Department of Water and Power the City of Los Angeles

JAMES K. HAHN
Mayor

Commission
DOMINICK W. RUBALCAVA, *President*
SID C. STOLPER, *Vice President*
ANNIE E. CHO
GERARD McCALLUM II
SILVIA SAUCEDO
SUSAN C. PARKS, *Secretary*

DAVID H. WIGGS, *General Manager*
FRANK SALAS, *Chief Administrative Officer*

July 27, 2004

Mr. David A. Bacharowski
Assistant Executive Officer
California Regional Water Quality
Control Board - Los Angeles Region
320 West Fourth Street, Room 200
Los Angeles, CA 90013

Dear Mr. Bacharowski:

Subject: Public Records Act Copy Request
Chatsworth Reservoir Sampling and Testing

Pursuant to your public record act copy request letter dated July 22, 2004 to me, enclosed please find the Los Angeles Department of Water and Power Final Site Investigation Report on Soil Suitability Evaluation at Chatsworth Reservoir.

If you have any questions or require additional information, please contact Ms. Fazi Mofidi at (213) 367-0280.

Sincerely,

Susan M. Damron, F.M.

SUSAN DAMRON
Manager of Wastewater Quality Compliance

FM:bdc

Enclosure

c: Ms. Fazi Mofidi

Essentia
management services

July 22, 2004

Mr. George Faeustle, Project Scientist [213-367-4708]
Los Angeles Department of Water and Power
111 North Hope Street, Room 1050
Los Angeles, CA 90012

Dear Mr. Faeustle:

Subject: **Final Site Investigation Report - Soil Suitability Evaluation**
Chatsworth Reservoir, Chatsworth, California

Essentia Management Services LLC (Essentia) and our valued team members are pleased to submit this Final Site Investigation (SI) Report documenting our efforts to evaluate the suitability of soils at the Chatsworth Reservoir in Chatsworth, California to be used for other Los Angeles Department of Water and Power (LADWP) projects. This SI Report has been prepared within the context of Task Assignment #02 issued under the terms and conditions of Agreement #47278-4.

Please feel free to contact either of us at your convenience should you have questions regarding this document at 562-740-1060.

Sincerely,
Essentia Management Services LLC

Kenneth Floom, PE
Task Assignment Manager

Edward Rogan, PE, REA II
Project Principal/Manager

Enclosures (6)

REGISTERED ENVIRONMENTAL ASSESSOR II
EDWARD J. ROGAN
No. 20234
Expires: 5-31-05
STATE OF CALIFORNIA

Table of Contents

LIST OF ATTACHMENTS

FIGURES

TABLES

APPENDICES

1.0 INTRODUCTION

1.1 Purpose

Essentia Management Services LLC (Essentia) was authorized by the Los Angeles Department of Water & Power (LADWP) to conduct a limited environmental assessment of near-surface soil and groundwater at the Chatsworth Reservoir. The purpose of the assessment was to evaluate the suitability of near-surface unsaturated soil at the bottom of the Chatsworth Reservoir for potential reuse as borrow material for future LADWP projects. Soil considered suitable as borrow material will have chemicals of potential concern at concentrations less than regulatory action levels or guidelines.

1.2 Site Location

The Chatsworth Reservoir is located in the City of Chatsworth, California. The approximate 360 acre reservoir is bound to the north by Valley Circle Boulevard, to the east by residential areas west of Highway 27 (i.e., Topanga Canyon Boulevard), to the south by residential areas north of Roscoe Boulevard, and to the west by Valley Circle Boulevard (see Figure 1). The site is a former water supply reservoir and is currently dry.

1.3 Report Organization

This report is organized as follows:

- **Section 1.0** – Introduction
- **Section 2.0** – Scope and Purpose of Work
- **Section 3.0** – Background Information
- **Section 4.0** – Sampling and Analysis Plan and Health and Safety Plan
- **Section 5.0** – Field Investigations
- **Section 6.0** – Analytical Testing
- **Section 7.0** – Comparison of Analytical Results to Regulatory Standards
- **Section 8.0** – Conclusions and Recommendations
- **Section 9.0** – List of References

2.0 SCOPE OF WORK

The LADWP is evaluating soil at the bottom of Chatsworth Reservoir for potential reuse as borrow material. The Essentia Project Team was authorized to assess unsaturated soil at six boring locations and groundwater at four locations. Soil and groundwater boring locations are shown on Figure 2. The scope of work was developed jointly with LADWP staff and is discussed in detail in the Cost Proposal (Essentia, 2004).

The authorized scope of work included completing the following activities:

- Obtain and review background information including miscellaneous reports resident in the LADWP files as well as from Environmental Data Resources, Inc. (EDR).
- Prepare and submit a Sampling and Analysis Plan (SAP) and a Health and Safety Plan (HSP).
- Conduct field investigations consisting of soil sampling from push-probe borings and groundwater sampling from temporary PVC wells.
- Analyze soil and groundwater samples for the following constituents:
    - Perchlorate
    - Dioxin and Furan Compounds
    - N-Nitrosodimethyl amine (NDMA)
    - 1,4-Dioxane
    - Total extractable petroleum hydrocarbons (TEPH)
    - Polychlorinated biphenyls (PCBs)
    - Volatile organic compounds (VOCs)
    - Semi-volatile organic compounds (SVOCs)
    - Radionuclides including cesium 137, thorium (soil only), tritium (groundwater only), strontium 90, potassium 40 (soil only), and uranium (soil only)
    - Title 22 metals (total and soluble)
    - Hexavalent Chromium
    - Total Coliform (water only)
- Compare analytical results with applicable regulatory standards or guidance
- Prepare and submit Site Investigation Report

Each of these tasks is described in this report in more detail below.

3.0 BACKGROUND INFORMATION

LADWP provided Essentia with documents relative to the Chatsworth Reservoir. The documents were reviewed to obtain an understanding of the reservoir construction and potential chemicals of concern based on past site use and facilities located in the vicinity of the site. These documents included the following:

- Final Report on the Enlargement of Chatsworth Reservoir, Field Engineering Division (LADWP, 1932)
- Chatsworth Reservoir Improvements Project Planning Report, Water Engineering Design Division, Planning Section, (LADWP, 1973)
- Phase 1 Environmental Site Assessment, Parcel 4 of Chatsworth Reservoir, LADWP File # W-67655. Box Canyon Road / Valley Circle Boulevard, Chatsworth, California, (Dames & Moore, 1999)

In addition to the documents listed above, an Environmental Data Resources, Inc. report (EDR, 2003) was acquired and reviewed by the Essentia Project Team.

As a result of the review of the above documents, the following observations were made primarily relative to possible sources of chemical constituents that could be present in soil or groundwater underlying the reservoir:

- The reservoir was originally constructed in 1919 (D&M, 1999). The reservoir was drained in 1969 and has remained dry and undeveloped since then.
- Indication of a slight seepage of gas and oil was noted as coming from Parcel 4 across from Valley Circle Boulevard, where the keyway for the reservoir blanket was excavated along the northerly edge of the reservoir adjacent to detention basin No. 2 (LADWP, 1973). LADWP further notes that it should be assumed that there may be more oil and gas seeps outside of the above area. This suggests a possible natural source of TPH and other constituents (e.g., dissolved inorganics).
- D&M, 1999 presents the findings of a Phase 1 Environmental Site Assessment (ESA) of Parcel 4 of the Chatsworth Reservoir. The purpose of the ESA was to gather information to assess if any conditions of potential environmental concern exist within Parcel 4. The assessment did not reveal evidence of Recognized Environmental Conditions (RECs) associated with Parcel 4.
- EDR, 2003 presents environmental records within a 1.5-mile radius of the center of the reservoir in accordance with requirements of ASTM Standard Practice for Environmental Site Assessments, E1527-00. The search was centered on the following coordinates → North Latitude – 34.233300 & West Latitude – 118.641700.

The following properties were identified as potential sources of environmental concerns within the 1.5 mile radius search:

Facility	Address
Former Hughes Aircraft Company [Currently Boeing]	8433 Fallbrook Ave., Canoga Park, CA
LA County Fire Station # 075	23310 Lake Manor Dr., Chatsworth, CA

4.0 SAMPLING AND ANALYSIS PLAN AND HEALTH AND SAFETY PLAN

Two versions of the Sampling and Analysis Plan (SAP) and Health and Safety Plan (HSP) (Essentia, 2004a; 2004b) were prepared. The first version was specific to the soil investigation phase. Eventually, a second version of each document was prepared and submitted that included the groundwater investigation phase. The HSPs were presented as appendices to the SAPs.

The SAPs described the details of the field investigations in regards to the following:

- Proposed scope of work
- Field methods for completing the scope of services
- Locations of the field investigations, i.e. borehole locations
- Field sampling procedures
- Sample handling protocols
- Analytical tests to be performed and their associated container types, volumes, preservatives, holding times and laboratory conducting the tests.

5.0 FIELD INVESTIGATIONS

A limited field investigation was completed at the Chatsworth Reservoir to evaluate the suitability of soils in two distinct areas of the Chatsworth Reservoir for potential reuse as borrow material for future LADWP projects. Groundwater sampling was also completed at four locations.

The locations for both the soil and groundwater borings were designated by the LADWP and are shown on Figure 2. The LADWP determined the location of the borings by survey. The results of the survey are as follows:

Coordinates (1)			
Boring No. Soil/Groundwater	**North**	**East**	**Elevation, ft. msl (2)**
B-1	1908882.8	6373272.1	865.1
B-2/B-2W	1907821.0	6372723.1	862.3
B-3/B-3W	1907078.4	6372474.3	859.7
B-4/B-4W	1907447.5	6369319.9	866.1
B-5/B-5W	1906108.2	6368427.9	870.7
B-6	1905545.2	6367854.7	873.4

(1) Horiz. Datum CCS83, Vert. Datum NGVD29 ('85 adj.)

(2) msl – mean sea level

Note – no groundwater sampling was conducted at location B-1 or B-6.

Summaries of the field investigations for both the soil and groundwater are provided below. A detailed discussion regarding the goals and objectives of these investigations is provided in the SAPs discussed in Section 4.0 (Essentia, 2004a; 2004b).

5.1 Soil Investigation

The soil investigation consisted of advancing six direct push probes at locations shown on Figure 2 to depths ranging from 11 to 20 feet below ground surface (bgs). Four-foot long soil samples were collected in acetate sleeves as the push probes were advanced. Soil samples were typically collected representing depth intervals of 1-5, 6-10, 11-15, and 16 to 20 feet bgs.

Borings logs for the six push probes are included in Appendix A and provide information regarding sample depth intervals, depth to water, and soil types encountered. The soil types encountered included silty sand, sandy silt, clayey silt, sandy clay, silty clay, and clay.

These soils appear to be present in discontinuous alternating layers of finite thickness typical of an alluvial depositional environment.

Depth to groundwater ranged from 10 to greater than 20 feet bgs at locations B-1 through B-5. Boring B-6 was advanced to refusal which occurred at a depth of 11 feet. Groundwater was not encountered in this boring. The groundwater depth observations may be deeper than static groundwater levels since no attempt was made to assess that groundwater levels had stabilized in the borings. Groundwater depths were measured using an electric sounder (e.g. M-Scope).

As discussed above, 4-foot long soil samples were collected representing 5-foot depth intervals. Encore samples, were ~~was co~~llected at each sample depth interval above the observed water table using EPA Method 5035, an approved sample preparation method for VOCs analysis in accordance with EPA Method 8260B. The Encore samples were preserved in accordance with the requirements of the SAP and transported to LADWP's analytical laboratory for analysis. The remainder of the soil samples collected above the water table from within individual borings was composited. The composite soil samples were preserved in accordance with the requirements of the SAP and transported to various analytical laboratories under chain-of-custody forms for analysis of the non-VOC analytes (Essentia, 2004a).

Upon completion of drilling and sampling at each location, the borings were backfilled with bentonite, which was subsequently hydrated with decontamination and/or potable water.

5.2 *Groundwater Investigation*

The groundwater investigation consisted of advancing four direct push hydropunch samples at locations adjacent to soil borings B2, B3, B4, and B5, as shown on Figure 2. The hydropunch samples were advanced to depths greater than 20 feet bgs to ensure that the hydropunch screen was below the water table and that there would be sufficient groundwater recharge to collect the requisite volume of groundwater for laboratory analysis. Once the desired depth was achieved, the hydropunch was retracted to expose the screen interval, and groundwater was extracted through the screen to the surface using a hand-pump or a peristaltic pump. Groundwater sampling methods are discussed in detail in the SAP (Essentia, 2004b).

Groundwater samples were preserved in accordance with the requirements of the SAP (Essentia, 2004b). Sample bottles for VOCs analyses were transported to LADWP's analytical laboratory. Sample bottles for non-VOC and TEPH analyses were shipped to other analytical laboratories under chain-of-custody forms.

Upon completion of the groundwater sampling at each hydropunch location, the borings were backfilled with bentonite, which was subsequently hydrated with decontamination and/or potable water.

6.0 ANALYTICAL RESULTS

The soil and groundwater samples were submitted to various analytical laboratories for analytical testing. Soil and groundwater analytical results (e.g., laboratory data sheets) are provided in Appendices B and C, respectively. Soil analytical results are discussed in Section 6.1 and groundwater analytical results are discussed in Section 6.2.

6.1 *Soil Analytical Results*

Fifteen discrete Encore soil samples were analyzed for VOC constituents in accordance with EPA Method 8260B. The analytical results are provided in Appendix B. The results indicate that VOCs were not detected at or above laboratory reporting limits. One composite soil sample from each of the six push-probe borings was submitted for analytical testing for the following analytes/analyte groups:

- Perchlorate
- Dioxins
- Radionuclides - Potassium 40, Cesium 137, Strontium 90, Thorium, and Uranium
- TEPH
- PCBs
- SVOCs
- Title 22 metals – Total
- Title 22 metals – Soluble
- N-Nitrosodimethyl amine
- Hexavalent Chromium

The results for the six composite soil samples indicate that the following analytes/analyte groups were not detected at or above laboratory reporting limits:

- Perchlorate
- Cesium 137
- Strontium 90
- TEPH
- PCBs
- N-Nitrosodimethyl amine
- 1,4-Dioxane

6.1.1 Semivolatile Analytical Results

The results for SVOCs indicate detections of two of the 71 compounds tested for. The two compounds detected were as follows:

- Bis(2-ethylhexyl)phthalate
- Di-n-Butylphthalate

Of particular note relative to the detections of the above two constituents, is that these compounds were detected in a majority of the samples analyzed (e.g., bis(2-ethylhexyl)phthalate was detected in 5 of 6 samples and Di-n-Butylphtlate was detected in 4 of 6 samples). Furthermore, the concentrations had a wide range (from ND to 27,550 ug/kg for bis(2-ethylhexyl)phthalate and from ND to 791 ug/kg for Di-n-Butylphthalate). Furthermore, a comparison of the concentrations for these constituents in samples B1 and the B1 duplicate shows a relatively wide variance, as follows:

	B1	B1 Duplicate
Bis(2-ethyhexyl)phthalate	92 J ug/kg (3)	14,540 ug/kg
Di-n-Butylphthalate	306 J ug/kg	84 J ug/kg

(3) J = Estimated Value

Possible sources of these SVOC constituents include the following:

- Present within the soils from past site uses
- Laboratory artifacts
- Field sampling equipment

Past site uses, as discussed in Section 3.0, do not support a source for SVOCs. Discussions with various laboratories indicates the above two compounds are common laboratory artifacts. A review of the sampling methods and equipment do not indicate a source for these SVOCs as follows:

- The sample trowel used to prepare the composite samples was plastic and decontaminated properly prior to use and between samples.
- The acetate sleeves (Rimtec 4355 UV Clear) in which the soil was collected is a rigid extrusion compound. No plasticizers are used to produce it.

The industrial and residential Preliminary Remediation Goals (PRGs) for these SVOC compounds are as follows:

	Industrial PRGs	Residential PRGs
■ Bis(2-ethylhexyl)phthalate	120,000 ug/kg	35,000 ug/kg
■ Di-n-Butylphthalate	62,000,000 ug/kg	6,100,000 ug/kg

Measured concentrations are below both the respective residential and industrial PRGs.

6.1.2 Dioxin and Furans

Tables 1 through 4 present the analytical results for the dioxin and furan compounds, metals, hexavalent chromium, and radionuclides in soil. These four tables present results for those analytes which had concentrations measured in one or more of the six composite soil samples. Trace levels of several dioxin and furan compounds were detected in the part per trillion (pg/g) or less range (Table 1). The above soil analytical results are discussed further in Section 7.0 relative to measured concentrations compared to regulatory standards.

6.1.3 Metals

Fourteen of seventeen Title 22 Metals were detected in the soil at an average concentration of less than 50 mg/kg with a few detections at just below 200 mg/kg (Table 2); the three metals not detected above laboratory reporting limits included mercury, silver, and thallium. The detected concentrations were unremarkable and were generally within the concentration ranges for California soils (Kearney, 1996). Hexavalent chromium was detected at low concentrations, ranging from 84 µg/kg to 280 µg/kg (Table 3). Potassium 40, Thorium (isotopes 228, 230, and 232), and uranium were detected above the reporting limits (Table 4). The above soil analytical results are discussed further in Section 7.0 relative to measured concentrations compared to regulatory standards.

6.1.4 Radionuclides

The observed radioactivity of these isotopes was as follows: Potassium 40 – approximately 20 pico Curies per gram (pCi/g); Thorium – about 1 pCi/g or less for each isotope reported; and Uranium - less than 5 pCi/g. The above soil analytical results are discussed further in Section 7.0 relative to measured concentrations compared to regulatory standards.

6.2 Groundwater Analytical Results

Groundwater samples were collected from hydropunch sample locations B2-W, B3-W, B4-W and B5-W were analyzed for the following analytes/analyte groups:

- Perchlorate
- Dioxins
- Radionuclides - Cesium 137, Strontium 90, and Tritium
- TEPH
- PCBs
- VOCs
- SVOCs
- Title 22 metals – Total & Soluble
- N-Nitrosodimethyl Amine
- 1,4-Dioxane

- Hexavalent Chromium
- Total Coliform

The results for the four groundwater samples indicate that the following analytes/analyte groups were not detected at or above laboratory reporting limits:

- Perchlorate
- Radionuclides
- TEPH
- PCBs
- N-Nitrosodimethyl Amine
- 1,4-Dioxane
- Hexavalent Chromium

Groundwater analytical results are presented in Appendix C. Data are summarized in Tables 5 through 7 for those analytes/analyte groups with detectable concentrations in at least one of the four groundwater samples. Four VOCs - acetone, carbon disulfide, toluene, and m-&p- isomers of xylenes – were detected in at least one boring, each at concentrations below regulatory standards or guidance (Table 5). All other VOCs were not detected above laboratory reporting limits.

Several dioxin and furan compounds were detected above laboratory reporting limits. Analytical results are summarized in Table 6. The results are presented in units of picograms per gram (i.e., units of solids rather than water) since the groundwater samples contained more than 10% sediment in the sample containers. This characterization of the water samples with soil units is required by testing methods when the solid content exceeds one percent. While regulatory standards or guidance are not available for the respective dioxins and furans detected, the detectable concentrations were nonetheless very low.

Fourteen of seventeen Title 22 metals were detected above the laboratory reporting limits. As was the case with the soil samples, mercury, silver and thallium were not detected above laboratory reporting limits. Regulatory standards or guidance for each of the metals detected were exceeded in the groundwater/sediment samples. In general, higher metal concentrations were detected in samples collected from boring locations B-2W and B-3W. Detectable concentrations and regulatory standards or guidance for metals are summarized on Table 7.

7.0 COMPARISON OF ANALYTICAL RESULTS TO REGULATORY STANDARDS

Tables 1 through 7 present the soil and groundwater analytical results for those analytes that were detected in at least one composite soil sample collected from the six borings or one groundwater sample collected from the four hydropunches. Soil and groundwater analytical results are compared to regulatory standards or guidance in Sections 7.1 and 7.2 for those constituents with measured concentrations above detection limits. The standards and guidance include EPA Region 9 PRGs and State and Federal Maximum Contaminant Levels (MCLs) and State Action Levels.

7.1 Soil Analytical Results

Table 1 presents the results for dioxin and furan compounds in soil. As illustrated in Table 1, the concentrations are extremely low (a few parts per trillion or less) with most reported values 'J' flagged, i.e. concentrations are estimated. There are no applicable regulatory standards for these analytes. The results do not indicate any remarkable concentrations.

Table 2 presents the results for metals in soil. As illustrated, several constituents had measured concentrations. It is normal that certain metals are present in soil. A comparison of the measured concentrations to Total Threshold Limit Concentrations (TTLC) and Industrial and Residential PRGs indicates there were no exceedances, except that the arsenic cancer-endpoint PRGs (industrial and residential) values were exceeded. Arsenic is commonly found in southwestern soils at concentrations that exceed residential and industrial cancer-endpoint PRGs.

Table 3 presents the results for hexavalent chromium in soil. As shown, all measured values are below the Industrial and Residential PRGs. Thus, the concentrations of hexavalent chromium appear to be within acceptable levels.

Several radionuclides were detected (see Table 4), the results of which were reported in terms of radioactivity (i.e., curies per mass). PRGs have not been established for these radionuclides.

7.2 Groundwater Analytical Results

Federal and State Maximum Contaminant Levels (MCLs), State Action Levels (AL), and/or EPA PRGs for tap water were not exceeded for the four VOCs (acetone, carbon disulfide, toluene, and xylenes) detected in groundwater (Table 5).

Several dioxins and furans were detected in the part per trillion concentrations; however, Federal or State regulatory levels or guidance have not been established for these compounds. One compound with regulatory standards or guidance – 2,3,7,8-TCDD was not specifically analyzed; however, no total tetra-dioxins, of which TCDD is included, were detected above laboratory reporting limits (Table 6).

Each of the Title 22 metals detected in the groundwater samples were detected at concentrations that exceed either a Federal or State regulatory standard or guidance (Table 7). These standards or guidance levels are designated for drinking water sources or supply.

8.0 CONCLUSIONS AND RECOMMENDATIONS

This report discusses the results of a limited environmental assessment of the near surface soils found in the unsaturated zone and groundwater at the Chatsworth Reservoir. The unsaturated soil and groundwater underlying the reservoir bottom do not appear to contain constituents at concentrations that would pose a health risk if the soil were used as a borrow material for earthworks construction for future industrial LADWP projects.

9.0 LIST OF REFERENCES

Dames & Moore, Phase 1 Environmental Site Assessment, Parcel 4 of Chatsworth Reservoir, LADWP File # W-67655. Box Canyon Road / Valley Circle Boulevard, Chatsworth, California, dated April 15, 1999 (D&M, 1999)

Environmental Data Resources, Inc. Reports, dated November 19, 2003 (EDR, 2003)

Essentia Management Services Project Team, "Los Angeles Department of Water & Power, Agreement # 47278-4, Chatsworth Reservoir, Task Assignment # 02, Cost Proposal (Revised), dated February 6, 2004 (Essentia, 2004)

Essentia Management Services Project Team, "Draft Sampling and Analysis Plan for Evaluation of Borrow Soil Present at Chatsworth Reservoir, Chatsworth, California", dated January 20, 2004 (Essentia, 2004a)

Essentia Management Services Project Team, "Draft Sampling and Analysis Plan, Limited Evaluation of Groundwater Present at Chatsworth Reservoir, Chatsworth, California" dated February 6, 2004 (Essentia, 2004b)

Kearney Foundation of Soil Science, Background Concentrations of Trace and Major Elements in California Soils (Kearney, 1996)

Los Angeles Department of Water & Power, Final Report on the Enlargement of Chatsworth Reservoir, by the Field Engineering Division, dated August 13, 1932 (LADWP, 1932)

Los Angeles Department of Water & Power, Chatsworth Reservoir Improvements Project Report, dated 1973 (LADWP, 1973)

TABLE 1
SOIL ANALYTICAL RESULTS - DIOXIN AND FURAN COMPOUNDS
EPA Method 1613
Chatsworth Reservoir, Chatsworth, California

			Boring #	B-1	B-2	B-3	B-4	B-5	B-6
			Sample ID:	B1 Comp	B2 Comp	B3 Comp	B4 Comp	B5 Comp	B6 Comp
			Sample Date:	1/28/04	1/28/04	1/28/04	1/28/04	1/28/04	1/28/04
Analyte	Industrial PRGs	Residential PRGs	Units	CONC.	CONC.	CONC.	CONC.	CONC.	CONC.
1,2,3,4,6,7,8-HpCDD	NE	NE	pg/g	0.411 (J)	0.573 (J)	0.897 (J)	<0.359	0.603 (J)	0.924 (J)
1,2,3,4,6,7,8-HpCDF	NE	NE	pg/g	<0.129	<0.119	<0.146	<0.132	<0.122	0.233 (J)
1,2,3,7,8,9-HxCDF	NE	NE	pg/g	<0.124	<0.195	0.292 (J)	<0.123	<0.129	<0.135
OCDD	NE	NE	pg/g	1.76 (J)	1.48 (J)	3.65 (J)	1.37 (J)	3.79 (J)	6.24
OCDF	NE	NE	pg/g	<0.451	<0.401	<0.578	<0.421	<0.432	0.667 (J)
Total Hepta-Dioxins	NE	NE	pg/g	0.867 (J)	1.03 (J)	1.87 (J)	<0.359	1.75 (J)	1.96 (J)
Total Hepta-Furans	NE	NE	pg/g	<0.158	<0.142	<0.163	<0.143	<0.135	0.491 (J)
Total Hexa-Furans	NE	NE	pg/g	<0.124	<0.195	0.503 (J)	<0.123	<0.129	<0.135
Total Penta-Furans	NE	NE	pg/g	<0.224	<0.220	0.773 (J,M)	<0.206	<0.177	<0.219
Total Tetra-Dioxins (1)	16	3.9	pg/g	<0.102	<0.174	<0.130	<0.103	1.45	<0.101
Total Tetra-Furans	NE	NE	pg/g	<0.0990	<0.108	0.248 (J)	<0.0884	1.67 (M)	<0.0996

Notes:

Regulatory Standard or Guidance refers to statutory, preliminary, or proposed concentration limit (e.g., EPA Preliminary Remediation Goals or Title 22 hazardous waste criteria - Total Threshold Limit Concentration [TTLC] and Soluble Threshold Limit Concentration [STLC]).

pg/g - picograms per gram

<0.129 - Analyte not detected above indicated Reporting Limit.

NE - None Established

J - The analyte was positively identified at a concentration less than the laboratory reporting limit. The associated numerical value is the estimated concentration of the analyte in the sample.

M - Maximum possible concentration

(1) - Industrial and Residential PRG's for 2,3,7,8 - TCDD (a Tetra dioxin) are 1.6 E -05 mg/kg (16 pg/g) and 3.9 E -06 (3.9 pg/g), respectively

TABLE 2
SOIL ANALYTICAL RESULTS - METALS
EPA Method 6010B /7471 (Hg)
Chatsworth Reservoir, Chatsworth, California

ANALYTE	Regulatory Standard or Guidance				Boring # / Sample ID:	B1 B1 Comp	B1 B1 Comp-Dup	B2 B2 Comp	B3 B3 Comp	B4 B4 Comp	B5 B5 Comp	B6 B6 Comp
	Limit TTLC mg/kg	Limit STLC mg/L	Industrial PRGs mg/kg	Residential PRGs mg/kg	Sample Date: / Units	1/28/04	1/28/04	1/28/04	1/28/04	1/28/04	1/28/04	1/28/04
Antimony	500	15	410	31	mg/kg	3.3 (J)	<0.80	5.30	5.10	<0.80	<0.80	<0.80
Arsenic (1)	500	5	1.6	0.39	mg/kg	9.60	4.9 (J)	8.80	7.30	6.10	4.5 (J)	4.8 (J)
Barium	10000	100	67000	5,400	mg/kg	75.9	72.0	171.8	186.7	93.9	109.8	72.2
Beryllium	75	0.75	1900	150	mg/kg	0.4 (J)	0.37 (J)	0.9 (J)	0.8 (J)	0.6 (J)	0.7 (J)	0.6 (J)
Cadmium	100	1	450	37	mg/kg	3.20	3.40	6.20	5.80	3.0 (J)	2.7 (J)	2.7 (J)
Chromium (Total)	500	5	450	210	mg/kg	11.4	11.0	27.4	24.2	14.7	15.4	13.1
Cobalt	8000	80	1900	900	mg/kg	9.90	10.0	21.3	19.6	13.6	12.0	13.7
Copper	2500	25	41000	3,100	mg/kg	7.70	8.10	27.8	23.9	5.70	7.90	17.5
Lead	1000	5	750	150	mg/kg	14.5	11.0	10.4	10.9	17.3	12.2	17.5
Mercury	20	0.2	310	23	mg/kg	<0.02	*NA*	<0.02	0.0305 (J)	<0.02	<0.02	<0.02
Molybdenum	3500	350	5100	390	mg/kg	6.1	3.20	10.9	6.90	0.80 (J)	1.20	0.60 (J)
Nickel	2000	20	20000	1,600	mg/kg	12.5	13.0	34.7	28.0	10.8	10.3	10.6
Selenium	100	1	5100	390	mg/kg	3.60	<0.70	<0.70	<0.70	<0.70	<0.70	<0.70
Silver	500	5	5100	390	mg/kg	<2.50	<2.50	<2.50	<2.50	<2.50	<2.50	<02.50
Thallium	700	7	67	5.2	mg/kg	<2.50	<2.50	<2.50	<2.50	<2.50	<2.50	<2.50
Vanadium	2400	24	7200	550	mg/kg	29.1	29.0	67.1	61.0	29.6	22.9	24.2
Zinc	5000	250	100000	23,000	mg/kg	31.9	33.0	83.2	72.6	46.6	42.2	39.3

Notes:

Regulatory Standard or Guidance refers to statutory, preliminary, or proposed concentration limit (e.g., EPA Preliminary Remediation Goals or Title 22 hazardous waste criteria - Total Threshold Limit Concentration [TTLC] and Soluble Threshold Limit Concentration [STLC]).

mg/kg - milligrams per kilogram

mg/L - milligrams per liter

NA - Not Analyzed

<0.80 - Analyte not detected above indicated Reporting Limit.

J - The analyte was positively identified at a concentration less than the laboratory reporting limit. The associated numerical value is the estimated concentration of the analyte in the sample.

(1) - Arsenic - cancer endpoint PRGs listed; non-cancer endpoint PRGs are 260 mg/kg (industrial) and 22 mg/kg (residential), respectively.

TABLE 3
SOIL ANALYTICAL RESULTS - HEXAVALENT CHROMIUM
EPA Method 7199
Chatsworth Reservoir, Chatsworth, California

ANALYTE	Regulatory Standard or Guidance				Boring #	B1	B2	B3	B4	B5	B6
					Sample ID:	B1 Comp	B2 Comp	B3 Comp	B4 Comp	B5 Comp	B6 Comp
	Limit TTLC mg/kg	Limit STLC mg/L	Industrial PRGs mg/kg	Residential PRGs mg/kg	Sample Date:	1/28/04	1/28/04	1/28/04	1/28/04	1/28/04	1/28/04
					Units	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Hexavalent Chromium	*	**	64,000	30,000		92	280	140	120	84	130

Notes:

Regulatory Standard or Guidance refers to statutory, preliminary, or proposed concentration limit (e.g., EPA Preliminary Remediation Goals [PRGs] or Title 22 hazardous waste criteria - Total Threshold Limit Concentration [TTLC] and Soluble Threshold Limit Concentration [STLC]).

µg/kg - micrograms per kilogram (e.g., 1000 ug/kg = 1 mg/kg)

NA - Not Analyzed

* - A TTLC for hexavalent chromium has not been established. The TTLC for total chromium is 500 mg/kg.

** - A STLC for hexavalent chromium has not been established. The STLC for total chromium is 5 mg/L.

TABLE 4
SOIL ANALYTICAL RESULTS - RADIONUCLIDES

Chatsworth Reservoir, Chatsworth, California

ANALYTE	Method	Unit	Reporting Limit	Boring #	B1	B2	B3	B4	B5	B6
				Sample ID:	B1	B2	B3	B4	B5	B6
				Sample Date:	1/28/04	1/28/04	1/28/04	1/28/04	1/28/04	1/28/04
RADIONUCLIDES-GAMMA										
Cesium 137	E901.1	pCi/g-dry	2.0		ND	ND	ND	ND	ND	ND
Potassium 40	E901.1	pCi/g	2.0		21.3	16.6	17.9	23.5	19.3	23.5
RADIONUCLIDES - TOTAL										
Thorium 228	E907.0	pCi/g-dry	0.2		0.6	0.8	1.0	0.7	0.9	0.8
Thorium 230	E907.0	pCi/g-dry	0.2		0.5	1.1	1.2	0.3	0.4	0.3
Thorium 232±)	E907.0	pCi/g-dry	0.2		0.4	0.6	0.9	0.6	0.7	0.7
Uranium	SW6020	mg/kg-dry	0.5		2.5	4.1	4.9	1.2	1.9	1.3
Strontium 90	E905.0	pCi/g-dry	0.600		ND	ND	ND	ND	ND	ND

Notes:

EPA Preliminary Remediation Goals [PRGs] in Soil for the above Radionuclides have not been developed.
pCi/g - pico curie per gram
mg/kg - milligrams per kilogram
ND - Not Detected at the Reporting Limit

TABLE 5
GROUNDWATER ANALYTICAL RESULTS - VOCs
EPA Method 8260B
Chatsworth Reservoir, Chatsworth, California

ANALYTE	Regulatory Standard or Guidance			Boring # / Sample Date: / Units	B-2W 3/24/04	B-3W 3/24/04	B-4W 3/24/04	B-5W 3/24/04
	Federal MCL	State MCL/AL	EPA PRG Tap Water					
Acetone	NE	NE	610	mg/L	ND	15.6	ND	ND
Carbon disulfide	NE	160	1000	mg/L	ND	ND	ND	2.35
Toluene	1000	150	720	mg/L	0.184J	0.707	0.3J	0.653
m & p-Xylene	10000	1750	210	mg/L	ND	ND	ND	0.499J

Notes:
Regulatory Standard or Guidance refers to statutory, preliminary, or proposed concentration limit (e.g., EPA Preliminary Remediation Goals or Title 22 hazardous waste criteria - Total Threshold Limit Concentration [TTLC] and Soluble Threshold Limit Concentration [STLC]).

mg/L - micrograms per liter
NE - None Established
ND - Analyte not detected above indicated Reporting Limit.
J - The analyte was positively identified at a concentration less than the laboratory reporting limit. The associated
MCL - Maximum Contaminant Level.
AL - Action Level
(1) - Regulatory Standard or guidance for xylenes are provided for total of o-, m-, & p- xylene isomers.

TABLE 6
GROUNDWATER ANALYTICAL RESULTS - DIOXIN AND FURAN COMPOUNDS
EPA Method 1613
Chatsworth Reservoir, Chatsworth, California

	Regulatory Standard or Guidance			Boring # Sample Date:	B-2W 3/24/04	B-3W 3/24/04	B-4W 3/24/04	B-5W 3/24/04
	Federal MCL	State MCL/AL	EPA PRG Tap Water	Units	CONC.	CONC.	CONC.	CONC.
1,2,3,4,6,7,8-HpCDD	NE	NE	NE	pg/g	4.01	2.70	8.12	11.0
1,2,3,4,6,7,8-HpCDF	NE	NE	NE	pg/g	ND	ND	ND	2.98
1,2,3,7,8,9-HxCDF	NE	NE	NE	pg/g	ND	ND	ND	ND
OCDD	NE	NE	NE	pg/g	27.1	15.2	32.9	86.3
OCDF	NE	NE	NE	pg/g	ND	ND	ND	5.68
Total Hepta-Dioxins	NE	NE	NE	pg/g	11.9	6.8	16.2	37.1
Total Hepta-Furans	NE	NE	NE	pg/g	ND	ND	ND	5.72
Total Hexa-Furans	NE	NE	NE	pg/g	ND	ND	ND	ND
Total Penta-Furans	NE	NE	NE	pg/g	ND	ND	ND	ND
Total Tetra-Dioxins (1)	3.8 E -04	NE	4..5 E -04	pg/g	ND	ND	ND	ND
Total Tetra-Furans	NE	NE	NE	pg/g	ND	ND	ND	ND

Notes:
Regulatory Standard or Guidance refers to statutory, preliminary, or proposed concentration limit (e.g., EPA and / or State maximum contaminant level [MCL] or Action Level [AL], or EPA Preliminary Remediation Goals [PRG] for tap water).

pg/g - picograms per gram
ND - Analyte not detected above indicated Reporting Limit.
NE - None Established
J - The analyte was positively identified at a concentration less than the laboratory reporting limit. Estimated concentration of the analyte in the sample.
(1) - Regulatory levels shown for 2,3,7,8 - TCDD - a tetra dioxin. Units have been converted from µg/L to pg/g of water.

TABLE 7
GROUNDWATER ANALYTICAL RESULTS - METALS
EPA 6010B/ 245.1 (Hg)
Chatsworth Reservoir, Chatsworth, California

ANALYTE	Regulatory Standard or Guidance mg/L			Boring # Sample Date:	B-2W 3/24/04	B-3W 3/24/04	B-4W 3/24/04	B-5W 3/24/04
	Federal MCL	State MCL/AL	EPA PRG Tap Water	Units				
Antimony	0.006	0.006	0.015	mg/L	0.022J	0.174	ND	ND
Arsenic	0.01	0.05	0.000045	mg/L	1.579	3.217	0.072J	0.403
Barium	1	1	2.6	mg/L	15.670	17.840	0.920	7.080
Beryllium	0.004	0.004	0.073	mg/L	0.078	0.123	0..007J	0.041
Cadmium	0.005	0.005	0.018	mg/L	0.543	0.686	0.025J	0.129
Chromium (Total)	0.05	0.05	55 (Cr^{+3})	mg/L	2.362	3.273	0.328	2.106
Cobalt	NE	NE	0.73	mg/L	1.859	2.202	0.155	0.659
Copper	NE	1.3	1.5	mg/L	3.921	10.080	0.098	1.209
Lead	NE	0.015	NE	mg/L	1.266	2.238	0.059J	0.807
Mercury	0.002	0.002	0.011	mg/L	ND	ND	ND	ND
Molybdenum	NE	NE	0.18	mg/L	0.396	0.227	ND	0.062
Nickel	0.1	0.1	0.73	mg/L	2.861	2.703	0.154	0.473
Selenium	0.05	0.08	0.18	mg/L	0.304	0.249	ND	ND
Silver	NE	NE	0.18	mg/L	ND	ND	ND	ND
Thallium	0.002	0.002	0.0024	mg/L	ND	ND	ND	ND
Vanadium	NE	0.05	0.26	mg/L	1.862	6.932	0.367	1.310
Zinc	NE	NE	11	mg/L	9.036	12.590	0.629	2.632

Notes:
Regulatory Standard or Guidance refers to statutory, preliminary, or proposed concentration limit (e.g., EPA or State MCLs or Action Levels or EPA Preliminary Remediation Goals [PRGs] for tap water.

mg/L - milligrams per liter
NE - None Established
ND - Analyte not detected above indicated Reporting Limit.
J - The analyte was positively identified at a concentration less than the laboratory reporting limit. The associated numerical value is the estimated concentration of the analyte in the sample.
MCL - Maximum Contaminant Level
AL - Action Level

DATE DRILLED 1/28/04 BORING NO. B6

GROUND ELEVATION 867 ± (MSL) SHEET 1 OF 1

METHOD OF DRILLING Direct Push

DRIVE WEIGHT NA DROP NA

SAMPLED BY RHS LOGGED BY RHS REVIEWED BY WRC

DEPTH (feet)	SAMPLES: Bulk	SAMPLES: Driven	BLOWS/FOOT	SAMPLE ID	ORGANIC VAPORS (ppm)	MOISTURE	SYMBOL	CLASSIFICATION U.S.C.S.	DESCRIPTION/INTERPRETATION
0								CL	ALLUVIUM: Dark yellowish orange (10 YR 6/6), damp, sandy CLAY.
				B6-5					
10				B6-10					Refusal at 11 feet. Total Depth = 11 feet. No groundwater encountered. Composite sample from 1-5, 6-10 foot samples. Backfilled with granular bentonite on 1/28/04.
20									
30									
40									

Essentia management services

BORING LOG

Chatsworth Reservoir
Chatsworth, California

PROJECT NO.	DATE	FIGURE
205411002	2/2004	A-6

DATE DRILLED 1/28/04 BORING NO. B4

GROUND ELEVATION 867 ± (MSL) SHEET 1 OF 1

METHOD OF DRILLING Direct Push

DRIVE WEIGHT NA DROP NA

SAMPLED BY RHS LOGGED BY RHS REVIEWED BY WRC

DEPTH (feet)	SAMPLES: Bulk	SAMPLES: Driven	BLOWS/FOOT	SAMPLE ID	ORGANIC VAPORS (ppm)	MOISTURE	SYMBOL	CLASSIFICATION U.S.C.S.	DESCRIPTION/INTERPRETATION
0				B4-5	<1			ML	ALLUVIUM: Moderate yellowish brown (10 YR 5/4), damp, clayey SILT; few fine sands.
10				B4-10	<1	▼		SM	Moderate yellowish brown (10 YR 5/4), moist, silty SAND; few clays. @ 10 feet: groundwater encountered after drilling.
									Total Depth = 16 feet. Groundwater encountered at 10 feet bgs. Composite sample from 1-5, 6-10 foot samples. Backfilled with hydrated bentonite on 1/28/04.
20									
30									
40									

Essentia management services

BORING LOG

Chatsworth Reservoir
Chatsworth, California

PROJECT NO.	DATE	FIGURE
205411002	2/2004	A-4

DATE DRILLED 1/28/04 BORING NO. B2

GROUND ELEVATION 867 ± (MSL) SHEET 1 OF 1

METHOD OF DRILLING Direct Push

DRIVE WEIGHT NA DROP NA

SAMPLED BY RHS LOGGED BY RHS REVIEWED BY WRC

DEPTH (feet)	SAMPLES: Bulk	SAMPLES: Driven	BLOWS/FOOT	SAMPLE ID	ORGANIC VAPORS (ppm)	MOISTURE	SYMBOL	CLASSIFICATION U.S.C.S.	DESCRIPTION/INTERPRETATION
0								ML	ALLUVIUM: Moderate yellowish brown (10 YR 5/4), damp, clayey SILT.
				B2-5	<1				
								CL	Moderate yellowish brown (10 YR 5/4), damp, silty CLAY.
10				B2-10	<1				
									Becomes sandy CLAY.
				B2-15		▼			
									@ 16.5 feet: groundwater encountered after drilling. Quick recharge.
20									Total Depth = 20 feet. Groundwater encountered at 16.5 feet bgs. Composite sample from 1-5, 6-10, 11-15 foot samples. Backfilled with hydrated bentonite on 1/28/04.
30									
40									

Essentia management services

BORING LOG

Chatsworth Reservoir
Chatsworth, California

PROJECT NO.	DATE	FIGURE
205411002	2/2004	A-2

Calscience Environmental Laboratories, Inc.

April 02, 2004

Ken Floom
Essentia Management Service
5000 East Spring Street, Suite 720
Long Beach, CA 90815-1270

Subject: **Calscience Work Order No.:** **04-03-1493**
Client Reference: **LADWP-Chatsworth Resrvoir**

Dear Client:

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 3/24/2004 and analyzed in accordance with the attached chain-of-custody.

Unless otherwise noted, all analytical testing was accomplished in accordance with the guidelines established in our Quality Assurance Program Manual, applicable standard operating procedures, and other related documentation. The original report of any subcontracted analysis is provided herein, and follows the standard Calscience data package. The results in this analytical report are limited to the samples tested and any reproduction thereof must be made in its entirety.

If you have any questions regarding this report, please do not hesitate to contact the undersigned.

Sincerely,

Calscience Environmental
Laboratories, Inc.
Stephen Nowak
Project Manager

Michael J. Crisostomo
Quality Assurance Manager

Calscience Environmental Laboratories, Inc.

Analytical Report

Essentia Management Service
5000 East Spring Street, Suite 720
Long Beach, CA 90815-1270

Date Received: 03/24/04
Work Order No: 04-03-1493
Preparation: N/A
Method: EPA 314.0

Project: LADWP-Chatsworth Resrvoir

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
B5-W	**04-03-1493-1**	**03/24/04**	**Aqueous**	**N/A**	**03/26/04**	**040325L01**

Parameter	Result	RL	DF	Qual	Units
Perchlorate	ND	2.0	1		ug/L

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
B4-W	**04-03-1493-2**	**03/24/04**	**Aqueous**	**N/A**	**03/26/04**	**040325L01**

Parameter	Result	RL	DF	Qual	Units
Perchlorate	ND	2.0	1		ug/L

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
B2-W	**04-03-1493-3**	**03/24/04**	**Aqueous**	**N/A**	**03/26/04**	**040325L01**

Parameter	Result	RL	DF	Qual	Units
Perchlorate	ND	2.0	1		ug/L

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
B3-W	**04-03-1493-4**	**03/24/04**	**Aqueous**	**N/A**	**03/26/04**	**040325L01**

Parameter	Result	RL	DF	Qual	Units
Perchlorate	ND	2.0	1		ug/L

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
Method Blank	**099-05-203-136**	**N/A**	**Aqueous**	**N/A**	**03/25/04**	**040325L01**

Parameter	Result	RL	DF	Qual	Units
Perchlorate	ND	2.0	1		ug/L

RL - Reporting Limit . DF - Dilution Factor . Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Essentia Management Service
5000 East Spring Street, Suite 720
Long Beach, CA 90815-1270

Date Received: 03/24/04
Work Order No: 04-03-1493
Preparation: N/A
Method: EPA 7199

Project: LADWP-Chatsworth Resrvoir

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
B5-W	**04-03-1493-1**	**03/24/04**	**Aqueous**	**N/A**	**03/24/04**	**40324CRL1**

Parameter	Result	RL	DF	Qual	Units
Chromium, Hexavalent	ND	1.0	1		ug/L

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
B4-W	**04-03-1493-2**	**03/24/04**	**Aqueous**	**N/A**	**03/24/04**	**40324CRL1**

Parameter	Result	RL	DF	Qual	Units
Chromium, Hexavalent	ND	1.0	1		ug/L

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
B2-W	**04-03-1493-3**	**03/24/04**	**Aqueous**	**N/A**	**03/24/04**	**40324CRL1**

Parameter	Result	RL	DF	Qual	Units
Chromium, Hexavalent	ND	1.0	1		ug/L

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
B3-W	**04-03-1493-4**	**03/24/04**	**Aqueous**	**N/A**	**03/24/04**	**40324CRL1**

Parameter	Result	RL	DF	Qual	Units
Chromium, Hexavalent	ND	1.0	1		ug/L

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
Method Blank	**099-05-123-1,331**	**N/A**	**Aqueous**	**N/A**	**03/24/04**	**40324CRL1**

Parameter	Result	RL	DF	Qual	Units
Chromium, Hexavalent	ND	1.0	1		ug/L

RL - Reporting Limit . DF - Dilution Factor . Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Essentia Management Service
5000 East Spring Street, Suite 720
Long Beach, CA 90815-1270

Date Received: 03/24/04
Work Order No: 04-03-1493
Preparation: EPA 3510C
Method: TPH - Carbon Range

Project: LADWP-Chatsworth Resrvoir

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
B5-W	**04-03-1493-1**	**03/24/04**	**Aqueous**	**03/25/04**	**03/25/04**	**040325B04**

Parameter	Result	RL	DF	Qual	Units	Parameter	Result	RL	DF	Qual	Units
C7	ND		1		ug/L	C19-C20	ND		1		ug/L
C8	ND		1		ug/L	C21-C22	ND		1		ug/L
C9-C10	ND		1		ug/L	C23-C24	ND		1		ug/L
C11-C12	ND		1		ug/L	C25-C28	ND		1		ug/L
C13-C14	ND		1		ug/L	C29-C32	ND		1		ug/L
C15-C16	ND		1		ug/L	C33-C36	ND		1		ug/L
C17-C18	ND		1		ug/L	C7-C36 Total	ND	1000	1		ug/L

Surrogates:	REC (%)	Control Limits	Qual
Decachlorobiphenyl	86	51-141	

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
B4-W	**04-03-1493-2**	**03/24/04**	**Aqueous**	**03/25/04**	**03/26/04**	**040325B04**

Parameter	Result	RL	DF	Qual	Units	Parameter	Result	RL	DF	Qual	Units
C7	ND		1		ug/L	C19-C20	ND		1		ug/L
C8	ND		1		ug/L	C21-C22	ND		1		ug/L
C9-C10	ND		1		ug/L	C23-C24	ND		1		ug/L
C11-C12	ND		1		ug/L	C25-C28	ND		1		ug/L
C13-C14	ND		1		ug/L	C29-C32	ND		1		ug/L
C15-C16	ND		1		ug/L	C33-C36	ND		1		ug/L
C17-C18	ND		1		ug/L	C7-C36 Total	ND	1000	1		ug/L

Surrogates:	REC (%)	Control Limits	Qual
Decachlorobiphenyl	92	51-141	

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
B2-W	**04-03-1493-3**	**03/24/04**	**Aqueous**	**03/25/04**	**03/26/04**	**040325B04**

Parameter	Result	RL	DF	Qual	Units	Parameter	Result	RL	DF	Qual	Units
C7	ND		1		ug/L	C19-C20	ND		1		ug/L
C8	ND		1		ug/L	C21-C22	ND		1		ug/L
C9-C10	ND		1		ug/L	C23-C24	ND		1		ug/L
C11-C12	ND		1		ug/L	C25-C28	ND		1		ug/L
C13-C14	ND		1		ug/L	C29-C32	ND		1		ug/L
C15-C16	ND		1		ug/L	C33-C36	ND		1		ug/L
C17-C18	ND		1		ug/L	C7-C36 Total	ND	1000	1		ug/L

Surrogates:	REC (%)	Control Limits	Qual
Decachlorobiphenyl	87	51-141	

RL - Reporting Limit . DF - Dilution Factor . Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Essentia Management Service
5000 East Spring Street, Suite 720
Long Beach, CA 90815-1270

Date Received: 03/24/04
Work Order No: 04-03-1493
Preparation: EPA 3510C
Method: TPH - Carbon Range

Project: LADWP-Chatsworth Resrvoir

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
B3-W	**04-03-1493-4**	**03/24/04**	**Aqueous**	**03/25/04**	**03/26/04**	**040325B04**

Parameter	Result	RL	DF	Qual	Units	Parameter	Result	RL	DF	Qual	Units
C7	ND		1		ug/L	C19-C20	ND		1		ug/L
C8	ND		1		ug/L	C21-C22	ND		1		ug/L
C9-C10	ND		1		ug/L	C23-C24	ND		1		ug/L
C11-C12	ND		1		ug/L	C25-C28	ND		1		ug/L
C13-C14	ND		1		ug/L	C29-C32	ND		1		ug/L
C15-C16	ND		1		ug/L	C33-C36	ND		1		ug/L
C17-C18	ND		1		ug/L	C7-C36 Total	ND	1000	1		ug/L

Surrogates:	REC (%)	Control Limits	Qual
Decachlorobiphenyl	91	51-141	

Method Blank	098-03-003-2,046	N/A	Aqueous	03/25/04	03/25/04	040325B04

Parameter	Result	RL	DF	Qual	Units
TPH as Diesel	ND	1000	1		ug/L

Surrogates:	REC (%)	Control Limits	Qual
Decachlorobiphenyl	103	51-141	

RL - Reporting Limit, DF - Dilution Factor, Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Essentia Management Service
5000 East Spring Street, Suite 720
Long Beach, CA 90815-1270

Date Received: 03/24/04
Work Order No: 04-03-1493
Preparation: EPA 3520B
Method: EPA 8082

Project: LADWP-Chatsworth Resrvoir

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
B5-W	04-03-1493-1	03/24/04	Aqueous	03/29/04	03/31/04	040329L09

Parameter	Result	RL	DF	Qual	Units	Parameter	Result	RL	DF	Qual	Units
Aroclor-1016	ND	1.0	1		ug/L	Aroclor-1248	ND	1.0	1		ug/L
Aroclor-1221	ND	1.0	1		ug/L	Aroclor-1254	ND	1.0	1		ug/L
Aroclor-1232	ND	1.0	1		ug/L	Aroclor-1260	ND	1.0	1		ug/L
Aroclor-1242	ND	1.0	1		ug/L	Aroclor-1262	ND	1.0	1		ug/L

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control	Qual
Decachlorobiphenyl	29	50-135	2	2,4,5,6-Tetrachloro-m-Xylene	87	50-135	

B4-W	04-03-1493-2	03/24/04	Aqueous	03/29/04	03/31/04	040329L09

Parameter	Result	RL	DF	Qual	Units	Parameter	Result	RL	DF	Qual	Units
Aroclor-1016	ND	1.0	1		ug/L	Aroclor-1248	ND	1.0	1		ug/L
Aroclor-1221	ND	1.0	1		ug/L	Aroclor-1254	ND	1.0	1		ug/L
Aroclor-1232	ND	1.0	1		ug/L	Aroclor-1260	ND	1.0	1		ug/L
Aroclor-1242	ND	1.0	1		ug/L	Aroclor-1262	ND	1.0	1		ug/L

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control	Qual
Decachlorobiphenyl	36	50-135	2	2,4,5,6-Tetrachloro-m-Xylene	85	50-135	

B2-W	04-03-1493-3	03/24/04	Aqueous	03/29/04	03/31/04	040329L09

Parameter	Result	RL	DF	Qual	Units	Parameter	Result	RL	DF	Qual	Units
Aroclor-1016	ND	1.0	1		ug/L	Aroclor-1248	ND	1.0	1		ug/L
Aroclor-1221	ND	1.0	1		ug/L	Aroclor-1254	ND	1.0	1		ug/L
Aroclor-1232	ND	1.0	1		ug/L	Aroclor-1260	ND	1.0	1		ug/L
Aroclor-1242	ND	1.0	1		ug/L	Aroclor-1262	ND	1.0	1		ug/L

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control	Qual
Decachlorobiphenyl	44	50-135	2	2,4,5,6-Tetrachloro-m-Xylene	92	50-135	

B3-W	04-03-1493-4	03/24/04	Aqueous	03/29/04	03/31/04	040329L09

Parameter	Result	RL	DF	Qual	Units	Parameter	Result	RL	DF	Qual	Units
Aroclor-1016	ND	1.0	1		ug/L	Aroclor-1248	ND	1.0	1		ug/L
Aroclor-1221	ND	1.0	1		ug/L	Aroclor-1254	ND	1.0	1		ug/L
Aroclor-1232	ND	1.0	1		ug/L	Aroclor-1260	ND	1.0	1		ug/L
Aroclor-1242	ND	1.0	1		ug/L	Aroclor-1262	ND	1.0	1		ug/L

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control	Qual
Decachlorobiphenyl	43	50-135	2	2,4,5,6-Tetrachloro-m-Xylene	91	50-135	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Essentia Management Service
5000 East Spring Street, Suite 720
Long Beach, CA 90815-1270

Date Received: 03/24/04
Work Order No: 04-03-1493
Preparation: EPA 3520B
Method: EPA 8082

Project: LADWP-Chatsworth Resrvoir

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
Method Blank	**099-07-010-181**	**N/A**	**Aqueous**	**03/29/04**	**03/31/04**	**040329L09**

Parameter	Result	RL	DF	Qual	Units	Parameter	Result	RL	DF	Qual	Units
Aroclor-1016	ND	1.0	1		ug/L	Aroclor-1248	ND	1.0	1		ug/L
Aroclor-1221	ND	1.0	1		ug/L	Aroclor-1254	ND	1.0	1		ug/L
Aroclor-1232	ND	1.0	1		ug/L	Aroclor-1260	ND	1.0	1		ug/L
Aroclor-1242	ND	1.0	1		ug/L	Aroclor-1262	ND	1.0	1		ug/L

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
Decachlorobiphenyl	100	50-135		2,4,5,6-Tetrachloro-m-Xylene	83	50-135	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Essentia Management Service
5000 East Spring Street, Suite 720
Long Beach, CA 90815-1270

Date Received: 03/24/04
Work Order No: 04-03-1493
Preparation: EPA 3520B
Method: EPA 8270C

Project: LADWP-Chatsworth Resrvoir

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
B5-W	**04-03-1493-1**	**03/24/04**	**Aqueous**	**03/25/04**	**03/30/04**	**040325L06**

Parameter	Result	RL	DF	Qual	Units	Parameter	Result	RL	DF	Qual	Units
N-Nitrosodimethylamine	ND	10	1		ug/L	2,4-Dinitrophenol	ND	50	1		ug/L
Aniline	ND	10	1		ug/L	4-Nitrophenol	ND	10	1		ug/L
Phenol	ND	10	1		ug/L	Dibenzofuran	ND	10	1		ug/L
Bis(2-Chloroethyl) Ether	ND	25	1		ug/L	2,4-Dinitrotoluene	ND	10	1		ug/L
2-Chlorophenol	ND	10	1		ug/L	2,6-Dinitrotoluene	ND	10	1		ug/L
1,3-Dichlorobenzene	ND	10	1		ug/L	Diethyl Phthalate	ND	10	1		ug/L
1,4-Dichlorobenzene	ND	10	1		ug/L	4-Chlorophenyl-Phenyl Ether	ND	10	1		ug/L
Benzyl Alcohol	ND	10	1		ug/L	Fluorene	ND	10	1		ug/L
1,2-Dichlorobenzene	ND	10	1		ug/L	4-Nitroaniline	ND	10	1		ug/L
2-Methylphenol	ND	10	1		ug/L	Azobenzene	ND	10	1		ug/L
Bis(2-Chloroisopropyl) Ether	ND	10	1		ug/L	4,6-Dinitro-2-Methylphenol	ND	50	1		ug/L
3/4-Methylphenol	ND	10	1		ug/L	N-Nitrosodiphenylamine	ND	10	1		ug/L
N-Nitroso-di-n-propylamine	ND	10	1		ug/L	4-Bromophenyl-Phenyl Ether	ND	10	1		ug/L
Hexachloroethane	ND	10	1		ug/L	Hexachlorobenzene	ND	10	1		ug/L
Nitrobenzene	ND	25	1		ug/L	Pentachlorophenol	ND	10	1		ug/L
Isophorone	ND	10	1		ug/L	Phenanthrene	ND	10	1		ug/L
2-Nitrophenol	ND	10	1		ug/L	Anthracene	ND	10	1		ug/L
2,4-Dimethylphenol	ND	10	1		ug/L	Di-n-Butyl Phthalate	ND	10	1		ug/L
Benzoic Acid	ND	50	1		ug/L	Fluoranthene	ND	10	1		ug/L
Bis(2-Chloroethoxy) Methane	ND	10	1		ug/L	Benzidine	ND	50	1		ug/L
2,4-Dichlorophenol	ND	10	1		ug/L	Pyrene	ND	10	1		ug/L
1,2,4-Trichlorobenzene	ND	10	1		ug/L	Pyridine	ND	10	1		ug/L
Naphthalene	ND	10	1		ug/L	Butyl Benzyl Phthalate	ND	10	1		ug/L
4-Chloroaniline	ND	10	1		ug/L	3,3'-Dichlorobenzidine	ND	25	1		ug/L
Hexachloro-1,3-Butadiene	ND	10	1		ug/L	Benzo (a) Anthracene	ND	10	1		ug/L
4-Chloro-3-Methylphenol	ND	10	1		ug/L	Bis(2-Ethylhexyl) Phthalate	ND	10	1		ug/L
2-Methylnaphthalene	ND	10	1		ug/L	Chrysene	ND	10	1		ug/L
Hexachlorocyclopentadiene	ND	25	1		ug/L	Di-n-Octyl Phthalate	ND	10	1		ug/L
2,4,6-Trichlorophenol	ND	10	1		ug/L	Benzo (k) Fluoranthene	ND	10	1		ug/L
2,4,5-Trichlorophenol	ND	10	1		ug/L	Benzo (b) Fluoranthene	ND	10	1		ug/L
2-Chloronaphthalene	ND	10	1		ug/L	Benzo (a) Pyrene	ND	10	1		ug/L
2-Nitroaniline	ND	10	1		ug/L	Benzo (g,h,i) Perylene	ND	10	1		ug/L
Dimethyl Phthalate	ND	10	1		ug/L	Indeno (1,2,3-c,d) Pyrene	ND	10	1		ug/L
Acenaphthylene	ND	10	1		ug/L	Dibenz (a,h) Anthracene	ND	10	1		ug/L
3-Nitroaniline	ND	10	1		ug/L	1-Methylnaphthalene	ND	10	1		ug/L
Acenaphthene	ND	10	1		ug/L						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control	Qual
2-Fluorophenol	76	15-138		Phenol-d6	78	17-141	
Nitrobenzene-d5	90	28-139		2-Fluorobiphenyl	79	33-144	
2,4,6-Tribromophenol	94	32-143		p-Terphenyl-d14	133	23-160	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Essentia Management Service
5000 East Spring Street, Suite 720
Long Beach, CA 90815-1270

Date Received: 03/24/04
Work Order No: 04-03-1493
Preparation: EPA 3520B
Method: EPA 8270C

Project: LADWP-Chatsworth Resrvoir

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
B4-W	**04-03-1493-2**	**03/24/04**	**Aqueous**	**03/25/04**	**03/30/04**	**040325L06**

Parameter	Result	RL	DF	Qual	Units	Parameter	Result	RL	DF	Qual	Units
N-Nitrosodimethylamine	ND	10	1		ug/L	2,4-Dinitrophenol	ND	50	1		ug/L
Aniline	ND	10	1		ug/L	4-Nitrophenol	ND	10	1		ug/L
Phenol	ND	10	1		ug/L	Dibenzofuran	ND	10	1		ug/L
Bis(2-Chloroethyl) Ether	ND	25	1		ug/L	2,4-Dinitrotoluene	ND	10	1		ug/L
2-Chlorophenol	ND	10	1		ug/L	2,6-Dinitrotoluene	ND	10	1		ug/L
1,3-Dichlorobenzene	ND	10	1		ug/L	Diethyl Phthalate	ND	10	1		ug/L
1,4-Dichlorobenzene	ND	10	1		ug/L	4-Chlorophenyl-Phenyl Ether	ND	10	1		ug/L
Benzyl Alcohol	ND	10	1		ug/L	Fluorene	ND	10	1		ug/L
1,2-Dichlorobenzene	ND	10	1		ug/L	4-Nitroaniline	ND	10	1		ug/L
2-Methylphenol	ND	10	1		ug/L	Azobenzene	ND	10	1		ug/L
Bis(2-Chloroisopropyl) Ether	ND	10	1		ug/L	4,6-Dinitro-2-Methylphenol	ND	50	1		ug/L
3/4-Methylphenol	ND	10	1		ug/L	N-Nitrosodiphenylamine	ND	10	1		ug/L
N-Nitroso-di-n-propylamine	ND	10	1		ug/L	4-Bromophenyl-Phenyl Ether	ND	10	1		ug/L
Hexachloroethane	ND	10	1		ug/L	Hexachlorobenzene	ND	10	1		ug/L
Nitrobenzene	ND	25	1		ug/L	Pentachlorophenol	ND	10	1		ug/L
Isophorone	ND	10	1		ug/L	Phenanthrene	ND	10	1		ug/L
2-Nitrophenol	ND	10	1		ug/L	Anthracene	ND	10	1		ug/L
2,4-Dimethylphenol	ND	10	1		ug/L	Di-n-Butyl Phthalate	ND	10	1		ug/L
Benzoic Acid	ND	50	1		ug/L	Fluoranthene	ND	10	1		ug/L
Bis(2-Chloroethoxy) Methane	ND	10	1		ug/L	Benzidine	ND	50	1		ug/L
2,4-Dichlorophenol	ND	10	1		ug/L	Pyrene	ND	10	1		ug/L
1,2,4-Trichlorobenzene	ND	10	1		ug/L	Pyridine	ND	10	1		ug/L
Naphthalene	ND	10	1		ug/L	Butyl Benzyl Phthalate	ND	10	1		ug/L
4-Chloroaniline	ND	10	1		ug/L	3,3'-Dichlorobenzidine	ND	25	1		ug/L
Hexachloro-1,3-Butadiene	ND	10	1		ug/L	Benzo (a) Anthracene	ND	10	1		ug/L
4-Chloro-3-Methylphenol	ND	10	1		ug/L	Bis(2-Ethylhexyl) Phthalate	ND	10	1		ug/L
2-Methylnaphthalene	ND	10	1		ug/L	Chrysene	ND	10	1		ug/L
Hexachlorocyclopentadiene	ND	25	1		ug/L	Di-n-Octyl Phthalate	ND	10	1		ug/L
2,4,6-Trichlorophenol	ND	10	1		ug/L	Benzo (k) Fluoranthene	ND	10	1		ug/L
2,4,5-Trichlorophenol	ND	10	1		ug/L	Benzo (b) Fluoranthene	ND	10	1		ug/L
2-Chloronaphthalene	ND	10	1		ug/L	Benzo (a) Pyrene	ND	10	1		ug/L
2-Nitroaniline	ND	10	1		ug/L	Benzo (g,h,i) Perylene	ND	10	1		ug/L
Dimethyl Phthalate	ND	10	1		ug/L	Indeno (1,2,3-c,d) Pyrene	ND	10	1		ug/L
Acenaphthylene	ND	10	1		ug/L	Dibenz (a,h) Anthracene	ND	10	1		ug/L
3-Nitroaniline	ND	10	1		ug/L	1-Methylnaphthalene	ND	10	1		ug/L
Acenaphthene	ND	10	1		ug/L						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control	Qual
2-Fluorophenol	80	15-138		Phenol-d6	39	17-141	
Nitrobenzene-d5	87	28-139		2-Fluorobiphenyl	88	33-144	
2,4,6-Tribromophenol	82	32-143		p-Terphenyl-d14	128	23-160	

RL - Reporting Limit . DF - Dilution Factor . Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Essentia Management Service
5000 East Spring Street, Suite 720
Long Beach, CA 90815-1270

Date Received: 03/24/04
Work Order No: 04-03-1493
Preparation: EPA 3520B
Method: EPA 8270C

Project: LADWP-Chatsworth Resrvoir

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
B2-W	**04-03-1493-3**	**03/24/04**	**Aqueous**	**03/25/04**	**03/30/04**	**040325L06**

Parameter	Result	RL	DF	Qual	Units	Parameter	Result	RL	DF	Qual	Units
N-Nitrosodimethylamine	ND	12	1.2		ug/L	2,4-Dinitrophenol	ND	60	1.2		ug/L
Aniline	ND	12	1.2		ug/L	4-Nitrophenol	ND	12	1.2		ug/L
Phenol	ND	12	1.2		ug/L	Dibenzofuran	ND	12	1.2		ug/L
Bis(2-Chloroethyl) Ether	ND	30	1.2		ug/L	2,4-Dinitrotoluene	ND	12	1.2		ug/L
2-Chlorophenol	ND	12	1.2		ug/L	2,6-Dinitrotoluene	ND	12	1.2		ug/L
1,3-Dichlorobenzene	ND	12	1.2		ug/L	Diethyl Phthalate	ND	12	1.2		ug/L
1,4-Dichlorobenzene	ND	12	1.2		ug/L	4-Chlorophenyl-Phenyl Ether	ND	12	1.2		ug/L
Benzyl Alcohol	ND	12	1.2		ug/L	Fluorene	ND	12	1.2		ug/L
1,2-Dichlorobenzene	ND	12	1.2		ug/L	4-Nitroaniline	ND	12	1.2		ug/L
2-Methylphenol	ND	12	1.2		ug/L	Azobenzene	ND	12	1.2		ug/L
Bis(2-Chloroisopropyl) Ether	ND	12	1.2		ug/L	4,6-Dinitro-2-Methylphenol	ND	60	1.2		ug/L
3/4-Methylphenol	ND	12	1.2		ug/L	N-Nitrosodiphenylamine	ND	12	1.2		ug/L
N-Nitroso-di-n-propylamine	ND	12	1.2		ug/L	4-Bromophenyl-Phenyl Ether	ND	12	1.2		ug/L
Hexachloroethane	ND	12	1.2		ug/L	Hexachlorobenzene	ND	12	1.2		ug/L
Nitrobenzene	ND	30	1.2		ug/L	Pentachlorophenol	ND	12	1.2		ug/L
Isophorone	ND	12	1.2		ug/L	Phenanthrene	ND	12	1.2		ug/L
2-Nitrophenol	ND	12	1.2		ug/L	Anthracene	ND	12	1.2		ug/L
2,4-Dimethylphenol	ND	12	1.2		ug/L	Di-n-Butyl Phthalate	ND	12	1.2		ug/L
Benzoic Acid	ND	60	1.2		ug/L	Fluoranthene	ND	12	1.2		ug/L
Bis(2-Chloroethoxy) Methane	ND	12	1.2		ug/L	Benzidine	ND	60	1.2		ug/L
2,4-Dichlorophenol	ND	12	1.2		ug/L	Pyrene	ND	12	1.2		ug/L
1,2,4-Trichlorobenzene	ND	12	1.2		ug/L	Pyridine	ND	12	1.2		ug/L
Naphthalene	ND	12	1.2		ug/L	Butyl Benzyl Phthalate	ND	12	1.2		ug/L
4-Chloroaniline	ND	12	1.2		ug/L	3,3'-Dichlorobenzidine	ND	30	1.2		ug/L
Hexachloro-1,3-Butadiene	ND	12	1.2		ug/L	Benzo (a) Anthracene	ND	12	1.2		ug/L
4-Chloro-3-Methylphenol	ND	12	1.2		ug/L	Bis(2-Ethylhexyl) Phthalate	ND	12	1.2		ug/L
2-Methylnaphthalene	ND	12	1.2		ug/L	Chrysene	ND	12	1.2		ug/L
Hexachlorocyclopentadiene	ND	30	1.2		ug/L	Di-n-Octyl Phthalate	ND	12	1.2		ug/L
2,4,6-Trichlorophenol	ND	12	1.2		ug/L	Benzo (k) Fluoranthene	ND	12	1.2		ug/L
2,4,5-Trichlorophenol	ND	12	1.2		ug/L	Benzo (b) Fluoranthene	ND	12	1.2		ug/L
2-Chloronaphthalene	ND	12	1.2		ug/L	Benzo (a) Pyrene	ND	12	1.2		ug/L
2-Nitroaniline	ND	12	1.2		ug/L	Benzo (g,h,i) Perylene	ND	12	1.2		ug/L
Dimethyl Phthalate	ND	12	1.2		ug/L	Indeno (1,2,3-c,d) Pyrene	ND	12	1.2		ug/L
Acenaphthylene	ND	12	1.2		ug/L	Dibenz (a,h) Anthracene	ND	12	1.2		ug/L
3-Nitroaniline	ND	12	1.2		ug/L	1-Methylnaphthalene	ND	12	1.2		ug/L
Acenaphthene	ND	12	1.2		ug/L						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control	Qual
2-Fluorophenol	82	15-138		Phenol-d6	82	17-141	
Nitrobenzene-d5	93	28-139		2-Fluorobiphenyl	87	33-144	
2,4,6-Tribromophenol	90	32-143		p-Terphenyl-d14	124	23-160	

RL - Reporting Limit . DF - Dilution Factor . Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Essentia Management Service
5000 East Spring Street, Suite 720
Long Beach, CA 90815-1270

Date Received: 03/24/04
Work Order No: 04-03-1493
Preparation: EPA 3520B
Method: EPA 8270C

Project: LADWP-Chatsworth Resrvoir

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
B3-W	**04-03-1493-4**	**03/24/04**	**Aqueous**	**03/25/04**	**03/30/04**	**040325L06**

Parameter	Result	RL	DF	Qual	Units	Parameter	Result	RL	DF	Qual	Units
N-Nitrosodimethylamine	ND	12	1.2		ug/L	2,4-Dinitrophenol	ND	60	1.2		ug/L
Aniline	ND	12	1.2		ug/L	4-Nitrophenol	ND	12	1.2		ug/L
Phenol	ND	12	1.2		ug/L	Dibenzofuran	ND	12	1.2		ug/L
Bis(2-Chloroethyl) Ether	ND	30	1.2		ug/L	2,4-Dinitrotoluene	ND	12	1.2		ug/L
2-Chlorophenol	ND	12	1.2		ug/L	2,6-Dinitrotoluene	ND	12	1.2		ug/L
1,3-Dichlorobenzene	ND	12	1.2		ug/L	Diethyl Phthalate	ND	12	1.2		ug/L
1,4-Dichlorobenzene	ND	12	1.2		ug/L	4-Chlorophenyl-Phenyl Ether	ND	12	1.2		ug/L
Benzyl Alcohol	ND	12	1.2		ug/L	Fluorene	ND	12	1.2		ug/L
1,2-Dichlorobenzene	ND	12	1.2		ug/L	4-Nitroaniline	ND	12	1.2		ug/L
2-Methylphenol	ND	12	1.2		ug/L	Azobenzene	ND	12	1.2		ug/L
Bis(2-Chloroisopropyl) Ether	ND	12	1.2		ug/L	4,6-Dinitro-2-Methylphenol	ND	60	1.2		ug/L
3/4-Methylphenol	ND	12	1.2		ug/L	N-Nitrosodiphenylamine	ND	12	1.2		ug/L
N-Nitroso-di-n-propylamine	ND	12	1.2		ug/L	4-Bromophenyl-Phenyl Ether	ND	12	1.2		ug/L
Hexachloroethane	ND	12	1.2		ug/L	Hexachlorobenzene	ND	12	1.2		ug/L
Nitrobenzene	ND	30	1.2		ug/L	Pentachlorophenol	ND	12	1.2		ug/L
Isophorone	ND	12	1.2		ug/L	Phenanthrene	ND	12	1.2		ug/L
2-Nitrophenol	ND	12	1.2		ug/L	Anthracene	ND	12	1.2		ug/L
2,4-Dimethylphenol	ND	12	1.2		ug/L	Di-n-Butyl Phthalate	ND	12	1.2		ug/L
Benzoic Acid	ND	60	1.2		ug/L	Fluoranthene	ND	12	1.2		ug/L
Bis(2-Chloroethoxy) Methane	ND	12	1.2		ug/L	Benzidine	ND	60	1.2		ug/L
2,4-Dichlorophenol	ND	12	1.2		ug/L	Pyrene	ND	12	1.2		ug/L
1,2,4-Trichlorobenzene	ND	12	1.2		ug/L	Pyridine	ND	12	1.2		ug/L
Naphthalene	ND	12	1.2		ug/L	Butyl Benzyl Phthalate	ND	12	1.2		ug/L
4-Chloroaniline	ND	12	1.2		ug/L	3,3'-Dichlorobenzidine	ND	30	1.2		ug/L
Hexachloro-1,3-Butadiene	ND	12	1.2		ug/L	Benzo (a) Anthracene	ND	12	1.2		ug/L
4-Chloro-3-Methylphenol	ND	12	1.2		ug/L	Bis(2-Ethylhexyl) Phthalate	ND	12	1.2		ug/L
2-Methylnaphthalene	ND	12	1.2		ug/L	Chrysene	ND	12	1.2		ug/L
Hexachlorocyclopentadiene	ND	30	1.2		ug/L	Di-n-Octyl Phthalate	ND	12	1.2		ug/L
2,4,6-Trichlorophenol	ND	12	1.2		ug/L	Benzo (k) Fluoranthene	ND	12	1.2		ug/L
2,4,5-Trichlorophenol	ND	12	1.2		ug/L	Benzo (b) Fluoranthene	ND	12	1.2		ug/L
2-Chloronaphthalene	ND	12	1.2		ug/L	Benzo (a) Pyrene	ND	12	1.2		ug/L
2-Nitroaniline	ND	12	1.2		ug/L	Benzo (g,h,i) Perylene	ND	12	1.2		ug/L
Dimethyl Phthalate	ND	12	1.2		ug/L	Indeno (1,2,3-c,d) Pyrene	ND	12	1.2		ug/L
Acenaphthylene	ND	12	1.2		ug/L	Dibenz (a,h) Anthracene	ND	12	1.2		ug/L
3-Nitroaniline	ND	12	1.2		ug/L	1-Methylnaphthalene	ND	12	1.2		ug/L
Acenaphthene	ND	12	1.2		ug/L						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control	Qual
2-Fluorophenol	85	15-138		Phenol-d6	66	17-141	
Nitrobenzene-d5	97	28-139		2-Fluorobiphenyl	82	33-144	
2,4,6-Tribromophenol	93	32-143		p-Terphenyl-d14	126	23-160	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Essentia Management Service
5000 East Spring Street, Suite 720
Long Beach, CA 90815-1270

Date Received: 03/24/04
Work Order No: 04-03-1493
Preparation: EPA 3520B
Method: EPA 8270C

Project: LADWP-Chatsworth Resrvoir

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
Method Blank	**095-01-003-1,446**	**N/A**	**Aqueous**	**03/25/04**	**03/30/04**	**040325L06**

Parameter	Result	RL	DF	Qual	Units	Parameter	Result	RL	DF	Qual	Units
N-Nitrosodimethylamine	ND	10	1		ug/L	2,4-Dinitrophenol	ND	50	1		ug/L
Aniline	ND	10	1		ug/L	4-Nitrophenol	ND	10	1		ug/L
Phenol	ND	10	1		ug/L	Dibenzofuran	ND	10	1		ug/L
Bis(2-Chloroethyl) Ether	ND	25	1		ug/L	2,4-Dinitrotoluene	ND	10	1		ug/L
2-Chlorophenol	ND	10	1		ug/L	2,6-Dinitrotoluene	ND	10	1		ug/L
1,3-Dichlorobenzene	ND	10	1		ug/L	Diethyl Phthalate	ND	10	1		ug/L
1,4-Dichlorobenzene	ND	10	1		ug/L	4-Chlorophenyl-Phenyl Ether	ND	10	1		ug/L
Benzyl Alcohol	ND	10	1		ug/L	Fluorene	ND	10	1		ug/L
1,2-Dichlorobenzene	ND	10	1		ug/L	4-Nitroaniline	ND	10	1		ug/L
2-Methylphenol	ND	10	1		ug/L	Azobenzene	ND	10	1		ug/L
Bis(2-Chloroisopropyl) Ether	ND	10	1		ug/L	4,6-Dinitro-2-Methylphenol	ND	50	1		ug/L
3/4-Methylphenol	ND	10	1		ug/L	N-Nitrosodiphenylamine	ND	10	1		ug/L
N-Nitroso-di-n-propylamine	ND	10	1		ug/L	4-Bromophenyl-Phenyl Ether	ND	10	1		ug/L
Hexachloroethane	ND	10	1		ug/L	Hexachlorobenzene	ND	10	1		ug/L
Nitrobenzene	ND	25	1		ug/L	Pentachlorophenol	ND	10	1		ug/L
Isophorone	ND	10	1		ug/L	Phenanthrene	ND	10	1		ug/L
2-Nitrophenol	ND	10	1		ug/L	Anthracene	ND	10	1		ug/L
2,4-Dimethylphenol	ND	10	1		ug/L	Di-n-Butyl Phthalate	ND	10	1		ug/L
Benzoic Acid	ND	50	1		ug/L	Fluoranthene	ND	10	1		ug/L
Bis(2-Chloroethoxy) Methane	ND	10	1		ug/L	Benzidine	ND	50	1		ug/L
2,4-Dichlorophenol	ND	10	1		ug/L	Pyrene	ND	10	1		ug/L
1,2,4-Trichlorobenzene	ND	10	1		ug/L	Pyridine	ND	10	1		ug/L
Naphthalene	ND	10	1		ug/L	Butyl Benzyl Phthalate	ND	10	1		ug/L
4-Chloroaniline	ND	10	1		ug/L	3,3'-Dichlorobenzidine	ND	25	1		ug/L
Hexachloro-1,3-Butadiene	ND	10	1		ug/L	Benzo (a) Anthracene	ND	10	1		ug/L
4-Chloro-3-Methylphenol	ND	10	1		ug/L	Bis(2-Ethylhexyl) Phthalate	ND	10	1		ug/L
2-Methylnaphthalene	ND	10	1		ug/L	Chrysene	ND	10	1		ug/L
Hexachlorocyclopentadiene	ND	25	1		ug/L	Di-n-Octyl Phthalate	ND	10	1		ug/L
2,4,6-Trichlorophenol	ND	10	1		ug/L	Benzo (k) Fluoranthene	ND	10	1		ug/L
2,4,5-Trichlorophenol	ND	10	1		ug/L	Benzo (b) Fluoranthene	ND	10	1		ug/L
2-Chloronaphthalene	ND	10	1		ug/L	Benzo (a) Pyrene	ND	10	1		ug/L
2-Nitroaniline	ND	10	1		ug/L	Benzo (g,h,i) Perylene	ND	10	1		ug/L
Dimethyl Phthalate	ND	10	1		ug/L	Indeno (1,2,3-c,d) Pyrene	ND	10	1		ug/L
Acenaphthylene	ND	10	1		ug/L	Dibenz (a,h) Anthracene	ND	10	1		ug/L
3-Nitroaniline	ND	10	1		ug/L	1-Methylnaphthalene	ND	10	1		ug/L
Acenaphthene	ND	10	1		ug/L						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control	Qual
2-Fluorophenol	66	15-138		Phenol-d6	69	17-141	
Nitrobenzene-d5	78	28-139		2-Fluorobiphenyl	68	33-144	
2,4,6-Tribromophenol	86	32-143		p-Terphenyl-d14	128	23-160	

RL - Reporting Limit . DF - Dilution Factor . Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Essentia Management Service
5000 East Spring Street, Suite 720
Long Beach, CA 90815-1270

Date Received: 03/24/04
Work Order No: 04-03-1493
Preparation: EPA 3520B
Method: GC/MS Isotope Dilution

Project: LADWP-Chatsworth Resrvoir

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
B5-W	**04-03-1493-1**	**03/24/04**	**Aqueous**	**03/25/04**	**03/30/04**	**040325L06**

Parameter	Result	RL	DF	Qual	Units
1,4-Dioxane	ND	2.0	1		ug/L

Surrogates:	REC (%)	Control Limits	Qual
Nitrobenzene-d5	90	56-123	

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
B4-W	**04-03-1493-2**	**03/24/04**	**Aqueous**	**03/25/04**	**03/30/04**	**040325L06**

Parameter	Result	RL	DF	Qual	Units
1,4-Dioxane	ND	2.0	1		ug/L

Surrogates:	REC (%)	Control Limits	Qual
Nitrobenzene-d5	87	56-123	

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
B2-W	**04-03-1493-3**	**03/24/04**	**Aqueous**	**03/25/04**	**03/30/04**	**040325L06**

Parameter	Result	RL	DF	Qual	Units
1,4-Dioxane	ND	2.0	1		ug/L

Surrogates:	REC (%)	Control Limits	Qual
Nitrobenzene-d5	93	56-123	

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
B3-W	**04-03-1493-4**	**03/24/04**	**Aqueous**	**03/25/04**	**03/30/04**	**040325L06**

Parameter	Result	RL	DF	Qual	Units
1,4-Dioxane	ND	2.0	1		ug/L

Surrogates:	REC (%)	Control Limits	Qual
Nitrobenzene-d5	97	56-123	

RL - Reporting Limit . DF - Dilution Factor . Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Essentia Management Service
5000 East Spring Street, Suite 720
Long Beach, CA 90815-1270

Date Received: 03/24/04
Work Order No: 04-03-1493
Preparation: EPA 3520B
Method: GC/MS Isotope Dilution

Project: LADWP-Chatsworth Resrvoir

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
Method Blank	**099-09-004-212**	**N/A**	**Aqueous**	**03/25/04**	**03/30/04**	**040325L06**

Parameter	Result	RL	DF	Qual	Units
1,4-Dioxane	ND	2.0	1		ug/L

Surrogates	REC (%)	Control Limits	Qual
Nitrobenzene-d5	78	56-123	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Essentia Management Service
5000 East Spring Street, Suite 720
Long Beach, CA 90815-1270

Date Received: 03/24/04
Work Order No: 04-03-1493
Preparation: N/A
Method: EPA 314.0

Project: LADWP-Chatsworth Resrvoir

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
04-03-1398-1	**Aqueous**	**IC 6**	**N/A**	**03/26/04**	**040325S01**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Perchlorate	111	104	80-120	6	0-15	

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Essentia Management Service
5000 East Spring Street, Suite 720
Long Beach, CA 90815-1270

Project: LADWP-Chatsworth Resrvoir

Date Received: N/A
Work Order No: 04-03-1493
Preparation: N/A
Method: EPA 314.0

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-05-203-136	Aqueous	IC 6	N/A	03/25/04	040325L01

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Perchlorate	108	113	85-115	5	0-15	

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Essentia Management Service
5000 East Spring Street, Suite 720
Long Beach, CA 90815-1270

Date Received: 03/24/04
Work Order No: 04-03-1493
Preparation: N/A
Method: EPA 7199

Project: LADWP-Chatsworth Resrvoir

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
04-03-1445-3	**Aqueous**	**IC 5**	**N/A**	**03/24/04**	**40324CRS1**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Chromium, Hexavalent	97	99	70-130	0	0-25	

Calscience Environmental Laboratories, Inc.

Quality Control - Laboratory Control Sample

Essentia Management Service
5000 East Spring Street, Suite 720
Long Beach, CA 90815-1270

Project: LADWP-Chatsworth Resrvoir

Date Received: N/A
Work Order No: 04-03-1493
Preparation: N/A
Method: EPA 7199

Quality Control Sample ID	Matrix	Instrument	Date Analyzed	Lab File ID	LCS Batch Number
099-05-123-1,331	Aqueous	IC 5	03/24/04	NONE	40324CRL1

Parameter	Conc Added	Conc Recovered	%Rec	%Rec CL	Qualifiers
Chromium, Hexavalent	10	10	102	80-120	

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Essentia Management Service
5000 East Spring Street, Suite 720
Long Beach, CA 90815-1270

Project: LADWP-Chatsworth Resrvoir

Date Received: N/A
Work Order No: 04-03-1493
Preparation: EPA 3510C
Method: TPH - Carbon Range

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
098-03-003-2,046	**Aqueous**	**GC 23**	**03/25/04**	**03/25/04**	**040325B04**

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
TPH as Diesel	93	98	60-132	5	0-11	

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Essentia Management Service
5000 East Spring Street, Suite 720
Long Beach, CA 90815-1270

Project: LADWP-Chatsworth Resrvoir

Date Received: N/A
Work Order No: 04-03-1493
Preparation: EPA 3520B
Method: EPA 8082

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-07-010-181	**Aqueous**	**GC 17**	**03/29/04**	**03/31/04**	**040329L09**

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Aroclor-1260	126	121	50-135	4	0-25	

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Essentia Management Service
5000 East Spring Street, Suite 720
Long Beach, CA 90815-1270

Project: LADWP-Chatsworth Resrvoir

Date Received: N/A
Work Order No: 04-03-1493
Preparation: EPA 3520B
Method: EPA 8270C

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
095-01-003-1,446	**Aqueous**	**GC/MS GG**	**03/25/04**	**03/30/04**	**040325L06**

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Phenol	81	83	4-118	2	0-18	
2-Chlorophenol	65	64	35-101	1	0-21	
1,4-Dichlorobenzene	65	65	39-93	0	0-45	
N-Nitroso-di-n-propylamine	61	59	33-123	3	0-38	
1,2,4-Trichlorobenzene	78	79	47-101	1	0-35	
4-Chloro-3-Methylphenol	86	83	0-295	3	0-30	
Acenaphthene	102	101	31-133	1	0-31	
4-Nitrophenol	81	72	1-143	12	0-44	
2,4-Dinitrotoluene	110	105	16-166	5	0-49	
Pentachlorophenol	86	94	1-154	9	0-53	
Pyrene	92	87	15-159	6	0-47	

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Essentia Management Service
5000 East Spring Street, Suite 720
Long Beach, CA 90815-1270

Project: LADWP-Chatsworth Resrvoir

Date Received: N/A
Work Order No: 04-03-1493
Preparation: EPA 3520B
Method: GC/MS Isotope Dilution

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-09-004-212	Aqueous	GC/MS GG	03/25/04	03/30/04	040325L06

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
1,4-Dioxane	71	71	50-130	0	0-20	

Calscience Environmental Laboratories, Inc.

Glossary of Terms and Qualifiers

Work Order Number: 04-03-1493

Qualifier	Definition
2	Surrogate spike compound was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
ND	Not detected at indicated reporting limit.

Calscience Environmental Laboratories, Inc.

WORK ORDER #: 04 - 03 - 1493

Cooler 1 of 1

SAMPLE RECEIPT FORM

CLIENT: N + M DATE: 3/24/04

TEMPERATURE – SAMPLES RECEIVED BY:

CALSCIENCE COURIER:

_____ Chilled, cooler with temperature blank provided.
_____ Chilled, cooler without temperature blank.
_____ Chilled and placed in cooler with wet ice.
_____ Ambient and placed in cooler with wet ice.
_____ Ambient temperature.
_____ °C Temperature blank.

LABORATORY (Other than Calscience Courier):

_____ °C Temperature blank.
3.6 °C IR thermometer.
_____ Ambient temperature.

Initial: NC

CUSTODY SEAL INTACT:

Sample(s): _____ Cooler: _____ No (Not Intact) : _____ Not Applicable (N/A): ✓

Initial: NC

SAMPLE CONDITION:

	Yes	No	N/A
Chain-Of-Custody document(s) received with samples	✓		
Sample container label(s) consistent with custody papers	✓		
Sample container(s) intact and good condition	✓		
Correct containers for analyses requested	✓ see comments	✓	
Proper preservation noted on sample label(s)	✓		see comments
VOA vial(s) free of headspace.	✓		
Tedlar bag(s) free of condensation			✓

Initial: NC

COMMENTS:

250mL unpreserved plastic bottles received for Total Coliform analysis - transferred to correct containers upon receipt

Ninyo & Moore

475 Goddard, Suite 200
Irvine, CA 92618

Tel: (949) 753-7070
Fax (949) 753-7071

PROJECT INFORMATION

PROJECT NAME	LADWP – Chatsworth Reservoir
ADDRESS	Chatsworth Reservoir
CITY/STATE	Chatsworth, California
Global ID	Log Code:
Project Manager	Ken Floom
Project Number	47278-4
SAMPLED BY	Krista Brodersen – Ninyo & Moore

Lab:
Calscience Laboratories
7440 Lincoln Way
Garden Grove, CA 92841
(714) 895-5494

FIELD POINT NAME	SAMPLE ID	NUMBER OF CONTAINERS	SAMPLE DATE	SAMPLE TIME	SAMPLE MATRIX	CONTAINER TYPE	PRESERV	1,4-Dioxane by GC/MS Isotope Dilution	Hexavalent Chromium 7199/3060A	Total Extractable Petroleum Hydrocarbons Method SW8015M	TPHcc 8015m	PCBs 8082	SVOCs 8270C	Perchlorate 314	REMARKS
	B5-W	1/1/1/1	3-24-04	8:11	Water	Liter/500 mL Poly/VOA/Liter/Liter	None	X	X	X	X	X	X	X	1493
	B4-W			9:31											
	B2-W			12:45											
	B3-W			13:35											
Total No. of Samples:															

Comments
Fax results to: Ken Floom at (562) 740-1070
E-mail final report to: ken_floom@essentia-llc.com

Relinquished By	Date/Time	Received By	Date/Time
Krista Brodersen	3-24-04 1700		
Relinquished By	Date/Time	Received By	Date/Time
Relinquished By	Date/Time	Received By	Date/Time
			3/24/04 1706

TURN AROUND TIME	SAMPLE INTEGRITY	REPORT FORMAT
☐ 24 HOUR	☐ SAMPLES INTACT?	☐ SARWQCB and GEOTRACKER
☐ 48 HOUR	☐ SAMPLES CHILLED	☐ SAN DIEGO HMMD
☐ 3 DAY	☐ SECURITY TAPE INTACT?	☐ NORMAL
☐ 5-DAY	☐ NO SECURITY TAPE USED	☐ OTHER:_____
☐ 14 DAY		
☒ Other _Normal_____		

SILLIKER, Inc.
Southern California Laboratory
1139 East Dominguez, Suite I
Carson, CA 90746
310/ 637 7121 Fax 310/ 637 2953

CERTIFICATE OF ANALYSIS

COA No:	SCA-30103167-0
Supersedes:	None
COA Date	3/28/04
Page 1 of 1	

TO:
Mr. Bob Stearns
Project Manager
Calscience Environmental Laboratories
7440 Lincoln Way
Garden Grove, CA 92841-1432

Received From:	Garden Grove, CA
Received Date:	3/24/04
P.O.# / ID:	04-03-1493
Location of Test: (except where noted)	Carson, CA

Analytical Results

Desc. 1:	Sample ID: B5-W	**Desc. 4:**	Matrix:WW	**Laboratory ID:**	300575490
Desc. 2:	Date: 03/24/04	**Desc. 5:**	Project #: 04-03-1493	**Condition Rec'd:**	NORMAL
Desc. 3:	Time: 8:11			**Temp Rec'd (°C):**	7.2

Analyte	Result	Units	Method Reference	Test Date	Loc.
Coliforms - 5 tube MPN	<20	/100mL	SMEWW 20th, 9221A-D	3/26/04	

Desc. 1:	Sample ID: B4-W	**Desc. 4:**	Matrix:WW	**Laboratory ID:**	300575491
Desc. 2:	Date: 03/24/04	**Desc. 5:**	Project #: 04-03-1493	**Condition Rec'd:**	NORMAL
Desc. 3:	Time: 9:31			**Temp Rec'd (°C):**	7.2

Analyte	Result	Units	Method Reference	Test Date	Loc.
Coliforms - 5 tube MPN	<20	/100mL	SMEWW 20th, 9221A-D	3/26/04	

Desc. 1:	Sample ID: B2-W	**Desc. 4:**	Matrix:WW	**Laboratory ID:**	300575492
Desc. 2:	Date: 03/24/04	**Desc. 5:**	Project #: 04-03-1493	**Condition Rec'd:**	NORMAL
Desc. 3:	Time: 12:45			**Temp Rec'd (°C):**	7.2

Analyte	Result	Units	Method Reference	Test Date	Loc.
Coliforms - 5 tube MPN	80	/100mL	SMEWW 20th, 9221A-D	3/28/04	

Desc. 1:	Sample ID: B3-W	**Desc. 4:**	Matrix:WW	**Laboratory ID:**	300575493
Desc. 2:	Date: 03/24/04	**Desc. 5:**	Project #: 04-03-1493	**Condition Rec'd:**	NORMAL
Desc. 3:	Time: 13:35			**Temp Rec'd (°C):**	7.2

Analyte	Result	Units	Method Reference	Test Date	Loc.
Coliforms - 5 tube MPN	<20	/100mL	SMEWW 20th, 9221A-D	3/26/04	

Vidhya Gangar, M.S. — Laboratory Director

ENERGY LABORATORIES, INC. *2393 Salt Creek Highway (82601)* P.O. Box 3258 * Casper, WY 82602
Toll Free 888.235.0515 * 307.235.0515 * Fax 307.234.1639 * casper@energylab.com

LABORATORY ANALYTICAL REPORT

Client: Essentia Management Services
Project: LADWP-Chatsworth Reservoir 47278-4
Lab ID: C04020172-001
Client Sample ID: B1

Report Date: 05/21/04
Collection Date: 01/28/04 12:25
Date Received: 02/04/04
Matrix: Soil

Analyses	Result	Units	Qual	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
Moisture	10.3	%		0.1		USDA26	02/05/04 17:00 / lmh
RADIONUCLIDES - GAMMA							
Cesium 137	ND	pCi/g-dry		2.0		E901.1	02/09/04 11:34 / db
Potassium 40	21.3	pCi/g-dry		2.0		E901.1	02/09/04 11:34 / db
Potassium 40 precision (±)	1.4	pCi/g-dry				E901.1	02/09/04 11:34 / db
RADIONUCLIDES - TOTAL							
Thorium 228	0.6	pCi/g-dry		0.2		E907.0	05/14/04 10:30 / ph
Thorium 228 precision (±)	0.1	pCi/g-dry				E907.0	05/14/04 10:30 / ph
Thorium 230	0.5	pCi/g-dry		0.2		E907.0	05/14/04 10:30 / ph
Thorium 230 precision (±)	0.1	pCi/g-dry				E907.0	05/14/04 10:30 / ph
Thorium 232	0.4	pCi/g-dry		0.2		E907.0	05/14/04 10:30 / ph
Thorium 232 precision (±)	0.1	pCi/g-dry				E907.0	05/14/04 10:30 / ph
Uranium	2.5	mg/kg-dry		0.5		SW6020	05/14/04 19:54 / bws
Strontium 90	ND	pCi/g-dry		0.600		E905.0	02/10/04 17:00 / db

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

ENERGY LABORATORIES, INC. *2393 Salt Creek Highway (82601)* P.O. Box 3258 * Casper, WY 82602
Toll Free 888.235.0515 * 307.235.0515 * Fax 307.234.1639 * casper@energylab.com

LABORATORY ANALYTICAL REPORT

Client: Essentia Management Services
Project: LADWP-Chatsworth Reservoir 47278-4
Lab ID: C04020172-002
Client Sample ID: B2

Report Date: 05/21/04
Collection Date: 01/28/04 13:20
Date Received: 02/04/04
Matrix: Soil

Analyses	Result	Units	Qual	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
Moisture	19.3	%		0.1		USDA26	02/05/04 17:00 / lmh
RADIONUCLIDES - GAMMA							
Cesium 137	ND	pCi/g-dry		2.0		E901.1	02/09/04 11:34 / db
Potassium 40	16.6	pCi/g-dry		2.0		E901.1	02/09/04 11:34 / db
Potassium 40 precision (±)	1.1	pCi/g-dry				E901.1	02/09/04 11:34 / db
RADIONUCLIDES - TOTAL							
Thorium 228	0.8	pCi/g-dry		0.2		E907.0	05/14/04 10:30 / ph
Thorium 228 precision (±)	0.1	pCi/g-dry				E907.0	05/14/04 10:30 / ph
Thorium 230	1.1	pCi/g-dry		0.2		E907.0	05/14/04 10:30 / ph
Thorium 230 precision (±)	0.2	pCi/g-dry				E907.0	05/14/04 10:30 / ph
Thorium 232	0.6	pCi/g-dry		0.2		E907.0	05/14/04 10:30 / ph
Thorium 232 precision (±)	0.1	pCi/g-dry				E907.0	05/14/04 10:30 / ph
Uranium	4.1	mg/kg-dry		0.5		SW6020	05/14/04 20:49 / bws
Strontium 90	ND	pCi/g-dry		0.600		E905.0	02/10/04 17:00 / db

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

ENERGY LABORATORIES, INC. *2393 Salt Creek Highway (82601)* P.O. Box 3258 * Casper, WY 82602
Toll Free 888.235.0515 * 307.235.0515 * Fax 307.234.1639 * casper@energylab.com

LABORATORY ANALYTICAL REPORT

Client: Essentia Management Services
Project: LADWP-Chatsworth Reservoir 47278-4
Lab ID: C04020172-003
Client Sample ID: B3

Report Date: 05/21/04
Collection Date: 01/28/04 14:15
Date Received: 02/04/04
Matrix: Soil

Analyses	Result	Units	Qual	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
Moisture	19.9	%		0.1		USDA26	02/05/04 17:00 / lmh
RADIONUCLIDES - GAMMA							
Cesium 137	ND	pCi/g-dry		2.0		E901.1	02/09/04 11:34 / db
Potassium 40	17.9	pCi/g-dry		2.0		E901.1	02/09/04 11:34 / db
Potassium 40 precision (±)	1.2	pCi/g-dry				E901.1	02/09/04 11:34 / db
RADIONUCLIDES - TOTAL							
Thorium 228	1.0	pCi/g-dry		0.2		E907.0	05/14/04 10:30 / ph
Thorium 228 precision (±)	0.2	pCi/g-dry				E907.0	05/14/04 10:30 / ph
Thorium 230	1.2	pCi/g-dry		0.2		E907.0	05/14/04 10:30 / ph
Thorium 230 precision (±)	0.2	pCi/g-dry				E907.0	05/14/04 10:30 / ph
Thorium 232	0.9	pCi/g-dry		0.2		E907.0	05/14/04 10:30 / ph
Thorium 232 precision (±)	0.1	pCi/g-dry				E907.0	05/14/04 10:30 / ph
Uranium	4.9	mg/kg-dry		0.5		SW6020	05/14/04 20:56 / bws
Strontium 90	ND	pCi/g-dry		0.600		E905.0	02/10/04 17:00 / db

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

ENERGY LABORATORIES, INC. *2393 Salt Creek Highway (82601)* P.O. Box 3258 * Casper, WY 82602
Toll Free 888.235.0515 * 307.235.0515 * Fax 307.234.1639 * casper@energylab.com

LABORATORY ANALYTICAL REPORT

Client: Essentia Management Services
Project: LADWP-Chatsworth Reservoir 47278-4
Lab ID: C04020172-004
Client Sample ID: B4

Report Date: 05/21/04
Collection Date: 01/28/04 11:20
Date Received: 02/04/04
Matrix: Soil

Analyses	Result	Units	Qual	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
Moisture	13.8	%		0.1		USDA26	02/05/04 17:00 / lmh
RADIONUCLIDES - GAMMA							
Cesium 137	ND	pCi/g-dry		2.0		E901.1	02/09/04 11:34 / db
Potassium 40	23.5	pCi/g-dry		2.0		E901.1	02/09/04 11:34 / db
Potassium 40 precision (±)	1.3	pCi/g-dry				E901.1	02/09/04 11:34 / db
RADIONUCLIDES - TOTAL							
Thorium 228	0.7	pCi/g-dry		0.2		E907.0	05/14/04 10:30 / ph
Thorium 228 precision (±)	0.1	pCi/g-dry				E907.0	05/14/04 10:30 / ph
Thorium 230	0.3	pCi/g-dry		0.2		E907.0	05/14/04 10:30 / ph
Thorium 230 precision (±)	0.09	pCi/g-dry				E907.0	05/14/04 10:30 / ph
Thorium 232	0.6	pCi/g-dry		0.2		E907.0	05/14/04 10:30 / ph
Thorium 232 precision (±)	0.1	pCi/g-dry				E907.0	05/14/04 10:30 / ph
Uranium	1.2	mg/kg-dry		0.5		SW6020	05/14/04 21:04 / bws
Strontium 90	ND	pCi/g-dry		0.600		E905.0	02/10/04 17:00 / db

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

ENERGY LABORATORIES, INC. *2393 Salt Creek Highway (82601)* P.O. Box 3258 * Casper, WY 82602
Toll Free 888.235.0515 * 307.235.0515 * Fax 307.234.1639 * casper@energylab.com

LABORATORY ANALYTICAL REPORT

Client: Essentia Management Services
Project: LADWP-Chatsworth Reservoir 47278-4
Lab ID: C04020172-005
Client Sample ID: B5

Report Date: 05/21/04
Collection Date: 01/28/04 10:15
Date Received: 02/04/04
Matrix: Soil

Analyses	Result	Units	Qual	MCL/ RL QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES						
Moisture	16.7	%		0.1	USDA26	02/05/04 17:00 / lmh
RADIONUCLIDES - GAMMA						
Cesium 137	ND	pCi/g-dry		2.0	E901.1	02/09/04 11:34 / db
Potassium 40	19.3	pCi/g-dry		2.0	E901.1	02/09/04 11:34 / db
Potassium 40 precision (±)	1.2	pCi/g-dry			E901.1	02/09/04 11:34 / db
RADIONUCLIDES - TOTAL						
Thorium 228	0.9	pCi/g-dry		0.2	E907.0	05/14/04 10:30 / ph
Thorium 228 precision (±)	0.2	pCi/g-dry			E907.0	05/14/04 10:30 / ph
Thorium 230	0.4	pCi/g-dry		0.2	E907.0	05/14/04 10:30 / ph
Thorium 230 precision (±)	0.1	pCi/g-dry			E907.0	05/14/04 10:30 / ph
Thorium 232	0.7	pCi/g-dry		0.2	E907.0	05/14/04 10:30 / ph
Thorium 232 precision (±)	0.1	pCi/g-dry			E907.0	05/14/04 10:30 / ph
Uranium	1.9	mg/kg-dry		0.5	SW6020	05/14/04 21:11 / bws
Strontium 90	ND	pCi/g-dry		0.600	E905.0	02/10/04 17:00 / db

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

ENERGY LABORATORIES, INC. *2393 Salt Creek Highway (82601)* P.O. Box 3258 * Casper, WY 82602
Toll Free 888.235.0515 * 307.235.0515 * Fax 307.234.1639 * casper@energylab.com

LABORATORY ANALYTICAL REPORT

Client: Essentia Management Services
Project: LADWP-Chatsworth Reservoir 47278-4
Lab ID: C04020172-006
Client Sample ID: B6

Report Date: 05/21/04
Collection Date: 01/28/04 09:15
Date Received: 02/04/04
Matrix: Soil

Analyses	Result	Units	Qual	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
Moisture	12.7	%		0.1		USDA26	02/05/04 17:00 / lmh
RADIONUCLIDES - GAMMA							
Cesium 137	ND	pCi/g-dry		2.0		E901.1	02/09/04 11:34 / db
Potassium 40	23.5	pCi/g-dry		2.0		E901.1	02/09/04 11:34 / db
Potassium 40 precision (±)	1.3	pCi/g-dry				E901.1	02/09/04 11:34 / db
RADIONUCLIDES - TOTAL							
Thorium 228	0.8	pCi/g-dry		0.2		E907.0	05/14/04 10:30 / ph
Thorium 228 precision (±)	0.1	pCi/g-dry				E907.0	05/14/04 10:30 / ph
Thorium 230	0.3	pCi/g-dry		0.2		E907.0	05/14/04 10:30 / ph
Thorium 230 precision (±)	0.09	pCi/g-dry				E907.0	05/14/04 10:30 / ph
Thorium 232	0.7	pCi/g-dry		0.2		E907.0	05/14/04 10:30 / ph
Thorium 232 precision (±)	0.1	pCi/g-dry				E907.0	05/14/04 10:30 / ph
Uranium	1.3	mg/kg-dry		0.5		SW6020	05/14/04 21:18 / bws
Strontium 90	ND	pCi/g-dry		0.600		E905.0	02/10/04 17:00 / db

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

FRONTIER
ANALYTICAL LABORATORY

February 9, 2004

FAL Project ID: 2444

Mr. Ken Floom
Essentia Management Services
5000 E. Spring Street, Suite 720
Long Beach, CA 90815

Dear Mr. Floom,

Enclosed are the results for Frontier Analytical Laboratory project **2444**. This corresponds to your project LADWP #47278-4. The six soil samples received on 2/2/04 were extracted and analyzed by EPA Method 1613 for tetra through octa chlorinated dibenzo dioxins and dibenzo furans. Essentia Management Services requested Frontier Analytical Laboratory's standard turnaround time of ten business days for project **2444**. Frontier Analytical Laboratory successfully fulfilled this request.

The following report consists of an Analytical Data section and a Sample Receipt section. The Analytical Data section contains the project-sample tracking log, qualifier reference guide, ML/MDL form and the analytical results. The Sample Receipt section contains the chain of custody, sample login form and sample photo.

If you have any questions regarding project **2444**, please feel free to contact me at (916) 934-0900. Thank you for choosing Frontier Analytical Laboratory for your analytical testing needs.

Sincerely,

Bradley B. Silverbush
Director of Operations

FRONTIER ANALYTICAL LABORATORY
5172 Hillsdale Circle · El Dorado Hills, CA 95762
Tel (916) 934-0900 · Fax (916) 934-0999
dioxin@frontieranalytical.com

Frontier Analytical Laboratory

Sample Tracking Log

FAL Project ID: 2444

Received on: 02/02/2004 Project Due: 02/24/2004 Storage: R1

FAL Sample ID	Dup	Client Project ID	Client Sample ID	Requested Method	Matrix	Sampling Date	Sampling Time	Hold Time Due Date
2444-001-SA	2	LADWP - 47278-4	B1	EPA 1613 D/F	Soil	01/28/2004	12:25 pm	01/27/2005
2444-002-SA	2	LADWP - 47278-4	B2	EPA 1613 D/F	Soil	01/28/2004	01:20 pm	01/27/2005
2444-003-SA	0	LADWP - 47278-4	B3	EPA 1613 D/F	Soil	01/28/2004	02:15 pm	01/27/2005
2444-004-SA	2	LADWP - 47278-4	B4	EPA 1613 D/F	Soil	01/28/2004	11:20 am	01/27/2005
2444-005-SA	2	LADWP - 47278-4	B5	EPA 1613 D/F	Soil	01/28/2004	10:15 am	01/27/2005
2444-006-SA	2	LADWP - 47278-4	B6	EPA 1613 D/F	Soil	01/28/2004	09:15 am	01/27/2005

5172 Hillsdale Circle • El Dorado Hills, CA 95762 • Tel (916) 934-0900 • Fax (916) 934-0999 • www.frontieranalytical.com

FRONTIER
ANALYTICAL LABORATORY

Qualifier Reference Guide

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B	Analyte is present in Method Blank
C	Chemical Interference
D	Presence of Diphenyl Ethers
E	Analyte concentration is above calibration range
F	Analyte confirmation on secondary column
J‡	Analyte concentration is below calibration range
M	Maximum possible concentration
NP	Not Provided
S	Sample acceptance criteria not met
X	Matrix interferences
*	Result taken from dilution or reinjection
-	Analyte Not Detected

‡ "J" values are equivalent to DNQ (detected but not quantified) for California Toxics Rule (CTR)/National Pollutant Discharge Elimination System (NPDES) samples

5172 Hillsdale Circle • El Dorado Hills, CA 95762 • Tel (916) 934-0900 • Fax (916) 934-0999 • www.frontieranalytical.com

EPA Method 1613/8290 Solid MDL
(Soxhlet/SDS Extraction)

FRONTIER ANALYTICAL LABORATORY

Analyte	ML	MDL
2,3,7,8-TCDD	0.500	0.132
1,2,3,7,8-PeCDD	2.50	0.213
1,2,3,4,7,8-HxCDD	2.50	0.321
1,2,3,6,7,8-HxCDD	2.50	0.364
1,2,3,7,8,9-HxCDD	2.50	0.315
1,2,3,4,6,7,8-HpCDD	2.50	0.328
OCDD	5.00	0.832
2,3,7,8-TCDF	0.500	0.108
1,2,3,7,8-PeCDF	2.50	0.252
2,3,4,7,8-PeCDF	2.50	0.236
1,2,3,4,7,8-HxCDF	2.50	0.101
1,2,3,6,7,8-HxCDF	2.50	0.0991
1,2,3,7,8,9-HxCDF	2.50	0.101
2,3,4,6,7,8-HxCDF	2.50	0.122
1,2,3,4,6,7,8-HpCDF	2.50	0.140
1,2,3,4,7,8,9-HpCDF	2.50	0.168
OCDF	5.00	0.594

Project **2330**, Extracted 11/25/03; analyzed 12/01/03. Based on 10g sample, pg/g.

5172 Hillsdale Circle • El Dorado Hills, CA 95762 • Tel (916) 934-0900 • Fax (916) 934-0999 • www.frontieranalytical.com

EPA Method 1613
PCDD/F

FRONTIER ANALYTICAL LABORATORY

FAL ID: 2444-001-MB
Client ID: Method Blank
Matrix: Soil
Batch No: X0171

Date Extracted: 02-03-2004
Date Received: NA
Amount: 10.00 g

ICal: PCDDFAL1-1-19-04
GC Column: DB5
Units: pg/g

Acquired: 02-05-2004
WHO TEQ: 0.00

Compound	Conc	DL	Qual	WHO Tox	Compound	Conc	DL	Qual	#Hom
2,3,7,8-TCDD	-	0.122		-					
1,2,3,7,8-PeCDD	-	0.145		-					
1,2,3,4,7,8-HxCDD	-	0.213		-					
1,2,3,6,7,8-HxCDD	-	0.231		-	Total Tetra-Dioxins	-	0.122		0
1,2,3,7,8,9-HxCDD	-	0.196		-	Total Penta-Dioxins	-	0.145		0
1,2,3,4,6,7,8-HpCDD	-	0.272		-	Total Hexa-Dioxins	-	0.231		0
OCDD	-	0.830		-	Total Hepta-Dioxins	-	0.272		0
2,3,7,8-TCDF	-	0.109		-					
1,2,3,7,8-PeCDF	-	0.133		-					
2,3,4,7,8-PeCDF	-	0.128		-					
1,2,3,4,7,8-HxCDF	-	0.100		-					
1,2,3,6,7,8-HxCDF	-	0.124		-					
2,3,4,6,7,8-HxCDF	-	0.132		-					
1,2,3,7,8,9-HxCDF	-	0.156		-	Total Tetra-Furans	-	0.109		0
1,2,3,4,6,7,8-HpCDF	-	0.128		-	Total Penta-Furans	-	0.133		0
1,2,3,4,7,8,9-HpCDF	-	0.140		-	Total Hexa-Furans	-	0.156		0
OCDF	-	0.344		-	Total Hepta-Furans	-	0.140		0

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	102	25.0 - 164	
13C-1,2,3,7,8-PeCDD	87.5	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	108	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	118	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	102	23.0 - 140	
13C-OCDD	78.2	17.0 - 157	
13C-2,3,7,8-TCDF	108	24.0 - 169	
13C-1,2,3,7,8-PeCDF	96.8	24.0 - 185	
13C-2,3,4,7,8-PeCDF	95.2	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	96.1	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	97.5	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	96.5	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	91.7	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	97.4	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	94.7	26.0 - 138	
13C-OCDF	84.0	17.0 - 157	
Cleanup Surrogate			
37Cl-2,3,7,8-TCDD	79.0	35.0 - 197	

Analyst: _____
Date: 2/6/04

Reviewed By: _____
Date: 2/9/04

5172 Hillsdale Circle • El Dorado Hills, CA 95762 • Tel (916) 934-0900 • Fax (916) 934-0999 • www.frontieranalytical.com

EPA Method 1613
PCDD/F

FRONTIER ANALYTICAL LABORATORY

FAL ID: 2444-001-OPR
Client ID: OPR
Matrix: Soil
Batch No: X0171

Date Extracted: 02-03-2004
Date Received: NA
Amount: 10.00 g

ICal: PCDDFAL1-1-19-04
GC Column: DB5
Units: ng/ml

Acquired: 02-05-2004
WHO TEQ: NA

Compound	Conc	QC Limits
2,3,7,8-TCDD	9.18	6.70 - 15.8
1,2,3,7,8-PeCDD	44.7	35.0 - 71.0
1,2,3,4,7,8-HxCDD	46.3	35.0 - 82.0
1,2,3,6,7,8-HxCDD	45.5	38.0 - 67.0
1,2,3,7,8,9-HxCDD	40.0	32.0 - 81.0
1,2,3,4,6,7,8-HpCDD	46.5	35.0 - 70.0
OCDD	96.9	78.0 - 144
2,3,7,8-TCDF	8.90	7.50 - 15.8
1,2,3,7,8-PeCDF	45.4	40.0 - 67.0
2,3,4,7,8-PeCDF	46.0	34.0 - 80.0
1,2,3,4,7,8-HxCDF	47.7	36.0 - 67.0
1,2,3,6,7,8-HxCDF	47.5	42.0 - 65.0
2,3,4,6,7,8-HxCDF	46.3	35.0 - 78.0
1,2,3,7,8,9-HxCDF	46.4	39.0 - 65.0
1,2,3,4,6,7,8-HpCDF	48.7	41.0 - 61.0
1,2,3,4,7,8,9-HpCDF	49.3	39.0 - 69.0
OCDF	93.9	63.0 - 170

Internal Standards	% Rec	QC Limits
13C-2,3,7,8-TCDD	104	20.0 - 175
13C-1,2,3,7,8-PeCDD	90.1	21.0 - 227
13C-1,2,3,4,7,8-HxCDD	109	21.0 - 193
13C-1,2,3,6,7,8-HxCDD	121	25.0 - 163
13C-1,2,3,4,6,7,8-HpCDD	99.9	26.0 - 166
13C-OCDD	71.9	13.0 - 198
13C-2,3,7,8-TCDF	109	22.0 - 152
13C-1,2,3,7,8-PeCDF	94.9	21.0 - 192
13C-2,3,4,7,8-PeCDF	97.8	13.0 - 328
13C-1,2,3,4,7,8-HxCDF	95.2	19.0 - 202
13C-1,2,3,6,7,8-HxCDF	100	21.0 - 159
13C-2,3,4,6,7,8-HxCDF	95.5	22.0 - 176
13C-1,2,3,7,8,9-HxCDF	91.4	17.0 - 205
13C-1,2,3,4,6,7,8-HpCDF	91.3	21.0 - 158
13C-1,2,3,4,7,8,9-HpCDF	93.6	20.0 - 186
13C-OCDF	76.2	13.0 - 198

Cleanup Surrogate		
37Cl-2,3,7,8-TCDD	79.4	31.0 - 191

Analyst: _____
Date: 2/6/04

Reviewed By: _____
Date: 2/9/04

5172 Hillsdale Circle • El Dorado Hills, CA 95762 • Tel (916) 934-0900 • Fax (916) 934-0999 • www.frontieranalytical.com

EPA Method 1613
PCDD/F

FRONTIER ANALYTICAL LABORATORY

FAL ID: 2444-001-SA
Client ID: B1
Matrix: Soil
Batch No: X0171

Date Extracted: 02-03-2004
Date Received: 02-02-2004
Amount: 10.01 g
% Solids: 91.4

ICal: PCDDFAL1-1-19-04
GC Column: DB5
Units: pg/g

Acquired: 02-05-2004
WHO TEQ: 0.00429

Compound	Conc	DL	Qual	WHO Tox	Compound	Conc	DL	Qual	#Hom
2,3,7,8-TCDD	-	0.102		-					
1,2,3,7,8-PeCDD	-	0.213		-					
1,2,3,4,7,8-HxCDD	-	0.268		-					
1,2,3,6,7,8-HxCDD	-	0.287		-	Total Tetra-Dioxins	-	0.102		0
1,2,3,7,8,9-HxCDD	-	0.244		-	Total Penta-Dioxins	-	0.213		0
1,2,3,4,6,7,8-HpCDD	0.411	-	J	0.00411	Total Hexa-Dioxins	-	0.287		0
OCDD	1.76	-	J	0.000176	Total Hepta-Dioxins	0.867	-	J	2
2,3,7,8-TCDF	-	0.0989		-					
1,2,3,7,8-PeCDF	-	0.224		-					
2,3,4,7,8-PeCDF	-	0.215		-					
1,2,3,4,7,8-HxCDF	-	0.0778		-					
1,2,3,6,7,8-HxCDF	-	0.0954		-					
2,3,4,6,7,8-HxCDF	-	0.102		-					
1,2,3,7,8,9-HxCDF	-	0.124		-	Total Tetra-Furans	-	0.0990		0
1,2,3,4,6,7,8-HpCDF	-	0.129		-	Total Penta-Furans	-	0.224		0
1,2,3,4,7,8,9-HpCDF	-	0.158		-	Total Hexa-Furans	-	0.124		0
OCDF	-	0.451		-	Total Hepta-Furans	-	0.158		0

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	104	25.0 - 164	
13C-1,2,3,7,8-PeCDD	88.5	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	107	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	118	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	106	23.0 - 140	
13C-OCDD	85.5	17.0 - 157	
13C-2,3,7,8-TCDF	109	24.0 - 169	
13C-1,2,3,7,8-PeCDF	99.9	24.0 - 185	
13C-2,3,4,7,8-PeCDF	98.2	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	94.1	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	96.1	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	96.8	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	94.8	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	104	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	93.7	26.0 - 138	
13C-OCDF	86.8	17.0 - 157	

Cleanup Surrogate		
37Cl-2,3,7,8-TCDD	80.4	35.0 - 197

Analyst: _____
Date: 2/6/04

Reviewed By: _____
Date: 2/9/04

5172 Hillsdale Circle • El Dorado Hills, CA 95762 • Tel (916) 934-0900 • Fax (916) 934-0999 • www.frontieranalytical.com

EPA Method 1613
PCDD/F

FRONTIER ANALYTICAL LABORATORY

FAL ID: 2444-002-SA
Client ID: B2
Matrix: Soil
Batch No: X0171

Date Extracted: 02-03-2004
Date Received: 02-02-2004
Amount: 9.98 g
% Solids: 80.5

ICal: PCDDFAL1-1-19-04
GC Column: DB5
Units: pg/g

Acquired: 02-05-2004
WHO TEQ: 0.00588

Compound	Conc	DL	Qual	WHO Tox	Compound	Conc	DL	Qual	#Hom
2,3,7,8-TCDD	-	0.108		-					
1,2,3,7,8-PeCDD	-	0.215		-					
1,2,3,4,7,8-HxCDD	-	0.308		-					
1,2,3,6,7,8-HxCDD	-	0.329		-	Total Tetra-Dioxins	-	0.174		0
1,2,3,7,8,9-HxCDD	-	0.280		-	Total Penta-Dioxins	-	0.215		0
1,2,3,4,6,7,8-HpCDD	0.573	-	J	0.00573	Total Hexa-Dioxins	-	0.329		0
OCDD	1.48	-	J	0.000148	Total Hepta-Dioxins	1.03	-	J	2
2,3,7,8-TCDF	-	0.0915		-					
1,2,3,7,8-PeCDF	-	0.208		-					
2,3,4,7,8-PeCDF	-	0.220		-					
1,2,3,4,7,8-HxCDF	-	0.132		-					
1,2,3,6,7,8-HxCDF	-	0.153		-					
2,3,4,6,7,8-HxCDF	-	0.173		-					
1,2,3,7,8,9-HxCDF	-	0.195		-	Total Tetra-Furans	-	0.108		0
1,2,3,4,6,7,8-HpCDF	-	0.119		-	Total Penta-Furans	-	0.220		0
1,2,3,4,7,8,9-HpCDF	-	0.142		-	Total Hexa-Furans	-	0.195		0
OCDF	-	0.401		-	Total Hepta-Furans	-	0.142		0

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	106	25.0 - 164	
13C-1,2,3,7,8-PeCDD	92.4	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	109	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	122	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	110	23.0 - 140	
13C-OCDD	91.6	17.0 - 157	
13C-2,3,7,8-TCDF	106	24.0 - 169	
13C-1,2,3,7,8-PeCDF	97.9	24.0 - 185	
13C-2,3,4,7,8-PeCDF	94.5	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	97.2	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	101	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	102	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	98.3	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	104	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	100	26.0 - 138	
13C-OCDF	93.3	17.0 - 157	

Cleanup Surrogate		
37Cl-2,3,7,8-TCDD	84.0	35.0 - 197

Analyst: _____
Date: 2/6/04

Reviewed By: _____
Date: 2/9/04

5172 Hillsdale Circle • El Dorado Hills, CA 95762 • Tel (916) 934-0900 • Fax (916) 934-0999 • www.frontieranalytical.com

EPA Method 1613
PCDD/F

FRONTIER ANALYTICAL LABORATORY

FAL ID: 2444-003-SA
Client ID: B3
Matrix: Soil
Batch No: X0171

Date Extracted: 02-03-2004
Date Received: 02-02-2004
Amount: 10.55 g
% Solids: 82.1

ICal: PCDDFAL1-1-19-04
GC Column: DB5
Units: pg/g

Acquired: 02-05-2004
WHO TEQ: 0.0385

Compound	Conc	DL	Qual	WHO Tox	Compound	Conc	DL	Qual	#Hom
2,3,7,8-TCDD	-	0.130		-					
1,2,3,7,8-PeCDD	-	0.233		-					
1,2,3,4,7,8-HxCDD	-	0.310		-					
1,2,3,6,7,8-HxCDD	-	0.335		-	Total Tetra-Dioxins	-	0.130		0
1,2,3,7,8,9-HxCDD	-	0.288		-	Total Penta-Dioxins	-	0.233		0
1,2,3,4,6,7,8-HpCDD	0.897	-	J	0.00897	Total Hexa-Dioxins	-	0.335		0
OCDD	3.65	-	J	0.000365	Total Hepta-Dioxins	1.87	-	J	2
2,3,7,8-TCDF	-	0.0773		-					
1,2,3,7,8-PeCDF	-	0.142		-					
2,3,4,7,8-PeCDF	-	0.136		-					
1,2,3,4,7,8-HxCDF	-	0.0502		-					
1,2,3,6,7,8-HxCDF	-	0.0597		-					
2,3,4,6,7,8-HxCDF	-	0.0725		-					
1,2,3,7,8,9-HxCDF	0.292	-	J	0.0292	Total Tetra-Furans	0.248	-	J	1
1,2,3,4,6,7,8-HpCDF	-	0.146		-	Total Penta-Furans	0.773	-	J,M	2
1,2,3,4,7,8,9-HpCDF	-	0.163		-	Total Hexa-Furans	0.503	-	J	2
OCDF	-	0.578		-	Total Hepta-Furans	-	0.163		0

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	104	25.0 - 164	
13C-1,2,3,7,8-PeCDD	86.0	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	103	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	115	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	100	23.0 - 140	
13C-OCDD	84.8	17.0 - 157	
13C-2,3,7,8-TCDF	109	24.0 - 169	
13C-1,2,3,7,8-PeCDF	95.4	24.0 - 185	
13C-2,3,4,7,8-PeCDF	96.7	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	91.2	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	97.5	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	92.7	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	89.9	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	94.8	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	95.0	26.0 - 138	
13C-OCDF	86.5	17.0 - 157	

Cleanup Surrogate		
37Cl-2,3,7,8-TCDD	79.0	35.0 - 197

Analyst: _____
Date: 2/6/04

Reviewed By: _____
Date: 2/9/04

5172 Hillsdale Circle • El Dorado Hills, CA 95762 • Tel (916) 934-0900 • Fax (916) 934-0999 • www.frontieranalytical.com

EPA Method 1613
PCDD/F

FRONTIER ANALYTICAL LABORATORY

FAL ID: 2444-004-SA
Client ID: B4
Matrix: Soil
Batch No: X0171

Date Extracted: 02-03-2004
Date Received: 02-02-2004
Amount: 10.00 g
% Solids: 86.4

ICal: PCDDFAL1-1-19-04
GC Column: DB5
Units: pg/g

Acquired: 02-05-2004
WHO TEQ: 0.000137

Compound	Conc	DL	Qual	WHO Tox	Compound	Conc	DL	Qual	#Hom
2,3,7,8-TCDD	-	0.103		-					
1,2,3,7,8-PeCDD	-	0.189		-					
1,2,3,4,7,8-HxCDD	-	0.286		-					
1,2,3,6,7,8-HxCDD	-	0.289		-	Total Tetra-Dioxins	-	0.103		0
1,2,3,7,8,9-HxCDD	-	0.241		-	Total Penta-Dioxins	-	0.189		0
1,2,3,4,6,7,8-HpCDD	-	0.359		-	Total Hexa-Dioxins	-	0.289		0
OCDD	1.37	-	J	0.000137	Total Hepta-Dioxins	-	0.359		0
2,3,7,8-TCDF	-	0.0884		-					
1,2,3,7,8-PeCDF	-	0.206		-					
2,3,4,7,8-PeCDF	-	0.201		-					
1,2,3,4,7,8-HxCDF	-	0.0805		-					
1,2,3,6,7,8-HxCDF	-	0.0943		-					
2,3,4,6,7,8-HxCDF	-	0.108		-					
1,2,3,7,8,9-HxCDF	-	0.123		-	Total Tetra-Furans	-	0.0884		0
1,2,3,4,6,7,8-HpCDF	-	0.132		-	Total Penta-Furans	-	0.206		0
1,2,3,4,7,8,9-HpCDF	-	0.143		-	Total Hexa-Furans	-	0.123		0
OCDF	-	0.421		-	Total Hepta-Furans	-	0.143		0

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	107	25.0 - 164	
13C-1,2,3,7,8-PeCDD	92.4	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	111	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	120	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	106	23.0 - 140	
13C-OCDD	85.5	17.0 - 157	
13C-2,3,7,8-TCDF	113	24.0 - 169	
13C-1,2,3,7,8-PeCDF	101	24.0 - 185	
13C-2,3,4,7,8-PeCDF	99.7	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	97.6	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	102	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	102	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	98.5	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	102	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	97.5	26.0 - 138	
13C-OCDF	90.9	17.0 - 157	

Cleanup Surrogate		
37Cl-2,3,7,8-TCDD	83.3	35.0 - 197

Analyst: _____
Date: 2/6/04

Reviewed By: _____
Date: 2/9/04

5172 Hillsdale Circle • El Dorado Hills, CA 95762 • Tel (916) 934-0900 • Fax (916) 934-0999 • www.frontieranalytical.com

EPA Method 1613
PCDD/F

FRONTIER ANALYTICAL LABORATORY

FAL ID: 2444-005-SA
Client ID: B5
Matrix: Soil
Batch No: X0171

Date Extracted: 02-03-2004
Date Received: 02-02-2004
Amount: 9.96 g
% Solids: 84.2

ICal: PCDDFAL1-1-19-04
GC Column: DB5
Units: pg/g

Acquired: 02-05-2004
WHO TEQ: 0.00668

Compound	Conc	DL	Qual	WHO Tox	Compound	Conc	DL	Qual	#Hom
2,3,7,8-TCDD	-	0.0925		-					
1,2,3,7,8-PeCDD	-	0.122		-					
1,2,3,4,7,8-HxCDD	-	0.179		-					
1,2,3,6,7,8-HxCDD	-	0.201		-	Total Tetra-Dioxins	1.45	-		1
1,2,3,7,8,9-HxCDD	-	0.169		-	Total Penta-Dioxins	-	0.194		0
1,2,3,4,6,7,8-HpCDD	0.630	-	J	0.00630	Total Hexa-Dioxins	-	0.358		0
OCDD	3.79	-	J	0.000379	Total Hepta-Dioxins	1.75	-	J	2
2,3,7,8-TCDF	-	0.0470		-					
1,2,3,7,8-PeCDF	-	0.173		-					
2,3,4,7,8-PeCDF	-	0.176		-					
1,2,3,4,7,8-HxCDF	-	0.0866		-					
1,2,3,6,7,8-HxCDF	-	0.105		-					
2,3,4,6,7,8-HxCDF	-	0.112		-					
1,2,3,7,8,9-HxCDF	-	0.129		-	Total Tetra-Furans	1.67	-	M	2
1,2,3,4,6,7,8-HpCDF	-	0.122		-	Total Penta-Furans	-	0.177		0
1,2,3,4,7,8,9-HpCDF	-	0.135		-	Total Hexa-Furans	-	0.129		0
OCDF	-	0.432		-	Total Hepta-Furans	-	0.135		0

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	97.1	25.0 - 164	
13C-1,2,3,7,8-PeCDD	85.8	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	107	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	115	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	104	23.0 - 140	
13C-OCDD	84.9	17.0 - 157	
13C-2,3,7,8-TCDF	111	24.0 - 169	
13C-1,2,3,7,8-PeCDF	99.6	24.0 - 185	
13C-2,3,4,7,8-PeCDF	96.4	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	92.6	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	98.1	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	98.1	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	95.6	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	95.9	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	96.7	26.0 - 138	
13C-OCDF	90.4	17.0 - 157	

Cleanup Surrogate		
37Cl-2,3,7,8-TCDD	77.8	35.0 - 197

Analyst: _____
Date: 2/6/04

Reviewed By: _____
Date: 2/9/04

5172 Hillsdale Circle • El Dorado Hills, CA 95762 • Tel (916) 934-0900 • Fax (916) 934-0999 • www.frontieranalytical.com

EPA Method 1613
PCDD/F

FRONTIER ANALYTICAL LABORATORY

FAL ID: 2444-006-SA
Client ID: B6
Matrix: Soil
Batch No: X0171

Date Extracted: 02-03-2004
Date Received: 02-02-2004
Amount: 9.95 g
% Solids: 88.7

ICal: PCDDFAL1-1-19-04
GC Column: DB5
Units: sample

Acquired: 02-06-2004
WHO TEQ: 0.0123

Compound	Conc	DL	Qual	WHO Tox	Compound	Conc	DL	Qual	#Hom
2,3,7,8-TCDD	-	0.101		-					
1,2,3,7,8-PeCDD	-	0.213		-					
1,2,3,4,7,8-HxCDD	-	0.299		-					
1,2,3,6,7,8-HxCDD	-	0.308		-	Total Tetra-Dioxins	-	0.101		0
1,2,3,7,8,9-HxCDD	-	0.262		-	Total Penta-Dioxins	-	0.213		0
1,2,3,4,6,7,8-HpCDD	0.924	-	J	0.00925	Total Hexa-Dioxins	-	0.308		0
OCDD	6.24	-		0.000624	Total Hepta-Dioxins	1.96	-	J	2
2,3,7,8-TCDF	-	0.0996		-					
1,2,3,7,8-PeCDF	-	0.215		-					
2,3,4,7,8-PeCDF	-	0.215		-					
1,2,3,4,7,8-HxCDF	-	0.0862		-					
1,2,3,6,7,8-HxCDF	-	0.100		-					
2,3,4,6,7,8-HxCDF	-	0.118		-					
1,2,3,7,8,9-HxCDF	-	0.135		-	Total Tetra-Furans	-	0.0996		0
1,2,3,4,6,7,8-HpCDF	0.233	-	J	0.00233	Total Penta-Furans	-	0.219		0
1,2,3,4,7,8,9-HpCDF	-	0.0785		-	Total Hexa-Furans	-	0.135		0
OCDF	0.667	-	J	0.0000670	Total Hepta-Furans	0.491	-	J	2

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	106	25.0 - 164	
13C-1,2,3,7,8-PeCDD	93.0	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	106	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	117	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	99.2	23.0 - 140	
13C-OCDD	73.0	17.0 - 157	
13C-2,3,7,8-TCDF	109	24.0 - 169	
13C-1,2,3,7,8-PeCDF	97.6	24.0 - 185	
13C-2,3,4,7,8-PeCDF	98.1	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	93.9	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	97.6	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	95.4	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	92.6	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	92.7	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	91.2	26.0 - 138	
13C-OCDF	75.5	17.0 - 157	

Cleanup Surrogate		
37Cl-2,3,7,8-TCDD	86.0	35.0 - 197

Analyst: _____
Date: 2/6/04

Reviewed By: _____
Date: 2/9/04

5172 Hillsdale Circle • El Dorado Hills, CA 95762 • Tel (916) 934-0900 • Fax (916) 934-0999 • www.frontieranalytical.com

Essentia Management Services **CHAIN OF CUSTODY RECORD** 40/2444 **Date:** 1/29/04 **Page:** 1 of 1

☐ 5000 E Spring Street, Suite 720
Long Beach, CA 90815
562/740-1060 phone
562/740-1070 fax

Project Name: LADWP – Chatsworth Reservoir	**Project No.** 47278-4	**Laboratory Name:** Frontier Analytical Laboratory	**Laboratory Address** Attn: Bradley Silverbush 5172 Hillsdale Circle El Dorado Hills, CA 95762
Client Name: LADWP	**Project Manager** Ken Floom	**Laboratory Phone:** 916-934-0900	
Site/Location: Chatsworth Reservoir	**Fax Results to:** (562) 740-1070	**Sampler Name:** Rich Stevenson	
E-mail Final Report to: ken_floom@essentia-llc.com	**Geotracker ID:** na	**Sampler Signature:**	**Turnaround time:** ☐ Same Day ☐ 24 hrs ☐ 48 hrs ☐ 3rd day ☐ 4th day ☒ Std. (15 days) ☐ Other:
Special Instructions/Comments:		**Cooler Receipt Temp. =** 4 °C	

Sample No.	Lab ID	Sample ID	Depth	Sampling Date	Sampling Time	Matrix	No. of Containers	Preservative Type	Dioxins EPA Method 1613/8290														Hold
1		B1		01/28/04	1225	Soil	3	—	X														
2		B2		01/28/04	1320	Soil	3	—	X														
3		B3		01/28/04	1415	Soil	1	—	X														
4		B4		01/28/04	1120	Soil	3	—	X														
5		B5		01/28/04	1015	Soil	3	—	X														
6		B6		01/28/04	915	Soil	3	—	X														
7																							
8																							
9																							
10																							

	Relinquished by: (Signature)	Date & Time	Received by: (Signature)	Date & time:
1		1/30/04 10:00		2/2/04 07:30
2				
3				

FRONTIER
ANALYTICAL LABORATORY

Frontier Analytical Laboratory

Sample Login Form

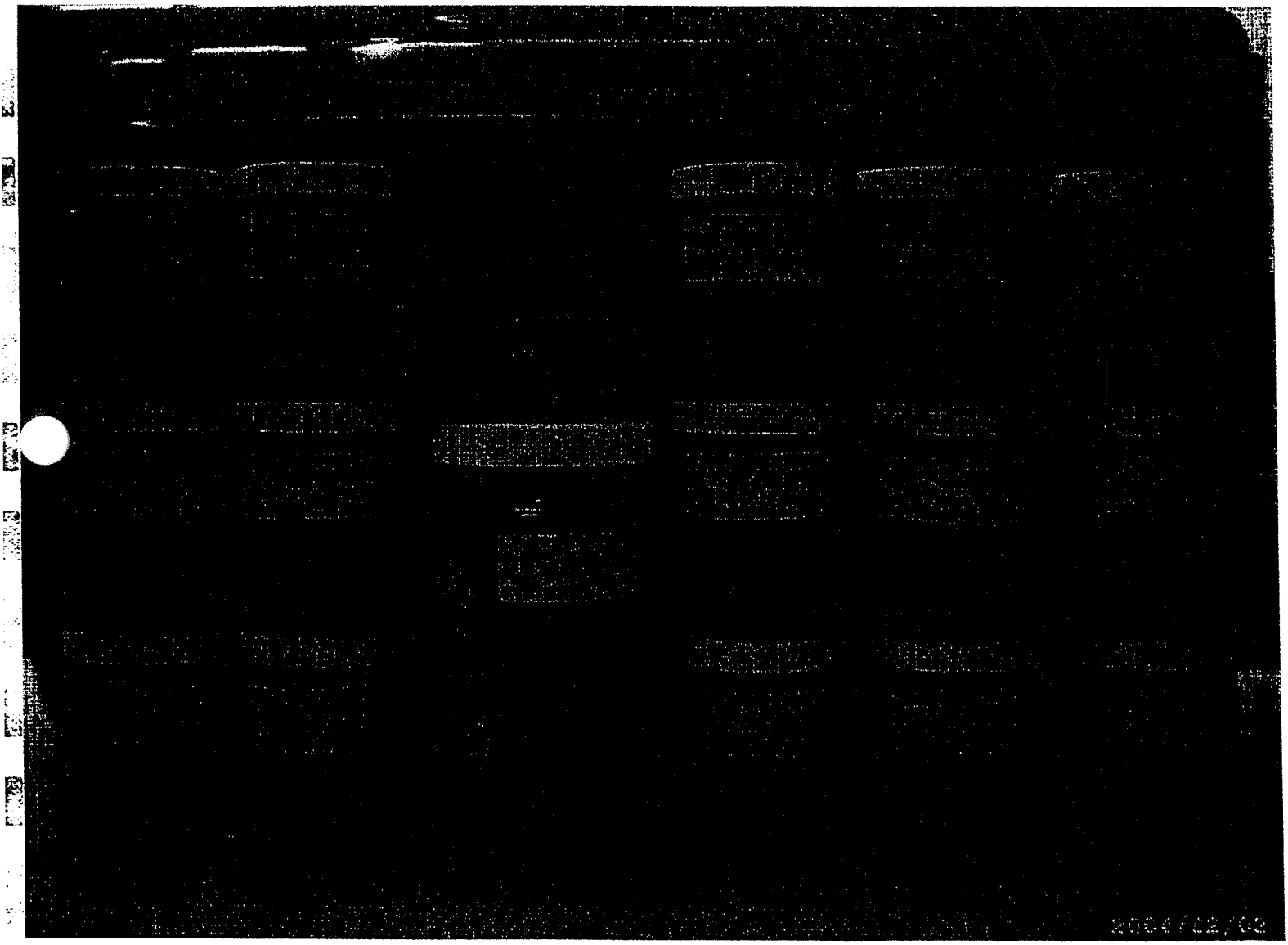
FAL Project ID: **2444**

Client:	Essentia Management Services
Client Project ID:	LADWP - Chatsworth Reservoir
Date Received:	02/02/2004
Time Received:	07:30 am
Received By:	BS
Logged In By:	NM
# of Samples Received:	6
Duplicates:	10
Storage Location:	R1

Method of Delivery:	Courier
Tracking Number:	
Shipping Container Received Intact	Yes
Custody seals(s) present?	No
Custody seals(s) intact?	No
Sample Arrival Temperature (C)	4
Cooling Method	Blue Ice
Chain Of Custody Present?	Yes
Return Shipping Container To Client	Yes
Test for residual Chlorine	No
Thiosulfate Added	No
Earliest Sample Hold Time Expiration	01/27/2005
Adequate Sample Volume	Yes

Anomalies or additional comments:

5172 Hillsdale Circle • El Dorado Hills, CA 95762 • Tel (916) 934-0900 • Fax (916) 934-0999 • www.frontieranalytical.com



5172 Hillsdale Circle • El Dorado Hills, CA 95762 • Tel (916) 934-0900 • Fax (916) 934-0999 • www.frontieranalytical.com

TABLE OF CONTENTS

CLIENT:	**GEORGE FAEUSTLE**
PROJECT:	**CHATSWORTH RESERVOIR**
REPORT NO.:	**C10582**

UUUUUU

DEPARTMENT OF WATER AND POWER
OF THE CITY OF LOS ANGELES
WATER QUALITY AND OPERATIONS

Report No. C10582
Page 1 of 1 w/attachments
COC 04-0177

ENVIRONMENTAL LABORATORY DATA REPORT

CHATSWORTH RESERVOIR

Soil samples from Chatsworht Reservoir were delivered on January 28, 2004 and analyzed for polychlorinated biphenyls (PCB), total extractable petroleum hydrocarbons (TEPH), Semi Volatile Organic Compounds (SVOC), Metals/Mercury, and Volatile Organic Compounds (VOC) analyses. The samples and their corresponding analytes, methods and results are listed below.

The samples were identified as follows:

Chem Lab Sample ID	COC Number	Sample Date	Sample Description	Chem Lab Sample ID	COC Number	Sample Date	Sample Description
LE00754	04-0177	1/28/04	B1 Composite	LE00765	04-0177	1/28/04	B3-5
LE00755			B2 Composite	LE00766			B3-10
LE00756			B3 Composite	LE00767			B3-15
LE00757			B4 Composite	LE00768			B3-20
LE00758			B5 Composite	LE00769			B4-5
LE00759			B6 Composite	LE00770			B4-10
LE00760			B1-5	LE00771			B5-5
LE00761			B1-10	LE00772			B5-10
LE00762			B2-5	LE00773			B6-5
LE00763			B2-10	LE00774			B6-10
LE00764			B2-15				

The analyses and results were as follows :

Analysis	Environmental Lab Sample ID	EPA Method No.	Analysis Date	Results	Analyzed by
PCB	LE00754 – LE00774	8082A	2/4/04	**Attachment #1**	Environmental Lab
TEPH		8015M	2/3/04	**Attachment #2**	
SVOC		8270C	2/11/04	**Attachment #3**	
Metals		6010B	2/7/04	**Attachment #4**	
Mercury		7471	1/30/04		
VOC		8260B	1/29/04	**Attachment #5**	

If there are any questions, or if further information is needed, please contact Mr. Lucas Wang at (213) 367-7271 or Mr. Stanley Kung at 213-367-7270

Date Completed: 2/19/04
Work Order: UND21
Job Card #: J96086
Copies To: George Faeustle
Stanley Kung
Filenet

Test made by: Environmental Lab

Report by: KC
Checked by: LW 2-19-04
Approved by: S. Kung/LW

MANAGER
ENVIRONMENTAL LABORATORY

nvironmental Laboratory
30 N. Main Street, Bldg 7
s Angeles, CA. 90012
3) 367-7248/7399
3) 367-7285 FAX

000001

Department of Water and Power
City of Los Angeles

Chain of Custody Record

COC #: 04-0177

Page 1 of 2

Report C#_____ JC#_____ WO#_____

Refrig#. 2 Shelf 2 Bin#._____

Initial of Field Personnel: RHS

No. of Field Test

PAGE-30445

Sample Location: CHATSWORTH RESERVOIR

Chem Lab use only MISTRY LOG NUMBERS (sample duplicates use .1 or .X)	Sample Date	(24 Hr) Sample Time	Sample Location and Description	Preservatives	Container No.	Container Type	Container Size	Sample Matrix	Analysis Required	Test Result	Analyst(s) Assigned
00754	1/28/04	12:25	B1 Composite	—	8	Jar	8oz.	Soil	TPHcc, PCBs, SVOCs, Title 22 Metals		
~~00755~~ NM 00755		1320	B2 Composite	—	8				TPHcc, PCBs, SVOCs, Title 22 Metals		
~~00756~~ NM 00756		1415	B3 Composite	—	8				TPHcc, PCBs, SVOCs, Title 22 Metals		
~~00757~~ NM 00757		1120	B4 Composite	—	8				TPHcc, PCBs, SVOCs, Title 22 Metals		
~~00758~~ NM 00758		1015	B5 Composite	—	5				TPHcc, PCBs, SVOCs, Title 22 Metals		
~~00759~~ NM 00759		915	B6 Composite	—	5	↓	↓	↓	TPHcc, PCBs, SVOCs, Title 22 Metals		
~~00760~~ NM 00760		1215	B1-5'	—	3	Encore			VOCs		
~~00761~~ NM 00761		1220	B1-10	—	3	Encore			VOCs		
~~00762~~ NM 00762		1305	B2-5	—	3	Encore			VOCs		
~~00763~~ NM 00763		1310	B2 10	—	3	Encore			VOCs		
~~00764~~ NM 00764		1315	B2-15	—	3	Encore			VOCs		
~~00765~~ NM 00765		1355	B3-5	—	3	Encore			VOCs		
~~00766~~ NM 00766		1400	B3-10	—	3	Encore			VOCs		
~~00767~~ NM 00767		1405	B3-15	—	3	Encore			VOCs		
~~00768~~ NM 00768		1410	B3-20	—	3	Encore			VOCs		
~~00769~~ NM 00769		1110	B4-5	—	3	Encore			VOCs		

Analyst_____ date_____

Approved by_____ date_____

Requested by._____ Organization / Div._____

Address._____ Tele._____ Fax._____

Date & Time Stamp: DEPARTMENT OF WATER & POWER JAN 28 PM 4:05 ENVIRONMENTAL LABORATORY SERVICES RECEIVED

Priority
2-4 Hrs
1Day
2 Wks
4Wks
Specify

Sk LW JW RP BT BE KC WLTO

Printed Name	Signature	Time	Date
Sampled by: Richard Stevenson	Sampled by:	1600	1/28/04
Relinquished by: Richard Stevenson	Relinquished by:	1600	1/28/04
Received by N. Manila	Received by:	1603	1/28/04

Form Revision: 10/2/2001

nvironment aboratory
530 N. Main Street, Bldg 7
os Angeles, CA. 90012
13) 367-7248/7399
13) 367-7285 FAX

200000

Department of Water and Power
City of Los Angeles

Chain of Custody Record

COC #:

Page 1 of 2

Report C#_____ JC#_____ WO#_____
Refrig#._____ Shelf_____ Bin#._____
Initial of Field Personnel: RHS
No. of Field Test:

Sample Location: Chatsworth Reservoir

Chem Lab use only EMISTRY LOG NUMBERS (for sample duplicates use 1 of 2)	Sample Date	(24 Hr) Sample Time	Sample Location and Description	Preservatives	Container No.	Container Type	Container Size	Sample Matrix	Analysis Required	Test Result	Analyst(s) Assigned
~~00771~~ 00770	1/28/04	1115	B4-10	—	3	Encore		Soil	VOCs		
~~00772~~ 00771		1005	B5-5	—	3	Encore			VOCs		
00772		1010	B5-10	—	3	Encore			VOCs		
00773		905	B6-5	—	3	Encore			VOCs		
00774		910	B6-10	—	3	Encore			VOCs		

Analyst_____ date_____
Approved by_____ date_____

Date & Time Stamp

Requested by._____ Organization / Div._____
Address._____ Tele._____ Fax._____

Priority
2-4 Hrs
1Day
2 Wks
4Wks
Specify

Printed Name	Signature	Time	Date
Sampled by:	Sampled by:		
Relinquished by:	Relinquished by:		
Received by	Received by		

Chem Lab COC Form #1
Revision: 10/2/2001

ATTACHMENT # 1

POLYCHLORINATED BIPHENYLS
PCB - EPA METHOD 8082A

Report No. C10582

CITY OF LOS ANGELES, DEPARTMENT OF WATER & POWER
ENVIRONMENTAL LABORATORY

Case Narrative

Project: Chatsworth Reservoir

METHOD 8082A
PCB (Polychlorinated Biphenyls)

1. Holding Time

Samples were extracted and analyzed within holding time limit.

2. Method Blank

Laboratory blank soil was used as method blank. There was no contamination detected at reporting level.

3. Lab Control Sample (LCS)

Certified QC sample was analyzed as LCS. Recovery was within QC limits

4 Surrogate Recovery

Recoveries were within QC limits.

5. Matrix Spike/Matrix Spike Duplicate

Sample LE00754 was analyzed for MS/MSD. Recovery met QC criteria.

7. Calibration

Initial calibration was performed at five different concentrations for PCB-1221, PCB-1232, PCB-1242, PCB-1248, PCB-1254, and PCB-1260. The percent Relative Standard Deviation (% RSD) were all within 15%. Calibration checks were performed at ten samples interval for PCB-1242 and PCB-1260, and at thirty samples interval for PCB-1221, PCB-1232, PCB-1248, and PCB-1254.

8. Sample Analysis

Samples were extracted using EPA300/SR-94/112 method for the screening of soils and sediment samples for the presence of polychlorinated biphenyl (PCB) mixtures. The reported method detection limits (MDL) were determined using the same procedures. The sample extracts were analyzed by gas chromatography.

001002

ENVIRONMENTAL LABORATORY DATA REPORT

ANALYTICAL RESULT FOR PCBs
by USEPA Method 300/SR-94/112 & 8082A
(Polychlorinated Biphenyls)
Sample Matrix: Soil

Project: CHATSWORTH RESERVOIR

LABORATORY LOG NO.	DATE SAMPLED	DATE RECEIVED	DATE EXTRACTED	DATE ANALYZED	SAMPLE DESCRIPTION	INSTR. ID	RUN LOG / BATCH QC
LE00754	1/28/2004	1/28/2004	2/3/2004	2/4/2004	B1 COMPOSITE	H.P.GC 2	20040204-11/A
LE00755	1/28/2004	1/28/2004	2/3/2004	2/4/2004	B2 COMPOSITE	H.P.GC 2	20040204-15/A
LE00756	1/28/2004	1/28/2004	2/3/2004	2/4/2004	B3 COMPOSITE	H.P.GC 2	20040204-16/A
LE00757	1/28/2004	1/28/2004	2/3/2004	2/4/2004	B4 COMPOSITE	H.P.GC 2	20040204-20/A
LE00758	1/28/2004	1/28/2004	2/3/2004	2/4/2004	B5 COMPOSITE	H.P.GC 2	20040204-21/A
LE00759	1/28/2004	1/28/2004	2/3/2004	2/4/2004	B6 COMPOSITE	H.P.GC 2	20040204-22/A

PARAMETERS	MDL (mg/kg)	RL (mg/kg)	LE00754 mg/kg	LE00755 mg/kg	LE00756 mg/kg	LE00757 mg/kg	LE00758 mg/kg	LE00759 mg/kg
PCB - 1221	0.006	0.030	ND	ND	ND	ND	ND	ND
PCB - 1232	0.008	0.040	ND	ND	ND	ND	ND	ND
PCB - 1242	0.017	0.085	ND	ND	ND	ND	ND	ND
PCB - 1248	0.005	0.025	ND	ND	ND	ND	ND	ND
PCB - 1254	0.010	0.050	ND	ND	ND	ND	ND	ND
PCB - 1260	0.013	0.065	ND	ND	ND	ND	ND	ND
SURROGATE PARAMETERS	QC LIMIT	% Recovery	% Recovery	% Recovery	% Recovery	% Recovery	% Recovery	
	D.F	1	1	1	1	1	1	
DECACHLOROBIPHENYL	70% - 130%	111%	110%	111%	105%	107%	108%	

MDL - Method Detection Limit
RL - Reporting Limit (5xMDL)
ND - Not Detected at indicated RL
j : above MDL but below RL
D.F - Dilution Factor
RUN LOG / BATCH QC - Line Number of Sequence Filename / Batch Identification

Analyst: R. Petersen

Project Name : CHATSWORTH RESERVOIR

001003

QA/QC Report for Method Blank

I. Method Blank, Method Blank Spike (MBS), & Method Blank Spike Duplicate (MBSD)

DATE ANALYZED: 02/04/04
RUN LOG / BATCH QC: 20040204-7/A,8/A,9/A
LAB SAMPLE I.D.: Method Blank Spike (MBS) & Method Blank Spike Dup (MBSD)

USEPA Method /600/SR-94/112 & 8082A
Instrument I.D. H. P. GC 2 UNIT: mg/kg

BATCH QC	A		A		(DUP)	A			MS/MSD	%
PARAMETERS	METHOD BLANK	SPIKE CONC	MBS	%MS	SPIKE CONC	MBSD	%MSD	RPD	% REC. LIMIT	RPD LIMIT
PCB-1221	ND	0.0			0.0					
PCB-1232	ND	0.0			0.0					
PCB-1242	ND	25.0	25.7	103	25.0	26.1	104	1%	70 - 130	30
PCB-1248	ND	0.0			0.0					
PCB-1254	ND	0.0			0.0					
PCB-1260	ND	25.0	22.8	91	25.0	23.6	94	3%	70 - 130	30

II. Matrix Spike (MS)/Matrix Spike Duplicate (MSD)

DATE ANALYZED: 02/04/04
RUN LOG / BATCH QC: 20040204-11/A,13/A,14/A
LAB SAMPLE I.D.: LE00754 Spike & Spike Duplicate

USEPA Method /600/SR-94/112 & 8082A
Instrument I.D. H. P. GC 2 UNIT: mg/kg

BATCH QC	A		A		(DUP)	A			MS/MSD	%
PARAMETERS	SAMPLE RESULT	SPIKE CONC	MS	%MS	SPIKE CONC	MSD	%MSD	RPD	% REC. LIMIT	RPD LIMIT
PCB-1221	ND	0.0			0.0					
PCB-1232	ND	0.0			0.0					
PCB-1242	ND	25.0	25.1	100	25.0	26.1	104	4%	70 - 130	30
PCB-1248	ND	0.0			0.0					
PCB-1254	ND	0.0			0.0					
PCB-1260	ND	25.0	23.2	93	25.0	23.5	94	1%	70 - 130	30

MS - Matrix Spike *MSD - Matrix Spike Dupplicate* *RPD - Relative Percent Difference*
%MS - Percent Recovery of Matrix Spike *%MSD - Percent Recovery of Matrix Spike Duplicate*
ND - Not Detected
RUN LOG / BATCH QC - Line Number of Sequence Filename / Batch Identification

Analyst: Bryan Tiu

Project Name : CHATSWORTH RESERVOIR

00100-1

III. Initial Calibration: PCB1W-10312003 Instrument I.D. H. P. GC 2

IV. Calibration Check Standard

DATE ANALYZED: 2/4/2004
LAB ID.: Q2583,2588,3460,3438,2589
RUN LOG / BATCH QC: 20040204-2/A,3/A,4/A,5/A,6/A,19/A

USEPA Method /600/SR-94/112 & 8082A
Instrument I.D. H. P. GC 2 UNIT: mg/kg

PARAMETERS	BATCH QC		A		A						ACCEPTANCE LIMITS (%)
	LAB ID	TRUE CONC	RESULT	% RC	RESULT	% RC	RESULT	% RC	RESULT	% RC	
PCB - 1221	Q2583	50.0	52.3	105%	NA						70 - 130
PCB - 1232	Q2588	50.0	47.8	96%	NA						70 - 130
PCB - 1242	Q3357	50.0	48.8	98%	49.7	99%					70 - 130
PCB - 1248	Q3438	50.0	52.3	105%	NA						70 - 130
PCB - 1254	Q2589	50.0	49.4	99%	NA						70 - 130
PCB - 1260	Q3357	50.0	51.7	103%	52.7	105%					70 - 130
											70 - 130

V. Laboratory Control Check Sample (LCS)

DATE ANALYZED: 2/4/2004
LCS I.D.: Q4748
RUN LOG / BATCH QC: 20040204-10/A

USEPA Method /600/SR-94/112 & 8082A
Instrument I.D. H. P. GC 2 UNIT: mg/kg

PARAMETERS	BATCH QC		A								ACCEPTANCE LIMITS (%)
	LAB ID	TRUE CONC	RESULT	% RC	RESULT	% RC	RESULT	% RC	RESULT	% RC	
PCB - 1221		0.0	ND								70 - 130
PCB - 1232		0.0	ND								70 - 130
PCB - 1242		0.0	ND								70 - 130
PCB - 1248	Q4748	15.0	11.5	78							70 - 130
PCB - 1254		0.0	ND								70 - 130
PCB - 1260		0.0	ND								70 - 130
											70 - 130

%RC - Percent Recovery
NA - Not Analyzed
ND - Not Detected

RUN LOG / BATCH QC - Line Number of Sequence Filename / Batch Identification

Analyst: Bryan Tiu

Checked by: Rose Gentallan

ATTACHMENT # 2

TOTAL EXTRACTABLE PETROLEUM HYDROCARBONS
TEPH - EPA METHOD 8015M

Report No. C10582

CITY OF LOS ANGELES, DEPARTMENT OF WATER & POWER
ENVIRONMENTAL LABORATORY

Case Narrative

Project: Chatsworth Reservoir

METHOD 8015M
Total Extractable Petroleum Hydrocarbons (TEPH)

1. Holding Time

   Analytical holding time was met.

2. Method Blank

   There was no contamination detected at reporting level.

3. Lab Control Sample

   Recovery was within QC limits.

4. Surrogate Recovery

   Recoveries were within QC limits.

5. Matrix Spike/Matrix Spike Duplicate

   Sample LE00754 was analyzed for MS/MSD. Recoveries met QC criteria.

6. Calibration

   Initial calibration was performed at five different concentrations. The percent relative standard deviation (% RSD) was within 15%. Calibration check standards were within QC limits.

7. Sample Analysis

   Samples were analyzed according to the prescribed QC procedures. There was no contamination detected at reporting level.

002002

COC No. 04-0177

ENVIRONMENTAL LABORATORY

ANALYTICAL TEST RESULT FOR EPA 8015M
TEPH (Total Extractable Petroleum Hydrocarbons, C9 - C36)

Sample Matrix: SOIL
Project: CHATSWORTH RESERVOIR

SAMPLE LOG NO.	DATE SAMPLED	DATE RECEIVED	DATE EXTRACTED	DATE ANALYZED	SAMPLE DESC.	INSTR. ID	RUN LOG	BATCH QC
LE00754	01/28/04	01/28/04	02/03/04	02/03/04	B1 COMP	H.P. GC 5	20040203-18	20040203
LE00755	01/28/04	01/28/04	02/03/04	02/03/04	B2 COMP	H.P. GC 5	20040203-23	20040203
LE00756	01/28/04	01/28/04	02/03/04	02/03/04	B3 COMP	H.P. GC 5	20040203-24	20040203
LE00757	01/28/04	01/28/04	02/03/04	02/03/04	B4 COMP	H.P. GC 5	20040203-25	20040203
LE00758	01/28/04	01/28/04	02/03/04	02/03/04	B5 COMP	H.P. GC 5	20040203-26	20040203
LE00759	01/28/04	01/28/04	02/03/04	02/03/04	B6 COMP	H.P. GC 6	20040203-27	20040204

	MDL / PQL mg/kg	MB mg/kg	LE00754 mg/kg	LE00755 mg/kg	LE00756 mg/kg	LE00757 mg/kg	LE00758 mg/kg	LE00759 mg/kg	
Dilution Factor		1	1	1	1	1	1	1	
DRO - (C10 - C28)		ND	ND	ND	ND	ND	ND	ND	
TEPH - (C13 - C22)		ND	ND	ND	ND	ND	ND	ND	
TEPH - (C23 - C32)		ND	ND	ND	ND	ND	ND	ND	
TEPH - (C9 - C36)	0.7/3.5	ND	ND	ND	ND	ND	ND	ND	
Quality Control Data		MB							
Surrogate/Internal Std.	% ACP	% RC	%RC	%RC	%RC	%RC	%RC	%RC	
1-Chlorooctadecane	(70 - 130)	111%	80.8%	93.3%	90.6%	90%	92%	93.4%	

ND - Not Detected; below method detection limit
MDL - Method Detection Limit
PQL - Practical Quantitation Limit (5 x MDL)
J - above MDL but below PQL
**High recovery caused by overlap with TEPH peaks.*

ACP % = Acceptable Range of Percent
% RC = % Recovery
MB - Method Blank
DRO - Diesel Range Organics
RUN LOG - Line Number of Sequence Filename
BATCH QC - Batch Identification

COC 04-0177

ENVIRONMENTAL LABORATORY

QA/QC REPORT

TEPH (Total Extractable Petroleum Hydrocarbon, C9 - C36)

Sample Matrix: SOIL

Project: CHATSWORTH RESERVOIR

I. Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Reporting Unit: mg/kg

SAMPLE LOG NO.	RUN LOG	BATCH QC	SAMPLE CONC	SPIKE CONC	MS	% MS	MSD	% MSD	RPD	MS/MSD % ACP	RPD ACP
LE00754	20040203-20,21	20040203	ND	10.0	12.1	121.0%	10.7	107.0%	12.3%	70 - 130	30

SPIKE CONC = Spiking Concentration;
MS = Matrix Spike
MSD = Matrix Spike Duplicate
% MS = Percent Recovery of MS
% MSD = Percent Recovery of MSD
RPD = Relative Percent Difference
ACP = Acceptable Range of Percent
RUN LOG - Line Number of Sequence Filename
BATCH QC - Batch Identification

II. Laboratory Quality Control Check Sample (LCS)

LCS Log No. Q4791

ANALYTE	RUN LOG	BATCH QC	DATE ANALYZED	SPIKE CONC.	RESULT	% RC.	Acceptable Range
TEPH	20040203-17	20040203	2/3/2004	10.0	9.5	94.9	70 - 130

% RC - Percent recovery
RUN LOG - Line Number of Sequence Filename
BATCH QC - Batch Identification

III. Calibration Standard Q4853

ANALYTE	RUN LOG	BATCH QC	INITIAL CALIBRATION DATE: 02/03/04		DAILY CALIBRATION		
			INITIAL RF_{avg}	%RSD ≤ ± 15%	DATE	DAILY RF	% DIFF w/ RF_{ave} ≤ ± 15%
TEPH (C9 - C36)	20040203-16	20040203	3.95E+04	8.4	02/03/04	3.82E+04	3.2
	20040203-28	20040203	3.95E+04	8.4	02/03/04	4.03E+04	2.0

SPIKE CONC = Spiking Concentration;
ACP = Acceptable Range of Percent
RF_{ave} = Average Response Factor
DAILY RF = Response Factor from Daily Calibration
%RSD = Percent Relative Standard Deviation;
%DIFF = Percent Difference
RUN LOG - Line Number of Sequence Filename
BATCH QC - Batch Identification

Analyst R. Olvina

ATTACHMENT # 3

SEMI VOLATILE ORGANIC COMPOUNDS
SVOC - EPA METHOD 8270C

CITY OF LOS ANGELES, DEPARTMENT OF WATER & POWER
ENVIRONMENTAL LABORATORY

Case Narrative

Project: Chatsworth Reservoir

METHOD 8270C
Semi-Volatile Organic Compounds by GC/MS

1. Holding Time

   Analytical holding time was met.

2. Tuning and Calibration

   Tuning and calibration met QC criteria.

3. Method Blank

   Laboratory soil blank was used as method blank. Phthalate compounds were detected in soil blanks.

4. Lab Control Sample

   Recoveries met QC criteria.

5. Surrogate Recovery

   Recoveries met QC criteria.

6. Matrix Spike/Matrix Spike Duplicate

   Sample LE00754 was analyzed for MS/MSD. Recoveries met QC criteria.

7. Calibration

   Initial calibration was performed at five different concentrations. The percent relative standard deviation (% RSD) was within 15%. Calibration check standards were within QC limits.

7. Sample Analysis

   Samples were analyzed according to the prescribed QC procedures. There was no contamination detected at reporting level except for phthalate compounds which may be due to matrix and sample handling.

ENVIRONMENTAL LABORATORY DATA REPORT

COC 04-0177

003002

Report of GC/MS Analysis for Semi-Volatile Organics
EPA SW-846 Method 3541/8270C

Project: Chatsworth Reservoir

Sample Matrix: Soil

Chemistry Log No.	Date Sampled	Date Extracted	Date Analyzed	Sample Description
LE00754	1/28/2004	2/6/2004	2/11/2004	B1 Composite
LE00755	1/28/2004	2/6/2004	2/11/2004	B2 Composite
LE00756	1/28/2004	2/6/2004	2/11/2004	B3 Composite
LE00757	1/28/2004	2/6/2004	2/11/2004	B4 Composite
LE00758	1/28/2004	2/6/2004	2/11/2004	B5 Composite
LE00759	1/28/2004	2/6/2004	2/11/2004	B6 Composite

Compounds	MDL ug/kg	RL ug/kg	LE00754 ug/kg	LE00755 ug/kg	LE00756 ug/kg	LE00757 ug/kg	LE00758 ug/kg	LE00759 ug/kg
Acenaphthene	37	186	nd	nd	nd	nd	nd	nd
Acenaphthylene	49	245	nd	nd	nd	nd	nd	nd
Anthracene	12	62	nd	nd	nd	nd	nd	nd
Aniline	105	527	nd	nd	nd	nd	nd	nd
Azobezene	39	194	nd	nd	nd	nd	nd	nd
Benzidine*	651	3255	nd	nd	nd	nd	nd	nd
Benzoic acid*	435	2175	nd	nd	nd	nd	nd	nd
Benzo(a)anthracene	31	156	nd	nd	nd	nd	nd	nd
Benzo(b)flouranthene	13	64	nd	nd	nd	nd	nd	nd
Benzo(k)flouranthene	164	820	nd	nd	nd	nd	nd	nd
Benzo(g,h,i)perylene	23	115	nd	nd	nd	nd	nd	nd
Benzo(a)pyrene	29	147	nd	nd	nd	nd	nd	nd
Benzyl alcohol	50	248	nd	nd	nd	nd	nd	nd
Bis(2-chloroethoxy)methane	49	245	nd	nd	nd	nd	nd	nd
Bis(2-chloroethyl)ether	74	369	nd	nd	nd	nd	nd	nd
Bis(2-chloroisopropyl)ether	107	533	nd	nd	nd	nd	nd	nd
Bis(2-ethylhexyl)phthalate	78	392	**92J**	**684**	**27550**	**303J**	**237J**	nd
4-Bromophenyl-phenylether	34	170	nd	nd	nd	nd	nd	nd
Benzyl butyl phthalate	50	251	nd	nd	nd	nd	nd	nd
Carbazole	54	271	nd	nd	nd	nd	nd	nd
4-Chloroaniline	31	157	nd	nd	nd	nd	nd	nd
2-Chloronaphthalene	54	268	nd	nd	nd	nd	nd	nd
4-Chloro-3-methylphenol	54	269	nd	nd	nd	nd	nd	nd
2-Chlorophenol	49	243	nd	nd	nd	nd	nd	nd
4-Chlorophenyl-phenylether	51	255	nd	nd	nd	nd	nd	nd
Chrysene	14	70	nd	nd	nd	nd	nd	nd
3,3-Dichlorobenzidine	65	326	nd	nd	nd	nd	nd	nd
Dibenz(a,h)anthracene	76	379	nd	nd	nd	nd	nd	nd
Dibenzofuran	41	205	nd	nd	nd	nd	nd	nd
Di-n-Butylphthalate	78	390	**306J**	**443**	nd	**791**	**412**	nd
1,3-Dichlorobenzene	65	324	nd	nd	nd	nd	nd	nd
1,4-Dichlorobenzene	59	294	nd	nd	nd	nd	nd	nd
1,2-Dichlorobenzene	73	367	nd	nd	nd	nd	nd	nd
2,4-Dichlorophenol	32	161	nd	nd	nd	nd	nd	nd
Diethyl phthalate	41	205	nd	nd	nd	nd	nd	nd
2,4-Dimethylphenol	98	491	nd	nd	nd	nd	nd	nd
Dimethyl phthalate	27	137	nd	nd	nd	nd	nd	nd
4,6-Dinitro-2-methylphenol	62	310	nd	nd	nd	nd	nd	nd
2,4-Dinitrophenol	84	419	nd	nd	nd	nd	nd	nd
2,4-Dinitrotoluene	45	226	nd	nd	nd	nd	nd	nd
2,6-Dinitrotoluene	28	139	nd	nd	nd	nd	nd	nd
Di-n-Octylphthalate	78	390	nd	nd	nd	nd	nd	nd
Flouranthene	30	149	nd	nd	nd	nd	nd	nd
Flourene	38	188	nd	nd	nd	nd	nd	nd
Hexachlorobenzene	9	46	nd	nd	nd	nd	nd	nd
Hexachlorobutadiene	64	319	nd	nd	nd	nd	nd	nd
Hexachlorocyclopentadiene	47	233	nd	nd	nd	nd	nd	nd
Hexachloroethane	58	291	nd	nd	nd	nd	nd	nd

ENVIRONMENTAL LABORATORY DATA REPORT

COC 04-0177

003003

Report of GC/MS Analysis for Semi-Volatile Organics
EPA SW-846 Method 3541/8270C

Project: Chatsworth Reservoir

Sample Matrix: Soil

Chemistry Log No.	Date Sampled	Date Extracted	Date Analyzed	Sample Description
LE00754	1/28/2004	2/6/2004	2/11/2004	B1 Composite
LE00755	1/28/2004	2/6/2004	2/11/2004	B2 Composite
LE00756	1/28/2004	2/6/2004	2/11/2004	B3 Composite
LE00757	1/28/2004	2/6/2004	2/11/2004	B4 Composite
LE00758	1/28/2004	2/6/2004	2/11/2004	B5 Composite
LE00759	1/28/2004	2/6/2004	2/11/2004	B6 Composite

Compounds	MDL ug/kg	RL ug/kg	LE00754 ug/kg	LE00755 ug/kg	LE00756 ug/kg	LE00757 ug/kg	LE00758 ug/kg	LE00759 ug/kg
Indeno(1,2,3-cd)pyrene	39	193	nd	nd	nd	nd	nd	nd
Isophorone	33	165	nd	nd	nd	nd	nd	nd
2-Methylnaphthalene	28	139	nd	nd	nd	nd	nd	nd
2-Methylphenol	39	194	nd	nd	nd	nd	nd	nd
4-Methylphenol	59	297	nd	nd	nd	nd	nd	nd
Naphthalene	55	275	nd	nd	nd	nd	nd	nd
2-Nitroaniline	16	82	nd	nd	nd	nd	nd	nd
3-Nitroaniline	35	174	nd	nd	nd	nd	nd	nd
4-Nitroaniline	49	244	nd	nd	nd	nd	nd	nd
Nitrobenzene	69	344	nd	nd	nd	nd	nd	nd
2-Nitrophenol	48	240	nd	nd	nd	nd	nd	nd
4-Nitrophenol	36	182	nd	nd	nd	nd	nd	nd
N-Nitrosodimethylamine	79	397	nd	nd	nd	nd	nd	nd
N-Nitrosodiphenylamine	61	305	nd	nd	nd	nd	nd	nd
N-Nitrosodi-n-propylamine	48	242	nd	nd	nd	nd	nd	nd
Pentachlorophenol	36	180	nd	nd	nd	nd	nd	nd
Phenanthrene	15	77	nd	nd	nd	nd	nd	nd
Phenol	88	441	nd	nd	nd	nd	nd	nd
Pyrene	34	172	nd	nd	nd	nd	nd	nd
Pyridine*	167	836	nd	nd	nd	nd	nd	nd
1,2,4-Trichlorobenzene	73	364	nd	nd	nd	nd	nd	nd
2,4,5-Trichlorophenol	51	256	nd	nd	nd	nd	nd	nd
2,4,6-Trichlorophenol	30	148	nd	nd	nd	nd	nd	nd

MDL - Method Detection Limit
RL - Reporting Limit (5xMDL)

J - Concentration above MDL, but below PQL
nd - Not Detected at indicated PQL

* Erratic chromatographic behavior

Quality Control Data

Surrogates 6000 ug/Kg for Acid Surrogate 3000 ug/Kg for Base Surrogate	EPA Limits % Recovery Lower-Upper	% Rec	% Rec	% Rec	% Rec	% Rec	% Rec
SURR: Phenol-d5	24 - 113	71.2%	3.9%	51.3%	61.1%	73.3%	74.8%
SURR: 2-Fluorophenol	25 - 121	94.2%	40.8%	76.5%	84.0%	102.4%	97.9%
SURR: 2,4,6-Tribromophenol	19 - 122	82.3%	62.2%	27.4%	83.6%	72.8%	64.4%
SURR: 2-Fluorobiphenyl	30 - 115	65.2%	38.9%	71.5%	70.5%	75.6%	70.6%
SURR: Nitrobenzidine-d5	23 - 120	77.0%	28.3%	62.7%	74.3%	88.4%	90.1%
SURR: p-Terphenyl-d14	18 - 137	91.3%	84.0%	97.7%	89.7%	84.3%	91.4%

Analyst: Kasey Chung

Reviewed by: Rose Gentallan

ENVIRONMENTAL LABORATORY DATA REPORT

COC 04-0177

Report of GC/MS Analysis for Semi- Volatile Organics
EPA SW-846 Method 3541/8270C

003004

Project: Chatsworth Reservoir

Sample Matrix: Soil

Chemistry Log No.	Date Sampled	Date Extracted	Date Analyzed	Sample Description
LE00754	1/28/2004	2/6/2004	2/11/2004	B1 Composite - Duplicate

Compounds	MDL ug/kg	RL ug/kg	LE00754 ug/kg
Acenaphthene	37	186	nd
Acenaphthylene	49	245	nd
Anthracene	12	62	nd
Aniline	105	527	nd
Azobezene	39	194	nd
Benzidine*	651	3255	nd
Benzoic acid*	435	2175	nd
Benzo(a)anthracene	31	156	nd
Benzo(b)flouranthene	13	64	nd
Benzo(k)flouranthene	164	820	nd
Benzo(g,h,i)perylene	23	115	nd
Benzo(a)pyrene	29	147	nd
Benzyl alcohol	50	248	nd
Bis(2-chloroethoxy)methane	49	245	nd
Bis(2-chloroethyl)ether	74	369	nd
Bis(2-chloroisopropyl)ether	107	533	nd
Bis(2-ethylhexyl)phthalate	78	392	**14540**
4-Bromophenyl-phenylether	34	170	nd
Benzyl butyl phthalate	50	251	nd
Carbazole	54	271	nd
4-Chloroaniline	31	157	nd
2-Chloronaphthalene	54	268	nd
4-Chloro-3-methylphenol	54	269	nd
2-Chlorophenol	49	243	nd
4-Chlorophenyl-phenylether	51	255	nd
Chrysene	14	70	nd
3,3-Dichlorobenzidine	65	326	nd
Dibenz(a,h)anthracene	76	379	nd
Dibenzofuran	41	205	nd
Di-n-Butylphthalate	78	390	**84J**
1,3-Dichlorobenzene	65	324	nd
1,4-Dichlorobenzene	59	294	nd
1,2-Dichlorobenzene	73	367	nd
2,4-Dichlorophenol	32	161	nd
Diethyl phthalate	41	205	nd
2,4-Dimethylphenol	98	491	nd
Dimethyl phthalate	27	137	nd
4,6-Dinitro-2-methylphenol	62	310	nd
2,4-Dinitrophenol	84	419	nd
2,4-Dinitrotoluene	45	226	nd
2,6-Dinitrotoluene	28	139	nd
Di-n-0ctylphthalate	78	390	nd
Flouranthene	30	149	nd
Flourene	38	188	nd
Hexachlorobenzene	9	46	nd
Hexachlorobutadiene	64	319	nd
Hexachlorocyclopentadiene	47	233	nd
Hexachloroethane	58	291	nd

ENVIRONMENTAL LABORATORY DATA REPORT

Report of GC/MS Analysis for Semi- Volatile Organics
EPA SW-846 Method 3541/8270C

COC 04-0177

003005

Project: Chatsworth Reservoir

Sample Matrix: Soil

Chemistry Log No.	Date Sampled	Date Extracted	Date Analyzed	Sample Description
LE00754	1/28/2004	2/6/2004	2/11/2004	B1 Composite - Duplicate

Compounds	MDL ug/kg	RL ug/kg	LE00754 ug/kg
Indeno(1,2,3-cd)pyrene	39	193	nd
Isophorone	33	165	nd
2-Methylnaphthalene	28	139	nd
2-Methylphenol	39	194	nd
4-Methylphenol	59	297	nd
Naphthalene	55	275	nd
2-Nitroaniline	16	82	nd
3-Nitroaniline	35	174	nd
4-Nitroaniline	49	244	nd
Nitrobenzene	69	344	nd
2-Nitrophenol	48	240	nd
4-Nitrophenol	36	182	nd
N-Nitrosodimethylamine	79	397	nd
N-Nitrosodiphenylamine	61	305	nd
N-Nitrosodi-n-propylamine	48	242	nd
Pentachlorophenol	36	180	nd
Phenanthrene	15	77	nd
Phenol	88	441	nd
Pyrene	34	172	nd
Pyridine*	167	836	nd
1,2,4-Trichlorobenzene	73	364	nd
2,4,5-Trichlorophenol	51	256	nd
2,4,6-Trichlorophenol	30	148	nd

MDL - Method Detection Limit
RL - Reporting Limit (5xMDL)

J - Concentration above MDL below PQL
nd - Not Detected at indicated PQL

* Erratic chromatographic behavior

Quality Control Data

Surrogates 3000 ug/Kg for Base Surrogate 6000 ug/Kg for Acid Surrogate	EPA Limits % Recovery Lower-Upper	Surrogate % Rec
SURR: Phenol-d5	24 - 113	100.0%
SURR: 2-Fluorophenol	25 - 121	99.6%
SURR: 2,4,6-Tribromophenol	19 - 122	78.4%
SURR: 2-Fluorobiphenyl	30 - 115	73.4%
SURR: Nitrobenzidine-d5	23 - 120	98.3%
SURR: p-Terphenyl-d14	18 - 137	92.7%

Comment:

Analyst: Kasey Chung

Reviewed by:

ENVIRONMENTAL LABORATORY DATA REPORT

Report of GC/MS Analysis for Semi-Volatile Organics
EPA SW-846 Method 8270

003006

Project: Chatsworth Reservoir

Sample Matrix: Soil

Chemistry Log No.	Date Sampled	Date Extracted	Date Analyzed	Sample Description
Q4856	1/28/2004	2/6/2004	2/11/2004	Blank Soil

Compounds	MDL ug/kg	RL ug/kg	Q4856 ug/kg
Acenaphthene	37	186	nd
Acenaphthylene	49	245	nd
Anthracene	12	62	nd
Aniline	105	527	nd
Azobezene	39	194	nd
Benzidine*	651	3255	nd
Benzoic acid*	435	2175	nd
Benzo(a)anthracene	31	156	nd
Benzo(b)flouranthene	13	64	nd
Benzo(k)flouranthene	164	820	nd
Benzo(g,h,i)perylene	23	115	nd
Benzo(a)pyrene	29	147	nd
Benzyl alcohol	50	248	nd
Bis(2-chloroethoxy)methane	49	245	nd
Bis(2-chloroethyl)ether	74	369	nd
Bis(2-chloroisopropyl)ether	107	533	nd
Bis(2-ethylhexyl)phthalate	78	392	nd
4-Bromophenyl-phenylether	34	170	nd
Benzyl butyl phthalate	50	251	nd
Carbazole	54	271	nd
4-Chloroaniline	31	157	nd
2-Chloronaphthalene	54	268	nd
4-Chloro-3-methylphenol	54	269	nd
2-Chlorophenol	49	243	nd
4-Chlorophenyl-phenylether	51	255	nd
Chrysene	14	70	nd
3,3-Dichlorobenzidine	65	326	nd
Dibenz(a,h)anthracene	76	379	nd
Dibenzofuran	41	205	nd
Di-n-Butylphthalate	78	390	nd
1,3-Dichlorobenzene	65	324	nd
1,4-Dichlorobenzene	59	294	nd
1,2-Dichlorobenzene	73	367	nd
2,4-Dichlorophenol	32	161	nd
Diethyl phthalate	41	205	nd
2,4-Dimethylphenol	98	491	nd
Dimethyl phthalate	27	137	nd
4,6-Dinitro-2-methylphenol	62	310	nd
2,4-Dinitrophenol	84	419	nd
2,4-Dinitrotoluene	45	226	nd
2,6-Dinitrotoluene	28	139	nd
Di-n-0ctylphthalate	78	390	nd
Flouranthene	30	149	nd
Flourene	38	188	nd
Hexachlorobenzene	9	46	nd
Hexachlorobutadiene	64	319	nd
Hexachlorocyclopentadiene	47	233	nd
Hexachloroethane	58	291	nd

ENVIRONMENTAL LABORATORY DATA REPORT

Report of GC/MS Analysis for Semi-Volatile Organics
EPA SW-846 Method 8270

Project: Chatsworth Reservoir

Sample Matrix: Soil

Chemistry Log No.	Date Sampled	Date Extracted	Date Analyzed	Sample Description
Q4856	1/28/2004	2/6/2004	2/11/2004	Blank Soil

Compounds	MDL ug/kg	RL ug/kg	Q4856 ug/kg
Indeno(1,2,3-cd)pyrene	39	193	nd
Isophorone	33	165	nd
2-Methylnaphthalene	28	139	nd
2-Methylphenol	39	194	nd
4-Methylphenol	59	297	nd
Naphthalene	55	275	nd
2-Nitroaniline	16	82	nd
3-Nitroaniline	35	174	nd
4-Nitroaniline	49	244	nd
Nitrobenzene	69	344	nd
2-Nitrophenol	48	240	nd
4-Nitrophenol	36	182	nd
N-Nitrosodimethylamine	79	397	nd
N-Nitrosodiphenylamine	61	305	nd
N-Nitrosodi-n-propylamine	48	242	nd
Pentachlorophenol	36	180	nd
Phenanthrene	15	77	nd
Phenol	88	441	nd
Pyrene	34	172	nd
Pyridine*	167	836	nd
1,2,4-Trichlorobenzene	73	364	nd
2,4,5-Trichlorophenol	51	256	nd
2,4,6-Trichlorophenol	30	148	nd

MDL - Method Detection Limit
RL - Reporting Limit (5xMDL)

J - Concentration above MDL below PQL
nd - Not Detected; below detection limit

* Erratic chromatographic behavior

Quality Control Data

Surrogates 3000 ug/Kg for Base Surrogate 6000 ug/Kg for Acid Surrogate	EPA Limits % Recovery Lower-Upper	Surrogate % Rec
SURR: Phenol-d5	24 - 113	80.3%
SURR: 2-Fluorophenol	25 - 121	98.3%
SURR: 2,4,6-Tribromophenol	19 - 122	65.8%
SURR: 2-Fluorobiphenyl	30 - 115	71.2%
SURR: Nitrobenzidine-d5	23 - 120	88.8%
SURR: p-Terphenyl-d14	18 - 137	88.4%

Comment:

Analyst: Kasey Chung

Reviewed by:

ENVIRONMENTAL LABORATORY
DEPARTMENT OF WATER AND POWER
CITY OF LOS ANGELES

1630 N. MAIN ST. BUILDING #7
LOS ANGELES, CA 91207
213-367-7399

003008

CHEMISTRY LABORATORY QUALITY CONTROL REPORT

Report of GC/MS analysis for Semi-Volatile Organics
EPA SW-846 METHOD 8270C

% RECOVERIES OF SURROGATE & SPIKE SAMPLES

Sample Matrix	Soil
Sample ID	Blank SPK & Blank SPK Dup
Sample Name	Q4856
Sample Weight(g)	5
Final Volume(ml)	1

Date Sampled :
Date Extracted : 2/6/04
Date Analyzed: 2/11/04

SURROGATE

Compound	Sample Results (ug/kg)	Amount Spiked (ug/Kg)	Blank SPK (ug/Kg)	SURR Rec (%)	BLK SPK DUP (ug/Kg)	SURR DUP Rec (%)	RPD (%)	EPA Limits % Recovery Lower – Upper
Phenol-d5	nd	**6000**	5810	96.8%	5655	94.3%	2.7%	24 - 113
2-Fluorophenol	nd	**6000**	5358	89.3%	5573	92.9%	3.9%	25 - 121
2,4,6-Tribromophenol	nd	**6000**	4356	72.6%	4835	80.6%	10.4%	19 - 122
2-Fluorobiphenyl	nd	**3000**	2396	79.9%	2280	76.0%	5.0%	30 - 115
Nitrobenzene-d5	nd	**3000**	2705	90.2%	2684	89.5%	0.8%	23 - 130
p-terphenyl-d14	nd	**3000**	2505	83.5%	2506	83.5%	0.0%	18 - 137

SPIKE / SPIKE DUP

Compound	Sample Results (ug/kg)	Amount Spiked (ug/Kg)	Blank SPK (ug/Kg)	SPK Rec (%)	Blank SPK DUP (ug/Kg)	Blank SPK DUP Rec (%)	RPD (%)	EPA Limits % Recovery Lower – Upper
Phenol	nd	**10000**	7642	76.4%	7835	78.4%	2.5%	26 - 90
2-Chlorophenol	nd	**10000**	7711	77.1%	7725	77.3%	0.2%	25 - 102
1,4-Dichlorobenzene	nd	**5000**	3680	73.6%	3294	65.9%	11.1%	28 - 104
N-Nitrosodi-n-propylamine	nd	**5000**	4391	87.8%	4087	81.7%	7.2%	41 - 126
1,2,4-trichlorobenzene	nd	**5000**	3703	74.1%	3883	77.7%	4.7%	38 - 107
4-Chloro-3-methylphenol	nd	**10000**	6628	66.3%	6796	68.0%	2.5%	26 - 103
Acenaphthene	nd	**5000**	4075	81.5%	3890	77.8%	4.6%	31 - 137
4-nitrophenol	nd	**10000**	660	6.6%	619	6.2%	6.4%	11 - 114
2,4-Dinitrotoluene	nd	**5000**	3852	77.0%	3696	73.9%	4.1%	28 - 89
Pentachlorophenol	nd	**10000**	9802	98.0%	5816	58.2%	51.0%	17 - 109
Pyrene	nd	**5000**	4031	80.6%	4016	80.3%	0.4%	35 - 142

*RPD -Relative Percent Difference; percent difference for each compound in the spiked samples for each analytical batch.

Analyzed by : Kasey Chung

Reviewed by : Rose Gentallan

ENVIRONMENTAL LABORATORY
DEPARTMENT OF WATER AND POWER
CITY OF LOS ANGELES

1630 N. MAIN ST. BUILDING #7
LOS ANGELES, CA 91207
213-367-7399

CHEMISTRY LABORATORY QUALITY CONTROL REPORT

Report of GC/MS analysis for Semi-Volatile Organics
EPA SW-846 METHOD 8270C

% RECOVERIES OF SURROGATE & SPIKE SAMPLES

Sample Matrix	**Soil**	
Sample ID	LE00754 SPK & SPK Dup	Date Sampled : 1/28/04
Sample Name	B1 Composite	Date Extracted : 2/6/04
Sample Weight(g)	5	Date Analyzed: 2/11/04
Final Volume(ml)	1	

SURROGATE

Compound	Sample Results (ug/kg)	Amount Spiked (ug/Kg)	LE00754 SPK (ug/Kg)	SURR Rec (%)	LE00754 SPK DUP (ug/Kg)	SURR DUP Rec (%)	RPD (%)	EPA Limits % Recovery Lower – Upper
Phenol-d5	nd	**6000**	6520	108.7%	4715	78.6%	32.1%	24 - 113
2-Fluorophenol	nd	**6000**	6485	108.1%	4730	78.8%	31.3%	25 - 121
2,4,6-Tribromophenol	nd	**6000**	5885	98.1%	5347	89.1%	9.6%	19 - 122
2-Fluorobiphenyl	nd	**3000**	2687	89.6%	1946	64.9%	32.0%	30 - 115
Nitrobenzene-d5	nd	**3000**	3237	107.9%	1775	59.2%	58.3%	23 - 130
p-terphenyl-d14	nd	**3000**	2830	94.3%	2517	83.9%	11.7%	18 - 137

SPIKE / SPIKE DUP

Compound	Sample Results (ug/kg)	Amount Spiked (ug/Kg)	LE00754 SPK (ug/Kg)	SURR Rec (%)	LE00754 SPK DUP (ug/Kg)	SURR DUP Rec (%)	RPD (%)	EPA Limits % Recovery Lower – Upper
Phenol	nd	**10000**	8669	86.7%	7260	72.6%	17.7%	26 - 90
2-Chlorophenol	nd	**10000**	8419	84.2%	7064	70.6%	17.5%	25 - 102
1,4-Dichlorobenzene	nd	**5000**	3690	73.8%	754	15.1%	132.1%	28 - 104
N-Nitrosodi-n-propylamine	nd	**5000**	4325	86.5%	3614	72.3%	17.9%	41 - 126
1,2,4-trichlorobenzene	nd	**5000**	4199	84.0%	1875	37.5%	76.5%	38 - 107
4-Chloro-3-methylphenol	nd	**10000**	8367	83.7%	7536	75.4%	10.5%	26 - 103
Acenaphthene	nd	**5000**	3997	79.9%	3568	71.4%	11.3%	31 - 137
4-nitrophenol	nd	**10000**	854	8.5%	563	5.6%	41.1%	11 - 114
2,4-Dinitrotoluene	nd	**5000**	3868	77.4%	3763	75.3%	2.8%	28 - 89
Pentachlorophenol	nd	**10000**	11596	116.0%	11936	119.4%	2.9%	17 - 109
Pyrene	nd	**5000**	4147	82.9%	3957	79.1%	4.7%	35 - 142

*RPD -Relative Percent Difference; percent difference for each compound in the spiked samples for each analytical batch.

Analyzed by : Kasey Chung

Reviewed by : Rose Gentallan

Laboratory Quality Control Check Sample (LCS)

Project: Chatsworth Reservoir

003010

DATE EXTRACTED: 2/6/2004
DATE ANALYZED: 2/11/2004
SUPPLY SOURCE: Resource Technology Corp
LOT NUMBER: FI 113

EXTRACTION METHOD : USEPA 3541
ANALYTICAL METHOD: USEPA 8270
LAB LCS I.D.: Q4818

ANALYTE	LCS RESULT (ug/kg)	TRUE VALUE (ug/kg)	% RECOVERY	Advisory Range
4-methyl phenol	543	7550	7.2%	0 - 15000
Hexachloroethane	1445	1650	87.6%	435 - 2870
Nitrobenzene	8511	5880	144.7%	1610 - 10200
2-Nitroaniline	18428	14500	127.1%	3760 -25300
3-Nitroaniline	214	975	21.9%	0 - 2070
2,4-Dinitrophenol	3675	1640	224.1%	0 - 4710
4-Nitrophenol	272	4560	6.0%	0 - 10300
2,4-Dinitrotoluene	17890	16000	111.8%	4550 - 27400
Fluorene	6878	8410	81.8%	3490 - 13300
Hexachlorobenzene	13739	14300	96.1%	7180 - 21400
Fluoranthene	11364	6510	174.6%	1190 - 11800
Pyrene	33034	37000	89.3%	3160 - 70900
Chrysene	6103	7210	84.6%	1380 - 13000
Bis (2-ethylhexyle) phthalate	1058	967	109.4%	137 - 1800
Benzo (b) fluoranthene	8065	3530	228.5%	1030 - 6030
Benzo (a) pyrene	4267	3170	134.6%	1110 - 5230

Surrogates 6000 ug/Kg for Acid Surrogate 3000 ug/Kg for Base Surrogate	EPA Limits % Recovery Lower-Upper	Conc. (ug/kg)	% Recovery
SURR: Phenol-d5	24 - 113	5647	94.1%
SURR: 2-Fluorophenol	25 - 121	6126	102.1%
SURR: 2,4,6-Tribromophenol	19 - 122	5573	92.9%
SURR: 2-Fluorobiphenyl	30 - 115	2407	80.2%
SURR: Nitrobenzidine-d5	23 - 120	2728	90.9%
SURR: p-Terphenyl-d14	18 - 137	2737	91.2%

Comment:

Analyst: Kasey Chung

Reviewed by:

ATTACHMENT # 4

METALS / MERCURY
EPA METHOD 6010B / 7471

CITY OF LOS ANGELES, DEPARTMENT OF WATER & POWER
ENVIRONMENTAL LABORATORY

Case Narrative

Project: Chatsworth Reservoir

METHOD 6010B/7471
METALS

1. Holding Time

   Analysis met holding time criteria.

2. Method Blank/Blank Spike/Blank Spike Duplicate

   Distilled water was used as method blank in the analysis of soil matrix. Recoveries met QC criteria.

3. Lab Control Sample

   Laboratory control sample (certified QC soil sample) was analyzed in every batch. Recoveries met QC criteria.

4. Matrix Spike/Matrix Spike Duplicate

   Sample LE00754 was analyzed for MS/MSD. Recoveries met QC criteria.

5. Sample Analysis

   Samples were analyzed according to the prescribed QC procedures.

ENVIRONMENTAL LABORATORY DATA REPORT

COC 04-0177

ANALYTICAL RESULT FOR METALS

004002

TTLC (Total Threshold Limit Concentration)

EPA Method 6010B

Sample Matrix: SOIL

Project Name : CHATSWORTH RESERVOIR

LABORATORY LOG NO.	DATE SAMPLED	DATE RECEIVED	DATE ANALYZED	SAMPLE DESCRIPTION	QC BATCH
LE00754	1/28/04	1/28/04	2/7/04	B1 COMPOSITE	$TTLCS-992
LE00755	1/28/04	1/28/04	2/7/04	B2 COMPOSITE	$TTLCS-992
LE00756	1/28/04	1/28/04	2/7/04	B3 COMPOSITE	$TTLCS-992
LE00757	1/28/04	1/28/04	2/7/04	B4 COMPOSITE	$TTLCS-992
LE00758	1/28/04	1/28/04	2/7/04	B5 COMPOSITE	$TTLCS-992
LE00759	1/28/04	1/28/04	2/7/04	B6 COMPOSITE	$TTLCS-992

METAL	LIMIT TTLC (mg/kg)	LIMIT STLC (mg/l)	METHOD	MDL	RL	D. F.	LE00754 mg/kg	LE00755 mg/kg	LE00756 mg/kg	LE00757 mg/kg	LE00758 mg/kg	LE00759 mg/kg
Antimony	500	15	6010	0.8	4.0	1	3.3J	5.3	5.1	ND	ND	ND
Arsenic	500	5	6010	1.0	5.0	1	9.6	8.8	7.3	6.1	4.5J	4.8J
Barium	10000	100	6010	0.5	2.5	1	75.9	171.8	186.7	93.9	109.8	72.2
Beryllium	75	0.75	6010	0.3	1.5	1	0.4J	0.9J	0.8J	0.6J	0.7J	0.6J
Cadmium	100	1	6010	0.6	3.0	1	3.2	6.2	5.8	3.0J	2.7J	2.7J
Chromium (T)	500	5	6010	0.3	1.5	1	11.4	27.4	24.2	14.7	15.4	13.1
Cobalt	8000	80	6010	0.2	1.0	1	9.9	21.3	19.6	13.6	12.0	13.7
Copper	2500	25	6010	0.2	1.0	1	7.7	27.8	23.9	5.7	7.9	17.5
Lead	1000	5	6010	0.9	4.5	1	14.5	10.4	10.9	17.3	12.2	17.5
Molybdenum	3500	350	6010	0.2	1.0	1	6.1	10.9	6.9	0.8J	1.2	0.6J
Nickel	2000	20	6010	0.4	2.0	1	12.5	34.7	28.0	10.8	10.3	10.6
Selenium	100	1	6010	0.7	3.5	1	3.6	ND	ND	ND	ND	ND
Silver	500	5	6010	2.5	12.5	1	ND	ND	ND	ND	ND	ND
Thallium	700	7	6010	2.5	12.5	1	ND	ND	ND	ND	ND	ND
Vanadium	2400	24	6010	0.3	1.5	1	29.1	67.1	61.0	29.6	22.9	24.2
Zinc	5000	250	6010	0.3	1.5	1	31.9	83.2	72.6	46.6	42.2	39.3
Mercury	20	0.2	7471	0.02	0.10	1	ND	ND	0.0305J	ND	ND	ND

ND - Not Detected; below method detection limit

MDL - Method Detection Limit

R.L. - Report Limit

D. F. - Dilution Factor

** - exceed TTLC limit

* - exceed 10x STLC limit

J - concentration above MDL and below RL

Annalyst: C. Y. Hwang

ENVIRONMENTAL LABORATORY DATA REPORT

COC 04-0177

ANALYTICAL RESULT FOR METALS

TTLC (Total Threshold Limit Concentration)

EPA Method 6010B

Sample Matrix: SOIL

004003

Project Name : CHATSWORTH RESERVOIR

LABORATORY LOG NO.	DATE SAMPLED	DATE RECEIVED	DATE ANALYZED	SAMPLE DESCRIPTION	QC BATCH
LE00754 Dup	01/28/04	1/28/04	2/7/04	B1 COMPOSITE	$TTLCS-992

METAL	LIMIT TTLC (mg/kg)	LIMIT STLC (mg/l)	METHOD	MDL	RL	D. F.	LE00754 (mg/kg)
Antimony	500	15	6010	0.8	4.0	1	ND
Arsenic	500	5	6010	1.0	5.0	1	4.9J
Barium	10000	100	6010	0.5	2.5	1	72
Beryllium	75	0.75	6010	0.3	1.5	1	0.37J
Cadmium	100	1	6010	0.6	3.0	1	3.4
Chromium (T)	2500	5	6010	0.3	1.5	1	11
Cobalt	8000	80	6010	0.2	1.0	1	10
Copper	2500	25	6010	0.2	1.0	1	8.1
Lead	1000	5	6010	0.9	4.5	1	11
Molybdenum	3500	350	6010	0.2	1.0	1	3.2
Nickel	2000	20	6010	0.4	2.0	1	13
Selenium	100	1	6010	0.7	3.5	1	ND
Silver	500	5	6010	2.5	12.5	1	ND
Thallium	700	7	6010	2.5	12.5	1	ND
Vanadium	2400	24	6010	0.3	1.5	1	29
Zinc	5000	250	6010	0.3	1.5	1	33

ND - Not Detected; below method detection limit

MDL - Method Detection Limit

R.L. - Report Limit

D. F. - Dilution Factor

** - exceed TTLC limit

* - exceed 10x STLC limit

J - concentration above MDL and below RL

Analyst: C. Y. Hwang

Project No: CHATSWORTH RESERVOIR

QA/QC Report

I. Matrix Spike (MS)/Matrix Spike Duplicate (MSD)

DATE ANALYZED: 02/07/04 ANALYTICAL METHOD USEPA 6010/7000

BATCH #: $TTLCS-992 (LE00754 LE00755 LE00756 LE00757 LE00758 LE00759)

LAB SAMPLE I.D.: LE00754 UNIT: (Circle One) (mg/kg)

METAL	SAMPLE RESULT	SPIKE CONC	MS	%MS	(DUP) SPIKE CONC	MSD	%MSD	RPD	MS/MSD % REC. LIMIT	RPD LIMIT
Antimony	3.3	100	45.2	41.9	100	35.0	31.7	27.7%	70 - 130	<30%
Arsenic	9.6	100	95.3	85.7	100	94.2	84.6	1.3%	70 - 130	<30%
Barium	---	---	---	---	---	---	---	---	70 - 130	<30%
Beryllium	0.4	100	102	102	100	100	99.6	2.4%	70 - 130	<30%
Cadmium	3.2	100	99.6	96.4	100	97.7	94.5	2.0%	70 - 130	<30%
Chromium (T)	11.4	100	109	97.6	100	105	93.6	4.2%	70 - 130	<30%
Cobalt	9.9	100	109	99.1	100	108	98.1	1.0%	70 - 130	<30%
Copper	7.7	100	106	98.3	100	102	94.3	4.2%	70 - 130	<30%
Lead	14.5	100	124	110	100	122	108	1.8%	70 - 130	<30%
Molybdenum	6.1	100	105	98.9	100	104	97.9	1.0%	70 - 130	<30%
Nickel	12.5	100	106	93.5	100	103	90.5	3.3%	70 - 130	<30%
Selenium	3.6	100	96.8	93.2	100	100	96.4	3.4%	70 - 130	<30%
Silver	---	---	---	---	---	---	---	---	70 - 130	<30%
Thallium	---	---	---	---	---	---	---	---	70 - 130	<30%
Vanadium	29.1	100	131	102	100	128	98.9	3.1%	70 - 130	<30%
Zinc	31.9	100	130	98.1	100	124	92.1	6.3%	70 - 130	<30%

MS = Matrix Spike MSD = Matrix Spike Duplicate
%MS = Percent Recovery of Matrix Spike

RPD = Relative Percent Difference
%MSD = Percent Recovery of Matrix Spike Duplicate

Analyst: C. Y. Hwang

Project : CHATSWORTH RESERVOIR

004005

III. Calibration and Laboratory Quality Control Check Sample (LCS)

DATE ANALYZED: 2/7/2004

SUPPLY SOURCE: Environmental Resource Associates

LOT NUMBER: D035-540

ANALYTICAL METHOD : EPA 6010B

LAB LCS I.D.: Q3259

UNIT: (Circle One)

(mg/kg) ug/L

METAL	LCS RESULTS mg/kg	TRUE VALUE mg/kg	RECOVERY %	Acceptane Range mg/kg
Aluminum	5735	6050	94.8%	1860 - 10200
Antimony	35	69.1	50.7%	15.1 - 123
Arsenic	94	193	48.7%	153 - 233
Barium	79	429	18.3%	341 - 517
Beryllium	100	102	98.0%	82.9 - 121
Cadmium	98	128	76.6%	103 - 153
Chromium (T)	105	137	76.6%	106 - 168
Cobalt	108	64.2	168.2%	54.4 - 74
Copper	102	92.1	110.7%	73.7 - 111
Lead	122	163	74.8%	126 - 200
Magnesium	3567	1960	182.0%	1350 - 2580
Manganeses	281	326	86.2%	246 - 406
Molybdenum	104	66.8	155.7%	53 - 80.6
Nickel	103	176	58.5%	138 - 214
Potassium	1601	1930	83.0%	1230 - 2630
Selenium	100	104	96.2%	74.4 - 133
Silver	50	116	43.1%	63.5 - 169
Sodium	356	282	126.2%	143 - 421
Thallium	13	78.6	16.5%	51.8 - 105
Vanadium	128	98.3	130.2%	68.8 - 128
Zinc	124	246	50.4%	189 - 303

Analyst: C. Y. Hwang / A. Luu

Report No.C10582
COC 04-0177
004060

Project Name: CHATSWORTH RESERVOIR

Mercury QA/QC Report

I. Method Blank Spike (BS)/ Method BlankSpike Duplicate (MBSD)

DATE ANALYZED: 01/30/04
BATCH #: 20040130/A
ANALYTICAL METHOD: USEPA 7471
UNIT: ug/kg
LAB SAMPLE I.D.: Method Blank, Method Blank Spike(MBS), and Method Blank Spike Dup(MBSD)

METAL	METHOD BLANK	SPIKE CONC	MBS	%MS	(DUP) SPIKE CONC	MBSD	%MSD	% RPD	MS/MSD % REC. LIMIT	% RPD LIMIT
MERCURY	7.0	2500	2800	111.7	2500	2770	110.5	0.5	70 - 130	30

II. Matrix Spike (MS)/Matrix Spike Duplicate (MSD)

BATCH #: 20040130/A
LAB SAMPLE I.D.: LE00754 Spike & Spike Duplicate
UNIT: ug/kg

METAL	SAMPLE RESULT	SPIKE CONC	MS	%MS	(DUP) SPIKE CONC	MSD	%MSD	% RPD	MS/MSD % REC. LIMIT	% RPD LIMIT
MERCURY	10.4	250	265	101.8	250	265	101.8	0	70 - 130	30

MS - Matrix Spike *MSD - Matrix Spike Dupllicate* *RPD - Relative Percent Difference*
%MS - Percent Recovery of Matrix Spike *%MSD - Percent Recovery of Matrix Spike Duplicate*

Analyst: R. Petersen / Kasey Chung

Report No.C10582
COC 04-0177

004007

Project Name: CHATSWORTH RESERVOIR

Mercury QA/QC Report

III. Laboratory Control Check Sample (LCS)

DATE ANALYZED: 1/30/2004
LCS I.D.: Q3295
BATCH QC : 20040130/A

UNIT: ug/kg

BATCH QC	A												
METAL	LAB ID	TRUE CONC	RESULT	% RC	LAB ID	TRUE CONC	RESULT	% RC	LAB ID	TRUE CONC	RESULT	% RC	ACCEPTANCE LIMITS (%)
MERCURY	Q3295	4700	5900	125.5									70 - 130

%RC - Percent Recovery
Batch - ten samples per batch

Analyst: R. Petersen / Kasey Chung

ATTACHMENT # 5

VOLATILE ORGANIC COMPOUNDS
VOC - EPA METHOD 8260B

CITY OF LOS ANGELES, DEPARTMENT OF WATER & POWER
ENVIRONMENTAL LABORATORY

Case Narrative

Project: Chatsworth Reservoir

METHOD 8260B
Volatile Organic Compounds by GC/MS

1. Holding Time

   Samples were analyzed within holding time limit.

2. Tuning and Calibration

   Tuning and calibration met QC requirements.

3. Method Blank

   There was no contamination detected at reporting level.

4. Lab Control Sample

   Laboratory control sample (certified QC soil sample) was analyzed in every batch. Recoveries met acceptable QC criteria.

5 Surrogate Recovery

   Recoveries met acceptable QC criteria.

6. Matrix Spike/Matrix Spike Duplicate

   Sample LE00760 was analyzed for MS/MSD. Recoveries met QC criteria.

7. Calibration

   Initial calibration was performed at five different concentrations. The percent relative standard deviation (% RSD) was within 15%. Calibration check standards met QC requirements.

7. Sample Analysis

   Samples were analyzed according to the prescribed QC procedures. There was no contamination detected at reporting level.

ENVIRONMENTAL LABORATORY DATA REPORT

COC 04-0177

Report of GC/MS Analysis for Purgeable Volatile Organics
EPA SW-846 Method 8260
Page 1 of 2

005002

PROJECT: CHATSWORTH RESERVOIR
Sample Matrix: Soil

Chemistry Log No.	Date Sampled	Date Received	Date Analyzed	Sample Description
LE00760	1/28/2004	1/28/2004	1/29/2004	CHATSWORTH RESERVOIR B1-5
LE00761	1/28/2004	1/28/2004	1/29/2004	CHATSWORTH RESERVOIR B1-10
LE00762	1/28/2004	1/28/2004	1/29/2004	CHATSWORTH RESERVOIR B2-5
LE00763	1/28/2004	1/28/2004	1/29/2004	CHATSWORTH RESERVOIR B2-10
LE00764	1/28/2004	1/28/2004	1/29/2004	CHATSWORTH RESERVOIR B2-15
LE00765	1/28/2004	1/28/2004	1/29/2004	CHATSWORTH RESERVOIR B3-5
LE00766	1/28/2004	1/28/2004	1/29/2004	CHATSWORTH RESERVOIR B3-10

Compounds	MDL ug/kg	PQL ug/kg	LE00760 Amount ug/kg	LE00761 Amount ug/kg	LE00762 Amount ug/kg	LE00763 Amount ug/kg	LE00764 Amount ug/kg	LE00765 Amount ug/kg	LE00766 Amount ug/kg
Acetone	8.5	42.5	nd	nd	nd	nd	nd	nd	nd
tert-Amyl methyl ether (TAME)	2.7	13.5	nd	nd	nd	nd	nd	nd	nd
Benzene	2.6	13.0	nd	nd	nd	nd	nd	nd	nd
Bromobenzene	2.9	14.5	nd	nd	nd	nd	nd	nd	nd
Bromochloromethane	2.4	12.0	nd	nd	nd	nd	nd	nd	nd
Bromodichloromethane	3.9	19.5	nd	nd	nd	nd	nd	nd	nd
Bromoform	3.6	18.0	nd	nd	nd	nd	nd	nd	nd
Bromomethane	2.2	11.0	nd	nd	nd	nd	nd	nd	nd
Methyl ethyl ketone (MEK)	3.4	17.0	nd	nd	nd	nd	nd	nd	nd
tert-Butyl alcohol (TBA)	21.6	108.0	nd	nd	nd	nd	nd	nd	nd
Butylbenzene	2.5	12.5	nd	nd	nd	nd	nd	nd	nd
sec-Butylbenzene	3.4	17.0	nd	nd	nd	nd	nd	nd	nd
tert-Butylbenzene	3.1	15.5	nd	nd	nd	nd	nd	nd	nd
tert-Butyl ethyl ether (ETBE)	2.7	13.5	nd	nd	nd	nd	nd	nd	nd
Carbon disulfide	5.3	26.5	nd	nd	nd	nd	nd	nd	nd
Carbon Tetrachloride	3.3	16.5	nd	nd	nd	nd	nd	nd	nd
Chlorobenzene	2.4	12.0	nd	nd	nd	nd	nd	nd	nd
Chloroethane	4.8	24.0	nd	nd	nd	nd	nd	nd	nd
2-Chloroethyl vinyl ether	2	10.0	nd	nd	nd	nd	nd	nd	nd
Chloroform	2.3	11.5	nd	nd	nd	nd	nd	nd	nd
Chloromethane	4.7	23.5	nd	nd	nd	nd	nd	nd	nd
2-Chlorotoluene	4.7	23.5	nd	nd	nd	nd	nd	nd	nd
4-Chlorotoluene	4.3	21.5	nd	nd	nd	nd	nd	nd	nd
Dibromochloromethane	4.2	21.0	nd	nd	nd	nd	nd	nd	nd
1,2-Dibromo-3-chloropropane	3.1	15.5	nd	nd	nd	nd	nd	nd	nd
1,2-Dibromoethane	3.6	18.0	nd	nd	nd	nd	nd	nd	nd
Dibromomethane	3.8	19.0	nd	nd	nd	nd	nd	nd	nd
1,2-Dichlorobenzene	4.7	23.5	nd	nd	nd	nd	nd	nd	nd
1,3-Dichlorobenzene	4.9	24.5	nd	nd	nd	nd	nd	nd	nd
1,4-Dichlorobenzene	5	25.0	nd	nd	nd	nd	nd	nd	nd
Dichlorodifluoromethane	5.2	26.0	nd	nd	nd	nd	nd	nd	nd
1,1-Dichloroethane	2.4	12.0	nd	nd	nd	nd	nd	nd	nd
1,2-Dichloroethane	2.8	14.0	nd	nd	nd	nd	nd	nd	nd
1,1-Dichloroethene	4.5	22.5	nd	nd	nd	nd	nd	nd	nd
cis-1,2-Dichloroethene	4.7	23.5	nd	nd	nd	nd	nd	nd	nd
trans-1,2-Dichloroethene	2.3	11.5	nd	nd	nd	nd	nd	nd	nd
1,2-Dichloropropane	2.7	13.5	nd	nd	nd	nd	nd	nd	nd
1,3-Dichloropropane	3.2	16.0	nd	nd	nd	nd	nd	nd	nd
2,2-Dichloropropane	2.9	14.5	nd	nd	nd	nd	nd	nd	nd
1,1-Dichloropropene	2.1	10.5	nd	nd	nd	nd	nd	nd	nd
cis-1,3-Dichloropropene	2.2	11.0	nd	nd	nd	nd	nd	nd	nd
trans-1,3-Dichloropropene	2.8	14.0	nd	nd	nd	nd	nd	nd	nd
Diisopropyl ether (DIPE)	3.2	16.0	nd	nd	nd	nd	nd	nd	nd
Ethylbenzene	3.1	15.5	nd	nd	nd	nd	nd	nd	nd
Hexachlorobutadiene	4.6	23.0	nd	nd	nd	nd	nd	nd	nd

ENVIRONMENTAL LABORATORY DATA REPORT

COC 04-0177

Report of GC/MS Analysis for Purgeable Volatile Organics

EPA SW-846 Method 8260

005003

PROJECT: CHATSWORTH RESERVOIR Sample Matrix: Soil

Chemistry Log No.	Date Sampled	Date Received	Date Analyzed	Sample Description
LE00760	1/28/2004	1/28/2004	1/29/2004	CHATSWORTH RESERVOIR B1-5
LE00761	1/28/2004	1/28/2004	1/29/2004	CHATSWORTH RESERVOIR B1-10
LE00762	1/28/2004	1/28/2004	1/29/2004	CHATSWORTH RESERVOIR B2-5
LE00763	1/28/2004	1/28/2004	1/29/2004	CHATSWORTH RESERVOIR B2-10
LE00764	1/28/2004	1/28/2004	1/29/2004	CHATSWORTH RESERVOIR B2-15
LE00765	1/28/2004	1/28/2004	1/29/2004	CHATSWORTH RESERVOIR B3-5
LE00766	1/28/2004	1/28/2004	1/29/2004	CHATSWORTH RESERVOIR B3-10

Compounds	MDL ug/kg	PQL ug/kg	LE00760 Amount ug/kg	LE00761 Amount ug/kg	LE00762 Amount ug/kg	LE00763 Amount ug/kg	LE00764 Amount ug/kg	LE00765 Amount ug/kg	LE00766 Amount ug/kg
2-Hexanone	2.2	11.0	nd	nd	nd	nd	nd	nd	nd
Isopropylbenzene	1.9	9.5	nd	nd	nd	nd	nd	nd	nd
p-Isopropyltoluene	2.5	12.5	nd	nd	nd	nd	nd	nd	nd
Methyl-t-butyl ether (MTBE)	3.1	15.5	nd	nd	nd	nd	nd	nd	nd
Methylene chloride	3.9	19.5	nd	nd	nd	nd	nd	nd	nd
Iodomethane	4.9	24.5	nd	nd	nd	nd	nd	nd	nd
Methyl Isobutyl ketone (MIBK)	2.3	11.5	nd	nd	nd	nd	nd	nd	nd
Naphthalene	2.7	13.5	nd	nd	nd	nd	nd	nd	nd
Propylbenzene	4.3	21.5	nd	nd	nd	nd	nd	nd	nd
Styrene	2.9	14.5	nd	nd	nd	nd	nd	nd	nd
1,1,1,2-Tetrachloroethane	2.2	11.0	nd	nd	nd	nd	nd	nd	nd
1,1,2,2-Tetrachloroethane	4.4	22.0	nd	nd	nd	nd	nd	nd	nd
Tetrachloroethylene	3.4	17.0	nd	nd	nd	nd	nd	nd	nd
Toluene	2	10.0	nd	nd	nd	nd	nd	nd	nd
1,2,3-Trichlorobenzene	3.3	16.5	nd	nd	nd	nd	nd	nd	nd
1,2,4-Trichlorobenzene	2.8	14.0	nd	nd	nd	nd	nd	nd	nd
1,1,1-Trichloroethane	2.9	14.5	nd	nd	nd	nd	nd	nd	nd
1,1,2-Trichloroethane	4.3	21.5	nd	nd	nd	nd	nd	nd	nd
Trichloroethylene	1.4	7.0	nd	nd	nd	nd	nd	nd	nd
Trichlorofluoromethane	3.5	17.5	nd	nd	nd	nd	nd	nd	nd
1,2,3-Trichloropropane	2.8	14.0	nd	nd	nd	nd	nd	nd	nd
1,2,4-Trimethylbenzene	2.5	12.5	nd	nd	nd	nd	nd	nd	nd
1,3,5-Trimethylbenzene	2.3	11.5	nd	nd	nd	nd	nd	nd	nd
Vinyl acetate	2.4	12.0	nd	nd	nd	nd	nd	nd	nd
Vinyl Chloride (Chloroethene)	3.6	18.0	nd	nd	nd	nd	nd	nd	nd
m & p-Xylene	6.7	33.5	nd	nd	nd	nd	nd	nd	nd
o-Xylene	2.2	11.0	nd	nd	nd	nd	nd	nd	nd

MDL - Method Detection Limit

PQL - Practical Quantitation Limit (5xMDL)

J - Concentration above MDL below PQL

nd - Not Detected; below detection limit

Quality Control Data

Surrogates 30 (ug/L each)	QC Limits % Recovery Lower-Upper							
SURR: Bromofluorobenzene	74 - 121	109.3%	108.0%	107.7%	108.7%	108.3%	110.0%	110.3%
SURR: Dibromofluoromethane	80 - 120	97.0%	97.3%	96.3%	97.7%	97.7%	96.7%	97.3%
SURR: Toluene-d8	81 - 117	113.0%	111.0%	112.3%	113.0%	111.0%	112.7%	110.7%

Comment:

Analyst: Bryan Tiu

Reviewed by: Rose Gentallan

ENVIRONMENTAL LABORATORY DATA REPORT

COC 04-0177

005004

Report of GC/MS Analysis for Purgeable Volatile Organics
EPA SW-846 Method 8260

PROJECT: CHATSWORTH RESERVOIR
Sample Matrix: Soil

Chemistry Log No.	Date Sampled	Date Received	Date Analyzed	Sample Description
LE00767	1/28/2004	1/28/2004	1/29/2004	CHATSWORTH RESERVOIR B3-15
LE00768	1/28/2004	1/28/2004	1/29/2004	CHATSWORTH RESERVOIR B3-20
LE00769	1/28/2004	1/28/2004	1/29/2004	CHATSWORTH RESERVOIR B4-5
LE00770	1/28/2004	1/28/2004	1/30/2004	CHATSWORTH RESERVOIR B4-10
LE00771	1/28/2004	1/28/2004	1/30/2004	CHATSWORTH RESERVOIR B5-5
LE00772	1/28/2004	1/28/2004	1/30/2004	CHATSWORTH RESERVOIR B5-10
LE00773	1/28/2004	1/28/2004	1/30/2004	CHATSWORTH RESERVOIR B6-5

Compounds	MDL (ug/kg)	PQL (ug/kg)	LE00767 Amount (ug/kg)	LE00768 Amount (ug/kg)	LE00769 Amount (ug/kg)	LE00770 Amount (ug/kg)	LE00771 Amount (ug/kg)	LE00772 Amount (ug/kg)	LE00773 Amount (ug/kg)
Acetone	8.5	42.5	nd	nd	nd	nd	nd	nd	nd
tert-Amyl methyl ether (TAME)	2.7	13.5	nd	nd	nd	nd	nd	nd	nd
Benzene	2.6	13.0	nd	nd	nd	nd	nd	nd	nd
Bromobenzene	2.9	14.5	nd	nd	nd	nd	nd	nd	nd
Bromochloromethane	2.4	12.0	nd	nd	nd	nd	nd	nd	nd
Bromodichloromethane	3.9	19.5	nd	nd	nd	nd	nd	nd	nd
Bromoform	3.6	18.0	nd	nd	nd	nd	nd	nd	nd
Bromomethane	2.2	11.0	nd	nd	nd	nd	nd	nd	nd
2-Butanone (MEK)	3.4	17.0	nd	nd	nd	nd	nd	nd	nd
tert-Butyl alcohol (TBA)	21.6	108.0	nd	nd	nd	nd	nd	nd	nd
n-Butylbenzene	2.5	12.5	nd	nd	nd	nd	nd	nd	nd
sec-Butylbenzene	3.4	17.0	nd	nd	nd	nd	nd	nd	nd
tert-Butylbenzene	3.1	15.5	nd	nd	nd	nd	nd	nd	nd
tert-Butyl ethyl ether (ETBE)	2.7	13.5	nd	nd	nd	nd	nd	nd	nd
Carbon disulfide	5.3	26.5	nd	nd	nd	nd	nd	nd	nd
Carbon Tetrachloride	3.3	16.5	nd	nd	nd	nd	nd	nd	nd
Chlorobenzene	2.4	12.0	nd	nd	nd	nd	nd	nd	nd
Chloroethane	4.8	24.0	nd	nd	nd	nd	nd	nd	nd
2-Chloroethyl vinyl ether	2	10.0	nd	nd	nd	nd	nd	nd	nd
Chloroform	2.3	11.5	nd	nd	nd	nd	nd	nd	nd
Chloromethane	4.7	23.5	nd	nd	nd	nd	nd	nd	nd
2-Chlorotoluene	4.7	23.5	nd	nd	nd	nd	nd	nd	nd
4-Chlorotoluene	4.3	21.5	nd	nd	nd	nd	nd	nd	nd
Dibromochloromethane	4.2	21.0	nd	nd	nd	nd	nd	nd	nd
1,2-Dibromo-3-chloropropane	3.1	15.5	nd	nd	nd	nd	nd	nd	nd
1,2-Dibromoethane (EDB)	3.6	18.0	nd	nd	nd	nd	nd	nd	nd
Dibromomethane	3.8	19.0	nd	nd	nd	nd	nd	nd	nd
1,2-Dichlorobenzene	4.7	23.5	nd	nd	nd	nd	nd	nd	nd
1,3-Dichlorobenzene	4.9	24.5	nd	nd	nd	nd	nd	nd	nd
1,4-Dichlorobenzene	5	25.0	nd	nd	nd	nd	nd	nd	nd
Dichlorodifluoromethane	5.2	26.0	nd	nd	nd	nd	nd	nd	nd
1,1-Dichloroethane	2.4	12.0	nd	nd	nd	nd	nd	nd	nd
1,2-Dichloroethane	2.8	14.0	nd	nd	nd	nd	nd	nd	nd
1,1-Dichloroethene	4.5	22.5	nd	nd	nd	nd	nd	nd	nd
cis-1,2-Dichloroethene	4.7	23.5	nd	nd	nd	nd	nd	nd	nd
trans-1,2-Dichloroethene	2.3	11.5	nd	nd	nd	nd	nd	nd	nd
1,2-Dichloropropane	2.7	13.5	nd	nd	nd	nd	nd	nd	nd
1,3-Dichloropropane	3.2	16.0	nd	nd	nd	nd	nd	nd	nd
2,2-Dichloropropane	2.9	14.5	nd	nd	nd	nd	nd	nd	nd
1,1-Dichloropropene	2.1	10.5	nd	nd	nd	nd	nd	nd	nd
cis-1,3-Dichloropropene	2.2	11.0	nd	nd	nd	nd	nd	nd	nd
trans-1,3-Dichloropropene	2.8	14.0	nd	nd	nd	nd	nd	nd	nd
Diisopropyl ether (DIPE)	3.2	16.0	nd	nd	nd	nd	nd	nd	nd
Ethylbenzene	3.1	15.5	nd	nd	nd	nd	nd	nd	nd
Hexachlorobutadiene	4.6	23.0	nd	nd	nd	nd	nd	nd	nd

ENVIRONMENTAL LABORATORY DATA REPORT

COC 04-0177

005005

Report of GC/MS Analysis for Purgeable Volatile Organics
EPA SW-846 Method 8260

PROJECT: CHATSWORTH RESERVOIR Sample Matrix: Soil

Chemistry Log No.	Date Sampled	Date Received	Date Analyzed	Sample Description
LE00767	1/28/2004	1/28/2004	1/29/2004	CHATSWORTH RESERVOIR B3-15
LE00768	1/28/2004	1/28/2004	1/29/2004	CHATSWORTH RESERVOIR B3-20
LE00769	1/28/2004	1/28/2004	1/29/2004	CHATSWORTH RESERVOIR B4-5
LE00770	1/28/2004	1/28/2004	1/30/2004	CHATSWORTH RESERVOIR B4-10
LE00771	1/28/2004	1/28/2004	1/30/2004	CHATSWORTH RESERVOIR B5-5
LE00772	1/28/2004	1/28/2004	1/30/2004	CHATSWORTH RESERVOIR B5-10
LE00773	1/28/2004	1/28/2004	1/30/2004	CHATSWORTH RESERVOIR B6-5

Compounds	MDL (ug/kg)	PQL (ug/kg)	LE00767 Amount (ug/kg)	LE00768 Amount (ug/kg)	LE00769 Amount (ug/kg)	LE00770 Amount (ug/kg)	LE00771 Amount (ug/kg)	LE00772 Amount (ug/kg)	LE00773 Amount (ug/kg)
2-Hexanone	2.2	11.0	nd	nd	nd	nd	nd	nd	nd
Isopropylbenzene	1.9	9.5	nd	nd	nd	nd	nd	nd	nd
p-Isopropyltoluene	2.5	12.5	nd	nd	nd	nd	nd	nd	nd
Methyl-t-butyl ether (MTBE)	3.1	15.5	nd	nd	nd	nd	nd	nd	nd
Methylene chloride	3.9	19.5	nd	nd	nd	nd	nd	nd	nd
Methyl Iodide (Iodomethane)	4.9	24.5	nd	nd	nd	nd	nd	nd	nd
4-Methyl-2-pentanone (MIBK)	2.3	11.5	nd	nd	nd	nd	nd	nd	nd
Naphthalene	2.7	13.5	nd	nd	nd	nd	nd	nd	nd
Propylbenzene	4.3	21.5	nd	nd	nd	nd	nd	nd	nd
Styrene (Phenylethylene)	2.9	14.5	nd	nd	nd	nd	nd	nd	nd
1,1,1,2-Tetrachloroethane	2.2	11.0	nd	nd	nd	nd	nd	nd	nd
1,1,2,2-Tetrachloroethane	4.4	22.0	nd	nd	nd	nd	nd	nd	nd
Tetrachloroethylene (PCE)	3.4	17.0	nd	nd	nd	nd	nd	nd	nd
Toluene	2	10.0	nd	nd	nd	nd	nd	nd	nd
1,2,3-Trichlorobenzene	3.3	16.5	nd	nd	nd	nd	nd	nd	nd
1,2,4-Trichlorobenzene	2.8	14.0	nd	nd	nd	nd	nd	nd	nd
1,1,1-Trichloroethane	2.9	14.5	nd	nd	nd	nd	nd	nd	nd
1,1,2-Trichloroethane	4.3	21.5	nd	nd	nd	nd	nd	nd	nd
Trichloroethylene (TCE)	1.4	7.0	nd	nd	nd	nd	nd	nd	nd
Trichlorofluoromethane	3.5	17.5	nd	nd	nd	nd	nd	nd	nd
1,2,3-Trichloropropane	2.8	14.0	nd	nd	nd	nd	nd	nd	nd
1,2,4-Trimethylbenzene	2.5	12.5	nd	nd	nd	nd	nd	nd	nd
1,3,5-Trimethylbenzene	2.3	11.5	nd	nd	nd	nd	nd	nd	nd
Vinyl acetate	2.4	12.0	nd	nd	nd	nd	nd	nd	nd
Vinyl Chloride	3.6	18.0	nd	nd	nd	nd	nd	nd	nd
m & p-Xylene	6.7	33.5	nd	nd	nd	nd	nd	nd	nd
o-Xylene	2.2	11.0	nd	nd	nd	nd	nd	nd	nd

MDL - Method Detection Limit
PQL - Practical Quantitation Limit (5xMDL)

J - Concentration above MDL below PQL
nd - Not Detected; below detection limit

Quality Control Data

Surrogates 30 (ug/L each)	QC Limits % Recovery Lower-Upper							
SURR: Bromofluorobenzene	74 - 121	109.0%	108.3%	108.7%	108.3%	110.3%	109.3%	109.0%
SURR: Dibromofluoromethane	80 - 120	96.0%	96.3%	96.3%	95.7%	95.7%	97.7%	96.3%
SURR: Toluene-d8	81 - 117	112.0%	111.7%	111.3%	111.3%	111.3%	110.3%	111.0%

Comment:

Analyst: Bryan Tiu

Reviewed by: Rose Gentallan

ENVIRONMENTAL LABORATORY DATA REPORT

COC 04-0177

Report of GC/MS Analysis for Purgeable Volatile Organics
EPA SW-846 Method 8260

005006

PROJECT: CHATSWORTH RESERVOIR

Sample Matrix: Soil

Chemistry Log No.	Date Sampled	Date Received	Date Analyzed	Sample Description
LE00774	1/28/2004	1/28/2004	1/30/2004	CHATSWORTH RESERVOIR B6-10

Compounds	MDL (ug/kg)	PQL (ug/kg)	LE00774 Amount (ug/kg)
Acetone	8.5	42.5	nd
tert-Amyl methyl ether (TAME)	2.7	13.5	nd
Benzene	2.6	13.0	nd
Bromobenzene	2.9	14.5	nd
Bromochloromethane	2.4	12.0	nd
Bromodichloromethane	3.9	19.5	nd
Bromoform	3.6	18.0	nd
Bromomethane	2.2	11.0	nd
2-Butanone (MEK)	3.4	17.0	nd
tert-Butyl alcohol (TBA)	21.6	108.0	nd
n-Butylbenzene	2.5	12.5	nd
sec-Butylbenzene	3.4	17.0	nd
tert-Butylbenzene	3.1	15.5	nd
tert-Butyl ethyl ether (ETBE)	2.7	13.5	nd
Carbon disulfide	5.3	26.5	nd
Carbon Tetrachloride	3.3	16.5	nd
Chlorobenzene	2.4	12.0	nd
Chloroethane	4.8	24.0	nd
2-Chloroethyl vinyl ether	2	10.0	nd
Chloroform	2.3	11.5	nd
Chloromethane	4.7	23.5	nd
2-Chlorotoluene	4.7	23.5	nd
4-Chlorotoluene	4.3	21.5	nd
Dibromochloromethane	4.2	21.0	nd
1,2-Dibromo-3-chloropropane	3.1	15.5	nd
1,2-Dibromoethane (EDB)	3.6	18.0	nd
Dibromomethane	3.8	19.0	nd
1,2-Dichlorobenzene	4.7	23.5	nd
1,3-Dichlorobenzene	4.9	24.5	nd
1,4-Dichlorobenzene	5	25.0	nd
Dichlorodifluoromethane	5.2	26.0	nd
1,1-Dichloroethane	2.4	12.0	nd
1,2-Dichloroethane	2.8	14.0	nd
1,1-Dichloroethene	4.5	22.5	nd
cis-1,2-Dichloroethene	4.7	23.5	nd
trans-1,2-Dichloroethene	2.3	11.5	nd
1,2-Dichloropropane	2.7	13.5	nd
1,3-Dichloropropane	3.2	16.0	nd
2,2-Dichloropropane	2.9	14.5	nd
1,1-Dichloropropene	2.1	10.5	nd
cis-1,3-Dichloropropene	2.2	11.0	nd
trans-1,3-Dichloropropene	2.8	14.0	nd
Diisopropyl ether (DIPE)	3.2	16.0	nd
Ethylbenzene	3.1	15.5	nd
Hexachlorobutadiene	4.6	23.0	nd

ENVIRONMENTAL LABORATORY DATA REPORT

COC 04-0177

Report of GC/MS Analysis for Purgeable Volatile Organics
EPA SW-846 Method 8260
Page 2 of 2

005007

PROJECT: CHATSWORTH RESERVOIR Sample Matrix: Soil

Chemistry Log No.	Date Sampled	Date Received	Date Analyzed	Sample Description
LE00774	1/28/2004	1/28/2004	1/30/2004	CHATSWORTH RESERVOIR B6-10

Compounds	MDL (ug/kg)	PQL (ug/kg)	LE00774 Amount (ug/kg)
2-Hexanone	2.2	11.0	nd
Isopropylbenzene	1.9	9.5	nd
p-Isopropyltoluene	2.5	12.5	nd
Methyl-t-butyl ether (MTBE)	3.1	15.5	nd
Methylene chloride	3.9	19.5	nd
Methyl iodide (Iodomethane)	4.9	24.5	nd
4-Methyl-2-pentanone (MIBK)	2.3	11.5	nd
Naphthalene	2.7	13.5	nd
Propylbenzene	4.3	21.5	nd
Styrene (Phenylethylene)	2.9	14.5	nd
1,1,1,2-Tetrachloroethane	2.2	11.0	nd
1,1,2,2-Tetrachloroethane	4.4	22.0	nd
Tetrachloroethylene (PCE)	3.4	17.0	nd
Toluene	2	10.0	nd
1,2,3-Trichlorobenzene	3.3	16.5	nd
1,2,4-Trichlorobenzene	2.8	14.0	nd
1,1,1-Trichloroethane	2.9	14.5	nd
1,1,2-Trichloroethane	4.3	21.5	nd
Trichloroethylene (TCE)	1.4	7.0	nd
Trichlorofluoromethane	3.5	17.5	nd
1,2,3-Trichloropropane	2.8	14.0	nd
1,2,4-Trimethylbenzene	2.5	12.5	nd
1,3,5-Trimethylbenzene	2.3	11.5	nd
Vinyl acetate	2.4	12.0	nd
Vinyl Chloride	3.6	18.0	nd
m & p-Xylene	6.7	33.5	nd
o-Xylene	2.2	11.0	nd

MDL - Method Detection Limit
PQL - Practical Quantitation Limit (5xMDL)

J - Concentration above MDL below PQL
nd - Not Detected; below detection limit

Quality Control Data

Surrogates 30 (ug/L each)	QC Limits % Recovery Lower-Upper	
SURR: Bromofluorobenzene	74 - 121	108.3%
SURR: Dibromofluoromethane	80 - 120	97.0%
SURR: Toluene-d8	81 - 117	112.3%

Comment:

Analyst: Bryan Tiu

Reviewed by: Rose Gentallan

ENVIRONMENTAL LABORATORY DATA REPORT

COC 04-0177

Report of GC/MS Analysis for Purgeable Volatile Organics
EPA SW-846 Method 8260

005008

PROJECT: CHATSWORTH RESERVOIR Sample Matrix: Soil

Chemistry Log No.	Date Sampled	Date Received	Date Analyzed	Sample Description
Blank	1/28/2004	1/28/2004	1/29/2004	Method Blank

Compounds	MDL ug/kg	PQL ug/kg	Blank Amount ug/kg
Acetone	8.5	42.5	nd
tert-Amyl methyl ether (TAME)	2.7	13.5	nd
Benzene	2.6	13.0	nd
Bromobenzene	2.9	14.5	nd
Bromochloromethane	2.4	12.0	nd
Bromodichloromethane	3.9	19.5	nd
Bromoform	3.6	18.0	nd
Bromomethane	2.2	11.0	nd
Methyl ethyl ketone (MEK)	3.4	17.0	nd
tert-Butyl alcohol (TBA)	21.6	108.0	nd
Butylbenzene	2.5	12.5	nd
sec-Butylbenzene	3.4	17.0	nd
tert-Butylbenzene	3.1	15.5	nd
tert-Butyl ethyl ether (ETBE)	2.7	13.5	nd
Carbon disulfide	5.3	26.5	nd
Carbon Tetrachloride	3.3	16.5	nd
Chlorobenzene	2.4	12.0	nd
Chloroethane	4.8	24.0	nd
2-Chloroethyl vinyl ether	2	10.0	nd
Chloroform	2.3	11.5	nd
Chloromethane	4.7	23.5	nd
2-Chlorotoluene	4.7	23.5	nd
4-Chlorotoluene	4.3	21.5	nd
Dibromochloromethane	4.2	21.0	nd
1,2-Dibromo-3-chloropropane	3.1	15.5	nd
1,2-Dibromoethane	3.6	18.0	nd
Dibromomethane	3.8	19.0	nd
1,2-Dichlorobenzene	4.7	23.5	nd
1,3-Dichlorobenzene	4.9	24.5	nd
1,4-Dichlorobenzene	5	25.0	nd
Dichlorodifluoromethane	5.2	26.0	nd
1,1-Dichloroethane	2.4	12.0	nd
1,2-Dichloroethane	2.8	14.0	nd
1,1-Dichloroethene	4.5	22.5	nd
cis-1,2-Dichloroethene	4.7	23.5	nd
trans-1,2-Dichloroethene	2.3	11.5	nd
1,2-Dichloropropane	2.7	13.5	nd
1,3-Dichloropropane	3.2	16.0	nd
2,2-Dichloropropane	2.9	14.5	nd
1,1-Dichloropropene	2.1	10.5	nd
cis-1,3-Dichloropropene	2.2	11.0	nd
trans-1,3-Dichloropropene	2.8	14.0	nd
Diisopropyl ether (DIPE)	3.2	16.0	nd
Ethylbenzene	3.1	15.5	nd

ENVIRONMENTAL LABORATORY DATA REPORT

COC 04-0177

Report of GC/MS Analysis for Purgeable Volatile Organics
EPA SW-846 Method 8260

005009

PROJECT: CHATSWORTH RESERVOIR Sample Matrix: Soil

Chemistry Log No.	Date Sampled	Date Received	Date Analyzed	Sample Description
Blank	1/28/2004	1/28/2004	1/29/2004	Method Blank

Compounds	MDL ug/kg	PQL ug/kg	Blank Amount ug/kg
Hexachlorobutadiene	4.6	23.0	nd
2-Hexanone	2.2	11.0	nd
Isopropylbenzene	1.9	9.5	nd
p-Isopropyltoluene	2.5	12.5	nd
Methyl-t-butyl ether (MTBE)	3.1	15.5	nd
Methylene chloride	3.9	19.5	nd
Iodomethane	4.9	24.5	nd
Methyl isobutyl ketone (MIBK)	2.3	11.5	nd
Naphthalene	2.7	13.5	nd
Propylbenzene	4.3	21.5	nd
Styrene	2.9	14.5	nd
1,1,1,2-Tetrachloroethane	2.2	11.0	nd
1,1,2,2-Tetrachloroethane	4.4	22.0	nd
Tetrachloroethylene	3.4	17.0	nd
Toluene	2	10.0	nd
1,2,3-Trichlorobenzene	3.3	16.5	nd
1,2,4-Trichlorobenzene	2.8	14.0	nd
1,1,1-Trichloroethane	2.9	14.5	nd
1,1,2-Trichloroethane	4.3	21.5	nd
Trichloroethylene	1.4	7.0	nd
Trichlorofluoromethane	3.5	17.5	nd
1,2,3-Trichloropropane	2.8	14.0	nd
1,2,4-Trimethylbenzene	2.5	12.5	nd
1,3,5-Trimethylbenzene	2.3	11.5	nd
Vinyl acetate	2.4	12.0	nd
Vinyl Chloride (Chloroethene)	3.6	18.0	nd
m & p-Xylene	6.7	33.5	nd
o-Xylene	2.2	11.0	nd

MDL - Method Detection Limit
PQL - Practical Quantitation Limit (5xMDL)

J - Concentration above MDL below PQL
nd - Not Detected; below detection limit

Quality Control Data

Surrogates 30 (ug/L each)	QC Limits % Recovery Lower-Upper	
SURR: Bromofluorobenzene	74 - 121	105.3%
SURR: Dibromofluoromethane	80 - 120	97.0%
SURR: Toluene-d8	81 - 117	114.7%

Comment:

Analyst: Bryan Tiu

Reviewed by: Rose Gentallan

Project No: CHATSWORTH RESERVOIR

(RWQCB LabForm10A;Ver12/94)

Quality Assurance Report

005012

Matrix Spike (MS)/Matrix Spike Duplicate (MSD)

DATE PERFORMED: 1/29/04
BATCH #: LE00760 LE(LE00760 LE00761 LE00762 LE00763 LE00764 LE00765 LE00766 LE00767 LE00768 LE00769
LAB SAMPLE I.D.: LE00760

ANALYTICAL METHOD: USEPA 8260
UNIT: ug/kg

ANALYTE	SAMPLE RESULT	SPIKE CONC	MS	%MS	SPIKE CONC (DUP)	MSD	%MSD	RPD	MS/MSD LIMIT	RPD LIMIT
1,1-Dichloroethene	ND	30.0	31.2	104	30.0	29.2	97.3	6.7%	59-172	22%
Benzene	ND	30.0	40.2	134	30.0	37.7	126	6.2%	66-142	21%
Trichloroethylene	ND	30.0	40.6	135	30.0	38.1	127	6.1%	62-137	24%
Toluene	ND	30.0	41.3	138	30.0	38.9	130	6.0%	59-139	21%
Chlorobenzene	ND	30.0	31.6	105	30.0	30.2	101	3.9%	60-133	21%

Laboratory Quality Control Check Sample (LCS)

DATE PERFORMED: 1/29/04
SUPPLY SOURCE:
LOT NUMBER:
DATE OF SOURCE:

ANALYTICAL METHOD: USEPA 8260
LAB LCS I.D.: Q4664
UNIT: ug/kg

ANALYTE	LCS RESULT ug/kg	TRUE VALUE ug/kg	% RECOVERY	Advisory Range
1,1,1-Trichloroethane	19.8	18.2	108.8	12.8 - 22.2
1,1,2,2-Tetrachloroethane	84	82.4	101.9	58.3 - 110
1,1,2-Trichloroethane	78.4	56.2	139.5	43.0 - 70.5
1,1-Dichloroethene	26.6	33.8	78.7	20.8 - 43.6
1,2-Dichlorobenzene	45.5	46.4	98.1	34.6 - 57.5
1,2-Dichloroethane	90.2	74.5	121.1	56.5 - 93.9
1,2-Dichloropropane	120	91.1	131.7	68.4 - 111
1,3-Dichlorobenzene	13.2	13.8	95.7	9.96 - 16.8
1,4-Dichlorobenzene	23.3	24.2	96.3	17.9 - 30.0
Acetone	165	156	105.8	69.6 - 240
Benzene	69.8	57.4	121.6	43.5 - 70.0
Bromodichloromethane	50.8	35.3	143.9	27.5 - 45.2
Bromoform	84.7	71.8	118.0	51.4 - 93.3
Carbon Tetrachloride	39.5	29.1	135.7	18.6 - 36.4
Chlorobenzene	27.6	27.5	100.4	21.4 - 33.0
Chloroform	30.9	26.4	117.0	19.9 - 32.5
Dibromochloromethane	71.8	47.4	151.5	35.8 - 59.3
Ethylbenzene	31.5	31.7	99.4	23.1 - 38.7
Methyl isobutyl ketone (MIBK)	153	129	118.6	76.9 - 174
Methylene chloride	42.3	41.4	102.2	27.9 - 53.8
o-Xylene	127	124	102.4	86.6 - 155
Tetrachloroethylene	80.7	63.7	126.7	40.8 - 75.8

Analyst: B. Tiu

Reviewed by: R. Gentallen

ANALYTICAL METHOD QA/QC SUMMARY

Table 1
Analytical Method Summary
LADWP Environmental Laboratory

Project: CHATSWORTH RESERVOIR

Analytical Group	Media	Analyte	Extraction/ Sample Preparation Method	Analytical Method	Measurement Accuracy (% Recovery)	Measurement Precision (% RPD)	LCS Accuracy (% Recovery)	Field Duplicate Precision (% RPD)	Completeness (%)	MDL/PQL (ug/kg)
Volatile Organic Compounds (VOCs)	Soil	Acetone	5035	8260B	-		45 - 154	<30%	100%	8.5/43
	Soil	Acrolein	5035	8260B	-		--			
	Soil	Acrylonitrile	5035	8260B	-		--			
	Soil	tert-Amyl methyl ether	5035	8260B	-		--			2.7/14
	Soil	Benzene	5035	8260B	66 -142	<21%	75 - 121	<30%	100%	2.6/13
	Soil	Bromobenzene	5035	8260B	-		--			2.9/15
	Soil	Bromochloromethane	5035	8260B	-		--			2.4/12
	Soil	Bromodichloromethane	5035	8260B	-		75 - 125	<30%	0%*	3.9/20
	Soil	Bromoform	5035	8260B	-		71 - 137	<30%	100%	3.6/18
	Soil	Bromomethane	5035	8260B	-		--			2.2/11
	Soil	2-Butanone (MEK)	5035	8260B	-		--			3.4/17
	Soil	tert-Butyl alcohol (TBA)	5035	8260B	-		--			21.6/108
	Soil	Butylbenzene	5035	8260B	-		--			2.5/13
	Soil	sec-Butylbenzene	5035	8260B	-		--			3.4/17
	Soil	tert-Butylbenzene	5035	8260B	-		--			3.1/16
	Soil	tert-Butyl ethyl ether (ETBE)	5035	8260B	-		--			2.7/14
	Soil	Carbon disulfide	5035	8260B	-		--			5.3/27
	Soil	Carbon Tetrachloride	5035	8260B	-		63 - 125	<30%	0%*	3.3/17
	Soil	Chlorobenzene	5035	8260B	60 - 133	<21%	77 - 120	<30%	100%	2.4/12
	Soil	Chloroethane	5035	8260B	-		--			4.8/24
	Soil	2-Chloroethyl vinyl ether	5035	8260B	-		--			2.0/10
	Soil	Chloroform	5035	8260B	-		75 - 123	<30%	100%	2.3/12
	Soil	Chloromethane	5035	8260B	-		--			4.7/24
	Soil	2-Chlorotoluene	5035	8260B	-		--			4.7/24
	Soil	4-Chlorotoluene	5035	8260B	-		--			4.3/22
	Soil	Dibromochloromethane	5035	8260B	-		75 - 125	<30%	0%*	4.2/21
	Soil	1,2-Dibromo-3-chloropropane	5035	8260B	-		--			3.1/16
	Soil	1,2-Dibromoethane (EDB)	5035	8260B	-		--			3.6/18

- Indicates a compound not included in the spike solution.

-- Indicates a compound not included in the LCS solution.

0%* - based on one batch

006002

Table 1
Analytical Method Summary
LADWP Environmental Laboratory

Project: CHATSWORTH RESERVOIR

Analytical Group	Media	Analytes	Extraction/ Sample Preparation Method	Analytical Method	Measurement Accuracy (% Recovery)	Measurement Precision (%RPD)	LCS Accuracy (% Recovery)	Field Duplicate Precision (%RPD)	Completeness (%)	MDL/PQL (ug/kg)
Volatile Organic Compounds (VOCs)	Soil	Acetone	5035	8260B	-		45 - 154	<30%	100%	8.5/43
	Soil	Acrolein	5035	8260B	-		--			
	Soil	Acrylonitrile	5035	8260B	-		--			
	Soil	tert-Amyl methyl ether	5035	8260B	-		--			2.7/14
	Soil	Benzene	5035	8260B	66 -142	<21%	75 - 121	<30%	100%	2.6/13
	Soil	Bromobenzene	5035	8260B	-		--			2.9/15
	Soil	Bromochloromethane	5035	8260B	-		--			2.4/12
	Soil	Bromodichloromethane	5035	8260B	-		75 - 125	<30%	0%*	3.9/20
	Soil	Bromoform	5035	8260B	-		71 - 137	<30%	100%	3.6/18
	Soil	Bromomethane	5035	8260B	-		--			2.2/11
	Soil	2-Butanone (MEK)	5035	8260B	-		--			3.4/17
	Soil	tert-Butyl alcohol (TBA)	5035	8260B	-		--			21.6/108
	Soil	Butylbenzene	5035	8260B	-		--			2.5/13
	Soil	sec-Butylbenzene	5035	8260B	-		--			3.4/17
	Soil	tert-Butylbenzene	5035	8260B	-		--			3.1/16
	Soil	tert-Butyl ethyl ether (ETBE)	5035	8260B	-		--			2.7/14
	Soil	Carbon disulfide	5035	8260B	-		--			5.3/27
	Soil	Carbon Tetrachloride	5035	8260B	-		63 - 125	<30%	0%*	3.3/17
	Soil	Chlorobenzene	5035	8260B	60 - 133	<21%	77 - 120	<30%	100%	2.4/12
	Soil	Chloroethane	5035	8260B	-		--			4.8/24
	Soil	2-Chloroethyl vinyl ether	5035	8260B	-		--			2.0/10
	Soil	Chloroform	5035	8260B	-		75 - 123	<30%	100%	2.3/12
	Soil	Chloromethane	5035	8260B	-		--			4.7/24
	Soil	2-Chlorotoluene	5035	8260B	-		--			4.7/24
	Soil	4-Chlorotoluene	5035	8260B	-		--			4.3/22
	Soil	Dibromochloromethane	5035	8260B	-		75 - 125	<30%	0%*	4.2/21
	Soil	1,2-Dibromo-3-chloropropane	5035	8260B	-		--			3.1/16
	Soil	1,2-Dibromoethane (EDB)	5035	8260B	-		--			3.6/18

- Indicates a compound not included in the spike solution.

-- Indicates a compound not included in the LCS solution.

0%* - based on one batch

Table 1
Analytical Method Summary
LADWP Environmental Laboratory

Analytical Group	Media	Analyte	Extraction/ Sample Preparation Method	Analytical Method	Measurement Accuracy (% Recovery)	Measurement Precision (% RPD)	LCS Accuracy (% Recovery)	Field Duplicate Precision (% RPD)	Completeness (%)	MDL/PQL (ug/kg)
Volatile Organic Compounds (VOCs)	Soil	Dibromomethane	5035	8260B	-		--			3.8/19
	Soil	1,2-Dichlorobenzene	5035	8260B	-		74 - 123	<30%	100%	4.7/24
	Soil	1,3-Dichlorobenzene	5035	8260B	-		72 - 121	<30%	100%	4.9/25
	Soil	1,4-Dichlorobenzene	5035	8260B	-		74 - 123	<30%	100%	5.0/25
	Soil	Dichlorodifluoromethane	5035	8260B	-		--			5.2/26
	Soil	1,1-Dichloroethane	5035	8260B	-		--			2.4/12
	Soil	1,2-Dichloroethane	5035	8260B	-		74 - 123	<30%	100%	2.8/14
	Soil	1,1-Dichloroethene	5035	8260B	59 - 172	<22%	61 - 128	<30%	100%	4.5/23
	Soil	cis-1,2-Dichloroethene	5035	8260B	-		--			4.7/24
	Soil	trans-1,2-Dichloroethene	5035	8260B	-		--			2.3/12
	Soil	1,2-Dichloropropane	5035	8260B	-		75 - 121	<30%	0%*	2.7/14
	Soil	1,3-Dichloropropane	5035	8260B	-		--			3.2/16
	Soil	2,2-Dichloropropane	5035	8260B	-		--			2.9/15
	Soil	1,1-Dichloropropene	5035	8260B	-		--			2.1/11
	Soil	cis-1,3-Dichloropropene	5035	8260B	-		--			2.2/11
	Soil	trans-1,3-Dichloropropene	5035	8260B	-		--			2.8/14
	Soil	Diisopropyl ether (DIPE)	5035	8260B	-		--			3.2/16
	Soil	Ethylbenzene	5035	8260B	-		72 - 122	<30%	100%	3.1/16
	Soil	Hexachlorobutadiene	5035	8260B	-		--			4.6/23
	Soil	2-Hexanone	5035	8260B	-		--			2.2/11
	Soil	Isopropylbenzene	5035	8260B	-		--			1.9/10
	Soil	p-Isopropyltoluene	5035	8260B	-		--			2.5/13
	Soil	Methyl-t-butyl ether (MTBE)	5035	8260B	-		--			3.1/16
	Soil	Methylene chloride	5035	8260B	-		67 - 130	<30%	100%	3.9/20
	Soil	Methyl iodide (Iodomethane)	5035	8260B	-		--			4.9/25
	Soil	Methyl Iso Butyl Ketone*	5035	8260B	-		59 - 134	<30%	0%*	2.3/12
	Soil	4-Methyl-2-pentanone	5035	8260B	-		--			2.3/12
	Soil	Naphthalene	5035	8260B	-		--			2.7/14
	Soil	Propylbenzene	5035	8260B	-		--			4.3/22

0%* - based on one batch

- Indicates a compound not included in the spike solution.

-- Indicates a compound not included in the LCS solution.

ble 1
Analytical Method Summary
LADWP Environmental Laboratory

Analytical Group	Media	Analyte	Extraction/ Sample Preparation Method	Analytical Method	Measurement Accuracy (%Recovery)	Measurement Precision (%RPD)	LCS Accuracy (%Recovery)	Field Duplicate Precision (%RPD)	Completeness (%)	MDL/PQL (ug/kg)
Volatile Organic Compounds (VOCs)	SOIL	Styrene (Phenylethylene)	5035	8260B	-		--			2.9/15
	SOIL	1,1,1,2-Tetrachloroethane	5035	8260B	-		--			2.2/11
	SOIL	1,1,2,2-Tetrachloroethane	5035	8260B	-		70 - 133	<30%	0%*	4.4/22
	SOIL	Tetrachloroethylene (PCE)	5035	8260B	-		64 - 119	<30%	100%	3.4/17
	SOIL	Toluene	5035	8260B	59 - 139	<21%	--		100%	2.0/10
	SOIL	1,2,3-Trichlorobenzene	5035	8260B	-		--			3.3/17
	SOIL	1,2,4-Trichlorobenzene	5035	8260B	-		--			2.8/14
	SOIL	1,1,1-Trichloroethane	5035	8260B	-		70 - 122	<30%	100%	2.9/15
	SOIL	1,1,2-Trichloroethane	5035	8260B	-		76 - 125	<30%	0%*	4.3/22
	SOIL	Trichloroethylene (TCE)	5035	8260B	62 - 137	<24%	--		100%	1.4/7
	SOIL	Trichlorofluoromethane	5035	8260B	-		--			3.5/18
	SOIL	1,2,3-Trichloropropane	5035	8260B	-		--			2.8/14
	SOIL	1,2,4-Trimethylbenzene	5035	8260B	-		--			2.5/13
	SOIL	1,3,5-Trimethylbenzene	5035	8260B	-		--			2.3/12
	SOIL	Vinyl acetate	5035	8260B	-		--			2.4/12
	SOIL	Vinyl Chloride	5035	8260B	-		--			3.6/18
	SOIL	m & p-Xylene	5035	8260B	-		--			6.7/34
	SOIL	o-Xylene	5035	8260B	-		69 - 125	<30%	100%	2.2/11
Surrogates:										
BFB[1]	SOIL		5035	8260B	70 - 130	<30%	--	<30%	100%	
DBFM[2]	SOIL		5035	8260B	70 - 130	<30%	--	<30%	100%	
Toluene-d8	SOIL		5035	8260B	70 - 130	<30%	--	<30%	100%	

(1) 4-Bromofluorobenzene

(2) Dibromofluoromethane

- Indicates a compound not included in the spike solution.

-- Indicates a compound not included in the LCS solution.

NA - Not Applicable

0%* - based on one batch

Table 2
Analytical Method Summary
West Coast Analytical Services, Inc

Analytical Group	Media	Analyte	Extraction or Sample Preparation Method	Analytical Method	Measurement Accuracy (% Recovery)	Measurement Precision (%RPD)	LCS Accuracy (% Recovery)	Field Duplicate Precision (%RPD)	Completeness (%)	MDL/PQL (mg/kg)
Biphenyls (PCBs)	SOIL	Aroclor 1221	3541	8082A	-		--			0.01 / 0.05
	SOIL	Aroclor 1232	3541	8082A	-		--			0.01 / 0.05
	SOIL	Aroclor 1242	3541	8082A	59 - 130	<30%	--		100%	0.01 / 0.05
	SOIL	Aroclor 1248	3541	8082A	-		70 - 130		100%	0.01 / 0.05
	SOIL	Aroclor 1254	3541	8082A	-		--			0.01 / 0.05
	SOIL	Aroclor 1260	3541	8082A	59 - 130	<30%	--		100%	0.01 / 0.05
Surrogates:	SOIL									
TCMX[3]	SOIL		3541	8082A	-		--			
DCBP[4]	SOIL		3541	8082A	60 - 150	<30%	--	<30%	100%	
Petroleum Hydrocarbons	SOIL	TRPH	418.1	418.1						
	SOIL	TEPH (C_9 - C_{36})	3541	8015M	77 -122	<30%	49 -123	<30%	100%	0.4 / 2.0
	SOIL	TPH - diesel range	3541	8015M						
	SOIL	TPH - gasoline range	8015B	8015B						
Surrogates:										
Chlorooctadecane	SOIL	TEPH (C_9 - C_{36})	3541	8015M	65 - 135	<30%	--	<30%	100%	
TFT[5]	SOIL		8015B	8015B						
BFB[6]	SOIL		8015B	8015B						

(3) Tetrachloro-m-xylene

(4) Decachlorobiphenyl

(5) Trifluorotoluene

(6) 4-Bromofluorobenzene

- Indicates a compound not included in the spike solution.

-- Indicates a compound not included in the LCS solution.

le 3
Analytical Method Summary
LADWP Environmental Laboratory

Analytical Group	Media	Analyte	Extraction/ Sample Preparation Method	Analytical Method	Measurement Accuracy (% Recovery)	Measurement Precision (% RPD)	LCS Accuracy (% Recovery)	Field Duplicate Precision (% RPD)	Completeness (%)	MDL/PQL (mg/kg)
Metals	SOIL	Aluminum	3050	6010B	-		31 - 169	<30	100%	
	SOIL	Antimony	3050	6010B	70 - 130	<30	22 - 178	<30	100%	0.8 / 4.0
	SOIL	Arsenic	3050	6010B	70 - 130	<30	79 - 121	<30	67%	1.0 / 5.0
	SOIL	Barium	3050	6010B	-		79 - 120	<30	0%*	0.5 / 2.5
	SOIL	Beryllium	3050	6010B	70 - 130	<30	81 - 120	<30	100%	0.3 / 1.5
	SOIL	Cadmium	3050	6010B	70 - 130	<30	80 - 119	<30	67%	0.6 / 3.0
	SOIL	Calcium	3050	6010B	-		--			
	SOIL	Chromium	3050	6010B	70 - 130	<30	77 - 123	<30	67%	0.3 / 1.5
	SOIL	Cobalt	3050	6010B	70 - 130	<30	85 - 115	<30	67%	0.2 / 1.0
	SOIL	Copper	3050	6010B	70 - 130	<30	80 - 121	<30	100%	0.2 / 1.0
	SOIL	Iron	3050	6010B	-		--			
	SOIL	Lead	3050	6010B	70 - 130	<30	77 - 127	<30	67%	0.9 / 4.5
	SOIL	Magnesium	3050	6010B	-		--			
	SOIL	Manganese	3050	6010B	-		--			
	SOIL	Mercury	3050	7471	70 - 130	<30	70 - 130	<30	100%	0.02 / 0.1
	SOIL	Molybdenum	3050	6010B	70 - 130	<30	79 - 121	<30	67%	0.2 / 1.0
	SOIL	Nickel	3050	6010B	70 - 130	<30	78 - 122	<30	67%	0.4 / 2.0
	SOIL	Potassium	3050	6010B	-		--			
	SOIL	Selenium	3050	6010B	70 - 130	<30	72 - 130	<30	90%	0.7 / 3.5
	SOIL	Silver	3050	6010B	70 - 130	<30	55 - 145	<30	67%	2.5 / 12.5
	SOIL	Sodium	3050	6010B	-		--			
	SOIL	Thallium	3050	6010B	-		66 - 134	<30	0%*	2.5 / 12.5
	SOIL	Vanadium	3050	6010B	70 - 130	<30	70 - 130	<30	100%	0.3 / 1.5
	SOIL	Zinc	3050	6010B	70 - 130	<30	77 - 123	<30	100%	0.3 / 1.5

- Indicates a compound not included in the spike solution.

-- Indicates a compound not included in the LCS solution.

0%* - based on one batch

Table 4
Analytical Method Summary
LADWP Environmental Laboratory

Analytical Group	Media	Analyte	Extraction/ Sample Preparation Method	Analytical Method	Measurement Accuracy (% Recovery)	Measurement Precision (% RPD)	LCS Accuracy (% Recovery)	Field Duplicate Precision (% RPD)	Completeness (%)	MDL/PQL (ug/kg)
Organic Compounds (SVOC)	SOIL	Acenaphthene	3541	8270C	31 - 137	<30			100%	37 / 186
	SOIL	Acenaphthylene	3541	8270C						49 / 245
	SOIL	Anthracene	3541	8270C						12 / 62
	SOIL	Aniline	3541	8270C						105 / 527
	SOIL	Azobezene	3541	8270C						39 / 194
	SOIL	Benzidine*	3541	8270C						651 / 3255
	SOIL	Benzoic acid*	3541	8270C						435 / 2175
	SOIL	Benzo(a)anthracene	3541	8270C						31 / 156
	SOIL	Benzo(b)flouranthene	3541	8270C			29 - 171	<30	0%*	13 / 64
	SOIL	Benzo(k)flouranthene	3541	8270C						164 / 820
	SOIL	Benzo(g,h,i)perylene	3541	8270C						23 / 115
	SOIL	Benzo(a)pyrene	3541	8270C			35 - 165	<30	100%	29 / 147
	SOIL	Benzyl alcohol	3541	8270C						50 / 248
	SOIL	Bis(2-chloroethoxy)methane	3541	8270C						49 / 248
	SOIL	Bis(2-chloroethyl)ether	3541	8270C						74 / 369
	SOIL	Bis(2-chloroisopropyl)ether	3541	8270C						107 / 533
	SOIL	Bis(2-ethylhexyl)phthalate	3541	8270C			14 - 186	<30	100%	78 / 392
	SOIL	4-Bromophenyl-phenylether	3541	8270C						34 / 170
	SOIL	Benzyl butyl phthalate	3541	8270C						50 / 251
	SOIL	Carbazole	3541	8270C						54 / 271
	SOIL	4-Chloroaniline	3541	8270C						31 / 157
	SOIL	2-Chloronaphthalene	3541	8270C						54 / 268
	SOIL	4-Chloro-3-methylphenol	3541	8270C	26 - 103	<30			100%	54 / 269
	SOIL	2-Chlorophenol	3541	8270C	25 - 102	<30			100%	49 / 243
	SOIL	4-Chlorophenyl-phenylether	3541	8270C						51 / 255
	SOIL	Chrysene	3541	8270C			19 - 180	<30	100%	14 / 70
	SOIL	3,3-Dichlorobenzidine	3541	8270C						65 / 326
	SOIL	Dibenz(a,h)anthracene	3541	8270C						76 / 379
	SOIL	Dibenzofuran	3541	8270C						41 / 205
	SOIL	Di-n-Butylphthalate	3541	8270C						78 / 390
	SOIL	1,3-Dichlorobenzene	3541	8270C						65 / 324
	SOIL	1,4-Dichlorobenzene	3541	8270C	28 - 104	<30			100%	59 / 294
	SOIL	1,2-Dichlorobenzene	3541	8270C						73 / 367
	SOIL	2,4-Dichlorophenol	3541	8270C						32 / 161
	SOIL	Diethyl phthalate	3541	8270C						41 / 205
	SOIL	2,4-Dimethylphenol	3541	8270C						98 / 491
	SOIL	Dimethyl phthalate	3541	8270C						27 / 137
	SOIL	4,6-Dinitro-2-methylphenol	3541	8270C						62 / 310
	SOIL	2,4-Dinitrophenol	3541	8270C			0 - 287	<30	100%	84 / 419
	SOIL	2,4-Dinitrotoluene	3541	8270C	28 - 29	<30	28 - 171	<30	100%	45 / 226

* Erratic Chromatographic Behavior 0%** - based on one batch

ble 4
Analytical Method Summary
LADWP Environmental Laboratory

Analytical Group	Media	Analyte	Extraction/ Sample Preparation Method	Analytical Method	Measurement Accuracy (% Recovery)	Measurement Precision (%RPD)	LCS Accuracy (% Recovery)	Field Duplicate Precision (%RPD)	Completeness (%)	MDL/PQL (ug/kg)
Organic Compounds (SVOC)	SOIL	2,6-Dinitrotoluene	3541	8270C						28 / 139
	SOIL	Di-n-0ctylphthalate	3541	8270C						78 / 390
	SOIL	Flouranthene	3541	8270C			18 - 181	<30	100%	30 / 149
	SOIL	Flourene	3541	8270C			41 - 158	<30	100%	38 / 188
	SOIL	Hexachlorobenzene	3541	8270C			50 - 150	<30	100%	9 / 46
	SOIL	Hexachlorobutadiene	3541	8270C						64 /319
	SOIL	Hexachlorocyclopentadiene	3541	8270C						47 / 233
	SOIL	Hexachloroethane	3541	8270C			27 - 174	<30	100%	58 / 291
	SOIL	Indeno(1,2,3-cd)pyrene	3541	8270C						39 / 193
	SOIL	Isophorone	3541	8270C						33 / 165
	SOIL	2-Methylnaphthalene	3541	8270C						28 / 139
	SOIL	2-Methylphenol	3541	8270C						39 / 194
	SOIL	4-Methylphenol	3541	8270C			0 - 198	<30	100%	59 / 297
	SOIL	Naphthalene	3541	8270C						55 / 275
	SOIL	2-Nitroaniline	3541	8270C			27 - 174	<30	100%	16 / 82
	SOIL	3-Nitroaniline	3541	8270C			0 - 212	<30	100%	35 / 174
	SOIL	4-Nitroaniline	3541	8270C						49 / 244
	SOIL	Nitrobenzene	3541	8270C			27 - 173	<30	100%	69 / 344
	SOIL	2-Nitrophenol	3541	8270C						48 / 240
	SOIL	4-Nitrophenol	3541	8270C	11 - 114	<30	0 - 226	<30	20%	36 / 182
	SOIL	N-Nitrosodimethylamine	3541	8270C						79 / 397
	SOIL	N-Nitrosodiphenylamine	3541	8270C						61 / 305
	SOIL	N-Nitrosodi-n-propylamine	3541	8270C	26 - 103	<30			100%	48 / 242
	SOIL	Pentachlorophenol	3541	8270C	17 - 109	<30			100%	36 / 180
	SOIL	Phenanthrene	3541	8270C						15 / 77
	SOIL	Phenol	3541	8270C	26 - 90	<30			100%	88 / 441
	SOIL	Pyrene	3541	8270C	35 - 142	<30	8 - 192	<30	100%	34 / 172
	SOIL	Pyridine*	3541	8270C						167/ 836
	SOIL	1,2,4-Trichlorobenzene	3541	8270C	38 - 107	<30			100%	73 / 364
	SOIL	2,4,5-Trichlorophenol	3541	8270C						51 / 256
	SOIL	2,4,6-Trichlorophenol	3541	8270C						30 / 148
Surrogates:	SOIL	Nittrobenzidine-d5	3541	8270C	23 - 120	<30		<30	100%	
	SOIL	2-Fluorobiphenyl	3541	8270C	30 - 115	<30		<30	100%	
	SOIL	Terphenyl-d14	3541	8270C	18 - 137	<30		<30	100%	
	SOIL	Phenol-d6	3541	8270C	24 - 113	<30		<30	92%	
	SOIL	2-Fluorophenol	3541	8270C	25 - 121	<30		<30	100%	
	SOIL	2,4,6-Tribromophenol	3541	8270C	19 - 122	<30		<30	100%	

* Erratic Chromatographic Behavior

Calscience
Environmental
Laboratories, Inc.

April 02, 2004

Ken Floom
Essentia Management Service
5000 East Spring Street, Suite 720
Long Beach, CA 90815-1270

Subject: **Calscience Work Order No.:** **04-03-1493**
Client Reference: **LADWP-Chatsworth Resrvoir**

Dear Client:

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 3/24/2004 and analyzed in accordance with the attached chain-of-custody.

Unless otherwise noted, all analytical testing was accomplished in accordance with the guidelines established in our Quality Assurance Program Manual, applicable standard operating procedures, and other related documentation. The original report of any subcontracted analysis is provided herein, and follows the standard Calscience data package. The results in this analytical report are limited to the samples tested and any reproduction thereof must be made in its entirety.

If you have any questions regarding this report, please do not hesitate to contact the undersigned.

Sincerely,

Calscience Environmental
Laboratories, Inc.
Stephen Nowak
Project Manager

Michael J. Crisostomo
Quality Assurance Manager

Calscience Environmental Laboratories, Inc.

Analytical Report

Essentia Management Service
5000 East Spring Street, Suite 720
Long Beach, CA 90815-1270

Date Received: 03/24/04
Work Order No: 04-03-1493
Preparation: N/A
Method: EPA 314.0

Project: LADWP-Chatsworth Resrvoir

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
B5-W	**04-03-1493-1**	**03/24/04**	**Aqueous**	**N/A**	**03/26/04**	**040325L01**

Parameter	Result	RL	DF	Qual	Units
Perchlorate	ND	2.0	1		ug/L

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
B4-W	**04-03-1493-2**	**03/24/04**	**Aqueous**	**N/A**	**03/26/04**	**040325L01**

Parameter	Result	RL	DF	Qual	Units
Perchlorate	ND	2.0	1		ug/L

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
B2-W	**04-03-1493-3**	**03/24/04**	**Aqueous**	**N/A**	**03/26/04**	**040325L01**

Parameter	Result	RL	DF	Qual	Units
Perchlorate	ND	2.0	1		ug/L

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
B3-W	**04-03-1493-4**	**03/24/04**	**Aqueous**	**N/A**	**03/26/04**	**040325L01**

Parameter	Result	RL	DF	Qual	Units
Perchlorate	ND	2.0	1		ug/L

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
Method Blank	**099-05-203-136**	**N/A**	**Aqueous**	**N/A**	**03/25/04**	**040325L01**

Parameter	Result	RL	DF	Qual	Units
Perchlorate	ND	2.0	1		ug/L

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Essentia Management Service
5000 East Spring Street, Suite 720
Long Beach, CA 90815-1270

Date Received: 03/24/04
Work Order No: 04-03-1493
Preparation: N/A
Method: EPA 7199

Project: LADWP-Chatsworth Resrvoir

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
B5-W	04-03-1493-1	03/24/04	Aqueous	N/A	03/24/04	40324CRL1

Parameter	Result	RL	DF	Qual	Units
Chromium, Hexavalent	ND	1.0	1		ug/L

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
B4-W	04-03-1493-2	03/24/04	Aqueous	N/A	03/24/04	40324CRL1

Parameter	Result	RL	DF	Qual	Units
Chromium, Hexavalent	ND	1.0	1		ug/L

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
2-W	04-03-1493-3	03/24/04	Aqueous	N/A	03/24/04	40324CRL1

Parameter	Result	RL	DF	Qual	Units
Chromium, Hexavalent	ND	1.0	1		ug/L

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
B3-W	04-03-1493-4	03/24/04	Aqueous	N/A	03/24/04	40324CRL1

Parameter	Result	RL	DF	Qual	Units
Chromium, Hexavalent	ND	1.0	1		ug/L

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
Method Blank	099-05-123-1,331	N/A	Aqueous	N/A	03/24/04	40324CRL1

Parameter	Result	RL	DF	Qual	Units
Chromium, Hexavalent	ND	1.0	1		ug/L

RL - Reporting Limit, DF - Dilution Factor, Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Essentia Management Service
5000 East Spring Street, Suite 720
Long Beach, CA 90815-1270

Date Received: 03/24/04
Work Order No: 04-03-1493
Preparation: EPA 3510C
Method: TPH - Carbon Range

Project: LADWP-Chatsworth Resrvoir

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
B5-W	04-03-1493-1	03/24/04	Aqueous	03/25/04	03/25/04	040325B04

Parameter	Result	RL	DF	Qual	Units	Parameter	Result	RL	DF	Qual	Units
C7	ND		1		ug/L	C19-C20	ND		1		ug/L
C8	ND		1		ug/L	C21-C22	ND		1		ug/L
C9-C10	ND		1		ug/L	C23-C24	ND		1		ug/L
C11-C12	ND		1		ug/L	C25-C28	ND		1		ug/L
C13-C14	ND		1		ug/L	C29-C32	ND		1		ug/L
C15-C16	ND		1		ug/L	C33-C36	ND		1		ug/L
C17-C18	ND		1		ug/L	C7-C36 Total	ND	1000	1		ug/L

Surrogates:	REC (%)	Control Limits	Qual
Decachlorobiphenyl	86	51-141	

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
B4-W	04-03-1493-2	03/24/04	Aqueous	03/25/04	03/26/04	040325B04

Parameter	Result	RL	DF	Qual	Units	Parameter	Result	RL	DF	Qual	Units
C7	ND		1		ug/L	C19-C20	ND		1		ug/L
C8	ND		1		ug/L	C21-C22	ND		1		ug/L
C9-C10	ND		1		ug/L	C23-C24	ND		1		ug/L
C11-C12	ND		1		ug/L	C25-C28	ND		1		ug/L
C13-C14	ND		1		ug/L	C29-C32	ND		1		ug/L
C15-C16	ND		1		ug/L	C33-C36	ND		1		ug/L
C17-C18	ND		1		ug/L	C7-C36 Total	ND	1000	1		ug/L

Surrogates:	REC (%)	Control Limits	Qual
Decachlorobiphenyl	92	51-141	

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
B2-W	04-03-1493-3	03/24/04	Aqueous	03/25/04	03/26/04	040325B04

Parameter	Result	RL	DF	Qual	Units	Parameter	Result	RL	DF	Qual	Units
C7	ND		1		ug/L	C19-C20	ND		1		ug/L
C8	ND		1		ug/L	C21-C22	ND		1		ug/L
C9-C10	ND		1		ug/L	C23-C24	ND		1		ug/L
C11-C12	ND		1		ug/L	C25-C28	ND		1		ug/L
C13-C14	ND		1		ug/L	C29-C32	ND		1		ug/L
C15-C16	ND		1		ug/L	C33-C36	ND		1		ug/L
C17-C18	ND		1		ug/L	C7-C36 Total	ND	1000	1		ug/L

Surrogates:	REC (%)	Control Limits	Qual
Decachlorobiphenyl	87	51-141	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Essentia Management Service
5000 East Spring Street, Suite 720
Long Beach, CA 90815-1270

Date Received: 03/24/04
Work Order No: 04-03-1493
Preparation: EPA 3510C
Method: TPH - Carbon Range

Project: LADWP-Chatsworth Resrvoir

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
B3-W	**04-03-1493-4**	**03/24/04**	**Aqueous**	**03/25/04**	**03/26/04**	**040325B04**

Parameter	Result	RL	DF	Qual	Units	Parameter	Result	RL	DF	Qual	Units
C7	ND		1		ug/L	C19-C20	ND		1		ug/L
C8	ND		1		ug/L	C21-C22	ND		1		ug/L
C9-C10	ND		1		ug/L	C23-C24	ND		1		ug/L
C11-C12	ND		1		ug/L	C25-C28	ND		1		ug/L
C13-C14	ND		1		ug/L	C29-C32	ND		1		ug/L
C15-C16	ND		1		ug/L	C33-C36	ND		1		ug/L
C17-C18	ND		1		ug/L	C7-C36 Total	ND	1000	1		ug/L

Surrogates:	REC (%)	Control Limits	Qual
Decachlorobiphenyl	91	51-141	

Method Blank	098-03-003-2,046	N/A	Aqueous	03/25/04	03/25/04	040325B04

Parameter	Result	RL	DF	Qual	Units
TPH as Diesel	ND	1000	1		ug/L

Surrogates:	REC (%)	Control Limits	Qual
Decachlorobiphenyl	103	51-141	

RL - Reporting Limit, DF - Dilution Factor, Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Essentia Management Service
5000 East Spring Street, Suite 720
Long Beach, CA 90815-1270

Date Received: 03/24/04
Work Order No: 04-03-1493
Preparation: EPA 3520B
Method: EPA 8082

Project: LADWP-Chatsworth Resrvoir

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
B5-W	04-03-1493-1	03/24/04	Aqueous	03/29/04	03/31/04	040329L09

Parameter	Result	RL	DF	Qual	Units	Parameter	Result	RL	DF	Qual	Units
Aroclor-1016	ND	1.0	1		ug/L	Aroclor-1248	ND	1.0	1		ug/L
Aroclor-1221	ND	1.0	1		ug/L	Aroclor-1254	ND	1.0	1		ug/L
Aroclor-1232	ND	1.0	1		ug/L	Aroclor-1260	ND	1.0	1		ug/L
Aroclor-1242	ND	1.0	1		ug/L	Aroclor-1262	ND	1.0	1		ug/L

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
Decachlorobiphenyl	29	50-135	2	2,4,5,6-Tetrachloro-m-Xylene	87	50-135	

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
B4-W	04-03-1493-2	03/24/04	Aqueous	03/29/04	03/31/04	040329L09

Parameter	Result	RL	DF	Qual	Units	Parameter	Result	RL	DF	Qual	Units
Aroclor-1016	ND	1.0	1		ug/L	Aroclor-1248	ND	1.0	1		ug/L
Aroclor-1221	ND	1.0	1		ug/L	Aroclor-1254	ND	1.0	1		ug/L
Aroclor-1232	ND	1.0	1		ug/L	Aroclor-1260	ND	1.0	1		ug/L
Aroclor-1242	ND	1.0	1		ug/L	Aroclor-1262	ND	1.0	1		ug/L

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
Decachlorobiphenyl	36	50-135	2	2,4,5,6-Tetrachloro-m-Xylene	85	50-135	

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
B2-W	04-03-1493-3	03/24/04	Aqueous	03/29/04	03/31/04	040329L09

Parameter	Result	RL	DF	Qual	Units	Parameter	Result	RL	DF	Qual	Units
Aroclor-1016	ND	1.0	1		ug/L	Aroclor-1248	ND	1.0	1		ug/L
Aroclor-1221	ND	1.0	1		ug/L	Aroclor-1254	ND	1.0	1		ug/L
Aroclor-1232	ND	1.0	1		ug/L	Aroclor-1260	ND	1.0	1		ug/L
Aroclor-1242	ND	1.0	1		ug/L	Aroclor-1262	ND	1.0	1		ug/L

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
Decachlorobiphenyl	44	50-135	2	2,4,5,6-Tetrachloro-m-Xylene	92	50-135	

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
B3-W	04-03-1493-4	03/24/04	Aqueous	03/29/04	03/31/04	040329L09

Parameter	Result	RL	DF	Qual	Units	Parameter	Result	RL	DF	Qual	Units
Aroclor-1016	ND	1.0	1		ug/L	Aroclor-1248	ND	1.0	1		ug/L
Aroclor-1221	ND	1.0	1		ug/L	Aroclor-1254	ND	1.0	1		ug/L
Aroclor-1232	ND	1.0	1		ug/L	Aroclor-1260	ND	1.0	1		ug/L
Aroclor-1242	ND	1.0	1		ug/L	Aroclor-1262	ND	1.0	1		ug/L

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
Decachlorobiphenyl	43	50-135	2	2,4,5,6-Tetrachloro-m-Xylene	91	50-135	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Essentia Management Service
5000 East Spring Street, Suite 720
Long Beach, CA 90815-1270

Date Received: 03/24/04
Work Order No: 04-03-1493
Preparation: EPA 3520B
Method: EPA 8082

Project: LADWP-Chatsworth Resrvoir

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
Method Blank	**099-07-010-181**	**N/A**	**Aqueous**	**03/29/04**	**03/31/04**	**040329L09**

Parameter	Result	RL	DF	Qual	Units	Parameter	Result	RL	DF	Qual	Units
Aroclor-1016	ND	1.0	1		ug/L	Aroclor-1248	ND	1.0	1		ug/L
Aroclor-1221	ND	1.0	1		ug/L	Aroclor-1254	ND	1.0	1		ug/L
Aroclor-1232	ND	1.0	1		ug/L	Aroclor-1260	ND	1.0	1		ug/L
Aroclor-1242	ND	1.0	1		ug/L	Aroclor-1262	ND	1.0	1		ug/L

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
Decachlorobiphenyl	100	50-135		2,4,5,6-Tetrachloro-m-Xylene	83	50-135	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Essentia Management Service
5000 East Spring Street, Suite 720
Long Beach, CA 90815-1270

Date Received: 03/24/04
Work Order No: 04-03-1493
Preparation: EPA 3520B
Method: EPA 8270C

Project: LADWP-Chatsworth Resrvoir

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
B5-W	04-03-1493-1	03/24/04	Aqueous	03/25/04	03/30/04	040325L06

Parameter	Result	RL	DF	Qual	Units	Parameter	Result	RL	DF	Qual	Units
N-Nitrosodimethylamine	ND	10	1		ug/L	2,4-Dinitrophenol	ND	50	1		ug/L
Aniline	ND	10	1		ug/L	4-Nitrophenol	ND	10	1		ug/L
Phenol	ND	10	1		ug/L	Dibenzofuran	ND	10	1		ug/L
Bis(2-Chloroethyl) Ether	ND	25	1		ug/L	2,4-Dinitrotoluene	ND	10	1		ug/L
2-Chlorophenol	ND	10	1		ug/L	2,6-Dinitrotoluene	ND	10	1		ug/L
1,3-Dichlorobenzene	ND	10	1		ug/L	Diethyl Phthalate	ND	10	1		ug/L
1,4-Dichlorobenzene	ND	10	1		ug/L	4-Chlorophenyl-Phenyl Ether	ND	10	1		ug/L
Benzyl Alcohol	ND	10	1		ug/L	Fluorene	ND	10	1		ug/L
1,2-Dichlorobenzene	ND	10	1		ug/L	4-Nitroaniline	ND	10	1		ug/L
2-Methylphenol	ND	10	1		ug/L	Azobenzene	ND	10	1		ug/L
Bis(2-Chloroisopropyl) Ether	ND	10	1		ug/L	4,6-Dinitro-2-Methylphenol	ND	50	1		ug/L
3/4-Methylphenol	ND	10	1		ug/L	N-Nitrosodiphenylamine	ND	10	1		ug/L
N-Nitroso-di-n-propylamine	ND	10	1		ug/L	4-Bromophenyl-Phenyl Ether	ND	10	1		ug/L
Hexachloroethane	ND	10	1		ug/L	Hexachlorobenzene	ND	10	1		ug/L
Nitrobenzene	ND	25	1		ug/L	Pentachlorophenol	ND	10	1		ug/L
Isophorone	ND	10	1		ug/L	Phenanthrene	ND	10	1		ug/L
2-Nitrophenol	ND	10	1		ug/L	Anthracene	ND	10	1		ug/L
2,4-Dimethylphenol	ND	10	1		ug/L	Di-n-Butyl Phthalate	ND	10	1		ug/L
Benzoic Acid	ND	50	1		ug/L	Fluoranthene	ND	10	1		ug/L
Bis(2-Chloroethoxy) Methane	ND	10	1		ug/L	Benzidine	ND	50	1		ug/L
2,4-Dichlorophenol	ND	10	1		ug/L	Pyrene	ND	10	1		ug/L
1,2,4-Trichlorobenzene	ND	10	1		ug/L	Pyridine	ND	10	1		ug/L
Naphthalene	ND	10	1		ug/L	Butyl Benzyl Phthalate	ND	10	1		ug/L
4-Chloroaniline	ND	10	1		ug/L	3,3'-Dichlorobenzidine	ND	25	1		ug/L
Hexachloro-1,3-Butadiene	ND	10	1		ug/L	Benzo (a) Anthracene	ND	10	1		ug/L
4-Chloro-3-Methylphenol	ND	10	1		ug/L	Bis(2-Ethylhexyl) Phthalate	ND	10	1		ug/L
2-Methylnaphthalene	ND	10	1		ug/L	Chrysene	ND	10	1		ug/L
Hexachlorocyclopentadiene	ND	25	1		ug/L	Di-n-Octyl Phthalate	ND	10	1		ug/L
2,4,6-Trichlorophenol	ND	10	1		ug/L	Benzo (k) Fluoranthene	ND	10	1		ug/L
2,4,5-Trichlorophenol	ND	10	1		ug/L	Benzo (b) Fluoranthene	ND	10	1		ug/L
2-Chloronaphthalene	ND	10	1		ug/L	Benzo (a) Pyrene	ND	10	1		ug/L
2-Nitroaniline	ND	10	1		ug/L	Benzo (g,h,i) Perylene	ND	10	1		ug/L
Dimethyl Phthalate	ND	10	1		ug/L	Indeno (1,2,3-c,d) Pyrene	ND	10	1		ug/L
Acenaphthylene	ND	10	1		ug/L	Dibenz (a,h) Anthracene	ND	10	1		ug/L
3-Nitroaniline	ND	10	1		ug/L	1-Methylnaphthalene	ND	10	1		ug/L
Acenaphthene	ND	10	1		ug/L						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control	Qual
2-Fluorophenol	76	15-138		Phenol-d6	78	17-141	
Nitrobenzene-d5	90	28-139		2-Fluorobiphenyl	79	33-144	
2,4,6-Tribromophenol	94	32-143		p-Terphenyl-d14	133	23-160	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Essentia Management Service
5000 East Spring Street, Suite 720
Long Beach, CA 90815-1270

Date Received: 03/24/04
Work Order No: 04-03-1493
Preparation: EPA 3520B
Method: EPA 8270C

Project: LADWP-Chatsworth Resrvoir

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
B4-W	04-03-1493-2	03/24/04	Aqueous	03/25/04	03/30/04	040325L06

Parameter	Result	RL	DF	Qual	Units	Parameter	Result	RL	DF	Qual	Units
N-Nitrosodimethylamine	ND	10	1		ug/L	2,4-Dinitrophenol	ND	50	1		ug/L
Aniline	ND	10	1		ug/L	4-Nitrophenol	ND	10	1		ug/L
Phenol	ND	10	1		ug/L	Dibenzofuran	ND	10	1		ug/L
Bis(2-Chloroethyl) Ether	ND	25	1		ug/L	2,4-Dinitrotoluene	ND	10	1		ug/L
2-Chlorophenol	ND	10	1		ug/L	2,6-Dinitrotoluene	ND	10	1		ug/L
1,3-Dichlorobenzene	ND	10	1		ug/L	Diethyl Phthalate	ND	10	1		ug/L
1,4-Dichlorobenzene	ND	10	1		ug/L	4-Chlorophenyl-Phenyl Ether	ND	10	1		ug/L
Benzyl Alcohol	ND	10	1		ug/L	Fluorene	ND	10	1		ug/L
1,2-Dichlorobenzene	ND	10	1		ug/L	4-Nitroaniline	ND	10	1		ug/L
2-Methylphenol	ND	10	1		ug/L	Azobenzene	ND	10	1		ug/L
Bis(2-Chloroisopropyl) Ether	ND	10	1		ug/L	4,6-Dinitro-2-Methylphenol	ND	50	1		ug/L
4-Methylphenol	ND	10	1		ug/L	N-Nitrosodiphenylamine	ND	10	1		ug/L
Nitroso-di-n-propylamine	ND	10	1		ug/L	4-Bromophenyl-Phenyl Ether	ND	10	1		ug/L
Hexachloroethane	ND	10	1		ug/L	Hexachlorobenzene	ND	10	1		ug/L
Nitrobenzene	ND	25	1		ug/L	Pentachlorophenol	ND	10	1		ug/L
Isophorone	ND	10	1		ug/L	Phenanthrene	ND	10	1		ug/L
2-Nitrophenol	ND	10	1		ug/L	Anthracene	ND	10	1		ug/L
2,4-Dimethylphenol	ND	10	1		ug/L	Di-n-Butyl Phthalate	ND	10	1		ug/L
Benzoic Acid	ND	50	1		ug/L	Fluoranthene	ND	10	1		ug/L
Bis(2-Chloroethoxy) Methane	ND	10	1		ug/L	Benzidine	ND	50	1		ug/L
2,4-Dichlorophenol	ND	10	1		ug/L	Pyrene	ND	10	1		ug/L
1,2,4-Trichlorobenzene	ND	10	1		ug/L	Pyridine	ND	10	1		ug/L
Naphthalene	ND	10	1		ug/L	Butyl Benzyl Phthalate	ND	10	1		ug/L
4-Chloroaniline	ND	10	1		ug/L	3,3'-Dichlorobenzidine	ND	25	1		ug/L
Hexachloro-1,3-Butadiene	ND	10	1		ug/L	Benzo (a) Anthracene	ND	10	1		ug/L
4-Chloro-3-Methylphenol	ND	10	1		ug/L	Bis(2-Ethylhexyl) Phthalate	ND	10	1		ug/L
2-Methylnaphthalene	ND	10	1		ug/L	Chrysene	ND	10	1		ug/L
Hexachlorocyclopentadiene	ND	25	1		ug/L	Di-n-Octyl Phthalate	ND	10	1		ug/L
2,4,6-Trichlorophenol	ND	10	1		ug/L	Benzo (k) Fluoranthene	ND	10	1		ug/L
2,4,5-Trichlorophenol	ND	10	1		ug/L	Benzo (b) Fluoranthene	ND	10	1		ug/L
2-Chloronaphthalene	ND	10	1		ug/L	Benzo (a) Pyrene	ND	10	1		ug/L
2-Nitroaniline	ND	10	1		ug/L	Benzo (g,h,i) Perylene	ND	10	1		ug/L
Dimethyl Phthalate	ND	10	1		ug/L	Indeno (1,2,3-c,d) Pyrene	ND	10	1		ug/L
Acenaphthylene	ND	10	1		ug/L	Dibenz (a,h) Anthracene	ND	10	1		ug/L
3-Nitroaniline	ND	10	1		ug/L	1-Methylnaphthalene	ND	10	1		ug/L
Acenaphthene	ND	10	1		ug/L						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control	Qual
2-Fluorophenol	80	15-138		Phenol-d6	39	17-141	
Nitrobenzene-d5	87	28-139		2-Fluorobiphenyl	88	33-144	
2,4,6-Tribromophenol	82	32-143		p-Terphenyl-d14	128	23-160	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Essentia Management Service
5000 East Spring Street, Suite 720
Long Beach, CA 90815-1270

Date Received: 03/24/04
Work Order No: 04-03-1493
Preparation: EPA 3520B
Method: EPA 8270C

Project: LADWP-Chatsworth Resrvoir

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
B2-W	04-03-1493-3	03/24/04	Aqueous	03/25/04	03/30/04	040325L06

Parameter	Result	RL	DF	Qual	Units	Parameter	Result	RL	DF	Qual	Units
N-Nitrosodimethylamine	ND	12	1.2		ug/L	2,4-Dinitrophenol	ND	60	1.2		ug/L
Aniline	ND	12	1.2		ug/L	4-Nitrophenol	ND	12	1.2		ug/L
Phenol	ND	12	1.2		ug/L	Dibenzofuran	ND	12	1.2		ug/L
Bis(2-Chloroethyl) Ether	ND	30	1.2		ug/L	2,4-Dinitrotoluene	ND	12	1.2		ug/L
2-Chlorophenol	ND	12	1.2		ug/L	2,6-Dinitrotoluene	ND	12	1.2		ug/L
1,3-Dichlorobenzene	ND	12	1.2		ug/L	Diethyl Phthalate	ND	12	1.2		ug/L
1,4-Dichlorobenzene	ND	12	1.2		ug/L	4-Chlorophenyl-Phenyl Ether	ND	12	1.2		ug/L
Benzyl Alcohol	ND	12	1.2		ug/L	Fluorene	ND	12	1.2		ug/L
1,2-Dichlorobenzene	ND	12	1.2		ug/L	4-Nitroaniline	ND	12	1.2		ug/L
2-Methylphenol	ND	12	1.2		ug/L	Azobenzene	ND	12	1.2		ug/L
Bis(2-Chloroisopropyl) Ether	ND	12	1.2		ug/L	4,6-Dinitro-2-Methylphenol	ND	60	1.2		ug/L
3/4-Methylphenol	ND	12	1.2		ug/L	N-Nitrosodiphenylamine	ND	12	1.2		ug/L
N-Nitroso-di-n-propylamine	ND	12	1.2		ug/L	4-Bromophenyl-Phenyl Ether	ND	12	1.2		ug/L
Hexachloroethane	ND	12	1.2		ug/L	Hexachlorobenzene	ND	12	1.2		ug/L
Nitrobenzene	ND	30	1.2		ug/L	Pentachlorophenol	ND	12	1.2		ug/L
Isophorone	ND	12	1.2		ug/L	Phenanthrene	ND	12	1.2		ug/L
2-Nitrophenol	ND	12	1.2		ug/L	Anthracene	ND	12	1.2		ug/L
2,4-Dimethylphenol	ND	12	1.2		ug/L	Di-n-Butyl Phthalate	ND	12	1.2		ug/L
Benzoic Acid	ND	60	1.2		ug/L	Fluoranthene	ND	12	1.2		ug/L
Bis(2-Chloroethoxy) Methane	ND	12	1.2		ug/L	Benzidine	ND	60	1.2		ug/L
2,4-Dichlorophenol	ND	12	1.2		ug/L	Pyrene	ND	12	1.2		ug/L
1,2,4-Trichlorobenzene	ND	12	1.2		ug/L	Pyridine	ND	12	1.2		ug/L
Naphthalene	ND	12	1.2		ug/L	Butyl Benzyl Phthalate	ND	12	1.2		ug/L
4-Chloroaniline	ND	12	1.2		ug/L	3,3'-Dichlorobenzidine	ND	30	1.2		ug/L
Hexachloro-1,3-Butadiene	ND	12	1.2		ug/L	Benzo (a) Anthracene	ND	12	1.2		ug/L
4-Chloro-3-Methylphenol	ND	12	1.2		ug/L	Bis(2-Ethylhexyl) Phthalate	ND	12	1.2		ug/L
2-Methylnaphthalene	ND	12	1.2		ug/L	Chrysene	ND	12	1.2		ug/L
Hexachlorocyclopentadiene	ND	30	1.2		ug/L	Di-n-Octyl Phthalate	ND	12	1.2		ug/L
2,4,6-Trichlorophenol	ND	12	1.2		ug/L	Benzo (k) Fluoranthene	ND	12	1.2		ug/L
2,4,5-Trichlorophenol	ND	12	1.2		ug/L	Benzo (b) Fluoranthene	ND	12	1.2		ug/L
2-Chloronaphthalene	ND	12	1.2		ug/L	Benzo (a) Pyrene	ND	12	1.2		ug/L
2-Nitroaniline	ND	12	1.2		ug/L	Benzo (g,h,i) Perylene	ND	12	1.2		ug/L
Dimethyl Phthalate	ND	12	1.2		ug/L	Indeno (1,2,3-c,d) Pyrene	ND	12	1.2		ug/L
Acenaphthylene	ND	12	1.2		ug/L	Dibenz (a,h) Anthracene	ND	12	1.2		ug/L
3-Nitroaniline	ND	12	1.2		ug/L	1-Methylnaphthalene	ND	12	1.2		ug/L
Acenaphthene	ND	12	1.2		ug/L						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control	Qual
2-Fluorophenol	82	15-138		Phenol-d6	82	17-141	
Nitrobenzene-d5	93	28-139		2-Fluorobiphenyl	87	33-144	
2,4,6-Tribromophenol	90	32-143		p-Terphenyl-d14	124	23-160	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Essentia Management Service
5000 East Spring Street, Suite 720
Long Beach, CA 90815-1270

Date Received: 03/24/04
Work Order No: 04-03-1493
Preparation: EPA 3520B
Method: EPA 8270C

Project: LADWP-Chatsworth Resrvoir

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
B3-W	04-03-1493-4	03/24/04	Aqueous	03/25/04	03/30/04	040325L06

Parameter	Result	RL	DF	Qual	Units	Parameter	Result	RL	DF	Qual	Units
N-Nitrosodimethylamine	ND	12	1.2		ug/L	2,4-Dinitrophenol	ND	60	1.2		ug/L
Aniline	ND	12	1.2		ug/L	4-Nitrophenol	ND	12	1.2		ug/L
Phenol	ND	12	1.2		ug/L	Dibenzofuran	ND	12	1.2		ug/L
Bis(2-Chloroethyl) Ether	ND	30	1.2		ug/L	2,4-Dinitrotoluene	ND	12	1.2		ug/L
2-Chlorophenol	ND	12	1.2		ug/L	2,6-Dinitrotoluene	ND	12	1.2		ug/L
1,3-Dichlorobenzene	ND	12	1.2		ug/L	Diethyl Phthalate	ND	12	1.2		ug/L
1,4-Dichlorobenzene	ND	12	1.2		ug/L	4-Chlorophenyl-Phenyl Ether	ND	12	1.2		ug/L
Benzyl Alcohol	ND	12	1.2		ug/L	Fluorene	ND	12	1.2		ug/L
1,2-Dichlorobenzene	ND	12	1.2		ug/L	4-Nitroaniline	ND	12	1.2		ug/L
2-Methylphenol	ND	12	1.2		ug/L	Azobenzene	ND	12	1.2		ug/L
Bis(2-Chloroisopropyl) Ether	ND	12	1.2		ug/L	4,6-Dinitro-2-Methylphenol	ND	60	1.2		ug/L
3/4-Methylphenol	ND	12	1.2		ug/L	N-Nitrosodiphenylamine	ND	12	1.2		ug/L
roso-di-n-propylamine	ND	12	1.2		ug/L	4-Bromophenyl-Phenyl Ether	ND	12	1.2		ug/L
achloroethane	ND	12	1.2		ug/L	Hexachlorobenzene	ND	12	1.2		ug/L
Nitrobenzene	ND	30	1.2		ug/L	Pentachlorophenol	ND	12	1.2		ug/L
Isophorone	ND	12	1.2		ug/L	Phenanthrene	ND	12	1.2		ug/L
2-Nitrophenol	ND	12	1.2		ug/L	Anthracene	ND	12	1.2		ug/L
2,4-Dimethylphenol	ND	12	1.2		ug/L	Di-n-Butyl Phthalate	ND	12	1.2		ug/L
Benzoic Acid	ND	60	1.2		ug/L	Fluoranthene	ND	12	1.2		ug/L
Bis(2-Chloroethoxy) Methane	ND	12	1.2		ug/L	Benzidine	ND	60	1.2		ug/L
2,4-Dichlorophenol	ND	12	1.2		ug/L	Pyrene	ND	12	1.2		ug/L
1,2,4-Trichlorobenzene	ND	12	1.2		ug/L	Pyridine	ND	12	1.2		ug/L
Naphthalene	ND	12	1.2		ug/L	Butyl Benzyl Phthalate	ND	12	1.2		ug/L
4-Chloroaniline	ND	12	1.2		ug/L	3,3'-Dichlorobenzidine	ND	30	1.2		ug/L
Hexachloro-1,3-Butadiene	ND	12	1.2		ug/L	Benzo (a) Anthracene	ND	12	1.2		ug/L
4-Chloro-3-Methylphenol	ND	12	1.2		ug/L	Bis(2-Ethylhexyl) Phthalate	ND	12	1.2		ug/L
2-Methylnaphthalene	ND	12	1.2		ug/L	Chrysene	ND	12	1.2		ug/L
Hexachlorocyclopentadiene	ND	30	1.2		ug/L	Di-n-Octyl Phthalate	ND	12	1.2		ug/L
2,4,6-Trichlorophenol	ND	12	1.2		ug/L	Benzo (k) Fluoranthene	ND	12	1.2		ug/L
2,4,5-Trichlorophenol	ND	12	1.2		ug/L	Benzo (b) Fluoranthene	ND	12	1.2		ug/L
2-Chloronaphthalene	ND	12	1.2		ug/L	Benzo (a) Pyrene	ND	12	1.2		ug/L
2-Nitroaniline	ND	12	1.2		ug/L	Benzo (g,h,i) Perylene	ND	12	1.2		ug/L
Dimethyl Phthalate	ND	12	1.2		ug/L	Indeno (1,2,3-c,d) Pyrene	ND	12	1.2		ug/L
Acenaphthylene	ND	12	1.2		ug/L	Dibenz (a,h) Anthracene	ND	12	1.2		ug/L
3-Nitroaniline	ND	12	1.2		ug/L	1-Methylnaphthalene	ND	12	1.2		ug/L
Acenaphthene	ND	12	1.2		ug/L						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control	Qual
2-Fluorophenol	85	15-138		Phenol-d6	66	17-141	
Nitrobenzene-d5	97	28-139		2-Fluorobiphenyl	82	33-144	
2,4,6-Tribromophenol	93	32-143		p-Terphenyl-d14	126	23-160	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Essentia Management Service
5000 East Spring Street, Suite 720
Long Beach, CA 90815-1270

Date Received: 03/24/04
Work Order No: 04-03-1493
Preparation: EPA 3520B
Method: EPA 8270C

Project: LADWP-Chatsworth Resrvoir

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
Method Blank	**095-01-003-1,446**	**N/A**	**Aqueous**	**03/25/04**	**03/30/04**	**040325L06**

Parameter	Result	RL	DF	Qual	Units	Parameter	Result	RL	DF	Qual	Units
N-Nitrosodimethylamine	ND	10	1		ug/L	2,4-Dinitrophenol	ND	50	1		ug/L
Aniline	ND	10	1		ug/L	4-Nitrophenol	ND	10	1		ug/L
Phenol	ND	10	1		ug/L	Dibenzofuran	ND	10	1		ug/L
Bis(2-Chloroethyl) Ether	ND	25	1		ug/L	2,4-Dinitrotoluene	ND	10	1		ug/L
2-Chlorophenol	ND	10	1		ug/L	2,6-Dinitrotoluene	ND	10	1		ug/L
1,3-Dichlorobenzene	ND	10	1		ug/L	Diethyl Phthalate	ND	10	1		ug/L
1,4-Dichlorobenzene	ND	10	1		ug/L	4-Chlorophenyl-Phenyl Ether	ND	10	1		ug/L
Benzyl Alcohol	ND	10	1		ug/L	Fluorene	ND	10	1		ug/L
1,2-Dichlorobenzene	ND	10	1		ug/L	4-Nitroaniline	ND	10	1		ug/L
2-Methylphenol	ND	10	1		ug/L	Azobenzene	ND	10	1		ug/L
Bis(2-Chloroisopropyl) Ether	ND	10	1		ug/L	4,6-Dinitro-2-Methylphenol	ND	50	1		ug/L
3/4-Methylphenol	ND	10	1		ug/L	N-Nitrosodiphenylamine	ND	10	1		ug/L
N-Nitroso-di-n-propylamine	ND	10	1		ug/L	4-Bromophenyl-Phenyl Ether	ND	10	1		ug/L
Hexachloroethane	ND	10	1		ug/L	Hexachlorobenzene	ND	10	1		ug/L
Nitrobenzene	ND	25	1		ug/L	Pentachlorophenol	ND	10	1		ug/L
Isophorone	ND	10	1		ug/L	Phenanthrene	ND	10	1		ug/L
2-Nitrophenol	ND	10	1		ug/L	Anthracene	ND	10	1		ug/L
2,4-Dimethylphenol	ND	10	1		ug/L	Di-n-Butyl Phthalate	ND	10	1		ug/L
Benzoic Acid	ND	50	1		ug/L	Fluoranthene	ND	10	1		ug/L
Bis(2-Chloroethoxy) Methane	ND	10	1		ug/L	Benzidine	ND	50	1		ug/L
2,4-Dichlorophenol	ND	10	1		ug/L	Pyrene	ND	10	1		ug/L
1,2,4-Trichlorobenzene	ND	10	1		ug/L	Pyridine	ND	10	1		ug/L
Naphthalene	ND	10	1		ug/L	Butyl Benzyl Phthalate	ND	10	1		ug/L
4-Chloroaniline	ND	10	1		ug/L	3,3'-Dichlorobenzidine	ND	25	1		ug/L
Hexachloro-1,3-Butadiene	ND	10	1		ug/L	Benzo (a) Anthracene	ND	10	1		ug/L
4-Chloro-3-Methylphenol	ND	10	1		ug/L	Bis(2-Ethylhexyl) Phthalate	ND	10	1		ug/L
2-Methylnaphthalene	ND	10	1		ug/L	Chrysene	ND	10	1		ug/L
Hexachlorocyclopentadiene	ND	25	1		ug/L	Di-n-Octyl Phthalate	ND	10	1		ug/L
2,4,6-Trichlorophenol	ND	10	1		ug/L	Benzo (k) Fluoranthene	ND	10	1		ug/L
2,4,5-Trichlorophenol	ND	10	1		ug/L	Benzo (b) Fluoranthene	ND	10	1		ug/L
2-Chloronaphthalene	ND	10	1		ug/L	Benzo (a) Pyrene	ND	10	1		ug/L
2-Nitroaniline	ND	10	1		ug/L	Benzo (g,h,i) Perylene	ND	10	1		ug/L
Dimethyl Phthalate	ND	10	1		ug/L	Indeno (1,2,3-c,d) Pyrene	ND	10	1		ug/L
Acenaphthylene	ND	10	1		ug/L	Dibenz (a,h) Anthracene	ND	10	1		ug/L
3-Nitroaniline	ND	10	1		ug/L	1-Methylnaphthalene	ND	10	1		ug/L
Acenaphthene	ND	10	1		ug/L						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control	Qual
2-Fluorophenol	66	15-138		Phenol-d6	69	17-141	
Nitrobenzene-d5	78	28-139		2-Fluorobiphenyl	68	33-144	
2,4,6-Tribromophenol	86	32-143		p-Terphenyl-d14	128	23-160	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Essentia Management Service
5000 East Spring Street, Suite 720
Long Beach, CA 90815-1270

Date Received: 03/24/04
Work Order No: 04-03-1493
Preparation: EPA 3520B
Method: GC/MS Isotope Dilution

Project: LADWP-Chatsworth Resrvoir

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
B5-W	**04-03-1493-1**	**03/24/04**	**Aqueous**	**03/25/04**	**03/30/04**	**040325L06**

Parameter	Result	RL	DF	Qual	Units
1,4-Dioxane	ND	2.0	1		ug/L

Surrogates:	REC (%)	Control Limits	Qual
Nitrobenzene-d5	90	56-123	

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
B4-W	**04-03-1493-2**	**03/24/04**	**Aqueous**	**03/25/04**	**03/30/04**	**040325L06**

Parameter	Result	RL	DF	Qual	Units
Dioxane	ND	2.0	1		ug/L

Surrogates:	REC (%)	Control Limits	Qual
Nitrobenzene-d5	87	56-123	

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
B2-W	**04-03-1493-3**	**03/24/04**	**Aqueous**	**03/25/04**	**03/30/04**	**040325L06**

Parameter	Result	RL	DF	Qual	Units
1,4-Dioxane	ND	2.0	1		ug/L

Surrogates:	REC (%)	Control Limits	Qual
Nitrobenzene-d5	93	56-123	

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
B3-W	**04-03-1493-4**	**03/24/04**	**Aqueous**	**03/25/04**	**03/30/04**	**040325L06**

Parameter	Result	RL	DF	Qual	Units
1,4-Dioxane	ND	2.0	1		ug/L

Surrogates:	REC (%)	Control Limits	Qual
Nitrobenzene-d5	97	56-123	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Essentia Management Service
5000 East Spring Street, Suite 720
Long Beach, CA 90815-1270

Date Received: 03/24/04
Work Order No: 04-03-1493
Preparation: EPA 3520B
Method: GC/MS Isotope Dilution

Project: LADWP-Chatsworth Resrvoir

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
Method Blank	**099-09-004-212**	**N/A**	**Aqueous**	**03/25/04**	**03/30/04**	**040325L06**

Parameter	Result	RL	DF	Qual	Units
1,4-Dioxane	ND	2.0	1		ug/L

Surrogates:	REC (%)	Control Limits	Qual
Nitrobenzene-d5	78	56-123	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Essentia Management Service
5000 East Spring Street, Suite 720
Long Beach, CA 90815-1270

Date Received: 03/24/04
Work Order No: 04-03-1493
Preparation: N/A
Method: EPA 314.0

Project: LADWP-Chatsworth Resrvoir

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
04-03-1398-1	Aqueous	IC 6	N/A	03/26/04	040325S01

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Perchlorate	111	104	80-120	6	0-15	

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Essentia Management Service
5000 East Spring Street, Suite 720
Long Beach, CA 90815-1270

Project: LADWP-Chatsworth Resrvoir

Date Received: N/A
Work Order No: 04-03-1493
Preparation: N/A
Method: EPA 314.0

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-05-203-136	Aqueous	IC 6	N/A	03/25/04	040325L01

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Perchlorate	108	113	85-115	5	0-15	

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Essentia Management Service
5000 East Spring Street, Suite 720
Long Beach, CA 90815-1270

Date Received: 03/24/04
Work Order No: 04-03-1493
Preparation: N/A
Method: EPA 7199

Project: LADWP-Chatsworth Resrvoir

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
04-03-1445-3	Aqueous	IC 5	N/A	03/24/04	40324CRS1

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Chromium, Hexavalent	97	99	70-130	0	0-25	

Calscience Environmental Laboratories, Inc.

Quality Control - Laboratory Control Sample

Essentia Management Service
5000 East Spring Street, Suite 720
Long Beach, CA 90815-1270

Project: LADWP-Chatsworth Resrvoir

Date Received:	N/A
Work Order No:	04-03-1493
Preparation:	N/A
Method:	EPA 7199

Quality Control Sample ID	Matrix	Instrument	Date Analyzed	Lab File ID	LCS Batch Number
099-05-123-1,331	Aqueous	IC 5	03/24/04	NONE	40324CRL1

Parameter	Conc Added	Conc Recovered	%Rec	%Rec CL	Qualifiers
Chromium, Hexavalent	10	10	102	80-120	

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Essentia Management Service
5000 East Spring Street, Suite 720
Long Beach, CA 90815-1270

Project: LADWP-Chatsworth Resrvoir

Date Received: N/A
Work Order No: 04-03-1493
Preparation: EPA 3510C
Method: TPH - Carbon Range

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
098-03-003-2,046	Aqueous	GC 23	03/25/04	03/25/04	040325B04

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
TPH as Diesel	93	98	60-132	5	0-11	

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Essentia Management Service
5000 East Spring Street, Suite 720
Long Beach, CA 90815-1270

Project: LADWP-Chatsworth Resrvoir

Date Received: N/A
Work Order No: 04-03-1493
Preparation: EPA 3520B
Method: EPA 8082

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-07-010-181	Aqueous	GC 17	03/29/04	03/31/04	040329L09

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Aroclor-1260	126	121	50-135	4	0-25	

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Essentia Management Service
5000 East Spring Street, Suite 720
Long Beach, CA 90815-1270

Project: LADWP-Chatsworth Resrvoir

Date Received: N/A
Work Order No: 04-03-1493
Preparation: EPA 3520B
Method: EPA 8270C

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
095-01-003-1,446	Aqueous	GC/MS GG	03/25/04	03/30/04	040325L06

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Phenol	81	83	4-118	2	0-18	
2-Chlorophenol	65	64	35-101	1	0-21	
1,4-Dichlorobenzene	65	65	39-93	0	0-45	
N-Nitroso-di-n-propylamine	61	59	33-123	3	0-38	
1,2,4-Trichlorobenzene	78	79	47-101	1	0-35	
4-Chloro-3-Methylphenol	86	83	0-295	3	0-30	
Acenaphthene	102	101	31-133	1	0-31	
4-Nitrophenol	81	72	1-143	12	0-44	
2,4-Dinitrotoluene	110	105	16-166	5	0-49	
Pentachlorophenol	86	94	1-154	9	0-53	
Pyrene	92	87	15-159	6	0-47	

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Essentia Management Service
5000 East Spring Street, Suite 720
Long Beach, CA 90815-1270

Project: LADWP-Chatsworth Resrvoir

Date Received: N/A
Work Order No: 04-03-1493
Preparation: EPA 3520B
Method: GC/MS Isotope Dilution

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-09-004-212	Aqueous	GC/MS GG	03/25/04	03/30/04	040325L06

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
1,4-Dioxane	71	71	50-130	0	0-20	

Calscience Environmental Laboratories, Inc.

Glossary of Terms and Qualifiers

Work Order Number: 04-03-1493

Qualifier	Definition
2	Surrogate spike compound was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
ND	Not detected at indicated reporting limit.

Calscience Environmental Laboratories, Inc.

WORK ORDER #: 04-03-1493

Cooler 1 of 1

SAMPLE RECEIPT FORM

CLIENT: N + M DATE: 3/24/04

TEMPERATURE – SAMPLES RECEIVED BY:

CALSCIENCE COURIER:

_____ Chilled, cooler with temperature blank provided.
_____ Chilled, cooler without temperature blank.
_____ Chilled and placed in cooler with wet ice.
_____ Ambient and placed in cooler with wet ice.
_____ Ambient temperature.

_____ °C Temperature blank.

LABORATORY (Other than Calscience Courier):

_____ °C Temperature blank.
3.6 °C IR thermometer.
_____ Ambient temperature.

Initial: NC

CUSTODY SEAL INTACT:

Sample(s): _____ Cooler: _____ No (Not Intact): _____ Not Applicable (N/A): ✓

Initial: NC

SAMPLE CONDITION:

	Yes	No	N/A
Chain-Of-Custody document(s) received with samples	✓		
Sample container label(s) consistent with custody papers	✓		
Sample container(s) intact and good condition	✓		
Correct containers for analyses requested	✓pp	✓	
Proper preservation noted on sample label(s)	✓		ore
VOA vial(s) free of headspace	✓		
Tedlar bag(s) free of condensation			✓

Initial: (V)

COMMENTS:

250mL unpreserved plastic bottles received for Total Coliform analysis - transferred to correct containers upon receipt

SILLIKER, Inc.
Southern California Laboratory
1139 East Dominguez, Suite I
Carson, CA 90746
310/ 637 7121 Fax 310/ 637 2953

CERTIFICATE OF ANALYSIS

COA No:	SCA-30103167-0
Supersedes:	None
COA Date	3/28/04
Page 1 of 1	

TO:
Mr. Bob Stearns
Project Manager
Calscience Environmental Laboratories
7440 Lincoln Way
Garden Grove, CA 92841-1432

Received From:	Garden Grove, CA
Received Date:	3/24/04
P.O.# / ID:	04-03-1493
Location of Test: (except where noted)	Carson, CA

Analytical Results

Desc. 1:	Sample ID: B5-W	**Desc. 4:**	Matrix:WW	**Laboratory ID:**	300575490
Desc. 2:	Date: 03/24/04	**Desc. 5:**	Project #: 04-03-1493	**Condition Rec'd:**	NORMAL
Desc. 3:	Time: 8:11			**Temp Rec'd (°C):**	7.2

Analyte	Result	Units	Method Reference	Test Date	Loc.
Coliforms - 5 tube MPN	<20	/100mL	SMEWW 20th, 9221A-D	3/26/04	

Desc. 1:	Sample ID: B4-W	**Desc. 4:**	Matrix:WW	**Laboratory ID:**	300575491
Desc. 2:	Date: 03/24/04	**Desc. 5:**	Project #: 04-03-1493	**Condition Rec'd:**	NORMAL
Desc. 3:	Time: 9:31			**Temp Rec'd (°C):**	7.2

Analyte	Result	Units	Method Reference	Test Date	Loc.
Coliforms - 5 tube MPN	<20	/100mL	SMEWW 20th, 9221A-D	3/26/04	

Desc. 1:	Sample ID: B2-W	**Desc. 4:**	Matrix:WW	**Laboratory ID:**	300575492
Desc. 2:	Date: 03/24/04	**Desc. 5:**	Project #: 04-03-1493	**Condition Rec'd:**	NORMAL
Desc. 3:	Time: 12:45			**Temp Rec'd (°C):**	7.2

Analyte	Result	Units	Method Reference	Test Date	Loc.
Coliforms - 5 tube MPN	80	/100mL	SMEWW 20th, 9221A-D	3/28/04	

Desc. 1:	Sample ID: B3-W	**Desc. 4:**	Matrix:WW	**Laboratory ID:**	300575493
Desc. 2:	Date: 03/24/04	**Desc. 5:**	Project #: 04-03-1493	**Condition Rec'd:**	NORMAL
Desc. 3:	Time: 13:35			**Temp Rec'd (°C):**	7.2

Analyte	Result	Units	Method Reference	Test Date	Loc.
Coliforms - 5 tube MPN	<20	/100mL	SMEWW 20th, 9221A-D	3/26/04	

Vidhya Gangar, M.S. Laboratory Director

Ninyo & Moore

475 Goddard, Suite 200
Irvine, CA 92618

Tel: (949) 753-7070
Fax (949) 753-7071

PROJECT INFORMATION

PROJECT NAME: LADWP – Chatsworth Reservoir
ADDRESS: Chatsworth Reservoir
CITY/STATE: Chatsworth, California
Global ID: Log Code:
Project Manager: Ken Floom Project Number: 47278-4
SAMPLED BY: Krista Brodersen – Ninyo & Moore

Lab: Calscience Laboratories
7440 Lincoln Way
Garden Grove, CA 92841
(714) 895-5494

FIELD POINT NAME	SAMPLE ID	NUMBER OF CONTAINERS	SAMPLE DATE	SAMPLE TIME	SAMPLE MATRIX	CONTAINER TYPE	PRESERV	1,4-dioxane by GS/MS Isotope Dilution	Hexavalent Chromium 7199/3060A	Total ~~Coliform~~ Coli. Method SM FWW	TPHcc 8015m	PCBs 8082	SVOCs 8270C	Perchlorate 314		REMARKS
	B5-W	1/1/1/3/1/1	3-24-04	8:11	Water	~~Liter~~ 500 ml/250ml/VOA/Liter/Liter	None	X	X	X	X	X	X	X		1493
	B4-W	↓	↓	9:31	↓	↓		↓	↓	↓	↓	↓	↓	↓		
	B2-W	↓	↓	12:45	↓	↓		↓	↓	↓	↓	↓	↓	↓		
	B3-W	↓	↓	13:35	↓	↓		↓	↓	↓	↓	↓	↓	↓		

Total No. of Samples:

Comments
Fax results to: Ken Floom at (562) 740-1070
E-mail final report to: ken_floom@essentia-llc.com

Relinquished By	Date/Time	Received By	Date/Time
Krista Brodersen	3-24-04 1700		
		[signature]	3/24/04 1706

TURN AROUND TIME
- ☐ 24 HOUR
- ☐ 48 HOUR
- ☐ 3 DAY
- ☐ 5-DAY
- ☐ 14 DAY
- ☒ Other _Normal_

SAMPLE INTEGRITY
- ☐ SAMPLES INTACT?
- ☐ SAMPLES CHILLED
- ☐ SECURITY TAPE INTACT?
- ☐ NO SECURITY TAPE USED

REPORT FORMAT
- ☐ SARWQCB and GEOTRACKER
- ☐ SAN DIEGO HMMD
- ☐ NORMAL
- ☐ OTHER:

Ninyo & Moore

475 Goddard, Suite 200
Irvine, CA 92618

Tel: (949) 753-7070
Fax (949) 753-7071

PROJECT INFORMATION

PROJECT NAME:	LADWP – Chatsworth Reservoir
ADDRESS:	Chatsworth Reservoir
CITY/STATE:	Chatsworth, California
Global ID:	Log Code:
Project Manager	Ken Floom
Project Number	47278-4
SAMPLED BY:	Krista Brodersen – Ninyo & Moore

Lab:
Calscience Laboratories
7440 Lincoln Way
Garden Grove, CA 92841
(714) 895-5494

FIELD POINT NAME	SAMPLE ID	NUMBER OF CONTAINERS	SAMPLE DATE	SAMPLE TIME	SAMPLE MATRIX	CONTAINER TYPE	PRESERV	1,4-dioxane by GC/MS Isotope Dilution	Hexavalent chromium 7199/3060A	Total [illegible] Method SM [illegible]	TPHcc 8015M	PCBs 8082	SVOCs 8270C	Perchlorate - 314	REMARKS
	B5-W	1/1/1/1	3-24-04	8:11	Water	Liter/500 ml/250 ml/Liter	None	X	X	X	X	X	X	X	1493
	B4-W			9:31		VOA/Liter/Liter									
	B2-W			12:45											
	B3-W			13:35											

Total No. of Samples:

Comments
Fax results to: Ken Floom at (562) 740-1070
E-mail final report to: ken_floom@essentia-llc.com

Relinquished By:	Date/Time	Received By:	Date/Time
Krista Brodersen	3-24-04 1700		
Relinquished By:	Date/Time	Received By:	Date/Time
Relinquished By:	Date/Time	Received By:	Date/Time
			3/24/04 1706

TURN AROUND TIME
- ☐ 24 HOUR
- ☐ 48 HOUR
- ☐ 3 DAY
- ☐ 5-DAY
- ☐ 14 DAY
- ☒ Other _Normal_____

SAMPLE INTEGRITY
- ☐ SAMPLES INTACT?
- ☐ SAMPLES CHILLED
- ☐ SECURITY TAPE INTACT?
- ☐ NO SECURITY TAPE USED

REPORT FORMAT
- ☐ SARWQCB and GEOTRACKER
- ☐ SAN DIEGO HMMD
- ☐ NORMAL
- ☐ OTHER:_____

ENERGY LABORATORIES, INC. 2393 Salt Creek Highway (82601) • P.O. Box 3258 • Casper, WY 82602
Toll Free 888.235.0515 • 307.235.0515 • Fax 307.234.1639 • casper@energylab.com • www.energylab.com

INVOICE

Invoice Date: *April 09, 2004*

Invoice No: 240430308

BILL TO: **Essentia Management Services**
Attn: Ken Floom
5000 E Spring St Ste 720
Long Beach, CA 90815

Purchase Order:

Account Number C11683

TERMS: NET 30 Days
Interest charged after 30 days 1.5% per month.
VISA/MasterCard payments accepted

Project Name: LADWP - Chatsworth Reservoir 472784

Lab Number	Client Sample ID	Remarks	Matrix	List Price	Mult	Price	Total
WorkOrder: C04031143							
C04031143-001	**B5-W**		**Aqueous**				**$250.00**
Gross Gamma				$75.00	1	$75.00	
Strontium 90				$100.00	1	$100.00	
Tritium in Water				$75.00	1	$75.00	
C04031143-002	**B4-W**		**Aqueous**				**$250.00**
Gross Gamma				$75.00	1	$75.00	
Strontium 90				$100.00	1	$100.00	
Tritium in Water				$75.00	1	$75.00	
C04031143-003	**B2-W**		**Aqueous**				**$250.00**
Gross Gamma				$75.00	1	$75.00	
Strontium 90				$100.00	1	$100.00	
Tritium in Water				$75.00	1	$75.00	
C04031143-004	**B3-W**		**Aqueous**				**$250.00**
Gross Gamma				$75.00	1	$75.00	
Strontium 90				$100.00	1	$100.00	
Tritium in Water				$75.00	1	$75.00	

INVOICE Total:	**$1,000.00**
Amount Received:	$0.00
AMOUNT DUE:	**$1,000.00**

Samples received from Ninyo & Moore 29-Apr-04.

Please detach and return this section with your payment. Thank you

REMIT TO: **Energy Laboratories Inc.**
Accounts Receivable
PO Box 30975
Billings, MT 59107-0975

Account Number:	**C11683**
Invoice Number:	**240430308**
Invoice Date:	**04/09/04**
Purchase Order:	
Invoice Total:	**$1,000.00**
Amount Received:	**$0.00**
Amount Due:	**$1,000.00**

C11683 240430308 000100000 0240542058

ENERGY LABORATORIES, INC. • 2393 Salt Creek Highway (82601) • P.O. Box 3258 • Casper, WY 82602
Toll Free 888.235.0515 • 307.235.0515 • Fax 307.234.1639 • casper@energylab.com • www.energylab.com

LABORATORY ANALYTICAL REPORT

Client: Essentia Management Services
Project: LADWP - Chatsworth Reservoir 472784

Lab Order: C04031143
Report Date: 04/09/04

Lab ID: C04031143-001
Client Sample ID: B5-W
Matrix: AQUEOUS

Collection Date: 03/24/04 08:11
DateReceived: 03/29/04

Analyses	Result	Units	Qual	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Cesium 137	ND	pCi/L		20		E901.1	04/02/04 10:12 / db
Strontium 90	ND	pCi/L		10		E905.0	04/01/04 16:00 / db
Tritium	ND	pCi/L		1200		E906.0	04/01/04 12:00 / db

Lab ID: C04031143-002
Client Sample ID: B4-W
Matrix: AQUEOUS

Collection Date: 03/24/04 09:31
DateReceived: 03/29/04

Analyses	Result	Units	Qual	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Cesium 137	ND	pCi/L		20		E901.1	04/02/04 10:12 / db
Strontium 90	ND	pCi/L		10		E905.0	04/01/04 16:00 / db
	ND	pCi/L		1200		E906.0	04/01/04 12:00 / db

Lab ID: C04031143-003
Client Sample ID: B2-W
Matrix: AQUEOUS

Collection Date: 03/24/04 12:45
DateReceived: 03/29/04

Analyses	Result	Units	Qual	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Cesium 137	ND	pCi/L		20		E901.1	04/02/04 10:12 / db
Strontium 90	ND	pCi/L		10		E905.0	04/01/04 16:00 / db
Tritium	ND	pCi/L		1200		E906.0	04/01/04 12:00 / db

Report Definitions: RL - Analyte reporting limit.
QCL - Quality control limit.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

ENERGY LABORATORIES, INC. • 2393 Salt Creek Highway (82601) • P.O. Box 3258 • Casper, WY 82602
Toll Free 888.235.0515 • 307.235.0515 • Fax 307.234.1639 • casper@energylab.com • www.energylab.com

LABORATORY ANALYTICAL REPORT

Client: Essentia Management Services
Project: LADWP - Chatsworth Reservoir 472784

Lab Order: C04031143
Report Date: 04/09/04

Lab ID: C04031143-004
Client Sample ID: B3-W
Matrix: AQUEOUS

Collection Date: 03/24/04 13:35
DateReceived: 03/29/04

Analyses	Result	Units	Qual	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Cesium 137	ND	pCi/L		20		E901.1	04/02/04 10:12 / db
Strontium 90	ND	pCi/L		10		E905.0	04/01/04 16:00 / db
Tritium	ND	pCi/L		1200		E906.0	04/01/04 12:00 / db

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

CO4031143

Ninyo & Moore

475 Goddard, Suite 200
Irvine, CA 92618

Tel: (949) 753-7070
Fax (949) 753-7071

PROJECT INFORMATI(

PROJECT NAME:	LADWP – Chatsworth Reservoir
ADDRESS:	Chatsworth Reservoir
CITY/STATE:	Chatsworth, California
Global ID:	Log Code:
Project Manager	Ken Floom
Project Number	47278-4
SAMPLED BY:	Krista Brodersen – Ninyo & Moore

Lab:
Energy Laboratories, Inc.
2393 Salt Creek Hwy (82601)
Casper, Wyoming 82601
(307) 235-0515
Attn: James Yocum

FIELD POINT NAME	SAMPLE ID	NUMBER OF CONTAINERS	SAMPLE DATE	SAMPLE TIME	SAMPLE MATRIX	CONTAINER TYPE	PRESERV	Cesium 137 - 901.1	Tritium - 906	Strontium 90 - 905	REMARKS
B5	B5-W	4/~~5~~1	3-24-04	8:11	Water	Liter	Nitric	X	X	X	*4 - 1L containers preserved w Nitric
B4	B4-W	"	"	9:31	"	"	none	"	"	"	
B2	B2-W	"	"	12:45	"	"	"	"	"	"	
B3	B3-W	↓	↓	13:35	↓	↓	↓	↓	↓	↓	1 - 1L container no preservative
											Voice Mail from Krista Sample #1 should be B5-W label on bottle is wrong JR 3/30/04 07:11
Total No. of Samples:											

Comments
Fax results to: Ken Floom at (562) 740-1070
E-mail final report to: ken_floom@essentia-llc.com

Relinquished By:	Date/Time	Received By:	Date/Time
Krista Brodersen	3-24-04 / 16:00	UPS	
		Jasmine Schertz	3/29/04 10:00

TURN AROUND TIME
- ☐ 24 HOUR
- ☐ 48 HOUR
- ☐ 3 DAY
- ☐ 5-DAY
- ☐ 14 DAY
- ☒ Other _Normal_____

SAMPLE INTEGRITY
- ☒ SAMPLES INTACT?
- ☒ SAMPLES CHILLED
- ☐ SECURITY TAPE INTACT?
- ☒ NO SECURITY TAPE USED

REPORT FORMAT
- ☐ SARWQCB and GEOTRACKER
- ☐ SAN DIEGO HMMD
- ☐ NORMAL
- ☐ OTHER:_____

Page ____ of ____

9

ENERGY LABORATORIES, INC. • 2393 Salt Creek Highway (82601) • P.O. Box 3258 • Casper, WY 82602
Toll Free 888.235.0515 • 307.235.0515 • Fax 307.234.1639 • casper@energylab.com • www.energylab.com

Track# CO4031143 Page

ENERGY LABORATORIES, INC. • 2393 Salt Creek Highway (82601) • P.O. Box 3258 • Casper, WY 82602
Toll Free 888.235.0515 • 307.235.0515 • Fax 307.234.1639 • casper@energylab.com • www.energylab.com

Energy Laboratories Inc.

Sample Receipt Checklist

Client Name: **Essentia Management Services** Date and Time Received: **3/29/2004 10:00:00**

Work Order Number **C04031143** Received by: **trs**

Checklist completed by: Tammie Schultz (Signature) 3/30/04 (Date) Reviewed by _____ (Initials) _____ (Date)

Carrier name: UPS

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☐	No ☑	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☐	No ☑	9 °C
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☑	No ☐	Not Applicable ☐

Adjusted? _____ Checked by _____

Any No and/or NA (not applicable) response must be detailed in the comments section below.

Client contacted: _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding: _____

Comments:
Sample C04031143-001 is listed on COC as BW-5. Bottle is labeled B4-W. Per Krista 5-BW on COC is correct. 7-30-04 07:11.

Corrective Action _____

ENERGY LABORATORIES, INC. • 2393 Salt Creek Highway (82601) • P.O. Box 3258 • Casper, WY 82602
Toll Free 888.235.0515 • 307.235.0515 • Fax 307.234.1639 • casper@energylab.com • www.energylab.com

ANALYTICAL SUMMARY REPORT

April 09, 2004

Ken Floom
Essentia Management Services
5000 E Spring St Ste 720
Long Beach, CA 90815

Workorder No.: C04031143

Project Name: LADWP - Chatsworth Reservoir 472784

Energy Laboratories Inc. received the following 4 samples from Essentia Management Services on 3/29/2004 for analysis.

Sample ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
C04031143-001	B5-W	03/24/04 8:11	03/29/04	Aqueous	Gross Gamma Strontium 90 Tritium in Water
C04031143-002	B4-W	03/24/04 9:31	03/29/04	Aqueous	Same As Above
C04031143-003	B2-W	03/24/04 12:45	03/29/04	Aqueous	Same As Above
C04031143-004	B3-W	03/24/04 13:35	03/29/04	Aqueous	Same As Above

There were no problems with the analyses and all data for associated QC met EPA or laboratory specifications except where noted in the Case Narrative or Report.

If you have any questions regarding these tests results, please call.

Report Approved By:

ENERGY LABORATORIES, INC. • 2393 Salt Creek Highway (82601) • P.O. Box 3258 • Casper, WY 82602
Toll Free 888.235.0515 • 307.235.0515 • Fax 307.234.1639 • casper@energylab.com • www.energylab.com

Date: *09-Apr-04*

CLIENT: Essentia Management Services
Project: LADWP - Chatsworth Reservoir 472784
Sample Delivery Group: C04031143

CASE NARRATIVE

THIS IS THE FINAL PAGE OF THE LABORATORY ANALYTICAL REPORT

BRANCH LABORATORY LOCATIONS
eli-b - Energy Laboratories, Inc. - Billings, MT
eli-cs - Energy Laboratories, Inc. - College Station, TX
eli-g - Energy Laboratories, Inc. - Gillette, WY
eli-h - Energy Laboratories, Inc. - Helena, MT
eli-r - Energy Laboratories, Inc. - Rapid City, SD

ORIGINAL SAMPLE SUBMITTAL(S)
All original sample submittals have been returned with the data package. A copy of the submittal(s) has been included and tracked in the data package.

SUBCONTRACTING ANALYSIS
Subcontracting of sample analyses to an outside laboratory may be required. If so, ENERGY LABORATORIES will utilize its branch laboratories or qualified contract laboratories for this service. Any such laboratories will be indicated within the Laboratory Analytical Report.

SAMPLE TEMPERATURE COMPLIANCE: 4°C (±2°C)
Temperature of samples received may not be considered properly preserved by accepted standards. Samples that are hand delivered immediately after collection shall be considered acceptable if there is evidence that the chilling process has begun.

ENERGY LABORATORIES, INC. - CASPER,WY certifies that certain method selections contained in this report meet requirements as set forth by NELAC. Some client specific reporting requirements may not require NELAC reporting protocol.

ELI appreciates the opportunity to provide you with this analytical service. For additional information and services visit our web page www.energylab.com.

The total number of pages of this report are indicated by the last four digits of the tracking number located in the lower right corner.

Ninyo & Moore

475 Goddard, Suite 200
Irvine, CA 92618

Tel: (949) 753-7070
Fax (949) 753-7071

PROJECT INFORMATION

PROJECT NAME:	LADWP – Chatsworth Reservoir
ADDRESS:	Chatsworth Reservoir
CITY/STATE:	Chatsworth, California
Global ID:	Log Code:
Project Manager	Ken Floom
Project Number	47278-4
SAMPLED BY:	Krista Brodersen – Ninyo & Moore

Lab:
Energy Laboratories, Inc
2393 Salt Creek Hwy (82601)
Casper, Wyoming 82601
(307) 235-0515
Attn: James Yocum

FIELD POINT NAME	SAMPLE ID	NUMBER OF CONTAINERS	SAMPLE DATE	SAMPLE TIME	SAMPLE MATRIX	CONTAINER TYPE	PRESERV	Cesium 137 - 901.1	Tritium - 906	Strontium 90 - 905	REMARKS
B5	B5-W	4/~~5~~1	3-24-04	8:11	Water	Liter	Nitric	X	X	X	#4 - 1L containers preserved w Nitric
B4	B4-W	↓	↓	9:31	↓	↓	None	↓	↓	↓	
B2	B2-W			12:45							
B3	B3-W	↓	↓	13:35	↓	↓	↓	↓	↓	↓	1 - 1L container no preservative
											Voice Mail from Krista Sample #1 should be B5-W label on bottle is wrong JRS 3/30/04 07:11
Total No. of Samples:											

Comments
Fax results to: Ken Floom at (562) 740-1070
E-mail final report to: ken_floom@essentia-llc.com

Relinquished By:	Date/Time	Received By:	Date/Time
Krista Brodersen	3-24-04 / 16:00	UPS	
		Jasmine Schultz	3/29/04 10:00
Relinquished By:	Date/Time	Received By:	Date/Time
Relinquished By:	Date/Time	Received By:	Date/Time

TURN AROUND TIME	SAMPLE INTEGRITY	REPORT FORMAT
☐ 24 HOUR	☒ SAMPLES INTACT?	☐ SARWQCB and GEOTRACKER
☐ 48 HOUR	☒ SAMPLES CHILLED	☐ SAN DIEGO HMMD
☐ 3 DAY	☐ SECURITY TAPE INTACT?	☐ NORMAL
☐ 5-DAY	☒ NO SECURITY TAPE USED	☐ OTHER:_____
☐ 14 DAY		
☒ Other _Normal_____		

FRONTIER
ANALYTICAL LABORATORY

April 22, 2004

FAL Project ID: 2514

Mr. Ken Floom
Essentia Management Services
5000 E. Spring Street, Suite 720
Long Beach, CA 90815

Dear Mr. Floom,

Enclosed are the results for Frontier Analytical Laboratory project **2514**. This corresponds to your project LADWP #47278-4. Four "aqueous" samples containing sediment were received on 3/29/04 in good condition. Prior to extracting these "aqueous" samples, it was determined that all four samples had percent solids greater than one percent. EPA Method 1613 states that if an "aqueous" sample has a solid content of greater than one percent, the sample must be analyzed as a solid sample. Due to this requirement, all four samples were analyzed as solid samples by EPA Method 1613 for tetra through octa chlorinated dibenzo dioxins and dibenzo furans.

Essentia Management Services requested a turnaround time of fifteen business days for project **2514**. On Wednesday, April 14th, Essentia Management Services was contacted regarding the heavy sediment content of their four "aqueous" samples. Essentia Management Services requested that we place the four samples on hold while they determined if other backup samples containing less sediment could be sent as replacements. On Friday, April 16th, Essentia Management Services requested we take the samples "off" hold because the sampling technique used for acquiring the samples causes turbidity in the samples and would have the same affect on any backup samples. Frontier Analytical Laboratory completed project **2514** within five business days after the samples were taken off hold.

The following report consists of an Analytical Data section and a Sample Receipt section. The Analytical Data section contains the project-sample tracking log, qualifier reference guide, ML/MDL form and the analytical results. The Sample Receipt section contains the chain of custody, sample login form and sample photo.

If you have any questions regarding project **2514**, please feel free to contact me at (916) 934-0900. Thank you for choosing Frontier Analytical Laboratory for your analytical needs.

Sincerely,

Bradley B. Silverbush
Director of Operations

FRONTIER ANALYTICAL LABORATORY
5172 Hillsdale Circle • El Dorado Hills, CA 95762
Tel (916) 934-0900 • Fax (916) 934-0999
dioxin@frontieranalytical.com

FRONTIER ANALYTICAL LABORATORY

Frontier Analytical Laboratory

Sample Tracking Log

FAL Project ID: **2514**

Received on: **03/29/2004** Project Due: **04/20/2004** Storage: **R1**

FAL Sample ID	Dup	Client Project ID	Client Sample ID	Requested Method	Matrix	Sampling Date	Sampling Time	Hold Time Due Date
2514-001-SA	0	LADWP - 47278-4	B5-W	EPA 1613 D/F	Solid	03/24/2004	08:11 am	03/24/2005
2514-002-SA	0	LADWP - 47278-4	B4-W	EPA 1613 D/F	Solid	03/24/2004	09:31 am	03/24/2005
2514-003-SA	0	LADWP - 47278-4	B2-W	EPA 1613 D/F	Solid	03/24/2004	12:45 pm	03/24/2005
2514-004-SA	0	LADWP - 47278-4	B3-W	EPA 1613 D/F	Solid	03/24/2004	01:35 pm	03/24/2005

5172 Hillsdale Circle • El Dorado Hills, CA 95762 • Tel (916) 934-0900 • Fax (916) 934-0999 • www.frontieranalytical.com

FRONTIER
ANALYTICAL LABORATORY

Qualifier Reference Guide

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B	Analyte is present in Method Blank
C	Chemical Interference
D	Presence of Diphenyl Ethers
E	Analyte concentration is above calibration range
F	Analyte confirmation on secondary column
J‡	Analyte concentration is below calibration range
M	Maximum possible concentration
NP	Not Provided
S	Sample acceptance criteria not met
X	Matrix interferences
*	Result taken from dilution or reinjection
-	Analyte Not Detected

‡ "J" values are equivalent to DNQ (detected but not quantified) for California Toxics Rule (CTR)/National Pollutant Discharge Elimination System (NPDES) samples

5172 Hillsdale Circle • El Dorado Hills, CA 95762 • Tel (916) 934-0900 • Fax (916) 934-0999 • www.frontieranalytical.com

EPA Method 1613/8290 Solid MDL
(Soxhlet/SDS Extraction)

FRONTIER ANALYTICAL LABORATORY

Analyte	ML	MDL
2,3,7,8-TCDD	0.500	0.132
1,2,3,7,8-PeCDD	2.50	0.213
1,2,3,4,7,8-HxCDD	2.50	0.321
1,2,3,6,7,8-HxCDD	2.50	0.364
1,2,3,7,8,9-HxCDD	2.50	0.315
1,2,3,4,6,7,8-HpCDD	2.50	0.328
OCDD	5.00	0.832
2,3,7,8-TCDF	0.500	0.108
1,2,3,7,8-PeCDF	2.50	0.252
2,3,4,7,8-PeCDF	2.50	0.236
1,2,3,4,7,8-HxCDF	2.50	0.101
1,2,3,6,7,8-HxCDF	2.50	0.0991
1,2,3,7,8,9-HxCDF	2.50	0.101
2,3,4,6,7,8-HxCDF	2.50	0.122
1,2,3,4,6,7,8-HpCDF	2.50	0.140
1,2,3,4,7,8,9-HpCDF	2.50	0.168
OCDF	5.00	0.594

Project **2330**, Extracted 11/25/03; analyzed 12/01/03. Based on 10g sample, pg/g.

5172 Hillsdale Circle • El Dorado Hills, CA 95762 • Tel (916) 934-0900 • Fax (916) 934-0999 • www.frontieranalytical.com

EPA Method 1613
PCDD/F

FRONTIER ANALYTICAL LABORATORY

FAL ID: 2514-001-MB
Client ID: Method Blank
Matrix: Solid
Batch No: X0225

Date Extracted: 04-19-2004
Date Received: NA
Amount: 10.00 g

ICal: PCDDFAL2-3-30-04
GC Column: DB5
Units: pg/g

Acquired: 04-22-2004
WHO TEQ: 0.00

Compound	Conc	DL	Qual	WHO Tox	Compound	Conc	DL	Qual	#Hom
2,3,7,8-TCDD	-	0.163		-					
1,2,3,7,8-PeCDD	-	0.261		-					
1,2,3,4,7,8-HxCDD	-	0.640		-					
1,2,3,6,7,8-HxCDD	-	0.692		-	Total Tetra-Dioxins	-	0.352		0
1,2,3,7,8,9-HxCDD	-	0.608		-	Total Penta-Dioxins	-	0.487		0
1,2,3,4,6,7,8-HpCDD	-	0.998		-	Total Hexa-Dioxins	-	0.849		0
OCDD	-	2.34		-	Total Hepta-Dioxins	-	1.03		0
2,3,7,8-TCDF	-	0.177		-					
1,2,3,7,8-PeCDF	-	0.554		-					
2,3,4,7,8-PeCDF	-	0.529		-					
1,2,3,4,7,8-HxCDF	-	0.176		-					
1,2,3,6,7,8-HxCDF	-	0.249		-					
2,3,4,6,7,8-HxCDF	-	0.257		-					
1,2,3,7,8,9-HxCDF	-	0.311		-	Total Tetra-Furans	-	0.313		0
1,2,3,4,6,7,8-HpCDF	-	0.314		-	Total Penta-Furans	-	0.669		0
1,2,3,4,7,8,9-HpCDF	-	0.358		-	Total Hexa-Furans	-	0.257		0
OCDF	-	0.892		-	Total Hepta-Furans	-	0.358		0

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	76.3	25.0 - 164	
13C-1,2,3,7,8-PeCDD	76.4	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	76.9	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	72.7	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	89.8	23.0 - 140	
13C-OCDD	91.0	17.0 - 157	
13C-2,3,7,8-TCDF	76.9	24.0 - 169	
13C-1,2,3,7,8-PeCDF	84.9	24.0 - 185	
13C-2,3,4,7,8-PeCDF	85.5	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	69.0	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	68.4	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	71.4	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	79.3	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	78.3	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	96.1	26.0 - 138	
13C-OCDF	86.2	17.0 - 157	

Cleanup Surrogate			
37Cl-2,3,7,8-TCDD	80.6	35.0 - 197	

Analyst: _____
Date: 4/22/04

Reviewed By: DN
Date: 4/22/2004

5172 Hillsdale Circle • El Dorado Hills, CA 95762 • Tel (916) 934-0900 • Fax (916) 934-0999 • www.frontieranalytical.com

EPA Method 1613
PCDD/F

FRONTIER ANALYTICAL LABORATORY

FAL ID: 2514-001-OPR
Client ID: OPR
Matrix: Solid
Batch No: X0225

Date Extracted: 04-19-2004
Date Received: NA
Amount: 10.00 g

ICal: PCDDFAL2-3-30-04
GC Column: DB5
Units: ng/ml

Acquired: 04-22-2004
WHO TEQ: NA

Compound	Conc	QC Limits
2,3,7,8-TCDD	8.30	6.70 - 15.8
1,2,3,7,8-PeCDD	49.1	35.0 - 71.0
1,2,3,4,7,8-HxCDD	51.7	35.0 - 82.0
1,2,3,6,7,8-HxCDD	52.1	38.0 - 67.0
1,2,3,7,8,9-HxCDD	50.8	32.0 - 81.0
1,2,3,4,6,7,8-HpCDD	51.7	35.0 - 70.0
OCDD	99.7	78.0 - 144
2,3,7,8-TCDF	10.3	7.50 - 15.8
1,2,3,7,8-PeCDF	55.7	40.0 - 67.0
2,3,4,7,8-PeCDF	56.4	34.0 - 80.0
1,2,3,4,7,8-HxCDF	54.4	36.0 - 67.0
1,2,3,6,7,8-HxCDF	54.9	42.0 - 65.0
2,3,4,6,7,8-HxCDF	53.8	35.0 - 78.0
1,2,3,7,8,9-HxCDF	57.4	39.0 - 65.0
1,2,3,4,6,7,8-HpCDF	51.3	41.0 - 61.0
1,2,3,4,7,8,9-HpCDF	53.5	39.0 - 69.0
OCDF	105	63.0 - 170

Internal Standards	% Rec	QC Limits
13C-2,3,7,8-TCDD	95.2	20.0 - 175
13C-1,2,3,7,8-PeCDD	90.3	21.0 - 227
13C-1,2,3,4,7,8-HxCDD	94.0	21.0 - 193
13C-1,2,3,6,7,8-HxCDD	89.1	25.0 - 163
13C-1,2,3,4,6,7,8-HpCDD	95.4	26.0 - 166
13C-OCDD	84.8	13.0 - 198
13C-2,3,7,8-TCDF	96.8	22.0 - 152
13C-1,2,3,7,8-PeCDF	102	21.0 - 192
13C-2,3,4,7,8-PeCDF	104	13.0 - 328
13C-1,2,3,4,7,8-HxCDF	88.1	19.0 - 202
13C-1,2,3,6,7,8-HxCDF	87.0	21.0 - 159
13C-2,3,4,6,7,8-HxCDF	87.5	22.0 - 176
13C-1,2,3,7,8,9-HxCDF	92.0	17.0 - 205
13C-1,2,3,4,6,7,8-HpCDF	87.3	21.0 - 158
13C-1,2,3,4,7,8,9-HpCDF	99.6	20.0 - 186
13C-OCDF	83.8	13.0 - 198

Cleanup Surrogate		
37Cl-2,3,7,8-TCDD	97.5	31.0 - 191

Analyst: _____
Date: 4/22/04

Reviewed By: _____
Date: 4/22/04

5172 Hillsdale Circle • El Dorado Hills, CA 95762 • Tel (916) 934-0900 • Fax (916) 934-0999 • www.frontieranalytical.com

EPA Method 1613
PCDD/F

FRONTIER ANALYTICAL LABORATORY

FAL ID: 2514-001-SA
Client ID: B5-W
Matrix: Solid
Batch No: X0225

Date Extracted: 04-19-2004
Date Received: 03-29-2004
Amount: 3.79 g
% Solids: 1.72

ICal: PCDDFAL2-3-30-04
GC Column: DB5
Units: pg/g

Acquired: 04-22-2004
WHO TEQ: 0.149

Compound	Conc	DL	Qual	WHO Tox	Compound	Conc	DL	Qual	#Hom
2,3,7,8-TCDD	-	0.406		-					
1,2,3,7,8-PeCDD	-	0.581		-					
1,2,3,4,7,8-HxCDD	-	2.58		-					
1,2,3,6,7,8-HxCDD	-	2.70		-	Total Tetra-Dioxins	-	0.737		0
1,2,3,7,8,9-HxCDD	-	2.40		-	Total Penta-Dioxins	-	1.72		0
1,2,3,4,6,7,8-HpCDD	11.0	-		0.110	Total Hexa-Dioxins	-	2.99		0
OCDD	86.3	-		0.00863	Total Hepta-Dioxins	37.1	-		2
2,3,7,8-TCDF	-	0.403		-					
1,2,3,7,8-PeCDF	-	1.49		-					
2,3,4,7,8-PeCDF	-	1.37		-					
1,2,3,4,7,8-HxCDF	-	0.628		-					
1,2,3,6,7,8-HxCDF	-	0.917		-					
2,3,4,6,7,8-HxCDF	-	0.942		-					
1,2,3,7,8,9-HxCDF	-	1.22		-	Total Tetra-Furans	-	0.798		0
1,2,3,4,6,7,8-HpCDF	2.98	-	J	0.0298	Total Penta-Furans	-	1.78		0
1,2,3,4,7,8,9-HpCDF	-	0.870		-	Total Hexa-Furans	-	1.22		0
OCDF	5.68	-	J	0.000568	Total Hepta-Furans	5.72	-	J	2

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	94.5	25.0 - 164	
13C-1,2,3,7,8-PeCDD	92.4	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	93.1	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	93.2	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	107	23.0 - 140	
13C-OCDD	94.0	17.0 - 157	
13C-2,3,7,8-TCDF	99.2	24.0 - 169	
13C-1,2,3,7,8-PeCDF	106	24.0 - 185	
13C-2,3,4,7,8-PeCDF	110	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	87.1	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	85.7	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	87.5	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	95.1	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	95.7	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	112	26.0 - 138	
13C-OCDF	71.3	17.0 - 157	

Cleanup Surrogate		
37Cl-2,3,7,8-TCDD	98.9	35.0 - 197

Analyst: _____
Date: 4/22/04

Reviewed By: _____
Date: 4/23/04

5172 Hillsdale Circle • El Dorado Hills, CA 95762 • Tel (916) 934-0900 • Fax (916) 934-0999 • www.frontieranalytical.com

EPA Method 1613
PCDD/F

FRONTIER ANALYTICAL LABORATORY

FAL ID: 2514-002-SA
Client ID: B4-W
Matrix: Solid
Batch No: X0225

Date Extracted: 04-19-2004
Date Received: 03-29-2004
Amount: 3.15 g
% Solids: 1.30

ICal: PCDDFAL2-3-30-04
GC Column: DB5
Units: pg/g

Acquired: 04-22-2004
WHO TEQ: 0.0845

Compound	Conc	DL	Qual	WHO Tox	Compound	Conc	DL	Qual	#Hom
2,3,7,8-TCDD	-	0.349		-					
1,2,3,7,8-PeCDD	-	0.840		-					
1,2,3,4,7,8-HxCDD	-	1.19		-					
1,2,3,6,7,8-HxCDD	-	1.40		-	Total Tetra-Dioxins	-	0.992		0
1,2,3,7,8,9-HxCDD	-	1.19		-	Total Penta-Dioxins	-	2.06		0
1,2,3,4,6,7,8-HpCDD	8.12	-		0.0812	Total Hexa-Dioxins	-	2.07		0
OCDD	32.9	-		0.00329	Total Hepta-Dioxins	16.2	-		2
2,3,7,8-TCDF	-	0.498		-					
1,2,3,7,8-PeCDF	-	1.20		-					
2,3,4,7,8-PeCDF	-	1.11		-					
1,2,3,4,7,8-HxCDF	-	0.596		-					
1,2,3,6,7,8-HxCDF	-	0.870		-					
2,3,4,6,7,8-HxCDF	-	0.959		-					
1,2,3,7,8,9-HxCDF	-	1.16		-	Total Tetra-Furans	-	0.977		0
1,2,3,4,6,7,8-HpCDF	-	0.971		-	Total Penta-Furans	-	1.64		0
1,2,3,4,7,8,9-HpCDF	-	1.13		-	Total Hexa-Furans	-	1.16		0
OCDF	-	2.42		-	Total Hepta-Furans	-	1.13		0

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	93.3	25.0 - 164	
13C-1,2,3,7,8-PeCDD	94.8	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	93.5	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	89.7	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	107	23.0 - 140	
13C-OCDD	91.2	17.0 - 157	
13C-2,3,7,8-TCDF	97.0	24.0 - 169	
13C-1,2,3,7,8-PeCDF	102	24.0 - 185	
13C-2,3,4,7,8-PeCDF	111	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	83.4	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	83.3	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	85.1	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	93.4	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	98.3	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	114	26.0 - 138	
13C-OCDF	90.9	17.0 - 157	

Cleanup Surrogate			
37Cl-2,3,7,8-TCDD	99.6	35.0 - 197	

Analyst: _____
Date: 4/22/04

Reviewed By: _____
Date: 4/26/04

5172 Hillsdale Circle • El Dorado Hills, CA 95762 • Tel (916) 934-0900 • Fax (916) 934-0999 • www.frontieranalytical.com

EPA Method 1613
PCDD/F

FRONTIER ANALYTICAL LABORATOR

FAL ID: 2514-003-SA
Client ID: B2-W
Matrix: Solid
Batch No: X0225

Date Extracted: 04-19-2004
Date Received: 03-29-2004
Amount: 6.91 g
% Solids: 3.33

ICal: PCDDFAL2-3-30-04
GC Column: DB5
Units: pg/g

Acquired: 04-22-2004
WHO TEQ: 0.0428

Compound	Conc	DL	Qual	WHO Tox	Compound	Conc	DL	Qual	#Hom
2,3,7,8-TCDD	-	0.247		-					
1,2,3,7,8-PeCDD	-	0.820		-					
1,2,3,4,7,8-HxCDD	-	0.746		-					
1,2,3,6,7,8-HxCDD	-	0.844		-	Total Tetra-Dioxins	-	0.903		0
1,2,3,7,8,9-HxCDD	-	0.741		-	Total Penta-Dioxins	-	0.820		0
1,2,3,4,6,7,8-HpCDD	4.01	-		0.0401	Total Hexa-Dioxins	-	1.17		0
OCDD	27.1	-		0.00271	Total Hepta-Dioxins	11.9	-		2
2,3,7,8-TCDF	-	0.224		-					
1,2,3,7,8-PeCDF	-	0.531		-					
2,3,4,7,8-PeCDF	-	0.445		-					
1,2,3,4,7,8-HxCDF	-	0.221		-					
1,2,3,6,7,8-HxCDF	-	0.339		-					
2,3,4,6,7,8-HxCDF	-	0.349		-					
1,2,3,7,8,9-HxCDF	-	0.409		-	Total Tetra-Furans	-	0.372		0
1,2,3,4,6,7,8-HpCDF	-	1.00		-	Total Penta-Furans	-	0.797		0
1,2,3,4,7,8,9-HpCDF	-	0.322		-	Total Hexa-Furans	-	0.409		0
OCDF	-	1.75		-	Total Hepta-Furans	-	1.11		0

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	96.0	25.0 - 164	
13C-1,2,3,7,8-PeCDD	97.7	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	92.1	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	90.2	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	105	23.0 - 140	
13C-OCDD	91.9	17.0 - 157	
13C-2,3,7,8-TCDF	95.5	24.0 - 169	
13C-1,2,3,7,8-PeCDF	106	24.0 - 185	
13C-2,3,4,7,8-PeCDF	114	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	81.7	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	80.6	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	83.1	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	93.6	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	94.9	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	114	26.0 - 138	
13C-OCDF	91.0	17.0 - 157	

Cleanup Surrogate			
37Cl-2,3,7,8-TCDD	95.9	35.0 - 197	

Analyst: _____
Date: 4/22/04

Reviewed By: _____
Date: 4/26/04

5172 Hillsdale Circle • El Dorado Hills, CA 95762 • Tel (916) 934-0900 • Fax (916) 934-0999 • www.frontieranalytical.com

EPA Method 1613
PCDD/F

FRONTIER ANALYTICAL LABORATORY

FAL ID: 2514-004-SA
Client ID: B3-W
Matrix: Solid
Batch No: X0225

Date Extracted: 04-19-2004
Date Received: 03-29-2004
Amount: 9.41 g
% Solids: 4.42

ICal: PCDDFAL2-3-30-04
GC Column: DB5
Units: pg/g

Acquired: 04-22-2004
WHO TEQ: 0.0285

Compound	Conc	DL	Qual	WHO Tox	Compound	Conc	DL	Qual	#Hom
2,3,7,8-TCDD	-	0.250		-					
1,2,3,7,8-PeCDD	-	0.647		-					
1,2,3,4,7,8-HxCDD	-	0.669		-					
1,2,3,6,7,8-HxCDD	-	0.728		-	Total Tetra-Dioxins	-	0.250		0
1,2,3,7,8,9-HxCDD	-	0.648		-	Total Penta-Dioxins	-	0.647		0
1,2,3,4,6,7,8-HpCDD	2.70	-		0.0270	Total Hexa-Dioxins	-	0.984		0
OCDD	15.2	-		0.00152	Total Hepta-Dioxins	6.82	-		2
2,3,7,8-TCDF	-	0.294		-					
1,2,3,7,8-PeCDF	-	0.554		-					
2,3,4,7,8-PeCDF	-	0.549		-					
1,2,3,4,7,8-HxCDF	-	0.396		-					
1,2,3,6,7,8-HxCDF	-	0.564		-					
2,3,4,6,7,8-HxCDF	-	0.580		-					
1,2,3,7,8,9-HxCDF	-	0.713		-	Total Tetra-Furans	-	0.294		0
1,2,3,4,6,7,8-HpCDF	-	0.887		-	Total Penta-Furans	-	0.749		0
1,2,3,4,7,8,9-HpCDF	-	0.941		-	Total Hexa-Furans	-	0.713		0
OCDF	-	1.52		-	Total Hepta-Furans	-	0.941		0

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	91.8	25.0 - 164	
13C-1,2,3,7,8-PeCDD	92.1	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	88.2	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	85.4	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	103	23.0 - 140	
13C-OCDD	99.4	17.0 - 157	
13C-2,3,7,8-TCDF	93.3	24.0 - 169	
13C-1,2,3,7,8-PeCDF	104	24.0 - 185	
13C-2,3,4,7,8-PeCDF	106	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	80.9	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	78.5	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	81.9	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	93.0	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	90.7	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	110	26.0 - 138	
13C-OCDF	93.3	17.0 - 157	

Cleanup Surrogate		
37Cl-2,3,7,8-TCDD	94.3	35.0 - 197

Analyst: _____
Date: 4/22/04

Reviewed By: _____
Date: 4/23/04

5172 Hillsdale Circle • El Dorado Hills, CA 95762 • Tel (916) 934-0900 • Fax (916) 934-0999 • www.frontieranalytical.com

Frontier Analytical Laboratory

Sample Login Form

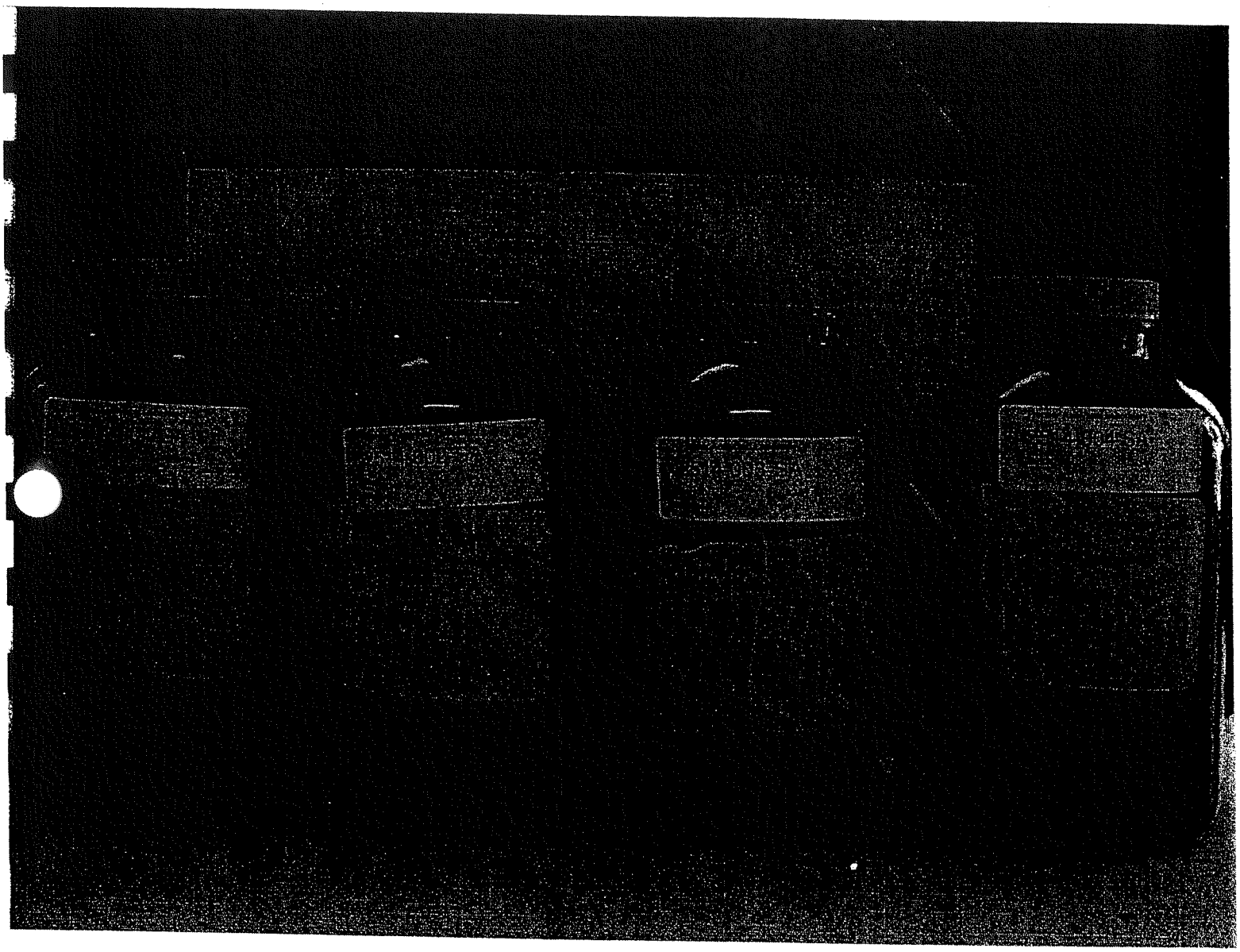
FAL Project ID: **2514**

Client:	Essentia Management Services
Client Project ID:	LADWP - 47278-4
Date Received:	03/29/2004
Time Received:	08:50 am
Received By:	KZ
Logged In By:	KZ
# of Samples Received:	4
Duplicates:	0
Storage Location:	R1

Method of Delivery:	Courier
Tracking Number:	CA Overnight
Shipping Container Received Intact	Yes
Custody seals(s) present?	No
Custody seals(s) intact?	No
Sample Arrival Temperature (C)	4
Cooling Method	Ice
Chain Of Custody Present?	Yes
Return Shipping Container To Client	Yes
Test for residual Chlorine	Yes
Thiosulfate Added	No
Earliest Sample Hold Time Expiration	03/24/2005
Adequate Sample Volume	Yes

Anomalies or additional comments:

5172 Hillsdale Circle • El Dorado Hills, CA 95762 • Tel (916) 934-0900 • Fax (916) 934-0999 • www.frontieranalytical.com



5172 Hillsdale Circle • El Dorado Hills, CA 95762 • Tel (916) 934-0900 • Fax (916) 934-0999 • www.frontieranalytical.com

Ninyo & Moore

475 Goddard, Suite 200
Irvine, CA 92618

Tel: (949) 753-7070
Fax (949) 753-7071

PROJECT INFORMATION

PROJECT NAME:	LADWP – Chatsworth Reservoir
ADDRESS:	Chatsworth Reservoir
CITY/STATE:	Chatsworth, California
Global ID:	Log Code:
Project Manager	Ken Floom
Project Number	47278-4
SAMPLED BY:	Krista Brodersen – Ninyo & Moore

Lab:
Frontier Analytical Laboratories
5172 Hillsdale Circle
El Dorado Hills, CA 95762
(916)-934-0900
ATTN: Bradley Silveby

FIELD POINT NAME	SAMPLE ID	NUMBER OF CONTAINERS	SAMPLE DATE	SAMPLE TIME	SAMPLE MATRIX	CONTAINER TYPE	PRESERV	Dioxins- 1613	REMARKS
B5	B5-W	1	3-24-04	8:11	Water	Liter	NONE	X	
B4	B4-W	1	〃	9:31	〃	〃	〃	〃	
B2	B2-W	1	〃	12:45	〃	〃	〃	〃	
B3	B3-W	1	〃	13:35	〃	〃	〃	〃	
Total No. of Samples:									

Comments
Fax results to: Ken Floom at (562) 740-1070
E-mail final report to: ken_floom@essentia-llc.com

Relinquished By:	Date/Time	Received By:	Date/Time
Krista Brodersen	3-24-04 16:00		
Relinquished By:	Date/Time	Received By:	Date/Time
Relinquished By:	Date/Time	Received By:	Date/Time
		Kathy Zipp	3/29/04 8:50

TURN AROUND TIME	SAMPLE INTEGRITY	REPORT FORMAT
☐ 24 HOUR	☐ SAMPLES INTACT?	☐ SARWQCB and GEOTRACKER
☐ 48 HOUR	☐ SAMPLES CHILLED	☐ SAN DIEGO HMMD
☐ 3 DAY	☐ SECURITY TAPE INTACT?	☐ NORMAL
☐ 5-DAY	☐ NO SECURITY TAPE USED	☐ OTHER:_____
☐ 14 DAY		
☒ Other _Normal_____		

TABLE OF CONTENTS

CLIENT:	**GEORGE FAEUSTLE**
PROJECT:	**CHATSWORTH RESERVOIR**
REPORT NO.:	**C10619**

DEPARTMENT OF WATER AND POWER
OF THE CITY OF LOS ANGELES
WATER QUALITY AND OPERATIONS

ENVIRONMENTAL LABORATORY DATA REPORT

CHATSWORTH RESERVOIR

Water samples from Chatsworth Reservoir were delivered on March 24, 2004 and analyzed for Metals/Mercury and Volatile Organic Compounds (VOC) analyses. The samples and their corresponding analytes, methods and results are listed below.

The samples were identified as follows:

Chem Lab Sample ID	COC Number	Sample Date	Sample Description
LE03464	04-0602	3/24/04	B5-W
LE03465			
LE03466			B4-W
LE03467			
LE03468			B2-W
LE03469			
LE03470			B3-W
LE03471			

The analyses and results were as follows :

Analysis	Environmental Lab Sample ID	EPA Method No.	Analysis Date	Results	Analyzed by
Metals/Mercury	LE03464 – LE03471	6010B/245.1	3/29/04, 4/9/04	**Attachment #1**	Environmental Lab
VOC		8260B	3/31/04	**Attachment #2**	Environmental Lab

If there are any questions, or if further information is needed, please contact Mr. Lucas Wang at (213) 367-7271 or Mr. Stanley Kung at 213-367-7270

Date Completed: 4/20/04
Work Order: UND21
Job Card #: J96086
Copies To: George Faeustle
Stanley Kung
Filenet

Test made by: Environmental Lab

Report by: KC
Checked by: AMK
Approved by: Stanley Kung 4/20

MANAGER
ENVIRONMENTAL LABORATORY

C10617

Environmental Laboratory
1630 N. Main Street, Bldg 7
Los Angeles, CA. 90012
(323) 367-7248/7399
(213) 367-7285 FAX

Department of Water and Power
City of Los Angeles

Chain of Custody Record

COC#: 04-0602 Page 1 of 1

Report C#_____ JC#_____ WO#_____
Refrig#. 4 Shelf 10 Bin#._____
Initial of Field Personnel: KAB No. of Field Test: Vials R953

Sample Location: Chatsworth Reservoir

Chem Lab use only CHEMISTRY LOG NUMBERS (For sample duplicates use .1 or .X)	Sample Date	(24 Hr) Sample Time	Sample Location and Description	Preservatives	Container No.	Container Type	Container Size	Sample Matrix	Analysis Required	Test Result	Analy: Assig
LE —	3-24-04	~~8:11~~	~~BS-W~~ KAB	HCL	3	VOA	40ml	Water	8015M		
03464		~~8:11~~	~~BS-W~~	HCL	3	VOA	40ml		8260B		
—			~~BS-W~~ KAB	$Na_2S_2O_3$	1	G	L		8270C		
03465		↓	BS-W	Nitric	1	P	500 ml		6010B/7000		
03466		9:31	B4-W	HCL	3	VOA	40 ml		8260B		
03467		↓	B4-W	Nitric	1	P	500 ml		6010B/7000		
03468		12:45	B2-W	HCL	3	VOA	40 ml		8260B		
03469		12:45	B2-W	Nitric	1	P	500 ml		6010B/7000		
03470		13:35	B3-W	HCL	3	VOA	40 ml		8260B		
03471	↓	13:35	B3-W	Nitric	1	P	500 ml		6010B/7000		

Requested by: George R. Faeustle Organization / Div. EA
Address. JFB 1044 Tele. 74708 Fax. 73582

Analyst_____ date_____
Approved by_____ date_____

Date & Time Stamp: DEPARTMENT OF WATER & POWER MAR 24 PM 2:49

Priority: 24 Hrs / 4 Day / 2 Wks / 5 Wks / Specify

ENVIRONMENTAL LABORATORY RECEIVED

SF JW LW RP CH AL BT WQTO

Printed Name	Signature	Time	Date
Sampled by: Krista Brodersen	Sampled by:		
Relinquished by: Krista Brodersen	Relinquished by:	15:48	3/24/04
Received by N Manila	Received by:	15:48	3/24/04

COC04-0602

Lab COC: [illegible]
Revision: 10/2/2001

ATTACHMENT # 1

METALS / MERCURY
EPA METHOD 6010B / 245.1

Report No. C10619

CITY OF LOS ANGELES, DEPARTMENT OF WATER & POWER
ENVIRONMENTAL LABORATORY

Case Narrative

Project: Chatsworth Reservoir

Method 3050/6010
Metals by ICP

1. Holding Time

   Analysis met holding time criteria.

2. Method Blank

   Method blanks were free of contamination at reporting level.

3. Lab Control Sample

   Sample results met QC criteria.

4. Matrix Spike/Matrix Spike Duplicate

   Sample LE03471 was analyzed for MS/MSD. Recoveries met QC criteria.

5. Sample Analysis

   Samples were analyzed according to the prescribed QC procedures. Results were below TTLC limits.

001002

ENVIRONMENTAL LABORATORY DATA REPORT

COC 04-0602

ANALYTICAL RESULT FOR METALS

TTLC (Total Threshold Limit Concentration)

EPA Method 6010B

Sample Matrix: WATER

LABORATORY LOG NO	DATE SAMPLED	DATE RECEIVED	DATE ANALYZED	SAMPLE DESCRIPTION	LOG BATCH
LE03465	3/24/04	3/24/04	4/9/04	B5-W	$TTLCW-1075
LE03467	3/24/04	3/24/04	4/9/04	B4-W	$TTLCW-1075
LE03469	3/24/04	3/24/04	4/9/04	B2-W	$TTLCW-1075
LE03471	3/24/04	3/24/04	4/9/04	B3-W	$TTLCW-1075

METAL	LIMIT TTLC (mg/kg)	LIMIT STLC (mg/l)	METHOD	MDL	RL	D. F.	LE03465 mg/l	LE03467 mg/l	LE03469 mg/l	LE03471 mg/l		
Antimony	500	15	6010	0.016	0.080	1	ND	ND	0.022J	0.174		
Arsenic	500	5	6010	0.021	0.105	1	0.403	0.072J	1.579	3.217		
Barium	10000	100	6010	0.01	0.050	1	7.08	0.92	15.67	17.84		
Beryllium	75	0.75	6010	0.006	0.030	1	0.041	0.007J	0.078	0.123		
Cadmium	100	1	6010	0.013	0.065	1	0.129	0.025J	0.543	0.686		
Chromium (T)	500	5	6010	0.006	0.030	1	2.106	0.328	2.362	3.273		
Cobalt	8000	80	6010	0.005	0.025	1	0.659	0.155	1.859	2.202		
Copper	2500	25	6010	0.004	0.020	1	1.209	0.098	3.921	10.080		
Lead	1000	5	6010	0.019	0.095	1	0.807	0.059J	1.266	2.238		
Molybdenum	3500	350	6010	0.004	0.020	1	0.062	ND	0.396	0.227		
Nickel	2000	20	6010	0.008	0.040	1	0.473	0.154	2.861	2.703		
Selenium	100	1	6010	0.014	0.070	1	ND	ND	0.304	0.249		
Silver	500	5	6010	0.05	0.250	1	ND	ND	ND	ND		
Thallium	700	7	6010	0.04	0.200	1	ND	ND	ND	ND		
Vanadium	2400	24	6010	0.007	0.035	1	1.310	0.367	4.862	6.932		
Zinc	5000	250	6010	0.006	0.030	1	2.632	0.629	9.036	12.590		
Mercury	20	0.2	245.1	0.0002	0.001	1	ND	ND	ND	ND		

ND - Not Detected; below method detection limit

MDL - Method Detection Limit

R.L. - Report Limit

D. F. - Dilution Factor

** - exceed TTLC limit

* - exceed 10x STLC limit

J - concentration above MDL and below RL

Annalyst: C. Y. Hwang

ENVIRONMENTAL LABORATORY DATA REPORT

COC 04-0602

ANALYTICAL RESULT FOR METALS

TTLC (Total Threshold Limit Concentration)

EPA Method 6010B

Sample Matrix:

LABORATORY LOG NO.	DATE SAMPLED	DATE RECEIVED	DATE ANALYZED	SAMPLE DESCRIPTION	QC BATCH
LE03471 Dup	03/24/04	3/24/04	4/9/04	B3-W	$TTLCW-1075

METAL	LIMIT TTLC (mg/kg)	LIMIT STLC (mg/l)	METHOD	MDL	RL	D. F.	LE03471 (mg/l)					
Antimony	500	15	6010	0.016	0.08	1	0.166					
Arsenic	500	5	6010	0.021	0.11	1	3.18					
Barium	10000	100	6010	0.01	0.05	1	17.1					
Beryllium	75	0.75	6010	0.006	0.03	1	0.119					
Cadmium	100	1	6010	0.013	0.07	1	0.652					
Chromium (T)	2500	5	6010	0.006	0.03	1	3.02					
Cobalt	8000	80	6010	0.005	0.03	1	2.10					
Copper	2500	25	6010	0.004	0.02	1	10.1					
Lead	1000	5	6010	0.019	0.10	1	2.13					
Molybdenum	3500	350	6010	0.004	0.02	1	0.205					
Nickel	2000	20	6010	0.008	0.04	1	2.54					
Selenium	100	1	6010	0.014	0.07	1	0.284					
Silver	500	5	6010	0.05	0.25	1	0.0571J					
Thallium	700	7	6010	0.04	0.20	1	ND					
Vanadium	2400	24	6010	0.007	0.04	1	6.44					
Zinc	5000	250	6010	0.006	0.03	1	11.7					

ND - Not Detected; below method detection limit
MDL - Method Detection Limit
RL - Report Limit
D. F. - Dilution Factor

** - exceed TTLC limit
* - exceed 10x STLC limit
J - concentration above MDL and below RL

Analyst: C. Y. Hwang

Project No: CHATSWORTH RESERVOIR

QA/QC Report

I. Blank Spike (BS)/Blank Spike Duplicate (BSD)

DATE ANALYZED: 04/09/04

ANALYTICAL METHOD : USEPA 6010/7000

BATCH #: $TTLCW-1075

LAB SAMPLE I.D.:

UNIT: (Circle One) (mg/l)

METAL	SAMPLE RESULT	SPIKE CONC	BS	%BS	DUP SPIKE CONC	BSD	%BSD	RPD	BS/BSD %REC LIMIT	RPD LIMIT
Antimony	ND	1.0	0.898	89.8	1.0	0.906	90.6	0.9%	70 - 130	<30%
Arsenic	ND	1.0	0.991	99.1	1.0	0.994	99.4	0.3%	70 - 130	<30%
Barium	ND	---	---	---	---	---	---	---	---	---
Beryllium	ND	1.0	1.088	109	1.0	1.097	110	0.9%	70 - 130	<30%
Cadmium	ND	1.0	1.039	104	1.0	1.041	104	0.0%	70 - 130	<30%
Chromium (T)	ND	1.0	1.052	105	1.0	1.052	105	0.0%	70 - 130	<30%
Cobalt	ND	1.0	1.069	107	1.0	1.082	108	0.9%	70 - 130	<30%
Copper	ND	1.0	1.050	105	1.0	1.062	106	0.9%	70 - 130	<30%
Lead	ND	1.0	0.982	98.2	1.0	0.972	97.2	1.0%	70 - 130	<30%
Molybdenum	ND	1.0	1.168	117	1.0	1.152	115	1.7%	70 - 130	<30%
Nickel	ND	1.0	1.042	104	1.0	1.029	103	1.0%	70 - 130	<30%
Selenium	ND	1.0	1.115	112	1.0	1.156	116	3.5%	70 - 130	<30%
Silver	ND	---	---	---	---	---	---	---	---	---
Thallium	ND	---	---	---	---	---	---	---	---	---
Vanadium	0.007	1.0	1.089	109	1.0	1.099	110	0.9%	70 - 130	<30%
Zinc	ND	1.0	1.010	101	1.0	0.995	99.5	1.5%	70 - 130	<30%

BS = Blank Spike BSD = Blank Spike Duplicate RPD = Relative Percent Difference
%BS = Percent Recovery of Blank Spike %BSD = Percent Recovery of Blank Spike Duplicate
--- indicates a compound not included in the spike solution

Analyst: C. Y. Hwang

Project No: CHATSWORTH RESERVOIR

QA/QC Report

II. Matrix Spike (MS)/Matrix Spike Duplicate (MSD)

DATE ANALYZED: 04/09/04 ANALYTICAL METHOD : USEPA 6010/7000

BATCH #: $TTLCW-1075 (LE03465, LE03467, LE03469, LE03471)

LAB SAMPLE I.D.: LE03471 UNIT: (Circle One) (mg/l)

METAL	SAMPLE RESULT	SPIKE CONC	MS	%MS	DUP SPIKE CONC	MSD	%MSD	RPD	MS/MSD % REC LIMIT	RPD LIMIT
Antimony	0.174	1.0	0.213	3.90	1.0	0.196	2.20	55.7%	70 - 130	<30%
Arsenic	3.217	1.0	3.91	69.3	1.0	3.98	76.3	9.6%	70 - 130	<30%
Barium	17.84	---	---	---	---	---	---	---	---	---
Beryllium	0.123	1.0	0.990	86.7	1.0	1.00	87.7	1.1%	70 - 130	<30%
Cadmium	0.686	1.0	1.33	64.4	1.0	1.34	65.4	1.5%	70 - 130	<30%
Chromium (T)	3.273	1.0	3.95	67.7	1.0	4.01	73.7	8.5%	70 - 130	<30%
Cobalt	2.202	1.0	2.87	66.8	1.0	2.91	70.8	5.8%	70 - 130	<30%
Copper	10.080	1.0	11.0	92.0	1.0	11.4	132	35.7%	70 - 130	<30%
Lead	2.238	1.0	2.80	56.2	1.0	2.85	61.2	8.5%	70 - 130	<30%
Molybdenum	0.227	1.0	0.597	37.0	1.0	0.620	39.3	6.0%	70 - 130	<30%
Nickel	2.703	1.0	3.33	62.7	1.0	3.30	59.7	4.9%	70 - 130	<30%
Selenium	0.249	1.0	0.879	63.0	1.0	0.878	62.9	0.2%	70 - 130	<30%
Silver	ND	---	---	---	---	---	---	---	---	---
Thallium	ND	---	---	---	---	---	---	---	---	---
Vanadium	6.932	1.0	7.38	44.8	1.0	7.61	67.8	40.9%	70 - 130	<30%
Zinc	12.590	1.0	12.8	21.0	1.0	12.8	21.0	0.0%	70 - 130	<30%

MS = Matrix Spike MSD = Matrix Spike Duplicate RPD = Relative Percent Difference
%MS = Percent Recovery of Matrix Spike %MSD = Percent Recovery of Matrix Spike Duplicate
--- indicates a compound not included in the spike solution

Analyst: C. Y. Hwang

Project No: CHATSWORTH RESERVOIR

III. Calibration and Laboratory Quality Control Check Sample (LCS)

DATE ANALYZED: 4/9/2004

SUPPLY SOURCE: CPI International

LOT NUMBER: 0DR176

ANALYTICAL: USEPA 6010/7000

LAB LCS I.D.: Q4518

UNIT: (Circle One) (mg/L) mg/kg

METAL	MDL mg/L	LCS RESULTS mg/L	TRUE VALUE mg/L	RECOVERY %	ACCEPTABLE RANGE
Antimony	0.016	2.248	2.38	94.5%	70 - 130%
Arsenic	0.021	9.61	9.52	100.9%	70 - 130%
Barium	0.01	9.94	9.52	104.4%	70 - 130%
Beryllium	0.006	0.274	0.24	115.1%	70 - 130%
Cadmium	0.013	0.272	0.24	114.1%	70 - 130%
Chromium (T)	0.006	1.02	0.95	106.8%	70 - 130%
Cobalt	0.005	2.67	2.38	112.0%	70 - 130%
Copper	0.004	1.29	1.19	108.4%	70 - 130%
Lead	0.019	2.45	2.38	103.0%	70 - 130%
Molybdenum	0.004	---	---	---	---
Nickel	0.008	2.53	2.38	106.5%	70 - 130%
Selenium	0.014	9.91	9.52	104.1%	70 - 130%
Silver	0.05	0.24	0.24	101.3%	70 - 130%
Thallium	0.05	9.51	9.52	99.9%	70 - 130%
Vanadium	0.007	2.59	2.38	108.9%	70 - 130%
Zinc	0.006	2.55	2.38	107.2%	70 - 130%

--- indicates a compound not included in the LCS solution

Analyst: C. Y. Hwang

Reviewed by:

Report No C10619
COC 04-0602

Project Name: CHATSWORTH RESERVOIR

Mercury QA/QC Report

I. Method Blank, Method Blank Spike (MBS), & Method Blank Spike Duplicate (MBSD)

DATE ANALYZED: 03/29/04
BATCH #: 20040329/A
LAB SAMPLE I.D.: Method Blank , Method Blank Spike & Method Blank Spike Duplicate

ANALYTICAL METHOD: USEPA 254.1
UNIT: ug/L

METAL	Method Blank	SPIKE CONC	MBS	% MBS	(DUP) SPIKE CONC	MBSD	% MBSD	% RPD	MS/MSD % REC LIMIT	% RPD LIMIT
MERCURY	0.0	2.50	2.55	102.0	2.50	2.56	102.4	0.2	70 - 120	30

II. Laboratory Control Check Sample (LCS)

DATE ANALYZED: 3/29/2004
LCS I.D.: Q3295
BATCH QC : 20040329/A

ANALYTICAL METHOD: USEPA 245.1
UNIT: ug/L

BATCH QC									
METAL	LAB ID	TRUE CONC	T	% RC	LAB ID	TRUE CONC	T	% RC	ACCEPTANCE LIMITS (%)
MERCURY	Q3295	4.70	5.42	115.3					70 - 130

MBS - Method Blank Spike MBSD - Method Blank Spike Duplicate %RSD - Relative Percent Difference
%MBS - Percent Recovery of Method Blank Spike %MBSD - Percent Recovery of Method Blank Spike Duplicate

Analyst: R. Petersen / Kasey Chung

ATTACHMENT # 2

VOLATILE ORGANIC COMPOUNDS
VOC - EPA METHOD 8260B

Report No. C10619

CITY OF LOS ANGELES, DEPARTMENT OF WATER & POWER
ENVIRONMENTAL LABORATORY

Case Narrative

Project: Marine Tank Farm

METHOD 5030/8260B
Volatile Organics by GC/MS

1. Holding Time

Samples were analyzed within holding time.

2. Tuning and Calibration

Tuning and calibration met QC requirements.

3. Method Blank

There was no contamination detected at reporting level.

4. Lab Control Sample

Recoveries met QC criteria.

5 Surrogate Recovery

Recoveries met QC criteria.

6. Matrix Spike/Matrix Spike Duplicate

Sample LE03450 was analyzed for MS/MSD in this analytical batch. Recoveries met QC criteria.

7. Calibration

Initial calibration was performed at five different concentrations. The percent relative standard deviation (% RSD) was within 15%. Continuing calibration check standards recoveries met QC requirements.

7. Sample Analysis

Samples were analyzed according to the prescribed QC procedures. Trace amount of toluene was detected in four samples. Other contaminants were acetone, carbon disulfide and xylene. See data.

002002

COC 04-0602

ENVIRONMENTAL LABORATORY DATA REPORT

Report of GC/MS Analysis for Purgeable Volatile Organics
EPA SW-846 Method 8260

Sample Matrix: Water

PROJECT: CHATSWORTH RESERVOIR

Chemistry Log No.	Date Sampled	Date Received	Date Analyzed	Sample Description
LE03464	3/24/2004	3/24/2004	3/31/2004	B5-W
LE03466	3/24/2004	3/24/2004	3/31/2004	B4-W
LE03468	3/24/2004	3/24/2004	3/31/2004	B2-W
LE03470	3/24/2004	3/24/2004	3/31/2004	B3-W

Compounds	MDL (ug/L)	PQL (ug/L)	LE03464 Amount (ug/L)	LE03466 Amount (ug/L)	LE03468 Amount (ug/L)	LE03470 Amount (ug/L)
Acetone	1	5.0	nd	nd	nd	**15.6**
tert-Amyl methyl ether (TAME)	0.5	2.5	nd	nd	nd	nd
Benzene	0.1	0.5	nd	nd	nd	nd
Bromobenzene	0.4	2.0	nd	nd	nd	nd
Bromochloromethane	0.2	1.0	nd	nd	nd	nd
Bromodichloromethane	0.4	2.0	nd	nd	nd	nd
Bromoform	0.3	1.5	nd	nd	nd	nd
Bromomethane	1.1	5.5	nd	nd	nd	nd
Methyl ethyl ketone (MEK)	0.6	3.0	nd	nd	nd	nd
tert-Butyl alcohol (TBA)	3	15.0	nd	nd	nd	nd
Butylbenzene	0.2	1.0	nd	nd	nd	nd
sec-Butylbenzene	0.3	1.5	nd	nd	nd	nd
tert-Butylbenzene	0.3	1.5	nd	nd	nd	nd
tert-Butyl ethyl ether (ETBE)	0.6	3.0	nd	nd	nd	nd
Carbon disulfide	0.3	1.5	**2.35**	nd	nd	nd
Carbon Tetrachloride	0.4	2.0	nd	nd	nd	nd
Chlorobenzene	0.2	1.0	nd	nd	nd	nd
Chloroethane	0.8	4.0	nd	nd	nd	nd
2-Chloroethyl vinyl ether	0.6	3.0	nd	nd	nd	nd
Chloroform	0.2	1.0	nd	nd	nd	nd
Chloromethane	0.4	2.0	nd	nd	nd	nd
2-Chlorotoluene	0.3	1.5	nd	nd	nd	nd
4-Chlorotoluene	0.4	2.0	nd	nd	nd	nd
Dibromochloromethane	0.2	1.0	nd	nd	nd	nd
1,2-Dibromo-3-chloropropane	1.1	5.5	nd	nd	nd	nd
1,2-Dibromoethane	0.5	2.5	nd	nd	nd	nd
Dibromomethane	0.4	2.0	nd	nd	nd	nd
1,2-Dichlorobenzene	0.1	0.5	nd	nd	nd	nd
1,3-Dichlorobenzene	0.3	1.5	nd	nd	nd	nd
1,4-Dichlorobenzene	0.2	1.0	nd	nd	nd	nd
Dichlorodifluoromethane	0.4	2.0	nd	nd	nd	nd
1,1-Dichloroethane	0.3	1.5	nd	nd	nd	nd
1,2-Dichloroethane	0.1	0.5	nd	nd	nd	nd
1,1-Dichloroethene	0.4	2.0	nd	nd	nd	nd
cis-1,2-Dichloroethene	0.3	1.5	nd	nd	nd	nd
trans-1,2-Dichloroethene	0.3	1.5	nd	nd	nd	nd
1,2-Dichloropropane	0.2	1.0	nd	nd	nd	nd
1,3-Dichloropropane	0.3	1.5	nd	nd	nd	nd
2,2-Dichloropropane	0.4	2.0	nd	nd	nd	nd
1,1-Dichloropropene	0.3	1.5	nd	nd	nd	nd
cis-1,3-Dichloropropene	0.5	2.5	nd	nd	nd	nd
trans-1,3-Dichloropropene	0.8	4.0	nd	nd	nd	nd
Diisopropyl ether (DIPE)	0.3	1.5	nd	nd	nd	nd
Ethylbenzene	0.1	0.5	nd	nd	nd	nd
Hexachlorobutadiene	0.7	3.5	nd	nd	nd	nd

ENVIRONMENTAL LABORATORY DATA REPORT

COC 04-0602

Report of GC/MS Analysis for Purgeable Volatile Organics
EPA SW-846 Method 8260

PROJECT: CHATSWORTH RESERVOIR Sample Matrix: Water

Chemistry Log No.	Date Sampled	Date Received	Date Analyzed	Sample Description
LE03464	3/24/2004	3/24/2004	3/31/2004	B5-W
LE03466	3/24/2004	3/24/2004	3/31/2004	B4-W
LE03468	3/24/2004	3/24/2004	3/31/2004	B2-W
LE03470	3/24/2004	3/24/2004	3/31/2004	B3-W

Compounds	MDL (ug/L)	PQL (ug/L)	LE03464 Amount (ug/L)	LE03466 Amount (ug/L)	LE03468 Amount (ug/L)	LE03470 Amount (ug/L)
2-Hexanone	0.3	1.5	nd	nd	nd	nd
Isopropylbenzene	0.1	0.5	nd	nd	nd	nd
p-Isopropyltoluene	0.3	1.5	nd	nd	nd	nd
Methyl-t-butyl ether (MTBE)	0.5	2.5	nd	nd	nd	nd
Methylene chloride	0.6	3.0	nd	nd	nd	nd
Iodomethane	1.2	6.0	nd	nd	nd	nd
Methyl isobutyl ketone (MIBK)	0.2	1.0	nd	nd	nd	nd
Naphthalene	0.2	1.0	nd	nd	nd	nd
Propylbenzene	0.2	1.0	nd	nd	nd	nd
Styrene	0.1	0.5	nd	nd	nd	nd
1,1,1,2-Tetrachloroethane	0.3	1.5	nd	nd	nd	nd
1,1,2,2-Tetrachloroethane	0.2	1.0	nd	nd	nd	nd
Tetrachloroethylene	0.3	1.5	nd	nd	nd	nd
Toluene	0.1	0.5	**0.653**	**0.3J**	**0.184J**	**0.707**
1,2,3-Trichlorobenzene	0.3	1.5	nd	nd	nd	nd
1,2,4-Trichlorobenzene	0.4	2.0	nd	nd	nd	nd
1,1,1-Trichloroethane	0.3	1.5	nd	nd	nd	nd
1,1,2-Trichloroethane	0.3	1.5	nd	nd	nd	nd
Trichloroethylene	0.2	1.0	nd	nd	nd	nd
Trichlorofluoromethane	0.2	1.0	nd	nd	nd	nd
1,2,3-Trichloropropane	0.3	1.5	nd	nd	nd	nd
1,2,4-Trimethylbenzene	0.3	1.5	nd	nd	nd	nd
1,3,5-Trimethylbenzene	0.2	1.0	nd	nd	nd	nd
Vinyl acetate	0.5	2.5	nd	nd	nd	nd
Vinyl Chloride (Chloroethene)	0.4	2.0	nd	nd	nd	nd
m & p-Xylene	0.3	1.5	**0.499J**	nd	nd	nd
o-Xylene	0.1	0.5	nd	nd	nd	nd

MDL - Method Detection Limit
PQL - Practical Quantitation Limit (5xMDL)

J - Concentration above MDL below PQL
nd - Not Detected; below detection limit

Quality Control Data

Surrogates 30 (ug/L each)	QC Limits % Recovery Lower-Upper				
SURR: Bromofluorobenzene	80 - 130	93.0%	91.7%	89.7%	91.7%
SURR: Dibromofluoromethane	80 - 120	88.3%	85.0%	84.0%	81.7%
SURR: Toluene-d8	80 - 130	97.0%	96.3%	97.7%	97.7%

Comment:

Analyst: Bryan Tiu

Reviewed by: Rose Gentallan

002004
COC 04-0603

ENVIRONMENTAL LABORATORY DATA REPORT

Report of GC/MS Analysis for Purgeable Volatile Organics
EPA SW-846 Method 8260

PRPJECT: CHATSWORTH RESERVOIR Sample Matrix: Water

Chemistry Log No.	Date Sampled	Date Received	Date Analyzed	Sample Description
Blank	3/24/2004	3/24/2004	3/31/2004	Method Blank

Compounds	MDL (ug/L)	PQL (ug/L)	Blank Amount ug/L
Acetone	1	5.0	nd
tert-Amyl methyl ether (TAME)	0.5	2.5	nd
Benzene	0.1	0.5	nd
Bromobenzene	0.4	2.0	nd
Bromochloromethane	0.2	1.0	nd
Bromodichloromethane	0.4	2.0	nd
Bromoform	0.3	1.5	nd
Bromomethane	1.1	5.5	nd
2-Butanone (MEK)	0.6	3.0	nd
tert-Butyl alcohol (TBA)	3	15.0	nd
n-Butylbenzene	0.2	1.0	nd
sec-Butylbenzene	0.3	1.5	nd
tert-Butylbenzene	0.3	1.5	nd
tert-Butyl ethyl ether (ETBE)	0.6	3.0	nd
Carbon disulfide	0.3	1.5	nd
Carbon Tetrachloride	0.6	3.0	nd
Chlorobenzene	0.2	1.0	nd
Chloroethane	0.8	4.0	nd
2-Chloroethyl vinyl ether	0.6	3.0	nd
Chloroform	0.2	1.0	nd
Chloromethane	0.4	2.0	nd
2-Chlorotoluene	0.3	1.5	nd
4-Chlorotoluene	0.4	2.0	nd
Dibromochloromethane	0.2	1.0	nd
1,2-Dibromo-3-chloropropane	1.1	5.5	nd
1,2-Dibromoethane (EDB)	0.5	2.5	nd
Dibromomethane	0.4	2.0	nd
1,2-Dichlorobenzene	0.1	0.5	nd
1,3-Dichlorobenzene	0.3	1.5	nd
1,4-Dichlorobenzene	0.2	1.0	nd
Dichlorodifluoromethane	0.4	2.0	nd
1,1-Dichloroethane	0.3	1.5	nd
1,2-Dichloroethane	0.1	0.5	nd
1,1-Dichloroethene	0.4	2.0	nd
cis-1,2-Dichloroethene	0.3	1.5	nd
trans-1,2-Dichloroethene	0.3	1.5	nd
1,2-Dichloropropane	0.2	1.0	nd
1,3-Dichloropropane	0.3	1.5	nd
2,2-Dichloropropane	0.4	2.0	nd
1,1-Dichloropropene	0.3	1.5	nd
cis-1,3-Dichloropropene	0.5	2.5	nd
trans-1,3-Dichloropropene	0.8	4.0	nd
Diisopropyl ether (DIPE)	0.3	1.5	nd
Ethylbenzene	0.1	0.5	nd

ENVIRONMENTAL LABORATORY DATA REPORT

COC 04-0603 002005

Report of GC/MS Analysis for Purgeable Volatile Organics
EPA SW-846 Method 8260

PRPJECT: CHATSWORTH RESERVOIR Sample Matrix: Water

Chemistry Log No.	Date Sampled	Date Received	Date Analyzed	Sample Description
Blank	3/24/2004	3/24/2004	3/31/2004	Method Blank

Compounds	MDL (ug/L)	PQL (ug/L)	Blank Amount ug/L
Hexachlorobutadiene	0.7	3.5	nd
2-Hexanone	0.3	1.5	nd
Isopropylbenzene	0.1	0.5	nd
p-Isopropyltoluene	0.3	1.5	nd
Methyl-t-butyl ether (MTBE)	0.5	2.5	nd
Methylene chloride	0.6	3.0	nd
Methyl Iodide (Iodomethane)	1.2	6.0	nd
4-Methyl-2-pentanone (MIBK)	0.2	1.0	nd
Naphthalene	0.2	1.0	nd
Propylbenzene	0.2	1.0	nd
Styrene (Phenylethylene)	0.1	0.5	nd
1,1,1,2-Tetrachloroethane	0.3	1.5	nd
1,1,2,2-Tetrachloroethane	0.2	1.0	nd
Tetrachloroethylene	0.3	1.5	nd
Toluene	0.1	0.5	nd
1,2,3-Trichlorobenzene	0.3	1.5	nd
1,2,4-Trichlorobenzene	0.4	2.0	nd
1,1,1-Trichloroethane	0.3	1.5	nd
1,1,2-Trichloroethane	0.3	1.5	nd
Trichloroethylene	0.2	1.0	nd
Trichlorofluoromethane	0.2	1.0	nd
1,2,3-Trichloropropane	0.3	1.5	nd
1,2,4-Trimethylbenzene	0.3	1.5	nd
1,3,5-Trimethylbenzene	0.2	1.0	nd
Vinyl acetate	0.5	2.5	nd
Vinyl Chloride (chloroethene)	0.6	3.0	nd
m & p-Xylene	0.3	1.5	nd
o-Xylene	0.1	0.5	nd

MDL - Method Detection Limit
PQL - Practical Quantitation Limit (5xMDL)

J - Concentration above MDL below PQL
nd - Not Detected; below detection limit

Quality Control Data

Surrogates 30 (ug/L each)	QC Limits % Recovery Lower-Upper	
SURR: Bromofluorobenzene	80 -130	94.3%
SURR: Dibromofluoromethane	80 - 120	81.7%
SURR: Toluene-d8	80 - 130	96.7%

Comment:

Analyst: Bryan Tiu

Reviewed by: Rose Gentallan

002006

Project No: CHATSWORTH RESORVOIR

(RWQCB LabForm10A;Ver12/94)

Quality Assurance Report

Matrix Spike (MS)/Matrix Spike Duplicate (MSD)

DATE PERFORMED: 3/30/04
BATCH #: $VOC-W-10: LE03444 LE03447 LE03450 LE03453 LE03456 LE03459 LE03460 LE03463
LAB SAMPLE I.D.: LE03450

ANALYTICAL METHOD: USEPA 8260
UNIT: ug/L

ANALYTE	SAMPLE RESULT	SPIKE CONC	MS	%MS	SPIKE CONC (DUP)	MSD	%MSD	RPD	MS/MSD LIMIT	RPD LIMIT
1,1-Dichloroethene	4.04	30.0	25.5	71.5	30.0	26.1	73.5	2.8 %	61-145	14%
Benzene	0.227	30.0	25.6	84.6	30.0	26.5	87.6	3.5 %	76-127	11%
Trichloroethylene	0.743	30.0	28.2	91.5	30.0	28.9	93.9	2.6 %	71-120	14%
Toluene	0.280	30.0	28.7	94.7	30.0	29.6	97.7	3.1 %	76-125	13%
Chlorobenzene	ND	30.0	29.6	98.7	30.0	30.4	101	2.3 %	75-130	13%

Laboratory Quality Control Check Sample (LCS)

DATE PERFORMED: 3/30/04
SUPPLY SOURCE:
LOT NUMBER:
DATE OF SOURCE:

ANALYTICAL METHOD: USEPA 8260
LAB LCS I.D.: Q4664
UNIT: ug/L

ANALYTE	LCS RESULT ug/L	TRUE VALUE ug/L	% RECOVERY	Advisory Range
1,1,1-Trichloroethane	14.1	18.2	77.5	12.8 - 22.2
1,1,2,2-Tetrachloroethane	95.2	82.4	115.5	58.3 - 110
1,1,2-Trichloroethane	60.3	56.2	107.3	43.0 - 70.5
1,1-Dichloroethene	20.1	33.8	59.5	20.8 - 43.6
1,2-Dichlorobenzene	51.7	46.4	111.4	34.6 - 57.5
1,2-Dichloroethane	78.7	74.5	105.6	56.5 - 93.9
1,2-Dichloropropane	96.3	91.1	105.7	68.4 - 111
1,3-Dichlorobenzene	13.2	13.8	95.7	9.96 - 16.8
1,4-Dichlorobenzene	26.8	24.2	110.7	17.9 - 30.0
Acetone	107	156	68.6	69.6 - 240
Benzene	51.6	57.4	89.9	43.5 - 70.0
Bromodichloromethane	37.1	35.3	105.1	27.5 - 45.2
Bromoform	54.9	71.8	76.5	51.4 - 93.3
Carbon Tetrachloride	24.6	29.1	84.5	18.6 - 36.4
Chlorobenzene	28.7	27.5	104.4	19.8 - 34.9
Chloroform	26	26.4	98.5	19.9 - 32.5
Dibromochloromethane	40.7	47.4	85.9	35.8 - 59.3
Ethylbenzene	31.9	31.7	100.6	23.1 - 38.7
Methyl isobutyl ketone (MIBK)	129	129	100.0	76.9 - 174
Methylene chloride	34.7	41.4	83.8	27.9 - 53.8
o-Xylene	134	124	108.1	86.6 - 155
Tetrachloroethylene	62.4	63.7	98.0	40.8 - 75.8

Analyst: B. Tiu

Reviewed by: R. Gentallan

ANALYTICAL METHOD QA/QC SUMMARY

003001

Table 1
Analytical Method Summary
LADWP Environmental Laboratory

Project: CHATSWORTH RESERVOIR

Analyte Group	Matrix	Analyte	Sample Preparation Method	Analytical Method	Matrix Spike Accuracy (%Recovery)	Matrix Spike Precision (%RPD)	LCS Accuracy (%Recovery)	LCS Duplicate Precision (%RPD)	Completeness (%)
Volatile Organic Compounds (VOCs)	Water	Acetone	5035	8260B	-		45 - 154	<30%	100%
	Water	Acrolein	5035	8260B	-		--		
	Water	Acrylonitrile	5035	8260B	-		--		
	Water	tert-Amyl methyl ether	5035	8260B	-		--		
	Water	Benzene	5035	8260B	66 -142	<21%	75 - 121	<30%	100%
	Water	Bromobenzene	5035	8260B	-		--		
	Water	Bromochloromethane	5035	8260B	-		--		
	Water	Bromodichloromethane	5035	8260B	-		75 - 125	<30%	100%
	Water	Bromoform	5035	8260B	-		71 - 137	<30%	100%
	Water	Bromomethane	5035	8260B	-		--		
	Water	2-Butanone (MEK)	5035	8260B	-		--		
	Water	tert-Butyl alcohol (TBA)	5035	8260B	-		--		
	Water	Butylbenzene	5035	8260B	-		--		
	Water	sec-Butylbenzene	5035	8260B	-		--		
	Water	tert-Butylbenzene	5035	8260B	-		--		
	Water	tert-Butyl ethyl ether (ETBE)	5035	8260B	-		--		
	Water	Carbon disulfide	5035	8260B	-		--		
	Water	Carbon Tetrachloride	5035	8260B	-		63 - 125	<30%	100%
	Water	Chlorobenzene	5035	8260B	60 - 133	<21%	77 - 120	<30%	100%
	Water	Chloroethane	5035	8260B	-		--		
	Water	2-Chloroethyl vinyl ether	5035	8260B	-		--		
	Water	Chloroform	5035	8260B	-		75 - 123	<30%	100%
	Water	Chloromethane	5035	8260B	-		--		
	Water	2-Chlorotoluene	5035	8260B	-		--		
	Water	4-Chlorotoluene	5035	8260B	-		--		
	Water	Dibromochloromethane	5035	8260B	-		75 - 125	<30%	100%
	Water	1,2-Dibromo-3-chloropropane	5035	8260B	-		--		
	Water	1,2-Dibromoethane (EDB)	5035	8260B	-		--		

- Indicates a compound not included in the spike solution.

-- Indicates a compound not included in the LCS solution.

Table 1
Analytical Method Summary
LADWP Environmental Laboratory

Analytes Group	Matrix	Analyte	Sample Preparation Method	Analytical Method	Accuracy (% Recovery)	Precision (% RSD)	Accuracy (% Recovery)	Precision (% RSD)	Completeness
Volatile Organic Compounds (VOCs)	Water	Dibromomethane	5035	8260B	-		--		
	Water	1,2-Dichlorobenzene	5035	8260B	-		74 - 123	<30%	100%
	Water	1,3-Dichlorobenzene	5035	8260B	-		72 - 121	<30%	100%
	Water	1,4-Dichlorobenzene	5035	8260B	-		74 - 123	<30%	100%
	Water	Dichlorodifluoromethane	5035	8260B	-		--		
	Water	1,1-Dichloroethane	5035	8260B	-		61 - 129	<30%	0%*
	Water	1,2-Dichloroethane	5035	8260B	-		74 - 123	<30%	100%
	Water	1,1-Dichloroethene	5035	8260B	59 - 172	<22%	61 - 128	<30%	100%
	Water	cis-1,2-Dichloroethene	5035	8260B	-		--		
	Water	trans-1,2-Dichloroethene	5035	8260B	-		--		
	Water	1,2-Dichloropropane	5035	8260B	-		75 - 121	<30%	100%
	Water	1,3-Dichloropropane	5035	8260B	-		--		
	Water	2,2-Dichloropropane	5035	8260B	-		--		
	Water	1,1-Dichloropropene	5035	8260B	-		--		
	Water	cis-1,3-Dichloropropene	5035	8260B	-		--		
	Water	trans-1,3-Dichloropropene	5035	8260B	-		--		
	Water	Diisopropyl ether (DIPE)	5035	8260B	-		--		
	Water	Ethylbenzene	5035	8260B	-		72 - 122	<30%	100%
	Water	Hexachlorobutadiene	5035	8260B	-		--		
	Water	2-Hexanone	5035	8260B	-		--		
	Water	Isopropylbenzene	5035	8260B	-		--		
	Water	p-Isopropyltoluene	5035	8260B	-		--		
	Water	Methyl-t-butyl ether (MTBE)	5035	8260B	-		--		
	Water	Methylene chloride	5035	8260B	-		67 - 130	<30%	100%
	Water	Methyl iodide (Iodomethane)	5035	8260B	-		--		
	Water	Methyl Iso Butyl Ketone*	5035	8260B	-		59 - 134	<30%	100%
	Water	4-Methyl-2-pentanone	5035	8260B	-		--		
	Water	Naphthalene	5035	8260B	-		--		
	Water	Propylbenzene	5035	8260B	-		--		

- Indicates a compound not included in the spike solution.

-- Indicates a compound not included in the LCS solution.

0%* : based on one batch

Table 1
Analytical Method Summary
LADWP Environmental Laboratory

Analyte Group	Matrix	Analyte	Sample Preparation Method	Analytical Method	Accuracy (% Recovery)	Precision (% RPD)	Accuracy (% Recovery)	Precision (% RPD)	Completeness
Volatile Organic Compounds (VOCs)	Water	Styrene (Phenylethylene)	5035	8260B	-		--		
	Water	1,1,1,2-Tetrachloroethane	5035	8260B	-		--		
	Water	1,1,2,2-Tetrachloroethane	5035	8260B	-		70 - 133	<30%	100%
	Water	Tetrachloroethylene (PCE)	5035	8260B	-		64 - 119	<30%	100%
	Water	Toluene	5035	8260B	59 - 139	<21%	--		100%
	Water	1,2,3-Trichlorobenzene	5035	8260B	-		--		
	Water	1,2,4-Trichlorobenzene	5035	8260B	-		--		
	Water	1,1,1-Trichloroethane	5035	8260B	-		70 - 122	<30%	0%
	Water	1,1,2-Trichloroethane	5035	8260B	-		76 - 125	<30%	100%
	Water	Trichloroethylene (TCE)	5035	8260B	62 - 137	<24%	--		100%
	Water	Trichlorofluoromethane	5035	8260B	-		--		
	Water	1,2,3-Trichloropropane	5035	8260B	-		--		
	Water	1,2,4-Trimethylbenzene	5035	8260B	-		--		
	Water	1,3,5-Trimethylbenzene	5035	8260B	-		--		
	Water	Vinyl acetate	5035	8260B	-		--		
	Water	Vinyl Chloride	5035	8260B	-		--		
	Water	m & p-Xylene	5035	8260B	-		--		
	Water	o-Xylene	5035	8260B	-		69 - 125	<30%	100%
Surrogates:									
BFB[1]	Water		5035	8260B	70 - 130	<30%	--	<30%	100%
DBFM[2]	Water		5035	8260B	70 - 130	<30%	--	<30%	100%
Toluene-d8	Water		5035	8260B	70 - 130	<30%	--	<30%	100%

(1) 4-Bromofluorobenzene

(2) Dibromofluoromethane

- Indicates a compound not included in the spike solution.

-- Indicates a compound not included in the LCS solution.

NA - Not Applicable

Table 3
An. .cal Method Summary
LADWP Environmental Laboratory

Analytical Group	Media	Analyte	Extraction/ Sample Preparation Method	Analytical Method	Measurement Accuracy (% Recovery)	Measurement Precision (% RPD)	LCS Accuracy (% Recovery)	Field Duplicate Precision (% RPD)	Completeness (%)
Metals	Water	Aluminum	3050	6010B	-		---		
	Water	Antimony	3050	6010B	70 - 130	<30	70 - 130	<30	60%
	Water	Arsenic	3050	6010B	70 - 130	<30	70 - 130	<30	100%
	Water	Barium	3050	6010B	-		70 - 130	<30	100%
	Water	Beryllium	3050	6010B	70 - 130	<30	70 - 130	<30	100%
	Water	Cadmium	3050	6010B	70 - 130	<30	70 - 130	<30	100%
	Water	Calcium	3050	6010B	-		--		
	Water	Chromium	3050	6010B	70 - 130	<30	70 - 130	<30	100%
	Water	Cobalt	3050	6010B	70 - 130	<30	70 - 130	<30	100%
	Water	Copper	3050	6010B	70 - 130	<30	70 - 130	<30	100%
	Water	Iron	3050	6010B	-		--		
	Water	Lead	3050	6010B	70 - 130	<30	70 - 130	<30	100%
	Water	Magnesium	3050	6010B	-		--		
	Water	Manganese	3050	6010B	-		--		
	Water	Mercury	3050	245.1	70 - 130	<30	70 - 130	<30	100%
	Water	Molybdenum	3050	6010B	70 - 130	<30	--		
	Water	Nickel	3050	6010B	70 - 130	<30	70 - 130	<30	100%
	Water	Potassium	3050	6010B	-		--		
	Water	Selenium	3050	6010B	70 - 130	<30	70 - 130	<30	100%
	Water	Silver	3050	6010B	70 - 130	<30	70 - 130	<30	100%
	Water	Sodium	3050	6010B	-		--		
	Water	Thallium	3050	6010B	-		70 - 130	<30	100%
	Water	Vanadium	3050	6010B	70 - 130	<30	70 - 130	<30	100%
	Water	Zinc	3050	6010B	70 - 130	<30	70 - 130	<30	100%

- Indicates a compound not included in the spike solution.
-- Indicates a compound not included in the LCS solution.

003004