



HARGIS + ASSOCIATES, INC.
HYDROGEOLOGY • ENGINEERING

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February 7, 2012

VIA FEDERAL EXPRESS STANDARD

Mr. William F. Jeffers, PE
Hazardous Substances Engineer
CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY
DEPARTMENT OF TOXIC SUBSTANCES CONTROL
Southern California Region
9211 Oakdale Avenue
Chatsworth, CA 91311-6520

Re: Data Submittal for Groundwater Monitoring and Groundwater Extraction and Treatment Pilot Testing, Fourth Quarter 2011, Raytheon Company (Former Hughes Aircraft Company Facility), 1901 West Malvern Avenue, Fullerton, California

Dear Mr. Jeffers:

This letter has been prepared for the submittal of groundwater monitoring and groundwater treatment pilot testing data collected during the fourth quarter 2011 for the former Raytheon Company site located at 1901 West Malvern Avenue, Fullerton, California (the Site) (Figure 1). Groundwater monitoring activities were completed in general accordance with the California Environmental Protection Agency, Department of Toxic Substances Control (DTSC)-approved Groundwater Monitoring Workplan and Sampling and Analysis Plan (GMWPSAP) and subsequent addenda (DTSC, 2003 and 2011; Hargis + Associates, Inc. [H+A], 2003, 2011a, and 2011b). Groundwater treatment pilot testing continued throughout the fourth quarter 2011 in general accordance with the DTSC-approved Groundwater Extraction and Treatment Pilot Testing, Corrective Measures Study Workplan Addendum No. 4A (DTSC, 2009; H+A, 2009a and 2009b). The results of the fourth quarter 2011 quarterly groundwater monitoring and pilot groundwater extraction and treatment system (GETS) operation from October through December 2011 are included in this data submittal.

GROUNDWATER MONITORING

Groundwater monitoring consists of measuring groundwater levels and collecting groundwater samples from monitor wells and piezometers at the Site (Figure 2). Quarterly water level measurements and groundwater samples were collected in October 2011 at all monitor wells and piezometers in general accordance with the GMWPSAP and Addendum No.1 (Table 1).

Water Level Measurement and Groundwater Sample Collection

Groundwater monitoring included water level measurements in all Site monitor wells, piezometers, and extraction wells (Figures 2 and 3). Water levels were measured on October 31, 2011 (Table 2).

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Groundwater samples were collected during the period from November 1 through November 4, 2011 (Appendix A). Analytical results are summarized in Table 3 and provided in Appendix B. Additional groundwater monitoring was conducted as part of routine operation and monitoring of the pilot GETS. A summary of the pilot GETS operation and monitoring is provided separately below.

Original and field duplicate groundwater samples were analyzed by Advanced Technology Laboratories, Inc., Signal Hill, California (ATL) (Appendix B). Laboratory split groundwater samples were analyzed by Exova, formerly Bodycote Testing Group, Santa Fe Springs, California (Appendix B). Chain-of-custody documentation was enclosed with each sample shipment. Results of groundwater sample volatile organic compound (VOC) and 1,4-dioxane analyses have been summarized (Table 3).

Quality Assurance/Quality Control

Quality assurance/quality control (QA/QC) samples collected in November 2011 consisted of trip blanks, field duplicates, and laboratory split samples. Trip blanks were provided by ATL. Field duplicate and/or laboratory split samples were collected for analysis of VOCs and 1,4-dioxane from monitor wells MW-08, MW-30B, MW-31, and MW-34B in November 2011 (Table 3). The relative percent difference was calculated between the results of each field duplicate and each laboratory split sample with its corresponding original sample. This data quality assessment indicated that all QA/QC results for groundwater samples are within acceptable criteria.

There were no detections of VOCs or 1,4-dioxane in the trip and/or laboratory method blanks analyzed with groundwater samples collected during the November 2011 groundwater monitoring event (Table 3; Appendix B).

The data quality assessment also included review of laboratory QA/QC results. Laboratory QA/QC results are within acceptable criteria.

GROUNDWATER EXTRACTION AND TREATMENT PILOT STUDY

This section summarizes the pilot GETS operation within the three-month period of monitoring conducted during the fourth quarter of 2011. The pilot GETS consists of three groundwater extraction wells, the treatment system, and the disposal system. Operation of the GETS during October and November 2011 consisted of using only one extraction well, EW-02. On December 5, 2011, operation of the GETS was modified to use two extraction wells, EW-02 and MW-21. Extraction well MW-21 was brought online in order to conduct a synthetic media pilot test using water collected from extraction well MW-21. The treatment system processes extracted groundwater through an advanced oxidation unit that utilizes ozone and hydrogen peroxide (HiPOx), followed by a granular activated carbon polish prior to disposal to the sanitary sewer. A graphical representation of the system operational time in relation to water level measurements at current extraction wells EW-02 and MW-21 and the previously utilized extraction well EW-01 have been provided (Figure 4).

Initial startup of the pilot GETS took place on Tuesday, July 8, 2008. From July 2008 through November 2009, the pilot GETS was operated with extraction wells EW-01 and MW-21 operating at approximately 10 gallons per minute (gpm) each. Pilot GETS expansion took place between November 2009 and March 2010 in order to incorporate recently installed extraction well EW-02 into the extraction well network. The system maximum flowrate was also increased from 20 gpm to 50 gpm. Beginning in March 2010, the pilot GETS was operated at 50 gpm, entirely from extraction well EW-02. During December 2011, a synthetic media pilot test was started. The purpose of the synthetic media pilot test is to evaluate the efficacy of treating water collected from extraction well MW-21 using a synthetic media for

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contaminant removal. In order to conduct the synthetic media pilot test, extraction wells EW-02 and MW-21 are operating at approximately 40 gpm and 10 gpm, respectively.

During the fourth quarter 2011, the pilot GETS was operational approximately 89 percent of the available runtime and approximately 5,327,864 gallons of groundwater were treated and discharged to the sanitary sewer (Table 4). The average monthly discharge flowrate to the sanitary sewer during October through December 2011 was approximately 40.2 gpm. Since startup of the pilot GETS, approximately 44,199,570 gallons of groundwater have been treated at an average flowrate of 24.0 gpm through the end of December 2011 (Table 4).

Current monthly and quarterly pilot GETS monitoring activities include collecting samples from extraction wells in addition to collecting samples at treatment system sampling ports: Extraction Wells EW-02 and MW-21, Influent, Post Particulate Filter, Post HiPOx Oxidation, Carbon Breakthrough, and Carbon Effluent (Tables 5 and 6; Figure 5). Samples collected during these activities were sent to ATL. Analytical results of the treatment system samples have been summarized (Table 6; Appendix B).

The pilot GETS system was shut down for expansion from approximately October 2009 to March 2010. The expansion was completed and extraction and treatment of groundwater resumed in March 2010. The pilot GETS was restarted on March 22, 2010 with extraction and treatment of groundwater from extraction well EW-02 at a rate of approximately 50 gpm. Extraction well MW-21 was brought online on December 5, 2011 for the purpose of conducting a synthetic media pilot test. The system is currently operating with extraction wells EW-02 and MW-21 at a flowrate of 40 gpm and 10 gpm, respectively. Extraction well EW-01 is on standby for the current phase of pilot testing, but may be used for future phases of pilot testing or as part of a full-scale pump and treat system.

The pilot GETS continues to remove VOCs and 1,4-dioxane from extracted groundwater. The HiPOx ozone/peroxide advanced oxidation and carbon adsorption treatment units effectively removed VOCs from extracted groundwater. Breakthrough of low-level detections of VOCs was not observed in the fourth quarter 2011 monitoring samples with the exception of detections of 1,1-dichloroethane at concentrations ranging from 0.52 micrograms per liter (ug/L) to 2.6 ug/L, which are just above the laboratory reporting limit, but below the pilot GETS permitted sewer discharge limit (Table 6). The effluent sample collected from the HiPOx advanced oxidation treatment unit contained low-level detections of bromate, a secondary by-product, during operations in the fourth quarter 2011. Carbon adsorption does not effectively remove this compound; however, this compound was detected at concentrations below the pilot GETS permitted sewer discharge limit. The operation of the advanced oxidation system continues to be optimized in an attempt to minimize the formation of bromate (Figure 6).

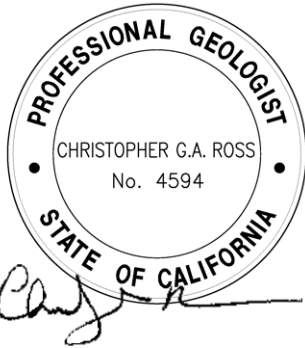
During the fourth quarter of 2011, the pilot GETS removed approximately 13.7 pounds of VOCs and 2.4 pounds of 1,4-dioxane from extracted groundwater. Since startup of the pilot GETS in July 2008, approximately 102.33 pounds of VOCs and 17.9 pounds of 1,4-dioxane have been removed from groundwater through December 2011 (Figure 7).

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If you have any questions or require additional information, please contact us at 858-455-6500.

Sincerely,

HARGIS + ASSOCIATES, INC.



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Principal Hydrogeologist

CGAR/SPN/ama



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REFERENCES

- California Environmental Protection Agency, Department of Toxic Substances Control (DTSC), 2003. Letter to P. Brewer, Raytheon Systems Company, from A. Plaza, DTSC, re Review of Additional Groundwater Assessment Workplan and Groundwater Monitoring Workplan and Sampling and Analysis Plan. May 20, 2003.
- _____, 2009. Letter to P. Brewer, Raytheon Systems Company, from W. Jeffers, DTSC, re Conditional Approval of Groundwater Extraction and Treatment System Pilot Testing, Corrective Measures Study Workplan Addendum No. 4A, Raytheon Company (Former Hughes Aircraft Company), 1901 West Malvern Avenue, Fullerton, California. June 1, 2009.
- _____, 2011. Email from W. Jeffers, DTSC, re: Conditional Approval of Addendum No. 1 to the Ground Water Monitoring Work Plan, Raytheon Fullerton, dated June 7, 2011.
- Hargis + Associates, Inc. (H+A), 2003. Groundwater Monitoring Work Plan and Sampling and Analysis Plan (Revision 1.0), Raytheon Company (former Hughes Aircraft Company), 1901 West Malvern Avenue, Fullerton, California. April 25, 2003.
- _____, 2009a. Groundwater Extraction and Treatment System Pilot Testing, Corrective Measures Study Workplan Addendum No. 4A, Raytheon Company (Former Hughes Aircraft Company), 1901 West Malvern Avenue, Fullerton, California. March 31, 2009.
- _____, 2009b. Letter to W. Jeffers, DTSC, from C. Ross and S. Netto, H+A, re Response to DTSC Comments to Addendums to Workplans. July 27, 2009.
- _____, 2011a. Letter to W. Jeffers, DTSC, re: Addendum No. 1 to the *Groundwater Monitoring Work Plan and Sampling and Analysis Plan (Revision 1.0)*, by Hargis + Associates, Inc., dated April 25, 2003, for the Raytheon Company, (Former Hughes Aircraft Company), 1901 West Malvern Avenue, Fullerton, California. February 11, 2011.
- _____, 2011b. Letter to W. Jeffers, DTSC, re: Amendment A, Addendum No. 1 to the *Groundwater Monitoring Work Plan and Sampling and Analysis Plan (Revision 1.0)*, by Hargis + Associates, Inc., dated April 25, 2003, for the Raytheon Company, (Former Hughes Aircraft Company), 1901 West Malvern Avenue, Fullerton, California. June 16, 2011.

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- Figure 5. 1,1-Dichloroethylene and 1,4-Dioxane in Extraction Wells EW-01, MW-21, and EW-02
- Figure 6. 1,4-Dioxane and Bromate in Influent and Post-Ox. Samples
- Figure 7. Pilot Groundwater Extraction and Treatment System Mass Removal

Appendices

- Appendix A. Groundwater Sampling Field Forms (Provided on CD only)
- Appendix B. Laboratory Analytical Reports (Provided on CD only)

cc w/encl: (1 copy w-CD)

Mr. Paul Pongetti, Department of Toxic Substances Control, Cypress
Mr. Paul E. Brewer, Raytheon Company
Mr. Carl Bernhardt, California RWQCB, Santa Ana Region
Mr. Dave Mark, Orange County Water District
Mr. Eric Silvers, Regency Centers
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Ms. Tizita Bekele, PE, Department of Toxic Substances Control, Cypress
Ms. Joan Lyle, City of Buena Park

TABLE 1

GROUNDWATER MONITORING PROGRAM

WELL IDENTIFIER	HYDROGEOLOGIC ZONE	SAMPLING FREQUENCY			
		QUARTERLY FEB, MAY, AUG, NOV	SEMIANNUAL FEBRUARY, AUGUST	ANNUAL FEBRUARY	BIENNIAL FEB (EVEN YEARS)
P-07	Perched			VOCs; 1,4-Dioxane	
P-09	Perched			VOCs; 1,4-Dioxane	
MW-35A	Other	VOCs; 1,4-Dioxane			
MW-17	A	PIEZOMETER - WATER LEVEL MEASUREMENT ONLY			
MW-18	A		VOCs; 1,4-Dioxane		
MW-19	A				VOCs
MW-22	A				VOCs; 1,4-Dioxane
MW-23	A				VOCs
MW-34A	A	VOCs; 1,4-Dioxane			
MW-35B	A	VOCs; 1,4-Dioxane			
MW-13	AB			VOCs; 1,4-Dioxane	
MW-15	AB		VOCs		
MW-26A	AB	PIEZOMETER - WATER LEVEL MEASUREMENT ONLY			
MW-26B	AB	PIEZOMETER - WATER LEVEL MEASUREMENT ONLY			
MW-32A	AB	VOCs; 1,4-Dioxane			
EW-01	B	VOCs; 1,4-Dioxane			
EW-02*	B	VOCs; 1,4-Dioxane			
MW-16	B		VOCs; 1,4-Dioxane		
MW-26C	B	VOCs; 1,4-Dioxane			
MW-27	B			VOCs; 1,4-Dioxane	
MW-28	B	VOCs; 1,4-Dioxane			
MW-29	B	VOCs; 1,4-Dioxane			
MW-30A	B	VOCs; 1,4-Dioxane			
MW-31	B	VOCs; 1,4-Dioxane			
MW-32B	B	VOCs; 1,4-Dioxane			
MW-33	B	VOCs; 1,4-Dioxane			
MW-34B	B	VOCs; 1,4-Dioxane			
MW-35C	B	VOCs; 1,4-Dioxane			
MW-36	B	VOCs; 1,4-Dioxane			
MW-21*	BC	VOCs; 1,4-Dioxane			
MW-08	BC	VOCs; 1,4-Dioxane			
MW-30B	BC	VOCs; 1,4-Dioxane			
MW-34C	BC	VOCs; 1,4-Dioxane			
MW-09	C		VOCs; 1,4-Dioxane		
MW-24	C			VOCs; 1,4-Dioxane	
MW-32C	C	VOCs; 1,4-Dioxane			
MW-06	D			VOCs	
MW-20	D		VOCs; 1,4-Dioxane		
MW-25	D	WATER LEVEL MEASUREMENT ONLY			

FOOTNOTES

* = Extraction Well monitored monthly as part of the Groundwater Extraction and Treatment System Pilot Testing
 VOCs = Volatile organic compounds

TABLE 2
GROUNDWATER LEVELS
FOURTH QUARTER 2011

Well Identifier	Date Measured	Reference Point Elevation (a) (feet msl)	Depth to Water (feet bls)	Water Level Elevation (feet msl)	Remediation System On
Regional Groundwater System Monitor and Extraction Wells					
MW-06	10/31/11	184.70	153.73	30.97	
MW-08	10/31/11	155.91	136.88	19.03	
MW-09	11/01/11	180.10	155.13	24.97	
MW-13	10/31/11	142.19	124.07	18.12	
MW-15	10/31/11	144.92	138.25	6.67	
MW-16	10/31/11	142.73	128.83	13.90	
MW-17	10/31/11	142.66	124.34	18.32	
MW-18	10/31/11	142.11	124.44	17.67	
MW-19	10/31/11	142.72	124.19	18.53	
MW-20	10/31/11	184.19	149.75	34.44	
MW-21	10/14/11	141.18	120.69	20.49	Pilot GETS
	10/31/11	141.18	120.89	20.29	
	12/08/11	141.18	131.77	9.41	
MW-22	10/31/11	138.65	120.38	18.27	
MW-23	10/31/11	137.33	120.60	16.73	
MW-24	10/31/11	142.83	117.61	25.22	
MW-25	10/31/11	142.64	113.28	29.36	
MW-26A	10/31/11	137.04	122.65	14.39	
MW-26B	10/31/11	137.05	129.89	7.16	
MW-26C	10/31/11	137.22	125.34	11.88	
	11/01/11	137.22	125.37	11.85	
MW-27	10/31/11	137.16	124.43	12.73	
MW-28	10/31/11	140.77	129.07	11.70	
MW-29	10/31/11	142.34	132.65	9.69	
MW-30A	10/31/11	129.44	119.19	10.25	
MW-30B	10/31/11	129.39	116.07	13.32	

TABLE 2
**GROUNDWATER LEVELS
FOURTH QUARTER 2011**

Well Identifier	Date Measured	Reference Point Elevation (a) (feet msl)	Depth to Water (feet bls)	Water Level Elevation (feet msl)	Remediation System On
<u>Regional Groundwater System Monitor and Extraction Wells (continued)</u>					
MW-31	10/31/11	119.60	107.84	11.76	
MW-32A	10/14/11	92.88	84.7	8.18	
	10/31/11	92.88	85.17	7.71	
MW-32B	10/14/11	92.89	83.95	8.94	
	10/31/11	92.89	84.01	8.88	
MW-32C	10/14/11	92.88	67.59	25.29	
	10/31/11	92.88	68.65	24.23	
MW-33	10/14/11	83.19	80.82	2.37	
	10/31/11	83.19	77.92	5.27	
MW-34A	10/14/11	153.25	140.77	12.48	
	10/31/11	153.25	141.95	11.30	
MW-34B	09/30/11	153.11	146.63	6.48	
	10/14/11	153.11	144.55	8.56	
	10/31/11	153.11	146.19	6.92	
MW-34C	10/14/11	153.29	144.06	9.23	
	10/31/11	153.29	144.52	8.77	
MW-35A	10/31/11	93.57	71.55	22.02	
MW-35B	10/31/11	93.56	79.67	13.89	
MW-35C	10/31/11	93.55	83.44	10.11	
EW-01	10/14/11	141.07	125.48	15.59	
	10/31/11	141.07	126.74	14.33	
EW-02	09/09/11	132.97	131.13	1.84	Pilot GETS
	09/30/11	132.97	128.61	4.36	
	10/17/11	132.97	127.67	5.30	Pilot GETS
	10/31/11	132.97	128.83	4.14	Pilot GETS
	11/1/11	132.97	128.76	4.21	Pilot GETS
	12/7/11	132.97	122.00	10.97	Pilot GETS
	12/8/12	132.97	123.51	9.46	Pilot GETS
<u>Perched Zone Water Levels</u>					
P-07	10/31/11	142.31	111.28	31.03	
P-09	10/31/11	183.86	120.50	63.36	

FOOTNOTES

(a) Reference point elevations are relative to City of Fullerton datum.

bls = Below land surface

msl = Mean sea level

Pilot GETS = Pilot Groundwater Extraction and Treatment System On

TABLE 3

FOURTH QUARTER 2011
PREVALENT VOLATILE ORGANIC COMPOUNDS AND 1,4-DIOXANE IN GROUNDWATER

Well Identifier / Sample Identifier	Date Sampled	QA Code	Concentration (micrograms per liter)													Semi-VOCs
			VOLATILE ORGANIC COMPOUNDS (FEDERAL MCL/CALIFORNIA MCL)													
			Benzene (5/1)	Carbon Tetrachloride (5/0.5)	Chloroform (80/80)	1,1-DCA (--/5)	1,2-DCA (--/--)	1,1-DCE (7/6)	cis-1,2-DCE (70/6)	PCE (5/5)	1,1,1-TCA (200/200)	1,1,2-TCA (5/5)	TCE (5/5)	TCFM (--/150)	Toluene	1,4-DIOXANE (3*/1**)
Regional Groundwater System Monitor and Extraction Wells																
MW-08	11/04/11	ORG	< 0.50	< 0.50	0.6	< 0.50	< 0.50	39.4	9.2	< 0.50	< 0.50	< 0.50	200	< 0.50	< 0.50	0.4
MW-0800	11/04/11	FD	< 0.50	< 0.50	0.6	< 0.50	< 0.50	39.5	7.6	< 0.50	< 0.50	< 0.50	170	< 0.50	< 0.50	0.4
MW-08 Historical Range***			< 0.50 - 0.95	< 0.50	< 0.50 - 0.86	< 0.50 - 5.1	< 0.50 - 0.99	< 0.50 - 500	< 0.50 - 10	< 0.50 - 1.3	< 0.50 - < 5.0	< 0.50 - < 5.0	< 0.50 - 480	< 0.50 - 1.0	< 0.50	< 0.5 - 130
MW-21	11/01/11	ORG	< 2.5	< 2.5	< 2.5	29	4.9	1,600	< 2.5	5.6	< 2.5	11	22	< 2.5	< 2.5	390
MW-21	12/07/11	ORG	< 10	< 10	< 10	43	< 10	3,200	< 10	< 10	< 10	< 10	20	< 10	< 10	450
MW-21 Historical Range***			< 0.50 - < 25	< 0.50 - 1.9	< 0.50 - 4.6	< 0.50 - 71	< 0.50 - 8.9	200 - 4,900	< 0.50 - 2.4	< 0.50 - 12	< 0.50 - 2.0	< 0.50 - 27	< 0.50 - 46	< 0.50 - 0.53	< 0.50 - < 25	11 - 1,100
MW-26C	11/01/11	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	9.1	< 0.20
MW-26C Historical Range***			< 0.50	< 0.50	< 0.50	< 0.50 - 1.7	< 0.50	< 0.50 - 120	< 0.50	< 0.50 - 0.79	< 0.50	< 0.50 - 0.77	< 0.50	< 0.50	< 0.50 - 22	< 0.20 - 55 E
MW-28	11/03/11	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	1.1	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.3
Historical High/Low																LOW
MW-28 Historical Range***			< 0.50	< 0.50	< 0.50	< 0.50 - 0.94	< 0.50	1.6 - 76 E	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.49 - 19
MW-29	11/03/11	ORG	< 0.50	< 0.50	0.8	7.8	1.4	804	0.6	1.3	< 0.50	2.3	6.0	1.0	< 0.50	301
Historical High/Low					HIGH	HIGH	HIGH	HIGH				HIGH	HIGH			HIGH
MW-29 Historical Range***			< 0.50 - < 1.0	< 0.50 - < 1.0	< 0.50 - 0.63	1 - 5.2	< 0.50 - 1.0	99 - 550	< 0.50 - < 0.61	< 0.50 - 1.5	< 0.50 - < 1.0	< 0.50 - 1.9	0.58 - 5.6	< 0.50 - 1.2	< 0.50	29 - 110
MW-30A	11/02/11	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.3
MW-30A Historical Range***			< 0.50	< 0.50	< 0.50	< 0.50 - 3	< 0.50 - 0.67	< 0.50 - 290	< 0.50	< 0.50 - 0.58	< 0.50	< 0.50 - 1.1	< 0.50 - 0.72	< 0.50	< 0.50	0.21 - 110
MW-30B	11/02/11	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	13.6	4.2	< 0.50	< 0.50	< 0.50	80.7	< 0.50	3.2	0.4
MW-3000B	11/02/11	FD	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	13.7	4.4	< 0.50	< 0.50	< 0.50	82.6	< 0.50	2.8	0.4
MW-30B Historical Range***			< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50 - 18 E	< 0.50 - 5.6	< 0.50	< 0.50	< 0.50	< 0.50 - 87	< 0.50	< 0.50 - 4.5	< 0.20 - 28 E
MW-31	11/03/11	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	32.6	< 0.50	< 0.50	< 0.50	< 0.50	4.4	< 0.50	0.6	< 2.0
MW-31	11/03/11	SPT	< 1	< 1	< 1	< 1	< 1	28	< 1	< 1	< 1	< 1	3	< 1	< 1	< 1
MW-31 Historical Range***			< 0.50	< 0.50	< 0.50	< 0.50 - 3.6	< 0.50	25 - 430	< 0.50 - 1.2	< 0.50	< 0.50	< 0.50	2.2 - 17	< 0.50	< 0.50 - 0.83	0.25 - 7
MW-32A	11/03/11	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.20
MW-32A Historical Range***			< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.20 - 0.57
MW-32B	08/03/11	ORG	< 0.50	< 0.50	< 0.50	0.6	< 0.50	69.9	4.3	< 0.50	< 0.50	< 0.50	48.6	< 0.50	< 0.50	2.3
MW-32B Historical Range***			< 0.50	< 0.50	< 0.50	< 0.50 - 0.70	< 0.50	16 - 77	1.9 - 5.7	< 0.50	< 0.50	< 0.50	24 - 63	< 0.50	< 0.50	0.49 - 3.0
MW-32C	11/03/11	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.20
MW-32C Historical Range***			< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0 - 1.0
MW-33	11/02/11	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	1.7	< 0.50	< 0.50	< 0.50	< 0.50	0.5	< 0.50	< 0.50	< 0.20
MW-33 Historical Range***			< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	4.4 - 12	< 0.50	< 0.50	< 0.50	< 0.50	0.55 - 1.6	< 0.50	< 0.50 - 1.4	< 0.20 - < 2.0
MW-34A	11/02/11	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.20
MW-34A Historical Range***			< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	1.0 - 1.6	< 0.50 - 2.8	< 0.20 - < 2.0	

TABLE 3

FOURTH QUARTER 2011
PREVALENT VOLATILE ORGANIC COMPOUNDS AND 1,4-DIOXANE IN GROUNDWATER

Concentration (micrograms per liter)																
VOLATILE ORGANIC COMPOUNDS (FEDERAL MCL/CALIFORNIA MCL)																
Well Identifier / Sample Identifier	Date Sampled	QA Code	Benzene (5/1)	Carbon Tetrachloride (5/0.5)	Chloroform (80/80)	1,1-DCA (--/5)	1,2-DCA (--/--)	1,1-DCE (7/6)	cis-1,2-DCE (70/6)	PCE (5/5)	1,1,1-TCA (200/200)	1,1,2-TCA (5/5)	TCE (5/5)	TCFM (--/150)	Toulene	1,4-DIOXANE (3*/1**)
Regional Groundwater System Monitor and Extraction Wells (cont'd)																
MW-34B	11/02/11	ORG	< 0.50	< 0.50	0.5	6.3	1.2	502	< 0.50	< 0.50	< 0.50	2.1	0.7	< 0.50	< 0.50	196
MW-34B	11/02/11	SPT	< 1	< 1	< 1	4	< 1	340	< 1	< 1	1	< 1	< 1	< 1	< 1	220
Historical High/Low																
MW-34B Historical Range***																
			< 0.50 - < 1.0	< 0.50 - < 1.0	< 0.50 - < 1.0	< 0.50 - 5.1	< 0.50 - < 1.0	20 - 560	< 0.50 - < 1.0	< 0.50 - < 1.0	< 0.50 - < 1.0	< 0.50 - 1.3	< 0.50 - 1.6	< 0.50 - < 1.0	< 0.50 - 2.6	4.1 - 84 "E"
MW-34C	11/02/11	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.20
Note: Chloromethane was detected in the original sample collected at MW-34C on 11/2/11 at 0.5 ug/l.																
MW-34C Historical Range***																
			< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.50 - 9.6	< 0.20 - < 2.0
MW-35A	11/01/11	ORG	< 0.50	< 0.50	6.5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.20
Note: Chloromethane was detected in the original sample collected at MW-35A on 11/1/11 at 0.59 ug/l.																
Historical High/Low																
MW-35A Historical Range***																
			< 0.50	< 0.50	11 - 67	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.20 - < 2.0
MW-35B	11/01/11	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.20
MW-35B Historical Range***																
			< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.20 - < 2.0
MW-35C	11/01/11	ORG	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.20
MW-35C Historical Range***																
			< 0.50	< 0.50	< 0.50 - 120	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.20 - < 2.0
EW-01	11/01/11	ORG	< 0.50	< 0.50	< 0.50	1.6	< 0.50	82	< 0.50	< 0.50	< 0.50	0.64	< 0.50	< 0.50	< 0.50	54
EW-01 Historical Range***																
			< 0.50 - 2	< 0.50 - 0.55	< 0.50 - 1.2	< 0.50 - 16	< 0.50 - 4.2	< 0.50 - 1,600 E	< 0.50 - 0.52	< 0.50 - 3.3	< 0.50 - < 2.5	< 0.50 - 10	< 0.50 - 2.8	< 0.50 - < 5.0	< 0.50 - 4.6	5.1 - 710
EW-02	10/17/11	ORG	< 0.50	< 0.50	< 0.50	0.62	< 0.50	67	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	19
EW-02	11/01/11	ORG	< 0.50	< 0.50	< 0.50	0.69	< 0.50	55	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	22
EW-02	12/07/11	ORG	< 0.50	< 0.50	< 0.50	0.62	< 0.50	62	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	20
Note: Naphthalene was detected in the original sample collected at EW-02 on 12/07/11 at 6.4 ug/l.																
EW-02 Historical Range***																
			< 0.50	< 0.50	< 0.50	< 0.50 - 1.5	< 0.50	52 - 160	< 0.50	< 0.50	< 0.50	< 0.50 - 0.59	< 0.50	< 0.50	< 0.50 - 0.85	16 - 48
QUALITY ASSURANCE/QUALITY CONTROL SAMPLES - FOURTH QUARTER 2011																
TB	10/17/2011	TB	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA
TB-110111	11/1/2011	TB	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA
TB-110211	11/2/2011	TB	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA
TB-110211	11/2/2011	TB-SPT	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	NA
TB-110311	11/3/2011	TB	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA
TB-110411	11/4/2011	TB	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA
TB-120711	12/7/2011	TB	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA

NOTE: Detections are shown in **BOLD** type.

FOOTNOTES

- 1,1-DCA = 1,1-Dichloroethane
- 1,2-DCA = 1,2-Dichloroethane
- 1,1-DCE = 1,1-Dichloroethene
- cis-1,2-DCE = cis-1,2-Dichloroethene
- PCE = Tetrachloroethene
- 1,1,1-TCA = 1,1,1-Trichloroethane
- 1,1,2-TCA = 1,1,2-Trichloroethane
- TCE = Trichloroethene
- TCFM = Trichlorofluoromethane
- (<) = Less than; the value is the Limit of Detection for that compound
- * = 1,4-Dioxane Action Level of 3 ug/L
- ** = California Notification Level for 1,4-Dioxane of 1 ug/L
- *** = Historical Range determined using original samples exclusively

Semi-VOCs = Semivolatile organic compounds

E = Data qualified as Estimated in accordance with quality control criteria.

"E" = Value above quantitative range in accordance with laboratory quality control criteria

NA = Not analyzed for constituent

FD = Field duplicate sample

ORG = Original sample

QA = Quality Assurance

SPT = Split sample

TB = Trip blank sample

ug/l = Micrograms per liter

MCL = Maximum contaminant level

TABLE 4
PILOT GROUNDWATER EXTRACTION AND TREATMENT SYSTEM OPERATIONAL SUMMARY

OPERATIONAL PERIOD (MONTH/QUARTER/YEAR)	WELLFIELD PRODUCTION ^(a) (gallons)	AVERAGE DISCHARGE RATE ^(b) (gpm)	AVERAGE OPERATIONAL DISCHARGE RATE ^(c) (gpm)	OPERATIONAL HOURS DURING OPERATIONAL PERIOD	HOURS IN OPERATIONAL PERIOD	% OPERATIONAL
2008^(d)	3,659,562	13.8	18.2	3,358	4,416	76%
2009	5,787,848	11.0	18.1	5,319	8,760	61%
2010	14,295,261	27.2	46.4	5,131	8,760	59%
Jan-11	1,925,903	43.1	44.9	715	744	96%
Feb-11	1,710,464	42.4	49.9	571	672	85%
Mar-11	1,799,420	40.3	44.3	677	744	91%
1Q2011	5,435,788	41.9	46.2	1,963	2,160	91%
Apr-11	1,887,147	43.7	47.6	661	720	92%
May-11	1,284,643	28.8	46.1	464	744	62%
Jun-11	1,523,613	35.3	45.9	554	720	77%
2Q2011	4,695,404	35.8	46.6	1,679	2,184	77%
Jul-11	1,573,420	35.2	45.9	572	744	77%
Aug-11	1,476,104	33.1	45.6	540	744	73%
Sep-11	1,948,319	45.1	45.3	717	720	100%
3Q2011	4,997,843	37.7	45.6	1,828	2,208	83%
Oct-11	1,578,445	35.4	45.9	573	744	77%
Nov-11	1,925,547	44.6	44.9	714	720	99%
Dec-11	1,823,872	40.9	44.4	685	744	92%
4Q2011	5,327,864	40.2	45.0	1,972	2,208	89%
SINCE INCEPTION	44,199,570	24.0	34.7	21,250	30,696	69%

Notes:

- (a) Based on Effluent totalizer readings from CEFF.
 - (b) Total volume of water treated during the operational period divided by the total number of minutes in that operational period.
 - (c) Total volume of water treated during the operational period divided by the minutes of operation in that operational period.
 - (d) Operational period beginning 7/1/2008 (first month of system operation).
- gpm = gallons per minute
Refer to previous quarterly reports for detail of 2008 thru 2010 operational summary
Treatment of groundwater from EW-02 initiated in 2010
CEFF = Carbon effluent

TABLE 5

PILOT GROUNDWATER EXTRACTION AND TREATMENT SYSTEM SAMPLING SCHEDULE

COMPOUND(S) / CONSTITUENT	ANALYTICAL METHOD	SAMPLE CONTAINER	REPORTING DETECTION LIMITS (milligrams per liter)	SAMPLE FREQUENCY AND LOCATION																			
				Daily Samples ¹ : Days 1-5					Weekly Samples ¹ : Weeks 1-4					Monthly Samples: Week 5+					Quarterly Samples: Week 1+				
				Extraction Well head (EW-02) ²	Post-Filter (PF)	Post-Oxidation (POX)	Carbon Breakthrough (CBT) ³	Post-Carbon (CEFF)	Extraction Well head (EW-02) ²	Post-Filter (PF)	Post-Oxidation (POX)	Carbon Breakthrough (CBT) ³	Post-Carbon (CEFF)	Extraction Well head (EW-02) ²	Post-Filter (PF)	Post-Oxidation (POX)	Carbon Breakthrough (CBT) ³	Post-Carbon (CEFF)	Extraction Well head (EW-02) ²	Post-Oxidation (POX)			
COMPOUNDS/CONSTITUENTS NORMALLY REQUIRED AS PART OF NPDES OR WDR PERMITS, PURSUANT TO CRWQCB REGION 8 ORDER NO. R8-2003-008:																							
Volatile Organic Compounds	8260B	QAPP ⁴	QAPP ⁴	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					
1,4-Dioxane	8270 Modified	QAPP ⁴	0.002	X					X					X									
1,4-Dioxane	8270 SIM	QAPP ⁴	0.0002			X				X					X								
Total Suspended Solids	SM2540D	8-oz poly	10	(a)	(a)									X	X								
Total Dissolved Solids	SM2540C	8-oz poly	10	(a)										X		X		X					
SELECTED METALS																							
Dissolved Metals (Iron, Manganese, Calcium, Sodium, Magnesium)	6010B	QAPP ⁴	QAPP ⁴	(a)															X				
Selenium	6010B	QAPP ⁴	QAPP ⁴																X				
SELECTED INORGANIC CONSTITUENTS																							
Hydroxide Alkalinity	SM2320B	8-oz poly	2.0	(a)															X				
Bicarbonate Alkalinity	SM2320B	8-oz poly	2.0	(a)															X				
Carbonate Alkalinity	SM2320B	8-oz poly	2.0	(a)															X				
Total Alkalinity	SM2320B	8-oz poly	2.0	(a)															X				
BROMATE EVALUATION																							
Bromate	317.0	4-oz poly	0.0005	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					
Bromide	300.0	4-oz poly	0.05	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					
OTHER CONSTITUENTS/COMPOUNDS																							
Total Organic Carbon	SM5310B	40 ml VOA, HCl	3.0	(a)															X	X			
Anions (Chloride, Sulfate, Nitrate, Nitrite, and Phosphate)	300.0	16-oz poly	Varies	(a)															X	X			
Chemical Oxygen Demand	410.4	4-oz poly, H ₂ SO ₄	5.0	(a)															X	X			
Field Parameters																							
Dissolve Oxygen (DO)	N/A	N/A	N/A	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					
Electrical Conductance (EC)	N/A	N/A	N/A	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					
Redox Potential	N/A	N/A	N/A	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					
Temperature	N/A	N/A	N/A	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					
pH	N/A	N/A	N/A	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					
Turbidity	N/A	N/A	N/A	X	X				X	X				X	X								
Flow-Meter	N/A	N/A	N/A	X				X	X				X	X				X					

FOOTNOTES

- (a) Only one sample to be collected during sampling period.
- 1. Daily and weekly samples collected during the first month of operation will be repeated after major modifications to system equipment or operating parameters, as detailed in the Workplan.
- 2. If more than one extraction well is in operation, combined influent samples will be collected in addition to extraction wellhead samples, with the same sampling schedule as the extraction wellheads.
- 3. Carbon breakthrough will be collected from the effluent of the first carbon unit in series; when breakthrough of the first unit is detected, the breakthrough sample will be collected from the effluent of the second carbon unit in series.
- 4. QAPP, Quality Assurance Project Plan, Appendix B of Additional Groundwater Assessment Workplan, Hargis + Associates, Inc., April 25, 2003.

CRWQCB = California Regional Water Quality Control Board, Santa Ana Region
 NPDES = National Pollutant Discharge Elimination System
 WDR = Waste Discharge Requirement
 N/A = Not applicable
 ml = Milliliter
 VOA = Volatile organic analysis
 HCl = Hydrochloric acid
 H₂SO₄ = Sulfuric acid

TABLE 6

SUMMARY OF SELECT COMPOUNDS DETECTED IN
PILOT GROUNDWATER EXTRACTION AND TREATMENT SYSTEM SAMPLES
FOURTH QUARTER 2011

Compound	Date	Units	MW-21	EW-01	EW-02	INF*	PF	POX	CBT	CEFF
1,1,2-Trichloroethane (5 ug/L MCL)	10/17/11	ug/L	--	--	< 0.50	--	--	< 0.50	< 0.50	< 0.50
	11/01/11	ug/L	11	0.64	< 0.50	--	--	< 0.50	< 0.50	< 0.50
	12/07/11	ug/L	< 10	--	< 0.50	< 5.0	--	3.0	< 0.50	< 0.50
1,1-Dichloroethane (5 ug/L MCL)	10/17/11	ug/L	--	--	0.62	--	--	< 0.50	0.52	0.56
	11/01/11	ug/L	29	1.6	0.69	--	--	0.52	0.55	0.56
	12/07/11	ug/L	43	--	0.62	12	--	8.4	2.6	0.71
1,1-Dichloroethene (6 ug/L MCL)	10/17/11	ug/L	--	--	67	--	--	< 0.50	< 0.50	< 0.50
	11/01/11	ug/L	1600	82	55	--	--	< 0.50	< 0.50	< 0.50
	12/07/11	ug/L	3200	--	62	850	--	1.6	< 0.50	< 0.50
1,2-Dichloroethane (0.5 ug/L MCL)	10/17/11	ug/L	--	--	< 0.50	--	--	< 0.50	< 0.50	< 0.50
	11/01/11	ug/L	4.9	< 0.50	< 0.50	--	--	< 0.50	< 0.50	< 0.50
	12/07/11	ug/L	< 10	--	< 0.50	< 5.0	--	1.3	< 0.50	< 0.50
cis-1,2-Dichloroethene (6 ug/L MCL)	10/17/11	ug/L	--	--	< 0.50	--	--	< 0.50	< 0.50	< 0.50
	11/01/11	ug/L	< 2.5	< 0.50	< 0.50	--	--	< 0.50	< 0.50	< 0.50
	12/07/11	ug/L	< 10	--	< 0.50	< 5.0	--	< 0.50	< 0.50	< 0.50
Tetrachloroethene (5 ug/L MCL)	10/17/11	ug/L	--	--	< 0.50	--	--	< 0.50	< 0.50	< 0.50
	11/01/11	ug/L	5.6	< 0.50	< 0.50	--	--	< 0.50	< 0.50	< 0.50
	12/07/11	ug/L	< 10	--	< 0.50	< 5.0	--	< 0.50	< 0.50	< 0.50
Trichloroethene (5 ug/L MCL)	10/17/11	ug/L	--	--	< 0.50	--	--	< 0.50	< 0.50	< 0.50
	11/01/11	ug/L	22	< 0.50	< 0.50	--	--	< 0.50	< 0.50	< 0.50
	12/07/11	ug/L	20	--	< 0.50	< 5.0	--	< 0.50	< 0.50	< 0.50
1,4-Dioxane (1 ug/L California Notification Level)	10/17/11	ug/L	--	--	19	--	--	0.36	--	--
	11/01/11	ug/L	390	54	22	--	--	0.33	--	--
	12/07/11	ug/L	450	--	20	120	--	5.2	--	--
Bromide	10/17/11	ug/L	--	--	480	--	--	470	--	470
	11/01/11	ug/L	--	--	430	--	--	420	--	430
	12/07/11	ug/L	510	--	150	230	--	240	--	230
Bromate (10 ug/L MCL)	10/17/11	ug/L	--	--	< 0.5	--	--	9.9	--	8.9
	10/17/11 Duplicate	ug/L	--	--	--	--	--	--	--	9.1
	11/01/11	ug/L	--	--	< 0.5	--	--	11.9	--	7.9
	12/07/11	ug/L	< 0.4	--	< 0.4	< 0.4	--	12.3	--	9.3

TABLE 6

**SUMMARY OF SELECT COMPOUNDS DETECTED IN
PILOT GROUNDWATER EXTRACTION AND TREATMENT SYSTEM SAMPLES
FOURTH QUARTER 2011**

Compound	Date	Units	MW-21	EW-01	EW-02	INF*	PF	POX	CBT	CEFF
Total Non-Filterable Residue	10/17/11	mg/L	--	--	< 10	--	< 10	--	--	--
	11/01/11	mg/L	--	--	< 10	--	< 10	--	--	--
	12/07/11	mg/L	17	--	< 10	< 10	< 10	--	--	--
Total Filterable Residue (500 mg/L MCL)	10/17/11	mg/L	--	--	630	--	--	640	--	640
	11/01/11	mg/L	--	--	640	--	--	630	--	640
	12/07/11	mg/L	1,200	--	640	760	--	750	--	770
Dissolved Calcium	12/07/11	mg/L	160	--	96	120	--	--	--	--
Dissolved Iron	12/07/11	mg/L	< 0.50	--	< 0.50	< 0.50	--	--	--	--
Dissolved Magnesium	12/07/11	mg/L	45	--	30	35	--	--	--	--
Dissolved Manganese	12/07/11	mg/L	< 0.50	--	< 0.50	< 0.50	--	--	--	--
Dissolved Selenium (0.05 mg/L MCL)	12/07/11	mg/L	0.01	--	0.01	0.010	--	--	--	--
Alkalinity, Bicarbonate (As CaCO3)	12/07/11	mg/L	234	--	220	228	--	--	--	--
Alkalinity, Carbonate (As CaCO3)	12/07/11	mg/L	< 2.0	--	< 2.0	< 2.0	--	--	--	--
Alkalinity, Hydroxide (As CaCO3)	12/07/11	mg/L	< 2.0	--	< 2.0	< 2.0	--	--	--	--
Alkalinity, Total (As CaCO3)	12/07/11	mg/L	234	--	220	228	--	--	--	--
Chemical Oxygen Demand	12/07/11	mg/L	11.0	--	< 4.8	6.5	--	18.5	--	--
Organic Carbon, Total	12/07/11	mg/L	0.7	--	< 3.0	< 3.0	--	< 3.0	--	--
Chloride	12/07/11	mg/L	220	--	82	140	--	140	--	--
Sulfate	12/07/11	mg/L	62	--	100	100	--	100	--	--
Nitrate	12/07/11	mg/L	7.0	--	5.1	5.6	--	5.6	--	--
Nitrite	12/07/11	mg/L	< 0.20	--	< 0.10	< 0.10	--	< 0.10	--	--
Phosphate	12/07/11	mg/L	< 0.10	--	< 0.05	< 0.05	--	< 0.05	--	--

FOOTNOTES

MCL = Maximum Contaminant Level or Drinking Water Action Level, if applicable

ug/l = Micrograms per liter

mg/l = Milligrams per liter

(--)= Not scheduled for performance monitoring

(<)= Less than; the numerical value is the Limit of Detection for that compound

INF* = Influent (same as EW-02, when active)

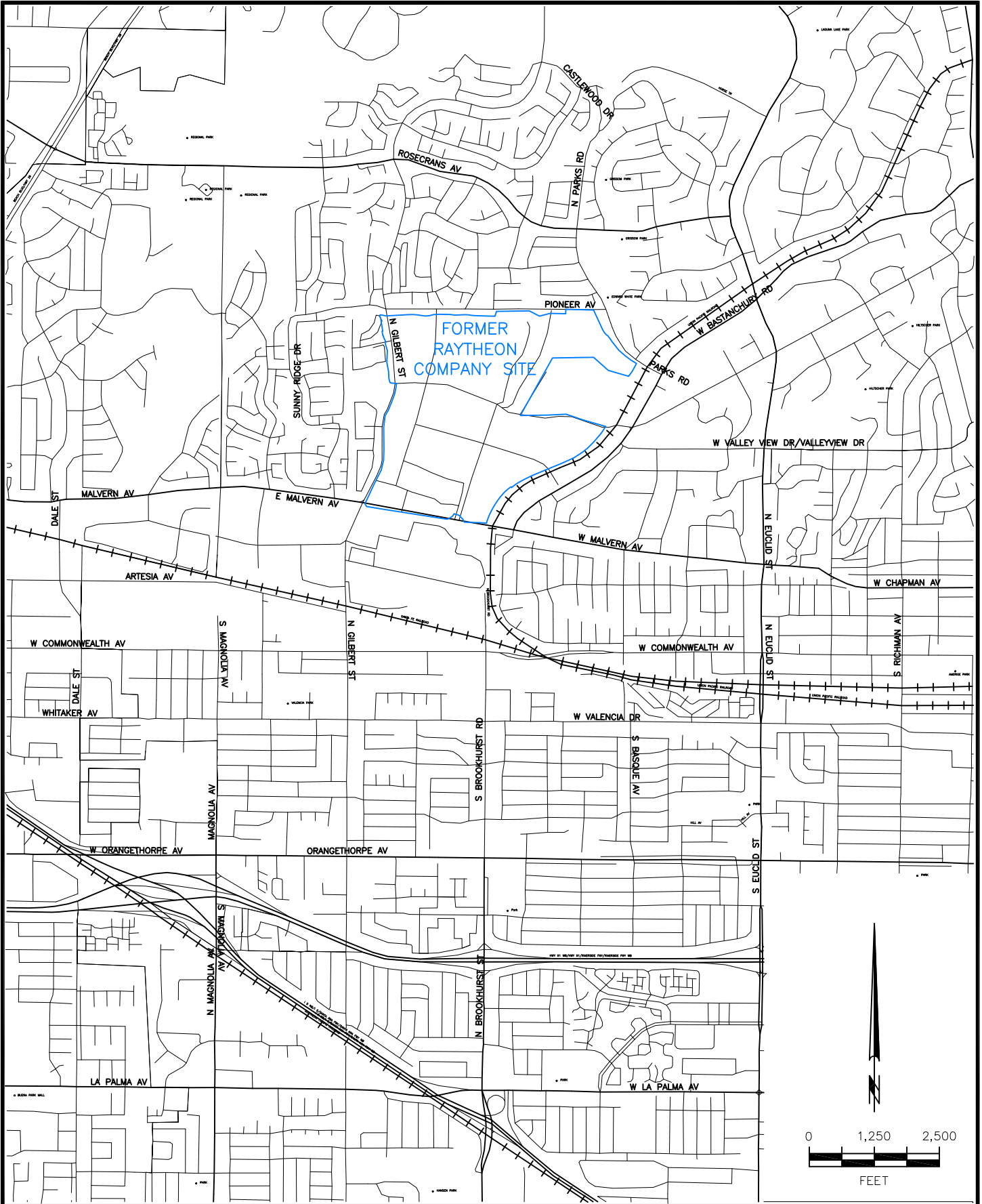
PF = Post Particulate Filter

POX = Post Hipox Oxidation

CBT = Carbon Breakthrough

CEFF = Carbon Effluent

CaCO3 = Calcium carbonate



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FIGURE 1. SITE LOCATION

Nov 18, 2011 1:04pm ADE - T: 2011\500-599\532_Raytheon\Hydrogeology\H+A_BaseMaps\410-8482.dwg

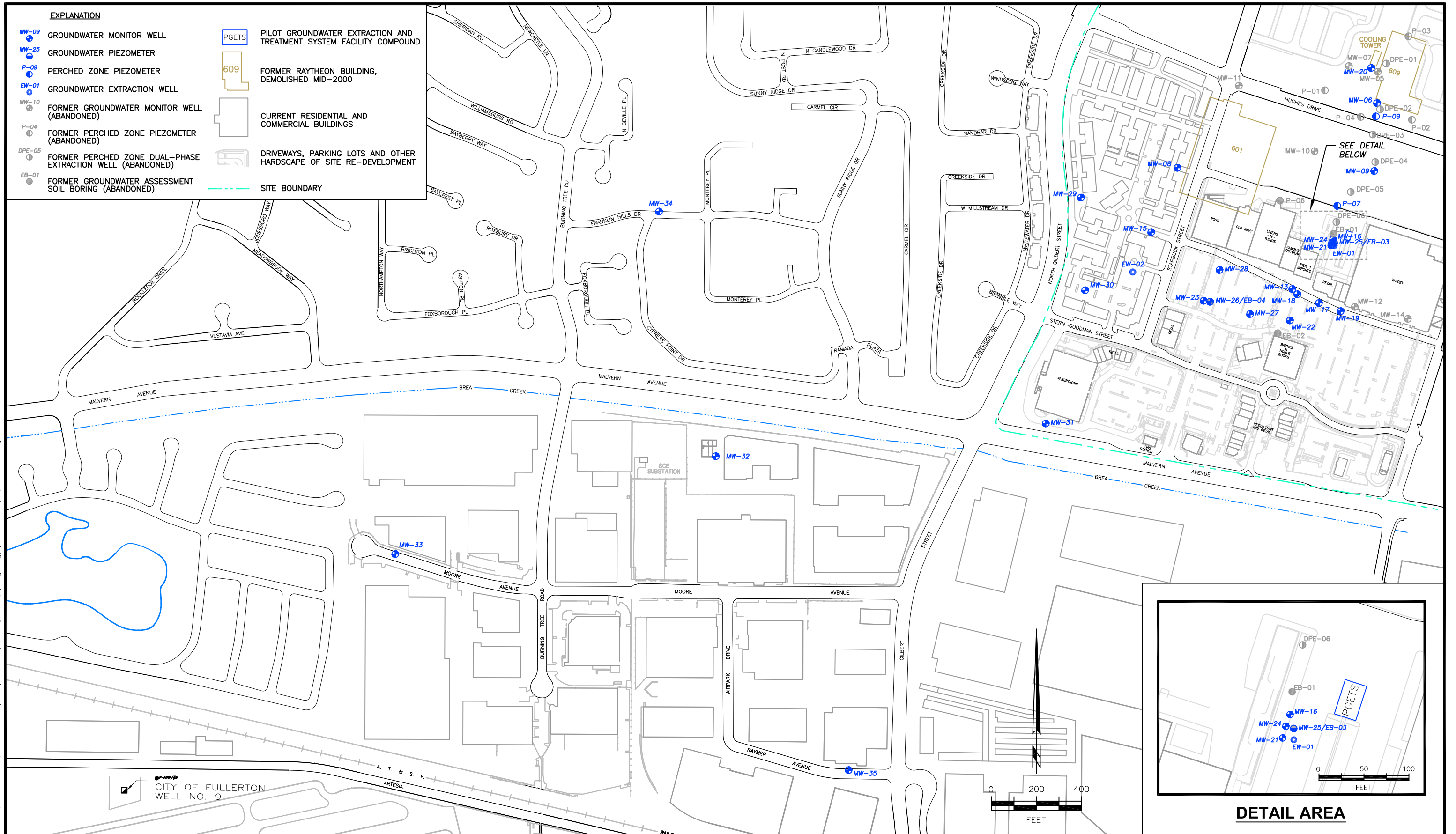
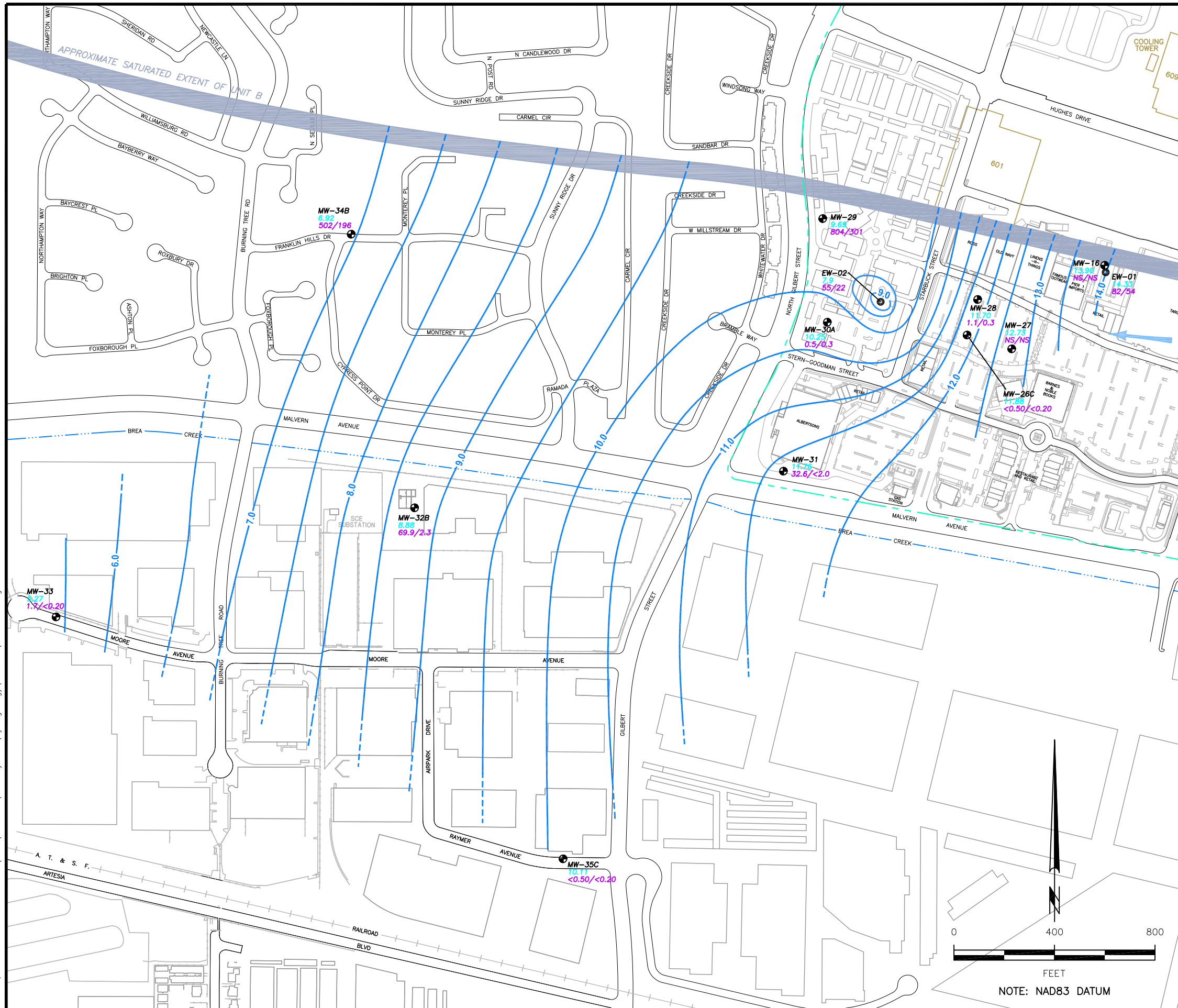


FIGURE 2.
WELL AND PIEZOMETER LOCATIONS

Jan 20, 2012 - 9:48am ADE - T:\2012\500-599\532 Raytheon Hydrogeology\Wate Lvl\220-2129.dwg



EXPLANATION

- MW-16 GROUNDWATER MONITOR WELL
- EW-01 GROUNDWATER EXTRACTION WELL
- 14.33 WATER LEVEL ELEVATION (FEET MEAN SEA LEVEL)
- 82/54 CONCENTRATION OF 1,1-DCE/1,4-DIOXANE IN GROUNDWATER (MICROGRAMS PER LITER)
- EXTRACTION WELL EW-02 PUMPING DURING WATER LEVEL GAUGING; ESTIMATED WATER LEVEL BASED ON THIEM EQUATION
- < LESS THAN; VALUE IS THE LIMIT OF DETECTION
- NS NOT SAMPLED
- 8.0 EQUAL WATER LEVEL ELEVATION CONTOUR, DASHED WHERE APPROXIMATE (FEET MEAN SEA LEVEL)
- 609 FORMER RAYTHEON BUILDING, DEMOLISHED MID-2000
- CURRENT RESIDENTIAL AND COMMERCIAL BUILDINGS
- DRIVEWAYS, PARKING LOTS AND OTHER HARDSCAPE OF SITE RE-DEVELOPMENT
- APPROXIMATE DIRECTION OF GROUNDWATER FLOW, NOVEMBER 2011 (COLLECTED ON OCTOBER 31, 2011)

RAYTHEON COMPANY
FULLERTON, CALIFORNIA

WATER LEVEL AND WATER QUALITY UNIT B NOVEMBER 2011

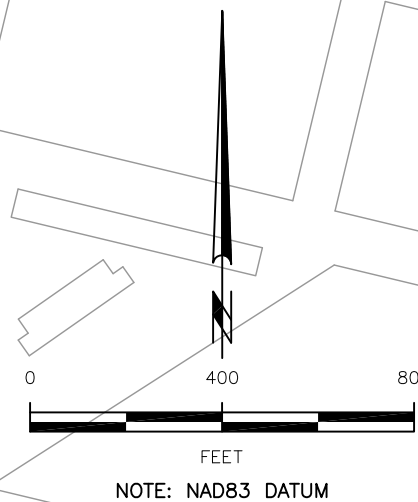


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01/12

FIGURE 3

PREP BY AMB REV BY SPN RPT NO. 532.31 220-2129 | A



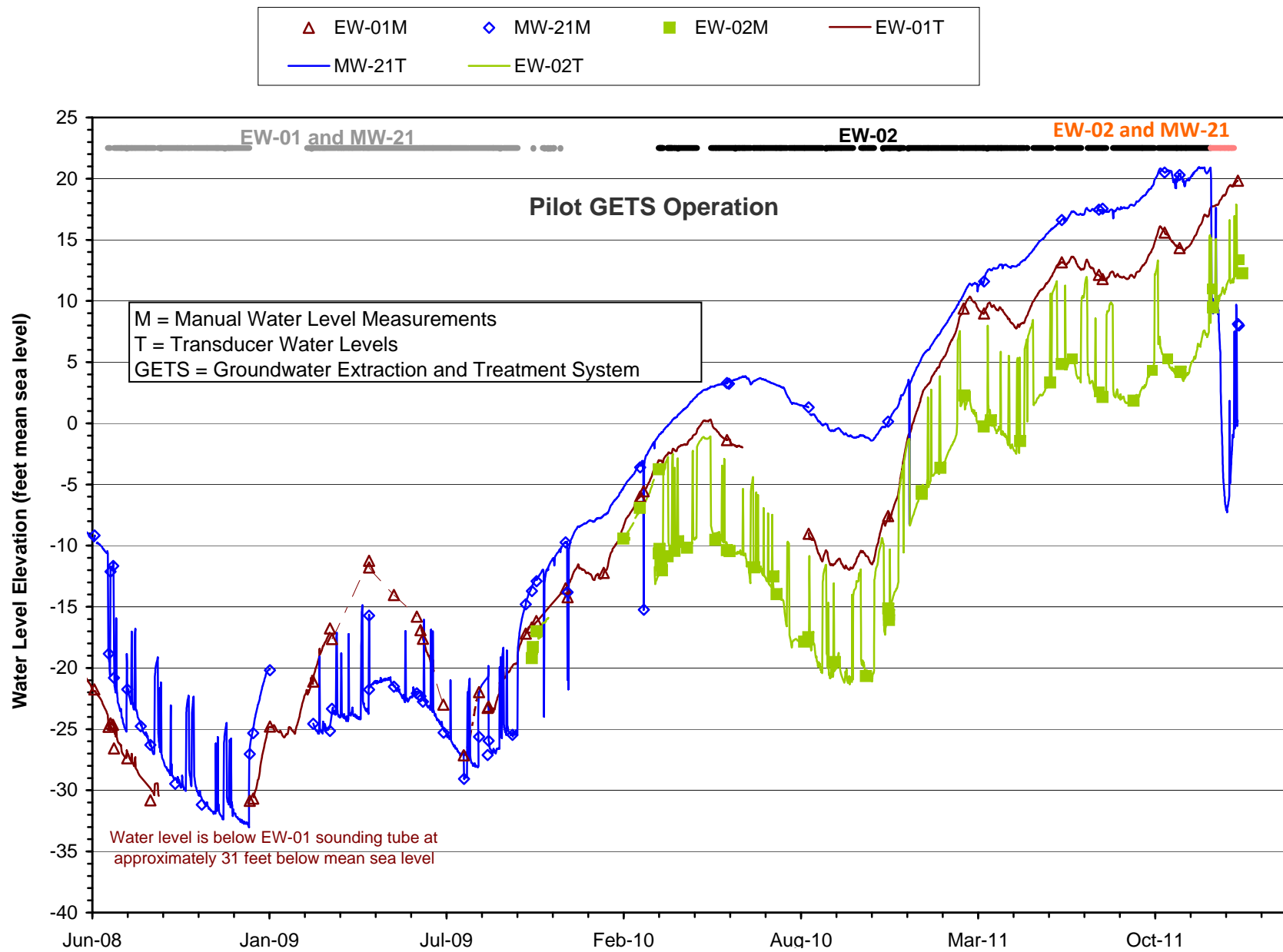


FIGURE 4.
PILOT GROUNDWATER EXTRACTION AND TREATMENT SYSTEM OPERATION
AND EXTRACTION WELL WATER LEVELS

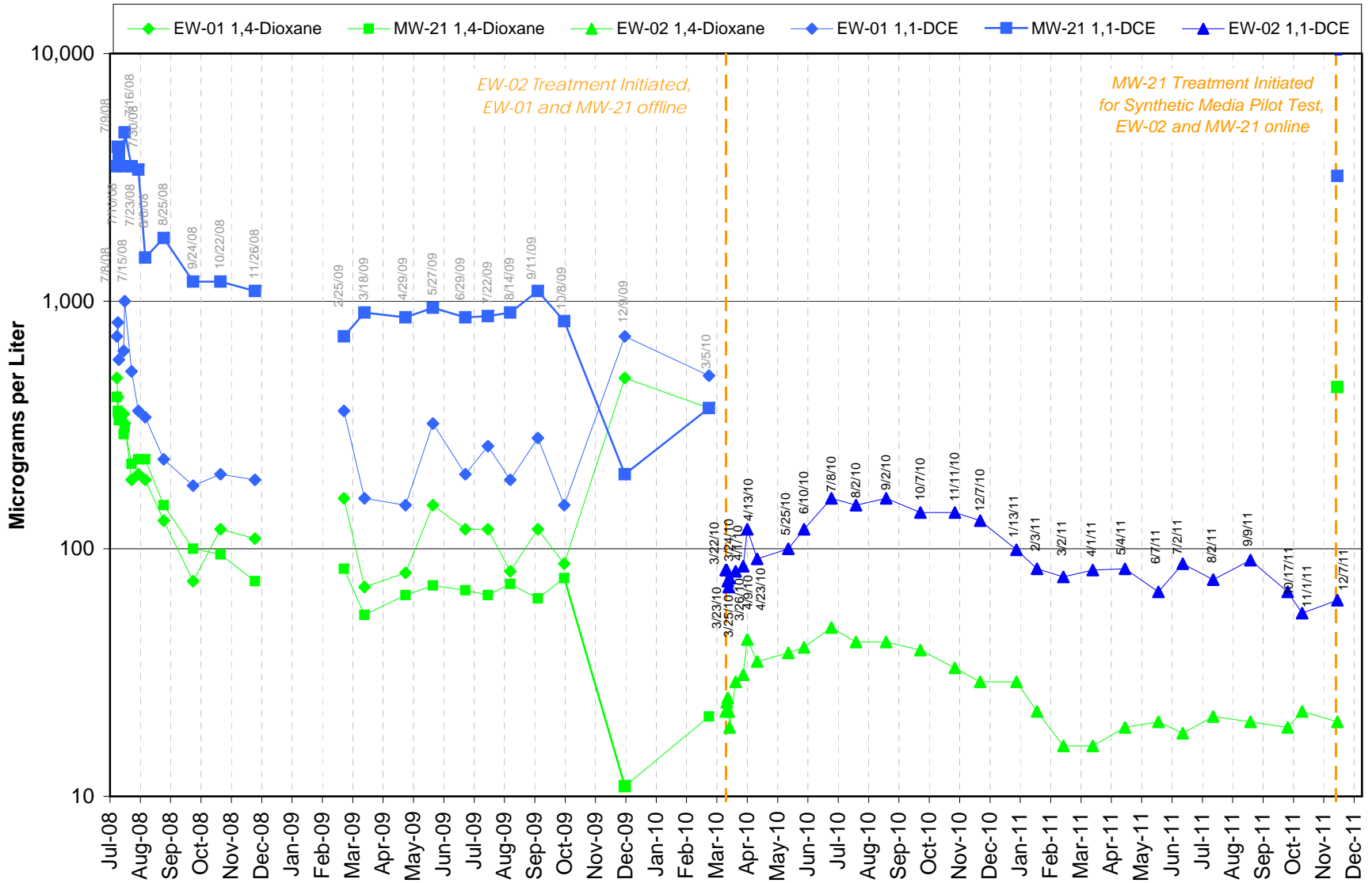
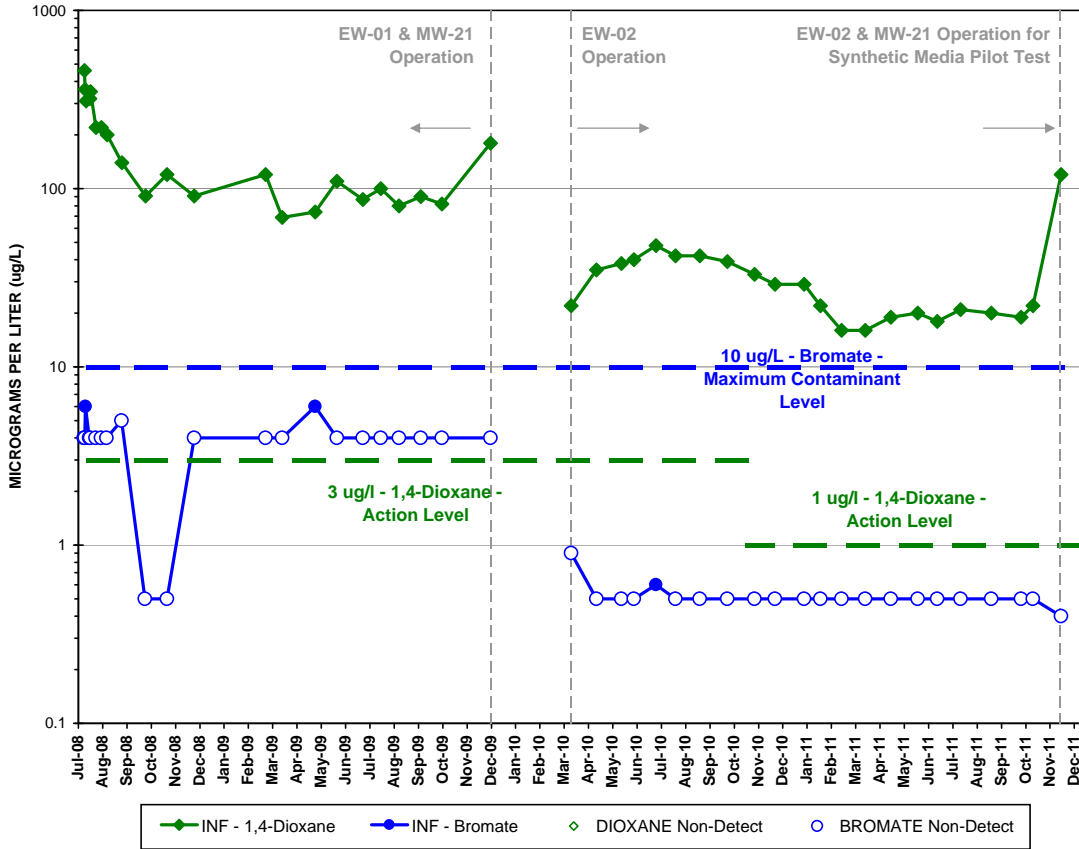


FIGURE 5.
1,1-DICHLOROETHYLENE AND 1,4-DIOXANE IN
EXTRACTION WELLS EW-01, MW-21, AND EW-02

Influent (INF) Concentrations



Post-Hipox (POX) Concentrations

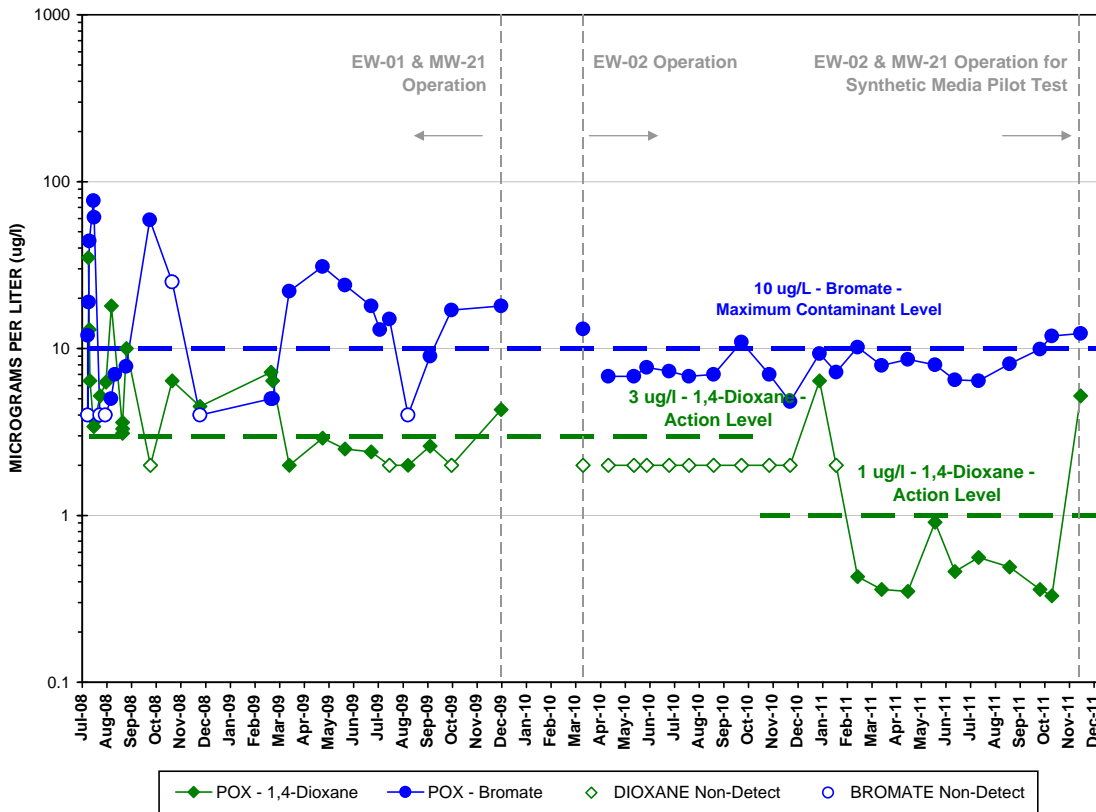


FIGURE 6.

1,4-DIOXANE AND BROMATE IN INFLUENT AND POST-OX. SAMPLES

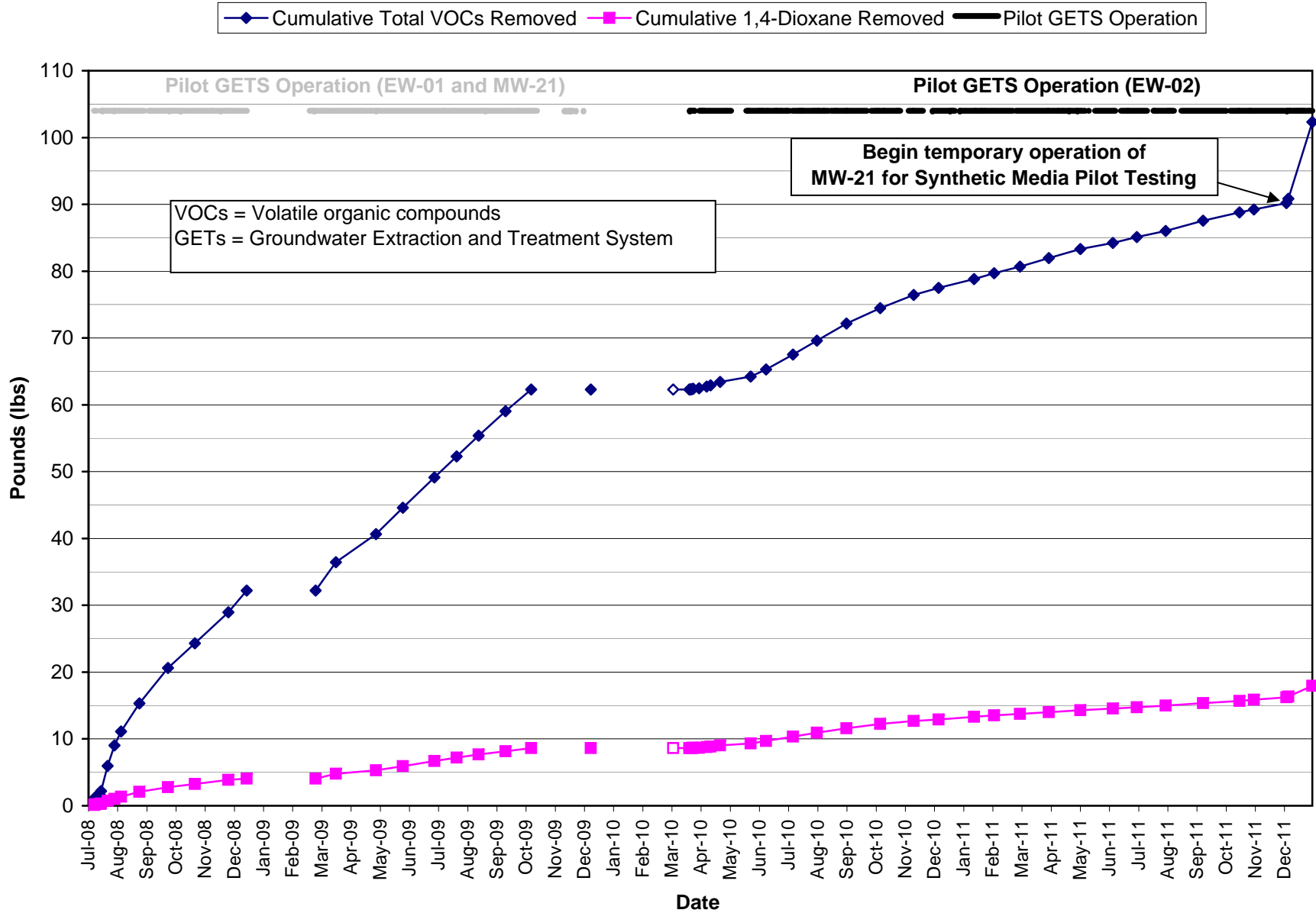


FIGURE 7.
PILOT GROUNDWATER EXTRACTION AND TREATMENT SYSTEM MASS REMOVAL

APPENDIX A
GROUNDWATER SAMPLING FIELD FORMS

GROUNDWATER SAMPLING INFORMATION

DATE: 11/4/11

TASK: 532.30

WELL ID: MW-08

Time <u>940</u> Static DTW (ft below reference point) <u>136.78</u>	Screen <u>Splint</u> Casing Volume (CV) (gallons) <u>46</u> 3 CV <u>5 CV</u> <u>13.8</u>	Weather Conditions	Initials <u>AMB & DM</u>
Casing Total Depth (ft below reference point) <u>163.79</u>	Purging Device <u>ded bailer</u> Sampling Device <u>ded. bailer</u>	Time <u>1000</u> Temp. <u>~65°</u>	Begin Purge <u>944</u> End Purge <u>1045</u>
Screen <u>Pump</u> Water Column (feet) <u>27.0</u>	Pump: Depth (ft brp) <u>NA</u> Type _____ Voltage _____ HP _____	Skies <u>Clear, sunny</u>	Gallons Purged <u>13.8</u> CVs Purged <u>3.0</u>
Casing Capacity (Diameter <u>2"</u>) (gallons per foot) <u>6.17</u>	Monitor Well Recharge Rate: Slow _____ Fast <u>X</u>	Wind (mph) <u>1-3</u> From <u>S-SW</u>	DTW (ft brp) <u>136.78</u> Time <u>1113</u>

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	...FIELD PARAMETERS...						Pump Frequency Hz	COMMENTS
				Temp. (°C)	pH	EC (µS/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
944	BEGIN	BAILING									
946	NM	0.25	0.1	20.81	7.06	1.262	69.3	6.39	20.0		
953	NM	2.25	0.5	20.88	7.21	1.617	58.2	6.43	123		
1005	NM	5.5	1.2	20.28	7.39	1.436	65.9	6.91	133		
1018	NM	7.8	1.7	20.87	7.15	1.876	88.9	6.41	65.9		
1029	NM	10.0	2.1	19.31	7.19	1.776	89.7	6.32	65.4		
1045	NM	13.8	3.0	20.57	7.26	1.550	73.9	6.55	68.4		

SAMPLE COLLECTION SAMPLE TIME <u>1045</u>	AIR MONITORING PID/FID ppm: VAULT NA BKGD NA BREATHING ZONE NA DISCHARGE WATER NA
ANALYSIS QUANTITY TYPE	NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)
8260B VOCs <u>6</u> 40 ml VOA	
8270 SIM 1,4 dioxane <u>2</u> 1 L Amber	
8270 MOD 1,4 dioxane _____ 1 L Amber	
DUPLICATES / SPLITS / BLANKS? <u>Y</u> N	
If yes, complete appropriate forms.	<u>MW-0800 DUP collected @ 1035</u>

GROUNDWATER SAMPLING INFORMATION

DATE: 11/1/11

TASK: 532.30

WELL ID: Mw-21

Time <u>1423</u> Static DTW (ft below reference point) <u>131.93</u>	Casing Volume (CV) (gallons) <u>70.7</u> 3 CV (gallons) <u>212</u>	Weather Conditions	Initials <u>AMB & DM</u>
Casing Total Depth (ft below reference point) <u>239</u>	Purging Device <u>Dead pump</u> Sampling Device <u>ded sample port</u>	Time <u>1420</u> Temp. <u>~80°</u>	Begin Purge <u>1419</u> End Purge <u>1445</u>
Water Column (feet) <u>107.07</u>	Pump: Depth (ft brp) <u>NA</u> Type _____ Voltage _____ HP _____	Skies <u>Clear, Sunny</u>	Gallons Purged <u>429</u> CVs Purged <u>6.1</u>
Casing Capacity (Diameter <u>4"</u>) (gallons per foot) <u>0.66</u>	Monitor Well Recharge Rate: Slow _____ Fast <u>X</u>	Wind (mph) <u>1-2</u> From <u>S-SW</u>	DTW (ft brp) <u>133.14</u> Time <u>1446</u>

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes PurgedFIELD PARAMETERS....						Pump Frequency Hz	COMMENTS
				Temp. (°C)	pH	EC (S/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
<u>1419</u>	<u>Pump</u>	<u>ON</u>	_____	_____	_____	_____	_____	_____	_____	<u>263627</u>	<u>19 gpm</u>
										<u>263845</u>	
<u>1442</u>	<u>NM</u>	<u>429</u>	<u>6.1</u>	<u>22.18</u>	<u>7.08</u>	<u>1.887</u>	<u>63.1</u>	<u>5.01</u>	<u>4.9</u>	<u>264056</u>	<u>18.9 gpm</u>
<u>1445</u>	<u>Pump OFF</u>	_____	_____	_____	_____	_____	_____	_____	_____		

SAMPLE COLLECTION SAMPLE TIME <u>1442</u>	AIR MONITORING PID/FID ppm: VAULT <u>NA</u> BKGD <u>NA</u> BREATHING ZONE <u>NA</u> DISCHARGE WATER <u>NA</u>
ANALYSIS QUANTITY TYPE	NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)
8260B VOCs <u>3</u> 40 ml VOA	
8270 SIM 1.4 dioxane <u>1</u> 1 L Amber	
8270 MOD 1.4 dioxane <u>1</u> 1 L Amber	
DUPLICATES / SPLITS / BLANKS? Y <u>N</u>	

GROUNDWATER SAMPLING INFORMATION

DATE: 11/1/11

TASK: 532.30

WELL ID: MW-26C

Time <u>1528</u> Static DTW (ft below reference point) <u>125.37</u>	Casing Volume (CV) (gallons) <u>63.5</u> 3 CV (gallons) <u>190.6</u>	Weather Conditions	Initials <u>AMB & DM</u>
Casing Total Depth (ft below reference point) <u>499</u>	Purging Device <u>ded pump</u> Sampling Device <u>ded tubing</u>	Time <u>1530</u> Temp. <u>~80°</u>	Begin Purge <u>1538</u> End Purge _____
Water Column (feet) <u>373.6</u>	Pump: Depth (ft brp) <u>300'</u> Type <u>grndbrs</u> Package <u>240 HP</u>	Skies <u>clear sunny</u>	Gallons Purged <u>204</u> CVs Purged <u>3</u>
Casing Capacity (Diameter <u>2"</u>) (gallons per foot) <u>0.17</u>	Monitor Well Recharge Rate: Slow _____ Fast <u>X</u>	Wind (mph) <u>1-3</u> From <u>SW</u>	DTW (ft brp) <u>125.49</u> Time <u>1748</u>

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	...FIELD PARAMETERS...						Pump Frequency Hz	COMMENTS
				Temp. (°C)	pH	EC (mS/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
1556	PUMP	ON									PUMP OFF
1558	PUMP	ON									2 GPM
1600	125.94	4	.06	22.04	7.21	0.493	-259.2	0.08	4.4	310	2 GPM
1615	126.03	34	.5	22.37	7.77	0.815	-148.2	0.83	1.9	310	
1630	126.05	64	1.0	22.41	7.50	0.958	-81.3	5.21	5.1	310	2 GPM
1645	126.08	94	1.5	22.43	7.47	0.967	-52.0	4.80	0.85	310	2 GPM
1700	126.10	124	2.0	22.43	7.45	0.968	-41.2	5.31	2.8	310	2 GPM
1715	126.10	154	2.5	22.44	7.43	0.970	-32.1	5.61	4.9	310	
1734	126.14	192	3.02	22.44	7.45	0.970	-40.0	8.06	5.1		
1740	—	PUMP OFF									

SAMPLE COLLECTION SAMPLE TIME <u>1734</u>	AIR MONITORING PID/FID ppm: VAULT NA BKGD NA BREATHING ZONE NA DISCHARGE WATER NA
ANALYSIS QUANTITY TYPE	NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)
8260B VOCs <u>3</u> 40 ml VOA	
8270 SIM 1,4 dioxane <u>✓</u> 1 L Amber	
8270 MOD 1,4 dioxane <u>✓</u> 1 L Amber	
DUPLICATES / SPLITS / BLANKS? <u>(Y) AMB (N)</u>	<u>MS & MSD (see blank log form)</u>

GROUNDWATER SAMPLING INFORMATION

DATE: 11/3/11

TASK: 532.30

WELL ID: Mlw-28

Time <u>928</u> Static DTW (ft below reference point) <u>124.38</u>	Casing Volume (CV) (gallons) <u>27</u> 3 CV (gallons) <u>81</u>	Weather Conditions	Initials <u>AMB & DM</u>
Casing Total Depth (ft below reference point) <u>375</u>	Purging Device <u>RED PUMP</u> Sampling Device <u>0-10 RED PIPE STAND</u>	Time <u>916</u> Temp. <u>70°</u>	Begin Purge <u>930</u> End Purge <u>942</u>
Water Column (feet) <u>520</u>	Pump: Depth (ft brp) <u>330'</u> Type <u>CAVITROS</u> Voltage <u>240</u> HP	Skies <u>OVERCAST</u>	Gallons Purged <u>99</u> CVs Purged <u>3.6</u>
Casing Capacity (Diameter <u>4"</u>) (gallons per foot) <u>0.60</u>	Monitor Well Recharge Rate: Slow _____ Fast <u>X</u>	Wind (mph) <u>0-5</u> From <u>NB</u>	DTW (ft brp) <u>130.52</u> Time <u>946</u>

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	...FIELD PARAMETERS...						Pump Frequency Hz	COMMENTS
				Temp. (°)	pH	EC (S/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
930	START	PURGE								9.26 PM < 5 PSI	
931	136.98	9	0.3	21.65	8.99	1.042	59.4	4.45	14		
933	138.47	25	0.9	21.60	8.86	1.013	58.5	4.24	13	8.9 GPM	
935	138.63	42	1.6	21.55	8.81	1.058	66	5.07	17	8.9 GPM	
937	138.71	62	2.3	21.56	8.82	1.063	63.6	5.42	7.3		
939	138.74	74	2.7	21.57	8.82	1.064	59.1	5.55	6.0		
940	138.77	83	3.1	21.57	8.83	1.064	54.2	5.73	NM		
942	NM	99	PUMP	OFF							

SAMPLE COLLECTION SAMPLE TIME <u>940</u>	AIR MONITORING PID/FID ppm: VAULT NA BKGD NA BREATHING ZONE NA DISCHARGE WATER NA
ANALYSIS QUANTITY TYPE	NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)
8260B VOCs <u>3</u> 40 ml VOA	<u>PH READING HIGH - 1.28 correction C/7 PH</u>
8270 SIM 1,4 dioxane <u>1</u> 1 L Amber	
8270 MOD 1,4 dioxane <u>1</u> 1 L Amber	
DUPLICATES / SPLITS / BLANKS? <u>Y</u> <u>(N)</u>	

GROUNDWATER SAMPLING INFORMATION

DATE: 11/3/11

TASK: 532.30

WELL ID: MW-29

Time <u>1016</u> Static DTW (ft below reference point) <u>132.93</u>	Screen Casing Volume (CV) (gallons) <u>SV 30</u>	SV (gallons) <u>90</u>	Weather Conditions	Initials <u>AMB & DM</u>
Casing Total Depth (ft below reference point) <u>240</u>	Purging Device <u>DET PUMP</u>	Sampling Device <u>7100 PRE-SCREEN</u>	Time <u>1023</u> Temp. <u>75°</u>	Begin Purge <u>1025</u> End Purge <u>1045</u>
Water Column (feet) <u>SCREEN</u>	Pump: Depth (ft brp) <u>190'</u> Type <u>GROUND</u>	Voltage <u>220</u> HP	Skies <u>partly cloudy/sunny</u>	Gallons Purged <u>94</u> CVs Purged <u>3.1</u>
Casing Capacity (Diameter ") (gallons per foot) <u>0.6</u>	Monitor Well Recharge Rate: Slow	Fast <u>X</u>	Wind (mph) <u>0-5</u> From <u>W</u>	DTW (ft brp) <u>132.93</u> Time <u>1054</u>

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	...FIELD PARAMETERS...						Pump Frequency Hz	COMMENTS	
				Temp. (°)	pH	EC (S/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)			
<u>1025</u>											<u>4.8 GPM</u>	<u>< 5 PSI</u>
<u>1027</u>	<u>140.45</u>	<u>9</u>	<u>0.3</u>	<u>21.52</u>	<u>7.37</u>	<u>1.339</u>	<u>53.8</u>	<u>4.86</u>	<u>14</u>			
<u>1030</u>	<u>140.81</u>	<u>22</u>	<u>0.7</u>	<u>21.66</u>	<u>7.25</u>	<u>1.370</u>	<u>43.4</u>	<u>6.59</u>	<u>8</u>		<u>4.8 GPM</u>	
<u>1033</u>	<u>140.83</u>	<u>38</u>	<u>1.3</u>	<u>21.69</u>	<u>7.24</u>	<u>1.391</u>	<u>39.2</u>	<u>6.92</u>	<u>4.0</u>			
<u>1036</u>	<u>140.88</u>	<u>55</u>	<u>1.8</u>	<u>21.70</u>	<u>7.24</u>	<u>1.388</u>	<u>33.0</u>	<u>7.83</u>	<u>7.9</u>		<u>4.8 GPM</u>	
<u>1039</u>	<u>140.89</u>	<u>67</u>	<u>2.2</u>	<u>21.70</u>	<u>7.23</u>	<u>1.387</u>	<u>29.4</u>	<u>7.79</u>	<u>7.2</u>			
<u>1042</u>	<u>140.89</u>	<u>81</u>	<u>2.7</u>	<u>21.71</u>	<u>7.23</u>	<u>1.386</u>	<u>28.7</u>	<u>7.90</u>	<u>7.1</u>			
<u>1045</u>	<u>140.91</u>	<u>94</u>	<u>3.1</u>	<u>21.72</u>	<u>7.24</u>	<u>1.385</u>	<u>30.0</u>	<u>7.89</u>	<u>7.2</u>			
<u>1048</u>	<u>NM</u>	<u>107</u>	<u>PUMP OFF</u>									

SAMPLE COLLECTION SAMPLE TIME <u>1045</u>	AIR MONITORING PID/FID ppm: VAULT NA	BKGD NA	BREATHING ZONE NA	DISCHARGE WATER NA
ANALYSIS QUANTITY TYPE	NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)			
8260B VOCs <u>3</u> 40 ml VOA				
8270 SIM 1.4 dioxane <u>1</u> 1 L Amber				
8270 MOD 1.4 dioxane <u>1</u> 1 L Amber				
DUPLICATES / SPLITS / BLANKS? Y <u>(N)</u>				

GROUNDWATER SAMPLING INFORMATION

DATE: 11/2/11

TASK: 532.30

WELL ID: MW-30A

Time <u>1425</u> Static DTW (ft below reference point) <u>191.35</u>	Casing Volume (CV) (gallons) <u>17.2</u> 3 CV (gallons) <u>51.5</u>	Weather Conditions	Initials AMB & DM
Casing Total Depth (ft below reference point) <u>564</u>	Purging Device <u>ded pump</u> Sampling Device <u>0-10 Ded. pipe stand</u>	Time <u>1425</u> Temp. <u>~</u>	Begin Purge <u>1426</u> End Purge <u>1438</u>
Screen <u>screen pump</u> Water Column (feet) <u>44</u>	Pump: Depth (ft brp) <u>520'</u> Type <u>ground</u> Voltage <u>240</u> HP	Skies <u>clear sunny</u>	Gallons Purged <u>55</u> CVs Purged <u>3.2</u>
Casing Capacity (Diameter <u>3"</u>) (gallons per foot) <u>0.39</u>	Monitor Well Recharge Rate: Slow _____ Fast <u>X</u>	Wind (mph) <u>1-20</u> From <u>ESE</u>	DTW (ft brp) <u>191.40</u> Time <u>1445</u>

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	...FIELD PARAMETERS...						Pump Frequency Hz	COMMENTS
				Temp. (°C)	pH	EC (µS/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
1426	PUMP ON									5.4 gpm < 5 PSI	
1428	121.14	7	0.4	21.87	7.68	0.804	25.8	2.00	8.4		
1430	121.14	16	0.9	21.25	8.77	0.706	-69.7	1.64	24		
1432	121.17	25	1.5	21.40	7.76	0.694	-44.5	1.27	32		
1434	121.19	36	2.0	21.60	7.59	0.698	-27.9	1.27	12		
1436	121.20	45	2.6	21.55	7.57	0.698	-30.9	1.33	11	5.4 gpm	
1438	121.23	55	3.2	21.56	7.57	0.698	-32.5	1.33	7.5		
1440	PUMP OFF										

SAMPLE COLLECTION SAMPLE TIME <u>1438</u>	AIR MONITORING PID/FID ppm: VAULT NA BKGD NA BREATHING ZONE NA DISCHARGE WATER NA
ANALYSIS QUANTITY TYPE	NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)
8260B VOCs <u>3</u> 40 ml VOA	
8270 SIM 1,4 dioxane <u>1</u> 1 L Amber	
8270 MOD 1,4 dioxane <u>1</u> 1 L Amber	
DUPLICATES / SPLITS / BLANKS? Y <u>N</u>	

GROUNDWATER SAMPLING INFORMATION

DATE: 11/2/11

TASK: 532.30

WELL ID: MW-30B

Time <u>1452</u> Static DTW (ft below reference point) <u>116.37</u>	Casing Volume (CV) (gallons) <u>37</u> 3 CV (gallons) <u>112</u>	Weather Conditions	Initials AMB & DM
Casing Total Depth (ft below reference point) <u>616</u>	Purging Device <u>ded pump</u> Sampling Device <u>Dedicated 10-140 Pipestand</u>	Time <u>1500</u> Temp. <u>~80°</u>	Begin Purge <u>1452</u> End Purge <u>1515</u>
Screen-pump Water Column (feet) <u>94</u>	Pump: Depth (ft brp) <u>520'</u> Type <u>Grundfos</u> Voltage <u>240</u> HP	Skies <u>Sunny, clear</u>	Gallons Purged <u>120.5</u> CVs Purged <u>3.0</u>
Casing Capacity (Diameter <u>3"</u>) (gallons per foot) <u>0.39</u>	Monitor Well Recharge Rate: Slow Fast <u>X</u>	Wind (mph) <u>2-15</u> From <u>E-SE</u>	DTW (ft brp) <u>120.57</u> Time <u>1530</u>

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	...FIELD PARAMETERS...						Pump Frequency Hz	COMMENTS
				Temp. (°C)	pH	EC (µS/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
1455	BEGIN PURGE										
1456	127.78	7	0.2	21.25	7.44	1.098	17.1	2.71	11		5.5 GPM < 5 PSI
1459	133.40	22	0.6	21.32	7.39	1.210	-4.6	0.54	9.4		5.3 GPM
1502	135.08	37	1.0	21.54	7.31	1.394	-4.7	2.70	9.0		5.5 avg 5.1 GPM
1506	136.54	58	1.6	21.60	7.32	1.190	8.4	3.46	60		
1510	137.81	87	2.3	21.63	7.38	1.089	3.3	2.47	25		5.2 gpm
1515	138.41	113	3.0	21.64	7.37	1.094	0.5	2.30	17		138.67 ± @ 1516
1517	NM	123	PUMP	OFF							

SAMPLE COLLECTION SAMPLE TIME <u>1515</u>	AIR MONITORING PID/FID ppm: VAULT NA BKGD NA BREATHING ZONE NA DISCHARGE WATER NA
ANALYSIS QUANTITY TYPE	NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)
8260B VOCs <u>3+3</u> 40 ml VOA	
8270 SIM 1,4 dioxane <u>1+1</u> 1 L Amber	
8270 MOD 1,4 dioxane <u>0</u> 1 L Amber	
DUPLICATES/SPLITS/BLANKS? <u>Y</u> N	<u>MW-3000B and MW-3000B @ 1535</u>

GROUNDWATER SAMPLING INFORMATION

DATE: 11/3/11

TASK: 532.30

WELL ID: MW-31

Time <u>754</u> Static DTW (ft below reference point) <u>109.97</u>	Casing Volume (CV) (gallons) <u>79.4</u> 3 CV (gallons) <u>238</u>	Weather Conditions	Initials AMB & DM
Casing Total Depth (ft below reference point) <u>996</u>	Purging Device <u>ded. pump</u> Sampling Device <u>Dedicated Pipestand</u>	Time <u>800</u> Temp. <u>~68°</u>	Begin Purge <u>815</u> End Purge <u>837</u>
<u>Screen-pump</u> Water Column (feet) <u>54</u>	Pump: Depth (ft brp) <u>942'</u> Type <u>Grundfos</u> Voltage <u>210</u> HP <u>100</u>	Skies <u>Clear</u>	Gallons Purged <u>240</u> CVs Purged <u>3.0</u>
Casing Capacity (Diameter <u>6"</u>) (gallons per foot) <u>1.5</u>	Monitor Well Recharge Rate: Slow _____ Fast <u>X</u>	Wind (mph) <u>1-2</u> From <u>S</u>	DTW (ft brp) <u>109.44</u> Time <u>846</u>

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	...FIELD PARAMETERS...						Pump Frequency Hz	COMMENTS
				Temp. (°C)	pH	EC (µS/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
815	PUMP ON									11.4 gpm 7 PSI	
817	111.04	12	0.15	21.00	8.76	0.804	78.4	0.17	4.2		
821	111.11	69	0.9	21.11	10.29	1.306	-65.2	6.18	130	11.4 gpm	
825	111.13	110	1.4	21.26	9.54	1.051	-28.0	0.48	23	11.4 gpm	
829	111.16	152	1.9	21.30	9.46	0.953	17.8	0.66	17		
833	111.18	210	2.6	21.33	9.25	0.878	10.1	0.81	8.3		
835	111.18	240		21.33	9.17					not B	
837	111.18	238 <u>240</u>	<u>3.0</u>	21.34	9.23	0.849	9.8	0.88	7.5	240 gallons	
839	PUMP OFF										

SAMPLE COLLECTION SAMPLE TIME <u>835 AMB 837</u>	AIR MONITORING PID/FID ppm: VAULT NA BKGD NA BREATHING ZONE NA DISCHARGE WATER NA
ANALYSIS QUANTITY TYPE	NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)
8260B VOCs <u>6</u> 40 ml VOA	
8270 SIM 1.4 dioxane <u>1</u> 1 L Amber	
8270 MOD 1.4 dioxane <u>1</u> 1 L Amber	
DUPLICATES/SPLITS/BLANKS? <u>(Y)</u> N	<u>MW-31 @ 847 split collected</u>

GROUNDWATER SAMPLING INFORMATION

DATE: 11/3/11

TASK: 532.30

WELL ID: MW-32A

Time <u>1143</u> Static DTW (ft below reference point)	<u>87.45</u> Screen <u>SV</u> Casing Volume (CV) (gallons)	<u>207</u> <u>SV</u> CV (gallons)	<u>621</u>	Weather Conditions	Initials <u>AMB & DM</u>
Casing Total Depth (ft below reference point)	<u>905</u>	Purging Device <u>ded pump</u>	Sampling Device <u>Dedicated ND pipe stand</u>	Time <u>1200</u> Temp. <u>-80°</u>	Begin Purge <u>1153</u> End Purge <u>1243</u>
Water Column (feet)	<u>345</u>	Pump: Depth (ft brp) <u>500'</u> Type <u>ground</u>	HP <u>240</u>	Skies <u>Clear sunny</u>	Gallons Purged <u>651</u> CVs Purged <u>3.1</u>
Casing Capacity (Diameter <u>4"</u>) (gallons per foot)	<u>0.60</u>	Monitor Well Recharge Rate: Slow	Fast <u>X</u>	Wind (mph) <u>1-5</u> From <u>S-SW</u>	DTW (ft brp) <u>88.74</u> Time <u>1250</u>

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	...FIELD PARAMETERS...						Pump Frequency Hz	COMMENTS
				Temp. (°C)	pH	EC (µS/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
1153	Pump ON										13.1 GPM 11 PSI
1154	88.93	14	0.1	20.57	7.25	0.802	32.4	-21.6	7.4		13.5 GPM
1153	89.16	161	0.8	20.91	7.44	0.805	68.4	1.73	3.5		13.5 GPM
1213	89.21	274	1.3	21.03	7.41	0.805	-95.1	1.91	8.7		
1223	89.22	390	1.9	21.08	7.42	0.804	-104.9	1.95	7.1		13.5 GPM
1233	89.26	538	2.6	21.07	7.43	0.803	-103.6	1.98	7.5		13.5 GPM
1243	89.27	651	3.1	21.08	7.44	0.803	-106.8	2.01	8.06		
1245	NM	682	Pump OFF								

SAMPLE COLLECTION SAMPLE TIME <u>1243</u>	AIR MONITORING PID/FID ppm: VAULT NA	BKGD NA	BREATHING ZONE NA	DISCHARGE WATER NA
ANALYSIS QUANTITY TYPE	NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)			
8260B VOCs <u>3</u> 40 ml VOA				
8270 SIM 1.4 dioxane <u>1</u> 1 L Amber				
8270 MOD 1.4 dioxane <u>1</u> 1 L Amber				
DUPLICATES / SPLITS / BLANKS? Y <u>(N)</u>				

GROUNDWATER SAMPLING INFORMATION

DATE: 11/3/11

86.25 MB

TASK: 532.30

WELL ID: MW-32B

Time: 1552 1557 MB	Static DTW (ft below reference point) 98.24 Screen SV	Casing Volume (CV) (gallons) 263.4	3 CV (gallons) 790	Weather Conditions	Initials AMB & DM
Casing Total Depth (ft below reference point) 999	Purging Device ded pump	Sampling Device ded. >100 pi	Temp. 70°	Begin Purge 1557	End Purge 1703
Screen-pump Water Column (feet) 439	Pump: Depth (ft brp) 560'	Type grinders	Voltage 240 HP	Gallons Purged 816	CVs Purged 3.1
Casing Capacity (Diameter 4") (gallons per foot) 0.6	Monitor Well Recharge Rate: Slow	Fast X	Wind (mph) 2-6	From S-SW	DTW (ft brp) 87.47
					Time 1715

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	...FIELD PARAMETERS...						Pump Frequency Hz	COMMENTS
				Temp. (°C)	pH	EC (µS/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
1557	PUMP ON										
1558	103.63	14	0.05	20.69	8.13	0.877	-193.2	0.33	9.03		12.8 gpm 12 PSI
1608	111.12	137	0.5	20.90	7.90	0.843	-292.2	0.40	10.80		
1618	111.84	262	1.0	21.15	8.05	0.758	-269.1	0.03	8.60		
1628	112.29	382	1.5	21.29	7.93	0.865	-242.5	0.03	7.97		12.4 gpm 9 PSI
1638	112.64	520	2.0	21.29	7.90	0.865	-233.2	0.02	6.68		12.4 gpm 9 PSI
1648	112.81	645	2.5	21.30	7.86	0.865	-228.8	0.02	9.68		12.4 gpm
1703	113.05	816	3.1	21.29	7.86	0.843	-168.1	0.65	8.91		
1705	PUMP OFF										

SAMPLE COLLECTION SAMPLE TIME 1703	AIR MONITORING PID/FID ppm: VAULT NA	BKGD NA	BREATHING ZONE NA	DISCHARGE WATER NA
ANALYSIS QUANTITY TYPE	NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)			
8260B VOCs 3 40 ml VOA	Purged over 3 casing volumes to account for draw down losses.			
8270 SIM 1.4 dioxane 1 L Amber				
8270 MOD 1.4 dioxane 1 L Amber				
DUPLICATES / SPLITS / BLANKS? Y (N)				

GROUNDWATER SAMPLING INFORMATION

DATE: 11/3/11

TASK: 532.30

WELL ID: MW-32C

Time <u>1303</u> Static DTW (ft below reference point) <u>68.42</u>	Screen <u>SV</u> Casing Volume (CV) (gallons) <u>318</u>	Screen <u>SV</u> Casing Volume (CV) (gallons) <u>954</u>	Weather Conditions	Initials <u>AMB & DM</u>
Casing Total Depth (ft below reference point) <u>1090</u>	Purging Device <u>ded pump</u>	Sampling Device <u>Dead ND pipe stand</u>	Time <u>1300</u> Temp. <u>~80°</u>	Begin Purge <u>1305</u> End Purge <u>1536</u>
Water Column (feet) <u>530</u>	Pump: Depth (ft brp) <u>50'</u> Type <u>ground</u> Voltage <u>240HP</u>		Skies <u>Sunny</u>	Gallons Purged <u>1070</u> CVs Purged <u>3.4</u>
Casing Capacity (Diameter <u>4"</u>) (gallons per foot) <u>0.60</u>	Monitor Well Recharge Rate: Slow _____ Fast <u>X</u>		Wind (mph) <u>1-5</u> From <u>S-SW</u>	DTW (ft brp) <u>148.38</u> Time <u>1550</u>

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	...FIELD PARAMETERS...						Pump Frequency Hz	COMMENTS
				Temp. (°C)	pH	EC (µS/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
1305		PUMP	ON								13.8 gpm 15 PSI
1306	91.55	15	0.05	20.73	8.44	0.479	-203.0	0.08	29.8		13.8 strong odor - sulfur
1321	213.38	161	0.5	21.00	8.35	0.480	-207.6	0.03	37.3		7.2
1345	244.88	352	1.1	21.31	8.48	0.479	-235.7	0.03	15.8		6.8 GPM
1409	249.55	510	1.6	21.59	8.50	0.478	-216.9	0.03	17.2		6.7 GPM <5 PSI
1433	251.13	670	2.1	21.64	8.51	0.478	-214.7	0.03	6.85		6.4 GPM
1458	252.36	830	2.6	21.64	8.50	0.478	-207.0	0.04	11.4		
1520	252.97	950	2.9	21.64	8.49	0.478	-211.3	0.02	12.6		6.4 GPM
1536	253.95	1070	3.4	21.64	8.50	0.478	-211.7	0.02	7.79		6.4 GPM
1538	NH	1085	PUMP OFF								

SAMPLE COLLECTION SAMPLE TIME <u>1536</u>	AIR MONITORING PID/FID ppm: VAULT NA	BKGD NA	BREATHING ZONE NA	DISCHARGE WATER NA
ANALYSIS QUANTITY TYPE	NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)			
8260B VOCs <u>3</u> 40 ml VOA	<u>ducer out @ 1301; ducer in at 1555</u> <u>Purged over 3 casing volumes to compensate for drawdown losses</u>			
8270 SIM 1,4 dioxane <u>1</u> 1 L Amber				
8270 MOD 1,4 dioxane <u>1</u> 1 L Amber				
DUPLICATES / SPLITS / BLANKS? <u>Y</u> <u>(N)</u>	If yes, complete appropriate forms.			

GROUNDWATER SAMPLING INFORMATION

DATE: 11/2/11

TASK: 532.30

WELL ID: MW-33

Time <u>1205</u> Static DTW (ft below reference point) <u>81.53</u>	<u>Screen SV</u> Casing Volume (SV) (gallons) <u>291</u>	<u>SV</u> 3 SV (gallons) <u>813</u>	Weather Conditions	Initials AMB & DM
Casing Total Depth (ft below reference point) <u>1020</u>	Purging Device <u>Dead pump</u>	Sampling Device <u>Pipe stand</u>	Time <u>1215</u> Temp. <u>80°</u>	Begin Purge <u>1218</u> End Purge <u>1302</u>
Screen-pump Water Column (feet) <u>484</u>	Pump: Depth (ft brp) <u>535'</u> Type <u>Grundfos</u>	Voltage <u>240'</u> HP	Skies <u>clear, sunny</u>	Gallons Purged <u>880</u> CVs Purged <u>3.0</u>
Casing Capacity (Diameter <u>4"</u>) (gallons per foot) <u>0.60</u>	Monitor Well Recharge Rate: Slow	Fast <u>X</u>	Wind (mph) <u>1-20</u> From <u>E-SE</u>	DTW (ft brp) <u>82.17</u> Time <u>1306</u>

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	...FIELD PARAMETERS...						Pump Frequency Hz	COMMENTS
				Temp. (°C)	pH	EC (µS/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
<u>1218</u>	<u>BEGIN PURGE</u>									<u>19.9 gpm 32 PSI</u>	
<u>1219</u>	<u>83.67</u>	<u>40</u>	<u>.13</u>	<u>20.02</u>	<u>7.93</u>	<u>0.604</u>	<u>-18.7</u>	<u>0.56</u>	<u>9.2</u>		
<u>1226</u>	<u>83.93</u>	<u>193</u>	<u>.66</u>	<u>20.78</u>	<u>7.67</u>	<u>0.604</u>	<u>-192.1</u>	<u>0.06</u>	<u>7.9</u>	<u>19.6 gpm 30 PSI</u>	
<u>1233</u>	<u>84.01</u>	<u>285</u>	<u>.97</u>	<u>20.92</u>	<u>7.72</u>	<u>0.595</u>	<u>-189.2</u>	<u>0.08</u>	<u>8.8</u>	<u>20.1 gpm</u>	
<u>1240</u>	<u>84.06</u>	<u>426</u>	<u>1.5</u>	<u>20.98</u>	<u>7.65</u>	<u>0.603</u>	<u>-167.2</u>	<u>0.43</u>	<u>5.2</u>	<u>20.6 gpm 30 PSI</u>	
<u>1247</u>	<u>84.14</u>	<u>557</u>	<u>1.9</u>	<u>20.99</u>	<u>7.64</u>	<u>0.604</u>	<u>-154.3</u>	<u>0.64</u>	<u>5.6</u>	<u>20.16 gpm 30 PSI</u>	
<u>1254</u>	<u>84.18</u>	<u>710</u>	<u>2.4</u>	<u>20.98</u>	<u>7.63</u>	<u>0.606</u>	<u>-147.2</u>	<u>0.46</u>	<u>10</u>	<u>20.16 gpm 30 PSI</u>	
<u>1302</u>	<u>84.28</u>	<u>880</u>	<u>3.0</u>	<u>20.99</u>	<u>7.62</u>	<u>0.607</u>	<u>-146.2</u>	<u>0.48</u>	<u>7.6</u>	<u>20.1 gpm</u>	
<u>1307</u>	<u>NM</u>	<u>908</u>	<u>PUMP</u>	<u>OFF</u>							

SAMPLE COLLECTION SAMPLE TIME <u>1302</u>	AIR MONITORING PID/FID ppm: VAULT NA	BKGD NA	BREATHING ZONE NA	DISCHARGE WATER NA
ANALYSIS QUANTITY TYPE	NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)			
8260B VOCs <u>3</u> 40 ml VOA	<u>strong odor in water ~ 50 gallons</u>			
8270 SIM 1.4 dioxane <u>1</u> 1 L Amber				
8270 MOD 1.4 dioxane <u>1</u> 1 L Amber				
DUPLICATES / SPLITS / BLANKS? Y <u>N</u>				

GROUNDWATER SAMPLING INFORMATION

DATE: 11/2/11

TASK: 532.30

WELL ID: MW-34A

Time <u>9:25</u> Static DTW (ft below reference point) <u>142.13</u>	Screen <u>SV</u> Casing Volume (CV) (gallons) <u>48</u> <u>SV</u> 3 CV (gallons) <u>144</u>	Weather Conditions	Initials <u>AMB & DM</u>
Casing Total Depth (ft below reference point) <u>280</u>	Purging Device <u>ded pump</u> Sampling Device <u>ND pipe stand</u>	Time <u>9:30</u> Temp. <u>~73°</u>	Begin Purge <u>9:37</u> End Purge <u>9:45</u>
Screen-pump Water Column (feet) <u>80</u>	Pump: Depth (ft brp) <u>200'</u> Type <u>grindis</u> Voltage <u>240</u> HP	Skies <u>clear, sunny</u>	Gallons Purged <u>156</u> CVs Purged <u>3.3</u>
Casing Capacity (Diameter <u>4"</u>) (gallons per foot) <u>0.60</u>	Monitor Well Recharge Rate: Slow _____ Fast <u>X</u>	Wind (mph) <u>1-25</u> From <u>E-SE</u>	DTW (ft brp) <u>142.27</u> Time <u>9:53</u>

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	...FIELD PARAMETERS...						Pump Frequency Hz	COMMENTS
				Temp. (°C)	pH	EC (µS/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
937	PUMP	ON	143.96	21.7	7.30	1.182	-158.3	4.71	380	21.8 gpm 32 PSI	
938	143.96	22	0.5	21.7	7.30	1.182	-158.3	4.71	380		
939	144.50	68	1.4	21.48	7.30	1.188	-130.8	4.84	134	Slowed flow rate, valued back 17.5 GPM PSI	
941	144.32	90	1.9	21.54	7.30	1.188	-87.1	4.91	75	17.6 gpm 58 PSI	
943	144.54	120	2.5	21.55	7.30	1.186	-80.5	4.83	95	17.6 gpm	
945	144.55	156	3.3	21.55	7.30	1.184	-66.0	4.99	55	17.6 gpm	
946	NM	166	PUMP OFF								

SAMPLE COLLECTION SAMPLE TIME <u>9:45</u>	AIR MONITORING PID/FID ppm: VAULT NA BKGD NA BREATHING ZONE NA DISCHARGE WATER NA
ANALYSIS QUANTITY TYPE	NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)
8260B VOCs <u>3</u> 40 ml VOA	
8270 SIM 1.4 dioxane <u>1</u> 1 L Amber	
8270 MOD 1.4 dioxane <u>1</u> 1 L Amber	
DUPLICATES / SPLITS / BLANKS? Y <u>(N)</u>	

GROUNDWATER SAMPLING INFORMATION

DATE: 11/2/11

TASK: 532.30

WELL ID: MW-34B

Time 1004 Static DTW (ft below reference point) 146.49	screen SV Casing Volume (CV) (gallons) 46	SV (gallons) 137	Weather Conditions	Initials AMB & DM
Casing Total Depth (ft below reference point) 536	Purging Device cled pump	Sampling Device dead piston	Time 1005 Temp. ~79°	Begin Purge 1009 End Purge 1018
Water Column (feet) 76	Pump: Depth (ft brp) 460 Type grinder	Voltage 240 HP	Skies clear sunny	Gallons Purged 142 CVs Purged 3
Casing Capacity (Diameter 4" (gallons per foot) 4 SIM 80) 0.60	Monitor Well Recharge Rate: Slow	Fast X	Wind (mph) 1-25 From E-SE	DTW (ft brp) 146.77 Time 1022

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	...FIELD PARAMETERS...						Pump Frequency Hz	COMMENTS
				Temp. (°C)	pH	EC (µS/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
1009	PUMP ON										19.7 gpm 30 PSI
1010	148.42	19	0.4	23.79	7.40	1.076	-7.0	6.92	16		valve back flow 16.3 50 psi
1012	148.51	52	1.1	21.72	7.41	1.05	-145.1	4.75	850		16.3 50 psi
1014	148.68	79	1.7	21.83	7.42	1.018	-108.6	4.77	80		16.3 gpm
1016	148.77	113	2.5	21.86	7.43	1.010	-86.7	4.83	24		16.3 gpm
1018	148.78	142	3.1	21.88	7.43	1.009	-70.1	4.99	16		
1020	NM	183	PUMP OFF								

SAMPLE COLLECTION SAMPLE TIME 1018	AIR MONITORING PID/FID ppm: VAULT NA	BKGD NA	BREATHING ZONE NA	DISCHARGE WATER NA
ANALYSIS QUANTITY TYPE	NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)			
8260B VOCs 6 40 ml VOA				
8270 SIM 1.4 dioxane 2 1 L Amber				
8270 MOD 1.4 dioxane 2 1 L Amber				
DUPLICATES / SPLITS / BLANKS? (Y) N	MW-3400B (2), 10/38			

MW-34B

GROUNDWATER SAMPLING INFORMATION

DATE: 11/2/11

TASK: 532.30

WELL ID: MW-34C

Time <u>828</u> Static DTW (ft below reference point) <u>145.50</u>	Screen <u>SV</u> Casing Volume (CV) (gallons) <u>57.7</u>	SV (gallons) <u>173</u>	Weather Conditions	Initials AMB & DM
Casing Total Depth (ft below reference point) <u>576</u>	Purging Device <u>ded pump</u>	Sampling Device <u>ded ND</u>	Time <u>830</u> Temp. <u>~70°</u>	Begin Purge <u>851</u> End Purge <u>901</u>
Pump-Screen Water Column (feet) <u>96</u>	Pump: Depth (ft brp) <u>480</u>	Type <u>ground</u>	Skies <u>clear sunny</u>	Gallons Purged <u>179</u> CVs Purged <u>3.0</u>
Casing Capacity (Diameter <u>4</u> " (gallons per foot) <u>0.60</u>	Monitor Well Recharge Rate: Slow	Fast <u>X</u>	Wind (mph) <u>1-25</u> From <u>E-SE</u>	DTW (ft brp) <u>156.80R</u> Time <u>904</u>

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	...FIELD PARAMETERS...						Pump Frequency Hz	COMMENTS
				Temp. (C)	pH	EC (µS/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
851	PUMP ON										
853	NM	19	0.3	21.31	7.44	0.664	-224	0.31	58		19.1 gpm
855	172.82	64	1.1	21.79	8.24	0.495	-293.0	0.09	50		18.9 gpm 25 PSI 5 NTU
857	173.60	96	1.7	21.84	7.77	0.642	-243.9	0.07	8.9		18.8 gpm
859	174.08	140	2.4	21.85	7.65	0.656	-230.2	0.05	9.9		18.8 gpm
901	174.30	179	3.1	21.86	7.62	0.660	-225.7	0.04	7.5		18.8 gpm
903	NM	200	PUMP OFF								

SAMPLE COLLECTION SAMPLE TIME <u>901</u>	AIR MONITORING PID/FID ppm: VAULT NA	BKGD NA	BREATHING ZONE NA	DISCHARGE WATER NA
ANALYSIS QUANTITY TYPE	NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)			
8260B VOCs <u>3</u> 40 ml VOA	<u>Strong odor to water (rotten egg smell)</u>			
8270 SIM 1.4 dioxane <u>1</u> 1 L Amber				
8270 MOD 1.4 dioxane <u>1</u> 1 L Amber				
DUPLICATES / SPLITS / BLANKS? <u>Y</u>	<u>ducer pulled during sampling and purge</u>			

GROUNDWATER SAMPLING INFORMATION

DATE: 11/1/11

TASK: 532.30

WELL ID: MW-35A

Time <u>920</u> Static DTW (ft below reference point) <u>72.40</u>	Screen Casing Volume (CV) (gallons) <u>42</u> ^{SV} 3 CV (gallons) <u>126</u>	Weather Conditions	Initials AMB & DM
Casing Total Depth (ft below reference point) <u>470</u>	Purging Device <u>ded pump</u> Sampling Device <u>ded. ND</u>	Time <u>920</u> Temp. <u>~65°</u>	Begin Purge <u>946</u> End Purge <u>1003</u>
Pump- <u>Screen</u> Water Column (feet) <u>SCH 80</u>	Pump: Depth (ft brp) <u>400</u> Type <u>Grundfos</u> Voltage <u>HP</u>	Skies <u>Overcast</u>	Gallons Purged <u>~199</u> CVs Purged <u>4.7</u>
Casing Capacity (Diameter <u>4"</u>) (gallons per foot) <u>0.6</u>	Monitor Well Recharge Rate: Slow <u>Fast X</u>	Wind (mph) <u>1-2</u> From <u>SW</u>	DTW (ft brp) <u>108.4</u> Time <u>1013</u>

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	...FIELD PARAMETERS...						Pump Frequency Hz	COMMENTS
				Temp. (°C)	pH	EC (µS/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
946	Pump ON										
948	NM	23	0.5	20.03	7.22	0.890	-54.7	0.67	9.51		14 gpm
950	144.6	64.9	1.5	20.16	7.31	0.894	-198.5	1.57	8.25		13.2 gpm 8 psi
953	169.2	92.4	2.2	20.18	7.32	0.892	-196.8	1.42	6.87		12.6 gpm
955	180.35	134.2	2.7	20.20	7.36	0.887	-201.6	0.81	5.34		12.2 gallons purged ~ 116
957	187.2	136.4	3.2	20.23	7.36	0.905	-199.5	0.67	3.93		
1000	196.55	178.2	4.2	20.26	7.34	0.919	-194.5	0.68	6.94		11.5 gpm
1003	201.25	235.3	4.7	20.28	7.32	0.919	-189.1	0.71	5.39		11.5 gallons purged ~ 199
1005	NM	222.2	PUMP OFF								

SAMPLE COLLECTION SAMPLE TIME <u>1004</u>	AIR MONITORING PID/FID ppm: VAULT NA	BKGD NA	BREATHING ZONE NA	DISCHARGE WATER NA
ANALYSIS QUANTITY TYPE	NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)			
8260B VOCs <u>3</u> 40 ml VOA	<u>Purged over 3 casing volumes to compensate for drawdown losses.</u>			
8270 SIM 1,4 dioxane <u>1</u> 1 L Amber				
8270 MOD 1,4 dioxane <u>1</u> 1 L Amber				
DUPLICATES / SPLITS / BLANKS? <u>Y</u>	<u>Recer reset in well at 1016</u>			

GROUNDWATER SAMPLING INFORMATION

DATE: 11/1/11

TASK: 532.30

WELL ID: MW-35B

Time <u>1010</u> Static DTW (ft below reference point)	<u>80.68</u> Screen Casing Volume (CV) (gallons)	<u>207</u> ^{SV} 3 CV (gallons)	<u>621</u>	Weather Conditions	Initials <u>AMB & DM</u>
Casing Total Depth (ft below reference point)	<u>805</u>	Purging Device <u>Ded pump</u>	Sampling Device <u>Dedicated ND pipestand</u>	Time <u>1020</u> Temp. <u>~70°</u>	Begin Purge <u>1030</u> End Purge <u>1056</u>
<u>Screen-pump</u> Water Column (feet)	<u>345</u>	Pump: Depth (ft brp) <u>460'</u> Type <u>Grundfos</u>	Voltage <u>240</u> HP	Skies <u>Clear, Sunny</u>	Gallons Purged <u>658</u> CVs Purged <u>3.2</u>
Casing Capacity (Diameter <u>4"</u>) (gallons per foot)	<u>0.6</u>	Monitor Well Recharge Rate: Slow	Fast <u>X</u>	Wind (mph) <u>1-3</u> From <u>SW</u>	DTW (ft brp) <u>80.98</u> Time <u>1105</u>

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	...FIELD PARAMETERS...						Pump Frequency Hz	COMMENTS
				Temp. (°C)	pH	EC (µS/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
1030	PUMP	0.0								30psi	
1031	86.09	24.2	0.1	20.11	7.46	0.863	-278.0	0.05	11.1	24.9 agm	
1035	86.30	127.6	0.6	20.24	7.51	0.767	-252.1	0.04	4.31	24.9	
1039	86.41	239.8	1.2	20.38	7.48	0.835	-172.4	1.71	18.6	24.3	
1043	86.48	338.8	1.6	20.40	7.37	0.959	-131.4	1.55	13.5	25.2 30psi	
1047	86.53	436.1	2.1	20.40	7.37	0.981	-125.1	1.43 15.9%	12.6	25.1+MB 24.3 agm	
1051	86.54	536.8	2.6	20.41	7.37	0.991	-124.7	1.66	4.86	24.3 agm	
1056	86.55	657.8	3.2	20.41	7.37	1.000	-116.0	1.32	1.9		
1058	NM	716.1	PUMP OFF								

SAMPLE COLLECTION SAMPLE TIME <u>1056</u>	AIR MONITORING PID/FID ppm: VAULT NA	BKGD NA	BREATHING ZONE NA	DISCHARGE WATER NA
ANALYSIS QUANTITY TYPE	NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)			
8260B VOCs <u>3</u> 40 ml VOA	<u>Purged over 3 casings to compensate for drawdown losses</u>			
8270 SIM 1.4 dioxane <u>1</u> 1 L Amber				
8270 MOD 1.4 dioxane <u>0</u> 1 L Amber				
DUPLICATES / SPLITS / BLANKS? Y <u>(N)</u>	If yes, complete appropriate forms.			

GROUNDWATER SAMPLING INFORMATION

DATE: 11/1/11

TASK: 532.30

WELL ID: MW-35C

Time <u>1107</u> Static DTW (ft below reference point)	<u>84.89</u>	Screen Casing Volume (CV) (gallons) <u>SV 340</u>	3 CV (gallons) <u>SV 1044</u>	Weather Conditions	Initials <u>AMB & DM</u>
Casing Total Depth (ft below reference point)	<u>990</u>	Purging Device <u>Ded pump</u>	Sampling Device <u>ND pipestand</u>	Time <u>1100</u> Temp. <u>~72°</u>	Begin Purge <u>1154</u> End Purge <u>1240</u>
Screen - Pump for Column (feet)	<u>580</u>	Pump: Depth (ft brp) <u>1040</u> Type <u>Grindlog</u>	oltage <u>240</u> HP	Skies <u>Clear, Sunny</u>	Gallons Purged <u>1050</u> CVs Purged <u>30</u>
Casing Capacity (Diameter <u>4"</u>) (gallons per foot)	<u>0.6</u>	Monitor Well Recharge Rate: Slow	Fast <u>X</u>	Wind (mph) <u>1-3</u> From <u>SW</u>	DTW (ft brp) <u>85.42</u> Time <u>1243</u>

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	...FIELD PARAMETERS...						Pump Frequency Hz	COMMENTS
				Temp. (°C)	pH	EC (µS/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
1143	PUMP ON										PUMP OFF @ 1143
1154	PUMP ON										22.8 gpm
1155	88.38	35	0.1	20.10	7.34	0.879	22.3	1.65	1.4		35 gal 22.7 gpm 32 PSI
1202	88.72	191	0.5	20.40	7.31	0.865	1.6	1.44	6.12		22.9 gpm
1209	88.75	338	0.9	20.55	7.42	0.707	5.5	3.55	6.9		22.44 gpm
1216	88.76	505	1.5	20.59	7.47	0.703	12.7	3.61	6.5		
1223	88.82	680	2.0	20.59	7.47	0.703	14.5	3.83	8.4		23 gpm 32 PSI
1230	88.84	867	2.3	20.59	7.47	0.703	16.7	3.62	5.9		23 gpm
1240	88.87	1050	3.0	20.59	7.48	0.703	15.3	3.59	6.7		23 gpm
1241	NM	1070	PUMP OFF								

SAMPLE COLLECTION SAMPLE TIME <u>1240</u>	AIR MONITORING PID/FID ppm: VAULT NA	BKGD NA	BREATHING ZONE NA	DISCHARGE WATER NA
ANALYSIS QUANTITY TYPE	NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)			
8260B VOCs <u>3</u> 40 ml VOA				
8270 SIM 1,4 dioxane <u>1</u> 1 L Amber				
8270 MOD 1,4 dioxane <u>1</u> 1 L Amber				
DUPLICATES / SPLITS / BLANKS? Y <u>(N)</u>				

GROUNDWATER SAMPLING INFORMATION

DATE: 11/1/11

TASK: 532.30

WELL ID: EW-01

Time <u>1417</u> Static DTW (ft below reference point) <u>126.79</u>	Casing Volume (CV) (gallons) <u>45.0</u> 3 CV (gallons) <u>135</u>	Weather Conditions	Initials <u>AMB & DM</u>
Casing Total Depth (ft below reference point) <u>195</u>	Purging Device <u>ded pump</u> Sampling Device <u>ded sample port</u>	Time <u>1415</u> Temp. <u>~80°</u>	Begin Purge <u>1419</u> End Purge <u>1423</u>
Water Column (feet) <u>68.2</u>	Pump: Depth (ft brp) <u>NA</u> Type _____ Voltage _____ HP _____	Skies <u>Clear, sunny</u>	Gallons Purged <u>168</u> CVs Purged <u>3.7</u>
Casing Capacity (Diameter <u>4"</u>) (gallons per foot) <u>0.166</u>	Monitor Well Recharge Rate: Slow _____ Fast <u>X</u>	Wind (mph) <u>1-2</u> From <u>SW</u>	DTW (ft brp) <u>127.32</u> Time <u>1424</u>

Time	Depth to Water	Volume Purged (Gallons)	Casing Volumes Purged	...FIELD PARAMETERS...						Pump Frequency Hz	COMMENTS
				Temp. (°C)	pH	EC (µS/cm)	O.R.P. (mV)	D.O. (mg/L)	Turbidity (NTU)		
1419	PUMP ON										273106 12.12 gm
											273243
1423	NM	168	3.7	22.41	7.27	1.105	78.8	8.34	4.8		273274
1445	PUMP OFF										

SAMPLE COLLECTION SAMPLE TIME <u>1423</u>	AIR MONITORING PID/FID ppm: VAULT NA BKGD NA BREATHING ZONE NA DISCHARGE WATER NA
ANALYSIS QUANTITY TYPE	NOTES (Color, odor, sand and silt content, factors possibly affecting samples, condition of vault, wellhead, sampling apparatus, etc.)
8260B VOCs <u>3</u> 40 ml VOA	
8270 SIM 1,4 dioxane <u>1</u> 1 L Amber	
8270 MOD 1,4 dioxane <u>1</u> 1 L Amber	
DUPLICATES / SPLITS / BLANKS? Y <u>N</u>	

APPENDIX B
LABORATORY ANALYTICAL REPORTS

GROUNDWATER SAMPLING ANALYTICAL RESULTS

November 03, 2011



Steve Netto
Hargis & Associates, Inc.
9171 Town Centre Drive, Suite 375
San Diego, CA 92122
TEL: (619) 249-3166
FAX: cell

ELAP No.: 1838
NELAP No.: 02107CA
CSDLAC No.: 10196
ORELAP No.: CA300003

Workorder No.: 120593

RE: RAYTHEON MAIN, 532.30

Attention: Steve Netto

Enclosed are the results for sample(s) received on November 01, 2011 by Advanced Technology Laboratories . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (562)989-4045 if I can be of further assistance to your company.

Sincerely,

Eddie F. Rodriguez
Laboratory Director

The cover letter is an integral part of this analytical report. This Laboratory Report cannot be reproduced in part or in its entirety without written permission from the client and Advanced Technology Laboratories.



Advanced Technology Laboratories

ANALYTICAL RESULTS

Print Date: 03-Nov-11

CLIENT: Hargis & Associates, Inc.
Lab Order: 120593
Project: RAYTHEON MAIN, 532.30
Lab ID: 120593-001A

Client Sample ID: MW-21
Collection Date: 11/1/2011 2:42:00 PM
Matrix: GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

RunID:	MS11_111103A	QC Batch:	A11VW214	PrepDate:	Analyst:	BD
1,1,1,2-Tetrachloroethane	ND	2.5	µg/L	5	11/3/2011 01:18 PM	
1,1,1-Trichloroethane	ND	2.5	µg/L	5	11/3/2011 01:18 PM	
1,1,2,2-Tetrachloroethane	ND	2.5	µg/L	5	11/3/2011 01:18 PM	
1,1,2-Trichloroethane	11	2.5	µg/L	5	11/3/2011 01:18 PM	
1,1-Dichloroethane	29	2.5	µg/L	5	11/3/2011 01:18 PM	
1,1-Dichloroethene	1600	50	µg/L	100	11/2/2011 07:55 PM	
1,1-Dichloropropene	ND	2.5	µg/L	5	11/3/2011 01:18 PM	
1,2,3-Trichlorobenzene	ND	2.5	µg/L	5	11/3/2011 01:18 PM	
1,2,3-Trichloropropane	ND	2.5	µg/L	5	11/3/2011 01:18 PM	
1,2,4-Trichlorobenzene	ND	2.5	µg/L	5	11/3/2011 01:18 PM	
1,2,4-Trimethylbenzene	ND	2.5	µg/L	5	11/3/2011 01:18 PM	
1,2-Dibromo-3-chloropropane	ND	2.5	µg/L	5	11/3/2011 01:18 PM	
1,2-Dibromoethane	ND	2.5	µg/L	5	11/3/2011 01:18 PM	
1,2-Dichlorobenzene	ND	2.5	µg/L	5	11/3/2011 01:18 PM	
1,2-Dichloroethane	4.9	2.5	µg/L	5	11/3/2011 01:18 PM	
1,2-Dichloropropane	ND	2.5	µg/L	5	11/3/2011 01:18 PM	
1,3,5-Trimethylbenzene	ND	2.5	µg/L	5	11/3/2011 01:18 PM	
1,3-Dichlorobenzene	ND	2.5	µg/L	5	11/3/2011 01:18 PM	
1,3-Dichloropropane	ND	2.5	µg/L	5	11/3/2011 01:18 PM	
1,4-Dichlorobenzene	ND	2.5	µg/L	5	11/3/2011 01:18 PM	
2,2-Dichloropropane	ND	2.5	µg/L	5	11/3/2011 01:18 PM	
2-Chlorotoluene	ND	2.5	µg/L	5	11/3/2011 01:18 PM	
4-Chlorotoluene	ND	2.5	µg/L	5	11/3/2011 01:18 PM	
4-Isopropyltoluene	ND	2.5	µg/L	5	11/3/2011 01:18 PM	
Benzene	ND	2.5	µg/L	5	11/3/2011 01:18 PM	
Bromobenzene	ND	2.5	µg/L	5	11/3/2011 01:18 PM	
Bromodichloromethane	ND	2.5	µg/L	5	11/3/2011 01:18 PM	
Bromoform	ND	2.5	µg/L	5	11/3/2011 01:18 PM	
Bromomethane	ND	2.5	µg/L	5	11/3/2011 01:18 PM	
Carbon tetrachloride	ND	2.5	µg/L	5	11/3/2011 01:18 PM	
Chlorobenzene	ND	2.5	µg/L	5	11/3/2011 01:18 PM	
Chloroethane	ND	2.5	µg/L	5	11/3/2011 01:18 PM	
Chloroform	ND	2.5	µg/L	5	11/3/2011 01:18 PM	
Chloromethane	ND	2.5	µg/L	5	11/3/2011 01:18 PM	
cis-1,2-Dichloroethene	ND	2.5	µg/L	5	11/3/2011 01:18 PM	

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



Advanced Technology
Laboratories

3275 Walnut Avenue, Signal Hill, CA 90755 Tel: 562.989.4045 Fax: 562.989.4040

Advanced Technology Laboratories

ANALYTICAL RESULTS

Print Date: 03-Nov-11

CLIENT: Hargis & Associates, Inc.
Lab Order: 120593
Project: RAYTHEON MAIN, 532.30
Lab ID: 120593-001A

Client Sample ID: MW-21
Collection Date: 11/1/2011 2:42:00 PM
Matrix: GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

RunID:	MS11_111103A	QC Batch:	A11VW214	PrepDate:	Analyst:	BD
cis-1,3-Dichloropropene	ND	2.5	µg/L	5	11/3/2011 01:18 PM	
Dibromochloromethane	ND	2.5	µg/L	5	11/3/2011 01:18 PM	
Dibromomethane	ND	2.5	µg/L	5	11/3/2011 01:18 PM	
Dichlorodifluoromethane	ND	2.5	µg/L	5	11/3/2011 01:18 PM	
Ethylbenzene	ND	2.5	µg/L	5	11/3/2011 01:18 PM	
Hexachlorobutadiene	ND	2.5	µg/L	5	11/3/2011 01:18 PM	
Isopropylbenzene	ND	2.5	µg/L	5	11/3/2011 01:18 PM	
m,p-Xylene	ND	5.0	µg/L	5	11/3/2011 01:18 PM	
Methylene chloride	ND	5.0	µg/L	5	11/3/2011 01:18 PM	
n-Butylbenzene	ND	2.5	µg/L	5	11/3/2011 01:18 PM	
n-Propylbenzene	ND	2.5	µg/L	5	11/3/2011 01:18 PM	
Naphthalene	ND	2.5	µg/L	5	11/3/2011 01:18 PM	
o-Xylene	ND	2.5	µg/L	5	11/3/2011 01:18 PM	
sec-Butylbenzene	ND	2.5	µg/L	5	11/3/2011 01:18 PM	
Styrene	ND	2.5	µg/L	5	11/3/2011 01:18 PM	
tert-Butylbenzene	ND	2.5	µg/L	5	11/3/2011 01:18 PM	
Tetrachloroethene	5.6	2.5	µg/L	5	11/3/2011 01:18 PM	
Toluene	ND	2.5	µg/L	5	11/3/2011 01:18 PM	
trans-1,2-Dichloroethene	ND	2.5	µg/L	5	11/3/2011 01:18 PM	
Trichloroethene	22	2.5	µg/L	5	11/3/2011 01:18 PM	
Trichlorofluoromethane	ND	2.5	µg/L	5	11/3/2011 01:18 PM	
Vinyl chloride	ND	2.5	µg/L	5	11/3/2011 01:18 PM	
Surr: 1,2-Dichloroethane-d4	123	70-130	%REC	5	11/3/2011 01:18 PM	
Surr: 1,2-Dichloroethane-d4	125	70-130	%REC	100	11/2/2011 07:55 PM	
Surr: 4-Bromofluorobenzene	98.5	70-130	%REC	5	11/3/2011 01:18 PM	
Surr: 4-Bromofluorobenzene	99.0	70-130	%REC	100	11/2/2011 07:55 PM	
Surr: Dibromofluoromethane	114	70-130	%REC	5	11/3/2011 01:18 PM	
Surr: Dibromofluoromethane	115	70-130	%REC	100	11/2/2011 07:55 PM	
Surr: Toluene-d8	112	70-130	%REC	100	11/2/2011 07:55 PM	
Surr: Toluene-d8	111	70-130	%REC	5	11/3/2011 01:18 PM	

Qualifiers: B Analyte detected in the associated Method Blank
 E Value above quantitation range
 H Holding times for preparation or analysis exceeded
 ND Not Detected at the Reporting Limit
 S Spike/Surrogate outside of limits due to matrix interference
 Results are wet unless otherwise specified
 DO Surrogate Diluted Out



Advanced Technology
Laboratories

3275 Walnut Avenue, Signal Hill, CA 90755 Tel: 562.989.4045 Fax: 562.989.4040

Advanced Technology Laboratories

ANALYTICAL RESULTS
 Print Date: 03-Nov-11

CLIENT: Hargis & Associates, Inc.
Lab Order: 120593
Project: RAYTHEON MAIN, 532.30
Lab ID: 120593-001B

Client Sample ID: MW-21
Collection Date: 11/1/2011 2:42:00 PM
Matrix: GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
1,4-DIOXANE BY GC/MS: ISOTOPE DILUTION TECHNIQUE						
	EPA 3510C		EPA 8270C(M)			
RunID: MS 13_111102A	QC Batch: 76687				PrepDate: 11/1/2011	Analyst: JSD
1,4-Dioxane	390	2.0		µg/L	1	11/2/2011 04:53 PM
Surr: 1,2-Dichlorobenzene-d4	79.8	46-97		%REC	1	11/2/2011 04:53 PM
Surr: 2,4,6-Tribromophenol	76.8	59-124		%REC	1	11/2/2011 04:53 PM
Surr: 2-Chlorophenol-d4	70.4	49-93		%REC	1	11/2/2011 04:53 PM
Surr: 2-Fluorobiphenyl	80.7	57-107		%REC	1	11/2/2011 04:53 PM
Surr: 2-Fluorophenol	40.2	27-60		%REC	1	11/2/2011 04:53 PM
Surr: 4-Terphenyl-d14	78.0	69-132		%REC	1	11/2/2011 04:53 PM
Surr: Nitrobenzene-d5	80.8	52-107		%REC	1	11/2/2011 04:53 PM
Surr: Phenol-d5	28.5	15-50		%REC	1	11/2/2011 04:53 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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CLIENT: Hargis & Associates, Inc.
Work Order: 120593
Project: RAYTHEON MAIN, 532.30

ANALYTICAL QC SUMMARY REPORT

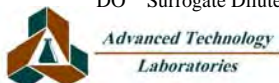
TestCode: 8260_WP_LL

Sample ID: A111102LCS1	SampType: LCS	TestCode: 8260_WP_LL	Units: µg/L	Prep Date:	RunNo: 138119						
Client ID: LCSW	Batch ID: A11VW213	TestNo: EPA 8260B	Analysis Date: 11/2/2011	SeqNo: 2270294							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	16.260	0.50	20.00	0	81.3	70	130				
Benzene	35.570	0.50	40.00	0	88.9	70	130				
Chlorobenzene	19.160	0.50	20.00	0	95.8	70	130				
MTBE	20.280	0.50	20.00	0	101	70	130				
Toluene	37.660	0.50	40.00	0	94.2	70	130				
Trichloroethene	19.040	0.50	20.00	0	95.2	70	130				
Surr: 1,2-Dichloroethane-d4	26.740		25.00		107	70	130				
Surr: 4-Bromofluorobenzene	26.200		25.00		105	70	130				
Surr: Dibromofluoromethane	25.210		25.00		101	70	130				
Surr: Toluene-d8	26.470		25.00		106	70	130				

Sample ID: A111102LCSD	SampType: LCSD	TestCode: 8260_WP_LL	Units: µg/L	Prep Date:	RunNo: 138119						
Client ID: LCSS02	Batch ID: A11VW213	TestNo: EPA 8260B	Analysis Date: 11/2/2011	SeqNo: 2270295							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	15.010	0.50	20.00	0	75.0	70	130	16.26	7.99	20	
Benzene	35.610	0.50	40.00	0	89.0	70	130	35.57	0.112	20	
Chlorobenzene	18.950	0.50	20.00	0	94.8	70	130	19.16	1.10	20	
MTBE	20.320	0.50	20.00	0	102	70	130	20.28	0.197	20	
Toluene	37.610	0.50	40.00	0	94.0	70	130	37.66	0.133	20	
Trichloroethene	18.470	0.50	20.00	0	92.4	70	130	19.04	3.04	20	
Surr: 1,2-Dichloroethane-d4	27.290		25.00		109	70	130		0	0	
Surr: 4-Bromofluorobenzene	26.490		25.00		106	70	130		0	0	
Surr: Dibromofluoromethane	25.550		25.00		102	70	130		0	0	
Surr: Toluene-d8	27.240		25.00		109	70	130		0	0	

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



CLIENT: Hargis & Associates, Inc.
Work Order: 120593
Project: RAYTHEON MAIN, 532.30

ANALYTICAL QC SUMMARY REPORT

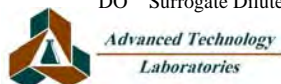
TestCode: 8260_WP_LL

Sample ID: A111102MB2	SampType: MBLK	TestCode: 8260_WP_LL	Units: µg/L	Prep Date:	RunNo: 138119						
Client ID: PBW	Batch ID: A11VW213	TestNo: EPA 8260B		Analysis Date: 11/2/2011	SeqNo: 2270296						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

1,1,1,2-Tetrachloroethane	ND	0.50									
1,1,1-Trichloroethane	ND	0.50									
1,1,2,2-Tetrachloroethane	ND	0.50									
1,1,2-Trichloroethane	ND	0.50									
1,1-Dichloroethane	ND	0.50									
1,1-Dichloroethene	ND	0.50									
1,1-Dichloropropene	ND	0.50									
1,2,3-Trichlorobenzene	ND	0.50									
1,2,3-Trichloropropane	ND	0.50									
1,2,4-Trichlorobenzene	ND	0.50									
1,2,4-Trimethylbenzene	ND	0.50									
1,2-Dibromo-3-chloropropane	ND	0.50									
1,2-Dibromoethane	ND	0.50									
1,2-Dichlorobenzene	ND	0.50									
1,2-Dichloroethane	ND	0.50									
1,2-Dichloropropane	ND	0.50									
1,3,5-Trimethylbenzene	ND	0.50									
1,3-Dichlorobenzene	ND	0.50									
1,3-Dichloropropane	ND	0.50									
1,4-Dichlorobenzene	ND	0.50									
2,2-Dichloropropane	ND	0.50									
2-Chlorotoluene	ND	0.50									
4-Chlorotoluene	ND	0.50									
4-Isopropyltoluene	ND	0.50									
Benzene	ND	0.50									
Bromobenzene	ND	0.50									
Bromodichloromethane	ND	0.50									
Bromoform	ND	0.50									
Bromomethane	ND	0.50									
Carbon tetrachloride	ND	0.50									

Qualifiers:

B Analyte detected in the associated Method Blank	E Value above quantitation range	H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit	R RPD outside accepted recovery limits	S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out	Calculations are based on raw values	



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CLIENT: Hargis & Associates, Inc.
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ANALYTICAL QC SUMMARY REPORT

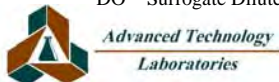
TestCode: 8260_WP_LL

Sample ID: A111102MB2	SampType: MBLK	TestCode: 8260_WP_LL	Units: µg/L	Prep Date:	RunNo: 138119						
Client ID: PBW	Batch ID: A11VW213	TestNo: EPA 8260B		Analysis Date: 11/2/2011	SeqNo: 2270296						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chlorobenzene	ND	0.50									
Chloroethane	ND	0.50									
Chloroform	ND	0.50									
Chloromethane	ND	0.50									
cis-1,2-Dichloroethene	ND	0.50									
cis-1,3-Dichloropropene	ND	0.50									
Dibromochloromethane	ND	0.50									
Dibromomethane	ND	0.50									
Dichlorodifluoromethane	ND	0.50									
Ethylbenzene	ND	0.50									
Hexachlorobutadiene	ND	0.50									
Isopropylbenzene	ND	0.50									
m,p-Xylene	ND	1.0									
Methylene chloride	ND	1.0									
n-Butylbenzene	ND	0.50									
n-Propylbenzene	ND	0.50									
Naphthalene	ND	0.50									
o-Xylene	ND	0.50									
sec-Butylbenzene	ND	0.50									
Styrene	ND	0.50									
tert-Butylbenzene	ND	0.50									
Tetrachloroethene	ND	0.50									
Toluene	ND	0.50									
trans-1,2-Dichloroethene	ND	0.50									
Trichloroethene	ND	0.50									
Trichlorofluoromethane	ND	0.50									
Vinyl chloride	ND	0.50									
Surr: 1,2-Dichloroethane-d4	28.420		25.00		114	70	130				
Surr: 4-Bromofluorobenzene	24.990		25.00		100	70	130				
Surr: Dibromofluoromethane	27.060		25.00		108	70	130				

Qualifiers:

B Analyte detected in the associated Method Blank	E Value above quantitation range	H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit	R RPD outside accepted recovery limits	S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out	Calculations are based on raw values	



CLIENT: Hargis & Associates, Inc.
Work Order: 120593
Project: RAYTHEON MAIN, 532.30

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_LL

Sample ID: A111102MB2	SampType: MBLK	TestCode: 8260_WP_LL	Units: µg/L	Prep Date:	RunNo: 138119						
Client ID: PBW	Batch ID: A11VW213	TestNo: EPA 8260B		Analysis Date: 11/2/2011	SeqNo: 2270296						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: Toluene-d8	27.340		25.00		109	70	130				

Qualifiers:

- | | | | | | |
|----|---|---|--------------------------------------|---|--|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |



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ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_LL

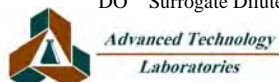
Sample ID: A111103LCS1		SampType: LCS		TestCode: 8260_WP_LL		Units: µg/L		Prep Date:		RunNo: 138126	
Client ID: LCSW		Batch ID: A11VW214		TestNo: EPA 8260B		Analysis Date: 11/3/2011				SeqNo: 2270378	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	16.780	0.50	20.00	0	83.9	70	130				
Benzene	37.140	0.50	40.00	0	92.8	70	130				
Chlorobenzene	19.990	0.50	20.00	0	100	70	130				
MTBE	20.720	0.50	20.00	0	104	70	130				
Toluene	39.060	0.50	40.00	0	97.6	70	130				
Trichloroethene	19.630	0.50	20.00	0	98.2	70	130				
Surr: 1,2-Dichloroethane-d4	29.400		25.00		118	70	130				
Surr: 4-Bromofluorobenzene	25.890		25.00		104	70	130				
Surr: Dibromofluoromethane	27.110		25.00		108	70	130				
Surr: Toluene-d8	27.780		25.00		111	70	130				

Sample ID: A111103LCSD		SampType: LCSD		TestCode: 8260_WP_LL		Units: µg/L		Prep Date:		RunNo: 138126	
Client ID: LCSS02		Batch ID: A11VW214		TestNo: EPA 8260B		Analysis Date: 11/3/2011				SeqNo: 2270379	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	15.890	0.50	20.00	0	79.4	70	130	16.78	5.45	20	
Benzene	36.040	0.50	40.00	0	90.1	70	130	37.14	3.01	20	
Chlorobenzene	19.030	0.50	20.00	0	95.2	70	130	19.99	4.92	20	
MTBE	20.650	0.50	20.00	0	103	70	130	20.72	0.338	20	
Toluene	37.650	0.50	40.00	0	94.1	70	130	39.06	3.68	20	
Trichloroethene	18.580	0.50	20.00	0	92.9	70	130	19.63	5.50	20	
Surr: 1,2-Dichloroethane-d4	29.080		25.00		116	70	130		0	0	
Surr: 4-Bromofluorobenzene	25.450		25.00		102	70	130		0	0	
Surr: Dibromofluoromethane	26.820		25.00		107	70	130		0	0	
Surr: Toluene-d8	27.900		25.00		112	70	130		0	0	

Sample ID: A111103MB2		SampType: MBLK		TestCode: 8260_WP_LL		Units: µg/L		Prep Date:		RunNo: 138126	
Client ID: PBW		Batch ID: A11VW214		TestNo: EPA 8260B		Analysis Date: 11/3/2011				SeqNo: 2270380	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



CLIENT: Hargis & Associates, Inc.
Work Order: 120593
Project: RAYTHEON MAIN, 532.30

ANALYTICAL QC SUMMARY REPORT

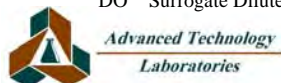
TestCode: 8260_WP_LL

Sample ID: A111103MB2	SampType: MBLK	TestCode: 8260_WP_LL	Units: µg/L	Prep Date:	RunNo: 138126						
Client ID: PBW	Batch ID: A11VW214	TestNo: EPA 8260B		Analysis Date: 11/3/2011	SeqNo: 2270380						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

1,1,1,2-Tetrachloroethane	ND	0.50									
1,1,1-Trichloroethane	ND	0.50									
1,1,2,2-Tetrachloroethane	ND	0.50									
1,1,2-Trichloroethane	ND	0.50									
1,1-Dichloroethane	ND	0.50									
1,1-Dichloroethene	ND	0.50									
1,1-Dichloropropene	ND	0.50									
1,2,3-Trichlorobenzene	ND	0.50									
1,2,3-Trichloropropane	ND	0.50									
1,2,4-Trichlorobenzene	ND	0.50									
1,2,4-Trimethylbenzene	ND	0.50									
1,2-Dibromo-3-chloropropane	ND	0.50									
1,2-Dibromoethane	ND	0.50									
1,2-Dichlorobenzene	ND	0.50									
1,2-Dichloroethane	ND	0.50									
1,2-Dichloropropane	ND	0.50									
1,3,5-Trimethylbenzene	ND	0.50									
1,3-Dichlorobenzene	ND	0.50									
1,3-Dichloropropane	ND	0.50									
1,4-Dichlorobenzene	ND	0.50									
2,2-Dichloropropane	ND	0.50									
2-Chlorotoluene	ND	0.50									
4-Chlorotoluene	ND	0.50									
4-Isopropyltoluene	ND	0.50									
Benzene	ND	0.50									
Bromobenzene	ND	0.50									
Bromodichloromethane	ND	0.50									
Bromoform	ND	0.50									
Bromomethane	ND	0.50									
Carbon tetrachloride	ND	0.50									

Qualifiers:

B Analyte detected in the associated Method Blank	E Value above quantitation range	H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit	R RPD outside accepted recovery limits	S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out	Calculations are based on raw values	



CLIENT: Hargis & Associates, Inc.
Work Order: 120593
Project: RAYTHEON MAIN, 532.30

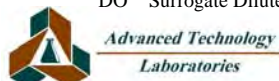
ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_LL

Sample ID: A111103MB2	SampType: MBLK	TestCode: 8260_WP_LL	Units: µg/L	Prep Date:	RunNo: 138126						
Client ID: PBW	Batch ID: A11VW214	TestNo: EPA 8260B	Analysis Date: 11/3/2011	SeqNo: 2270380							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chlorobenzene	ND	0.50									
Chloroethane	ND	0.50									
Chloroform	ND	0.50									
Chloromethane	ND	0.50									
cis-1,2-Dichloroethene	ND	0.50									
cis-1,3-Dichloropropene	ND	0.50									
Dibromochloromethane	ND	0.50									
Dibromomethane	ND	0.50									
Dichlorodifluoromethane	ND	0.50									
Ethylbenzene	ND	0.50									
Hexachlorobutadiene	ND	0.50									
Isopropylbenzene	ND	0.50									
m,p-Xylene	ND	1.0									
Methylene chloride	ND	1.0									
n-Butylbenzene	ND	0.50									
n-Propylbenzene	ND	0.50									
Naphthalene	ND	0.50									
o-Xylene	ND	0.50									
sec-Butylbenzene	ND	0.50									
Styrene	ND	0.50									
tert-Butylbenzene	ND	0.50									
Tetrachloroethene	ND	0.50									
Toluene	ND	0.50									
trans-1,2-Dichloroethene	ND	0.50									
Trichloroethene	ND	0.50									
Trichlorofluoromethane	ND	0.50									
Vinyl chloride	ND	0.50									
Surr: 1,2-Dichloroethane-d4	29.910		25.00		120	70	130				
Surr: 4-Bromofluorobenzene	24.670		25.00		98.7	70	130				
Surr: Dibromofluoromethane	28.260		25.00		113	70	130				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



CLIENT: Hargis & Associates, Inc.
Work Order: 120593
Project: RAYTHEON MAIN, 532.30

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_LL

Sample ID: A111103MB2	SampType: MBLK	TestCode: 8260_WP_LL	Units: µg/L	Prep Date:	RunNo: 138126						
Client ID: PBW	Batch ID: A11VW214	TestNo: EPA 8260B		Analysis Date: 11/3/2011	SeqNo: 2270380						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: Toluene-d8	27.740		25.00		111	70	130				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: Hargis & Associates, Inc.
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Project: RAYTHEON MAIN, 532.30

ANALYTICAL QC SUMMARY REPORT

TestCode: 8270_Dioxane_W

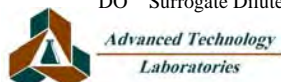
Sample ID: MB-76687	SampType: MBLK	TestCode: 8270_Dioxan	Units: µg/L	Prep Date: 11/1/2011	RunNo: 138114						
Client ID: PBW	Batch ID: 76687	TestNo: EPA 8270C(M EPA 3510C)		Analysis Date: 11/2/2011	SeqNo: 2270206						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,4-Dioxane	ND	2.0									
Surr: 1,2-Dichlorobenzene-d4	75.880		100.0		75.9	46	97				
Surr: 2,4,6-Tribromophenol	79.350		100.0		79.4	59	124				
Surr: 2-Chlorophenol-d4	65.820		100.0		65.8	49	93				
Surr: 2-Fluorobiphenyl	79.270		100.0		79.3	57	107				
Surr: 2-Fluorophenol	35.470		100.0		35.5	27	60				
Surr: 4-Terphenyl-d14	83.270		100.0		83.3	69	132				
Surr: Nitrobenzene-d5	76.230		100.0		76.2	52	107				
Surr: Phenol-d5	25.380		100.0		25.4	15	50				

Sample ID: LCS-76687	SampType: LCS	TestCode: 8270_Dioxan	Units: µg/L	Prep Date: 11/1/2011	RunNo: 138114						
Client ID: LCSW	Batch ID: 76687	TestNo: EPA 8270C(M EPA 3510C)		Analysis Date: 11/2/2011	SeqNo: 2270207						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,4-Dioxane	95.430	2.0	100.0	0	95.4	70	130				
Surr: 1,2-Dichlorobenzene-d4	70.420		100.0		70.4	46	97				
Surr: 2,4,6-Tribromophenol	87.430		100.0		87.4	59	124				
Surr: 2-Chlorophenol-d4	63.570		100.0		63.6	49	93				
Surr: 2-Fluorobiphenyl	81.340		100.0		81.3	57	107				
Surr: 2-Fluorophenol	34.140		100.0		34.1	27	60				
Surr: 4-Terphenyl-d14	89.180		100.0		89.2	69	132				
Surr: Nitrobenzene-d5	76.120		100.0		76.1	52	107				
Surr: Phenol-d5	26.870		100.0		26.9	15	50				

Sample ID: LCSD-76687	SampType: LCSD	TestCode: 8270_Dioxan	Units: µg/L	Prep Date: 11/1/2011	RunNo: 138114						
Client ID: LCSS02	Batch ID: 76687	TestNo: EPA 8270C(M EPA 3510C)		Analysis Date: 11/2/2011	SeqNo: 2270208						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,4-Dioxane	100.130	2.0	100.0	0	100	70	130	95.43	4.81	20	
Surr: 1,2-Dichlorobenzene-d4	72.930		100.0		72.9	46	97		0	0	

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



CLIENT: Hargis & Associates, Inc.
Work Order: 120593
Project: RAYTHEON MAIN, 532.30

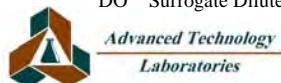
ANALYTICAL QC SUMMARY REPORT

TestCode: 8270_Dioxane_W


Sample ID: LCSD-76687	SampType: LCSD	TestCode: 8270_Dioxan	Units: µg/L	Prep Date: 11/1/2011	RunNo: 138114						
Client ID: LCSS02	Batch ID: 76687	TestNo: EPA 8270C(M EPA 3510C		Analysis Date: 11/2/2011	SeqNo: 2270208						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: 2,4,6-Tribromophenol	89.740		100.0		89.7	59	124		0	0	
Surr: 2-Chlorophenol-d4	67.490		100.0		67.5	49	93		0	0	
Surr: 2-Fluorobiphenyl	84.180		100.0		84.2	57	107		0	0	
Surr: 2-Fluorophenol	38.000		100.0		38.0	27	60		0	0	
Surr: 4-Terphenyl-d14	95.790		100.0		95.8	69	132		0	0	
Surr: Nitrobenzene-d5	78.480		100.0		78.5	52	107		0	0	
Surr: Phenol-d5	29.000		100.0		29.0	15	50		0	0	

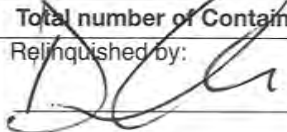
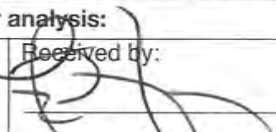
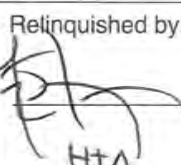
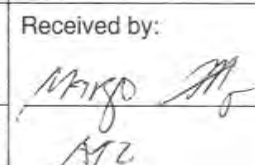
Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST FORM

PROJECT NAME RAYTHEON MAIN				PROJECT No./TASK No. 532.30				SAMPLE CONTAINERS		ANALYSIS REQUESTED		ESTIMATED CONCENTRATION RANGE (ppb) FOR VOAS		SPECIAL HANDLING		LABORATORY INFORMATION	
PROJECT MANAGER Chris Ross				Phone No. 858-455-6500												Exova ATL RACHELLE ALADA	
QA MANAGER Steve Netto				Fax No. 858-455-6533													
SAMPLER (SIGNATURE) 				SAMPLER (PRINTED) Amanda Beam Dan Mora													
LAB ID	SAMPLE ID	SAMPLE COLLECTION		MATRIX			PRESERVATION			40 ml VOA 1 L Amber	8260 VOCs 8270 SIM 1,4-Dioxane 8270 MND 1,4-Dioxane	ESTIMATED CONCENTRATION RANGE (ppb) FOR VOAS			Standard TAT Rush results (48 hrs. TAT)		REMARKS
		Date	Time	Soil	Ground-water	Surface water	Lab H2O	HCl	HNO3			NaOH	H2SO4	Ice			
	MW-21	11/1/11	1442	X			X			X				X	X		Cross replace
	↓	↓	1442	X					1	X	X			X	X		TE-11011 FROM OTHER COC FOR TASK # 992.30
Total number of Containers per analysis:										31	Total No. of Containers: 4						

Relinquished by: 				Date: <u>11/1/11</u>		Received by: 				Date: <u>11/1/11</u>		INSTRUCTIONS 1. Fill out form completely except for shaded areas (lab use only); sign only after verified for completeness. 2. Complete in ballpoint pen. Draw one line through errors, initial and date correction. 3. Indicate number of sample containers in analysis request space; indicate choice with √ or x. 4. Note applicable preservatives, special instructions, and deviations from typical environmental samples. 5. Consult project QA documents for specific instructions.				Shipment Method: <u>Courier/Drop off</u>			
Company: <u>HFA, INC</u>				Time: <u>14:56</u>		Company: <u>HFA</u>				Time: <u>14:56</u>						<input checked="" type="checkbox"/> 9171 TOWNE CENTRE DRIVE, SUITE 375 SAN DIEGO, CA 92122 (858) 455-6500 <input type="checkbox"/> 1640 SOUTH STAPLEY DRIVE, SUITE 124 MESA, AZ 85204 (480) 345-0888 <input type="checkbox"/> 1820 EAST RIVER ROAD, SUITE 220 TUCSON, AZ 85718 (520) 881-7300			
Relinquished by: 				Date: <u>11/1/11</u>		Received by: 				Date: <u>11/1/11</u>		Sample Receipt: <input type="checkbox"/> No. of containers correct <input type="checkbox"/> received good condition/cold <input type="checkbox"/> custody seals secure <input type="checkbox"/> conforms to COC document				Send invoice to San Diego, CA Attn: Accounts Payable			
Company: <u>HFA</u>				Time: <u>16:00</u>		Company: <u>ATL</u>				Time: <u>16:00</u>									

November 16, 2011



Steve Netto
Hargis & Associates, Inc.
9171 Town Centre Drive, Suite 375
San Diego, CA 92122
TEL: (619) 249-3166
FAX: cell

ELAP No.: 1838
NELAP No.: 02107CA
CSDLAC No.: 10196
ORELAP No.: CA300003

Workorder No.: 120606

RE: RAYTHEON MAIN, 532.30


Attention: Steve Netto

Enclosed are the results for sample(s) received on November 01, 2011 by Advanced Technology Laboratories . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (562)989-4045 if I can be of further assistance to your company.

Sincerely,


Eddie F. Rodriguez
Laboratory Director

The cover letter and the case narrative are an integral part of this analytical report and cannot be reproduced in part or in its entirety without written permission from the client and Advanced Technology Laboratories.



CLIENT: Hargis & Associates, Inc.
Project: RAYTHEON MAIN, 532.30
Lab Order: 120606

CASE NARRATIVE

Analytical Comments for EPA 8260B

Sample 120606-005A, surrogate recovery biased high possibly due to matrix interferences.



Advanced Technology Laboratories

ANALYTICAL RESULTS

Print Date: 16-Nov-11

CLIENT: Hargis & Associates, Inc.
Lab Order: 120606
Project: RAYTHEON MAIN, 532.30
Lab ID: 120606-001A

Client Sample ID: TB-110111
Collection Date: 11/1/2011 7:00:00 AM
Matrix: GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

RunID:	MS11_111103A	QC Batch:	A11VW214	PrepDate:	Analyst: BD
1,1,1,2-Tetrachloroethane	ND	0.50	µg/L	1	11/3/2011 07:50 PM
1,1,1-Trichloroethane	ND	0.50	µg/L	1	11/3/2011 07:50 PM
1,1,2,2-Tetrachloroethane	ND	0.50	µg/L	1	11/3/2011 07:50 PM
1,1,2-Trichloroethane	ND	0.50	µg/L	1	11/3/2011 07:50 PM
1,1-Dichloroethane	ND	0.50	µg/L	1	11/3/2011 07:50 PM
1,1-Dichloroethene	ND	0.50	µg/L	1	11/3/2011 07:50 PM
1,1-Dichloropropene	ND	0.50	µg/L	1	11/3/2011 07:50 PM
1,2,3-Trichlorobenzene	ND	0.50	µg/L	1	11/3/2011 07:50 PM
1,2,3-Trichloropropane	ND	0.50	µg/L	1	11/3/2011 07:50 PM
1,2,4-Trichlorobenzene	ND	0.50	µg/L	1	11/3/2011 07:50 PM
1,2,4-Trimethylbenzene	ND	0.50	µg/L	1	11/3/2011 07:50 PM
1,2-Dibromo-3-chloropropane	ND	0.50	µg/L	1	11/3/2011 07:50 PM
1,2-Dibromoethane	ND	0.50	µg/L	1	11/3/2011 07:50 PM
1,2-Dichlorobenzene	ND	0.50	µg/L	1	11/3/2011 07:50 PM
1,2-Dichloroethane	ND	0.50	µg/L	1	11/3/2011 07:50 PM
1,2-Dichloropropane	ND	0.50	µg/L	1	11/3/2011 07:50 PM
1,3,5-Trimethylbenzene	ND	0.50	µg/L	1	11/3/2011 07:50 PM
1,3-Dichlorobenzene	ND	0.50	µg/L	1	11/3/2011 07:50 PM
1,3-Dichloropropane	ND	0.50	µg/L	1	11/3/2011 07:50 PM
1,4-Dichlorobenzene	ND	0.50	µg/L	1	11/3/2011 07:50 PM
2,2-Dichloropropane	ND	0.50	µg/L	1	11/3/2011 07:50 PM
2-Chlorotoluene	ND	0.50	µg/L	1	11/3/2011 07:50 PM
4-Chlorotoluene	ND	0.50	µg/L	1	11/3/2011 07:50 PM
4-Isopropyltoluene	ND	0.50	µg/L	1	11/3/2011 07:50 PM
Benzene	ND	0.50	µg/L	1	11/3/2011 07:50 PM
Bromobenzene	ND	0.50	µg/L	1	11/3/2011 07:50 PM
Bromodichloromethane	ND	0.50	µg/L	1	11/3/2011 07:50 PM
Bromoform	ND	0.50	µg/L	1	11/3/2011 07:50 PM
Bromomethane	ND	0.50	µg/L	1	11/3/2011 07:50 PM
Carbon tetrachloride	ND	0.50	µg/L	1	11/3/2011 07:50 PM
Chlorobenzene	ND	0.50	µg/L	1	11/3/2011 07:50 PM
Chloroethane	ND	0.50	µg/L	1	11/3/2011 07:50 PM
Chloroform	ND	0.50	µg/L	1	11/3/2011 07:50 PM
Chloromethane	ND	0.50	µg/L	1	11/3/2011 07:50 PM
cis-1,2-Dichloroethene	ND	0.50	µg/L	1	11/3/2011 07:50 PM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



Advanced Technology
Laboratories

3275 Walnut Avenue, Signal Hill, CA 90755 Tel: 562.989.4045 Fax: 562.989.4040

Advanced Technology Laboratories

ANALYTICAL RESULTS

Print Date: 16-Nov-11

CLIENT: Hargis & Associates, Inc.
Lab Order: 120606
Project: RAYTHEON MAIN, 532.30
Lab ID: 120606-001A

Client Sample ID: TB-110111
Collection Date: 11/1/2011 7:00:00 AM
Matrix: GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

RunID:	MS11_111103A	QC Batch:	A11VW214	PrepDate:	Analyst: BD
cis-1,3-Dichloropropene	ND	0.50	µg/L	1	11/3/2011 07:50 PM
Dibromochloromethane	ND	0.50	µg/L	1	11/3/2011 07:50 PM
Dibromomethane	ND	0.50	µg/L	1	11/3/2011 07:50 PM
Dichlorodifluoromethane	ND	0.50	µg/L	1	11/3/2011 07:50 PM
Ethylbenzene	ND	0.50	µg/L	1	11/3/2011 07:50 PM
Hexachlorobutadiene	ND	0.50	µg/L	1	11/3/2011 07:50 PM
Isopropylbenzene	ND	0.50	µg/L	1	11/3/2011 07:50 PM
m,p-Xylene	ND	1.0	µg/L	1	11/3/2011 07:50 PM
Methylene chloride	ND	1.0	µg/L	1	11/3/2011 07:50 PM
n-Butylbenzene	ND	0.50	µg/L	1	11/3/2011 07:50 PM
n-Propylbenzene	ND	0.50	µg/L	1	11/3/2011 07:50 PM
Naphthalene	ND	0.50	µg/L	1	11/3/2011 07:50 PM
o-Xylene	ND	0.50	µg/L	1	11/3/2011 07:50 PM
sec-Butylbenzene	ND	0.50	µg/L	1	11/3/2011 07:50 PM
Styrene	ND	0.50	µg/L	1	11/3/2011 07:50 PM
tert-Butylbenzene	ND	0.50	µg/L	1	11/3/2011 07:50 PM
Tetrachloroethene	ND	0.50	µg/L	1	11/3/2011 07:50 PM
Toluene	ND	0.50	µg/L	1	11/3/2011 07:50 PM
trans-1,2-Dichloroethene	ND	0.50	µg/L	1	11/3/2011 07:50 PM
Trichloroethene	ND	0.50	µg/L	1	11/3/2011 07:50 PM
Trichlorofluoromethane	ND	0.50	µg/L	1	11/3/2011 07:50 PM
Vinyl chloride	ND	0.50	µg/L	1	11/3/2011 07:50 PM
Surr: 1,2-Dichloroethane-d4	125	70-130	%REC	1	11/3/2011 07:50 PM
Surr: 4-Bromofluorobenzene	100	70-130	%REC	1	11/3/2011 07:50 PM
Surr: Dibromofluoromethane	115	70-130	%REC	1	11/3/2011 07:50 PM
Surr: Toluene-d8	111	70-130	%REC	1	11/3/2011 07:50 PM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



Advanced Technology
Laboratories

3275 Walnut Avenue, Signal Hill, CA 90755 Tel: 562.989.4045 Fax: 562.989.4040

Advanced Technology Laboratories

ANALYTICAL RESULTS

Print Date: 16-Nov-11

CLIENT: Hargis & Associates, Inc.
Lab Order: 120606
Project: RAYTHEON MAIN, 532.30
Lab ID: 120606-002A

Client Sample ID: MW-35A
Collection Date: 11/1/2011 10:04:00 AM
Matrix: GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS BY GC/MS						
EPA 8260B						
RunID: MS11_111103A	QC Batch: A11VW214				PrepDate:	Analyst: BD
1,1,1,2-Tetrachloroethane	ND	0.50		µg/L	1	11/3/2011 08:10 PM
1,1,1-Trichloroethane	ND	0.50		µg/L	1	11/3/2011 08:10 PM
1,1,2,2-Tetrachloroethane	ND	0.50		µg/L	1	11/3/2011 08:10 PM
1,1,2-Trichloroethane	ND	0.50		µg/L	1	11/3/2011 08:10 PM
1,1-Dichloroethane	ND	0.50		µg/L	1	11/3/2011 08:10 PM
1,1-Dichloroethene	ND	0.50		µg/L	1	11/3/2011 08:10 PM
1,1-Dichloropropene	ND	0.50		µg/L	1	11/3/2011 08:10 PM
1,2,3-Trichlorobenzene	ND	0.50		µg/L	1	11/3/2011 08:10 PM
1,2,3-Trichloropropane	ND	0.50		µg/L	1	11/3/2011 08:10 PM
1,2,4-Trichlorobenzene	ND	0.50		µg/L	1	11/3/2011 08:10 PM
1,2,4-Trimethylbenzene	ND	0.50		µg/L	1	11/3/2011 08:10 PM
1,2-Dibromo-3-chloropropane	ND	0.50		µg/L	1	11/3/2011 08:10 PM
1,2-Dibromoethane	ND	0.50		µg/L	1	11/3/2011 08:10 PM
1,2-Dichlorobenzene	ND	0.50		µg/L	1	11/3/2011 08:10 PM
1,2-Dichloroethane	ND	0.50		µg/L	1	11/3/2011 08:10 PM
1,2-Dichloropropane	ND	0.50		µg/L	1	11/3/2011 08:10 PM
1,3,5-Trimethylbenzene	ND	0.50		µg/L	1	11/3/2011 08:10 PM
1,3-Dichlorobenzene	ND	0.50		µg/L	1	11/3/2011 08:10 PM
1,3-Dichloropropane	ND	0.50		µg/L	1	11/3/2011 08:10 PM
1,4-Dichlorobenzene	ND	0.50		µg/L	1	11/3/2011 08:10 PM
2,2-Dichloropropane	ND	0.50		µg/L	1	11/3/2011 08:10 PM
2-Chlorotoluene	ND	0.50		µg/L	1	11/3/2011 08:10 PM
4-Chlorotoluene	ND	0.50		µg/L	1	11/3/2011 08:10 PM
4-Isopropyltoluene	ND	0.50		µg/L	1	11/3/2011 08:10 PM
Benzene	ND	0.50		µg/L	1	11/3/2011 08:10 PM
Bromobenzene	ND	0.50		µg/L	1	11/3/2011 08:10 PM
Bromodichloromethane	ND	0.50		µg/L	1	11/3/2011 08:10 PM
Bromoform	ND	0.50		µg/L	1	11/3/2011 08:10 PM
Bromomethane	ND	0.50		µg/L	1	11/3/2011 08:10 PM
Carbon tetrachloride	ND	0.50		µg/L	1	11/3/2011 08:10 PM
Chlorobenzene	ND	0.50		µg/L	1	11/3/2011 08:10 PM
Chloroethane	ND	0.50		µg/L	1	11/3/2011 08:10 PM
Chloroform	6.5	0.50		µg/L	1	11/3/2011 08:10 PM
Chloromethane	0.59	0.50		µg/L	1	11/3/2011 08:10 PM
cis-1,2-Dichloroethene	ND	0.50		µg/L	1	11/3/2011 08:10 PM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



Advanced Technology
Laboratories

3275 Walnut Avenue, Signal Hill, CA 90755 Tel: 562.989.4045 Fax: 562.989.4040

Advanced Technology Laboratories

ANALYTICAL RESULTS

Print Date: 16-Nov-11

CLIENT: Hargis & Associates, Inc.
Lab Order: 120606
Project: RAYTHEON MAIN, 532.30
Lab ID: 120606-002A

Client Sample ID: MW-35A
Collection Date: 11/1/2011 10:04:00 AM
Matrix: GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

RunID:	MS11_111103A	QC Batch:	A11VW214	PrepDate:	Analyst:	BD
cis-1,3-Dichloropropene	ND	0.50	µg/L	1	11/3/2011 08:10 PM	
Dibromochloromethane	ND	0.50	µg/L	1	11/3/2011 08:10 PM	
Dibromomethane	ND	0.50	µg/L	1	11/3/2011 08:10 PM	
Dichlorodifluoromethane	ND	0.50	µg/L	1	11/3/2011 08:10 PM	
Ethylbenzene	ND	0.50	µg/L	1	11/3/2011 08:10 PM	
Hexachlorobutadiene	ND	0.50	µg/L	1	11/3/2011 08:10 PM	
Isopropylbenzene	ND	0.50	µg/L	1	11/3/2011 08:10 PM	
m,p-Xylene	ND	1.0	µg/L	1	11/3/2011 08:10 PM	
Methylene chloride	ND	1.0	µg/L	1	11/3/2011 08:10 PM	
n-Butylbenzene	ND	0.50	µg/L	1	11/3/2011 08:10 PM	
n-Propylbenzene	ND	0.50	µg/L	1	11/3/2011 08:10 PM	
Naphthalene	ND	0.50	µg/L	1	11/3/2011 08:10 PM	
o-Xylene	ND	0.50	µg/L	1	11/3/2011 08:10 PM	
sec-Butylbenzene	ND	0.50	µg/L	1	11/3/2011 08:10 PM	
Styrene	ND	0.50	µg/L	1	11/3/2011 08:10 PM	
tert-Butylbenzene	ND	0.50	µg/L	1	11/3/2011 08:10 PM	
Tetrachloroethene	ND	0.50	µg/L	1	11/3/2011 08:10 PM	
Toluene	ND	0.50	µg/L	1	11/3/2011 08:10 PM	
trans-1,2-Dichloroethene	ND	0.50	µg/L	1	11/3/2011 08:10 PM	
Trichloroethene	ND	0.50	µg/L	1	11/3/2011 08:10 PM	
Trichlorofluoromethane	ND	0.50	µg/L	1	11/3/2011 08:10 PM	
Vinyl chloride	ND	0.50	µg/L	1	11/3/2011 08:10 PM	
Surr: 1,2-Dichloroethane-d4	126	70-130	%REC	1	11/3/2011 08:10 PM	
Surr: 4-Bromofluorobenzene	99.2	70-130	%REC	1	11/3/2011 08:10 PM	
Surr: Dibromofluoromethane	115	70-130	%REC	1	11/3/2011 08:10 PM	
Surr: Toluene-d8	110	70-130	%REC	1	11/3/2011 08:10 PM	

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



Advanced Technology
Laboratories

3275 Walnut Avenue, Signal Hill, CA 90755 Tel: 562.989.4045 Fax: 562.989.4040

Advanced Technology Laboratories

ANALYTICAL RESULTS
 Print Date: 16-Nov-11

CLIENT:	Hargis & Associates, Inc.	Client Sample ID:	MW-35A
Lab Order:	120606	Collection Date:	11/1/2011 10:04:00 AM
Project:	RAYTHEON MAIN, 532.30	Matrix:	GROUNDWATER
Lab ID:	120606-002B		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
1,4-DIOXANE BY GC/MS-SIM: ISOTOPE DILUTION						
	EPA 3510C			EPA 8270C(M)		
RunID: MS15_111108A	QC Batch: 76761			PrepDate: 11/4/2011		Analyst: JSD
1,4-Dioxane	ND	0.20		µg/L	1	11/8/2011 11:50 AM
Surr: 1,2-Dichlorobenzene-d4	88.7	58-99		%REC	1	11/8/2011 11:50 AM
Surr: 2-Fluorobiphenyl	89.4	60-104		%REC	1	11/8/2011 11:50 AM
Surr: 4-Terphenyl-d14	106	65-127		%REC	1	11/8/2011 11:50 AM
Surr: Nitrobenzene-d5	116	50-136		%REC	1	11/8/2011 11:50 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 16-Nov-11

CLIENT: Hargis & Associates, Inc.
Lab Order: 120606
Project: RAYTHEON MAIN, 532.30
Lab ID: 120606-003A

Client Sample ID: MW-35B
Collection Date: 11/1/2011 10:56:00 AM
Matrix: GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

RunID:	MS11_111103A	QC Batch:	A11VW214	PrepDate:	Analyst:	BD
1,1,1,2-Tetrachloroethane	ND	0.50	µg/L	1	11/3/2011 08:30 PM	
1,1,1-Trichloroethane	ND	0.50	µg/L	1	11/3/2011 08:30 PM	
1,1,2,2-Tetrachloroethane	ND	0.50	µg/L	1	11/3/2011 08:30 PM	
1,1,2-Trichloroethane	ND	0.50	µg/L	1	11/3/2011 08:30 PM	
1,1-Dichloroethane	ND	0.50	µg/L	1	11/3/2011 08:30 PM	
1,1-Dichloroethene	ND	0.50	µg/L	1	11/3/2011 08:30 PM	
1,1-Dichloropropene	ND	0.50	µg/L	1	11/3/2011 08:30 PM	
1,2,3-Trichlorobenzene	ND	0.50	µg/L	1	11/3/2011 08:30 PM	
1,2,3-Trichloropropane	ND	0.50	µg/L	1	11/3/2011 08:30 PM	
1,2,4-Trichlorobenzene	ND	0.50	µg/L	1	11/3/2011 08:30 PM	
1,2,4-Trimethylbenzene	ND	0.50	µg/L	1	11/3/2011 08:30 PM	
1,2-Dibromo-3-chloropropane	ND	0.50	µg/L	1	11/3/2011 08:30 PM	
1,2-Dibromoethane	ND	0.50	µg/L	1	11/3/2011 08:30 PM	
1,2-Dichlorobenzene	ND	0.50	µg/L	1	11/3/2011 08:30 PM	
1,2-Dichloroethane	ND	0.50	µg/L	1	11/3/2011 08:30 PM	
1,2-Dichloropropane	ND	0.50	µg/L	1	11/3/2011 08:30 PM	
1,3,5-Trimethylbenzene	ND	0.50	µg/L	1	11/3/2011 08:30 PM	
1,3-Dichlorobenzene	ND	0.50	µg/L	1	11/3/2011 08:30 PM	
1,3-Dichloropropane	ND	0.50	µg/L	1	11/3/2011 08:30 PM	
1,4-Dichlorobenzene	ND	0.50	µg/L	1	11/3/2011 08:30 PM	
2,2-Dichloropropane	ND	0.50	µg/L	1	11/3/2011 08:30 PM	
2-Chlorotoluene	ND	0.50	µg/L	1	11/3/2011 08:30 PM	
4-Chlorotoluene	ND	0.50	µg/L	1	11/3/2011 08:30 PM	
4-Isopropyltoluene	ND	0.50	µg/L	1	11/3/2011 08:30 PM	
Benzene	ND	0.50	µg/L	1	11/3/2011 08:30 PM	
Bromobenzene	ND	0.50	µg/L	1	11/3/2011 08:30 PM	
Bromodichloromethane	ND	0.50	µg/L	1	11/3/2011 08:30 PM	
Bromoform	ND	0.50	µg/L	1	11/3/2011 08:30 PM	
Bromomethane	ND	0.50	µg/L	1	11/3/2011 08:30 PM	
Carbon tetrachloride	ND	0.50	µg/L	1	11/3/2011 08:30 PM	
Chlorobenzene	ND	0.50	µg/L	1	11/3/2011 08:30 PM	
Chloroethane	ND	0.50	µg/L	1	11/3/2011 08:30 PM	
Chloroform	ND	0.50	µg/L	1	11/3/2011 08:30 PM	
Chloromethane	ND	0.50	µg/L	1	11/3/2011 08:30 PM	
cis-1,2-Dichloroethene	ND	0.50	µg/L	1	11/3/2011 08:30 PM	

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 16-Nov-11

CLIENT: Hargis & Associates, Inc.
Lab Order: 120606
Project: RAYTHEON MAIN, 532.30
Lab ID: 120606-003A

Client Sample ID: MW-35B
Collection Date: 11/1/2011 10:56:00 AM
Matrix: GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

RunID:	MS11_111103A	QC Batch:	A11VW214	PrepDate:	Analyst: BD
cis-1,3-Dichloropropene	ND	0.50	µg/L	1	11/3/2011 08:30 PM
Dibromochloromethane	ND	0.50	µg/L	1	11/3/2011 08:30 PM
Dibromomethane	ND	0.50	µg/L	1	11/3/2011 08:30 PM
Dichlorodifluoromethane	ND	0.50	µg/L	1	11/3/2011 08:30 PM
Ethylbenzene	ND	0.50	µg/L	1	11/3/2011 08:30 PM
Hexachlorobutadiene	ND	0.50	µg/L	1	11/3/2011 08:30 PM
Isopropylbenzene	ND	0.50	µg/L	1	11/3/2011 08:30 PM
m,p-Xylene	ND	1.0	µg/L	1	11/3/2011 08:30 PM
Methylene chloride	ND	1.0	µg/L	1	11/3/2011 08:30 PM
n-Butylbenzene	ND	0.50	µg/L	1	11/3/2011 08:30 PM
n-Propylbenzene	ND	0.50	µg/L	1	11/3/2011 08:30 PM
Naphthalene	ND	0.50	µg/L	1	11/3/2011 08:30 PM
o-Xylene	ND	0.50	µg/L	1	11/3/2011 08:30 PM
sec-Butylbenzene	ND	0.50	µg/L	1	11/3/2011 08:30 PM
Styrene	ND	0.50	µg/L	1	11/3/2011 08:30 PM
tert-Butylbenzene	ND	0.50	µg/L	1	11/3/2011 08:30 PM
Tetrachloroethene	ND	0.50	µg/L	1	11/3/2011 08:30 PM
Toluene	ND	0.50	µg/L	1	11/3/2011 08:30 PM
trans-1,2-Dichloroethene	ND	0.50	µg/L	1	11/3/2011 08:30 PM
Trichloroethene	ND	0.50	µg/L	1	11/3/2011 08:30 PM
Trichlorofluoromethane	ND	0.50	µg/L	1	11/3/2011 08:30 PM
Vinyl chloride	ND	0.50	µg/L	1	11/3/2011 08:30 PM
Surr: 1,2-Dichloroethane-d4	127	70-130	%REC	1	11/3/2011 08:30 PM
Surr: 4-Bromofluorobenzene	98.6	70-130	%REC	1	11/3/2011 08:30 PM
Surr: Dibromofluoromethane	115	70-130	%REC	1	11/3/2011 08:30 PM
Surr: Toluene-d8	111	70-130	%REC	1	11/3/2011 08:30 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS
 Print Date: 16-Nov-11

CLIENT: Hargis & Associates, Inc.
Lab Order: 120606
Project: RAYTHEON MAIN, 532.30
Lab ID: 120606-003B

Client Sample ID: MW-35B
Collection Date: 11/1/2011 10:56:00 AM
Matrix: GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
1,4-DIOXANE BY GC/MS-SIM: ISOTOPE DILUTION						
	EPA 3510C				EPA 8270C(M)	
RunID: MS15_111108A	QC Batch: 76761				PrepDate: 11/4/2011	Analyst: JSD
1,4-Dioxane	ND	0.20		µg/L	1	11/8/2011 12:18 PM
Surr: 1,2-Dichlorobenzene-d4	95.2	58-99		%REC	1	11/8/2011 12:18 PM
Surr: 2-Fluorobiphenyl	90.0	60-104		%REC	1	11/8/2011 12:18 PM
Surr: 4-Terphenyl-d14	104	65-127		%REC	1	11/8/2011 12:18 PM
Surr: Nitrobenzene-d5	109	50-136		%REC	1	11/8/2011 12:18 PM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
 H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
 S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
 DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 16-Nov-11

CLIENT: Hargis & Associates, Inc.
Lab Order: 120606
Project: RAYTHEON MAIN, 532.30
Lab ID: 120606-004A

Client Sample ID: MW-35C
Collection Date: 11/1/2011 12:40:00 PM
Matrix: GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

RunID:	MS11_111107A	QC Batch:	A11VW216	PrepDate:	Analyst:	BD
1,1,1,2-Tetrachloroethane	ND	0.50	µg/L	1	11/7/2011 01:44 PM	
1,1,1-Trichloroethane	ND	0.50	µg/L	1	11/7/2011 01:44 PM	
1,1,2,2-Tetrachloroethane	ND	0.50	µg/L	1	11/7/2011 01:44 PM	
1,1,2-Trichloroethane	ND	0.50	µg/L	1	11/7/2011 01:44 PM	
1,1-Dichloroethane	ND	0.50	µg/L	1	11/7/2011 01:44 PM	
1,1-Dichloroethene	ND	0.50	µg/L	1	11/7/2011 01:44 PM	
1,1-Dichloropropene	ND	0.50	µg/L	1	11/7/2011 01:44 PM	
1,2,3-Trichlorobenzene	ND	0.50	µg/L	1	11/7/2011 01:44 PM	
1,2,3-Trichloropropane	ND	0.50	µg/L	1	11/7/2011 01:44 PM	
1,2,4-Trichlorobenzene	ND	0.50	µg/L	1	11/7/2011 01:44 PM	
1,2,4-Trimethylbenzene	ND	0.50	µg/L	1	11/7/2011 01:44 PM	
1,2-Dibromo-3-chloropropane	ND	0.50	µg/L	1	11/7/2011 01:44 PM	
1,2-Dibromoethane	ND	0.50	µg/L	1	11/7/2011 01:44 PM	
1,2-Dichlorobenzene	ND	0.50	µg/L	1	11/7/2011 01:44 PM	
1,2-Dichloroethane	ND	0.50	µg/L	1	11/7/2011 01:44 PM	
1,2-Dichloropropane	ND	0.50	µg/L	1	11/7/2011 01:44 PM	
1,3,5-Trimethylbenzene	ND	0.50	µg/L	1	11/7/2011 01:44 PM	
1,3-Dichlorobenzene	ND	0.50	µg/L	1	11/7/2011 01:44 PM	
1,3-Dichloropropane	ND	0.50	µg/L	1	11/7/2011 01:44 PM	
1,4-Dichlorobenzene	ND	0.50	µg/L	1	11/7/2011 01:44 PM	
2,2-Dichloropropane	ND	0.50	µg/L	1	11/7/2011 01:44 PM	
2-Chlorotoluene	ND	0.50	µg/L	1	11/7/2011 01:44 PM	
4-Chlorotoluene	ND	0.50	µg/L	1	11/7/2011 01:44 PM	
4-Isopropyltoluene	ND	0.50	µg/L	1	11/7/2011 01:44 PM	
Benzene	ND	0.50	µg/L	1	11/7/2011 01:44 PM	
Bromobenzene	ND	0.50	µg/L	1	11/7/2011 01:44 PM	
Bromodichloromethane	ND	0.50	µg/L	1	11/7/2011 01:44 PM	
Bromoform	ND	0.50	µg/L	1	11/7/2011 01:44 PM	
Bromomethane	ND	0.50	µg/L	1	11/7/2011 01:44 PM	
Carbon tetrachloride	ND	0.50	µg/L	1	11/7/2011 01:44 PM	
Chlorobenzene	ND	0.50	µg/L	1	11/7/2011 01:44 PM	
Chloroethane	ND	0.50	µg/L	1	11/7/2011 01:44 PM	
Chloroform	ND	0.50	µg/L	1	11/7/2011 01:44 PM	
Chloromethane	ND	0.50	µg/L	1	11/7/2011 01:44 PM	
cis-1,2-Dichloroethene	ND	0.50	µg/L	1	11/7/2011 01:44 PM	

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 16-Nov-11

CLIENT: Hargis & Associates, Inc.
Lab Order: 120606
Project: RAYTHEON MAIN, 532.30
Lab ID: 120606-004A

Client Sample ID: MW-35C
Collection Date: 11/1/2011 12:40:00 PM
Matrix: GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

RunID:	MS11_111107A	QC Batch:	A11VW216	PrepDate:	Analyst:	BD
cis-1,3-Dichloropropene	ND	0.50	µg/L	1	11/7/2011 01:44 PM	
Dibromochloromethane	ND	0.50	µg/L	1	11/7/2011 01:44 PM	
Dibromomethane	ND	0.50	µg/L	1	11/7/2011 01:44 PM	
Dichlorodifluoromethane	ND	0.50	µg/L	1	11/7/2011 01:44 PM	
Ethylbenzene	ND	0.50	µg/L	1	11/7/2011 01:44 PM	
Hexachlorobutadiene	ND	0.50	µg/L	1	11/7/2011 01:44 PM	
Isopropylbenzene	ND	0.50	µg/L	1	11/7/2011 01:44 PM	
m,p-Xylene	ND	1.0	µg/L	1	11/7/2011 01:44 PM	
Methylene chloride	ND	1.0	µg/L	1	11/7/2011 01:44 PM	
n-Butylbenzene	ND	0.50	µg/L	1	11/7/2011 01:44 PM	
n-Propylbenzene	ND	0.50	µg/L	1	11/7/2011 01:44 PM	
Naphthalene	ND	0.50	µg/L	1	11/7/2011 01:44 PM	
o-Xylene	ND	0.50	µg/L	1	11/7/2011 01:44 PM	
sec-Butylbenzene	ND	0.50	µg/L	1	11/7/2011 01:44 PM	
Styrene	ND	0.50	µg/L	1	11/7/2011 01:44 PM	
tert-Butylbenzene	ND	0.50	µg/L	1	11/7/2011 01:44 PM	
Tetrachloroethene	ND	0.50	µg/L	1	11/7/2011 01:44 PM	
Toluene	ND	0.50	µg/L	1	11/7/2011 01:44 PM	
trans-1,2-Dichloroethene	ND	0.50	µg/L	1	11/7/2011 01:44 PM	
Trichloroethene	ND	0.50	µg/L	1	11/7/2011 01:44 PM	
Trichlorofluoromethane	ND	0.50	µg/L	1	11/7/2011 01:44 PM	
Vinyl chloride	ND	0.50	µg/L	1	11/7/2011 01:44 PM	
Surr: 1,2-Dichloroethane-d4	125	70-130	%REC	1	11/7/2011 01:44 PM	
Surr: 4-Bromofluorobenzene	103	70-130	%REC	1	11/7/2011 01:44 PM	
Surr: Dibromofluoromethane	114	70-130	%REC	1	11/7/2011 01:44 PM	
Surr: Toluene-d8	112	70-130	%REC	1	11/7/2011 01:44 PM	

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS
 Print Date: 16-Nov-11

CLIENT:	Hargis & Associates, Inc.	Client Sample ID:	MW-35C
Lab Order:	120606	Collection Date:	11/1/2011 12:40:00 PM
Project:	RAYTHEON MAIN, 532.30	Matrix:	GROUNDWATER
Lab ID:	120606-004B		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
1,4-DIOXANE BY GC/MS-SIM: ISOTOPE DILUTION						
	EPA 3510C			EPA 8270C(M)		
RunID: MS15_111108A	QC Batch: 76761			PrepDate: 11/4/2011		Analyst: JSD
1,4-Dioxane	ND	0.20		µg/L	1	11/8/2011 12:47 PM
Surr: 1,2-Dichlorobenzene-d4	91.7	58-99		%REC	1	11/8/2011 12:47 PM
Surr: 2-Fluorobiphenyl	86.5	60-104		%REC	1	11/8/2011 12:47 PM
Surr: 4-Terphenyl-d14	111	65-127		%REC	1	11/8/2011 12:47 PM
Surr: Nitrobenzene-d5	103	50-136		%REC	1	11/8/2011 12:47 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 16-Nov-11

CLIENT: Hargis & Associates, Inc.
Lab Order: 120606
Project: RAYTHEON MAIN, 532.30
Lab ID: 120606-005A

Client Sample ID: EW-01
Collection Date: 11/1/2011 2:23:00 PM
Matrix: GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

RunID:	MS11_111107A	QC Batch:	A11VW216	PrepDate:	Analyst:	BD
1,1,1,2-Tetrachloroethane	ND	0.50	µg/L	1	11/7/2011 02:04 PM	
1,1,1-Trichloroethane	ND	0.50	µg/L	1	11/7/2011 02:04 PM	
1,1,2,2-Tetrachloroethane	ND	0.50	µg/L	1	11/7/2011 02:04 PM	
1,1,2-Trichloroethane	0.64	0.50	µg/L	1	11/7/2011 02:04 PM	
1,1-Dichloroethane	1.6	0.50	µg/L	1	11/7/2011 02:04 PM	
1,1-Dichloroethene	82	5.0	µg/L	10	11/7/2011 04:46 PM	
1,1-Dichloropropene	ND	0.50	µg/L	1	11/7/2011 02:04 PM	
1,2,3-Trichlorobenzene	ND	0.50	µg/L	1	11/7/2011 02:04 PM	
1,2,3-Trichloropropane	ND	0.50	µg/L	1	11/7/2011 02:04 PM	
1,2,4-Trichlorobenzene	ND	0.50	µg/L	1	11/7/2011 02:04 PM	
1,2,4-Trimethylbenzene	ND	0.50	µg/L	1	11/7/2011 02:04 PM	
1,2-Dibromo-3-chloropropane	ND	0.50	µg/L	1	11/7/2011 02:04 PM	
1,2-Dibromoethane	ND	0.50	µg/L	1	11/7/2011 02:04 PM	
1,2-Dichlorobenzene	ND	0.50	µg/L	1	11/7/2011 02:04 PM	
1,2-Dichloroethane	ND	0.50	µg/L	1	11/7/2011 02:04 PM	
1,2-Dichloropropane	ND	0.50	µg/L	1	11/7/2011 02:04 PM	
1,3,5-Trimethylbenzene	ND	0.50	µg/L	1	11/7/2011 02:04 PM	
1,3-Dichlorobenzene	ND	0.50	µg/L	1	11/7/2011 02:04 PM	
1,3-Dichloropropane	ND	0.50	µg/L	1	11/7/2011 02:04 PM	
1,4-Dichlorobenzene	ND	0.50	µg/L	1	11/7/2011 02:04 PM	
2,2-Dichloropropane	ND	0.50	µg/L	1	11/7/2011 02:04 PM	
2-Chlorotoluene	ND	0.50	µg/L	1	11/7/2011 02:04 PM	
4-Chlorotoluene	ND	0.50	µg/L	1	11/7/2011 02:04 PM	
4-Isopropyltoluene	ND	0.50	µg/L	1	11/7/2011 02:04 PM	
Benzene	ND	0.50	µg/L	1	11/7/2011 02:04 PM	
Bromobenzene	ND	0.50	µg/L	1	11/7/2011 02:04 PM	
Bromodichloromethane	ND	0.50	µg/L	1	11/7/2011 02:04 PM	
Bromoform	ND	0.50	µg/L	1	11/7/2011 02:04 PM	
Bromomethane	ND	0.50	µg/L	1	11/7/2011 02:04 PM	
Carbon tetrachloride	ND	0.50	µg/L	1	11/7/2011 02:04 PM	
Chlorobenzene	ND	0.50	µg/L	1	11/7/2011 02:04 PM	
Chloroethane	ND	0.50	µg/L	1	11/7/2011 02:04 PM	
Chloroform	ND	0.50	µg/L	1	11/7/2011 02:04 PM	
Chloromethane	ND	0.50	µg/L	1	11/7/2011 02:04 PM	
cis-1,2-Dichloroethene	ND	0.50	µg/L	1	11/7/2011 02:04 PM	

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



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Laboratories

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Advanced Technology Laboratories

ANALYTICAL RESULTS

Print Date: 16-Nov-11

CLIENT: Hargis & Associates, Inc.
Lab Order: 120606
Project: RAYTHEON MAIN, 532.30
Lab ID: 120606-005A

Client Sample ID: EW-01
Collection Date: 11/1/2011 2:23:00 PM
Matrix: GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

RunID:	MS11_111107A	QC Batch:	A11VW216	PrepDate:	Analyst:	BD
cis-1,3-Dichloropropene	ND	0.50	µg/L	1	11/7/2011 02:04 PM	
Dibromochloromethane	ND	0.50	µg/L	1	11/7/2011 02:04 PM	
Dibromomethane	ND	0.50	µg/L	1	11/7/2011 02:04 PM	
Dichlorodifluoromethane	ND	0.50	µg/L	1	11/7/2011 02:04 PM	
Ethylbenzene	ND	0.50	µg/L	1	11/7/2011 02:04 PM	
Hexachlorobutadiene	ND	0.50	µg/L	1	11/7/2011 02:04 PM	
Isopropylbenzene	ND	0.50	µg/L	1	11/7/2011 02:04 PM	
m,p-Xylene	ND	1.0	µg/L	1	11/7/2011 02:04 PM	
Methylene chloride	ND	1.0	µg/L	1	11/7/2011 02:04 PM	
n-Butylbenzene	ND	0.50	µg/L	1	11/7/2011 02:04 PM	
n-Propylbenzene	ND	0.50	µg/L	1	11/7/2011 02:04 PM	
Naphthalene	ND	0.50	µg/L	1	11/7/2011 02:04 PM	
o-Xylene	ND	0.50	µg/L	1	11/7/2011 02:04 PM	
sec-Butylbenzene	ND	0.50	µg/L	1	11/7/2011 02:04 PM	
Styrene	ND	0.50	µg/L	1	11/7/2011 02:04 PM	
tert-Butylbenzene	ND	0.50	µg/L	1	11/7/2011 02:04 PM	
Tetrachloroethene	ND	0.50	µg/L	1	11/7/2011 02:04 PM	
Toluene	ND	0.50	µg/L	1	11/7/2011 02:04 PM	
trans-1,2-Dichloroethene	ND	0.50	µg/L	1	11/7/2011 02:04 PM	
Trichloroethene	ND	0.50	µg/L	1	11/7/2011 02:04 PM	
Trichlorofluoromethane	ND	0.50	µg/L	1	11/7/2011 02:04 PM	
Vinyl chloride	ND	0.50	µg/L	1	11/7/2011 02:04 PM	
Surr: 1,2-Dichloroethane-d4	126	70-130	%REC	1	11/7/2011 02:04 PM	
Surr: 1,2-Dichloroethane-d4	132	70-130	S %REC	10	11/7/2011 04:46 PM	
Surr: 4-Bromofluorobenzene	101	70-130	%REC	1	11/7/2011 02:04 PM	
Surr: 4-Bromofluorobenzene	102	70-130	%REC	10	11/7/2011 04:46 PM	
Surr: Dibromofluoromethane	114	70-130	%REC	1	11/7/2011 02:04 PM	
Surr: Dibromofluoromethane	117	70-130	%REC	10	11/7/2011 04:46 PM	
Surr: Toluene-d8	111	70-130	%REC	10	11/7/2011 04:46 PM	
Surr: Toluene-d8	112	70-130	%REC	1	11/7/2011 02:04 PM	

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



Advanced Technology
Laboratories

3275 Walnut Avenue, Signal Hill, CA 90755 Tel: 562.989.4045 Fax: 562.989.4040

Advanced Technology Laboratories

ANALYTICAL RESULTS
 Print Date: 16-Nov-11

CLIENT: Hargis & Associates, Inc.
Lab Order: 120606
Project: RAYTHEON MAIN, 532.30
Lab ID: 120606-005B

Client Sample ID: EW-01
Collection Date: 11/1/2011 2:23:00 PM
Matrix: GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
1,4-DIOXANE BY GC/MS: ISOTOPE DILUTION TECHNIQUE						
	EPA 3510C		EPA 8270C(M)			
RunID: MS 13_111102A	QC Batch: 76687				PrepDate: 11/1/2011	Analyst: JSD
1,4-Dioxane	54	2.0		µg/L	1	11/2/2011 04:25 PM
Surr: 1,2-Dichlorobenzene-d4	84.6	46-97		%REC	1	11/2/2011 04:25 PM
Surr: 2,4,6-Tribromophenol	82.0	59-124		%REC	1	11/2/2011 04:25 PM
Surr: 2-Chlorophenol-d4	74.8	49-93		%REC	1	11/2/2011 04:25 PM
Surr: 2-Fluorobiphenyl	84.5	57-107		%REC	1	11/2/2011 04:25 PM
Surr: 2-Fluorophenol	42.8	27-60		%REC	1	11/2/2011 04:25 PM
Surr: 4-Terphenyl-d14	81.3	69-132		%REC	1	11/2/2011 04:25 PM
Surr: Nitrobenzene-d5	85.4	52-107		%REC	1	11/2/2011 04:25 PM
Surr: Phenol-d5	31.0	15-50		%REC	1	11/2/2011 04:25 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



Advanced Technology Laboratories

ANALYTICAL RESULTS

Print Date: 16-Nov-11

CLIENT: Hargis & Associates, Inc.
Lab Order: 120606
Project: RAYTHEON MAIN, 532.30
Lab ID: 120606-006A

Client Sample ID: MW-26C
Collection Date: 11/1/2011 5:34:00 PM
Matrix: GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

RunID:	MS11_111103A	QC Batch:	A11VW214	PrepDate:	Analyst: BD
1,1,1,2-Tetrachloroethane	ND	0.50	µg/L	1	11/3/2011 09:29 PM
1,1,1-Trichloroethane	ND	0.50	µg/L	1	11/3/2011 09:29 PM
1,1,2,2-Tetrachloroethane	ND	0.50	µg/L	1	11/3/2011 09:29 PM
1,1,2-Trichloroethane	ND	0.50	µg/L	1	11/3/2011 09:29 PM
1,1-Dichloroethane	ND	0.50	µg/L	1	11/3/2011 09:29 PM
1,1-Dichloroethene	ND	0.50	µg/L	1	11/3/2011 09:29 PM
1,1-Dichloropropene	ND	0.50	µg/L	1	11/3/2011 09:29 PM
1,2,3-Trichlorobenzene	ND	0.50	µg/L	1	11/3/2011 09:29 PM
1,2,3-Trichloropropane	ND	0.50	µg/L	1	11/3/2011 09:29 PM
1,2,4-Trichlorobenzene	ND	0.50	µg/L	1	11/3/2011 09:29 PM
1,2,4-Trimethylbenzene	ND	0.50	µg/L	1	11/3/2011 09:29 PM
1,2-Dibromo-3-chloropropane	ND	0.50	µg/L	1	11/3/2011 09:29 PM
1,2-Dibromoethane	ND	0.50	µg/L	1	11/3/2011 09:29 PM
1,2-Dichlorobenzene	ND	0.50	µg/L	1	11/3/2011 09:29 PM
1,2-Dichloroethane	ND	0.50	µg/L	1	11/3/2011 09:29 PM
1,2-Dichloropropane	ND	0.50	µg/L	1	11/3/2011 09:29 PM
1,3,5-Trimethylbenzene	ND	0.50	µg/L	1	11/3/2011 09:29 PM
1,3-Dichlorobenzene	ND	0.50	µg/L	1	11/3/2011 09:29 PM
1,3-Dichloropropane	ND	0.50	µg/L	1	11/3/2011 09:29 PM
1,4-Dichlorobenzene	ND	0.50	µg/L	1	11/3/2011 09:29 PM
2,2-Dichloropropane	ND	0.50	µg/L	1	11/3/2011 09:29 PM
2-Chlorotoluene	ND	0.50	µg/L	1	11/3/2011 09:29 PM
4-Chlorotoluene	ND	0.50	µg/L	1	11/3/2011 09:29 PM
4-Isopropyltoluene	ND	0.50	µg/L	1	11/3/2011 09:29 PM
Benzene	ND	0.50	µg/L	1	11/3/2011 09:29 PM
Bromobenzene	ND	0.50	µg/L	1	11/3/2011 09:29 PM
Bromodichloromethane	ND	0.50	µg/L	1	11/3/2011 09:29 PM
Bromoform	ND	0.50	µg/L	1	11/3/2011 09:29 PM
Bromomethane	ND	0.50	µg/L	1	11/3/2011 09:29 PM
Carbon tetrachloride	ND	0.50	µg/L	1	11/3/2011 09:29 PM
Chlorobenzene	ND	0.50	µg/L	1	11/3/2011 09:29 PM
Chloroethane	ND	0.50	µg/L	1	11/3/2011 09:29 PM
Chloroform	ND	0.50	µg/L	1	11/3/2011 09:29 PM
Chloromethane	ND	0.50	µg/L	1	11/3/2011 09:29 PM
cis-1,2-Dichloroethene	ND	0.50	µg/L	1	11/3/2011 09:29 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 16-Nov-11

CLIENT: Hargis & Associates, Inc.
Lab Order: 120606
Project: RAYTHEON MAIN, 532.30
Lab ID: 120606-006A

Client Sample ID: MW-26C
Collection Date: 11/1/2011 5:34:00 PM
Matrix: GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

RunID:	MS11_111103A	QC Batch:	A11VW214	PrepDate:	Analyst: BD
cis-1,3-Dichloropropene	ND	0.50	µg/L	1	11/3/2011 09:29 PM
Dibromochloromethane	ND	0.50	µg/L	1	11/3/2011 09:29 PM
Dibromomethane	ND	0.50	µg/L	1	11/3/2011 09:29 PM
Dichlorodifluoromethane	ND	0.50	µg/L	1	11/3/2011 09:29 PM
Ethylbenzene	ND	0.50	µg/L	1	11/3/2011 09:29 PM
Hexachlorobutadiene	ND	0.50	µg/L	1	11/3/2011 09:29 PM
Isopropylbenzene	ND	0.50	µg/L	1	11/3/2011 09:29 PM
m,p-Xylene	ND	1.0	µg/L	1	11/3/2011 09:29 PM
Methylene chloride	ND	1.0	µg/L	1	11/3/2011 09:29 PM
n-Butylbenzene	ND	0.50	µg/L	1	11/3/2011 09:29 PM
n-Propylbenzene	ND	0.50	µg/L	1	11/3/2011 09:29 PM
Naphthalene	ND	0.50	µg/L	1	11/3/2011 09:29 PM
o-Xylene	ND	0.50	µg/L	1	11/3/2011 09:29 PM
sec-Butylbenzene	ND	0.50	µg/L	1	11/3/2011 09:29 PM
Styrene	ND	0.50	µg/L	1	11/3/2011 09:29 PM
tert-Butylbenzene	ND	0.50	µg/L	1	11/3/2011 09:29 PM
Tetrachloroethene	ND	0.50	µg/L	1	11/3/2011 09:29 PM
Toluene	9.1	0.50	µg/L	1	11/3/2011 09:29 PM
trans-1,2-Dichloroethene	ND	0.50	µg/L	1	11/3/2011 09:29 PM
Trichloroethene	ND	0.50	µg/L	1	11/3/2011 09:29 PM
Trichlorofluoromethane	ND	0.50	µg/L	1	11/3/2011 09:29 PM
Vinyl chloride	ND	0.50	µg/L	1	11/3/2011 09:29 PM
Surr: 1,2-Dichloroethane-d4	129	70-130	%REC	1	11/3/2011 09:29 PM
Surr: 4-Bromofluorobenzene	100	70-130	%REC	1	11/3/2011 09:29 PM
Surr: Dibromofluoromethane	116	70-130	%REC	1	11/3/2011 09:29 PM
Surr: Toluene-d8	110	70-130	%REC	1	11/3/2011 09:29 PM

Qualifiers: B Analyte detected in the associated Method Blank
 E Value above quantitation range
 H Holding times for preparation or analysis exceeded
 ND Not Detected at the Reporting Limit
 S Spike/Surrogate outside of limits due to matrix interference
 Results are wet unless otherwise specified
 DO Surrogate Diluted Out



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ANALYTICAL RESULTS
 Print Date: 16-Nov-11

CLIENT: Hargis & Associates, Inc.
Lab Order: 120606
Project: RAYTHEON MAIN, 532.30
Lab ID: 120606-006B

Client Sample ID: MW-26C
Collection Date: 11/1/2011 5:34:00 PM
Matrix: GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
1,4-DIOXANE BY GC/MS-SIM: ISOTOPE DILUTION						
	EPA 3510C				EPA 8270C(M)	
RunID: MS15_111108A	QC Batch: 76761				PrepDate: 11/4/2011	Analyst: JSD
1,4-Dioxane	ND	0.20		µg/L	1	11/8/2011 01:15 PM
Surr: 1,2-Dichlorobenzene-d4	90.8	58-99		%REC	1	11/8/2011 01:15 PM
Surr: 2-Fluorobiphenyl	89.4	60-104		%REC	1	11/8/2011 01:15 PM
Surr: 4-Terphenyl-d14	107	65-127		%REC	1	11/8/2011 01:15 PM
Surr: Nitrobenzene-d5	104	50-136		%REC	1	11/8/2011 01:15 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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CLIENT: Hargis & Associates, Inc.
Work Order: 120606
Project: RAYTHEON MAIN, 532.30

ANALYTICAL QC SUMMARY REPORT

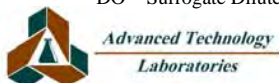
TestCode: 8260_WP_LL

Sample ID: A111103LCS1	SampType: LCS	TestCode: 8260_WP_LL	Units: µg/L	Prep Date:	RunNo: 138126						
Client ID: LCSW	Batch ID: A11VW214	TestNo: EPA 8260B	Analysis Date: 11/3/2011	SeqNo: 2270378							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	16.780	0.50	20.00	0	83.9	70	130				
Benzene	37.140	0.50	40.00	0	92.8	70	130				
Chlorobenzene	19.990	0.50	20.00	0	100	70	130				
MTBE	20.720	0.50	20.00	0	104	70	130				
Toluene	39.060	0.50	40.00	0	97.6	70	130				
Trichloroethene	19.630	0.50	20.00	0	98.2	70	130				
Surr: 1,2-Dichloroethane-d4	29.400		25.00		118	70	130				
Surr: 4-Bromofluorobenzene	25.890		25.00		104	70	130				
Surr: Dibromofluoromethane	27.110		25.00		108	70	130				
Surr: Toluene-d8	27.780		25.00		111	70	130				

Sample ID: A111103LCSD	SampType: LCSD	TestCode: 8260_WP_LL	Units: µg/L	Prep Date:	RunNo: 138126						
Client ID: LCSS02	Batch ID: A11VW214	TestNo: EPA 8260B	Analysis Date: 11/3/2011	SeqNo: 2270379							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	15.890	0.50	20.00	0	79.4	70	130	16.78	5.45	20	
Benzene	36.040	0.50	40.00	0	90.1	70	130	37.14	3.01	20	
Chlorobenzene	19.030	0.50	20.00	0	95.2	70	130	19.99	4.92	20	
MTBE	20.650	0.50	20.00	0	103	70	130	20.72	0.338	20	
Toluene	37.650	0.50	40.00	0	94.1	70	130	39.06	3.68	20	
Trichloroethene	18.580	0.50	20.00	0	92.9	70	130	19.63	5.50	20	
Surr: 1,2-Dichloroethane-d4	29.080		25.00		116	70	130		0	0	
Surr: 4-Bromofluorobenzene	25.450		25.00		102	70	130		0	0	
Surr: Dibromofluoromethane	26.820		25.00		107	70	130		0	0	
Surr: Toluene-d8	27.900		25.00		112	70	130		0	0	

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



CLIENT: Hargis & Associates, Inc.
Work Order: 120606
Project: RAYTHEON MAIN, 532.30

ANALYTICAL QC SUMMARY REPORT

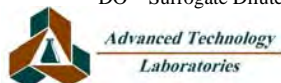
TestCode: 8260_WP_LL

Sample ID: A111103MB2	SampType: MBLK	TestCode: 8260_WP_LL	Units: µg/L	Prep Date:	RunNo: 138126						
Client ID: PBW	Batch ID: A11VW214	TestNo: EPA 8260B		Analysis Date: 11/3/2011	SeqNo: 2270380						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

1,1,1,2-Tetrachloroethane	ND	0.50									
1,1,1-Trichloroethane	ND	0.50									
1,1,2,2-Tetrachloroethane	ND	0.50									
1,1,2-Trichloroethane	ND	0.50									
1,1-Dichloroethane	ND	0.50									
1,1-Dichloroethene	ND	0.50									
1,1-Dichloropropene	ND	0.50									
1,2,3-Trichlorobenzene	ND	0.50									
1,2,3-Trichloropropane	ND	0.50									
1,2,4-Trichlorobenzene	ND	0.50									
1,2,4-Trimethylbenzene	ND	0.50									
1,2-Dibromo-3-chloropropane	ND	0.50									
1,2-Dibromoethane	ND	0.50									
1,2-Dichlorobenzene	ND	0.50									
1,2-Dichloroethane	ND	0.50									
1,2-Dichloropropane	ND	0.50									
1,3,5-Trimethylbenzene	ND	0.50									
1,3-Dichlorobenzene	ND	0.50									
1,3-Dichloropropane	ND	0.50									
1,4-Dichlorobenzene	ND	0.50									
2,2-Dichloropropane	ND	0.50									
2-Chlorotoluene	ND	0.50									
4-Chlorotoluene	ND	0.50									
4-Isopropyltoluene	ND	0.50									
Benzene	ND	0.50									
Bromobenzene	ND	0.50									
Bromodichloromethane	ND	0.50									
Bromoform	ND	0.50									
Bromomethane	ND	0.50									
Carbon tetrachloride	ND	0.50									

Qualifiers:

B Analyte detected in the associated Method Blank	E Value above quantitation range	H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit	R RPD outside accepted recovery limits	S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out	Calculations are based on raw values	



CLIENT: Hargis & Associates, Inc.
Work Order: 120606
Project: RAYTHEON MAIN, 532.30

ANALYTICAL QC SUMMARY REPORT

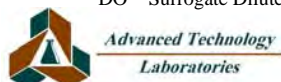
TestCode: 8260_WP_LL

Sample ID: A111103MB2	SampType: MBLK	TestCode: 8260_WP_LL	Units: µg/L	Prep Date:	RunNo: 138126
Client ID: PBW	Batch ID: A11VW214	TestNo: EPA 8260B		Analysis Date: 11/3/2011	SeqNo: 2270380

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chlorobenzene	ND	0.50									
Chloroethane	ND	0.50									
Chloroform	ND	0.50									
Chloromethane	ND	0.50									
cis-1,2-Dichloroethene	ND	0.50									
cis-1,3-Dichloropropene	ND	0.50									
Dibromochloromethane	ND	0.50									
Dibromomethane	ND	0.50									
Dichlorodifluoromethane	ND	0.50									
Ethylbenzene	ND	0.50									
Hexachlorobutadiene	ND	0.50									
Isopropylbenzene	ND	0.50									
m,p-Xylene	ND	1.0									
Methylene chloride	ND	1.0									
n-Butylbenzene	ND	0.50									
n-Propylbenzene	ND	0.50									
Naphthalene	ND	0.50									
o-Xylene	ND	0.50									
sec-Butylbenzene	ND	0.50									
Styrene	ND	0.50									
tert-Butylbenzene	ND	0.50									
Tetrachloroethene	ND	0.50									
Toluene	ND	0.50									
trans-1,2-Dichloroethene	ND	0.50									
Trichloroethene	ND	0.50									
Trichlorofluoromethane	ND	0.50									
Vinyl chloride	ND	0.50									
Surr: 1,2-Dichloroethane-d4	29.910		25.00		120	70	130				
Surr: 4-Bromofluorobenzene	24.670		25.00		98.7	70	130				
Surr: Dibromofluoromethane	28.260		25.00		113	70	130				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



CLIENT: Hargis & Associates, Inc.
Work Order: 120606
Project: RAYTHEON MAIN, 532.30

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_LL

Sample ID: A111103MB2	SampType: MBLK	TestCode: 8260_WP_LL	Units: µg/L	Prep Date:	RunNo: 138126						
Client ID: PBW	Batch ID: A11VW214	TestNo: EPA 8260B		Analysis Date: 11/3/2011	SeqNo: 2270380						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: Toluene-d8	27.740		25.00		111	70	130				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		



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CLIENT: Hargis & Associates, Inc.
Work Order: 120606
Project: RAYTHEON MAIN, 532.30

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_LL

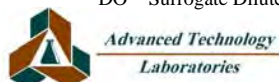
Sample ID: A111107LCS1		SampType: LCS		TestCode: 8260_WP_LL		Units: µg/L		Prep Date:		RunNo: 138258	
Client ID: LCSW		Batch ID: A11VW216		TestNo: EPA 8260B		Analysis Date: 11/7/2011				SeqNo: 2272707	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	17.980	0.50	20.00	0	89.9	70	130				
Benzene	37.630	0.50	40.00	0	94.1	70	130				
Chlorobenzene	20.240	0.50	20.00	0	101	70	130				
MTBE	21.490	0.50	20.00	0	107	70	130				
Toluene	39.850	0.50	40.00	0	99.6	70	130				
Trichloroethene	20.190	0.50	20.00	0	101	70	130				
Surr: 1,2-Dichloroethane-d4	31.470		25.00		126	70	130				
Surr: 4-Bromofluorobenzene	27.190		25.00		109	70	130				
Surr: Dibromofluoromethane	28.120		25.00		112	70	130				
Surr: Toluene-d8	28.140		25.00		113	70	130				

Sample ID: A111107LCSD		SampType: LCSD		TestCode: 8260_WP_LL		Units: µg/L		Prep Date:		RunNo: 138258	
Client ID: LCSS02		Batch ID: A11VW216		TestNo: EPA 8260B		Analysis Date: 11/7/2011				SeqNo: 2272708	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	17.750	0.50	20.00	0	88.8	70	130	17.98	1.29	20	
Benzene	37.650	0.50	40.00	0	94.1	70	130	37.63	0.0531	20	
Chlorobenzene	20.110	0.50	20.00	0	101	70	130	20.24	0.644	20	
MTBE	21.960	0.50	20.00	0	110	70	130	21.49	2.16	20	
Toluene	39.960	0.50	40.00	0	99.9	70	130	39.85	0.276	20	
Trichloroethene	20.260	0.50	20.00	0	101	70	130	20.19	0.346	20	
Surr: 1,2-Dichloroethane-d4	30.640		25.00		123	70	130		0	0	
Surr: 4-Bromofluorobenzene	26.190		25.00		105	70	130		0	0	
Surr: Dibromofluoromethane	27.310		25.00		109	70	130		0	0	
Surr: Toluene-d8	27.890		25.00		112	70	130		0	0	

Sample ID: A111107MB2		SampType: MBLK		TestCode: 8260_WP_LL		Units: µg/L		Prep Date:		RunNo: 138258	
Client ID: PBW		Batch ID: A11VW216		TestNo: EPA 8260B		Analysis Date: 11/7/2011				SeqNo: 2272709	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



CLIENT: Hargis & Associates, Inc.
Work Order: 120606
Project: RAYTHEON MAIN, 532.30

ANALYTICAL QC SUMMARY REPORT

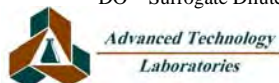
TestCode: 8260_WP_LL

Sample ID: A111107MB2	SampType: MBLK	TestCode: 8260_WP_LL	Units: µg/L	Prep Date:	RunNo: 138258						
Client ID: PBW	Batch ID: A11VW216	TestNo: EPA 8260B		Analysis Date: 11/7/2011	SeqNo: 2272709						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

1,1,1,2-Tetrachloroethane	ND	0.50									
1,1,1-Trichloroethane	ND	0.50									
1,1,2,2-Tetrachloroethane	ND	0.50									
1,1,2-Trichloroethane	ND	0.50									
1,1-Dichloroethane	ND	0.50									
1,1-Dichloroethene	ND	0.50									
1,1-Dichloropropene	ND	0.50									
1,2,3-Trichlorobenzene	ND	0.50									
1,2,3-Trichloropropane	ND	0.50									
1,2,4-Trichlorobenzene	ND	0.50									
1,2,4-Trimethylbenzene	ND	0.50									
1,2-Dibromo-3-chloropropane	ND	0.50									
1,2-Dibromoethane	ND	0.50									
1,2-Dichlorobenzene	ND	0.50									
1,2-Dichloroethane	ND	0.50									
1,2-Dichloropropane	ND	0.50									
1,3,5-Trimethylbenzene	ND	0.50									
1,3-Dichlorobenzene	ND	0.50									
1,3-Dichloropropane	ND	0.50									
1,4-Dichlorobenzene	ND	0.50									
2,2-Dichloropropane	ND	0.50									
2-Chlorotoluene	ND	0.50									
4-Chlorotoluene	ND	0.50									
4-Isopropyltoluene	ND	0.50									
Benzene	ND	0.50									
Bromobenzene	ND	0.50									
Bromodichloromethane	ND	0.50									
Bromoform	ND	0.50									
Bromomethane	ND	0.50									
Carbon tetrachloride	ND	0.50									

Qualifiers:

B Analyte detected in the associated Method Blank	E Value above quantitation range	H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit	R RPD outside accepted recovery limits	S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out	Calculations are based on raw values	



CLIENT: Hargis & Associates, Inc.
Work Order: 120606
Project: RAYTHEON MAIN, 532.30

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_LL

Sample ID: A111107MB2	SampType: MBLK	TestCode: 8260_WP_LL	Units: µg/L	Prep Date:	RunNo: 138258						
Client ID: PBW	Batch ID: A11VW216	TestNo: EPA 8260B		Analysis Date: 11/7/2011	SeqNo: 2272709						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chlorobenzene	ND	0.50									
Chloroethane	ND	0.50									
Chloroform	ND	0.50									
Chloromethane	ND	0.50									
cis-1,2-Dichloroethene	ND	0.50									
cis-1,3-Dichloropropene	ND	0.50									
Dibromochloromethane	ND	0.50									
Dibromomethane	ND	0.50									
Dichlorodifluoromethane	ND	0.50									
Ethylbenzene	ND	0.50									
Hexachlorobutadiene	ND	0.50									
Isopropylbenzene	ND	0.50									
m,p-Xylene	ND	1.0									
Methylene chloride	ND	1.0									
n-Butylbenzene	ND	0.50									
n-Propylbenzene	ND	0.50									
Naphthalene	ND	0.50									
o-Xylene	ND	0.50									
sec-Butylbenzene	ND	0.50									
Styrene	ND	0.50									
tert-Butylbenzene	ND	0.50									
Tetrachloroethene	ND	0.50									
Toluene	ND	0.50									
trans-1,2-Dichloroethene	ND	0.50									
Trichloroethene	ND	0.50									
Trichlorofluoromethane	ND	0.50									
Vinyl chloride	ND	0.50									
Surr: 1,2-Dichloroethane-d4	30.420		25.00		122	70	130				
Surr: 4-Bromofluorobenzene	25.630		25.00		103	70	130				
Surr: Dibromofluoromethane	28.320		25.00		113	70	130				

Qualifiers:

B Analyte detected in the associated Method Blank	E Value above quantitation range	H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit	R RPD outside accepted recovery limits	S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out	Calculations are based on raw values	



*Advanced Technology
Laboratories*

3275 Walnut Avenue, Signal Hill, CA 90755 Tel: 562.989.4045 Fax: 562.989.4040

CLIENT: Hargis & Associates, Inc.
Work Order: 120606
Project: RAYTHEON MAIN, 532.30

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_LL

Sample ID: A111107MB2	SampType: MBLK	TestCode: 8260_WP_LL	Units: µg/L	Prep Date:	RunNo: 138258						
Client ID: PBW	Batch ID: A11VW216	TestNo: EPA 8260B		Analysis Date: 11/7/2011	SeqNo: 2272709						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: Toluene-d8	28.250		25.00		113	70	130				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		



*Advanced Technology
Laboratories*

3275 Walnut Avenue, Signal Hill, CA 90755 Tel: 562.989.4045 Fax: 562.989.4040

CLIENT: Hargis & Associates, Inc.
Work Order: 120606
Project: RAYTHEON MAIN, 532.30

ANALYTICAL QC SUMMARY REPORT

TestCode: 8270_Dioxane_W

Sample ID: MB-76687	SampType: MBLK	TestCode: 8270_Dioxan	Units: µg/L	Prep Date: 11/1/2011	RunNo: 138114						
Client ID: PBW	Batch ID: 76687	TestNo: EPA 8270C(M EPA 3510C		Analysis Date: 11/2/2011	SeqNo: 2270206						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

1,4-Dioxane	ND	2.0									
Surr: 1,2-Dichlorobenzene-d4	75.880		100.0		75.9	46	97				
Surr: 2,4,6-Tribromophenol	79.350		100.0		79.4	59	124				
Surr: 2-Chlorophenol-d4	65.820		100.0		65.8	49	93				
Surr: 2-Fluorobiphenyl	79.270		100.0		79.3	57	107				
Surr: 2-Fluorophenol	35.470		100.0		35.5	27	60				
Surr: 4-Terphenyl-d14	83.270		100.0		83.3	69	132				
Surr: Nitrobenzene-d5	76.230		100.0		76.2	52	107				
Surr: Phenol-d5	25.380		100.0		25.4	15	50				

Sample ID: LCS-76687	SampType: LCS	TestCode: 8270_Dioxan	Units: µg/L	Prep Date: 11/1/2011	RunNo: 138114						
Client ID: LCSW	Batch ID: 76687	TestNo: EPA 8270C(M EPA 3510C		Analysis Date: 11/2/2011	SeqNo: 2270207						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

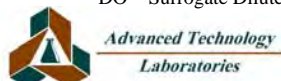
1,4-Dioxane	95.430	2.0	100.0	0	95.4	70	130				
Surr: 1,2-Dichlorobenzene-d4	70.420		100.0		70.4	46	97				
Surr: 2,4,6-Tribromophenol	87.430		100.0		87.4	59	124				
Surr: 2-Chlorophenol-d4	63.570		100.0		63.6	49	93				
Surr: 2-Fluorobiphenyl	81.340		100.0		81.3	57	107				
Surr: 2-Fluorophenol	34.140		100.0		34.1	27	60				
Surr: 4-Terphenyl-d14	89.180		100.0		89.2	69	132				
Surr: Nitrobenzene-d5	76.120		100.0		76.1	52	107				
Surr: Phenol-d5	26.870		100.0		26.9	15	50				

Sample ID: LCSD-76687	SampType: LCSD	TestCode: 8270_Dioxan	Units: µg/L	Prep Date: 11/1/2011	RunNo: 138114						
Client ID: LCSS02	Batch ID: 76687	TestNo: EPA 8270C(M EPA 3510C		Analysis Date: 11/2/2011	SeqNo: 2270208						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

1,4-Dioxane	100.130	2.0	100.0	0	100	70	130	95.43	4.81	20	
Surr: 1,2-Dichlorobenzene-d4	72.930		100.0		72.9	46	97		0	0	

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



CLIENT: Hargis & Associates, Inc.
Work Order: 120606
Project: RAYTHEON MAIN, 532.30

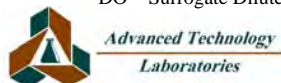
ANALYTICAL QC SUMMARY REPORT

TestCode: 8270_Dioxane_W

Sample ID: LCSD-76687	SampType: LCSD	TestCode: 8270_Dioxan	Units: µg/L	Prep Date: 11/1/2011	RunNo: 138114						
Client ID: LCSS02	Batch ID: 76687	TestNo: EPA 8270C(M EPA 3510C		Analysis Date: 11/2/2011	SeqNo: 2270208						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: 2,4,6-Tribromophenol	89.740		100.0		89.7	59	124		0	0	
Surr: 2-Chlorophenol-d4	67.490		100.0		67.5	49	93		0	0	
Surr: 2-Fluorobiphenyl	84.180		100.0		84.2	57	107		0	0	
Surr: 2-Fluorophenol	38.000		100.0		38.0	27	60		0	0	
Surr: 4-Terphenyl-d14	95.790		100.0		95.8	69	132		0	0	
Surr: Nitrobenzene-d5	78.480		100.0		78.5	52	107		0	0	
Surr: Phenol-d5	29.000		100.0		29.0	15	50		0	0	

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



CLIENT: Hargis & Associates, Inc.
Work Order: 120606
Project: RAYTHEON MAIN, 532.30

ANALYTICAL QC SUMMARY REPORT

TestCode: 8270_W_SIMDIOX

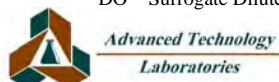
Sample ID: MB-76761		SampType: MBLK		TestCode: 8270_W_SIM Units: µg/L		Prep Date: 11/4/2011		RunNo: 138221			
Client ID: PBW		Batch ID: 76761		TestNo: EPA 8270C(M EPA 3510C)		Analysis Date: 11/8/2011		SeqNo: 2272298			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,4-Dioxane	ND	0.20									
Surr: 1,2-Dichlorobenzene-d4	0.892		1.000		89.2	58	99				
Surr: 2-Fluorobiphenyl	0.888		1.000		88.8	60	104				
Surr: 4-Terphenyl-d14	1.130		1.000		113	65	127				
Surr: Nitrobenzene-d5	1.052		1.000		105	50	136				

Sample ID: LCS-76761		SampType: LCS		TestCode: 8270_W_SIM Units: µg/L		Prep Date: 11/4/2011		RunNo: 138221			
Client ID: LCSW		Batch ID: 76761		TestNo: EPA 8270C(M EPA 3510C)		Analysis Date: 11/8/2011		SeqNo: 2272299			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,4-Dioxane	0.868	0.20	1.000	0	86.8	70	130				
Surr: 1,2-Dichlorobenzene-d4	0.808		1.000		80.8	58	99				
Surr: 2-Fluorobiphenyl	0.794		1.000		79.4	60	104				
Surr: 4-Terphenyl-d14	0.991		1.000		99.1	65	127				
Surr: Nitrobenzene-d5	0.932		1.000		93.2	50	136				

Sample ID: 120606-006BMS		SampType: MS		TestCode: 8270_W_SIM Units: µg/L		Prep Date: 11/4/2011		RunNo: 138221			
Client ID: MW-26C		Batch ID: 76761		TestNo: EPA 8270C(M EPA 3510C)		Analysis Date: 11/8/2011		SeqNo: 2272300			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,4-Dioxane	0.905	0.20	1.000	0.06982	83.5	70	130				
Surr: 1,2-Dichlorobenzene-d4	0.867		1.000		86.7	58	99				
Surr: 2-Fluorobiphenyl	0.821		1.000		82.1	60	104				
Surr: 4-Terphenyl-d14	0.941		1.000		94.1	65	127				
Surr: Nitrobenzene-d5	1.055		1.000		105	50	136				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



CLIENT: Hargis & Associates, Inc.
Work Order: 120606
Project: RAYTHEON MAIN, 532.30

ANALYTICAL QC SUMMARY REPORT

TestCode: 8270_W_SIMDIOX

Sample ID: 120606-006BMSD	SampType: MSD	TestCode: 8270_W_SIM	Units: µg/L	Prep Date: 11/4/2011	RunNo: 138221						
Client ID: MW-26C	Batch ID: 76761	TestNo: EPA 8270C(M EPA 3510C		Analysis Date: 11/8/2011	SeqNo: 2272301						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,4-Dioxane	1.144	0.20	1.000	0.06982	107	70	130	0.9050	23.4	30	
Surr: 1,2-Dichlorobenzene-d4	0.846		1.000		84.6	58	99		0	0	
Surr: 2-Fluorobiphenyl	0.785		1.000		78.5	60	104		0	0	
Surr: 4-Terphenyl-d14	0.895		1.000		89.5	65	127		0	0	
Surr: Nitrobenzene-d5	1.021		1.000		102	50	136		0	0	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		



Advanced Technology
Laboratories

3275 Walnut Avenue, Signal Hill, CA 90755 Tel: 562.989.4045 Fax: 562.989.4040

PROJECT NAME		PROJECT No./TASK No.		SAMPLE CONTAINERS		ANALYSIS REQUESTED		ESTIMATED CONCENTRATION RANGE (ppb) FOR VOAS		SPECIAL HANDLING		LABORATORY INFORMATION		
RAYTHEON MAIN		532.30										ATL Attn: Rachelle Arada		
PROJECT MANAGER Chris Ross		Phone No. 858-455-6500												
QA MANAGER Steve Netto		Fax No. 858-455-6533												
SAMPLER (SIGNATURE) <i>Amanda Blam</i>		SAMPLER (PRINTED) Amanda Blam Daniel Mora												
LAB ID	SAMPLE ID	SAMPLE COLLECTION		MATRIX			PRESERVATION			40 ml VOA 1 L Amber	8260 VOCs 8270 SIM 1,4-Dioxane 8271 M'D 1,4-Dioxane	0-10 10-100 100-1,000 >1,000	Standard TAT MS/MSD	REMARKS
		Date	Time	Soil	Ground water	Surface water	Lab H2O	HCl	HNO 3					
	TB-110111	11/1/11	700	X			X			X				
	MW-35A		1004	X			X			X				
	↓		↓	X						X				
	MW-35B		1056	X			X			X				
	↓		↓	X						X				
	MW-35C		1240	X			X			X				
	↓		↓	X						X				
	EW-01		1423	X			X			X				
	↓		↓	X						X				
	MW-26C	11/1/11	1734	X			X			X			X	MS and MSD collected for VOCs
	↓		↓	X						X			X	

Total number of Containers per analysis: 22 Total No. of Containers: 22

Relinquished by: *Amanda Blam*
Date: 11/1/11
Time: 1737
Company: H+R, Inc

Received by: *Michelle*
Date: 11/1/11
Time: 1712
Company: ATL

Relinquished by: *Michelle*
Date: 11/1/11
Time: 1818
Company: ATL

Received by: *Mary*
Date: 11/1/11
Time: 1818
Company: ATL

INSTRUCTIONS 175

- Fill out form completely except for shaded areas (lab use only); sign only after verified for completeness.
- Complete in ballpoint pen. Draw one line through errors, initial and date correction.
- Indicate number of sample containers in analysis request space; indicate choice with \checkmark or x.
- Note applicable preservatives, special instructions, and deviations from typical environmental samples.
- Consult project QA documents for specific instructions.

Sample Receipt:

No. of containers correct received good condition/cold

custody seals secure conforms to COC document

Shipment Method: Courier/Drop off

Send Results to: Steve Netto

9171 TOWNE CENTRE DRIVE, SUITE 375
SAN DIEGO, CA 92122 (858) 455-6500

1640 SOUTH STAPLEY DRIVE, SUITE 124
MESA, AZ 85204 (480) 345-0888

1820 EAST RIVER ROAD, SUITE 220
TUCSON, AZ 85718 (520) 881-7300

Send invoice to San Diego, CA
Attn: Accounts Payable

16 November 2011



Steve Netto
Hargis & Associates, Inc.
9171 Town Centre Drive, Suite 375
San Diego, CA 92122
Tel: (619) 249-3166
Fax: (619) 521-8580

ELAP No.: 1838
NELAP No.: 02107CA
CSDLAC No.: 10196
ORELAP No.: CA300003

RE: ATL Work Order Number : 1100023
Client Reference : RAYTHEON MAIN, 532.30

Enclosed are the results for sample(s) received on November, 2 2011 by Advanced Technology Laboratories. The sample(s) are tested for the parameters as indicated on the enclosed chain of custody in accordance with applicable laboratory certifications. The laboratory results contained in this report specifically pertains to the sample(s) submitted.

Thank you for the opportunity to serve the needs of your company. If you have any questions, please feel free to contact me or your Project Manager.

Sincerely,

A handwritten signature in black ink, appearing to read "Eddie Rodriguez".

Eddie Rodriguez
Laboratory Director

The cover letter and the case narrative are an integral part of this analytical report and its absence renders the report invalid. The report cannot be reproduced without written permission from the client and Advanced Technology Laboratories.



Hargis & Associates, Inc.

9171 Town Centre Drive, Suite 375
San Diego , CA 92122

Project Number: RAYTHEON MAIN, 532.30

Report To: Steve Netto

Reported:

11/16/2011

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
TB-110211	1100023-01	Lab H2O	11/02/11 7:25	11/02/11 17:45
MW-34C	1100023-02	Groundwater	11/02/11 9:01	11/02/11 17:45
MW-34A	1100023-03	Groundwater	11/02/11 9:45	11/02/11 17:45
MW-34B	1100023-04	Groundwater	11/02/11 10:18	11/02/11 17:45
MW-33	1100023-05	Groundwater	11/02/11 13:02	11/02/11 17:45
MW-30A	1100023-06	Groundwater	11/02/11 14:38	11/02/11 17:45
MW-30B	1100023-07	Groundwater	11/02/11 15:15	11/02/11 17:45
MW-3000B	1100023-08	Groundwater	11/02/11 15:35	11/02/11 17:45



Hargis & Associates, Inc.

9171 Town Centre Drive, Suite 375
San Diego , CA 92122

Project Number: RAYTHEON MAIN, 532.30
Report To: Steve Netto

Reported:
11/16/2011

Client Sample ID TB-110211

Lab ID: 110023-01

Volatile Organic Compounds by EPA 8260

Analyst: BD

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 19:24	
1,1,1-Trichloroethane	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 19:24	
1,1,2,2-Tetrachloroethane	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 19:24	
1,1,2-Trichloroethane	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 19:24	
1,1-Dichloroethane	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 19:24	
1,1-Dichloroethene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 19:24	
1,1-Dichloropropene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 19:24	
1,2,3-Trichloropropane	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 19:24	
1,2,3-Trichlorobenzene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 19:24	
1,2,4-Trichlorobenzene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 19:24	
1,2,4-Trimethylbenzene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 19:24	
1,2-Dibromo-3-chloropropane	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 19:24	
1,2-Dibromoethane	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 19:24	
1,2-Dichlorobenzene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 19:24	
1,2-Dichloroethane	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 19:24	
1,2-Dichloropropane	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 19:24	
1,3,5-Trimethylbenzene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 19:24	
1,3-Dichlorobenzene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 19:24	
1,3-Dichloropropane	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 19:24	
1,4-Dichlorobenzene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 19:24	
2,2-Dichloropropane	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 19:24	
2-Chlorotoluene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 19:24	
4-Chlorotoluene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 19:24	
4-Isopropyltoluene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 19:24	
Benzene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 19:24	
Bromobenzene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 19:24	
Bromodichloromethane	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 19:24	
Bromoform	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 19:24	
Bromomethane	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 19:24	
Carbon tetrachloride	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 19:24	
Chlorobenzene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 19:24	
Chloroethane	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 19:24	
Chloroform	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 19:24	
Chloromethane	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 19:24	



Hargis & Associates, Inc.

9171 Town Centre Drive, Suite 375
San Diego, CA 92122

Project Number: RAYTHEON MAIN, 532.30
Report To: Steve Netto

Reported:
11/16/2011

Client Sample ID TB-110211

Lab ID: 110023-01

Volatile Organic Compounds by EPA 8260

Analyst: BD

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
cis-1,2-Dichloroethene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 19:24	
cis-1,3-Dichloropropene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 19:24	
Dibromochloromethane	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 19:24	
Dibromomethane	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 19:24	
Dichlorodifluoromethane	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 19:24	
Ethylbenzene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 19:24	
Hexachlorobutadiene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 19:24	
Isopropylbenzene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 19:24	
m,p-Xylene	ND	1.0	NA	1	B1K0212	11/10/2011	11/10/11 19:24	
Methylene chloride	ND	1.0	NA	1	B1K0212	11/10/2011	11/10/11 19:24	
n-Butylbenzene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 19:24	
n-Propylbenzene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 19:24	
Naphthalene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 19:24	
o-Xylene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 19:24	
sec-Butylbenzene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 19:24	
Styrene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 19:24	
tert-Butylbenzene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 19:24	
Tetrachloroethene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 19:24	
Toluene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 19:24	
trans-1,2-Dichloroethene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 19:24	
Trichloroethene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 19:24	
Trichlorofluoromethane	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 19:24	
Vinyl chloride	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 19:24	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>115 %</i>	<i>70 - 130</i>			B1K0212	11/10/2011	<i>11/10/11 19:24</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>98.4 %</i>	<i>70 - 130</i>			B1K0212	11/10/2011	<i>11/10/11 19:24</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>115 %</i>	<i>70 - 130</i>			B1K0212	11/10/2011	<i>11/10/11 19:24</i>	
<i>Surrogate: Toluene-d8</i>	<i>115 %</i>	<i>70 - 130</i>			B1K0212	11/10/2011	<i>11/10/11 19:24</i>	



Hargis & Associates, Inc.

9171 Town Centre Drive, Suite 375
San Diego , CA 92122

Project Number: RAYTHEON MAIN, 532.30
Report To: Steve Netto

Reported:
11/16/2011

Client Sample ID MW-34C

Lab ID: 110023-02

Volatile Organic Compounds by EPA 8260

Analyst: BD

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 19:44	
1,1,1-Trichloroethane	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 19:44	
1,1,2,2-Tetrachloroethane	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 19:44	
1,1,2-Trichloroethane	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 19:44	
1,1-Dichloroethane	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 19:44	
1,1-Dichloroethene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 19:44	
1,1-Dichloropropene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 19:44	
1,2,3-Trichloropropane	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 19:44	
1,2,3-Trichlorobenzene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 19:44	
1,2,4-Trichlorobenzene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 19:44	
1,2,4-Trimethylbenzene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 19:44	
1,2-Dibromo-3-chloropropane	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 19:44	
1,2-Dibromoethane	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 19:44	
1,2-Dichlorobenzene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 19:44	
1,2-Dichloroethane	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 19:44	
1,2-Dichloropropane	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 19:44	
1,3,5-Trimethylbenzene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 19:44	
1,3-Dichlorobenzene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 19:44	
1,3-Dichloropropane	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 19:44	
1,4-Dichlorobenzene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 19:44	
2,2-Dichloropropane	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 19:44	
2-Chlorotoluene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 19:44	
4-Chlorotoluene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 19:44	
4-Isopropyltoluene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 19:44	
Benzene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 19:44	
Bromobenzene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 19:44	
Bromodichloromethane	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 19:44	
Bromoform	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 19:44	
Bromomethane	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 19:44	
Carbon tetrachloride	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 19:44	
Chlorobenzene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 19:44	
Chloroethane	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 19:44	
Chloroform	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 19:44	
Chloromethane	0.5	0.5	NA	1	B1K0212	11/10/2011	11/10/11 19:44	



Hargis & Associates, Inc.

9171 Town Centre Drive, Suite 375
San Diego , CA 92122

Project Number: RAYTHEON MAIN, 532.30
Report To: Steve Netto

Reported:
11/16/2011

Client Sample ID MW-34C

Lab ID: 110023-02

Volatile Organic Compounds by EPA 8260

Analyst: BD

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
cis-1,2-Dichloroethene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 19:44	
cis-1,3-Dichloropropene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 19:44	
Dibromochloromethane	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 19:44	
Dibromomethane	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 19:44	
Dichlorodifluoromethane	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 19:44	
Ethylbenzene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 19:44	
Hexachlorobutadiene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 19:44	
Isopropylbenzene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 19:44	
m,p-Xylene	ND	1.0	NA	1	B1K0212	11/10/2011	11/10/11 19:44	
Methylene chloride	ND	1.0	NA	1	B1K0212	11/10/2011	11/10/11 19:44	
n-Butylbenzene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 19:44	
n-Propylbenzene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 19:44	
Naphthalene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 19:44	
o-Xylene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 19:44	
sec-Butylbenzene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 19:44	
Styrene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 19:44	
tert-Butylbenzene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 19:44	
Tetrachloroethene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 19:44	
Toluene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 19:44	
trans-1,2-Dichloroethene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 19:44	
Trichloroethene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 19:44	
Trichlorofluoromethane	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 19:44	
Vinyl chloride	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 19:44	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>118 %</i>	<i>70 - 130</i>			B1K0212	11/10/2011	<i>11/10/11 19:44</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>97.6 %</i>	<i>70 - 130</i>			B1K0212	11/10/2011	<i>11/10/11 19:44</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>116 %</i>	<i>70 - 130</i>			B1K0212	11/10/2011	<i>11/10/11 19:44</i>	
<i>Surrogate: Toluene-d8</i>	<i>115 %</i>	<i>70 - 130</i>			B1K0212	11/10/2011	<i>11/10/11 19:44</i>	



Hargis & Associates, Inc.

9171 Town Centre Drive, Suite 375
San Diego, CA 92122

Project Number: RAYTHEON MAIN, 532.30

Report To: Steve Netto

Reported:

11/16/2011

Client Sample ID MW-34C

Lab ID: 1100023-02

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: JD

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	ND	0.2	0.1	1	B1K0068	11/08/2011	11/08/11 23:55	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	83.4 %		58 - 99		B1K0068	11/08/2011	11/08/11 23:55	
<i>Surrogate: 2-Fluorobiphenyl</i>	84.3 %		60 - 104		B1K0068	11/08/2011	11/08/11 23:55	
<i>Surrogate: 4-Terphenyl-d14</i>	95.8 %		65 - 127		B1K0068	11/08/2011	11/08/11 23:55	
<i>Surrogate: Nitrobenzene-d5</i>	99.1 %		50 - 136		B1K0068	11/08/2011	11/08/11 23:55	



Hargis & Associates, Inc.

9171 Town Centre Drive, Suite 375
San Diego , CA 92122

Project Number: RAYTHEON MAIN, 532.30
Report To: Steve Netto

Reported:
11/16/2011

Client Sample ID MW-34A

Lab ID: 110023-03

Volatile Organic Compounds by EPA 8260

Analyst: BD

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 20:03	
1,1,1-Trichloroethane	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 20:03	
1,1,2,2-Tetrachloroethane	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 20:03	
1,1,2-Trichloroethane	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 20:03	
1,1-Dichloroethane	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 20:03	
1,1-Dichloroethene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 20:03	
1,1-Dichloropropene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 20:03	
1,2,3-Trichloropropane	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 20:03	
1,2,3-Trichlorobenzene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 20:03	
1,2,4-Trichlorobenzene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 20:03	
1,2,4-Trimethylbenzene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 20:03	
1,2-Dibromo-3-chloropropane	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 20:03	
1,2-Dibromoethane	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 20:03	
1,2-Dichlorobenzene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 20:03	
1,2-Dichloroethane	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 20:03	
1,2-Dichloropropane	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 20:03	
1,3,5-Trimethylbenzene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 20:03	
1,3-Dichlorobenzene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 20:03	
1,3-Dichloropropane	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 20:03	
1,4-Dichlorobenzene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 20:03	
2,2-Dichloropropane	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 20:03	
2-Chlorotoluene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 20:03	
4-Chlorotoluene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 20:03	
4-Isopropyltoluene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 20:03	
Benzene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 20:03	
Bromobenzene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 20:03	
Bromodichloromethane	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 20:03	
Bromoform	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 20:03	
Bromomethane	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 20:03	
Carbon tetrachloride	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 20:03	
Chlorobenzene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 20:03	
Chloroethane	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 20:03	
Chloroform	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 20:03	
Chloromethane	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 20:03	



Hargis & Associates, Inc.

9171 Town Centre Drive, Suite 375
San Diego , CA 92122

Project Number: RAYTHEON MAIN, 532.30
Report To: Steve Netto

Reported:
11/16/2011

Client Sample ID MW-34A

Lab ID: 110023-03

Volatile Organic Compounds by EPA 8260

Analyst: BD

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
cis-1,2-Dichloroethene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 20:03	
cis-1,3-Dichloropropene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 20:03	
Dibromochloromethane	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 20:03	
Dibromomethane	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 20:03	
Dichlorodifluoromethane	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 20:03	
Ethylbenzene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 20:03	
Hexachlorobutadiene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 20:03	
Isopropylbenzene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 20:03	
m,p-Xylene	ND	1.0	NA	1	B1K0212	11/10/2011	11/10/11 20:03	
Methylene chloride	ND	1.0	NA	1	B1K0212	11/10/2011	11/10/11 20:03	
n-Butylbenzene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 20:03	
n-Propylbenzene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 20:03	
Naphthalene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 20:03	
o-Xylene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 20:03	
sec-Butylbenzene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 20:03	
Styrene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 20:03	
tert-Butylbenzene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 20:03	
Tetrachloroethene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 20:03	
Toluene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 20:03	
trans-1,2-Dichloroethene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 20:03	
Trichloroethene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 20:03	
Trichlorofluoromethane	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 20:03	
Vinyl chloride	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 20:03	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>121 %</i>	<i>70 - 130</i>			B1K0212	11/10/2011	<i>11/10/11 20:03</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>97.6 %</i>	<i>70 - 130</i>			B1K0212	11/10/2011	<i>11/10/11 20:03</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>119 %</i>	<i>70 - 130</i>			B1K0212	11/10/2011	<i>11/10/11 20:03</i>	
<i>Surrogate: Toluene-d8</i>	<i>115 %</i>	<i>70 - 130</i>			B1K0212	11/10/2011	<i>11/10/11 20:03</i>	



Hargis & Associates, Inc.

9171 Town Centre Drive, Suite 375
San Diego, CA 92122

Project Number: RAYTHEON MAIN, 532.30

Report To: Steve Netto

Reported:

11/16/2011

Client Sample ID MW-34A

Lab ID: 1100023-03

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: JD

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	ND	0.2	0.1	1	B1K0068	11/08/2011	11/09/11 00:23	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>77.3 %</i>		<i>58 - 99</i>		B1K0068	11/08/2011	<i>11/09/11 00:23</i>	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>75.4 %</i>		<i>60 - 104</i>		B1K0068	11/08/2011	<i>11/09/11 00:23</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>94.0 %</i>		<i>65 - 127</i>		B1K0068	11/08/2011	<i>11/09/11 00:23</i>	
<i>Surrogate: Nitrobenzene-d5</i>	<i>77.5 %</i>		<i>50 - 136</i>		B1K0068	11/08/2011	<i>11/09/11 00:23</i>	



Hargis & Associates, Inc.

9171 Town Centre Drive, Suite 375
San Diego , CA 92122

Project Number: RAYTHEON MAIN, 532.30

Report To: Steve Netto

Reported:

11/16/2011

Client Sample ID MW-34B

Lab ID: 110023-04

Volatile Organic Compounds by EPA 8260

Analyst: BD

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 20:23	
1,1,1-Trichloroethane	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 20:23	
1,1,2,2-Tetrachloroethane	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 20:23	
1,1,2-Trichloroethane	2.1	0.5	NA	1	B1K0212	11/10/2011	11/10/11 20:23	
1,1-Dichloroethane	6.3	0.5	NA	1	B1K0212	11/10/2011	11/10/11 20:23	
1,1-Dichloroethene	502	5.0	NA	10	B1K0212	11/11/2011	11/11/11 01:00	
1,1-Dichloropropene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 20:23	
1,2,3-Trichloropropane	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 20:23	
1,2,3-Trichlorobenzene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 20:23	
1,2,4-Trichlorobenzene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 20:23	
1,2,4-Trimethylbenzene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 20:23	
1,2-Dibromo-3-chloropropane	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 20:23	
1,2-Dibromoethane	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 20:23	
1,2-Dichlorobenzene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 20:23	
1,2-Dichloroethane	1.2	0.5	NA	1	B1K0212	11/10/2011	11/10/11 20:23	
1,2-Dichloropropane	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 20:23	
1,3,5-Trimethylbenzene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 20:23	
1,3-Dichlorobenzene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 20:23	
1,3-Dichloropropane	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 20:23	
1,4-Dichlorobenzene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 20:23	
2,2-Dichloropropane	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 20:23	
2-Chlorotoluene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 20:23	
4-Chlorotoluene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 20:23	
4-Isopropyltoluene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 20:23	
Benzene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 20:23	
Bromobenzene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 20:23	
Bromodichloromethane	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 20:23	
Bromoform	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 20:23	
Bromomethane	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 20:23	
Carbon tetrachloride	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 20:23	
Chlorobenzene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 20:23	
Chloroethane	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 20:23	
Chloroform	0.5	0.5	NA	1	B1K0212	11/10/2011	11/10/11 20:23	
Chloromethane	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 20:23	
cis-1,2-Dichloroethene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 20:23	



Hargis & Associates, Inc.

9171 Town Centre Drive, Suite 375
San Diego, CA 92122

Project Number: RAYTHEON MAIN, 532.30
Report To: Steve Netto

Reported:
11/16/2011

Client Sample ID MW-34B

Lab ID: 110023-04

Volatile Organic Compounds by EPA 8260

Analyst: BD

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
cis-1,3-Dichloropropene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 20:23	
Dibromochloromethane	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 20:23	
Dibromomethane	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 20:23	
Dichlorodifluoromethane	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 20:23	
Ethylbenzene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 20:23	
Hexachlorobutadiene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 20:23	
Isopropylbenzene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 20:23	
m,p-Xylene	ND	1.0	NA	1	B1K0212	11/10/2011	11/10/11 20:23	
Methylene chloride	ND	1.0	NA	1	B1K0212	11/10/2011	11/10/11 20:23	
n-Butylbenzene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 20:23	
n-Propylbenzene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 20:23	
Naphthalene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 20:23	
o-Xylene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 20:23	
sec-Butylbenzene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 20:23	
Styrene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 20:23	
tert-Butylbenzene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 20:23	
Tetrachloroethene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 20:23	
Toluene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 20:23	
trans-1,2-Dichloroethene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 20:23	
Trichloroethene	0.7	0.5	NA	1	B1K0212	11/10/2011	11/10/11 20:23	
Trichlorofluoromethane	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 20:23	
Vinyl chloride	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 20:23	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>82.4 %</i>		<i>70 - 130</i>		B1K0212	11/11/2011	<i>11/11/11 01:00</i>	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>123 %</i>		<i>70 - 130</i>		B1K0212	11/10/2011	<i>11/10/11 20:23</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>90.8 %</i>		<i>70 - 130</i>		B1K0212	11/11/2011	<i>11/11/11 01:00</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>102 %</i>		<i>70 - 130</i>		B1K0212	11/10/2011	<i>11/10/11 20:23</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>121 %</i>		<i>70 - 130</i>		B1K0212	11/10/2011	<i>11/10/11 20:23</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>99.7 %</i>		<i>70 - 130</i>		B1K0212	11/11/2011	<i>11/11/11 01:00</i>	
<i>Surrogate: Toluene-d8</i>	<i>117 %</i>		<i>70 - 130</i>		B1K0212	11/10/2011	<i>11/10/11 20:23</i>	
<i>Surrogate: Toluene-d8</i>	<i>111 %</i>		<i>70 - 130</i>		B1K0212	11/11/2011	<i>11/11/11 01:00</i>	



Hargis & Associates, Inc.

9171 Town Centre Drive, Suite 375
San Diego , CA 92122

Project Number: RAYTHEON MAIN, 532.30

Report To: Steve Netto

Reported:

11/16/2011

Client Sample ID MW-34B

Lab ID: 1100023-04

1,4-Dioxane by EPA 8270: Isotope Dilution Technique

Analyst: JD

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	196	2.0	1.7	1	B1K0073	11/08/2011	11/10/11 13:09	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>63.4 %</i>		<i>37 - 93</i>		B1K0073	11/08/2011	<i>11/10/11 13:09</i>	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>74.1 %</i>		<i>51 - 100</i>		B1K0073	11/08/2011	<i>11/10/11 13:09</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>86.9 %</i>		<i>58 - 113</i>		B1K0073	11/08/2011	<i>11/10/11 13:09</i>	
<i>Surrogate: Nitrobenzene-d5</i>	<i>73.0 %</i>		<i>39 - 95</i>		B1K0073	11/08/2011	<i>11/10/11 13:09</i>	



Hargis & Associates, Inc.

9171 Town Centre Drive, Suite 375
San Diego , CA 92122

Project Number: RAYTHEON MAIN, 532.30

Report To: Steve Netto

Reported:

11/16/2011

Client Sample ID MW-33

Lab ID: 110023-05

Volatile Organic Compounds by EPA 8260

Analyst: BD

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.5	NA	1	B1K0188	11/11/2011	11/11/11 19:02	
1,1,1-Trichloroethane	ND	0.5	NA	1	B1K0188	11/11/2011	11/11/11 19:02	
1,1,2,2-Tetrachloroethane	ND	0.5	NA	1	B1K0188	11/11/2011	11/11/11 19:02	
1,1,2-Trichloroethane	ND	0.5	NA	1	B1K0188	11/11/2011	11/11/11 19:02	
1,1-Dichloroethane	ND	0.5	NA	1	B1K0188	11/11/2011	11/11/11 19:02	
1,1-Dichloroethene	1.7	0.5	NA	1	B1K0188	11/11/2011	11/11/11 19:02	
1,1-Dichloropropene	ND	0.5	NA	1	B1K0188	11/11/2011	11/11/11 19:02	
1,2,3-Trichloropropane	ND	0.5	NA	1	B1K0188	11/11/2011	11/11/11 19:02	
1,2,3-Trichlorobenzene	ND	0.5	NA	1	B1K0188	11/11/2011	11/11/11 19:02	
1,2,4-Trichlorobenzene	ND	0.5	NA	1	B1K0188	11/11/2011	11/11/11 19:02	
1,2,4-Trimethylbenzene	ND	0.5	NA	1	B1K0188	11/11/2011	11/11/11 19:02	
1,2-Dibromo-3-chloropropane	ND	0.5	NA	1	B1K0188	11/11/2011	11/11/11 19:02	
1,2-Dibromoethane	ND	0.5	NA	1	B1K0188	11/11/2011	11/11/11 19:02	
1,2-Dichlorobenzene	ND	0.5	NA	1	B1K0188	11/11/2011	11/11/11 19:02	
1,2-Dichloroethane	ND	0.5	NA	1	B1K0188	11/11/2011	11/11/11 19:02	
1,2-Dichloropropane	ND	0.5	NA	1	B1K0188	11/11/2011	11/11/11 19:02	
1,3,5-Trimethylbenzene	ND	0.5	NA	1	B1K0188	11/11/2011	11/11/11 19:02	
1,3-Dichlorobenzene	ND	0.5	NA	1	B1K0188	11/11/2011	11/11/11 19:02	
1,3-Dichloropropane	ND	0.5	NA	1	B1K0188	11/11/2011	11/11/11 19:02	
1,4-Dichlorobenzene	ND	0.5	NA	1	B1K0188	11/11/2011	11/11/11 19:02	
2,2-Dichloropropane	ND	0.5	NA	1	B1K0188	11/11/2011	11/11/11 19:02	
2-Chlorotoluene	ND	0.5	NA	1	B1K0188	11/11/2011	11/11/11 19:02	
4-Chlorotoluene	ND	0.5	NA	1	B1K0188	11/11/2011	11/11/11 19:02	
4-Isopropyltoluene	ND	0.5	NA	1	B1K0188	11/11/2011	11/11/11 19:02	
Benzene	ND	0.5	NA	1	B1K0188	11/11/2011	11/11/11 19:02	
Bromobenzene	ND	0.5	NA	1	B1K0188	11/11/2011	11/11/11 19:02	
Bromodichloromethane	ND	0.5	NA	1	B1K0188	11/11/2011	11/11/11 19:02	
Bromoform	ND	0.5	NA	1	B1K0188	11/11/2011	11/11/11 19:02	
Bromomethane	ND	0.5	NA	1	B1K0188	11/11/2011	11/11/11 19:02	
Carbon tetrachloride	ND	0.5	NA	1	B1K0188	11/11/2011	11/11/11 19:02	
Chlorobenzene	ND	0.5	NA	1	B1K0188	11/11/2011	11/11/11 19:02	
Chloroethane	ND	0.5	NA	1	B1K0188	11/11/2011	11/11/11 19:02	
Chloroform	ND	0.5	NA	1	B1K0188	11/11/2011	11/11/11 19:02	
Chloromethane	ND	0.5	NA	1	B1K0188	11/11/2011	11/11/11 19:02	



Hargis & Associates, Inc.

9171 Town Centre Drive, Suite 375
San Diego, CA 92122

Project Number: RAYTHEON MAIN, 532.30
Report To: Steve Netto

Reported:
11/16/2011

Client Sample ID MW-33

Lab ID: 110023-05

Volatile Organic Compounds by EPA 8260

Analyst: BD

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
cis-1,2-Dichloroethene	ND	0.5	NA	1	B1K0188	11/11/2011	11/11/11 19:02	
cis-1,3-Dichloropropene	ND	0.5	NA	1	B1K0188	11/11/2011	11/11/11 19:02	
Dibromochloromethane	ND	0.5	NA	1	B1K0188	11/11/2011	11/11/11 19:02	
Dibromomethane	ND	0.5	NA	1	B1K0188	11/11/2011	11/11/11 19:02	
Dichlorodifluoromethane	ND	0.5	NA	1	B1K0188	11/11/2011	11/11/11 19:02	
Ethylbenzene	ND	0.5	NA	1	B1K0188	11/11/2011	11/11/11 19:02	
Hexachlorobutadiene	ND	0.5	NA	1	B1K0188	11/11/2011	11/11/11 19:02	
Isopropylbenzene	ND	0.5	NA	1	B1K0188	11/11/2011	11/11/11 19:02	
m,p-Xylene	ND	1.0	NA	1	B1K0188	11/11/2011	11/11/11 19:02	
Methylene chloride	ND	1.0	NA	1	B1K0188	11/11/2011	11/11/11 19:02	
n-Butylbenzene	ND	0.5	NA	1	B1K0188	11/11/2011	11/11/11 19:02	
n-Propylbenzene	ND	0.5	NA	1	B1K0188	11/11/2011	11/11/11 19:02	
Naphthalene	ND	0.5	NA	1	B1K0188	11/11/2011	11/11/11 19:02	
o-Xylene	ND	0.5	NA	1	B1K0188	11/11/2011	11/11/11 19:02	
sec-Butylbenzene	ND	0.5	NA	1	B1K0188	11/11/2011	11/11/11 19:02	
Styrene	ND	0.5	NA	1	B1K0188	11/11/2011	11/11/11 19:02	
tert-Butylbenzene	ND	0.5	NA	1	B1K0188	11/11/2011	11/11/11 19:02	
Tetrachloroethene	ND	0.5	NA	1	B1K0188	11/11/2011	11/11/11 19:02	
Toluene	ND	0.5	NA	1	B1K0188	11/11/2011	11/11/11 19:02	
trans-1,2-Dichloroethene	ND	0.5	NA	1	B1K0188	11/11/2011	11/11/11 19:02	
Trichloroethene	0.5	0.5	NA	1	B1K0188	11/11/2011	11/11/11 19:02	
Trichlorofluoromethane	ND	0.5	NA	1	B1K0188	11/11/2011	11/11/11 19:02	
Vinyl chloride	ND	0.5	NA	1	B1K0188	11/11/2011	11/11/11 19:02	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>95.2 %</i>		<i>70 - 130</i>		B1K0188	11/11/2011	<i>11/11/11 19:02</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>94.4 %</i>		<i>70 - 130</i>		B1K0188	11/11/2011	<i>11/11/11 19:02</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>104 %</i>		<i>70 - 130</i>		B1K0188	11/11/2011	<i>11/11/11 19:02</i>	
<i>Surrogate: Toluene-d8</i>	<i>113 %</i>		<i>70 - 130</i>		B1K0188	11/11/2011	<i>11/11/11 19:02</i>	



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9171 Town Centre Drive, Suite 375
San Diego, CA 92122

Project Number: RAYTHEON MAIN, 532.30

Report To: Steve Netto

Reported:

11/16/2011

Client Sample ID MW-33

Lab ID: 1100023-05

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: JD

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	ND	0.2	0.1	1	B1K0068	11/08/2011	11/09/11 00:50	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>92.2 %</i>		<i>58 - 99</i>		B1K0068	11/08/2011	<i>11/09/11 00:50</i>	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>91.0 %</i>		<i>60 - 104</i>		B1K0068	11/08/2011	<i>11/09/11 00:50</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>97.8 %</i>		<i>65 - 127</i>		B1K0068	11/08/2011	<i>11/09/11 00:50</i>	
<i>Surrogate: Nitrobenzene-d5</i>	<i>99.9 %</i>		<i>50 - 136</i>		B1K0068	11/08/2011	<i>11/09/11 00:50</i>	



Hargis & Associates, Inc.

9171 Town Centre Drive, Suite 375
San Diego , CA 92122

Project Number: RAYTHEON MAIN, 532.30

Report To: Steve Netto

Reported:

11/16/2011

Client Sample ID MW-30A

Lab ID: 110023-06

Volatile Organic Compounds by EPA 8260

Analyst: BD

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.5	NA	1	B1K0188	11/11/2011	11/11/11 19:27	
1,1,1-Trichloroethane	ND	0.5	NA	1	B1K0188	11/11/2011	11/11/11 19:27	
1,1,2,2-Tetrachloroethane	ND	0.5	NA	1	B1K0188	11/11/2011	11/11/11 19:27	
1,1,2-Trichloroethane	ND	0.5	NA	1	B1K0188	11/11/2011	11/11/11 19:27	
1,1-Dichloroethane	ND	0.5	NA	1	B1K0188	11/11/2011	11/11/11 19:27	
1,1-Dichloroethene	0.5	0.5	NA	1	B1K0188	11/11/2011	11/11/11 19:27	
1,1-Dichloropropene	ND	0.5	NA	1	B1K0188	11/11/2011	11/11/11 19:27	
1,2,3-Trichloropropane	ND	0.5	NA	1	B1K0188	11/11/2011	11/11/11 19:27	
1,2,3-Trichlorobenzene	ND	0.5	NA	1	B1K0188	11/11/2011	11/11/11 19:27	
1,2,4-Trichlorobenzene	ND	0.5	NA	1	B1K0188	11/11/2011	11/11/11 19:27	
1,2,4-Trimethylbenzene	ND	0.5	NA	1	B1K0188	11/11/2011	11/11/11 19:27	
1,2-Dibromo-3-chloropropane	ND	0.5	NA	1	B1K0188	11/11/2011	11/11/11 19:27	
1,2-Dibromoethane	ND	0.5	NA	1	B1K0188	11/11/2011	11/11/11 19:27	
1,2-Dichlorobenzene	ND	0.5	NA	1	B1K0188	11/11/2011	11/11/11 19:27	
1,2-Dichloroethane	ND	0.5	NA	1	B1K0188	11/11/2011	11/11/11 19:27	
1,2-Dichloropropane	ND	0.5	NA	1	B1K0188	11/11/2011	11/11/11 19:27	
1,3,5-Trimethylbenzene	ND	0.5	NA	1	B1K0188	11/11/2011	11/11/11 19:27	
1,3-Dichlorobenzene	ND	0.5	NA	1	B1K0188	11/11/2011	11/11/11 19:27	
1,3-Dichloropropane	ND	0.5	NA	1	B1K0188	11/11/2011	11/11/11 19:27	
1,4-Dichlorobenzene	ND	0.5	NA	1	B1K0188	11/11/2011	11/11/11 19:27	
2,2-Dichloropropane	ND	0.5	NA	1	B1K0188	11/11/2011	11/11/11 19:27	
2-Chlorotoluene	ND	0.5	NA	1	B1K0188	11/11/2011	11/11/11 19:27	
4-Chlorotoluene	ND	0.5	NA	1	B1K0188	11/11/2011	11/11/11 19:27	
4-Isopropyltoluene	ND	0.5	NA	1	B1K0188	11/11/2011	11/11/11 19:27	
Benzene	ND	0.5	NA	1	B1K0188	11/11/2011	11/11/11 19:27	
Bromobenzene	ND	0.5	NA	1	B1K0188	11/11/2011	11/11/11 19:27	
Bromodichloromethane	ND	0.5	NA	1	B1K0188	11/11/2011	11/11/11 19:27	
Bromoform	ND	0.5	NA	1	B1K0188	11/11/2011	11/11/11 19:27	
Bromomethane	ND	0.5	NA	1	B1K0188	11/11/2011	11/11/11 19:27	
Carbon tetrachloride	ND	0.5	NA	1	B1K0188	11/11/2011	11/11/11 19:27	
Chlorobenzene	ND	0.5	NA	1	B1K0188	11/11/2011	11/11/11 19:27	
Chloroethane	ND	0.5	NA	1	B1K0188	11/11/2011	11/11/11 19:27	
Chloroform	ND	0.5	NA	1	B1K0188	11/11/2011	11/11/11 19:27	
Chloromethane	ND	0.5	NA	1	B1K0188	11/11/2011	11/11/11 19:27	



Hargis & Associates, Inc.

9171 Town Centre Drive, Suite 375
San Diego, CA 92122

Project Number: RAYTHEON MAIN, 532.30
Report To: Steve Netto

Reported:
11/16/2011

Client Sample ID MW-30A

Lab ID: 110023-06

Volatile Organic Compounds by EPA 8260

Analyst: BD

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
cis-1,2-Dichloroethene	ND	0.5	NA	1	B1K0188	11/11/2011	11/11/11 19:27	
cis-1,3-Dichloropropene	ND	0.5	NA	1	B1K0188	11/11/2011	11/11/11 19:27	
Dibromochloromethane	ND	0.5	NA	1	B1K0188	11/11/2011	11/11/11 19:27	
Dibromomethane	ND	0.5	NA	1	B1K0188	11/11/2011	11/11/11 19:27	
Dichlorodifluoromethane	ND	0.5	NA	1	B1K0188	11/11/2011	11/11/11 19:27	
Ethylbenzene	ND	0.5	NA	1	B1K0188	11/11/2011	11/11/11 19:27	
Hexachlorobutadiene	ND	0.5	NA	1	B1K0188	11/11/2011	11/11/11 19:27	
Isopropylbenzene	ND	0.5	NA	1	B1K0188	11/11/2011	11/11/11 19:27	
m,p-Xylene	ND	1.0	NA	1	B1K0188	11/11/2011	11/11/11 19:27	
Methylene chloride	ND	1.0	NA	1	B1K0188	11/11/2011	11/11/11 19:27	
n-Butylbenzene	ND	0.5	NA	1	B1K0188	11/11/2011	11/11/11 19:27	
n-Propylbenzene	ND	0.5	NA	1	B1K0188	11/11/2011	11/11/11 19:27	
Naphthalene	ND	0.5	NA	1	B1K0188	11/11/2011	11/11/11 19:27	
o-Xylene	ND	0.5	NA	1	B1K0188	11/11/2011	11/11/11 19:27	
sec-Butylbenzene	ND	0.5	NA	1	B1K0188	11/11/2011	11/11/11 19:27	
Styrene	ND	0.5	NA	1	B1K0188	11/11/2011	11/11/11 19:27	
tert-Butylbenzene	ND	0.5	NA	1	B1K0188	11/11/2011	11/11/11 19:27	
Tetrachloroethene	ND	0.5	NA	1	B1K0188	11/11/2011	11/11/11 19:27	
Toluene	ND	0.5	NA	1	B1K0188	11/11/2011	11/11/11 19:27	
trans-1,2-Dichloroethene	ND	0.5	NA	1	B1K0188	11/11/2011	11/11/11 19:27	
Trichloroethene	ND	0.5	NA	1	B1K0188	11/11/2011	11/11/11 19:27	
Trichlorofluoromethane	ND	0.5	NA	1	B1K0188	11/11/2011	11/11/11 19:27	
Vinyl chloride	ND	0.5	NA	1	B1K0188	11/11/2011	11/11/11 19:27	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>96.1 %</i>	<i>70 - 130</i>			B1K0188	11/11/2011	<i>11/11/11 19:27</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>94.8 %</i>	<i>70 - 130</i>			B1K0188	11/11/2011	<i>11/11/11 19:27</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>105 %</i>	<i>70 - 130</i>			B1K0188	11/11/2011	<i>11/11/11 19:27</i>	
<i>Surrogate: Toluene-d8</i>	<i>112 %</i>	<i>70 - 130</i>			B1K0188	11/11/2011	<i>11/11/11 19:27</i>	



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9171 Town Centre Drive, Suite 375
San Diego , CA 92122

Project Number: RAYTHEON MAIN, 532.30

Report To: Steve Netto

Reported:

11/16/2011

Client Sample ID MW-30A

Lab ID: 1100023-06

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: JD

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	0.3	0.2	0.1	1	B1K0068	11/08/2011	11/09/11 01:17	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	78.3 %		58 - 99		B1K0068	11/08/2011	11/09/11 01:17	
<i>Surrogate: 2-Fluorobiphenyl</i>	74.4 %		60 - 104		B1K0068	11/08/2011	11/09/11 01:17	
<i>Surrogate: 4-Terphenyl-d14</i>	88.3 %		65 - 127		B1K0068	11/08/2011	11/09/11 01:17	
<i>Surrogate: Nitrobenzene-d5</i>	77.6 %		50 - 136		B1K0068	11/08/2011	11/09/11 01:17	



Hargis & Associates, Inc.

9171 Town Centre Drive, Suite 375
San Diego , CA 92122

Project Number: RAYTHEON MAIN, 532.30
Report To: Steve Netto

Reported:
11/16/2011

Client Sample ID MW-30B

Lab ID: 110023-07

Volatile Organic Compounds by EPA 8260

Analyst: BD

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 21:23	
1,1,1-Trichloroethane	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 21:23	
1,1,2,2-Tetrachloroethane	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 21:23	
1,1,2-Trichloroethane	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 21:23	
1,1-Dichloroethane	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 21:23	
1,1-Dichloroethene	13.6	0.5	NA	1	B1K0212	11/10/2011	11/10/11 21:23	
1,1-Dichloropropene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 21:23	
1,2,3-Trichloropropane	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 21:23	
1,2,3-Trichlorobenzene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 21:23	
1,2,4-Trichlorobenzene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 21:23	
1,2,4-Trimethylbenzene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 21:23	
1,2-Dibromo-3-chloropropane	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 21:23	
1,2-Dibromoethane	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 21:23	
1,2-Dichlorobenzene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 21:23	
1,2-Dichloroethane	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 21:23	
1,2-Dichloropropane	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 21:23	
1,3,5-Trimethylbenzene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 21:23	
1,3-Dichlorobenzene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 21:23	
1,3-Dichloropropane	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 21:23	
1,4-Dichlorobenzene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 21:23	
2,2-Dichloropropane	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 21:23	
2-Chlorotoluene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 21:23	
4-Chlorotoluene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 21:23	
4-Isopropyltoluene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 21:23	
Benzene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 21:23	
Bromobenzene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 21:23	
Bromodichloromethane	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 21:23	
Bromoform	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 21:23	
Bromomethane	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 21:23	
Carbon tetrachloride	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 21:23	
Chlorobenzene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 21:23	
Chloroethane	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 21:23	
Chloroform	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 21:23	
Chloromethane	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 21:23	



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9171 Town Centre Drive, Suite 375
San Diego, CA 92122

Project Number: RAYTHEON MAIN, 532.30
Report To: Steve Netto

Reported:
11/16/2011

Client Sample ID MW-30B

Lab ID: 110023-07

Volatile Organic Compounds by EPA 8260

Analyst: BD

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
cis-1,2-Dichloroethene	4.2	0.5	NA	1	B1K0212	11/10/2011	11/10/11 21:23	
cis-1,3-Dichloropropene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 21:23	
Dibromochloromethane	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 21:23	
Dibromomethane	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 21:23	
Dichlorodifluoromethane	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 21:23	
Ethylbenzene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 21:23	
Hexachlorobutadiene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 21:23	
Isopropylbenzene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 21:23	
m,p-Xylene	ND	1.0	NA	1	B1K0212	11/10/2011	11/10/11 21:23	
Methylene chloride	ND	1.0	NA	1	B1K0212	11/10/2011	11/10/11 21:23	
n-Butylbenzene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 21:23	
n-Propylbenzene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 21:23	
Naphthalene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 21:23	
o-Xylene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 21:23	
sec-Butylbenzene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 21:23	
Styrene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 21:23	
tert-Butylbenzene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 21:23	
Tetrachloroethene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 21:23	
Toluene	3.2	0.5	NA	1	B1K0212	11/10/2011	11/10/11 21:23	
trans-1,2-Dichloroethene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 21:23	
Trichloroethene	80.7	0.5	NA	1	B1K0212	11/10/2011	11/10/11 21:23	
Trichlorofluoromethane	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 21:23	
Vinyl chloride	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 21:23	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>127 %</i>		<i>70 - 130</i>		B1K0212	11/10/2011	<i>11/10/11 21:23</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>101 %</i>		<i>70 - 130</i>		B1K0212	11/10/2011	<i>11/10/11 21:23</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>117 %</i>		<i>70 - 130</i>		B1K0212	11/10/2011	<i>11/10/11 21:23</i>	
<i>Surrogate: Toluene-d8</i>	<i>111 %</i>		<i>70 - 130</i>		B1K0212	11/10/2011	<i>11/10/11 21:23</i>	



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9171 Town Centre Drive, Suite 375
San Diego , CA 92122

Project Number: RAYTHEON MAIN, 532.30

Report To: Steve Netto

Reported:

11/16/2011

Client Sample ID MW-30B

Lab ID: 110023-07

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: JD

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	0.4	0.2	0.1	1	B1K0068	11/08/2011	11/09/11 01:44	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	79.5 %		58 - 99		B1K0068	11/08/2011	11/09/11 01:44	
<i>Surrogate: 2-Fluorobiphenyl</i>	76.2 %		60 - 104		B1K0068	11/08/2011	11/09/11 01:44	
<i>Surrogate: 4-Terphenyl-d14</i>	92.2 %		65 - 127		B1K0068	11/08/2011	11/09/11 01:44	
<i>Surrogate: Nitrobenzene-d5</i>	85.2 %		50 - 136		B1K0068	11/08/2011	11/09/11 01:44	



Hargis & Associates, Inc.

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Project Number: RAYTHEON MAIN, 532.30
Report To: Steve Netto

Reported:
11/16/2011

Client Sample ID MW-3000B

Lab ID: 110023-08

Volatile Organic Compounds by EPA 8260

Analyst: BD

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 21:42	
1,1,1-Trichloroethane	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 21:42	
1,1,2,2-Tetrachloroethane	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 21:42	
1,1,2-Trichloroethane	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 21:42	
1,1-Dichloroethane	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 21:42	
1,1-Dichloroethene	13.7	0.5	NA	1	B1K0212	11/10/2011	11/10/11 21:42	
1,1-Dichloropropene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 21:42	
1,2,3-Trichloropropane	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 21:42	
1,2,3-Trichlorobenzene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 21:42	
1,2,4-Trichlorobenzene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 21:42	
1,2,4-Trimethylbenzene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 21:42	
1,2-Dibromo-3-chloropropane	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 21:42	
1,2-Dibromoethane	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 21:42	
1,2-Dichlorobenzene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 21:42	
1,2-Dichloroethane	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 21:42	
1,2-Dichloropropane	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 21:42	
1,3,5-Trimethylbenzene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 21:42	
1,3-Dichlorobenzene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 21:42	
1,3-Dichloropropane	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 21:42	
1,4-Dichlorobenzene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 21:42	
2,2-Dichloropropane	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 21:42	
2-Chlorotoluene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 21:42	
4-Chlorotoluene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 21:42	
4-Isopropyltoluene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 21:42	
Benzene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 21:42	
Bromobenzene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 21:42	
Bromodichloromethane	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 21:42	
Bromoform	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 21:42	
Bromomethane	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 21:42	
Carbon tetrachloride	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 21:42	
Chlorobenzene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 21:42	
Chloroethane	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 21:42	
Chloroform	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 21:42	
Chloromethane	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 21:42	



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9171 Town Centre Drive, Suite 375
San Diego , CA 92122

Project Number: RAYTHEON MAIN, 532.30
Report To: Steve Netto

Reported:
11/16/2011

Client Sample ID MW-3000B

Lab ID: 110023-08

Volatile Organic Compounds by EPA 8260

Analyst: BD

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
cis-1,2-Dichloroethene	4.4	0.5	NA	1	B1K0212	11/10/2011	11/10/11 21:42	
cis-1,3-Dichloropropene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 21:42	
Dibromochloromethane	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 21:42	
Dibromomethane	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 21:42	
Dichlorodifluoromethane	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 21:42	
Ethylbenzene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 21:42	
Hexachlorobutadiene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 21:42	
Isopropylbenzene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 21:42	
m,p-Xylene	ND	1.0	NA	1	B1K0212	11/10/2011	11/10/11 21:42	
Methylene chloride	ND	1.0	NA	1	B1K0212	11/10/2011	11/10/11 21:42	
n-Butylbenzene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 21:42	
n-Propylbenzene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 21:42	
Naphthalene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 21:42	
o-Xylene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 21:42	
sec-Butylbenzene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 21:42	
Styrene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 21:42	
tert-Butylbenzene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 21:42	
Tetrachloroethene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 21:42	
Toluene	2.8	0.5	NA	1	B1K0212	11/10/2011	11/10/11 21:42	
trans-1,2-Dichloroethene	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 21:42	
Trichloroethene	82.6	0.5	NA	1	B1K0212	11/10/2011	11/10/11 21:42	
Trichlorofluoromethane	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 21:42	
Vinyl chloride	ND	0.5	NA	1	B1K0212	11/10/2011	11/10/11 21:42	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>129 %</i>		<i>70 - 130</i>		B1K0212	11/10/2011	<i>11/10/11 21:42</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>99.7 %</i>		<i>70 - 130</i>		B1K0212	11/10/2011	<i>11/10/11 21:42</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>123 %</i>		<i>70 - 130</i>		B1K0212	11/10/2011	<i>11/10/11 21:42</i>	
<i>Surrogate: Toluene-d8</i>	<i>112 %</i>		<i>70 - 130</i>		B1K0212	11/10/2011	<i>11/10/11 21:42</i>	



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Project Number: RAYTHEON MAIN, 532.30

Report To: Steve Netto

Reported:

11/16/2011

Client Sample ID MW-3000B

Lab ID: 1100023-08

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: JD

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	0.4	0.2	0.1	1	B1K0068	11/08/2011	11/09/11 02:12	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>73.1 %</i>		<i>58 - 99</i>		B1K0068	11/08/2011	<i>11/09/11 02:12</i>	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>68.0 %</i>		<i>60 - 104</i>		B1K0068	11/08/2011	<i>11/09/11 02:12</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>92.9 %</i>		<i>65 - 127</i>		B1K0068	11/08/2011	<i>11/09/11 02:12</i>	
<i>Surrogate: Nitrobenzene-d5</i>	<i>70.5 %</i>		<i>50 - 136</i>		B1K0068	11/08/2011	<i>11/09/11 02:12</i>	



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QUALITY CONTROL SECTION

Volatile Organic Compounds by EPA 8260 - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B1K0188 - MSVOAW_LL

Blank (B1K0188-BLK1)

Prepared: 11/11/2011 Analyzed: 11/11/2011

1,1,1,2-Tetrachloroethane	ND	0.5			NR				
1,1,1-Trichloroethane	ND	0.5			NR				
1,1,2,2-Tetrachloroethane	ND	0.5			NR				
1,1,2-Trichloroethane	ND	0.5			NR				
1,1-Dichloroethane	ND	0.5			NR				
1,1-Dichloroethene	ND	0.5			NR				
1,1-Dichloropropene	ND	0.5			NR				
1,2,3-Trichloropropane	ND	0.5			NR				
1,2,3-Trichlorobenzene	ND	0.5			NR				
1,2,4-Trichlorobenzene	ND	0.5			NR				
1,2,4-Trimethylbenzene	ND	0.5			NR				
1,2-Dibromo-3-chloropropane	ND	0.5			NR				
1,2-Dibromoethane	ND	0.5			NR				
1,2-Dichlorobenzene	ND	0.5			NR				
1,2-Dichloroethane	ND	0.5			NR				
1,2-Dichloropropane	ND	0.5			NR				
1,3,5-Trimethylbenzene	ND	0.5			NR				
1,3-Dichlorobenzene	ND	0.5			NR				
1,3-Dichloropropane	ND	0.5			NR				
1,4-Dichlorobenzene	ND	0.5			NR				
2,2-Dichloropropane	ND	0.5			NR				
2-Chlorotoluene	ND	0.5			NR				
4-Chlorotoluene	ND	0.5			NR				
4-Isopropyltoluene	ND	0.5			NR				
Benzene	ND	0.5			NR				
Bromobenzene	ND	0.5			NR				
Bromodichloromethane	ND	0.5			NR				
Bromoform	ND	0.5			NR				
Bromomethane	ND	0.5			NR				
Carbon tetrachloride	ND	0.5			NR				
Chlorobenzene	ND	0.5			NR				
Chloroethane	ND	0.5			NR				
Chloroform	ND	0.5			NR				
Chloromethane	ND	0.5			NR				
cis-1,2-Dichloroethene	ND	0.5			NR				
cis-1,3-Dichloropropene	ND	0.5			NR				
Dibromochloromethane	ND	0.5			NR				
Dibromomethane	ND	0.5			NR				
Dichlorodifluoromethane	ND	0.5			NR				



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Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
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Batch B1K0188 - MSVOAW_LL (continued)

Blank (B1K0188-BLK1) - Continued

Prepared: 11/11/2011 Analyzed: 11/11/2011

Ethylbenzene	ND	0.5				NR			
Hexachlorobutadiene	ND	0.5				NR			
Isopropylbenzene	ND	0.5				NR			
m,p-Xylene	ND	1.0				NR			
Methylene chloride	ND	1.0				NR			
n-Butylbenzene	ND	0.5				NR			
n-Propylbenzene	ND	0.5				NR			
Naphthalene	ND	0.5				NR			
o-Xylene	ND	0.5				NR			
sec-Butylbenzene	ND	0.5				NR			
Styrene	ND	0.5				NR			
tert-Butylbenzene	ND	0.5				NR			
Tetrachloroethene	ND	0.5				NR			
Toluene	ND	0.5				NR			
trans-1,2-Dichloroethene	ND	0.5				NR			
Trichloroethene	ND	0.5				NR			
Trichlorofluoromethane	ND	0.5				NR			
Vinyl chloride	ND	0.5				NR			

<i>Surrogate: 1,2-Dichloroethane-d4</i>	24.55		25.0		98.2	70 - 130			
<i>Surrogate: 4-Bromofluorobenzene</i>	23.61		25.0		94.4	70 - 130			
<i>Surrogate: Dibromofluoromethane</i>	27.00		25.0		108	70 - 130			
<i>Surrogate: Toluene-d8</i>	28.50		25.0		114	70 - 130			

LCS (B1K0188-BS1)

Prepared: 11/11/2011 Analyzed: 11/11/2011

1,1-Dichloroethene	16.88	0.5	20.0		84.4	70 - 130			
Benzene	34.97	0.5	40.0		87.4	70 - 130			
Chlorobenzene	18.45	0.5	20.0		92.2	70 - 130			
MTBE	16.97	0.5	20.0		84.8	70 - 130			
Toluene	38.28	0.5	40.0		95.7	70 - 130			
Trichloroethene	18.81	0.5	20.0		94.0	70 - 130			

<i>Surrogate: 1,2-Dichloroethane-d4</i>	23.45		25.0		93.8	70 - 130			
<i>Surrogate: 4-Bromofluorobenzene</i>	23.36		25.0		93.4	70 - 130			
<i>Surrogate: Dibromofluoromethane</i>	25.99		25.0		104	70 - 130			
<i>Surrogate: Toluene-d8</i>	28.60		25.0		114	70 - 130			

LCS Dup (B1K0188-BSD1)

Prepared: 11/11/2011 Analyzed: 11/11/2011

1,1-Dichloroethene	18.02	0.5	20.0		90.1	70 - 130	6.53	20	
Benzene	36.64	0.5	40.0		91.6	70 - 130	4.66	20	
Chlorobenzene	19.09	0.5	20.0		95.4	70 - 130	3.41	20	
MTBE	17.27	0.5	20.0		86.4	70 - 130	1.75	20	
Toluene	40.23	0.5	40.0		101	70 - 130	4.97	20	



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Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
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Batch B1K0188 - MSVOAW_LL (continued)

LCS Dup (B1K0188-BSD1) - Continued

Prepared: 11/11/2011 Analyzed: 11/11/2011

Trichloroethene	19.92	0.5	20.0		99.6	70 - 130	5.73	20	
Surrogate: 1,2-Dichloroethane-d4	23.30		25.0		93.2	70 - 130			
Surrogate: 4-Bromofluorobenzene	23.38		25.0		93.5	70 - 130			
Surrogate: Dibromofluoromethane	25.62		25.0		102	70 - 130			
Surrogate: Toluene-d8	28.53		25.0		114	70 - 130			

Matrix Spike (B1K0188-MS1)

Source: 1100034-01

Prepared: 11/11/2011 Analyzed: 11/11/2011

1,1-Dichloroethene	116.3	0.5	20.0	96.85	97.4	70 - 130			
Benzene	40.31	0.5	40.0	ND	101	70 - 130			
Chlorobenzene	20.66	0.5	20.0	ND	103	70 - 130			
MTBE	20.62	0.5	20.0	ND	103	70 - 130			
Toluene	43.91	0.5	40.0	ND	110	70 - 130			
Trichloroethene	21.83	0.5	20.0	ND	109	70 - 130			
Surrogate: 1,2-Dichloroethane-d4	27.12		25.0		108	70 - 130			
Surrogate: 4-Bromofluorobenzene	24.12		25.0		96.5	70 - 130			
Surrogate: Dibromofluoromethane	27.80		25.0		111	70 - 130			
Surrogate: Toluene-d8	28.55		25.0		114	70 - 130			

Matrix Spike Dup (B1K0188-MSD1)

Source: 1100034-01

Prepared: 11/11/2011 Analyzed: 11/11/2011

1,1-Dichloroethene	109.8	0.5	20.0	96.85	65.0	70 - 130	5.72	20	M1
Benzene	38.27	0.5	40.0	ND	95.7	70 - 130	5.19	20	
Chlorobenzene	20.01	0.5	20.0	ND	100	70 - 130	3.20	20	
MTBE	20.06	0.5	20.0	ND	100	70 - 130	2.75	20	
Toluene	41.79	0.5	40.0	ND	104	70 - 130	4.95	20	
Trichloroethene	20.51	0.5	20.0	ND	103	70 - 130	6.24	20	
Surrogate: 1,2-Dichloroethane-d4	25.64		25.0		103	70 - 130			
Surrogate: 4-Bromofluorobenzene	24.17		25.0		96.7	70 - 130			
Surrogate: Dibromofluoromethane	26.55		25.0		106	70 - 130			
Surrogate: Toluene-d8	28.73		25.0		115	70 - 130			

Batch B1K0194 - MSVOAW_LL

Blank (B1K0194-BLK1)

Prepared: 11/10/2011 Analyzed: 11/10/2011

1,1,1,2-Tetrachloroethane	ND	0.5			NR				
1,1,1-Trichloroethane	ND	0.5			NR				
1,1,2,2-Tetrachloroethane	ND	0.5			NR				
1,1,2-Trichloroethane	ND	0.5			NR				
1,1-Dichloroethane	ND	0.5			NR				
1,1-Dichloroethene	ND	0.5			NR				
1,1-Dichloropropene	ND	0.5			NR				
1,2,3-Trichloropropane	ND	0.5			NR				



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Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
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Batch BIK0194 - MSVOAW_LL (continued)

Blank (BIK0194-BLK1) - Continued

Prepared: 11/10/2011 Analyzed: 11/10/2011

1,2,3-Trichlorobenzene	ND	0.5			NR
1,2,4-Trichlorobenzene	ND	0.5			NR
1,2,4-Trimethylbenzene	ND	0.5			NR
1,2-Dibromo-3-chloropropane	ND	0.5			NR
1,2-Dibromoethane	ND	0.5			NR
1,2-Dichlorobenzene	ND	0.5			NR
1,2-Dichloroethane	ND	0.5			NR
1,2-Dichloropropane	ND	0.5			NR
1,3,5-Trimethylbenzene	ND	0.5			NR
1,3-Dichlorobenzene	ND	0.5			NR
1,3-Dichloropropane	ND	0.5			NR
1,4-Dichlorobenzene	ND	0.5			NR
2,2-Dichloropropane	ND	0.5			NR
2-Chlorotoluene	ND	0.5			NR
4-Chlorotoluene	ND	0.5			NR
4-Isopropyltoluene	ND	0.5			NR
Benzene	ND	0.5			NR
Bromobenzene	ND	0.5			NR
Bromodichloromethane	ND	0.5			NR
Bromoform	ND	0.5			NR
Bromomethane	ND	0.5			NR
Carbon tetrachloride	ND	0.5			NR
Chlorobenzene	ND	0.5			NR
Chloroethane	ND	0.5			NR
Chloroform	ND	0.5			NR
Chloromethane	ND	0.5			NR
cis-1,2-Dichloroethene	ND	0.5			NR
cis-1,3-Dichloropropene	ND	0.5			NR
Dibromochloromethane	ND	0.5			NR
Dibromomethane	ND	0.5			NR
Dichlorodifluoromethane	ND	0.5			NR
Ethylbenzene	ND	0.5			NR
Hexachlorobutadiene	ND	0.5			NR
Isopropylbenzene	ND	0.5			NR
m,p-Xylene	ND	1.0			NR
Methylene chloride	ND	1.0			NR
n-Butylbenzene	ND	0.5			NR
n-Propylbenzene	ND	0.5			NR
Naphthalene	ND	0.5			NR
o-Xylene	ND	0.5			NR
sec-Butylbenzene	ND	0.5			NR
Styrene	ND	0.5			NR



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Report To: Steve Netto

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Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B1K0194 - MSVOAW_LL (continued)

Blank (B1K0194-BLK1) - Continued

Prepared: 11/10/2011 Analyzed: 11/10/2011

tert-Butylbenzene	ND	0.5			NR				
Tetrachloroethene	ND	0.5			NR				
Toluene	ND	0.5			NR				
trans-1,2-Dichloroethene	ND	0.5			NR				
Trichloroethene	ND	0.5			NR				
Trichlorofluoromethane	ND	0.5			NR				
Vinyl chloride	ND	0.5			NR				
<i>Surrogate: 1,2-Dichloroethane-d4</i>	29.00		25.0		116	70 - 130			
<i>Surrogate: 4-Bromofluorobenzene</i>	24.43		25.0		97.7	70 - 130			
<i>Surrogate: Dibromofluoromethane</i>	29.19		25.0		117	70 - 130			
<i>Surrogate: Toluene-d8</i>	28.97		25.0		116	70 - 130			

LCS (B1K0194-BS1)

Prepared: 11/9/2011 Analyzed: 11/9/2011

1,1-Dichloroethene	19.06	0.5	20.0		95.3	70 - 130			
Benzene	39.29	0.5	40.0		98.2	70 - 130			
Chlorobenzene	20.71	0.5	20.0		104	70 - 130			
MTBE	21.32	0.5	20.0		107	70 - 130			
Toluene	43.16	0.5	40.0		108	70 - 130			
Trichloroethene	20.79	0.5	20.0		104	70 - 130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	29.44		25.0		118	70 - 130			
<i>Surrogate: 4-Bromofluorobenzene</i>	26.10		25.0		104	70 - 130			
<i>Surrogate: Dibromofluoromethane</i>	28.01		25.0		112	70 - 130			
<i>Surrogate: Toluene-d8</i>	29.01		25.0		116	70 - 130			

LCS Dup (B1K0194-BSD1)

Prepared: 11/9/2011 Analyzed: 11/9/2011

1,1-Dichloroethene	18.63	0.5	20.0		93.2	70 - 130	2.28	20	
Benzene	39.27	0.5	40.0		98.2	70 - 130	0.0509	20	
Chlorobenzene	20.83	0.5	20.0		104	70 - 130	0.578	20	
MTBE	21.28	0.5	20.0		106	70 - 130	0.188	20	
Toluene	42.28	0.5	40.0		106	70 - 130	2.06	20	
Trichloroethene	20.52	0.5	20.0		103	70 - 130	1.31	20	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	28.56		25.0		114	70 - 130			
<i>Surrogate: 4-Bromofluorobenzene</i>	25.70		25.0		103	70 - 130			
<i>Surrogate: Dibromofluoromethane</i>	27.29		25.0		109	70 - 130			
<i>Surrogate: Toluene-d8</i>	29.01		25.0		116	70 - 130			

Matrix Spike (B1K0194-MS1)

Source: 1100021-09

Prepared: 11/9/2011 Analyzed: 11/9/2011

1,1-Dichloroethene	20.79	0.5	20.0	ND	104	70 - 130			
Benzene	41.31	0.5	40.0	ND	103	70 - 130			
Chlorobenzene	21.25	0.5	20.0	ND	106	70 - 130			
MTBE	21.72	0.5	20.0	ND	109	70 - 130			



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Project Number: RAYTHEON MAIN, 532.30

Report To: Steve Netto

Reported:

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Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B1K0194 - MSVOAW_LL (continued)

Matrix Spike (B1K0194-MS1) - Continued

Source: 1100021-09

Prepared: 11/9/2011 Analyzed: 11/9/2011

Toluene	44.79	0.5	40.0	ND	112	70 - 130			
Trichloroethene	21.61	0.5	20.0	ND	108	70 - 130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>28.67</i>		<i>25.0</i>		<i>115</i>	<i>70 - 130</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>25.49</i>		<i>25.0</i>		<i>102</i>	<i>70 - 130</i>			
<i>Surrogate: Dibromofluoromethane</i>	<i>27.74</i>		<i>25.0</i>		<i>111</i>	<i>70 - 130</i>			
<i>Surrogate: Toluene-d8</i>	<i>28.75</i>		<i>25.0</i>		<i>115</i>	<i>70 - 130</i>			

Matrix Spike Dup (B1K0194-MSD1)

Source: 1100021-09

Prepared: 11/9/2011 Analyzed: 11/9/2011

1,1-Dichloroethene	19.41	0.5	20.0	ND	97.0	70 - 130	6.87	20	
Benzene	38.91	0.5	40.0	ND	97.3	70 - 130	5.98	20	
Chlorobenzene	20.69	0.5	20.0	ND	103	70 - 130	2.67	20	
MTBE	20.81	0.5	20.0	ND	104	70 - 130	4.28	20	
Toluene	42.15	0.5	40.0	ND	105	70 - 130	6.07	20	
Trichloroethene	20.51	0.5	20.0	ND	103	70 - 130	5.22	20	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>27.57</i>		<i>25.0</i>		<i>110</i>	<i>70 - 130</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>25.21</i>		<i>25.0</i>		<i>101</i>	<i>70 - 130</i>			
<i>Surrogate: Dibromofluoromethane</i>	<i>27.54</i>		<i>25.0</i>		<i>110</i>	<i>70 - 130</i>			
<i>Surrogate: Toluene-d8</i>	<i>28.57</i>		<i>25.0</i>		<i>114</i>	<i>70 - 130</i>			

Batch B1K0212 - MSVOAW_LL

Blank (B1K0212-BLK1)

Prepared: 11/10/2011 Analyzed: 11/10/2011

1,1,1,2-Tetrachloroethane	ND	0.5							NR
1,1,1-Trichloroethane	ND	0.5							NR
1,1,2,2-Tetrachloroethane	ND	0.5							NR
1,1,2-Trichloroethane	ND	0.5							NR
1,1-Dichloroethane	ND	0.5							NR
1,1-Dichloroethene	ND	0.5							NR
1,1-Dichloropropene	ND	0.5							NR
1,2,3-Trichloropropane	ND	0.5							NR
1,2,3-Trichlorobenzene	ND	0.5							NR
1,2,4-Trichlorobenzene	ND	0.5							NR
1,2,4-Trimethylbenzene	ND	0.5							NR
1,2-Dibromo-3-chloropropane	ND	0.5							NR
1,2-Dibromoethane	ND	0.5							NR
1,2-Dichlorobenzene	ND	0.5							NR
1,2-Dichloroethane	ND	0.5							NR
1,2-Dichloropropane	ND	0.5							NR
1,3,5-Trimethylbenzene	ND	0.5							NR
1,3-Dichlorobenzene	ND	0.5							NR
1,3-Dichloropropane	ND	0.5							NR



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Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
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Batch B1K0212 - MSVOAW_LL (continued)

Blank (B1K0212-BLK1) - Continued

Prepared: 11/10/2011 Analyzed: 11/10/2011

1,4-Dichlorobenzene	ND	0.5			NR				
2,2-Dichloropropane	ND	0.5			NR				
2-Chlorotoluene	ND	0.5			NR				
4-Chlorotoluene	ND	0.5			NR				
4-Isopropyltoluene	ND	0.5			NR				
Benzene	ND	0.5			NR				
Bromobenzene	ND	0.5			NR				
Bromodichloromethane	ND	0.5			NR				
Bromoform	ND	0.5			NR				
Bromomethane	ND	0.5			NR				
Carbon tetrachloride	ND	0.5			NR				
Chlorobenzene	ND	0.5			NR				
Chloroethane	ND	0.5			NR				
Chloroform	ND	0.5			NR				
Chloromethane	ND	0.5			NR				
cis-1,2-Dichloroethene	ND	0.5			NR				
cis-1,3-Dichloropropene	ND	0.5			NR				
Dibromochloromethane	ND	0.5			NR				
Dibromomethane	ND	0.5			NR				
Dichlorodifluoromethane	ND	0.5			NR				
Ethylbenzene	ND	0.5			NR				
Hexachlorobutadiene	ND	0.5			NR				
Isopropylbenzene	ND	0.5			NR				
m,p-Xylene	ND	1.0			NR				
Methylene chloride	ND	1.0			NR				
n-Butylbenzene	ND	0.5			NR				
n-Propylbenzene	ND	0.5			NR				
Naphthalene	ND	0.5			NR				
o-Xylene	ND	0.5			NR				
sec-Butylbenzene	ND	0.5			NR				
Styrene	ND	0.5			NR				
tert-Butylbenzene	ND	0.5			NR				
Tetrachloroethene	ND	0.5			NR				
Toluene	ND	0.5			NR				
trans-1,2-Dichloroethene	ND	0.5			NR				
Trichloroethene	ND	0.5			NR				
Trichlorofluoromethane	ND	0.5			NR				
Vinyl chloride	ND	0.5			NR				
Surrogate: 1,2-Dichloroethane-d4	27.58		25.0		110	70 - 130			
Surrogate: 4-Bromofluorobenzene	24.06		25.0		96.2	70 - 130			
Surrogate: Dibromofluoromethane	27.78		25.0		111	70 - 130			



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Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B1K0212 - MSVOAW_LL (continued)

Blank (B1K0212-BLK1) - Continued

Prepared: 11/10/2011 Analyzed: 11/10/2011

Surrogate: Toluene-d8 28.75 25.0 115 70 - 130

LCS (B1K0212-BS1)

Prepared: 11/10/2011 Analyzed: 11/10/2011

1,1-Dichloroethene	17.11	0.5	20.0	85.6	70 - 130
Benzene	37.93	0.5	40.0	94.8	70 - 130
Chlorobenzene	20.00	0.5	20.0	100	70 - 130
MTBE	20.80	0.5	20.0	104	70 - 130
Toluene	41.19	0.5	40.0	103	70 - 130
Trichloroethene	20.20	0.5	20.0	101	70 - 130

Surrogate: 1,2-Dichloroethane-d4	26.77	25.0	107	70 - 130
Surrogate: 4-Bromofluorobenzene	24.49	25.0	98.0	70 - 130
Surrogate: Dibromofluoromethane	26.73	25.0	107	70 - 130
Surrogate: Toluene-d8	28.61	25.0	114	70 - 130

LCS Dup (B1K0212-BSD1)

Prepared: 11/10/2011 Analyzed: 11/10/2011

1,1-Dichloroethene	17.08	0.5	20.0	85.4	70 - 130	0.175	20
Benzene	38.11	0.5	40.0	95.3	70 - 130	0.473	20
Chlorobenzene	20.40	0.5	20.0	102	70 - 130	1.98	20
MTBE	20.53	0.5	20.0	103	70 - 130	1.31	20
Toluene	40.88	0.5	40.0	102	70 - 130	0.755	20
Trichloroethene	20.03	0.5	20.0	100	70 - 130	0.845	20

Surrogate: 1,2-Dichloroethane-d4	26.03	25.0	104	70 - 130
Surrogate: 4-Bromofluorobenzene	24.55	25.0	98.2	70 - 130
Surrogate: Dibromofluoromethane	26.25	25.0	105	70 - 130
Surrogate: Toluene-d8	29.09	25.0	116	70 - 130

Matrix Spike (B1K0212-MS1)

Source: 1100023-05RE1

Prepared: 11/10/2011 Analyzed: 11/10/2011

1,1-Dichloroethene	25.16	0.5	20.0	5.160	100	70 - 130
Benzene	41.40	0.5	40.0	ND	104	70 - 130
Chlorobenzene	21.80	0.5	20.0	ND	109	70 - 130
MTBE	20.53	0.5	20.0	ND	103	70 - 130
Toluene	45.23	0.5	40.0	ND	113	70 - 130
Trichloroethene	23.41	0.5	20.0	1.110	112	70 - 130

Surrogate: 1,2-Dichloroethane-d4	21.30	25.0	85.2	70 - 130
Surrogate: 4-Bromofluorobenzene	23.41	25.0	93.6	70 - 130
Surrogate: Dibromofluoromethane	24.47	25.0	97.9	70 - 130
Surrogate: Toluene-d8	27.78	25.0	111	70 - 130

Matrix Spike Dup (B1K0212-MSD1)

Source: 1100023-05RE1

Prepared: 11/10/2011 Analyzed: 11/10/2011

1,1-Dichloroethene	23.59	0.5	20.0	5.160	92.2	70 - 130	6.44	20
Benzene	38.75	0.5	40.0	ND	96.9	70 - 130	6.61	20



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Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
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Batch B1K0212 - MSVOAW_LL (continued)

Matrix Spike Dup (B1K0212-MSD1) - Continued

Source: 1100023-05RE1

Prepared: 11/10/2011 Analyzed: 11/10/2011

Chlorobenzene	20.35	0.5	20.0	ND	102	70 - 130	6.88	20	
MTBE	20.45	0.5	20.0	ND	102	70 - 130	0.390	20	
Toluene	42.17	0.5	40.0	ND	105	70 - 130	7.00	20	
Trichloroethene	21.66	0.5	20.0	1.110	103	70 - 130	7.77	20	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>21.34</i>		<i>25.0</i>		<i>85.4</i>	<i>70 - 130</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>23.04</i>		<i>25.0</i>		<i>92.2</i>	<i>70 - 130</i>			
<i>Surrogate: Dibromofluoromethane</i>	<i>24.51</i>		<i>25.0</i>		<i>98.0</i>	<i>70 - 130</i>			
<i>Surrogate: Toluene-d8</i>	<i>27.64</i>		<i>25.0</i>		<i>111</i>	<i>70 - 130</i>			

Batch B1K0246 - MSVOAW

Blank (B1K0246-BLK1)

Prepared: 11/9/2011 Analyzed: 11/9/2011

1,1,1,2-Tetrachloroethane	ND	0.5			NR				
1,1,1-Trichloroethane	ND	0.5			NR				
1,1,2,2-Tetrachloroethane	ND	0.5			NR				
1,1,2-Trichloroethane	ND	0.5			NR				
1,1-Dichloroethane	ND	0.5			NR				
1,1-Dichloroethene	ND	0.5			NR				
1,1-Dichloropropene	ND	0.5			NR				
1,2,3-Trichloropropane	ND	0.5			NR				
1,2,3-Trichlorobenzene	ND	0.5			NR				
1,2,4-Trichlorobenzene	ND	0.5			NR				
1,2,4-Trimethylbenzene	ND	0.5			NR				
1,2-Dibromo-3-chloropropane	ND	0.5			NR				
1,2-Dibromoethane	ND	0.5			NR				
1,2-Dichlorobenzene	ND	0.5			NR				
1,2-Dichloroethane	ND	0.5			NR				
1,2-Dichloropropane	ND	0.5			NR				
1,3,5-Trimethylbenzene	ND	0.5			NR				
1,3-Dichlorobenzene	ND	0.5			NR				
1,3-Dichloropropane	ND	0.5			NR				
1,4-Dichlorobenzene	ND	0.5			NR				
2,2-Dichloropropane	ND	0.5			NR				
2-Chlorotoluene	ND	0.5			NR				
4-Chlorotoluene	ND	0.5			NR				
4-Isopropyltoluene	ND	0.5			NR				
Benzene	ND	0.5			NR				
Bromobenzene	ND	0.5			NR				
Bromodichloromethane	ND	0.5			NR				
Bromoform	ND	0.5			NR				
Bromomethane	0.6800	0.5			NR				



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Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
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Batch B1K0246 - MSVOAW (continued)

Blank (B1K0246-BLK1) - Continued

Prepared: 11/9/2011 Analyzed: 11/9/2011

Carbon tetrachloride	ND	0.5			NR				
Chlorobenzene	ND	0.5			NR				
Chloroethane	ND	0.5			NR				
Chloroform	ND	0.5			NR				
Chloromethane	ND	0.5			NR				
cis-1,2-Dichloroethene	ND	0.5			NR				
cis-1,3-Dichloropropene	ND	0.5			NR				
Dibromochloromethane	ND	0.5			NR				
Dibromomethane	ND	0.5			NR				
Dichlorodifluoromethane	ND	0.5			NR				
Ethylbenzene	ND	5.0			NR				
Hexachlorobutadiene	ND	0.5			NR				
Isopropylbenzene	ND	0.5			NR				
m,p-Xylene	ND	1.0			NR				
Methylene chloride	ND	1.0			NR				
n-Butylbenzene	ND	0.5			NR				
n-Propylbenzene	ND	0.5			NR				
Naphthalene	ND	0.5			NR				
o-Xylene	ND	0.5			NR				
sec-Butylbenzene	ND	0.5			NR				
Styrene	ND	0.5			NR				
tert-Butylbenzene	ND	0.5			NR				
Tetrachloroethene	ND	0.5			NR				
Toluene	ND	0.5			NR				
trans-1,2-Dichloroethene	ND	0.5			NR				
Trichloroethene	ND	0.5			NR				
Trichlorofluoromethane	ND	0.5			NR				
Vinyl chloride	ND	0.5			NR				

Surrogate: 1,2-Dichloroethane-d4	24.51		25.0		98.0	70 - 130			
Surrogate: 4-Bromofluorobenzene	27.56		25.0		110	70 - 130			
Surrogate: Dibromofluoromethane	24.68		25.0		98.7	70 - 130			
Surrogate: Toluene-d8	25.88		25.0		104	70 - 130			

LCS (B1K0246-BS1)

Prepared: 11/9/2011 Analyzed: 11/9/2011

1,1-Dichloroethene	14.97	0.5	20.0		74.8	70 - 130			
Benzene	37.09	0.5	40.0		92.7	70 - 130			
Chlorobenzene	20.29	0.5	20.0		101	70 - 130			
MTBE	18.20	0.5	20.0		91.0	70 - 130			
Toluene	38.76	0.5	40.0		96.9	70 - 130			
Trichloroethene	18.61	0.5	20.0		93.0	70 - 130			

Surrogate: 1,2-Dichloroethane-d4	22.83		25.0		91.3	70 - 130			
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Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B1K0246 - MSVOAW (continued)

LCS (B1K0246-BS1) - Continued

Prepared: 11/9/2011 Analyzed: 11/9/2011

<i>Surrogate: 4-Bromofluorobenzene</i>	25.33		25.0		101	70 - 130			
<i>Surrogate: Dibromofluoromethane</i>	23.12		25.0		92.5	70 - 130			
<i>Surrogate: Toluene-d8</i>	24.17		25.0		96.7	70 - 130			

LCS Dup (B1K0246-BS1)

Prepared: 11/9/2011 Analyzed: 11/9/2011

1,1-Dichloroethene	15.31	0.5	20.0		76.6	70 - 130	2.25	20	
Benzene	38.28	0.5	40.0		95.7	70 - 130	3.16	20	
Chlorobenzene	20.69	0.5	20.0		103	70 - 130	1.95	20	
MTBE	18.18	0.5	20.0		90.9	70 - 130	0.110	20	
Toluene	40.57	0.5	40.0		101	70 - 130	4.56	20	
Trichloroethene	19.56	0.5	20.0		97.8	70 - 130	4.98	20	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	90.29		25.0		361	70 - 130			
<i>Surrogate: 4-Bromofluorobenzene</i>	98.55		25.0		394	70 - 130			
<i>Surrogate: Dibromofluoromethane</i>	92.67		25.0		371	70 - 130			
<i>Surrogate: Toluene-d8</i>	99.52		25.0		398	70 - 130			



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1,4-Dioxane by EPA 8270: Isotope Dilution Technique - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B1K0073 - MSSEMI_ISOTOPEDILN

Blank (B1K0073-BLK1)

Prepared: 11/8/2011 Analyzed: 11/10/2011

1,4-Dioxane	ND	10.0			NR				
Surrogate: 1,2-Dichlorobenzene-d	65.53		100		65.5	0 - 200			
Surrogate: 2-Fluorobiphenyl	76.61		100		76.6	0 - 200			
Surrogate: 4-Terphenyl-d14	88.36		100		88.4	0 - 200			
Surrogate: Nitrobenzene-d5	73.15		100		73.2	0 - 200			

LCS (B1K0073-BS1)

Prepared: 11/8/2011 Analyzed: 11/10/2011

1,4-Dioxane	108.9	10.0	100		109	70 - 130			
Surrogate: 1,2-Dichlorobenzene-d	67.70		100		67.7	0 - 200			
Surrogate: 2-Fluorobiphenyl	80.26		100		80.3	0 - 200			
Surrogate: 4-Terphenyl-d14	94.50		100		94.5	0 - 200			
Surrogate: Nitrobenzene-d5	82.70		100		82.7	0 - 200			

Matrix Spike (B1K0073-MS1)

Source: 1100061-04

Prepared: 11/8/2011 Analyzed: 11/10/2011

1,4-Dioxane	385.4	10.0	100	300.5	84.8	0 - 200			
Surrogate: 1,2-Dichlorobenzene-d	65.39		100		65.4	0 - 200			
Surrogate: 2-Fluorobiphenyl	78.91		100		78.9	0 - 200			
Surrogate: 4-Terphenyl-d14	93.03		100		93.0	0 - 200			
Surrogate: Nitrobenzene-d5	83.72		100		83.7	0 - 200			

Matrix Spike Dup (B1K0073-MSD1)

Source: 1100061-04

Prepared: 11/8/2011 Analyzed: 11/10/2011

1,4-Dioxane	387.1	10.0	100	300.5	86.5	0 - 200	0.440	200	
Surrogate: 1,2-Dichlorobenzene-d	63.16		100		63.2	0 - 200			
Surrogate: 2-Fluorobiphenyl	75.07		100		75.1	0 - 200			
Surrogate: 4-Terphenyl-d14	85.81		100		85.8	0 - 200			
Surrogate: Nitrobenzene-d5	80.72		100		80.7	0 - 200			



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1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
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Batch B1K0068 - MSSEMI_ISOTOPEDILN

Blank (B1K0068-BLK1)

Prepared: 11/8/2011 Analyzed: 11/8/2011

1,4-Dioxane	ND	0.2			NR				
Surrogate: 1,2-Dichlorobenzene-d	0.8078		1.00		80.8	58 - 99			
Surrogate: 2-Fluorobiphenyl	0.7421		1.00		74.2	60 - 104			
Surrogate: 4-Terphenyl-d14	0.9813		1.00		98.1	65 - 127			
Surrogate: Nitrobenzene-d5	0.8560		1.00		85.6	50 - 136			

LCS (B1K0068-BS1)

Prepared: 11/8/2011 Analyzed: 11/8/2011

1,4-Dioxane	1.138	0.2	1.00		114	70 - 130			
Surrogate: 1,2-Dichlorobenzene-d	0.7727		1.00		77.3	58 - 99			
Surrogate: 2-Fluorobiphenyl	0.7399		1.00		74.0	60 - 104			
Surrogate: 4-Terphenyl-d14	0.8954		1.00		89.5	65 - 127			
Surrogate: Nitrobenzene-d5	0.8679		1.00		86.8	50 - 136			

Matrix Spike (B1K0068-MS1)

Source: 1100061-06

Prepared: 11/8/2011 Analyzed: 11/8/2011

1,4-Dioxane	1.222	0.2	1.00	ND	122	70 - 130			
Surrogate: 1,2-Dichlorobenzene-d	0.7918		1.00		79.2	58 - 99			
Surrogate: 2-Fluorobiphenyl	0.7680		1.00		76.8	60 - 104			
Surrogate: 4-Terphenyl-d14	0.8661		1.00		86.6	65 - 127			
Surrogate: Nitrobenzene-d5	0.8901		1.00		89.0	50 - 136			

Matrix Spike Dup (B1K0068-MSD1)

Source: 1100061-06

Prepared: 11/8/2011 Analyzed: 11/8/2011

1,4-Dioxane	1.253	0.2	1.00	ND	125	70 - 130	2.50	20	
Surrogate: 1,2-Dichlorobenzene-d	0.8228		1.00		82.3	58 - 99			
Surrogate: 2-Fluorobiphenyl	0.7976		1.00		79.8	60 - 104			
Surrogate: 4-Terphenyl-d14	0.8919		1.00		89.2	65 - 127			
Surrogate: Nitrobenzene-d5	0.9331		1.00		93.3	50 - 136			



Hargis & Associates, Inc.

9171 Town Centre Drive, Suite 375
San Diego , CA 92122

Project Number: RAYTHEON MAIN, 532.30

Report To: Steve Netto

Reported:

11/16/2011

Notes and Definitions

M1	Matrix spike recovery outside of acceptance limit. The analytical batch was validated by the laboratory control sample.
ND	Analyte not detected at or above reporting limit
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
NR	Not Reported
RPD	Relative Percent Difference
CA1	CA-NELAP (CDPH)
CA2	CA-ELAP (CDPH)
OR1	OR-NELAP (OSPHL)
TX1	TX-NELAP (TCEQ)

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST FORM

PROJECT NAME		PROJECT No./TASK No.		SAMPLE CONTAINERS		ANALYSIS REQUESTED		ESTIMATED CONCENTRATION RANGE (ppb) FOR VOAS		SPECIAL HANDLING		LABORATORY INFORMATION	
RAYTHEON MAIN		532.30										ATL	
PROJECT MANAGER Chris Ross		Phone No. 858-455-6500										Attn: Rachele Arata	
QA MANAGER Steve Netto		Fax No. 858-455-6533											
SAMPLER (SIGNATURE)		SAMPLER (PRINTED)											
		Amanda beam											
LAB ID		SAMPLE ID		SAMPLE COLLECTION		MATRIX		PRESERVATION		Standard TAT		REMARKS	
				Date Time		Soil Ground-water Surface water Lab H2O HCl HNO3 NaOH H2SO4 Ice		40 ml VOA 1 L Amber		8260 VOCs 8270 SIM 4,4-Dioxane 8270 MCD 1,4-Dioxane			
				0-10 10-100 100-1,000 >1,000									
1100023-007	TB-110211	11/2/11	725			X	X		X				
2	MW-34C		901	X		X			X				
	↓		↓	X					X				
3	MW-34A		945	X		X			X				
	↓		↓	X					X				
4	MW-34B		1018	X		X			X		X		
	↓		↓	X					X				
5	MW-33		1302	X		X			X			X	
	↓		↓	X					X				
6	MW-30A		1438	X		X			X			X	
	↓		↓	X					X				
7	MW-30B		1515	X		X			X			X	
	↓		↓	X					X				
8 1535	MW-3000B		1545	X		X			X			X	1535 TIME
Total number of Containers per analysis: 237										Total No. of Containers: 30			

Relinquished by:	Date	Received by:	Date
	11/2/11		11/2/11
H+A Inc	Time 1701	ATL	Time 1701
Company		Company	
Relinquished by:	Date	Received by:	Date
	11/2/11		11/2/11
ATL	Time 1744	ATL	Time 1745
Company		Company	

INSTRUCTIONS

- Fill out form completely except for shaded areas (lab use only); sign only after verified for completeness.
- Complete in ballpoint pen. Draw one line through errors, initial and date correction.
- Indicate number of sample containers in analysis request space; indicate choice with √ or x.
- Note applicable preservatives, special instructions, and deviations from typical environmental samples.
- Consult project QA documents for specific instructions.

Sample Receipt:

No. of containers correct received good condition/cold

custody seals secure conforms to COC document

Shipment Method: Courier/Drop off

Send Results to: Steve Netto

9171 TOWNE CENTRE DRIVE, SUITE 375
SAN DIEGO, CA 92122 (858) 455-6500

1640 SOUTH STAPLEY DRIVE, SUITE 124
MESA, AZ 85204 (480) 345-0888

1820 EAST RIVER ROAD, SUITE 220
TUCSON, AZ 85718 (520) 881-7300

Send invoice to San Diego, CA
Attn: Accounts Payable



21 November 2011

Steve Netto
Hargis & Associates, Inc.
9171 Town Centre Drive, Suite 375
San Diego, CA 92122
Tel: (619) 249-3166
Fax:(619) 521-8580



ELAP No.: 1838
NELAP No.: 02107CA
CSDLAC No.: 10196
ORELAP No.: CA300003

RE: ATL Work Order Number: 1100061
Client Reference : RAYTHEON MAIN, 532.30

Enclosed are the results for sample(s) received on November, 3 2011 by Advanced Technology Laboratories. The sample(s) are tested for the parameters as indicated on the enclosed chain of custody in accordance with applicable laboratory certifications. The laboratory results contained in this report specifically pertains to the sample(s) submitted.

Thank you for the opportunity to serve the needs of your company. If you have any questions, please feel free to contact me or your Project Manager.

Sincerely,

A handwritten signature in black ink, appearing to read 'E. Rodriguez', is written over a light gray rectangular background.

Eddie Rodriguez
Laboratory Director

The cover letter and the case narrative are an integral part of this analytical report and its absence renders the report invalid. The report cannot be reproduced without written permission from the client and Advanced Technology Laboratories.

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www.atlglobal.com



Hargis & Associates, Inc.

9171 Town Centre Drive, Suite 375
San Diego , CA 92122

Project Number: RAYTHEON MAIN, 532.30

Report To: Steve Netto

Reported:

11/21/2011

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
TB-110311	1100061-01	Lab H2O	11/03/11 7:30	11/03/11 17:15
MW-31	1100061-02	Groundwater	11/03/11 8:37	11/03/11 17:15
MW-28	1100061-03	Groundwater	11/03/11 9:40	11/03/11 17:15
MW-29	1100061-04	Groundwater	11/03/11 10:45	11/03/11 17:15
MW-32A	1100061-05	Groundwater	11/03/11 12:43	11/03/11 17:15
MW-32C	1100061-06	Groundwater	11/03/11 15:36	11/03/11 17:15
MW-32B	1100061-07	Groundwater	11/03/11 17:03	11/03/11 17:15

CASE NARRATIVE

Sample Receiving / General Comments

Headspace >5-6mm was noted four voa vials for sample MW-29.



Hargis & Associates, Inc.

9171 Town Centre Drive, Suite 375
San Diego , CA 92122

Project Number: RAYTHEON MAIN, 532.30
Report To: Steve Netto

Reported:
11/21/2011

Client Sample ID TB-110311

Lab ID: 1100061-01

Volatile Organic Compounds by EPA 8260

Analyst: BD

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:38	
1,1,1-Trichloroethane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:38	
1,1,2,2-Tetrachloroethane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:38	
1,1,2-Trichloroethane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:38	
1,1-Dichloroethane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:38	
1,1-Dichloroethene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:38	
1,1-Dichloropropene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:38	
1,2,3-Trichloropropane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:38	
1,2,3-Trichlorobenzene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:38	
1,2,4-Trichlorobenzene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:38	
1,2,4-Trimethylbenzene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:38	
1,2-Dibromo-3-chloropropane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:38	
1,2-Dibromoethane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:38	
1,2-Dichlorobenzene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:38	
1,2-Dichloroethane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:38	
1,2-Dichloropropane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:38	
1,3,5-Trimethylbenzene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:38	
1,3-Dichlorobenzene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:38	
1,3-Dichloropropane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:38	
1,4-Dichlorobenzene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:38	
2,2-Dichloropropane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:38	
2-Chlorotoluene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:38	
4-Chlorotoluene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:38	
4-Isopropyltoluene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:38	
Benzene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:38	
Bromobenzene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:38	
Bromodichloromethane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:38	
Bromoform	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:38	
Bromomethane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:38	
Carbon tetrachloride	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:38	
Chlorobenzene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:38	
Chloroethane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:38	
Chloroform	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:38	
Chloromethane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:38	



Hargis & Associates, Inc.

9171 Town Centre Drive, Suite 375
San Diego, CA 92122

Project Number: RAYTHEON MAIN, 532.30
Report To: Steve Netto

Reported:
11/21/2011

Client Sample ID TB-110311

Lab ID: 1100061-01

Volatile Organic Compounds by EPA 8260

Analyst: BD

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
cis-1,2-Dichloroethene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:38	
cis-1,3-Dichloropropene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:38	
Dibromochloromethane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:38	
Dibromomethane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:38	
Dichlorodifluoromethane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:38	
Ethylbenzene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:38	
Hexachlorobutadiene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:38	
Isopropylbenzene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:38	
m,p-Xylene	ND	1.0	NA	1	B1K0290	11/16/2011	11/16/11 18:38	
Methylene chloride	ND	1.0	NA	1	B1K0290	11/16/2011	11/16/11 18:38	
n-Butylbenzene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:38	
n-Propylbenzene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:38	
Naphthalene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:38	
o-Xylene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:38	
sec-Butylbenzene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:38	
Styrene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:38	
tert-Butylbenzene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:38	
Tetrachloroethene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:38	
Toluene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:38	
trans-1,2-Dichloroethene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:38	
Trichloroethene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:38	
Trichlorofluoromethane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:38	
Vinyl chloride	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:38	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>88.2 %</i>	<i>70 - 130</i>			B1K0290	11/16/2011	<i>11/16/11 18:38</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>96.4 %</i>	<i>70 - 130</i>			B1K0290	11/16/2011	<i>11/16/11 18:38</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>97.1 %</i>	<i>70 - 130</i>			B1K0290	11/16/2011	<i>11/16/11 18:38</i>	
<i>Surrogate: Toluene-d8</i>	<i>99.3 %</i>	<i>70 - 130</i>			B1K0290	11/16/2011	<i>11/16/11 18:38</i>	



Hargis & Associates, Inc.

9171 Town Centre Drive, Suite 375
San Diego, CA 92122

Project Number: RAYTHEON MAIN, 532.30
Report To: Steve Netto

Reported:
11/21/2011

Client Sample ID MW-31

Lab ID: 1100061-02

Volatile Organic Compounds by EPA 8260

Analyst: BD

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 22:16	
1,1,1-Trichloroethane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 22:16	
1,1,2,2-Tetrachloroethane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 22:16	
1,1,2-Trichloroethane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 22:16	
1,1-Dichloroethane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 22:16	
1,1-Dichloroethene	32.6	0.5	NA	1	B1K0290	11/16/2011	11/16/11 22:16	
1,1-Dichloropropene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 22:16	
1,2,3-Trichloropropane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 22:16	
1,2,3-Trichlorobenzene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 22:16	
1,2,4-Trichlorobenzene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 22:16	
1,2,4-Trimethylbenzene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 22:16	
1,2-Dibromo-3-chloropropane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 22:16	
1,2-Dibromoethane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 22:16	
1,2-Dichlorobenzene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 22:16	
1,2-Dichloroethane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 22:16	
1,2-Dichloropropane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 22:16	
1,3,5-Trimethylbenzene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 22:16	
1,3-Dichlorobenzene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 22:16	
1,3-Dichloropropane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 22:16	
1,4-Dichlorobenzene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 22:16	
2,2-Dichloropropane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 22:16	
2-Chlorotoluene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 22:16	
4-Chlorotoluene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 22:16	
4-Isopropyltoluene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 22:16	
Benzene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 22:16	
Bromobenzene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 22:16	
Bromodichloromethane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 22:16	
Bromoform	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 22:16	
Bromomethane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 22:16	
Carbon tetrachloride	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 22:16	
Chlorobenzene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 22:16	
Chloroethane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 22:16	
Chloroform	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 22:16	
Chloromethane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 22:16	



Hargis & Associates, Inc.

9171 Town Centre Drive, Suite 375
San Diego, CA 92122

Project Number: RAYTHEON MAIN, 532.30
Report To: Steve Netto

Reported:
11/21/2011

Client Sample ID MW-31

Lab ID: 1100061-02

Volatile Organic Compounds by EPA 8260

Analyst: BD

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
cis-1,2-Dichloroethene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 22:16	
cis-1,3-Dichloropropene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 22:16	
Dibromochloromethane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 22:16	
Dibromomethane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 22:16	
Dichlorodifluoromethane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 22:16	
Ethylbenzene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 22:16	
Hexachlorobutadiene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 22:16	
Isopropylbenzene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 22:16	
m,p-Xylene	ND	1.0	NA	1	B1K0290	11/16/2011	11/16/11 22:16	
Methylene chloride	ND	1.0	NA	1	B1K0290	11/16/2011	11/16/11 22:16	
n-Butylbenzene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 22:16	
n-Propylbenzene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 22:16	
Naphthalene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 22:16	
o-Xylene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 22:16	
sec-Butylbenzene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 22:16	
Styrene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 22:16	
tert-Butylbenzene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 22:16	
Tetrachloroethene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 22:16	
Toluene	0.6	0.5	NA	1	B1K0290	11/16/2011	11/16/11 22:16	
trans-1,2-Dichloroethene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 22:16	
Trichloroethene	4.4	0.5	NA	1	B1K0290	11/16/2011	11/16/11 22:16	
Trichlorofluoromethane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 22:16	
Vinyl chloride	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 22:16	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>88.1 %</i>		<i>70 - 130</i>		B1K0290	11/16/2011	<i>11/16/11 22:16</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>96.0 %</i>		<i>70 - 130</i>		B1K0290	11/16/2011	<i>11/16/11 22:16</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>96.6 %</i>		<i>70 - 130</i>		B1K0290	11/16/2011	<i>11/16/11 22:16</i>	
<i>Surrogate: Toluene-d8</i>	<i>99.8 %</i>		<i>70 - 130</i>		B1K0290	11/16/2011	<i>11/16/11 22:16</i>	



Hargis & Associates, Inc.

9171 Town Centre Drive, Suite 375
San Diego, CA 92122

Project Number: RAYTHEON MAIN, 532.30

Report To: Steve Netto

Reported:

11/21/2011

Client Sample ID MW-31

Lab ID: 1100061-02

1,4-Dioxane by EPA 8270: Isotope Dilution Technique

Analyst: JD

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	ND	2.0	1.7	1	B1K0073	11/08/2011	11/10/11 13:37	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	56.7 %		37 - 93		B1K0073	11/08/2011	11/10/11 13:37	
<i>Surrogate: 2-Fluorobiphenyl</i>	67.3 %		51 - 100		B1K0073	11/08/2011	11/10/11 13:37	
<i>Surrogate: 4-Terphenyl-d14</i>	89.0 %		58 - 113		B1K0073	11/08/2011	11/10/11 13:37	
<i>Surrogate: Nitrobenzene-d5</i>	62.1 %		39 - 95		B1K0073	11/08/2011	11/10/11 13:37	



Hargis & Associates, Inc.

9171 Town Centre Drive, Suite 375
San Diego , CA 92122

Project Number: RAYTHEON MAIN, 532.30
Report To: Steve Netto

Reported:
11/21/2011

Client Sample ID MW-28

Lab ID: 1100061-03

Volatile Organic Compounds by EPA 8260

Analyst: BD

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 17:39	
1,1,1-Trichloroethane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 17:39	
1,1,2,2-Tetrachloroethane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 17:39	
1,1,2-Trichloroethane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 17:39	
1,1-Dichloroethane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 17:39	
1,1-Dichloroethene	1.1	0.5	NA	1	B1K0290	11/16/2011	11/16/11 17:39	
1,1-Dichloropropene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 17:39	
1,2,3-Trichloropropane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 17:39	
1,2,3-Trichlorobenzene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 17:39	
1,2,4-Trichlorobenzene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 17:39	
1,2,4-Trimethylbenzene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 17:39	
1,2-Dibromo-3-chloropropane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 17:39	
1,2-Dibromoethane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 17:39	
1,2-Dichlorobenzene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 17:39	
1,2-Dichloroethane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 17:39	
1,2-Dichloropropane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 17:39	
1,3,5-Trimethylbenzene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 17:39	
1,3-Dichlorobenzene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 17:39	
1,3-Dichloropropane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 17:39	
1,4-Dichlorobenzene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 17:39	
2,2-Dichloropropane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 17:39	
2-Chlorotoluene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 17:39	
4-Chlorotoluene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 17:39	
4-Isopropyltoluene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 17:39	
Benzene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 17:39	
Bromobenzene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 17:39	
Bromodichloromethane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 17:39	
Bromoform	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 17:39	
Bromomethane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 17:39	
Carbon tetrachloride	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 17:39	
Chlorobenzene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 17:39	
Chloroethane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 17:39	
Chloroform	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 17:39	
Chloromethane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 17:39	



Hargis & Associates, Inc.

9171 Town Centre Drive, Suite 375
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Project Number: RAYTHEON MAIN, 532.30

Report To: Steve Netto

Reported:

11/21/2011

Client Sample ID MW-28

Lab ID: 1100061-03

Volatile Organic Compounds by EPA 8260

Analyst: BD

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
cis-1,2-Dichloroethene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 17:39	
cis-1,3-Dichloropropene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 17:39	
Dibromochloromethane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 17:39	
Dibromomethane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 17:39	
Dichlorodifluoromethane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 17:39	
Ethylbenzene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 17:39	
Hexachlorobutadiene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 17:39	
Isopropylbenzene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 17:39	
m,p-Xylene	ND	1.0	NA	1	B1K0290	11/16/2011	11/16/11 17:39	
Methylene chloride	ND	1.0	NA	1	B1K0290	11/16/2011	11/16/11 17:39	
n-Butylbenzene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 17:39	
n-Propylbenzene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 17:39	
Naphthalene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 17:39	
o-Xylene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 17:39	
sec-Butylbenzene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 17:39	
Styrene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 17:39	
tert-Butylbenzene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 17:39	
Tetrachloroethene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 17:39	
Toluene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 17:39	
trans-1,2-Dichloroethene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 17:39	
Trichloroethene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 17:39	
Trichlorofluoromethane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 17:39	
Vinyl chloride	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 17:39	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>86.6 %</i>		<i>70 - 130</i>		B1K0290	11/16/2011	<i>11/16/11 17:39</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>96.0 %</i>		<i>70 - 130</i>		B1K0290	11/16/2011	<i>11/16/11 17:39</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>96.3 %</i>		<i>70 - 130</i>		B1K0290	11/16/2011	<i>11/16/11 17:39</i>	
<i>Surrogate: Toluene-d8</i>	<i>98.9 %</i>		<i>70 - 130</i>		B1K0290	11/16/2011	<i>11/16/11 17:39</i>	



Hargis & Associates, Inc.

9171 Town Centre Drive, Suite 375
San Diego , CA 92122

Project Number: RAYTHEON MAIN, 532.30

Report To: Steve Netto

Reported:

11/21/2011

Client Sample ID MW-28

Lab ID: 1100061-03

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: JD

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	0.3	0.2	0.1	1	B1K0068	11/08/2011	11/09/11 02:39	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	82.6 %		58 - 99		B1K0068	11/08/2011	11/09/11 02:39	
<i>Surrogate: 2-Fluorobiphenyl</i>	72.9 %		60 - 104		B1K0068	11/08/2011	11/09/11 02:39	
<i>Surrogate: 4-Terphenyl-d14</i>	93.4 %		65 - 127		B1K0068	11/08/2011	11/09/11 02:39	
<i>Surrogate: Nitrobenzene-d5</i>	78.8 %		50 - 136		B1K0068	11/08/2011	11/09/11 02:39	



Hargis & Associates, Inc.

9171 Town Centre Drive, Suite 375
San Diego , CA 92122

Project Number: RAYTHEON MAIN, 532.30
Report To: Steve Netto

Reported:
11/21/2011

Client Sample ID MW-29

Lab ID: 1100061-04

Volatile Organic Compounds by EPA 8260

Analyst: BD

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.5	NA	1	B1K0371	11/17/2011	11/17/11 03:32	
1,1,1-Trichloroethane	ND	0.5	NA	1	B1K0371	11/17/2011	11/17/11 03:32	
1,1,2,2-Tetrachloroethane	ND	0.5	NA	1	B1K0371	11/17/2011	11/17/11 03:32	
1,1,2-Trichloroethane	2.3	0.5	NA	1	B1K0371	11/17/2011	11/17/11 03:32	
1,1-Dichloroethane	7.8	0.5	NA	1	B1K0371	11/17/2011	11/17/11 03:32	
1,1-Dichloroethene	804	5.0	NA	10	B1K0371	11/17/2011	11/17/11 03:51	
1,1-Dichloropropene	ND	0.5	NA	1	B1K0371	11/17/2011	11/17/11 03:32	
1,2,3-Trichloropropane	ND	0.5	NA	1	B1K0371	11/17/2011	11/17/11 03:32	
1,2,3-Trichlorobenzene	ND	0.5	NA	1	B1K0371	11/17/2011	11/17/11 03:32	
1,2,4-Trichlorobenzene	ND	0.5	NA	1	B1K0371	11/17/2011	11/17/11 03:32	
1,2,4-Trimethylbenzene	ND	0.5	NA	1	B1K0371	11/17/2011	11/17/11 03:32	
1,2-Dibromo-3-chloropropane	ND	0.5	NA	1	B1K0371	11/17/2011	11/17/11 03:32	
1,2-Dibromoethane	ND	0.5	NA	1	B1K0371	11/17/2011	11/17/11 03:32	
1,2-Dichlorobenzene	ND	0.5	NA	1	B1K0371	11/17/2011	11/17/11 03:32	
1,2-Dichloroethane	1.4	0.5	NA	1	B1K0371	11/17/2011	11/17/11 03:32	
1,2-Dichloropropane	ND	0.5	NA	1	B1K0371	11/17/2011	11/17/11 03:32	
1,3,5-Trimethylbenzene	ND	0.5	NA	1	B1K0371	11/17/2011	11/17/11 03:32	
1,3-Dichlorobenzene	ND	0.5	NA	1	B1K0371	11/17/2011	11/17/11 03:32	
1,3-Dichloropropane	ND	0.5	NA	1	B1K0371	11/17/2011	11/17/11 03:32	
1,4-Dichlorobenzene	ND	0.5	NA	1	B1K0371	11/17/2011	11/17/11 03:32	
2,2-Dichloropropane	ND	0.5	NA	1	B1K0371	11/17/2011	11/17/11 03:32	
2-Chlorotoluene	ND	0.5	NA	1	B1K0371	11/17/2011	11/17/11 03:32	
4-Chlorotoluene	ND	0.5	NA	1	B1K0371	11/17/2011	11/17/11 03:32	
4-Isopropyltoluene	ND	0.5	NA	1	B1K0371	11/17/2011	11/17/11 03:32	
Benzene	ND	0.5	NA	1	B1K0371	11/17/2011	11/17/11 03:32	
Bromobenzene	ND	0.5	NA	1	B1K0371	11/17/2011	11/17/11 03:32	
Bromodichloromethane	ND	0.5	NA	1	B1K0371	11/17/2011	11/17/11 03:32	
Bromoform	ND	0.5	NA	1	B1K0371	11/17/2011	11/17/11 03:32	
Bromomethane	ND	0.5	NA	1	B1K0371	11/17/2011	11/17/11 03:32	
Carbon tetrachloride	ND	0.5	NA	1	B1K0371	11/17/2011	11/17/11 03:32	
Chlorobenzene	ND	0.5	NA	1	B1K0371	11/17/2011	11/17/11 03:32	
Chloroethane	ND	0.5	NA	1	B1K0371	11/17/2011	11/17/11 03:32	
Chloroform	0.8	0.5	NA	1	B1K0371	11/17/2011	11/17/11 03:32	
Chloromethane	ND	0.5	NA	1	B1K0371	11/17/2011	11/17/11 03:32	
cis-1,2-Dichloroethene	0.6	0.5	NA	1	B1K0371	11/17/2011	11/17/11 03:32	



Hargis & Associates, Inc.

9171 Town Centre Drive, Suite 375
San Diego, CA 92122

Project Number: RAYTHEON MAIN, 532.30
Report To: Steve Netto

Reported:
11/21/2011

Client Sample ID MW-29

Lab ID: 1100061-04

Volatile Organic Compounds by EPA 8260

Analyst: BD

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
cis-1,3-Dichloropropene	ND	0.5	NA	1	B1K0371	11/17/2011	11/17/11 03:32	
Dibromochloromethane	ND	0.5	NA	1	B1K0371	11/17/2011	11/17/11 03:32	
Dibromomethane	ND	0.5	NA	1	B1K0371	11/17/2011	11/17/11 03:32	
Dichlorodifluoromethane	ND	0.5	NA	1	B1K0371	11/17/2011	11/17/11 03:32	
Ethylbenzene	ND	0.5	NA	1	B1K0371	11/17/2011	11/17/11 03:32	
Hexachlorobutadiene	ND	0.5	NA	1	B1K0371	11/17/2011	11/17/11 03:32	
Isopropylbenzene	ND	0.5	NA	1	B1K0371	11/17/2011	11/17/11 03:32	
m,p-Xylene	ND	1.0	NA	1	B1K0371	11/17/2011	11/17/11 03:32	
Methylene chloride	ND	1.0	NA	1	B1K0371	11/17/2011	11/17/11 03:32	
n-Butylbenzene	ND	0.5	NA	1	B1K0371	11/17/2011	11/17/11 03:32	
n-Propylbenzene	ND	0.5	NA	1	B1K0371	11/17/2011	11/17/11 03:32	
Naphthalene	ND	0.5	NA	1	B1K0371	11/17/2011	11/17/11 03:32	
o-Xylene	ND	0.5	NA	1	B1K0371	11/17/2011	11/17/11 03:32	
sec-Butylbenzene	ND	0.5	NA	1	B1K0371	11/17/2011	11/17/11 03:32	
Styrene	ND	0.5	NA	1	B1K0371	11/17/2011	11/17/11 03:32	
tert-Butylbenzene	ND	0.5	NA	1	B1K0371	11/17/2011	11/17/11 03:32	
Tetrachloroethene	1.3	0.5	NA	1	B1K0371	11/17/2011	11/17/11 03:32	
Toluene	ND	0.5	NA	1	B1K0371	11/17/2011	11/17/11 03:32	
trans-1,2-Dichloroethene	ND	0.5	NA	1	B1K0371	11/17/2011	11/17/11 03:32	
Trichloroethene	6.0	0.5	NA	1	B1K0371	11/17/2011	11/17/11 03:32	
Trichlorofluoromethane	1.0	0.5	NA	1	B1K0371	11/17/2011	11/17/11 03:32	
Vinyl chloride	ND	0.5	NA	1	B1K0371	11/17/2011	11/17/11 03:32	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>91.3 %</i>		<i>70 - 130</i>		B1K0371	11/17/2011	<i>11/17/11 03:32</i>	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>90.0 %</i>		<i>70 - 130</i>		B1K0371	11/17/2011	<i>11/17/11 03:51</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>96.7 %</i>		<i>70 - 130</i>		B1K0371	11/17/2011	<i>11/17/11 03:32</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>97.2 %</i>		<i>70 - 130</i>		B1K0371	11/17/2011	<i>11/17/11 03:51</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>97.8 %</i>		<i>70 - 130</i>		B1K0371	11/17/2011	<i>11/17/11 03:32</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>97.9 %</i>		<i>70 - 130</i>		B1K0371	11/17/2011	<i>11/17/11 03:51</i>	
<i>Surrogate: Toluene-d8</i>	<i>99.7 %</i>		<i>70 - 130</i>		B1K0371	11/17/2011	<i>11/17/11 03:32</i>	
<i>Surrogate: Toluene-d8</i>	<i>100 %</i>		<i>70 - 130</i>		B1K0371	11/17/2011	<i>11/17/11 03:51</i>	



Hargis & Associates, Inc.

9171 Town Centre Drive, Suite 375
San Diego , CA 92122

Project Number: RAYTHEON MAIN, 532.30

Report To: Steve Netto

Reported:

11/21/2011

Client Sample ID MW-29

Lab ID: 1100061-04

1,4-Dioxane by EPA 8270: Isotope Dilution Technique

Analyst: JD

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	301	2.0	1.7	1	B1K0073	11/08/2011	11/10/11 14:05	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>58.5 %</i>		<i>37 - 93</i>		B1K0073	11/08/2011	<i>11/10/11 14:05</i>	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>68.4 %</i>		<i>51 - 100</i>		B1K0073	11/08/2011	<i>11/10/11 14:05</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>89.2 %</i>		<i>58 - 113</i>		B1K0073	11/08/2011	<i>11/10/11 14:05</i>	
<i>Surrogate: Nitrobenzene-d5</i>	<i>64.0 %</i>		<i>39 - 95</i>		B1K0073	11/08/2011	<i>11/10/11 14:05</i>	



Hargis & Associates, Inc.

9171 Town Centre Drive, Suite 375
San Diego , CA 92122

Project Number: RAYTHEON MAIN, 532.30
Report To: Steve Netto

Reported:
11/21/2011

Client Sample ID MW-32A

Lab ID: 1100061-05

Volatile Organic Compounds by EPA 8260

Analyst: BD

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 17:59	
1,1,1-Trichloroethane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 17:59	
1,1,2,2-Tetrachloroethane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 17:59	
1,1,2-Trichloroethane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 17:59	
1,1-Dichloroethane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 17:59	
1,1-Dichloroethene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 17:59	
1,1-Dichloropropene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 17:59	
1,2,3-Trichloropropane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 17:59	
1,2,3-Trichlorobenzene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 17:59	
1,2,4-Trichlorobenzene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 17:59	
1,2,4-Trimethylbenzene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 17:59	
1,2-Dibromo-3-chloropropane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 17:59	
1,2-Dibromoethane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 17:59	
1,2-Dichlorobenzene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 17:59	
1,2-Dichloroethane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 17:59	
1,2-Dichloropropane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 17:59	
1,3,5-Trimethylbenzene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 17:59	
1,3-Dichlorobenzene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 17:59	
1,3-Dichloropropane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 17:59	
1,4-Dichlorobenzene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 17:59	
2,2-Dichloropropane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 17:59	
2-Chlorotoluene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 17:59	
4-Chlorotoluene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 17:59	
4-Isopropyltoluene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 17:59	
Benzene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 17:59	
Bromobenzene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 17:59	
Bromodichloromethane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 17:59	
Bromoform	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 17:59	
Bromomethane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 17:59	
Carbon tetrachloride	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 17:59	
Chlorobenzene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 17:59	
Chloroethane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 17:59	
Chloroform	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 17:59	
Chloromethane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 17:59	



Hargis & Associates, Inc.

9171 Town Centre Drive, Suite 375
San Diego, CA 92122

Project Number: RAYTHEON MAIN, 532.30

Report To: Steve Netto

Reported:

11/21/2011

Client Sample ID MW-32A

Lab ID: 1100061-05

Volatile Organic Compounds by EPA 8260

Analyst: BD

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
cis-1,2-Dichloroethene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 17:59	
cis-1,3-Dichloropropene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 17:59	
Dibromochloromethane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 17:59	
Dibromomethane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 17:59	
Dichlorodifluoromethane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 17:59	
Ethylbenzene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 17:59	
Hexachlorobutadiene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 17:59	
Isopropylbenzene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 17:59	
m,p-Xylene	ND	1.0	NA	1	B1K0290	11/16/2011	11/16/11 17:59	
Methylene chloride	ND	1.0	NA	1	B1K0290	11/16/2011	11/16/11 17:59	
n-Butylbenzene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 17:59	
n-Propylbenzene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 17:59	
Naphthalene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 17:59	
o-Xylene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 17:59	
sec-Butylbenzene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 17:59	
Styrene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 17:59	
tert-Butylbenzene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 17:59	
Tetrachloroethene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 17:59	
Toluene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 17:59	
trans-1,2-Dichloroethene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 17:59	
Trichloroethene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 17:59	
Trichlorofluoromethane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 17:59	
Vinyl chloride	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 17:59	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>87.8 %</i>	<i>70 - 130</i>			B1K0290	11/16/2011	<i>11/16/11 17:59</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>96.2 %</i>	<i>70 - 130</i>			B1K0290	11/16/2011	<i>11/16/11 17:59</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>96.4 %</i>	<i>70 - 130</i>			B1K0290	11/16/2011	<i>11/16/11 17:59</i>	
<i>Surrogate: Toluene-d8</i>	<i>98.9 %</i>	<i>70 - 130</i>			B1K0290	11/16/2011	<i>11/16/11 17:59</i>	



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9171 Town Centre Drive, Suite 375
San Diego , CA 92122

Project Number: RAYTHEON MAIN, 532.30
Report To: Steve Netto

Reported:
11/21/2011

Client Sample ID MW-32A

Lab ID: 1100061-05

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: JD

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	ND	0.2	0.1	1	B1K0068	11/08/2011	11/09/11 03:06	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>79.0 %</i>		<i>58 - 99</i>		B1K0068	11/08/2011	<i>11/09/11 03:06</i>	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>71.7 %</i>		<i>60 - 104</i>		B1K0068	11/08/2011	<i>11/09/11 03:06</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>92.8 %</i>		<i>65 - 127</i>		B1K0068	11/08/2011	<i>11/09/11 03:06</i>	
<i>Surrogate: Nitrobenzene-d5</i>	<i>76.3 %</i>		<i>50 - 136</i>		B1K0068	11/08/2011	<i>11/09/11 03:06</i>	



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9171 Town Centre Drive, Suite 375
San Diego, CA 92122

Project Number: RAYTHEON MAIN, 532.30
Report To: Steve Netto

Reported:
11/21/2011

Client Sample ID MW-32C

Lab ID: 1100061-06

Volatile Organic Compounds by EPA 8260

Analyst: BD

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.5	NA	1	B1K0371	11/17/2011	11/17/11 03:12	
1,1,1-Trichloroethane	ND	0.5	NA	1	B1K0371	11/17/2011	11/17/11 03:12	
1,1,2,2-Tetrachloroethane	ND	0.5	NA	1	B1K0371	11/17/2011	11/17/11 03:12	
1,1,2-Trichloroethane	ND	0.5	NA	1	B1K0371	11/17/2011	11/17/11 03:12	
1,1-Dichloroethane	ND	0.5	NA	1	B1K0371	11/17/2011	11/17/11 03:12	
1,1-Dichloroethene	ND	0.5	NA	1	B1K0371	11/17/2011	11/17/11 03:12	
1,1-Dichloropropene	ND	0.5	NA	1	B1K0371	11/17/2011	11/17/11 03:12	
1,2,3-Trichloropropane	ND	0.5	NA	1	B1K0371	11/17/2011	11/17/11 03:12	
1,2,3-Trichlorobenzene	ND	0.5	NA	1	B1K0371	11/17/2011	11/17/11 03:12	
1,2,4-Trichlorobenzene	ND	0.5	NA	1	B1K0371	11/17/2011	11/17/11 03:12	
1,2,4-Trimethylbenzene	ND	0.5	NA	1	B1K0371	11/17/2011	11/17/11 03:12	
1,2-Dibromo-3-chloropropane	ND	0.5	NA	1	B1K0371	11/17/2011	11/17/11 03:12	
1,2-Dibromoethane	ND	0.5	NA	1	B1K0371	11/17/2011	11/17/11 03:12	
1,2-Dichlorobenzene	ND	0.5	NA	1	B1K0371	11/17/2011	11/17/11 03:12	
1,2-Dichloroethane	ND	0.5	NA	1	B1K0371	11/17/2011	11/17/11 03:12	
1,2-Dichloropropane	ND	0.5	NA	1	B1K0371	11/17/2011	11/17/11 03:12	
1,3,5-Trimethylbenzene	ND	0.5	NA	1	B1K0371	11/17/2011	11/17/11 03:12	
1,3-Dichlorobenzene	ND	0.5	NA	1	B1K0371	11/17/2011	11/17/11 03:12	
1,3-Dichloropropane	ND	0.5	NA	1	B1K0371	11/17/2011	11/17/11 03:12	
1,4-Dichlorobenzene	ND	0.5	NA	1	B1K0371	11/17/2011	11/17/11 03:12	
2,2-Dichloropropane	ND	0.5	NA	1	B1K0371	11/17/2011	11/17/11 03:12	
2-Chlorotoluene	ND	0.5	NA	1	B1K0371	11/17/2011	11/17/11 03:12	
4-Chlorotoluene	ND	0.5	NA	1	B1K0371	11/17/2011	11/17/11 03:12	
4-Isopropyltoluene	ND	0.5	NA	1	B1K0371	11/17/2011	11/17/11 03:12	
Benzene	ND	0.5	NA	1	B1K0371	11/17/2011	11/17/11 03:12	
Bromobenzene	ND	0.5	NA	1	B1K0371	11/17/2011	11/17/11 03:12	
Bromodichloromethane	ND	0.5	NA	1	B1K0371	11/17/2011	11/17/11 03:12	
Bromoform	ND	0.5	NA	1	B1K0371	11/17/2011	11/17/11 03:12	
Bromomethane	ND	0.5	NA	1	B1K0371	11/17/2011	11/17/11 03:12	
Carbon tetrachloride	ND	0.5	NA	1	B1K0371	11/17/2011	11/17/11 03:12	
Chlorobenzene	ND	0.5	NA	1	B1K0371	11/17/2011	11/17/11 03:12	
Chloroethane	ND	0.5	NA	1	B1K0371	11/17/2011	11/17/11 03:12	
Chloroform	ND	0.5	NA	1	B1K0371	11/17/2011	11/17/11 03:12	
Chloromethane	ND	0.5	NA	1	B1K0371	11/17/2011	11/17/11 03:12	



Hargis & Associates, Inc.

9171 Town Centre Drive, Suite 375
San Diego , CA 92122

Project Number: RAYTHEON MAIN, 532.30

Report To: Steve Netto

Reported:

11/21/2011

Client Sample ID MW-32C

Lab ID: 1100061-06

Volatile Organic Compounds by EPA 8260

Analyst: BD

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
cis-1,2-Dichloroethene	ND	0.5	NA	1	B1K0371	11/17/2011	11/17/11 03:12	
cis-1,3-Dichloropropene	ND	0.5	NA	1	B1K0371	11/17/2011	11/17/11 03:12	
Dibromochloromethane	ND	0.5	NA	1	B1K0371	11/17/2011	11/17/11 03:12	
Dibromomethane	ND	0.5	NA	1	B1K0371	11/17/2011	11/17/11 03:12	
Dichlorodifluoromethane	ND	0.5	NA	1	B1K0371	11/17/2011	11/17/11 03:12	
Ethylbenzene	ND	0.5	NA	1	B1K0371	11/17/2011	11/17/11 03:12	
Hexachlorobutadiene	ND	0.5	NA	1	B1K0371	11/17/2011	11/17/11 03:12	
Isopropylbenzene	ND	0.5	NA	1	B1K0371	11/17/2011	11/17/11 03:12	
m,p-Xylene	ND	1.0	NA	1	B1K0371	11/17/2011	11/17/11 03:12	
Methylene chloride	ND	1.0	NA	1	B1K0371	11/17/2011	11/17/11 03:12	
n-Butylbenzene	ND	0.5	NA	1	B1K0371	11/17/2011	11/17/11 03:12	
n-Propylbenzene	ND	0.5	NA	1	B1K0371	11/17/2011	11/17/11 03:12	
Naphthalene	ND	0.5	NA	1	B1K0371	11/17/2011	11/17/11 03:12	
o-Xylene	ND	0.5	NA	1	B1K0371	11/17/2011	11/17/11 03:12	
sec-Butylbenzene	ND	0.5	NA	1	B1K0371	11/17/2011	11/17/11 03:12	
Styrene	ND	0.5	NA	1	B1K0371	11/17/2011	11/17/11 03:12	
tert-Butylbenzene	ND	0.5	NA	1	B1K0371	11/17/2011	11/17/11 03:12	
Tetrachloroethene	ND	0.5	NA	1	B1K0371	11/17/2011	11/17/11 03:12	
Toluene	ND	0.5	NA	1	B1K0371	11/17/2011	11/17/11 03:12	
trans-1,2-Dichloroethene	ND	0.5	NA	1	B1K0371	11/17/2011	11/17/11 03:12	
Trichloroethene	ND	0.5	NA	1	B1K0371	11/17/2011	11/17/11 03:12	
Trichlorofluoromethane	ND	0.5	NA	1	B1K0371	11/17/2011	11/17/11 03:12	
Vinyl chloride	ND	0.5	NA	1	B1K0371	11/17/2011	11/17/11 03:12	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>90.8 %</i>	<i>70 - 130</i>			B1K0371	11/17/2011	<i>11/17/11 03:12</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>97.2 %</i>	<i>70 - 130</i>			B1K0371	11/17/2011	<i>11/17/11 03:12</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>98.3 %</i>	<i>70 - 130</i>			B1K0371	11/17/2011	<i>11/17/11 03:12</i>	
<i>Surrogate: Toluene-d8</i>	<i>99.8 %</i>	<i>70 - 130</i>			B1K0371	11/17/2011	<i>11/17/11 03:12</i>	



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9171 Town Centre Drive, Suite 375
San Diego, CA 92122

Project Number: RAYTHEON MAIN, 532.30
Report To: Steve Netto

Reported:
11/21/2011

Client Sample ID MW-32C

Lab ID: 1100061-06

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: JD

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	ND	0.2	0.1	1	B1K0068	11/08/2011	11/09/11 03:34	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	82.6 %		58 - 99		B1K0068	11/08/2011	11/09/11 03:34	
<i>Surrogate: 2-Fluorobiphenyl</i>	70.4 %		60 - 104		B1K0068	11/08/2011	11/09/11 03:34	
<i>Surrogate: 4-Terphenyl-d14</i>	91.9 %		65 - 127		B1K0068	11/08/2011	11/09/11 03:34	
<i>Surrogate: Nitrobenzene-d5</i>	81.5 %		50 - 136		B1K0068	11/08/2011	11/09/11 03:34	



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Project Number: RAYTHEON MAIN, 532.30
Report To: Steve Netto

Reported:
11/21/2011

Client Sample ID MW-32B

Lab ID: 1100061-07

Volatile Organic Compounds by EPA 8260

Analyst: BD

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:19	
1,1,1-Trichloroethane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:19	
1,1,2,2-Tetrachloroethane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:19	
1,1,2-Trichloroethane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:19	
1,1-Dichloroethane	0.6	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:19	
1,1-Dichloroethene	69.9	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:19	
1,1-Dichloropropene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:19	
1,2,3-Trichloropropane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:19	
1,2,3-Trichlorobenzene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:19	
1,2,4-Trichlorobenzene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:19	
1,2,4-Trimethylbenzene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:19	
1,2-Dibromo-3-chloropropane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:19	
1,2-Dibromoethane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:19	
1,2-Dichlorobenzene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:19	
1,2-Dichloroethane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:19	
1,2-Dichloropropane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:19	
1,3,5-Trimethylbenzene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:19	
1,3-Dichlorobenzene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:19	
1,3-Dichloropropane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:19	
1,4-Dichlorobenzene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:19	
2,2-Dichloropropane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:19	
2-Chlorotoluene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:19	
4-Chlorotoluene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:19	
4-Isopropyltoluene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:19	
Benzene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:19	
Bromobenzene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:19	
Bromodichloromethane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:19	
Bromoform	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:19	
Bromomethane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:19	
Carbon tetrachloride	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:19	
Chlorobenzene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:19	
Chloroethane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:19	
Chloroform	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:19	
Chloromethane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:19	



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Project Number: RAYTHEON MAIN, 532.30
Report To: Steve Netto

Reported:
11/21/2011

Client Sample ID MW-32B

Lab ID: 1100061-07

Volatile Organic Compounds by EPA 8260

Analyst: BD

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
cis-1,2-Dichloroethene	4.3	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:19	
cis-1,3-Dichloropropene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:19	
Dibromochloromethane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:19	
Dibromomethane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:19	
Dichlorodifluoromethane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:19	
Ethylbenzene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:19	
Hexachlorobutadiene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:19	
Isopropylbenzene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:19	
m,p-Xylene	ND	1.0	NA	1	B1K0290	11/16/2011	11/16/11 18:19	
Methylene chloride	ND	1.0	NA	1	B1K0290	11/16/2011	11/16/11 18:19	
n-Butylbenzene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:19	
n-Propylbenzene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:19	
Naphthalene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:19	
o-Xylene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:19	
sec-Butylbenzene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:19	
Styrene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:19	
tert-Butylbenzene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:19	
Tetrachloroethene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:19	
Toluene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:19	
trans-1,2-Dichloroethene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:19	
Trichloroethene	48.6	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:19	
Trichlorofluoromethane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:19	
Vinyl chloride	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:19	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>87.5 %</i>		<i>70 - 130</i>		B1K0290	11/16/2011	<i>11/16/11 18:19</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>96.1 %</i>		<i>70 - 130</i>		B1K0290	11/16/2011	<i>11/16/11 18:19</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>96.4 %</i>		<i>70 - 130</i>		B1K0290	11/16/2011	<i>11/16/11 18:19</i>	
<i>Surrogate: Toluene-d8</i>	<i>99.0 %</i>		<i>70 - 130</i>		B1K0290	11/16/2011	<i>11/16/11 18:19</i>	



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9171 Town Centre Drive, Suite 375
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Project Number: RAYTHEON MAIN, 532.30

Report To: Steve Netto

Reported:

11/21/2011

Client Sample ID MW-32B

Lab ID: 1100061-07

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: JD

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	2.3	0.2	0.1	1	B1K0068	11/08/2011	11/09/11 04:01	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>82.0 %</i>		<i>58 - 99</i>		B1K0068	11/08/2011	<i>11/09/11 04:01</i>	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>76.3 %</i>		<i>60 - 104</i>		B1K0068	11/08/2011	<i>11/09/11 04:01</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>91.8 %</i>		<i>65 - 127</i>		B1K0068	11/08/2011	<i>11/09/11 04:01</i>	
<i>Surrogate: Nitrobenzene-d5</i>	<i>85.6 %</i>		<i>50 - 136</i>		B1K0068	11/08/2011	<i>11/09/11 04:01</i>	



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Report To: Steve Netto

Reported:
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QUALITY CONTROL SECTION

Volatile Organic Compounds by EPA 8260 - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B1K0290 - MSVOAW_LL

Blank (B1K0290-BLK1)

Prepared: 11/16/2011 Analyzed: 11/16/2011

1,1,1,2-Tetrachloroethane	ND	0.5			NR				
1,1,1-Trichloroethane	ND	0.5			NR				
1,1,2,2-Tetrachloroethane	ND	0.5			NR				
1,1,2-Trichloroethane	ND	0.5			NR				
1,1-Dichloroethane	ND	0.5			NR				
1,1-Dichloroethene	ND	0.5			NR				
1,1-Dichloropropene	ND	0.5			NR				
1,2,3-Trichloropropane	ND	0.5			NR				
1,2,3-Trichlorobenzene	ND	0.5			NR				
1,2,4-Trichlorobenzene	ND	0.5			NR				
1,2,4-Trimethylbenzene	ND	0.5			NR				
1,2-Dibromo-3-chloropropane	ND	0.5			NR				
1,2-Dibromoethane	ND	0.5			NR				
1,2-Dichlorobenzene	ND	0.5			NR				
1,2-Dichloroethane	ND	0.5			NR				
1,2-Dichloropropane	ND	0.5			NR				
1,3,5-Trimethylbenzene	ND	0.5			NR				
1,3-Dichlorobenzene	ND	0.5			NR				
1,3-Dichloropropane	ND	0.5			NR				
1,4-Dichlorobenzene	ND	0.5			NR				
2,2-Dichloropropane	ND	0.5			NR				
2-Chlorotoluene	ND	0.5			NR				
4-Chlorotoluene	ND	0.5			NR				
4-Isopropyltoluene	ND	0.5			NR				
Benzene	ND	0.5			NR				
Bromobenzene	ND	0.5			NR				
Bromodichloromethane	ND	0.5			NR				
Bromoform	ND	0.5			NR				
Bromomethane	ND	0.5			NR				
Carbon tetrachloride	ND	0.5			NR				
Chlorobenzene	ND	0.5			NR				
Chloroethane	ND	0.5			NR				
Chloroform	ND	0.5			NR				
Chloromethane	ND	0.5			NR				
cis-1,2-Dichloroethene	ND	0.5			NR				
cis-1,3-Dichloropropene	ND	0.5			NR				
Dibromochloromethane	ND	0.5			NR				
Dibromomethane	ND	0.5			NR				
Dichlorodifluoromethane	ND	0.5			NR				



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Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
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Batch B1K0290 - MSVOAW_LL (continued)

Blank (B1K0290-BLK1) - Continued

Prepared: 11/16/2011 Analyzed: 11/16/2011

Ethylbenzene	ND	0.5				NR			
Hexachlorobutadiene	ND	0.5				NR			
Isopropylbenzene	ND	0.5				NR			
m,p-Xylene	ND	1.0				NR			
Methylene chloride	ND	1.0				NR			
n-Butylbenzene	ND	0.5				NR			
n-Propylbenzene	ND	0.5				NR			
Naphthalene	ND	0.5				NR			
o-Xylene	ND	0.5				NR			
sec-Butylbenzene	ND	0.5				NR			
Styrene	ND	0.5				NR			
tert-Butylbenzene	ND	0.5				NR			
Tetrachloroethene	ND	0.5				NR			
Toluene	ND	0.5				NR			
trans-1,2-Dichloroethene	ND	0.5				NR			
Trichloroethene	ND	0.5				NR			
Trichlorofluoromethane	ND	0.5				NR			
Vinyl chloride	ND	0.5				NR			

<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>21.95</i>		<i>25.0</i>		<i>87.8</i>	<i>70 - 130</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>24.06</i>		<i>25.0</i>		<i>96.2</i>	<i>70 - 130</i>			
<i>Surrogate: Dibromofluoromethane</i>	<i>24.22</i>		<i>25.0</i>		<i>96.9</i>	<i>70 - 130</i>			
<i>Surrogate: Toluene-d8</i>	<i>24.87</i>		<i>25.0</i>		<i>99.5</i>	<i>70 - 130</i>			

LCS (B1K0290-BS1)

Prepared: 11/16/2011 Analyzed: 11/16/2011

1,1-Dichloroethene	17.60	0.5	20.0		88.0	70 - 130			
Benzene	37.47	0.5	40.0		93.7	70 - 130			
Chlorobenzene	20.50	0.5	20.0		102	70 - 130			
MTBE	21.39	0.5	20.0		107	70 - 130			
Toluene	39.25	0.5	40.0		98.1	70 - 130			
Trichloroethene	19.66	0.5	20.0		98.3	70 - 130			

<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>23.50</i>		<i>25.0</i>		<i>94.0</i>	<i>70 - 130</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>24.31</i>		<i>25.0</i>		<i>97.2</i>	<i>70 - 130</i>			
<i>Surrogate: Dibromofluoromethane</i>	<i>24.26</i>		<i>25.0</i>		<i>97.0</i>	<i>70 - 130</i>			
<i>Surrogate: Toluene-d8</i>	<i>24.81</i>		<i>25.0</i>		<i>99.2</i>	<i>70 - 130</i>			

LCS Dup (B1K0290-BSD1)

Prepared: 11/16/2011 Analyzed: 11/16/2011

1,1-Dichloroethene	18.22	0.5	20.0		91.1	70 - 130	3.46	20	
Benzene	38.26	0.5	40.0		95.6	70 - 130	2.09	20	
Chlorobenzene	20.77	0.5	20.0		104	70 - 130	1.31	20	
MTBE	20.98	0.5	20.0		105	70 - 130	1.94	20	
Toluene	40.06	0.5	40.0		100	70 - 130	2.04	20	



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Report To: Steve Netto

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Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B1K0290 - MSVOAW_LL (continued)

LCS Dup (B1K0290-BSD1) - Continued

Prepared: 11/16/2011 Analyzed: 11/16/2011

Trichloroethene	20.48	0.5	20.0		102	70 - 130	4.09	20	
Surrogate: 1,2-Dichloroethane-d4	23.06		25.0		92.2	70 - 130			
Surrogate: 4-Bromofluorobenzene	24.50		25.0		98.0	70 - 130			
Surrogate: Dibromofluoromethane	23.75		25.0		95.0	70 - 130			
Surrogate: Toluene-d8	24.77		25.0		99.1	70 - 130			

Matrix Spike (B1K0290-MS1)

Source: 1100084-01

Prepared: 11/16/2011 Analyzed: 11/16/2011

1,1-Dichloroethene	20.92	0.5	20.0	ND	105	70 - 130			
Benzene	41.79	0.5	40.0	ND	104	70 - 130			
Chlorobenzene	22.23	0.5	20.0	ND	111	70 - 130			
MTBE	21.81	0.5	20.0	ND	109	70 - 130			
Toluene	43.90	0.5	40.0	ND	110	70 - 130			
Trichloroethene	22.55	0.5	20.0	ND	113	70 - 130			
Surrogate: 1,2-Dichloroethane-d4	23.36		25.0		93.4	70 - 130			
Surrogate: 4-Bromofluorobenzene	24.43		25.0		97.7	70 - 130			
Surrogate: Dibromofluoromethane	23.87		25.0		95.5	70 - 130			
Surrogate: Toluene-d8	24.66		25.0		98.6	70 - 130			

Matrix Spike Dup (B1K0290-MSD1)

Source: 1100084-01

Prepared: 11/16/2011 Analyzed: 11/16/2011

1,1-Dichloroethene	20.12	0.5	20.0	ND	101	70 - 130	3.90	20	
Benzene	40.07	0.5	40.0	ND	100	70 - 130	4.20	20	
Chlorobenzene	21.51	0.5	20.0	ND	108	70 - 130	3.29	20	
MTBE	21.51	0.5	20.0	ND	108	70 - 130	1.39	20	
Toluene	42.05	0.5	40.0	ND	105	70 - 130	4.30	20	
Trichloroethene	21.52	0.5	20.0	ND	108	70 - 130	4.67	20	
Surrogate: 1,2-Dichloroethane-d4	22.85		25.0		91.4	70 - 130			
Surrogate: 4-Bromofluorobenzene	24.17		25.0		96.7	70 - 130			
Surrogate: Dibromofluoromethane	23.86		25.0		95.4	70 - 130			
Surrogate: Toluene-d8	24.57		25.0		98.3	70 - 130			

Batch B1K0371 - MSVOAW_LL

Blank (B1K0371-BLK1)

Prepared: 11/17/2011 Analyzed: 11/17/2011

1,1,1,2-Tetrachloroethane	ND	0.5				NR			
1,1,1-Trichloroethane	ND	0.5				NR			
1,1,2,2-Tetrachloroethane	ND	0.5				NR			
1,1,2-Trichloroethane	ND	0.5				NR			
1,1-Dichloroethane	ND	0.5				NR			
1,1-Dichloroethene	ND	0.5				NR			
1,1-Dichloropropene	ND	0.5				NR			
1,2,3-Trichloropropane	ND	0.5				NR			



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Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
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Batch B1K0371 - MSVOAW_LL (continued)

Blank (B1K0371-BLK1) - Continued

Prepared: 11/17/2011 Analyzed: 11/17/2011

1,2,3-Trichlorobenzene	ND	0.5			NR
1,2,4-Trichlorobenzene	ND	0.5			NR
1,2,4-Trimethylbenzene	ND	0.5			NR
1,2-Dibromo-3-chloropropane	ND	0.5			NR
1,2-Dibromoethane	ND	0.5			NR
1,2-Dichlorobenzene	ND	0.5			NR
1,2-Dichloroethane	ND	0.5			NR
1,2-Dichloropropane	ND	0.5			NR
1,3,5-Trimethylbenzene	ND	0.5			NR
1,3-Dichlorobenzene	ND	0.5			NR
1,3-Dichloropropane	ND	0.5			NR
1,4-Dichlorobenzene	ND	0.5			NR
2,2-Dichloropropane	ND	0.5			NR
2-Chlorotoluene	ND	0.5			NR
4-Chlorotoluene	ND	0.5			NR
4-Isopropyltoluene	ND	0.5			NR
Benzene	ND	0.5			NR
Bromobenzene	ND	0.5			NR
Bromodichloromethane	ND	0.5			NR
Bromoform	ND	0.5			NR
Bromomethane	ND	0.5			NR
Carbon tetrachloride	ND	0.5			NR
Chlorobenzene	ND	0.5			NR
Chloroethane	ND	0.5			NR
Chloroform	ND	0.5			NR
Chloromethane	ND	0.5			NR
cis-1,2-Dichloroethene	ND	0.5			NR
cis-1,3-Dichloropropene	ND	0.5			NR
Dibromochloromethane	ND	0.5			NR
Dibromomethane	ND	0.5			NR
Dichlorodifluoromethane	ND	0.5			NR
Ethylbenzene	ND	0.5			NR
Hexachlorobutadiene	ND	0.5			NR
Isopropylbenzene	ND	0.5			NR
m,p-Xylene	ND	1.0			NR
Methylene chloride	ND	1.0			NR
n-Butylbenzene	ND	0.5			NR
n-Propylbenzene	ND	0.5			NR
Naphthalene	ND	0.5			NR
o-Xylene	ND	0.5			NR
sec-Butylbenzene	ND	0.5			NR
Styrene	ND	0.5			NR



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Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B1K0371 - MSVOAW_LL (continued)

Blank (B1K0371-BLK1) - Continued

Prepared: 11/17/2011 Analyzed: 11/17/2011

tert-Butylbenzene	ND	0.5			NR				
Tetrachloroethene	ND	0.5			NR				
Toluene	ND	0.5			NR				
trans-1,2-Dichloroethene	ND	0.5			NR				
Trichloroethene	ND	0.5			NR				
Trichlorofluoromethane	ND	0.5			NR				
Vinyl chloride	ND	0.5			NR				
<i>Surrogate: 1,2-Dichloroethane-d4</i>	22.44		25.0		89.8	70 - 130			
<i>Surrogate: 4-Bromofluorobenzene</i>	23.88		25.0		95.5	70 - 130			
<i>Surrogate: Dibromofluoromethane</i>	24.50		25.0		98.0	70 - 130			
<i>Surrogate: Toluene-d8</i>	25.18		25.0		101	70 - 130			

LCS (B1K0371-BS1)

Prepared: 11/17/2011 Analyzed: 11/17/2011

1,1-Dichloroethene	19.58	0.5	20.0		97.9	70 - 130			
Benzene	38.03	0.5	40.0		95.1	70 - 130			
Chlorobenzene	20.38	0.5	20.0		102	70 - 130			
MTBE	20.96	0.5	20.0		105	70 - 130			
Toluene	39.74	0.5	40.0		99.4	70 - 130			
Trichloroethene	20.59	0.5	20.0		103	70 - 130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	23.32		25.0		93.3	70 - 130			
<i>Surrogate: 4-Bromofluorobenzene</i>	24.43		25.0		97.7	70 - 130			
<i>Surrogate: Dibromofluoromethane</i>	24.12		25.0		96.5	70 - 130			
<i>Surrogate: Toluene-d8</i>	24.77		25.0		99.1	70 - 130			

LCS Dup (B1K0371-BS1)

Prepared: 11/17/2011 Analyzed: 11/17/2011

1,1-Dichloroethene	19.61	0.5	20.0		98.0	70 - 130	0.153	20	
Benzene	38.31	0.5	40.0		95.8	70 - 130	0.734	20	
Chlorobenzene	20.36	0.5	20.0		102	70 - 130	0.0982	20	
MTBE	21.05	0.5	20.0		105	70 - 130	0.428	20	
Toluene	39.99	0.5	40.0		100	70 - 130	0.627	20	
Trichloroethene	20.82	0.5	20.0		104	70 - 130	1.11	20	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	23.59		25.0		94.4	70 - 130			
<i>Surrogate: 4-Bromofluorobenzene</i>	24.44		25.0		97.8	70 - 130			
<i>Surrogate: Dibromofluoromethane</i>	24.47		25.0		97.9	70 - 130			
<i>Surrogate: Toluene-d8</i>	24.83		25.0		99.3	70 - 130			

Matrix Spike (B1K0371-MS1)

Source: 1100061-06

Prepared: 11/17/2011 Analyzed: 11/17/2011

1,1-Dichloroethene	20.31	0.5	20.0	ND	102	70 - 130			
Benzene	38.24	0.5	40.0	ND	95.6	70 - 130			
Chlorobenzene	19.89	0.5	20.0	ND	99.4	70 - 130			
MTBE	19.46	0.5	20.0	ND	97.3	70 - 130			



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Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch BIK0371 - MSVOAW_LL (continued)

Matrix Spike (BIK0371-MS1) - Continued

Source: 1100061-06

Prepared: 11/17/2011 Analyzed: 11/17/2011

Toluene	39.81	0.5	40.0	ND	99.5	70 - 130			
Trichloroethene	20.05	0.5	20.0	ND	100	70 - 130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>23.27</i>		<i>25.0</i>		<i>93.1</i>	<i>70 - 130</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>24.21</i>		<i>25.0</i>		<i>96.8</i>	<i>70 - 130</i>			
<i>Surrogate: Dibromofluoromethane</i>	<i>24.38</i>		<i>25.0</i>		<i>97.5</i>	<i>70 - 130</i>			
<i>Surrogate: Toluene-d8</i>	<i>24.89</i>		<i>25.0</i>		<i>99.6</i>	<i>70 - 130</i>			

Matrix Spike (BIK0371-MS2)

Source: 1100061-04

Prepared: 11/17/2011 Analyzed: 11/17/2011

1,1-Dichloroethene	581.1	0.5	20.0	518.3	314	70 - 130			M3
Benzene	42.56	0.5	40.0	ND	106	70 - 130			
Chlorobenzene	22.18	0.5	20.0	ND	111	70 - 130			
MTBE	21.56	0.5	20.0	ND	108	70 - 130			
Toluene	44.49	0.5	40.0	ND	111	70 - 130			
Trichloroethene	29.21	0.5	20.0	6.040	116	70 - 130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>23.54</i>		<i>25.0</i>		<i>94.2</i>	<i>70 - 130</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>24.40</i>		<i>25.0</i>		<i>97.6</i>	<i>70 - 130</i>			
<i>Surrogate: Dibromofluoromethane</i>	<i>24.49</i>		<i>25.0</i>		<i>98.0</i>	<i>70 - 130</i>			
<i>Surrogate: Toluene-d8</i>	<i>25.01</i>		<i>25.0</i>		<i>100</i>	<i>70 - 130</i>			

Matrix Spike Dup (BIK0371-MSD1)

Source: 1100061-06

Prepared: 11/17/2011 Analyzed: 11/17/2011

1,1-Dichloroethene	18.44	0.5	20.0	ND	92.2	70 - 130	9.65	20	
Benzene	36.28	0.5	40.0	ND	90.7	70 - 130	5.26	20	
Chlorobenzene	19.02	0.5	20.0	ND	95.1	70 - 130	4.47	20	
MTBE	19.12	0.5	20.0	ND	95.6	70 - 130	1.76	20	
Toluene	38.04	0.5	40.0	ND	95.1	70 - 130	4.55	20	
Trichloroethene	19.10	0.5	20.0	ND	95.5	70 - 130	4.85	20	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>23.30</i>		<i>25.0</i>		<i>93.2</i>	<i>70 - 130</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>24.24</i>		<i>25.0</i>		<i>97.0</i>	<i>70 - 130</i>			
<i>Surrogate: Dibromofluoromethane</i>	<i>24.33</i>		<i>25.0</i>		<i>97.3</i>	<i>70 - 130</i>			
<i>Surrogate: Toluene-d8</i>	<i>25.05</i>		<i>25.0</i>		<i>100</i>	<i>70 - 130</i>			

Matrix Spike Dup (BIK0371-MSD2)

Source: 1100061-04

Prepared: 11/17/2011 Analyzed: 11/17/2011

1,1-Dichloroethene	561.4	0.5	20.0	518.3	216	70 - 130	3.44	20	M3
Benzene	41.29	0.5	40.0	ND	103	70 - 130	3.03	20	
Chlorobenzene	21.51	0.5	20.0	ND	108	70 - 130	3.07	20	
MTBE	21.39	0.5	20.0	ND	107	70 - 130	0.792	20	
Toluene	42.88	0.5	40.0	ND	107	70 - 130	3.69	20	
Trichloroethene	28.07	0.5	20.0	6.040	110	70 - 130	3.98	20	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>23.71</i>		<i>25.0</i>		<i>94.8</i>	<i>70 - 130</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>24.16</i>		<i>25.0</i>		<i>96.6</i>	<i>70 - 130</i>			
<i>Surrogate: Dibromofluoromethane</i>	<i>24.47</i>		<i>25.0</i>		<i>97.9</i>	<i>70 - 130</i>			



Hargis & Associates, Inc.

9171 Town Centre Drive, Suite 375
San Diego , CA 92122

Project Number: RAYTHEON MAIN, 532.30

Report To: Steve Netto

Reported:

11/21/2011

Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B1K0371 - MSVOAW_LL (continued)

Matrix Spike Dup (B1K0371-MSD2) - Continued

Source: 1100061-04

Prepared: 11/17/2011 Analyzed: 11/17/2011

Surrogate: Toluene-d8

24.95

25.0

99.8

70 - 130



Hargis & Associates, Inc.

9171 Town Centre Drive, Suite 375
San Diego, CA 92122

Project Number: RAYTHEON MAIN, 532.30
Report To: Steve Netto

Reported:
11/21/2011

1,4-Dioxane by EPA 8270: Isotope Dilution Technique - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B1K0073 - MSSEMI_ISOTOPEDILN

Blank (B1K0073-BLK1)

Prepared: 11/8/2011 Analyzed: 11/10/2011

1,4-Dioxane	ND	10.0				NR			
Surrogate: 1,2-Dichlorobenzene-d	65.53		100		65.5	0 - 200			
Surrogate: 2-Fluorobiphenyl	76.61		100		76.6	0 - 200			
Surrogate: 4-Terphenyl-d14	88.36		100		88.4	0 - 200			
Surrogate: Nitrobenzene-d5	73.15		100		73.2	0 - 200			

LCS (B1K0073-BS1)

Prepared: 11/8/2011 Analyzed: 11/10/2011

1,4-Dioxane	108.9	10.0	100		109	70 - 130			
Surrogate: 1,2-Dichlorobenzene-d	67.70		100		67.7	0 - 200			
Surrogate: 2-Fluorobiphenyl	80.26		100		80.3	0 - 200			
Surrogate: 4-Terphenyl-d14	94.50		100		94.5	0 - 200			
Surrogate: Nitrobenzene-d5	82.70		100		82.7	0 - 200			

Matrix Spike (B1K0073-MS1)

Source: 1100061-04

Prepared: 11/8/2011 Analyzed: 11/10/2011

1,4-Dioxane	385.4	10.0	100	300.5	84.8	0 - 200			
Surrogate: 1,2-Dichlorobenzene-d	65.39		100		65.4	0 - 200			
Surrogate: 2-Fluorobiphenyl	78.91		100		78.9	0 - 200			
Surrogate: 4-Terphenyl-d14	93.03		100		93.0	0 - 200			
Surrogate: Nitrobenzene-d5	83.72		100		83.7	0 - 200			

Matrix Spike Dup (B1K0073-MSD1)

Source: 1100061-04

Prepared: 11/8/2011 Analyzed: 11/10/2011

1,4-Dioxane	387.1	10.0	100	300.5	86.5	0 - 200	0.440	200	
Surrogate: 1,2-Dichlorobenzene-d	63.16		100		63.2	0 - 200			
Surrogate: 2-Fluorobiphenyl	75.07		100		75.1	0 - 200			
Surrogate: 4-Terphenyl-d14	85.81		100		85.8	0 - 200			
Surrogate: Nitrobenzene-d5	80.72		100		80.7	0 - 200			



Hargis & Associates, Inc.

9171 Town Centre Drive, Suite 375
San Diego, CA 92122

Project Number: RAYTHEON MAIN, 532.30
Report To: Steve Netto

Reported:
11/21/2011

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
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Batch B1K0068 - MSSEMI_ISOTOPEDILN

Blank (B1K0068-BLK1)

Prepared: 11/8/2011 Analyzed: 11/8/2011

1,4-Dioxane	ND	0.2			NR				
Surrogate: 1,2-Dichlorobenzene-d	0.8078		1.00		80.8	58 - 99			
Surrogate: 2-Fluorobiphenyl	0.7421		1.00		74.2	60 - 104			
Surrogate: 4-Terphenyl-d14	0.9813		1.00		98.1	65 - 127			
Surrogate: Nitrobenzene-d5	0.8560		1.00		85.6	50 - 136			

LCS (B1K0068-BS1)

Prepared: 11/8/2011 Analyzed: 11/8/2011

1,4-Dioxane	1.138	0.2	1.00		114	70 - 130			
Surrogate: 1,2-Dichlorobenzene-d	0.7727		1.00		77.3	58 - 99			
Surrogate: 2-Fluorobiphenyl	0.7399		1.00		74.0	60 - 104			
Surrogate: 4-Terphenyl-d14	0.8954		1.00		89.5	65 - 127			
Surrogate: Nitrobenzene-d5	0.8679		1.00		86.8	50 - 136			

Matrix Spike (B1K0068-MS1)

Source: 1100061-06

Prepared: 11/8/2011 Analyzed: 11/8/2011

1,4-Dioxane	1.222	0.2	1.00	ND	122	70 - 130			
Surrogate: 1,2-Dichlorobenzene-d	0.7918		1.00		79.2	58 - 99			
Surrogate: 2-Fluorobiphenyl	0.7680		1.00		76.8	60 - 104			
Surrogate: 4-Terphenyl-d14	0.8661		1.00		86.6	65 - 127			
Surrogate: Nitrobenzene-d5	0.8901		1.00		89.0	50 - 136			

Matrix Spike Dup (B1K0068-MSD1)

Source: 1100061-06

Prepared: 11/8/2011 Analyzed: 11/8/2011

1,4-Dioxane	1.253	0.2	1.00	ND	125	70 - 130	2.50	20	
Surrogate: 1,2-Dichlorobenzene-d	0.8228		1.00		82.3	58 - 99			
Surrogate: 2-Fluorobiphenyl	0.7976		1.00		79.8	60 - 104			
Surrogate: 4-Terphenyl-d14	0.8919		1.00		89.2	65 - 127			
Surrogate: Nitrobenzene-d5	0.9331		1.00		93.3	50 - 136			



Hargis & Associates, Inc.

9171 Town Centre Drive, Suite 375
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Project Number: RAYTHEON MAIN, 532.30

Report To: Steve Netto

Reported:

11/21/2011

Notes and Definitions

M3	Matrix spike recovery outside of acceptance limit due to disproportionate concentration of the analyte to spike level. The analytical batch was validated by the laboratory control sample.
ND	Analyte not detected at or above reporting limit
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
NR	Not Reported
RPD	Relative Percent Difference
CA1	CA-NELAP (CDPH)
CA2	CA-ELAP (CDPH)
OR1	OR-NELAP (OSPHL)
TX1	TX-NELAP (TCEQ)

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST FORM

PROJECT NAME RAYTHEON MAIN		PROJECT No./TASK No. 532.30				SAMPLE CONTAINERS		ANALYSIS REQUESTED			ESTIMATED CONCENTRATION RANGE (ppb) FOR VOAS		SPECIAL HANDLING		LABORATORY INFORMATION						
PROJECT MANAGER Chris Ross		Phone No. 858-455-8500													ATL Attn: Rachelle Arada						
QA MANAGER Steve Netto		Fax No. 858-455-6533																			
SAMPLER (SIGNATURE) 		SAMPLER (PRINTED) Amanda Beam Daniel Mora																			
LAB ID	SAMPLE ID	SAMPLE COLLECTION		MATRIX			PRESERVATION			40 ml VOA 1 L Amber	8260 VOCs	8270 SW 1,4-Dioxane	8270 MD 1,4-Dioxane	0-10	10-100	100-1,000	>1,000	Standard TAT	MS/MSD collected	REMARKS	
		Date	Time	Soil	Ground-water	Surface water	Lab H2O	HCl	HNO3												NaOH
110061 - 1	TB-110311	11/3/11	730			X	X			X				X				X			
2	MW-31		837	X			X			3		X			X						
3	MW-28		940	X			X			3		X	X								
4	MW-29		1045	X			X			3		X	X			X		X			+6 VOAs +2 L Amber
5	MW-32A		1243	X			X			3		X	X			X		X			
6	MW-32C		1536	X			X			3		X	X			X		X			+6 VOAs +2 L Amber
7	MW-32B		1703	X			X			3		X	X			X		X			
Total number of Containers per analysis:										Total No. of Containers: 26											
Relinquished by: HHA, INC Company		Date: 11/3/11	Received by: ATL Company	Date: 11/3/11	INSTRUCTIONS										Shipment Method: <u>Courier (Drop-off)</u> Send Results to: <u>Steve Netto</u>						
		Time: 1715		Time: 1715	<ol style="list-style-type: none"> Fill out form completely except for shaded areas (lab use only); sign only after verified for completeness. Complete in ballpoint pen. Draw one line through errors, initial and date correction. Indicate number of sample containers in analysis request space; indicate choice with \checkmark or x. Note applicable preservatives, special instructions, and deviations from typical environmental samples. Consult project QA documents for specific instructions. 										<input checked="" type="checkbox"/> 9171 TOWNE CENTRE DRIVE, SUITE 375 SAN DIEGO, CA 92122 (858) 455-6500 <input type="checkbox"/> 1640 SOUTH STAPLEY DRIVE, SUITE 124 MESA, AZ 85204 (480) 345-0888 <input type="checkbox"/> 1820 EAST RIVER ROAD, SUITE 220 TUCSON, AZ 85718 (520) 881-7300						
Relinquished by: ATL Company		Date: 11/3/11	Received by: ATL Company	Date: 11/3/11	Sample Receipt:										Send invoice to San Diego, CA Attn: Accounts Payable						
		Time: 1700		Time: 1700	<input type="checkbox"/> No. of containers correct <input type="checkbox"/> custody seals secure <input checked="" type="checkbox"/> received good condition/cold <input type="checkbox"/> conforms to COC document																



21 November 2011

Steve Netto
Hargis & Associates, Inc.
9171 Town Centre Drive, Suite 375
San Diego, CA 92122
Tel: (619) 249-3166
Fax:(619) 521-8580



ELAP No.: 1838
NELAP No.: 02107CA
CSDLAC No.: 10196
ORELAP No.: CA300003

RE: ATL Work Order Number: 1100070
Client Reference : RAYTHEON MAIN, 532.30

Enclosed are the results for sample(s) received on November, 4 2011 by Advanced Technology Laboratories. The sample(s) are tested for the parameters as indicated on the enclosed chain of custody in accordance with applicable laboratory certifications. The laboratory results contained in this report specifically pertains to the sample(s) submitted.

Thank you for the opportunity to serve the needs of your company. If you have any questions, please feel free to contact me or your Project Manager.

Sincerely,

A handwritten signature in black ink, appearing to read 'E. Rodriguez', is written over a light gray rectangular background.

Eddie Rodriguez
Laboratory Director

The cover letter and the case narrative are an integral part of this analytical report and its absence renders the report invalid. The report cannot be reproduced without written permission from the client and Advanced Technology Laboratories.

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Hargis & Associates, Inc.

9171 Town Centre Drive, Suite 375
San Diego , CA 92122

Project Number: RAYTHEON MAIN, 532.30

Report To: Steve Netto

Reported:

11/21/2011

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
TB-110411	1100070-01	Lab H2O	11/04/11 8:00	11/03/11 17:15
MW-0800	1100070-02	Groundwater	11/04/11 10:35	11/03/11 17:15
MW-08	1100070-03	Groundwater	11/04/11 10:45	11/03/11 17:15

CASE NARRATIVE

Sample Receiving / General Comments

Headspace <5-6mm was noted on all the voa vials for TB-110411.



Hargis & Associates, Inc.

9171 Town Centre Drive, Suite 375
San Diego , CA 92122

Project Number: RAYTHEON MAIN, 532.30
Report To: Steve Netto

Reported:
11/21/2011

Client Sample ID TB-110411

Lab ID: 110070-01

Volatile Organic Compounds by EPA 8260

Analyst: BD

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:58	
1,1,1-Trichloroethane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:58	
1,1,2,2-Tetrachloroethane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:58	
1,1,2-Trichloroethane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:58	
1,1-Dichloroethane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:58	
1,1-Dichloroethene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:58	
1,1-Dichloropropene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:58	
1,2,3-Trichloropropane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:58	
1,2,3-Trichlorobenzene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:58	
1,2,4-Trichlorobenzene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:58	
1,2,4-Trimethylbenzene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:58	
1,2-Dibromo-3-chloropropane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:58	
1,2-Dibromoethane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:58	
1,2-Dichlorobenzene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:58	
1,2-Dichloroethane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:58	
1,2-Dichloropropane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:58	
1,3,5-Trimethylbenzene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:58	
1,3-Dichlorobenzene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:58	
1,3-Dichloropropane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:58	
1,4-Dichlorobenzene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:58	
2,2-Dichloropropane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:58	
2-Chlorotoluene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:58	
4-Chlorotoluene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:58	
4-Isopropyltoluene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:58	
Benzene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:58	
Bromobenzene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:58	
Bromodichloromethane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:58	
Bromoform	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:58	
Bromomethane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:58	
Carbon tetrachloride	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:58	
Chlorobenzene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:58	
Chloroethane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:58	
Chloroform	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:58	
Chloromethane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:58	



Hargis & Associates, Inc.

9171 Town Centre Drive, Suite 375
San Diego , CA 92122

Project Number: RAYTHEON MAIN, 532.30
Report To: Steve Netto

Reported:
11/21/2011

Client Sample ID TB-110411

Lab ID: 110070-01

Volatile Organic Compounds by EPA 8260

Analyst: BD

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
cis-1,2-Dichloroethene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:58	
cis-1,3-Dichloropropene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:58	
Dibromochloromethane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:58	
Dibromomethane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:58	
Dichlorodifluoromethane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:58	
Ethylbenzene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:58	
Hexachlorobutadiene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:58	
Isopropylbenzene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:58	
m,p-Xylene	ND	1.0	NA	1	B1K0290	11/16/2011	11/16/11 18:58	
Methylene chloride	ND	1.0	NA	1	B1K0290	11/16/2011	11/16/11 18:58	
n-Butylbenzene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:58	
n-Propylbenzene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:58	
Naphthalene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:58	
o-Xylene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:58	
sec-Butylbenzene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:58	
Styrene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:58	
tert-Butylbenzene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:58	
Tetrachloroethene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:58	
Toluene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:58	
trans-1,2-Dichloroethene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:58	
Trichloroethene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:58	
Trichlorofluoromethane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:58	
Vinyl chloride	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 18:58	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>88.6 %</i>	<i>70 - 130</i>			B1K0290	11/16/2011	<i>11/16/11 18:58</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>96.1 %</i>	<i>70 - 130</i>			B1K0290	11/16/2011	<i>11/16/11 18:58</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>96.8 %</i>	<i>70 - 130</i>			B1K0290	11/16/2011	<i>11/16/11 18:58</i>	
<i>Surrogate: Toluene-d8</i>	<i>99.8 %</i>	<i>70 - 130</i>			B1K0290	11/16/2011	<i>11/16/11 18:58</i>	



Hargis & Associates, Inc.

9171 Town Centre Drive, Suite 375
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Project Number: RAYTHEON MAIN, 532.30
Report To: Steve Netto

Reported:
11/21/2011

Client Sample ID MW-0800

Lab ID: 1100070-02

Volatile Organic Compounds by EPA 8260

Analyst: BD

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 20:57	
1,1,1-Trichloroethane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 20:57	
1,1,2,2-Tetrachloroethane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 20:57	
1,1,2-Trichloroethane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 20:57	
1,1-Dichloroethane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 20:57	
1,1-Dichloroethene	39.5	0.5	NA	1	B1K0290	11/16/2011	11/16/11 20:57	
1,1-Dichloropropene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 20:57	
1,2,3-Trichloropropane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 20:57	
1,2,3-Trichlorobenzene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 20:57	
1,2,4-Trichlorobenzene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 20:57	
1,2,4-Trimethylbenzene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 20:57	
1,2-Dibromo-3-chloropropane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 20:57	
1,2-Dibromoethane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 20:57	
1,2-Dichlorobenzene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 20:57	
1,2-Dichloroethane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 20:57	
1,2-Dichloropropane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 20:57	
1,3,5-Trimethylbenzene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 20:57	
1,3-Dichlorobenzene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 20:57	
1,3-Dichloropropane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 20:57	
1,4-Dichlorobenzene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 20:57	
2,2-Dichloropropane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 20:57	
2-Chlorotoluene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 20:57	
4-Chlorotoluene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 20:57	
4-Isopropyltoluene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 20:57	
Benzene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 20:57	
Bromobenzene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 20:57	
Bromodichloromethane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 20:57	
Bromoform	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 20:57	
Bromomethane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 20:57	
Carbon tetrachloride	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 20:57	
Chlorobenzene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 20:57	
Chloroethane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 20:57	
Chloroform	0.6	0.5	NA	1	B1K0290	11/16/2011	11/16/11 20:57	
Chloromethane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 20:57	



Hargis & Associates, Inc.

9171 Town Centre Drive, Suite 375
San Diego , CA 92122

Project Number: RAYTHEON MAIN, 532.30
Report To: Steve Netto

Reported:
11/21/2011

Client Sample ID MW-0800

Lab ID: 1100070-02

Volatile Organic Compounds by EPA 8260

Analyst: BD

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
cis-1,2-Dichloroethene	7.6	0.5	NA	1	B1K0290	11/16/2011	11/16/11 20:57	
cis-1,3-Dichloropropene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 20:57	
Dibromochloromethane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 20:57	
Dibromomethane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 20:57	
Dichlorodifluoromethane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 20:57	
Ethylbenzene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 20:57	
Hexachlorobutadiene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 20:57	
Isopropylbenzene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 20:57	
m,p-Xylene	ND	1.0	NA	1	B1K0290	11/16/2011	11/16/11 20:57	
Methylene chloride	ND	1.0	NA	1	B1K0290	11/16/2011	11/16/11 20:57	
n-Butylbenzene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 20:57	
n-Propylbenzene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 20:57	
Naphthalene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 20:57	
o-Xylene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 20:57	
sec-Butylbenzene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 20:57	
Styrene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 20:57	
tert-Butylbenzene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 20:57	
Tetrachloroethene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 20:57	
Toluene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 20:57	
trans-1,2-Dichloroethene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 20:57	
Trichloroethene	170	5.0	NA	10	B1K0290	11/16/2011	11/16/11 21:16	
Trichlorofluoromethane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 20:57	
Vinyl chloride	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 20:57	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>89.4 %</i>		<i>70 - 130</i>		B1K0290	11/16/2011	<i>11/16/11 20:57</i>	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>88.2 %</i>		<i>70 - 130</i>		B1K0290	11/16/2011	<i>11/16/11 21:16</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>96.6 %</i>		<i>70 - 130</i>		B1K0290	11/16/2011	<i>11/16/11 20:57</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>98.0 %</i>		<i>70 - 130</i>		B1K0290	11/16/2011	<i>11/16/11 21:16</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>97.3 %</i>		<i>70 - 130</i>		B1K0290	11/16/2011	<i>11/16/11 21:16</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>97.3 %</i>		<i>70 - 130</i>		B1K0290	11/16/2011	<i>11/16/11 20:57</i>	
<i>Surrogate: Toluene-d8</i>	<i>101 %</i>		<i>70 - 130</i>		B1K0290	11/16/2011	<i>11/16/11 21:16</i>	
<i>Surrogate: Toluene-d8</i>	<i>99.6 %</i>		<i>70 - 130</i>		B1K0290	11/16/2011	<i>11/16/11 20:57</i>	



Hargis & Associates, Inc.

9171 Town Centre Drive, Suite 375
San Diego , CA 92122

Project Number: RAYTHEON MAIN, 532.30

Report To: Steve Netto

Reported:

11/21/2011

Client Sample ID MW-0800

Lab ID: 1100070-02

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: JD

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	0.4	0.2	0.1	1	B1K0068	11/08/2011	11/09/11 04:29	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>81.9 %</i>		<i>58 - 99</i>		B1K0068	11/08/2011	<i>11/09/11 04:29</i>	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>78.7 %</i>		<i>60 - 104</i>		B1K0068	11/08/2011	<i>11/09/11 04:29</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>93.9 %</i>		<i>65 - 127</i>		B1K0068	11/08/2011	<i>11/09/11 04:29</i>	
<i>Surrogate: Nitrobenzene-d5</i>	<i>84.6 %</i>		<i>50 - 136</i>		B1K0068	11/08/2011	<i>11/09/11 04:29</i>	



Hargis & Associates, Inc.

9171 Town Centre Drive, Suite 375
San Diego , CA 92122

Project Number: RAYTHEON MAIN, 532.30
Report To: Steve Netto

Reported:
11/21/2011

Client Sample ID MW-08

Lab ID: 110070-03

Volatile Organic Compounds by EPA 8260

Analyst: BD

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 21:36	
1,1,1-Trichloroethane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 21:36	
1,1,2,2-Tetrachloroethane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 21:36	
1,1,2-Trichloroethane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 21:36	
1,1-Dichloroethane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 21:36	
1,1-Dichloroethene	39.4	0.5	NA	1	B1K0290	11/16/2011	11/16/11 21:36	
1,1-Dichloropropene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 21:36	
1,2,3-Trichloropropane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 21:36	
1,2,3-Trichlorobenzene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 21:36	
1,2,4-Trichlorobenzene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 21:36	
1,2,4-Trimethylbenzene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 21:36	
1,2-Dibromo-3-chloropropane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 21:36	
1,2-Dibromoethane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 21:36	
1,2-Dichlorobenzene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 21:36	
1,2-Dichloroethane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 21:36	
1,2-Dichloropropane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 21:36	
1,3,5-Trimethylbenzene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 21:36	
1,3-Dichlorobenzene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 21:36	
1,3-Dichloropropane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 21:36	
1,4-Dichlorobenzene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 21:36	
2,2-Dichloropropane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 21:36	
2-Chlorotoluene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 21:36	
4-Chlorotoluene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 21:36	
4-Isopropyltoluene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 21:36	
Benzene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 21:36	
Bromobenzene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 21:36	
Bromodichloromethane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 21:36	
Bromoform	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 21:36	
Bromomethane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 21:36	
Carbon tetrachloride	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 21:36	
Chlorobenzene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 21:36	
Chloroethane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 21:36	
Chloroform	0.6	0.5	NA	1	B1K0290	11/16/2011	11/16/11 21:36	
Chloromethane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 21:36	



Hargis & Associates, Inc.

9171 Town Centre Drive, Suite 375
San Diego, CA 92122

Project Number: RAYTHEON MAIN, 532.30
Report To: Steve Netto

Reported:
11/21/2011

Client Sample ID MW-08

Lab ID: 1100070-03

Volatile Organic Compounds by EPA 8260

Analyst: BD

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
cis-1,2-Dichloroethene	9.2	0.5	NA	1	B1K0290	11/16/2011	11/16/11 21:36	
cis-1,3-Dichloropropene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 21:36	
Dibromochloromethane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 21:36	
Dibromomethane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 21:36	
Dichlorodifluoromethane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 21:36	
Ethylbenzene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 21:36	
Hexachlorobutadiene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 21:36	
Isopropylbenzene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 21:36	
m,p-Xylene	ND	1.0	NA	1	B1K0290	11/16/2011	11/16/11 21:36	
Methylene chloride	ND	1.0	NA	1	B1K0290	11/16/2011	11/16/11 21:36	
n-Butylbenzene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 21:36	
n-Propylbenzene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 21:36	
Naphthalene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 21:36	
o-Xylene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 21:36	
sec-Butylbenzene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 21:36	
Styrene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 21:36	
tert-Butylbenzene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 21:36	
Tetrachloroethene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 21:36	
Toluene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 21:36	
trans-1,2-Dichloroethene	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 21:36	
Trichloroethene	200	5.0	NA	10	B1K0290	11/16/2011	11/16/11 21:56	
Trichlorofluoromethane	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 21:36	
Vinyl chloride	ND	0.5	NA	1	B1K0290	11/16/2011	11/16/11 21:36	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>89.4 %</i>		<i>70 - 130</i>		B1K0290	11/16/2011	<i>11/16/11 21:56</i>	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>90.6 %</i>		<i>70 - 130</i>		B1K0290	11/16/2011	<i>11/16/11 21:36</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>96.0 %</i>		<i>70 - 130</i>		B1K0290	11/16/2011	<i>11/16/11 21:56</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>98.6 %</i>		<i>70 - 130</i>		B1K0290	11/16/2011	<i>11/16/11 21:36</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>97.9 %</i>		<i>70 - 130</i>		B1K0290	11/16/2011	<i>11/16/11 21:36</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>96.8 %</i>		<i>70 - 130</i>		B1K0290	11/16/2011	<i>11/16/11 21:56</i>	
<i>Surrogate: Toluene-d8</i>	<i>102 %</i>		<i>70 - 130</i>		B1K0290	11/16/2011	<i>11/16/11 21:36</i>	
<i>Surrogate: Toluene-d8</i>	<i>99.6 %</i>		<i>70 - 130</i>		B1K0290	11/16/2011	<i>11/16/11 21:56</i>	



Hargis & Associates, Inc.

9171 Town Centre Drive, Suite 375
San Diego , CA 92122

Project Number: RAYTHEON MAIN, 532.30

Report To: Steve Netto

Reported:

11/21/2011

Client Sample ID MW-08

Lab ID: 1100070-03

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: JD

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	0.4	0.2	0.1	1	B1K0068	11/08/2011	11/09/11 04:56	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	79.9 %		58 - 99		B1K0068	11/08/2011	11/09/11 04:56	
<i>Surrogate: 2-Fluorobiphenyl</i>	79.4 %		60 - 104		B1K0068	11/08/2011	11/09/11 04:56	
<i>Surrogate: 4-Terphenyl-d14</i>	94.1 %		65 - 127		B1K0068	11/08/2011	11/09/11 04:56	
<i>Surrogate: Nitrobenzene-d5</i>	84.1 %		50 - 136		B1K0068	11/08/2011	11/09/11 04:56	



Hargis & Associates, Inc.

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San Diego , CA 92122

Project Number: RAYTHEON MAIN, 532.30
Report To: Steve Netto

Reported:
11/21/2011

QUALITY CONTROL SECTION

Volatile Organic Compounds by EPA 8260 - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B1K0290 - MSVOAW_LL

Blank (B1K0290-BLK1)

Prepared: 11/16/2011 Analyzed: 11/16/2011

1,1,1,2-Tetrachloroethane	ND	0.5			NR				
1,1,1-Trichloroethane	ND	0.5			NR				
1,1,2,2-Tetrachloroethane	ND	0.5			NR				
1,1,2-Trichloroethane	ND	0.5			NR				
1,1-Dichloroethane	ND	0.5			NR				
1,1-Dichloroethene	ND	0.5			NR				
1,1-Dichloropropene	ND	0.5			NR				
1,2,3-Trichloropropane	ND	0.5			NR				
1,2,3-Trichlorobenzene	ND	0.5			NR				
1,2,4-Trichlorobenzene	ND	0.5			NR				
1,2,4-Trimethylbenzene	ND	0.5			NR				
1,2-Dibromo-3-chloropropane	ND	0.5			NR				
1,2-Dibromoethane	ND	0.5			NR				
1,2-Dichlorobenzene	ND	0.5			NR				
1,2-Dichloroethane	ND	0.5			NR				
1,2-Dichloropropane	ND	0.5			NR				
1,3,5-Trimethylbenzene	ND	0.5			NR				
1,3-Dichlorobenzene	ND	0.5			NR				
1,3-Dichloropropane	ND	0.5			NR				
1,4-Dichlorobenzene	ND	0.5			NR				
2,2-Dichloropropane	ND	0.5			NR				
2-Chlorotoluene	ND	0.5			NR				
4-Chlorotoluene	ND	0.5			NR				
4-Isopropyltoluene	ND	0.5			NR				
Benzene	ND	0.5			NR				
Bromobenzene	ND	0.5			NR				
Bromodichloromethane	ND	0.5			NR				
Bromoform	ND	0.5			NR				
Bromomethane	ND	0.5			NR				
Carbon tetrachloride	ND	0.5			NR				
Chlorobenzene	ND	0.5			NR				
Chloroethane	ND	0.5			NR				
Chloroform	ND	0.5			NR				
Chloromethane	ND	0.5			NR				
cis-1,2-Dichloroethene	ND	0.5			NR				
cis-1,3-Dichloropropene	ND	0.5			NR				
Dibromochloromethane	ND	0.5			NR				
Dibromomethane	ND	0.5			NR				
Dichlorodifluoromethane	ND	0.5			NR				



Hargis & Associates, Inc.

9171 Town Centre Drive, Suite 375
San Diego , CA 92122

Project Number: RAYTHEON MAIN, 532.30
Report To: Steve Netto

Reported:
11/21/2011

Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
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Batch B1K0290 - MSVOAW_LL (continued)

Blank (B1K0290-BLK1) - Continued

Prepared: 11/16/2011 Analyzed: 11/16/2011

Ethylbenzene	ND	0.5				NR			
Hexachlorobutadiene	ND	0.5				NR			
Isopropylbenzene	ND	0.5				NR			
m,p-Xylene	ND	1.0				NR			
Methylene chloride	ND	1.0				NR			
n-Butylbenzene	ND	0.5				NR			
n-Propylbenzene	ND	0.5				NR			
Naphthalene	ND	0.5				NR			
o-Xylene	ND	0.5				NR			
sec-Butylbenzene	ND	0.5				NR			
Styrene	ND	0.5				NR			
tert-Butylbenzene	ND	0.5				NR			
Tetrachloroethene	ND	0.5				NR			
Toluene	ND	0.5				NR			
trans-1,2-Dichloroethene	ND	0.5				NR			
Trichloroethene	ND	0.5				NR			
Trichlorofluoromethane	ND	0.5				NR			
Vinyl chloride	ND	0.5				NR			

<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>21.95</i>		<i>25.0</i>		<i>87.8</i>	<i>70 - 130</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>24.06</i>		<i>25.0</i>		<i>96.2</i>	<i>70 - 130</i>			
<i>Surrogate: Dibromofluoromethane</i>	<i>24.22</i>		<i>25.0</i>		<i>96.9</i>	<i>70 - 130</i>			
<i>Surrogate: Toluene-d8</i>	<i>24.87</i>		<i>25.0</i>		<i>99.5</i>	<i>70 - 130</i>			

LCS (B1K0290-BS1)

Prepared: 11/16/2011 Analyzed: 11/16/2011

1,1-Dichloroethene	17.60	0.5	20.0		88.0	70 - 130			
Benzene	37.47	0.5	40.0		93.7	70 - 130			
Chlorobenzene	20.50	0.5	20.0		102	70 - 130			
MTBE	21.39	0.5	20.0		107	70 - 130			
Toluene	39.25	0.5	40.0		98.1	70 - 130			
Trichloroethene	19.66	0.5	20.0		98.3	70 - 130			

<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>23.50</i>		<i>25.0</i>		<i>94.0</i>	<i>70 - 130</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>24.31</i>		<i>25.0</i>		<i>97.2</i>	<i>70 - 130</i>			
<i>Surrogate: Dibromofluoromethane</i>	<i>24.26</i>		<i>25.0</i>		<i>97.0</i>	<i>70 - 130</i>			
<i>Surrogate: Toluene-d8</i>	<i>24.81</i>		<i>25.0</i>		<i>99.2</i>	<i>70 - 130</i>			

LCS Dup (B1K0290-BSD1)

Prepared: 11/16/2011 Analyzed: 11/16/2011

1,1-Dichloroethene	18.22	0.5	20.0		91.1	70 - 130	3.46	20	
Benzene	38.26	0.5	40.0		95.6	70 - 130	2.09	20	
Chlorobenzene	20.77	0.5	20.0		104	70 - 130	1.31	20	
MTBE	20.98	0.5	20.0		105	70 - 130	1.94	20	
Toluene	40.06	0.5	40.0		100	70 - 130	2.04	20	



Hargis & Associates, Inc.

9171 Town Centre Drive, Suite 375
San Diego, CA 92122

Project Number: RAYTHEON MAIN, 532.30

Report To: Steve Netto

Reported:

11/21/2011

Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B1K0290 - MSVOAW_LL (continued)

LCS Dup (B1K0290-BSD1) - Continued

Prepared: 11/16/2011 Analyzed: 11/16/2011

Trichloroethene	20.48	0.5	20.0		102	70 - 130	4.09	20	
Surrogate: 1,2-Dichloroethane-d4	23.06		25.0		92.2	70 - 130			
Surrogate: 4-Bromofluorobenzene	24.50		25.0		98.0	70 - 130			
Surrogate: Dibromofluoromethane	23.75		25.0		95.0	70 - 130			
Surrogate: Toluene-d8	24.77		25.0		99.1	70 - 130			

Matrix Spike (B1K0290-MS1)

Source: 1100084-01

Prepared: 11/16/2011 Analyzed: 11/16/2011

1,1-Dichloroethene	20.92	0.5	20.0	ND	105	70 - 130			
Benzene	41.79	0.5	40.0	ND	104	70 - 130			
Chlorobenzene	22.23	0.5	20.0	ND	111	70 - 130			
MTBE	21.81	0.5	20.0	ND	109	70 - 130			
Toluene	43.90	0.5	40.0	ND	110	70 - 130			
Trichloroethene	22.55	0.5	20.0	ND	113	70 - 130			
Surrogate: 1,2-Dichloroethane-d4	23.36		25.0		93.4	70 - 130			
Surrogate: 4-Bromofluorobenzene	24.43		25.0		97.7	70 - 130			
Surrogate: Dibromofluoromethane	23.87		25.0		95.5	70 - 130			
Surrogate: Toluene-d8	24.66		25.0		98.6	70 - 130			

Matrix Spike Dup (B1K0290-MSD1)

Source: 1100084-01

Prepared: 11/16/2011 Analyzed: 11/16/2011

1,1-Dichloroethene	20.12	0.5	20.0	ND	101	70 - 130	3.90	20	
Benzene	40.07	0.5	40.0	ND	100	70 - 130	4.20	20	
Chlorobenzene	21.51	0.5	20.0	ND	108	70 - 130	3.29	20	
MTBE	21.51	0.5	20.0	ND	108	70 - 130	1.39	20	
Toluene	42.05	0.5	40.0	ND	105	70 - 130	4.30	20	
Trichloroethene	21.52	0.5	20.0	ND	108	70 - 130	4.67	20	
Surrogate: 1,2-Dichloroethane-d4	22.85		25.0		91.4	70 - 130			
Surrogate: 4-Bromofluorobenzene	24.17		25.0		96.7	70 - 130			
Surrogate: Dibromofluoromethane	23.86		25.0		95.4	70 - 130			
Surrogate: Toluene-d8	24.57		25.0		98.3	70 - 130			



Hargis & Associates, Inc.

9171 Town Centre Drive, Suite 375
San Diego, CA 92122

Project Number: RAYTHEON MAIN, 532.30
Report To: Steve Netto

Reported:
11/21/2011

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B1K0068 - MSSEMI_ISOTOPEDILN

Blank (B1K0068-BLK1)

Prepared: 11/8/2011 Analyzed: 11/8/2011

1,4-Dioxane	ND	0.2			NR				
Surrogate: 1,2-Dichlorobenzene-d	0.8078		1.00		80.8	58 - 99			
Surrogate: 2-Fluorobiphenyl	0.7421		1.00		74.2	60 - 104			
Surrogate: 4-Terphenyl-d14	0.9813		1.00		98.1	65 - 127			
Surrogate: Nitrobenzene-d5	0.8560		1.00		85.6	50 - 136			

LCS (B1K0068-BS1)

Prepared: 11/8/2011 Analyzed: 11/8/2011

1,4-Dioxane	1.138	0.2	1.00		114	70 - 130			
Surrogate: 1,2-Dichlorobenzene-d	0.7727		1.00		77.3	58 - 99			
Surrogate: 2-Fluorobiphenyl	0.7399		1.00		74.0	60 - 104			
Surrogate: 4-Terphenyl-d14	0.8954		1.00		89.5	65 - 127			
Surrogate: Nitrobenzene-d5	0.8679		1.00		86.8	50 - 136			

Matrix Spike (B1K0068-MS1)

Source: 1100061-06

Prepared: 11/8/2011 Analyzed: 11/8/2011

1,4-Dioxane	1.222	0.2	1.00	ND	122	70 - 130			
Surrogate: 1,2-Dichlorobenzene-d	0.7918		1.00		79.2	58 - 99			
Surrogate: 2-Fluorobiphenyl	0.7680		1.00		76.8	60 - 104			
Surrogate: 4-Terphenyl-d14	0.8661		1.00		86.6	65 - 127			
Surrogate: Nitrobenzene-d5	0.8901		1.00		89.0	50 - 136			

Matrix Spike Dup (B1K0068-MSD1)

Source: 1100061-06

Prepared: 11/8/2011 Analyzed: 11/8/2011

1,4-Dioxane	1.253	0.2	1.00	ND	125	70 - 130	2.50	20	
Surrogate: 1,2-Dichlorobenzene-d	0.8228		1.00		82.3	58 - 99			
Surrogate: 2-Fluorobiphenyl	0.7976		1.00		79.8	60 - 104			
Surrogate: 4-Terphenyl-d14	0.8919		1.00		89.2	65 - 127			
Surrogate: Nitrobenzene-d5	0.9331		1.00		93.3	50 - 136			



Hargis & Associates, Inc.

9171 Town Centre Drive, Suite 375
San Diego , CA 92122

Project Number: RAYTHEON MAIN, 532.30

Report To: Steve Netto

Reported:

11/21/2011

Notes and Definitions

ND	Analyte not detected at or above reporting limit
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
NR	Not Reported
RPD	Relative Percent Difference
CA1	CA-NELAP (CDPH)
CA2	CA-ELAP (CDPH)
OR1	OR-NELAP (OSPHL)
TX1	TX-NELAP (TCEQ)

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST FORM

PROJECT NAME		PROJECT No./TASK No.		SAMPLE CONTAINERS		ANALYSIS REQUESTED		ESTIMATED CONCENTRATION RANGE (ppb) FOR VOAS		SPECIAL HANDLING		LABORATORY INFORMATION							
RAYTHEON MATN		532.30										ATL							
PROJECT MANAGER Chris Ross		Phone No. 858-455-6500										Attn: Rachelle Arata							
QA MANAGER Steve Netto		Fax No. 858-455-6533																	
SAMPLER (SIGNATURE) <i>[Signature]</i>				SAMPLER (PRINTED) Amanda Beam Daniel Mora															
LAB ID	SAMPLE ID	SAMPLE COLLECTION		MATRIX			PRESERVATION			40 ml VOA 1 L Amber	8260 VOCs 8270 SIM 1,4-Dioxane 8270 MOD 1,4-Dioxane	ESTIMATED CONCENTRATION RANGE (ppb) FOR VOAS			Standard TAT	REMARKS			
		Date	Time	Soil	Ground-water	Surface water	Lab H2O	HCl	HNO3			NaOH	H2SO4	Ice			0-10	10-100	100-1,000
11M70-1	TB-110411	11/4/11	800			X	X			X				X					
	MW-0811		1035	X						X					X				
	↓		↓	X							X					X			
	MW-08		1045	X		X				X					X				
	↓		↓	X							X					X			

Total number of Containers per analysis: 82 Total No. of Containers: 10

Relinquished by: <i>[Signature]</i>	Date: <u>11/4/11</u>	Received by: <i>[Signature]</i>	Date: <u>11/4/11</u>
Company: <u>H&A, Inc</u>	Time: <u>1252</u>	Company: <u>ATL</u>	Time: <u>1252</u>
Relinquished by:	Date:	Received by:	Date:
Company:	Time:	Company:	Time:

INSTRUCTIONS

- Fill out form completely except for shaded areas (lab use only); sign only after verified for completeness.
- Complete in ballpoint pen. Draw one line through errors, initial and date correction.
- Indicate number of sample containers in analysis request space; indicate choice with √ or x.
- Note applicable preservatives, special instructions, and deviations from typical environmental samples.
- Consult project QA documents for specific instructions.

Sample Receipt:

No. of containers correct received good condition/cold

custody seals secure conforms to COC document

Shipment Method: Courier/Drop off

Send Results to: Steve Netto

9171 TOWNE CENTRE DRIVE, SUITE 375
SAN DIEGO, CA 92122 (858) 455-6500

1640 SOUTH STAPLEY DRIVE, SUITE 124
MESA, AZ 85204 (480) 345-0888

1820 EAST RIVER ROAD, SUITE 220
TUCSON, AZ 85718 (520) 881-7300

Send invoice to San Diego, CA
Attn: Accounts Payable

Exova
9240 Santa Fe Springs Road
Santa Fe Springs
California
USA
90670

T: +1 (562) 948-2225
F: +1 (562) 948-5850
E: Info400@exova.com
W: www.exova.com



Certificate of Analysis

Testing. Advising. Assuring.

November 18, 2011

Hargis+Associates Inc
9171 Towne Centre Dr
Ste 375
San Diego, CA 92122

Exova Job No: 135297
Purchase Order: 532.30
Project Name: Raytheon Main
Samples Received: Eleven (11) Samples
Date Received: 11/03/2011

Attn: Steve Netto

KC

Analysis


Page

Volatile Organics by EPA 624/8260B
1,4-Dioxane by Modified EPA 8270

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9



Michael Shelton
Technical Director



Samina N. Hussain
Senior Chemist

Volatile Organics by EPA 624/8260B

Sample: MW-31

Compound	Result	Parts Per Billion (µg/L)		Detection Limit
		Detection Limit	Blank Result	
Acetone	ND	5	ND	5
tert-Amyl Methyl Ether	ND	1	ND	1
Benzene	ND	1	ND	1
Bromodichloromethane	ND	1	ND	1
Bromoform	ND	1	ND	1
Bromomethane	ND	5	ND	5
2-Butanone (MEK)	ND	2	ND	2
tert-Butyl Alcohol	ND	5	ND	5
tert-Butyl Ethyl Ether	ND	1	ND	1
Carbon Disulfide	ND	1	ND	1
Carbon Tetrachloride	ND	1	ND	1
Chlorobenzene	ND	1	ND	1
Chloroethane	ND	1	ND	1
Chloroform	ND	1	ND	1
Chloromethane	ND	2	ND	2
2-Chlorotoluene	ND	1	ND	1
4-Chlorotoluene	ND	1	ND	1
Dibromochloromethane	ND	1	ND	1
1,2-Dichlorobenzene	ND	1	ND	1
1,3-Dichlorobenzene	ND	1	ND	1
1,4-Dichlorobenzene	ND	1	ND	1
1,1-Dichloroethane	ND	1	ND	1
1,2-Dichloroethane	ND	1	ND	1
1,1-Dichloroethylene	28	1	ND	1
cis-1,2-Dichloroethylene	ND	1	ND	1
trans-1,2-Dichloroethylene	ND	1	ND	1
1,2-Dichloropropane	ND	1	ND	1
cis-1,3-Dichloropropene	ND	1	ND	1
trans-1,3-Dichloropropene	ND	1	ND	1
Diisopropyl Ether	ND	1	ND	1
Ethylbenzene	ND	1	ND	1
Ethylene Dibromide	ND	1	ND	1
Freon-TF	ND	1	ND	1
2-Hexanone	ND	1	ND	1
Methylene Chloride	ND	5	ND	5
4-Methyl-2-Pentanone (MIBK)	ND	1	ND	1
Methyl t-Butyl Ether	ND	2	ND	2
Styrene	ND	1	ND	1

Volatile Organics by EPA 624/8260B

Sample: MW-31 (continued)

<u>Compound</u>	<u>Result</u>	Parts Per Billion (µg/L)		<u>Detection Limit</u>
		<u>Detection Limit</u>	<u>Blank Result</u>	
1,1,2,2-Tetrachloroethane	ND	1	ND	1
Tetrachloroethylene	ND	1	ND	1
Tetrahydrofuran	ND	1	ND	1
Toluene	ND	1	ND	1
1,1,1-Trichloroethane	ND	1	ND	1
1,1,2-Trichloroethane	ND	1	ND	1
Trichloroethylene	3	1	ND	1
Trichlorofluoromethane	ND	1	ND	1
Vinyl Chloride	ND	1	ND	1
m/p-Xylenes	ND	1	ND	1
o-Xylene	ND	1	ND	1

Date extracted: 11-09-11

Date analyzed: 11-10-11

<u>Surrogate</u>	<u>QC Limits</u>	<u>Sample Percent Recovery</u>	<u>Blank Percent Recovery</u>
Dibromofluoromethane	75-125	96	100
1,2-Dichloroethane-d ₄	82-121	91	92
Toluene-d ₈	87-110	103	105
Bromofluorobenzene	76-113	100	102

Volatile Organics by EPA 624/8260B

Sample: MW-34B

Compound	Result	Parts Per Billion (µg/L)		Detection Limit
		Detection Limit	Blank Result	
Acetone	ND	5	ND	5
tert-Amyl Methyl Ether	ND	1	ND	1
Benzene	ND	1	ND	1
Bromodichloromethane	ND	1	ND	1
Bromoform	ND	1	ND	1
Bromomethane	ND	5	ND	5
2-Butanone (MEK)	ND	2	ND	2
tert-Butyl Alcohol	ND	5	ND	5
tert-Butyl Ethyl Ether	ND	1	ND	1
Carbon Disulfide	ND	1	ND	1
Carbon Tetrachloride	ND	1	ND	1
Chlorobenzene	ND	1	ND	1
Chloroethane	ND	1	ND	1
Chloroform	ND	1	ND	1
Chloromethane	ND	2	ND	2
2-Chlorotoluene	ND	1	ND	1
4-Chlorotoluene	ND	1	ND	1
Dibromochloromethane	ND	1	ND	1
1,2-Dichlorobenzene	ND	1	ND	1
1,3-Dichlorobenzene	ND	1	ND	1
1,4-Dichlorobenzene	ND	1	ND	1
1,1-Dichloroethane	4	1	ND	1
1,2-Dichloroethane	ND	1	ND	1
1,1-Dichloroethylene	340	1	ND	1
cis-1,2-Dichloroethylene	ND	1	ND	1
trans-1,2-Dichloroethylene	ND	1	ND	1
1,2-Dichloropropane	ND	1	ND	1
cis-1,3-Dichloropropene	ND	1	ND	1
trans-1,3-Dichloropropene	ND	1	ND	1
Diisopropyl Ether	ND	1	ND	1
Ethylbenzene	ND	1	ND	1
Ethylene Dibromide	ND	1	ND	1
Freon-TF	ND	1	ND	1
2-Hexanone	ND	1	ND	1
Methylene Chloride	ND	5	ND	5
4-Methyl-2-Pentanone (MIBK)	ND	1	ND	1
Methyl t-Butyl Ether	ND	2	ND	2
Styrene	ND	1	ND	1

Volatile Organics by EPA 624/8260B

Sample: MW-34B (continued)

Compound	Result	Parts Per Billion (µg/L)		Detection Limit
		Detection Limit	Blank Result	
1,1,2,2-Tetrachloroethane	ND	1	ND	1
Tetrachloroethylene	ND	1	ND	1
Tetrahydrofuran	ND	1	ND	1
Toluene	ND	1	ND	1
1,1,1-Trichloroethane	ND	1	ND	1
1,1,2-Trichloroethane	1	1	ND	1
Trichloroethylene	ND	1	ND	1
Trichlorofluoromethane	ND	1	ND	1
Vinyl Chloride	ND	1	ND	1
m/p-Xylenes	ND	1	ND	1
o-Xylene	ND	1	ND	1

Date extracted: 11-09-11

Date analyzed: 11-10-11

Surrogate	QC Limits	Sample Percent Recovery	Blank Percent Recovery
Dibromofluoromethane	75-125	93	100
1,2-Dichloroethane-d ₄	82-121	88	92
Toluene-d ₈	87-110	101	105
Bromofluorobenzene	76-113	103	102

Volatile Organics by EPA 624/8260B

Sample: TB-110211A

Compound	Result	Parts Per Billion (µg/L)		Detection Limit
		Detection Limit	Blank Result	
Acetone	ND	5	ND	5
tert-Amyl Methyl Ether	ND	1	ND	1
Benzene	ND	1	ND	1
Bromodichloromethane	ND	1	ND	1
Bromoform	ND	1	ND	1
Bromomethane	ND	5	ND	5
2-Butanone (MEK)	ND	2	ND	2
tert-Butyl Alcohol	ND	5	ND	5
tert-Butyl Ethyl Ether	ND	1	ND	1
Carbon Disulfide	ND	1	ND	1
Carbon Tetrachloride	ND	1	ND	1
Chlorobenzene	ND	1	ND	1
Chloroethane	ND	1	ND	1
Chloroform	ND	1	ND	1
Chloromethane	ND	2	ND	2
2-Chlorotoluene	ND	1	ND	1
4-Chlorotoluene	ND	1	ND	1
Dibromochloromethane	ND	1	ND	1
1,2-Dichlorobenzene	ND	1	ND	1
1,3-Dichlorobenzene	ND	1	ND	1
1,4-Dichlorobenzene	ND	1	ND	1
1,1-Dichloroethane	ND	1	ND	1
1,2-Dichloroethane	ND	1	ND	1
1,1-Dichloroethylene	ND	1	ND	1
cis-1,2-Dichloroethylene	ND	1	ND	1
trans-1,2-Dichloroethylene	ND	1	ND	1
1,2-Dichloropropane	ND	1	ND	1
cis-1,3-Dichloropropene	ND	1	ND	1
trans-1,3-Dichloropropene	ND	1	ND	1
Diisopropyl Ether	ND	1	ND	1
Ethylbenzene	ND	1	ND	1
Ethylene Dibromide	ND	1	ND	1
Freon-TF	ND	1	ND	1
2-Hexanone	ND	1	ND	1
Methylene Chloride	ND	5	ND	5
4-Methyl-2-Pentanone (MIBK)	ND	1	ND	1
Methyl t-Butyl Ether	ND	2	ND	2
Styrene	ND	1	ND	1

Volatile Organics by EPA 624/8260B

Sample: TB-110211A (continued)

<u>Compound</u>	<u>Result</u>	Parts Per Billion (µg/L)		<u>Detection Limit</u>
		<u>Detection Limit</u>	<u>Blank Result</u>	
1,1,2,2-Tetrachloroethane	ND	1	ND	1
Tetrachloroethylene	ND	1	ND	1
Tetrahydrofuran	ND	1	ND	1
Toluene	ND	1	ND	1
1,1,1-Trichloroethane	ND	1	ND	1
1,1,2-Trichloroethane	ND	1	ND	1
Trichloroethylene	ND	1	ND	1
Trichlorofluoromethane	ND	1	ND	1
Vinyl Chloride	ND	1	ND	1
m/p-Xylenes	ND	1	ND	1
o-Xylene	ND	1	ND	1

Date extracted: 11-09-11

Date analyzed: 11-10-11

<u>Surrogate</u>	<u>QC Limits</u>	<u>Sample Percent Recovery</u>	<u>Blank Percent Recovery</u>
Dibromofluoromethane	75-125	96	100
1,2-Dichloroethane-d ₄	82-121	91	92
Toluene-d ₈	87-110	103	105
Bromofluorobenzene	76-113	105	102

Quality Control Summary

Batch ID: MW-34B

<u>Compound</u>	<u>Sample Result</u>	<u>Spike Conc</u>	<u>Spike Result</u>	<u>Spike % Rec</u>	<u>Spike Dup Result</u>	<u>Spike Dup % Rec</u>	<u>Spike RPD</u>
Benzene	ND	50.0	45.9	92	47.1	94	3
Chlorobenzene	ND	50.0	47.1	94	48.0	96	2
1,1-Dichloroethylene	337	50.0	441	NR	441	NR	0
Toluene	ND	50.0	48.0	96	48.8	98	2
Trichloroethylene	ND	50.0	44.5	89	46.5	93	4

NR - Not Reported; the sample result exceeds the amount spiked. The spike result of a lab fortified blank demonstrated acceptable 1,1-dichloroethylene recovery:

Batch ID:

<u>Compound</u>	<u>Sample Result</u>	<u>Spike Conc</u>	<u>Spike Result</u>	<u>Spike % Rec</u>
1,1-Dichloroethylene	ND	50.0	47.8	96

Quality Control Limits

<u>Compound</u>	<u>% Recovery</u>	<u>RPD</u>
Benzene	77-127	10
Chlorobenzene	80-116	9
1,1-Dichloroethylene	66-125	11
Toluene	81-118	10
Trichloroethylene	72-119	11

1,4-Dioxane by Modified EPA 8270
 Gas Chromatography/Mass Spectrometry

<u>Sample ID</u>	<u>Parts Per Billion (µg/L)</u>
MW-31	ND
MW-34B	220
Method Blank	ND

Detection Limit 1

Date Extracted: 11-09-11
 Dates Analyzed: 11-11-11, 11-12-11

Quality Control Summary

<u>Sample ID:</u>	<u>Batch QC</u>				<u>Spike Duplicate Result</u>	<u>Spike Duplicate % Rec</u>	<u>Spike RPD</u>
<u>Analyte</u>	<u>Sample Result</u>	<u>Spike Conc</u>	<u>Spike Result</u>	<u>Spike % Rec</u>			
1,4-Dioxane	ND	20.5	20.1	98	19.8	97	2

Quality Control Guidelines

<u>Analyte</u>	<u>% Recovery</u>	<u>RPD</u>
1,4-Dioxane	85 - 113	NMT 11

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST FORM

PROJECT NAME		PROJECT No./TASK No.		SAMPLE CONTAINERS		ANALYSIS REQUESTED		ESTIMATED CONCENTRATION RANGE (ppb) FOR VOA'S		SPECIAL HANDLING		LABORATORY INFORMATION									
RAYTHEON MAIN		532.30										Exova									
PROJECT MANAGER Chris Ross		Phone No. 858-455-6500																			
QA MANAGER Steve Netto		Fax No. 858-455-6533																			
SAMPLER (SIGNATURE)		SAMPLER (PRINTED)																			
<i>[Signature]</i>		Amanda Beam Daniel Mora																			
LAB ID	SAMPLE ID	SAMPLE COLLECTION		MATRIX			PRESERVATION			40 ml VOA	1 L Amber	8260 VOCs	8270 SIM 1,4-Dioxane	8270 MOD 1,4-Dioxane	0-10	10-100	100-1,000	>1,000	Standard TAT	REMARKS	
		Date	Time	Soil	Ground water	Surface water	Lab H2O	HCl	HNO 3												NaOH
	3TB-110211A	11/2/11	700			X	X								X						
	3 MW-34B		1038	X												X					
	MW-34B		1038	X								X									
	MW-31	11/3/11	847	X			X								X						
	MW-31		847	X																	

Total number of Containers per analysis:

Total No. of Containers: 11

Relinquished by: Amanda Beam Date: 11/3/11
 Received by: [Signature] Date: 11/3/11
 Company: H+A, Inc. Time: 934
 Company: Exova Time: 11:30

Relinquished by: _____ Date: _____
 Received by: _____ Date: _____
 Company: _____ Time: _____
 Company: _____ Time: _____

- INSTRUCTIONS**
- Fill out form completely except for shaded areas (lab use only); sign only after verified for completeness.
 - Complete in ballpoint pen. Draw one line through errors, initial and date correction.
 - Indicate number of sample containers in analysis request space; indicate choice with √ or x.
 - Note applicable preservatives, special instructions, and deviations from typical environmental samples.
 - Consult project QA documents for specific instructions.

Sample Receipt:

No. of containers correct received good condition/cold
 custody seals secure conforms to COC document

Shipment Method: Courier/Drop off
 Send Results to: Steve Netto

9171 TOWNE CENTRE DRIVE, SUITE 375
 SAN DIEGO, CA 92122 (858) 455-6500

1640 SOUTH STAPLEY DRIVE, SUITE 124
 MESA, AZ 85204 (480) 345-0888

1820 EAST RIVER ROAD, SUITE 220
 TUCSON, AZ 85718 (520) 881-7300

Send invoice to San Diego, CA
 Attn: Accounts Payable

135297

GROUNDWATER EXTRACTION AND TREATMENT SYSTEM ANALYTICAL RESULTS

November 02, 2011



Steve Netto
Hargis & Associates, Inc.
9171 Town Centre Drive, Suite 375
San Diego, CA 92122
TEL: (619) 249-3166
FAX: cell

ELAP No.: 1838
NELAP No.: 02107CA
CSDLAC No.: 10196
ORELAP No.: CA300003

Workorder No.: 120342

RE: Raytheon Fullerton-Monthly, 532.15


Attention: Steve Netto

Enclosed are the results for sample(s) received on October 17, 2011 by Advanced Technology Laboratories. The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (562)989-4045 if I can be of further assistance to your company.

Sincerely,


Eddie F. Rodriguez
Laboratory Director

The cover letter and the case narrative are an integral part of this analytical report and cannot be reproduced in part or in its entirety without written permission from the client and Advanced Technology Laboratories.



CLIENT: Hargis & Associates, Inc.
Project: Raytheon Fullerton-Monthly, 532.15
Lab Order: 120342

CASE NARRATIVE

The samples for EPA 317 (Bromate) analysis were subcontracted to Exova, Inc. with ELAP Cert.# 2652.

Analytical Comments EPA 300.0

Samples 120342-006C-MS and 120342-006C-MSD, Matrix Spike (MS) and /or Matrix Spike Duplicate (MSD) are/is outside recovery criteria; however, the analytical batch was validated by the Laboratory Control Sample (LCS).

Analytical Comments for EPA 8270C(M)

Sample 120342-002B and 120342-004B, surrogate recovery biased high/low possibly due to matrix interferences. Sample was reanalyzed and demonstrated the same recovery. 1,4 Dioxane is an early eluting compound and the early eluting surrogate, 1,2-Dichlorobenzene-d4, is within criteria for all samples. The analytical batch was validated by the Laboratory Control Sample (LCS).

MB-76396, surrogate recovery biased high possibly due to prep error and/or instrument variance. Sample was reanalyzed and demonstrated the same recovery. 1,4 Dioxane is an early eluting compound and the early eluting surrogate, 1,2-Dichlorobenzene-d4, is within criteria for all samples. The analytical batch was validated by the Laboratory Control Sample (LCS).



Advanced Technology Laboratories

ANALYTICAL RESULTS

Print Date: 02-Nov-11

CLIENT:	Hargis & Associates, Inc.	Client Sample ID:	TB
Lab Order:	120342	Collection Date:	10/17/2011 9:00:00 AM
Project:	Raytheon Fullerton-Monthly, 532.15	Matrix:	LAB H2O
Lab ID:	120342-001A		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

RunID: MS11_111019B	QC Batch: A11VW202	PrepDate:	Analyst: BD
1,1,1,2-Tetrachloroethane	ND	0.50	µg/L 1 10/19/2011 08:54 PM
1,1,1-Trichloroethane	ND	0.50	µg/L 1 10/19/2011 08:54 PM
1,1,2,2-Tetrachloroethane	ND	0.50	µg/L 1 10/19/2011 08:54 PM
1,1,2-Trichloroethane	ND	0.50	µg/L 1 10/19/2011 08:54 PM
1,1-Dichloroethane	ND	0.50	µg/L 1 10/19/2011 08:54 PM
1,1-Dichloroethene	ND	0.50	µg/L 1 10/19/2011 08:54 PM
1,1-Dichloropropene	ND	0.50	µg/L 1 10/19/2011 08:54 PM
1,2,3-Trichlorobenzene	ND	0.50	µg/L 1 10/19/2011 08:54 PM
1,2,3-Trichloropropane	ND	0.50	µg/L 1 10/19/2011 08:54 PM
1,2,4-Trichlorobenzene	ND	0.50	µg/L 1 10/19/2011 08:54 PM
1,2,4-Trimethylbenzene	ND	0.50	µg/L 1 10/19/2011 08:54 PM
1,2-Dibromo-3-chloropropane	ND	0.50	µg/L 1 10/19/2011 08:54 PM
1,2-Dibromoethane	ND	0.50	µg/L 1 10/19/2011 08:54 PM
1,2-Dichlorobenzene	ND	0.50	µg/L 1 10/19/2011 08:54 PM
1,2-Dichloroethane	ND	0.50	µg/L 1 10/19/2011 08:54 PM
1,2-Dichloropropane	ND	0.50	µg/L 1 10/19/2011 08:54 PM
1,3,5-Trimethylbenzene	ND	0.50	µg/L 1 10/19/2011 08:54 PM
1,3-Dichlorobenzene	ND	0.50	µg/L 1 10/19/2011 08:54 PM
1,3-Dichloropropane	ND	0.50	µg/L 1 10/19/2011 08:54 PM
1,4-Dichlorobenzene	ND	0.50	µg/L 1 10/19/2011 08:54 PM
2,2-Dichloropropane	ND	0.50	µg/L 1 10/19/2011 08:54 PM
2-Chlorotoluene	ND	0.50	µg/L 1 10/19/2011 08:54 PM
4-Chlorotoluene	ND	0.50	µg/L 1 10/19/2011 08:54 PM
4-Isopropyltoluene	ND	0.50	µg/L 1 10/19/2011 08:54 PM
Benzene	ND	0.50	µg/L 1 10/19/2011 08:54 PM
Bromobenzene	ND	0.50	µg/L 1 10/19/2011 08:54 PM
Bromodichloromethane	ND	0.50	µg/L 1 10/19/2011 08:54 PM
Bromoform	ND	0.50	µg/L 1 10/19/2011 08:54 PM
Bromomethane	ND	0.50	µg/L 1 10/19/2011 08:54 PM
Carbon tetrachloride	ND	0.50	µg/L 1 10/19/2011 08:54 PM
Chlorobenzene	ND	0.50	µg/L 1 10/19/2011 08:54 PM
Chloroethane	ND	0.50	µg/L 1 10/19/2011 08:54 PM
Chloroform	ND	0.50	µg/L 1 10/19/2011 08:54 PM
Chloromethane	ND	0.50	µg/L 1 10/19/2011 08:54 PM
cis-1,2-Dichloroethene	ND	0.50	µg/L 1 10/19/2011 08:54 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



Advanced Technology Laboratories

ANALYTICAL RESULTS

Print Date: 02-Nov-11

CLIENT:	Hargis & Associates, Inc.	Client Sample ID:	TB
Lab Order:	120342	Collection Date:	10/17/2011 9:00:00 AM
Project:	Raytheon Fullerton-Monthly, 532.15	Matrix:	LAB H2O
Lab ID:	120342-001A		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

RunID: MS11_111019B	QC Batch: A11VW202			PrepDate:		Analyst: BD
cis-1,3-Dichloropropene	ND	0.50		µg/L	1	10/19/2011 08:54 PM
Dibromochloromethane	ND	0.50		µg/L	1	10/19/2011 08:54 PM
Dibromomethane	ND	0.50		µg/L	1	10/19/2011 08:54 PM
Dichlorodifluoromethane	ND	0.50		µg/L	1	10/19/2011 08:54 PM
Ethylbenzene	ND	0.50		µg/L	1	10/19/2011 08:54 PM
Hexachlorobutadiene	ND	0.50		µg/L	1	10/19/2011 08:54 PM
Isopropylbenzene	ND	0.50		µg/L	1	10/19/2011 08:54 PM
m,p-Xylene	ND	1.0		µg/L	1	10/19/2011 08:54 PM
Methylene chloride	ND	1.0		µg/L	1	10/19/2011 08:54 PM
n-Butylbenzene	ND	0.50		µg/L	1	10/19/2011 08:54 PM
n-Propylbenzene	ND	0.50		µg/L	1	10/19/2011 08:54 PM
Naphthalene	ND	0.50		µg/L	1	10/19/2011 08:54 PM
o-Xylene	ND	0.50		µg/L	1	10/19/2011 08:54 PM
sec-Butylbenzene	ND	0.50		µg/L	1	10/19/2011 08:54 PM
Styrene	ND	0.50		µg/L	1	10/19/2011 08:54 PM
tert-Butylbenzene	ND	0.50		µg/L	1	10/19/2011 08:54 PM
Tetrachloroethene	ND	0.50		µg/L	1	10/19/2011 08:54 PM
Toluene	ND	0.50		µg/L	1	10/19/2011 08:54 PM
trans-1,2-Dichloroethene	ND	0.50		µg/L	1	10/19/2011 08:54 PM
Trichloroethene	ND	0.50		µg/L	1	10/19/2011 08:54 PM
Trichlorofluoromethane	ND	0.50		µg/L	1	10/19/2011 08:54 PM
Vinyl chloride	ND	0.50		µg/L	1	10/19/2011 08:54 PM
Surr: 1,2-Dichloroethane-d4	91.6	70-130		%REC	1	10/19/2011 08:54 PM
Surr: 4-Bromofluorobenzene	96.4	70-130		%REC	1	10/19/2011 08:54 PM
Surr: Dibromofluoromethane	103	70-130		%REC	1	10/19/2011 08:54 PM
Surr: Toluene-d8	110	70-130		%REC	1	10/19/2011 08:54 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



Advanced Technology
Laboratories

3275 Walnut Avenue, Signal Hill, CA 90755 Tel: 562.989.4045 Fax: 562.989.4040

Advanced Technology Laboratories

ANALYTICAL RESULTS

Print Date: 02-Nov-11

CLIENT: Hargis & Associates, Inc.
Lab Order: 120342
Project: Raytheon Fullerton-Monthly, 532.15
Lab ID: 120342-002A

Client Sample ID: EW-02
Collection Date: 10/17/2011 1:15:00 PM
Matrix: GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

RunID:	MS11_111019B	QC Batch:	A11VW202	PrepDate:	Analyst:	BD
1,1,1,2-Tetrachloroethane	ND	0.50	µg/L	1	10/19/2011 09:33 PM	
1,1,1-Trichloroethane	ND	0.50	µg/L	1	10/19/2011 09:33 PM	
1,1,2,2-Tetrachloroethane	ND	0.50	µg/L	1	10/19/2011 09:33 PM	
1,1,2-Trichloroethane	ND	0.50	µg/L	1	10/19/2011 09:33 PM	
1,1-Dichloroethane	0.62	0.50	µg/L	1	10/19/2011 09:33 PM	
1,1-Dichloroethene	67	0.50	µg/L	1	10/19/2011 09:33 PM	
1,1-Dichloropropene	ND	0.50	µg/L	1	10/19/2011 09:33 PM	
1,2,3-Trichlorobenzene	ND	0.50	µg/L	1	10/19/2011 09:33 PM	
1,2,3-Trichloropropane	ND	0.50	µg/L	1	10/19/2011 09:33 PM	
1,2,4-Trichlorobenzene	ND	0.50	µg/L	1	10/19/2011 09:33 PM	
1,2,4-Trimethylbenzene	ND	0.50	µg/L	1	10/19/2011 09:33 PM	
1,2-Dibromo-3-chloropropane	ND	0.50	µg/L	1	10/19/2011 09:33 PM	
1,2-Dibromoethane	ND	0.50	µg/L	1	10/19/2011 09:33 PM	
1,2-Dichlorobenzene	ND	0.50	µg/L	1	10/19/2011 09:33 PM	
1,2-Dichloroethane	ND	0.50	µg/L	1	10/19/2011 09:33 PM	
1,2-Dichloropropane	ND	0.50	µg/L	1	10/19/2011 09:33 PM	
1,3,5-Trimethylbenzene	ND	0.50	µg/L	1	10/19/2011 09:33 PM	
1,3-Dichlorobenzene	ND	0.50	µg/L	1	10/19/2011 09:33 PM	
1,3-Dichloropropane	ND	0.50	µg/L	1	10/19/2011 09:33 PM	
1,4-Dichlorobenzene	ND	0.50	µg/L	1	10/19/2011 09:33 PM	
2,2-Dichloropropane	ND	0.50	µg/L	1	10/19/2011 09:33 PM	
2-Chlorotoluene	ND	0.50	µg/L	1	10/19/2011 09:33 PM	
4-Chlorotoluene	ND	0.50	µg/L	1	10/19/2011 09:33 PM	
4-Isopropyltoluene	ND	0.50	µg/L	1	10/19/2011 09:33 PM	
Benzene	ND	0.50	µg/L	1	10/19/2011 09:33 PM	
Bromobenzene	ND	0.50	µg/L	1	10/19/2011 09:33 PM	
Bromodichloromethane	ND	0.50	µg/L	1	10/19/2011 09:33 PM	
Bromoform	ND	0.50	µg/L	1	10/19/2011 09:33 PM	
Bromomethane	ND	0.50	µg/L	1	10/19/2011 09:33 PM	
Carbon tetrachloride	ND	0.50	µg/L	1	10/19/2011 09:33 PM	
Chlorobenzene	ND	0.50	µg/L	1	10/19/2011 09:33 PM	
Chloroethane	ND	0.50	µg/L	1	10/19/2011 09:33 PM	
Chloroform	ND	0.50	µg/L	1	10/19/2011 09:33 PM	
Chloromethane	ND	0.50	µg/L	1	10/19/2011 09:33 PM	
cis-1,2-Dichloroethene	ND	0.50	µg/L	1	10/19/2011 09:33 PM	

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



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3275 Walnut Avenue, Signal Hill, CA 90755 Tel: 562.989.4045 Fax: 562.989.4040

Advanced Technology Laboratories

ANALYTICAL RESULTS
 Print Date: 02-Nov-11

CLIENT:	Hargis & Associates, Inc.	Client Sample ID:	EW-02
Lab Order:	120342	Collection Date:	10/17/2011 1:15:00 PM
Project:	Raytheon Fullerton-Monthly, 532.15	Matrix:	GROUNDWATER
Lab ID:	120342-002A		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

RunID: MS11_111019B	QC Batch: A11VW202	PrepDate:	Analyst: BD
cis-1,3-Dichloropropene	ND	0.50	µg/L 1 10/19/2011 09:33 PM
Dibromochloromethane	ND	0.50	µg/L 1 10/19/2011 09:33 PM
Dibromomethane	ND	0.50	µg/L 1 10/19/2011 09:33 PM
Dichlorodifluoromethane	ND	0.50	µg/L 1 10/19/2011 09:33 PM
Ethylbenzene	ND	0.50	µg/L 1 10/19/2011 09:33 PM
Hexachlorobutadiene	ND	0.50	µg/L 1 10/19/2011 09:33 PM
Isopropylbenzene	ND	0.50	µg/L 1 10/19/2011 09:33 PM
m,p-Xylene	ND	1.0	µg/L 1 10/19/2011 09:33 PM
Methylene chloride	ND	1.0	µg/L 1 10/19/2011 09:33 PM
n-Butylbenzene	ND	0.50	µg/L 1 10/19/2011 09:33 PM
n-Propylbenzene	ND	0.50	µg/L 1 10/19/2011 09:33 PM
Naphthalene	ND	0.50	µg/L 1 10/19/2011 09:33 PM
o-Xylene	ND	0.50	µg/L 1 10/19/2011 09:33 PM
sec-Butylbenzene	ND	0.50	µg/L 1 10/19/2011 09:33 PM
Styrene	ND	0.50	µg/L 1 10/19/2011 09:33 PM
tert-Butylbenzene	ND	0.50	µg/L 1 10/19/2011 09:33 PM
Tetrachloroethene	ND	0.50	µg/L 1 10/19/2011 09:33 PM
Toluene	ND	0.50	µg/L 1 10/19/2011 09:33 PM
trans-1,2-Dichloroethene	ND	0.50	µg/L 1 10/19/2011 09:33 PM
Trichloroethene	ND	0.50	µg/L 1 10/19/2011 09:33 PM
Trichlorofluoromethane	ND	0.50	µg/L 1 10/19/2011 09:33 PM
Vinyl chloride	ND	0.50	µg/L 1 10/19/2011 09:33 PM
Surr: 1,2-Dichloroethane-d4	96.6	70-130	%REC 1 10/19/2011 09:33 PM
Surr: 4-Bromofluorobenzene	95.5	70-130	%REC 1 10/19/2011 09:33 PM
Surr: Dibromofluoromethane	104	70-130	%REC 1 10/19/2011 09:33 PM
Surr: Toluene-d8	109	70-130	%REC 1 10/19/2011 09:33 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



Advanced Technology
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Advanced Technology Laboratories

ANALYTICAL RESULTS
 Print Date: 02-Nov-11

CLIENT: Hargis & Associates, Inc.
Lab Order: 120342
Project: Raytheon Fullerton-Monthly, 532.15
Lab ID: 120342-002B

Client Sample ID: EW-02
Collection Date: 10/17/2011 1:15:00 PM
Matrix: GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
1,4-DIOXANE BY GC/MS-SIM: ISOTOPE DILUTION						
	EPA 3510C		EPA 8270C(M)			
RunID: MS15_111024A	QC Batch: 76396				PrepDate: 10/21/2011	Analyst: JSD
1,4-Dioxane	19	0.20		µg/L	1	10/25/2011 12:46 PM
Surr: 1,2-Dichlorobenzene-d4	79.5	58-99		%REC	1	10/25/2011 12:46 PM
Surr: 2-Fluorobiphenyl	97.1	60-104		%REC	1	10/25/2011 12:46 PM
Surr: 4-Terphenyl-d14	129	65-127	S	%REC	1	10/25/2011 12:46 PM
Surr: Nitrobenzene-d5	49.8	50-136	S	%REC	1	10/25/2011 12:46 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		



Advanced Technology Laboratories

ANALYTICAL RESULTS
Print Date: 02-Nov-11

CLIENT:	Hargis & Associates, Inc.	Client Sample ID:	EW-02
Lab Order:	120342	Collection Date:	10/17/2011 1:15:00 PM
Project:	Raytheon Fullerton-Monthly, 532.15	Matrix:	GROUNDWATER
Lab ID:	120342-002C		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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TOTAL NON-FILTERABLE RESIDUE

SM2540D

RunID: WETCHEM_111020A	QC Batch: 76379	PrepDate: 10/20/2011	Analyst: PT		
Suspended Solids (Residue, Non-Filterable)	ND	10	mg/L	1	10/20/2011 08:00 AM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		



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Advanced Technology Laboratories

ANALYTICAL RESULTS
Print Date: 02-Nov-11

CLIENT:	Hargis & Associates, Inc.	Client Sample ID:	EW-02
Lab Order:	120342	Collection Date:	10/17/2011 1:15:00 PM
Project:	Raytheon Fullerton-Monthly, 532.15	Matrix:	GROUNDWATER
Lab ID:	120342-002D		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_111020B	QC Batch: 76398	PrepDate: 10/20/2011	Analyst: PT		
Total Dissolved Solids (Residue, Filterable)	630	10	mg/L	1	10/20/2011 11:00 AM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		



Advanced Technology Laboratories

ANALYTICAL RESULTS
Print Date: 02-Nov-11

CLIENT:	Hargis & Associates, Inc.	Client Sample ID:	EW-02
Lab Order:	120342	Collection Date:	10/17/2011 1:15:00 PM
Project:	Raytheon Fullerton-Monthly, 532.15	Matrix:	GROUNDWATER
Lab ID:	120342-002E		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC3_111021A	QC Batch: R137703	PrepDate:	Analyst: PT	
Bromide	0.48	0.050 mg/L	1	10/21/2011 09:01 AM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		



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ANALYTICAL RESULTS
Print Date: 02-Nov-11

CLIENT:	Hargis & Associates, Inc.	Client Sample ID:	PF
Lab Order:	120342	Collection Date:	10/17/2011 11:45:00 AM
Project:	Raytheon Fullerton-Monthly, 532.15	Matrix:	GROUNDWATER
Lab ID:	120342-003A		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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TOTAL NON-FILTERABLE RESIDUE

SM2540D

RunID: WETCHEM_111020A	QC Batch: 76379	PrepDate: 10/20/2011	Analyst: PT		
Suspended Solids (Residue, Non-Filterable)	ND	10	mg/L	1	10/20/2011 08:00 AM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		



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ANALYTICAL RESULTS

Print Date: 02-Nov-11

CLIENT: Hargis & Associates, Inc.
Lab Order: 120342
Project: Raytheon Fullerton-Monthly, 532.15
Lab ID: 120342-004A

Client Sample ID: POX
Collection Date: 10/17/2011 12:05:00 PM
Matrix: GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

RunID:	MS11_111019B	QC Batch:	A11VW202	PrepDate:	Analyst:	BD
1,1,1,2-Tetrachloroethane	ND	0.50	µg/L	1	10/19/2011 09:52 PM	
1,1,1-Trichloroethane	ND	0.50	µg/L	1	10/19/2011 09:52 PM	
1,1,2,2-Tetrachloroethane	ND	0.50	µg/L	1	10/19/2011 09:52 PM	
1,1,2-Trichloroethane	ND	0.50	µg/L	1	10/19/2011 09:52 PM	
1,1-Dichloroethane	ND	0.50	µg/L	1	10/19/2011 09:52 PM	
1,1-Dichloroethene	ND	0.50	µg/L	1	10/19/2011 09:52 PM	
1,1-Dichloropropene	ND	0.50	µg/L	1	10/19/2011 09:52 PM	
1,2,3-Trichlorobenzene	ND	0.50	µg/L	1	10/19/2011 09:52 PM	
1,2,3-Trichloropropane	ND	0.50	µg/L	1	10/19/2011 09:52 PM	
1,2,4-Trichlorobenzene	ND	0.50	µg/L	1	10/19/2011 09:52 PM	
1,2,4-Trimethylbenzene	ND	0.50	µg/L	1	10/19/2011 09:52 PM	
1,2-Dibromo-3-chloropropane	ND	0.50	µg/L	1	10/19/2011 09:52 PM	
1,2-Dibromoethane	ND	0.50	µg/L	1	10/19/2011 09:52 PM	
1,2-Dichlorobenzene	ND	0.50	µg/L	1	10/19/2011 09:52 PM	
1,2-Dichloroethane	ND	0.50	µg/L	1	10/19/2011 09:52 PM	
1,2-Dichloropropane	ND	0.50	µg/L	1	10/19/2011 09:52 PM	
1,3,5-Trimethylbenzene	ND	0.50	µg/L	1	10/19/2011 09:52 PM	
1,3-Dichlorobenzene	ND	0.50	µg/L	1	10/19/2011 09:52 PM	
1,3-Dichloropropane	ND	0.50	µg/L	1	10/19/2011 09:52 PM	
1,4-Dichlorobenzene	ND	0.50	µg/L	1	10/19/2011 09:52 PM	
2,2-Dichloropropane	ND	0.50	µg/L	1	10/19/2011 09:52 PM	
2-Chlorotoluene	ND	0.50	µg/L	1	10/19/2011 09:52 PM	
4-Chlorotoluene	ND	0.50	µg/L	1	10/19/2011 09:52 PM	
4-Isopropyltoluene	ND	0.50	µg/L	1	10/19/2011 09:52 PM	
Benzene	ND	0.50	µg/L	1	10/19/2011 09:52 PM	
Bromobenzene	ND	0.50	µg/L	1	10/19/2011 09:52 PM	
Bromodichloromethane	ND	0.50	µg/L	1	10/19/2011 09:52 PM	
Bromoform	ND	0.50	µg/L	1	10/19/2011 09:52 PM	
Bromomethane	ND	0.50	µg/L	1	10/19/2011 09:52 PM	
Carbon tetrachloride	ND	0.50	µg/L	1	10/19/2011 09:52 PM	
Chlorobenzene	ND	0.50	µg/L	1	10/19/2011 09:52 PM	
Chloroethane	ND	0.50	µg/L	1	10/19/2011 09:52 PM	
Chloroform	ND	0.50	µg/L	1	10/19/2011 09:52 PM	
Chloromethane	ND	0.50	µg/L	1	10/19/2011 09:52 PM	
cis-1,2-Dichloroethene	ND	0.50	µg/L	1	10/19/2011 09:52 PM	

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 02-Nov-11

CLIENT: Hargis & Associates, Inc.
Lab Order: 120342
Project: Raytheon Fullerton-Monthly, 532.15
Lab ID: 120342-004A

Client Sample ID: POX
Collection Date: 10/17/2011 12:05:00 PM
Matrix: GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

RunID:	MS11_111019B	QC Batch:	A11VW202	PrepDate:	Analyst: BD
cis-1,3-Dichloropropene	ND	0.50	µg/L	1	10/19/2011 09:52 PM
Dibromochloromethane	ND	0.50	µg/L	1	10/19/2011 09:52 PM
Dibromomethane	ND	0.50	µg/L	1	10/19/2011 09:52 PM
Dichlorodifluoromethane	ND	0.50	µg/L	1	10/19/2011 09:52 PM
Ethylbenzene	ND	0.50	µg/L	1	10/19/2011 09:52 PM
Hexachlorobutadiene	ND	0.50	µg/L	1	10/19/2011 09:52 PM
Isopropylbenzene	ND	0.50	µg/L	1	10/19/2011 09:52 PM
m,p-Xylene	ND	1.0	µg/L	1	10/19/2011 09:52 PM
Methylene chloride	ND	1.0	µg/L	1	10/19/2011 09:52 PM
n-Butylbenzene	ND	0.50	µg/L	1	10/19/2011 09:52 PM
n-Propylbenzene	ND	0.50	µg/L	1	10/19/2011 09:52 PM
Naphthalene	ND	0.50	µg/L	1	10/19/2011 09:52 PM
o-Xylene	ND	0.50	µg/L	1	10/19/2011 09:52 PM
sec-Butylbenzene	ND	0.50	µg/L	1	10/19/2011 09:52 PM
Styrene	ND	0.50	µg/L	1	10/19/2011 09:52 PM
tert-Butylbenzene	ND	0.50	µg/L	1	10/19/2011 09:52 PM
Tetrachloroethene	ND	0.50	µg/L	1	10/19/2011 09:52 PM
Toluene	ND	0.50	µg/L	1	10/19/2011 09:52 PM
trans-1,2-Dichloroethene	ND	0.50	µg/L	1	10/19/2011 09:52 PM
Trichloroethene	ND	0.50	µg/L	1	10/19/2011 09:52 PM
Trichlorofluoromethane	ND	0.50	µg/L	1	10/19/2011 09:52 PM
Vinyl chloride	ND	0.50	µg/L	1	10/19/2011 09:52 PM
Surr: 1,2-Dichloroethane-d4	96.5	70-130	%REC	1	10/19/2011 09:52 PM
Surr: 4-Bromofluorobenzene	95.2	70-130	%REC	1	10/19/2011 09:52 PM
Surr: Dibromofluoromethane	105	70-130	%REC	1	10/19/2011 09:52 PM
Surr: Toluene-d8	109	70-130	%REC	1	10/19/2011 09:52 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS
 Print Date: 02-Nov-11

CLIENT: Hargis & Associates, Inc.
Lab Order: 120342
Project: Raytheon Fullerton-Monthly, 532.15
Lab ID: 120342-004B

Client Sample ID: POX
Collection Date: 10/17/2011 12:05:00 PM
Matrix: GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
1,4-DIOXANE BY GC/MS-SIM: ISOTOPE DILUTION						
	EPA 3510C			EPA 8270C(M)		
RunID: MS15_111024A	QC Batch: 76396			PrepDate: 10/21/2011		Analyst: JSD
1,4-Dioxane	0.36	0.20		µg/L	1	10/25/2011 01:14 PM
Surr: 1,2-Dichlorobenzene-d4	92.8	58-99		%REC	1	10/25/2011 01:14 PM
Surr: 2-Fluorobiphenyl	112	60-104	S	%REC	1	10/25/2011 01:14 PM
Surr: 4-Terphenyl-d14	127	65-127		%REC	1	10/25/2011 01:14 PM
Surr: Nitrobenzene-d5	62.8	50-136		%REC	1	10/25/2011 01:14 PM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
 H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
 S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
 DO Surrogate Diluted Out



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ANALYTICAL RESULTS
Print Date: 02-Nov-11

CLIENT:	Hargis & Associates, Inc.	Client Sample ID:	POX
Lab Order:	120342	Collection Date:	10/17/2011 12:05:00 PM
Project:	Raytheon Fullerton-Monthly, 532.15	Matrix:	GROUNDWATER
Lab ID:	120342-004C		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_111020B	QC Batch: 76398	PrepDate: 10/20/2011	Analyst: PT		
Total Dissolved Solids (Residue, Filterable)	640	10	mg/L	1	10/20/2011 11:00 AM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		



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ANALYTICAL RESULTS
Print Date: 02-Nov-11

CLIENT:	Hargis & Associates, Inc.	Client Sample ID:	POX
Lab Order:	120342	Collection Date:	10/17/2011 12:05:00 PM
Project:	Raytheon Fullerton-Monthly, 532.15	Matrix:	GROUNDWATER
Lab ID:	120342-004D		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC3_111021A	QC Batch: R137703	PrepDate:	Analyst: PT	
Bromide	0.47	0.050 mg/L	1	10/21/2011 09:13 AM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		



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ANALYTICAL RESULTS

Print Date: 02-Nov-11

CLIENT: Hargis & Associates, Inc.
Lab Order: 120342
Project: Raytheon Fullerton-Monthly, 532.15
Lab ID: 120342-005A

Client Sample ID: CBT
Collection Date: 10/17/2011 12:15:00 PM
Matrix: GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

RunID:	MS11_111020A	QC Batch:	A11VW203	PrepDate:	Analyst:	BD
1,1,1,2-Tetrachloroethane	ND	0.50	µg/L	1	10/20/2011 02:51 PM	
1,1,1-Trichloroethane	ND	0.50	µg/L	1	10/20/2011 02:51 PM	
1,1,2,2-Tetrachloroethane	ND	0.50	µg/L	1	10/20/2011 02:51 PM	
1,1,2-Trichloroethane	ND	0.50	µg/L	1	10/20/2011 02:51 PM	
1,1-Dichloroethane	0.52	0.50	µg/L	1	10/20/2011 02:51 PM	
1,1-Dichloroethene	ND	0.50	µg/L	1	10/20/2011 02:51 PM	
1,1-Dichloropropene	ND	0.50	µg/L	1	10/20/2011 02:51 PM	
1,2,3-Trichlorobenzene	ND	0.50	µg/L	1	10/20/2011 02:51 PM	
1,2,3-Trichloropropane	ND	0.50	µg/L	1	10/20/2011 02:51 PM	
1,2,4-Trichlorobenzene	ND	0.50	µg/L	1	10/20/2011 02:51 PM	
1,2,4-Trimethylbenzene	ND	0.50	µg/L	1	10/20/2011 02:51 PM	
1,2-Dibromo-3-chloropropane	ND	0.50	µg/L	1	10/20/2011 02:51 PM	
1,2-Dibromoethane	ND	0.50	µg/L	1	10/20/2011 02:51 PM	
1,2-Dichlorobenzene	ND	0.50	µg/L	1	10/20/2011 02:51 PM	
1,2-Dichloroethane	ND	0.50	µg/L	1	10/20/2011 02:51 PM	
1,2-Dichloropropane	ND	0.50	µg/L	1	10/20/2011 02:51 PM	
1,3,5-Trimethylbenzene	ND	0.50	µg/L	1	10/20/2011 02:51 PM	
1,3-Dichlorobenzene	ND	0.50	µg/L	1	10/20/2011 02:51 PM	
1,3-Dichloropropane	ND	0.50	µg/L	1	10/20/2011 02:51 PM	
1,4-Dichlorobenzene	ND	0.50	µg/L	1	10/20/2011 02:51 PM	
2,2-Dichloropropane	ND	0.50	µg/L	1	10/20/2011 02:51 PM	
2-Chlorotoluene	ND	0.50	µg/L	1	10/20/2011 02:51 PM	
4-Chlorotoluene	ND	0.50	µg/L	1	10/20/2011 02:51 PM	
4-Isopropyltoluene	ND	0.50	µg/L	1	10/20/2011 02:51 PM	
Benzene	ND	0.50	µg/L	1	10/20/2011 02:51 PM	
Bromobenzene	ND	0.50	µg/L	1	10/20/2011 02:51 PM	
Bromodichloromethane	ND	0.50	µg/L	1	10/20/2011 02:51 PM	
Bromoform	ND	0.50	µg/L	1	10/20/2011 02:51 PM	
Bromomethane	ND	0.50	µg/L	1	10/20/2011 02:51 PM	
Carbon tetrachloride	ND	0.50	µg/L	1	10/20/2011 02:51 PM	
Chlorobenzene	ND	0.50	µg/L	1	10/20/2011 02:51 PM	
Chloroethane	ND	0.50	µg/L	1	10/20/2011 02:51 PM	
Chloroform	ND	0.50	µg/L	1	10/20/2011 02:51 PM	
Chloromethane	ND	0.50	µg/L	1	10/20/2011 02:51 PM	
cis-1,2-Dichloroethene	ND	0.50	µg/L	1	10/20/2011 02:51 PM	

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 02-Nov-11

CLIENT: Hargis & Associates, Inc.
Lab Order: 120342
Project: Raytheon Fullerton-Monthly, 532.15
Lab ID: 120342-005A

Client Sample ID: CBT
Collection Date: 10/17/2011 12:15:00 PM
Matrix: GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

RunID:	MS11_111020A	QC Batch:	A11VW203	PrepDate:	Analyst:	BD
cis-1,3-Dichloropropene	ND	0.50	µg/L	1	10/20/2011 02:51 PM	
Dibromochloromethane	ND	0.50	µg/L	1	10/20/2011 02:51 PM	
Dibromomethane	ND	0.50	µg/L	1	10/20/2011 02:51 PM	
Dichlorodifluoromethane	ND	0.50	µg/L	1	10/20/2011 02:51 PM	
Ethylbenzene	ND	0.50	µg/L	1	10/20/2011 02:51 PM	
Hexachlorobutadiene	ND	0.50	µg/L	1	10/20/2011 02:51 PM	
Isopropylbenzene	ND	0.50	µg/L	1	10/20/2011 02:51 PM	
m,p-Xylene	ND	1.0	µg/L	1	10/20/2011 02:51 PM	
Methylene chloride	ND	1.0	µg/L	1	10/20/2011 02:51 PM	
n-Butylbenzene	ND	0.50	µg/L	1	10/20/2011 02:51 PM	
n-Propylbenzene	ND	0.50	µg/L	1	10/20/2011 02:51 PM	
Naphthalene	ND	0.50	µg/L	1	10/20/2011 02:51 PM	
o-Xylene	ND	0.50	µg/L	1	10/20/2011 02:51 PM	
sec-Butylbenzene	ND	0.50	µg/L	1	10/20/2011 02:51 PM	
Styrene	ND	0.50	µg/L	1	10/20/2011 02:51 PM	
tert-Butylbenzene	ND	0.50	µg/L	1	10/20/2011 02:51 PM	
Tetrachloroethene	ND	0.50	µg/L	1	10/20/2011 02:51 PM	
Toluene	ND	0.50	µg/L	1	10/20/2011 02:51 PM	
trans-1,2-Dichloroethene	ND	0.50	µg/L	1	10/20/2011 02:51 PM	
Trichloroethene	ND	0.50	µg/L	1	10/20/2011 02:51 PM	
Trichlorofluoromethane	ND	0.50	µg/L	1	10/20/2011 02:51 PM	
Vinyl chloride	ND	0.50	µg/L	1	10/20/2011 02:51 PM	
Surr: 1,2-Dichloroethane-d4	98.9	70-130	%REC	1	10/20/2011 02:51 PM	
Surr: 4-Bromofluorobenzene	96.9	70-130	%REC	1	10/20/2011 02:51 PM	
Surr: Dibromofluoromethane	106	70-130	%REC	1	10/20/2011 02:51 PM	
Surr: Toluene-d8	110	70-130	%REC	1	10/20/2011 02:51 PM	

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 02-Nov-11

CLIENT: Hargis & Associates, Inc.
Lab Order: 120342
Project: Raytheon Fullerton-Monthly, 532.15
Lab ID: 120342-006A

Client Sample ID: CEFF
Collection Date: 10/17/2011 12:30:00 PM
Matrix: GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

RunID: MS11_111019B	QC Batch: A11VW202	PrepDate:	Analyst: BD		
1,1,1,2-Tetrachloroethane	ND	0.50	µg/L	1	10/19/2011 09:13 PM
1,1,1-Trichloroethane	ND	0.50	µg/L	1	10/19/2011 09:13 PM
1,1,2,2-Tetrachloroethane	ND	0.50	µg/L	1	10/19/2011 09:13 PM
1,1,2-Trichloroethane	ND	0.50	µg/L	1	10/19/2011 09:13 PM
1,1-Dichloroethane	0.56	0.50	µg/L	1	10/19/2011 09:13 PM
1,1-Dichloroethene	ND	0.50	µg/L	1	10/19/2011 09:13 PM
1,1-Dichloropropene	ND	0.50	µg/L	1	10/19/2011 09:13 PM
1,2,3-Trichlorobenzene	ND	0.50	µg/L	1	10/19/2011 09:13 PM
1,2,3-Trichloropropane	ND	0.50	µg/L	1	10/19/2011 09:13 PM
1,2,4-Trichlorobenzene	ND	0.50	µg/L	1	10/19/2011 09:13 PM
1,2,4-Trimethylbenzene	ND	0.50	µg/L	1	10/19/2011 09:13 PM
1,2-Dibromo-3-chloropropane	ND	0.50	µg/L	1	10/19/2011 09:13 PM
1,2-Dibromoethane	ND	0.50	µg/L	1	10/19/2011 09:13 PM
1,2-Dichlorobenzene	ND	0.50	µg/L	1	10/19/2011 09:13 PM
1,2-Dichloroethane	ND	0.50	µg/L	1	10/19/2011 09:13 PM
1,2-Dichloropropane	ND	0.50	µg/L	1	10/19/2011 09:13 PM
1,3,5-Trimethylbenzene	ND	0.50	µg/L	1	10/19/2011 09:13 PM
1,3-Dichlorobenzene	ND	0.50	µg/L	1	10/19/2011 09:13 PM
1,3-Dichloropropane	ND	0.50	µg/L	1	10/19/2011 09:13 PM
1,4-Dichlorobenzene	ND	0.50	µg/L	1	10/19/2011 09:13 PM
2,2-Dichloropropane	ND	0.50	µg/L	1	10/19/2011 09:13 PM
2-Chlorotoluene	ND	0.50	µg/L	1	10/19/2011 09:13 PM
4-Chlorotoluene	ND	0.50	µg/L	1	10/19/2011 09:13 PM
4-Isopropyltoluene	ND	0.50	µg/L	1	10/19/2011 09:13 PM
Benzene	ND	0.50	µg/L	1	10/19/2011 09:13 PM
Bromobenzene	ND	0.50	µg/L	1	10/19/2011 09:13 PM
Bromodichloromethane	ND	0.50	µg/L	1	10/19/2011 09:13 PM
Bromoform	ND	0.50	µg/L	1	10/19/2011 09:13 PM
Bromomethane	ND	0.50	µg/L	1	10/19/2011 09:13 PM
Carbon tetrachloride	ND	0.50	µg/L	1	10/19/2011 09:13 PM
Chlorobenzene	ND	0.50	µg/L	1	10/19/2011 09:13 PM
Chloroethane	ND	0.50	µg/L	1	10/19/2011 09:13 PM
Chloroform	ND	0.50	µg/L	1	10/19/2011 09:13 PM
Chloromethane	ND	0.50	µg/L	1	10/19/2011 09:13 PM
cis-1,2-Dichloroethene	ND	0.50	µg/L	1	10/19/2011 09:13 PM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



Advanced Technology
Laboratories

3275 Walnut Avenue, Signal Hill, CA 90755 Tel: 562.989.4045 Fax: 562.989.4040

Advanced Technology Laboratories

ANALYTICAL RESULTS

Print Date: 02-Nov-11

CLIENT: Hargis & Associates, Inc.
Lab Order: 120342
Project: Raytheon Fullerton-Monthly, 532.15
Lab ID: 120342-006A

Client Sample ID: CEFF
Collection Date: 10/17/2011 12:30:00 PM
Matrix: GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

RunID:	MS11_111019B	QC Batch:	A11VW202	PrepDate:	Analyst:	BD
cis-1,3-Dichloropropene	ND	0.50	µg/L	1	10/19/2011 09:13 PM	
Dibromochloromethane	ND	0.50	µg/L	1	10/19/2011 09:13 PM	
Dibromomethane	ND	0.50	µg/L	1	10/19/2011 09:13 PM	
Dichlorodifluoromethane	ND	0.50	µg/L	1	10/19/2011 09:13 PM	
Ethylbenzene	ND	0.50	µg/L	1	10/19/2011 09:13 PM	
Hexachlorobutadiene	ND	0.50	µg/L	1	10/19/2011 09:13 PM	
Isopropylbenzene	ND	0.50	µg/L	1	10/19/2011 09:13 PM	
m,p-Xylene	ND	1.0	µg/L	1	10/19/2011 09:13 PM	
Methylene chloride	ND	1.0	µg/L	1	10/19/2011 09:13 PM	
n-Butylbenzene	ND	0.50	µg/L	1	10/19/2011 09:13 PM	
n-Propylbenzene	ND	0.50	µg/L	1	10/19/2011 09:13 PM	
Naphthalene	ND	0.50	µg/L	1	10/19/2011 09:13 PM	
o-Xylene	ND	0.50	µg/L	1	10/19/2011 09:13 PM	
sec-Butylbenzene	ND	0.50	µg/L	1	10/19/2011 09:13 PM	
Styrene	ND	0.50	µg/L	1	10/19/2011 09:13 PM	
tert-Butylbenzene	ND	0.50	µg/L	1	10/19/2011 09:13 PM	
Tetrachloroethene	ND	0.50	µg/L	1	10/19/2011 09:13 PM	
Toluene	ND	0.50	µg/L	1	10/19/2011 09:13 PM	
trans-1,2-Dichloroethene	ND	0.50	µg/L	1	10/19/2011 09:13 PM	
Trichloroethene	ND	0.50	µg/L	1	10/19/2011 09:13 PM	
Trichlorofluoromethane	ND	0.50	µg/L	1	10/19/2011 09:13 PM	
Vinyl chloride	ND	0.50	µg/L	1	10/19/2011 09:13 PM	
Surr: 1,2-Dichloroethane-d4	95.6	70-130	%REC	1	10/19/2011 09:13 PM	
Surr: 4-Bromofluorobenzene	95.5	70-130	%REC	1	10/19/2011 09:13 PM	
Surr: Dibromofluoromethane	104	70-130	%REC	1	10/19/2011 09:13 PM	
Surr: Toluene-d8	111	70-130	%REC	1	10/19/2011 09:13 PM	

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



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ANALYTICAL RESULTS
Print Date: 02-Nov-11

CLIENT:	Hargis & Associates, Inc.	Client Sample ID:	CEFF
Lab Order:	120342	Collection Date:	10/17/2011 12:30:00 PM
Project:	Raytheon Fullerton-Monthly, 532.15	Matrix:	GROUNDWATER
Lab ID:	120342-006B		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_111020B	QC Batch: 76398				PrepDate: 10/20/2011	Analyst: PT
Total Dissolved Solids (Residue, Filterable)	640	10		mg/L	1	10/20/2011 11:00 AM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		



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ANALYTICAL RESULTS
Print Date: 02-Nov-11

CLIENT:	Hargis & Associates, Inc.	Client Sample ID:	CEFF
Lab Order:	120342	Collection Date:	10/17/2011 12:30:00 PM
Project:	Raytheon Fullerton-Monthly, 532.15	Matrix:	GROUNDWATER
Lab ID:	120342-006C		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC3_111021A	QC Batch: R137703	PrepDate:	Analyst: PT	
Bromide	0.47	0.050 mg/L	1	10/21/2011 09:24 AM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		



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CLIENT: Hargis & Associates, Inc.
Work Order: 120342
Project: Raytheon Fullerton-Monthly, 532.15

ANALYTICAL QC SUMMARY REPORT

TestCode: 160.1_2540C_W

Sample ID: 120342-002D-DUP	SampType: DUP	TestCode: 160.1_2540C	Units: mg/L	Prep Date: 10/20/2011	RunNo: 137710						
Client ID: EW-02	Batch ID: 76398	TestNo: SM2540C		Analysis Date: 10/20/2011	SeqNo: 2262261						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filtera 630.000 10 634.0 0.633 10

Sample ID: LCS-76398	SampType: LCS	TestCode: 160.1_2540C	Units: mg/L	Prep Date: 10/20/2011	RunNo: 137710						
Client ID: LCSW	Batch ID: 76398	TestNo: SM2540C		Analysis Date: 10/20/2011	SeqNo: 2262264						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

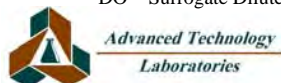
Total Dissolved Solids (Residue, Filtera 997.000 10 970.0 0 103 80 120

Sample ID: MB-76398	SampType: MBLK	TestCode: 160.1_2540C	Units: mg/L	Prep Date: 10/20/2011	RunNo: 137710						
Client ID: PBW	Batch ID: 76398	TestNo: SM2540C		Analysis Date: 10/20/2011	SeqNo: 2262265						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filtera ND 10

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



CLIENT: Hargis & Associates, Inc.
Work Order: 120342
Project: Raytheon Fullerton-Monthly, 532.15

ANALYTICAL QC SUMMARY REPORT

TestCode: 160.2_2540D_W

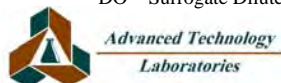
Sample ID: 120342-002C-DUP	SampType: DUP	TestCode: 160.2_2540D	Units: mg/L	Prep Date: 10/20/2011	RunNo: 137685						
Client ID: EW-02	Batch ID: 76379	TestNo: SM2540D		Analysis Date: 10/20/2011	SeqNo: 2261717						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Suspended Solids (Residue, Non-Filter)	ND	10						0	0	10	

Sample ID: LCS-76379	SampType: LCS	TestCode: 160.2_2540D	Units: mg/L	Prep Date: 10/20/2011	RunNo: 137685						
Client ID: LCSW	Batch ID: 76379	TestNo: SM2540D		Analysis Date: 10/20/2011	SeqNo: 2261720						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Suspended Solids (Residue, Non-Filter)	97.000	10	96.60	0	100	80	120				

Sample ID: MB-76379	SampType: MBLK	TestCode: 160.2_2540D	Units: mg/L	Prep Date: 10/20/2011	RunNo: 137685						
Client ID: PBW	Batch ID: 76379	TestNo: SM2540D		Analysis Date: 10/20/2011	SeqNo: 2261721						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Suspended Solids (Residue, Non-Filter)	ND	10									

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



CLIENT: Hargis & Associates, Inc.
Work Order: 120342
Project: Raytheon Fullerton-Monthly, 532.15

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_BR

Sample ID: MB-R137703	SampType: MBLK	TestCode: 300_W_BR	Units: mg/L	Prep Date:	RunNo: 137703						
Client ID: PBW	Batch ID: R137703	TestNo: EPA 300.0		Analysis Date: 10/21/2011	SeqNo: 2262003						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromide	ND	0.050									

Sample ID: LCS-R137703	SampType: LCS	TestCode: 300_W_BR	Units: mg/L	Prep Date:	RunNo: 137703						
Client ID: LCSW	Batch ID: R137703	TestNo: EPA 300.0		Analysis Date: 10/21/2011	SeqNo: 2262004						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromide	1.076	0.050	1.000	0	108	90	110				

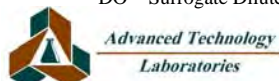
Sample ID: 120342-006C-DUP	SampType: DUP	TestCode: 300_W_BR	Units: mg/L	Prep Date:	RunNo: 137703						
Client ID: CEFF	Batch ID: R137703	TestNo: EPA 300.0		Analysis Date: 10/21/2011	SeqNo: 2262008						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromide	0.478	0.050						0.4662	2.56	20	

Sample ID: 120342-006C-MS	SampType: MS	TestCode: 300_W_BR	Units: mg/L	Prep Date:	RunNo: 137703						
Client ID: CEFF	Batch ID: R137703	TestNo: EPA 300.0		Analysis Date: 10/21/2011	SeqNo: 2262009						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromide	3.623	0.050	2.500	0.4662	126	80	120				S

Sample ID: 120342-006C-MSD	SampType: MSD	TestCode: 300_W_BR	Units: mg/L	Prep Date:	RunNo: 137703						
Client ID: CEFF	Batch ID: R137703	TestNo: EPA 300.0		Analysis Date: 10/21/2011	SeqNo: 2262010						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromide	3.469	0.050	2.500	0.4662	120	80	120	3.623	4.35	20	S

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



CLIENT: Hargis & Associates, Inc.
Work Order: 120342
Project: Raytheon Fullerton-Monthly, 532.15

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_LL

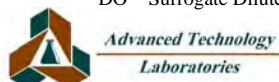
Sample ID: A111019LCS2		SampType: LCS		TestCode: 8260_WP_LL		Units: µg/L		Prep Date:		RunNo: 137684	
Client ID: LCSW		Batch ID: A11VW202		TestNo: EPA 8260B		Analysis Date: 10/19/2011				SeqNo: 2261700	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	18.110	0.50	20.00	0	90.6	70	130				
Benzene	39.260	0.50	40.00	0.2800	97.5	70	130				
Chlorobenzene	20.030	0.50	20.00	0	100	70	130				
MTBE	17.930	0.50	20.00	0	89.7	70	130				
Toluene	41.380	0.50	40.00	0	103	70	130				
Trichloroethene	20.300	0.50	20.00	0	102	70	130				
Surr: 1,2-Dichloroethane-d4	23.450		25.00		93.8	70	130				
Surr: 4-Bromofluorobenzene	24.620		25.00		98.5	70	130				
Surr: Dibromofluoromethane	24.710		25.00		98.8	70	130				
Surr: Toluene-d8	27.480		25.00		110	70	130				

Sample ID: A111019LCSD		SampType: LCSD		TestCode: 8260_WP_LL		Units: µg/L		Prep Date:		RunNo: 137684	
Client ID: LCSS02		Batch ID: A11VW202		TestNo: EPA 8260B		Analysis Date: 10/19/2011				SeqNo: 2261701	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	18.910	0.50	20.00	0	94.6	70	130	18.11	4.32	20	
Benzene	40.120	0.50	40.00	0.2800	99.6	70	130	39.26	2.17	20	
Chlorobenzene	20.170	0.50	20.00	0	101	70	130	20.03	0.697	20	
MTBE	17.800	0.50	20.00	0	89.0	70	130	17.93	0.728	20	
Toluene	42.120	0.50	40.00	0	105	70	130	41.38	1.77	20	
Trichloroethene	20.490	0.50	20.00	0	102	70	130	20.30	0.932	20	
Surr: 1,2-Dichloroethane-d4	23.080		25.00		92.3	70	130		0	0	
Surr: 4-Bromofluorobenzene	24.630		25.00		98.5	70	130		0	0	
Surr: Dibromofluoromethane	24.900		25.00		99.6	70	130		0	0	
Surr: Toluene-d8	27.500		25.00		110	70	130		0	0	

Sample ID: A111019MB3		SampType: MBLK		TestCode: 8260_WP_LL		Units: µg/L		Prep Date:		RunNo: 137684	
Client ID: PBW		Batch ID: A11VW202		TestNo: EPA 8260B		Analysis Date: 10/19/2011				SeqNo: 2261702	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



CLIENT: Hargis & Associates, Inc.
Work Order: 120342
Project: Raytheon Fullerton-Monthly, 532.15

ANALYTICAL QC SUMMARY REPORT

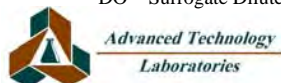
TestCode: 8260_WP_LL

Sample ID: A111019MB3	SampType: MBLK	TestCode: 8260_WP_LL	Units: µg/L	Prep Date:	RunNo: 137684						
Client ID: PBW	Batch ID: A11VW202	TestNo: EPA 8260B		Analysis Date: 10/19/2011	SeqNo: 2261702						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

1,1,1,2-Tetrachloroethane	ND	0.50									
1,1,1-Trichloroethane	ND	0.50									
1,1,2,2-Tetrachloroethane	ND	0.50									
1,1,2-Trichloroethane	ND	0.50									
1,1-Dichloroethane	ND	0.50									
1,1-Dichloroethene	ND	0.50									
1,1-Dichloropropene	ND	0.50									
1,2,3-Trichlorobenzene	ND	0.50									
1,2,3-Trichloropropane	ND	0.50									
1,2,4-Trichlorobenzene	ND	0.50									
1,2,4-Trimethylbenzene	ND	0.50									
1,2-Dibromo-3-chloropropane	ND	0.50									
1,2-Dibromoethane	ND	0.50									
1,2-Dichlorobenzene	ND	0.50									
1,2-Dichloroethane	ND	0.50									
1,2-Dichloropropane	ND	0.50									
1,3,5-Trimethylbenzene	ND	0.50									
1,3-Dichlorobenzene	ND	0.50									
1,3-Dichloropropane	ND	0.50									
1,4-Dichlorobenzene	ND	0.50									
2,2-Dichloropropane	ND	0.50									
2-Chlorotoluene	ND	0.50									
4-Chlorotoluene	ND	0.50									
4-Isopropyltoluene	ND	0.50									
Benzene	0.280	0.50									
Bromobenzene	ND	0.50									
Bromodichloromethane	ND	0.50									
Bromoform	ND	0.50									
Bromomethane	ND	0.50									
Carbon tetrachloride	ND	0.50									

Qualifiers:

B Analyte detected in the associated Method Blank	E Value above quantitation range	H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit	R RPD outside accepted recovery limits	S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out	Calculations are based on raw values	



CLIENT: Hargis & Associates, Inc.
Work Order: 120342
Project: Raytheon Fullerton-Monthly, 532.15

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_LL

Sample ID: A111019MB3	SampType: MBLK	TestCode: 8260_WP_LL	Units: µg/L	Prep Date:	RunNo: 137684						
Client ID: PBW	Batch ID: A11VW202	TestNo: EPA 8260B		Analysis Date: 10/19/2011	SeqNo: 2261702						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chlorobenzene	ND	0.50									
Chloroethane	ND	0.50									
Chloroform	ND	0.50									
Chloromethane	ND	0.50									
cis-1,2-Dichloroethene	ND	0.50									
cis-1,3-Dichloropropene	ND	0.50									
Dibromochloromethane	ND	0.50									
Dibromomethane	ND	0.50									
Dichlorodifluoromethane	ND	0.50									
Ethylbenzene	ND	0.50									
Hexachlorobutadiene	ND	0.50									
Isopropylbenzene	ND	0.50									
m,p-Xylene	ND	1.0									
Methylene chloride	ND	1.0									
n-Butylbenzene	ND	0.50									
n-Propylbenzene	ND	0.50									
Naphthalene	ND	0.50									
o-Xylene	ND	0.50									
sec-Butylbenzene	ND	0.50									
Styrene	ND	0.50									
tert-Butylbenzene	ND	0.50									
Tetrachloroethene	ND	0.50									
Toluene	ND	0.50									
trans-1,2-Dichloroethene	ND	0.50									
Trichloroethene	ND	0.50									
Trichlorofluoromethane	ND	0.50									
Vinyl chloride	ND	0.50									
Surr: 1,2-Dichloroethane-d4	23.450		25.00		93.8	70	130				
Surr: 4-Bromofluorobenzene	23.680		25.00		94.7	70	130				
Surr: Dibromofluoromethane	25.620		25.00		102	70	130				

Qualifiers:

B Analyte detected in the associated Method Blank	E Value above quantitation range	H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit	R RPD outside accepted recovery limits	S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out	Calculations are based on raw values	



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Laboratories*

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CLIENT: Hargis & Associates, Inc.
Work Order: 120342
Project: Raytheon Fullerton-Monthly, 532.15

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_LL

Sample ID: A111019MB3	SampType: MBLK	TestCode: 8260_WP_LL	Units: µg/L	Prep Date:	RunNo: 137684						
Client ID: PBW	Batch ID: A11VW202	TestNo: EPA 8260B		Analysis Date: 10/19/2011	SeqNo: 2261702						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: Toluene-d8	27.340		25.00		109	70	130				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		



*Advanced Technology
Laboratories*

3275 Walnut Avenue, Signal Hill, CA 90755 Tel: 562.989.4045 Fax: 562.989.4040

CLIENT: Hargis & Associates, Inc.
Work Order: 120342
Project: Raytheon Fullerton-Monthly, 532.15

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_LL

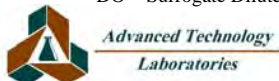
Sample ID: A111020LCS1		SampType: LCS		TestCode: 8260_WP_LL		Units: µg/L		Prep Date:		RunNo: 137705	
Client ID: LCSW		Batch ID: A11VW203		TestNo: EPA 8260B		Analysis Date: 10/20/2011				SeqNo: 2262108	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	18.750	0.50	20.00	0	93.8	70	130				
Benzene	40.190	0.50	40.00	0	100	70	130				
Chlorobenzene	20.290	0.50	20.00	0	101	70	130				
MTBE	17.850	0.50	20.00	0	89.2	70	130				
Toluene	42.070	0.50	40.00	0	105	70	130				
Trichloroethene	20.770	0.50	20.00	0	104	70	130				
Surr: 1,2-Dichloroethane-d4	23.380		25.00		93.5	70	130				
Surr: 4-Bromofluorobenzene	24.880		25.00		99.5	70	130				
Surr: Dibromofluoromethane	25.140		25.00		101	70	130				
Surr: Toluene-d8	27.760		25.00		111	70	130				

Sample ID: A111020LCSD		SampType: LCSD		TestCode: 8260_WP_LL		Units: µg/L		Prep Date:		RunNo: 137705	
Client ID: LCSS02		Batch ID: A11VW203		TestNo: EPA 8260B		Analysis Date: 10/20/2011				SeqNo: 2262109	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	18.340	0.50	20.00	0	91.7	70	130	18.75	2.21	20	
Benzene	40.310	0.50	40.00	0	101	70	130	40.19	0.298	20	
Chlorobenzene	20.070	0.50	20.00	0	100	70	130	20.29	1.09	20	
MTBE	18.330	0.50	20.00	0	91.7	70	130	17.85	2.65	20	
Toluene	41.980	0.50	40.00	0	105	70	130	42.07	0.214	20	
Trichloroethene	20.730	0.50	20.00	0	104	70	130	20.77	0.193	20	
Surr: 1,2-Dichloroethane-d4	23.720		25.00		94.9	70	130		0	0	
Surr: 4-Bromofluorobenzene	24.510		25.00		98.0	70	130		0	0	
Surr: Dibromofluoromethane	25.290		25.00		101	70	130		0	0	
Surr: Toluene-d8	27.330		25.00		109	70	130		0	0	

Sample ID: A111020MB3		SampType: MBLK		TestCode: 8260_WP_LL		Units: µg/L		Prep Date:		RunNo: 137705	
Client ID: PBW		Batch ID: A11VW203		TestNo: EPA 8260B		Analysis Date: 10/20/2011				SeqNo: 2262110	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



CLIENT: Hargis & Associates, Inc.
Work Order: 120342
Project: Raytheon Fullerton-Monthly, 532.15

ANALYTICAL QC SUMMARY REPORT

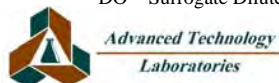
TestCode: 8260_WP_LL

Sample ID: A111020MB3	SampType: MBLK	TestCode: 8260_WP_LL	Units: µg/L	Prep Date:	RunNo: 137705						
Client ID: PBW	Batch ID: A11VW203	TestNo: EPA 8260B		Analysis Date: 10/20/2011	SeqNo: 2262110						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

1,1,1,2-Tetrachloroethane	ND	0.50									
1,1,1-Trichloroethane	ND	0.50									
1,1,2,2-Tetrachloroethane	ND	0.50									
1,1,2-Trichloroethane	ND	0.50									
1,1-Dichloroethane	ND	0.50									
1,1-Dichloroethene	ND	0.50									
1,1-Dichloropropene	ND	0.50									
1,2,3-Trichlorobenzene	ND	0.50									
1,2,3-Trichloropropane	ND	0.50									
1,2,4-Trichlorobenzene	ND	0.50									
1,2,4-Trimethylbenzene	ND	0.50									
1,2-Dibromo-3-chloropropane	ND	0.50									
1,2-Dibromoethane	ND	0.50									
1,2-Dichlorobenzene	ND	0.50									
1,2-Dichloroethane	ND	0.50									
1,2-Dichloropropane	ND	0.50									
1,3,5-Trimethylbenzene	ND	0.50									
1,3-Dichlorobenzene	ND	0.50									
1,3-Dichloropropane	ND	0.50									
1,4-Dichlorobenzene	ND	0.50									
2,2-Dichloropropane	ND	0.50									
2-Chlorotoluene	ND	0.50									
4-Chlorotoluene	ND	0.50									
4-Isopropyltoluene	ND	0.50									
Benzene	ND	0.50									
Bromobenzene	ND	0.50									
Bromodichloromethane	ND	0.50									
Bromoform	ND	0.50									
Bromomethane	ND	0.50									
Carbon tetrachloride	ND	0.50									

Qualifiers:

B Analyte detected in the associated Method Blank	E Value above quantitation range	H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit	R RPD outside accepted recovery limits	S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out	Calculations are based on raw values	



CLIENT: Hargis & Associates, Inc.
Work Order: 120342
Project: Raytheon Fullerton-Monthly, 532.15

ANALYTICAL QC SUMMARY REPORT

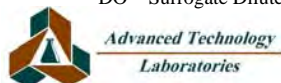
TestCode: 8260_WP_LL

Sample ID: A111020MB3	SampType: MBLK	TestCode: 8260_WP_LL	Units: µg/L	Prep Date:	RunNo: 137705						
Client ID: PBW	Batch ID: A11VW203	TestNo: EPA 8260B		Analysis Date: 10/20/2011	SeqNo: 2262110						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chlorobenzene	ND	0.50									
Chloroethane	ND	0.50									
Chloroform	ND	0.50									
Chloromethane	ND	0.50									
cis-1,2-Dichloroethene	ND	0.50									
cis-1,3-Dichloropropene	ND	0.50									
Dibromochloromethane	ND	0.50									
Dibromomethane	ND	0.50									
Dichlorodifluoromethane	ND	0.50									
Ethylbenzene	ND	0.50									
Hexachlorobutadiene	ND	0.50									
Isopropylbenzene	ND	0.50									
m,p-Xylene	ND	1.0									
Methylene chloride	ND	1.0									
n-Butylbenzene	ND	0.50									
n-Propylbenzene	ND	0.50									
Naphthalene	ND	0.50									
o-Xylene	ND	0.50									
sec-Butylbenzene	ND	0.50									
Styrene	ND	0.50									
tert-Butylbenzene	ND	0.50									
Tetrachloroethene	ND	0.50									
Toluene	ND	0.50									
trans-1,2-Dichloroethene	ND	0.50									
Trichloroethene	ND	0.50									
Trichlorofluoromethane	ND	0.50									
Vinyl chloride	ND	0.50									
Surr: 1,2-Dichloroethane-d4	23.520		25.00		94.1	70	130				
Surr: 4-Bromofluorobenzene	23.850		25.00		95.4	70	130				
Surr: Dibromofluoromethane	25.610		25.00		102	70	130				

Qualifiers:

B Analyte detected in the associated Method Blank	E Value above quantitation range	H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit	R RPD outside accepted recovery limits	S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out	Calculations are based on raw values	



CLIENT: Hargis & Associates, Inc.
Work Order: 120342
Project: Raytheon Fullerton-Monthly, 532.15

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_LL

Sample ID: A111020MB3	SampType: MBLK	TestCode: 8260_WP_LL	Units: µg/L	Prep Date:	RunNo: 137705						
Client ID: PBW	Batch ID: A11VW203	TestNo: EPA 8260B		Analysis Date: 10/20/2011	SeqNo: 2262110						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: Toluene-d8	27.370		25.00		109	70	130				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		



*Advanced Technology
Laboratories*

3275 Walnut Avenue, Signal Hill, CA 90755 Tel: 562.989.4045 Fax: 562.989.4040

CLIENT: Hargis & Associates, Inc.
Work Order: 120342
Project: Raytheon Fullerton-Monthly, 532.15

ANALYTICAL QC SUMMARY REPORT

TestCode: 8270_W_SIMDIOX

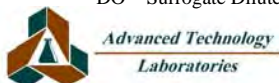
Sample ID: MB-76396	SampType: MBLK	TestCode: 8270_W_SIM	Units: µg/L	Prep Date: 10/21/2011	RunNo: 137766						
Client ID: PBW	Batch ID: 76396	TestNo: EPA 8270C(M EPA 3510C)		Analysis Date: 10/24/2011	SeqNo: 2263214						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,4-Dioxane	ND	0.20									
Surr: 1,2-Dichlorobenzene-d4	0.942		1.000		94.2	58	99				
Surr: 2-Fluorobiphenyl	1.195		1.000		120	60	104				S
Surr: 4-Terphenyl-d14	1.408		1.000		141	65	127				S
Surr: Nitrobenzene-d5	0.713		1.000		71.3	50	136				

Sample ID: LCS-76396	SampType: LCS	TestCode: 8270_W_SIM	Units: µg/L	Prep Date: 10/21/2011	RunNo: 137766						
Client ID: LCSW	Batch ID: 76396	TestNo: EPA 8270C(M EPA 3510C)		Analysis Date: 10/24/2011	SeqNo: 2263215						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,4-Dioxane	1.057	0.20	1.000	0	106	70	130				
Surr: 1,2-Dichlorobenzene-d4	0.692		1.000		69.2	58	99				
Surr: 2-Fluorobiphenyl	0.875		1.000		87.5	60	104				
Surr: 4-Terphenyl-d14	1.133		1.000		113	65	127				
Surr: Nitrobenzene-d5	0.507		1.000		50.7	50	136				

Sample ID: LCS-76396	SampType: LCS	TestCode: 8270_W_SIM	Units: µg/L	Prep Date: 10/21/2011	RunNo: 137766						
Client ID: LCSO2	Batch ID: 76396	TestNo: EPA 8270C(M EPA 3510C)		Analysis Date: 10/24/2011	SeqNo: 2263216						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,4-Dioxane	1.068	0.20	1.000	0	107	70	130	1.057	0.997	30	
Surr: 1,2-Dichlorobenzene-d4	0.802		1.000		80.2	58	99		0	0	
Surr: 2-Fluorobiphenyl	1.011		1.000		101	60	104		0	0	
Surr: 4-Terphenyl-d14	1.204		1.000		120	65	127		0	0	
Surr: Nitrobenzene-d5	0.580		1.000		58.0	50	136		0	0	

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



Client: Advanced Technology Laboratories
Job No.: 134905

Bromate by EPA 317
Ion Chromatography with Post-Column Derivatization-Visible Absorption

Column: Dionex AS9-HC/AG9-HSC
Eluent: 30 mM Na₂CO₃
Flow: 1.0 mL/min
Injection: 250 µL
Detection: Post-column derivatization, Visible detection, 450 nm

Sample Preparation: The undiluted samples were treated with a Dionex OnGuard II H cartridge to remove excess basic cations.

Sample ID	Bromate Parts per Billion (µg/L)
120342-002F / EW-02	ND
120342-004E / POX	9.9
120342-006D / CEFF	8.9
120342-006D / CEFF Duplicate	9.1
Method Blank	ND
Detection Limit	0.5
Date Analyzed:	11-01-11

Calibration Summary

Sample ID: Laboratory Control Standard (50.0 ppb Second Source Standard)

Date Analyzed	Result	% Rec	% Rec Limits
11-01-11	51.3	103	80 - 120

Standard Curve (n=6) $r^2 \geq 0.999$

Quality Control Summary

Sample ID: 120342-006D / CEFF

Analyte	Sample Result	Duplicate Result	Sample RPD	Spike Conc	Spike Result	Spike % Rec
Bromate	8.9	9.1	2	20.0	27.0	90
QC Guidelines			10			75 - 125



Advanced Technology Laboratories

3275 Walnut Avenue, Signal Hill, CA 90755-5225

www.atlglobal.com

TEL: (562) 989-4045

FAX: (562) 989-4040

CHAIN-OF-CUSTODY RECORD

QC Level: RTNE

Subcontractor:

Exova Inc.
9240 Santa Fe Springs Road
Santa Fe Springs, California 90670


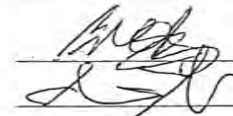
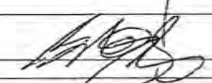

TEL: 562 948-2225
FAX: 562 948-5850
Acct #:

Field Sampler: Kenneth Simon

17-Oct-11

Sample ID	Matrix	Date Collected	Bottle Type	Requested Tests		
				EPA 317.0		
120342-002F / EW-02	Groundwater	10/17/2011 1:15:00 PM	8OZP	1		
120342-004E / POX	Groundwater	10/17/2011 12:05:00 PM	8OZP	1		
120342-006D / CEFF	Groundwater	10/17/2011 12:30:00 PM	8OZP	1		

General Comments: Please email sample receipt acknowledgement to the PM.
 Please use PO#: SC06776 Please fax results by: NORMAL TAT
 ANALYZE THE SAMPLES FOR BROMATE BY EPA 317
 PLEASE SEND REPORT TO RACHELLE ARADA

Relinquished by: 	Date/Time: 10/17/11	Received by: 	Date/Time: 10/18/11 944
Relinquished by: 	Date/Time: 10/18/11 1231	Received by:  EXOVA	Date/Time: 10-18-11 P12:29

PROJECT NAME Raytheon Fullerton-Monthly			PROJECT No./TASK No. 532.15			SAMPLE CONTAINERS	ANALYSIS REQUESTED	ESTIMATED CONCENTRATION RANGE (ppb) FOR VOAS	SPECIAL HANDLING	LABORATORY INFORMATION																															
PROJECT MANAGER Chris Ross			Phone No. 858-455-6500			<table border="1"> <tr> <td>40 ml Glass VOA</td> <td>125 ml Poly</td> <td>250 ml Poly</td> <td>500 ml Poly</td> <td>1 L Amber</td> <td>VOCS by EPA 8260B</td> <td>1,4-Dioxane by EPA 8270 SIM</td> <td>Bromate by 317</td> <td>TDS by SM2540C</td> <td>TSS by SM2540D</td> <td>Bromide by 300</td> <td>0 - 10</td> <td>10 - 100</td> <td>100 - 1,000</td> <td>> 1,000</td> </tr> <tr> <td colspan="15"> VOCs by EPA 8260B 1,4-Dioxane by EPA 8270 SIM Bromate by 317 TDS by SM2540C TSS by SM2540D Bromide by 300 </td> </tr> </table>				40 ml Glass VOA	125 ml Poly	250 ml Poly	500 ml Poly	1 L Amber	VOCS by EPA 8260B	1,4-Dioxane by EPA 8270 SIM	Bromate by 317	TDS by SM2540C	TSS by SM2540D	Bromide by 300	0 - 10	10 - 100	100 - 1,000	> 1,000	VOCs by EPA 8260B 1,4-Dioxane by EPA 8270 SIM Bromate by 317 TDS by SM2540C TSS by SM2540D Bromide by 300															ATL	
40 ml Glass VOA	125 ml Poly	250 ml Poly	500 ml Poly	1 L Amber	VOCS by EPA 8260B					1,4-Dioxane by EPA 8270 SIM	Bromate by 317	TDS by SM2540C	TSS by SM2540D	Bromide by 300	0 - 10	10 - 100	100 - 1,000	> 1,000																							
VOCs by EPA 8260B 1,4-Dioxane by EPA 8270 SIM Bromate by 317 TDS by SM2540C TSS by SM2540D Bromide by 300																																									
QA MANAGER Steve Netto			Fax No. 858-455-6533												C/O Rachele Arada																										
SAMPLER (SIGNATURE) <i>[Signature]</i>			SAMPLER (PRINTED) KENNETH SIMON												3275 Walnut Ave.																										
			Marcos Rodriguez <i>[Signature]</i>												Signal Hill, CA																										
LAB ID	SAMPLE ID	SAMPLE COLLECTION		MATRIX			PRESER-VATION																																		
		Date	Time	Soil	Ground water	Surface water	Lab H2O	HCl	HNO 3	NaOH	H2SO 4	Ice	REMARKS																												
	TB	10/17/11	0900				X	X			X	2																									Please include				
	EW-02		1315	X			X	X				3	2	2	1	X	X	X	X	X	X	X	X													mrodriguez@hargis.com					
	PF		1145	X			X	X					1		X	X	X	X	X	X	X	X													in lab report						
	POX		1205	X			X	X				3	2	1	1	X	X	X	X	X	X	X													distribution list						
	CBT		1215	X			X	X				3			X	X	X	X	X	X	X	X													set 1,4-Dioxane						
	CEFF	10/17/11	1230	X			X	X			X	3	2	1	X	X	X	X	X	X	X	X													MDL to 1.0 ppm						

Total number of Containers per analysis: 1465 2 Total No. of Containers: 27

Relinquished by: <i>[Signature]</i>	Date 10/17/11	Received by: JCH	Date 10/17/11
I-17A INC Company	Time 1430	ATL Company	Time 1430
Relinquished by:	Date	Received by:	Date
	Time		Time
Company		Company	

INSTRUCTIONS

1. Fill out form completely except for shaded areas (lab use only); sign only after verified for completeness.
2. Complete in ballpoint pen. Draw one line through errors, initial and date correction.
3. Indicate number of sample containers in analysis request space; indicate choice with ✓ or x.
4. Note applicable preservatives, special instructions, and deviations from typical environmental samples.
5. Consult project QA documents for specific instructions.

Sample Receipt:

No. of containers correct received good condition/cold
 custody seals secure conforms to COC document

Shipment Method: **DROP-OFF**

Send Results to: **Steve Netto**

9171 TOWNE CENTRE DRIVE, SUITE 375
SAN DIEGO, CA 92122 (858) 455-6500

1640 SOUTH STAPLEY DRIVE, SUITE 124
MESA, AZ 85204 (480) 345-0888

1820 EAST RIVER ROAD, SUITE 220
TUCSON, AZ 85718 (520) 881-7300

Send invoice to San Diego, CA
Attn: Accounts Payable

3.2^{PL}

November 14, 2011



Steve Netto
Hargis & Associates, Inc.
9171 Town Centre Drive, Suite 375
San Diego, CA 92122
TEL: (619) 249-3166
FAX: cell

ELAP No.: 1838
NELAP No.: 02107CA
CSDLAC No.: 10196
ORELAP No.: CA300003

Workorder No.: 120594

RE: Raytheon Fullerton-Monthly, 532.15

Attention: Steve Netto

Enclosed are the results for sample(s) received on November 01, 2011 by Advanced Technology Laboratories . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (562)989-4045 if I can be of further assistance to your company.

Sincerely,

A handwritten signature in black ink, appearing to read "Eddie F. Rodriguez".

Eddie F. Rodriguez
Laboratory Director

The cover letter and the case narrative are an integral part of this analytical report and cannot be reproduced in part or in its entirety without written permission from the client and Advanced Technology Laboratories.



Advanced Technology Laboratories

Date: 14-Nov-11

CLIENT: Hargis & Associates, Inc.
Project: Raytheon Fullerton-Monthly, 532.15
Lab Order: 120594

CASE NARRATIVE

The samples for EPA 317 (Bromate) analysis were subcontracted to Exova, Inc. with ELAP Cert.# 2652.



Advanced Technology Laboratories

ANALYTICAL RESULTS

Print Date: 14-Nov-11

CLIENT:	Hargis & Associates, Inc.	Client Sample ID:	TB-110111
Lab Order:	120594	Collection Date:	11/1/2011 12:00:00 PM
Project:	Raytheon Fullerton-Monthly, 532.15	Matrix:	LAB H2O
Lab ID:	120594-001A		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
----------	--------	-----	------	-------	----	---------------

VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

RunID: MS11_111102A	QC Batch: A11VW213	PrepDate:	Analyst: BD
1,1,1,2-Tetrachloroethane	ND	0.50	µg/L 1 11/2/2011 03:57 PM
1,1,1-Trichloroethane	ND	0.50	µg/L 1 11/2/2011 03:57 PM
1,1,2,2-Tetrachloroethane	ND	0.50	µg/L 1 11/2/2011 03:57 PM
1,1,2-Trichloroethane	ND	0.50	µg/L 1 11/2/2011 03:57 PM
1,1-Dichloroethane	ND	0.50	µg/L 1 11/2/2011 03:57 PM
1,1-Dichloroethene	ND	0.50	µg/L 1 11/2/2011 03:57 PM
1,1-Dichloropropene	ND	0.50	µg/L 1 11/2/2011 03:57 PM
1,2,3-Trichlorobenzene	ND	0.50	µg/L 1 11/2/2011 03:57 PM
1,2,3-Trichloropropane	ND	0.50	µg/L 1 11/2/2011 03:57 PM
1,2,4-Trichlorobenzene	ND	0.50	µg/L 1 11/2/2011 03:57 PM
1,2,4-Trimethylbenzene	ND	0.50	µg/L 1 11/2/2011 03:57 PM
1,2-Dibromo-3-chloropropane	ND	0.50	µg/L 1 11/2/2011 03:57 PM
1,2-Dibromoethane	ND	0.50	µg/L 1 11/2/2011 03:57 PM
1,2-Dichlorobenzene	ND	0.50	µg/L 1 11/2/2011 03:57 PM
1,2-Dichloroethane	ND	0.50	µg/L 1 11/2/2011 03:57 PM
1,2-Dichloropropane	ND	0.50	µg/L 1 11/2/2011 03:57 PM
1,3,5-Trimethylbenzene	ND	0.50	µg/L 1 11/2/2011 03:57 PM
1,3-Dichlorobenzene	ND	0.50	µg/L 1 11/2/2011 03:57 PM
1,3-Dichloropropane	ND	0.50	µg/L 1 11/2/2011 03:57 PM
1,4-Dichlorobenzene	ND	0.50	µg/L 1 11/2/2011 03:57 PM
2,2-Dichloropropane	ND	0.50	µg/L 1 11/2/2011 03:57 PM
2-Chlorotoluene	ND	0.50	µg/L 1 11/2/2011 03:57 PM
4-Chlorotoluene	ND	0.50	µg/L 1 11/2/2011 03:57 PM
4-Isopropyltoluene	ND	0.50	µg/L 1 11/2/2011 03:57 PM
Benzene	ND	0.50	µg/L 1 11/2/2011 03:57 PM
Bromobenzene	ND	0.50	µg/L 1 11/2/2011 03:57 PM
Bromodichloromethane	ND	0.50	µg/L 1 11/2/2011 03:57 PM
Bromoform	ND	0.50	µg/L 1 11/2/2011 03:57 PM
Bromomethane	ND	0.50	µg/L 1 11/2/2011 03:57 PM
Carbon tetrachloride	ND	0.50	µg/L 1 11/2/2011 03:57 PM
Chlorobenzene	ND	0.50	µg/L 1 11/2/2011 03:57 PM
Chloroethane	ND	0.50	µg/L 1 11/2/2011 03:57 PM
Chloroform	ND	0.50	µg/L 1 11/2/2011 03:57 PM
Chloromethane	ND	0.50	µg/L 1 11/2/2011 03:57 PM
cis-1,2-Dichloroethene	ND	0.50	µg/L 1 11/2/2011 03:57 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 14-Nov-11

CLIENT:	Hargis & Associates, Inc.	Client Sample ID:	TB-110111
Lab Order:	120594	Collection Date:	11/1/2011 12:00:00 PM
Project:	Raytheon Fullerton-Monthly, 532.15	Matrix:	LAB H2O
Lab ID:	120594-001A		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

RunID:	MS11_111102A	QC Batch:	A11VW213	PrepDate:	Analyst:	BD
cis-1,3-Dichloropropene	ND	0.50	µg/L	1	11/2/2011 03:57 PM	
Dibromochloromethane	ND	0.50	µg/L	1	11/2/2011 03:57 PM	
Dibromomethane	ND	0.50	µg/L	1	11/2/2011 03:57 PM	
Dichlorodifluoromethane	ND	0.50	µg/L	1	11/2/2011 03:57 PM	
Ethylbenzene	ND	0.50	µg/L	1	11/2/2011 03:57 PM	
Hexachlorobutadiene	ND	0.50	µg/L	1	11/2/2011 03:57 PM	
Isopropylbenzene	ND	0.50	µg/L	1	11/2/2011 03:57 PM	
m,p-Xylene	ND	1.0	µg/L	1	11/2/2011 03:57 PM	
Methylene chloride	ND	1.0	µg/L	1	11/2/2011 03:57 PM	
n-Butylbenzene	ND	0.50	µg/L	1	11/2/2011 03:57 PM	
n-Propylbenzene	ND	0.50	µg/L	1	11/2/2011 03:57 PM	
Naphthalene	ND	0.50	µg/L	1	11/2/2011 03:57 PM	
o-Xylene	ND	0.50	µg/L	1	11/2/2011 03:57 PM	
sec-Butylbenzene	ND	0.50	µg/L	1	11/2/2011 03:57 PM	
Styrene	ND	0.50	µg/L	1	11/2/2011 03:57 PM	
tert-Butylbenzene	ND	0.50	µg/L	1	11/2/2011 03:57 PM	
Tetrachloroethene	ND	0.50	µg/L	1	11/2/2011 03:57 PM	
Toluene	ND	0.50	µg/L	1	11/2/2011 03:57 PM	
trans-1,2-Dichloroethene	ND	0.50	µg/L	1	11/2/2011 03:57 PM	
Trichloroethene	ND	0.50	µg/L	1	11/2/2011 03:57 PM	
Trichlorofluoromethane	ND	0.50	µg/L	1	11/2/2011 03:57 PM	
Vinyl chloride	ND	0.50	µg/L	1	11/2/2011 03:57 PM	
Surr: 1,2-Dichloroethane-d4	124	70-130	%REC	1	11/2/2011 03:57 PM	
Surr: 4-Bromofluorobenzene	97.4	70-130	%REC	1	11/2/2011 03:57 PM	
Surr: Dibromofluoromethane	113	70-130	%REC	1	11/2/2011 03:57 PM	
Surr: Toluene-d8	111	70-130	%REC	1	11/2/2011 03:57 PM	

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 14-Nov-11

CLIENT: Hargis & Associates, Inc.
Lab Order: 120594
Project: Raytheon Fullerton-Monthly, 532.15
Lab ID: 120594-002A

Client Sample ID: EW-02
Collection Date: 11/1/2011 1:45:00 PM
Matrix: GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

RunID:	MS11_111102A	QC Batch:	A11VW213	PrepDate:	Analyst:	BD
1,1,1,2-Tetrachloroethane	ND	0.50	µg/L	1	11/2/2011 05:36 PM	
1,1,1-Trichloroethane	ND	0.50	µg/L	1	11/2/2011 05:36 PM	
1,1,2,2-Tetrachloroethane	ND	0.50	µg/L	1	11/2/2011 05:36 PM	
1,1,2-Trichloroethane	ND	0.50	µg/L	1	11/2/2011 05:36 PM	
1,1-Dichloroethane	0.69	0.50	µg/L	1	11/2/2011 05:36 PM	
1,1-Dichloroethene	55	0.50	µg/L	1	11/2/2011 05:36 PM	
1,1-Dichloropropene	ND	0.50	µg/L	1	11/2/2011 05:36 PM	
1,2,3-Trichlorobenzene	ND	0.50	µg/L	1	11/2/2011 05:36 PM	
1,2,3-Trichloropropane	ND	0.50	µg/L	1	11/2/2011 05:36 PM	
1,2,4-Trichlorobenzene	ND	0.50	µg/L	1	11/2/2011 05:36 PM	
1,2,4-Trimethylbenzene	ND	0.50	µg/L	1	11/2/2011 05:36 PM	
1,2-Dibromo-3-chloropropane	ND	0.50	µg/L	1	11/2/2011 05:36 PM	
1,2-Dibromoethane	ND	0.50	µg/L	1	11/2/2011 05:36 PM	
1,2-Dichlorobenzene	ND	0.50	µg/L	1	11/2/2011 05:36 PM	
1,2-Dichloroethane	ND	0.50	µg/L	1	11/2/2011 05:36 PM	
1,2-Dichloropropane	ND	0.50	µg/L	1	11/2/2011 05:36 PM	
1,3,5-Trimethylbenzene	ND	0.50	µg/L	1	11/2/2011 05:36 PM	
1,3-Dichlorobenzene	ND	0.50	µg/L	1	11/2/2011 05:36 PM	
1,3-Dichloropropane	ND	0.50	µg/L	1	11/2/2011 05:36 PM	
1,4-Dichlorobenzene	ND	0.50	µg/L	1	11/2/2011 05:36 PM	
2,2-Dichloropropane	ND	0.50	µg/L	1	11/2/2011 05:36 PM	
2-Chlorotoluene	ND	0.50	µg/L	1	11/2/2011 05:36 PM	
4-Chlorotoluene	ND	0.50	µg/L	1	11/2/2011 05:36 PM	
4-Isopropyltoluene	ND	0.50	µg/L	1	11/2/2011 05:36 PM	
Benzene	ND	0.50	µg/L	1	11/2/2011 05:36 PM	
Bromobenzene	ND	0.50	µg/L	1	11/2/2011 05:36 PM	
Bromodichloromethane	ND	0.50	µg/L	1	11/2/2011 05:36 PM	
Bromoform	ND	0.50	µg/L	1	11/2/2011 05:36 PM	
Bromomethane	ND	0.50	µg/L	1	11/2/2011 05:36 PM	
Carbon tetrachloride	ND	0.50	µg/L	1	11/2/2011 05:36 PM	
Chlorobenzene	ND	0.50	µg/L	1	11/2/2011 05:36 PM	
Chloroethane	ND	0.50	µg/L	1	11/2/2011 05:36 PM	
Chloroform	ND	0.50	µg/L	1	11/2/2011 05:36 PM	
Chloromethane	ND	0.50	µg/L	1	11/2/2011 05:36 PM	
cis-1,2-Dichloroethene	ND	0.50	µg/L	1	11/2/2011 05:36 PM	

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 14-Nov-11

CLIENT: Hargis & Associates, Inc.
Lab Order: 120594
Project: Raytheon Fullerton-Monthly, 532.15
Lab ID: 120594-002A

Client Sample ID: EW-02
Collection Date: 11/1/2011 1:45:00 PM
Matrix: GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

RunID:	MS11_111102A	QC Batch:	A11VW213	PrepDate:	Analyst:	BD
cis-1,3-Dichloropropene	ND	0.50	µg/L	1	11/2/2011 05:36 PM	
Dibromochloromethane	ND	0.50	µg/L	1	11/2/2011 05:36 PM	
Dibromomethane	ND	0.50	µg/L	1	11/2/2011 05:36 PM	
Dichlorodifluoromethane	ND	0.50	µg/L	1	11/2/2011 05:36 PM	
Ethylbenzene	ND	0.50	µg/L	1	11/2/2011 05:36 PM	
Hexachlorobutadiene	ND	0.50	µg/L	1	11/2/2011 05:36 PM	
Isopropylbenzene	ND	0.50	µg/L	1	11/2/2011 05:36 PM	
m,p-Xylene	ND	1.0	µg/L	1	11/2/2011 05:36 PM	
Methylene chloride	ND	1.0	µg/L	1	11/2/2011 05:36 PM	
n-Butylbenzene	ND	0.50	µg/L	1	11/2/2011 05:36 PM	
n-Propylbenzene	ND	0.50	µg/L	1	11/2/2011 05:36 PM	
Naphthalene	ND	0.50	µg/L	1	11/2/2011 05:36 PM	
o-Xylene	ND	0.50	µg/L	1	11/2/2011 05:36 PM	
sec-Butylbenzene	ND	0.50	µg/L	1	11/2/2011 05:36 PM	
Styrene	ND	0.50	µg/L	1	11/2/2011 05:36 PM	
tert-Butylbenzene	ND	0.50	µg/L	1	11/2/2011 05:36 PM	
Tetrachloroethene	ND	0.50	µg/L	1	11/2/2011 05:36 PM	
Toluene	ND	0.50	µg/L	1	11/2/2011 05:36 PM	
trans-1,2-Dichloroethene	ND	0.50	µg/L	1	11/2/2011 05:36 PM	
Trichloroethene	ND	0.50	µg/L	1	11/2/2011 05:36 PM	
Trichlorofluoromethane	ND	0.50	µg/L	1	11/2/2011 05:36 PM	
Vinyl chloride	ND	0.50	µg/L	1	11/2/2011 05:36 PM	
Surr: 1,2-Dichloroethane-d4	128	70-130	%REC	1	11/2/2011 05:36 PM	
Surr: 4-Bromofluorobenzene	100	70-130	%REC	1	11/2/2011 05:36 PM	
Surr: Dibromofluoromethane	115	70-130	%REC	1	11/2/2011 05:36 PM	
Surr: Toluene-d8	111	70-130	%REC	1	11/2/2011 05:36 PM	

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



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ANALYTICAL RESULTS
 Print Date: 14-Nov-11

CLIENT:	Hargis & Associates, Inc.	Client Sample ID:	EW-02
Lab Order:	120594	Collection Date:	11/1/2011 1:45:00 PM
Project:	Raytheon Fullerton-Monthly, 532.15	Matrix:	GROUNDWATER
Lab ID:	120594-002B		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
1,4-DIOXANE BY GC/MS: ISOTOPE DILUTION TECHNIQUE						
	EPA 3510C		EPA 8270C(M)			
RunID: MS 13_111102A	QC Batch: 76687			PrepDate:	11/1/2011	Analyst: JSD
1,4-Dioxane	22	2.0		µg/L	1	11/2/2011 05:21 PM
Surr: 1,2-Dichlorobenzene-d4	84.8	46-97		%REC	1	11/2/2011 05:21 PM
Surr: 2,4,6-Tribromophenol	80.7	59-124		%REC	1	11/2/2011 05:21 PM
Surr: 2-Chlorophenol-d4	74.6	49-93		%REC	1	11/2/2011 05:21 PM
Surr: 2-Fluorobiphenyl	85.4	57-107		%REC	1	11/2/2011 05:21 PM
Surr: 2-Fluorophenol	43.1	27-60		%REC	1	11/2/2011 05:21 PM
Surr: 4-Terphenyl-d14	82.0	69-132		%REC	1	11/2/2011 05:21 PM
Surr: Nitrobenzene-d5	83.7	52-107		%REC	1	11/2/2011 05:21 PM
Surr: Phenol-d5	32.4	15-50		%REC	1	11/2/2011 05:21 PM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		



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ANALYTICAL RESULTS
Print Date: 14-Nov-11

CLIENT: Hargis & Associates, Inc.	Client Sample ID: EW-02
Lab Order: 120594	Collection Date: 11/1/2011 1:45:00 PM
Project: Raytheon Fullerton-Monthly, 532.15	Matrix: GROUNDWATER
Lab ID: 120594-002C	

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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TOTAL NON-FILTERABLE RESIDUE

SM2540D

RunID: WETCHEM_111102B	QC Batch: 76728	PrepDate: 11/2/2011	Analyst: PT	
Suspended Solids (Residue, Non-Filterable)	ND	10 mg/L	1	11/2/2011 08:00 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS
Print Date: 14-Nov-11

CLIENT:	Hargis & Associates, Inc.	Client Sample ID:	EW-02
Lab Order:	120594	Collection Date:	11/1/2011 1:45:00 PM
Project:	Raytheon Fullerton-Monthly, 532.15	Matrix:	GROUNDWATER
Lab ID:	120594-002D		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE		SM2540C				
RunID: WETCHEM_111107C	QC Batch: 76820			PrepDate: 11/7/2011	Analyst: PT	
Total Dissolved Solids (Residue, Filterable)	640	10		mg/L	1	11/7/2011 08:03 AM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		



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ANALYTICAL RESULTS
Print Date: 14-Nov-11

CLIENT:	Hargis & Associates, Inc.	Client Sample ID:	EW-02
Lab Order:	120594	Collection Date:	11/1/2011 1:45:00 PM
Project:	Raytheon Fullerton-Monthly, 532.15	Matrix:	GROUNDWATER
Lab ID:	120594-002E		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC3_111102B	QC Batch: R138129	PrepDate:	Analyst: PT	
Bromide	0.43	0.050 mg/L	1	11/2/2011 12:35 PM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		



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ANALYTICAL RESULTS
Print Date: 14-Nov-11

CLIENT:	Hargis & Associates, Inc.	Client Sample ID:	PF
Lab Order:	120594	Collection Date:	11/1/2011 1:00:00 PM
Project:	Raytheon Fullerton-Monthly, 532.15	Matrix:	GROUNDWATER
Lab ID:	120594-003A		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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TOTAL NON-FILTERABLE RESIDUE

SM2540D

RunID: WETCHEM_111102B	QC Batch: 76728	PrepDate: 11/2/2011	Analyst: PT	
Suspended Solids (Residue, Non-Filterable)	ND	10 mg/L	1	11/2/2011 08:00 AM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		



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ANALYTICAL RESULTS

Print Date: 14-Nov-11

CLIENT: Hargis & Associates, Inc.
Lab Order: 120594
Project: Raytheon Fullerton-Monthly, 532.15
Lab ID: 120594-004A

Client Sample ID: POX
Collection Date: 11/1/2011 1:05:00 PM
Matrix: GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

RunID:	MS11_111102A	QC Batch:	A11VW213	PrepDate:	Analyst:	BD
1,1,1,2-Tetrachloroethane	ND	0.50	µg/L	1	11/2/2011 05:17 PM	
1,1,1-Trichloroethane	ND	0.50	µg/L	1	11/2/2011 05:17 PM	
1,1,2,2-Tetrachloroethane	ND	0.50	µg/L	1	11/2/2011 05:17 PM	
1,1,2-Trichloroethane	ND	0.50	µg/L	1	11/2/2011 05:17 PM	
1,1-Dichloroethane	0.52	0.50	µg/L	1	11/2/2011 05:17 PM	
1,1-Dichloroethene	ND	0.50	µg/L	1	11/2/2011 05:17 PM	
1,1-Dichloropropene	ND	0.50	µg/L	1	11/2/2011 05:17 PM	
1,2,3-Trichlorobenzene	ND	0.50	µg/L	1	11/2/2011 05:17 PM	
1,2,3-Trichloropropane	ND	0.50	µg/L	1	11/2/2011 05:17 PM	
1,2,4-Trichlorobenzene	ND	0.50	µg/L	1	11/2/2011 05:17 PM	
1,2,4-Trimethylbenzene	ND	0.50	µg/L	1	11/2/2011 05:17 PM	
1,2-Dibromo-3-chloropropane	ND	0.50	µg/L	1	11/2/2011 05:17 PM	
1,2-Dibromoethane	ND	0.50	µg/L	1	11/2/2011 05:17 PM	
1,2-Dichlorobenzene	ND	0.50	µg/L	1	11/2/2011 05:17 PM	
1,2-Dichloroethane	ND	0.50	µg/L	1	11/2/2011 05:17 PM	
1,2-Dichloropropane	ND	0.50	µg/L	1	11/2/2011 05:17 PM	
1,3,5-Trimethylbenzene	ND	0.50	µg/L	1	11/2/2011 05:17 PM	
1,3-Dichlorobenzene	ND	0.50	µg/L	1	11/2/2011 05:17 PM	
1,3-Dichloropropane	ND	0.50	µg/L	1	11/2/2011 05:17 PM	
1,4-Dichlorobenzene	ND	0.50	µg/L	1	11/2/2011 05:17 PM	
2,2-Dichloropropane	ND	0.50	µg/L	1	11/2/2011 05:17 PM	
2-Chlorotoluene	ND	0.50	µg/L	1	11/2/2011 05:17 PM	
4-Chlorotoluene	ND	0.50	µg/L	1	11/2/2011 05:17 PM	
4-Isopropyltoluene	ND	0.50	µg/L	1	11/2/2011 05:17 PM	
Benzene	ND	0.50	µg/L	1	11/2/2011 05:17 PM	
Bromobenzene	ND	0.50	µg/L	1	11/2/2011 05:17 PM	
Bromodichloromethane	ND	0.50	µg/L	1	11/2/2011 05:17 PM	
Bromoform	ND	0.50	µg/L	1	11/2/2011 05:17 PM	
Bromomethane	ND	0.50	µg/L	1	11/2/2011 05:17 PM	
Carbon tetrachloride	ND	0.50	µg/L	1	11/2/2011 05:17 PM	
Chlorobenzene	ND	0.50	µg/L	1	11/2/2011 05:17 PM	
Chloroethane	ND	0.50	µg/L	1	11/2/2011 05:17 PM	
Chloroform	ND	0.50	µg/L	1	11/2/2011 05:17 PM	
Chloromethane	ND	0.50	µg/L	1	11/2/2011 05:17 PM	
cis-1,2-Dichloroethene	ND	0.50	µg/L	1	11/2/2011 05:17 PM	

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 14-Nov-11

CLIENT: Hargis & Associates, Inc.
Lab Order: 120594
Project: Raytheon Fullerton-Monthly, 532.15
Lab ID: 120594-004A

Client Sample ID: POX
Collection Date: 11/1/2011 1:05:00 PM
Matrix: GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

RunID:	MS11_111102A	QC Batch:	A11VW213	PrepDate:	Analyst:	BD
cis-1,3-Dichloropropene	ND	0.50	µg/L	1	11/2/2011 05:17 PM	
Dibromochloromethane	ND	0.50	µg/L	1	11/2/2011 05:17 PM	
Dibromomethane	ND	0.50	µg/L	1	11/2/2011 05:17 PM	
Dichlorodifluoromethane	ND	0.50	µg/L	1	11/2/2011 05:17 PM	
Ethylbenzene	ND	0.50	µg/L	1	11/2/2011 05:17 PM	
Hexachlorobutadiene	ND	0.50	µg/L	1	11/2/2011 05:17 PM	
Isopropylbenzene	ND	0.50	µg/L	1	11/2/2011 05:17 PM	
m,p-Xylene	ND	1.0	µg/L	1	11/2/2011 05:17 PM	
Methylene chloride	ND	1.0	µg/L	1	11/2/2011 05:17 PM	
n-Butylbenzene	ND	0.50	µg/L	1	11/2/2011 05:17 PM	
n-Propylbenzene	ND	0.50	µg/L	1	11/2/2011 05:17 PM	
Naphthalene	ND	0.50	µg/L	1	11/2/2011 05:17 PM	
o-Xylene	ND	0.50	µg/L	1	11/2/2011 05:17 PM	
sec-Butylbenzene	ND	0.50	µg/L	1	11/2/2011 05:17 PM	
Styrene	ND	0.50	µg/L	1	11/2/2011 05:17 PM	
tert-Butylbenzene	ND	0.50	µg/L	1	11/2/2011 05:17 PM	
Tetrachloroethene	ND	0.50	µg/L	1	11/2/2011 05:17 PM	
Toluene	ND	0.50	µg/L	1	11/2/2011 05:17 PM	
trans-1,2-Dichloroethene	ND	0.50	µg/L	1	11/2/2011 05:17 PM	
Trichloroethene	ND	0.50	µg/L	1	11/2/2011 05:17 PM	
Trichlorofluoromethane	ND	0.50	µg/L	1	11/2/2011 05:17 PM	
Vinyl chloride	ND	0.50	µg/L	1	11/2/2011 05:17 PM	
Surr: 1,2-Dichloroethane-d4	129	70-130	%REC	1	11/2/2011 05:17 PM	
Surr: 4-Bromofluorobenzene	99.8	70-130	%REC	1	11/2/2011 05:17 PM	
Surr: Dibromofluoromethane	118	70-130	%REC	1	11/2/2011 05:17 PM	
Surr: Toluene-d8	110	70-130	%REC	1	11/2/2011 05:17 PM	

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



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ANALYTICAL RESULTS
 Print Date: 14-Nov-11

CLIENT:	Hargis & Associates, Inc.	Client Sample ID:	POX
Lab Order:	120594	Collection Date:	11/1/2011 1:05:00 PM
Project:	Raytheon Fullerton-Monthly, 532.15	Matrix:	GROUNDWATER
Lab ID:	120594-004B		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
1,4-DIOXANE BY GC/MS-SIM: ISOTOPE DILUTION						
	EPA 3510C		EPA 8270C(M)			
RunID: MS15_111108A	QC Batch: 76761				PrepDate: 11/4/2011	Analyst: JSD
1,4-Dioxane	0.33	0.20		µg/L	1	11/8/2011 11:22 AM
Surr: 1,2-Dichlorobenzene-d4	97.1	58-99		%REC	1	11/8/2011 11:22 AM
Surr: 2-Fluorobiphenyl	86.5	60-104		%REC	1	11/8/2011 11:22 AM
Surr: 4-Terphenyl-d14	103	65-127		%REC	1	11/8/2011 11:22 AM
Surr: Nitrobenzene-d5	111	50-136		%REC	1	11/8/2011 11:22 AM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		



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ANALYTICAL RESULTS
Print Date: 14-Nov-11

CLIENT:	Hargis & Associates, Inc.	Client Sample ID:	POX
Lab Order:	120594	Collection Date:	11/1/2011 1:05:00 PM
Project:	Raytheon Fullerton-Monthly, 532.15	Matrix:	GROUNDWATER
Lab ID:	120594-004C		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_111107C	QC Batch: 76820	PrepDate: 11/7/2011	Analyst: PT		
Total Dissolved Solids (Residue, Filterable)	630	10	mg/L	1	11/7/2011 08:03 AM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		



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ANALYTICAL RESULTS
Print Date: 14-Nov-11

CLIENT:	Hargis & Associates, Inc.	Client Sample ID:	POX
Lab Order:	120594	Collection Date:	11/1/2011 1:05:00 PM
Project:	Raytheon Fullerton-Monthly, 532.15	Matrix:	GROUNDWATER
Lab ID:	120594-004D		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC3_111102B	QC Batch: R138129	PrepDate:	Analyst: PT	
Bromide	0.42	0.050 mg/L	1	11/2/2011 12:47 PM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		



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ANALYTICAL RESULTS

Print Date: 14-Nov-11

CLIENT: Hargis & Associates, Inc.
Lab Order: 120594
Project: Raytheon Fullerton-Monthly, 532.15
Lab ID: 120594-005A

Client Sample ID: CBT
Collection Date: 11/1/2011 1:15:00 PM
Matrix: GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

RunID: MS11_111102A	QC Batch: A11VW213	PrepDate:	Analyst: BD		
1,1,1,2-Tetrachloroethane	ND	0.50	µg/L	1	11/2/2011 04:37 PM
1,1,1-Trichloroethane	ND	0.50	µg/L	1	11/2/2011 04:37 PM
1,1,2,2-Tetrachloroethane	ND	0.50	µg/L	1	11/2/2011 04:37 PM
1,1,2-Trichloroethane	ND	0.50	µg/L	1	11/2/2011 04:37 PM
1,1-Dichloroethane	0.55	0.50	µg/L	1	11/2/2011 04:37 PM
1,1-Dichloroethene	ND	0.50	µg/L	1	11/2/2011 04:37 PM
1,1-Dichloropropene	ND	0.50	µg/L	1	11/2/2011 04:37 PM
1,2,3-Trichlorobenzene	ND	0.50	µg/L	1	11/2/2011 04:37 PM
1,2,3-Trichloropropane	ND	0.50	µg/L	1	11/2/2011 04:37 PM
1,2,4-Trichlorobenzene	ND	0.50	µg/L	1	11/2/2011 04:37 PM
1,2,4-Trimethylbenzene	ND	0.50	µg/L	1	11/2/2011 04:37 PM
1,2-Dibromo-3-chloropropane	ND	0.50	µg/L	1	11/2/2011 04:37 PM
1,2-Dibromoethane	ND	0.50	µg/L	1	11/2/2011 04:37 PM
1,2-Dichlorobenzene	ND	0.50	µg/L	1	11/2/2011 04:37 PM
1,2-Dichloroethane	ND	0.50	µg/L	1	11/2/2011 04:37 PM
1,2-Dichloropropane	ND	0.50	µg/L	1	11/2/2011 04:37 PM
1,3,5-Trimethylbenzene	ND	0.50	µg/L	1	11/2/2011 04:37 PM
1,3-Dichlorobenzene	ND	0.50	µg/L	1	11/2/2011 04:37 PM
1,3-Dichloropropane	ND	0.50	µg/L	1	11/2/2011 04:37 PM
1,4-Dichlorobenzene	ND	0.50	µg/L	1	11/2/2011 04:37 PM
2,2-Dichloropropane	ND	0.50	µg/L	1	11/2/2011 04:37 PM
2-Chlorotoluene	ND	0.50	µg/L	1	11/2/2011 04:37 PM
4-Chlorotoluene	ND	0.50	µg/L	1	11/2/2011 04:37 PM
4-Isopropyltoluene	ND	0.50	µg/L	1	11/2/2011 04:37 PM
Benzene	ND	0.50	µg/L	1	11/2/2011 04:37 PM
Bromobenzene	ND	0.50	µg/L	1	11/2/2011 04:37 PM
Bromodichloromethane	ND	0.50	µg/L	1	11/2/2011 04:37 PM
Bromoform	ND	0.50	µg/L	1	11/2/2011 04:37 PM
Bromomethane	ND	0.50	µg/L	1	11/2/2011 04:37 PM
Carbon tetrachloride	ND	0.50	µg/L	1	11/2/2011 04:37 PM
Chlorobenzene	ND	0.50	µg/L	1	11/2/2011 04:37 PM
Chloroethane	ND	0.50	µg/L	1	11/2/2011 04:37 PM
Chloroform	ND	0.50	µg/L	1	11/2/2011 04:37 PM
Chloromethane	ND	0.50	µg/L	1	11/2/2011 04:37 PM
cis-1,2-Dichloroethene	ND	0.50	µg/L	1	11/2/2011 04:37 PM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 14-Nov-11

CLIENT: Hargis & Associates, Inc.
Lab Order: 120594
Project: Raytheon Fullerton-Monthly, 532.15
Lab ID: 120594-005A

Client Sample ID: CBT
Collection Date: 11/1/2011 1:15:00 PM
Matrix: GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

RunID:	MS11_111102A	QC Batch:	A11VW213	PrepDate:	Analyst:	BD
cis-1,3-Dichloropropene	ND	0.50	µg/L	1	11/2/2011 04:37 PM	
Dibromochloromethane	ND	0.50	µg/L	1	11/2/2011 04:37 PM	
Dibromomethane	ND	0.50	µg/L	1	11/2/2011 04:37 PM	
Dichlorodifluoromethane	ND	0.50	µg/L	1	11/2/2011 04:37 PM	
Ethylbenzene	ND	0.50	µg/L	1	11/2/2011 04:37 PM	
Hexachlorobutadiene	ND	0.50	µg/L	1	11/2/2011 04:37 PM	
Isopropylbenzene	ND	0.50	µg/L	1	11/2/2011 04:37 PM	
m,p-Xylene	ND	1.0	µg/L	1	11/2/2011 04:37 PM	
Methylene chloride	ND	1.0	µg/L	1	11/2/2011 04:37 PM	
n-Butylbenzene	ND	0.50	µg/L	1	11/2/2011 04:37 PM	
n-Propylbenzene	ND	0.50	µg/L	1	11/2/2011 04:37 PM	
Naphthalene	ND	0.50	µg/L	1	11/2/2011 04:37 PM	
o-Xylene	ND	0.50	µg/L	1	11/2/2011 04:37 PM	
sec-Butylbenzene	ND	0.50	µg/L	1	11/2/2011 04:37 PM	
Styrene	ND	0.50	µg/L	1	11/2/2011 04:37 PM	
tert-Butylbenzene	ND	0.50	µg/L	1	11/2/2011 04:37 PM	
Tetrachloroethene	ND	0.50	µg/L	1	11/2/2011 04:37 PM	
Toluene	ND	0.50	µg/L	1	11/2/2011 04:37 PM	
trans-1,2-Dichloroethene	ND	0.50	µg/L	1	11/2/2011 04:37 PM	
Trichloroethene	ND	0.50	µg/L	1	11/2/2011 04:37 PM	
Trichlorofluoromethane	ND	0.50	µg/L	1	11/2/2011 04:37 PM	
Vinyl chloride	ND	0.50	µg/L	1	11/2/2011 04:37 PM	
Surr: 1,2-Dichloroethane-d4	129	70-130	%REC	1	11/2/2011 04:37 PM	
Surr: 4-Bromofluorobenzene	102	70-130	%REC	1	11/2/2011 04:37 PM	
Surr: Dibromofluoromethane	115	70-130	%REC	1	11/2/2011 04:37 PM	
Surr: Toluene-d8	112	70-130	%REC	1	11/2/2011 04:37 PM	

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 14-Nov-11

CLIENT: Hargis & Associates, Inc.
Lab Order: 120594
Project: Raytheon Fullerton-Monthly, 532.15
Lab ID: 120594-006A

Client Sample ID: CEFF
Collection Date: 11/1/2011 1:20:00 PM
Matrix: GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

RunID:	MS11_111102A	QC Batch:	A11VW213	PrepDate:	Analyst:	BD
1,1,1,2-Tetrachloroethane	ND	0.50	µg/L	1	11/2/2011 04:16 PM	
1,1,1-Trichloroethane	ND	0.50	µg/L	1	11/2/2011 04:16 PM	
1,1,2,2-Tetrachloroethane	ND	0.50	µg/L	1	11/2/2011 04:16 PM	
1,1,2-Trichloroethane	ND	0.50	µg/L	1	11/2/2011 04:16 PM	
1,1-Dichloroethane	0.56	0.50	µg/L	1	11/2/2011 04:16 PM	
1,1-Dichloroethene	ND	0.50	µg/L	1	11/2/2011 04:16 PM	
1,1-Dichloropropene	ND	0.50	µg/L	1	11/2/2011 04:16 PM	
1,2,3-Trichlorobenzene	ND	0.50	µg/L	1	11/2/2011 04:16 PM	
1,2,3-Trichloropropane	ND	0.50	µg/L	1	11/2/2011 04:16 PM	
1,2,4-Trichlorobenzene	ND	0.50	µg/L	1	11/2/2011 04:16 PM	
1,2,4-Trimethylbenzene	ND	0.50	µg/L	1	11/2/2011 04:16 PM	
1,2-Dibromo-3-chloropropane	ND	0.50	µg/L	1	11/2/2011 04:16 PM	
1,2-Dibromoethane	ND	0.50	µg/L	1	11/2/2011 04:16 PM	
1,2-Dichlorobenzene	ND	0.50	µg/L	1	11/2/2011 04:16 PM	
1,2-Dichloroethane	ND	0.50	µg/L	1	11/2/2011 04:16 PM	
1,2-Dichloropropane	ND	0.50	µg/L	1	11/2/2011 04:16 PM	
1,3,5-Trimethylbenzene	ND	0.50	µg/L	1	11/2/2011 04:16 PM	
1,3-Dichlorobenzene	ND	0.50	µg/L	1	11/2/2011 04:16 PM	
1,3-Dichloropropane	ND	0.50	µg/L	1	11/2/2011 04:16 PM	
1,4-Dichlorobenzene	ND	0.50	µg/L	1	11/2/2011 04:16 PM	
2,2-Dichloropropane	ND	0.50	µg/L	1	11/2/2011 04:16 PM	
2-Chlorotoluene	ND	0.50	µg/L	1	11/2/2011 04:16 PM	
4-Chlorotoluene	ND	0.50	µg/L	1	11/2/2011 04:16 PM	
4-Isopropyltoluene	ND	0.50	µg/L	1	11/2/2011 04:16 PM	
Benzene	ND	0.50	µg/L	1	11/2/2011 04:16 PM	
Bromobenzene	ND	0.50	µg/L	1	11/2/2011 04:16 PM	
Bromodichloromethane	ND	0.50	µg/L	1	11/2/2011 04:16 PM	
Bromoform	ND	0.50	µg/L	1	11/2/2011 04:16 PM	
Bromomethane	ND	0.50	µg/L	1	11/2/2011 04:16 PM	
Carbon tetrachloride	ND	0.50	µg/L	1	11/2/2011 04:16 PM	
Chlorobenzene	ND	0.50	µg/L	1	11/2/2011 04:16 PM	
Chloroethane	ND	0.50	µg/L	1	11/2/2011 04:16 PM	
Chloroform	ND	0.50	µg/L	1	11/2/2011 04:16 PM	
Chloromethane	ND	0.50	µg/L	1	11/2/2011 04:16 PM	
cis-1,2-Dichloroethene	ND	0.50	µg/L	1	11/2/2011 04:16 PM	

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 14-Nov-11

CLIENT: Hargis & Associates, Inc.
Lab Order: 120594
Project: Raytheon Fullerton-Monthly, 532.15
Lab ID: 120594-006A

Client Sample ID: CEFF
Collection Date: 11/1/2011 1:20:00 PM
Matrix: GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

RunID:	MS11_111102A	QC Batch:	A11VW213	PrepDate:	Analyst:	BD
cis-1,3-Dichloropropene	ND	0.50	µg/L	1	11/2/2011 04:16 PM	
Dibromochloromethane	ND	0.50	µg/L	1	11/2/2011 04:16 PM	
Dibromomethane	ND	0.50	µg/L	1	11/2/2011 04:16 PM	
Dichlorodifluoromethane	ND	0.50	µg/L	1	11/2/2011 04:16 PM	
Ethylbenzene	ND	0.50	µg/L	1	11/2/2011 04:16 PM	
Hexachlorobutadiene	ND	0.50	µg/L	1	11/2/2011 04:16 PM	
Isopropylbenzene	ND	0.50	µg/L	1	11/2/2011 04:16 PM	
m,p-Xylene	ND	1.0	µg/L	1	11/2/2011 04:16 PM	
Methylene chloride	ND	1.0	µg/L	1	11/2/2011 04:16 PM	
n-Butylbenzene	ND	0.50	µg/L	1	11/2/2011 04:16 PM	
n-Propylbenzene	ND	0.50	µg/L	1	11/2/2011 04:16 PM	
Naphthalene	ND	0.50	µg/L	1	11/2/2011 04:16 PM	
o-Xylene	ND	0.50	µg/L	1	11/2/2011 04:16 PM	
sec-Butylbenzene	ND	0.50	µg/L	1	11/2/2011 04:16 PM	
Styrene	ND	0.50	µg/L	1	11/2/2011 04:16 PM	
tert-Butylbenzene	ND	0.50	µg/L	1	11/2/2011 04:16 PM	
Tetrachloroethene	ND	0.50	µg/L	1	11/2/2011 04:16 PM	
Toluene	ND	0.50	µg/L	1	11/2/2011 04:16 PM	
trans-1,2-Dichloroethene	ND	0.50	µg/L	1	11/2/2011 04:16 PM	
Trichloroethene	ND	0.50	µg/L	1	11/2/2011 04:16 PM	
Trichlorofluoromethane	ND	0.50	µg/L	1	11/2/2011 04:16 PM	
Vinyl chloride	ND	0.50	µg/L	1	11/2/2011 04:16 PM	
Surr: 1,2-Dichloroethane-d4	126	70-130	%REC	1	11/2/2011 04:16 PM	
Surr: 4-Bromofluorobenzene	98.9	70-130	%REC	1	11/2/2011 04:16 PM	
Surr: Dibromofluoromethane	114	70-130	%REC	1	11/2/2011 04:16 PM	
Surr: Toluene-d8	113	70-130	%REC	1	11/2/2011 04:16 PM	

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS
Print Date: 14-Nov-11

CLIENT:	Hargis & Associates, Inc.	Client Sample ID:	CEFF
Lab Order:	120594	Collection Date:	11/1/2011 1:20:00 PM
Project:	Raytheon Fullerton-Monthly, 532.15	Matrix:	GROUNDWATER
Lab ID:	120594-006B		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_111107C	QC Batch: 76820	PrepDate: 11/7/2011	Analyst: PT		
Total Dissolved Solids (Residue, Filterable)	640	10	mg/L	1	11/7/2011 08:03 AM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		



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ANALYTICAL RESULTS
Print Date: 14-Nov-11

CLIENT:	Hargis & Associates, Inc.	Client Sample ID:	CEFF
Lab Order:	120594	Collection Date:	11/1/2011 1:20:00 PM
Project:	Raytheon Fullerton-Monthly, 532.15	Matrix:	GROUNDWATER
Lab ID:	120594-006C		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC3_111102B	QC Batch: R138129	PrepDate:	Analyst: PT	
Bromide	0.43	0.050 mg/L	1	11/2/2011 12:58 PM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		



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3275 Walnut Avenue, Signal Hill, CA 90755 Tel: 562.989.4045 Fax: 562.989.4040

CLIENT: Hargis & Associates, Inc.
Work Order: 120594
Project: Raytheon Fullerton-Monthly, 532.15

ANALYTICAL QC SUMMARY REPORT

TestCode: 160.1_2540C_W

Sample ID: 120594-006B-DUP	SampType: DUP	TestCode: 160.1_2540C	Units: mg/L	Prep Date: 11/7/2011	RunNo: 138239						
Client ID: CEFF	Batch ID: 76820	TestNo: SM2540C		Analysis Date: 11/7/2011	SeqNo: 2272510						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filtera	633.000	10						641.0	1.26	10	
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Sample ID: LCS-76820	SampType: LCS	TestCode: 160.1_2540C	Units: mg/L	Prep Date: 11/7/2011	RunNo: 138239						
Client ID: LCSW	Batch ID: 76820	TestNo: SM2540C		Analysis Date: 11/7/2011	SeqNo: 2272511						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

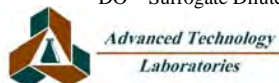
Total Dissolved Solids (Residue, Filtera	984.000	10	970.0	0	101	80	120				
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Sample ID: MB-76820	SampType: MBLK	TestCode: 160.1_2540C	Units: mg/L	Prep Date: 11/7/2011	RunNo: 138239						
Client ID: PBW	Batch ID: 76820	TestNo: SM2540C		Analysis Date: 11/7/2011	SeqNo: 2272512						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filtera	ND	10									
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Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



CLIENT: Hargis & Associates, Inc.
Work Order: 120594
Project: Raytheon Fullerton-Monthly, 532.15

ANALYTICAL QC SUMMARY REPORT

TestCode: 160.2_2540D_W

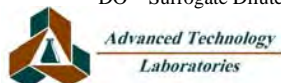
Sample ID: 120604-001A-DUP	SampType: DUP	TestCode: 160.2_2540D	Units: mg/L	Prep Date: 11/2/2011	RunNo: 138102						
Client ID: ZZZZZZ	Batch ID: 76728	TestNo: SM2540D		Analysis Date: 11/2/2011	SeqNo: 2269827						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Suspended Solids (Residue, Non-Filter)	ND	10						0	0	10	

Sample ID: LCS-76728	SampType: LCS	TestCode: 160.2_2540D	Units: mg/L	Prep Date: 11/2/2011	RunNo: 138102						
Client ID: LCSW	Batch ID: 76728	TestNo: SM2540D		Analysis Date: 11/2/2011	SeqNo: 2269828						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Suspended Solids (Residue, Non-Filter)	94.000	10	96.60	0	97.3	80	120				

Sample ID: MB-76728	SampType: MBLK	TestCode: 160.2_2540D	Units: mg/L	Prep Date: 11/2/2011	RunNo: 138102						
Client ID: PBW	Batch ID: 76728	TestNo: SM2540D		Analysis Date: 11/2/2011	SeqNo: 2269829						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Suspended Solids (Residue, Non-Filter)	ND	10									

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



CLIENT: Hargis & Associates, Inc.
Work Order: 120594
Project: Raytheon Fullerton-Monthly, 532.15

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_BR

Sample ID: MB-R138129	SampType: MBLK	TestCode: 300_W_BR	Units: mg/L	Prep Date:	RunNo: 138129						
Client ID: PBW	Batch ID: R138129	TestNo: EPA 300.0		Analysis Date: 11/2/2011	SeqNo: 2270430						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Bromide	ND	0.050									
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Sample ID: LCS-R138129	SampType: LCS	TestCode: 300_W_BR	Units: mg/L	Prep Date:	RunNo: 138129						
Client ID: LCSW	Batch ID: R138129	TestNo: EPA 300.0		Analysis Date: 11/2/2011	SeqNo: 2270431						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Bromide	0.979	0.050	1.000	0	97.9	90	110				
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Sample ID: 120608-001B-DUP	SampType: DUP	TestCode: 300_W_BR	Units: mg/L	Prep Date:	RunNo: 138129						
Client ID: ZZZZZZ	Batch ID: R138129	TestNo: EPA 300.0		Analysis Date: 11/2/2011	SeqNo: 2270436						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Bromide	0.428	0.25						0.4735	10.2	20	
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Sample ID: 120608-001B-MS	SampType: MS	TestCode: 300_W_BR	Units: mg/L	Prep Date:	RunNo: 138129						
Client ID: ZZZZZZ	Batch ID: R138129	TestNo: EPA 300.0		Analysis Date: 11/2/2011	SeqNo: 2270437						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

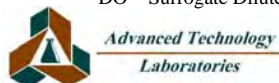
Bromide	13.515	0.25	12.50	0.4735	104	80	120				
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Sample ID: 120608-001B-MSD	SampType: MSD	TestCode: 300_W_BR	Units: mg/L	Prep Date:	RunNo: 138129						
Client ID: ZZZZZZ	Batch ID: R138129	TestNo: EPA 300.0		Analysis Date: 11/2/2011	SeqNo: 2270438						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Bromide	13.371	0.25	12.50	0.4735	103	80	120	13.51	1.07	20	
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Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



CLIENT: Hargis & Associates, Inc.
Work Order: 120594
Project: Raytheon Fullerton-Monthly, 532.15

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_LL

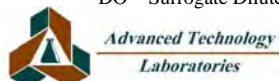
Sample ID: A111102LCS1		SampType: LCS		TestCode: 8260_WP_LL		Units: µg/L		Prep Date:		RunNo: 138119	
Client ID: LCSW		Batch ID: A11VW213		TestNo: EPA 8260B		Analysis Date: 11/2/2011				SeqNo: 2270294	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	16.260	0.50	20.00	0	81.3	70	130				
Benzene	35.570	0.50	40.00	0	88.9	70	130				
Chlorobenzene	19.160	0.50	20.00	0	95.8	70	130				
MTBE	20.280	0.50	20.00	0	101	70	130				
Toluene	37.660	0.50	40.00	0	94.2	70	130				
Trichloroethene	19.040	0.50	20.00	0	95.2	70	130				
Surr: 1,2-Dichloroethane-d4	26.740		25.00		107	70	130				
Surr: 4-Bromofluorobenzene	26.200		25.00		105	70	130				
Surr: Dibromofluoromethane	25.210		25.00		101	70	130				
Surr: Toluene-d8	26.470		25.00		106	70	130				

Sample ID: A111102LCSD		SampType: LCSD		TestCode: 8260_WP_LL		Units: µg/L		Prep Date:		RunNo: 138119	
Client ID: LCSS02		Batch ID: A11VW213		TestNo: EPA 8260B		Analysis Date: 11/2/2011				SeqNo: 2270295	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	15.010	0.50	20.00	0	75.0	70	130	16.26	7.99	20	
Benzene	35.610	0.50	40.00	0	89.0	70	130	35.57	0.112	20	
Chlorobenzene	18.950	0.50	20.00	0	94.8	70	130	19.16	1.10	20	
MTBE	20.320	0.50	20.00	0	102	70	130	20.28	0.197	20	
Toluene	37.610	0.50	40.00	0	94.0	70	130	37.66	0.133	20	
Trichloroethene	18.470	0.50	20.00	0	92.4	70	130	19.04	3.04	20	
Surr: 1,2-Dichloroethane-d4	27.290		25.00		109	70	130		0	0	
Surr: 4-Bromofluorobenzene	26.490		25.00		106	70	130		0	0	
Surr: Dibromofluoromethane	25.550		25.00		102	70	130		0	0	
Surr: Toluene-d8	27.240		25.00		109	70	130		0	0	

Sample ID: A111102MB2		SampType: MBLK		TestCode: 8260_WP_LL		Units: µg/L		Prep Date:		RunNo: 138119	
Client ID: PBW		Batch ID: A11VW213		TestNo: EPA 8260B		Analysis Date: 11/2/2011				SeqNo: 2270296	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



CLIENT: Hargis & Associates, Inc.
Work Order: 120594
Project: Raytheon Fullerton-Monthly, 532.15

ANALYTICAL QC SUMMARY REPORT

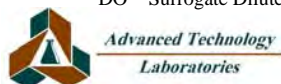
TestCode: 8260_WP_LL

Sample ID: A111102MB2	SampType: MBLK	TestCode: 8260_WP_LL	Units: µg/L	Prep Date:	RunNo: 138119						
Client ID: PBW	Batch ID: A11VW213	TestNo: EPA 8260B		Analysis Date: 11/2/2011	SeqNo: 2270296						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

1,1,1,2-Tetrachloroethane	ND	0.50									
1,1,1-Trichloroethane	ND	0.50									
1,1,2,2-Tetrachloroethane	ND	0.50									
1,1,2-Trichloroethane	ND	0.50									
1,1-Dichloroethane	ND	0.50									
1,1-Dichloroethene	ND	0.50									
1,1-Dichloropropene	ND	0.50									
1,2,3-Trichlorobenzene	ND	0.50									
1,2,3-Trichloropropane	ND	0.50									
1,2,4-Trichlorobenzene	ND	0.50									
1,2,4-Trimethylbenzene	ND	0.50									
1,2-Dibromo-3-chloropropane	ND	0.50									
1,2-Dibromoethane	ND	0.50									
1,2-Dichlorobenzene	ND	0.50									
1,2-Dichloroethane	ND	0.50									
1,2-Dichloropropane	ND	0.50									
1,3,5-Trimethylbenzene	ND	0.50									
1,3-Dichlorobenzene	ND	0.50									
1,3-Dichloropropane	ND	0.50									
1,4-Dichlorobenzene	ND	0.50									
2,2-Dichloropropane	ND	0.50									
2-Chlorotoluene	ND	0.50									
4-Chlorotoluene	ND	0.50									
4-Isopropyltoluene	ND	0.50									
Benzene	ND	0.50									
Bromobenzene	ND	0.50									
Bromodichloromethane	ND	0.50									
Bromoform	ND	0.50									
Bromomethane	ND	0.50									
Carbon tetrachloride	ND	0.50									

Qualifiers:

B Analyte detected in the associated Method Blank	E Value above quantitation range	H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit	R RPD outside accepted recovery limits	S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out	Calculations are based on raw values	



CLIENT: Hargis & Associates, Inc.
Work Order: 120594
Project: Raytheon Fullerton-Monthly, 532.15

ANALYTICAL QC SUMMARY REPORT

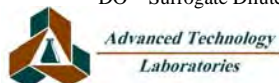
TestCode: 8260_WP_LL

Sample ID: A111102MB2	SampType: MBLK	TestCode: 8260_WP_LL	Units: µg/L	Prep Date:	RunNo: 138119						
Client ID: PBW	Batch ID: A11VW213	TestNo: EPA 8260B		Analysis Date: 11/2/2011	SeqNo: 2270296						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chlorobenzene	ND	0.50									
Chloroethane	ND	0.50									
Chloroform	ND	0.50									
Chloromethane	ND	0.50									
cis-1,2-Dichloroethene	ND	0.50									
cis-1,3-Dichloropropene	ND	0.50									
Dibromochloromethane	ND	0.50									
Dibromomethane	ND	0.50									
Dichlorodifluoromethane	ND	0.50									
Ethylbenzene	ND	0.50									
Hexachlorobutadiene	ND	0.50									
Isopropylbenzene	ND	0.50									
m,p-Xylene	ND	1.0									
Methylene chloride	ND	1.0									
n-Butylbenzene	ND	0.50									
n-Propylbenzene	ND	0.50									
Naphthalene	ND	0.50									
o-Xylene	ND	0.50									
sec-Butylbenzene	ND	0.50									
Styrene	ND	0.50									
tert-Butylbenzene	ND	0.50									
Tetrachloroethene	ND	0.50									
Toluene	ND	0.50									
trans-1,2-Dichloroethene	ND	0.50									
Trichloroethene	ND	0.50									
Trichlorofluoromethane	ND	0.50									
Vinyl chloride	ND	0.50									
Surr: 1,2-Dichloroethane-d4	28.420		25.00		114	70	130				
Surr: 4-Bromofluorobenzene	24.990		25.00		100	70	130				
Surr: Dibromofluoromethane	27.060		25.00		108	70	130				

Qualifiers:

B Analyte detected in the associated Method Blank	E Value above quantitation range	H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit	R RPD outside accepted recovery limits	S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out	Calculations are based on raw values	



CLIENT: Hargis & Associates, Inc.
Work Order: 120594
Project: Raytheon Fullerton-Monthly, 532.15

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_LL

Sample ID: A111102MB2	SampType: MBLK	TestCode: 8260_WP_LL	Units: µg/L	Prep Date:	RunNo: 138119						
Client ID: PBW	Batch ID: A11VW213	TestNo: EPA 8260B		Analysis Date: 11/2/2011	SeqNo: 2270296						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: Toluene-d8	27.340		25.00		109	70	130				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		



*Advanced Technology
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CLIENT: Hargis & Associates, Inc.
Work Order: 120594
Project: Raytheon Fullerton-Monthly, 532.15

ANALYTICAL QC SUMMARY REPORT

TestCode: 8270_Dioxane_W

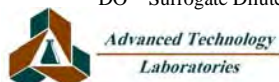
Sample ID: MB-76687	SampType: MBLK	TestCode: 8270_Dioxan	Units: µg/L	Prep Date: 11/1/2011	RunNo: 138114						
Client ID: PBW	Batch ID: 76687	TestNo: EPA 8270C(M EPA 3510C		Analysis Date: 11/2/2011	SeqNo: 2270206						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,4-Dioxane	ND	2.0									
Surr: 1,2-Dichlorobenzene-d4	75.880		100.0		75.9	46	97				
Surr: 2,4,6-Tribromophenol	79.350		100.0		79.4	59	124				
Surr: 2-Chlorophenol-d4	65.820		100.0		65.8	49	93				
Surr: 2-Fluorobiphenyl	79.270		100.0		79.3	57	107				
Surr: 2-Fluorophenol	35.470		100.0		35.5	27	60				
Surr: 4-Terphenyl-d14	83.270		100.0		83.3	69	132				
Surr: Nitrobenzene-d5	76.230		100.0		76.2	52	107				
Surr: Phenol-d5	25.380		100.0		25.4	15	50				

Sample ID: LCS-76687	SampType: LCS	TestCode: 8270_Dioxan	Units: µg/L	Prep Date: 11/1/2011	RunNo: 138114						
Client ID: LCSW	Batch ID: 76687	TestNo: EPA 8270C(M EPA 3510C		Analysis Date: 11/2/2011	SeqNo: 2270207						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,4-Dioxane	95.430	2.0	100.0	0	95.4	70	130				
Surr: 1,2-Dichlorobenzene-d4	70.420		100.0		70.4	46	97				
Surr: 2,4,6-Tribromophenol	87.430		100.0		87.4	59	124				
Surr: 2-Chlorophenol-d4	63.570		100.0		63.6	49	93				
Surr: 2-Fluorobiphenyl	81.340		100.0		81.3	57	107				
Surr: 2-Fluorophenol	34.140		100.0		34.1	27	60				
Surr: 4-Terphenyl-d14	89.180		100.0		89.2	69	132				
Surr: Nitrobenzene-d5	76.120		100.0		76.1	52	107				
Surr: Phenol-d5	26.870		100.0		26.9	15	50				

Sample ID: LCSD-76687	SampType: LCSD	TestCode: 8270_Dioxan	Units: µg/L	Prep Date: 11/1/2011	RunNo: 138114						
Client ID: LCSS02	Batch ID: 76687	TestNo: EPA 8270C(M EPA 3510C		Analysis Date: 11/2/2011	SeqNo: 2270208						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,4-Dioxane	100.130	2.0	100.0	0	100	70	130	95.43	4.81	20	
Surr: 1,2-Dichlorobenzene-d4	72.930		100.0		72.9	46	97		0	0	

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



CLIENT: Hargis & Associates, Inc.
Work Order: 120594
Project: Raytheon Fullerton-Monthly, 532.15

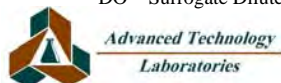
ANALYTICAL QC SUMMARY REPORT

TestCode: 8270_Dioxane_W

Sample ID: LCSD-76687	SampType: LCSD	TestCode: 8270_Dioxan	Units: µg/L	Prep Date: 11/1/2011	RunNo: 138114						
Client ID: LCSS02	Batch ID: 76687	TestNo: EPA 8270C(M EPA 3510C		Analysis Date: 11/2/2011	SeqNo: 2270208						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: 2,4,6-Tribromophenol	89.740		100.0		89.7	59	124		0	0	
Surr: 2-Chlorophenol-d4	67.490		100.0		67.5	49	93		0	0	
Surr: 2-Fluorobiphenyl	84.180		100.0		84.2	57	107		0	0	
Surr: 2-Fluorophenol	38.000		100.0		38.0	27	60		0	0	
Surr: 4-Terphenyl-d14	95.790		100.0		95.8	69	132		0	0	
Surr: Nitrobenzene-d5	78.480		100.0		78.5	52	107		0	0	
Surr: Phenol-d5	29.000		100.0		29.0	15	50		0	0	

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



CLIENT: Hargis & Associates, Inc.
Work Order: 120594
Project: Raytheon Fullerton-Monthly, 532.15

ANALYTICAL QC SUMMARY REPORT

TestCode: 8270_W_SIMDIOX

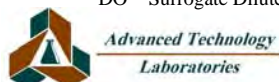
Sample ID: MB-76761	SampType: MBLK	TestCode: 8270_W_SIM	Units: µg/L	Prep Date: 11/4/2011	RunNo: 138221						
Client ID: PBW	Batch ID: 76761	TestNo: EPA 8270C(M EPA 3510C)		Analysis Date: 11/8/2011	SeqNo: 2272298						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,4-Dioxane	ND	0.20									
Surr: 1,2-Dichlorobenzene-d4	0.892		1.000		89.2	58	99				
Surr: 2-Fluorobiphenyl	0.888		1.000		88.8	60	104				
Surr: 4-Terphenyl-d14	1.130		1.000		113	65	127				
Surr: Nitrobenzene-d5	1.052		1.000		105	50	136				

Sample ID: LCS-76761	SampType: LCS	TestCode: 8270_W_SIM	Units: µg/L	Prep Date: 11/4/2011	RunNo: 138221						
Client ID: LCSW	Batch ID: 76761	TestNo: EPA 8270C(M EPA 3510C)		Analysis Date: 11/8/2011	SeqNo: 2272299						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,4-Dioxane	0.868	0.20	1.000	0	86.8	70	130				
Surr: 1,2-Dichlorobenzene-d4	0.808		1.000		80.8	58	99				
Surr: 2-Fluorobiphenyl	0.794		1.000		79.4	60	104				
Surr: 4-Terphenyl-d14	0.991		1.000		99.1	65	127				
Surr: Nitrobenzene-d5	0.932		1.000		93.2	50	136				

Sample ID: 120606-006BMS	SampType: MS	TestCode: 8270_W_SIM	Units: µg/L	Prep Date: 11/4/2011	RunNo: 138221						
Client ID: ZZZZZZ	Batch ID: 76761	TestNo: EPA 8270C(M EPA 3510C)		Analysis Date: 11/8/2011	SeqNo: 2272300						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,4-Dioxane	0.905	0.20	1.000	0.06982	83.5	70	130				
Surr: 1,2-Dichlorobenzene-d4	0.867		1.000		86.7	58	99				
Surr: 2-Fluorobiphenyl	0.821		1.000		82.1	60	104				
Surr: 4-Terphenyl-d14	0.941		1.000		94.1	65	127				
Surr: Nitrobenzene-d5	1.055		1.000		105	50	136				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



CLIENT: Hargis & Associates, Inc.
Work Order: 120594
Project: Raytheon Fullerton-Monthly, 532.15

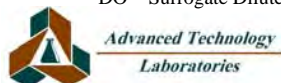
ANALYTICAL QC SUMMARY REPORT

TestCode: 8270_W_SIMDIOX

Sample ID: 120606-006BMSD	SampType: MSD	TestCode: 8270_W_SIM	Units: µg/L	Prep Date: 11/4/2011	RunNo: 138221						
Client ID: ZZZZZZ	Batch ID: 76761	TestNo: EPA 8270C(M EPA 3510C		Analysis Date: 11/8/2011	SeqNo: 2272301						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,4-Dioxane	1.144	0.20	1.000	0.06982	107	70	130	0.9050	23.4	30	
Surr: 1,2-Dichlorobenzene-d4	0.846		1.000		84.6	58	99		0	0	
Surr: 2-Fluorobiphenyl	0.785		1.000		78.5	60	104		0	0	
Surr: 4-Terphenyl-d14	0.895		1.000		89.5	65	127		0	0	
Surr: Nitrobenzene-d5	1.021		1.000		102	50	136		0	0	

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



Client: Advanced Technology Laboratories
Job No.: 135291

Bromate by EPA 317
Ion Chromatography with Post-Column Derivatization-Visible Absorption

Column: Dionex AS9-HC/AG9-HSC
Eluent: 30 mM Na₂CO₃
Flow: 1.0 mL/min
Injection: 250 µL
Detection: Post-column derivatization, Visible detection, 450 nm

Sample Preparation: The undiluted samples were treated with a Dionex OnGuard II H cartridge to remove excess basic cations.

<u>Sample ID</u>	<u>Bromate Parts per Billion (µg/L)</u>
120594-002F / EW-02	ND
120594-004E / POX	11.9
120594-006D / CEFF	7.9
Method Blank	ND
Detection Limit	0.5
Date Analyzed:	11-04-11

Quality Control Summary

Sample ID: 120594-002F / EW-02

<u>Analyte</u>	<u>Sample Result</u>	<u>Spike Conc</u>	<u>Spike Result</u>	<u>Spike % Rec</u>	<u>Spike Duplicate Result</u>	<u>Spike Duplicate % Rec</u>	<u>Spike RPD</u>
Bromate	ND	16.0	16.0	100	15.5	97	3
QC Guidelines				75-125		75-125	10



Advanced Technology Laboratories

3275 Walnut Avenue, Signal Hill, CA 90755-5225

www.atlglobal.com

TEL: (562) 989-4045

FAX: (562) 989-4040

CHAIN-OF-CUSTODY RECORD

QC Level: RTNE

Subcontractor:

Exova Inc.
9240 Santa Fe Springs Road
Santa Fe Springs, California 90670


TEL: 562 948-2225
FAX: 562 948-5850
Acct #:

Field Sampler: Marcos Rodriguez

01-Nov-11

Sample ID	Matrix	Date Collected	Bottle Type	Requested Tests		
				EPA 317.0		
120594-002F / EW-02	Groundwater	11/1/2011 1:45:00 PM	4OZP	1		
120594-004E / POX	Groundwater	11/1/2011 1:05:00 PM	4OZP	1		
120594-006D / CEFF	Groundwater	11/1/2011 1:20:00 PM	4OZP	1		

General Comments: Please email sample receipt acknowledgement to the PM. *RM*
 Please use PO#: SC06802 Please fax results by: Normal TAT
 Please analyze sample for Bromate by EPA 317
 Please send report to Rachelle Arada

Relinquished by: 	Date/Time: 11/1/11 1:04	Received by: _____	Date/Time: _____
Relinquished by: _____	Date/Time: _____	Received by: _____	Date/Time: _____

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST FORM

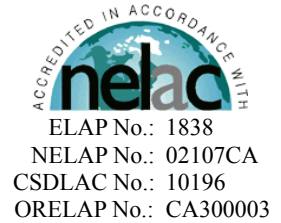
PROJECT NAME Raytheon Fullerton-Monthly				PROJECT No./TASK No. 532.15				SAMPLE CONTAINERS		ANALYSIS REQUESTED		ESTIMATED CONCENTRATION RANGE (ppb) FOR VOAS		SPECIAL HANDLING		LABORATORY INFORMATION	
PROJECT MANAGER Chris Ross				Phone No. 858-455-6500				10 ml Glass VOA 125 ml Poly 250 ml Poly 500 ml Poly 1 L Amber VOCs by 8260B 1,4-Dioxane by 8270 SIM Bromate by 317 TDS by SM2540C TSS by SM2540D Bromide by 30D 1,4-DIOXANE BY EPA 8270 MOD		0-10 10-100 100-1,000 >1,000						ATL	
QA MANAGER Steve Netto				Fax No. 858-455-6533												C/O Rachele Arada	
SAMPLER (SIGNATURE) 				SAMPLER (PRINTED) Marcos Rodriguez												3275 Walnut Ave.	
LAB ID		SAMPLE ID		SAMPLE COLLECTION		MATRIX		PRESERVATION				REMARKS					
		Date	Time	Soil	Ground-water	Surface water	Lab H2O	HCl	HNO 3	NaOH	H2SO 4	Ice					
	TB-110111	4/1/11	12:00				X	X									
	EW-02		13:45	X			X										
	PF		13:00	X													
	POX		13:05	X													
	CBT		13:15	X													
	CEFF		13:20	X													

Total number of Containers per analysis: 14/6 5 2 Total No. of Containers: 27

Relinquished by: 		Date <u>4/1/11</u>	Received by: 		Date <u>4/1/11</u>	INSTRUCTIONS 1. Fill out form completely except for shaded areas (lab use only); sign only after verified for completeness. 2. Complete in ballpoint pen. Draw one line through errors, initial and date correction. 3. Indicate number of sample containers in analysis request space; indicate choice with √ or x. 4. Note applicable preservatives, special instructions, and deviations from typical environmental samples. 5. Consult project QA documents for specific instructions.	Shipment Method: <u>DRIVER</u>	
Company <u>H+A</u>		Time <u>16:00</u>	Company <u>ATL</u>		Time <u>16:00</u>		Send Results to: <u>Steve Netto</u> <input checked="" type="checkbox"/> 9171 TOWNE CENTRE DRIVE, SUITE 375 SAN DIEGO, CA 92122 (658) 455-0888 <input type="checkbox"/> 1640 SOUTH STAPLEY DRIVE, SUITE 124 MESA, AZ 85204 (480) 345-0888 <input type="checkbox"/> 1820 EAST RIVER ROAD, SUITE 220 TUCSON, AZ 85718 (520) 881-7300	
Relinquished by:		Date	Received by:		Date		Send invoice to San Diego, CA Attn: Accounts Payable	
Company		Time	Company		Time	Sample Receipt: <input type="checkbox"/> No. of containers correct <input type="checkbox"/> received good condition/cold <input type="checkbox"/> custody seals secure <input type="checkbox"/> conforms to COC document		

December 28, 2011

Steve Netto
Hargis & Associates, Inc.
9171 Town Centre Drive, Suite 375
San Diego, CA 92122
Tel: (619) 249-3166
Fax:(619) 521-8580



Re: ATL Work Order Number : 1100530
Client Reference : Raytheon Fullerton - Quarterly, 532.15

Enclosed are the results for sample(s) received on December 07, 2011 by Advanced Technology Laboratories. The sample(s) are tested for the parameters as indicated on the enclosed chain of custody in accordance with applicable laboratory certifications. The laboratory results contained in this report specifically pertains to the sample(s) submitted.

Thank you for the opportunity to serve the needs of your company. If you have any questions, please feel free to contact me or your Project Manager.

Sincerely,

A handwritten signature in black ink, appearing to read "Eddie Rodriguez", with a small "ER" monogram to the left.

Eddie Rodriguez
Laboratory Director

The cover letter and the case narrative are an integral part of this analytical report and its absence renders the report invalid. The report cannot be reproduced without written permission from the client and Advanced Technology Laboratories.



Hargis & Associates, Inc.

9171 Town Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Fullerton - Quarterly, 532.15

Report To : Steve Netto

Reported : 12/28/2011

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
EW-02	1100530-01	Groundwater	12/07/11 17:10	12/07/11 19:27
POX	1100530-02	Groundwater	12/07/11 16:40	12/07/11 19:27
MW-21	1100530-03	Groundwater	12/07/11 17:30	12/07/11 19:27
INF	1100530-04	Groundwater	12/07/11 16:10	12/07/11 19:27

CASE NARRATIVE

The samples for SM 2320B (Alkalinity) analysis were subcontracted to AETL with DOHS Cert.#1541.



Hargis & Associates, Inc.
 9171 Town Centre Drive, Suite 375
 San Diego , CA 92122

Project Number : Raytheon Fullerton - Quarterly, 532.15
 Report To : Steve Netto
 Reported : 12/28/2011

Client Sample ID EW-02
Lab ID: 1100530-01

Anions Scan by Ion Chromatography EPA 300.0

Analyst: Phali

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Chloride	82	10	NA	20	B1L0700	12/09/2011	12/09/11 10:06	
Nitrate as N	5.1	0.10	NA	1	B1L0697	12/08/2011	12/08/11 12:55	
Nitrite, as N	ND	0.10	NA	1	B1L0697	12/08/2011	12/08/11 12:55	
ortho-Phosphate (As P)	ND	0.05	NA	1	B1L0697	12/08/2011	12/08/11 12:55	
Sulfate	100	20	NA	20	B1L0700	12/09/2011	12/09/11 10:06	

Chemical Oxygen Demand by EPA 410.4

Analyst: PT

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Chemical Oxygen Demand	ND	5.0	4.8	1	B1L0413	12/13/2011	12/13/11 14:15	

Total Metals by ICP-AES EPA 6010B

Analyst: KK

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Selenium	0.01	0.01	NA	1	B1L0371	12/13/2011	12/13/11 15:55	

Dissolved Metals by ICP-AES EPA 6010B

Analyst: KK

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Calcium	96	0.50	NA	1	B1L0446	12/14/2011	12/16/11 17:37	
Iron	ND	0.50	NA	1	B1L0446	12/14/2011	12/16/11 17:37	
Magnesium	30	0.10	NA	1	B1L0446	12/14/2011	12/16/11 17:37	
Manganese	ND	0.50	NA	1	B1L0446	12/14/2011	12/16/11 17:38	
Selenium	0.01	0.01	NA	1	B1L0446	12/14/2011	12/16/11 17:38	
Sodium	82	2.0	NA	2	B1L0446	12/14/2011	12/21/11 11:17	

Total Organic Carbon by SM 5310B

Analyst: PT

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Organic Carbon, Total	ND	3.0	NA	1	B1L0358	12/12/2011	12/12/11 13:52	



Hargis & Associates, Inc.
9171 Town Centre Drive, Suite 375
San Diego , CA 92122

Project Number : Raytheon Fullerton - Quarterly, 532.15
Report To : Steve Netto
Reported : 12/28/2011

Client Sample ID POX
Lab ID: 1100530-02

Anions Scan by Ion Chromatography EPA 300.0

Analyst: Phali

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Chloride	140	10	NA	20	B1L0700	12/09/2011	12/09/11 10:17	
Nitrate as N	5.6	0.10	NA	1	B1L0697	12/08/2011	12/08/11 13:06	
Nitrite, as N	ND	0.10	NA	1	B1L0697	12/08/2011	12/08/11 13:06	
ortho-Phosphate (As P)	ND	0.05	NA	1	B1L0697	12/08/2011	12/08/11 13:06	
Sulfate	100	20	NA	20	B1L0700	12/09/2011	12/09/11 10:17	

Chemical Oxygen Demand by EPA 410.4

Analyst: PT

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Chemical Oxygen Demand	18.5	5.0	4.8	1	B1L0413	12/13/2011	12/13/11 14:15	

Total Organic Carbon by SM 5310B

Analyst: PT

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Organic Carbon, Total	ND	3.0	NA	1	B1L0358	12/12/2011	12/12/11 14:05	



Hargis & Associates, Inc.
 9171 Town Centre Drive, Suite 375
 San Diego , CA 92122

Project Number : Raytheon Fullerton - Quarterly, 532.15
 Report To : Steve Netto
 Reported : 12/28/2011

Client Sample ID MW-21
Lab ID: 1100530-03

Anions Scan by Ion Chromatography EPA 300.0

Analyst: Phali

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Chloride	220	25	NA	50	B1L0700	12/09/2011	12/09/11 10:28	
Nitrate as N	7.0	0.20	NA	2	B1L0697	12/08/2011	12/08/11 13:18	
Nitrite, as N	ND	0.20	NA	2	B1L0697	12/08/2011	12/08/11 13:18	
ortho-Phosphate (As P)	ND	0.10	NA	2	B1L0697	12/08/2011	12/08/11 13:18	
Sulfate	62	50	NA	50	B1L0700	12/09/2011	12/09/11 10:28	

Chemical Oxygen Demand by EPA 410.4

Analyst: PT

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Chemical Oxygen Demand	11.0	5.0	4.8	1	B1L0413	12/13/2011	12/13/11 14:15	

Total Metals by ICP-AES EPA 6010B

Analyst: KK

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Selenium	0.02	0.01	NA	1	B1L0371	12/13/2011	12/13/11 15:58	

Dissolved Metals by ICP-AES EPA 6010B

Analyst: KK

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Calcium	160	0.50	NA	1	B1L0446	12/14/2011	12/16/11 17:41	
Iron	ND	0.50	NA	1	B1L0446	12/14/2011	12/16/11 17:41	
Magnesium	45	0.10	NA	1	B1L0446	12/14/2011	12/16/11 17:41	
Manganese	ND	0.50	NA	1	B1L0446	12/14/2011	12/16/11 17:42	
Selenium	0.01	0.01	NA	1	B1L0446	12/14/2011	12/16/11 17:42	
Sodium	160	2.0	NA	2	B1L0446	12/14/2011	12/21/11 11:18	

Total Organic Carbon by SM 5310B

Analyst: PT

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Organic Carbon, Total	0.7	3.0	NA	1	B1L0358	12/12/2011	12/12/11 14:19	



Hargis & Associates, Inc.
 9171 Town Centre Drive, Suite 375
 San Diego , CA 92122

Project Number : Raytheon Fullerton - Quarterly, 532.15

Report To : Steve Netto

Reported : 12/28/2011

Client Sample ID INF

Lab ID: 1100530-04

Anions Scan by Ion Chromatography EPA 300.0

Analyst: Phali

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Chloride	140	10	NA	20	B1L0700	12/09/2011	12/09/11 10:40	
Nitrate as N	5.6	0.10	NA	1	B1L0697	12/08/2011	12/08/11 13:29	
Nitrite, as N	ND	0.10	NA	1	B1L0697	12/08/2011	12/08/11 13:29	
ortho-Phosphate (As P)	ND	0.05	NA	1	B1L0697	12/08/2011	12/08/11 13:29	
Sulfate	100	20	NA	20	B1L0700	12/09/2011	12/09/11 10:40	

Chemical Oxygen Demand by EPA 410.4

Analyst: PT

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Chemical Oxygen Demand	6.5	5.0	4.8	1	B1L0413	12/13/2011	12/13/11 14:15	

Total Metals by ICP-AES EPA 6010B

Analyst: KK

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Selenium	0.01	0.01	NA	1	B1L0371	12/13/2011	12/13/11 16:02	

Dissolved Metals by ICP-AES EPA 6010B

Analyst: KK

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Calcium	120	0.50	NA	1	B1L0446	12/14/2011	12/16/11 17:44	
Iron	ND	0.50	NA	1	B1L0446	12/14/2011	12/16/11 17:44	
Magnesium	35	0.10	NA	1	B1L0446	12/14/2011	12/16/11 17:44	
Manganese	ND	0.50	NA	1	B1L0446	12/14/2011	12/16/11 17:45	
Selenium	0.01	0.01	NA	1	B1L0446	12/14/2011	12/16/11 17:45	
Sodium	100	2.0	NA	2	B1L0446	12/14/2011	12/21/11 11:18	

Total Organic Carbon by SM 5310B

Analyst: PT

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Organic Carbon, Total	ND	3.0	NA	1	B1L0358	12/12/2011	12/12/11 14:33	



Hargis & Associates, Inc.
 9171 Town Centre Drive, Suite 375
 San Diego , CA 92122

Project Number : Raytheon Fullerton - Quarterly, 532.15
 Report To : Steve Netto
 Reported : 12/28/2011

QUALITY CONTROL SECTION

Anions Scan by Ion Chromatography EPA 300.0 - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD	RPD Limit	Notes
---------	------------------	---------------	----------------	------------------	----------------	-----------------	-----	--------------	-------

Batch B1L0697 - No_Prep_IC_1

Blank (B1L0697-BLK1)

Prepared: 12/8/2011 Analyzed: 12/8/2011

Chloride	ND	0.50			NR				
Nitrate as N	ND	0.10			NR				
Nitrite, as N	ND	0.10			NR				
ortho-Phosphate (As P)	ND	0.05			NR				
Sulfate	ND	1.0			NR				

LCS (B1L0697-BS1)

Prepared: 12/8/2011 Analyzed: 12/8/2011

Chloride	0.97	0.50	1.00		97	90 - 110			
Nitrate as N	0.93	0.10	1.00		93	90 - 110			
Nitrite, as N	0.93	0.10	1.00		93	90 - 110			
ortho-Phosphate (As P)	0.96	0.05	1.00		96	90 - 110			
Sulfate	1.9	1.0	2.00		94	90 - 110			

Duplicate (B1L0697-DUP1)

Source: 1100530-04

Prepared: 12/8/2011 Analyzed: 12/8/2011

Chloride	280	0.50		280	NR		0.1	20	
Nitrate as N	5.6	0.10		5.6	NR		0.4	20	
Nitrite, as N	ND	0.10		ND	NR			20	
ortho-Phosphate (As P)	ND	0.05		ND	NR			20	
Sulfate	160	1.0		160	NR		0.2	20	

Matrix Spike (B1L0697-MS1)

Source: 1100530-04

Prepared: 12/8/2011 Analyzed: 12/8/2011

Chloride	230	0.50	2.50	280	-1940	80 - 120			
Nitrate as N	7.9	0.10	2.50	5.6	92	80 - 120			
Nitrite, as N	4.6	0.10	2.50	ND	184	80 - 120			M1
ortho-Phosphate (As P)	1.2	0.05	2.50	ND	50	80 - 120			M1
Sulfate	150	1.0	5.00	160	-223	80 - 120			

Matrix Spike Dup (B1L0697-MSD1)

Source: 1100530-04

Prepared: 12/8/2011 Analyzed: 12/8/2011

Chloride	230	0.50	2.50	280	-1890	80 - 120	NR	20	
Nitrate as N	8.0	0.10	2.50	5.6	93	80 - 120	2	20	
Nitrite, as N	4.6	0.10	2.50	ND	184	80 - 120	0.004	20	M1
ortho-Phosphate (As P)	2.3	0.05	2.50	ND	92	80 - 120	60	20	M1
Sulfate	150	1.0	5.00	160	-183	80 - 120	NR	20	

Batch B1L0700 - No_Prep_IC_1

Blank (B1L0700-BLK1)

Prepared: 12/9/2011 Analyzed: 12/9/2011

Chloride	ND	0.50			NR				
Nitrate as N	ND	0.10			NR				
Nitrite, as N	ND	0.10			NR				



Hargis & Associates, Inc.

9171 Town Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Fullerton - Quarterly, 532.15

Report To : Steve Netto

Reported : 12/28/2011

Anions Scan by Ion Chromatography EPA 300.0 - Quality Control (cont'd)

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B1L0700 - No_Prep_IC_1 (continued)

Blank (B1L0700-BLK1) - Continued

Prepared: 12/9/2011 Analyzed: 12/9/2011

ortho-Phosphate (As P)	ND	0.05			NR				
Sulfate	ND	1.0			NR				

LCS (B1L0700-BS1)

Prepared: 12/9/2011 Analyzed: 12/9/2011

Chloride	1.0	0.50	1.00		100	90 - 110			
Nitrate as N	0.95	0.10	1.00		95	90 - 110			
Nitrite, as N	0.95	0.10	1.00		95	90 - 110			
ortho-Phosphate (As P)	1.0	0.05	1.00		100	90 - 110			
Sulfate	2.0	1.0	2.00		98	90 - 110			

Duplicate (B1L0700-DUP1)

Source: 1100530-04RE1

Prepared: 12/9/2011 Analyzed: 12/9/2011

Chloride	140	10		140	NR		1	20	
Nitrate as N	16	2.0		16	NR		0.6	20	
Nitrite, as N	ND	2.0		ND	NR			20	
ortho-Phosphate (As P)	ND	1.0		ND	NR			20	
Sulfate	100	20		100	NR		0.7	20	

Matrix Spike (B1L0700-MS1)

Source: 1100530-04RE1

Prepared: 12/9/2011 Analyzed: 12/9/2011

Chloride	9.3		2.50	7.0	90	80 - 120			
Nitrate as N	55		2.50	0.79	2190	80 - 120			
Nitrite, as N	52		2.50	ND	2100	80 - 120			
ortho-Phosphate (As P)	64		2.50	ND	2550	80 - 120			
Sulfate	10		5.00	5.0	108	80 - 120			

Matrix Spike Dup (B1L0700-MSD1)

Source: 1100530-04RE1

Prepared: 12/9/2011 Analyzed: 12/9/2011

Chloride	9.2		2.50	7.0	88	80 - 120	3	20	
Nitrate as N	56		2.50	0.79	2190	80 - 120	0.1	20	
Nitrite, as N	53		2.50	ND	2100	80 - 120	0.3	20	
ortho-Phosphate (As P)	64		2.50	ND	2560	80 - 120	0.7	20	
Sulfate	10		5.00	5.0	102	80 - 120	6	20	



Hargis & Associates, Inc.
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 San Diego , CA 92122

Project Number : Raytheon Fullerton - Quarterly, 532.15
 Report To : Steve Netto
 Reported : 12/28/2011

Chemical Oxygen Demand by EPA 410.4 - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
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Batch B1L0413 - Prep_WC_1_W

Blank (B1L0413-BLK1)

Prepared: 12/13/2011 Analyzed: 12/13/2011

Chemical Oxygen Demand

ND

5.0

NR

LCS (B1L0413-BS1)

Prepared: 12/13/2011 Analyzed: 12/13/2011

Chemical Oxygen Demand

499.5

5.0

500

100

80 - 120

Matrix Spike (B1L0413-MS1)

Source: 1100522-01

Prepared: 12/13/2011 Analyzed: 12/13/2011

Chemical Oxygen Demand

511

500

11.8

100

80 - 120

Matrix Spike Dup (B1L0413-MSD1)

Source: 1100522-01

Prepared: 12/13/2011 Analyzed: 12/13/2011

Chemical Oxygen Demand

518

500

11.8

101

80 - 120

1

20



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Project Number : Raytheon Fullerton - Quarterly, 532.15
 Report To : Steve Netto
 Reported : 12/28/2011

Total Metals by ICP-AES EPA 6010B - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B1L0371 - EPA 3010A

Blank (B1L0371-BLK1)

Selenium ND 0.01 Prepared: 12/13/2011 Analyzed: 12/13/2011

LCS (B1L0371-BS1)

Selenium 0.93 0.01 1.00 Prepared: 12/13/2011 Analyzed: 12/13/2011

Matrix Spike (B1L0371-MS1)

Selenium 2.4 0.01 2.50 **Source: 1100532-02** Prepared: 12/13/2011 Analyzed: 12/13/2011

Matrix Spike Dup (B1L0371-MSD1)

Selenium 2.3 0.01 2.50 **Source: 1100532-02** Prepared: 12/13/2011 Analyzed: 12/13/2011



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Project Number : Raytheon Fullerton - Quarterly, 532.15
 Report To : Steve Netto
 Reported : 12/28/2011

Dissolved Metals by ICP-AES EPA 6010B - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
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Batch B1L0446 - EPA 3010A

Blank (B1L0446-BLK1)

Prepared: 12/14/2011 Analyzed: 12/16/2011

Calcium	ND	0.50			NR				
Iron	ND	0.50			NR				
Magnesium	ND	0.10			NR				
Manganese	ND	0.50			NR				
Selenium	ND	0.01			NR				
Sodium	ND	1.0			NR				

Blank (B1L0446-BLK2)

Prepared: 12/14/2011 Analyzed: 12/21/2011

Calcium	ND	0.50			NR				
Iron	ND	0.50			NR				
Magnesium	ND	0.10			NR				
Manganese	ND	0.50			NR				
Selenium	ND	0.01			NR				
Sodium	ND	1.0			NR				

LCS (B1L0446-BS1)

Prepared: 12/14/2011 Analyzed: 12/16/2011

Calcium	21	0.50	20.0		105	85 - 115			
Iron	21	0.50	20.0		103	85 - 115			
Magnesium	21	0.10	20.0		104	85 - 115			
Manganese	20	0.50	20.0		102	85 - 115			
Selenium	1.0	0.01	1.00		102	85 - 115			
Sodium	20	1.0	20.0		99.1	85 - 115			

LCS (B1L0446-BS2)

Prepared: 12/14/2011 Analyzed: 12/21/2011

Calcium	ND	0.50	20.0		NR	85 - 115			
Iron	ND	0.50	20.0		NR	85 - 115			
Magnesium	ND	0.10	20.0		NR	85 - 115			
Manganese	ND	0.50	20.0		NR	85 - 115			
Selenium	ND	0.01	1.00		NR	85 - 115			
Sodium	20	1.0	20.0		99.4	85 - 115			

Matrix Spike (B1L0446-MS1)

Source: 1100530-04

Prepared: 12/14/2011 Analyzed: 12/16/2011

Calcium	130	0.50	20.0	120	67.7	5 - 159			
Iron	20	0.50	20.0	0.03	98.7	71 - 118			
Magnesium	52	0.10	20.0	35	84.8	69 - 126			
Manganese	19	0.50	20.0	0.004	94.4	79 - 109			
Selenium	2.4	0.01	2.50	0.01	97.0	78 - 116			
Sodium	ND	1.0	20.0	ND	NR	70 - 130			

M1

Matrix Spike (B1L0446-MS2)

Source: 1100530-04

Prepared: 12/14/2011 Analyzed: 12/21/2011

Calcium	ND	0.50	20.0	120	-581	5 - 159			
Iron	ND	0.50	20.0	0.03	-0.152	71 - 118			



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Project Number : Raytheon Fullerton - Quarterly, 532.15

Report To : Steve Netto

Reported : 12/28/2011

Dissolved Metals by ICP-AES EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B1L0446 - EPA 3010A (continued)									
Matrix Spike (B1L0446-MS2) - Continued			Source: 1100530-04		Prepared: 12/14/2011 Analyzed: 12/21/2011				
Magnesium	ND	0.10	20.0	35	-176	69 - 126			
Manganese	ND	0.50	20.0	0.004	-0.0224	79 - 109			
Selenium	ND	0.01	2.50	0.01	-0.461	78 - 116			
Sodium	110	1.0	20.0	ND	571	70 - 130			E
Matrix Spike (B1L0446-MS3)			Source: 1100530-04		Prepared: 12/14/2011 Analyzed: 12/21/2011				
Calcium	ND	1.0	20.0	120	-581	5 - 159			
Iron	ND	1.0	20.0	0.03	-0.152	71 - 118			
Magnesium	ND	0.20	20.0	35	-176	69 - 126			
Manganese	ND	1.0	20.0	0.004	-0.0224	79 - 109			
Selenium	ND	0.02	2.50	0.01	-0.461	78 - 116			
Sodium	120	2.0	20.0	ND	598	70 - 130			M1
Matrix Spike Dup (B1L0446-MSD1)			Source: 1100530-04		Prepared: 12/14/2011 Analyzed: 12/16/2011				
Calcium	120	0.50	20.0	120	17.2	5 - 159	8.10	20	
Iron	19	0.50	20.0	0.03	93.6	71 - 118	5.27	20	
Magnesium	49	0.10	20.0	35	69.4	69 - 126	6.10	20	
Manganese	18	0.50	20.0	0.004	88.0	79 - 109	6.98	20	
Selenium	2.3	0.01	2.50	0.01	89.7	78 - 116	7.74	20	
Sodium	ND	1.0	20.0	ND	NR	70 - 130		20	M1
Matrix Spike Dup (B1L0446-MSD2)			Source: 1100530-04		Prepared: 12/14/2011 Analyzed: 12/21/2011				
Calcium	ND	0.50	20.0	120	-581	5 - 159		20	
Iron	ND	0.50	20.0	0.03	-0.152	71 - 118		20	
Magnesium	ND	0.10	20.0	35	-176	69 - 126		20	
Manganese	ND	0.50	20.0	0.004	-0.0224	79 - 109		20	
Selenium	ND	0.01	2.50	0.01	-0.461	78 - 116		20	
Sodium	120	1.0	20.0	ND	612	70 - 130	6.92	20	E



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Project Number : Raytheon Fullerton - Quarterly, 532.15
 Report To : Steve Netto
 Reported : 12/28/2011

Dissolved Metals by ICP-AES EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch BIL0446 - EPA 3010A (continued)

Matrix Spike Dup (BIL0446-MSD3)

Source: 1100530-04

Prepared: 12/14/2011 Analyzed: 12/21/2011

Calcium	ND	1.0	20.0	120	-581	5 - 159		20	
Iron	ND	1.0	20.0	0.03	-0.152	71 - 118		20	
Magnesium	ND	0.20	20.0	35	-176	69 - 126		20	
Manganese	ND	1.0	20.0	0.004	-0.0224	79 - 109		20	
Selenium	ND	0.02	2.50	0.01	-0.461	78 - 116		20	
Sodium	110	2.0	20.0	ND	565	70 - 130	5.63	20	M1



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Project Number : Raytheon Fullerton - Quarterly, 532.15

Report To : Steve Netto

Reported : 12/28/2011

Total Organic Carbon by SM 5310B - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B1L0358 - No_Prep_II_W

Blank (B1L0358-BLK1)

Prepared: 12/12/2011 Analyzed: 12/12/2011

Organic Carbon, Total

ND

3.0

NR



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Project Number : Raytheon Fullerton - Quarterly, 532.15
 Report To : Steve Netto
 Reported : 12/28/2011

Total Organic Carbon by SM 5310B - Quality Control (cont'd)

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B1L0358 - No_Prep_II_W (continued)

LCS (B1L0358-BS1)

Prepared: 12/12/2011 Analyzed: 12/12/2011

Organic Carbon, Total	19.5	3.0	20.0		98	80 - 120			
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Project Number : Raytheon Fullerton - Quarterly, 532.15
 Report To : Steve Netto
 Reported : 12/28/2011

Total Organic Carbon by SM 5310B - Quality Control (cont'd)

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B1L0358 - No_Prep_II_W (continued)

LCS Dup (B1L0358-BSD1)

Prepared: 12/12/2011 Analyzed: 12/12/2011

Organic Carbon, Total	19.4	3.0	20.0		97	80 - 120	0.8	20	
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Project Number : Raytheon Fullerton - Quarterly, 532.15

Report To : Steve Netto

Reported : 12/28/2011

Notes and Definitions

M1	Matrix spike recovery outside of acceptance limit. The analytical batch was validated by the laboratory control sample.
E	Result value above quantitation range.
ND	Analyte not detected at or above reporting limit
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
NR	Not Reported
RPD	Relative Percent Difference
CA1	CA-NELAP (CDPH)
CA2	CA-ELAP (CDPH)
OR1	OR-NELAP (OSPHL)
TX1	TX-NELAP (TCEQ)



American Environmental Testing Laboratory Inc.

2834 & 2908 North Naomi Street Burbank, CA 91504 • DOHS NO: 1541, LACSD NO: 10181
Tel: (888) 288-AETL • (818) 845-8200 • Fax: (818) 845-8840 • www.aetlab.com

Ordered By

Advanced Technology Laboratories
3275 Walnut Street
Signal Hill, CA 90755-5225

Number of Pages 2
Date Received 12/12/2011
Date Reported 12/21/2011

Telephone: (562)989-4045
Attention: Diane Galvan

Job Number	Order Date	Client
64080	12/12/2011	ATL

Project ID: 1100530
Project Name: PO# SC06924

Enclosed please find results of analyses of 3 water samples which were analyzed as specified on the attached chain of custody. If there are any questions, please do not hesitate to call.

Checked By: _____

Approved By: _____

Cyrus Razmara, Ph.D.
Laboratory Director



American Environmental Testing Laboratory Inc.

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Page: 1 A

Ordered By

Advanced Technology Laboratories
3275 Walnut Street
Signal Hill, CA 90755-5225

Project ID: 1100530
Date Received 12/12/2011
Date Reported 12/21/2011

Telephone: (562)989-4045
Attention: Diane Galvan

Job Number	Order Date	Client
64080	12/12/2011	ATL

CERTIFICATE OF ANALYSIS CASE NARRATIVE

AETL received 3 samples with the following specification on 12/12/2011.

Lab ID	Sample ID	Sample Date	Matrix	QTY of Containers
64080.01	1100530-01	12/07/2011	Aqueous	1
64080.02	1100530-03	12/07/2011	Aqueous	1
64080.03	1100530-04	12/07/2011	Aqueous	1

The samples were analyzed as specified on the enclosed chain of custody. No analytical non-conformances were encountered.

Checked By: _____

Approved By: _____

Cyrus Razmara, Ph.D.
Laboratory Director



American Environmental Testing Laboratory Inc.

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ANALYTICAL RESULTS

Ordered By

Advanced Technology Laboratories
 3275 Walnut Street
 Signal Hill, CA 90755-5225

Telephone: (562)989-4045

Attn: Diane Galvan

Page: 2

Project ID: 1100530
 Project Name: PO# SC06924

AETL Job Number	Submitted	Client
64080	12/12/2011	ATL

Method: 310.1, Alkalinity, Titrimetric (pH 4.5), (EPA/600/4-79-020)

QC Batch No: 121311-1

Our Lab I.D.		Method Blank	64080.01	64080.02	64080.03	
Client Sample I.D.			1100530-01	1100530-03	1100530-04	
Date Sampled			12/07/2011	12/07/2011	12/07/2011	
Date Prepared		12/13/2011	12/13/2011	12/13/2011	12/13/2011	
Preparation Method		310.1	310.1	310.1	310.1	
Date Analyzed		12/13/2011	12/13/2011	12/13/2011	12/13/2011	
Matrix		Aqueous	Aqueous	Aqueous	Aqueous	
Units		mg/L	mg/L	mg/L	mg/L	
Dilution Factor		1	1	1	1	
Analytes	MDL	PQL	Results	Results	Results	Results
Alkalinity, Bicarbonate	2.0	2.0	ND	220	234	228
Alkalinity, Carbonate	2.0	2.0	ND	ND	ND	ND
Alkalinity, Hydroxide	2.0	2.0	ND	ND	ND	ND
Alkalinity, Total	2.0	2.0	ND	220	234	228

QUALITY CONTROL REPORT

QC Batch No: 121311-1; Dup or Spiked Sample: 64080.01; LCS: Clean Water; QC Prepared: 12/13/2011; QC Analyzed: 12/13/2011;
 Units: mg/L

Analytes	Sample Result	MS Concen	MS Recov	MS % REC	MS DUP Concen	MS DUP Recov	MS DUP % REC	RPD %	MS/MSD % Limit	MS RPD % Limit
Alkalinity, Bicarbonate	220	20.0	240	100	20.0	240	100	<1	80-120	<15
Alkalinity, Total	220	20.0	240	100	20.0	240	100	<1	80-120	<15

QC Batch No: 121311-1; Dup or Spiked Sample: 64080.01; LCS: Clean Water; QC Prepared: 12/13/2011; QC Analyzed: 12/13/2011;
 Units: mg/L

Analytes	SM Result	SM DUP Result	RPD %	SM RPD % Limit	LCS Concen	LCS Recov	LCS % REC	LCS/LCSD % Limit
Alkalinity, Bicarbonate	220	222	<1	<15	20.0	20.0	100	80-120
Alkalinity, Total	220	222	<1	<15	20.0	20.0	100	80-120



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Data Qualifiers and Descriptors

Data Qualifier:

- *: In the QC section, sample results have been taken directly from the ICP reading. No preparation factor has been applied.
- B: Analyte was present in the Method Blank.
- D: Result is from a diluted analysis.
- E: Result is beyond calibration limits and is estimated.
- H: Analysis was performed over the allowed holding time due to circumstances which were beyond laboratory control.
- J: Analyte was detected . However, the analyte concentration is an estimated value, which is between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL).
- M: Matrix spike recovery is outside control limits due to matrix interference. Laboratory Control Sample recovery was acceptable.
- MCL: Maximum Contaminant Level
- NS: No Standard Available
- S6: Surrogate recovery is outside control limits due to matrix interference.
- S8: The analysis of the sample required a dilution such that the surrogate concentration was diluted below the method acceptance criteria.
- X: Results represent LCS and LCSD data.

Definition:

- %Limi: Percent acceptable limits.
- %REC: Percent recovery.
- Con.L: Acceptable Control Limits
- Conce: Added concentration to the sample.
- LCS: Laboratory Control Sample
- MDL: Method Detection Limit is a statistically derived number which is specific for each instrument, each method, and each compound. It indicates a distinctively detectable quantity with 99% probability.



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Data Qualifiers and Descriptors

MS:	Matrix Spike
MS DU:	Matrix Spike Duplicate
ND:	Analyte was not detected in the sample at or above MDL.
PQL:	Practical Quantitation Limit or ML (Minimum Level as per RWQCB) is the minimum concentration that can be quantified with more than 99% confidence. Taking into account all aspects of the entire analytical instrumentation and practice.
Recov:	Recovered concentration in the sample.
RPD:	Relative Percent Difference

ADVANCED TECHNOLOGY
LABORATORIES

Job # 64080

SUBCONTRACT ORDER

Work Order: 1100530

SENDING LABORATORY:

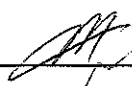
Advanced Technology Laboratories
3275 Walnut Avenue
Signal Hill, CA 90755
Phone: 562.989.4045
Fax: 562.989.6348
Project Manager: Rachele Arada

RECEIVING LABORATORY:

AETL
2834 North Naomi Street
Burbank, CA 91504
Phone : (818) 845-8200
Fax: (818) 845-8840
PO#: SC06924 Standard TAT

IMPORTANT : Please include Work Order # and PO # in your invoice.

Analysis	Due	Expires	Sampled	Comments (AK)
ATL Lab#: 1100530-01 Client Sample ID: EW-02 310.1_2320B_Speciati	12/15/11 17:00	12/21/11 17:10	12/07/11 17:10 64080.01	NEED EXCEL EDD Alkalinity-Hydroxide, Bicarbonate, Carbonate and Total.
ATL Lab#: 1100530-03 Client Sample ID: MW-21 310.1_2320B_Speciati	12/15/11 17:00	12/21/11 17:30	12/07/11 17:30 64080.02	Alkalinity - Hydroxide, Bicarbonate, Carbonate and Total.
ATL Lab#: 1100530-04 Client Sample ID: INF 310.1_2320B_Speciati	12/15/11 17:00	12/21/11 16:10	12/07/11 16:10 64080.03	Alkalinity - Hydroxide, Bicarbonate, Carbonate and Total.

Released By 	Date 12/12/11	Received By Herman	Date 12-12-11 1345
Released By Herman	Date 12-12-11 1655	Received By Jean Claude	Date 12/12/11 1655

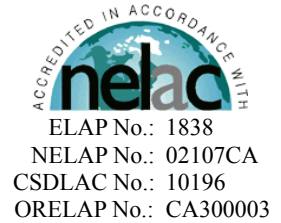
CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST FORM

PROJECT NAME Raytheon Fullerton - Quarterly		PROJECT No./TASK No. 532.15		SAMPLE CONTAINERS		ANALYSIS REQUESTED		ESTIMATED CONCENTRATION RANGE (ppb) FOR VOAs		SPECIAL HANDLING		LABORATORY INFORMATION													
PROJECT MANAGER Chris Ross		Phone No. 858-455-6500		125 ml Poly 250 ml Poly 500 ml Poly 40 ml VOA Total Se by 6010B Dissolved Se, Fe, Mn, Ca, Na, Mg Alkalinity (hydroxide, Bicarbonate and Total) by 3111 TOC by 415.1 Anions Cl, SO4, NO3, NO2, PO4 by 300 COD by 410.4 0-10 10-100		Lab to filter and acidify Dissolved metals Lab to filter anions		ATL Signal Hill 862-989-4045																	
QA MANAGER Steve Netto		Fax No. 858-455-6533																							
SAMPLER (SIGNATURE) 		SAMPLER (PRINTED) Marcos Rodriguez																							
LAB ID	SAMPLE ID	SAMPLE COLLECTION		MATRIX			PRESERVATION					REMARKS													
		Date	Time	Soil	Ground-water	Surface water	Lab H2O	HCl	HNO3	NaOH	H2SO4		Ice												
1100530-01	EW-02	12/07/11	17:10	X				XX	XX																
	2 POX	↓	16:40	X				XX	XX																
	3 MW-21	↓	17:30	X				XX	XX																
	4 INF	↓	16:10	X				XX	XX																
Total number of Containers per analysis:												4 3/0 4		Total No. of Containers: 21											

Relinquished by: 		Received by: 		INSTRUCTIONS		Shipment Method: <u>DELIVER</u>	
Date: <u>12/7/11</u>		Date: <u>12/7/11</u>		1. Fill out form completely except for shaded areas (lab use only); sign only after verified for completeness. 2. Complete in ballpoint pen. Draw one line through errors, initial and date correction. 3. Indicate number of sample containers in analysis request space; indicate choice with √ or x. 4. Note applicable preservatives, special instructions, and deviations from typical environmental samples. 5. Consult project QA documents for specific instructions.		Send Results to: <u>Steve Netto</u>	
Time: <u>19:27</u>		Time: <u>19:27</u>				<input checked="" type="checkbox"/> 9171 TOWNE CENTRE DRIVE, SUITE 375 SAN DIEGO, CA 92122 (858) 455-6500	
Company: <u>HXA</u>		Company: <u>ATL</u>				<input type="checkbox"/> 1640 SOUTH STAPLEY DRIVE, SUITE 124 MESA, AZ 85204 (480) 345-0888	
Date: _____		Date: _____				<input type="checkbox"/> 1820 EAST RIVER ROAD, SUITE 220 TUCSON, AZ 85718 (520) 881-7300	
Time: _____		Time: _____				Send invoice to San Diego, CA Attn: Accounts Payable	
Company: _____		Company: _____		Sample Receipt: <input type="checkbox"/> No. of containers correct <input type="checkbox"/> received good condition/cold <input type="checkbox"/> custody seals secure <input type="checkbox"/> conforms to COC document			

December 29, 2011

Steve Netto
Hargis & Associates, Inc.
9171 Town Centre Drive, Suite 375
San Diego, CA 92122
Tel: (619) 249-3166
Fax:(619) 521-8580



Re: ATL Work Order Number : 1100531
Client Reference : Raytheon Fullerton - Monthly, 532.15

Enclosed are the results for sample(s) received on December 07, 2011 by Advanced Technology Laboratories. The sample(s) are tested for the parameters as indicated on the enclosed chain of custody in accordance with applicable laboratory certifications. The laboratory results contained in this report specifically pertains to the sample(s) submitted.

Thank you for the opportunity to serve the needs of your company. If you have any questions, please feel free to contact me or your Project Manager.

Sincerely,

A handwritten signature in black ink, appearing to read "Eddie Rodriguez", with a small initial "ER" in the bottom left corner.

Eddie Rodriguez
Laboratory Director

The cover letter and the case narrative are an integral part of this analytical report and its absence renders the report invalid. The report cannot be reproduced without written permission from the client and Advanced Technology Laboratories.



Hargis & Associates, Inc.

9171 Town Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Fullerton - Monthly, 532.15

Report To : Steve Netto

Reported : 12/29/2011

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
TB-120711	1100531-01	Lab H2O	12/07/11 15:00	12/07/11 19:26
EW-02	1100531-02	Groundwater	12/07/11 17:10	12/07/11 19:26
PF	1100531-03	Groundwater	12/07/11 16:35	12/07/11 19:26
POX	1100531-04	Groundwater	12/07/11 16:40	12/07/11 19:26
CBT	1100531-05	Groundwater	12/07/11 17:00	12/07/11 19:26
CEFF	1100531-06	Groundwater	12/07/11 17:05	12/07/11 19:26
MW-21	1100531-07	Groundwater	12/07/11 17:30	12/07/11 19:26
INF	1100531-08	Groundwater	12/07/11 16:10	12/07/11 19:26



Hargis & Associates, Inc.

9171 Town Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Fullerton - Monthly, 532.15

Report To : Steve Netto

Reported : 12/29/2011

Client Sample ID TB-120711

Lab ID: 1100531-01

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 16:31	
1,1,1-Trichloroethane	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 16:31	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 16:31	
1,1,2-Trichloroethane	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 16:31	
1,1-Dichloroethane	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 16:31	
1,1-Dichloroethene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 16:31	
1,1-Dichloropropene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 16:31	
1,2,3-Trichloropropane	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 16:31	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 16:31	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 16:31	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 16:31	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 16:31	
1,2-Dibromoethane	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 16:31	
1,2-Dichlorobenzene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 16:31	
1,2-Dichloroethane	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 16:31	
1,2-Dichloropropane	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 16:31	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 16:31	
1,3-Dichlorobenzene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 16:31	
1,3-Dichloropropane	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 16:31	
1,4-Dichlorobenzene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 16:31	
2,2-Dichloropropane	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 16:31	
2-Chlorotoluene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 16:31	
4-Chlorotoluene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 16:31	
4-Isopropyltoluene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 16:31	
Benzene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 16:31	
Bromobenzene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 16:31	
Bromodichloromethane	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 16:31	
Bromoform	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 16:31	
Bromomethane	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 16:31	
Carbon tetrachloride	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 16:31	
Chlorobenzene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 16:31	
Chloroethane	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 16:31	
Chloroform	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 16:31	
Chloromethane	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 16:31	



Hargis & Associates, Inc.
 9171 Town Centre Drive, Suite 375
 San Diego , CA 92122

Project Number : Raytheon Fullerton - Monthly, 532.15
 Report To : Steve Netto
 Reported : 12/29/2011

Client Sample ID TB-120711
Lab ID: 1100531-01

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
cis-1,2-Dichloroethene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 16:31	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 16:31	
Dibromochloromethane	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 16:31	
Dibromomethane	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 16:31	
Dichlorodifluoromethane	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 16:31	
Ethylbenzene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 16:31	
Hexachlorobutadiene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 16:31	
Isopropylbenzene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 16:31	
m,p-Xylene	ND	1.0	NA	1	B1L0505	12/16/2011	12/16/11 16:31	
Methylene chloride	ND	1.0	NA	1	B1L0505	12/16/2011	12/16/11 16:31	
n-Butylbenzene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 16:31	
n-Propylbenzene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 16:31	
Naphthalene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 16:31	
o-Xylene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 16:31	
sec-Butylbenzene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 16:31	
Styrene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 16:31	
tert-Butylbenzene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 16:31	
Tetrachloroethene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 16:31	
Toluene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 16:31	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 16:31	
Trichloroethene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 16:31	
Trichlorofluoromethane	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 16:31	
Vinyl chloride	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 16:31	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>120 %</i>		<i>70 - 130</i>		B1L0505	12/16/2011	<i>12/16/11 16:31</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>103 %</i>		<i>70 - 130</i>		B1L0505	12/16/2011	<i>12/16/11 16:31</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>104 %</i>		<i>70 - 130</i>		B1L0505	12/16/2011	<i>12/16/11 16:31</i>	
<i>Surrogate: Toluene-d8</i>	<i>94.3 %</i>		<i>70 - 130</i>		B1L0505	12/16/2011	<i>12/16/11 16:31</i>	



Hargis & Associates, Inc.
 9171 Town Centre Drive, Suite 375
 San Diego , CA 92122

Project Number : Raytheon Fullerton - Monthly, 532.15
 Report To : Steve Netto
 Reported : 12/29/2011

Client Sample ID EW-02
Lab ID: 1100531-02

Anions by Ion Chromatography EPA 300.0

Analyst: Phali

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromide	0.15	0.05	NA	1	B1L0705	12/13/2011	12/13/11 09:29	

Total Dissolved Solids (Residue, Filterable) by SM 2540C

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Residue, Dissolved	640	10	10	1	B1L0623	12/13/2011	12/14/11 10:00	

Total Suspended Solids (Residue, Non-Filtrable) by SM 2540D

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Residue, Suspended	ND	10	10	1	B1L0436	12/12/2011	12/12/11 17:00	

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 17:30	
1,1,1-Trichloroethane	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 17:30	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 17:30	
1,1,2-Trichloroethane	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 17:30	
1,1-Dichloroethane	0.62	0.50	NA	1	B1L0505	12/16/2011	12/16/11 17:30	
1,1-Dichloroethene	62	0.50	NA	1	B1L0505	12/16/2011	12/16/11 17:30	
1,1-Dichloropropene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 17:30	
1,2,3-Trichloropropane	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 17:30	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 17:30	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 17:30	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 17:30	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 17:30	
1,2-Dibromoethane	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 17:30	
1,2-Dichlorobenzene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 17:30	
1,2-Dichloroethane	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 17:30	
1,2-Dichloropropane	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 17:30	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 17:30	



Hargis & Associates, Inc.

9171 Town Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Fullerton - Monthly, 532.15

Report To : Steve Netto

Reported : 12/29/2011

Client Sample ID EW-02

Lab ID: 1100531-02

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,3-Dichlorobenzene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 17:30	
1,3-Dichloropropane	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 17:30	
1,4-Dichlorobenzene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 17:30	
2,2-Dichloropropane	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 17:30	
2-Chlorotoluene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 17:30	
4-Chlorotoluene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 17:30	
4-Isopropyltoluene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 17:30	
Benzene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 17:30	
Bromobenzene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 17:30	
Bromodichloromethane	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 17:30	
Bromoform	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 17:30	
Bromomethane	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 17:30	
Carbon tetrachloride	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 17:30	
Chlorobenzene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 17:30	
Chloroethane	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 17:30	
Chloroform	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 17:30	
Chloromethane	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 17:30	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 17:30	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 17:30	
Dibromochloromethane	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 17:30	
Dibromomethane	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 17:30	
Dichlorodifluoromethane	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 17:30	
Ethylbenzene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 17:30	
Hexachlorobutadiene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 17:30	
Isopropylbenzene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 17:30	
m,p-Xylene	ND	1.0	NA	1	B1L0505	12/16/2011	12/16/11 17:30	
Methylene chloride	ND	1.0	NA	1	B1L0505	12/16/2011	12/16/11 17:30	
n-Butylbenzene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 17:30	
n-Propylbenzene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 17:30	
Naphthalene	6.4	0.50	NA	1	B1L0505	12/16/2011	12/16/11 17:30	
o-Xylene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 17:30	
sec-Butylbenzene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 17:30	
Styrene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 17:30	
tert-Butylbenzene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 17:30	



Hargis & Associates, Inc.
9171 Town Centre Drive, Suite 375
San Diego , CA 92122

Project Number : Raytheon Fullerton - Monthly, 532.15
Report To : Steve Netto
Reported : 12/29/2011

Client Sample ID EW-02
Lab ID: 1100531-02

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Tetrachloroethene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 17:30	
Toluene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 17:30	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 17:30	
Trichloroethene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 17:30	
Trichlorofluoromethane	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 17:30	
Vinyl chloride	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 17:30	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>110 %</i>		<i>70 - 130</i>		B1L0505	12/16/2011	<i>12/16/11 17:30</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>102 %</i>		<i>70 - 130</i>		B1L0505	12/16/2011	<i>12/16/11 17:30</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>101 %</i>		<i>70 - 130</i>		B1L0505	12/16/2011	<i>12/16/11 17:30</i>	
<i>Surrogate: Toluene-d8</i>	<i>94.6 %</i>		<i>70 - 130</i>		B1L0505	12/16/2011	<i>12/16/11 17:30</i>	

1,4-Dioxane by EPA 8270: Isotope Dilution Technique

Analyst: JD

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	20	2.0	1.7	1	B1L0369	12/13/2011	12/14/11 16:14	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>79.3 %</i>		<i>37 - 93</i>		B1L0369	12/13/2011	<i>12/14/11 16:14</i>	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>87.2 %</i>		<i>51 - 100</i>		B1L0369	12/13/2011	<i>12/14/11 16:14</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>98.2 %</i>		<i>58 - 113</i>		B1L0369	12/13/2011	<i>12/14/11 16:14</i>	
<i>Surrogate: Nitrobenzene-d5</i>	<i>80.2 %</i>		<i>39 - 95</i>		B1L0369	12/13/2011	<i>12/14/11 16:14</i>	



Hargis & Associates, Inc.

9171 Town Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Fullerton - Monthly, 532.15

Report To : Steve Netto

Reported : 12/29/2011

Client Sample ID PF

Lab ID: 1100531-03

Total Suspended Solids (Residue, Non-Filtrable) by SM 2540D

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Residue, Suspended	ND	10	10	1	B1L0436	12/12/2011	12/12/11 17:00	



Hargis & Associates, Inc.

9171 Town Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Fullerton - Monthly, 532.15

Report To : Steve Netto

Reported : 12/29/2011

Client Sample ID POX

Lab ID: 1100531-04

Anions by Ion Chromatography EPA 300.0

Analyst: Phali

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromide	0.24	0.05	NA	1	B1L0705	12/13/2011	12/13/11 09:40	

Total Dissolved Solids (Residue, Filterable) by SM 2540C

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Residue, Dissolved	750	10	10	1	B1L0623	12/13/2011	12/14/11 10:00	

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 15:31	
1,1,1-Trichloroethane	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 15:31	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 15:31	
1,1,2-Trichloroethane	3.0	0.50	NA	1	B1L0505	12/16/2011	12/16/11 15:31	
1,1-Dichloroethane	8.4	0.50	NA	1	B1L0505	12/16/2011	12/16/11 15:31	
1,1-Dichloroethene	1.6	0.50	NA	1	B1L0505	12/16/2011	12/16/11 15:31	
1,1-Dichloropropene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 15:31	
1,2,3-Trichloropropane	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 15:31	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 15:31	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 15:31	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 15:31	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 15:31	
1,2-Dibromoethane	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 15:31	
1,2-Dichlorobenzene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 15:31	
1,2-Dichloroethane	1.3	0.50	NA	1	B1L0505	12/16/2011	12/16/11 15:31	
1,2-Dichloropropane	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 15:31	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 15:31	
1,3-Dichlorobenzene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 15:31	
1,3-Dichloropropane	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 15:31	
1,4-Dichlorobenzene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 15:31	
2,2-Dichloropropane	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 15:31	
2-Chlorotoluene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 15:31	
4-Chlorotoluene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 15:31	



Hargis & Associates, Inc.

9171 Town Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Fullerton - Monthly, 532.15

Report To : Steve Netto

Reported : 12/29/2011

Client Sample ID POX

Lab ID: 1100531-04

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4-Isopropyltoluene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 15:31	
Benzene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 15:31	
Bromobenzene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 15:31	
Bromodichloromethane	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 15:31	
Bromoform	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 15:31	
Bromomethane	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 15:31	
Carbon tetrachloride	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 15:31	
Chlorobenzene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 15:31	
Chloroethane	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 15:31	
Chloroform	0.76	0.50	NA	1	B1L0505	12/16/2011	12/16/11 15:31	
Chloromethane	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 15:31	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 15:31	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 15:31	
Dibromochloromethane	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 15:31	
Dibromomethane	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 15:31	
Dichlorodifluoromethane	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 15:31	
Ethylbenzene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 15:31	
Hexachlorobutadiene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 15:31	
Isopropylbenzene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 15:31	
m,p-Xylene	ND	1.0	NA	1	B1L0505	12/16/2011	12/16/11 15:31	
Methylene chloride	ND	1.0	NA	1	B1L0505	12/16/2011	12/16/11 15:31	
n-Butylbenzene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 15:31	
n-Propylbenzene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 15:31	
Naphthalene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 15:31	
o-Xylene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 15:31	
sec-Butylbenzene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 15:31	
Styrene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 15:31	
tert-Butylbenzene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 15:31	
Tetrachloroethene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 15:31	
Toluene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 15:31	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 15:31	
Trichloroethene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 15:31	
Trichlorofluoromethane	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 15:31	
Vinyl chloride	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 15:31	



Hargis & Associates, Inc.
9171 Town Centre Drive, Suite 375
San Diego , CA 92122

Project Number : Raytheon Fullerton - Monthly, 532.15

Report To : Steve Netto

Reported : 12/29/2011

Client Sample ID POX

Lab ID: 1100531-04

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>	120 %	70 - 130			B1L0505	12/16/2011	12/16/11 15:31	
<i>Surrogate: 4-Bromofluorobenzene</i>	102 %	70 - 130			B1L0505	12/16/2011	12/16/11 15:31	
<i>Surrogate: Dibromofluoromethane</i>	105 %	70 - 130			B1L0505	12/16/2011	12/16/11 15:31	
<i>Surrogate: Toluene-d8</i>	94.8 %	70 - 130			B1L0505	12/16/2011	12/16/11 15:31	

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: JD

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	5.2	0.24	0.15	1	B1L0414	12/14/2011	12/14/11 19:27	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	89.0 %	58 - 99			B1L0414	12/14/2011	12/14/11 19:27	
<i>Surrogate: 2-Fluorobiphenyl</i>	95.7 %	60 - 104			B1L0414	12/14/2011	12/14/11 19:27	
<i>Surrogate: 4-Terphenyl-d14</i>	135 %	65 - 127			B1L0414	12/14/2011	12/14/11 19:27	S8
<i>Surrogate: Nitrobenzene-d5</i>	107 %	50 - 136			B1L0414	12/14/2011	12/14/11 19:27	



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San Diego , CA 92122

Project Number : Raytheon Fullerton - Monthly, 532.15

Report To : Steve Netto

Reported : 12/29/2011

Client Sample ID CBT

Lab ID: 1100531-05

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 15:51	
1,1,1-Trichloroethane	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 15:51	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 15:51	
1,1,2-Trichloroethane	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 15:51	
1,1-Dichloroethane	2.6	0.50	NA	1	B1L0505	12/16/2011	12/16/11 15:51	
1,1-Dichloroethene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 15:51	
1,1-Dichloropropene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 15:51	
1,2,3-Trichloropropane	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 15:51	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 15:51	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 15:51	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 15:51	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 15:51	
1,2-Dibromoethane	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 15:51	
1,2-Dichlorobenzene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 15:51	
1,2-Dichloroethane	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 15:51	
1,2-Dichloropropane	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 15:51	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 15:51	
1,3-Dichlorobenzene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 15:51	
1,3-Dichloropropane	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 15:51	
1,4-Dichlorobenzene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 15:51	
2,2-Dichloropropane	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 15:51	
2-Chlorotoluene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 15:51	
4-Chlorotoluene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 15:51	
4-Isopropyltoluene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 15:51	
Benzene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 15:51	
Bromobenzene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 15:51	
Bromodichloromethane	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 15:51	
Bromoform	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 15:51	
Bromomethane	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 15:51	
Carbon tetrachloride	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 15:51	
Chlorobenzene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 15:51	
Chloroethane	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 15:51	
Chloroform	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 15:51	
Chloromethane	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 15:51	



Hargis & Associates, Inc.
 9171 Town Centre Drive, Suite 375
 San Diego , CA 92122

Project Number : Raytheon Fullerton - Monthly, 532.15

Report To : Steve Netto

Reported : 12/29/2011

Client Sample ID CBT

Lab ID: 1100531-05

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
cis-1,2-Dichloroethene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 15:51	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 15:51	
Dibromochloromethane	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 15:51	
Dibromomethane	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 15:51	
Dichlorodifluoromethane	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 15:51	
Ethylbenzene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 15:51	
Hexachlorobutadiene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 15:51	
Isopropylbenzene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 15:51	
m,p-Xylene	ND	1.0	NA	1	B1L0505	12/16/2011	12/16/11 15:51	
Methylene chloride	ND	1.0	NA	1	B1L0505	12/16/2011	12/16/11 15:51	
n-Butylbenzene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 15:51	
n-Propylbenzene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 15:51	
Naphthalene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 15:51	
o-Xylene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 15:51	
sec-Butylbenzene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 15:51	
Styrene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 15:51	
tert-Butylbenzene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 15:51	
Tetrachloroethene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 15:51	
Toluene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 15:51	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 15:51	
Trichloroethene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 15:51	
Trichlorofluoromethane	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 15:51	
Vinyl chloride	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 15:51	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>120 %</i>		<i>70 - 130</i>		B1L0505	12/16/2011	<i>12/16/11 15:51</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>102 %</i>		<i>70 - 130</i>		B1L0505	12/16/2011	<i>12/16/11 15:51</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>105 %</i>		<i>70 - 130</i>		B1L0505	12/16/2011	<i>12/16/11 15:51</i>	
<i>Surrogate: Toluene-d8</i>	<i>95.4 %</i>		<i>70 - 130</i>		B1L0505	12/16/2011	<i>12/16/11 15:51</i>	



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San Diego , CA 92122

Project Number : Raytheon Fullerton - Monthly, 532.15

Report To : Steve Netto

Reported : 12/29/2011

Client Sample ID CEFF

Lab ID: 1100531-06

Anions by Ion Chromatography EPA 300.0

Analyst: Phali

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromide	0.23	0.05	NA	1	B1L0705	12/13/2011	12/13/11 09:52	

Total Dissolved Solids (Residue, Filterable) by SM 2540C

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Residue, Dissolved	770	10	10	1	B1L0623	12/13/2011	12/14/11 10:00	

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 16:11	
1,1,1-Trichloroethane	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 16:11	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 16:11	
1,1,2-Trichloroethane	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 16:11	
1,1-Dichloroethane	0.71	0.50	NA	1	B1L0505	12/16/2011	12/16/11 16:11	
1,1-Dichloroethene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 16:11	
1,1-Dichloropropene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 16:11	
1,2,3-Trichloropropane	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 16:11	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 16:11	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 16:11	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 16:11	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 16:11	
1,2-Dibromoethane	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 16:11	
1,2-Dichlorobenzene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 16:11	
1,2-Dichloroethane	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 16:11	
1,2-Dichloropropane	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 16:11	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 16:11	
1,3-Dichlorobenzene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 16:11	
1,3-Dichloropropane	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 16:11	
1,4-Dichlorobenzene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 16:11	
2,2-Dichloropropane	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 16:11	
2-Chlorotoluene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 16:11	
4-Chlorotoluene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 16:11	



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Project Number : Raytheon Fullerton - Monthly, 532.15

Report To : Steve Netto

Reported : 12/29/2011

Client Sample ID CEFF

Lab ID: 1100531-06

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4-Isopropyltoluene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 16:11	
Benzene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 16:11	
Bromobenzene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 16:11	
Bromodichloromethane	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 16:11	
Bromoform	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 16:11	
Bromomethane	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 16:11	
Carbon tetrachloride	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 16:11	
Chlorobenzene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 16:11	
Chloroethane	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 16:11	
Chloroform	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 16:11	
Chloromethane	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 16:11	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 16:11	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 16:11	
Dibromochloromethane	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 16:11	
Dibromomethane	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 16:11	
Dichlorodifluoromethane	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 16:11	
Ethylbenzene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 16:11	
Hexachlorobutadiene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 16:11	
Isopropylbenzene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 16:11	
m,p-Xylene	ND	1.0	NA	1	B1L0505	12/16/2011	12/16/11 16:11	
Methylene chloride	ND	1.0	NA	1	B1L0505	12/16/2011	12/16/11 16:11	
n-Butylbenzene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 16:11	
n-Propylbenzene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 16:11	
Naphthalene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 16:11	
o-Xylene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 16:11	
sec-Butylbenzene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 16:11	
Styrene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 16:11	
tert-Butylbenzene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 16:11	
Tetrachloroethene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 16:11	
Toluene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 16:11	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 16:11	
Trichloroethene	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 16:11	
Trichlorofluoromethane	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 16:11	
Vinyl chloride	ND	0.50	NA	1	B1L0505	12/16/2011	12/16/11 16:11	



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Project Number : Raytheon Fullerton - Monthly, 532.15
Report To : Steve Netto
Reported : 12/29/2011

Client Sample ID CEFF
Lab ID: 1100531-06

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>	118 %	70 - 130			B1L0505	12/16/2011	12/16/11 16:11	
<i>Surrogate: 4-Bromofluorobenzene</i>	103 %	70 - 130			B1L0505	12/16/2011	12/16/11 16:11	
<i>Surrogate: Dibromofluoromethane</i>	104 %	70 - 130			B1L0505	12/16/2011	12/16/11 16:11	
<i>Surrogate: Toluene-d8</i>	94.0 %	70 - 130			B1L0505	12/16/2011	12/16/11 16:11	



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Project Number : Raytheon Fullerton - Monthly, 532.15
 Report To : Steve Netto
 Reported : 12/29/2011

Client Sample ID MW-21
Lab ID: 1100531-07

Anions by Ion Chromatography EPA 300.0

Analyst: Phali

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromide	0.51	0.10	NA	2	B1L0705	12/13/2011	12/13/11 10:03	

Total Dissolved Solids (Residue, Filterable) by SM 2540C

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Residue, Dissolved	1200	12	12	1	B1L0623	12/13/2011	12/14/11 10:00	

Total Suspended Solids (Residue, Non-Filtrable) by SM 2540D

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Residue, Suspended	17	10	10	1	B1L0436	12/12/2011	12/12/11 17:00	

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	10	NA	20	B1L0505	12/16/2011	12/16/11 17:50	
1,1,1-Trichloroethane	ND	10	NA	20	B1L0505	12/16/2011	12/16/11 17:50	
1,1,2,2-Tetrachloroethane	ND	10	NA	20	B1L0505	12/16/2011	12/16/11 17:50	
1,1,2-Trichloroethane	ND	10	NA	20	B1L0505	12/16/2011	12/16/11 17:50	
1,1-Dichloroethane	43	10	NA	20	B1L0505	12/16/2011	12/16/11 17:50	
1,1-Dichloroethene	3200	25	NA	50	B1L0553	12/19/2011	12/19/11 05:32	
1,1-Dichloropropene	ND	10	NA	20	B1L0505	12/16/2011	12/16/11 17:50	
1,2,3-Trichloropropane	ND	10	NA	20	B1L0505	12/16/2011	12/16/11 17:50	
1,2,3-Trichlorobenzene	ND	10	NA	20	B1L0505	12/16/2011	12/16/11 17:50	
1,2,4-Trichlorobenzene	ND	10	NA	20	B1L0505	12/16/2011	12/16/11 17:50	
1,2,4-Trimethylbenzene	ND	10	NA	20	B1L0505	12/16/2011	12/16/11 17:50	
1,2-Dibromo-3-chloropropane	ND	10	NA	20	B1L0505	12/16/2011	12/16/11 17:50	
1,2-Dibromoethane	ND	10	NA	20	B1L0505	12/16/2011	12/16/11 17:50	
1,2-Dichlorobenzene	ND	10	NA	20	B1L0505	12/16/2011	12/16/11 17:50	
1,2-Dichloroethane	ND	10	NA	20	B1L0505	12/16/2011	12/16/11 17:50	
1,2-Dichloropropane	ND	10	NA	20	B1L0505	12/16/2011	12/16/11 17:50	
1,3,5-Trimethylbenzene	ND	10	NA	20	B1L0505	12/16/2011	12/16/11 17:50	
1,3-Dichlorobenzene	ND	10	NA	20	B1L0505	12/16/2011	12/16/11 17:50	



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Client Sample ID MW-21

Lab ID: 1100531-07

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,3-Dichloropropane	ND	10	NA	20	B1L0505	12/16/2011	12/16/11 17:50	
1,4-Dichlorobenzene	ND	10	NA	20	B1L0505	12/16/2011	12/16/11 17:50	
2,2-Dichloropropane	ND	10	NA	20	B1L0505	12/16/2011	12/16/11 17:50	
2-Chlorotoluene	ND	10	NA	20	B1L0505	12/16/2011	12/16/11 17:50	
4-Chlorotoluene	ND	10	NA	20	B1L0505	12/16/2011	12/16/11 17:50	
4-Isopropyltoluene	ND	10	NA	20	B1L0505	12/16/2011	12/16/11 17:50	
Benzene	ND	10	NA	20	B1L0505	12/16/2011	12/16/11 17:50	
Bromobenzene	ND	10	NA	20	B1L0505	12/16/2011	12/16/11 17:50	
Bromodichloromethane	ND	10	NA	20	B1L0505	12/16/2011	12/16/11 17:50	
Bromoform	ND	10	NA	20	B1L0505	12/16/2011	12/16/11 17:50	
Bromomethane	ND	10	NA	20	B1L0505	12/16/2011	12/16/11 17:50	
Carbon tetrachloride	ND	10	NA	20	B1L0505	12/16/2011	12/16/11 17:50	
Chlorobenzene	ND	10	NA	20	B1L0505	12/16/2011	12/16/11 17:50	
Chloroethane	ND	10	NA	20	B1L0505	12/16/2011	12/16/11 17:50	
Chloroform	ND	10	NA	20	B1L0505	12/16/2011	12/16/11 17:50	
Chloromethane	ND	10	NA	20	B1L0505	12/16/2011	12/16/11 17:50	
cis-1,2-Dichloroethene	ND	10	NA	20	B1L0505	12/16/2011	12/16/11 17:50	
cis-1,3-Dichloropropene	ND	10	NA	20	B1L0505	12/16/2011	12/16/11 17:50	
Dibromochloromethane	ND	10	NA	20	B1L0505	12/16/2011	12/16/11 17:50	
Dibromomethane	ND	10	NA	20	B1L0505	12/16/2011	12/16/11 17:50	
Dichlorodifluoromethane	ND	10	NA	20	B1L0505	12/16/2011	12/16/11 17:50	
Ethylbenzene	ND	10	NA	20	B1L0505	12/16/2011	12/16/11 17:50	
Hexachlorobutadiene	ND	10	NA	20	B1L0505	12/16/2011	12/16/11 17:50	
Isopropylbenzene	ND	10	NA	20	B1L0505	12/16/2011	12/16/11 17:50	
m,p-Xylene	ND	20	NA	20	B1L0505	12/16/2011	12/16/11 17:50	
Methylene chloride	ND	20	NA	20	B1L0505	12/16/2011	12/16/11 17:50	
n-Butylbenzene	ND	10	NA	20	B1L0505	12/16/2011	12/16/11 17:50	
n-Propylbenzene	ND	10	NA	20	B1L0505	12/16/2011	12/16/11 17:50	
Naphthalene	ND	10	NA	20	B1L0505	12/16/2011	12/16/11 17:50	
o-Xylene	ND	10	NA	20	B1L0505	12/16/2011	12/16/11 17:50	
sec-Butylbenzene	ND	10	NA	20	B1L0505	12/16/2011	12/16/11 17:50	
Styrene	ND	10	NA	20	B1L0505	12/16/2011	12/16/11 17:50	
tert-Butylbenzene	ND	10	NA	20	B1L0505	12/16/2011	12/16/11 17:50	
Tetrachloroethene	ND	10	NA	20	B1L0505	12/16/2011	12/16/11 17:50	



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Client Sample ID MW-21
Lab ID: 1100531-07

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Toluene	ND	10	NA	20	B1L0505	12/16/2011	12/16/11 17:50	
trans-1,2-Dichloroethene	ND	10	NA	20	B1L0505	12/16/2011	12/16/11 17:50	
Trichloroethene	20	10	NA	20	B1L0505	12/16/2011	12/16/11 17:50	
Trichlorofluoromethane	ND	10	NA	20	B1L0505	12/16/2011	12/16/11 17:50	
Vinyl chloride	ND	10	NA	20	B1L0505	12/16/2011	12/16/11 17:50	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>124 %</i>		<i>70 - 130</i>		B1L0553	12/19/2011	<i>12/19/11 05:32</i>	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>112 %</i>		<i>70 - 130</i>		B1L0505	12/16/2011	<i>12/16/11 17:50</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>103 %</i>		<i>70 - 130</i>		B1L0553	12/19/2011	<i>12/19/11 05:32</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>99.6 %</i>		<i>70 - 130</i>		B1L0505	12/16/2011	<i>12/16/11 17:50</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>102 %</i>		<i>70 - 130</i>		B1L0505	12/16/2011	<i>12/16/11 17:50</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>107 %</i>		<i>70 - 130</i>		B1L0553	12/19/2011	<i>12/19/11 05:32</i>	
<i>Surrogate: Toluene-d8</i>	<i>93.7 %</i>		<i>70 - 130</i>		B1L0505	12/16/2011	<i>12/16/11 17:50</i>	
<i>Surrogate: Toluene-d8</i>	<i>95.0 %</i>		<i>70 - 130</i>		B1L0553	12/19/2011	<i>12/19/11 05:32</i>	

1,4-Dioxane by EPA 8270: Isotope Dilution Technique

Analyst: JD

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	450	10	8.4	5	B1L0369	12/13/2011	12/15/11 13:16	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>72.5 %</i>		<i>37 - 93</i>		B1L0369	12/13/2011	<i>12/14/11 16:42</i>	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>70.2 %</i>		<i>37 - 93</i>		B1L0369	12/13/2011	<i>12/15/11 13:16</i>	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>82.6 %</i>		<i>51 - 100</i>		B1L0369	12/13/2011	<i>12/14/11 16:42</i>	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>74.4 %</i>		<i>51 - 100</i>		B1L0369	12/13/2011	<i>12/15/11 13:16</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>94.8 %</i>		<i>58 - 113</i>		B1L0369	12/13/2011	<i>12/14/11 16:42</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>99.2 %</i>		<i>58 - 113</i>		B1L0369	12/13/2011	<i>12/15/11 13:16</i>	
<i>Surrogate: Nitrobenzene-d5</i>	<i>73.7 %</i>		<i>39 - 95</i>		B1L0369	12/13/2011	<i>12/14/11 16:42</i>	
<i>Surrogate: Nitrobenzene-d5</i>	<i>92.4 %</i>		<i>39 - 95</i>		B1L0369	12/13/2011	<i>12/15/11 13:16</i>	



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Report To : Steve Netto

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Client Sample ID INF

Lab ID: 1100531-08

Anions by Ion Chromatography EPA 300.0

Analyst: Phali

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Bromide	0.23	0.05	NA	1	B1L0705	12/13/2011	12/13/11 10:15	

Total Dissolved Solids (Residue, Filterable) by SM 2540C

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Residue, Dissolved	760	10	10	1	B1L0623	12/13/2011	12/14/11 10:00	

Total Suspended Solids (Residue, Non-Filtrable) by SM 2540D

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Residue, Suspended	ND	10	10	1	B1L0443	12/12/2011	12/13/11 15:10	

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	5.0	NA	10	B1L0505	12/16/2011	12/16/11 18:10	
1,1,1-Trichloroethane	ND	5.0	NA	10	B1L0505	12/16/2011	12/16/11 18:10	
1,1,2,2-Tetrachloroethane	ND	5.0	NA	10	B1L0505	12/16/2011	12/16/11 18:10	
1,1,2-Trichloroethane	ND	5.0	NA	10	B1L0505	12/16/2011	12/16/11 18:10	
1,1-Dichloroethane	12	5.0	NA	10	B1L0505	12/16/2011	12/16/11 18:10	
1,1-Dichloroethene	850	5.0	NA	10	B1L0505	12/16/2011	12/16/11 18:10	
1,1-Dichloropropene	ND	5.0	NA	10	B1L0505	12/16/2011	12/16/11 18:10	
1,2,3-Trichloropropane	ND	5.0	NA	10	B1L0505	12/16/2011	12/16/11 18:10	
1,2,3-Trichlorobenzene	ND	5.0	NA	10	B1L0505	12/16/2011	12/16/11 18:10	
1,2,4-Trichlorobenzene	ND	5.0	NA	10	B1L0505	12/16/2011	12/16/11 18:10	
1,2,4-Trimethylbenzene	ND	5.0	NA	10	B1L0505	12/16/2011	12/16/11 18:10	
1,2-Dibromo-3-chloropropane	ND	5.0	NA	10	B1L0505	12/16/2011	12/16/11 18:10	
1,2-Dibromoethane	ND	5.0	NA	10	B1L0505	12/16/2011	12/16/11 18:10	
1,2-Dichlorobenzene	ND	5.0	NA	10	B1L0505	12/16/2011	12/16/11 18:10	
1,2-Dichloroethane	ND	5.0	NA	10	B1L0505	12/16/2011	12/16/11 18:10	
1,2-Dichloropropane	ND	5.0	NA	10	B1L0505	12/16/2011	12/16/11 18:10	
1,3,5-Trimethylbenzene	ND	5.0	NA	10	B1L0505	12/16/2011	12/16/11 18:10	



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Lab ID: 1100531-08

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,3-Dichlorobenzene	ND	5.0	NA	10	B1L0505	12/16/2011	12/16/11 18:10	
1,3-Dichloropropane	ND	5.0	NA	10	B1L0505	12/16/2011	12/16/11 18:10	
1,4-Dichlorobenzene	ND	5.0	NA	10	B1L0505	12/16/2011	12/16/11 18:10	
2,2-Dichloropropane	ND	5.0	NA	10	B1L0505	12/16/2011	12/16/11 18:10	
2-Chlorotoluene	ND	5.0	NA	10	B1L0505	12/16/2011	12/16/11 18:10	
4-Chlorotoluene	ND	5.0	NA	10	B1L0505	12/16/2011	12/16/11 18:10	
4-Isopropyltoluene	ND	5.0	NA	10	B1L0505	12/16/2011	12/16/11 18:10	
Benzene	ND	5.0	NA	10	B1L0505	12/16/2011	12/16/11 18:10	
Bromobenzene	ND	5.0	NA	10	B1L0505	12/16/2011	12/16/11 18:10	
Bromodichloromethane	ND	5.0	NA	10	B1L0505	12/16/2011	12/16/11 18:10	
Bromoform	ND	5.0	NA	10	B1L0505	12/16/2011	12/16/11 18:10	
Bromomethane	ND	5.0	NA	10	B1L0505	12/16/2011	12/16/11 18:10	
Carbon tetrachloride	ND	5.0	NA	10	B1L0505	12/16/2011	12/16/11 18:10	
Chlorobenzene	ND	5.0	NA	10	B1L0505	12/16/2011	12/16/11 18:10	
Chloroethane	ND	5.0	NA	10	B1L0505	12/16/2011	12/16/11 18:10	
Chloroform	ND	5.0	NA	10	B1L0505	12/16/2011	12/16/11 18:10	
Chloromethane	ND	5.0	NA	10	B1L0505	12/16/2011	12/16/11 18:10	
cis-1,2-Dichloroethene	ND	5.0	NA	10	B1L0505	12/16/2011	12/16/11 18:10	
cis-1,3-Dichloropropene	ND	5.0	NA	10	B1L0505	12/16/2011	12/16/11 18:10	
Dibromochloromethane	ND	5.0	NA	10	B1L0505	12/16/2011	12/16/11 18:10	
Dibromomethane	ND	5.0	NA	10	B1L0505	12/16/2011	12/16/11 18:10	
Dichlorodifluoromethane	ND	5.0	NA	10	B1L0505	12/16/2011	12/16/11 18:10	
Ethylbenzene	ND	5.0	NA	10	B1L0505	12/16/2011	12/16/11 18:10	
Hexachlorobutadiene	ND	5.0	NA	10	B1L0505	12/16/2011	12/16/11 18:10	
Isopropylbenzene	ND	5.0	NA	10	B1L0505	12/16/2011	12/16/11 18:10	
m,p-Xylene	ND	10	NA	10	B1L0505	12/16/2011	12/16/11 18:10	
Methylene chloride	ND	10	NA	10	B1L0505	12/16/2011	12/16/11 18:10	
n-Butylbenzene	ND	5.0	NA	10	B1L0505	12/16/2011	12/16/11 18:10	
n-Propylbenzene	ND	5.0	NA	10	B1L0505	12/16/2011	12/16/11 18:10	
Naphthalene	ND	5.0	NA	10	B1L0505	12/16/2011	12/16/11 18:10	
o-Xylene	ND	5.0	NA	10	B1L0505	12/16/2011	12/16/11 18:10	
sec-Butylbenzene	ND	5.0	NA	10	B1L0505	12/16/2011	12/16/11 18:10	
Styrene	ND	5.0	NA	10	B1L0505	12/16/2011	12/16/11 18:10	
tert-Butylbenzene	ND	5.0	NA	10	B1L0505	12/16/2011	12/16/11 18:10	



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San Diego , CA 92122

Project Number : Raytheon Fullerton - Monthly, 532.15
Report To : Steve Netto
Reported : 12/29/2011

Client Sample ID INF
Lab ID: 1100531-08

Volatile Organic Compounds by EPA 8260

Analyst: DC

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Tetrachloroethene	ND	5.0	NA	10	B1L0505	12/16/2011	12/16/11 18:10	
Toluene	ND	5.0	NA	10	B1L0505	12/16/2011	12/16/11 18:10	
trans-1,2-Dichloroethene	ND	5.0	NA	10	B1L0505	12/16/2011	12/16/11 18:10	
Trichloroethene	ND	5.0	NA	10	B1L0505	12/16/2011	12/16/11 18:10	
Trichlorofluoromethane	ND	5.0	NA	10	B1L0505	12/16/2011	12/16/11 18:10	
Vinyl chloride	ND	5.0	NA	10	B1L0505	12/16/2011	12/16/11 18:10	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>116 %</i>		<i>70 - 130</i>		B1L0505	12/16/2011	<i>12/16/11 18:10</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>101 %</i>		<i>70 - 130</i>		B1L0505	12/16/2011	<i>12/16/11 18:10</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>103 %</i>		<i>70 - 130</i>		B1L0505	12/16/2011	<i>12/16/11 18:10</i>	
<i>Surrogate: Toluene-d8</i>	<i>94.3 %</i>		<i>70 - 130</i>		B1L0505	12/16/2011	<i>12/16/11 18:10</i>	

1,4-Dioxane by EPA 8270: Isotope Dilution Technique

Analyst: JD

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	120	2.0	1.7	1	B1L0369	12/13/2011	12/14/11 17:10	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>70.6 %</i>		<i>37 - 93</i>		B1L0369	12/13/2011	<i>12/14/11 17:10</i>	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>82.6 %</i>		<i>51 - 100</i>		B1L0369	12/13/2011	<i>12/14/11 17:10</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>97.2 %</i>		<i>58 - 113</i>		B1L0369	12/13/2011	<i>12/14/11 17:10</i>	
<i>Surrogate: Nitrobenzene-d5</i>	<i>72.6 %</i>		<i>39 - 95</i>		B1L0369	12/13/2011	<i>12/14/11 17:10</i>	



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QUALITY CONTROL SECTION

Anions by Ion Chromatography EPA 300.0 - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B1L0705 - No_Prep_IC_1									
Blank (B1L0705-BLK1)				Prepared: 12/13/2011 Analyzed: 12/13/2011					
Bromide	ND	0.05			NR				
LCS (B1L0705-BS1)				Prepared: 12/13/2011 Analyzed: 12/13/2011					
Bromide	0.95	0.05	1.00		95	90 - 110			
Duplicate (B1L0705-DUP1)		Source: 1100610-01		Prepared: 12/13/2011 Analyzed: 12/13/2011					
Bromide	ND	0.05		ND	NR			20	
Matrix Spike (B1L0705-MS1)		Source: 1100610-01		Prepared: 12/13/2011 Analyzed: 12/13/2011					
Bromide	2.6	0.05	2.50	ND	106	80 - 120			
Matrix Spike Dup (B1L0705-MSD1)		Source: 1100610-01		Prepared: 12/13/2011 Analyzed: 12/13/2011					
Bromide	2.6	0.05	2.50	ND	106	80 - 120	0.4	20	



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Total Dissolved Solids (Residue, Filterable) by SM 2540C - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B1L0623 - No_Prep_WC_1

Blank (B1L0623-BLK1)

Prepared: 12/13/2011 Analyzed: 12/14/2011

Residue, Dissolved

ND

10

NR

LCS (B1L0623-BS1)

Prepared: 12/13/2011 Analyzed: 12/14/2011

Residue, Dissolved

990

10

970

102

80 - 120

Duplicate (B1L0623-DUP1)

Source: 1100531-02

Prepared: 12/13/2011 Analyzed: 12/14/2011

Residue, Dissolved

660

10

640

NR

2

10



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Project Number : Raytheon Fullerton - Monthly, 532.15
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Total Suspended Solids (Residue, Non-Filtrable) by SM 2540D - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B1L0436 - No_Prep_WC_1

Blank (B1L0436-BLK1)

Prepared: 12/12/2011 Analyzed: 12/12/2011

Residue, Suspended ND 10 NR

LCS (B1L0436-BS1)

Prepared: 12/12/2011 Analyzed: 12/12/2011

Residue, Suspended 87 10 96.6 90 80 - 120

Duplicate (B1L0436-DUP1)

Source: 1100531-07

Prepared: 12/12/2011 Analyzed: 12/12/2011

Residue, Suspended 16 10 17 NR 6 10

Batch B1L0443 - No_Prep_WC_1

Blank (B1L0443-BLK1)

Prepared: 12/12/2011 Analyzed: 12/13/2011

Residue, Suspended ND 10 NR

LCS (B1L0443-BS1)

Prepared: 12/12/2011 Analyzed: 12/13/2011

Residue, Suspended 91 10 96.6 94 80 - 120

Duplicate (B1L0443-DUP1)

Source: 1100531-08

Prepared: 12/12/2011 Analyzed: 12/13/2011

Residue, Suspended ND 10 ND NR 10



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Volatile Organic Compounds by EPA 8260 - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
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Batch B1L0505 - MSVOAW_LL

Blank (B1L0505-BLK1)

Prepared: 12/16/2011 Analyzed: 12/16/2011

1,1,1,2-Tetrachloroethane	ND	0.50			NR				
1,1,1-Trichloroethane	ND	0.50			NR				
1,1,2,2-Tetrachloroethane	ND	0.50			NR				
1,1,2-Trichloroethane	ND	0.50			NR				
1,1-Dichloroethane	ND	0.50			NR				
1,1-Dichloroethene	ND	0.50			NR				
1,1-Dichloropropene	ND	0.50			NR				
1,2,3-Trichloropropane	ND	0.50			NR				
1,2,3-Trichlorobenzene	ND	0.50			NR				
1,2,4-Trichlorobenzene	ND	0.50			NR				
1,2,4-Trimethylbenzene	ND	0.50			NR				
1,2-Dibromo-3-chloropropane	ND	0.50			NR				
1,2-Dibromoethane	ND	0.50			NR				
1,2-Dichlorobenzene	ND	0.50			NR				
1,2-Dichloroethane	ND	0.50			NR				
1,2-Dichloropropane	ND	0.50			NR				
1,3,5-Trimethylbenzene	ND	0.50			NR				
1,3-Dichlorobenzene	ND	0.50			NR				
1,3-Dichloropropane	ND	0.50			NR				
1,4-Dichlorobenzene	ND	0.50			NR				
2,2-Dichloropropane	ND	0.50			NR				
2-Chlorotoluene	ND	0.50			NR				
4-Chlorotoluene	ND	0.50			NR				
4-Isopropyltoluene	ND	0.50			NR				
Benzene	ND	0.50			NR				
Bromobenzene	ND	0.50			NR				
Bromodichloromethane	ND	0.50			NR				
Bromoform	ND	0.50			NR				
Bromomethane	ND	0.50			NR				
Carbon tetrachloride	ND	0.50			NR				
Chlorobenzene	ND	0.50			NR				
Chloroethane	ND	0.50			NR				
Chloroform	ND	0.50			NR				
Chloromethane	ND	0.50			NR				
cis-1,2-Dichloroethene	ND	0.50			NR				
cis-1,3-Dichloropropene	ND	0.50			NR				
Dibromochloromethane	ND	0.50			NR				
Dibromomethane	ND	0.50			NR				
Dichlorodifluoromethane	ND	0.50			NR				
Ethylbenzene	ND	0.50			NR				
Hexachlorobutadiene	ND	0.50			NR				



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Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
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Batch B1L0505 - MSVOAW_LL (continued)

Blank (B1L0505-BLK1) - Continued

Prepared: 12/16/2011 Analyzed: 12/16/2011

Isopropylbenzene	ND	0.50				NR			
m,p-Xylene	ND	1.0				NR			
Methylene chloride	ND	1.0				NR			
n-Butylbenzene	ND	0.50				NR			
n-Propylbenzene	ND	0.50				NR			
Naphthalene	ND	0.50				NR			
o-Xylene	ND	0.50				NR			
sec-Butylbenzene	ND	0.50				NR			
Styrene	ND	0.50				NR			
tert-Butylbenzene	ND	0.50				NR			
Tetrachloroethene	ND	0.50				NR			
Toluene	ND	0.50				NR			
trans-1,2-Dichloroethene	ND	0.50				NR			
Trichloroethene	ND	0.50				NR			
Trichlorofluoromethane	ND	0.50				NR			
Vinyl chloride	ND	0.50				NR			

<i>Surrogate: 1,2-Dichloroethane-d4</i>	28		25.0		110	70 - 130			
<i>Surrogate: 4-Bromofluorobenzene</i>	25		25.0		101	70 - 130			
<i>Surrogate: Dibromofluoromethane</i>	25		25.0		100	70 - 130			
<i>Surrogate: Toluene-d8</i>	24		25.0		94.2	70 - 130			

LCS (B1L0505-BS1)

Prepared: 12/16/2011 Analyzed: 12/16/2011

1,1-Dichloroethene	18	0.50	20.0		91.5	70 - 130			
Benzene	35	0.50	40.0		87.0	70 - 130			
Chlorobenzene	20	0.50	20.0		101	70 - 130			
MTBE	20	0.50	20.0		99.0	70 - 130			
Toluene	36	0.50	40.0		90.8	70 - 130			
Trichloroethene	20	0.50	20.0		98.5	70 - 130			

<i>Surrogate: 1,2-Dichloroethane-d4</i>	28		25.0		113	70 - 130			
<i>Surrogate: 4-Bromofluorobenzene</i>	26		25.0		104	70 - 130			
<i>Surrogate: Dibromofluoromethane</i>	24		25.0		98.0	70 - 130			
<i>Surrogate: Toluene-d8</i>	24		25.0		94.6	70 - 130			

LCS (B1L0505-BS2)

Prepared: 12/16/2011 Analyzed: 12/16/2011

1,1-Dichloroethene	18	0.50	20.0		90.1	70 - 130			
Benzene	35	0.50	40.0		87.3	70 - 130			
Chlorobenzene	20	0.50	20.0		102	70 - 130			
MTBE	21	0.50	20.0		104	70 - 130			
Toluene	36	0.50	40.0		90.8	70 - 130			
Trichloroethene	20	0.50	20.0		98.2	70 - 130			

<i>Surrogate: 1,2-Dichloroethane-d4</i>	27		25.0		108	70 - 130			
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Project Number : Raytheon Fullerton - Monthly, 532.15
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Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B1L0505 - MSVOAW_LL (continued)

LCS (B1L0505-BS2) - Continued

Prepared: 12/16/2011 Analyzed: 12/16/2011

Surrogate: 4-Bromofluorobenzene	26		25.0		103	70 - 130			
Surrogate: Dibromofluoromethane	24		25.0		96.0	70 - 130			
Surrogate: Toluene-d8	23		25.0		93.9	70 - 130			

LCS Dup (B1L0505-BSD1)

Prepared: 12/16/2011 Analyzed: 12/16/2011

1,1-Dichloroethene	18	0.50	20.0		89.9	70 - 130	1.76	20	
Benzene	35	0.50	40.0		87.0	70 - 130	0.0575	20	
Chlorobenzene	20	0.50	20.0		101	70 - 130	0.396	20	
MTBE	21	0.50	20.0		104	70 - 130	4.88	20	
Toluene	36	0.50	40.0		91.2	70 - 130	0.385	20	
Trichloroethene	20	0.50	20.0		98.0	70 - 130	0.509	20	

Surrogate: 1,2-Dichloroethane-d4	28		25.0		111	70 - 130			
Surrogate: 4-Bromofluorobenzene	26		25.0		105	70 - 130			
Surrogate: Dibromofluoromethane	24		25.0		97.9	70 - 130			
Surrogate: Toluene-d8	24		25.0		94.7	70 - 130			

LCS Dup (B1L0505-BSD2)

Prepared: 12/16/2011 Analyzed: 12/16/2011

1,1-Dichloroethene	17	0.50	20.0		87.2	70 - 130	3.33		
Benzene	35	0.50	40.0		87.4	70 - 130	0.172		
Chlorobenzene	20	0.50	20.0		101	70 - 130	0.345		
MTBE	21	0.50	20.0		105	70 - 130	1.72		
Toluene	37	0.50	40.0		91.5	70 - 130	0.713		
Trichloroethene	20	0.50	20.0		99.4	70 - 130	1.27		

Surrogate: 1,2-Dichloroethane-d4	27		25.0		108	70 - 130			
Surrogate: 4-Bromofluorobenzene	26		25.0		102	70 - 130			
Surrogate: Dibromofluoromethane	24		25.0		95.9	70 - 130			
Surrogate: Toluene-d8	24		25.0		94.8	70 - 130			

Batch B1L0553 - MSVOAW_LL

Blank (B1L0553-BLK1)

Prepared: 12/19/2011 Analyzed: 12/19/2011

1,1,1,2-Tetrachloroethane	ND	0.50			NR				
1,1,1-Trichloroethane	ND	0.50			NR				
1,1,2,2-Tetrachloroethane	ND	0.50			NR				
1,1,2-Trichloroethane	ND	0.50			NR				
1,1-Dichloroethane	ND	0.50			NR				
1,1-Dichloroethene	ND	0.50			NR				
1,1-Dichloropropene	ND	0.50			NR				
1,2,3-Trichloropropane	ND	0.50			NR				
1,2,3-Trichlorobenzene	ND	0.50			NR				
1,2,4-Trichlorobenzene	ND	0.50			NR				



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Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
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Batch B1L0553 - MSVOAW_LL (continued)

Blank (B1L0553-BLK1) - Continued

Prepared: 12/19/2011 Analyzed: 12/19/2011

1,2,4-Trimethylbenzene	ND	0.50			NR
1,2-Dibromo-3-chloropropane	ND	0.50			NR
1,2-Dibromoethane	ND	0.50			NR
1,2-Dichlorobenzene	ND	0.50			NR
1,2-Dichloroethane	ND	0.50			NR
1,2-Dichloropropane	ND	0.50			NR
1,3,5-Trimethylbenzene	ND	0.50			NR
1,3-Dichlorobenzene	ND	0.50			NR
1,3-Dichloropropane	ND	0.50			NR
1,4-Dichlorobenzene	ND	0.50			NR
2,2-Dichloropropane	ND	0.50			NR
2-Chlorotoluene	ND	0.50			NR
4-Chlorotoluene	ND	0.50			NR
4-Isopropyltoluene	ND	0.50			NR
Benzene	ND	0.50			NR
Bromobenzene	ND	0.50			NR
Bromodichloromethane	ND	0.50			NR
Bromoform	ND	0.50			NR
Bromomethane	ND	0.50			NR
Carbon tetrachloride	ND	0.50			NR
Chlorobenzene	ND	0.50			NR
Chloroethane	ND	0.50			NR
Chloroform	ND	0.50			NR
Chloromethane	ND	0.50			NR
cis-1,2-Dichloroethene	ND	0.50			NR
cis-1,3-Dichloropropene	ND	0.50			NR
Dibromochloromethane	ND	0.50			NR
Dibromomethane	ND	0.50			NR
Dichlorodifluoromethane	ND	0.50			NR
Ethylbenzene	ND	0.50			NR
Hexachlorobutadiene	ND	0.50			NR
Isopropylbenzene	ND	0.50			NR
m,p-Xylene	ND	1.0			NR
Methylene chloride	ND	1.0			NR
n-Butylbenzene	ND	0.50			NR
n-Propylbenzene	ND	0.50			NR
Naphthalene	ND	0.50			NR
o-Xylene	ND	0.50			NR
sec-Butylbenzene	ND	0.50			NR
Styrene	ND	0.50			NR
tert-Butylbenzene	ND	0.50			NR
Tetrachloroethene	ND	0.50			NR



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Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B1L0553 - MSVOAW_LL (continued)

Blank (B1L0553-BLK1) - Continued

Prepared: 12/19/2011 Analyzed: 12/19/2011

Toluene	ND	0.50			NR				
trans-1,2-Dichloroethene	ND	0.50			NR				
Trichloroethene	ND	0.50			NR				
Trichlorofluoromethane	ND	0.50			NR				
Vinyl chloride	ND	0.50			NR				
<i>Surrogate: 1,2-Dichloroethane-d4</i>	28		25.0		112	70 - 130			
<i>Surrogate: 4-Bromofluorobenzene</i>	25		25.0		101	70 - 130			
<i>Surrogate: Dibromofluoromethane</i>	25		25.0		101	70 - 130			
<i>Surrogate: Toluene-d8</i>	24		25.0		94.1	70 - 130			

LCS (B1L0553-BS1)

Prepared: 12/18/2011 Analyzed: 12/18/2011

1,1-Dichloroethene	18	0.50	20.0		90.4	70 - 130			
Benzene	34	0.50	40.0		85.8	70 - 130			
Chlorobenzene	20	0.50	20.0		101	70 - 130			
MTBE	21	0.50	20.0		104	70 - 130			
Toluene	36	0.50	40.0		90.0	70 - 130			
Trichloroethene	20	0.50	20.0		98.0	70 - 130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	28		25.0		114	70 - 130			
<i>Surrogate: 4-Bromofluorobenzene</i>	26		25.0		105	70 - 130			
<i>Surrogate: Dibromofluoromethane</i>	25		25.0		99.9	70 - 130			
<i>Surrogate: Toluene-d8</i>	24		25.0		95.3	70 - 130			

LCS (B1L0553-BS2)

Prepared: 12/18/2011 Analyzed: 12/18/2011

1,1-Dichloroethene	18	0.50	20.0		91.2	70 - 130			
Benzene	35	0.50	40.0		86.8	70 - 130			
Chlorobenzene	20	0.50	20.0		100	70 - 130			
MTBE	21	0.50	20.0		104	70 - 130			
Toluene	37	0.50	40.0		91.8	70 - 130			
Trichloroethene	20	0.50	20.0		98.1	70 - 130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	28		25.0		110	70 - 130			
<i>Surrogate: 4-Bromofluorobenzene</i>	26		25.0		106	70 - 130			
<i>Surrogate: Dibromofluoromethane</i>	24		25.0		96.4	70 - 130			
<i>Surrogate: Toluene-d8</i>	24		25.0		94.4	70 - 130			

LCS Dup (B1L0553-BSD1)

Prepared: 12/18/2011 Analyzed: 12/18/2011

1,1-Dichloroethene	18	0.50	20.0		90.4	70 - 130	0.0553	20	
Benzene	34	0.50	40.0		86.0	70 - 130	0.262	20	
Chlorobenzene	20	0.50	20.0		101	70 - 130	0.397	20	
MTBE	21	0.50	20.0		106	70 - 130	2.43	20	
Toluene	36	0.50	40.0		90.1	70 - 130	0.111	20	
Trichloroethene	20	0.50	20.0		97.8	70 - 130	0.153	20	



Hargis & Associates, Inc.

9171 Town Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Raytheon Fullerton - Monthly, 532.15

Report To : Steve Netto

Reported : 12/29/2011

Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B1L0553 - MSVOAW_LL (continued)

LCS Dup (B1L0553-BSD1) - Continued

Prepared: 12/18/2011 Analyzed: 12/18/2011

Surrogate: 1,2-Dichloroethane-d4	28		25.0		112	70 - 130			
Surrogate: 4-Bromofluorobenzene	26		25.0		103	70 - 130			
Surrogate: Dibromofluoromethane	25		25.0		99.0	70 - 130			
Surrogate: Toluene-d8	24		25.0		94.1	70 - 130			

LCS Dup (B1L0553-BSD2)

Prepared: 12/18/2011 Analyzed: 12/18/2011

1,1-Dichloroethene	18	0.50	20.0		89.0	70 - 130	2.50		
Benzene	34	0.50	40.0		85.9	70 - 130	1.13		
Chlorobenzene	20	0.50	20.0		99.4	70 - 130	0.552		
MTBE	21	0.50	20.0		103	70 - 130	1.01		
Toluene	36	0.50	40.0		90.3	70 - 130	1.62		
Trichloroethene	20	0.50	20.0		98.2	70 - 130	0.153		

Surrogate: 1,2-Dichloroethane-d4	27		25.0		108	70 - 130			
Surrogate: 4-Bromofluorobenzene	26		25.0		104	70 - 130			
Surrogate: Dibromofluoromethane	24		25.0		97.1	70 - 130			
Surrogate: Toluene-d8	24		25.0		95.0	70 - 130			

Duplicate (B1L0553-DUP1)

Source: 1100653-04RE1

Prepared: 12/19/2011 Analyzed: 12/19/2011

1,1-Dichloroethene	ND	100		ND	NR			20	
Benzene	840	100		850	NR		0.237	20	
Chlorobenzene	ND	100		ND	NR			20	
MTBE	ND	100		ND	NR			20	
Toluene	1400	100		1400	NR		0.855	20	
Trichloroethene	ND	100		ND	NR			20	

Surrogate: 1,2-Dichloroethane-d4	29		25.0		118	70 - 130			
Surrogate: 4-Bromofluorobenzene	27		25.0		106	70 - 130			
Surrogate: Dibromofluoromethane	26		25.0		104	70 - 130			
Surrogate: Toluene-d8	24		25.0		94.4	70 - 130			



Hargis & Associates, Inc.
 9171 Town Centre Drive, Suite 375
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Project Number : Raytheon Fullerton - Monthly, 532.15
 Report To : Steve Netto
 Reported : 12/29/2011

1,4-Dioxane by EPA 8270: Isotope Dilution Technique - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B1L0369 - MSSEMI_ISOTOPEDILN

Blank (B1L0369-BLK1)

Prepared: 12/13/2011 Analyzed: 12/13/2011

1,4-Dioxane	ND	10			NR				
Surrogate: 1,2-Dichlorobenzene-d4	71		100		71.4	37 - 93			
Surrogate: 2-Fluorobiphenyl	80		100		79.7	51 - 100			
Surrogate: 4-Terphenyl-d14	86		100		85.8	58 - 113			
Surrogate: Nitrobenzene-d5	73		100		72.6	39 - 95			



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Project Number : Raytheon Fullerton - Monthly, 532.15
 Report To : Steve Netto
 Reported : 12/29/2011

1,4-Dioxane by EPA 8270: Isotope Dilution Technique - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B1L0369 - MSSEMI_ISOTOPEDILN (continued)

LCS (B1L0369-BS1)

Prepared: 12/13/2011 Analyzed: 12/13/2011

1,4-Dioxane	100	10	100		104	70 - 130			
Surrogate: 1,2-Dichlorobenzene-d4	64		100		64.1	37 - 93			
Surrogate: 2-Fluorobiphenyl	75		100		75.2	51 - 100			
Surrogate: 4-Terphenyl-d14	88		100		88.0	58 - 113			
Surrogate: Nitrobenzene-d5	69		100		68.9	39 - 95			



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Project Number : Raytheon Fullerton - Monthly, 532.15
 Report To : Steve Netto
 Reported : 12/29/2011

1,4-Dioxane by EPA 8270: Isotope Dilution Technique - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
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Batch B1L0369 - MSSEMI_ISOTOPEDILN (continued)

LCS Dup (B1L0369-bsd1)

Prepared: 12/13/2011 Analyzed: 12/13/2011

1,4-Dioxane	100	10	100		103	70 - 130	1.00	20	
Surrogate: 1,2-Dichlorobenzene-d4	68		100		68.3	37 - 93			
Surrogate: 2-Fluorobiphenyl	82		100		81.9	51 - 100			
Surrogate: 4-Terphenyl-d14	91		100		91.1	58 - 113			
Surrogate: Nitrobenzene-d5	75		100		74.7	39 - 95			



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Project Number : Raytheon Fullerton - Monthly, 532.15
 Report To : Steve Netto
 Reported : 12/29/2011

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B1L0414 - MSSEMI_ISOTOPEDILN

Blank (B1L0414-BLK1)

Prepared: 12/14/2011 Analyzed: 12/14/2011

1,4-Dioxane	ND	0.20			NR				
Surrogate: 1,2-Dichlorobenzene-d4	0.83		1.00		82.7	58 - 99			
Surrogate: 2-Fluorobiphenyl	0.93		1.00		92.9	60 - 104			
Surrogate: 4-Terphenyl-d14	1.1		1.00		110	65 - 127			
Surrogate: Nitrobenzene-d5	1.0		1.00		99.8	50 - 136			



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Project Number : Raytheon Fullerton - Monthly, 532.15
 Report To : Steve Netto
 Reported : 12/29/2011

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
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Batch B1L0414 - MSSEMI_ISOTOPEDILN (continued)

LCS (B1L0414-BS1)

Prepared: 12/14/2011 Analyzed: 12/14/2011

1,4-Dioxane	1.2	0.20	1.00		116	70 - 130			
Surrogate: 1,2-Dichlorobenzene-d4	0.82		1.00		81.8	58 - 99			
Surrogate: 2-Fluorobiphenyl	0.88		1.00		88.4	60 - 104			
Surrogate: 4-Terphenyl-d14	1.0		1.00		102	65 - 127			
Surrogate: Nitrobenzene-d5	1.0		1.00		100	50 - 136			



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Project Number : Raytheon Fullerton - Monthly, 532.15
 Report To : Steve Netto
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1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
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Batch B1L0414 - MSSEMI_ISOTOPEDILN (continued)

LCS Dup (B1L0414-bsd1)

Prepared: 12/14/2011 Analyzed: 12/14/2011

1,4-Dioxane	1.2	0.20	1.00		119	70 - 130	2.28	20	
Surrogate: 1,2-Dichlorobenzene-d4	0.83		1.00		82.9	58 - 99			
Surrogate: 2-Fluorobiphenyl	0.88		1.00		88.4	60 - 104			
Surrogate: 4-Terphenyl-d14	1.0		1.00		104	65 - 127			
Surrogate: Nitrobenzene-d5	1.0		1.00		101	50 - 136			



Hargis & Associates, Inc.

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Project Number : Raytheon Fullerton - Monthly, 532.15

Report To : Steve Netto

Reported : 12/29/2011

Notes and Definitions

S8	Surrogate recovery was above laboratory acceptance limit. See CAR for details.
ND	Analyte not detected at or above reporting limit
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
NR	Not Reported
RPD	Relative Percent Difference
CA1	CA-NELAP (CDPH)
CA2	CA-ELAP (CDPH)
OR1	OR-NELAP (OSPHL)
TX1	TX-NELAP (TCEQ)

Client: Advanced Technology Laboratories
Job No.: 136180

Bromate by EPA 317
Ion Chromatography-Suppressed Conductivity

Column: Dionex AS14 250 mm x 4 mm, AG14 Guard 50 mm x 4 mm
Eluent: 30.0 mM Na₂CO₃
Flow: 1.0 mL/min
Injection: 250 µL
Detection: Visible, 450 nm

Sample preparation: The samples were treated with OnGuard II H syringe filters prior to analysis to remove excess base.

Parts Per Billion (µg/L)

<u>Sample ID</u>	<u>Result</u>
1100531-02 EW-02	ND
1100531-04 POX	12.3
1100531-06 CEFF	9.3
1100531-07 MW-21	ND
1100531-08 INF	ND
Method Blank	ND
Detection Limit	0.4
Date Analyzed:	12-21-11

Quality Control Summary

Sample ID: 1100531-02 EW-02

<u>Analyte</u>	<u>Sample Result</u>	<u>Spike Conc</u>	<u>Spike Result</u>	<u>Spike % Rec</u>	<u>Spike Duplicate Result</u>	<u>Spike Duplicate % Rec</u>	<u>Spike RPD</u>
Bromate	ND	10	9.1	91	9.3	93	2
QC Guidelines				75 - 125		75 - 125	NMT 10


ADVANCED TECHNOLOGY
 LABORATORIES

SUBCONTRACT ORDER

Work Order: 1100531

SENDING LABORATORY:

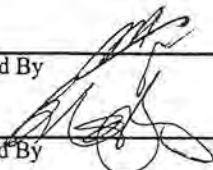
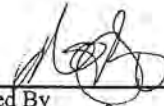

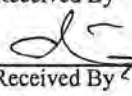
Advanced Technology Laboratories
 3275 Walnut Avenue
 Signal Hill, CA 90755
 Phone: 562.989.4045
 Fax: 562.989.6348
 Project Manager: Rachele Arada

RECEIVING LABORATORY:



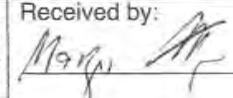
Exova Inc.
 9240 Santa Fe Springs Road
 Santa Fe Springs, CA 90670
 Phone : (562) 948-2225
 Fax: (562) 948-5850
 PO#: SC06916 Standard TAT

IMPORTANT : Please include Work Order # and PO # in your invoice.

Analysis	Due	Expires	Sampled	Comments (RA)
ATL Lab#: 1100531-02 317.0	Client Sample ID: EW-02 12/21/11 17:00	Groundwater 12/08/11 17:10	12/07/11 17:10	BROMATE
ATL Lab#: 1100531-04 317.0	Client Sample ID: POX 12/21/11 17:00	Groundwater 12/08/11 16:40	12/07/11 16:40	BROMATE
ATL Lab#: 1100531-06 317.0	Client Sample ID: CEFF 12/21/11 17:00	Groundwater 12/08/11 17:05	12/07/11 17:05	BROMATE
ATL Lab#: 1100531-07 317.0	Client Sample ID: MW-21 12/21/11 17:00	Groundwater 12/08/11 17:30	12/07/11 17:30	BROMATE
ATL Lab#: 1100531-08 317.0	Client Sample ID: INF 12/21/11 17:00	Groundwater 12/08/11 16:10	12/07/11 16:10	BROMATE

Released By 	Date <u>12/8/11</u>	Received By 	Date <u>12/9/11 950</u>
Released By 	Date <u>12/9/11 1304</u>	Received By  < EXOVA	Date <u>12-09-11 P1:01</u>

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST FORM

PROJECT NAME Raytheon Fullerton-Monthly		PROJECT No./TASK No. 532.15		SAMPLE CONTAINERS		ANALYSIS REQUESTED		ESTIMATED CONCENTRATION RANGE (ppb) FOR VOAS		SPECIAL HANDLING		LABORATORY INFORMATION					
PROJECT MANAGER Chris ROss		Phone No. 858-455-6500		40 ml Glass VOA 125 ml Poly 250 ml Poly 500 ml Poly 1 L Amber VOCs by 8260B 1,4-Dioxane by 8270 SIM Bromate by 317 TDS by SM2540C TSS by SM2540D Bromide by 30D 1,4-DIOXANE BY EPA 8270 MOD								ATL C/O Rachele Arada 3275 Walnut Ave. Signal Hill, CA 90807 562-989-4045					
QA MANAGER Steve Netto		Fax No. 858-455-6533															
SAMPLER (SIGNATURE) 		SAMPLER (PRINTED) Marcos Rodriguez															
LAB ID	SAMPLE ID	SAMPLE COLLECTION		MATRIX			PRESERVATION								REMARKS		
		Date	Time	Soil	Ground water	Surface water	Lab H2O	HCl	HNO 3	NaOH						H2SO 4	Ice
	TB-1207/11	12/7/11	15:00			X	X			X							Please include mrodriguez@hargis.com in lab report distribution list set 1,4-Dioxane MDL to 1.0 ppm
	EW-02		17:10	X			X			X							
	PF		16:55	X						X							
	POX		16:40	X			X			X							
	CBT		17:00	X			X			X							
	CEFF		17:05	X			X			X							
	MW-21		17:50	X			X			X							
	INF		16:10	X			X			X							
Total number of Containers per analysis:										20		9		4		Total No. of Containers: 43	
Relinquished by:  HTA Company		Date 12/7/11 Time 19:26	Received by:  ATL Company		Date 12/7/11 Time 19:26	INSTRUCTIONS 1. Fill out form completely except for shaded areas (lab use only); sign only after verified for completeness. 2. Complete in ballpoint pen. Draw one line through errors, initial and date correction. 3. Indicate number of sample containers in analysis request space; indicate choice with √ or x. 4. Note applicable preservatives, special instructions, and deviations from typical environmental samples. 5. Consult project QA documents for specific instructions.						Shipment Method: <u>DELIVER</u> Send Results to: <u>Steve Netto</u>					
Relinquished by:		Date	Received by:		Date							<input checked="" type="checkbox"/> 9171 TOWNE CENTRE DRIVE, SUITE 375 SAN DIEGO, CA 92122 (858) 455-6500 <input type="checkbox"/> 1640 SOUTH STAPLEY DRIVE, SUITE 124 MESA, AZ 85204 (480) 345-0888 <input type="checkbox"/> 1820 EAST RIVER ROAD, SUITE 220 TUCSON, AZ 85718 (520) 881-7300					
Company		Time	Company		Time	Sample Receipt: <input type="checkbox"/> No. of containers correct <input type="checkbox"/> received good condition/cold <input type="checkbox"/> custody seals secure <input type="checkbox"/> conforms to COC document						Send invoice to San Diego, CA Attn: Accounts Payable					

Fernando Diwa

From: Rachelle Arada
Sent: Friday, December 09, 2011 3:03 PM
To: Fernando Diwa
Cc: customer.relations; Carmen Aguila
Subject: FW: Correction to Chain of Custody

Please log accordingly.

From: Marcos Rodriguez [<mailto:MRODRIGUEZ@HARGIS.COM>]
Sent: Friday, December 09, 2011 2:39 PM
To: Rachelle Arada
Subject: Correction to Chain of Custody

Rachelle-

I am writing to notify you of a mistake in the chain of custody we provided with samples submitted to ATL on Wednesday, December 7. We collected a sample for CEFF at 17:05 to be analyzed for TDS but did not mark this in the chain of custody. Can you please proceed to analyze the sample for TDS? I already notified Margo at testing services of this mistake. Please let me know if you have any questions.

Thank you.

Marcos Rodriguez, P.E.
Engineer
HARGIS + ASSOCIATES, INC.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122
Phone: (858) 455-6500 x155
Fax: (858) 410-7455