroanilin	<u> </u>		
86-30-6N-nitrosodiphenylamine (1) 410 U 101-55-34-Bromophenyl-phenylether 410 U 118-74-1Hexachlorobenzene 410 U 87-86-5Pentachlorophenol 1000 U 85-01-8	534-52-1	4.6-Dinitro-2	-methylphenol		
101-55-34-Bromophenyl-phenylether	86-30-6	N-nitrosodiph	envlamine (1)		
118-74-1	101-55-3	4-Bromophenyl	-phenylether		
87-86-5Pentachlorophenol 1000 U 85-01-8Phenanthrene 410 U 120-12-7Anthracene 410 U 86-74-8Carbazole 410 U 84-74-2Di-n-butylphthalate 410 U 206-44-0Fluoranthene 410 U 129-00-0Pyrene 410 U 85-68-7Butylbenzylphthalate 410 U 91-94-13,3'-Dichlorobenzidine 410 U 56-55-3	118-74-1	Hevachloroben	zene		
85-01-8Phenanthrene 410 U 120-12-7Anthracene 410 U 86-74-8Carbazole 410 U 84-74-2Di-n-butylphthalate 410 U 206-44-0Fluoranthene 410 U 129-00-0Pyrene 410 U 85-68-7Butylbenzylphthalate 410 U 91-94-13,3'-Dichlorobenzidine 410 U 56-55-3	87-86-5	Pentachloroph	enol		
120-12-7Anthracene 410 U 86-74-8Carbazole 410 U 84-74-2	85-01-8	Dhenanthrene			
86-74-8	120-12-7	Anthracene			
84-74-2Di-n-butylphthalate 410 U 206-44-0Fluoranthene 410 U 129-00-0Pyrene 410 U 85-68-7Butylbenzylphthalate 410 U 91-94-13,3'-Dichlorobenzidine 410 U 56-55-3Benzo(a) anthracene 410 U 218-01-9Chrysene 410 U 117-81-7bis(2-Ethylhexyl)phthalate 68 J 117-84-0Benzo(b)fluoranthene 410 U 205-99-2Benzo(b)fluoranthene 410 U 207-08-9Benzo(k)fluoranthene 410 U 50-32-8Benzo(a)pyrene 410 U 193-39-5Indeno(1,2,3-cd)pyrene 410 U 53-70-3Benzo(g,h,i)perylene 410 U	86-74-8	Carbarale	**************************************		
206-44-0Fluoranthene 410 U 129-00-0Pyrene 410 U 85-68-7	84-74-2	Di n buty pht	halate		
129-00-0	206-44-0-	DI-H-Ducyiphic.	narace		
85-68-7	129-00-0-	Fluoranchene_			
56-55-3	25-60 7	Pyrene			
56-55-3	01 04 1	BucArpenzArbu	Luarace		
218-01-9	56-55 3	3,3,-DICUTOLO	penziqine		
117-81-7bis (2-Ethylhexyl) phthalate 68 J 117-84-0Di-n-octylphthalate 410 U 205-99-2Benzo (b) fluoranthene 410 U 207-08-9Benzo (k) fluoranthene 410 U 50-32-8Benzo (a) pyrene 410 U 193-39-5Indeno (1, 2, 3-cd) pyrene 410 U 53-70-3	30-33-3	Benzo(a) anthr	acene		
117-84-0Di-n-octylphthalate 410 U 205-99-2Benzo (b) fluoranthene 410 U 207-08-9Benzo (k) fluoranthene 410 U 50-32-8Benzo (a) pyrene 410 U 193-39-5Indeno (1,2,3-cd) pyrene 410 U 53-70-3Dibenzo (a, h) anthracene 410 U 191-24-2Benzo (g, h, i) perylene 410 U	117 01 7	Chrysene			•
205-99-2Benzo (b) fluoranthene 410 U 207-08-9Benzo (k) fluoranthene 410 U 50-32-8Benzo (a) pyrene 410 U 193-39-5Indeno (1,2,3-cd) pyrene 410 U 53-70-3Dibenzo (a,h) anthracene 410 U 191-24-2Benzo (g,h,i) perylene 410 U	117-81-7	pis(2-Etuvine	xy1)pntna1ate		1 '
207-08-9Benzo (k) fluoranthene 410 U 50-32-8Benzo (a) pyrene 410 U 193-39-5Indeno (1, 2, 3-cd) pyrene 410 U 53-70-3Dibenzo (a, h) anthracene 410 U 191-24-2Benzo (g, h, i) perylene 410 U	11/-84-0	Dr-u-octAtbut	nalace		1
50-32-8Benzo(a)pyrene 410 U 193-39-5Indeno(1,2,3-cd)pyrene 410 U 53-70-3Dibenzo(a,h)anthracene 410 U 191-24-2Benzo(g,h,i)perylene 410 U	205-99-2	Benzo(b) fluor	anthene		
193-39-5Indeno(1,2,3-cd)pyrene 410 U 53-70-3Dibenzo(a,h)anthracene 410 U 191-24-2Benzo(g,h,i)perylene 410 U	207-08-9	Benzo(k)fluor	anthene		
53-70-3	50-32-8	Benzo(a)pyren	e		1 -
191-24-2Benzo(g,h,i)perylene 410 U	193-39-5	Indeno(1,2,3-	cd)pyrene		+
	53-70-3	Dibenzo(a,h)a	nthracene		1
	191-24-2	Benzo(g,h,i)p	erylene	410	U
) - Cannot be separated from Diphenvlamine					
) - Cannor be	separated from D	iphenylamine		•

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

JW565

Lab Name: COMPUCHEM

Contract: 68D50004

Lab Code: COMPU

Case No.: 27165 SAS No.:

SDG No.: JW542

Matrix: (soil/water) SOIL

Lab Sample ID: 949693

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: GH049693B66

Date Received: 07/03/99

Level: (low/med)

% Moisture: 20

decanted: (Y/N) N

LOM.

Date Extracted:07/08/99

Injection Volume: 2.0(uL)

Date Analyzed: 07/13/99 Dilution Factor: 1.0

Concentrated Extract Volume: 500(uL)

GPC Cleanup: (Y/N) Y pH: 7.7

Number TICs found: 12

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 2. 3. 4. 5. 464-48-2 6.	UNKNOWN (BC) UNKNOWN UNKNOWN UNKNOWN SUBSTITUTED BENZENE BICYCLO[2.2.1] HEPTAN-2-ONE, UNKNOWN CARBOXYLIC ACID UNKNOWN CARBOXYLIC ACID,	5.40 5.54 6.31 6.51 7.98 8.21 15.13	250 110 190 100 120 220	R JN JN JN JN JN JN JN JN JN JN JN JN JN
8. 9. 10. 11. 12.	UNKNOWN CARBOXYLIC ACID UNKNOWN LAW COMMUNKNOWN UNKNOWN UNKNOWN UNKNOWN UNKNOWN	21.51 21.72 21.78 22.58 24.42	170 340 180 100 120	J/ J/ J/
14. 15. 16. 17. 18.				
20. 21. 22. 23. 24.				
26. 27. 28. 29.				

FORM I SV-TIC

Lab Name: COMPUCHEM Contract: 68D50004

Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JW542

Matrix: (soil/water) SOIL Lab Sample ID: 949971

Sample wt/vol: 30.0 (g/mL) G Lab File ID: GH049971A66

Level: (low/med) LOW Date Received: 07/08/99

% Moisture: 7 decanted: (Y/N) N Date Extracted: 07/09/99

Concentrated Extract Volume: 500(uL) Date Analyzed: 07/14/99

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.4

CAS NO. COMPOUND CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/KG Q

108-95-2-----Phenol 111-44-4-----bis(2-Chloroethyl)ether 350 U 350 U 350 U 350 U 106-46-7-----1,4-Dichlorobenzene 95-50-1-----1,2-Dichlorobenzene 350 U 350 U 95-48-7----2-Methylphenol 108-60-1----2;2'-oxybis(1-Chloropropane) 350 U 350 U 106-44-5----4-Methylphenol 350 U 621-64-7----N-Nitroso-di-n-propylamine 350 U 67-72-1-----Hexachloroethane 350 LT. 98-95-3-----Nitrobenzene 350 U 78-59-1-----Isophorone__ 88-75-5----2-Nitrophenol
105-67-9-----2,4-Dimethylphenol 350 U 350 U 350 U 111-91-1-----bis (2-Chloroethoxy) methane 350 U 120-83-2----2,4-Dichlorophenol 350 U 120-82-1----1,2,4-Trichlorobenzene 350 U 91-20-3----Naphthalene 350 U 106-47-8----4-Chloroaniline 350 U 87-68-3-----Hexachlorobutadiene 350 U 59-50-7----4-Chloro-3-methylphenol____ 350 U 91-57-6----2-Methylnaphthalene 350 U 77-47-4-----Hexachlorocyclopentadiene 350 T 88-06-2----2,4,6-Trichlorophenol____ 350 U 95-95-4----2,4,5-Trichlorophenol____ 890 U 91-58-7----2-Chloronaphthalene____ 350 U 88-74-4----2-Nitroaniline 890 U 131-11-3-----Dimethylphthalate____ 350 U 208-96-8-----Acenaphthylene____ 350 U 606-20-2----2,6-Dinitrotoluene 99-09-2----3-Nitroaniline 350 U 890 U 83-32-9-----Acenaphthene___ 350 U

JW574

Lab Name: COMPUCHEM

Contract: 68D50004

Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JW542

Matrix: (soil/water) SOIL

Lab Sample ID: 949971

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: GH049971A66

Level: (low/med) LOW

Date Received: 07/08/99

% Moisture: 7 decanted: (Y/N) N

Date Extracted:07/09/99

Concentrated Extract Volume: 500(uL)

Date Analyzed: 07/14/99

Injection Volume: 2.0(uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.4

		CONCENTRATION	ON UNITS:	
	CAS NO.	COMPOUND (ug/L or ug	/Kg) UG/KG	Q
ĺ				
- 1	51-28-5	2,4-Dinitrophenol		90 U
	100-02-7	4-Nitrophenol		90 ប
	132-64-9	Dibenzofuran		50 U
- 1	121-14-2	2,4-Dinitrotoluene		50 U
- 1	84-66-2	Diethylphthalate		50 U
	7005-72-3	4-Chlorophenyl-phenylether		50 U
- 1	86-73-7		3	50 U
- 1		4-Nitroaniline	8	90 U
-1	534-52-1	4,6-Dinitro-2-methylphenol	8	90 U
- 1		N-nitrosodiphenylamine (1)	3	50 U
		4-Bromophenyl-phenylether	3	50 U
		Hexachlorobenzene	3	50 U
١		Pentachlorophenol	8	90 U
1		Phenanthrene		68 J
. 1		Anthracene		50 U
		Carbazole		50 U
- 1		Di-n-butylphthalate		50 U
		Fluoranthene		40 J
	129-00-0			L 06
		Butylbenzylphthalate		50 U
- 1	91-94-1	3,3'-Dichlorobenzidine		50 U
		Benzo (a) anthracene	1 /	51 J
	218-01-9		•	59 J
-		bis(2-Ethylhexyl)phthalate	· ·	80
ı		Di-n-octylphthalate		50 0
	205-99-2	Benzo(b) fluoranthene		95 J
		Benzo(k) fluoranthene	1 3	50 U
1	50-32-8	Benzo(a)pyrene		93 ЈЈ
		Indeno(1,2,3-cd)pyrene		67 J
		Dibenzo(a,h)anthracene	1	350 U
		Benzo(g,h,i)perylene		20 J
ļ		201120 (3/11/2/2-1-01-0	112.1	
(=) - Cannot be	separated from Diphenylamine	-!	Δ -
			•	CP 11-97
				Uij/1"
		FORM I SV-2		7 OLM03.0

JW574 Lab Name: COMPUCHEM Contract: 68D50004

Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JW542

Matrix: (soil/water) SOIL Lab Sample ID: 949971

Sample wt/vol: 30.0 (g/mL) G Lab File ID: GH049971A66

Level: (low/med) LOW Date Received: 07/08/99

% Moisture: 7 decanted: (Y/N) N Date Extracted:07/09/99

Concentrated Extract Volume: 500(uL) Date Analyzed: 07/14/99

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.4

CONCENTRATION UNITS: Number TICs found: 20 (ug/L or ug/Kg) UG/KG

NUMBER 1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14.	COMPOUND NAME UNKNOWN	RT 5.63 10.19 10.24 20.39 20.74 21.14 21.27 21.55 21.62 21.81 22.39 22.76 22.84 22.91 23.02	EST. CONC. 110 110 170 75 92 72 86 86 74 190 120 82 110 89 80	Q
19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29.	UNKNOWN UNKNOWN	24.14 24.74 27.42	180 90 73	J J J J J J J J J J J J J J J J J J J

OP 9-1-9 OLM03.0

JW575

Lab Name: COMPUCHEM Contract: 68D50004

Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JW542

Matrix: (soil/water) SOIL Lab Sample ID: 949972

Sample wt/vol: 30.0 (g/mL) G Lab File ID: GH049972A66

Level: (low/med) LOW Date Received: 07/08/99

% Moisture: 4 decanted: (Y/N) N Date Extracted:07/09/99

Concentrated Extract Volume: 500(uL) Date Analyzed: 07/14/99

CONCENTRATION UNITS:

Injection Volume: 2.0(uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.6

CAS NO.	COMPOUND (ug/l	L or ug/Kg)	UG/KG	Q
108-95-2	Phenol	arta da Sali	340	U
111-44-4	bis(2-Chloroethyl)ethe	er	340	
95-57-8	2 Chlorophonol		340	
541-73-1	1 3-Dichlorobenzene		340	
T00-40-/	1.4-Dichtorobenzene		340	
JJ-DU-1	I J-D1Chloropenzene		340	
95-48-7	2-Methylphenol		340	
108-60-1	2,2'-oxybis(1-Chlorop	ropane	340	
106-44-5	4-Methylphenol	Toponio,	340	
621-64-7	N-Nitrogo-di-n-propuls	amine	340	
67-72-1	Hexachloroethane		340	
98-95-3	Nitrobenzene		340	
78-59-1	Isophorone		340	
88-75-5	2-Nitrophenol		340	
105-67-9	2,4-Dimethylphenol	<u> </u>	340	
111-91-1	bis(2-Chloroethoxy) met	- hana		
120-83-2	2,4-Dichlorophenol	-11a11e	340	
120-82-1	1,2,4-Trichlorobenzene		340	
91-20-3			340	
106-47-0	Naphthaiene 4-Chloroaniline		340	
87-69-2	4-Chioroaniline		340	
50-50-7	Hexachlorobutadiene		340	
01-57 6	4-Chloro-3-methylpheno	o+	340	
77 A7 A	2-Methylnaphthalene	<u> </u>	54	
//-4/-4	Hexachlorocyclopentad	rene	340	
00-00-2	2,4,6-Irichlorophenol		340	
93-95-4	2,4,5-Trichlorophenol		860	
3T-28-/	2-Chloronaphthalene 2-Nitroaniline		340	
88-/4-4	2-Nitroaniline		860	
T3T-T1-3	Dimethylphthalate		340	
ZUB-96-8	Acenanhthulene	1	340	U
606-20-2	2;6-Dinitrotoluene		340	Ū
33-119-2	3-Nitroaniline		860	U ·

JW575

Lab Name: COMPUCHEM

Contract: 68D50004

Lab Code: COMPU Case No.: 27165 SAS No.:

SDG No.: JW542

Matrix: (soil/water) SOIL

Lab Sample ID: 949972

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: GH049972A66

Level: (low/med) LOW

Date Received: 07/08/99

% Moisture: 4 decanted: (Y/N) N

Date Extracted:07/09/99

Concentrated Extract Volume: 500(uL) Date Analyzed: 07/14/99

Injection Volume: 2.0(uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.6

CAS NO. COMPOUND CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

CAD NO. COMPOSITO	· · ·	
51-28-52,4-Dinitrophenol 100-02-74-Nitrophenol 132-64-9Dibenzofuran 121-14-22,4-Dinitrotoluene 84-66-2Diethylphthalate 7005-72-34-Chlorophenyl-phenylether 86-73-7Fluorene 100-01-64-Nitroaniline 534-52-14,6-Dinitro-2-methylphenol 86-30-6N-nitrosodiphenylamine (1) 101-55-34-Bromophenyl-phenylether 118-74-1Hexachlorobenzene 87-86-5Pentachlorophenol 85-01-8Phenanthrene 120-12-7Anthracene 86-74-8Carbazole 84-74-2Di-n-butylphthalate 206-44-0Fluoranthene 129-00-0	860 210 340 340 360 860 860 340 340 340	ACCRACCARA BACCCCC CCC

JW575

Lab Name: COMPUCHEM

Contract: 68D50004

Lab Code: COMPU Case No.: 27165 SAS No.:

SDG No.: JW542

Matrix: (soil/water) SOIL

Lab Sample ID: 949972

Sample wt/vol:

30.0 (g/mL) G

Lab File ID: GH049972A66

Level: (low/med)

Date Received: 07/08/99

% Moisture: 4

LOW

decanted: (Y/N) N

Date Extracted: 07/09/99

Concentrated Extract Volume: 500(uL)

Date Analyzed: 07/14/99

Injection Volume: 2.0(uL)

Dilution Factor: 1.0

GPC Cleanup:

(Y/N) Y

pH: 7.6

Number TICs found: 30

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST.	CONC.	Q
1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30.	UNKNOWN METHYLPHENANTHRENE METHYLPHENANTHRENE METHYLANTHRACENE CYCLOBUTAPHENANTHRENE METHYLANTHRACENE DIMETHYLPHENANTHRENE BENZONAPHTHOFURAN BENZOFLUORENE BENZOFLUORENE BENZOFLUORENE METHYLPYRENE UNKNOWN PAH	5.88 14.76 14.82 14.90 14.96 15.01 15.81 16.83 17.41 17.48 18.65 18.74 19.62 20.11 20.23 20.34 21.13 21.84 21.97 22.23 22.56 22.97 23.14 24.46 29.07 29.28		440 610 840 350 870 610 380 1200 610 610 430 560 310 310 310 310 310 310 310 310 310 31	ממממממממממממממממממממממ

CP 9-1-99 OLM03.0

Lab Name: COMPUCHEM Contract: 68D50004

Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JW542

Matrix: (soil/water) SOIL Lab Sample ID: 949972

Sample wt/vol: 30.0 (g/mL) G Lab File ID: GD049972A66

Level: (low/med) LOW Date Received: 07/08/99

% Moisture: 4 decanted: (Y/N) N Date Extracted:07/09/99

Concentrated Extract Volume: 500(uL) Date Analyzed: 07/15/99

Injection Volume: 2.0(uL) Dilution Factor: 5.0

GPC Cleanup: (Y/N) Y pH: 7.6

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/KG Q

			
108-95-2Phenol		1700	Ū
111-44-4bis(2-Chloroethyl)ether	•	1700	υ
95-57-82-Chlorophenol	•		ΰ
541-73-11,3-Dichlorobenzene		1700	υ · Ι
106-46-71,4-Dichlorobenzene	•	- 1	υl
95-50-11; 2-Dichlorobenzene	•	1700	ŭ
95-48-72-Methylphenol	•	1700	Ŭ l
108-60-12,2'-oxybis(1-Chloropropane)	•		υ
106-44-54-Methylphenol			Ü l
621-64-7N-Nitroso-di-n-propylamine	•	1	υ
67-72-1Hexachloroethane	-	1	บ
98-95-3Nitrobenzene	• [Ü l
78-59-1Isophorone	-		υ l
88-75-52-Nitrophenol	-		υ
105-67-92,4-Dimethylphenol	-	1	l ii
111-91-1bis (2-Chloroethoxy) methane	-		77
120-83-22,4-Dichlorophenol		1	Ü
120-82-11,2,4-Trichlorobenzene	-		ט
91-20-3Naphthalene	-		<u>u</u> .
106-47-84-Chloroaniline	- .		
87-68-3Hexachlorobutadiene	-		U U
59-50-74-Chloro-3-methylphenol	- [- 1
91-57 C 2 Mathed application	-	1	U
91-57-62-Methylnaphthalene	-	[<u>ט</u>
77-47-4Hexachlorocyclopentadiene	-	1700	<u>.</u>
88-06-22,4,6-Trichlorophenol	- '	1700	<u>u</u>
95-95-42,4,5-Trichlorophenol			<u>ט</u>
91-58-72-Chloronaphthalene	_		U
88-74-42-Nitroaniline	_	4300	U
131-11-3Dimethylphthalate	_		Ū
208-96-8Acenaphthylene	-1	1700	U
606-20-22,6-Dinitrotoluene	_ [Ū
99-09-23-Nitroaniline			Ŭ
83-32-9Acenaphthene	_	390	ÞĴĴ
	_		•

FORM I SV-1

OP 0LM03.0

JW575DL

Lab Name: COMPUCHEM

Contract: 68D50004

Lab Code: COMPU Case No.: 27165 SAS No.:

SDG No.: JW542

Matrix: (soil/water) SOIL

Lab Sample ID: 949972

Sample wt/vol:

30.0 (g/mL) G

Lab File ID:

GD049972A66

Level: (low/med) LOW

Date Received: 07/08/99

decanted: (Y/N) N

Date Extracted:07/09/99

% Moisture: 4

Concentrated Extract Volume: 500(uL)

Date Analyzed: 07/15/99

Injection Volume: 2.0(uL)

Dilution Factor: 5.0

GPC Cleanup: (Y/N) Y

pH: 7.6

CAS NO.

COMPOUND

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

		<u> </u>
51-28-52,4-Dinitrophenol_ 100-02-74-Nitrophenol_ 132-64-9Dibenzofuran_ 121-14-22,4-Dinitrotoluene_ 84-66-2Diethylphthalate_ 7005-72-34-Chlorophenyl-phenylethe 86-73-7Fluorene_ 100-01-64-Nitroaniline_ 534-52-14,6-Dinitro-2-methylphenol_ 86-30-6N-nitrosodiphenylamine_(1	340 4300 1700 1700 1700 1700 4300 5600 1500 1100 1700 6400 6200 1700 1700 3200 3200	त्राध्य वत्राक्षेत्रववववववववव्रवविव्यव
85-68-7Butylbenzylphthalate 91-94-13,3'-Dichlorobenzidine 56-55-3Benzo(a)anthracene 218-01-9Chrysene 117-81-7	1700 1700 3200 3200 1700 1700 2900 1100 2000 1100 320 450	दिन द टिन टिन टिन प्रतिविध्य
(1) - Cannot be separated from Diphenylamine	≘ 3.0	ρí

FORM I SV-2

CP9-1-99 OLM03.0

Lab Name: COMPUCHEM

Contract: 68D50004

JW575DL

Lab Code: COMPU Case No.: 27165 SAS No.:

SDG No.: JW542

Matrix: (soil/water) SOIL

Lab Sample ID: 949972

Sample wt/vol:

Lab File ID: GD049972A66

30.0 (g/mL) G

Level: (low/med) LOW

Date Received: 07/08/99

% Moisture: 4 decanted: (Y/N) N

Date Extracted:07/09/99

Concentrated Extract Volume: 500(uL) Date Analyzed: 07/15/99

Injection Volume: 2.0(uL)

Dilution Factor: 5.0

GPC Cleanup: (Y/N) Y

pH: 7.6

Number TICs found: 19

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30.	UNKNOWN METHYLANTHRACENE METHYLANTHRACENE CYCLOPENTAPHENANTHRENE METHYLANTHRACENE PHENYLNAPHTHALENE BENZOFLUORENE BENZOFLUORENE UNKNOWN UNKNOWN UNKNOWN METHYLTRIPHENYLENE BENZOFLUORANTHENE UNKNOWN UNKNOWN UNKNOWN UNKNOWN UNKNOWN UNKNOWN PAH UNKNOWN PAH UNKNOWN	6.52 14.61 14.64 14.78 14.83 15.17 17.06 17.22 17.27 18.13 18.44 19.83 21.72 23.84 23.91 24.54 24.77 25.39	390 460 710 790 480 380 740 460 470 370 360 490 550 360 960 490 1000 2200	*

JW578

Lab Name: COMPUCHEM Contract: 68D50004

Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JW542

Matrix: (soil/water) SOIL Lab Sample ID: 950019

Sample wt/vol: 30.0 (g/mL) G Lab File ID: GH050019A66

Level: (low/med) LOW Date Received: 07/09/99

% Moisture: 7 decanted: (Y/N) N Date Extracted:07/09/99

Concentrated Extract Volume: 500(uL) Date Analyzed: 07/14/99

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.1

	CONCENTRA	TION UNITS:
CAS NO.	COMPOUND (ug/L or	ug/Kg) UG/KG Q
108-95-2	Phenol	350 U
111-44-4	bis(2-Chloroethyl)ether	350 U
1 95-57-8	2-Chlorophenol	· 350 U
541-73-1	1,3-Dichlorobenzene	350 U
106-46-7	1,4-Dichlorobenzene	350 U
95-50-1	1,2-Dichlorobenzene	350 U
95-48-7	2-Methylphenol	350 U
108-60-1	2,2'-oxybis(1-Chloropropar	ie) 350 U
106-44-5	4-Methylphenol	350 U
621-64-7	2,2'-oxybis(1-Chloropropar 4-Methylphenol N-Nitroso-di-n-propylamine	350 U
67-72-1	Hexachloroethane	
98-95-3	Nitrobenzene	350 U
78-59-1	Isophorone	350 U
88-75-5	2-Nitrophenol	350 U
105-67-9	2.4-Dimethylphenol	350 0
111-91-1	2-Nitrophenol 2,4-Dimethylphenol bis(2-Chloroethoxy)methane	350 0
120-83-2	2,4-Dichlorophenol	350 U
1 120-82-1	1 2 4-Trichlorobenzene	350 U
91-20-3	Naphthalene	48 J
1 106-47-8	4-Chloroaniline	350 U
87-68-3	Hexachlorobutadiene	350 U
59-50-7	4-Chloro-3-methylphenol	350 U
91-57-6	2-Methylnaphthalene	290 J
77-47-4	Hexachlorocyclopentadiene	350 U
88-06-2	2,4,6-Trichlorophenol	350 U
95-95-4	2.4.5-Trichlorophenol	890 U
1 91-58-7	2-Chloronaphthalene	350 U
88-74-4	2-Nitroaniline	890 U
131-11-3	Dimethylphthalate	350 U
1 208-96-8	Acenaphthylene	350 U
606-20-2	2;6-Dinitrotoluene	350 U
99-09-2	3-Nitroaniline	890 U
83-32-9	Acenaphthene	350 U
	Market Ma	
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FORM I SV-1

G-1-99 OLMO3.0

Lab Name: COMPUCHEM Contract: 68D50004

JW578

Lab Code: COMPU Case No.: 27165 SAS No.:

SDG No.: JW542

Matrix: (soil/water) SOIL

Lab Sample ID: 950019

Sample wt/vol:

30.0 (g/mL) G

Lab File ID: GH050019A66

Date Received: 07/09/99

Level: (low/med) LOW

% Moisture: 7 decanted: (Y/N) N

Date Extracted: 07/09/99

Concentrated Extract Volume: 500(uL)

Date Analyzed: 07/14/99

Injection Volume: 2.0(uL)

Dilution Factor: 1.0

CONCENTRATION UNITS:

GPC Cleanup: (Y/N) Y pH: 7.1

CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG

51-28-52,4-Dinitrophenol			890	TT
100-02-74-Nitrophenol		•	890	
132-64-9Dibenzofuran			350	
121-14-22,4-Dinitrotoluene			350	
84-66-2Diethylphthalate			350	
7005-72-34-Chlorophenyl-phenylether				Ŭ
86-73-7Fluorene	· .			J
100-01-64-Nitroaniline		. •	890	_
534-52-14,6-Dinitro-2-methylphenol			890	
86-30-6N-nitrosodiphenylamine (1)	<u></u>		350	
101-55-34-Bromophenyl-phenylether			350	
118-74-1Hexachlorobenzene			350	
87-86-5Pentachlorophenol			890	
85-01-8Phenanthrene		<i>:</i> ·	250	
120-12-7Anthracene	· ·		350	
86-74-8Carbazole			350	
86-74-8Carbazole 84-74-2Di-n-butylphthalate			350	
206-44-0Fluoranthene			350	
129-00-0Pyrene			36	
85-68-7Butylbenzylphthalate			350	
91-94-13,3'-Dichlorobenzidine			350	
56-55-3Benzo (a) anthracene			350	
218-01-9Chrysene			350	
117-81-7bis(2-Ethylhexyl)phthalate				iT
117-84-0Di-n-octylphthalate	=		. – ,	_
205-99-2Benzo(b) fluoranthene			350	
203-99-2Benzo (b) IIuoranthene	·	•	350	
207-08-9Benzo(k)fluoranthene			350	
50-32-8Benzo(a)pyrene		•	350	
193-39-5Indeno(1,2,3-cd)pyrene	<u>-</u> _		350	
53-70-3Dibenzo(a,h)anthracene			3.50	
191-24-2Benzo(g,h,i)perylene			350	Ū
1) - Cannot be separated from Dipnenylamine			_ ^	

TVOI AMETER ODCAN

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

JW578

Lab Name: COMPUCHEM

Contract: 68D50004

Lab Code: COMPU Case No.: 27165 SAS No.:

SDG No.: JW542

Matrix: (soil/water) SOIL

Lab Sample ID: 950019

Sample wt/vol:

30.0 (g/mL) G

Lab File ID: GH050019A66

Level:

(low/med) LOW

Date Received: 07/09/99

% Moisture: 7

decanted: (Y/N) N

Date Extracted:07/09/99

Concentrated Extract Volume:

500 (uL)

Date Analyzed: 07/14/99

Injection Volume:

2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup:

(Y/N) Y

pH: 7.1

Number TICs found: 23

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q =====
1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30.	UNKNOWN	11.50 11.70 11.77 11.89 12.03 12.36 12.75 12.85 12.91 13.48 13.48 13.59 14.04 14.13 14.38 14.57 14.73 14.85 14.99 15.43 15.59 21.81	130	נוניניניניניניניניניניניניניניני

(199-1-95 OLMO3.0

Lab Name: COMPUCHEM Contract: 68D50004

Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JW542

Matrix: (soil/water) SOIL Lab Sample ID: 950020

Sample wt/vol: 30.0 (g/mL) G Lab File ID: GH050020A66

Level: (low/med) LOW Date Received: 07/09/99

% Moisture: 13 decanted: (Y/N) N Date Extracted:07/09/99

Concentrated Extract Volume: 500(uL) Date Analyzed: 07/14/99

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.7

CONCENTRATION UNITS:
CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG Q

	(15) = 1-15)	5,,,	
95-57-8 541-73-1 106-46-7 95-50-1 95-48-7 108-60-1 621-64-7 67-72-1 98-95-3 78-59-1 88-75-5 105-67-9 111-91-1 120-83-2 91-20-3 106-47-8	bis(2-Chloroethyl)ether2-Chlorophenol1,3-Dichlorobenzene1,4-Dichlorobenzene1,2-Dichlorobenzene2-Methylphenol2,2'-oxybis(1-Chloropropane)4-MethylphenolN-Nitroso-di-n-propylamineHexachloroethaneNitrobenzeneIsophorone2-Nitrophenol2,4-Dimethylphenol2,4-Dichlorophenol1,2,4-TrichlorobenzeneNaphthalene4-Chloroaniline	380 380 380 380 380 380 380 380 380 380	מאממממממממממממממממ מאממממממממממממממ
621-64-7	N-Nitroso-di-n-propylamine Hexachloroethane	380 380 380	ם ט
78-59-1 88-75-5 105-67-9 111-91-1	Isophorone 2-Nitrophenol 2,4-Dimethylphenol bis(2-Chloroethoxy)methane	380 380	ָ ָ ָ
120-83-2	2,4-Dichiorophenoi 1,2,4-Trichlorobenzene Naphthalene	380 380 150	ם מ
87-68-3 59-50-7 91-57-6	Hexachlorobutadiene 4-Chloro-3-methylphenol 2-Methylnaphthalene	380 380 94	n n
88-06-2 95-95-4 91-58-7	Hexachlorocyclopentadiene 2,4,6-Trichlorophenol 2,4,5-Trichlorophenol 2-Chloronaphthalene	380 380 950 380	ט ט
131-11-3 208-96-8 606-20-2	2-NitroanilineDimethylphthalateAcenaphthylene2,6-Dinitrotoluene	950 380 380 380	ָ ט
99-09-2	3-Nitroaniline	950 380	U

FORM I SV-1

OF 0LM03.0

Lab Name: COMPUCHEM Contract: 68D50004

Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JW542

Matrix: (soil/water) SOIL Lab Sample ID: 950020

Sample wt/vol: 30.0 (g/mL) G Lab File ID: GH050020A66

Level: (low/med) LOW Date Received: 07/09/99

% Moisture: 13 decanted: (Y/N) N Date Extracted:07/09/99

Concentrated Extract Volume: 500(uL) Date Analyzed: 07/14/99

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.7

CONCENTRATION UNITS: CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG 51-28-5----2,4-Dinitrophenol 950 U 100-02-7----4-Nitrophenol_____ 950 U 132-64-9-----Dibenzofuran 380 U 121-14-2----2,4-Dinitrotoluene 380 U 84-66-2-----Diethylphthalate 380 U 7005-72-3----4-Chlorophenyl-phenylether 380 86-73-7----Fluorene ,380 U 100-01-6----4-Nitroaniline 950 U 534-52-1----4,6-Dinitro-2-methylphenol_ 950 U 86-30-6----N-nitrosodiphenylamine (1) _____ 101-55-3----4-Bromophenyl-phenylether____ 380 U 380 U 118-74-1-----Hexachlorobenzene 380 U 87-86-5----Pentachlorophenol 950 U 85-01-8-----Phenanthrene 92 J 120-12-7-----Anthracene 380 U 86-74-8-----Carbazole 380 U 380 U 84-74-2----Di-n-butylphthalate 206-44-0-----Fluoranthene 120 J 129-00-0-----Pyrene 120 J 380 U 380 U 50 J 85-68-7-----Butylbenzylphthalate 91-94-1----3,3'-Dichlorobenzidine 56-55-3-----Benzo(a)anthracene 218-01-9-----Chrysene 71 J 117-81-7-----bis(2-Ethylhexyl)phthalate 300 J 117-84-0-----Di-n-octylphthalate 380 U 205-99-2----Benzo(b) fluoranthene 52 J 207-08-9-----Benzo(k)fluoranthene 380 U 50-32-8-----Benzo(a) pyrene 380 U 193-39-5-----Indeno(1,2,3-cd)pyrene_ 380 U 53-70-3-----Dibenzo(a,h)anthracene 380 U 191-24-2----Benzo(g,h,i)perylene___ 380 U (1) - Cannot be separated from Diphenylamine

FORM I SV-2

OLM03.0

JW579 Contract: 68D50004

Lab Name: COMPUCHEM

SDG No.: JW542

Matrix: (soil/water) SOIL

Lab Sample ID: 950020

Lab Code: COMPU Case No.: 27165 SAS No.:

Lab File ID: GH050020A66

Sample wt/vol: 30.0 (g/mL) G

Level: (low/med) LOW

Date Received: 07/09/99

% Moisture: 13 decanted: (Y/N) N

Date Extracted:07/09/99

Concentrated Extract Volume: 500(uL)

Date Analyzed: 07/14/99

Injection Volume: 2.0(uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y

pH: 7.7

Number TICs found: 21

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30.		6.67 15.64 16.27 17.22 21.06 21.55 21.60 21.67 21.83 22.30 24.25 24.83 25.07 25.28 26.26 26.77 26.91 28.25	640 380 1200 710 720 770 550 750 1100 610 1400 860 750 730 1100 570 600 760 540 420 1000	\

PG-1-99 OLM03.0

JW580

Lab Name: COMPUCHEM

Lab Code: COMPU

Contract: 68D50004

SDG No.: JW542

Matrix: (soil/water) SOIL Lab Sample ID: 950021

Case No.: 27165 SAS No.:

Sample wt/vol: Lab File ID: 30.0 (g/mL) G GH050021A66

Level: (low/med) LOW Date Received: 07/09/99

% Moisture: 6 decanted: (Y/N) N Date Extracted:07/09/99

Concentrated Extract Volume: 500 (uL) Date Analyzed: 07/13/99

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.2

CAS NO. COMPOUND CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

108-95-2----Phenol 350 U 111-44-4-----bis(2-Chloroethyl)ether 350 U 95-57-8----2-Chlorophenol 350 U 541-73-1----1,3-Dichlorobenzene 350 U 106-46-7-----1,4-Dichlorobenzene 95-50-1-----1,2-Dichlorobenzene 350 U 350 U 95-48-7----2-Methylphenol 108-60-1----2,2'-oxybis(1-Chloropropane) 350 U 350 U 106-44-5----4-Methylphenol 350 U 621-64-7----N-Nitroso-di-n-propylamine 350 U 67-72-1-----Hexachloroethane 350 U 98-95-3-----Nitrobenzene 350 U 78-59-1-----Isophorone 350 U 88-75-5----2-Nitrophenol 105-67-9-----2,4-Dimethylphenol____ 350 U 111-91-1-----bis(2-Chloroethoxy)methane__ 350 U 120-83-2----2,4-Dichlorophenol_ 120-82-1-----1,2,4-Trichlorobenzene____ 350 U 350 U 91-20-3----Naphthalene 350 U 106-47-8----4-Chloroaniline 350 U 87-68-3-----Hexachlorobutadiene 350 U 59-50-7----4-Chloro-3-methylphenol____ 350 U 91-57-6----2-Methylnaphthalene 350 U 77-47-4-----Hexachlorocyclopentadiene 350 U 88-06-2----2,4,6-Trichlorophenol 350 U 95-95-4----2,4,5-Trichlorophenol 880 U 91-58-7----2-Chloronaphthalene 350 U 88-74-4----2-Nitroaniline 880 U 131-11-3-----Dimethylphthalate 350 U 208-96-8-----Acenaphthylene 350 U 606-20-2----2,6-Dinitrotoluene 350 U 99-09-2----3-Nitroaniline_____ 880 U 83-32-9-----Acenaphthene_ 350 TU

FORM I SV-1

99 OLM03.0

JW580

Lab Name: COMPUCHEM Contract: 68D50004

Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JW542

Matrix: (soil/water) SOIL Lab Sample ID: 950021

Sample wt/vol: 30.0 (g/mL) G Lab File ID: GH050021A66

Level: (low/med) LOW Date Received: 07/09/99

% Moisture: 6 decanted: (Y/N) N Date Extracted:07/09/99

Concentrated Extract Volume: 500(uL) Date Analyzed: 07/13/99

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.2

CONCENTRATION UNITS:
CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG Q

51-28-5----2,4-Dinitrophenol____ 880 U 100-02-7----4-Nitrophenol__ U 088 132-64-9-----Dibenzofuran 350 U 121-14-2----2,4-Dinitrotoluene 350 U 84-66-2-----Diethylphthalate___ 350 U 7005-72-3----4-Chlorophenyl-phenylether 350 U 86-73-7----Fluorene 350 U 100-01-6----4-Nitroaniline 880 U 534-52-1----4,6-Dinitro-2-methylphenol_ 880 U 86-30-6----N-nitrosodiphenylamine (1) 350 U 101-55-3----4-Bromophenyl-phenylether 350 U 118-74-1----Hexachlorobenzene 350 U 880 UJ 350 U 87-86-5----Pentachlorophenol 85-01-8-----Phenanthrene_ 120-12-7-----Anthracene 86-74-8-----Carbazole 350 U 84-74-2----Di-n-butylphthalate 350 U 206-44-0-----Fluoranthene 350 U 129-00-0-----Pyrene 350 U 85-68-7-----Butylbenzylphthalate 350 U 91-94-1----3,37-Dichlorobenzidine____ 350 T 56-55-3-----Benzo (a) anthracene____ 350 U 218-01-9-----Chrysene 350 U 117-81-7-----bis(2-Ethylhexyl)phthalate 230 J 117-84-0-----Di-n-octylphthalate_ 350 U 205-99-2----Benzo (b) fluoranthene 350 U 207-08-9----Benzo(k) fluoranthene 350 U 50-32-8-----Benzo (a) pyrene 350 U 193-39-5----Indeno(1,2,3-cd)pyrene_ 350 T 53-70-3----Dibenzo(a,h)anthracene___ 350 U 191-24-2----Benzo(q,h,i)perylene 350 U (1) - Cannot be separated from Diphenylamine

FORM I SV-2

1,47 9-1-97 OLMO3.0

TENTATIVELY IDENTIFIED COMPOUNDS

JW580

Lab Name: COMPUCHEM

Contract: 68D50004

Lab Code: COMPU

Case No.: 27165 SAS No.:

30.0 (g/mL) G

SDG No.: JW542

Matrix: (soil/water) SOIL

Lab Sample ID: 950021

Sample wt/vol:

Lab File ID:

GH050021A66

LOW

Level: (low/med)

Concentrated Extract Volume:

Date Received: 07/09/99

% Moisture: 6

decanted: (Y/N) N

500 (uL)

Date Extracted: 07/09/99

Date Analyzed: 07/13/99

Injection Volume:

2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y

pH: 7.2

Number TICs found: 31

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q ·
1.	UNKNOWN CARBOXYLIC ACID	14.90	140	JN
2.	UNKNOWN PHTHALATE	15.04	100	JN
4.	UNKNOWN (BC) UNKNOWN	18.18 20.48		JB-R JN
5.	UNKNOWN	21.02		J'i
6.	UNKNOWN	21.09	230	J
7.	UNKNOWN	21.23	150	J
8.	UNKNOWN	21.34	260 180	J
10.	UNKNOWN UNKNOWN	21.44 21.62		J
111.	UNKNOWN	21.70	200	J
12.	UNKNOWN	21.77	220	J
13.	UNKNOWN	21.88	420	J
14.	UNKNOWN	22.11	210	J
15. 16.	UNKNOWN UNKNOWN	22.32 22.41	210 140	J
17.	UNKNOWN	22.48	340	J
18.	UNKNOWN	22.95	150	
19.	UNKNOWN	23.02	87	J
20.	UNKNOWN	23.14	120	J
21.	UNKNOWN UNKNOWN	23.32 23.51		J
23.	UNKNOWN	23.60	91	5
24.	UNKNOWN	24.28	100	J
25.	UNKNOWN	24.77	290	J
26.	UNKNOWN	26.07		J
27.	UNKNOWN	26.21		
28.	UNKNOWN	28.68 28.86		
30.	UNKNOWN	30.00		JV
		50.00		

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: COMPUCHEM Contract: 68D50004 JW580

Lab Code: COMPU Case No.: 27165 SAS No.:

SDG No.: JW542

Matrix: (soil/water) SOIL

Lab Sample ID: 950021

Sample wt/vol: 30.0 (g/mL) G Lab File ID: GH050021A66

Level: (low/med) LOW

Date Received: 07/09/99

% Moisture: 6 decanted: (Y/N) N

Date Extracted:07/09/99

Concentrated Extract Volume: 500(uL) Date Analyzed: 07/13/99

Injection Volume: 2.0(uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.2

Number TICs found: 31

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

CAS NUMBER		RT	EST. CONC.	1
	UNKNOWN	30.54	170	J <i>N</i>
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OLM03.0

JP411

Lab Name: COMPUCHEM

Contract: 68D50004

Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JW542

Matrix: (soil/water) SOIL

Lab Sample ID: 950008

Sample wt/vol:

30.0 (g/mL) G

Lab File ID:

% Moisture: 18

decanted: (Y/N) N

Date Received: 07/09/99

Extraction: (SepF/Cont/Sonc) SONC

Date Extracted:07/09/99

Concentrated Extract Volume: 5000(uL)

Date Analyzed: 08/11/99

Injection Volume: 2.0(uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.8

Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG

1	319-84-6alpha-BHC	2.1 0.66 IPBU
١	319-85-7beta-BHC	2.1 U
	319-86-8delta-BHC	2.1 U
ľ	58-89-9gamma-BHC (Lindane)	2.1 0.50 JPU
1	76-44-8Heptachlor	2.1 U
I	309-00-2Aldrin	2.1 1.0 IPBU
l	1024-57-3Heptachlor epoxide	2.1 U
1	959-98-8Endosulfan I	2.1 U
١	60-57-1Dieldrin	4.2 3
١	72-55-94,4'-DDE	36 18
١	72-20-8Endrin	4.0 U
١	33213-65-9Endosulfan II	4.0 U
١	72-54-84,4'-DDD	46 18
١	1031-07-8Endosulfan sulfate	4.0 1-3 IPBU
١	50-29-34,4'-DDT	4.1 PBNJ
١	72-43-5Methoxychlor	21 U
1	53494-70-5Endrin ketone	4.0 U
١	7421-93-4Endrin aldehyde	4.0 0.18 IPBU
1	5103-71-9alpha-Chlordane	3.4 75
١	5103-71-9alpha-chiordane	
1	8001-35-2Toxaphene	4.6 B 210 U
١	12674-11-2Aroclor-1016	40 U
١	11104-28-2Aroclor-1221	82 U
	11141-16-5Aroclor-1232	40 U
١	53469-21-9Aroclor-1242	150 75
	12672-29-6Aroclor-1248	40 U
	11097-69-1Aroclor-1246	40 0
١	11097-69-1Aroclor-1254 11096-82-5Aroclor-1260	40 0
1	TT030-07-2	
i		. 1 1

JP412

Lab Name: COMPUCHEM Contract: 68D50004

Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JW542

Matrix: (soil/water) SOIL Lab Sample ID: 950017

Sample wt/vol: 30.0 (g/mL) G Lab File ID:

% Moisture: 5 decanted: (Y/N) N Date Received: 07/09/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted:07/09/99

Concentrated Extract Volume: 5000(uL) Date Analyzed: 08/11/99

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.8 Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:
CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG Q

	3,	
319-85-7 319-86-8 58-89-9	delta-BHC gamma-BHC (Lindane)	1.8 U 1.8 U 1.8 U 1.8 U 1.8 U 1.8 U
	Aldrin Heptachlor epoxide Endosulfan I Dieldrin	1.8 U 1.8 0.041 JPBU 1.8 U 3.5 0.71 JBU 18 B
72-54-8 1031-07-8 50-29-3	Endosulfan II 4,4'-DDD Endosulfan sulfate 4,4'-DDT	5.5 3.5 11 ½ 3.5 U 7.4 ½ 18 U
53494-70-5 7421-93-4 5103-71-9	MethoxychlorEndrin ketoneEndrin aldehydealpha-Chlordanegamma-ChlordaneToxaphene	0.65 J 3.5 0.53 JB U 1.8 0.19 JP U 1.8 0.41 JPB U
12674-11-2 11104-28-2 11141-16-5 53469-21-9	Aroclor-1016 Aroclor-1221 Aroclor-1232 Aroclor-1242 Aroclor-1248	35 U 70 U 35 U 35 U 35 U
11097-69-1	Aroclor-1254 Aroclor-1260	35 U 35 U

CP - 2-99

OLM03.0

Contract: 68D50004 Lab Name: COMPUCHEM

JP413

Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JW542

Matrix: (soil/water) SOIL

Lab Sample ID: 950018

Sample wt/vol: 30.0 (g/mL) G

Lab File ID:

% Moisture: 15 decanted: (Y/N) N

Date Received: 07/09/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted:07/09/99

Concentrated Extract Volume: 5000(uL)

Date Analyzed: 08/11/99

Injection Volume: 2.0(uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y

pH: 7.6 Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:
CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG

319-84-6alpha-BHC 319-85-7beta-BHC 319-86-8delta-BHC 58-89-9gamma-BHC (Lindane)	2.0 U 2.0 0.28 JPB 4 2.0 0.12 JP 4 2.0 0.13 JP U
76-44-8Heptachlor	2.0 U 2.0 U 2.0 JPBU 3.9 0.58 JPBU 3.9 0.82 JPBU
72-55-94,4'-DDE 72-20-8Endrin 33213-65-9Endosulfan II 72-54-84,4'-DDD 1031-07-8Endosulfan sulfate 50-29-34,4'-DDT	3.9 0.82 JPBU 0.80 J 3.9 U 3.9 JBU 3.9 U 2.1 JB
72-43-5	20 U 3.9 U 3.9 U 2.0 U 2.0 U
8001-35-2Toxaphene 12674-11-2Aroclor-1016 11104-28-2Aroclor-1221 11141-16-5Aroclor-1232 53469-21-9Aroclor-1242 12672-29-6Aroclor-1248	200 U 39 U 79 U 39 U 39 U 39 U
11097-69-1Aroclor-1254 11096-82-5Aroclor-1260	39 U 39 U

Lab Name: COMPUCHEM Contract: 68D50004

Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JW542

Matrix: (soil/water) SOIL Lab Sample ID: 950228

Sample wt/vol: 30.0 (g/mL) G Lab File ID:

% Moisture: 24 decanted: (Y/N) N Date Received: 07/10/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted:07/13/99

Concentrated Extract Volume: 5000(uL) Date Analyzed: 08/11/99

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.3 Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:
CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG Ç

	(43, 2 01 43,	-5,			* .
319-84-6	alpha-BHC			2.2	TT ·
319-85-7	beta-RHC			2:3	
319-86-8	delta-BHC		<i>5</i> 4 1. 44	2.2	
58-89-9	gamma-BHC (Lindane)		2.2	0.64	
76-44-8	gamma-BHC (Lindane)			2.2	
309-00-2	Aldrin			2.2	
1024-57-3	Heptachlor epoxide		ير يـ	0.27	
959-98-8	Endosulfan I	•	U- 10-	19	
60-57-1	Dieldrin				PJ
72-55-9	4,4'-DDE			860	EPeJ
72-20-8	Endrin		4	3 2.3	
33213-65-9	Endosulfan II		•	4.3	
72-54-8	4,4'-DDD				PU
1031-07-8	Endosulfan sulfate	-			EPC J
50-29-3	4,4'-DDT	:			EPC J
72-43-5	Methoxychlor		22		J₽U
53494-70-5	Endrin ketone			4.3	
7421-93-4	Endrin aldehyde			4.3	
5103-71-9	alpha-Chlordane			2.2	
5103-74-2	gamma-Chlordane		2.2		
8001-35-2	Toxaphene			220	Ū
12674-11-2	Aroclor-1016			43	Ū
11104-28-2	Aroclor-1221			88	ប
11141-16-5	Aroclor-1232		٠.	43	ט
53469-21-9	Aroclor-1242			_	U
12672-29-6	Aroclor-1248				Ū
11097-69-1	Aroclor-1254			43	U
11096-82-5	Aroclor-1260		• •	43	Ū
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CP 9-2-99

JP415DL

Lab Name: COMPUCHEM Contract: 68D50004

Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JW542

Matrix: (soil/water) SOIL Lab Sample ID: 950228

Sample wt/vol: 30.0 (g/mL) G Lab File ID:

% Moisture: 24 decanted: (Y/N) N Date Received: 07/10/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted:07/13/99

Concentrated Extract Volume: 5000(uL) Date Analyzed: 08/13/99

Injection Volume: 2.0(uL) Dilution Factor: 50.0

GPC Cleanup: (Y/N) Y pH: 6.3 Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:
CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG Q

CAS NO.	COMPOUND (43/12 01 43/	٠.				
				110	TT .	
319-84-6	alpha-BHC			110		
319-85-7	beta-BHC	1	4 4	110		. 1
319-86-8	delta-BHC			110		
58-89-9	gamma-BHC (Lindane)		• .	110		
76-44-8	Heptachlor			110		
309-00-2	Aldrin			110		
1024-57-3	Heptachlor epoxide			110		
959-98-8	Endosulfan I			30		
60-57-1	Dieldrin		. •	44		
72-55-9	4,4'-DDE		•	2200		
72-20-8	Endrin	100		. 220		
33213-65-9	Endosulfan II	1.		220		
72-54-8	4,4'-DDD	Ι.		14		u
1031-07-8	Endosulfan sulfate			610		
50-29-3	4,4'-DDT_			1500		
72-43-5	Methoxychlor			1100		
53494-70-5	Endrin ketone			220		
7421-93-4	Endrin aldehyde	1.		• 220	1.	
5103-71-9	alpha-Chlordane			110		•
5103-74-2	gamma-Chlordane			110	ט	
8001-35-2	Toxaphene	1		11000		
	Aroclor-1016	1	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	2200	U	•
11104-28-2	Aroclor-1221	•		4400	U	
11141-16-5	Aroclor-1232	1		2200	U	•
53469-21-9	Aroclor-1242	-		2200	U	
12672-21-5	Aroclor-1248	-		2200	ע ו	
11007-60-1	Aroclor-1254	-		2200		
	Aroclor-1260	-		2200	lυ	
11030-02-3	AIOCIOI IZOO	- .		11.194	1	
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CP 9.2-99

JP416

Lab Name: COMPUCHEM Contract: 68D50004

Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JW542

Matrix: (soil/water) SOIL Lab Sample ID: 950229

Sample wt/vol: Lab File ID: 30.0 (g/mL) G

% Moisture: 7 decanted: (Y/N) N Date Received: 07/10/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted:07/13/99

Concentrated Extract Volume: 5000(uL) Date Analyzed: 08/11/99

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.7 Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS: CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG

319-84-6----alpha-BHC 1.8 U 319-85-7-----beta-BHC D-80 JPU 319-86-8-----delta-BHC 1.8 U 58-89-9-----gamma-BHC (Lindane) 1.8 U 1.8 U 309-00-2----Aldrin 1.8 U 1.8 0.14 JPU 1024-57-3-----Heptachlor epoxide 959-98-8-----Endosulfan I 1.8 U 3.5 0.92 JPU 60-57-1-----Dieldrin 72-55-9----4,4'-DDE 28 72-20-8-----Endrin 3.5 U 33213-65-9----Endosulfan II 3.5 U 72-54-8-----4,4'-DDD 14 1031-07-8-----Endosulfan sulfate 3.5 0.71 JP U 50-29-3----4,4'-DDT 3.5 2-8 JEU 18 5-3 704 72-43-5-----Methoxychlor____ 53494-70-5----Endrin ketone 3.5 1-0 JP 4 7421-93-4----Endrin aldehyde 5103-71-9-----alpha-Chlordane 1.8 U 5103-74-2----gamma-Chlordane 1.8 D-42 &U 8001-35-2-----Toxaphene 180 U 12674-11-2----Aroclor-1016 35 U 72 U 11104-28-2----Aroclor-1221 11141-16-5-----Aroclor-1232_ 35 U 53469-21-9-----Aroclor-1242 35 U 12672-29-6-----Aroclor-1248 35 U 11097-69-1----Aroclor-1254 35 U -11096-82-5----Aroclor-1260

JP417 Lab Name: COMPUCHEM Contract: 68D50004

Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JW542

Matrix: (soil/water) SOIL Lab Sample ID: 950230

Sample wt/vol: 30.0 (g/mL) G Lab File ID:

% Moisture: 34 decanted: (Y/N) N Date Received: 07/10/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 07/13/99

Date Analyzed: 08/11/99 Concentrated Extract Volume: 5000(uL)

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.5 Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS: CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG Q

319-84-6alpha-BHC 319-85-7beta-BHC 319-86-8delta-BHC 58-89-9gamma-BHC (Lindane) 76-44-8Heptachlor 309-00-2Aldrin 1024-57-3Heptachlor epoxide 959-98-8Endosulfan I 60-57-1Dieldrin 72-55-94,4'-DDE 72-20-8Endosulfan II 72-54-8Endosulfan II 72-54-8	2.6 U 2.2 J 2.4 U 3.0 U 3.0 U 3.0 U 3.0 U 3.0 U 3.0 U 5.0 U 5.0 U
50-29-34,4'-DDT 72-43-5Methoxychlor 53494-70-5Endrin ketone 7421-93-4Endrin aldehyde 5103-71-9alpha-Chlordane 5103-74-2gamma-Chlordane 8001-35-2Toxaphene 12674-11-2Aroclor-1221 11141-16-5Aroclor-1232 53469-21-9Aroclor-1242 12672-29-6Aroclor-1248 11097-69-1Aroclor-1254 11096-82-5Aroclor-1260	5.0 0.62 JPU 2.6 U 2.6 U 2.6 U 2.6 U 2.6 U 2.0 U 5.0 U

CP 9-2-99

JW542

Lab Name: COMPUCHEM

Contract: 68D50004

Lab Code: COMPU

Case No.: 27165 SAS No.:

SDG No.: JW542

Matrix: (soil/water) SOIL

Lab Sample ID: 949679

Sample wt/vol:

30.0 (g/mL) G

Lab File ID:

% Moisture: 7

decanted: (Y/N) N

Date Received: 07/03/99

Extraction: (SepF/Cont/Sonc) SONC

Date Extracted:07/08/99

Concentrated Extract Volume: 5000(uL)

Date Analyzed: 08/11/99

Injection Volume: 2.0(uL)

CAS NO.

COMPOUND

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y

pH: 7.0

Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

1.8 U 319-84-6

JW542DL

Lab Name: COMPUCHEM

Contract: 68D50004

Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JW542

Matrix: (soil/water) SOIL

Lab Sample ID: 949679

Sample wt/vol:

30.0 (g/mL) G

Lab File ID:

% Moisture: 7 decanted: (Y/N) N

Date Received: 07/03/99

Extraction: (SepF/Cont/Sonc) SONC

Date Extracted:07/08/99

Concentrated Extract Volume: 5000(uL)

Date Analyzed: 08/13/99

Injection Volume: 2.0(uL)

Dilution Factor: 5.0

GPC Cleanup: (Y/N) Y pH: 7.0

Sulfur Cleanup: (Y/N) N

CAS NO.

CONCENTRATION UNITS: COMPOUND (ug/L or ug/Kg) UG/KG

319-84-6alpha-BHC	9.1	ָט	
319-85-7beta-BHC	9.1	1 - 1	ŀ
319-86-8delta-BHC	9.1		
58-89-9gamma-BHC (Lindane)	9.1 0.49	DJPU	
76-44-8Heptachlor	9.1	TT	
309-00-2Aldrin	9 1	U	ĺ
1024-57-3Heptachlor epoxide	9.1 9.1	Ϊ́Τ	ĺ
959-98-8Endosulfan I	9.1	l ti	İ
60-57-1Dieldrin		υ	
72-55-94,4'-DDE		DE	İ
72-20-8Endrin	18 0.85	DJPBU	
33213-65-9Endosulfan II	18	TT	
72-54-84,4'-DDD	210	р	
1031-07-8Endosulfan sulfate	18		
50-29-34,4'-DDT	3.7 18 3.7	NATOR	1
72-43-5Methoxychlor	91 1.6	DIPBU	
53494-70-5Endrin ketone	18	TT	· ·
7421-93-4Endrin aldehyde	18	ן ט	
5103-71-9alpha-Chlordane	9.1		
5103-74-2gamma-Chlordane	9.1 2.9	D-7₽U	
8001-35-2Toxaphene	910		
12674-11-2Aroclor-1016	180	1 - 1	
11104-28-2Aroclor-1221	360	1	
11141-16-5Aroclor-1232	180		
53469-21-9Aroclor-1242	180		
12672-29-6Aroclor-1248	180		
11097-69-1Aroclor-1254	180		
11096-82-5Aroclor-1260	180	1	
	l	l	1

Cf q-2-99

JW545

Contract: 68D50004 Lab Name: COMPUCHEM

Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JW542

Lab Sample ID: 949690 Matrix: (soil/water) SOIL

Sample wt/vol: 30.0 (g/mL) G Lab File ID:

% Moisture: 7 decanted: (Y/N) N Date Received: 07/03/99

Date Extracted:07/08/99 Extraction: (SepF/Cont/Sonc) SONC

Concentrated Extract Volume: 5000(uL) Date Analyzed: 08/11/99

Dilution Factor: 1.0 Injection Volume: 2.0(uL)

GPC Cleanup: (Y/N) Y pH: 7.8 Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

CP 9-2-99

FORM I PEST

OLM03.0

JW546

Q

Contract: 68D50004 Lab Name: COMPUCHEM

Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JW542

Lab Sample ID: 949691 Matrix: (soil/water) SOIL

Lab File ID: 30.0 (g/mL) G Sample wt/vol:

% Moisture: 20 decanted: (Y/N) N Date Received: 07/03/99

Date Extracted:07/08/99 Extraction: (SepF/Cont/Sonc) SONC

Date Analyzed: 08/11/99 Concentrated Extract Volume: 5000(uL)

Injection Volume: 2.0(uL) Dilution Factor: 1.0

pH: 7.2 Sulfur Cleanup: (Y/N) N GPC Cleanup: (Y/N) Y

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG CAS NO. COMPOUND.

1		1
	319-84-6alpha-BHC 319-85-7beta-BHC 319-86-8delta-BHC	4.2 10 FJ 2.1 0-19 JPU
	58-89-9gamma-BHC (Lindane) 76-44-8Heptachlor	2.1 U 2.1 U
	309-00-2	2.1 0.10 JPU 2.1 0.094 JPU
	959-98-8Endosulfan I60-57-1Dieldrin	2.1 U 191 عوس جد 4.1
	72-55-9	33 \\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \
	33213-65-9Endosulfan II 72-54-84,4'-DDD 1031-07-8Endosulfan sulfate	100 EP J 4.1 0.74 J2 U
	50-29-3	2 47 0.52 JPBU
	53494-70-5Endrin ketone	4.1 U 4.1 U 2.1 42 0.60 FP 4
	5103-71-9alpha-Chlordane 5103-74-2gamma-Chlordane	2.1 42 0.60 FP 4 2.1 42 1.6 JP 4
	8001-35-2Toxaphene 12674-11-2Aroclor-1016 11104-28-2Aroclor-1221	41 U 84 U
	11141-16-5Aroclor-1232 53469-21-9Aroclor-1242	41 U 41 U
	12672-29-6Aroclor-1248 11097-69-1Aroclor-1254	41 U 40 J#
	11096-82-5Aroclor-1260	41 U

OLM03.0'

JW546DL

Lab Name: COMPUCHEM

Contract: 68D50004

Lab Code: COMPU Case No.: 27165 SAS No.:

SDG No.: JW542

Matrix: (soil/water) SOIL

Lab Sample ID: 949691

Sample wt/vol:

30.0 (g/mL) G Lab File ID:

% Moisture: 20

decanted: (Y/N) N

Date Received: 07/03/99

Extraction: (SepF/Cont/Sonc) SONC

Date Extracted:07/29/99

Concentrated Extract Volume: 5000(uL)

Date Analyzed: 08/13/99

Injection Volume: 2.0(uL)

Dilution Factor: 5.0

GPC Cleanup: (Y/N) Y pH: 7.2

Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

OLM03.0

JW564 Lab Name: COMPUCHEM Contract: 68D50004

Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JW542

Lab Sample ID: 949692 Matrix: (soil/water) SOIL:

Sample wt/vol: 30.0 (g/mL) G Lab File ID:

% Moisture: 7 decanted: (Y/N) N Date Received: 07/03/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted:07/08/99

Concentrated Extract Volume: 5000(uL) Date Analyzed: 08/11/99

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.0 Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS: CAS NO. COMPOUND

(ug/L or ug/Kg) UG/KG

319-84-6alpha-BHC	1.8 U
319-85-7beta-BHC	1.8 0.47 JPU
319-86-8delta-BHC	1.8 U
58-89-9gamma-BHC (Lindane)	1.8 U
76-44-8Heptachlor	1.8 U
309-00-2Aldrin	1.8 U
1024-57-3Heptachlor epoxide	1.8 U
959-98-8Endosulfan I	1.8 0.30 JEU
60-57-1Dieldrin	1.6 J₽
72-55-94,4'-DDE	52 3
72-20-8Endrin	3.5 0.16 JPBU
33213-65-9Endosulfan II	3.5 0
72-54-84,4'-DDD	29
1031-07-8Endosulfan sulfate	3.5 0.71 Ju
50-29-34,4'-DDT	3.5 1.6 JPB U
272-43-5Methoxychlor	18 1-6 JPB U
53494-70-5Endrin ketone	3.5 0.17 JP U
7421-93-4Endrin aldehyde	3.5 U
5103-71-9alpha-Chlordane	2.0
5103-71-9gamma-Chlordane	2.6 75
8001-35-2Toxaphene	180 0
12674-11-2Aroclor-1016	35 U
11104-28-2Aroclor-1016	72 0
	- 35 U
11141-16-5Aroclor-1232	35 0
53469-21-9Aroclor-1242	35 0
12672-29-6Aroclor-1248	- 35 U
11097-69-1Aroclor-1254	35 0
11096-82-5Aroclor-1260	-
	· [

OLM03.0

JW565 Lab Name: COMPUCHEM Contract: 68D50004

Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JW542

Matrix: (soil/water) SOIL Lab Sample ID: 949693

Sample wt/vol: 30.0 (g/mL) G Lab File ID:

decanted: (Y/N) N Date Received: 07/03/99 % Moisture: 20

Date Extracted:07/08/99 Extraction: (SepF/Cont/Sonc) SONC

Date Analyzed: 08/11/99 Concentrated Extract Volume: 5000(uL)

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.7 Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:

CONCENTRATION ONLINE (ug/L or ug/Kg) UG/KG CAS NO. COMPOUND

319-84-6alpha-BHC 319-85-7beta-BHC 319-86-8delta-BHC 58-89-9gamma-BHC (Lindane) 76-44-8Heptachlor 309-00-2Aldrin 1024-57-3Heptachlor epoxide 959-98-8Endosulfan I 60-57-1Dieldrin 72-55-94,4'-DDE	2.	0.49 2.1 2.1 2.1	PTV BUU BUU BUU BUU BUU BUU BUU BUU BUU BU
72-20-8Endrin 33213-65-9Endosulfan II 72-54-84,4'-DDD 1031-07-8Endosulfan sulfate 50-29-34,4'-DDT 72-43-5Methoxychlor 53494-70-5Endrin ketone 7421-93-4Endrin aldehyde 5103-71-9alpha-Chlordane 5103-74-2gamma-Chlordane 8001-35-2Toxaphene 12674-11-2Aroclor-1016 11104-28-2Aroclor-1221 11141-16-5Aroclor-1232		4.1 4.1 26 28 210 41 84 41	DU TU TU TU TU TU TU TU TU TU TU TU TU TU
11104-28-2Aroclor-1221		84	ם ט ט ט

JW565DL

Lab Name: COMPUCHEM

Contract: 68D50004

Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JW542

Lab Sample ID: 949693 Matrix: (soil/water) SOIL

Sample wt/vol: 30.0 (g/mL) G Lab File ID:

Date Received: 07/03/99 % Moisture: 20 decanted: (Y/N) N

Extraction: (SepF/Cont/Sonc) SONC Date Extracted:07/08/99

Date Analyzed: 08/13/99 Concentrated Extract Volume: 5000(uL)

Injection Volume: 2.0(uL) Dilution Factor: 5.0

GPC Cleanup: (Y/N) Y pH: 7.7 Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG CAS NO. COMPOUND

	<u> </u>	
319-84-6	// 0.24 // 0.48 11 11 11 // 0.93 2 5.1 24 21 100 21 7.3 110 21 29 32 1100 210 210 210 210 34	

CP 9-99

JW570

Contract: 68D50004 Lab Name: COMPUCHEM

Lab Code: COMPU Case No.: 27165 SAS No.:

SDG No.: JW542

Matrix: (soil/water) SOIL

Lab Sample ID: 949967

Sample wt/vol:

30.0 (g/mL) G

Lab File ID:

% Moisture: 12

decanted: (Y/N) N

Date Received: 07/08/99

Extraction: (SepF/Cont/Sonc) SONC

Date Extracted: 07/09/99

Concentrated Extract Volume: 5000(uL)

Date Analyzed: 08/11/99

Injection Volume: 2.0(uL)

Dilution Factor: 20.0

GPC Cleanup: (Y/N) Y

pH: 7.9

Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS: COMPOUND CAS NO.

Q. (ug/L or ug/Kg) UG/KG

39 U 319-84-6----alpha-BHC 39 U 319-85-7----beta-BHC 39 U 319-86-8-----delta-BHC 39 U 58-89-9-----gamma-BHC (Lindane) 39 U 76-44-8-----Heptachlor__ 39 U 309-00-2----Aldrin 1024-57-3-----Heptachlor epoxide_ 959-98-8-----Endosulfan I____ 39 T 39 U 75 U 60-57-1-----Dieldrin 3300 EBC J 72-55-9-----4,4'-DDE 75 U 72-20-8-----Endrin 33213-65-9----Endosulfan II 75 U 320 B 39 JPB 72-54-8-----4,4'-DDD 1031-07-8-----Endosulfan sulfate_ 4000 EB€ J 50-29-3-----4,4'-DDT 390 22 JPU 72-43-5----Methoxychlor 75 U 53494-70-5----Endrin ketone 75 I U 7421-93-4----Endrin aldehyde 39 U 5103-71-9-----alpha-Chlordane_ 39 U 5103-74-2----gamma-Chlordane 3900 U 8001-35-2-----Toxaphene 750 U 12674-11-2----Aroclor-1016 1500 U 11104-28-2----Aroclor-1221 750 U 11141-16-5-----Aroclor-1232 750 Ū 53469-21-9----Aroclor-1242 750 U 12672-29-6-----Aroclor-1248 750 11097-69-1----Aroclor-1254 750 U 11096-82-5----Aroclor-1260

Lab Name: COMPUCHEM Contract: 68D50004

Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JW542

Matrix: (soil/water) SOIL Lab Sample ID: 949967

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 12 decanted: (Y/N) N Date Received: 07/08/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted:07/09/99

Concentrated Extract Volume: 5000(uL) Date Analyzed: 08/13/99

Injection Volume: 2.0(uL) Dilution Factor: 100.0

GPC Cleanup: (Y/N) Y pH: 7.9 Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:
CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG C

319-84-6			1
5103-71-9alpha-Chlordane 190 U 5103-74-2gamma-Chlordane 190 U 8001-35-2Toxaphene 19000 U 12674-11-2Aroclor-1016 3800 U 11104-28-2Aroclor-1221 7600 U 11141-16-5Aroclor-1232 3800 U 53469-21-9Aroclor-1242 3800 U	319-85-7beta-BHC 319-86-8delta-BHC 58-89-9gamma-BHC (Lindane) 76-44-8Heptachlor 309-00-2Aldrin 1024-57-3Heptachlor epoxide 959-98-8Endosulfan I 60-57-1	190 190 190 190 190 190 190 380 4500 380 290 46 5000 1900 380	#####################################
72-55-94,4'-DDE 4500 DBC 72-20-8Endrin 380 U 33213-65-9Endosulfan II 380 U 72-54-84,4'-DDD 290 DBC 1031-07-8Endosulfan sulfate 46 DJB 50-29-34,4'-DDT 5000 DBC 72-43-5Methoxychlor 1900 U 53494-70-5Endrin ketone 380 U 7421-93-4Endrin aldehyde 380 U 5103-71-9alpha-Chlordane 190 U 8001-35-2Toxaphene 1900 U 12674-11-2Aroclor-1016 3800 U 11104-28-2Aroclor-1221 7600 U 11141-16-5Aroclor-1232 3800 U 53469-21-9Aroclor-1242 3800 U	959-98-8Endosulfan I		
72-20-8Endrin 380 U 33213-65-9Endosulfan II 380 U 72-54-84,4'-DDD 290 DBC 1031-07-8Endosulfan sulfate 46 DJB 50-29-34,4'-DDT 5000 DBC 72-43-5Methoxychlor 1900 U 53494-70-5Endrin ketone 380 U 7421-93-4Endrin aldehyde 380 U 5103-71-9alpha-Chlordane 190 U 8001-35-2Toxaphene 19000 U 12674-11-2Aroclor-1016 3800 U 11104-28-2Aroclor-1221 7600 U 11141-16-5Aroclor-1232 3800 U 53469-21-9Aroclor-1242 3800 U			
33213-65-9Endosulfan II 72-54-84,4'-DDD 1031-07-8Endosulfan sulfate 50-29-34,4'-DDT 72-43-5Methoxychlor 53494-70-5Endrin ketone 7421-93-4Endrin aldehyde 5103-71-9alpha-Chlordane 5103-74-2gamma-Chlordane 8001-35-2Toxaphene 12674-11-2Aroclor-1016 11104-28-2Aroclor-1221 7600 U 11141-16-5Aroclor-1232 3800 U 53469-21-9Aroclor-1242			
72-54-84,4'-DDD 290 DJB 1031-07-8Endosulfan sulfate 46 DJB 50-29-34,4'-DDT 5000 DBC 72-43-5Methoxychlor 1900 U 53494-70-5Endrin ketone 380 U 7421-93-4Endrin aldehyde 380 U 5103-71-9alpha-Chlordane 190 U 8001-35-2Toxaphene 19000 U 12674-11-2Aroclor-1016 3800 U 11141-16-5Aroclor-1221 7600 U 11141-16-5Aroclor-1232 3800 U 53469-21-9Aroclor-1242 3800 U			
1031-07-8Endosulfan sulfate 46 DJB 50-29-34,4'-DDT 5000 DBC 72-43-5Methoxychlor 1900 U 53494-70-5Endrin ketone 380 U 7421-93-4Endrin aldehyde 380 U 5103-71-9alpha-Chlordane 190 U 5103-74-2gamma-Chlordane 190 U 8001-35-2Toxaphene 19000 U 12674-11-2Aroclor-1016 3800 U 11141-16-5Aroclor-1221 7600 U 53469-21-9Aroclor-1242 3800 U			
50-29-34,4'-DDT 5000 DBC 72-43-5Methoxychlor 1900 U 53494-70-5Endrin ketone 380 U 7421-93-4Endrin aldehyde 380 U 5103-71-9alpha-Chlordane 190 U 8001-35-2Toxaphene 19000 U 12674-11-2Aroclor-1016 3800 U 11104-28-2Aroclor-1221 7600 U 11141-16-5Aroclor-1232 3800 U 53469-21-9Aroclor-1242 3800 U	72-54-84,4'-DDD		
72-43-5Methoxychlor 1900 U 53494-70-5Endrin ketone 380 U 7421-93-4Endrin aldehyde 380 U 5103-71-9alpha-Chlordane 190 U 8001-35-2Toxaphene 19000 U 12674-11-2Aroclor-1016 3800 U 11104-28-2Aroclor-1221 7600 U 11141-16-5Aroclor-1242 3800 U			
53494-70-5Endrin ketone 380 U 7421-93-4Endrin aldehyde 380 U 5103-71-9alpha-Chlordane 190 U 5103-74-2gamma-Chlordane 190 U 8001-35-2Toxaphene 19000 U 12674-11-2Aroclor-1016 3800 U 11104-28-2Aroclor-1221 7600 U 11141-16-5Aroclor-1232 3800 U 53469-21-9Aroclor-1242 3800 U	50-29-34,4'-DDT		
7421-93-4Endrin aldehyde 380 U 5103-71-9alpha-Chlordane 190 U 5103-74-2gamma-Chlordane 190 U 8001-35-2Toxaphene 19000 U 12674-11-2Aroclor-1016 3800 U 11104-28-2Aroclor-1221 7600 U 11141-16-5Aroclor-1232 3800 U 53469-21-9Aroclor-1242 3800 U		1	1
5103-71-9alpha-Chlordane 190 U 5103-74-2gamma-Chlordane 190 U 8001-35-2Toxaphene 19000 U 12674-11-2Aroclor-1016 3800 U 11104-28-2Aroclor-1221 7600 U 11141-16-5Aroclor-1232 3800 U 53469-21-9Aroclor-1242 3800 U			- :
5103-74-2gamma-Chlordane 190 U 19000 U 12674-11-2Aroclor-1016 3800 U 11104-28-2Aroclor-1221 7600 U 11141-16-5Aroclor-1232 3800 U 53469-21-9Aroclor-1242 3800 U			
8001-35-2Toxaphene 19000 U 12674-11-2Aroclor-1016 3800 U 11104-28-2Aroclor-1221 7600 U 11141-16-5Aroclor-1232 3800 U 53469-21-9Aroclor-1242 3800 U			1 - 1
12674-11-2Aroclor-1016 3800 U 11104-28-2Aroclor-1221 7600 U 11141-16-5Aroclor-1232 3800 U 53469-21-9Aroclor-1242 3800 U		i	
11104-28-2Aroclor-1221 7600 U 11141-16-5Aroclor-1232 3800 U 53469-21-9Aroclor-1242 3800 U			1 1
11141-16-5Aroclor-1232 3800 U 53469-21-9Aroclor-1242 3800 U			1
53469-21-9Aroclor-1242 3800 U			1
		3800	U
	12672-29-6Aroclor-1248	3800	U
11097-69-1Aroclor-1254 3800 U	11097-69-1Aroclor-1254	3800	U
11096-82-5Aroclor-1260 3800 U	11096-82-5Aroclor-1260	3800	U

OP 9-2-99

FORM I PEST

OLM03.0

JW571

Lab Name: COMPUCHEM Contract: 68D50004

Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JW542

Matrix: (soil/water) SOIL

Lab Sample ID: 949968

Sample wt/vol:

30.0 (g/mL) G

Lab File ID:

% Moisture: 8

decanted: (Y/N) N

Date Received: 07/08/99

Extraction: (SepF/Cont/Sonc) SONC

Date Extracted:07/09/99

Concentrated Extract Volume: 5000(uL)

Date Analyzed: 08/11/99

Injection Volume: 2.0(uL)

Dilution Factor: 2.0

Sulfur Cleanup: (Y/N) N

GPC Cleanup: (Y/N) Y pH: 8.0 Sulfur Cleanup: (
CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

١			• •		
١	319-84-6alpha-BHC			,	U
	319-85-7beta-BHC				U
١	319-86-8delta-BHC			1	<u>U</u> ~
١	58-89-9gamma-BHC (Lindane)		•	J., 1	U
١	76-44-8Heptachlor			٠,١	<u>U</u> .
1	309-00-2Aldrin			J	U
1	1024-57-3Heptachlor epoxide			1	U:
	959-98-8Endosulfan I			3.7	U
	60-57-1Dieldrin		•	7.2	Ū
١	72-55-94,4'-DDE	,		31	₽ U
١	72-20-8Endrin			7.2	•
1	33213-65-9Endosulfan II			7.2	U JE
١	72-54-84,4'-DDD			0.72	υ.εο. ΤΣΡ Σ ΙΙ
١	1031-07-8Endosulfan sulfate		7. 4	14	B
١	50-29-34,4'-DDT			27 L	P TT
	72-43-5Methoxychlor			7.2	Ü
	53494-70-5Endrin ketone			7.2	Ü
-	7421-93-4Endrin aldehyde			3.7	Ü
	5103-71-9alpha-Chlordane		•	3.7	Ü
	5103-74-2gamma-Chlordane	1::		370	Ü
1	8001-35-2Toxaphene		1	72	Ü
	12674-11-2Aroclor-1016	1	•	140	TT
. !	11104-28-2Aroclor-1221	1:		72	Ū
	11141-16-5Aroclor-1232			72	Ü
•	53469-21-9Aroclor-1242			72	1 -
	12672-29-6Aroclor-1248	. J		72	υ
	11097-69-1Aroclor-1254	· [72	TI
	11096-82-5Aroclor-1260			, 2	
		1			1

JW572

Lab Name: COMPUCHEM

Contract: 68D50004

Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JW542

Matrix: (soil/water) SOIL

Lab Sample ID: 949969

Sample wt/vol:

30.0 (g/mL) G Lab File ID:

% Moisture: 14 decanted: (Y/N) N Date Received: 07/08/99

Extraction: (SepF/Cont/Sonc) SONC

Date Extracted:07/09/99

Concentrated Extract Volume: 5000(uL) Date Analyzed: 08/11/99

Injection Volume: 2.0(uL)

Dilution Factor: 10.0

GPC Cleanup: (Y/N) Y pH: 7.4 Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:
CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG

319-84-6alpha-BHC 319-85-7beta-BHC 319-86-8delta-BHC 58-89-9gamma-BHC (Lindane) 76-44-8Heptachlor 309-00-2Aldrin 1024-57-3Heptachlor epoxide 959-98-8Endosulfan I 60-57-1Dieldrin 72-55-94,4'-DDE 72-20-8Endosulfan II 72-54-8Endosulfan II 72-54-84,4'-DDD 1031-07-8Endosulfan sulfate 50-29-34,4'-DDT 72-43-5Methoxychlor 53494-70-5Endrin ketone 7421-93-4Endrin aldehyde 5103-71-9alpha-Chlordane 5103-74-2gamma-Chlordane 8001-35-2Toxaphene 12674-11-2Aroclor-1016 11104-28-2Aroclor-1221		Ì	
58-89-9gamma-BHC (Lindane) 76-44-8Heptachlor 309-00-2Aldrin 1024-57-3Heptachlor epoxide 959-98-8Endosulfan I 60-57-1Dieldrin 72-55-9	~	20 20 20	U U
959-98-8Endosulfan I 60-57-1Dieldrin 72-55-94,4'-DDE 72-20-8Endrin 33213-65-9Endosulfan II 72-54-84,4'-DDD 1031-07-8Endosulfan sulfate 50-29-34,4'-DDT 72-43-5Methoxychlor 53494-70-5Endrin ketone 7421-93-4Endrin aldehyde 5103-71-9alpha-Chlordane 5103-74-2gamma-Chlordane 8001-35-2Toxaphene 12674-11-2Aroclor-1016 11104-28-2Aroclor-1221		20 20 20	U U U
72-20-8Endrin 33213-65-9Endosulfan II 72-54-84,4'-DDD 1031-07-8Endosulfan sulfate 50-29-34,4'-DDT 72-43-5Methoxychlor 53494-70-5Endrin ketone 7421-93-4Endrin aldehyde 5103-71-9alpha-Chlordane 5103-74-2gamma-Chlordane 8001-35-2Toxaphene 12674-11-2Aroclor-1016 11104-28-2Aroclor-1221		20 20 38 1200	u u u ebc J
50-29-34,4'-DDT 72-43-5Methoxychlor 53494-70-5Endrin ketone 7421-93-4Endrin aldehyde 5103-71-9alpha-Chlordane 5103-74-2gamma-Chlordane 8001-35-2Toxaphene 12674-11-2Aroclor-1016 11104-28-2Aroclor-1221		38 38	U U B
5103-71-9alpha-Chlordane 5103-74-2gamma-Chlordane 8001-35-2Toxaphene 12674-11-2Aroclor-1016 11104-28-2Aroclor-1221		20 800 200 38	
12674-11-2Aroclor-1016 11104-28-2Aroclor-1221	20	38 20 0.19 2000	
11141-16-5Aroclor-1232		380 780 380	ช บ บ
53469-21-9Aroclor-1242 12672-29-6Aroclor-1248 11097-69-1Aroclor-1254 11096-82-5Aroclor-1260		380 380 380 380	U U

JW572DL

Lab Name: COMPUCHEM

Contract: 68D50004

Lab Code: COMPU Case No.: 27165 SAS No.:

SDG No.: JW542

Matrix: (soil/water) SOIL

Lab Sample ID: 949969

Sample wt/vol:

30.0 (g/mL) G

Lab File ID:

% Moisture: 14 decanted: (Y/N) N

Date Received: 07/08/99

Extraction: (SepF/Cont/Sonc) SONC

Date Extracted:07/09/99

Concentrated Extract Volume: 5000(uL)

Date Analyzed: 08/13/99

Injection Volume: 2.0(uL)

Dilution Factor: 50.0

GPC Cleanup: (Y/N) Y

pH: 7.4

Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG CAS NO. COMPOUND

				<u>,</u>	<u> </u>	i
		land Discount of the second			99	ט ו
319-8	4-6	alpha-BHC				υl
		beta-BHC				υ
319-8	6-8	delta-BHC			99	-
58-89	-9	gamma-BHC (Lindane)	·		99	Ü
76-44	-8	Heptachlor			- 1	- 1
309-0	0-2	Aldrin	4 3.00		.99	U
1024-	57-3	Heptachlor epoxide			99	<u>U</u>
959-9	8-8	Endosulfan I			99	
		Dieldrin			190	
		4,4'-DDE	•			
	-8		•		190	U
33213	-65-9	Endosulfan II	Later Land		190	
		4,4'-DDD	. 9			ALTR
1031	07-9	Endosulfan sulfate				AAL A
E0-20	07-0	4,4'-DDT			850	DBC
72-43		Methoxychlor		1	990	U.
72-43	-3	Endrin ketone		' / '	190	U
53494	- 70-5	Todain aldehyde			190	U
7421-	93-4	Endrin aldehyde		•	99	
5103-	71-9	alpha-Chlordane		1	99	
5103-	74-2	gamma-Chlordane		•	9900	
8001-	35-2	Toxaphene		•	1900	1
12674	-11-2	Aroclor-1016		- <u> </u> .	3900	4 -
		Aroclor-1221		-	1900	1.
		Aroclor-1232		-	1900	1
		Aroclor-1242	. to the	-	_	1
		Aroclor-1248		-	1900	1 .
		Aroclor-1254	*	_	1900	1
11096	5-82-5	Aroclor-1260		_	1900	Ū
				_		.

JW573

Lab Name: COMPUCHEM

Contract: 68D50004

Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JW542

Matrix: (soil/water) SOIL

Lab Sample ID: 949970

Sample wt/vol:

30.0 (g/mL) G

Lab File ID:

% Moisture: 8

decanted: (Y/N) N Date Received: 07/08/99

Extraction: (SepF/Cont/Sonc) SONC

Date Extracted:07/09/99

Concentrated Extract Volume: 5000(uL) Date Analyzed: 08/11/99

Injection Volume: 2.0(uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.7

Sulfur Cleanup: (Y/N) N

CAS NO. COMPOUND CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

	1	·		
319-84-6alpha-BHC		_	1.8	ט
319-85-7beta-BHC		1,8	28	IPB U
319-86-8delta-BHC		, _	1.8	ַ ט
58-89-9gamma-BHC (Lindane)		1.8	0-16	JP U
76-44-8Heptachlor	•		1.8	υ.
309-00-2Aldrin		1.8	0-49	JPBU
1024-57-3Heptachlor epoxide	1	• • • • • • • • • • • • • • • • • • • •	1.8	ט ו
959-98-8Endosulfan I			1.8	ן ט
60-57-1Dieldrin			3.6	ט
72-55-94,4'-DDE	1	•	32	l±i l
72-20-8Endrin	1	3.6		J₽U
33213-65-9Endosulfan II			3.6	U
72-54-84,4'-DDD			2.5	J
1031-07-8Endosulfan sulfate	•	2.1.	0.82	
50-29-34,4'-DDT	•]	7.0	19	TR
72-43-5Methoxychlor	•		18	ក
53494-70-5Endrin ketone	•		3.6	Ū
7421 02 4 Figure 2 dobude	•1		3.6	Ū
7421-93-4Endrin aldehyde	-	•	1.8	Ū
5103-71-9alpha-Chlordane	-		1.8	lΰ
5103-74-2gamma-Chlordane	-		180	1 -
8001-35-2Toxaphene			36	
12674-11-2Aroclor-1016	-	•	73.	Ü .
11104-28-2Aroclor-1221	- [36	1 -
11141-16-5Aroclor-1232	-			
53469-21-9Aroclor-1242	-		36 36	ָּט װ
12672-29-6Aroclor-1248	-			
11097-69-1Aroclor-1254	_ '		36	1
11096-82-5Aroclor-1260	-		. 36	U
	_			.
				^

CP9-2-97

JW574

Lab Name: COMPUCHEM

Contract: 68D50004

Lab Code: COMPU

Case No.: 27165 SAS No.:

SDG No.: JW542

Matrix: (soil/water) SOIL

Lab Sample ID: 949971

Sample wt/vol:

30.0 (g/mL) G

Lab File ID:

Date Received: 07/08/99

Extraction: (SepF/Cont/Sonc) SONC

Date Extracted:07/09/99

Concentrated Extract Volume:

5000 (uL)

Date Analyzed: 08/11/99

Injection Volume: 2.0(uL)

Dilution Factor: 1.0

GPC Cleanup:

(Y/N) Y

11096-82-5----Aroclor-1260

% Moisture: 7 decanted: (Y/N) N

pH: 7.4

Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

CAS NO. COMPOUND 319-84-6----alpha-BHC 319-85-7-----beta-BHC 319-86-8-----delta-BHC 58-89-9-----gamma-BHC (Lindane)_ 1.8 U 76-44-8-----Heptachlor__ 1.8 U 309-00-2----Aldrin 1.8 2-20 JBU 1024-57-3-----Heptachlor epoxide 959-98-8-----Endosulfan I 3.5 U 60-57-1-----Dieldrin 72-55-9-----4,4'-DDE 72-20-8-----Endrin 33213-65-9----Endosulfan II 3.5 0.16 JBU 72-54-8-----4,4'-DDD 1031-07-8-----Endosulfan sulfate 19 8 50-29-3----4,4'-DDT 18 U 72-43-5-----Methoxychlor 3.5 U 53494-70-5-----Endrin ketone 3.5 U 7421-93-4-----Endrin aldehyde_ 1.8 U 5103-71-9----alpha-Chlordane 1.8 2-16 JPBU 5103-74-2----gamma-Chlordane 180 U 8001-35-2----Toxaphene 35 U 12674-11-2----Aroclor-1016 72 U 11104-28-2----Aroclor-1221 35 U 11141-16-5-----Aroclor-1232 35 U 53469-21-9----Aroclor-1242 35 U 12672-29-6-----Aroclor-1248 35 U 11097-69-1----Aroclor-1254

JW575

Lab Name: COMPUCHEM Contract: 68D50004

Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JW542

Matrix: (soil/water) SOIL Lab Sample ID: 949972

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 4 decanted: (Y/N) N Date Received: 07/08/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted:07/09/99

Concentrated Extract Volume: 5000(uL) Date Analyzed: 08/11/99

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.6 Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:
CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG Q

CPq,2-99

Lab Name: COMPUCHEM

JW578
Contract: 68D50004

Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JW542

Matrix: (soil/water) SOIL Lab Sample ID: 950019

Sample wt/vol: 30.0 (g/mL) G Lab File ID:

% Moisture: 7 decanted: (Y/N) N Date Received: 07/09/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 07/09/99

Concentrated Extract Volume: 5000(uL) Date Analyzed: 08/11/99

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.1 Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG C

319-84-6alpha-BHC	1.8 U	, .
319-85-7beta-BHC	1.9 PB	u
319-86-8delta-BHC	1.8 U	
58-89-9gamma-BHC (Lin		
76-44-8Heptachlor	1.8 U	
309-00-2Aldrin	1.8 1.2 JPE	
1024-57-3Heptachlor epo	oxide /. 8 0.018 JPE	зU
959-98-8Endosulfan I	1.8 U	
60-57-1Dieldrin	2.7 JP	Å
72-55-94,4'-DDE		,
72-20-8Endrin	17 B 3.5 U	,
33213-65-9Endosulfan II		•
72-54-84,4'-DDD	37 🗷	•
1031-07-8Endosulfan sul	fate 3.5 0.77 JPI	зU
50-29-34,4'-DDT	3,5 1.9 JPI	
72-43-5Methoxychlor	18 1.9 JP	u
53494-70-5Endrin ketone		
7421-93-4Endrin aldehyo		
5103-71-9alpha-Chlordan	ie 5.5 p 3	2 - <i>(</i>
5103-74-2gamma-Chlordan		
8001-35-2Toxaphene	180 U	-
12674-11-2Aroclor-1016	35 U	
11104-28-2Aroclor-1221	72 U	
11141-16-5Aroclor-1232	35 U	
53469-21-9Aroclor-1232_	35 U	•
12672-29-6Aroclor-1248		
11097-69-1Aroclor-1254	35 U 35 U	
11096-82-5Aroclor-1260	35 U	
l · · · · · · · · · · · · · · · · · · ·		

CP 4.2.99

Lab Name: COMPUCHEM Contract: 68D50004

Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JW542

Matrix: (soil/water) SOIL Lab Sample ID: 950020

Sample wt/vol: 30.0 (g/mL) G Lab File ID:

% Moisture: 13 decanted: (Y/N) N Date Received: 07/09/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted:07/09/99

Concentrated Extract Volume: 5000(uL) Date Analyzed: 08/11/99

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.7 Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG Q

210 04 C -1-h- DUG	1	2.00	a= TD	P7 i /
319-84-6alpha-BHC	.			
319-85-7beta-BHC	-	•	.1 PB	. J
319-86-8delta-BHC	.		.0 U	.
58-89-9gamma-BHC (Lindane)	.	2.00	. 1	u
76-44-8Heptachlor	.		.0 U	
309-00-2Aldrin	.	20 £	. 1 JP	BU
1024-57-3Heptachlor epoxide	1	2.0 0.	13 #	BU
959-98-8Endosulfan I		2	.010	
60-57-1Dieldrin	1	1	.1 JP	18
72-55-94,4'-DDE	1		17 B	
72-20-8Endrin	-1	3	.eliu	1
33213-65-9Endosulfan II	- ·	· 3	.8 U	
72-54-84,4'-DDD	-		31 18	1
1031-07-8Endosulfan sulfate	-	3.8	78 JP	RU
50-29-34,4'-DDT	-		.1 JP	
72-43-5Methoxychlor	-		20 U	7 [
53494-70-5Endrin ketone	-		26 17	u
7421-93-4Endrin aldehyde	-		.8 U	~
5103-71-9alpha-Chlordane	-	_	-6 JF	d
5103-74-2gamma-Chlordane	-			
S103-74-2gaillia-Chitordane	-		.6 🕏	
8001-35-2Toxaphene	-			1
12674-11-2Aroclor-1016	-		38 U	- 4
11104-28-2Aroclor-1221	- ·	•	77 0	
11141-16-5Aroclor-1232	-		38 U	
53469-21-9Aroclor-1242	_		38 U	
12672-29-6Aroclor-1248	_		38 U	l
11097-69-1Aroclor-1254		4	38 U	
11096-82-5Aroclor-1260		,	38 U	ļ
	-	,		Ì

CP 0-2-95

FORM I PEST

OLM03.0

JW580 Contract: 68D50004 Lab Name: COMPUCHEM

Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JW542

Matrix: (soil/water) SOIL Lab Sample ID: 950021

Sample wt/vol: 30.0 (g/mL) G Lab File ID:

% Moisture: 6 decanted: (Y/N) N Date Received: 07/09/99

Date Extracted:07/09/99 Extraction: (SepF/Cont/Sonc) SONC

Concentrated Extract Volume: 5000(uL) Date Analyzed: 08/11/99

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.2 Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG

319-84-6----alpha-BHC 1.8 U 1.8 0.65 JPBU 319-85-7-----beta-BHC 319-86-8-----delta-BHC 1.80.089 JP 4 58-89-9----gamma-BHC (Lindane) 76-44-8------Heptachlor____ 1.8 U 309-00-2----Aldrin 1.8 U 1024-57-3-----Heptachlor epoxide 1.8 U 959-98-8-----Endosulfan I 1.8 U 3.5 48 0.30 JPB 4 60-57-1-----Dieldrin 72-55-9----4,4'-DDE 2.6 JPB 72-20-8-----Endrin 0.95 J 33213-65-9----Endosulfan II 3.5 U 3.5 1.1 JBU 72-54-8-----4,4'-DDD 1031-07-8-----Endosulfan sulfate 3.5 0.30 JPBU 3.0 JB 50-29-3----4,4'-DDT 72-43-5----Methoxychlor 18 U 53494-70-5----Endrin ketone 3.5 0.31 JP4 7421-93-4----Endrin aldehyde 3,5 0-46 JPB U 5103-71-9----alpha-Chlordane 1.8 U 1.8 0.18 JB U 5103-74-2----gamma-Chlordane 8001-35-2----Toxaphene 12674-11-2----Aroclor-1016 35 U 71 U 35 U 35 U 11104-28-2----Aroclor-1221 11141-16-5----Aroclor-1232 53469-21-9----Aroclor-1242 12672-29-6----Aroclor-1248 35 U 11097-69-1----Aroclor-1254 35 U 35 U 11096-82-5----Aroclor-1260

9-2-99

1500 First Interstate Center, 999 Third Avenue MORANDUM Seattle, Washington 98104 Tel: (206) 624-9537, Fax: (206) 621-9832

DATE:

September 19, 1999

TO:

Mark Woodke, Project Manager, E & E, Seattle, WA

FROM:

Alasdair Turner, START-Chemist, E & E, Seattle, WA

SUBJ:

Inorganic Data Quality Assurance Summary Review, Wenatchee

Brownfields Site, Wenatchee, Washington.

REF:

TDD: 98-11-0007

PAN: CK0701SIDM

The data quality assurance summary review of 20 water samples collected from the Wenatchee Brownfields Site in Wenatchee, Washington has been completed. Analysis for VOCs, SVOC, and Pest/PCBs (EPA CLP SOW for organic analysis OLM03.2) has been completed, and was performed by COMPUCHEM, of Cary, NC.

No discrepancies were noted.

ENVIRONMENTAL SERVICES ASSISTANCE TEAMS - WESTERN ZONE

LOCKHEED MARTIN
TECHNOLOGY SERVICES GROUP

ESAT Region 10 Lockheed Martin 7411 Beach Drive East Port Orchard, WA 98366 Phone (360) 871-8723

DELIVERABLE NARRATIVE

DATE:

August 30, 1999

To:

Ginna Grepo-Grove, WAM, USEPA, Region 10

THROUGH:

Dave Dobb, Team Manager, ESAT Region 10

FROM:

Chris Pace, Task Lead, ESAT Region 10

SUBJECT:

Data validation report for the volatile organic (VOA), semi-volatile organic (SVOA) and

pesticide/polychlorinated biphenyl (Pest/PCB) analysis of samples from the Wenatchee Brownfields

Site. Case: 27165 SDG: JW513

DOC:

ESW10-3-1377

PWO:

ESW72019

TDF:

3638

WA:

10-99-3-10

CC:

Gerald Dodo, RPO, USEPA, Region 10

Project File

The quality assurance (QA) review of 20 water samples collected from the above referenced site has been completed. These samples were analyzed for VOA (18), SVOA (11) and Pest/PCB (11) in accordance with the USEPA Contract Laboratory Program (CLP) Statement of Work (SOW) for Organic Analyses (OLM03.2) by COMPUCHEM of Cary, NC.

DATA QUALIFICATIONS

The following comments refer to the laboratory performance in meeting the Quality Control Specifications outlined in the USEPA CLP SOW for Organic Analysis (OLM03.2), the USEPA CLP National Functional Guidelines for Organic Data Review (2/94) and the Region 10 Guidelines for CLP Data Review.

The conclusions presented herein are based on the information provided for the review.

Holding Time

All samples were preserved with ice and VOA samples (except JW522) were acidified to a pH of < 2 prior to shipment. All of the samples met the method and technical (40 CFR 136) required holding times for all analyses with the following exceptions:

SVOA samples JP430 (17 days) and JP431RE (13 days) exceeded the extraction holding time criteria of 7 days. Sample data were qualified as estimated, "J/UJ". Sample JP431RE was further qualified on the basis of low internal standard area.

VOA sample JW522 was received at a pH of 6 and was extracted 13 days from the sample collection date. Aromatic target analytes were qualified as estimated, "J/UJ".

The Holding Times Summary listing the pertinent collection, extraction, and analysis dates is attached at the end of this validation report.

Case No.: 27165 SDG: JW513 ESW10-3-1377 Page 2 of 7

Instrument Performance - Acceptable

All of the GC and GC/MS systems met the SOW specified technical acceptance criteria prior to sample analyses, i.e., GC/MS performance checks, GC performance checks, retention times, response factors, and calibrations. The systems remained stable throughout the course of analyses. Instrument blanks were all clean and there were no indications of carry-over.

Initial Calibrations

Three VOA, five SVOA and one Pest/PCB initial calibrations were performed. The initial calibrations met the SOW technical acceptance criteria with the following exceptions:

SVOA Initial Calibration on 7/26/99, instrument 66 - the %RSD for 3,3'-dichlorobenzidine was 45.5. The
lowest calibration level was non-linear. Associated samples were qualified as estimated, "J/UJ", in the nonlinear portion of the calibration curve.

Continuing Calibration Verification (CCVs) Standards

All of the CCVs met the criteria for frequency of analysis, the minimum response factor, the retention time and the percent differences (%Ds) criteria with the following exceptions:

 The %Ds for the following VOA compounds exceeded the QC limits and the associated results were qualified accordingly:

Date /Time of Analysis	Inst. i.d.	Compound	%D	Qualifier Detect/Non-detect
7/18/99 (08:22)	54	асетоле	29.5	J/none

The %Ds for the following SVOA compounds exceeded the QC limits and the associated results were qualified accordingly:

Date /Time of Analysis	Inst. i.d.	Compound	%D	Qualifier Detect/Non-detect
7/16/99 (11:39)	66	2,2'-oxybis(1-chloropropane) hexachlorobutadiene 4-bromophenyl-phenylether hexachlorobenzene pentachlorophenol terphenyl-d14 (surr.) 2,4,6-tribomophenol (surr.)	-30.7 27.4 28.2 34.7 -30.9 28.0 43.8	J/UJ J/none J/none J/UJ none none
7/20/99 (09:30)	66	2,4-dinitrophenol	-25.2	none
7/27/99 (09:30)	66	2,2'-oxybis(1-chloropropane) carbazole 3,3'-dichlorobenzidine di-n-octylphthalate	33.8 32.8 -25.2 -25.3	J/none J/none none none
7/29/99 (21:51)	70	4-chloroaniline	47.0	J/none

Compound Quantitation and Detection Limits

All of the samples were analyzed at the contract required quantitation limits (CRQLs) with the following exceptions:

VOA sample JW527 was analyzed at a 10X dilution due to high levels of methylene chloride.

Target compounds that were detected at concentrations less than the CRQLs were qualified as estimated, "J". Detected compounds at concentrations over the calibration range were qualified as estimated, "J". Data users should consider these estimated compounds as the minimum amount present in the samples. It is also recommended that for these compounds, data users should utilize the concentrations reported from the dilution runs. All of the reported results were adjusted for sample amounts analyzed.

Blanks

Acetone was detected below the CRQL in the VOA blanks VBLKCU and VBLKSA. Acetone detected in the samples at concentrations less than ten times the value in their associated blank(s) were qualified as non-detects, "U".

Methylene chloride was detected below the CRQL in the VOA blank VHBLKE2. Methylene chloride detected in the samples at concentrations less than ten times the value in their associated blank(s) were qualified as non-detects, "U".

- 4-Methyl-2-pentanone was detected below the CRQL in the VOA blanks VBLKCU, VBLKSA and VBLKBF. 4-Methyl-2-pentanone detected in the samples at concentrations less than ten times the value in their associated blank(s) were qualified as non-detects, "U".
- 2-Hexanone was detected below the CRQL in the VOA blanks VBLKRG, VBLKCU, VBLKSA and VBLKBF. 2-Hexanone detected in the samples at concentrations less than ten times the value in their associated blank(s) were qualified as non-detects, "U".

Phenol was detected below the CRQL in the SVOA blank SBLKQR. Phenol detected in the samples at concentrations less than five times the value in their associated blank(s) were qualified as non-detects, "U".

- 4,4'-DDD was detected below the CRQL in the Pest/PCB blank PBLKPE. 4,4'-DDD detected in the samples at concentrations less than five times the value in their associated blank(s) were qualified as non-detects, "U".
- 4,4'-DDE, endrin, 4,4'-DDD and 4,4'-DDT were detected below the CRQL in the Pest/PCB blank PBLKMK. 4,4'-DDE, endrin, 4,4'-DDD and 4,4'-DDT detected in the samples at concentrations less than five times the value in their associated blank(s) were qualified as non-detects, "U".

Analytical Sequence - Acceptable

All of the standards, blanks, samples, and QC samples were analyzed in accordance with the SOW specified analytical sequence.

System Monitoring Compounds (SMC)/Surrogate Spikes

All of the VOA SMC recoveries met the applicable QC criteria with the following exception:

JW522MS 1,2-dichloroethane-d4 116%. None of the data were qualified on this basis.

Case No.: 27165 SDG: JW513 ESW10-3-1377 Page 4 of 7

All of the SVOA surrogates recoveries met the applicable QC criteria with the following exceptions:

JP431 2-Fluorobiphenyl 131%

terphenyl-d14 24%

phenol-d5 3%.

The 2-fluorobiphenyl recovery was high due to low internal standard area and therefore, no qualifiers were applied to the base/neutral analytes. Due to the extremely low phenol-d5 surrogate recovery, the detected acid fraction analytes were qualified as estimated, "J", and the non-detected acid fraction analytes were qualified "R". Sample JP431 was further qualified on the basis of low internal standard area.

JP431RE

2-Fluorobiphenyl 175%.

The 2-fluorobiphenyl recovery was high due to low internal standard area. None of the data were qualified on this basis.

JW581 Terphenyl-d14 22%. None of the data were qualified on this basis.

All of the Pest/PCB surrogate spike recoveries met the applicable QC criteria (30-150%) with the exception of the following:

JP430	TCX2 171%	DCB1 18%
JP431	DCB1 20%	
JW522	TCX1 4%	TCX2 0%
JW522MSD	TCX1 27%	TCX2 719%
JW527	TCX1 2%	TCX2 392%
JW576	TCX2 161%	DCB1 22%

Samples JW522 and JW527 were affected by extreme chromatographic interference. See compound identification for qualifications. Samples JP430, JP431 and JW576 were not qualified on the basis surrogate spike recovery.

Matrix Spike/Matrix Spike Duplicate (MS/MSD)

VOA sample JW522 was utilized for MS/MSD analyses. The criteria for frequency of analysis, recoveries and RPDs were met for all analyses with the following exceptions:

JW522MS 1,1-dichloroethene 57% JW522MSD 1,1-dichloroethene 54%

SVOA sample JW522 was utilized for MS/MSD analyses. The criteria for frequency of analysis, recoveries and RPDs were met for all analyses with the following exceptions:

The RPDs between JW522MS and JW522MSD were 97% for 4-chloro-3-methylphenol, 85% for 4-nitrophenol, 66% for pentachlorophenol and 37% for pyrene.

Pest/PCB sample JW522 was utilized for MS/MSD analyses. The criteria for frequency of analysis, recoveries and RPDs were met for all analyses with the following exceptions:

JW522MS gamma-BHC 31%, heptachlor 17% aldrin 37% JW522MSD gamma-BHC 11%, heptachlor 22% aldrin 5%

The RPDs between JW522MS and JW522MSD were 95% for gamma-BHC, 26% for heptachlor, 152% for aldrin and 48% for endrin.

No data qualification was applied based on MS/MSD analysis.

ESW10-3-1377 Page 5 of 7

Internal Standards

The acceptance criteria for internal standards (IS) are ± 30 seconds for retention time (RT) shifts and -50% to +100% of the IS area as compared to the IS RT and area of the daily continuing calibration standard. All of the GC/MS analyses met the IS area and retention time shift criteria with following exceptions:

SVOA JP431

perylene-d12 -85%

JP431RE

perylene-d12 -97%

Due to the extremely low internal standard area the associated detected analytes were qualified as estimated, "J", and the associated non-detected analytes were qualified "R".

Compound Identification

All of the compounds detected in the GC/MS analyses were within the retention time windows, met the USEPA spectral matching criteria and were judged to be acceptable.

Single component pesticides were qualified as follows: where %Ds (between two column concentrations) > 30% but \leq 60% - detected results were qualified as estimated, "J"; %Ds > 60% with concentrations > CRQL - results were qualified as tentatively identified at the estimated concentration, "JN"; %Ds > 60% with concentrations < CRQL - results were qualified as non-detects, "U"; %Ds > 400% - results were qualified as non-detects with raised quantitation limit if > CRQL. In cases where %Ds < 60% with concentrations < CRQL and chromatographic interferences, the results were qualified as non-detects, "U". In cases where %Ds < 400% with concentrations > CRQL and chromatographic interferences, the results were qualified as tentatively identified at the estimated concentration, "JN".

Due to extreme chromatographic interference in the analysis of samples JW522 and JW527, the following single component and aroclor results were qualified "R":

alpha-BHC, beta-BHC, delta-BHC, gamma-BHC, heptachlor, aldrin, heptachlor epoxide, endosulfan-I, aroclor-1016, aroclor-1221, aroclor-1232, aroclor-1242 and aroclor-1248.

Tentatively Identified Compounds

Peaks that were detected in the samples at areas >10% of the internal standards and were not part of the target compound lists were identified as tentatively identified compounds (TICs). TICs that were both found in the sample and in the associated method blank(s) were qualified as unusable, "R." Peaks that were identified as common laboratory contaminants, solvent preservatives, column bleed or aldol condensation products were qualified as unusable, "R". The rest of the peaks identified as TICs were qualified "NJ", tentatively identified at an estimated concentration.

Laboratory Contact

The laboratory was contacted by Region 10 concerning the following items:

FORM IV VOA is missing for VBLKBF analyzed on 7/10 at 11:10.

Hard copies of all resubmissions will be sent to Region 10.

Overall Assessment

All of the samples were analyzed in accordance with the SOW specifications. The data, as qualified, are acceptable and can be used for all purposes.

Case No.: 27165 SDG: JW513 ESW10-3-1377 Page 6 of 7

Data Qualifiers

U	-	The applyto was not detected at an all and all all all all all all all all all al
•		The analyte was not detected at or above the reported result.

- The analyte was positively identified. The associated numerical result is an estimate.
- R The data are unusable for all purposes.
- N There is evidence the analyte is present in this sample.
- JN There is evidence that the analyte is present. The associated numerical result is an estimate.
- UJ The analyte was not detected at or above the reported estimated result. The associated numerical value is an estimate of the quantitation limit of the analyte in this sample.

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Holding Time Summary - Case 27165

SDG: JW513

Sample Number	Collection Date	VTSR	VOA Analysis	SVOA Extraction	SVOA Analysis	Pest/PCB Extraction	Pest/PCB Analysis
JР414	7/8/99	7/9/99	7/18/99	NA	NA	NA	NA
JP423	7/9/99	7/10/99	7/19/99	· NA	NA	NA	NA
JP424	7/9/99	7/14/99	7/21/99	NA	NA	NA	. NA
JP425	7/9/99	7/14/99	NA	NA	NA	7/16/99	8/9/99
JP426	7/9/99	7/14/99	NA	7/15/99	7/19/99	NA	NA
JP427	7/9/99	7/14/99	7/21/99	7/15/99	7/20/99	7/16/99	8/9/99
JP430	7/9/99	· 7/14/99	7/21/99	7/26/99*	7/30/99	7/16/99	8/9/99
	7/9/99	7/14/99	7/21/99	7/15/99	7/20/99	7/16/99	8/9/99
JW513	6/29/99	7/2/99	7/10/99	NA	NA	NA	NA
JW514	6/29/99	7/2/99	7/10/99	NA	NA	NA	NA
JW522	6/29/99	- 7/2/99	7/12/99	7/6/99	7/18/99	7/6/99	8/9/99
JW527	6/30/99	7/3/99	7/13/99	7/6/99	7/18/99	7/6/99	8/9/99
JW530	6/30/99	7/2/99	7/12/99	7/6/99	7/16/99	7/6/99	8/9/99
JW536	6/30/99	7/3/99	7/13/99	NA	NA	NA	NA
JW537	6/30/99	7/3/99	7/13/99	NA	NA	NA	NA
JW568	7/2/99	7/3/99	7/13/99	7/6/99	7/16/99	7/6/99	8/9/99
JW569	7/2/99	7/3/99	7/13/99	7/6/99	7/18/99	7/6/99	8/9/99
JW576	7/7/99	7/9/99	7/18/99	7/12/99	7/18/99	7/12/99	8/8/99
JW577	7/7/99	7/8/99	7/18/99	NA	NA	NA	NA
JW581	7/7/99	7/9/99	7/18/99	7/12/99	7/18/99	7/12/99	8/8/99
JW531RE	7/9/99	7/14/99	NA	7/22/99*	. 7/27/99	NA	NA

VTSR - Verified time of sample receipt in the laboratory

NA - Not available

^{* -} Outside of holding time

VOLATILE ORGANICS ANALYSIS DATA SHEET

JP414 Contract: 68D50004

Lab Name: COMPUCHEM Contract: 68D5

Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JW513

Matrix: (soil/water) WATER Lab Sample ID: 950022

Sample wt/vol: 5.0 (g/mL) mL Lab File ID: CN050022A54

Level: (low/med) LOW Date Received: 07/09/99

% Moisture: not dec. Date Analyzed: 07/18/99

GC Column: EQUITY624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: ____(uL) Soil Aliquot Volume: ____(uL)

CONCENTRATION UNITS:

CAS NO COMPOUND (ug/L or ug/Kg) ug/L (

74-87-3	Chloromethane		10	υ	
74-87-3 74-83-9	Bromomethane		10		
75-01-4	Vinyl Chloride	· ·	10	U	
75-00-3	Chloroethane		10		.
75-09-2	Methylene Chloride		10 A	#U	
67-64-1	Acetone		10	ប	۱
75-15-0	Carbon Disulfide		10		
75-35-4	1,1-Dichloroethene		10		١
75-`34-3	1,1-Dichloroethane	1	10	Ū	
67-66-3	Chloroform		10		
107-06-2	1,2-Dichloroethane		10		١
78-93-3	2-Butanone		10		
71-55-6	1,1,1-Trichloroethane		10		
56-23-5	Carbon Tetrachloride		10	1 '	١
	Bromodichloromethane	_	10		
78-87-5	1,2-Dichloropropane		10		
10061-01-5-	cis-1,3-Dichloropropene		10		
79-01-6	Trichloroethene	_	10		
	Dibromochloromethane	_	10		1
79-00-5	1,1,2-Trichloroethane	_	. 10		
71-43-2	Benzene	_	10		
10061-02-6-	trans-1,3-Dichloropropene	_	10		
75-25-2	Bromoform	_		U	
108-10-1	4-Methyl-2-Pentanone	-1		U	
591-78-6	2-Hexanone	_		U	
127-18-4	Tetrachloroethene	_		U	
79-34-5	1,1,2,2-Tetrachloroethane	_		U	
	Toluene	_		U	
	Chlorobenzene	_}		U	
	Ethylbenzene	_		Ü	
	Styrene	_		U	
1330-20-7	Xylene (Total)	_		U	
540-59-0	1,2-Dichloroethene (total)_	1	10	U	

FORM I VOA

OLM03.0

VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

	**
JP4	114

Lab	Name:	COMPUCHEM

Contract: 68D50004

Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JW513

Matrix: (soil/water) WATER

Lab Sample ID: 950022

Sample wt/vol:

5.0 (g/mL) mL

Lab File ID: cn050022a54

Level: (low/med)

Date Received: 07/09/99

% Moisture: not dec.

Date Analyzed: 07/18/99

GC Column: EQUITY624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Aliquot Volume: ____

Soil Extract Volume: (uL)

CONCENTRATION UNITS:

Number TICs found: 1

(ug/L or ug/Kg) ug/L

1. 311 89 7 PERFLUOROTRIDUTIAMINE 2.	. Q	EST. CONC.	RT	COMPOUND NAME	CAS NUMBER
3 4 4 5 5 6 6 7 7 8 8 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	N U -FM	7	10.12	PERFLUOROTRIBUTYLAMINE	L . 311 89 7
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JP423

Lab Name: COMPUCHEM Contract: 68D50004

Case No.: 27165

SAS No.:

SDG No.: JW513

Matrix: (soil/water) WATER

Lab Sample ID: 950247

Sample wt/vol:

Lab Code: COMPU

5.0 (g/mL) mL

Lab File ID: CR050247A54

Level:

(low/med)

LOW

Date Received: 07/10/99

% Moisture: not dec.

GC Column: EQUITY624 ID: 0.53 (mm)

Dilution Factor: 1.0

Date Analyzed: 07/19/99

Soil Extract Volume: ____(uL)

CAS NO.

COMPOUND

Soil Aliquot Volume: ____(uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L

	•		
74-87-3	Chloromethane	¥° 1.	10 U
	Bromomethane		10 0
75-01-4	Vinyl Chloride	<u></u>	10 0
75-00-3	Chloroethane		10 0
75-09-2	Methylene Chloride		25
67-64-1		·	10 U
	Carbon Disulfide	•	10 U
75-35-4	1,1-Dichloroethene_	·	10 U
75-34-3	1,1-Dichloroethane		10 U
	Chloroform		10 U
	1,2-Dichloroethane		10 U
	2-Butanone		10 U
71-55-6	1,1,1-Trichloroethane		10 U
	Carbon Tetrachloride		10 U
75-27-4	Bromodichloromethane		10 U
78-87-5	1,2-Dichloropropane		10 U
10061-01-5	cis-1,3-Dichloropropene		10 U
	Trichloroethene		10 U
124-48-1	Dibromochloromethane		10 U
79-00-5	1,1,2-Trichloroethane		10 U
71-43-2	Benzene		10 U
10061-02-6	trans-1,3-Dichloropropene		10 U
75-25-2	Bromoform		10 U
108-10-1	4-Methyl-2-Pentanone	• .	10 U
591-78-6	2-Hexanone		10 U
	Tetrachloroethene		10 U
79-34-5	1,1,2,2-Tetrachloroethane		10 U
108-88-3	Toluene		10 U
108-90-7	Chlorobenzene		10 U
100-41-4	Ethylbenzene		10 U
100-42-5	Styrene		10 U
1330-20-7	Xylene (Total)	•	10 U
540-50-0	1,2-Dichloroethene (total)	1	10 U

CP8-26-99 OLM03.0

			JP423
Lab Name:	COMPUCHEM	Contract: 68D50004	

Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JW513

Matrix: (soil/water) WATER Lab Sample ID: 950247

Sample wt/vol: 5.0 (g/mL) mL Lab File ID: cr050247a54

Level: (low/med) LOW Date Received: 07/10/99

% Moisture: not dec. ____ Date Analyzed: 07/19/99

GC Column: EQUITY624 ID: 0.53 (mm) Dilution Factor: 1.0

Number TICs found: 0

Soil Extract Volume: ____(uL) Soil Aliquot Volume: ____(uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L

AS NUMBER	COMPOUND NAME RT	EST. CONC.	Q
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Dilution Factor: 1.0

VOLATILE ORGANICS ANALYSIS DATA SHEET

JP424 Contract: 68D50004 Lab Name: COMPUCHEM SDG No.: JW513 Lab Code: COMPU Case No.: 27165 SAS No.: Lab Sample ID: 950546 Matrix: (soil/water) WATER Lab File ID: CN050546A54 5.0 (g/mL) mL Sample wt/vol: Date Received: 07/14/99 Level: (low/med) LOW Date Analyzed: 07/21/99 % Moisture: not dec.

GC Column: EQUITY624 ID: 0.53 (mm)

Soil Extract Volume:____(uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS: CAS NO. COMPOUND (ug/L or ug/Kg) ug/L Q

	Chloromethane	10	
	Bromomethane	10	
	Vinyl Chloride	10	
75-00-3	Chloroethane	10	ע
75-09-2	Methylene Chloride	27	
57-64-1	Acetone	10	-
	Carbon Disulfide	10	1 -
75-35-4	1,1-Dichloroethene	10	1 .
75-34-3	1,1-Dichloroethane	10	-
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	ĮŪ
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	ע
78-87-5	1,2-Dichloropropane	10	U
	cis-1,3-Dichloropropene	10	U
	Trichloroethene	10	U
	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2		10	U
	trans-1,3-Dichloropropene	10	U
	Bromoform	10	U
	4-Methyl-2-Pentanone	10	U .
	2-Hexanone	10	U
	Tetrachloroethene	10	ַּט
	1,1,2,2-Tetrachloroethane	10	יטו
	Toluene	. I	טו
	Chlorobenzene	_ 1	שו
	Ethylbenzene	• (บ
	Styrene	10	טוט
	Xylene (Total)		Ü .
	1,2-Dichloroethene (total)	• i	ט ט

FORM I VOA

JP424

Lab Name: COMPUC	
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Contract: 68D50004

Lab Code: COMPU Case No.: 27165

LOW

SAS No.:

SDG No.: JW513

Matrix: (soil/water) WATER

Lab Sample ID: 950546

Sample wt/vol:

5.0 (g/mL) mL

Lab File ID: cn050546a54

Level: (low/med)

Date Received: 07/14/99

% Moisture: not dec.

Date Analyzed: 07/21/99

GC Column: EQUITY624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume:

Soil Aliquot Volume: _____

(uL)

Number TICs found: 0

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
CAS NUMBER 1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15.	COMPOUND NAME	RT	EST. CONC.	
17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30.				

cf 8-26-99

JP427

Lab Name: COMPUCHEM

Contract: 68D50004

Lab Code: COMPU Case No.: 27165 SAS No.:

SDG No.: JW513

Matrix: (soil/water) WATER

Lab Sample ID: 950549

Sample wt/vol:

5.0 (g/mL) mL

Lab File ID: CN050549A54

Level: (low/med)

LOW

Date Received: 07/14/99

% Moisture: not dec. _____

Date Analyzed: 07/21/99

GC Column: EQUITY624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: ____(uL)

CONCENTRATION UNITS:

CAS NO. COMPOUND

(ug/L or ug/Kg) ug/L

74-87-3	1
74-83-9Bromomethane 10 U 75-01-4Vinyl Chloride 10 U 75-00-3	
75-01-4	- 1.
75-00-3	1
75-09-2Methylene Chloride	
67-64-1	
67-64-1	
75-35-41,1-Dichloroethene 10 U 75-34-31,1-Dichloroethane 10 U 67-66-3Chloroform 10 U 107-06-21,2-Dichloroethane 10 U 78-93-32-Butanone 10 U 71-55-61,1,1-Trichloroethane 10 U 56-23-5Carbon Tetrachloride 10 U 75-27-4Bromodichloromethane 10 U 78-87-51,2-Dichloropropane 10 U 10061-01-5cis-1,3-Dichloropropene 10 U 79-01-6Trichloroethene 10 U 124-48-1Dibromochloromethane 10 U 79-00-51,1,2-Trichloroethane 10 U 71-43-2Benzene 10 U 10061-02-6trans-1,3-Dichloropropene 10 U	- 1
75-35-41,1-Dichloroethene 10 U 75-34-31,1-Dichloroethane 10 U 67-66-3Chloroform 10 U 107-06-21,2-Dichloroethane 10 U 78-93-32-Butanone 10 U 71-55-61,1,1-Trichloroethane 10 U 56-23-5Carbon Tetrachloride 10 U 75-27-4Bromodichloromethane 10 U 78-87-51,2-Dichloropropane 10 U 10061-01-5cis-1,3-Dichloropropene 10 U 79-01-6Trichloroethene 10 U 124-48-1Dibromochloromethane 10 U 79-00-51,1,2-Trichloroethane 10 U 71-43-2Benzene 10 U 10061-02-6trans-1,3-Dichloropropene 10 U	1
75-34-31,1-Dichloroethane 10 U 67-66-3Chloroform 10 U 107-06-21,2-Dichloroethane 10 U 78-93-32-Butanone 10 U 71-55-61,1,1-Trichloroethane 10 U 56-23-5Carbon Tetrachloride 10 U 75-27-4Bromodichloromethane 10 U 78-87-51,2-Dichloropropane 10 U 10061-01-5cis-1,3-Dichloropropene 10 U 79-01-6Trichloroethene 10 U 124-48-1Dibromochloromethane 10 U 79-00-51,1,2-Trichloroethane 10 U 71-43-2Benzene 10 U 10061-02-6trans-1,3-Dichloropropene 10 U	
67-66-3	
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75 25 2	
108-10-14-Methyl-2-Pentanone 10 U	-
591-78-62-Hexanone 10 U	
127-18-4Tetrachloroethene 10 U	
79-34-51,1,2,2-Tetrachloroethane10_U	1
108-88-3Toluene	
108-88-3	
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1 200 12 3 00/2000	
1 1550-20-7	
540-59-01,2-Dichloroethene (total) 10 U	

· JP427	•	-

Lab Name: COMPUCHEM		Contract: 68D5	0004		
Lab Code: COMPU	Case No.: 27165	SAS No.:	SDG I	No.: JW513	
Matrix: (soil/water)	WATER	Lab S	Sample ID:	950549	•
Sample wt/vol:	5.0 (g/mL) mL	Lab I	File ID:	cn050549a54	
Level: (low/med)	LOW	Date	Received:	07/14/99	•
% Moisture: not dec.	<u> </u>	Date	Analyzed:	07/21/99	
CC Column FOUTTV624	TD 0 53 (mm)	Dilut	ion Facto	r: 1.0	·, ·

Soil Extract Volume: ____(uL)

Number TICs found: 0

Soil Aliquot Volume: ____(uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L

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JP430

Lab Name: COMPUCHEM Contract: 68D50004 Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JW513 Lab Sample ID: 950550 Matrix: (soil/water) WATER Lab File ID: CN050550A54 Sample wt/vol: 5.0 (g/mL) mLLevel: (low/med) Date Received: 07/14/99 LOW % Moisture: not dec. Date Analyzed: 07/21/99

GC Column: EQUITY624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

> CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L

CAS NO.	COMPOUND (ug/L or ug/	/Kg) ug/L	Q
	Chloromethane		10 U
	Bromomethane		10 U
	Vinyl Chloride		10 U
	Chloroethane		10 U
75-09-2	Methylene Chloride	,	10 U
67-64-1			6 J
75-15-0	Carbon Disulfide		10 U
75-35-4	1,1-Dichloroethene		10 U
75-34-3	1,1-Dichloroethane		10 U
67-66-3	Chloroform		10 U
107-06-2	1,2-Dichloroethane		10 U
	2-Butanone		10 U
	1,1,1-Trichloroethane		10 U
56-23-5	Carbon Tetrachloride	,	10 U
	Bromodichloromethane		10 U
	1,2-Dichloropropane		10 U
10061-01-5	cis-1,3-Dichloropropene		10 U
79-01-6	Trichloroethene		10 0
124-48-1	Dibromochloromethane		10 U
	1,1,2-Trichloroethane	•	10 0
71-43-2			10 0
	trans-1,3-Dichloropropene		10 0
	Bromoform		10 0
	4-Methyl-2-Pentanone		10 0
591~78~6~~~	2-Hexanone		10 0
	Tetrachloroethene		10 0
	1,1,2,2-Tetrachloroethane		1 1
108-88-3			10 U
			10 0
108-90-/	Chlorobenzene		10 0
100-41-4	Ethylbenzene		10 U
100-42-5	Styrene		10 0
1330-20-7	Xylene (Total)		10 0
540-59-0	1,2-Dichloroethene (total)		10 U

CK-26-99 OLM03.0

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

	JP430	
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Lab Name: COMPUCHEM

Contract: 68D50004

Lab Code: COMPU

Case No.: 27165 SAS No.:

SDG No.: JW513

Matrix: (soil/water) WATER

Lab Sample ID: 950550

Sample wt/vol: 5.0 (g/mL) mL

Lab File ID: cn050550a54

Level: (low/med) LOW

Date Received: 07/14/99

% Moisture: not dec.

Dilution Factor: 1.0

Date Analyzed: 07/21/99

GC Column: EQUITY624 ID: 0.53 (mm)

Soil Aliquot Volume:

(uL)

Soil Extract Volume: (uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L

Number TICs found: 0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	. Q
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VOLATILE ORGANICS ANALYSIS DATA SHEET

JP431 Contract: 68D50004 Lab Name: COMPUCHEM SAS No.: SDG No.: JW513 Case No.: 27165 Lab Code: COMPU Lab Sample ID: 950551 Matrix: (soil/water) WATER Lab File ID: CN050551A54 5.0 (g/mL) mL Sample wt/vol: Date Received: 07/14/99 Level: (low/med) LOW Date Analyzed: 07/21/99 % Moisture: not dec. _ Dilution Factor: 1.0 GC Column: EQUITY624 ID: 0.53 (mm) Soil Aliquot Volume: ____ (uL) Soil Extract Volume: (uL) CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L CAS NO. COMPOUND

	Gullerenthano	10 U
l	74-87-3Chloromethane	
١	74-83-9Bromomethane	10 U
١	75-01-4Vinyl Chloride	
١	75-00-3Chloroethane	t
١	75-09-2Methylene Chloride	10 U 7 J
١	67-64-1Acetone	
١	75-15-0Carbon Disulfide	10 U
١	75-35-41,1-Dichloroethene	10 U
١	75-34-31,1-Dichloroethane	10 U
1	67-66-3Chloroform	10 U
1	107-06-21,2-Dichloroethane	10 U
I	78-93-32-Butanone	10 U
1	71-55-61,1,1-Trichloroethane_	10 U
	56-23-5Carbon Tetrachloride	: 10 U
	75-27-4Bromodichloromethane	10 U
-	78-87-51,2-Dichloropropane	10 U
	10061-01-5cis-1,3-Dichloropropene	10 U
	79-01-6Trichloroethene	10 U
	124-48-1Dibromochloromethane	10 U
	79-00-51,1,2-Trichloroethane	10 U
	71-43-2Benzene	10 U
	10061-02-6trans-1,3-Dichloroprope	ene 10 U
	75-25-2Bromoform	10 U
	108-10-14-Methyl-2-Pentanone	10 U
	591-78-62-Hexanone	10 U
	127-18-4Tetrachloroethene	10 U
	79-34-51,1,2,2-Tetrachloroetha	ine 10 U
	108-88-3Toluene	10 0
	108-90-7Chlorobenzene	10 0
	100-41-4Ethylbenzene	10 0
	100-41-4Styrene	10 0
	1330-20-7Xylene (Total)	10 U
	540-59-01, 2-Dichloroethene (total)	
	540-59-0I, 2-DIGITOTOECHERE (CO	-01

8 OLM03.0

FORM I VOA

EPA SAMPLE NO.

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VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

JP431 Contract: 68D50004

Lab Name: COMPUCHEM

Lab Code: COMPU Case No.: 27165 SAS No.:

SDG No.: JW513

Matrix: (soil/water) WATER

Lab Sample ID: 950551

Sample wt/vol:

5.0 (g/mL) mL

Lab File ID: cn050551a54

Level: (low/med) LOW Date Received: 07/14/99

% Moisture: not dec.

Date Analyzed: 07/21/99

GC Column: EQUITY624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume:

CONCENTRATION UNITS:

Number TICs found: 0 (ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME RT	EST. CONC.	Q
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CP8-26-99

JW513 Lab Name: COMPUCHEM Contract: 68D50004 Case No.: 27165 SAS No.: SDG No.: JW513 Lab Code: COMPU Lab Sample ID: 949462 Matrix: (soil/water) WATER Lab File ID: CN049462A57 Sample wt/vol: 5.0 (g/mL) mL Level: (low/med) Date Received: 07/02/99 LOW % Moisture: not dec. Date Analyzed: 07/10/99 GC Column: EOUITY624 ID: 0.53 (mm) Dilution Factor: 1.0 Soil Aliquot Volume: (uL) Soil Extract Volume: (uL) CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L COMPOUND CAS NO. 74-87-3-----Chloromethane 10 U 10 U 74-83-9-----Bromomethane 10 U 75-01-4-----Vinyl Chloride 75-00-3-----Chloroethane 10 U 10 U 75-09-2-----Methylene Chloride 10 U 67-64-1----Acetone 75-15-0-----Carbon Disulfide 10 U 10 U 75-35-4----1,1-Dichloroethene 75-34-3-----1,1-Dichloroethane 10 U 67-66-3-----Chloroform 10 U 107-06-2----1,2-Dichloroethane_ 10 U 78-93-3-----2-Butanone 10 U 10 U 71-55-6-----1,1,1-Trichloroethane 10 U

56-23-5-----Carbon Tetrachloride 75-27-4-----Bromodichloromethane 78-87-5----1, 2-Dichloropropane 10061-01-5----cis-1,3-Dichloropropene 79-01-6----Trichloroethene 124-48-1-----Dibromochloromethane 79-00-5----1,1,2-Trichloroethane 71-43-2----Benzene 10061-02-6----trans-1,3-Dichloropropene 75-25-2-----Bromoform 108-10-1----4-Methyl-2-Pentanone

591-78-6----2-Hexanone 127-18-4-----Tetrachloroethene 79-34-5----1,1,2,2-Tetrachloroethane 108-88-3-----Toluene_

108-90-7-----Chlorobenzene 100-41-4-----Ethylbenzene 100-42-5-----Styrene

1330-20-7-----Xylene (Total) 540-59-0----1, 2-Dichloroethene (total)

Ug-26-99

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FORM I VOA

EPA	SAMPLE	NO.

Lab	Name:	COMPUCHEM	Contract:	68D50004

Case No.: 27165

JW513

Matrix: (soil/water) WATER

Lab Sample ID: 949462

Sample wt/vol:

Lab Code: COMPU

5.0 (g/mL) mL

Lab File ID: cn049462a57

Level: (low/med) LOW

Date Received: 07/02/99

% Moisture: not dec.

Date Analyzed: 07/10/99

GC Column: EQUITY624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

SDG No.: JW513

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L

SAS No.:

Number TICs found: 0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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JW514 Contract: 68D50004 Lab Name: COMPUCHEM

Case No.: 27165 SAS No.: SDG No.: JW513 Lab Code: COMPU

Lab Sample ID: 949467 Matrix: (soil/water) WATER

Lab File ID: CN049467A57 5.0 (g/mL) mL Sample wt/vol:

Date Received: 07/02/99 Level: (low/med) LOW

Date Analyzed: 07/10/99 % Moisture: not dec.

Dilution Factor: 1.0 GC Column: EQUITY624 ID: 0.53 (mm)

Soil Aliquot Volume: ____(uL) Soil Extract Volume: (uL)

CONCENTRATION UNITS: CAS NO. COMPOUND (ug/L or ug/Kg) ug/L 10 U 74-87-3-----Chloromethane 10 U 74-83-9-----Bromomethane 10 U 75-01-4-----Vinyl Chloride_____ 10 U 75-00-3-----Chloroethane___ 10 U 75-09-2-----Methylene Chloride 10 U 67-64-1-----Acetone 75-15-0-----Carbon Disulfide 10 U

10 U 75-35-4----1,1-Dichloroethene 10 U 75-34-3----1,1-Dichloroethane____ 10 U 67-66-3-----Chloroform_ 10 U 107-06-2----1,2-Dichloroethane___ 10 U 78-93-3----2-Butanone_ 10 U 71-55-6----1,1,1-Trichloroethane_ 10 U 56-23-5-----Carbon Tetrachloride____

10 U 75-27-4-----Bromodichloromethane_ 10 U 78-87-5----1,2-Dichloropropane___ 10061-01-5----cis-1,3-Dichloropropene 10 U 10 U 79-01-6-----Trichloroethene

10 U 124-48-1-----Dibromochloromethane 10 U 79-00-5----1,1,2-Trichloroethane____ 10 U 71-43-2----Benzene 10 0 10061-02-6----trans-1,3-Dichloropropene

10 U 75-25-2----Bromoform 10 U 108-10-1----4-Methyl-2-Pentanone

10 U 591-78-6----2-Hexanone 10 U 127-18-4-----Tetrachloroethene

79-34-5----1,1,2,2-Tetrachloroethane 10 U 108-88-3-----Toluene 10 U 108-90-7-----Chlorobenzene 10 U 10 U

100-41-4----Ethylbenzene 10 U 100-42-5-----Styrene 1330-20-7-----Xylene (Total) 10 U 10 U

540-59-0----1,2-Dichloroethene (total)

OLMO3.0

FORM I VOA

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Lab Name: COMPUCHEM	Contract: 68D50004
Lab Code: COMPU Case No.: 271	165 SAS No.: SDG No.: JW513
Matrix: (soil/water) WATER	Lab Sample ID: 949467
Sample wt/vol: 5.0 (g/mL)) mL Lab File ID: cn049467a57
Level: (low/med) LOW	Date Received: 07/02/99
% Moisture: not dec	Date Analyzed: 07/10/99
GC Column: EQUITY624 ID: 0.53 (r	mm) Dilution Factor: 1.0
Soil Extract Volume: (uL)	Soil Aliquot Volume:(u

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L Number TICs found: 0

Soil Extract Volume:

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JW522 Contract: 68D50004

Lab Name: COMPUCHEM

Case No.: 27165 SAS No.: Lab Code: COMPU

Matrix: (soil/water) WATER

Lab Sample ID: 949468

Sample wt/vol:

5.0 (g/mL) mL

Lab File ID: CR049468B51

SDG No.: JW513

Level: (low/med)

LOW

Date Received: 07/02/99

% Moisture: not dec.

Date Analyzed: 07/12/99

GC Column: EQUITY624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume:____(uL)

Soil Aliquot Volume: ____(uL)

CONCENTRATION UNITS:

CAS NO.

COMPOUND

(ug/L or ug/Kg) ug/L

	8	7.0 77
74-87-3Chloromethane		10 U
74-83-9Bromomethane		10 U
75-01-4Vinyl Chloride		10 0
75-00-3Chloroethane		10 U
75-09-2Methylene Chloride		10 U
67-64-1Acetone		2 J
75-15-0Carbon Disulfide		2 J
75-35-41,1-Dichloroethene		10 U
75-34-31,1-Dichloroethane		10 U
67-66-3Chloroform		10 U
107-06-21,2-Dichloroethane		10 U
78-93-32-Butanone		10 U
71-55-61,1,1-Trichloroethane		10 U
56-23-5Carbon Tetrachloride		10 U
75-27-4Bromodichloromethane		10 U
78-87-51,2-Dichloropropane		10 U
10061-01-5cis-1,3-Dichloropropene		10 U
79-01-6Trichloroethene		10 U
124-48-1Dibromochloromethane		10 U
79-00-51,1,2-Trichloroethane		10 U
71-43-2Benzene		2 J
10061-02-6trans-1,3-Dichloropropene		10 U
75-25-2Bromoform		10 U
108-10-14-Methyl-2-Pentanone		10 U
591-78-62-Hexanone		10 U
127-18-4Tetrachloroethene		10 U
79-34-51,1,2,2-Tetrachloroethane		10 U
108-88-3Toluene		10 05
108-90-7Chlorobenzene		5 J
100-41-4Ethylbenzene		10 05
100-42-5Styrene	· ·	10 05
1330-20-7Xylene (Total)		2 7
540-59-01,2-Dichloroethene (total)		10 U
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		•	4				JW522	
Lab	Name:	COMPUCHEM	Co	ontract:	68D50004			

Lab Code: COMPU SAS No.: SDG No.: JW513 Case No.: 27165

Matrix: (soil/water) WATER Lab Sample ID: 949468

Sample wt/vol: 5.0 (g/mL) mL Lab File ID: cr049468b51

Level: (low/med) LOW Date Received: 07/02/99

Date Analyzed: 07/12/99 % Moisture: not dec.

Dilution Factor: 1.0 GC Column: EQUITY624 ID: 0.53 (mm)

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

Number TICs found: 2 (ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 2. 119-64-2	SUBSTITUTED BENZENE NAPHTHALENE, 1,2,3,4-TETRAHY	21.93 23.86	5 5	JV NJ
4.				
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7. 8.				
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11.				
12. <u> </u>				
14. 15.				
16. 17.				
18.				
19. 20.				
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23.				
24. 25.				
26. 27.				
28				
30				

JW527 Contract: 68D50004 Lab Name: COMPUCHEM SDG No.: JW513 Lab Code: COMPU Case No.: 27165 SAS No.: Lab Sample ID: 949694 Matrix: (soil/water) WATER 5.0 (g/mL) mL Lab File ID: CN049694B51 Sample wt/vol: Date Received: 07/03/99 Level: (low/med) LOW Date Analyzed: 07/13/99 % Moisture: not dec. Dilution Factor: 10.0 GC Column: EQUITY624 ID: 0.53 (mm) Soil Aliquot Volume: Soil Extract Volume: (uL) (uL)

CONCENTRATION UNITS:
CAS NO. COMPOUND (ug/L or ug/Kg) ug/L Q

	•			
74-87-3	Chloromethane		100	ט
	Bromomethane		100	U
	Vinyl Chloride	4	100	υl
	Chloroethane		100	י די
	Methylene Chloride		420	
67-64-1	Acetone		130	
	Carbon Disulfide	·	100	ן ע
75-35-4	1,1-Dichloroethene		100	
75-34-3	1,1-Dichloroethane		100	
	Chloroform		100	
107-06-2	1,2-Dichloroethane		100	-
78-93-3	2-Butanone	,	100	
	1,1,1-Trichloroethane		100	
	Carbon Tetrachloride		100	1
	Bromodichloromethane		100	
	1,2-Dichloropropane	·	100	
	cis-1,3-Dichloropropene		100	
	Trichloroethene		100	
	Dibromochloromethane		100	
	1,1,2-Trichloroethane		100	
	Benzene		100	υ
	trans-1,3-Dichloropropene		100	-
	Bromoform		100	1
	4-Methyl-2-Pentanone		100	U
	2-Hexanone		100	υ
	Tetrachloroethene		100	ט
	1,1,2,2-Tetrachloroethane		100	Ū
	Toluene		100	
	Chlorobenzene		100	
	Ethylbenzene		100	
	Styrene		100	ט
	Xylene (Total)		100	
540-59-0	1,2-Dichloroethene (total)	1	100	1
- 10 00 0				
l 		. 1		١ ١

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OLMO3.0

Contract: 68D50004 Lab Name: COMPUCHEM

Case No.: 27165 SAS No.: SDG No.: JW513

Matrix: (soil/water) WATER

Lab Sample ID: 949694

Sample wt/vol:

Lab Code: COMPU

5.0 (g/mL) mL

Lab File ID: cn049694b51

Level: (low/med)

LOW

Date Received: 07/03/99

% Moisture: not dec.

Date Analyzed: 07/13/99

GC Column: EQUITY624 ID: 0.53 (mm)

Dilution Factor: 10.0

Soil Extract Volume:____

Soil Aliquot Volume: ____ (uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L

Number TICs found: 2

CAS NUMBER	S NUMBER COMPOUND NAME RT EST. CO		EST. CONC.	Q
1. 76-13-1 2. 110-54-3	ETHANE, 1,1,2-TRICHLORO-1,2, HEXANE	8.79 10.92	198 57	NJ NJ
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V				-

JW530 Contract: 68D50004

Lab Name: COMPUCHEM

Lab Code: COMPU

Case No.: 27165

SAS No.:

SDG No.: JW513

Matrix: (soil/water) WATER

Lab Sample ID: 949475

Sample wt/vol:

5.0 (g/mL) mL

Lab File ID:

CR049475B51

Level: (low/med)

LOM

Date Received: 07/02/99

% Moisture: not dec. ____

Date Analyzed: 07/12/99

GC Column: EQUITY624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume:____

Soil Aliquot Volume: _

CAS NO.

COMPOUND

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L

		·	
75-00-3 75-09-2 75-09-2 75-15-0 75-35-4 75-34-3 75-34-3 107-06-2 78-93-3 71-55-6 75-27-4 78-87-5 10061-01-5 79-01-6 79-01-6 79-00-5 124-48-1 79-00-5 10061-02-6 75-25-2 108-10-1 591-78-6 127-18-4	-Bromomethane -Vinyl Chloride -Chloroethane -Methylene Chloride -Acetone -Carbon Disulfide -1,1-Dichloroethane -1,1-Dichloroethane -1,2-Dichloroethane -2-Butanone -1,1-Trichloroethane -2-Butanone -1,1-Trichloroethane -1,2-Dichloromethane -1,2-Dichloromethane -1,2-Dichloropropane -cis-1,3-Dichloropropene -Trichloroethene -Dibromochloromethane -1,1,2-Trichloroethane -1,1,2-Trichloroethane -Benzene -trans-1,3-Dichloropropene -Bromoform -4-Methyl-2-Pentanone -2-Hexanone -Tetrachloroethene	3 10 10 10 10 10 10 10 10 10 10 10	מפטטט ניסטטטטטטטטטטטטטטטטטטטטטטטטטטטטטטטטט
10061-01-5 79-01-6 124-48-1 79-00-5	cis-1,3-Dichloropropene Trichloroethene Dibromochloromethane 1,1,2-Trichloroethane	10 10 10	U U U
10061-02-6 75-25-2 108-10-1 591-78-6	trans-1,3-Dichloropropene Bromoform 4-Methyl-2-Pentanone 2-Hexanone	10	ט ט ט ט
79-34-5 108-88-3 108-90-7	1,1,2,2-Tetrachloroethane Toluene Chlorobenzene Ethylbenzene_	10	0 U 2 J 0 U 0 U 0 U
1330-20-7	Xylene (Total) 1,2-Dichloroethene (total)	⊸ i	10 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
	FORM I VOA		OLMO3.0

JW53	0

Lab Name: COMPUCHEM

Contract: 68D50004

Lab Code: COMPU Case No.: 27165 SAS No.:

SDG No.: JW513

Matrix: (soil/water) WATER

Lab Sample ID: 949475

Sample wt/vol: 5.0 (g/mL) mL

Lab File ID: cr049475b51

Level: (low/med)

LOW

Date Received: 07/02/99

Date Analyzed: 07/12/99

% Moisture: not dec.

GC Column: EQUITY624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: _

CONCENTRATION UNITS:

Number TICs found: 23

(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q	
1. 2. 3. 4. 5. 78-78-4 6. 7. 8. 9. 10. 11. 76-13-1 12. 13. 14. 15. 16. 17. 110-54-3 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30.	UNKNOWN ALKENE UNKNOWN ALKENE UNKNOWN ALKENE UNKNOWN HYDROCARBON BUTANE, 2-METHYL- UNKNOWN HYDROCARBON UNKNOWN HYDROCARBON UNKNOWN HYDROCARBON UNKNOWN HYDROCARBON UNKNOWN HYDROCARBON ETHANE, 1,1,2-TRICHLORO-1,2, UNKNOWN ALKANE UNKNOWN ALKANE UNKNOWN ALKENE UNKNOWN ALKENE HEXANE UNKNOWN ALKENE SUBSTITUTED HEXENE SUBSTITUTED HEXENE SUBSTITUTED HEXENE UNKNOWN ALKENE UNKNOWN ALKENE UNKNOWN HYDROCARBON UNKNOWN HYDROCARBON UNKNOWN HYDROCARBON	4.88 5.24 5.61 6.34 6.73 7.58 7.95 8.24 8.38 8.80 9.60 9.85 9.91 10.35 10.73 10.92 11.11 11.23 11.59 13.28 14.10 22.74	26 10 23 31 52 16 14 9 16 17 10 9 10 26 11 6		

OLMO3.0

FORM I VOA-TIC

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VOLATILE ORGANICS ANALYSIS DATA SHEET

JW536

Lab Name: COMPUCHEM

Contract: 68D50004

Lab Code: COMPU Case No.: 27165 SAS No.:

SDG No.: JW513

Matrix: (soil/water) WATER

Lab Sample ID: 949695

Sample wt/vol:

5.0 (g/mL) mL

Lab File ID: CN049695B51

Level: (low/med)

LOW

Date Received: 07/03/99

% Moisture: not dec. ____

Date Analyzed: 07/13/99

GC Column: EQUITY624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume:

CAS NO.

Soil Aliquot Volume: ____(uL)

CONCENTRATION UNITS:

COMPOUND

(ug/L or ug/Kg) ug/L

74-87-3Chloromethane		10 ע
74-83-9Bromomethane		10 U
75-01-4Vinyl Chloride		10 U
75-00-3Chloroethane		10 U
75-09-2Methylene Chloride		36
67-64-1Acetone		16
75-15-0Carbon Disulfide		10 U
75-35-41,1-Dichloroethene		10 U
75-34-31,1-Dichloroethane		10 U
67-66-3Chloroform		10 U
107-06-21,2-Dichloroethane		10 U
78-93-32-Butanone		10 U
71-55-61,1,1-Trichloroethane		10 U
56-23-5Carbon Tetrachloride	·	10 U
75-27-4Bromodichloromethane		10 U
78-87-51,2-Dichloropropane		10 U
10061-01-5cis-1,3-Dichloropropene		10 U
79-01-6Trichloroethene		10 U
124-48-1Dibromochloromethane		10 U
79-00-51,1,2-Trichloroethane		10 U
71-43-2Benzene		10 U
10061-02-6trans-1,3-Dichloropropene		10 U
75-25-2Bromoform		10 U
108-10-14-Methyl-2-Pentanone		10 U
591-78-62-Hexanone		10 U
127-18-4Tetrachloroethene		10 U
79-34-51,1,2,2-Tetrachloroethane		10 U
108-88-3Toluene		10 U
108-90-7Chlorobenzene		10 U
100-41-4Ethylbenzene		10 U
100-42-5Styrene		10 U
1330-20-7Xylene (Total)	\.	10 U
540-59-01,2-Dichloroethene (total)	10 U
		5. 1
		11/11/2017

JW536	

Lab Na	me:	COMPUCHEM
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Contract: 68D50004

Lab Code: COMPU Case No.: 27165 SAS No.:

SDG No.: JW513

Matrix: (soil/water) WATER

Lab Sample ID: 949695

Sample wt/vol: 5.0 (g/mL) mL

Lab File ID: cn049695b51

Level: (low/med) LOW

Date Received: 07/03/99

% Moisture: not dec.

Date Analyzed: 07/13/99

GC Column: EQUITY624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Aliquot Volume: (uL)

Soil Extract Volume: ____(uL)

CONCENTRATION UNITS:

Number TICs found: 1

(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	. Q
1. 76-13-1	ETHANE, 1,1,2-TRICHLORO-1,2,	8.79	20	NJ NJ
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6		1,1,44		
7.	#12/4/12/11 1			
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.9.				-
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JW537 Contract: 68D50004 Lab Name: COMPUCHEM Case No.: 27165 SAS No.: SDG No.: JW513 Lab Code: COMPU Lab Sample ID: 949696 Matrix: (soil/water) WATER Sample wt/vol: Lab File ID: CN049696B51 5.0 (g/mL) mL Date Received: 07/03/99 Level: (low/med) LOW % Moisture: not dec. Date Analyzed: 07/13/99 Dilution Factor: 1.0 GC Column: EQUITY624 ID: 0.53 (mm)

Soil Extract Volume: ____(uL) Soil Aliquot Volume: ____(uL)

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) ug/L 74-87-3-----Chloromethane 10 TU 74-83-9-----Bromomethane_ 10 U 75-01-4-----Vinyl Chloride 10 U 75-00-3-----Chloroethane 10 U 75-09-2----Methylene Chloride 28 67-64-1-----Acetone 14 75-15-0-----Carbon Disulfide 10 0 75-35-4----1,1-Dichloroethene 10 U 75-34-3----1,1-Dichloroethane 10 U 67-66-3-----Chloroform 39 10 0 107-06-2----1, 2-Dichloroethane 78-93-3----2-Butanone 10 U 71-55-6----1,1,1-Trichloroethane 10 U 56-23-5-----Carbon Tetrachloride 10 U 7 1 3 75-27-4-----Bromodichloromethane 78-87-5----1, 2-Dichloropropane_ 10 U 10061-01-5----cis-1,3-Dichloropropene 10 U 10 U 79-01-6----Trichloroethene 124-48-1-----Dibromochloromethane 2 J 10 U 79-00-5----1,1,2-Trichloroethane 71-43-2----Benzene 10 U 10061-02-6----trans-1,3-Dichloropropene 10 U 75-25-2----Bromoform 10 U 108-10-1----4-Methyl-2-Pentanone 10 U 591-78-6----2-Hexanone 10 U

> 08-26-99 OLM03.0

10 U

10 U

10 U

10 U

10 U

10 U

10 U

127-18-4----Tetrachloroethene

108-90-7-----Chlorobenzene

100-41-4-----Ethylbenzene

1330-20-7------Xylene (Total)

108-88-3----Toluene

100-42-5----Styrene

79-34-5----1,1,2,2-Tetrachloroethane

540-59-0----1, 2-Dichloroethene (total)

Lab	Name:	COMPUCHEM
	Titulic .	

Contract: 68D50004

Lab Code: COMPU

Case No.: 27165 SAS No.:

SDG No.: JW513

Matrix: (soil/water) WATER

Lab Sample ID: 949696

Sample wt/vol: 5.0 (g/mL) mL

Lab File ID: cn049696b51

Level: (low/med) LOW

Date Received: 07/03/99

% Moisture: not dec.

Date Analyzed: 07/13/99

GC Column: EQUITY624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: ____(uL)

Soil Aliquot Volume:

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L

Number TICs found: 2

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	·Q
======================================	ETHANE, 1,1,2-TRICHLORO-1,2, SUBSTITUTED ALKANE	8.79 13.94	17 9	J <i>N</i>
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7.				_
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JW568

Contract: 68D50004 Lab Name: COMPUCHEM

Lab Code: COMPU Case No.: 27165 SAS No.:

SDG No.: JW513

Matrix: (soil/water) WATER

Lab Sample ID: 949697

Sample wt/vol:

5.0 (g/mL) mL

Lab File ID: CN049697B51

Level: (low/med)

LOW

Date Received: 07/03/99

% Moisture: not dec.

Date Analyzed: 07/13/99

GC Column: EQUITY624 ID: 0.53

COMPOUND

Dilution Factor: 1.0

Soil Extract Volume:___

CAS NO.

Soil Aliquot Volume: ____

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L

74-87-3Chloromethane	10 0
74-83-9Bromomethane	10 U
75-01-4Vinyl Chloride	10 U
75-00-3Chloroethane	10 0
75-09-2Methylene Chloride	10 U
67-64-1Acetone	4 J
75-15-0Carbon Disulfide	10 U
75-35-41,1-Dichloroethene	10 U
75-34-31,1-Dichloroethane	10 U
67-66-3Chloroform	10 0
107-06-21,2-Dichloroethane	10 0
78-93-32-Butanone	10 0
71-55-61,1,1-Trichloroethane_	
56-23-5Carbon Tetrachloride	10 U
75-27-4Bromodichloromethane	10 0
78-87-51,2-Dichloropropane	10 0
10061-01-5cis-1,3-Dichloropropen	
79-01-6Trichloroethene	10 0
124-48-1Dibromochloromethane	10 U
79-00-51,1,2-Trichloroethane	10 0
71-43-2Benzene	10 0
10061-02-6trans-1,3-Dichloroprop	
75-25-2Bromoform	10 0
108-10-14-Methyl-2-Pentanone_	10 0
591-78-62-Hexanone	
	10 U
127-18-4Tetrachloroethene	
79-34-51,1,2,2-Tetrachloroeth	
108-88-3Toluene	10 U
108-90-7Chlorobenzene	[
100-41-4Ethylbenzene	
100-42-5Styrene	10 U
1330-20-7Xylene (Total)	10 U
540-59-01, 2-Dichloroethene (to	otal) 10 U

	-	JW568
Contract:	68D50004	

Lab Name: COMPUCHEM

Lab Code: COMPU Case No.: 27165 SAS No.:

SDG No.: JW513

Matrix: (soil/water) WATER

Lab Sample ID: 949697

Sample wt/vol:

5.0 (g/ml) ml

Lab File ID: cn049697b51

Level: (low/med) LOW

Date Received: 07/03/99

% Moisture: not dec.

Date Analyzed: 07/13/99

GC Column: EQUITY624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume:

Number TICs found: 1

Soil Aliquot Volume: _

(uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L

'AS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
. 124-19-6	NONANAL	22.74	6	NJ
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FORM I VOA-TIC

JW569 Contract: 68D50004 Lab Name: COMPUCHEM Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JW513 Lab Sample ID: 949698 Matrix: (soil/water) WATER Lab File ID: CN049698B51 5.0 (g/mL) mL Sample wt/vol: Date Received: 07/03/99 Level: (low/med) Date Analyzed: 07/13/99 % Moisture: not dec. Dilution Factor: 1.0 GC Column: EQUITY624 ID: 0.53 (mm) Soil Aliquot Volume: _____ (uL) Soil Extract Volume:____(uL) CONCENTRATION UNITS: COMPOUND (ug/L or ug/Kg) ug/L CAS NO.

			- 1	
74-87-3	Chloromethane	Service Services	10 U	
	Bromomethane	•	10 U	l
	Vinyl Chloride		.10 U	į.
75-00-3	Chloroethane		10 U	
75-00-3	Methylene Chloride		10 U]
67-64-1			3 J	-
75-15-0	Carbon Disulfide		10 U	- 1
75-25-4	1,1-Dichloroethene		10 U	
75 34 3	1,1-Dichloroethane		10 U	
	Chloroform		10 U	- 1
	1,2-Dichloroethane		10 U	
	2-Butanone		10 U	
			10 0	1.
/1-55-6	1,1,1-Trichloroethane		10 U	
56-23-5	Carbon Tetrachloride		10 U	
75-27-4	Bromodichloromethane		10 0	- 1
78-87-5	1,2-Dichloropropane		10 U	- 1
10061-01-5	cis-1,3-Dichloropropene		10 0	- 1
79-01-6	Trichloroethene		10 0	
124-48-1	Dibromochloromethane		10 0	1
79-00-5	1,1,2-Trichloroethane			1
71-43-2	Benzene		10 U	- 1
10061-02-6	trans-1,3-Dichloropropene		10 U	
75-25-2	Bromoform		10 0	1
108-10-1	4-Methyl-2-Pentanone		10 U	. [
591-78-6	2-Hexanone		10 U	- 1
127-18-4	Tetrachloroethene		10 U	- 1
79-34-5	1,1,2,2-Tetrachloroethane		.10 ប	
108-88-3	Toluene		10 U	
	Chlorobenzene		10 U	
	Ethylbenzene	.	10 U	1
	Styrene		10 U	
100-42-0	Xylene (Total)	-	10 U	
1330-20-/	1,2-Dichloroethene (total)	-	10 0	1
540-59-0	I, Z-DICHIOTOECHEHE (COCAI)	-	-0 3	•
		- 1	! `	

FORM I VOA

Lab Name: COMPUCHEM Contract: 68D50004

JW569

Lab Code: COMPU Case No.: 27165 SAS No.:

SDG No.: JW513

Matrix: (soil/water) WATER

Lab Sample ID: 949698

Sample wt/vol:

5.0 (g/mL) mL

Lab File ID: cn049698b51

Level: (low/med) LOW

Date Received: 07/03/99

% Moisture: not dec.

Date Analyzed: 07/13/99

GC Column: EQUITY624 ID: 0.53 (mm)

Number TICs found: 0

Dilution Factor: 1.0

Soil Aliquot Volume: (uL)

Soil Extract Volume: ____(uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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VOLATILE ORGANICS ANALYSIS DATA SHEET

JW576

Lab Name: COMPUCHEM

Contract: 68D50004

Lab Code: COMPU

Case No.: 27165 SAS No.:

LOW

SDG No.: JW513

Matrix: (soil/water) WATER

Lab Sample ID: 950023

Sample wt/vol:

5.0 (g/mL) mL

Lab File ID: CN050023A54

Level: (low/med)

Date Received: 07/09/99

% Moisture: not dec.

Date Analyzed: 07/18/99

GC Column: EQUITY624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume:____

Soil Aliquot Volume: _

(uL)

CAS NO.

COMPOUND

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L

		·		······································	1
74-87-3Chloror	ethane	2	10	U I	
74-83-9Bromome			10		
75-01-4Vinyl (ט	
75-00-3Chloroe	ethane	•	10	י ד	
75-09-2Methyle			102	ZU	
67-64-1Acetone			10		
75-15-0Carbon	Disulfide	*•	10		
75-35-41,1-Dic	chloroethene		10	U.	
75-34-31,1-Dic	chloroethane		10	∙υ	
67-66-3Chloro	form		10	U	
107-06-21,2-Dic	chloroethane		10	Ū	
78-93-32-Butar			10	ָ ט	
71-55-61,1,1-5			10	Ū	
56-23-5Carbon	Tetrachloride	•	10	ប	
75-27-4Bromod:	ichloromethane		10	Ū	
78-87-51,2-Die			10	U	
10061-01-5cis-1,	3-Dichloropropene	•	10	-	ŀ
79-01-6Trichle	proethene		10		
124-48-1Dibrom		•	10	U ·	
79-00-51,1,2-			10	Ū	
71-43-2Benzene	e		10	Ŭ	
10061-02-6trans-			10	U	
75-25-2Bromofe	orm		10	Ū	
108-10-14-Meth	/1-2-Pentanone			U	
591-78-62-Hexai				U	
127-18-4Tetrac		· .		Ū	
79-34-51,1,2,	2-Tetrachloroethane	•	10	U	
108-88-3Toluen			· 10	Ū	
108-90-7Chloro			10		
100-41-4Ethylb	enzene		10		
100-42-5Styren	e		10	U	
1330-20-7Xylene	(Total)	•	10	U	.
540-59-01,2-Di	chloroethene (total)		10	Ū	
					1
			-		

JW576	
	1
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Lab Name: COMPUCHEM.

Contract: 68D50004

Lab Code: COMPU Case No.: 27165 SAS No.:

SDG No.: JW513

Matrix: (soil/water) WATER

Lab Sample ID: 950023

Sample wt/vol:

5.0 (g/mL) mL

Lab File ID: cn050023a54

Level: (low/med) LOW

Date Received: 07/09/99

% Moisture: not dec.

Date Analyzed: 07/18/99

GC Column: EQUITY624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Number TICs found: 1

Soil Aliquot Volume: ____

(uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 311-89-7 2.	PERFLUOROTRIBUTYLAMINE Lab Cont.	10.14	12	NJ R
3.				
5. 6.				
7. 8.				
9. 10. 11				
12.				
14. 15.				
16. 17. 18.				
19. 20.		·		
21.				
23. 24.				
25. 26. 27.				
28. 29.				
30.				

JW577 Lab Name: COMPUCHEM Contract: 68D50004

SAS No.:

Lab Code: COMPU

Case No.: 27165

SDG No.: JW513

Matrix: (soil/water) WATER Lab Sample ID: 949973

Lab File ID: CN049973A54 Sample wt/vol: 5.0 (g/mL) mL

Level: (low/med) LOW Date Received: 07/08/99

Date Analyzed: 07/18/99 % Moisture: not dec.

Dilution Factor: 1.0 GC Column: EQUITY624 ID: 0.53 (mm)

Soil Aliquot Volume: (uL) Soil Extract Volume: (uL)

CONCENTRATION UNITS: COMPOUND (ug/L or ug/Kg) ug/L CAS NO.

10 U 74-87-3-----Chloromethane 10 U 74-83-9-----Bromomethane 10 U 75-01-4-----Vinyl Chloride 10 U 75-00-3-----Chloroethane 10 U 75-09-2-----Methylene Chloride 10 U 67-64-1-----Acetone 10 U 75-15-0-----Carbon Disulfide 10 U 75-35-4----1,1-Dichloroethene 10 U 75-34-3----1,1-Dichloroethane_ 10 U 67-66-3----Chloroform 10 U 107-06-2----1, 2-Dichloroethane 10 U 78-93-3----2-Butanone 71-55-6-----1,1,1-Trichloroethane 10 U 56-23-5-----Carbon Tetrachloride 10 U 75-27-4-----Bromodichloromethane 10 U 78-87-5----1,2-Dichloropropane 10 U 10061-01-5----cis-1,3-Dichloropropene 10 U 10 U 79-01-6-----Trichloroethene 10 U 124-48-1-----Dibromochloromethane 10 U 79-00-5----1,1,2-Trichloroethane 10 U 71-43-2----Benzene 10061-02-6----trans-1,3-Dichloropropene 10 U 10 U 75-25-2----Bromoform 108-10-1----4-Methyl-2-Pentanone 10 U 10 U 591-78-6----2-Hexanone 127-18-4-----Tetrachloroethene 10 U 79-34-5----1,1,2,2-Tetrachloroethane 10 U 108-88-3-----Toluene 10 U 10 U 108-90-7-----Chlorobenzene 10 U 100-41-4-----Ethylbenzene 100-42-5-----Styrene 10 U 1330-20-7-----Xylene (Total)_ 10 U 540-59-0----1, 2-Dichloroethene (total) 10 U

FORM I VOA

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

	. JW577		
04			

Contract: 68D500

Lab Code: COMPU

Case No.: 27165

SAS No.:

SDG No.: JW513

Matrix: (soil/water) WATER

Lab Sample ID: 949973

Sample wt/vol:

5.0 (g/mL) mL

Lab File ID: cn049973a54

Level: (low/med)

LOW

Date Received: 07/08/99

% Moisture: not dec.

Date Analyzed: 07/18/99

GC Column: EQUITY624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume:____(uL)

Soil Aliquot Volume: ____(uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L

Number TICs found: 0

CAS NUMBER	COMPOUND NAME		EST. CONC.	
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JW581 Contract: 68D50004 Lab Name: COMPUCHEM

Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JW513

Matrix: (soil/water) WATER Lab Sample ID: 950024

Sample wt/vol: Lab File ID: 5.0 (g/mL) mL CN050024A54

Level: (low/med) Date Received: 07/09/99

% Moisture: not dec. Date Analyzed: 07/18/99

GC Column: EQUITY624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

CAS NO. (ug/L or ug/Kg) ug/L COMPOUND 74-87-3-----Chloromethane 10 U. 10 U 74-83-9-----Bromomethane 75-01-4-----Vinyl Chloride 10 U 75-00-3-----Chloroethane 10 U 10 21 x U 75-09-2----Methylene Chloride 10 U 67-64-1-----Acetone 75-15-0-----Carbon Disulfide 10 U 75-35-4----1,1-Dichloroethene 10 U 75-34-3----1,1-Dichloroethane 10 U 67-66-3-----Chloroform 10 U 107-06-2----1,2-Dichloroethane 10 U 78-93-3----2-Butanone 10 U 71-55-6----1,1,1-Trichloroethane_ 10 U 56-23-5-----Carbon Tetrachloride 10 U 75-27-4----Bromodichloromethane 10 U 78-87-5----1, 2-Dichloropropane 10 U 10061-01-5----cis-1,3-Dichloropropene 10 U 79-01-6----Trichloroethene 10 U 124-48-1-----Dibromochloromethane 10 U 79-00-5-----1,1,2-Trichloroethane 10 U 71-43-2----Benzene 10 U 10061-02-6----trans-1,3-Dichloropropene 10 U 75-25-2----Bromoform 10 U 108-10-1----4-Methyl-2-Pentanone 10 U 591-78-6----2-Hexanone 10 U 127-18-4----Tetrachloroethene 1|J79-34-5----1,1,2,2-Tetrachloroethane 10 U 108-88-3-----Toluene 10 U 108-90-7-----Chlorobenzene 10 U 100-41-4----Ethylbenzene 10 U 100-42-5-----Styrene 10 U 1330-20-7-----Xylene (Total) 10 U 540-59-0----1,2-Dichloroethene (total) 21

W8-26

Lab Name:	COMPUCHEM
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Contract: 68D50004

Lab Code: COMPU

Case No.: 27165

SAS No.:

SDG No.: JW513

Matrix: (soil/water) WATER

Lab Sample ID: 950024

Sample wt/vol:

5.0 (g/mL) mL

Lab File ID: cn050024a54

Level: (low/med)

Date Received: 07/09/99

% Moisture: not dec.

LOW

Date Analyzed: 07/18/99

GC Column: EQUITY624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: __

(uL)

Number TICs found: 2

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L

CAS NUMBER	MBER COMPOUND NAME		EST. CONC.	Q
1. 60-29-7 2. 3278-46-4 3.	ETHER PROPANOIC ACID, 2,2,3-TRICHL	8.05 10.06	21	NJ
4 5 6.				
7				
10 11 12				
13 14 15				
16. 17. 18.				
19. 20. 21.				
22. 23. 24.				
25. 26. 27.				
28. 29. 30.				

JP426 Contract: 68D50004 Lab Name: COMPUCHEM Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JW513 Lab Sample ID: 950548 Matrix: (soil/water) WATER Sample wt/vol: 500 (g/mL) ML Lab File ID: GH050548A64 Date Received: 07/14/99 Level: (low/med) LOW % Moisture: ____ decanted: (Y/N)___ Date Extracted: 07/15/99 Concentrated Extract Volume: 500(uL) Date Analyzed: 07/19/99 Dilution Factor: 1.0 Injection Volume: 2.0(uL)

GPC Cleanup: (Y/N) N pH: ____

CAS NO.	COMPOUND	(ug/L or ug/	Kg) UG/L	Q
108-95-2	bis(2-Chloroet	thyl)ether	.	10 U 10 U
95-57-8	2-Chloropheno	l		10 U
541-73-1	1,3-Dichlorobe	enzene	· .	10 U
106-46-7	1,4-Dichlorobe	enzene	٠	10 U
95-50-1	1,2-Dichlorob	enzene		10 U
1 95-48-7	2-Methylpheno.	L		10 U
108-60-1	2,2'-oxybis(1	-Chloropropane)		10 U
1 106-44-5	4-Methylpheno.	1 ' 1		10 U
621-64-7	N-Nitroso-di-	n-propylamine		10 U
67-72-1	Hexachloroeth	ane	•	10 U
	Nitrobenzene_			10 U
78-59-1	Isophorone			10 U
88-75-5	2-Nitrophenol			10 U
1 105-67-9	2.4-Dimethvlp	henol	_	10 U
111-91-1	bis(2-Chloroe	thoxy) methane	•	10 U
120-83-2	2,4-Dichlorop	henol		10 U
120-82-1	1,2,4-Trichlo	robenzene		10 U
91-20-3	Naphthalene			10 U
106-47-8	4-Chloroanili	ne	. *	10 U
87-68-3	Hexachlorobut	adiene		10 U
59-50-7	4-Chloro-3-me	thylphenol		1:0 U
91-57-6	2-Methylnapht	halene		10 U
77-47-4	Hexachlorocyc	lopentadiene	·	10 U
88-06-2	2.4.6-Trichlo	rophenol		10 U
95-95-4	2,4,5-Trichlo	rophenol	·	25 U
91-58-7	2-Chloronapht	halene		10 U
88-74-4	2-Nitroanilin	le —		25 U
	Dimethylphtha			10 U
	Acenaphthylen			10 U
606-20-2	2;6-Dinitroto	luene		10 U
99-09-2	3-Nitroanilin	ie		25 U
83-32-9	Acenaphthene			10 U

CONCENTRATION UNITS:

FORM I SV-1

CV - 27-99 OLMO3.0

JP426 Lab Name: COMPUCHEM Contract: 68D50004

SDG No.: JW513 Lab Code: COMPU Case No.: 27165 SAS No.:

Lab Sample ID: 950548 Matrix: (soil/water) WATER

500 (g/mL) ML Lab File ID: GH050548A64 Sample wt/vol:

Date Received: 07/14/99 Level: (low/med) LOW

% Moisture: ____ decanted: (Y/N)___ Date Extracted: 07/15/99

Concentrated Extract Volume: 500(uL) Date Analyzed: 07/19/99

Dilution Factor: 1.0

Injection Volume: 2.0(uL)

GPC Cleanup: (Y/N) N pH: ____

CAS NO. COMPOUND CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L Q

51-28-5----2,4-Dinitrophenol 25 U 100-02-7----4-Nitrophenol 25 U 132-64-9-----Dibenzofuran_ 10 U 121-14-2----2,4-Dinitrotoluene____ 10 U 84-66-2-----Diethylphthalate 10 U 7005-72-3----4-Chlorophenyl-phenylether___86-73-7----Fluorene 10 U 25 100-01-6-----4-Nitroaniline 534-52-1----4,6-Dinitro-2-methylphenol_ 25 U 86-30-6----N-nitrosodiphenylamine (1) _____ 101-55-3-----4-Bromophenyl-phenylether____ 10 U 10 U 10 U 118-74-1-----Hexachlorobenzene 25 U 87-86-5-----Pentachlorophenol 85-01-8-----Phenanthrene 10 U 120-12-7-----Anthracene 10 U 86-74-8-----Carbazole 10 U 84-74-2----Di-n-butylphthalate 10 U 206-44-0-----Fluoranthene_ 10 U 129-00-0-----Pyrene 10 U 85-68-7-----Butylbenzylphthalate 91-94-1-----3,3'-Dichlorobenzidine___ 10 U 10 U 56-55-3-----Benzo (a) anthracene 10 U 218-01-9-----Chrysene 10 U 117-81-7-----bis(2-Ethylhexyl)phthalate___ 1 J 117-84-0-----Di-n-octylphthalate_ 205-99-2-----Benzo(b)fluoranthene 10 U 10 U 207-08-9-----Benzo(k) fluoranthene 10 U 50-32-8-----Benzo (a) pyrene 10 U 193-39-5-----Indeno(1,2,3-cd)pyrene__ 10 U 53-70-3-----Dibenzo(a,h)anthracene 10 U 191-24-2----Benzo(g,h,i)perylene__ 10 U (1) - Cannot be separated from Diphenylamine

FORM I SV-2

1F

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

•				JP426
Lab Name:	COMPUCHEM	Contract:	68D50004	· · · · · · · · · · · · · · · · · · ·

Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JW513

Matrix: (soil/water) WATER Lab Sample ID: 950548

Sample wt/vol: 500 (g/mL) ML Lab File ID: GH050548A64

Level: (low/med) LOW Date Received: 07/14/99

% Moisture: ____ decanted: (Y/N) ___ Date Extracted:07/15/99

Concentrated Extract Volume: 500(uL) Date Analyzed: 07/19/99

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1				===:
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J SV-TIC 01

JP427 Lab Name: COMPUCHEM Contract: 68D50004 Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JW513 Matrix: (soil/water) WATER Lab Sample ID: 950549 Sample wt/vol: 970 (g/mL) ML Lab File ID: GH050549A64 Date Received: 07/14/99 Level: (low/med) LOW % Moisture: _____decanted: (Y/N) Date Extracted:07/15/99 Concentrated Extract Volume: 1000(uL) Date Analyzed: 07/20/99 Dilution Factor: 1.0

Injection Volume: 2.0(uL)

GPC Cleanup: (Y/N) N pH:

> CONCENTRATION UNITS: CAS NO. COMPOUND (ug/L or ug/Kg) UG/L Q 108-95-2----Phenol 10 U 111-44-4----bis(2-Chloroethyl)ether___ 10 U 95-57-8-----2-Chlorophenol 541-73-1-----1,3-Dichlorobenzene 10 U 10 U 106-46-7-----1,4-Dichlorobenzene 95-50-1-----1,2-Dichlorobenzene 10 0 10 U 95-48-7----2-Methylphenol 10 U 108-60-1----2;2'-oxybis(1-Chloropropane) 10 U 106-44-5----4-Methylphenol 10 U 621-64-7----N-Nitroso-di-n-propylamine 10 U 67-72-1-----Hexachloroethane 10 U 98-95-3-----Nitrobenzene 10 U 78-59-1----Isophorone 10 U 88-75-5----2-Nitrophenol 10 U 105-67-9-----2,4-Dimethylphenol 10 U 111-91-1-----bis(2-Chloroethoxy)methane__ 10 0 120-83-2----2,4-Dichlorophenol____ 10 U 120-82-1----1,2,4-Trichlorobenzene 10 U 91-20-3-----Naphthalene 10 U 106-47-8-----4-Chloroaniline 10 U 87-68-3-----Hexachlorobutadiene 10 U 59-50-7----4-Chloro-3-methylphenol 10 U 91-57-6----2-Methylnaphthalene____ 10 U 77-47-4-----Hexachlorocyclopentadiene 10 U 88-06-2----2,4,6-Trichlorophenol 10 U 95-95-4-----2,4,5-Trichlorophenol 91-58-7-----2-Chloronaphthalene 26 U 10 U 88-74-4----2-Nitroaniline 26 U 131-11-3-----Dimethylphthalate 10 U 208-96-8-----Acenaphthylene 10 U 606-20-2----2,6-Dinitrotoluene____ 10 U 99-09-2----3-Nitroaniline 26 U 83-32-9-----Acenaphthene_ 10 U

> > FORM I SV-1

JP427 Contract: 68D50004 Lab Name: COMPUCHEM Case No.: 27165 SAS No.: SDG No.: JW513 Lab Code: COMPU Lab Sample ID: 950549 Matrix: (soil/water) WATER Lab File ID: GH050549A64 (g/mL) ML Sample wt/vol: 970 Date Received: 07/14/99 Level: (low/med) LOW Date Extracted: 07/15/99 decanted: (Y/N) % Moisture: Date Analyzed: 07/20/99 1000(uL) Concentrated Extract Volume: Dilution Factor: 1.0 Injection Volume: 2.0(uL) GPC Cleanup: (Y/N) N pH: CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L COMPOUND. CAS NO. 26 U 51-28-5----2,4-Dinitrophenol_ 26 U 100-02-7----4-Nitrophenol 10 U 132-64-9-----Dibenzofuran 10 U 121-14-2----2,4-Dinitrotoluene 10 U 84-66-2----Diethylphthalate_ 10 U 7005-72-3----4-Chlorophenyl-phenylether 10 U 86-73-7-----Fluorene 26 U 100-01-6----4-Nitroaniline 26 U 534-52-1-----4,6-Dinitro-2-methylphenol_ 10 U 86-30-6----N-nitrosodiphenylamine_(1)__ 10 U 101-55-3----4-Bromophenyl-phenylether 10 U 118-74-1-----Hexachlorobenzene 26 U 87-86-5-----Pentachlorophenol_ 10 U 85-01-8-----Phenanthrene 10 U 120-12-7-----Anthracene 10 U 86-74-8------Carbazole 10 U 84-74-2-----Di-n-butylphthalate___ 10 U 206-44-0-----Fluoranthene_ 10 U 129-00-0-----Pyrene 10 U 85-68-7-----Butylbenzylphthalate 10 91-94-1----3,37-Dichlorobenzidine 10 U 56-55-3-----Benzo(a) anthracene 10 U 218-01-9-----Chrysene 10 U 117-81-7-----bis(2-Ethylhexyl)phthalate_ 10 U 117-84-0-----Di-n-octylphthalate 205-99-2----Benzo(b) fluoranthene 10 U 10 U 207-08-9-----Benzo(k) fluoranthene_ 10 U 50-32-8-----Benzo(a)pyrene 10 U 193-39-5----Indeno(1,2,3-cd)pyrene_ 10 U 53-70-3-----Dibenzo(a,h)anthracene 10 U 191-24-2----Benzo(g,h,i)perylene__

FORM I SV-2

(1) - Cannot be separated from Diphenylamine

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

JP427		

Lab Name: COMPUCHEM

Contract: 68D50004

Lab Code: COMPU

Case No.: 27165 SAS No.:

SDG No.: JW513

Matrix: (soil/water) WATER

970 (g/mL) ML

Lab Sample ID: 950549

Sample wt/vol:

Lab File ID: GH050549A64

Level: (low/med)

LOW

Date Received: 07/14/99

% Moisture:

decanted: (Y/N)

1000 (uL)

Date Extracted:07/15/99

Concentrated Extract Volume:

Date Analyzed: 07/20/99

Injection Volume: 2.0(uL)

Dilution Factor: 1.0

GPC_Cleanup: (Y/N) N

pH:

Number TICs found: 2

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 2.	UNKNOWN UNKNOWN	6.10	3	JW JW
4.				
6. 7.				
8. 9.				
10. 11. 12.				· · · · · · · · · · · · · · · · · · ·
13				<u> </u>
15. 16.				
17. 18.				
19. 20. 21.				
22				-
24.				
26. 27.				
28. 29. 30.				
30.				-

FORM I SV-TIC

Lab Name: COMPUCHEM Contract: 68D50004

Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JW513

Matrix: (soil/water) WATER Lab Sample ID: 950550

Sample wt/vol: 500 (g/mL) ML Lab File ID: GR050550B70

Level: (low/med) LOW Date Received: 07/14/99

% Moisture: _____ decanted: (Y/N)___ Date Extracted:07/26/99

Concentrated Extract Volume: 500(uL) Date Analyzed: 07/30/99

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CONCENTRATION UNITS:
CAS NO. COMPOUND (ug/L or ug/Kg), UG/L Q

•	•	
95-57-8 541-73-1 106-46-7 95-50-1 95-48-7 108-60-1 106-44-5 621-64-7 98-95-3 78-59-1 88-75-5 111-91-1 120-83-2 110-83-2 120-82-1 120-83-2 120-83-2 120-83-2 120-83-2 120-83-2 120-83-2 120-83-2 120-83-2 120-83-2 131-11-3 91-57-6 91-57-6 91-58-7	Phenolbis(2-Chloroethyl)ether2-Chlorophenol1,3-Dichlorobenzene1,4-Dichlorobenzene1,2-Dichlorobenzene2,Methylphenol2,2'-oxybis(1-Chloropropane)4-MethylphenolN-Nitroso-di-n-propylamineHexachloroethaneNitrobenzeneIsophorone2,4-Dimethylphenol2,4-Dimethylphenol1,2,4-TrichlorobenzeneNaphthalene4-Chloroaniline4-Chloroaniline4-Chloro-3-methylphenol2,4-5-Trichlorophenol2,4,5-Trichlorophenol2,4,5-Trichlorophenol2,-2-Chloroaphthalene2-Nitroaniline2-Nitroaniline2-Nitroaniline2-Nitroaniline2,6-Dinitrotoluene3-NitroanilineAcenaphthylene	10 10 10 10 10 10 10 10 10 10 10 10 10 1

FORM I SV-1

Ug-27-99 OLMO3.0

Lab Name: COMPUCHEM Contract: 68D50004 JP430
Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JW513

Matrix: (soil/water) WATER Lab Sample ID: 950550

Sample wt/vol: 500 (g/mL) ML Lab File ID: GR050550B70

Level: (low/med) LOW Date Received: 07/14/99

% Moisture: ____ decanted: (Y/N)___ Date Extracted:07/26/99

Concentrated Extract Volume: 500(uL) Date Analyzed: 07/30/99

Injection Volume: 2.0(uL) Dilution Factor: 1.0

injection volume: 2.0(db) Dilution Factor: 1.0

pH:

GPC Cleanup: (Y/N) N

CONCENTRATION UNITS:
CAS NO. CÓMPOUND (ug/L or ug/Kg) UG/L Q

F1 20 F	274 Dinia - 17		0.5
	2,4-Dinitrophenol		25 U 3
	4-Nitrophenol		25 U
	Dibenzofuran	.	10 U
121-14-2	2,4-Dinitrotoluene		10 ∪ ₩
84-66-2	Diethylphthalate		1 J
7005-72-3	4-Chlorophenyl-phenylether_		10 U J
86-73-7			10 U
100-01-6	4-Nitroaniline		25 U
534-52-1	4,6-Dinitro-2-methylphenol_		25 U
86-30-6	N-nitrosodiphenylamine (1)		10 0
101-55-3	4-Bromophenyl-phenylether	•	10 U
118-74-1	Hexachlorobenzene		10 UV
87-86-5	Pentachlorophenol	•	2 J
85-01-8	Phenanthrene	•	10 07
120-12-7	Anthracene	•	10 0
26-74-0	Carbazole	•	10 0
		•	
206 44 2	Di-n-butylphthalate		10 Ū →
206-44-0	Fluoranthene		1 J
129-00-0	Pyrene		3 J
85-68-7	Butylbenzylphthalate		10 U J
91-94-1	3,37-Dichlorobenzidine		10 U
56-55-3	Benzo(a) anthracene		10 U
218-01-9	Chrysene		10 U ❤
117-81-7	bis(2-Ethylhexyl)phthalate	•	17 5
117-84-0	Di-n-octvlphthalate		17 J
205-99-2	Benzo(b)fluoranthene	-	10 UJ
207-08-9	Benzo(k)fluoranthene	•	10 U
50-32-8	Benzo(a)pyrene	-	10 0
193-39-5	Indeno(1,2,3-cd)pyrene	-	10 0
53-70-3	Dibenzo(a,h)anthracene	-	10 0
191-24-2	Benzo(g,h,i)perylene	-	
TJT-77	Benzo(g,n,r)peryrene	-	10 UV
Connet		,	
- Cannot be	separated from Diphenylamine		. 70

FORM I SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

JP430 ·

Lab Name: COMPUCHEM

Contract: 68D50004

Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JW513

Matrix: (soil/water) WATER

Sample wt/vol: 500 (g/mL) ML

Lab File ID: GR050550B70

Level: (low/med) LOW

% Moisture: ____ decanted: (Y/N)___

Date Received: 07/14/99

Concentrated Extract Volume: 500(uL)

Date Extracted: 07/26/99 Date Analyzed: 07/30/99

Lab Sample ID: 950550

Injection Volume: 2.0(uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

pH:

Number TICs found: 32

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

	•					· · ·		
CAS NUMBER	1. 5	COMPOUND	NAME		RT	EST.	CONC.	Q
	======		====	Tab Costa	mination = 70	=====	======	======
1	TRICHLOR	OPROPENE	(BC)	J.	3.70			1 × - 40
2.	CONTRACTOR	(BC)		X	6.42		7	JB- K
] 3.	UNKNOWN	•	,		10.46		24	JN
4.	UNKNOWN	•		•	11.61		5	JI
5.	UNKNOWN				11.93	1	. 6	J-
6.	UNKNOWN	•			12.25		4	J]
7.	UNKNOWN			•	12.66	· ·	5	IJ
8.	UNKNOWN				12.93		7	J I
9.	UNKNOWN				13.03	1	. 6	J
10.	UNKNOWN				13.08		6	J
11.	UNKNOWN		•		13.13		4	J
12.	UNKNOWN		•	•	13.20		5	lj l
13.	UNKNOWN	.*			13.33		5	J
14.	UNKNOWN	* .			13.38		4	J
15.	UNKNOWN	•			13.57		5	J
16.					13.82		. 5	J
17.	UNKNOWN	TOTAL TRANS			i .			
18.		PHTHALAT	Ľ		13.87		<u>4</u> 7	l Ţ
	UNKNOWN				13.91			ū
19.	UNKNOWN				14.18		, 6.	J J
20.	UNKNOWN				14.25		9	J
21.	UNKNOWN	•			14.36		14	J
22	UNKNOWN	AMIDE		•	14.48	·	13	J
23.	UNKNOWN				14.57		. 4 8	J
24.	UNKNOWN		•		14.62			J
25.	UNKNOWN			•	14.68		5	J
26.	UNKNOWN			•	14.82		10	J
27.	UNKNOWN				14.97		7	J.
28.	UNKNOWN				15.04		. 9	JJ ·
29.	UNKNOWN				15.14			J
30.	UNKNOWN				15.24	1.	. 4 6	JV
	Jan 1971						Ū	
1	_1					1		1

540

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

	JP430	
50004		

Lab Name: COMPUCHEM

Contract: 68D5

Lab Code: COMPU Case No.: 27165 SAS No.:

SDG No.: JW513

Matrix: (soil/water) WATER

Lab Sample ID: 950550

Sample wt/vol:

500 (g/mL) ML

Lab File ID: GR050550B70

Level: (low/med) LOW

Date Received: 07/14/99

% Moisture: ____ decanted: (Y/N)___

Date Extracted: 07/26/99

Concentrated Extract Volume:

500 (uL)

Date Analyzed: 07/30/99

Injection Volume: 2.0(uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

pH:

Number TICs found: 32

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 2. 3	UNKNOWN UNKNOWN	15.61 15.87	21	JN JN
4				_
5				-
6.				-
8				
9				-
0.				
1.				_
.2.				
.3 .				_
4.				
5. 6.				-
				-
.8.				-
9.				-
0.				
21.				
22.		• • •		_
23.				_
24. 25.				_
26.				-
27.				-
28.				_
28. 29.				
30.				

JP431 Lab Name: COMPUCHEM Contract: 68D50004 Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JW513 Matrix: (soil/water) WATER Lab Sample ID: 950551 Sample wt/vol: 500 (g/mL) ML Lab File ID: GH050551A66 Level: (low/med) LOW Date Received: 07/14/99 % Moisture: ____ decanted: (Y/N) ___ Date Extracted:07/15/99 Concentrated Extract Volume: 500(uL) Date Analyzed: 07/20/99 Injection Volume: 2.0(uL) Dilution Factor: 1.0 GPC Cleanup: (Y/N) N pH: CONCENTRATION OT. UG/L CONCENTRATION UNITS: CAS NO. COMPOUND Q. 108-95-2----Phenol 10 g R 111-44-4-----bis(2-Chloroethyl)ether 95-57-8-----2-Chlorophenol 10 | y R 541-73-1-----1,3-Dichlorobenzene 106-46-7-----1,4-Dichlorobenzene 95-50-1-----1,2-Dichlorobenzene 10 0 10 U 10 U 95-48-7----2-Methylphenol 10 \p R 108-60-1----2,2'-oxybis(1-Chloropropane) 10 U 106-44-5-----4-Methylphenol 621-64-7----N-Nitroso-di-n-propylamine_ 67-72-1-----Hexachloroethane 10 U 98-95-3----Nitrobenzene____ 10 U 78-59-1------Isophorone 88-75-5-----2-Nitrophenol 105-67-9-----2,4-Dimethylphenol 10 U 10 VR 111-91-1-----bis(2-Chloroethoxy) methane___ 10 0 10 VR 10 U 91-20-3-----Naphthalene 10 U 106-47-8-----4-Chloroaniline 87-68-3-----Hexachlorobutadiene 10 U 10 U 59-50-7----4-Chloro-3-methylphenol 10 V R 91-57-6-----2-Methylnaphthalene_ 10 U 10 ½ R 25 ¼ R 10 U 25 U 88-74-4----2-Nitroaniline 131-11-3-----Dimethylphthalate____ 10 U 208-96-8-----Acenaphthylene 606-20-2-----2,6-Dinitrotoluene 10 U 10 U 99-09-2----3-Nitroaniline_____ 25 U 83-32-9-----Acenaphthene____

FORM I SV-1

09-27-99 OLMO3.0

JP431 Lab Name: COMPUCHEM Contract: 68D50004 Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JW513 Matrix: (soil/water) WATER Lab Sample ID: 950551 Sample wt/vol: 500 (g/mL) ML Lab File ID: GH050551A66 Level: (low/med) LOW Date Received: 07/14/99 % Moisture: decanted: (Y/N) Date Extracted: 07/15/99 Concentrated Extract Volume: 500 (uL) Date Analyzed: 07/20/99 Injection Volume: 2.0(uL) Dilution Factor: 1.0 GPC Cleanup: (Y/N) N pH: CONCENTRATION UNITS: CAS NO. COMPOUND (ug/L or ug/Kg) UG/L # R 51-28-5-----2,4-Dinitrophenol 25 100-02-7----4-Nitrophenol 25 132-64-9-----Dibenzofuran 10 0 121-14-2----2,4-Dinitrotoluene 10 U 84-66-2-----Diethylphthalate 10 U 7005-72-3----4-Chlorophenyl-phenylether 10 U 86-73-7-----Fluorene 10 U 100-01-6----4-Nitroaniline 25 U 534-52-1----4,6-Dinitro-2-methylphenol_ 25 \ \mathcal{V} \mathcal{L} \mathcal{L} \\ \mathcal{L} \\ \mathcal{U} \\ \mathcal{L} \\ \mathcal{U} \\ \mathca 86-30-6----N-nitrosodiphenylamine (1) 101-55-3----4-Bromophenyl-phenylether_ 10 U 118-74-1-----Hexachlorobenzene U 10 87-86-5----Pentachlorophenol 5 J 85-01-8-----Phenanthrene 10 U 120-12-7-----Anthracene 10 U 86-74-8-----Carbazole 10 U 84-74-2----Di-n-butylphthalate 10 U 206-44-0-----Fluoranthene 129-00-0-----Pyrene 10 U 85-68-7-----Butylbenzylphthalate 10 U 91-94-1----3,37-Dichlorobenzidine_ 10 U 56-55-3-----Benzo (a) anthracene 10 U 218-01-9-----Chrysene 10 U 117-81-7-----bis(2-Ethylhexyl)phthalate 117-84-0-----Di-n-octylphthalate 10 区 205-99-2----Benzo (b) fluoranthene J 2 207-08-9-----Benzo(k) fluoranthene 10 1 50-32-8-----Benzo (a) pyrene 10 3 193-39-5----Indeno (1,2,3-cd) pyrene_ 10 1 53-70-3-----Dibenzo(a,h)anthracene 10 1 191-24-2----Benzo(g,h,i)perylene_ 10 W (1) - Cannot be separated from Diphenylamine FORM I SV-2 OLMO3.0

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

JP431 Contract: 68D50004

Lab Name: COMPUCHEM

Lab Code: COMPU

Case No.: 27165 SAS No.:

SDG No.: JW513

Matrix: (soil/water) WATER

Lab Sample ID: 950551

GH050551A66

Sample wt/vol: 500 (g/mL) ML

Lab File ID:

Level: (low/med) LOW

Date Received: 07/14/99

% Moisture: _____ decanted: (Y/N)____

Date Extracted: 07/15/99

Concentrated Extract Volume: 500(uL)

Date Analyzed: 07/20/99

Injection Volume: 2.0(uL)

Dilution Factor: 1.0

GPC Cleanup:

(Y/N) N

pH:

Number TICs found: 30

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

		r		· · · · · · · · · · · · · · · · · · ·
CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
	THURSONIAL CIT ON ME Lab Conf.	======	======================================	====
1.	OMIGIOM STEOMETICE	5.42		FR
2.	UNKNOWN	6.03		J Ņ
3.	UNKNOWN	6.28	3 [3	Ţ [
4.	UNKNOWN	6.68	4 5	J 🖟
-5.	UNKNOWN SILOXANE Lub Cont.	7.19		- R
6.	UNKNOWN	7.68		Į į į
7.	UNKNOWN	7.78		
8.	UNKNOWN	8.43	5 3	
9.	Immorat	8.68	7 5	
10.	UNKNOWN SILOXANE Lab Co. A.			J 🗸
11. 85-44-9	DIMINIAT TO AMBRIDATE	8.94		F-R
12. 05-44-9		9.24	8 1	ا م لا
	- UNKNOWN SILOXANE	10.52		- R
13.	UNKNOWN	11.04	8 3	ŢŅ
14.	UNKNOWN	12.15	3 0	7
15.	UNKNOWN	12.45	10 3	7 I I
16.	BENZOTHIAZOLONE	12.53	3 ا ع	, I
17.	UNKNOWN / /	12.69		√
-18.	UNKNOWN SILOXANE Lab Con.	13.29	2 3	
19.	UNKNOWN	13.66		N
20.	UNKNOWN	14.31	5 3	
21.	UNKNOWN	14.90	2 3	
22.	NAPHTHALIC ANHYDRIDE	15.34	2 3	
23.	UNKNOWN			
24.		15.44	4]	
25.	UNKNOWN	15.81	3 3	
	UNKNOWN	16.16] . 3 J	
26.	UNKNOWN	17.30	3 J	
27.	UNKNOWN	17.43	3 3	, I
28.	UNKNOWN	18.23	4 5	7
29.	UNKNOWN	21.56	12 3	- 3 1
30.	UNKNOWN	22.86		
		22.00	2 0	, •
	.	i	l	

FORM I SV-TIC

GR050551A66

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

500 (g/mL) ML

JP431RE

Lab Name: COMPUCHEM Contract: 68D50004

Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JW513

Matrix: (soil/water) WATER Lab Sample ID: 950551

Sample wt/vol: Level: (low/med) LOW Date Received: 07/14/99

Lab File ID:

CONCENTRATION UNITS:

% Moisture: _____ decanted: (Y/N)___ Date Extracted:07/22/99

Concentrated Extract Volume: 500(uL) Date Analyzed: 07/27/99

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

88-06-2-----2,4,6-Trichlorophenol_

91-58-7----2-Chloronaphthalene

131-11-3-----Dimethylphthalate

88-74-4----2-Nitroaniline

208-96-8-----Acenaphthylene

83-32-9-----Acenaphthene

95-95-4----2,4,5-Trichlorophenol_

606-20-2----2,6-Dinitrotoluene____

99-09-2----3-Nitroaniline_____

CAS NO. COMPOUND (ug/L or ug/Kg) UG/L 10 U J 108-95-2----Phenol 111-44-4-----bis(2-Chloroethyl)ether 95-57-8----2-Chlorophenol 10 U 541-73-1----1,3-Dichlorobenzene 106-46-7----1,4-Dichlorobenzene - 10 U 10 U 95-50-1----1,2-Dichlorobenzene 10 U 95-48-7----2-Methylphenol , 10 U 108-60-1----2,2'-oxybis(1-Chloropropane) 10 U 106-44-5----4-Methylphenol 10 U 621-64-7----N-Nitroso-di-n-propylamine 10 U 67-72-1-----Hexachloroethane 10 U 98-95-3----Nitrobenzene___ 10 U 78-59-1-----Isophorone 88-75-5------Isophorone 10 U 10 U 105-67-9-----2;4-Dimethylphenol 10 U 10 U 10 U 111-91-1-----bis(2-Chloroethoxy) methane 91-20-3----Naphthalene 10 U 106-47-8-----4-Chloroaniline 10 U 87-68-3-----Hexachlorobutadiene 10 U 59-50-7----4-Chloro-3-methylphenol 10 U 91-57-6----2-Methylnaphthalene 10 U 77-47-4-----Hexachlorocyclopentadiene

FORM I SV-1

8-27-99 OLMO3.0

10 U

10 ប្រ

25 U 10 U 25 U

10 U

10 U

10 U

25 U

10 UV

JP431RE Lab Name: COMPUCHEM Contract: 68D50004 Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JW513 Lab Sample ID: 950551 Matrix: (soil/water) WATER 500 (g/mL) ML Sample wt/vol: Lab File ID: GR050551A66 (low/med) Date Received: 07/14/99 Level: LOW Date Extracted: 07/22/99 % Moisture: decanted: (Y/N) Concentrated Extract Volume: 500(uL) Date Analyzed: 07/27/99 Dilution Factor: 1.0 Injection Volume: 2.0(uL) GPC Cleanup: (Y/N) N pH: CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L CAS NO. COMPOUND 25 UT 51-28-5----2,4-Dinitrophenol_____ 100-02-7----4-Nitrophenol 25 U 10 U 132-64-9-----Dibenzofuran 10 U V 121-14-2----2,4-Dinitrotoluene_ 84-66-2-----Diethylphthalate_ 2 J 7005-72-3----4-Chlorophenyl-phenylether 10 UJ 10 U 86-73-7----Fluorene 25 100-01-6----4-Nitroaniline U 25 U 534-52-1----4,6-Dinitro-2-methylphenol 86-30-6----N-nitrosodiphenylamine (1) 10 U 10 U 101-55-3----4-Bromophenyl-phenylether 118-74-1-----Hexachlorobenzene υΨ 10 87-86-5-----Pentachlorophenol J 11 10 UJ 85-01-8-----Phenanthrene 120-12-7-----Anthracene 10 U 86-74-8-----Carbazole 10 U 10 U. 84-74-2-----Di-n-butylphthalate___ 10 U 206-44-0-----Fluoranthene 129-00-0-----Pyrene 10 U 85-68-7-----Butylbenzylphthalate 91-94-1-----3,3'-Dichlorobenzidine 10 U 10 U 56-55-3-----Benzo (a) anthracene 10 U 218-01-9-----Chrysene 10 | U ₩ 117-81-7-----bis(2-Ethylhexyl)phthalate 6 J 10 छ 117-84-0-----Di-n-octylphthalate 10 B 205-99-2----Benzo (b) fluoranthene 207-08-9----Benzo(k) fluoranthene 10 B 50-32-8-----Benzo (a) pyrene 10 1 10 1 10 B 191-24-2----Benzo(g,h,i)perylene 10 V (1) - Cannot be separated from Diphenylamine

FORM I SV-2

OLMO3.0

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

JP431RE

Lab Name: COMPUCHEM

Contract: 68D50004

Lab Code: COMPU

Case No.: 27165 SAS No.:

SDG No.: JW513

Matrix: (soil/water) WATER

Lab Sample ID: 950551

Sample wt/vol:

500

(g/mL) ML Lab File ID: GR050551A66

Level:

(low/med)

LOW

Date Received: 07/14/99

% Moisture:

decanted: (Y/N)_

Date Extracted: 07/22/99

Concentrated Extract Volume:

500 (uL)

Date Analyzed: 07/27/99

Injection Volume: 2.0(uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

pH:

Number TICs found: 31

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
2. 3. 4. 5. 6. 85-44-9 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30.	TRICHLOROPROPENE (BC) Lab Cond. UNKNOWN SILOXANE UNKNOWN SILOXANE UNKNOWN SILOXANE PHTHALIC ANHYDRIDE UNKNOWN SILOXANE UNKNOWN	# 1	EST. CONC. 54 57 3 11 4 13 3 5 5 3 5 3 5 3 5 3 5 3 5 3 5 5 7 6 5 5 3 3 5 3 3 5 3 5 3 4 5 5 7 6 5 5 3 3 5 3 5 3 5 3 5 3 5 3 5 3 5 3 5	

FORM I SV-TIC

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

ab	Name:	COMPUCHEM	•	Contract:	68D5000

JP431RE

Lab Code: COMPU

Case No.: 27165 SAS No.:

SDG No.: JW513

Matrix: (soil/water) WATER

Lab Sample ID: 950551

GR050551A66

Sample wt/vol: 500 (g/mL) ML

Lab File ID:

Level: (low/med) LOW

Concentrated Extract Volume:

Date Received: 07/14/99

% Moisture: _____ decanted: (Y/N)____

500 (uL)

Date Extracted:07/22/99 Date Analyzed: 07/27/99

Injection Volume: 2.0(uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

pH:

Number TICs found: 31

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	ŖŦ	EST. CONC.	Q
1. 2	UNKNOWN	21.06	3	J / √
3 4				
6 7				***************************************
8 9			***************************************	
11		***************************************		
13. 14. 15.				
16. 17. 18.				
19 20				
21. 22. 23.				
24. 25.				
26. 27. 28.				
29. 30.				

FORM I SV-TIC

JW522

Lab Name: COMPUCHEM Contract: 68D50004

Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JW513

Matrix: (soil/water) WATER Lab Sample ID: 949468

Sample wt/vol: 1000 (g/mL) ML Lab File ID: GJ049468A66

Level: (low/med) LOW Date Received: 07/02/99

% Moisture: decanted: (Y/N)___ Date Extracted:07/06/99

Concentrated Extract Volume: 1000(uL) Date Analyzed: 07/18/99

Injection Volume: 2.0(uL) Dilution Factor: 1.0

COMPOUND

131-11-3-----Dimethylphthalate

208-96-8-----Acenaphthylene 606-20-2-----2,6-Dinitrotoluene

99-09-2----3-Nitroaniline_83-32-9-----Acenaphthene

GPC Cleanup: (Y/N) N PH: ____

CAS NO.

1	108-95-2Phenol				3	J	- 1	
.	111-44-4bis(2-Chloroethyl)ether					U		٠
-	95-57-82-Chlorophenol				10	U		i
1	541-73-11,3-Dichlorobenzene				10	U	.	
	106-46-71,4-Dichlorobenzene				10	U		İ
	95-50-11,2-Dichlorobenzene				10	U		
	95-48-72-Methylphenol	1.1		•	- 1	J		
	108-60-12,2'-oxybis(1-Chloropropane)				10	U J		ľ
i				i	. 3	J		ĺ
	106-44-54-Methylphenol 621-64-7N-Nitroso-di-n-propylamine		•		10	U		
	67-72-1Hexachloroethane	•			10	U		
	98-95-3Nitrobenzene				10	U		
	78-59-1Isophorone				10	U		
	88-75-52-Nitrophenol				10			
	105-67-92,4-Dimethylphenol				10	_		
٠.	111-91-1bis(2-Chloroethoxy)methane		• • • • • • • • • • • • • • • • • • • •		10	U		ļ.,
	120-83-22,4-Dichlorophenol	-7-5-1			10	_		
·	120-82-11,2,4-Trichlorobenzene				10	1		
	91-20-3Naphthalene 106-47-84-Chloroaniline				1	J		
•	106-47-84-Chloroaniline				10	_		1
	87-68-3Hexachlorobutadiene				10	•		١.
	59-50-74-Chloro-3-methylphenol				10	_		
	91-57-62-Methylnaphthalene				10	-		
	77-47-4Hexachlorocyclopentadiene				10	_	•	
	88-06-22,4,6-Trichlorophenol				10			
	95-95-42,4,5-Trichlorophenol				25	ì		
	91-58-72-Chloronaphthalene				10	i		1
	88-74-42-Nitroaniline		•		25	1 .		
	1 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4				7 0	1 TT		

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/L

FORM I SV-1

Of 27-97 OLMO3.0

10 U

10 U

10 U 25 U

JW522 Lab Name: COMPUCHEM Contract: 68D50004 Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JW513 Matrix: (soil/water) WATER Lab Sample ID: 949468 Sample wt/vol: 1000 Lab File ID: (g/mL) ML GJ049468A66 Level: (low/med) LOW Date Received: 07/02/99 % Moisture: decanted: (Y/N)____ Date Extracted: 07/06/99 Concentrated Extract Volume: 1000(uL) Date Analyzed: 07/18/99 Injection Volume: 2.0(uL) Dilution Factor: 1.0 GPC Cleanup: (Y/N) N : Hq CONCENTRATION UNITS: CAS NO. COMPOUND (ug/L or ug/Kg) UG/L 51-28-5----2,4-Dinitrophenol_ 25 U 100-02-7----4-Nitrophenol 25 U 132-64-9-----Dibenzofuran 10 U 121-14-2----2,4-Dinitrotoluene____ 10 U 84-66-2-----Diethylphthalate 10 7005-72-3----4-Chlorophenyl-phenylether 10 86-73-7----Fluorene 10 100-01-6-----4-Nitroaniline 25 534-52-1----4,6-Dinitro-2-methylphenol 25 86-30-6----N-nitrosodiphenylamine (1) 10 U 101-55-3----4-Bromophenyl-phenylether 10 U 118-74-1-----Hexachlorobenzene 10 U 87-86-5-----Pentachlorophenol 25 UJ 85-01-8-----Phenanthrene 10 U 120-12-7----Anthracene_ 10 86-74-8-----Carbazole 10 U 84-74-2----Di-n-butylphthalate____ U 10 206-44-0-----Fluoranthene 10 U 129-00-0-----Pyrene 10 U 85-68-7-----Butylbenzylphthalate 10 U 91-94-1----3,3'-Dichlorobenzidine____ 10 U 56-55-3-----Benzo(a)anthracene_ 10 U 218-01-9-----Chrysene 10 U 117-81-7-----bis(2-Ethylhexyl)phthalate 10 U 117-84-0-----Di-n-octylphthalate_ 10 U 205-99-2----Benzo (b) fluoranthene 10 U 207-08-9-----Benzo(k)fluoranthene 10 U 50-32-8-----Benzo(a)pyrene 10 U 193-39-5----Indeno(1,2,3-cd)pyrene_ 10 U 53-70-3-----Dibenzo(a,h)anthracene 10 U 191-24-2-----Benzo(g,h,i)perylene____ (i) - Cannot be separated from Diphenylamine CPG-27-94 FORM I SV-2 OLM03.0

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

JW522

Lab Name: COMPUCHEM

Contract: 68D50004

Lab Code: COMPU Case No.: 27165 SAS No.:

SDG No.: JW513

Matrix: (soil/water) WATER

Lab Sample ID: 949468

Sample wt/vol:

1000 (q/mL) ML

1000 (uL)

Lab File ID:

GJ049468A66

Level:

(low/med)

decanted: (Y/N)

% Moisture:

LOW

Date Received: 07/02/99

Date Extracted: 07/06/99

Concentrated Extract Volume:

Date Analyzed: 07/18/99

Injection Volume: 2.0(uL)

Dilution Factor: 1.0

GPC Cleanup:

(Y/N) N

pH:

Number TICs found: 30

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 2. 3. 4. 5. 99-94-5 6.	UNKNOWN UNKNOWN UNKNOWN	7.56 7.80 8.22 8.89 9.14 11.17 11.24 11.40 11.54 11.80 11.85 11.98 12.05 12.17 12.34 12.78 12.89 13.10 13.22 13.29 13.47 13.85 13.97	16 28 16 28 17 88 17 88 11 11 88 11 11 11 11 11 11 11 11 11	

JW527 Lab Name: COMPUCHEM Contract: 68D50004 Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JW513 Matrix: (soil/water) WATER Lab Sample ID: 949694 Sample wt/vol: 500 (g/mL) ML Lab File ID: GJ049694A66 Level: (low/med) LOW Date Received: 07/03/99 % Moisture: ____ decanted: (Y/N) Date Extracted:07/06/99 Concentrated Extract Volume: 500 (uL) Date Analyzed: 07/18/99 Injection Volume: 2.0(uL) Dilution Factor: 1.0 GPC Cleanup: (Y/N) N pH: CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L CAS NO. COMPOUND 108-95-2----Phenol 10 U 111-44-4----bis(2-Chloroethyl)ether 10 U 95-57-8----2-Chlorophenol_ 10 U 541-73-1----1,3-Dichlorobenzene 10 U 106-46-7----1,4-Dichlorobenzene_ 10 U 95-50-1-----1,2-Dichlorobenzene 10 U 95-48-7----2-Methylphenol 10 U 10 UJ 108-60-1----2,2'-oxybis(1-Chloropropane) 106-44-5----4-Methylphenol_ 1 J 621-64-7----N-Nitroso-di-n-propylamine_ 10 U 67-72-1-----Hexachloroethane 10 U 98-95-3----Nitrobenzene 10 U 78-59-1-----Isophorone_ 10 U 88-75-5----2-Nitrophenol 10 U 105-67-9-----2,4-Dimethylphenol_ 10 U 111-91-1-----bis(2-Chloroethoxy)methane 10 U 120-83-2----2,4-Dichlorophenol 10 U 120-82-1----1, 2, 4-Trichlorobenzene 10 U 91-20-3-----Naphthalene 3 J 106-47-8----4-Chloroaniline 10 U 87-68-3-----Hexachlorobutadiene 10 U 59-50-7----4-Chloro-3-methylphenol 10 U 91-57-6----2-Methylnaphthalene 77-47-4-----Hexachlorocyclopentadiene ט | 10 88-06-2----2,4,6-Trichlorophenol_____95-95-4-----2,4,5-Trichlorophenol_____ 10 T 25 U 91-58-7----2-Chloronaphthalene 10 U 88-74-4----2-Nitroaniline 25 U 131-11-3-----Dimethylphthalate 10 U 208-96-8-----Acenaphthylene 10 U 606-20-2----2,6-Dinitrotoluene 10 U 99-09-2----3-Nitroaniline____ 25 U 83-32-9-----Acenaphthene 10 U

FORM I SV-1

01-17-95 OLMO3.0

JW527 Lab Name: COMPUCHEM Contract: 68D50004

CONCENTRATION UNITS:

Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JW513

Matrix: (soil/water) WATER Lab Sample ID: 949694

Lab File ID: GJ049694A66 Sample wt/vol: 500 (g/mL) ML

Level: (low/med) LOW Date Received: 07/03/99

% Moisture: ____ decanted: (Y/N)___ Date Extracted:07/06/99

Concentrated Extract Volume: 500(uL) Date Analyzed: 07/18/99

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

	CAS NO.	COMPOUND (ug/L or ug/	/Kg) UG/L	Q	
	100-02-7	2,4-Dinitrophenol		5 U	
	132-64-9	Dibenzofuran 2,4-Dinitrotoluene	10	ט ט	
ŀ	84-66-2	Diethylphthalate		2 J	
-	7005-72-3	4-Chlorophenyl-phenylether	10		
-	86-73-7	Fluorene 4-Nitroaniline	10 25	ט ט פוס	
-	534-52-1	4,6-Dinitro-2-methylphenol		5 0	
	86-30-6	N-nitrosodiphenylamine (1)		ט ט	
	118-74-1	4-Bromophenyl-phenylether		ט ט	
	87-86-5	Pentachlorophenol	25		
	85-01-8	Phenanthrene	10		
	86-74-8	Anthracene Carbazole		ט ט ט ט	
	84-74-2	Di-n-butylphthalate	1(ס ס	
1	129-00-0	Fluoranthene	10 10	ט ט ט ט	
	85-68-7	Pyrene Butylbenzylphthalate		ט ט	
	91-94-1	3.3'-Dichlorobenzidine	B	ט ט	
l	218-01-9	Benzo(a) anthracene	10	ט ט ס	
	117-81-7	bis(2-Ethylhexyl)phthalate	- · · · · · · · · · · · · · · · · · · ·	ร์ มี	
	117-84-0	Di-n-octylphthalate Benzo(b) fluoranthene	10	- 3 - 1	•
	207-08-9	Benzo(k)fluoranthene	10		. •
	50-32-8	Benzo(a)pyrene	10	ט ס	
1	193-39-5	Indeno(1,2,3-cd)pyrene	1	ָט ט ט ט	
	191-24-2	Benzo(g,h,i)perylene	10	- -	
	·				
_	i - Caimot be	separated from Diphenylamine	·	08-27-99	
			O	8-27	,

FORM I SV-2

TENTATIVELY IDENTIFIED COMPOUNDS JW527 Lab Name: COMPUCHEM Contract: 68D50004

Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JW513

Matrix: (soil/water) WATER Lab Sample ID: 949694

Sample wt/vol: 500 (g/mL) MLLab File ID: GJ049694A66

Level: (low/med) LOW Date Received: 07/03/99

% Moisture: _____ decanted: (Y/N)____ Date Extracted:07/06/99

Concentrated Extract Volume: 500(uL) Date Analyzed: 07/18/99

Injection Volume: Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

CONCENTRATION UNITS: Number TICs found: 30 (ug/L or ug/Kg) UG/L

pH:

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 10544-50-0 30.	UNKNOWN UNKNOWN SULFUR UNKNOWN UNKNOWN UNKNOWN BENZOTHIAZOLONE UNKNOWN SULFUR, MOL. (S8) UNKNOWN	8.15 10.70 10.89 11.43 11.50 12.54 12.83 12.94 13.06 13.22 13.83 14.04 14.25 14.32 14.41 14.52 14.66 14.90 14.97 15.11 15.24 15.34 15.57 15.88 17.57	67 85 665 215 63 665 13 66 14 14 16 13 19 18 14 11 11 11 11 11 11 11 11 11 11 11 11	

Lab Name: COMPUCHEM Contract: 68D50004 JW530

Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JW513

Matrix: (soil/water) WATER Lab Sample ID: 949475

Sample wt/vol: 1000 (g/mL) ML Lab File ID: GH049475A66

Level: (low/med) LOW Date Received: 07/02/99

% Moisture: ____ decanted: (Y/N)___ Date Extracted:07/06/99

Concentrated Extract Volume: 1000(uL) Date Analyzed: 07/16/99

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CONCENTRATION UNITS:
CAS NO. COMPOUND (ug/L or ug/Kg) UG/L Q

	• • •	
108-95-2	10 10 10 10 10 10 10 10 10 10 10 10 10 1	ממממממממממממממממממ
77-47-4Hexachlorocyclopentadiene 88-06-22,4,6-Trichlorophenol 95-95-42,4,5-Trichlorophenol 91-58-72-Chloronaphthalene	10 10 25 10	ט ט ט ט ט ט ט

FORM I SV-1

Of -27-99 OLMO3.0

JW530 Contract: 68D50004 Lab Name: COMPUCHEM Case No.: 27165 SAS No.: SDG No.: JW513 Lab Code: COMPU

Lab Sample ID: 949475 Matrix: (soil/water) WATER

Lab File ID: GH049475A66 Sample wt/vol: 1000 (g/mL) ML

Level: (low/med) Date Received: 07/02/99 LOW

% Moisture: decanted: (Y/N) Date Extracted: 07/06/99

Date Analyzed: 07/16/99 Concentrated Extract Volume: 1000 (uL)

Dilution Factor: 1.0 Injection Volume: 2.0(uL)

pH:

GPC Cleanup: (Y/N) N

CONCENTRATION UNITS: . Q COMPOUND (ug/L or ug/Kg) UG/L CAS NO.

51-28-5----2,4-Dinitrophenol 25 U 25 U 100-02-7----4-Nitrophenol 10 U 132-64-9-----Dibenzofuran 121-14-2----2,4-Dinitrotoluene 10 U 84-66-2-----Diethylphthalate_ 10 U 10 U 7005-72-3----4-Chlorophenyl-phenylether 10 U 86-73-7----Fluorene 25 I U 100-01-6----4-Nitroaniline 534-52-1-----4,6-Dinitro-2-methylphenol 25 U 86-30-6----N-nitrosodiphenylamine (1) 10 U 101-55-3-----4-Bromophenyl-phenylether 10 U 10 U 118-74-1----Hexachlorobenzene 25 UJ 87-86-5----Pentachlorophenol 85-01-8-----Phenanthrene 10 U 120-12-7-----Anthracene 10 U 10 U 86-74-8-----Carbazole 84-74-2-----Di-n-butylphthalate 10 U 10 U 206-44-0-----Fluoranthene 129-00-0----Pyrene_ 10 U 85-68-7-----Butylbenzylphthalate 10 U 91-94-1----3,37-Dichlorobenzidine 10 U 56-55-3-----Benzo (a) anthracene 10 U 218-01-9-----Chrysene 10 U 10 U 117-81-7-----bis(2-Ethylhexyl)phthalate 10 U 117-84-0-----Di-n-octylphthalate_ 205-99-2----Benzo(b) fluoranthene 10 Ų 10 U 207-08-9-----Benzo(k)fluoranthene 10 U 50-32-8-----Benzo (a) pyrene 193-39-5----Indeno(1,2,3-cd)pyrene___ 10 U 53-70-3-----Dibenzo(a,h)anthracene 10 U 191-24-2----Benzo(q,h,i)perylene 10 U (1) - Cannot be separated from Diphenylamine

FORM I SV-2

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: COMPUCHEM Contract: 68D50004 JW530

Lab Code: COMPU

Case No.: 27165 SAS No.:

SDG No.: JW513

Matrix: (soil/water) WATER

Lab Sample ID: 949475

Sample wt/vol:

1000 (g/mL) ML

Lab File ID: GH049475A66

Level: (low/med) LOW

Date Received: 07/02/99

% Moisture: ____ decanted: (Y/N)____

Date Extracted:07/06/99

Concentrated Extract Volume: 1000(uL)

Date Analyzed: 07/16/99

Injection Volume: ; 2.0(uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

pH:

Number TICs found: 0

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME RT	EST. CONC.	Q
1.			
2			
3.			· .
4			
5			
7			
8.			
9.		.	
0			
1.			
2			
3. 4.			<u>.</u>
5.			<u> </u>
6.			
7.		:	
8.		•	
9.			
0.			
1			
3.		-	
4.			
5.			
6.		-	
7		-	
8.			
9.			
0.			

FORM I SV-TIC

ЈW568 Contract: 68D50004

Lab Name: COMPUCHEM Contract: 68D50004

Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JW513

Matrix: (soil/water) WATER Lab Sample ID: 949697

Sample wt/vol: 500 (g/mL) ML Lab File ID: GH049697A66

Level: (low/med) LOW Date Received: 07/03/99

% Moisture: decanted: (Y/N) Date Extracted:07/06/99

Concentrated Extract Volume: 500(uL) Date Analyzed: 07/16/99

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ____

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) UG/L Q

	•	
108-95-2Phenol	10	U
111-44-4bis(2-Chloroethyl)ether	10	ט
95-57-82-Chlorophenol	10	ן ט
541-73-11,3-Dichlorobenzene	10	ו טו
106-46-71,4-Dichlorobenzene	10	ן טו
95-50-11.2-Dichlorobenzene	10	ן ט
95-48-72-Methylphenol	10	ט
108-60-12,2'-oxybis(1-Chloropropane)	10	UJ
106-44-54-Methylphenol	10	1
621-64-7N-Nitroso-di-n-propylamine	10	Ü
67-72-1Hexachloroethane	10	lŭ l
98-95-3Nitrobenzene	10	1 - 1
78-59-1Isophorone	10	ا تا
88-75-52-Nitrophenol	10	1 - 1
105-67-92,4-Dimethylphenol	10	1 -
111-91-1bis(2-Chloroethoxy)methane	10	
120-83-22,4-Dichlorophenol	10	1 - 1
120-82-11,2,4-Trichlorobenzene	10	1
91-20-3Naphthalene	10	
106-47-84-Chloroaniline	10	
87-68-3Hexachlorobutadiene	10	
59-50-74-Chloro-3-methylphenol	10	
91-57-62-Methylnaphthalene	10	
77-47-4Hexachlorocyclopentadiene	10	1 1
88-06-22,4,6-Trichlorophenol	10	ן ט
95-95-42,4,5-Trichlorophenol	25	1 -
91-58-72-Chloronaphthalene	10	1 -
88-74-42-Nitroaniline	25	
131-11-3Dimethylphthalate	10	1 -
208-96-8Acenaphthylene	10	
606-20-22,6-Dinitrotoluene	10	1 - 1
99-09-23-Nitroaniline	25	1
83-32-9Acenaphthene		U U
* * * * * * * * * * * * * * * * * * *]
		. I <u></u>

FORM I SV-1

W-95 OLMO3.0

EPA SAMPLE NO. SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET JW568 Lab Name: COMPUCHEM Contract: 68D50004 Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JW513 Matrix: (soil/water) WATER Lab Sample ID: 949697 500 (g/mL) ML Sample wt/vol: Lab File ID: GH049697A66 Level: (low/med) LOW Date Received: 07/03/99 % Moisture: decanted: (Y/N)_ Date Extracted: 07/06/99 Concentrated Extract Volume: 500(uL) Date Analyzed: 07/16/99 Injection Volume: 2.0(uL) Dilution Factor: 1.0 GPC Cleanup: (Y/N) N pH: CONCENTRATION UNITS: CAS NO. (ug/L or ug/Kg) UG/L

١		17				1
I	51-28-52,4-Dinitrophenol				U	
١	100-02-74-Nitrophenol			25	U	1
ŀ	132-64-9Dibenzofuran			10	Ū ·	1
l	121-14-22,4-Dinitrotoluene			10	U .	ŀ
١	84-66-2Diethylphthalate			10	U	į
l	7005-72-34-Chlorophenyl-phenylether			10	Ū	
١	86-73-7Fluorene			10		
I	100-01-64-Nitroaniline	• •		25		1
l	534-52-14,6-Dinitro-2-methylphenol			25	U	
I	86-30-6N-nitrosodiphenylamine_(1)			10	-	
١	101-55-34-Bromophenyl-phenylether		·	10	U	
ı	118-74-1Hexachlorobenzene			10		
۱	87-86-5Pentachlorophenol			25	UJ	1
1	85-01-8Phenanthrene			10		'
۱	120-12-7Anthracene			10		1
ı	86-74-8Carbazole	٠	*	10	-	1
I	84-74-2Di-n-butylphthalate			10		
I	206-44-0Fluoranthene			10		
١	129-00-0Pyrene			10		
1	85-68-7Butylbenzylphthalate			10		
١	91-94-13,3'-Dichlorobenzidine	". · .		10] .
١	56-55-3Benzo(a) anthracene			10		
١	218-01-9Chrysene			10		
I	117-81-7bis(2-Ethylhexyl)phthalate			10		1.
I	117-84-0Di-n-octylphthalate		. :	10		
l	205-99-2Benzo(b) fluoranthene			10	Ŭ	1
l	207-08-9Benzo(k) fluoranthene			10		
1	50-32-8Benzo (a) pyrene			10		
1	193-39-5Indeno(1,2,3-cd)pyrene			1.0		
1	53-70-3Dibenzo(a,h)anthracene			10	1	1
	191-24-2Benzo(g,h,i)perylene			10	Ŭ	
١		<u> </u>		:		_
1	.) - Cannot be separated from Diphenylamine					

Cannot be separated from Diphenylamine

CF-27-51

1F SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

JW568

Lab Name: COMPUCHEM

Contract: 68D50004

Lab Code: COMPU

Case No.: 27165 SAS No.:

SDG No.: JW513

Matrix: (soil/water) WATER

Lab Sample ID: 949697

Sample wt/vol:

500 (g/mL) ML

Lab File ID: GH049697A66

Level: (low/med)

LOW

Date Received: 07/03/99

% Moisture:

decanted: (Y/N)

500 (uL)

Date Extracted:07/06/99

Concentrated Extract Volume:

Date Analyzed: 07/16/99

Injection Volume:

2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

pH:

Number TICs found: 10

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q =====
1. 2. 3. 4. 5. 6. 101 84 8 7. 8. 119-61-9 9.	UNKNOWN (BC) Lab Cont. UNKNOWN (BC) UNKNOWN (BC) UNKNOWN (BC) UNKNOWN (BC) DIPHENYL ETHER UNKNOWN BENZOPHENONE Lab Cont.	7.01 7.96 9.40 9.73 10.15 11.45 12.33 13.64	8 5 2 3 6 2 2 6 2	JN JB JN JN NJB R JN NJB R JN
10. 10544-50-0 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30.	UNKNOWN SULFUR, MOL. (S8)	15.83	8	NJ

FORM I SV-TIC

OLMO3.0

JW569
Lab Name: COMPUCHEM Contract: 68D50004

Lab Code: COMPU Case: No.: 27165 SAS No.: SDG No.: JW513

Matrix: (soil/water) WATER Lab Sample ID: 949698

Sample wt/vol: 1000 (g/mL) ML Lab File ID: GJ049698A66

Level: (low/med) LOW Date Received: 07/03/99

% Moisture: _____ decanted: (Y/N)___ Date Extracted:07/06/99

Concentrated Extract Volume: 1000(uL) Date Analyzed: 07/18/99

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS NO. COMPOUND (ug/L or ug/Kg) UG/L

	<u> </u>	
108-95-2Phenol		10 U
111-44-4bis(2-Chloroethyl)ether		10 U
95-57-82-Chlorophenol		10 0
541-73-11,3-Dichlorobenzene		10 U
106-46-71,4-Dichlorobenzene		10 U
95-50-11,2-Dichlorobenzene	•	10 U
95-48-72-Methylphenol		10 U_
108-60-12,2'-oxybis(1-Chloropropane)		ן לט 10
106-44-54-Methylphenol		10 U
621-64-7N-Nitroso-di-n-propylamine		10 U
67-72-1Hexachloroethane		10 U
98-95-3Nitrobenzene		10 U
78-59-1Isophorone		10 U
88-75-52-Nitrophenol		10 U
105-67-92,4-Dimethylphenol		10 U
111-91-1bis(2-Chloroethoxy)methane		10 U
120-83-22,4-Dichlorophenol		10 U
120-82-11,2,4-Trichlorobenzene		10 U
91-20-3Naphthalene		10 U
106-47-84-Chloroaniline	•	10 U
87-68-3Hexachlorobutadiene	11.00	10 U
59-50-74-Chloro-3-methylphenol		10 U
91-57-62-Methylnaphthalene		10 U
77-47-4Hexachlorocyclopentadiene		10 U
88-06-22,4,6-Trichlorophenol		10 ប
95-95-42,4,5-Trichlorophenol	and the second	25 U.
91-58-72-Chloronaphthalene		10 U
88-74-42-Nitroaniline		25 U
131-11-3Dimethylphthalate		10 U
208-96-8Acenaphthylene		10 U
606-20-22,6-Dinitrotoluene		10 U
99-09-23-Nitroaniline		25 U
83-32-9Acenaphthene		10 U
· ·		.] .

FORM I SV-1

C/ 59 OLMO3.0

Lab Name: COMPUCHEM Contract: 68D50004

Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JW513

Matrix: (soil/water) WATER Lab Sample ID: 949698

Sample wt/vol: 1000 (g/mL) ML Lab File ID: GJ049698A66

Level: (low/med) LOW Date Received: 07/03/99

% Moisture: _____ decanted: (Y/N)___ Date Extracted:07/06/99

Concentrated Extract Volume: 1000(uL) Date Analyzed: 07/18/99

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N ; pH: ___

CAS NO.	COMPOUND	(ug/L or ug	/Kg)	UG/L		Ç	2
100-02-7 132-64-9 121-14-2 84-66-2 7005-72-3- 86-73-7 100-01-6 534-30-6 101-55-3 118-74-1 87-86-5 85-01-8 120-12-7 86-74-8 206-44-0 129-00-0 85-68-7 91-94-1 56-55-3 218-01-9 117-81-7- 117-84-0 207-08-9 117-84-0 207-08-9 117-84-0 207-08-9 117-84-0 218-39-5 193-39-5 191-24-2	2,4-Dinitrophen4-Nitrophenol2,4-Dinitrotolu2,4-Dinitrotolu2,4-DinitrotoluDiethylphthalat4-Chlorophenyl4-Nitroaniline4,6-Dinitro-2-mN-nitrosodiphen4-Bromophenyl-pHexachlorobenzePentachlorophenPhenanthrenePhenanthreneCarbazoleDi-n-butylphthaPyreneButylbenzylphth3,3'-DichlorobeBenzo(a) anthrac	methylphenol mylamine (1) phenylether methylphenol mylamine (1) phenylether malate malate malate malate malate malate milate		25 10 10 10 25 10 10 25 10 10 10 10 10 10 10 10 10 10 10 10 10			
					11.4	<u>-</u>	7G

FORM I SV-2

1F SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

•	EPA	SAMPLE	ИÓ

Lab Name: COMPUCHEM		Contract	: 68D50004	JW269	
Lab Code: COMPU C	lase No.: 27165	SAS No.	: SDG	No.: JW513	
Matrix: (soil/water)	WATER		Lab Sample ID:	: 949698	
Sample wt/vol:	1000 (g/mL) ML		Lab File ID:	GJ049698A66	
Level: (low/med)	LOW		Date Received:	07/03/99	
% Moisture:	decanted: (Y/N)_		Date Extracted	1:07/06/99	
Concentrated Extract	Volume: 1000	(uL)	Date Analyzed:	: 07/18/99	
Injection Volume:	2.0(uL)		Dilution Facto	or: 1.0	

GPC Cleanup:

(Y/N) N

Number TICs found: 1

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME RT EST. CONC	. Q
======================================	UNKNOWN 9.12	-4 J <i>N</i>
3		
4		
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8. 9.		
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FORM I SV-TIC

Lab Name: COMPUCHEM Contract: 68D50004

Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JW513

Matrix: (soil/water) WATER Lab Sample ID: 950023

Sample wt/vol: 1000 (g/mL) ML Lab File ID: GH050023B64

Level: (low/med) LOW Date Received: 07/09/99

% Moisture: ____ decanted: (Y/N) ___ Date Extracted:07/12/99

Concentrated Extract Volume: 1000(uL) Date Analyzed: 07/18/99

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	(ug/L or ug/K	g) UG/L	· Q
95-57-8 541-73-1 106-46-7 95-50-1 95-48-7 108-60-1 106-44-5 621-64-7 98-95-3 78-59-1 88-75-5 105-67-9 111-91-1 120-83-2 120-83-2 120-82-1 91-20-3 91-57-6 91-57-6 91-58-7	Phenolbis(2-Chloroe2-Chloropheno1,3-Dichlorob1,4-Dichlorob1,2-Dichlorob2,2'-oxybis(14-MethylphenoNitroso-diHexachloroethIsophorone2,4-Dimethylpbis(2-Chloroe2,4-Dichlorop1,2,4-TrichloNaphthalene4-ChloroaniliHexachlorobut4-Chloro-3-me2,4,5-Trichlo2,4,5-Trichlo2,4,5-Trichlo2,6-Dinitroto2,6-Dinitroto3-NitroanilirAcenaphthene	enzene enzene enzene enzene enzene l -Chloropropane) l n-propylamine ane ehenol ethoxy) methane chenol erobenzene ne adiene ethylphenol chalene elopentadiene erophenol erophenol erophenol ende elate ele elate ele elate ele elate ele elate ele elate ele elate ele elate ele elate ele elate ele elate ele elate ele elate	1(10 10 10 10 10 10 10 10 10 10 10 10 10	00000000000000000000000000000000000000

CONCENTRATION UNITS:

FORM I SV-1

CP -99

JW576

Contract: 68D50004 Lab Name: COMPUCHEM SAS No.: SDG No.: JW513 Lab Code: COMPU Case No.: 27165 Lab Sample ID: 950023 Matrix: (soil/water) WATER

Lab File ID: GH050023B64 1000 (q/mL) ML Sample wt/vol: Level: (low/med) Date Received: 07/09/99 LOW

Date Extracted: 07/12/99 % Moisture: decanted: (Y/N)

Date Analyzed: 07/18/99 Concentrated Extract Volume: 1000(uL)

Dilution Factor: 1.0 Injection Volume: 2.0 (uL)

GPC Cleanup: (Y/N) N : Hq

> COMPOUND CAS NO. (ug/L or ug/Kg) UG/L ·Q 51-28-5-----2;4-Dinitrophenol 25 U 100-02-7----4-Nitrophenol 25 U 10 U 132-64-9-----Dibenzofuran 121-14-2----2,4-Dinitrotoluene 10 U 10 U 84-66-2-----Diethylphthalate 10 U 7005-72-3----4-Chlorophenyl-phenylether 10 U 86-73-7-----Fluorene 25 U 100-01-6-----4-Nitroaniline 534-52-1----4,6-Dinitro-2-methylphenol 25 U 10 U 86-30-6----N-nitrosodiphenylamine (1) 10 U 101-55-3----4-Bromophenyl-phenylether 10 U 118-74-1-----Hexachlorobenzene 87-86-5----Pentachlorophenol 25 U 85-01-8-----Phenanthrene 10 U 120-12-7-----Anthracene 10 U 10 U 86-74-8-----Carbazole 10 0 84-74-2-----Di-n-butylphthalate 10 U 206-44-0-----Fluoranthene 129-00-0-----Pyrene 10 U 10 U 85-68-7-----Butylbenzylphthalate 91-94-1----3,3'-Dichlorobenzidine 10 U 56-55-3-----Benzo (a) anthracene 10 U 10 U 218-01-9-----Chrysene 117-81-7-----bis(2-Ethylhexyl)phthalate 10 U 117-84-0-----Di-n-octylphthalate 10 U 205-99-2----Benzo(b) fluoranthene 10 U 207-08-9----Benzo(k)fluoranthene 50-32-8-----Benzo (a) pyrene 10 U 193-39-5-----Indeno(1,2,3-cd)pyrene_ 53-70-3-----Dibenzo(a,h)anthracene_ 10 U 10 U 10 U 191-24-2----Benzo(g,h,i)perylene (1) - Cannot be separated from Diphenylamine

CONCENTRATION UNITS:

FORM I SV-2

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

JW576	
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Lab	Name:	COMPUCHEM

Lab Code: COMPU Case No.: 27165 SAS No.:

Contract: 68D50004

SDG No.: JW513

Matrix: (soil/water) WATER

Lab Sample ID: 950023

Sample wt/vol:

1000 (g/mL) ML

Lab File ID:

GH050023B64

Level: (low/med)

LOM ·

Date Received: 07/09/99

% Moisture: _____

decanted: (Y/N)____

Date Extracted: 07/12/99

Concentrated Extract Volume:

1000 (uL)

Date Analyzed: 07/18/99

Injection Volume: 2.0(uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

pH: _

Number TICs found: 4

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT -	EST. CONC.	Q
1. 2. 3. 10544-50-0 4.	UNKNOWN UNKNOWN SULFUR, MOL. (S8) UNKNOWN	6.63 10.32 15.71 25.32	4 2 3 2	JN JN NJ JN
6. 7. 8.				
10. 11. 12.				
14. 15. 16.				
17. 18. 19.				
21. 22. 23. 24.				
25. 26. 27. 28.				
29. 30.				

JW581

Lab Name: COMPUCHEM Contract: 68D50004

Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JW513

Matrix: (soil/water) WATER Lab Sample ID: 950024

Sample wt/vol: 950 (g/mL) ML Lab File ID: GH050024B64

Level: (low/med) LOW Date Received: 07/09/99

% Moisture: ____ decanted: (Y/N)___ Date Extracted:07/12/99

Concentrated Extract Volume: 1000(uL) Date Analyzed: 07/18/99

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) UG/L Q

10 0 108-95-2----Phenol 111-44-4----bis(2-Chloroethyl)ether 10 | U 10 U 95-57-8----2-Chlorophenol 10 U 541-73-1----1,3-Dichlorobenzene 106-46-7----1,4-Dichlorobenzene 10 U 10 U 95-50-1----1,2-Dichlorobenzene 10 U 95-48-7----2-Methylphenol 108-60-1----2,2'-oxybis(1-Chloropropane) 10 U 10 U 106-44-5----4-Methylphenol 621-64-7----N-Nitroso-di-n-propylamine_ 10 U 10 U 67-72-1-----Hexachloroethane 98-95-3-----Nitrobenzene 10 U 10 U 78-59-1-----Isophorone 88-75-5-----2-Nitrophenol
105-67-9-----2,4-Dimethylphenol 10 U 10 U . 10 U 111-91-1-----bis(2-Chloroethoxy)methane 10 U 120-83-2----2,4-Dichlorophenol 10 U 120-82-1----1,2,4-Trichlorobenzene 10 U 91-20-3-----Naphthalene 10 U 106-47-8-----4-Chloroaniline 10 U 87-68-3-----Hexachlorobutadiene 10 U 59-50-7----4-Chloro-3-methylphenol 10 U 91-57-6----2-Methylnaphthalene 77-47-4-----Hexachlorocyclopentadiene 10 U 88-06-2----2,4,6-Trichlorophenol_95-95-4-----2,4,5-Trichlorophenol_ 10 U 26 U 10 U 91-58-7----2-Chloronaphthalene 26 U 88-74-4----2-Nitroaniline 10 U 131-11-3-----Dimethylphthalate 208-96-8-----Acenaphthylene 10 U 606-20-2----2,6-Dinitrotoluene____ 10 U 99-09-2----3-Nitroaniline_____ 26 U 10 U 83-32-9-----Acenaphthene

FORM I SV-1

6-27-99 OLMO3.0

JW581 Lab Name: COMPUCHEM Contract: 68D50004 Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JW513 Matrix: (soil/water) WATER Lab Sample ID: 950024 Sample wt/vol: 950 (g/mL) ML Lab File ID: GH050024B64 Level: (low/med) LOW Date Received: 07/09/99 % Moisture: decanted: (Y/N)____ Date Extracted:07/12/99 Concentrated Extract Volume: 1000(uL) Date Analyzed: 07/18/99 Injection Volume: 2.0(uL) Dilution Factor: 1.0 GPC Cleanup: (Y/N) N pH: CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L CAS NO. COMPOUND 51-28-5----2,4-Dinitrophenol____ 26 U 100-02-7----4-Nitrophenol_____ 26 U 132-64-9-----Dibenzofuran_ 10 U 121-14-2----2,4-Dinitrotoluene 10 U 84-66-2-----Diethylphthalate 3 J 7005-72-3----4-Chlorophenyl-phenylether 10 U 86-73-7----Fluorene 10 100-01-6----4-Nitroaniline 26 534-52-1-----4,6-Dinitro-2-methylphenol_ 26 U 86-30-6----N-nitrosodiphenylamine_(1)___ 10 U 101-55-3----4-Bromophenyl-phenylether____ 10 U 10 U 118-74-1----Hexachlorobenzene 87-86-5-----Pentachlorophenol 26 U 85-01-8-----Phenanthrene_ 10 U 120-12-7-----Anthracene 10 U 86-74-8-----Carbazole 10 U 84-74-2-----Di-n-butylphthalate____ 10 U 206-44-0-----Fluoranthene__ 10 U 129-00-0------Pyrene 85-68-7------Butylbenzylphthalate 91-94-1-----3,3'-Dichlorobenzidine 10 U 10 U 10 U 56-55-3----Benzo (a) anthracene 10 U 218-01-9-----Chrysene 10 U 117-81-7-----bis(2-Ethylhexyl)phthalate_ 10 U 117-84-0------Di-n-octylphthalate_ 205-99-2-----Benzo(b)fluoranthene 10 U 10 U 10 | U 207-08-9-----Benzo (k) fluoranthene 50-32-8-----Benzo (a) pyrene 10 U 193-39-5-----Indeno(1,2,3-cd)pyrene 10 U 53-70-3-----Dibenzo(a,h)anthracene 10 U 191-24-2----Benzo(g,h,i)perylene 10 U (1) - Cannot be separated from Diphenylamine FORM I SV-2 OLM03.0

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

JW581 Contract: 68D50004

Lab Name: COMPUCHEM

Lab Code: COMPU

Case No.: 27165 SAS No.: SDG No.: JW513

Matrix: (soil/water) WATER

Lab Sample ID: 950024

Sample wt/vol: 950 (g/mL) ML

Lab File ID: GH050024B64

Level: (low/med)

LOW

Date Received: 07/09/99

% Moisture:

decanted: (Y/N)____

Date Extracted: 07/12/99

Concentrated Extract Volume: 1000(uL)

Date Analyzed: 07/18/99

Injection Volume: 2.0(uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

pH:

Number TICs found: 10

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q =====
1. 2. 65-85-0 3. 4. 5. 6. 7. 8. 9.	BENZOIC ACID UNKNOWN UNKNOWN UNKNOWN UNKNOWN METHYLBENZENESULFONAMIDE METHYLBENZENESULFONAMIDE UNKNOWN CARBOXYLIC ACID	5.93 8.44 8.76 10.50 11.18 11.38 12.62 12.94 14.86	2 13 4 6 3 4 3 2	那- K NJ J J J J J J J J J J J J J J J J J J
10. 11. 12.	UNKNOWN	15.54	2	
13. 14. 15.				
16. 17. 18. 19.				
20. 21.				
23. 24. 25.				
26. 27. 28.				
29. 30.				

JP425 Lab Name: COMPUCHEM Contract: 68D50004 Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JW513 Matrix: (soil/water) WATER Lab Sample ID: 950547 Sample wt/vol: 1010 (g/mL) ML Lab File ID: % Moisture: _____ decanted: (Y/N)___ Date Received: 07/14/99 Extraction: (SepF/Cont/Sonc) SEPF Date Extracted:07/16/99 Concentrated Extract Volume: 10000(uL) Date Analyzed: 08/09/99 Injection Volume: 2.0(uL) Dilution Factor: 1.0 GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L Q CAS NO. COMPOUND 0.050 0.050 U 319-84-6-----alpha-BHC 319-85-7-----beta-BHC 319-85-7-----beta-BHC 319-86-8-----delta-BHC 58-89-9-----gamma-BHC (Lindane)_____ 0.050 U 76-44-8-----Heptachlor____ 0.050 U 309-00-2-----Aldrin 0.050 U 1024-57-3-----Heptachlor epoxide 0:050 U 959-98-8-----Endosulfan I_____ 0.050 U 60-57-1-----Dieldrin 0.099 0 72-55-9-----4,4'-DDE_____ 0.099 U 72-20-8-----Endrin 33213-65-9----Endosulfan II 0.099 U 0.099 U 72-54-8-----4,4'-DDD 0.099 U 1031-07-8-----Endosulfan sulfate____ 0.099 U 50-29-3-----4,4'-DDT 0.099 U 0.50 U 0.099 U 0.099 U 72-43-5-----Methoxychlor___ 53494-70-5----Endrin ketone_____ 7421-93-4----Endrin aldehyde 5103-71-9-----alpha-Chlordane 5103-74-2----gamma-Chlordane 0.050 U 8001-35-2----Toxaphene 5.0 U 12674-11-2----Aroclor-1016____ 0.99 U 11104-28-2----Aroclor-1221_____ 2.0 U 11141-16-5-----Aroclor-1232 53469-21-9-----Aroclor-1242 0.99 U 0.99 U 12672-29-6-----Aroclor-1248 0.99 0 11097-69-1-----Aroclor-1254__ 0.99 U 11096-82-5----Aroclor-1260 0.99 U 8-30-99

FORM I PEST

OLMO3.0

1D PESTICIDE ORGANICS ANALYSIS DATA SHEET

Lab Name: COMPUCHEM	•	Contract: 68D5	0004	JP427	
Lab Code: COMPU	Case No.: 27165	SAS No.:	SDG	No.: JW513	•
Matrix: (soil/water) WATER	Lab S	ample ID:	: 950549	
Sample wt/vol:	1020 (g/mL) ML	Lab F	ile ID:		
% Moisture:	decanted: (Y/N)	Date	Received:	: 07/14/99	
Extraction: (SepF/	Cont/Sonc) SEPF	Date	Extracted	1:07/16/99	•
Concentrated Extrac	t Volume: 10000	(uL) Date	Analyzed:	: 08/09/99	`
Injection Volume:	2.0 (uL)	Dilut	ion Facto	or: 1.0	
GPC Cleanup: (Y/N) N pH:	_ Sulfu	r Cleanur	o: (Y/N) N	
CAS NO.	COMPOUND	CONCENTRATION (ug/L or ug			<u> </u>
319-85-7 319-86-8 58-89-9 76-44-8 309-00-2 1024-57-3 959-98-8 72-55-9 72-55-9 72-20-8 33213-65-9 72-54-8 1031-07-8 50-29-3 5103-74-2 5103-74-2 8001-35-2 12674-11-2 11104-28-2 11141-16-5 53469-21-9 12672-29-6 11097-69-1	Heptachlor epo Endosulfan I_ Dieldrin 4,4'-DDE Endrin Endosulfan II_ 4,4'-DDD	lfateieie		0.049 0.049 0.049 0.049 0.049 0.049 0.049 0.049 0.098	

CP,30-91

FORM I PEST

PESTICIDE ORGANICS ANALYSIS DATA SHEET

JP430 Contract: 68D50004 Lab Name: COMPUCHEM Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JW513 Lab Sample ID: 950550 Matrix: (soil/water) WATER Sample wt/vol: 500.0 (g/mL) ML Lab File ID: % Moisture: ____ decanted: (Y/N)___ Date Received: 07/14/99 Date Extracted:07/16/99 Extraction: (SepF/Cont/Sonc) SEPF Concentrated Extract Volume: 5000(uL) Date Analyzed: 08/09/99 Injection Volume: 2.0(uL) Dilution Factor: 1.0 GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N CONCENTRATION UNITS: CAS NO. COMPOUND (ug/L or ug/Kg) UG/L

3, 3,		•	
5103-74-2gamma-Chlordane 8001-35-2Toxaphene 12674-11-2Aroclor-1016 11104-28-2Aroclor-1221 11141-16-5Aroclor-1232 53469-21-9Aroclor-1242	0.050 0.10	0.050 0.050 0.050 0.050 0.050 0.050 0.050 0.045 0.033 0.10 0.064 0.10 0.50 0.10 0.50 0.10 0.50 0.10 0.10	
		1.0	ם ט ט

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FORM I PEST

PESTICIDE ORGANICS ANALYSIS DATA SHEET

Contract: 68D50004 Lab Name: COMPUCHEM SDG No.: JW513 Lab Code: COMPU Case No.: 27165 SAS No.: Lab Sample ID: 950551 Matrix: (soil/water) WATER Lab File ID: Sample wt/vol: 500.0 (g/mL) ML Date Received: 07/14/99 decanted: (Y/N)____ % Moisture: Date Extracted: 07/16/99 Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 08/09/99 Concentrated Extract Volume: 5000(uL) Dilution Factor: 1.0 Injection Volume: 2.0(uL) Sulfur Cleanup: (Y/N) N GPC Cleanup: (Y/N) N pH:

CONCENTRATION UNITS:
CAS NO. COMPOUND (ug/L or ug/Kg) UG/L

319-84-6alpha-BHC	. 0.	050 U
319-85-7beta-BHC		050 U
319-86-8delta-BHC		083 JFU
	• • •	050 U
58-89-9gamma-BHC (Lindane)		050 U
76-44-8Heptachlor		050 U
309-00-2Aldrin		050 U
1024-57-3Heptachlor epoxide	O,	050 U
959-98-8Endosulfan I		011 JPU
60-57-1Dieldrin	C-10.0	013 ZU
72-55-94,4'-DDE		.10 U
72-20-8Endrin		.10 0
33213-65-9Endosulfan II		DEGT CEG
72-54-84,4'-DDD		
1031-07-8Endosulfan sulfate		.10 U
50-29-34,4'-DDT		080 ZU
72-43-5Methoxychlor	1	.50 U
53494-70-5Endrin ketone	1	.10 0
7421-93-4Endrin aldehyde		.10 U
5103-71-9alpha-Chlordane		050 U
5103-74-2gamma-Chlordane	0.	050 U
8001-35-2Toxaphene		5.0 U
12674-11-2Aroclor-1016		1.0 U
11104-28-2Aroclor-1221		2.0 U
11141-16-5Aroclor-1232		1.0 U
53469-21-9Aroclor-1242		1.0 U
12672-29-6Aroclor-1248		1.0 0
11097-69-1Aroclor-1254		1.0 U
11096-82-5Aroclor-1260		1.0 U
	. 1	0 2

CP 30.95

Lab Na	ame: COMPUCHEM		Contract:	68D50004	JW522
Lab Co	ode: COMPU (Case No.: 27165	SAS No.:	SDG	No.: JW513
Matrix	x: (soil/water)	WATER	L	ab Sample ID:	949468
Sample	e wt/vol:	1000 (g/mL) ML	I	Lab File ID:	
% Mois	sture:	decanted: (Y/N)_	Γ	Date Received:	07/02/99
Extra	ction: (SepF/Co	ont/Sonc) SEPF	· I	Date Extracted	1:07/06/99
Concer	ntrated Extract,	Volume: 10000	(uL) I	Date Analyzed:	08/09/99
Inject	tion Volume:	2.0 (uL)	Γ	Dilution Facto	or: 1.0
GPC C	leanup: (Y/N)	N pH:	_	Sulfur Cleanur	o: (Y/N) N
·	CAS NO.	COMPOUND		rration units: or ug/Kg) UG/I	
	76-44-8 309-00-2 1024-57-3 959-98-8 60-57-1 72-55-9 72-20-8 33213-65-9 72-54-8	beta-BHCdelta-BHCgamma-BHC (Line	oxide	0.10	0.050 V R 0.11 P 0.050 V O 0.050 V O 0.050 V O 0.050 V O 0.050 V O 0.10 U O

72-43-5-----Methoxychlor

8001-35-2-----Toxaphene

12674-11-2----Aroclor-1016

11104-28-2----Aroclor-1221 11141-16-5----Aroclor-1232

53469-21-9----Aroclor-1242

12672-29-6-----Aroclor-1248

11097-69-1----Aroclor-1254 11096-82-5----Aroclor-1260

53494-70-5----Endrin ketone

7421-93-4----Endrin aldehyde 5103-71-9----alpha-Chlordane

5103-74-2----gamma-Chlordane

8-30-49

0.50 U

U

U

U

U

U 5.0

ष्ट्रविष

0.10

0.10

0.050

0.050

1.0

2.0

1.0 1.0

1.0 Ø 1.0 U

1.0 U

1.0

FORM I PEST

OLMO3.0

PESTICIDE ORGANICS ANALYSIS DATA SHEET

JW527
Lab Name: COMPUCHEM Contract: 68D50004

Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JW513

Matrix: (soil/water) WATER Lab Sample ID: 949694

Sample wt/vol: 1000 (g/mL) ML Lab File ID:

% Moisture: ____ decanted: (Y/N) ___ Date Received: 07/03/99

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted:07/06/99

Concentrated Extract Volume: 10000(uL) Date Analyzed: 08/09/99

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:
CAS NO. COMPOUND (ug/L or ug/Kg) UG/L

	COMPOUND	(ug/L OL	-3, -3.	à		· -
319-94-6	alpha-BHC				0.050	vi R
319-85-7				. .	0.050	W 1
	delta-BHC		·		0.050	Tr 1
58-89-9	gamma-BHC (Linda	nel	-,		0.050	
76-44-8	Heptachlor	.110/			0.050	F
309-00-2	Aldrin				0.050	6
	Heptachlor epoxi	de			0.050	
	Endosulfan I				0.050	ับป
	Dieldrin				0.050	ប៊
72-55-9		•		•	0.61	PBJN
72-20-8					0.10	
	Endosulfan II				0.10	
	4,4'-DDD					DB-JN
	Endosulfan sulfa			.10	0.061	
50-29-3			— ×	•	0.10	
	Methoxychlor				0.50	
	Endrin ketone				0.10	
7/21-02-/	Endrin aldehyde_				0.10	
F102-71 0	alpha-Chlordane_				0.050	I .
5103-71-3	gamma-Chlordane				0.050	1
8001-35-2	ganilla-chioidane_ Toxaphene				5.0	
	Aroclor-1016		`			p R
	Aroclor-1010				2.0	D I
	Aroclor-1221		·		1.0	
	Aroclor-1232		 ' '	;	1.0	ਪਿੰ
	Aroclor-1242				1.0	N.
	Aroclor-1246		 ;		1.0	
11006-00-5	Aroclor-1254				1.0	
11030-02-2				•	1.0	١

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FORM I PEST

PESTICIDE ORGANICS ANALYSIS DATA SHEET

JW530 Contract: 68D50004 Lab Name: COMPUCHEM Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JW513

Lab Sample ID: 949475 Matrix: (soil/water) WATER

1000 (g/mL) ML Lab File ID: Sample wt/vol:

% Moisture: _____ decanted: (Y/N)___ Date Received: 07/02/99

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted:07/06/99

Date Analyzed: 08/09/99 Concentrated Extract Volume: 10000(uL)

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS: CAS NO. COMPOUND (ug/L or ug/Kg) UG/L

		<u> </u>	
319-84-6alpha-BHC 319-85-7beta-BHC 319-86-8delta-BHC 58-89-9gamma-BHC (Lindane) 76-44-8Heptachlor 309-00-2Aldrin	*	0.050 0.050 0.050 0.050 0.050 0.050	U U
1024-57-3Heptachlor epoxide		0.050	_
959-98-8Endosulfan I	210	0.050	
60-57-1Dieldrin	0.70	0.011	
72-55-94,4'-DDE		0.036	IJ\$
72-20-8Endrin	0.70	0.0038	
33213-65-9Endosulfan II		0.10	U
72-54-84,4'-DDD		0.040	, ,
1031-07-8Endosulfan sulfate	0	0.10	U
50-29-34,4'-DDT	0.10	-0.013	
72-43-5Methoxychlor		0.50	1 .
53494-70-5Endrin ketone		0.10	
7421-93-4Endrin aldehyde		0.10	
5103-71-9alpha-Chlordane		0.050	i -
5103-74-2gamma-Chlordane		0.050	1
8001-35-2Toxaphene		5.0 1.0	U U
12674-11-2Aroclor-1016		2.0	U .
11104-28-2Aroclor-1221		1.0	τ
11141-16-5Aroclor-1232		1.0	. –
53469-21-9Aroclor-1242	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		i -
12672-29-6Aroclor-1248		1.0 1.0	[U U
11097-69-1Aroclor-1254			1 -
11096-82-5Aroclor-1260		1.0	U
	l		l <u></u>

CP 5-30-99

FORM I PEST

1D PESTICIDE ORGANICS ANALYSIS DATA SHEET

JW568
Contract: 68D50004

Contract: 68D50004 Lab Name: COMPUCHEM Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JW513 Lab Sample ID: 949697 Matrix: (soil/water) WATER Sample wt/vol: 1000 (g/mL) ML Lab File ID: % Moisture: ____ decanted: (Y/N) ___ Date Received: 07/03/99 Date Extracted: 07/06/99 Extraction: (SepF/Cont/Sonc) SEPF Concentrated Extract Volume: 10000(uL) Date Analyzed: 08/09/99 Injection Volume: 2.0(uL) Dilution Factor: 1.0 GPC Cleanup: (Y/N) N pH: _ Sulfur Cleanup: (Y/N) N CONCENTRATION UNITS: CAS NO. COMPOUND · Q (ug/L or ug/Kg) UG/L 319-84-6----alpha-BHC 0.050 U 0.050 U 319-85-7-----beta-BHC 319-86-8-----delta-BHC 58-89-9-----gamma-BHC (Lindane)_____ 0.050 U 0.050 U 0.050 U 76-44-8-----Heptachlor_____ 0.050 U 309-00-2----Aldrin 0.050 U 0.050 U 1024-57-3-----Heptachlor epoxide 0.10 U 0.10 U 72-55-9-----4,4'-DDE 0.10 U 72-20-8-----Endrin 33213-65-9----Endosulfan II 0.10 U 0.10 U 72-54-8-----4,4'-DDD 1031-07-8-----Endosulfan sulfate 0.10 U 50-29-3-----4,4'-DDT 0.10 U 0.50 U 72-43-5-----Methoxychlor_ 53494-70-5----Endrin ketone 0.10 U 0.10 U 0.050 U

CP 99

0.050 U

5.0 U 1.0 U 2.0 U

1.0 U

1.0 U

1.0 U

1.0 U

OLM03.0

5103-74-2----gamma-Chlordane____

8001-35-2-----Toxaphene 12674-11-2----Aroclor-1016

11104-28-2----Aroclor-1221

11141-16-5-----Aroclor-1232_ 53469-21-9-----Aroclor-1242_

12672-29-6----Aroclor-1248

11097-69-1----Aroclor-1254

11096-82-5----Aroclor-1260

JW569 Lab Name: COMPUCHEM Contract: 68D50004 Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JW513 Lab Sample ID: 949698 Matrix: (soil/water) WATER Lab File ID: Sample wt/vol: 1000 (g/mL) ML % Moisture: ____ decanted: (Y/N)___ Date Received: 07/03/99 Extraction: (SepF/Cont/Sonc) SEPF Date Extracted:07/06/99 Concentrated Extract Volume: 10000(uL) Date Analyzed: 08/09/99 Injection Volume: 2.0(uL) Dilution Factor: 1.0 GPC Cleanup: (Y/N) N pH: __ Sulfur Cleanup: (Y/N) N CAS NO. COMPOUND CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L 319-84-6-----alpha-BHC 319-85-7-----beta-BHC 319-86-8-----delta-BHC 0.050 U 0.050 0-0052 JEU 0.050 U 58-89-9-----gamma-BHC (Lindane) 0.050 U 0.050 U 309-00-2-----Aldrin 0.050 U 1024-57-3-----Heptachlor epoxide 0.050 U 959-98-8-----Endosulfan I 0.050 U 60-57-1-----Dieldrin 0.10 U 72-55-9-----4,4'-DDE__ 0.10 U 0.10 0.10 U 0.10 U 0.10 U 0.10 U 0.10 U 0.10 U 72-20-8-----Endrin 72-54-8-----4,4'-DDD 1031-07-8-----Endosulfan sulfate 50-29-3-----4,4'-DDT 72-43-5-----Methoxychlor 53494-70-5----Endrin ketone 72-43-5-----Methoxychlor 0.10 U 7421-93-4----Endrin aldehyde_ 0.10 U 5103-71-9-----alpha-Chlordane 5103-74-2----gamma-Chlordane 0.050 U 0.050 U 8001-35-2-----Toxaphene 5.0 U 12674-11-2----Aroclor-1016 1.0 U 11104-28-2----Aroclor-1221 2.0 U .11141-16-5----Aroclor-1232 1.0 U 53469-21-9----Aroclor-1242 1.0 U 12672-29-6-----Aroclor-1248

1.0 0

1.0 U

1.0 U

FORM I PEST

11097-69-1-----Aroclor-1254

11096-82-5----Aroclor-1260

PESTICIDE ORGANICS ANALYSIS DATA SHEET

JW576
Contract: 68D50004

Lab Name: COMPUCHEM Contra

Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JW513

Matrix: (soil/water) WATER Lab Sample ID: 950023

Sample wt/vol: 940.0 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: 07/09/99

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted:07/12/99

Concentrated Extract Volume: 10000(uL) Date Analyzed: 08/08/99

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:
CAS NO. COMPOUND (ug/L or ug/Kg) UG/L C

319-84-6	0.053 U U U U U U U U U U U U U U U U U U U
5103-71-9alpha-Chlordane 5103-74-2gamma-Chlordane 8001-35-2Toxaphene	0.053 U 5.3 U 1.1 U

CA 99

FORM I PEST

PESTICIDE ORGANICS ANALYSIS DATA SHEET

JW581 Lab Name: COMPUCHEM Contract: 68D50004 Lab Code: COMPU Case No.: 27165 SAS No.: SDG No : JW513 Matrix: (soil/water) WATER Lab Sample ID: 950024 Sample wt/vol: 1000 (g/mL) ML Lab File ID: % Moisture: decanted: (Y/N)____ Date Received: 07/09/99 Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 07/12/99 Concentrated Extract Volume: 10000(uL) Date Analyzed: 08/08/99 Injection Volume: 2.0(uL) Dilution Factor: 1.0 GPC Cleanup: (Y/N) N pH: ____ Sulfur Cleanup: (Y/N) N CONCENTRATION UNITS: COMPOUND (ug/L or ug/Kg) UG/L

Ug-30-99



ecology and environment, inc.

International Specialists in the Environment

4500 First Interstate Center, 999 Third Avenue Scattle, Washington 98104 Tel: (200) 624-9537, Fax: (200) 621-9832

MEMORANDUM

DATE:

September 24, 1999

TO:

Mark Woodke, Project Manager, E & E, Seattle, WA

FROM:

Leatta Dahlhoff, Chemist, E & E, Seattle, WA

SUBJ:

Organic Data Quality Assurance Summary Check,

Wenatchee Brownfield, Wenatchee, Washington

REF:

TDD: 98-11-0007

PAN: CK0701SIDM

The data quality assurance summary review of 20 soil samples collected from the Wenatchee Brownfield site in Wenatchee, Washington, has been completed. Samples were analyzed for Volatile Organic Compounds (VOCs), Semivolatile Organic Compounds (SVOCs), and Pesticides/PCBs in accordance with the USEPA Contract Laboratory Program (CLP) Statement of Work (SOW) for Organic Analyses (revision OLM03.1). The analyses were performed by CompuChem of Cary, North Carolina.

There were no discrepancies noted in the review.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION 10

1200 Sixth Avenue Seattle, Washington 98101

Reply To

Attn Of:

OEA-095

September 21, 1999

MEMORANDUM

Subject: Data Validation Report for Volatile Organic Compounds

(VOCs), Semi-Volatile Organic Compounds (SVOCs) and

Pesticide/Polychlorinated Biphenyls (Pest/PCBs) Analysis of Samples from Wenatchee Brownfields

Case: 27165

SDGs: JP410

From:

Sinna Grepo-Grove, The

Quality Assurance & Data Unit, OEA

To:

oanne Labaw, Site Manager, ECL

CC:

Bruce Woods, Region 10 CLP TPO

Tracy Trople, Ecology and Environment

The quality assurance (QA) review of 20 soil samples collected from the above referenced site has been completed. These samples were analyzed for VOCs, SVOCs and pest/PCBs in accordance with the USEPA Contract Laboratory Program (CLP) Statement of Work (SOW) for Organic Analyses (revision OLMO3.1). The analyses were performed by Compuchem of Cary, NC. The data validations were performed by the Environmental Services Assistance Team (ESAT) and the USEPA Manchester Environmental Laboratory, Port Orchard, WA.

The laboratory had to be contacted to obtain additional information and data in order to complete the review. There were no significant problems encountered with the data. All of the samples were analyzed in accordance with the technical requirements specified in the SOW. The data, as qualified, can be used for all purposes.

Attached are the validation memos for the above mentioned case and sample delivery groups (SDGs).

ENVIRONMENTAL SERVICES ASSISTANCE TEAMS - WESTERN ZONE

LOCKHEED MARTIN TECHNOLOGY SERVICES GROUP ESAT Region 10 Lockheed Martin 7411 Beach Drive East Port Orchard, WA 98366 Phone (360) 871-8723

DELIVERABLE NARRATIVE

DATE:

September 15, 1999

To:

Ginna Grepo-Grove, WAM, USEPA, Region 10

THROUGH:

Dave Dobb, Team Manager, ESAT Region 10

FROM:

Chris Pace, Task Lead, ESAT Region 10

SUBJECT:

Data validation report for the volatile organic (VOA), semi-volatile organic (SVOA) and

pesticide/polychlorinated biphenyl (Pest/PCB) analysis of samples from the Wenatchee Brownfields

Site. Case: 27165 SDG: JP410

DOC:

ESW10-3-1420

PWO:

ESW72023

TDF: WA:

10-99-3-10

3644

CC:

Gerald Dodo, RPO, USEPA, Region 10

Project File

The quality assurance (QA) review of 20 soil samples collected from the above referenced site has been completed. These samples were analyzed for VOA (8), SVOA (8) and Pest/PCB (19) in accordance with the USEPA Contract Laboratory Program (CLP) Statement of Work (SOW) for Organic Analyses (OLM03.2) by COMPUCHEM of Cary, NC.

DATA QUALIFICATIONS

The following comments refer to the laboratory performance in meeting the Quality Control Specifications outlined in the USEPA CLP SOW for Organic Analysis (OLM03.2), the USEPA CLP National Functional Guidelines for Organic Data Review (2/94) and the Region 10 Guidelines for CLP Data Review.

The conclusions presented herein are based on the information provided for the review.

Holding Time

All samples were preserved with ice prior to shipment. All of the samples met the method and technical (40 CFR 136) required holding times for all analyses with the following exceptions:

SVOA sample JP428 was extracted 20 days from the collection date and therefore, associated target analytes were qualified as estimated, "J/UJ".

The Holding Times Summary listing the pertinent collection, extraction, and analysis dates is attached at the end of this validation report.

Instrument Performance - Acceptable

All of the GC and GC/MS systems met the SOW specified technical acceptance criteria prior to sample analyses, i.e., GC/MS performance checks, GC performance checks, retention times, response factors, and calibrations. The systems remained stable throughout the course of analyses. Instrument blanks were all clean and there were no

Case No.: 27165 SDG: JP410 ESW10-3-1420 Page 2 of 7

indications of carry-over.

Initial Calibrations

Two VOA, four SVOA and two Pest/PCB initial calibrations were performed. The initial calibrations met the SOW technical acceptance criteria with the following exceptions:

- VOA Initial Calibration on 6/28/99, instrument 55 the %RSD for 2-hexanone was 31.4. The lowest calibration level was non-linear. Associated samples were qualified as estimated, "J/UJ", in the non-linear portion of the calibration curve.
- VOA Initial Calibration on 7/16/99, instrument 51 the %RSDs for acetone and 2-butanone were 38.5 and 47.4 respectively. The lowest calibration levels were non-linear. Associated samples were qualified as estimated, "J/UJ", in the non-linear portion of the calibration curve.
- SVOA Initial Calibration on 7/23/99, instrument 66 the %RSD for 3,3'-dichlorobenzidine was 33.1. The lowest calibration level was non-linear. Associated samples were qualified as estimated, "J/UJ", in the non-linear portion of the calibration curve.
- SVOA Initial Calibration on 7/26/99, instrument 66 the %RSD for 3,3'-dichlorobenzidine was 45.5. The
 lowest calibration level was non-linear. Associated samples were qualified as estimated, "J/UJ", in the nonlinear portion of the calibration curve.

Continuing Calibration Verification (CCVs) Standards

All of the CCVs met the criteria for frequency of analysis, the minimum response factor, the retention time and the percent differences (%Ds) criteria with the following exceptions:

 The %Ds for the following VOA compounds exceeded the QC limits and the associated results were qualified accordingly:

Date /Time of Analysis	Inst. i.d.	Compound	%Д	Qualifier Detect/Non-detect
7/16/99 (14:22)	51	2-butanone	-27.2	J/UJ
7/20/99 (13:45)	51	4-methyl-2-pentanone 2-hexanone	30.7 25.8	J/none none
7/22/99 (20:56)	55	acetone carbon disulfide 1,1-dichloroethene 2-butanone 4-methyl-2-pentanone 2-hexanone	-53.8 -27.8 -25.2 -55.8 -48.5 -56.6	J/UJ J/UJ none J/UJ J/UJ J/UJ

ESW10-3-1420 Page 3 of 7

The %Ds for the following SVOA compounds exceeded the QC limits and the associated results were qualified accordingly:

Date /Time of Analysis	Inst. i.d.	Compound	%D	Qualifier Detect/Non-detect
7/13/99 (11:33)	66	pentachlorophenol 3,3'-dichlorobenzidine 2,4,6-tribromophenol (surr.)	-28.8 48.4 33.0	J/UJ J/none none
7/14/99 (10:50)	66	2,4-dinitrophenol 3,3'-dichlorobenzidine	34.6 28.2	J/none J/none
7/24/99 (10:52)	66	3-nitroaniline 4-nitroaniline	-25,2 -33.0	none J/UJ
7/27/99 (09:30)	66	2,2'-oxybis(1-chloropropane) carbazole 3,3'-dichlorobenzidine di-n-octylphthalate	33.8 32.8 -25.2 -25.3	J/none J/none none none
7/14/99 (23:38)	70	pentachlorophenol 2,4,6-tribromophenol (surr.)	-27.5 -28.8	J/UJ none
7/30/99 (23:07)	70	4-chloroaniline 3-nitroaniline 2,4-dinitrophenol 4-nitroaniline pentachlorophenol butylbenzylphthalate 3,3'-dichlorobenzidine bis (2-ethylhexyl)phthalate di-n-octylphthalate 2-fluorophenol (surr.)	45.4 35.8 -32.3 39.0 -33.3 26.4 59.1 31.6 48.0 -25.2	J/none J/none J/UJ J/none J/none J/none J/none J/none J/none

Compound Quantitation and Detection Limits

All of the samples were analyzed at the contract required quantitation limits (CRQLs) with the following exceptions:

Pest/PCB samples JP421, JW585, JW591, JW593 and JW595 were analyzed at dilutions of 2X, 5X, 5X, 10X and 5X respectively, based on the results of the screen analysis.

Target compounds that were detected at concentrations less than the CRQLs were qualified as estimated, "J". Detected compounds at concentrations over the calibration range were qualified as estimated, "J". Data users should consider these estimated compounds as the minimum amount present in the samples. It is also recommended that for these compounds, data users should utilize the concentrations reported from the dilution runs. All of the reported results were adjusted for sample amounts analyzed.

Blanks

Methylene chloride, acetone, 2-butanone and 2-hexanone were detected below the CRQL in the VOA blank VBLKB4. Methylene chloride, acetone, 2-butanone and 2-hexanone detected in the samples at concentrations less than ten times the value in their associated blank(s) were qualified as non-detects, "U".

Methylene chloride, acetone and 2-butanone were detected below the CRQL in the VOA blank VBLKZ7. Methylene chloride, acetone and 2-butanone detected in the samples at concentrations less than ten times the value

in their associated blank(s) were qualified as non-detects, "U".

Methylene chloride and acetone was detected below the CRQL in the VOA blanks VBLKZ8 and VHBLD7. Methylene chloride and acetone detected in the samples at concentrations less than ten times the value in their associated blank(s) were qualified as non-detects, "U".

Alpha-BHC, beta-BHC, heptachlor, aldrin, heptachlor epoxide, dieldrin, 4,4'-DDE, 4,4'-DDD, endosulfan sulfate, 4,4'-DDT, endrin aldehyde and gamma chlordane were detected below the CRQL in the Pest/PCB blank PBLKNX. Alpha-BHC, beta-BHC, heptachlor, aldrin, heptachlor epoxide, dieldrin, 4,4'-DDE, 4,4'-DDD, endosulfan sulfate, 4,4'-DDT, endrin aldehyde and gamma chlordane detected in the samples at concentrations less than five times the value in their associated blank(s) were qualified as non-detects, "U".

Aldrin, heptachlor epoxide, 4,4'-DDD and 4,4'-DDT were detected below the CRQL in the Pest/PCB blank PBLKOJ. Aldrin, heptachlor epoxide, 4,4'-DDD and 4,4'-DDT detected in the samples at concentrations less than five times the value in their associated blank(s) were qualified as non-detects, "U".

4,4'-DDE, 4,4'-DDD and 4,4'-DDT were detected below the CRQL in the Pest/PCB blank PBLKPD. 4,4'-DDE, 4,4'-DDD and 4,4'-DDT detected in the samples at concentrations less than five times the value in their associated blank(s) were qualified as non-detects, "U".

Alpha-BHC, beta-BHC, heptachlor epoxide, 4,4'-DDE, endrin, 4,4'-DDD, endosulfan sulfate and 4,4'-DDT were detected below the CRQL in the Pest/PCB blank PBLKXN. Alpha-BHC, beta-BHC, heptachlor epoxide, 4,4'-DDE, endrin, 4,4'-DDD, endosulfan sulfate and 4,4'-DDT detected in the samples at concentrations less than five times the value in their associated blank(s) were qualified as non-detects, "U".

Analytical Sequence - Acceptable

All of the standards, blanks, samples, and QC samples were analyzed in accordance with the SOW specified analytical sequence.

System Monitoring Compounds (SMC)/Surrogate Spikes

All of the VOA SMC recoveries met the applicable QC criteria.

All of the SVOA surrogates recoveries met the applicable QC criteria.

All of the Pest/PCB surrogate spike recoveries met the applicable QC criteria (30-150%) with the following exceptions:

JP429 TCX2 174%, DCB1 263% JW593 DCB1 151%, DCB2 152%

Surrogated recoveries for sample JP429 were affected by chromatographic interferences. Surrogate recoveries for sample JW593 were only slightly outside of the recovery criteria. None of the data were qualified on the basis of surrogate spike recoveries.

Matrix Spike/Matrix Spike Duplicate (MS/MSD)

VOA sample JP410 was utilized for MS/MSD analyses. The criteria for frequency of analysis, recoveries and RPDs were met for all analyses.

SVOA sample JP410 was utilized for MS/MSD analyses. The criteria for frequency of analysis, recoveries and RPDs were met for all analyses.

ESW10-3-1420 Page 5 of 7

Pest/PCB sample JP410 was utilized for MS/MSD analyses. The criteria for frequency of analysis, recoveries and RPDs were met for all analyses.

No data qualification was applied based on MS/MSD analysis.

Internal Standards - Acceptable

The acceptance criteria for internal standards (IS) are ± 30 seconds for retention time (RT) shifts and -50% to +100% of the IS area as compared to the IS RT and area of the daily continuing calibration standard. All of the GC/MS analyses met the IS area and retention time shift criteria.

Compound Identification

All of the compounds detected in the GC/MS analyses were within the retention time windows, met the USEPA spectral matching criteria and were judged to be acceptable.

Single component pesticides and aroclors were qualified as follows: where %Ds (between two column concentrations) > 30% but \leq 60% - detected results were qualified as estimated, "J"; %Ds > 60% with concentrations > CRQL - results were qualified as tentatively identified at the estimated concentration, "JN"; %Ds > 60% with concentrations < CRQL - results were qualified as non-detects, "U"; %Ds > 400% - results were qualified as non-detects with raised quantitation limit if > CRQL. In cases where %Ds < 60% with concentrations < CRQL and chromatographic interferences, the results were qualified as non-detects, "U". In cases where %Ds < 400% with concentrations > CRQL and chromatographic interferences, the results were qualified as tentatively identified at the estimated concentration, "JN".

Tentatively Identified Compounds

Peaks that were detected in the samples at areas >10% of the internal standards and were not part of the target compound lists were identified as tentatively identified compounds (TICs). TICs that were both found in the sample and in the associated method blank(s) were qualified as unusable, "R." Peaks that were identified as common laboratory contaminants, solvent preservatives, column bleed or aldol condensation products were qualified as unusable, "R". The rest of the peaks identified as TICs were qualified "NJ", tentatively identified at an estimated concentration.

Laboratory Contact

The laboratory was contacted by Region 10 concerning the following items:

All raw data for the SVOA instrument performance check on 7/8/99 at 20:41 (instrument HP70) is missing. Raw data for the instrument performance check on 7/9/99 at 08:46 was included and is not needed.

Hard copies of all resubmissions will be sent to Region 10.

Overall Assessment

All of the samples were analyzed in accordance with the SOW specifications. The data, as qualified, are acceptable and can be used for all purposes.

Data Qualifiers

- U The analyte was not detected at or above the reported result.
- J The analyte was positively identified. The associated numerical result is an estimate.
- R The data are unusable for all purposes.
- N There is evidence the analyte is present in this sample.
- JN There is evidence that the analyte is present. The associated numerical result is an estimate.
- UJ The analyte was not detected at or above the reported estimated result. The associated numerical value is an estimate of the quantitation limit of the analyte in this sample.

Holding Time Summary - Case 27165

SDG: JP410

Sample Number	Collection Date	VTSR	VOA Analysis	SVOA Extraction	SVOA Analysis	Pest/PCB Extraction	Pest/PCB Analysis
JP410	7/8/99	7/9/99	7/16/99	7/9/99	7/14/99	7/9/99	8/11/99
JP418	7/8/99	7/10/99	7/16/99	7/12/99	7/15/99	7/13/99	8/18/99
ЛР419	7/8/99	7/10/99	7/16/99	7/12/99	7/15/99	NA	NA
ЛР420	7/9/99	7/10/99	7/16/99	7/12/99	7/15/99	7/13/99	8/20/99
Љ421	7/9/99	7/10/99	7/16/99	7/12/99	7/15/99	7/13/99	8/18/99
ЛР422	7/9/99	7/10/99	7/16/99	7/12/99	7/15/99	7/13/99	8/18/99
ЛР428	7/9/99	7/14/99	7/16/99	7/29/99	7/31/99	7/16/99	8/19/99
JP429	7/9/99	7/14/99	7/16/99	7/16/99	7/27/99	7/16/99	8/19/99
JW585	7/8/99	7/10/99	NA	NA.	NA	7/13/99	8/20/99
JW586	7/8/99	7/10/99	NA	NA.	NA	7/13/99	8/18/99
JW587	7/8/99	7/10/99	NA	NA	NA	7/13/99	8/18/99
JW588	7/8/99	7/10/99	NA	·NA	NA	7/13/99	8/18/99
JW589	7/8/99	7/10/99	NA	NA	· NA	7/13/99	8/18/99
JW590	7/8/99	7/10/99	NA ·	NA	NA .	7/13/99	8/18/99
JW591	7/8/99	7/10/99	NA	NA	NA	7/13/99	.8/20/99
JW592	7/8/99	7/10/99	NA	NA	NA	7/13/99	8/18/99
JW593	7/8/99	7/10/99	NA	NA ·	NA	7/13/99	8/18/99
JW594	7/8/99	7/10/99	NA	NA	NA	7/13/99	8/18/99
JW595	7/8/99	7/10/99	NA .	. NA	NA	7/13/99	8/20/99
JW596	7/8/99	7/10/99	NA	NA	NA	7/13/99	8/18/99
Љ410DL	7/8/99	7/9/99	NA .	NA	NA	7/9/99	8/19/99
JW585DL	. 7/8/99	7/10/99	NA	NA	NA	7/13/99	8/19/99
JW587DL	7/8/99	7/10/99	NA	NA	NA	7/13/99	8/20/99
JW591DL	7/8/99	7/10/99	NA	NA	NA	7/13/99	8/20/99
JW593DL	7/8/99	7/10/99	NA	NA	NA.	7/13/99	8/20/99
JW595DL	7/8/99	7/10/99	NA	NA	NA	7/13/99	8/19/99

JP410 Lab Name: COMPUCHEM Contract: 68D50004 Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JP410 Matrix: (soil/water) SOIL Lab Sample ID: 949999 Lab File ID: Sample wt/vol: 5.0 (g/mL) gGH049999A51 Level: (low/med) LOW Date Received: 07/09/99 % Moisture: not dec. 9 Date Analyzed: 07/16/99 GC Column: EQUITY624 ID: 0.53 (mm) Dilution Factor: 1.0 Soil Aliquot Volume: _ Soil Extract Volume: (uL) CONCENTRATION UNITS: CAS NO. COMPOUND (ug/L or ug/Kg) ug/Kg 74-87-3-----Chloromethane 11 U 74-83-9-----Bromomethane 11 U 75-01-4-----Vinyl Chloride 11 U 75-00-3-----Chloroethane 11 U 1/ 3 万3 U 49 BU 75-09-2----Methylene Chloride 67-64-1-----Acetone 75-15-0-----Carbon Disulfide 11 0 75-35-4----1,1-Dichloroethene 11 U 75-34-3-----1,1-Dichloroethane
540-59-0----1,2-Dichloroethene (total) 11 U 11 U 67-66-3-----Chloroform 11 U 107-06-2----1,2-Dichloroethane 11 U 78-93-3----2-Butanone 1120 ABUJ 71-55-6----1,1,1-Trichloroethane 11 U 11 U 11 U 78-87-5-----1,2-Dichloropropane_ 11 U 10061-01-5----cis-1,3-Dichloropropene 11 U 79-01-6-----Trichloroethene 11 U 124-48-1-----Dibromochloromethane 11 U 79-00-5----1,1,2-Trichloroethane 11 U 71-43-2-----Benzene 11 U 11 U 10061-02-6----trans-1,3-Dichloropropene 75-25-2-----Bromoform 108-10-1----4-Methyl-2-Pentanone 11 U 591-78-6----2-Hexanone 11 | U 127-18-4-----Tetrachloroethene 11 | U 79-34-5----1,1,2,2-Tetrachloroethane 11 U 108-88-3-----Toluene 11 | U 108-90-7-----Chlorobenzene 11 U 100-41-4-----Ethylbenzene 11 U 100-42-5-----Styrene 11 U 1330-20-7-----Xylene (Total) 11 U

FORM I VOA

TENTATIVELY IDENTIFIED COMPOUNDS

5.0 (g/mL) g

EPA SAME	LE NO.
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Lab Name: COMPUCHEM

Contract: 68D50004

Lab Code: COMPU Case No.: 27165

SAS No.:

SDG No.: JP410

Matrix: (soil/water) SOIL

Lab Sample ID: 94999

Sample wt/vol:

Lab File ID: gh049999a51

Level: (low/med)

Date Received: 07/09/99

% Moisture: not dec. 9

Date Analyzed: 07/16/99

GC Column: EOUITY624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume:

Soil Aliquot Volume:

Number TICs found: 0

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg

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FORM I VOA-TIC

VOLATILE ORGANICS ANALYSIS DATA SHEET

JP418 Contract: 68D50004

Lab Name: COMPUCHEM

SDG No.: JP410 Lab Code: COMPU Case No.: 27165 SAS No.:

Lab Sample ID: 950231 Matrix: (soil/water) SOIL

Lab File ID: GH050231A51 Sample wt/vol: 5.0 (g/mL) g

Date Received: 07/10/99 Level: (low/med) LOW

Date Analyzed: 07/16/99 % Moisture: not dec. 11

Dilution Factor: 1.0 GC Column: EQUITY624 ID: 0.53 (mm)

Soil Aliquot Volume: ____(uL Soil Extract Volume:____(uL)

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) ug/Kg

11 0 74-87-3-----Chloromethane 11 U 74-83-9-----Bromomethane 11 U 75-01-4------Vinyl Chloride 11 U 75-00-3-----Chloroethane 75-09-2-----Methylene Chloride___ 67-64-1-----Acetone_ 75-15-0-----Carbon Disulfide 11 75-35-4----1,1-Dichloroethene_ 11 75-34-3----1,1-Dichloroethane 11 540-59-0----1,2-Dichloroethene (total) 11 67-66-3-----Chloroform 11 U 107-06-2----1,2-Dichloroethane 11 U 78-93-3----2-Butanone 11 U 71-55-6-----1,1,1-Trichloroethane_ 11 | U 56-23-5-----Carbon Tetrachloride__ 75-27-4-----Bromodichloromethane 11 U 11 U _78-87-5----1,2-Dichloropropane_ 11 U 10061-01-5----cis-1,3-Dichloropropene 11 U 79-01-6-----Trichloroethene 11 | U 124-48-1-----Dibromochloromethane 11 U 79-00-5-----1,1,2-Trichloroethane_ 11 U 71-43-2-----Benzene 11 U 10061-02-6----trans-1,3-Dichloropropene_ 11 U 75-25-2-----Bromoform 11 U 108-10-1-----4-Methyl- $\overline{2}$ -Pentanone___ 11 | U 591-78-6----2-Hexanone 127-18-4-----Tetrachloroethene 11 | U 79-34-5----1,1,2,2-Tetrachloroethane_ 11 U 108-88-3-----Toluene 11 | U 11 U 108-90-7-----Chlorobenzene 11 U 100-41-4-----Ethylbenzene 100-42-5-----Styrene 1330-20-7------Xylene (Total)_____ 11 | U 11 U

FORM I VOA

VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

COMPUCHEM

Contract: 68D50004

Lab Code: COMPU

Case No.: 27165

SAS No.:

SDG No.: JP410

Matrix: (soil/water) SOIL

Lab Sample ID: 950231

Sample wt/vol:

5.0 (g/mL) g

Lab File ID: gh050231a51

Level: (low/med) LOW Date Received: 07/10/99

% Moisture: not dec. 11

Date Analyzed: 07/16/99

GC Column: EQUITY624

Dilution Factor: 1.0

ID: 0.53

Soil Extract Volume:

Soil Aliquot Volume:

Number TICs found: 2

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	, RT	EST. CONC.	Q
1. 2.	LABORATORY ARTIFACT LABORATORY ARTIFACT	ination _{20.59}		J-R
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5. 6.				
7. 8. 9.				
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12. 13. 14.				
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17.				
19. 20. 21.				
22.				
24. 25. 26.				
27. 28.				
29. 30.				

FORM I VOA-TIC

JP419 Lab Name: COMPUCHEM Contract: 68D50004 Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JP410 Matrix: (soil/water) SOIL Lab Sample ID: 950232 5.0 (g/mL) g Sample wt/vol: Lab File ID: GH050232A51 Level: (low/med) LOW Date Received: 07/10/99 % Moisture: not dec. 14 Date Analyzed: 07/16/99 GC Column: EQUITY624 ID: 0.53 (mm) Dilution Factor: 1.0 Soil Extract Volume: ____(uL) Soil Aliquot Volume: ___ CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg Q CAS NO. COMPOUND

74-87-3	Chloromethane	š	12 U
74-83-9	-Bromomethane		12 0
75-01-4	Vinyl Chloride		12 U
75-00-3	-Chloroethane		12 U
	Methylene Chloride	٠	12 x JBU
67-64-1	Acetone		12 20 JBUJ
	-Carbon Disulfide	-	12 0
75-35-4	-1,1-Dichloroethene		12 U
75-34-3	-1,1-Dichloroethane		12 U
540-59-0	-1,2-Dichloroethene (total)	. ;	12 U
67-66-3	-Chloroform		12 U
	-1,2-Dichloroethane		12 U
78-93-3	-2-Butanone		12 2 JBUT
	-1,1,1-Trichloroethane		12 0
	-Carbon Tetrachloride		12 U
75-27-4	-Bromodichloromethane		12 U
78-87-5	-1,2-Dichloropropane		12 U
10061-01-5	-cis-1,3-Dichloropropene		12 U
79-01-6	-Trichloroethene		12 1
124-48-1	-Dibromochloromethane		12 U
79-00-5	-1,1,2-Trichloroethane		12 U
71-43-2	-Benzene		12 U
	-trans-1,3-Dichloropropene		12 U
75-25-2	-Bromoform		12 U
	-4-Methyl-2-Pentanone		12 U
591-78-6	-2-Hexanone		12 U
	-Tetrachloroethene		12 0
	-1,1,2,2-Tetrachloroethane		12 U
108-88-3	-Toluene		12 U
108-90-7	-Chlorobenzene		12 U
100-41-4	-Ethylbenzene		12 U
100-42-5	-Styrene	1	12 U
1330-20-7	-Xvlene (Total)		12 0
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VOLATILE ORGANICS ANALYSIS DATA SHEET

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JP419	

EPA SAMPLE NO.

PUCHEM	
	POCHEM

Contract: 68D50004

Lab Code: COMPU

Case No.: 27165

SAS No.:

SDG No : JP410

Matrix: (soil/water) SOIL

Lab Sample ID: 950232

Sample wt/vol:

5.0 (g/mL) g

Lab File ID: gh050232a51

Level:

(low/med)

% Moisture: not dec. 14

LOM.

Date Received: 07/10/99

Date Analyzed: 07/16/99

GC Column: EQUITY624 ID: 0.53

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume:

Number TICs found: 2

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1	LABORATORY ARTIFACT Lab Cont.	20.57	7	J-R
2. 3.	LABORATORY ARTIFACT	22.53	19	ਹਾ K
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FORM I VOA-TIC

EPA SAMPLE NO.

JP420 Lab Name: COMPUCHEM Contract: 68D50004 Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JP410 Lab Sample ID: 950233 Matrix: (soil/water) SOIL Sample wt/vol: 5.0 (g/mL) g Lab File ID: GH050233A51 Level: (low/med) LOW Date Received: 07/10/99 % Moisture: not dec. 6 Date Analyzed: 07/16/99 GC Column: EQUITY624 ID: 0.53 (mm) Dilution Factor: 1.0 Soil Extract Volume: (uL) Soil Aliquot Volume: (uL CONCENTRATION UNITS: CAS NO. (ug/L or ug/Kg) ug/Kg COMPOUND 11 U 74-87-3-----Chloromethane 74-83-9-----Bromomethane 11 U 11 U 75-01-4----Vinyl Chloride 11 U 11 25 JBU 75-00-3-----Chloroethane 75-09-2-----Methylene Chloride_ 170 B 67-64-1-----Acetone 75-15-0-----Carbon Disulfide 11 U 75-35-4----1,1-Dichloroethene 11 U 75-34-3----1,1-Dichloroethane 11 U 540-59-0----1,2-Dichloroethene (total) 11 U '67-66-3-----Chloroform 11 U 107-06-2----1,2-Dichloroethane 11 U 40 8丁 78-93-3----2-Butanone 71-55-6-----1,1,1-Trichloroethane_ 11 U 56-23-5-----Carbon Tetrachloride 11 | U 75-27-4-----Bromodichloromethane 11 U 78-87-5-----1,2-Dichloropropane_ 11 10061-01-5----cis-1,3-Dichloropropene_ 11

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11 U

FORM I VOA

79-01-6----Trichloroethene

71-43-2----Benzene

108-88-3-----Toluene

100-42-5----Styrene

75-25-2----Bromoform

591-78-6----2-Hexanone

124-48-1-----Dibromochloromethane

79-00-5----1,1,2-Trichloroethane

108-10-1----4-Methyl-2-Pentanone

127-18-4----Tetrachloroethene

108-90-7-----Chlorobenzene

100-41-4----Ethylbenzene_

1330-20-7-----Xylene (Total)

10061-02-6----trans-1,3-Dichloropropene

79-34-5----1,1,2,2-Tetrachloroethane

OLM03.0

OP 9-13-97

1E

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

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	Con	tra	ct:	68D50004

Lab Name: COMPUCHEM

Lab Code: COMPU Case No.: 27165

SAS No.:

SDG No.: JP410

Matrix: (soil/water) SOIL

Lab Sample ID: 950233

Sample wt/vol:

5.0 (g/mL) g

Lab File ID: gh050233a51

Level: (low/med) LOW

Date Received: 07/10/99

% Moisture: not dec. 6

Date Analyzed: 07/16/99

GC Column: EQUITY624

ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume:

Soil Aliquot Volume:

____(uL

Number TICs found: 5

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	LABORATORY ARTIFACT Lab Cont.	20.56	43	J- R
3.	UNKNOWN HYDROCARBON SUBSTITUTED BENZENE DECAHYDRONAPHTHALENE ISOMER	20.79 21.20 22.01	13 8 6	JW JW
5 .	LABORATORY ARTIFACT Lab Cont.	22.52	25	J K
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CP 9-13-97

1A VOLATILE ORGANICS ANALYSIS DATA SHEET

JP421 Lab Name: COMPUCHEM Contract: 68D50004 Lab Code: COMPU SAS No.: SDG No.: JP410 Case No.: 27165 Matrix: (soil/water) SOIL Lab Sample ID: 950234 Sample wt/vol: Lab File ID: 5.0 (g/mL) gGH050234A51 Level: (low/med)Date Received: 07/10/99 LOW % Moisture: not dec. 8 Date Analyzed: 07/16/99 GC Column: EQUITY624 ID: 0.53 (mm) Dilution Factor: 1.0 Soil Extract Volume: ____(uL) Soil Aliquot Volume: (uL CONCENTRATION UNITS: CAS NO. (ug/L or ug/Kg) ug/Kg COMPOUND

	(45/2 02 45	,5,	45/			. *	
74-87-3	Chloromethane				11	U	
74-83-9	Bromomethane	· -				Ü	
75-01-4	Vinyl Chloride	·				Ü	
75-00-3	Chloroethane	1	•		11	Ü	
75-09-2	Methylene Chloride	1		11		JEU	
67-64-1		: 1		10		BU	* .
	Carbon Disulfide	•			11	Ü	,
	1,1-Dichloroethene	• [11	Ū	
75-34-3	1,1-Dichloroethane	•	v			Ū	
540-59-0	1,2-Dichloroethene (total)	•			11	τ	j ·
67-66-3	Chloroform	•			11.	. –	
107-06-2	1,2-Dichloroethane	-			11		}
78-93-3	2-Butanone	- -) į		BUJ	
71-55-6	1,1,1-Trichloroethane	-		· ''.	11	U	
56-23-5	Carbon Tetrachloride	-			11	Ü	
75-27-4	Bromodichloromethane	-			11	_	• • • •
78-87-5	1,2-Dichloropropane	-			īi		:
10061-01-5	cis-1,3-Dichloropropene				11	Ū	
79-01-6	Trichloroethene	-			11		1.7
124-48-1	Dibromochloromethane	-	•		11		
79-00-5	1,1,2-Trichloroethane	-			11		
71-43-2	Benzene	-		•	11	Ū	İ
10061-02-6	trans-1,3-Dichloropropene				11	Ū	1
75-25-2	Bromoform	-			11	Ū	
108-10-1	4-Methyl-2-Pentanone	-			11	Ū	1
591-78-6	2-Hexanone	-			11		
127-18-4	Tetrachloroethene				11	1	"
	1,1,2,2-Tetrachloroethane	-			11	_	
108-88-3	Toluene	-			11		
108-90-7	Chlorobenzene	- .		•	11		" "
100-41-4	Ethylbenzene	-			11	U	
100-42-5	Styrene	-		•	11	lπ	
1330-20-7	Xylene (Total)	-			11	U	
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FORM I VOA

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VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO

	TENTATIVELY	IDENTIFIE	D COMPOUNDS		JP421
Lab Name:	COMPUCHEM		Contract: 68D500	04	

Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JP410

Matrix: (soil/water) SOIL Lab Sample ID: 950234

Sample wt/vol: 5.0 (g/mL) g Lab File ID: gh050234a51

Level: (low/med) LOW Date Received: 07/10/99

% Moisture: not dec. 8 Date Analyzed: 07/16/99

GC Column: EQUITY624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: ____(uL

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg

Number TICs found: 2

CAS NUMBER	COMPOUND NAME	R'T	EST. CONC.	Q
1.	LABORATORY ARTIFACT Lab Cont.	20.56 22.51	129 116	JR JR
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CP 9-13-59

FORM I VOA-TIC

VOLATILE ORGANICS ANALYSIS DATA SHEET

JP422 Contract: 68D50004

Lab Name: COMPUCHEM

Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JP410

Lab Sample ID: 950235 Matrix: (soil/water) SOIL

Sample wt/vol: Lab File ID: GH050235A51 5.0 (g/mL) g

Date Received: 07/10/99 Level: (low/med) LOW

% Moisture: not dec. 15 Date Analyzed: 07/16/99

GC Column: EQUITY624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL

CONCENTRATION UNITS:

COMPOUND CAS NO. (ug/L or ug/Kg) ug/Kg

74-87-3Chloromethane		12	U
74-83-9Bromomethane		12	U
75-01-4Vinyl Chloride		12	U
75-00-3Chloroethane		12	U
75-09-2Methylene Chloride		122	JE U
67-64-1Acetone			BU
75-15-0Carbon Disulfide		12	υ
75-35-41,1-Dichloroethene		. 12	Ū
75-34-31,1-Dichloroethane		12	
540-59-01,2-Dichloroethene (total)		12	
67-66-3Chloroform		12	_
107-06-21,2-Dichloroethane		12	_
78-93-32-Butanone			JBUJ
71-55-61,1,1-Trichloroethane		12	
56-23-5Carbon Tetrachloride		12	
75-27-4Bromodichloromethane		12	_
78-87-51,2-Dichloropropane		12	-
10061-01-5cis-1,3-Dichloropropene		12	_
79-01-6Trichloroethene		12	
124-48-1Dibromochloromethane		12	
79-00-5,1,2-Trichloroethane		12	
71-43-2Benzene		12	
10061-02-6trans-1,3-Dichloropropene		12	1 -
75-25-2Bromoform	,	12	3 -
108-10-14-Methyl-2-Pentanone	1	12	บี
591-78-62-Hexanone	l'	12	Ü.
127-18-4Tetrachloroethene		12	บี
79-34-51,1,2,2-Tetrachloroethane		12	υ
108-88-3Toluene		12	Ü
108-90-7Chlorobenzene		12	Ü
		12	ָ ט
100-41-4Ethylbenzene		_	יט ו
100-42-5Styrene		12	1 -
1330-20-7Xylene (Total)		12	Ū
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FORM I VOA

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

JP422

Lab	Name:	COMPUCHEM
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Contract: 68D50004

Lab Code: COMPU

Case No.: 27165

SAS No.:

SDG No.: JP410

Matrix: (soil/water) SOIL

gh050235a51

Sample wt/vol:

Lab File ID:

Level: (low/med)

Date Analyzed: 07/16/99

Date Received: 07/10/99

% Moisture: not dec. 15

5.0 (g/mL) g

Dilution Factor: 1.0

Lab Sample ID: 950235

GC Column: EQUITY624 ID: 0.53

Soil Aliquot Volume:

(uL

Soil Extract Volume:

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg

Number TICs found: 2

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	LABORATORY ARTIFACT LAB CONT.	20.57	17 27	J K
2 3.	LABORATORY ARTIFACT	22.52	. 21	U /
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3. 9.				1
9. D.				\

JP428 Lab Name: COMPUCHEM Contract: 68D50004 Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JP410 Matrix: (soil/water) SOIL Lab Sample ID: 950544 Sample wt/vol: 5.0 (g/mL) g Lab File ID: GH050544B51 Level: (low/med) LOW Date Received: 07/14/99 % Moisture: not dec. 7 Date Analyzed: 07/16/99 GC Column: EQUITY624 ID: 0.53 (mm) Dilution Factor: 1.0 Soil Extract Volume: ____(uL) Soil Aliquot Volume: (uL CONCENTRATION UNITS: CAS NO. COMPOUND (ug/L or ug/Kg) ug/Kg 74-87-3-----Chloromethane 11 U 74-83-9-----Bromomethane 11 U 75-01-4-----Vinyl Chloride 11 U 75-00-3-----Chloroethane 11 U 75-09-2----Methylene Chloride____ 11 U 67-64-1------Acetone 78 BU 75-15-0-----Carbon Disulfide 75-35-4----1,1-Dichloroethene 11 U 75-34-3----1,1-Dichloroethane 11 U 540-59-0----1,2-Dichloroethene (total) 11 U 67-66-3-----Chloroform 11 U 107-06-2----1,2-Dichloroethane 11 U 78-93-3----2-Butanone 1/ 20 3345 71-55-6----1,1,1-Trichloroethane 11 U 56-23-5-----Carbon Tetrachloride 11 U 75-27-4-----Bromodichloromethane 11 U 78-87-5----1,2-Dichloropropane 11 | U 10061-01-5----cis-1,3-Dichloropropene 11 U 79-01-6----Trichloroethene 11 U 124-48-1----Dibromochloromethane 11 U 79-00-5----1,1,2-Trichloroethane 11 U 71-43-2----Benzene 11 U 10061-02-6----trans-1,3-Dichloropropene 11 U 75-25-2----Bromoform 11 U 108-10-1----4-Methyl-2-Pentanone_ 11 U 591-78-6----2-Hexanone 11 U 127-18-4----Tetrachloroethene 11 U 79-34-5----1,1,2,2-Tetrachloroethane 11 U 108-88-3-----Toluene 11 | U 108-90-7-----Chlorobenzene 11 U 100-41-4-----Ethylbenzene_ 11 | U 100-42-5-----Styrene 1330-20-7------Xylene (Total) 11 U 11 U

CP 9-13-50

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA	SAMPLE	NO
-----	--------	----

Y IDENTIFIED COMPOUNDS	·
	JP428
Contract: 68D50004	

Lab Code: COMPU Case No.: 27165 SAS No.:

SDG No.: JP410

Matrix: (soil/water) SOIL

Lab Sample ID: 950544

Sample wt/vol:

5.0 (g/mL) g

Lab File ID: gh050544b51

Level: (low/med) LOW

Date Received: 07/14/99

% Moisture: not dec.

Date Analyzed: 07/16/99

GC Column: EQUITY624

Lab Name: COMPUCHEM

ID: 0.53

Dilution Factor: 1.0

Soil Extract Volume:

Soil Aliquot Volume:

Number TICs found: 6

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 2. 3. 4.	SUBSTITUTED ALKANE SUBSTITUTED ALKANE SUBSTITUTED BENZENE DECAHYDRONAPHTHALENE ISOMER LABORATORY ARTIFACT Lab Cont.	21.44 21.70 21.94 22.02 22.53	9 . 13 6 6	JN JN JN JN
6. 7.	UNKNOWN CYCLIC HYDROCARBON	23.04	8	JN
8.				
10.				
12. 13.				
15.				
17. 18.				
19. 20. 21.				
22.				
24. 25.				
26. 27. 28.				· · · · · · · · · · · · · · · · · · ·
29.				

FORM I VOA-TIC

1A VOLATILE ORGANICS ANALYSIS DATA SHEET

JP429 Lab Name: COMPUCHEM Contract: 68D50004 Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JP410 Matrix: (soil/water) SOIL Lab Sample ID: 950545 Sample wt/vol: 5.0 (g/mL) gLab File ID: GH050545B51 Level: (low/med) LOW Date Received: 07/14/99 % Moisture: not dec. 23 Date Analyzed: 07/16/99 GC Column: EQUITY624 ID: 0.53 (mm) Dilution Factor: 1.0 Soil Extract Volume: ____(uL) Soil Aliquot Volume: (uL CONCENTRATION UNITS: CAS NO. COMPOUND (ug/L or ug/Kg) ug/Kg

74-87-3	Chloromethane	i	13	Ū ·
74-83-9	Bromomethane	`]. ·	13	ט
75-01-4	Vinyl Chloride	·	13	ັບ.
75-00-3	Chloroethane	1	13	
75-09-2	Methylene Chloride	1	13	Ū
57-64-1	Acetone	1 .		BU
75-15-0	Carbon Disulfide	1	13	ט
75-35-4	1,1-Dichloroethene	1	13	Ū
75-34-3	1,1-Dichloroethane	•	13	
540-59-0	1,2-Dichloroethene (total)	1	13	Ū
57-66-3 -	Chloroform	1	13	
L07-06-2	1,2-Dichloroethane	• .	13	Ū
78-93-3	2-Butanone	•		JBUJ
71-55-6	1,1,1-Trichloroethane	• .	13	บี
6-23-5	Carbon Tetrachloride	•	13	Ū
75-27-4	Bromodichloromethane		13	_
78-87-5	1,2-Dichloropropane		13	υ
L0061-01-5	cis-1,3-Dichloropropene	1	13	lπ
79-01-6	Trichloroethene	•	13	. –
L24-48-1	Dibromochloromethane	•	13	
79-00-5	1,1,2-Trichloroethane	- .	13	
71-43-2	Benzene	•	13	_
0061-02-6	trans-1,3-Dichloropropene	-	13	
75-25-2	Bromoform	-	13	1
-08-10-1	4-Methyl-2-Pentanone	-	13	_
91-78-6	2-Hexanone	-	13	Ü
27-18-4	Tetrachloroethene	- [13	τī
19-34-5	1,1,2,2-Tetrachloroethane	-	13	, –
08-88-3	Toluene	-	13	ט
08-90-7	Chlorobenzene	-	13	υ .
100-41-4	Ethylbenzene	-	13	. –
100-42-5	Styrene	-	13	
1330-22-5	Xylene (Total)	-	13	
	vytene (locar)	-	13	ΙΟ .

FORM I VOA

144

VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

	•	1
•.	JP429	

Lab Name: COMPUCHEM

Contract: 68D50004

Lab Code: COMPU

Case No.: 27165

SAS No.:

SDG No.: JP410

Matrix: (soil/water) SOIL

Lab Sample ID: 950545

Lab File ID:

gh050545b51

Sample wt/vol:

5.0 (g/mL) g

Level: (low/med)

Date Received: 07/14/99

% Moisture: not dec. 23

Date Analyzed: 07/16/99

GC Column: EQUITY624 ID: 0.53

Dilution Factor: 1.0

Soil Extract Volume:

Soil Aliquot Volume:

Number TICs found: 5

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 2. 3. 4.	LABORATORY ARTIFACT Lab Conf. UNKNOWN ALKANE SUBSTITUTED BENZENE SUBSTITUTED CYCLOHEXANE	20.56 20.82 21.20 21.39	10 19 11 7	7 R 1 N 1 N 1 R
6. 7.	LABORATORY ARTIFACT Lab Cont.			
8. 9. 10				
11. 12. 13.				
14. 15. 16.				
17. 18.				
20. 21. 22.				
23. 24. 25.				
26. 27. 28.				
29. 30.				
		. 1		nP

JP410

Lab Name: COMPUCHEM

Contract: 68D50004

Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JP410

Matrix: (soil/water) SOIL

Lab Sample ID: 949999

Sample wt/vol:

30.0 (g/mL) G

Lab File ID: GH049999A66

Level: (low/med) LOW

Date Received: 07/09/99

% Moisture: 9

decanted: (Y/N) N

Date Extracted: 07/09/99

Concentrated Extract Volume: 500 (uL)

Date Analyzed: 07/14/99

Injection Volume: 2.0(uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.0

108-95-2	CAS NO.	CONCENTRATIO COMPOUND (ug/L or ug/		Q
· · · · · · · · · · · · · · · · · · ·	111-44-4 95-57-8 541-73-1 106-46-7 95-48-7 108-60-1 106-44-5 621-64-7 98-95-3 98-95-3 88-75-5 105-67-9 111-91-1 120-82-1 91-20-3 91-20-3 91-58-7 91-57-6 77-47-4 88-76-2 91-58-7 88-74-4 131-11-3 208-96-8 606-20-2 99-09-2	bis(2-Chloroethyl)ether2-Chlorophenol1,3-Dichlorobenzene1,4-Dichlorobenzene1,2-Dichlorobenzene2-Methylphenol2,2'-oxybis(1-Chloropropane)4-MethylphenolNhitroso-di-n-propylamineHexachloroethane1sophorone2,4-Dimethylphenol2,4-Dimethylphenol2,4-Dichlorophenol1,2,4-TrichlorobenzeneNaphthalene4-Chloroaniline4-Chloro-3-methylphenol2-Methylnaphthalene2,4,6-Trichlorophenol2,4,5-Trichlorophenol2,4,5-Trichlorophenol2,4,5-Trichlorophenol2-Nitroaniline2-Nitroaniline	360 TT TT TT TT TT TT TT TT TT TT TT TT TT	

JP410

Lab Name: COMPUCHEM

Contract: 68D50004

Lab Code: COMPU Case No.: 27165 SAS No.:

SDG No.: JP410

Matrix: (soil/water) SOIL

Lab Sample ID: 949999

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: GH049999A66

Level: (low/med) LOW,

Date Received: 07/09/99

% Moisture: 9

decanted: (Y/N) N

Date Extracted: 07/09/99

Concentrated Extract Volume: 500 (uL)

Date Analyzed: 07/14/99

Injection Volume: 2.0(uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y

pH: 8.0

CA C NO	COMPOUND	CONCENTRATION (ug/L or ug/L)		C C	Q	
CAS NO.	COMPOUND	(ug/H of ug/	kg/ 00/k		· ×	<u>. </u>
E1 20 E	2,4-Dinitrophe	nol		910	U	
100 00 7	4-Nitrophenol	1101		910	Ŭ	
	4-Nicrophenoi_ Dibenzofuran			360	Ū	
		11070		360		
	2,4-Dinitrotol			360		
84-66-2	Diethylphthala		٤	360		٠
7005-72-3	4-Chlorophenyl	-buenArecher		360		
86-73-7			,	910		
100-01-6	4 Nitroaniline		· ;	910		
534-52-1	4,6-Dinitro-2-	methylphenol	Ţ	360		
86-30-6	N [±] nitrosodiphe	nylamine (1)		360		•
101-55-3	4-Bromophenyl-	buenATeruer				
	Hexachlorobenz		,	360		
	Pentachlorophe	no1		910		
	Phenanthrene_	•		360		
	Anthracene	<u> </u>		360		
86-74-8	Carbazole	a :		360		
84-74-2	Di-n-butylphth	nalate		360		
206-44-0	Fluoranthene		1	360	Ū.	
129-00-0	Pyrene			360	U	
85-68-7	Butvlbenzvlpht	halate	a tale to	360	U	
91-94-1	3,3'-Dichlorok	enzidi ne		360	U.	
56-55-3	Benzo(a)anthra	acene		360	U.	٠.
218-01-9	Chrysene			. 360	U	
117-81-7	bis(2-Ethylhe	cvl)phthalate		64	J.	,
117-84-0	Di-n-octylphtl	nalate		360	U	
205-99-2	Benzo(b) fluora	enthene		360	Ū	
	Benzo(k) fluora			360		
	Benzo(a)pyrene		·[.	360		
	Indeno(1,2,3-c		1	360		
	Dibenzo(a, h) as		•	360	1	
. 33-70-3 101-04:-0-	Benzo(g,h,i)p	arri ene	- [360		
エンエームユームーーー	benzo(g,n,1)p	er à reme	•	200		
) - Cannot be	separated from D	iphenylamine	. 1		<u></u>	·
•	- · · · · · · · · · · · · · · · · · · ·		• *	()	0	اسرر

FORM I SV-2

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

JP410

Lab Name: COMPUCHEM

Contract: 68D50004

ab Code: COMPU

Case No.: 27165

SAS No.:

SDG No.: JP410

Matrix: (soil/water) SOIL

Lab Sample ID: 949999

lample wt/vol: 30.0 (g/mL) G

Lab File ID: GH049999A66

Tevel: (low/med)

Date Received: 07/09/99

Moisture: 9

decanted: (Y/N) N

Date Extracted:07/09/99

oncentrated Extract Volume: 500(uL)

Date Analyzed: 07/14/99

injection Volume: 2.0(uL)

Dilution Factor: 1.0

PC Cleanup:

(Y/N) Y

pH: 8.0

Number TICs found: 30

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

]	CAS NUMBER	COMPOUND NAME	RT	EST, CONC.	Q
	1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30.	UNKNOWN UNKNOWN	10.26 16.25 20.44 20.60 20.79 20.86 21.09 21.55 21.60 21.67 21.81 21.85 22.07 22.14 22.30 22.37 22.44 22.58 22.72 22.83 22.92 23.09 23.28 23.97 24.23	750 900 480 570 350	ממממממממממממממממממממ ממממממממממממממממ

FORM I SV-TIC

JP418 Contract: 68D50004 Lab Name: COMPUCHEM

Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JP410

Lab Sample ID: 950231 Matrix: (soil/water) SOIL

Sample wt/vol: 30.0 (g/mL) G Lab File ID: GH050231B70

Date Received: 07/10/99 Level: (low/med) LOW

% Moisture: 11 decanted: (Y/N) N Date Extracted:07/12/99

Concentrated Extract Volume: 500(uL) Date Analyzed: 07/15/99

Dilution Factor: 1.0 Injection Volume: 2.0(uL)

GPC Cleanup: (Y/N) Y pH: 7.1 CONCENTRATION UNITS:

COMPOUND CAS NO. (ug/L or ug/Kg) UG/KG

108-95-2Phenol			370	U .	
111-44-4bis(2-Chloroethyl)ether	٠. ٠		- 1	Ü	
95-57-82-Chlorophenol		•		Ü	F
541-73-11,3-Dichlorobenzene			370	Ü	
106 46 7 1 4 Dighteroperson		٠	370	Ŭ	- 1
106-46-71,4-Dichlorobenzene	ĺ		370	Ü	ľ
95-50-11,2-Dichlorobenzene			370	Ü	
95-48-72-Methylphenol	ĺ		370	บ	
108-60-12,2'-oxybis(1-Chloropropane) 106-44-54-Methylphenol_		•			
106-44-54-Methylphenol	İ		370	Ü	
621-64-7N-Nitroso-di-n-propylamine			370	Ū	
67-72-1Hexachloroethane	'		370	מ	- 1
98-95-3Nitrobenzene		•	370	_	· .
78-59-1Isophorone			370		
88-75-52 ² Nitrophenol			370	-,	1.
105-67-92;4-Dimethylphenol			37.0	-	ľ
111-91-1bis(2-Chloroethoxy)methane	۳		370	1 -	
120-83-22;4-Dichlorophenol	l .		370		
版20-82-11,2,4-Trichlorobenzene			3.70	U	.
91-20-3Naphthalene	1		370	Ū.	
106-47-84-Chloroaniline	Ì		370	U	- 1
87-68-3Hexachlorobutadiene	1		370	U	- 1
59-50-74-Chloro-3-methylphenol	l .		370	U	
91-57-62-Methylnaphthalene	1		370	U	1
77-47-4Hexachlorocyclopentadiene	1	,	370	U	l
88-06-22,4,6-Trichlorophenol	1		370	U	
95-95-42,4,5-Trichlorophenol	1		930	U	
91-58-72-Chloronaphthalene	1		370		
88-74-42-Nitroaniline			930	1 -	
131-11-3Dimethylphthalate	· [370	1 -	- 1
208-96-8Acenaphthylene	1		370	1 -	
606 20 2 C Dinitrotolucro	.		3.70	1 -	
606-20-22,6-Dinitrotoluene				1 -	•
99-09-23-Nitroaniline			930		
83-32-9Acenaphthene	.		370	U	
	.]			.	

FORM I SV-1

OLMO3.0

Lab Name: COMPUCHEM Contract: 68D50004

Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JP410

Matrix: (soil/water) SOIL Lab Sample ID: 950231

Sample wt/vol: 30.0 (g/mL) G Lab File ID: GH050231B70

Level: (low/med) LOW Date Received: 07/10/99

% Moisture: 11 decanted: (Y/N) N Date Extracted:07/12/99

Concentrated Extract Volume: 500(uL) Date Analyzed: 07/15/99

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.1

	CAS NO.	COMPOUND	CONCENTRATION (ug/L or ug/			Q	
	100-02-7 132-64-9 121-14-2 84-66-2 7005-72-3 86-73-7 100-01-6 534-52-1 86-30-6 101-55-3 118-74-1 87-86-5 120-12-7 86-74-8 120-12-7 84-74-2 206-44-0 129-00-0 129-00-0 56-55-3 218-01-9 117-81-7 117-84-0 205-99-2 207-08-9 50-32-8 193-39-5 191-24-2	-Dibenzofuran -2,4-Dinitrotolue -Diethylphthalate -4-Chlorophenyl-p -Fluorene -4,6-Dinitro-2-me -4,6-Dinitro-2-me -N-nitrosodipheny -4-Bromophenyl-ph -Hexachlorobenzer -Pentachlorophene -Phenanthrene -Anthracene -Carbazole -Di-n-butylphthal -Fluoranthene -Pyrene -Butylbenzylphthal -3,3'-Dichlorober -Benzo(a) anthrace	chenylether chylphenol clamine (1) chenylether chenyle		930 370 370 370 930 370 370	ממסממני מטמממממממממממממממממממממממממממממממממ	
(7	r, - Caimor de S	eparated from Dip	TICITATUMTHE	•		0	

OP 9-14-99

FORM I SV-2

OLMO3.0

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

JP418

Lab Name: COMPUCHEM

Contract: 68D50004

Lab Code: COMPU

Case No.: 27165

SAS No.:

SDG No.: JP410

Matrix: (soil/water) SOIL

Sample wt/vol:

30.0 (g/mL) G

Lab File ID:

GH050231B70

Level:

(low/med) LOW

Date Received: 07/10/99

% Moisture: 11

decanted: (Y/N) N

500 (uL)

Date Extracted: 07/12/99

Lab Sample ID: 950231

Concentrated Extract Volume:

Date Analyzed: 07/15/99

Injection Volume:

2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y

pH: 7.1

Number TICs found: 19

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

CAS NUMBER		COMPOUND NAME	RT	EST.	CONC.	Q
CAS NUMBER	UNKNOWN UNKNOWN UNKNOWN UNKNOWN UNKNOWN UNKNOWN UNKNOWN UNKNOWN UNKNOWN UNKNOWN UNKNOWN UNKNOWN UNKNOWN UNKNOWN UNKNOWN	Lab Contamination	RT ====== 6.78 17.16 17.85 18.08 18.20 18.25 18.51 18.61 18.96 19.35 20.52 22.11 22.24 22.29 22.34 22.41 22.53 22.58 22.70		 180	
28. 29. 30.						

Lab Name: COMPUCHEM Contract: 68D50004

Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JP410

Matrix: (soil/water) SOIL Lab Sample ID: 950232

Sample wt/vol: 30.0 (g/mL) G Lab File ID: GH050232B70

Level: (low/med) LOW Date Received: 07/10/99

% Moisture: 14 decanted: (Y/N) N Date Extracted: 07/12/99

Concentrated Extract Volume: 500(uL) Date Analyzed: 07/15/99

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.8

CONCENTRATION UNITS:
CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG Q

108-95-2----Phenol 380 U 111-44-4-----bis(2-Chloroethyl)ether 380 U 380 U 95-57-8----2-Chlorophenol 541-73-1----1,3-Dichlorobenzene 380 U 380 U 106-46-7----1,4-Dichlorobenzene 95-50-1----1,2-Dichlorobenzene 380 U 95-48-7----2-Methylphenol 380 U 380 U 380 U 380 U 108-60-1----2,2'-oxybis(1-Chloropropane) 106-44-5----4-Methylphenol 621-64-7----N-Nitroso-di-n-propylamine_ 380 U 67-72-1-----Hexachloroethane 98-95-3----Nitrobenzene 380 U 78-59-1-----Isophorone 380 U 88-75-5----2-Nitrophenol 380 U 105-67-9----2,4-Dimethylphenol 380 U 111-91-1----bis(2-Chloroethoxy)methane___ 3.80 U 380 U 380 U 91-20-3----Naphthalene 380 U 380 U 106-47-8----4-Chloroaniline 87-68-3-----Hexachlorobutadiene .380 U 260 J 59-50-7----4-Chloro-3-methylphenol 380 U 91-57-6----2-Methylnaphthalene___ 380 U 77-47-4-----Hexachlorocyclopentadiene___ 380 U 88-06-2----2,4,6-Trichlorophenol_ 960 U 95-95-4----2,4,5-Trichlorophenol_ 380 U 91-58-7----2-Chloronaphthalene 960 U 88-74-4----2-Nitroaniline 80 J 131-11-3-----Dimethylphthalate____ 380 U 208-96-8-----Acenaphthylene 606-20-2----2,6-Dinitrotoluene 380 U 99-09-2----3-Nitroaniline_ 960 U 380 U 83-32-9----Acenaphthene

FORM I SV-1

P 14-90LM03.0

Lab Name: COMPUCHEM Contract: 68D50004

Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JP410

Matrix: (soil/water) SOIL Lab Sample ID: 950232

Sample wt/vol: 30.0 (g/ π L) G Lab File ID: GH050232B70

Level: (low/med) LOW Date Received: 07/10/99

% Moisture: 14 decanted: (Y/N) N Date Extracted:07/12/99

Concentrated Extract Volume: 500(uL) Date Analyzed: 07/15/99

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.8

CAS NO.	COMPOUND	CONCENTRATION (ug/L or ug/l		Q
100-02-7 132-64-9 121-14-2 84-66-2 7005-72-3 86-73-7 100-01-6 534-52-1 86-30-6 101-55-3 118-74-1 87-86-5 85-01-8 120-12-7 86-74-8 206-44-0 129-00-0 85-68-7 91-94-1 117-84-0 117-84-0 205-99-2 207-08-9 50-32-8 193-39-5 53-70-3	4-Nitroaniline4,6-Dinitro-2-meN-nitrosodipheny4-Bromophenyl-phHexachlorobenzerPentachlorophenoPhenanthreneCarbazoleDi-n-butylphthalFluoranthenePyreneButylbenzylphthalButylbenzylphthal	chenylether chylphenol clamine (1) chenylether clamine (1) chenylether chenyle	960 380 380 380 380 960 380 380 380 380 380 380 380	מממממממממממממממממממממממ
(i) - Cannot be	separated from Dip	henylamine '		NP a

FORM I SV-2

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

TENTATIVELY IDENTIFIED COMPOUNDS

JP419

Lab Name: COMPUCHEM Contract: 68D50004

Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JP410

Matrix: (soil/water) SOIL Lab Sample ID: 950232

Sample wt/vol: 30.0 (g/mL) G Lab File ID: GH050232B70

Level: (low/med) LOW Date Received: 07/10/99

% Moisture: 14 decanted: (Y/N) N Date Extracted: 07/12/99

Concentrated Extract Volume: 500(uL) Date Analyzed: 07/15/99

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.8

CONCENTRATION UNITS:

Number TICs found: 10 (ug/L or ug/Kg) UG/KG

2. UNKNOWN 9.79 95 3. UNKNOWN 10.72 180 4. UNKNOWN 10.94 110 5. UNKNOWN 14.78 88 6. UNKNOWN 15.15 4000 7. UNKNOWN AMIDE 17.16 150 8. UNKNOWN ALCOHOL 17.87 95 9. UNKNOWN L 19.54 88 10. UNKNOWN 22.11 82 11. 22. 23. 25. 25. 25. 25. 25. 25. 25. 25. 25. 25	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
24. 25. 26. 27. 28. 29. 30.		UNKNOWN UNKNOWN UNKNOWN UNKNOWN UNKNOWN UNKNOWN UNKNOWN AMIDE UNKNOWN UNKNOWN UNKNOWN UNKNOWN	9.79 9.79 10.72 10.94 14.78 15.15 17.16 17.87 19.54	### 170	

OLMO3.0

Lab Name: COMPUCHEM Contract: 68D50004

Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JP410

Matrix: (soil/water) SOIL Lab Sample ID: 950233

Sample wt/vol: 30.0 (g/mL) G Lab File ID: GH050233B70

Level: (low/med) LOW Date Received: 07/10/99

% Moisture: 6 decanted: (Y/N) N Date Extracted: 07/12/99

Concentrated Extract Volume: 500(uL) Date Analyzed: 07/15/99

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.3

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG

350 U 108-95-2----Phenol 350 U 111-44-4-----bis(2-Chloroethyl)ether 350 U 95-57-8----2-Chlorophenol 350 U 541-73-1----1,3-Dichlorobenzene 350 U 106-46-7----1,4-Dichlorobenzene_ 350 U 95-50-1----1,2-Dichlorobenzene_ 350 U 95-48-7----2-Methylphenol 108-60-1----2,2'-oxybis(1-Chloropropane) 350 U 350 U 106-44-5----4-Methylphenol 350 U 621-64-7----N-Nitroso-di-n-propylamine 350 U 67-72-1-----Hexachloroethane 98-95-3-----Nitrobenzene 350 U 78-59-1-----Isophorone 350 U 350 U 88-75-5----2-Nitrophenol 350 U 105-67-9----2,4-Dimethylphenol_ 111-91-1-----bis(2-Chloroethoxy) methane 350 U 350 LU 120-83-2----2,4-Dichlorophenol 350 U 120-82-1----1,2,4-Trichlorobenzene 350 U 91-20-3----Naphthalene 350 U 106-47-8-----4-Chloroaniline 350 U 87-68-3-----Hexachlorobutadiene 350 U 59-50-7----4-Chloro-3-methylphenol 350 U 91-57-6----2-Methylnaphthalene 77-47-4-----Hexachlorocyclopentadiene 350 U 88-06-2----2,4,6-Trichlorophenol 350 U 95-95-4-----2,4,5-Trichlorophenol_ 880 U 350 U 91-58-7----2-Chloronaphthalene___ 88-74-4----2-Nitroaniline 880 U 350 U 131-11-3-----Dimethylphthalate 350 U 208-96-8-----Acenaphthylene 606-20-2----2,6-Dinitrotoluene 350 U 99-09-2----3-Nitroaniline_____ 880 U 350 U 83-32-9-----Acenaphthene

FORM I SV-1

CP 9-14990LM03.0

Lab Name: COMPUCHEM Contract: 68D50004 _____

Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JP410

Matrix: (soil/water) SOIL Lab Sample ID: 950233

Sample wt/vol: 30.0 (g/mL) G Lab File ID: GH050233B70

Level: (low/med) LOW Date Received: 07/10/99

% Moisture: 6 decanted: (Y/N) N Date Extracted: 07/12/99

Concentrated Extract Volume: 500(uL) Date Analyzed: 07/15/99

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.3

CONCENTRATION UNITS:
CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG (

.

FORM I SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

JP420

Lab Name: COMPUCHEM

Contract: 68D50004

Lab Code: COMPU Case No.: 27165 SAS No.:

SDG No.: JP410

Matrix: (soil/water) SOIL

Lab Sample ID: 950233

Sample wt/vol:

30.0 (g/mL) G

Lab File ID: GH050233B70

Level: (low/med)

LOW

Date Received: 07/10/99

% Moisture: 6

decanted: (Y/N) N

Date Extracted:07/12/99

Concentrated Extract Volume: 500 (uL) Date Analyzed: 07/15/99

Injection Volume: 2.0(uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y

pH: 6.3

Number TICs found: 20

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 2. 95-16-9 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21.	UNKNOWN UNKNOWN UNKNOWN UNKNOWN UNKNOWN UNKNOWN UNKNOWN UNKNOWN UNKNOWN UNKNOWN UNKNOWN UNKNOWN UNKNOWN UNKNOWN UNKNOWN UNKNOWN UNKNOWN UNKNOWN PHTHALATE UNKNOWN PHTHALATE UNKNOWN UNKNOWN UNKNOWN UNKNOWN UNKNOWN UNKNOWN UNKNOWN UNKNOWN UNKNOWN UNKNOWN UNKNOWN UNKNOWN UNKNOWN UNKNOWN	6.78 9.23 15.40 15.99 16.02 16.17 16.28 16.58 16.85 17.15 18.07 18.20 18.25 18.49 18.57 22.34 23.08 23.57 25.82	110 93 110 130 120 110 100 96 220 130 220 150 160 280	אטא טטטטטטטטטטטטטטטטטטטטטטטטטטטטטטטטטט
23. 24. 25. 26. 27. 28. 29. 30.				

FORM I SV-TIC

JP421 Contract: 68D50004 Lab Name: COMPUCHEM

Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JP410

Lab Sample ID: 950234 Matrix: (soil/water) SOIL

Lab File ID: GH050234B70 Sample wt/vol: 30.0 (g/mL) G

Level: (low/med) LOW Date Received: 07/10/99

Date Extracted:07/12/99 % Moisture: 8 decanted: (Y/N) N

Concentrated Extract Volume: 500(uL) Date Analyzed: 07/15/99

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.2

CONCENTRATION UNITS: CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG

	**	
108-95-2Phenol 111-44-4bis (2-Chloroethyl) ether 95-57-82-Chlorophenol 541-73-11,3-Dichlorobenzene 106-46-71,4-Dichlorobenzene 95-50-11,2-Dichlorobenzene 95-48-72-Methylphenol 108-60-12,2'-oxybis (1-Chloropropane) 106-44-54-Methylphenol 621-64-7		360 360 360 360 360 360 360 360 360 360
120-82-11,2,4-Trichlorobenzene91-20-3Naphthalene 91-20-3Naphthalene 106-47-8		360 U 360 U 360 U 360 U 360 U

FORM I SV-1

G-14-99 OLMO3.0

Lab Name: COMPUCHEM Contract: 68D50004

Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JP410

Matrix: (soil/water) SOIL Lab Sample ID: 950234

Sample wt/vol: 30.0 (g/mL) G Lab File ID: GH050234B70

Level: (low/med) LOW Date Received: 07/10/99

% Moisture: 8 decanted: (Y/N) N Date Extracted:07/12/99

Concentrated Extract Volume: 500(uL) Date Analyzed: 07/15/99

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.2

CONCENTRATION UNITS: COMPOUND CAS NO. (ug/L or ug/Kg) UG/KG Q 900 U 51-28-5----2,4-Dinitrophenol____ 100-02-7----4-Nitrophenol 900 U 360 U 132-64-9-----Dibenzofuran 360 U 121-14-2----2,4-Dinitrotoluene____ 360 U 84-66-2-----Diethylphthalate 360 U 360 U 7005-72-3----4-Chlorophenyl-phenylether 86-73-7-----Fluorene 900 U 900 U 100-01-6----4-Nitroaniline 534-52-1----4,6-Dinitro-2-methylphenol 360 U 86-30-6----N-nitrosodiphenylamine (1) 360 U 101-55-3----4-Bromophenyl-phenylether 360 U 118-74-1-----Hexachlorobenzene 900 UJ 87-86-5----Pentachlorophenol 85-01-8-----Phenanthrene 360 U 120-12-7-----Anthracene 360 U 86-74-8-----Carbazole 360 U 84-74-2-----Di-n-butylphthalate 360 U 206-44-0-----Fluoranthene 360 U 129-00-0-----Pyrene 360 U 85-68-7-----Butylbenzylphthalate 360 U 91-94-1----3,3'-Dichlorobenzidine 360 U 56-55-3----Benzo(a)anthracene___ 360 U 218-01-9-----Chrysene 360 U 117-81-7-----bis(2-Ethylhexyl)phthalate 360 U 117-84-0-----Di-n-octylphthalate__ 360 U 205-99-2----Benzo(b) fluoranthene 360 U 207-08-9-----Benzo(k) fluoranthene 360 U 50-32-8-----Benzo(a)pyrene_ 360 U 193-39-5----Indeno(1,2,3-cd)pyrene_ 360 U 53-70-3-----Dibenzo(a,h)anthracene 360 U 360 U 191-24-2----Benzo(g,h,i)perylene (1) - Cannot be separated from Diphenylamine

FORM I SV-2

OLMO3.0

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

TENTATIVELY IDENTIFIED COMPOUNDS

JP421

Lab Name: COMPUCHEM Contract: 68D50004

Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JP410

Cabe No.: 2/103 BAB No.: BBG No.: 0141

Matrix: (soil/water) SOIL Lab Sample ID: 950234

Sample wt/vol: 30.0 (g/mL) G Lab File ID: GH050234B70

Level: (low/med) LOW Date Received: 07/10/99

% Moisture: 8 decanted: (Y/N) N Date Extracted: 07/12/99

Concentrated Extract Volume: 500 (uL) Date Analyzed: 07/15/99

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.2

Number TICs found: 23 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

I	·			·			
CAS NUMBER		COMPOUND	NAME-	- RT	EST. (CONC.	Q
===============	=======			=======	=======		=====
-1	TINKNOWN	(BC) Lab	Cont.	6.78		130	JB-R
1 2.	UNKNOWN	(= 0)	•	7.30		85	J.Ņ
] 3.	UNKNOWN			10.73		230	J.
1 4	UNKNOWN				1	170	J
5.			•	10.87			
	UNKNOWN	,		15.82		280	101
6. 7.	DDD/DDT			16.78		160	
, · -	UNKNOWN		• •	16.98		140	J
8.	UNKNOWN		:	17.81		170	J
9.	UNKNOWN			19.55		280	J
10.	UNKNOWN			19.77	3 1	320	J
11.	UNKNOWN			20.04	1.	200	J
12.	UNKNOWN	*		20.19		210	J
13.	UNKNOWN		•	20.82	ŀ	270	J
14.	UNKNOWN			22.12		270	J
15.	UNKNOWN	,		22.26			J
16				22.26		200	
16. 17.	UNKNOWN	· ,		22.34		350	J
1 1/.	UNKNOWN	•		23.07		160	J
18.	UNKNOWN	•		23.59		200	J
19.	UNKNOWN		•	23.86		230	J
20.	UNKNOWN			25.23		190	J]
21.	UNKNOWN	•		25.60		250	J
22.	UNKNOWN			25.72	,	250	J
23.	UNKNOWN			25.82	,	160	J
24.	OMIGNOMIA	•		23.02		ŤOO	10*
25.	-					·	<u> </u>
26.				-			
	1				l		
27.	.						
28.		•					
29.							•
30.							
				-			
1	. I			_	l		1

FORM I SV-TIC

JP422 Contract: 68D50004 Lab Name: COMPUCHEM

Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JP410

Lab Sample ID: 950235 Matrix: (soil/water) SOIL

Lab File ID: GH050235B70 Sample wt/vol: 30.0 (g/mL) G

Level: (low/med) LOW Date Received: 07/10/99

Date Extracted:07/12/99 % Moisture: 15 decanted: (Y/N) N

Concentrated Extract Volume: 500(uL) Date Analyzed: 07/15/99

Dilution Factor: 1.0 Injection Volume: 2.0(uL)

GPC Cleanup: (Y/N) Y pH: 7.3

CAS NO.	COMPOUND	(ug/L o			Ç	<u>)</u>
108-95-2	Phenol	thyllether	•	390 - 390		

				<u> </u>	i
	108-95-2Phenol		390	U	
١	111-44-4bis(2-Chloroethyl)e	ther		Ŭ	- 1
۱	95-57-82-Chlorophenol		220	U	
١	541-73-11;3-Dichlorobenzene		390	U	
1	106-46-71,4-Dichlorobenzene		390	U	- 1
١	95-50-11,2-Dichlorobenzene		390	U	
١	95-48-72-Methylphenol		390		
١	108-60-12;2'-oxybis(1-Cnior	opropane)	390	U	ŀ
١	106-44-54-Methylphenol		390	ט	1
	621-64-7N-Nitroso-di-n-prop	ylamine	390	U	.
	67-72-1Hexachloroethane		390	Ū .	.
	98-95-3Nitrobenzene		390		- 1
	78-59-1Isophorone		390	U	
	88-75-52-Nitrophenol		390		
	105-67-92,4-Dimethylphenol_		390		
	111-91-1bis(2-Chloroethoxy)	methane	390		
	120-83-22,4-Dichlorophenol_		390	•	
	120-82-11,2,4-Trichlorobenz	zene	390	U.	1
	91-20-3Naphthalene		390	U .	.
	106-47-84-Chloroaniline		390		
	87-68-3Hexachlorobutadiene		390	ט	
	59-50-74-Chloro-3-methylph	nenol	. 390		-
	91-57-62-Methylnaphthalene	≥	390		1
	77-47-4Hexachlorocyclopent	adiene	390		.
	88-06-22,4,6-Trichloropher	101	390		
	95-95-42,4,5-Trichloropher 91-58-72-Chloronaphthalen	nol	980		1
	91-58-72-Chloronaphthalen	2	390		
	88-74-42-Nitroaniline		980	3	· .
	131-11-3Dimethylphthalate		390		.
	208-96-8Acenaphthylene		390		
	606-20-22;6-Dinitrotoluene		390	3	
	99-09-23-Nitroaniline		980		
	83-32-9Acenaphthene		390	U	• •
					ì

FORM I SV-1

JP422

Lab Name: COMPUCHEM Contract: 68D50004

Lab Code: COMPU Case No.: 27165 SAS No.:

SDG No.: JP410

Matrix: (soil/water) SOIL

Lab Sample ID: 950235

CONCENTRATION UNITS:

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: GH050235B70

Level: (low/med) LOW'

Date Received: 07/10/99

% Moisture: 15 decanted: (Y/N) N

Date Extracted:07/12/99

Concentrated Extract Volume: 500(uL)

Date Analyzed: 07/15/99

Injection Volume: 2.0(uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y

pH: 7.3

CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG

	CAD NO.	COMPOUND	(dg/1 of dg/kg	, 55,16		×	•
	51-28-5	-2,4-Dinitrophenol -4-Nitrophenol -0ibenzofuran -2,4-Dinitrotoluer -2,4-Dinitrotoluer -2,4-Chlorophenyl-pl -1-Chlorophenyl-pl -1-Chlorophenyl-pl -4-Nitroaniline -4,6-Dinitro-2-met -N-nitrosodiphenyl-pl -Hexachlorobenzene -Pentachlorobenzene -Pentachlorophenol -Phenanthrene -Anthracene -Carbazole -Di-n-butylphthal -Fluoranthene -Pyrene -Butylbenzylphtha -3,3'-Dichloroben -Benzo(a) anthrace -Chrysene -bis(2-Ethylhexyl -Di-n-octylphthal -Benzo(b) fluorant -Benzo(a) pyrene -Indeno(1,2,3-cd)	henylether	-	980 980 980 390 980 3990 980 980 980 980 990 990 990 990 990		
	53-70-3	-Indeno(1,2,3-cd) -Dibenzo(a,h)anth -Benzo(g,h,i)pery	racene		390 U 390 U	·	
(1	l) - Cannot be se	parated from Diph	enylamine		!- (A	I	14-99
		FORM I S	V-2		O 1	OI	_M03.0

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

JP422 Lab Name: COMPUCHEM Contract: 68D50004

Case No.: 27165 SAS No.:

SDG No.: JP410

Matrix: (soil/water) SOIL

Lab Sample ID: 950235

Sample wt/vol:

Lab Code: COMPU

30.0 (g/mL) G

Lab File ID: GH050235B70

Level: (low/med) LOW

Date Received: 07/10/99

% Moisture: 15 decanted: (Y/N) N

Date Extracted: 07/12/99

Concentrated Extract Volume:

500 (uL)

Date Analyzed: 07/15/99

Injection Volume: 2.0(uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y

pH: 7.3

Number TICs found: 5

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT 6.78	EST. CONC.	Q ===== m_R
2. 3. 4.	UNKNOWN AMIDE UNKNOWN UNKNOWN UNKNOWN	17.15 25.35 25.72 25.80	140 130 92 97	JB-R JN JN JN
6. 7.				
8.				
10. 11. 12.				
13.				
15. 16.		-		
18. 19.				
20.				
22. 23. 24.				
25. 26.				
27. 28.				
29. 30.				.

JP428

Lab Name: COMPUCHEM

Contract: 68D50004

Lab Code: COMPU Case No.: 27165 SAS No.:

SDG No.: JP410

Matrix: (soil/water) SOIL

Lab File ID: GR050544B70

Sample wt/vol: 30.0 (g/mL) G

CONCENTRATION UNITS:

Level: (low/med)

LOW

Date Received: 07/14/99

Lab Sample ID: 950544

% Moisture: 7 decanted: (Y/N) N Date Extracted:07/29/99

Concentrated Extract Volume: 500(uL) Date Analyzed: 07/31/99

Injection Volume: 2.0(uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y

pH: 7.6

CAS NO.	COMPOUND	(ug/L or ug/l	•	. Q	
95-57-8 541-73-1 106-46-7 95-50-1 95-48-7 108-60-1 621-64-7 67-72-1 98-95-3 78-59-1 88-75-5 105-67-9 111-91-1 120-83-2	bis(2-Chloroethyl-2-Chlorophenol 1,3-Dichlorobenze 1,4-Dichlorobenze 1,2-Dichlorobenze 2-Methylphenol 2,2'-oxybis(1-Chloroethylphenol N-Nitroso-di-n-pro-1-Chloroethane Hexachloroethane Nitrobenzene Isophorone 2-Nitrophenol 2,4-Dimethylphenol 2,4-Dichlorophenol 2,4-Dichlorophenol 2,4-Dichlorophenol	ene_ene_ene_ene_ene_ene_ene_ene_ene_ene	350 350 350 350 350 350 350 350 350 350	4 4 6	
91-20-3 106-47-8 87-68-3 59-50-7 91-57-6 77-47-4 88-06-2 95-95-4 91-58-7 88-74-4 131-11-3 208-96-8 606-20-2	Naphthalene4-ChloroanilineHexachlorobutadi4-Chloro-3-methy2-MethylnaphthalHexachlorocyclop2,4,5-Trichlorop2-Chloronaphthal2-NitroanilineDimethylphthalatAcenaphthylene2,6-Dinitrotolue3-Nitroaniline	ene lphenol ene entadiene henol henol ene	180 350 350 350 350 350 350 890 350 350 350 350	מממממממממח ליים	

JP428 Contract: 68D50004

Lab Name: COMPUCHEM

SDG No.: JP410 SAS No.: Lab Code: COMPU Case No.: 27165

Lab Sample ID: 950544 Matrix: (soil/water) SOIL

GR050544B70 Lab File ID: ..30:0 (g/mL) G Sample wt/vol:

Date Received: 07/14/99 Level: (low/med) LOW

Date Extracted: 07/29/99 % Moisture: 7 decanted: (Y/N) N

Concentrated Extract Volume: 500(uL) Date Analyzed: 07/31/99

Dilution Factor: 1.0 Injection Volume: 2.0(uL)

GPC Cleanup: (Y/N) Y pH: 7.6 CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/KG COMPOUND CAS NO. 890 U J 51-28-5----2,4-Dinitrophenol_____ 890 I U 100-02-7----4-Nitrophenol 350 U 132-64-9-----Dibenzofuran 121-14-2----2,4-Dinitrotoluene 350 l U 350 J U 84-66-2-----Diethylphthalate 350 U 7005-72-3----4-Chlorophenyl-phenylether_ 3,50 ١U 86-73-7-----Fluorene . 890 100-01-6-----4-Nitroaniline 890 U 534-52-1-----4,6-Dinitro-2-methylphenol 86-30-6----N-nitrosodiphenylamine_(1) 350 U 101-55-3----4-Bromophenyl-phenylether_ 350 U 350. U 118-74-1-----Hexachlorobenzene U 890 87-86-5-----Pentachlorophenol 350 U 85-01-8-----Phenanthrene 350 U 120-12-7-----Anthracene 350 U 86-74-8-----Carbazole 350 U 84-74-2-----Di-n-butylphthalate 350 U 206-44-0----Fluoranthene 49 J 129-00-0----Pyrene 350 U 85-68-7-----Butylbenzylphthalate 350 U 91-94-1----3,3'-Dichlorobenzidine_ 350 U 56-55-3-----Benzo(a)anthracene_ 350 U 218-01-9-----Chrysene 350 U 117-81-7-----bis(2-Ethylhexyl)phthalate 350 U 117-84-0-----Di-n-octylphthalate 350 U 205-99-2----Benzo (b) fluoranthene 350 U 207-08-9-----Benzo(k)fluoranthene_ 350 U 50-32-8-----Benzo(a)pyrene 193-39-5----Indeno(1,2,3-cd)pyrene 350 U 53-70-3-----Dibenzo(a,h)anthracene 350 U 350 U ♥ 191-24-2----Benzo(g,h,i)perylene_ (i) - Cannot be separated from Diphenylamine OLM03.0

FORM I SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

JP428

Lab Name: COMPUCHEM

Contract: 68D50004

Lab Code: COMPU Case No.: 27165 SAS No.:

SDG No.: JP410

Matrix: (soil/water) SOIL

Lab Sample ID: 950544

Sample wt/vol:

30.0 (g/mL) G

Lab File ID: GR050544B70

Level: (low/med) LOW

decanted: (Y/N) N

Date Received: 07/14/99 Date Extracted:07/29/99

% Moisture: 7

Concentrated Extract Volume: 500(uL)

Date Analyzed: 07/31/99

Injection Volume:

2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y

pH: 7.6

Number TICs found: 30

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

1. UNKNOWN 16.73 980 J ✓ 17.29 960 J 1 3. UNKNOWN 17.29 960 J 17.59 890 J 17.	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
28. UNKNOWN 21.29 590 J 30. UNKNOWN 21.93 510 J V	1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29.	UNKNOWN UNKNOWN	16.73 17.59 17.59 17.76 17.83 17.98 18.06 18.16 18.25 18.45 18.52 18.65 18.99 19.03 19.20 19.45 19.52 19.57 19.99 20.18 20.38 20.61 20.92 21.07 21.29	980 960 890 830 1100 880 1600 900 1100 1300 1700 1100 870 830 1300 990 1000 910 630 860 1400 660 500 830 590	

JP429 Contract: 68D50004 Lab Name: COMPUCHEM

SDG No.: JP410 Lab Code: COMPU Case No.: 27165 SAS No.:

Lab Sample ID: 950545 Matrix: (soil/water) SOIL

Lab File ID: GH050545A66 Sample wt/vol: 30.2 (g/mL) G

Date Received: 07/14/99 Level: (low/med) LOW

Date Extracted: 07/16/99 decanted: (Y/N) N % Moisture: 23

Date Analyzed: 07/27/99 Concentrated Extract Volume: 500 (uL)

Dilution Factor: 1.0 Injection Volume: 2.0(uL)

GPC Cleanup: (Y/N) Y 5 pH: 7.0

CAS NO.

CONCENTRATION UNITS:

COMPOUND 420 U 108-95-2-----Phenol 420 U 111-44-4-----bis(2-Chloroethyl)ether 420 U 95-57-8----2-Chlorophenol 420 U 541-73-1----1,3-Dichlorobenzene 420 U 106-46-7----1,4-Dichlorobenzene 420 U 95-50-1----1,2-Dichlorobenzene 95-48-7----2-Methylphenol 420 U 108-60-1----2,2'-oxybis(1-Chloropropane) 420 U 420 U 106-44-5----4-Methylphenol 621-64-7----N-Nitroso-di-n-propylamine 420 U 67-72-1-----Hexachloroethane 420 U 98-95-3-----Nitrobenzene 420 U 78-59-1-----Isophorone 420 U 88-75-5----2-Nitrophenol 420 U 105-67-9-----2,4-Dimethylphenol 420 U 111-91-1----bis(2-Chloroethoxy)methane_ 420 U 420 U 120-83-2----2,4-Dichlorophenol 420 U 120-82-1----1,2,4-Trichlorobenzene 120 J 91-20-3-----Naphthalene 106-47-8-----4 Chloroaniline 420 U 420 87-68-3------Hexachlorobutadiene U 59-50-7----4-Chloro-3-methylphenol 420 U 160 J 91-57-6----2 Methylnaphthalene

(ug/L or ug/Kg) UG/KG

FORM I SV-1

77-47-4-----Hexachlorocyclopentadiene

88-06-2----2,4,6-Trichlorophenol_

95-95-4-----2,4,5-Trichlorophenol_

91-58-7----2-Chloronaphthalene_

131-11-3-----Dimethylphthalate

606-20-2----2,6-Dinitrotoluene 99-09-2----3-Nitroaniline

88-74-4----2-Nitroaniline

208-96-8-----Acenaphthylene

83-32-9-----Acenaphthene

9-14-99 OLMO3.0

420 U

420 U

420 U

420 U 420 U

420 U

1100 U 420 U

1100 U

1100 U

Lab Name: COMPUCHEM Contract: 68D50004

Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JP410

Matrix: (soil/water) SOIL Lab Sample ID: 950545

Sample wt/vol: 30.2 (g/mL) G Lab File ID: GH050545A66

Level: (low/med) LOW Date Received: 07/14/99

% Moisture: 23 decanted: (Y/N) N Date Extracted:07/16/99

Concentrated Extract Volume: 500(uL) Date Analyzed: 07/27/99

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.0

	•		CONCENT	RATION U	NITS:			
	CAS NO.	COMPOUND	(ug/L o	r ug/Kg)	UG/K G		Q	
	51-28-5 100-02-7 132-64-9 84-66-2 84-66-2 7005-72-3 86-73-7 100-01-6 534-52-1 86-30-6 101-55-3 87-86-5 85-01-8 85-01-8 206-44-0 129-00-0 85-68-7 218-01-9 56-55-3 218-01-9 117-84-0 205-99-2 207-08-9 117-84-0 205-99-2 117-84-0 205-99-2 117-84-0 117-84-0 205-99-2 117-84-0	2,4-Dinitrophenol4-NitrophenolDibenzofuran2,4-DinitrotolDiethylphthal4-ChlorophenyFluorene4-Nitroanilin4,6-Dinitro-2N-nitrosodiph4-BromophenyHexachlorobenPentachlorophPhenanthreneCarbazoleDi-n-butylphFluorantheneCarbazoleDi-n-butylphBenzo(a) anthChrysenebis(2-EthylhBenzo(b) fluoBenzo(b) fluoBenzo(a) pyreIndeno(1,2,3Dibenzo(a,h)Benzo(g,h,i)	nenol late late yl-phenylethe ne late yl-phenylethe nenylamine (l-phenylethe nzene nenol thalate cobenzidine racene exyl)phthala thalate ranthene ranthene ne -cd)pyrene anthracene perylene	er	110 110 42 42 42 42 110 110 42 42 42 42 42 42 42 42 42 42 42 42 42			
`	caminot be	separated from	DIPHEHYLAMIN	iC.	Λ <i>i</i>	P	.1.6	1

FORM I SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

JP429

Lab Name: COMPUCHEM

Contract: 68D50004

Lab Code: COMPU

Case No.: 27165 SAS No.:

SDG No.: JP410

Matrix: (soil/water) SOIL

Lab Sample ID: 950545

Sample wt/vol:

30.2 (g/mL) G

Lab File ID: GH050545A66

Level: (low/med)

Date Received: 07/14/99

decanted: (Y/N) N

Date Extracted: 07/16/99

LOW

Date Analyzed: 07/27/99

Concentrated Extract Volume: 500(uL)

% Moisture: 23

Injection Volume: 2.0(uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y

pH: 7.0

Number TICs found: 22

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q =====
1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21.	ETHYLMETHYLBENZENE UNKNOWN	5.10 15.57 15.97 18.44 19.28 19.85 20.51 20.55 20.69 20.92 21.04 21.27 21.35 21.46 21.76 21.86 22.74 23.09 23.58	450 640 660 590 1100 1100 1200 1200 590 500 1100 580 600 690 500	ככככככככככככככככ
22. 23. 24. 25. 26. 27. 28. 29.	UNKNOWN	26.21	430	

JP410

Lab Name: COMPUCHEM

Contract: 68D50004

Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JP410

Matrix: (soil/water) SOIL

Lab Sample ID: 949999

Sample wt/vol:

30.0 (g/mL) G

Lab File ID:

% Moisture: 9

decanted: (Y/N) N Date Received: 07/09/99

Extraction: (SepF/Cont/Sonc) SONC

Date Extracted:07/09/99

Concentrated Extract Volume: 5000(uL) Date Analyzed: 08/11/99

Injection Volume: 2.0(uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.0 Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG

319-85-7beta-BHC 319-86-8delta-BHC 58-89-9gamma-BHC (Lindane) 76-44-8Heptachlor 309-00-2Aldrin 1024-57-3Heptachlor epoxide 959-98-8Endosulfan I 72-55-94,4'-DDE 72-20-8Endrin 33213-65-9Endosulfan II 72-54-84,4'-DDD 1031-07-8Endosulfan sulfate 50-29-34,4'-DDT 72-43-5Methoxychlor 53494-70-5Endrin ketone 7421-93-4Endrin aldehyde 5103-71-9alpha-Chlordane 5103-74-2	929 98 98 98 98 98 98 98 98 98 98 98 98 98

CP 9-15-99

JP410DL

Lab Name: COMPUCHEM Contract: 68D50004

Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JP410

Matrix: (soil/water) SOIL Lab Sample ID: 949999

Sample wt/vol: 30.0 (g/mL) G Lab File ID:

% Moisture: 9 decanted: (Y/N) N Date Received: 07/09/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted:07/09/99

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 08/19/99

Injection Volume: 2.0(uL) Dilution Factor: 2.0

GPC Cleanup: (Y/N) Y pH: 8.0 Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:
CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG

	•
319-84-6beta-BHC 319-85-7beta-BHC 319-86-8delta-BHC 58-89-9gamma-BHC (Lindane) 76-44-8Aldrin 1024-57-3Heptachlor epoxide 959-98-8Endosulfan I 60-57-1Dieldrin 72-55-94,4'-DDE 72-20-8Endrin 33213-65-9Endosulfan II 72-54-84,4'-DDD 1031-07-8Endosulfan sulfate 50-29-34,4'-DDT 72-43-5Methoxychlor 53494-70-5Endrin ketone 7421-93-4Endrin aldehyde 5103-71-9	3.7 3.7 3.7 3.7 3.7 3.7 3.7 3.7
11141-16-5Aroclor-1232 53469-21-9Aroclor-1242	72 U 72 U

Cf 9-15-99

JP418 Lab Name: COMPUCHEM Contract: 68D50004 Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JP410 Matrix: (soil/water) SOIL Lab Sample ID: 950231 Sample wt/vol: 30.0 (g/mL) G Lab File ID: % Moisture: 11 decanted: (Y/N) N Date Received: 07/10/99 Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 07/13/99 Concentrated Extract Volume: 5000(uL) Date Analyzed: 08/18/99 Injection Volume: 2.0(uL) Dilution Factor: 1.0 GPC Cleanup: (Y/N) Y pH: 7.1 Sulfur Cleanup: (Y/N) N CONCENTRATION UNITS:
COMPOUND (ug/L or ug/Kg) UG/KG CAS NO.

				· · ·		
319-84-6	alpha-BHC			1.9	ָּט .	
319-85-7			•	1.9	U	-
	delta-BHC			1.9	Ū	
	gamma-BHC (Lindane)			1.9		١
	Heptachlor			1.9	Ū	
309-00-2	Aldrin			1.9	Ū	١
	Heptachlor epoxide			1.9	i -	
	Endosulfan I			1.9	1	.
60-57-1	Dieldrin	27	LA	0-21		
72-55-9	4,4'-DDE	2.1	T	4.8		
72-20-8	Endrin		27	0.16	JPU	-
	Endosulfan II		3.1	3.7		١
72-54-8				3.2		
	Endosulfan sulfate			3.7		1
50-29-3	4 4'-DDT	·		0.89		1
72-43-5	Methoxychlor			19	U	1
	Endrin ketone		27	0-14		1
	Endrin aldehyde		201	3.7	Ū ,	-
	alpha-Chlordane			1.9	, –	1
	gamma-Chlordane		10	0-12		1
8001-35-2	Toxaphene	,	7.7	190		-
12674-11-2	Aroclor-1016		•	37	π	-
	Aroclor-1221			75	Ü	۱
	Aroclor-1232	٠,		37.	Ü	
	Aroclor-1242			37	TT .	
	Aroclor-1248			37	Ü	
11097-69-1	Aroclor-1254			37	U:	
	Aroclor-1254			3 <i>7</i>	π	١
1			_	. 5/	١٠	1
1		I		·	1	_ 1

UP 15.99

FORM I PEST

JP420

Lab Name: COMPUCHEM

Contract: 68D50004

Lab Code: COMPU Case No.: 27165 SAS No.:

SDG No.: JP410

Matrix: (soil/water) SOIL

Lab Sample ID: 950233

Sample wt/vol:

30.0 (g/mL) G

Lab File ID:

% Moisture: 6 decanted: (Y/N) N Date Received: 07/10/99

Extraction: (SepF/Cont/Sonc) SONC

Date Extracted: 07/13/99

Concentrated Extract Volume: 5000(uL)

Date Analyzed: 08/20/99

Injection Volume: 2.0(uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.3 Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS: CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG

1.8|U 319-84-6------alpha-BHC_ 2.3 厘丁 319-85-7-----beta-BHC 1.8 U 319-86-8-----delta-BHC 1.8 U 58-89-9-----gamma-BHC (Lindane) 1.8 U 76-44-8-----Heptachlor 1.8|U 309-00-2----Aldrin 1.8|U 1024-57-3-----Heptachlor epoxide 1.8 U 959-98-8-----Endosulfan I 3.5 D.13 JPU 60-57-1-----Dieldrin 6.9 72-55-9----4,4'-DDE 3.50-20 JPU 72-20-8-----Endrin 3.5 U 33213-65-9----Endosulfan II 2.7 JB 72-54-8-----4,4'-DDD 3.5 0.19 JPU 1031-07-8----Endosulfan sulfate 2.6 JB 50-29-3-----4,4'-DDT 18 2-36 JPU 72-43-5-----Methoxychlor_ 3.5 U 53494-70-5----Endrin ketone 3.5 U 7421-93-4-----Endrin aldehyde 1.8 U 5103-71-9----alpha-Chlordane 1.8|U 5103-74-2----gamma-Chlordane_ 180 U 8001-35-2-----Toxaphene 35 | U 12674-11-2----Aroclor-1016 71 U 11104-28-2----Aroclor-1221 35|U 11141-16-5----Aroclor-1232 35 U 53469-21-9----Aroclor-1242 35 U 12672-29-6----Aroclor-1248 35 U 11097-69-1----Aroclor-1254 35 I U 11096-82-5----Aroclor-1260

JP421 Lab Name: COMPUCHEM Contract: 68D50004

Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JP410

Matrix: (soil/water) SOIL Lab Sample ID: 950234

Sample wt/vol: 30.0 (g/mL) G Lab File ID:

% Moisture: 8 decanted: (Y/N) N Date Received: 07/10/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted:07/13/99

Concentrated Extract Volume: 5000(uL) Date Analyzed: 08/18/99

Injection Volume: 2.0(uL) Dilution Factor: 2.0

GPC Cleanup: (Y/N) Y pH: 6.2 Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG 319-84-6----alpha-BHC 3.7 U 3.7 0.66 JP U 3.7 0.34 JP U 3.7 U 3.7 U 319-85-7-----beta-BHC_ 319-86-8-----delta-BHC 58-89-9----gamma-BHC (Lindane) 76-44-8-----Heptachlor 309-00-2----Aldrin 3.7 U 1024-57-3-----Heptachlor epoxide____ 3.7 0.19 IPBU 3.7 U 959-98-8-----Endosulfan I_____ 60-57-1-----Dieldrin 7.2 3.7 0.66 JPU 72-55-9-----4,4'-DDE 24 72-20-8-----Endrin 7.2 0 33213-65-9----Endosulfan II 7.2 U 72-54-8-----4,4'-DDD 90 18 1031-07-8-----Endosulfan sulfate 7.2 1-6 JPU 7.2 3.4 JPBU 50-29-3-----4,4'-DDT 72-43-5-----Methoxychlor 37 4.0 JU 7.2 U 53494-70-5----Endrin ketone 7421-93-4----Endrin aldehyde 7.2 0 5103-71-9----alpha-Chlordane 5103-74-2----gamma-Chlordane 2.4 J 370 U 8001-35-2-----Toxaphene 12674-11-2----Aroclor-1016__ 72 U 11104-28-2----Aroclor-1221 140 U 11141-16-5----Aroclor-1232 72 U 53469-21-9----Aroclor-1242 72 U 12672-29-6----Aroclor-1248 72 U 11097-69-1----Aroclor-1254 72 U 11096-82-5----Aroclor-1260 72 U

9-15-99

JP422

Lab Name: COMPUCHEM Contract: 68D50004

Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JP410

Matrix: (soil/water) SOIL Lab Sample ID: 950235

Sample wt/vol: 30.0 (g/mL) G Lab File ID:

% Moisture: 15 decanted: (Y/N) N Date Received: 07/10/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted:07/13/99

Concentrated Extract Volume: 5000(uL) Date Analyzed: 08/18/99

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.3 Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:
CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG C

**************************************			• •••		
	3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3			0 0	T+
	alpha-BHC			2.0	
	beta-BHC		2.0		
	delta-BHC	1		2.0	
	gamma-BHC (Lindane)	1		2.0	1
	Heptachlor			2.0	
	Aldrin	1		2.0	
	Heptachlor epoxide				U
959-98-8	Endosulfan I	6		2.0	
	Dieldrin			3.9	ן ט
72-55-9	4,4'-DDE	1.555	3.9	2.32	JP.U
72-20-8	Endrin		Į.	3.9	
33213-65-9-	Endosulfan II			3.9	
72-54-8	4,4'-DDD		3.9	D-29	JPBU
1031-07-8	Endosulfan sulfate			3.9	
	4,4'-DDT	1.37	3.9	0.22	JB U
72-43-5	Methoxychlor	10 m 10 m 10 m 10 m 10 m 10 m 10 m 10 m		. 20	ĮŪ
53494-70-5-	Endrin ketone		*	3.9	
7421-93-4	Endrin aldehyde	A Section		3.9	
5103-71-9	alpha-Chlordane			2.0	
5103-74-2	gamma-Chlordane			2.0	Ü
8001-35-2	Toxaphene	Line in the		200	
	Aroclor-1016			39	U
	Aroclor-1221			79	
11141-16-5-	Aroclor-1232	1 12 4		39	U .
	Aroclor-1242	1,315		39	U
	Aroclor-1248		•	39	
	Aroclor-1254			39	U
	Aroclor-1260	<u>'</u>		39	U
		1	** * **		
		. 1			

W5-15-99

JP428 Lab Name: COMPUCHEM Contract: 68D50004

Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JP410

Matrix: (soil/water) SOIL Lab Sample ID: 950544

Sample wt/vol: 30.0 (g/mL) G Lab File ID:

% Moisture: 7 decanted: (Y/N) N Date Received: 07/14/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted:07/16/99

Concentrated Extract Volume: 5000(uL) Date Analyzed: 08/19/99

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.6 Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS: COMPOUND (ug/L or ug/Kg) UG/KG

(49/11 01	2 dg/1lg/ 00/1l0 Q
319-84-6	1.8 U 1.8 U
53469-21-9Aroclor-1242	35 U

FORM I PEST

JP429

Lab Name: COMPUCHEM Contract: 68D50004

Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JP410

Matrix: (soil/water) SOIL Lab Sample ID: 950545

Sample wt/vol: 30.0 (g/mL) G Lab File ID:

% Moisture: 23 decanted: (Y/N) N Date Received: 07/14/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted:07/16/99

Concentrated Extract Volume: 5000(uL) Date Analyzed: 08/19/99

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.0 Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:
CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG Q

	(49/1 01 49	, ng, 00, no Q
210 04 6	-1-1	
319-84-6	alpha-BHC	. 2.2 U,,
319-85-7	beta-BHC	2.2 1-6 34
213-00-0	delta-BHC	2.2 U
76 44 0	gamma-BHC (Lindane)	2.2 U
76-44-8	Heptachlor	2.2 U
309-00-2		2.2 0.089 JPU
1024-5/-3	Heptachlor epoxide	2.2 U
959-98-8	Endosulfan I	2.2 D-40 JP4
60-57-1		4.3 2.2 JEU
72-55-9		25 28
72-20-8	Endrin	4.3 U
	Endosulfan II	4.3 U
72-54-8		44 12
1031-07-8	Endosulfan sulfate	4.3 1.0 10
50-29-3	4,4'-DDT	4.3 1-4 JPBU
/2-43-5	Methoxychlor	22 U
53494-70-5	Endrin ketone	4.3 -0-21 JPU
7421-93-4	Endrin aldehyde	4.3 U
5103-71-9	alpha-Chlordane	3.9
5103-74-2	gamma-Chlordane	4.6 PJ
	Toxaphene	220 U
	Aroclor-1016	43 U
	Aroclor-1221	87 U
	Aroclor-1232	43 U
	Aroclor-1242	43 U
	Aroclor-1248	43 U
	Aroclor-1254	43 U
11096-82-5	Aroclor-1260	43 U

CP G-15-99

JW585

Lab Name: COMPUCHEM Contract: 68D50004

Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JP410

Matrix: (soil/water) SOIL Lab Sample ID: 950236

Sample wt/vol: 30.0 (g/mL) G Lab File ID:

% Moisture: 18 Date Received: 07/10/99 decanted: (Y/N) N

Extraction: (SepF/Cont/Sonc) SONC

Date Extracted: 07/13/99

Concentrated Extract Volume: 5000(uL) Date Analyzed: 08/20/99

Injection Volume: 2.0(uL) Dilution Factor: 5.0

GPC Cleanup: (Y/N) Y pH: 6.6 Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS: COMPOUND CAS NO. (ug/L or ug/Kg) UG/KG

COMPONE (A	ig/ i or ag/ kg/ od/ kg	
319-84-6alpha-BHC	10	Ū.
319-85-7beta-BHC	10	U
319-86-8delta-BHC	10	U
58-89-9gamma-BHC (Lindane)	10	U
76-44-8	10	U
309-00-2Aldrin	10	U .
1024-57-3Heptachlor epoxide	10	Ū
959-98-8Endosulfan I	10	U
60-57-1Dieldrin	20	U
72-55-94,4'-DDE	750	ECJ
72-20-8Endrin		JPU
33213-65-9Endosulfan II	.20	
72-54-84,4'-DDD		J₽₽
1031-07-8Endosulfan sulfate	72	
50-29-34,4'-DDT	440	EBej
72-43-5Methoxychlor	100 4.2	JPU
53494-70-5Endrin ketone	20	U
7421-93-4Endrin aldehyde	20	U
5103-71-9alpha-Chlordane	10	U.
5103-74-2gamma-Chlordane	10	U
8001-35-2Toxaphene	1000	U
12674-11-2Aroclor-1016	200	U
11104-28-2Aroclor-1221	410	U
11141-16-5Aroclor-1232	200	U
53469-21-9Aroclor-1242	200	U
12672-29-6Aroclor-1248	200	ע
11097-69-1Aroclor-1254	200	Ū
11096-82-5Aroclor-1260	200	U

CP G-15-99

JW585DL

Lab Name: COMPUCHEM Contract: 68D50004

Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JP410

Matrix: (soil/water) SOIL Lab Sample ID: 950236

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 18 decanted: (Y/N) N Date Received: 07/10/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted:07/13/99

Concentrated Extract Volume: 5000(uL) Date Analyzed: 08/19/99

Injection Volume: 2.0(uL) Dilution Factor: 50.0

GPC Cleanup: (Y/N) Y pH: 6.6 Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG Q

	(-5, = -5,	٠.			
76-44-8 309-00-2 1024-57-3 959-98-8 72-55-9 72-55-9 72-20-8 72-54-8 1031-07-8 50-29-3 72-43-5 53494-70-5 7421-93-4 5103-71-9 5103-74-2 1104-28-2 11141-16-5 53469-21-9	-beta-BHC -delta-BHC -gamma-BHC (Lindane) -Heptachlor -Aldrin -Heptachlor epoxide -Endosulfan I -Dieldrin -4,4'-DDE -Endrin -Endosulfan II -4,4'-DDD -Endosulfan sulfate -4,4'-DDT -Methoxychlor -Endrin ketone -Endrin aldehyde -alpha-Chlordane -gamma-Chlordane -gamma-Chlordane -Toxaphene -Aroclor-1016 -Aroclor-1221 -Aroclor-1242		200	100 100 100 100 100 200 200 200 200 200	00000000000000000000000000000000000000
11141-16-5	-Aroclor-1232 -Aroclor-1242 -Aroclor-1248 -Aroclor-1254		· ·	2000 2000	บ บ บ

Ng-15-99

EPA SAMPLE NO.

JW586

Lab Name: COMPUCHEM Contract: 68D50004

Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JP410

Matrix: (soil/water) SOIL

Lab Sample ID: 950237

Sample wt/vol: 30.0 (g/mL) G

Lab File ID:

% Moisture: 14 decanted: (Y/N) N

Date Received: 07/10/99

Extraction: (SepF/Cont/Sonc) SONC

Date Extracted: 07/13/99

Concentrated Extract Volume: 5000(uL)

Date Analyzed: 08/18/99

Injection Volume: 2.0(uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y

pH: 7.4

Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG Q 319-84-6----alpha-BHC 2.0 U 319-85-7-----beta-BHC 2.0 U 319-86-8-----delta-BHC 2.0 U 58-89-9-----gamma-BHC (Lindane) 2.0 U 2.0 U 2.0 D-85 JBU

309-00-2----Aldrin 1024-57-3-----Heptachlor epoxide 959-98-8-----Endosulfan I 60-57-1-----Dieldrin 72-55-9----4,4'-DDE 72-20-8-----Endrin

33213-65-9----Endosulfan II 72-54-8----4,4'-DDD 1031-07-8-----Endosulfan sulfate

50-29-3----4,4'-DDT 72-43-5-----Methoxychlor_ 53494-70-5----Endrin ketone 7421-93-4----Endrin aldehyde

5103-71-9----alpha-Chlordane 5103-74-2----gamma-Chlordane 8001-35-2-----Toxaphene

12674-11-2----Aroclor-1016 11104-28-2----Aroclor-1221 11141-16-5----Aroclor-1232 53469-21-9----Aroclor-1242

12672-29-6----Aroclor-1248 11097-69-1----Aroclor-1254 11096-82-5----Aroclor-1260

2.0 U 3.8 U 0.45 J₽ 3.8 D-14 JPU 3.8 U 3.8 U 3.8 U 3,80.31 ##U

2.0 U

3.8 U 3.8 U 2.0 U 2.0 U 200 U 38 U

78 U 38 U 38 I U 38 U 38 U 38 U

9-15-99

FORM I PEST

Lab Name: COMPUCHEM Contract: 68D50004 _____

Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JP410

Matrix: (soil/water) SOIL Lab Sample ID: 950238

Sample wt/vol: 30.0 (g/mL) G Lab File ID:

% Moisture: 12 decanted: (Y/N) N Date Received: 07/10/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted:07/13/99

Concentrated Extract Volume: 5000(uL) Date Analyzed: 08/18/99

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.2 Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:
CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG

JW587DL

Contract: 68D50004 Lab Name: COMPUCHEM

Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JP410

Lab Sample ID: 950238 Matrix: (soil/water) SOIL

Sample wt/vol: 30.0 (g/mL) G Lab File ID:

% Moisture: 12 decanted: (Y/N) N Date Received: 07/10/99 Extraction: (SepF/Cont/Sonc) SONC Date Extracted:07/13/99

Concentrated Extract Volume: 5000(uL) Date Analyzed: 08/20/99

Injection Volume: 2.0(uL) Dilution Factor: 10.0

Sulfur Cleanup: (Y/N) N GPC Cleanup: (Y/N) Y pH: 6.2

CONCENTRATION UNITS:
CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG

		.,	
319-84-6alpha-BHC		19	
319-85-7beta-BHC		. 19	
319-86-8delta-BHC		19	
58-89-9gamma-BHC (Lindane)		19	U
76-44-8Heptachlor		19	
309-00-2Aldrin		19	U
1024-57-3Heptachlor epoxide		19	
959-98-8Endosulfan I		1.4	p Jp
60-57-1Dieldrin		38	-
72-55-94,4'-DDE		290	De
72-20-8Endrin		3.8	U
33213-65-9Endosulfan II	,	38	
72-54-84,4'-DDD		38 2.4	DIPBU
1031-07-8Endosulfan sulfate		5.1	DJP
50-29-34,4'-DDT			DBC
72-43-5Methoxychlor		19023	Dou
53494-70-5Endrin ketone		38	ָ ט
7421-93-4Endrin aldehyde	1	38	U
5103-71-9alpha-Chlordane		19	U
5103-74-2gamma-Chlordane		19	U
8001-35-2Toxaphene		1900	U
12674-11-2Aroclor-1016		380	U
11104-28-2Aroclor-1221		760	υ.
11141-16-5Aroclor-1232		380	
53469-21-9Aroclor-1242	į	380	1
12672-29-6Aroclor-1248		380	
11097-69-1Aroclor-1254	1 .	380	1
11096-82-5Aroclor-1260		380	
11070-02-3-1-1-ALOCTOL 1200	1		1.
			. 1

OLMO3.0

JW588

Lab Name: COMPUCHEM

Contract: 68D50004

Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JP410

Matrix: (soil/water) SOIL

Lab Sample ID: 950239

Sample wt/vol:

30.0 (g/mL) G

Lab File ID:

% Moisture: 5

decanted: (Y/N) N

Date Received: 07/10/99

Extraction: (SepF/Cont/Sonc) SONC

Date Extracted: 07/13/99

Concentrated Extract Volume: 5000(uL)

Date Analyzed: 08/18/99

Injection Volume: 2.0(uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.5

Sulfur Cleanup: (Y/N) N

CAS NO. COMPOUND

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

		i.		
210-04-6 almba_BUC			1.8	ប
319-84-6alpha-BHC 319-85-7beta-BHC		-18	0.29	-
		7 . 4	1.8	บี
319-86-8delta-BHC	*		1.8	
58-89-9gamma-BHC (Lindane)		*	1.8	Ŭ
76-44-8Heptachlor			1.8	บ
309-00-2Aldrin			1.8	τi
1024-57-3Heptachlor epoxide	: .		1.8	Ü
959-98-8Endosulfan I				•
60-57-1Dieldrin		٠.		
72-55-94,4'-DDE	· · · · · · · · · · · · · · · · · · ·		0.58	
72-20-8Endrin	7		3.5	T.
33213-65-9Endosulfan II	.19		3.5	U
72-54-84,4'-DDD		3.5	0.17	
1031-07-8Endosulfan sulfate			3.5	
50-29-34,4'-DDT		3.5	0-23	
72-43-5Methoxychlor			18	U
53494-70-5Endrin ketone			3.5	U
7421-93-4Endrin aldehyde	· ·		3.5	U
5103-71-9alpha-Chlordane	1		1.8	Ū
5103-74-2gamma-Chlordane			1.8	U
8001-35-2Toxaphene			180	U
12674-11-2Aroclor-1016			35	U
11104-28-2Aroclor-1221			70	U
11141-16-5Aroclor-1232			35	Ū
			35	Ū
53469-21-9Aroclor-1242			35	1 -
12672-29-6Aroclor-1248			32	บี
11097-69-1Aroclor-1254			35	
11096-82-5Aroclor-1260			35	١٠,
				.

JW589. Contract: 68D50004 Lab Name: COMPUCHEM

Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JP410

Lab Sample ID: 950240 Matrix: (soil/water) SOIL

Lab File ID: Sample wt/vol: 30.0 (g/mL) G

Date Received: 07/10/99 % Moisture: 0 decanted: (Y/N) N

Date Extracted:07/13/99 Extraction: (SepF/Cont/Sonc) SONC

Concentrated Extract Volume: 5000(uL) Date Analyzed: 08/18/99

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.2 Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/II OI	ug/ kg/	OG/ RG	<u> </u>
319-84-6				1.7	7 U

	1	
319-84-6alpha-BHC 319-85-7beta-BHC 319-86-8delta-BHC	1.7 1.7 /7 0.076 /7 0.19	U J₽ U
58-89-9gamma-BHC (Lindane) 76-44-8Heptachlor 309-00-2Aldrin 1024-57-3Heptachlor epoxide	1.7 1.7 1.7	บ บ บ
959-98-8Endosulfan I 60-57-1Dieldrin 72-55-94,4'-DDE	0.26 3.3 4 0-25 19	zu
72-20-8Endrin 33213-65-9Endosulfan II 72-54-84,4'-DDD 1031-07-8Endosulfan sulfate	3.3 0.26 3.3 0.6 5 3.3 0.5 9 0.52	JBU
50-29-34,4'-DDT 72-43-5Methoxychlor 53494-70-5Endrin ketone	15 17 3,3 0 -31	
7421-93-4Endrin aldehyde 5103-71-9alpha-Chlordane 5103-74-2gamma-Chlordane 8001-35-2Toxaphene	7.733 0 .47 0.82 170	J
12674-11-2Aroclor-1016 11104-28-2Aroclor-1221 11141-16-5Aroclor-1232	33 67 33	U U U
53469-21-9Aroclor-1242 12672-29-6Aroclor-1248 11097-69-1Aroclor-1254	33	U U U
11096-82-5Aroclor-1260	_	_

JW590

Lab Name: COMPUCHEM

Contract: 68D50004

Lab Code: COMPU Case No.: 27165 SAS No.:

SDG No.: JP410

Matrix: (soil/water) SOIL

Lab Sample ID: 950241

Sample wt/vol: 30.0 (g/mL) G

Lab File ID:

% Moisture: 4 decanted: (Y/N) N

Date Received: 07/10/99

Extraction: (SepF/Cont/Sonc) SONC

Date Extracted: 07/13/99

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 08/18/99

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.1 Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:
CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG

210 01			a: .			
319-84-6	alpha-BHC			1.8	Ŭ.,,	,
319-85-7	beta-BHC		1.8	0-44	-	
319-86-8	delta-BHC	.1	•	1.8	U	
58-89-9	gamma-BHC (Lindane)			1.8		
76-44-8	Heptachlor			1.8		
309-00-2	Aldrin	1		1.8	U	
1024-57-3	Heptachlor epoxide	1		1.8	U.	
959-98-8	Endosulfan I			1.8		
60-57-1	Dieldrin	1	· . ·	3.4	Ū	
72-55-9	4,4'-DDE	1		2.6.	J	
72-20-8	Endrin		3.4	0.25	J₽U	!
33213-65-9	Endosulfan II	' -	- •	3.4		
72-54-8	4,4'-DDD		3.4	2.32	JEU	(
1031-07-8	Endosulfan sulfate		3. (3.4		
50-29-3	4,4'-DDT	· [9.6	18	- :
72-43-5	Methoxychlor		18	0.74		/
53494-70-5	Endrin ketone	1	. 7 0	3.4		٠.
7421-93-4	Endrin aldehyde			3.4	_	
5103-71-9	alpha-Chlordane	1		1.8	-	
5103-74-2	alpha-Chlordane gamma-Chlordane	The same of		1.8		
8001-35-2	Toxaphene	•		180		
12674-11-2	Aroclor-1016			34		
	Aroclor-1221	•		70		
11141-16-5	Aroclor-1232	•		34		
53469-21-9	Aroclor-1242	•		34		
12672-29-6	Aroclor-1248	1		34		
11097-69-1	Aroclor-1254	•	. :	34	υ	
	Aroclor-1260	•		34	U	
	ALOCIOI-1260	-		34	١٠	
		. 1		·	ــــــــــــــــــــــــــــــــــــــ	
	:	•			n	_

JW591

Lab Name: COMPUCHEM Contract: 68D50004

Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JP410

Matrix: (soil/water) SOIL Lab Sample ID: 950242

Sample wt/vol: 30.0 (g/mL) G Lab File ID:

% Moisture: 7 decanted: (Y/N) N Date Received: 07/10/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted:07/13/99

Concentrated Extract Volume: 5000(uL) Date Analyzed: 08/20/99

Injection Volume: 2.0(uL) Dilution Factor: 5.0

GPC Cleanup: (Y/N) Y pH: 6.5 Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:
CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG Q

	 <i>i</i> :		
319-84-6		9.1 9.1 9.1 9.1 9.1 9.1 7.3 1200 18 18 31	
			l

Mg-15-99

OLMO3.0

JW591DL

Lab Name: COMPUCHEM

Contract: 68D50004

Lab Code: COMPU Case No.: 27165 SAS No.:

SDG No.: JP410

Matrix: (soil/water) SOIL

Lab Sample ID: 950242

Sample wt/vol:

30.0 (g/mL) G

Lab File ID:

% Moisture: 7

decanted: (Y/N) N

Date Received: 07/10/99

Extraction: (SepF/Cont/Sonc) SONC

Date Extracted: 07/13/99

Concentrated Extract Volume: 5000 (uL)

Date Analyzed: 08/20/99

Injection Volume:

2.0(uL)

Dilution Factor: 50.0

GPC Cleanup: (Y/N) Y

pH: 6.5

Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:

CAS NO.

COMPOUND

(ug/L or ug/Kg) UG/KG

•	·	
319-84-6	16 1200 910 180 180 91 91 9100 1800 3600	מממממממממממממממממממממממממממממממממממממ
5103-71-9alpha-Chlordane 5103-74-2gamma-Chlordane 8001-35-2Toxaphene 12674-11-2Aroclor-1016	91 91 9100 1800	ט ט ט ט ט ט ט ט ט ט ט ט ט ט ט ט ט ט ט

JW592 Contract: 68D50004

Lab Name: COMPUCHEM Contract: 68D50004

Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JP410

Matrix: (soil/water) SOIL Lab Sample ID: 950243

Sample wt/vol: 30.0 (g/mL) G Lab File ID:

% Moisture: 5 decanted: (Y/N) N Date Received: 07/10/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted:07/13/99

Concentrated Extract Volume: 5000(uL) Date Analyzed: 08/18/99

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.2 Sulfur Cleanup: (Y/N) N

CAS NO. COMPOUND COMP

	1
319-84-6	1.8 0.42 1.8 1.8 1.8 1.8 1.8 1.8 1.8 1.8 1.8 1.8

P 9-15-99

JW593
Lab Name: COMPUCHEM Contract: 68D50004

Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JP410

Matrix: (soil/water) SOIL Lab Sample ID: 950244

Sample wt/vol: 30.0 (g/mL) G Lab File ID:

% Moisture: 9 decanted: (Y/N) N Date Received: 07/10/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted:07/13/99

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 08/18/99

Injection Volume: 2.0(uL) Dilution Factor: 10.0

GPC Cleanup: (Y/N) Y pH: 7.2 Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG (

319-84-6 319-85-7			19 19	
319-86-8		f	19	
58-89-9	gamma-BHC (Lindane)		19	
76-44-8	Heptachlor		19	_
309-00-2			19	
	Heptachlor epoxide		19 19	
60-57-1	Endosulfan I		36 2	
72-55-9			1600	
72-20-8			. 36	Ū
	Endosulfan II		36	, -
72-54-8				PBJ
1031-07-8	Endosulfan sulfate		3.7	PJ_
50-29-3	4,4'-DDT		860	EBCJ
	Methoxychlor		190 25	zu ;
	Endrin ketone		36 3.0	JP U
	Endrin aldehyde		36	
5103-71-9	arpha-Chrordane		19	U
5103-74-2	gamma-Chlordane		19 1900	
8001-35-2	Toxaphene Aroclor-1016		360	1
	Aroclor-1016		740	1 -
	Aroclor-1221		360) -
	Aroclor-1242		360	
	Aroclor-1248		360	U
	Aroclor-1254		360	
11096-82-5	Aroclor-1260		360	ע
		l	•	

Wg-15-99

JW593DL

Lab Name: COMPUCHEM Contract: 68D50004

ab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JP410

Matrix: (soil/water) SOIL Lab Sample ID: 950244

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 9 decanted: (Y/N) N Date Received: 07/10/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted:07/13/99

Concentrated Extract Volume: 5000(uL) Date Analyzed: 08/20/99

Injection Volume: 2.0(uL) Dilution Factor: 50.0

GPC Cleanup: (Y/N) Y pH: 7.2 Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:
CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG Q

319-84-6alpha-BHC 319-85-7beta-BHC 319-86-8delta-BHC 58-89-9gamma-BHC (Lindane) 76-44-8Heptachlor 309-00-2Aldrin 1024-57-3Heptachlor epoxide 959-98-8Endosulfan I 60-57-1Dieldrin 72-55-94,4'-DDE 72-20-8Endrin 33213-65-9Endosulfan II 72-54-84,4'-DDD 1031-07-8Endosulfan sulfate 50-29-34,4'-DDT 72-43-5Methoxychlor 53494-70-5Endrin ketone 7421-93-4Endrin aldehyde 5103-71-9Endrin aldehyde 5103-74-2	93 U U U U U U U U U U U U U U U U U U U
5103-74-2gamma-Chlordane 8001-35-2Toxaphene 12674-11-2Aroclor-1016	9300 U 1800 U 3700 U

OP 9-15-99

JW594

Lab Name: COMPUCHEM Contract: 68D50004

Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JP410

Matrix: (soil/water) SOIL Lab Sample ID: 950245

Sample wt/vol: 30.0 (g/mL) G Lab File ID:

% Moisture: 5 decanted: (Y/N) N Date Received: 07/10/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 07/13/99

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 08/18/99

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.8 Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG (

UP 9-15-97

JW595

Lab Name: COMPUCHEM Contract: 68D50004

Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JP410

Matrix: (soil/water) SOIL Lab Sample ID: 950246

Sample wt/vol: 30.0 (g/mL) G Lab File ID:

% Moisture: 11 decanted: (Y/N) N Date Received: 07/10/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted:07/13/99

Concentrated Extract Volume: 5000(uL) Date Analyzed: 08/20/99

Injection Volume: 2.0(uL) Dilution Factor: 5.0

GPC Cleanup: (Y/N) Y pH: 6.3 Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:
CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG Q

UP 9-15-59

JW595DL

Lab Name: COMPUCHEM Contract: 68D50004

Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JP410

Matrix: (soil/water) SOIL Lab Sample ID: 950246

Sample wt/vol: 30.0 (g/mL) G Lab File ID:

% Moisture: 11 decanted: (Y/N) N Date Received: 07/10/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 07/13/99

Concentrated Extract Volume: 5000(uL) Date Analyzed: 08/19/99

Injection Volume: 2.0(uL) Dilution Factor: 50.0

GPC Cleanup: (Y/N) Y pH: 6.3 Sulfur Cleanup: (Y/N) N

CAS NO. COMPOUND CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/KG Q

96 I U 319-84-6-----alpha-BHC 96 U 319-85-7-----beta-BHC 96 U 319-86-8-----delta-BHC 96 U 58-89-9-----gamma-BHC (Lindane) 96 | U 76-44-8-----Heptachlor 96 U 309-00-2-----Aldrin 1024-57-3-----Heptachlor epoxide 96 U 96 U 959-98-8-----Endosulfan I 180 U 60-57-1-----Dieldrin 1500 DC 180 U 72-55-9-----4,4'-DDE 72-20-8-----Endrin 180 U 33213-65-9----Endosulfan II 39 ØJ₽\$ 52 ØJ 72-54-8----4,4'-DDD 1031-07-8-----Endosulfan sulfate 580 DBC 50-29-3----4,4'-DDT 72-43-5-----Methoxychlor 960 IU 180 U 53494-70-5----Endrin ketone 7421-93-4----Endrin aldehyde 180 U 96 U 5103-71-9----alpha-Chlordane 96 U 5103-74-2----gamma-Chlordane 9600 U 8001-35-2----Toxaphene 1800 U 12674-11-2----Aroclor-1016 3800 U 11104-28-2----Aroclor-1221 1800 U 11141-16-5----Aroclor-1232 1800 53469-21-9----Aroclor-1242 1800 U 12672-29-6-----Aroclor-1248 1800 U 11097-69-1----Aroclor-1254 1800 U 11096-82-5----Aroclor-1260

UP 9-15-99

Lab Name: COMPUCHEM Contract: 68D50004

. JW596

Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JP410

Matrix: (soil/water) SOIL

Lab Sample ID: 950248

Sample wt/vol:

30.0 (g/mL) G

Lab File ID:

% Moisture: 5 decanted: (Y/N) N Date Received: 07/10/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted:07/13/99

Concentrated Extract Volume: 5000(uL) Date Analyzed: 08/18/99

Injection Volume: 2.0(uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.3 Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/KG Q

	(ag/II of b	9/19/	UG/ I	(G	, Q
319-84-6	alpha-BHC beta-BHC				T.,
319-85-7	beta-BHC			1.8	
1 272-00-8	delta-BHC		1.8	1.8	10 xx 11
58-89-9	camma - BUC /Lindano)		1.0	0-096	
/0-44-8	Hentachlor		•	1.8	
1 202-00-2	Aldrin			1.8	10
1024-57-3	Uontach lan anaid	·		1.8	Ŭ.
1 222220-8	- Undogs I for T			1.8	Ū
60-57-1 72-55-9	Dieldrin	 '		1.8	U
72-55-9	4 4'-DDF			3.5	<u>ַ</u> עַ
/2-20-8	Endrin	 .],		2.3	
33213-65-9	Endogulfan II			3.5	
/2-54-8	4 4'-DDD			3.5	U
1031-07-8	Endosulfan sulfate		3.5	0-12	
50-29-3	4 // -DDT	·		3.5	<u>U</u> ,,
72-43-5	Methoxychlor		3.5	0.81	یک 8⊈ر
1 23494-70-5	Endrin ketone	<u></u>		18	Ŭ
7421-93-4	Endrin aldehyde			3.5	U
5103-71-9	alpha-Chlordane			3.5	U .
5103-74-2	gamma-Chlordane	_ .		1.8	U
8001-35-2	Toyanhana			1.8	Ŭ
12674-11-2	Aroclor-1016			180	
11104-28-2	Aroclor-1016			35.	
11141-16-5	Aroclor-1221			70	
53469-21-9	Aroclor-1232	<u> </u>		35	
12672-29-6-	Aroclor-1242			35	
11097-69-1-	Aroclor-1248	_ -		35	
11096-82-5-	Aroclor-1254			35	
	ALOCIOI-1260	_		. 35	U

Wq-15.99

FORM I PEST

1500 First Interstate Center, 999 Third Avenue Scattle, Washington, 98104 Tel: (306) (24-9537, Fax: (206) 621-9832

MEMORANDUM

DATE:

September 23, 1999

TO:

Mark Woodke, Project Manager, E & E, Seattle, WA

FROM:

Alasdair Turner, START-Chemist, E & E, Seattle, WA

SUBJ:

Inorganic Data Quality Assurance Summary Review, Wenatchee

Brownfields Site, Wenatchee, Washington.

REF:

TDD: 98-11-0007

PAN: CK0701SIDM

The data quality assurance summary review of 20 soil samples collected from the Wenatchee Brownfields Site in Wenatchee, Washington has been completed. Analysis for VOCs, SVOC, and Pest/PCBs (EPA CLP SOW for organic analysis OLM03.2) has been completed, and was performed by COMPUCHEM, of Cary, NC.

No discrepancies were noted.

Environmental Services Assistance Teams - Western Zone

LOCKHEED MARTIN
TECHNOLOGY SERVICES GROUP

ESAT Region 10 Lockheed Martin 7411 Beach Drive East Port Orchard, WA 98366 Phone (360) 871-8723

DELIVERABLE NARRATIVE

DATE:

August 25, 1999

To:

Ginna Grepo-Grove, WAM, USEPA, Region 10

THROUGH:

Dave Dobb, Team Manager, ESAT Region 10

FROM:

Chris Pace, Task Lead, ESAT Region 10

SUBJECT:

Data validation report for the volatile organic (VOA), semi-volatile organic (SVOA) and

pesticide/polychlorinated biphenyl (Pest/PCB) analysis of samples from the Wenatchee Brownfields

Site. Case: 27165 SDG: JW515

DOC:

ESW10-3-1363

PWO:

ESW72018

TDF:

3636

WA:

10-99-3-10

CC:

Gerald Dodo, RPO, USEPA, Region 10

Project File

The quality assurance (QA) review of 20 soil samples collected from the above referenced site has been completed. These samples were analyzed for VOA, SVOA and Pest/PCB in accordance with the USEPA Contract Laboratory Program (CLP) Statement of Work (SOW) for Organic Analyses (OLM03.2) by COMPUCHEM of Cary, NC.

DATA QUALIFICATIONS

The following comments refer to the laboratory performance in meeting the Quality Control Specifications outlined in the USEPA CLP SOW for Organic Analysis (OLM03.2), the USEPA CLP National Functional Guidelines for Organic Data Review (2/94) and the Region 10 Guidelines for CLP Data Review.

The conclusions presented herein are based on the information provided for the review.

Holding Time

All samples were preserved with ice prior to shipment. All of the samples met the method and technical (40 CFR 136) required holding times for all analyses with the following exceptions:

SVOA samples JW515, JW531, JW531DL and JW532 were extracted 17 to 21 days from the collection date and therefore, were qualified as estimated, "J/UJ".

SVOA samples JW516, JW518RE, JW525, JW525DL, JW528RE and JW529RE were extracted 23 to 27 days from the collection date thus grossly exceeding the extraction holding time criteria of 14 days. The recovery of the phenolic and more volatile compounds may have been affected. Sample data were qualified as estimated, "J/UJ".

The Holding Times Summary listing the pertinent collection, extraction, and analysis dates is attached at the end of this validation report.

ESW10-3-1363 Page 2 of 8

Instrument Performance - Acceptable

All of the GC and GC/MS systems met the SOW specified technical acceptance criteria prior to sample analyses, i.e., GC/MS performance checks, GC performance checks, retention times, response factors, and calibrations. The systems remained stable throughout the course of analyses. Instrument blanks were all clean and there were no indications of carry-over.

Initial Calibrations

Two VOA, nine SVOA and two Pest/PCB initial calibrations were performed. The initial calibrations met the SOW technical acceptance criteria with the following exceptions:

- VOA Initial Calibration on 6/28/99, instrument 55 the %RSD for 2-hexanone was 31.4. The lowest calibration level was non-linear. Associated samples were qualified as estimated, "J/UJ", in the non-linear portion of the calibration curve.
- SVOA Initial Calibration on 7/22/99, instrument 66 the %RSD for carbazole was 35.1. The %RSD for 3,3'-dichlorobenzidine was 34.3. The lowest calibration level was non-linear for both analytes. Associated samples were qualified as estimated, "J/UJ", in the non-linear portion of the calibration curves.
- SVOA Initial Calibration on 7/23/99, instrument 66 the %RSD for 3,3'-dichlorobenzidine was 33.6. The
 lowest calibration level was non-linear. Associated samples were qualified as estimated, "J/UJ", in the nonlinear portion of the calibration curve.

Continuing Calibration Verification (CCVs) Standards

All of the CCVs met the criteria for frequency of analysis, the minimum response factor, the retention time and the percent differences (%Ds) criteria with the following exceptions:

• The %Ds for the following VOA compounds exceeded the QC limits and the associated results were qualified accordingly:

Date /Time of Analysis	Inst. i.d.	. Compound	%D	Qualifier Detect/Non-detect		
7/12/99 (09:07)	51	trans-1,3-dichloropropene 2-hexanone 1,2-dichloroethane-d4 (surr.)	26.5 26.5 40.8	J/none J/none none		
7/13/99 (08:31)	51	chloromethane 1,2-dichloroethane 1,2-dichloroethane-d4 (surr.)	-42.8 29.2 42.4	J/UJ J/none none		
7/11/99 (12:11)	55	chloroethane carbon disulfide 1,1-dichloroethene tetrachloroethene	-25.9 -31.8 -29.4 -28.7	none J/UJ J/UJ J/UJ		

Case No.: 27165 SDG: JW515 ESW10-3-1363 Page 3 of 8

The %Ds for the following SVOA compounds exceeded the QC limits and the associated results were qualified accordingly:

Date /Time of Analysis	Inst. i.d.	Compound	%D	Qualifier Detect/Non-detect
7/16/99 (21:53)	64	4-methylphenol	28.1	J/none
7/20/99 (09:30)	66	2,4-dinitrophenol	-25.2	поле
7/22/99 (14:31)	66	4-nitroaniline 3,3'-dichlorobenzidine	58.1 26.6	J/none J/none
7/30/99 (21:22)	68	3,3'-dichlorobenzidine	-26.0	none
7/14/99 (23:38)	70	pentachlorophenol 2,4,6-tribomophenol (surr.)	-27.5 -28.8	J/UJ none
7/29/99 (09:06)	70	n-nitroso-di-n-propylamine 4-chloroaniline butylbenzylphthalate 3,3'- dichlorobenzidine bis(2-ethylhexyl)phthalate di-n-octylphthalate	32.6 25.7 33.5 -37.6 28.4 66.3	J/none none J/none J/UJ J/none J/none

Compound Quantitation and Detection Limits

All of the samples were analyzed at the contract required quantitation limits (CRQLs) with the following exceptions:

SVOA sample JW544 was analyzed at a 2X dilution due to matrix interferences. Pest/PCB samples JW520, JW524, JW539, JW543 were analyzed at dilutions of 2X, 2X, 10X and 5X respectively, due to matrix interferences.

Target compounds that were detected at concentrations less than the CRQLs were qualified as estimated, "J". Detected compounds at concentrations over the calibration range were qualified as estimated, "J". Data users should consider these estimated compounds as the minimum amount present in the samples. It is also recommended that for these compounds, data users should utilize the concentrations reported from the dilution runs. All of the reported results were adjusted for sample amounts analyzed.

Blanks

Acetone was detected below the CRQL in the VOA blanks VBLKT6, VBLKT7, VBLKU4 and VHBLKU3. Acetone detected in the samples at concentrations less than ten times the value in their associated blank(s) were qualified as non-detects, "U".

Methylene chloride was detected below the CRQL in the VOA blanks VBLKT6 and VHBLKU3. Methylene chloride detected in the samples at concentrations less than ten times the value in their associated blank(s) were qualified as non-detects, "U".

2-Hexanone was detected below the CRQL in the VOA blanks VBLKT6, VBLKT7 and VBLKU4. 2-Hexanone detected in the samples at concentrations less than ten times the value in their associated blank(s) were qualified as non-detects, "U".

Case No.: 27165 SDG: JW515 ESW10-3-1363 Page 4 of 8

Bis(2-ethylhexyl)phthalate was detected below the CRQL in the SVOA blank SBLKMY. Bis(2-ethylhexyl)phthalate detected in the samples at concentrations less than ten times the value in their associated blank(s) were qualified as non-detects, "U".

Di-n-butylphthalate was detected below the CRQL in the SVOA blank SBLKPG. Di-n-butylphthalate detected in the samples at concentrations less than ten times the value in their associated blank(s) were qualified as non-detects, "U".

Analytical Sequence - Acceptable

All of the standards, blanks, samples, and QC samples were analyzed in accordance with the SOW specified analytical sequence.

System Monitoring Compounds (SMC)/Surrogate Spikes

All of the VOA SMC recoveries met the applicable QC criteria.

All of the SVOA surrogates recoveries met the applicable QC criteria with the following exceptions:

	2-fluorobiphenyl	phenol-d5	2-fluorophenol	2,4,6-tribromophenol	2-chlorophenol
JW518		14%	2%	0%	7%
JW518RE	n to distribute	•	8%	0%	17%
JW528	28%	15%	3%	0%	6%
JW528RE	•	. :	4%	1%	12%
JW529		15%	6%	0%	12%
JW529RE			3%	0%	10%

Due to the extremely low acid fraction surrogate recoveries for the above listed samples, the detected acid fraction analytes were qualified as estimated, "J", and the non-detected acid fraction analytes were qualified "R".

All of the Pest/PCB surrogate spike recoveries met the applicable QC criteria (30-150%) with the exception of the following:

JW515 decachlorobiphenyl column 2 186% JW544 decachlorobiphenyl column 2 170%

One or more surrogates in samples JW520DL and JW525DL were reported as diluted out. None of Pest/PCB data were qualified on the basis of surrogate recovery.

Matrix Spike/Matrix Spike Duplicate (MS/MSD)

VOA sample JW523 was utilized for MS/MSD analyses. The criteria for frequency of analysis, recoveries and RPDs were met for all analyses.

SVOA sample JW523 was utilized for MS/MSD analyses. The criteria for frequency of analysis, recoveries and RPDs were met for all analyses with the following exceptions:

JW523MS 4-chloro-3-methylphenol 19%, 4-nitrophenol 0%, pentachlorophenol 16% JW523MSD 4-chloro-3-methylphenol 11%, 4-nitrophenol 0%, pentachlorophenol 9%

Data Validation Report - Wenatchee Brownfields Case No.: 27165 SDG: JW515

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The RPDs between JW523MS and JW523MSD were 53% for 4-chloro-3-methylphenol and 56% for pentachlorophenol.

Pest/PCB sample JW523 was utilized for MS/MSD analyses. The criteria for frequency of analysis, recoveries and RPDs were met for all analyses.

No data qualification was applied based on MS/MSD analysis.

Internal Standards - Acceptable

The acceptance criteria for internal standards (IS) are ± 30 seconds for retention time (RT) shifts and -50% to +100% of the IS area as compared to the IS RT and area of the daily continuing calibration standard. All of the GC/MS analyses met the IS area and retention time shift criteria.

Compound Identification

All of the compounds detected in the GC/MS analyses were within the retention time windows, met the USEPA spectral matching criteria and were judged to be acceptable with the following exception:

Benzo(b)fluoranthene and benzo(k)fluoranthene could not be chromatographically separated in sample JW520 and were reported together using the response factor that resulted in the highest concentration (that of benzo(k)fluoranthene).

Single component pesticides were qualified as follows: where %Ds (between two column concentrations) > 30% but \leq 60% - detected results were qualified as estimated, "J"; %Ds > 60% with concentrations > CRQL - results were qualified as tentatively identified at the estimated concentration, "JN"; %Ds > 60% with concentrations < CRQL - results were qualified as non-detects, "U"; %Ds > 400% - results were qualified as non-detects with raised quantitation limit if > CRQL. In cases where %Ds < 60% with concentrations < CRQL and chromatographic interferences, the results were qualified as non-detects, "U". In cases where %Ds < 400% with concentrations > CRQL and chromatographic interferences, the results were qualified as tentatively identified at the estimated concentration, "JN".

A correction was made by the reviewer to the result of 4,4'-DDD in Pest/PCB sample JW515. Due to similar retention time windows on column 1, an analyte peak was incorrectly identified as endosulfan II instead of 4,4'-DDD.

Tentatively Identified Compounds

Peaks that were detected in the samples at areas >10% of the internal standards and were not part of the target compound lists were identified as tentatively identified compounds (TICs). TICs that were both found in the sample and in the associated method blank(s) were qualified as unusable, "R." Peaks that were identified as common laboratory contaminants, solvent preservatives, column bleed or aldol condensation products were qualified as unusable, "R". The rest of the peaks identified as TICs were qualified "NJ", tentatively identified at an estimated concentration.

Laboratory Contact

The laboratory was contacted by Region 10 concerning the following items:

VOA sample JW517 - Check the integrated area for acetone. When the sample and standards chromatograms are compared, the area listed on page 101 seems high. The mass spectra for acetone on page 103 does not meet the spectral matching criteria. The molecular ion for acetone, m/z 58, is absent. There is, however, an m/z 56. Resolution: Acetone should not have been reported. Acetone was qualified as non-detected, "U", at the reported

concentration.

VOA sample JW517 - The large peak on the sample chromatogram at about 21 minutes was not reported as a TIC. Are the two TICs that were reported as artifacts in this sample common in your laboratory. Resolution: The two TICs reported as artifacts were errors. Corrected FORM I VOA-TIC and supporting raw data have been submitted.

All raw data for the SVOA instrument performance check on 7/8/99 at 20:41 (instrument HP70) is missing. Raw data for the instrument performance check on 7/9/99 at 08:46 was included and is not needed (pages 2426-2429).

The SVOA analysis of sample JW518RE reports benzene as a TIC. Benzene was not reported in the analysis of SVOA of JW518 or the VOA analysis of JW518. Resolution: The benzene TIC in SVOA sample JW518RE was qualified as unusable, "R".

The SVOA analysis of sample JW525 reports benzo(a)anthracene and chrysene at the same retention time. Resolution: Corrected FORM I SV-1 and supporting raw data have been submitted.

FORM VII PEST-1 are missing for PEM28 (8/2 at 2024) and PEM34 (8/4 at 2025).

All issues have been resolved. Hard copies of all resubmissions will be sent to Region 10.

Overall Assessment

All of the samples were analyzed in accordance with the SOW specifications. The data, as qualified, are acceptable and can be used for all purposes.

Data Qualifiers

U		The analyte was not detected at or above the reported result.
The analyte was positively identify R - The data are unusable for all pur N - There is evidence the analyte is pur JN - There is evidence that the analyte UJ - The analyte was not detected at or	The analyte was positively identified. The associated numerical result is an estimate.	
R		The data are unusable for all purposes.
N		There is evidence the analyte is present in this sample.
JN .	-	There is evidence that the analyte is present. The associated numerical result is an estimate.
UJ		The analyte was not detected at or above the reported estimated result. The associated numerical value is an estimate of the quantitation limit of the analyte in this sample.

Page 7 of 8.

Holding Time Summary - Case 27165

SDG: JW515

Sample Number	Collection Date	VTSR	VOA Analysis	SVOA Extraction	SVOA Analysis	Pest/PCB Extraction	Pest/PCB Analysis
JW515	6/29/99	7/2/99	7/11/99	7/16/99*	7/18/99	7/8/99	8/6/99
JW516	6/29/99	7/2/99	7 /11/99	7/22/99*	7/25/99	7/8/99	8/3/99
JW517	6/29/99	7/2/99	7/11/99	7/8/99	7/20/99	7/8/99	8/3/99
JW518	6/29/99	7/2/99	7/11/99	7/8/99	7/20/99	7/8/99	8/3/99
JW519	6/29/99	7/2/99	7/12/99	7/8/99	7/24/99	7/8/99	8/3/99
JW520	6/29/99	7/2/99	7/12/99	7/12/99	7/15/99	7/8/99	8/5/99
JW521	6/29/99	7/2/99	7/11/99	7/8/99	7/20/99	7/8/99	8/5/99
JW523	6/30/99	7/2/99	7 /11/99	7/8/99	7 /24/99	7/8/99	8/6/99
JW524	6/30/99	7/2/99	.7/11/99	7/8/99	7/20/99 _. -	7/8/99	8/5/99
JW525	6/30/99	7/3/99	7/13/99	7/26/99*	7/30/99	7/8/99	8/5/99
JW526	6/30/99	7/3/99	7/11/99	7/12/99	7/15/99	7/8/99	8/5/99
JW528	6/30/99	7/2/99	7/12/99	7/8/99	7/20/99	7/8/99	8/4/99
JW529	6/30/99	7/2/99	7/11/99	7/8/99	7/20/99	7/8/99	8/4/99
JW531	7/1/99	7 /3/99	7/11/99	7/22/99*	7/25/99	7/8/99	8/6/99
JW532	7/1/99	7/3/99	7/11/99	7/22/99*	7/28/99	7/8/99	8/6/99
JW538	6/30/99	7/2/99	7/11/99	7/8/99	7/20/99	7/8/99	8/4/99
JW539	6/30/99	7/2/99	7/11/99	7/12/99	7/15/99	7/8/99	8/5/99
JW540	6/30/99	7/2/99	7/12/99	7/8/99	7/20/99	7/8/99	8/6/99
JW543	7/1/99	7/3/99	7/13/99	7/8/99	7/23/99	7/8/99	8/5/99
JW544	7/1/99	7/3/99	7/13/99	7/8/99	7/23/99	7/8/99	8/6/99
JW518RE	6/29/99	7/2/99	NA	7/26/99*	7/30/99	NA	NA
JW528RE	6/30/99	. 7/2/99	NA	7/23/99*	7/29/99	ŅA	NA
JW529RE	6/30/99	7/2/99	NA	7/26/99*	7/30/99	NA	NA
JW516DL	6/29/99	7/2/99	NA	NA	NA	7/8/99	8/6/99
JW520DL	6/29/99	7/2/99	NA	NA	ΝA	7/8/99	8/6/99
JW523DL	6/30/99	7/2/99	NA	NA	NA	7/8/99	8/6/99
JW524DL	6/30/99	7/2/99	NA	NA	N _A	7/8/99	8/6/99
JW525DL	6/30/99	7/3/99	NA	7/26/99*	7 /31/99	7/8/99	8/6/99

Sample Number	Collection Date	VTSR	VOA Analysis	SVOA Extraction	SVOA Analysis	Pest/PCB Extraction	Pest/PCB Analysis
JW528DL	6/30/99	7/2/99	NA	NA	NA	7/8/99	8/6/99
JW531DL	7/1/99	7/3/99	NA	7/26/99*	7/29/99	NA	NA
JW538DL	6/30/99	7/2/99	NA	NA	NA	7/8/99	8/6/99
JW539DL	6/30/99	7/2/99	NA	NA	NA	7/8/99	8/6/99
JW540DL	6/30/99	7/2/99	NA	NA	NA	7/8/99	8/5/99
JW544DL	7/1/99	7/3/99	NA	NA	NA	7/8/99	8/6/99

VTSR - Verified time of sample receipt in the laboratory NA - Not available

^{* -} Outside of holding time

Lab Name: COMPUCHEM Contract: 68D50004 JW515

Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JW515

Matrix: (soil/water) SOIL Lab Sample ID: 949440

Sample wt/vol: 5.0 (g/mL) g Lab File ID: GH049440A55

Level: (low/med) LOW Date Received: 07/02/99

% Moisture: not dec. 7 Date Analyzed: 07/11/99

GC Column: EQUITY624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: ____(uL) Soil Aliquot Volume: ____(uL

CONCENTRATION UNITS:
CAS NO. COMPOUND (ug/L or ug/Kg) ug/Kg Q

74-87-3-----Chloromethane 11 U 11 U 74-83-9-----Bromomethane 75-01-4-----Vinyl Chloride 75-00-3-----Chloroethane וַבן ע 75-09-2----Methylene Chloride 11 A JBU 67-64-1-----Acetone 32 BU 75-15-0-----Carbon Disulfide 11 05 75-35-4-----1,1-Dichloroethene 11 07 75-34-3-----1,1-Dichloroethane 11 U 540-59-0----1,2-Dichloroethene (total) 11 U 67-66-3-----Chloroform 11 U 107-06-2----1,2-Dichloroethane 11 U 78-93-3----2-Butanone 71-55-6-----1,1,1-Trichloroethane 11 U 56-23-5-----Carbon Tetrachloride 11 U 75-27-4-----Bromodichloromethane 11 U 78-87-5----1,2-Dichloropropane 11 U 10061-01-5----cis-1,3-Dichloropropene 11 U 79-01-6-----Trichloroethene 11 U 124-48-1-----Dibromochloromethane 11 U 79-00-5----1,1,2-Trichloroethane 11 U 71-43-2----Benzene 11 U 10061-02-6----trans-1,3-Dichloropropene 11 U 75-25-2-----Bromoform 11 U 108-10-1----4-Methyl-2-Pentanone 11 U 591-78-6----2-Hexanone 11 U 127-18-4----Tetrachloroethene 11 07 79-34-5----1,1,2,2-Tetrachloroethane 11 U 108-88-3-----Toluene 11 | U 108-90-7-----Chlorobenzene 11 | U 100-41-4-----Ethylbenzene 11 U 100-42-5-----Styrene 1330-20-7------Xylene (Total)__ 11 U 3 1

CP8-18-99

FORM I VOA

VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

Soil Aliquot Volume:

	•	•			JW515
Lab	Name: COMPUCHEM		Contract:	68D50004	3,1313
	•				

Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JW515

Matrix: (soil/water) SOIL Lab Sample ID: 949440

Sample wt/vol: 5.0 (g/mL) gLab File ID: qh049440a55

Level: (low/med) LOW Date Received: 07/02/99

% Moisture: not dec. 7 Date Analyzed: 07/11/99

GC Column: EQUITY624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: ____(uL)

CONCENTRATION UNITS: Number TICs found: 8 (ug/L or ug/Kg) ug/Kg

		i		
CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	SUBSTITUTED CYCLOHEXANE	19.80	6	J <i>N</i>
2.	SUBSTITUTED ALKANE	20.37	6	J
3.	SUBSTITUTED CYCLOHEXANE	20.49	11	J♥
4.	LABORATORY ARTITACT Contemporal	21.00	25	J-R
5.	UNKNOWN HYDROCARBON SUBSTITUTED BENZENE	21.13	6	JN
7.	UNKNOWN HYDROCARBON	21.22 21.34	11	J
8.	SUBSTITUTED BENZENE	21.95	9	J.
9				١
10				
11				
13.	-			
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30.				
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JW516 Lab Name: COMPUCHEM Contract: 68D50004 Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JW515 Matrix: (soil/water) SOIL Lab Sample ID: 949449 Sample wt/vol: 5.0 (g/mL) g Lab File ID: GH049449A55 Level: Date Received: 07/02/99 (low/med) LOW % Moisture: not dec. 17 Date Analyzed: 07/11/99 GC Column: EQUITY624 ID: 0.53 (mm) Dilution Factor: 1.0 Soil Extract Volume:____(uL) Soil Aliquot Volume: (uI CONCENTRATION UNITS: COMPOUND (ug/L or ug/Kg) ug/Kg CAS NO. 0 74-87-3-----Chloromethane 12 U 74-83-9-----Bromomethane 12 U 75-01-4-----Vinyl Chloride 12 U 75-00-3-----Chloroethane 12 U 75-09-2----Methylene Chloride 12 7 BU 67-64-1-----Acetone 14 BU 75-15-0-----Carbon Disulfide 12 UJ 75-35-4----1,1-Dichloroethene 12 UJ 75-34-3----1,1-Dichloroethane 12 | U 540-59-0----1,2-Dichloroethene (total) 12 U 67-66-3-----Chloroform 12 U 107-06-2----1,2-Dichloroethane 12 U 78-93-3----2-Butanone 3 J 71-55-6----1,1,1-Trichloroethane_ 12 U 56-23-5-----Carbon Tetrachloride 12 U 75-27-4-----Bromodichloromethane 12 U 78-87-5----1,2-Dichloropropane_ 12 U 10061-01-5----cis-1,3-Dichloropropene 12 U 79-01-6-----Trichloroethene 12 U 124-48-1-----Dibromochloromethane 12 U 79-00-5----1,1,2-Trichloroethane 12 71-43-2----Benzene 10061-02-6----trans-1,3-Dichloropropene_ 12 U 12 U 75-25-2-----Bromoform 12 U 108-10-1----4-Methyl-2-Pentanone 12 U 591-78-6----2-Hexanone 12 U 127-18-4----Tetrachloroethene 12 07 79-34-5----1,1,2,2-Tetrachloroethane 12 U 108-88-3-----Toluene 12 U 108-90-7-----Chlorobenzene 12 U 100-41-4-----Ethylbenzene 2 | J 100-42-5----Styrene 12 U 1330-20-7-----Xylene (Total)_

FORM I VOA

OLMO3.0

VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

JW516

Lab	Name:	COMPUCHEM
	TACKIIC .	COMEDCHE

Contract: 68D50004

Lab Code: COMPU Case No.: 27165

SAS No.:

SDG No.: JW515

Matrix: (soil/water) SOIL

Lab Sample ID: 949449

Sample wt/vol: 5.0 (g/mL) g

Lab File ID: gh049449a55

Level: (low/med) LOW Date Received: 07/02/99

% Moisture: not dec. 17

Date Analyzed: 07/11/99

GC Column: EQUITY624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume:

Number TICs found: 9

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT :	EST. CONC.	Q
1. 2. 3. 79-92-5	SUBSTITUTED CYCLOHEXANE UNKNOWN CYCLIC HYDROCARBON CAMPHENE LABORATORY ARTIFACT Lab Conf.	19.78 20.47 20.89	6 9 8	J N J N NJ
5. 6. 7. 8. 9.	SUBSTITUTED BENZENE SUBSTITUTED BENZENE SUBSTITUTED BENZENE SUBSTITUTED BENZENE SUBSTITUTED BENZENE	21.11 21.21 21.43 21.63 21.94	7 17 7 16 10	J
11. 12. 13. 14.				
16. 17. 18. 19. 20.				
22. 23. 24. 25.				
27. 28. 29. 30.				

FORM I VOA-TIC

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO:

JW517

Lab Name: COMPUCHEM

Contract: 68D50004

Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JW515

Matrix: (soil/water) SOIL

Lab Sample ID: 949450

Sample wt/vol:

5.0 (g/mL) g

Lab File ID: GH049450A55

Level: (low/med) LOW Date Received: 07/02/99

% Moisture: not dec. 29

Date Analyzed: 07/11/99

GC Column: EQUITY624 ID: 0.53 (mm)

CAS NO.

COMPOUND

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg

74-87-3	Chloromethane	£	14	บ .
	Bromomethane		$\overline{14}$	1 - 1
	Vinyl Chloride		14	
75-00-3	Chloroethane		14	υ
	Methylene Chloride		14 4	76 U
67-64-1			150	RKU
	Carbon Disulfide	1.	14	TI
	1,1-Dichloroethene		14	11
75-34-3	1,1-Dichloroethane		14	Ü
	1,2-Dichloroethene (total)		14	1 - 1
	Chloroform		14	1 - 1
	1,2-Dichloroethane			-
70 03 3	·2-Butanone		14	
			13	(–
/1-55-6	1,1,1-Trichloroethane		14	1 - 1
	Carbon Tetrachloride		14	
	Bromodichloromethane	. 🖡	14	1. 1
78-87-5	1,2-Dichloropropane		14	1 -
10061-01-5	cis-1,3-Dichloropropene		14	_
	Trichloroethene	.]	14	
	Dibromochloromethane		14	
	1,1,2-Trichloroethane	.	14	1 -
71-43-2		.1	14	
10061-02-6	trans-1,3-Dichloropropene	.	14	
	Bromoform		14	
	4-Methyl-2-Pentanone		14	U
	2-Hexanone].	14	שׁן
127-18-4	Tetrachloroethene		14	U
79-34-5	1,1,2,2-Tetrachloroethane		14	lυ
108-88-3	Toluene		14	Ū
	Chlorobenzene	•	14	Ū
100-41-4	Ethylbenzene	-	14	U
100-42-5	Styrene	-	14	-
	Xylene (Total)	-	14	1 -
	11 - 312 / 1 - 3 - 1	-		
·		- 1		· 1

CP8-28 OLMO3.0

FORM I VOA

Case No.: 27165 SAS No.: SDG No.: JW515

EPA	SAMPLE	NO.
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JW517

Y				•
VOLATILE `	ORGANIC	S ANALYSIS	DATA	SHEET
TENTA	TIVELY	IDENTIFIED	COMPO	SOMUC

Name: COMPUCHEM Contract: 68D50004

wix: (soil/water) SOIL

Lab Sample ID: 949450

Toda: COMPU

Lab File ID: gh049450a55

(low/med) LOW

Date Received: 07/02/99

misture: not dec. 29

Date Analyzed: 07/11/99

Column: EQUITY624 ID: 0.53 (mm)

Dilution Factor: 1.0

Extract Volume: (uL)

Soil Aliquot Volume:

Cumber TICs found: 3

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg

AS NUMBER	· · · · · · · · · · · · · · · · · · ·		EST. CONC.	Q 1 7 R	
	SEMI TOL SUON farget analyte DIHYDRODIMETHYLINDENE	18.09 20.08	8	שׁרַבּ	
	LABORATORY ARTIFACT Contamination	21.02		0 K	
			4		
•					
•					
		ATA II.			
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•					
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•					
•	10000				
•					
:					

OLMO3.0

FORM I VOA-TIC

JW518 Lab Name: COMPUCHEM Contract: 68D50004 Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JW515 Matrix: (soil/water) SOIL Lab Sample ID: 949451 Sample wt/vol: 5.0 (g/mL) g Lab File ID: GH049451A55 Level: (low/med) LOW Date Received: 07/02/99 % Moisture: not dec. 7 Date Analyzed: 07/11/99 GC Column: EQUITY624 ID: 0.53 (mm) Dilution Factor: 1.0 Soil Extract Volume:____(uL) Soil Aliquot Volume: ____(uL CONCENTRATION UNITS: CAS NO. COMPOUND (ug/L or ug/Kg) ug/Kg Q

	· · · · · · · · · · · · · · · · · · ·
74-87-3Chloromethane	11 0
74-83-9Bromomethane	11 0
75-01-4Vinyl Chloride	11 0
75-00-3Chloroethane	11 0
75-09-2Methylene Chloride	1/ B JB U
75-09-2Methylene Chloride 67-64-1Acetone	12 84
75-15-0Carbon Disulfide	11 03
75-35-41.1-Dichloroethene	11 05
75-34-31,1-Dichloroethane	
540-59-01,2-Dichloroethene (total)	11 0
67-66-3Chloroform	11 0
107-06-21,2-Dichloroethane	11 0
78-93-32-Butanone	
71-55-61,1,1-Trichloroethane	11 0
56-23-5Carbon Tetrachloride	
75-27-4Bromodichloromethane	11 0
*78-87-51,2-Dichloropropane	
10061-01-5cis-1,3-Dichloropropene	
79-01-6Trichloroethene	
124-48-1Dibromochloromethane	
79-00-51,1,2-Trichloroethane	
71-43-2Benzene	11 0
10061-02-6trans-1,3-Dichloropropene	11 0
75-25-2Bromoform	ן דו ט
108-10-14-Methyl-2-Pentanone	
591-78-62-Hexanone	
127-18-4Tetrachloroethene	11 0 7
79-34-51,1,2,2-Tetrachloroethane	
108-88-3Toluene	ן טוון
108-90-7Chlorobenzene	
100-41-4Ethylbenzene	
100-42-5Styrene	11 0
1330-20-7Xylene (Total)	2 1
	l'

FORM I VOA

OLM03.0.

VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

JW518

Lab Name: COMPUCHEM

Contract: 68D50004

Lab Code: COMPU

Case No.: 27165 SAS No.:

SDG No.: JW515

Matrix: (soil/water) SOIL

Lab Sample ID: 949451

Sample wt/vol: 5.0 (g/mL) g

Lab File ID: gh049451a55

Level: (low/med) LOW

Date Received: 07/02/99

% Moisture: not dec. 7

Date Analyzed: 07/11/99

GC Column: EQUITY624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: ____(uL)

Soil Aliquot Volume:

Number TICs found: 8

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT ======	EST. CONC.	Q ======
2. 3. 4. 5. 6. 7. 8.	LABORATORY ARTIFACT Lab Co. C., SUBSTITUTED BENZENE SUBSTITUTED BENZENE SUBSTITUTED BENZENE SUBSTITUTED BENZENE SUBSTITUTED BENZENE SUBSTITUTED BENZENE UNKNOWN HYDROCARBON UNKNOWN HYDROCARBON	21.00 21.44 21.84 21.94 22.12 23.12 23.29 23.72	16 6 5 10 6 10 8	7 N J J J J J J J J J J J J J J J J J J
10. 11. 12. 13. 14. 15. 16. 17. 18. 19.				
20. 21. 22. 23. 24. 25. 26. 27. 28. 29.				

OP 8-18-99

Soil Aliquot Volume: ____(uL

VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: COMPUCHEM

Soil Extract Volume: (uL)

JW519 Contract: 68D50004

Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JW515

Lab Sample ID: 949452 Matrix: (soil/water) SOIL

Sample wt/vol: 5.0 (g/mL) gLab File ID: GR049452A51

Date Received: 07/02/99 Level: (low/med) LOW

Date Analyzed: 07/12/99 % Moisture: not dec. 6

Dilution Factor: 1.0 GC Column: EQUITY624 ID: 0.53 (mm)

CONCENTRATION UNITS: CAS NO. COMPOUND (ug/L or ug/Kg) ug/Kg

74-87-3-----Chloromethane 11 U 11 U 74-83-9-----Bromomethane 11 U 75-01-4-----Vinyl Chloride 11 U 75-00-3-----Chloroethane 11 8 8 75-09-2-----Methylene Chloride 67-64-1-----Acetone 75-15-0-----Carbon Disulfide 11 U 75-35-4----1,1-Dichloroethene 11 U 11 U 75-34-3-----1,1-Dichloroethane_ 540-59-0----1,2-Dichloroethene (total) 11 U 67-66-3-----Chloroform 11 U 107-06-2----1,2-Dichloroethane 11 U 78-93-3----2-Butanone 11 U 71-55-6-----1,1,1-Trichloroethane_ 11 | U 56-23-5-----Carbon Tetrachloride 11 U 11 U 75-27-4-----Bromodichloromethane 11 U 78-87-5----1,2-Dichloropropane___ 11 U 10061-01-5----cis-1,3-Dichloropropene___ 11 U 79-01-6-----Trichloroethene 124-48-1-----Dibromochloromethane 11 U 11 U 79-00-5----1,1,2-Trichloroethane 71-43-2----Benzene 11 10061-02-6----trans-1,3-Dichloropropene 11 U 75-25-2-----Bromoform 11 | U 108-10-1----4-Methyl-2-Pentanone 11 U 11 U 591-78-6----2-Hexanone 127-18-4-----Tetrachloroethene 11 U 11 U 79-34-5----1,1,2,2-Tetrachloroethane_ 11 U 108-88-3-----Toluene 11 U 108-90-7-----Chlorobenzene_ 11 | U 100-41-4-----Ethylbenzene 11 U 100-42-5----Styrene 1330-20-7-----Xylene (Total) CP8-18-99

VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

Lab Name: COMPUCHEM Contract: 68D50004 JW519

Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JW515

Matrix: (soil/water) SOIL

Lab Sample ID: 949452

Sample wt/vol: 5.0 (g/mL) g

Lab File ID: gr049452a51

Level: (low/med) LOW

Date Received: 07/02/99

% Moisture: not dec. 6

Date Analyzed: 07/12/99

GC Column: EQUITY624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: ____(uL)

Number TICs found: 9

Soil Aliquot Volume:

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT ,	EST. CONC.	,Q
1. 71-23-8 -2 3. 4. 5.	1-PROPANOL LABORATORY ARTIFACT Lab Cont. SUBSTITUTED ALKANE SUBSTITUTED ALKANE SUBSTITUTED ALKANE	11.52 20.59 21.48 21.74 21.97	33 9 8 7	J J J J J
7. 8. 9.	LABORATORY ARTIFACT Lab Cont. UNKNOWN CYCLIC HYDROCARBON UNKNOWN HYDROCARBON SUBSTITUTED ALKANE	22.55 22.80 23.09 23.37	19 10 14 7	7 \ 7 \ 7 \ 7 \ 7 \ 7 \ 7 \ 7 \ 7 \ 7 \
11. 12. 13. 14.				
16. 17. 18. 19.				
21				
26				
30				

JW520

Lab Name: COMPUCHEM

Contract: 68D50004

Lab Code: COMPU Case No.: 27165

SAS No.:

SDG No.: JW515

Matrix: (soil/water) SOIL

% Moisture: not dec. 22

Lab Sample ID: 949453

Sample wt/vol: 5.0 (g/mL) g

Lab File ID:

GR049453A51

Level: (low/med)

LOW

Date Received: 07/02/99

Date Analyzed: 07/12/99

GC Column: EQUITY624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: ____(uL)

Soil Aliquot Volume: _____

CAS NO. COMPOUND

CONCENTRATION UNITS:

(ug/L or ug/Kg) ug/Kg

t	
74-87-3Chloromethane	13 U
74-83-9Bromomethane	13 0
75-01-4Vinyl Chloride	13 0
75-00-3Chloroethane	13 0
75-09-2Methylene Chloride	13 2 x U
67-64-1Acetone	110 8
75-15-0Carbon Disulfide	13 0
75-35-41,1-Dichloroethene	13 0
75-34-31,1-Dichloroethane	13 U
540-59-01,2-Dichloroethene (total)	13 U
67-66-3Chloroform	· 13 U
107-06-21,2-Dichloroethane	- 13 U
78-93-32-Butanone	- 13 U 31
71-55-61,1,1-Trichloroethane	
56-23-5Carbon Tetrachloride	- 13 U
75-27-4Bromodichloromethane	_
79 97 F	13 U
78-87-51,2-Dichloropropane	13 U
10061-01-5cis-1,3-Dichloropropene	13 U
79-01-6Trichloroethene	13 U
124-48-1Dibromochloromethane	13 U
79-00-51,1,2-Trichloroethane	_ 13 U
71-43-2Benzene	_ 13 บ
10061-02-6trans-1,3-Dichloropropene	_ 13 U
75-25-2Bromoform	_ 13 U
108-10-14-Methyl-2-Pentanone	_ 13 ប
591-78-62-Hexanone	13 U
127-18-4Tetrachloroethene	13 U
79-34-51,1,2,2-Tetrachloroethane	- 13 U
108-88-3Toluene	_ 13 U
108-90-7Chlorobenzene	- 4 J
100-41-4Ethylbenzene	8 J
100-42-5Styrene	- 13 U
1330-20-7Xylene (Total)	43
The second secon	_

CP - 18-99

FORM I VOA

VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

JW520 Contract: 68D50004

Lab Sample ID: 949453

Lab Name: COMPUCHEM

Lab Code: COMPU Case No.: 27165 SAS No.:

SDG No.: JW515

Matrix: (soil/water) SOIL

5.0 (g/mL) g

Lab File ID: qr049453a51

Sample wt/vol:

Level: (low/med) LOW

Date Received: 07/02/99

% Moisture: not dec. 22

Date Analyzed: 07/12/99

GC Column: EQUITY624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: ____(uL)

Soil Aliquot Volume:

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg

Number TICs found: 21

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q.
	LABORATORY ARTTEACT Lab Cont.	17.84	8	J-R
1. 2. 3. 4. 5. 6. 79-92-5 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 1195-79-5 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30.	LABORATORY ARTIFACT Lab Conf. UNKNOWN HYDROCARBON SUBSTITUTED CYCLOHEXANE TRIMETHYLDODECANE ISOMER SUBSTITUTED CYCLOHEXANE CAMPHENE LABORATORY ARTIFACT UNKNOWN ALKANE UNKNOWN HYDROCARBON SUBSTITUTED BENZENE SUBSTITUTED BENZENE UNKNOWN HYDROCARBON SUBSTITUTED BENZENE SUBSTITUTED BENZENE SUBSTITUTED BENZENE SUBSTITUTED BENZENE SUBSTITUTED BENZENE SUBSTITUTED BENZENE SUBSTITUTED BENZENE SUBSTITUTED BENZENE UNKNOWN HYDROCARBON BICYCLO[2.2.1]HEPTAN-2-ONE, SUBSTITUTED BENZENE UNKNOWN HYDROCARBON		20 19 165 15 17 12 13 12 9 18 48 12 27 26 9 9	

UF 8-18-9°

Lab Name: COMPUCHEM Contract: 68D50004

Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JW515

Matrix: (soil/water) SOIL Lab Sample ID: 949454

Sample wt/vol: 5.0 (g/mL) g Lab File ID: GH049454A55

Level: (low/med) LOW Date Received: 07/02/99

% Moisture: not dec. 12 Date Analyzed: 07/11/99

GC Column: EQUITY624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: ____(uL) Soil Aliquot Volume: ____(u

CONCENTRATION UNITS:
CAS NO. COMPOUND (ug/L or ug/Kg) ug/Kg Q

74-87-3	GIE NO.		/Kg/	ug/1	kg .	Q	
74-83-9	74-87-3	Chloromethane			11	177	-
75-01-4	74-83-9	Bromomethane	-	•			- 1
75-00-3	75-01-4	Vinyl Chloride	•				- 1
75-09-2	75-00-3	Chloroethane	• ·			–	-
10 10 10 10 10 10 10 10	75-09-2	Methylene Chloride	• ·				,
75-15-0	67-64-1	Agetone	.				
75-35-4	75-15-0	Carbon Digulfido	-		11:20	ME 4	٠
75-34-3	75-35-4	1 1 Dighloroothone	-				- 1
11 U 10 10 10 10 10 10 1	75-34-3	1 1 Dighloroothane	.				- 1
67-66-3	540-50-0	1 2 Diablementhane /t-t-1	-				
107-06-21,2-Dichloroethane 11 U 78-93-32-Butanone 2 J 71-55-61,1,1-Trichloroethane 11 U 56-23-5Carbon Tetrachloride 11 U 75-27-4Bromodichloromethane 11 U 78-87-51,2-Dichloropropane 11 U 10061-01-5cis-1,3-Dichloropropene 11 U 79-01-6Trichloroethane 11 U 79-01-6Trichloroethane 11 U 79-01-6Trichloroethane 11 U 79-01-6Trichloroethane 11 U 124-48-1Benzene 11 U 10061-02-6	67-66-3	Chloroform	.				
78-93-32-Butanone 71-55-61,1,1-Trichloroethane 75-23-5Carbon Tetrachloride 75-27-4Bromodichloromethane 78-87-51,2-Dichloropropane 11 U 10061-01-51,3-Dichloropropene 79-01-6Trichloroethene 11 U 124-48-1Benzene 11 U 17-43-2Benzene 10061-02-6trans-1,3-Dichloropropene 11 U 175-25-2Bromoform 11 U 175-25-2Bromoform 11 U 108-10-14-Methyl-2-Pentanone 11 U 127-18-4Tetrachloroethene 127-18-4Tetrachloroethene 11 U 108-90-7Chlorobenzene 11 U 108-90-7Chlorobenzene 11 U 108-90-7	1.0706.2	Ciltorotoriii	-	,			1
71-55-61,1,1-Trichloroethane 56-23-5Carboń Tetrachloride 75-27-4Bromodichloromethane 78-87-51,2-Dichloropropane 11 U 10061-01-5cis-1,3-Dichloropropene 79-01-6Trichloroethene 11 U 124-48-1Dibromochloromethane 79-00-51,1,2-Trichloroethane 71-43-2Benzene 10061-02-6trans-1,3-Dichloropropene 75-25-2Bromoform 11 U 108-10-14-Methyl-2-Pentanone 11 U 127-18-4Tetrachloroethene 79-34-51,1,2,2-Tetrachloroethane 11 U 127-18-4Toluene 11 U 108-88-3Toluene 11 U 108-88-3Toluene 11 U 108-90-7Chlorobenzene 11 U 109-41-4Ethylbenzene 11 U 1109-42-5	70 02 2	1,2-Dichioroethane	.				
56-23-5	70-33-3	2-Butanone	. I				
75-27-4	/1-55-6	1,1,1-Trichloroethane	.			_	
78-87-51,2-Dichloropropane 11 U 10061-01-5cis-1,3-Dichloropropene 11 U 79-01-6Trichloroethene 11 U 124-48-1Dibromochloromethane 11 U 79-00-51,1,2-Trichloroethane 11 U 71-43-2Benzene 11 U 10061-02-6trans-1,3-Dichloropropene 11 U 75-25-2Bromoform 11 U 108-10-14-Methyl-2-Pentanone 11 U 591-78-62-Hexanone 11 U 127-18-4Tetrachloroethene 11 U 79-34-51,1,2,2-Tetrachloroethane 11 U 108-88-3Toluene 11 U 100-41-4Ethylbenzene 11 U 100-42-5Styrene 11 U 1330-20-7Xylene (Total) 11 U	56-23-5	Carbon Tetrachloride	-				1
10061-01-5cis-1,3-Dichloropropene 11 U 79-01-6Trichloroethene 11 U 124-48-1Dibromochloromethane 11 U 79-00-51,1,2-Trichloroethane 11 U 71-43-2Benzene 11 U 10061-02-6trans-1,3-Dichloropropene 11 U 75-25-2Bromoform 11 U 108-10-14-Methyl-2-Pentanone 11 U 591-78-62-Hexanone 11 U 127-18-4Tetrachloroethene 11 U 79-34-51,1,2,2-Tetrachloroethane 11 U 108-88-3Toluene 11 U 108-90-7Chlorobenzene 11 U 100-41-4Ethylbenzene 11 U 100-42-5	75-27-4	Bromodichioromethane	_				İ
79-01-6Trichloroethene 11 U 124-48-1Dibromochloromethane 11 U 179-00-51,1,2-Trichloroethane 11 U 171-43-2Benzene 11 U 175-25-2Bromoform 11 U 175-25-2Bromoform 11 U 175-25-2Bromoform 11 U 175-18-4Tetrachloroethene 11 U 175-34-51,1,2,2-Tetrachloroethane 11 U 175-34-5Toluene 11 U 175-34-5Toluene 11 U 175-34-5	/8-8/-5	1,2-Dichloropropane	_				
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FORM I VOA

VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

Contract: 68D50004

JW521

Lab Code: COMPU Case No.: 27165 SAS No.:

Lab Name: COMPUCHEM

SDG No.: JW515

Matrix: (soil/water) SOIL

Lab Sample ID: 949454

Sample wt/vol: 5.0 (g/mL) g

Lab File ID: gh049454a55

Level: (low/med) LOW

Date Received: 07/02/99

% Moisture: not dec. 12

Date Analyzed: 07/11/99

GC Column: EQUITY624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume:

Soil Aliquot Volume:

Number TICs found: 1

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg

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FORM I VOA-TIC

JW523

Lab Name: COMPUCHEM Contract: 68D50004

Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JW515

Matrix: (soil/water) SOIL Lab Sample ID: 949455

Sample wt/vol: 5.0 (g/mL) g Lab File ID: GH049455A55

Level: (low/med) LOW Date Received: 07/02/99

% Moisture: not dec. 8 Date Analyzed: 07/11/99

GC Column: EQUITY624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: ____(uL) Soil Aliquot Volume: ____(uL

CONCENTRATION UNITS:

COMPOUND CAS NO. (ug/L or ug/Kg) ug/Kg Q 11 | U 74-87-3-----Chloromethane 11 U 74-83-9-----Bromomethane 75-01-4-----Vinyl Chloride 11 U 75-00-3-----Chloroethane 11 U JBU 75-09-2----Methylene Chloride 67-64-1-----Acetone 120 8 75-15-0-----Carbon Disulfide 11 UJ 75-35-4----1,1-Dichloroethene 11 05 75-34-3----1,1-Dichloroethane 11 U 540-59-0----1,2-Dichloroethene (total) 11 U 11 U 67-66-3-----Chloroform 11 U 107-06-2----1,2-Dichloroethane 78-93-3-----2-Butanone 28 11 0 71-55-6-----1,1,1-Trichloroethane 56-23-5-----Carbon Tetrachloride_ 11 U 75-27-4-----Bromodichloromethane 11 U 11 U 78-87-5----1,2-Dichloropropane 10061-01-5----cis-1,3-Dichloropropene 11 U 11 U -79-01-6-----Trichloroethene 124-48-1----Dibromochloromethane 11 | U 79-00-5----1,1,2-Trichloroethane 11 U 71-43-2-----Benzene 11 U 10061-02-6----trans-1,3-Dichloropropene 11 U 75-25-2-----Bromoform 11 U 108-10-1----4-Methyl-2-Pentanone 11 U 11 U 591-78-6----2-Hexanone 127-18-4-----Tetrachloroethene 11 U J 79-34-5----1,1,2,2-Tetrachloroethane 11 U 108-88-3-----Toluene 11 U 108-90-7-----Chlorobenzene 11 U 100-41-4-----Ethylbenzene 11 U 11 U 100-42-5-----Styrene 11 U 1330-20-7-----Xylene (Total)

FORM I VOA

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

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EPA SAMPLE NO.

Lab	Name:	COMPUCHEM	Contract:	68D50004

Lab Code: COMPU Case No.: 27165 SAS No.: SDG No.: JW515

Matrix: (soil/water) SOIL Lab Sample ID: 949455

Sample wt/vol: 5.0 (g/mL) g Lab File ID: gh049455a55

Level: (low/med) LOW Date Received: 07/02/99

% Moisture: not dec. 8 Date Analyzed: 07/11/99

GC Column: EQUITY624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: ____(uL) Soil Aliquot Volume:

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg

Number TICs found: 1

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	. Ŏ.
	LABORATORY ARTIFACT Lab Cont.	20.99		J-R
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