ARCADIS U.S., Inc.
1410 Rocky Ridge Drive
Suite 330
Roseville
California 95661
Tel 916.786.0320
Fax 916.786.0366
www.arcadis-us.com

ENVIRONMENT

Ms. Brunilda Davila
United States Environmental Protection Agency, Region IX
75 Hawthorne Street, 9th Floor
SFD-7-4
San Francisco, California 94105

Subject:
USEPA Fourth Quarter 2011 Monitoring Report
Watkins-Johnson Superfund Site, 440 Kings Village Road, Scotts Valley, California

Date:
31 December 2011

Contact:
Liz Sewell

Phone:
916.786.5535

Email:
Liz.Sewell@arcadis-us.com

Our ref:
RC000463.0101.MD211

Dear Ms. Davila:

ARCADIS has prepared this *United States Environmental Protection Agency (USEPA) Fourth Quarter 2011 Monitoring Report* for the Watkins-Johnson Superfund Site, 440 Kings Village Road, Scotts Valley, California (Site). This report is submitted in accordance with the *Final Remedial Design Plan for Remedial Design/Remedial Action (*Watkins-Johnson Environmental, Inc. August 31, 1993*, Final Remedial Design Plan for Remedial Design/Remedial Action, Watkins-Johnson Company, Scotts Valley, California)* for the Site.

Introduction

This report presents the information obtained during the fourth quarter 2011 (September 1, 2011 through November 30, 2011) for the Site.

This quarterly report provides:

- A discussion of the groundwater monitoring program and the associated activities performed during the current quarter;
- A summary of groundwater monitoring activities;
- A summary of groundwater level measurements;
- A summary of groundwater quality results;
- A summary of the status of the groundwater extraction and treatment system (GWETS) and the soil vapor extraction system (SVES);
- A summary of data validation results; and
- Summary.

Groundwater Monitoring Program

ARCADIS assumed responsibility for operation of the remedial system at the Site in July 1999. At that time, the USEPA and Watkins Johnson Company (WJC) had agreed to specific activities to monitor trichloroethene (TCE), which had been observed in monitoring well WJ-41 at concentrations above its maximum contaminant level (MCL) of 5 micrograms per liter (µg/L). During the June 1999 sampling event, tetrachloroethene (PCE) began to be detected in well WJ-43.

After review of the historic and recent data from site-wide monitoring in December 2002, the groundwater-monitoring program was modified to only require quarterly sampling of Regional Zone wells WJ-41 and WJ-43. In 2010, USEPA requested that the routine groundwater monitoring program include wells WJ-11, WJ-37A, WJ-41, WJ-43, the Wescosa Well and additional wells installed upgradient and offsite (*Addendum to Sampling and Analysis Plan – Background Groundwater Assessment*, ARCADIS April 16, 2010). Four additional upgradient offsite wells (KV-1 through KV-4) were installed during the third and fourth quarters of 2010.

Well locations are shown on Figure 1. Groundwater samples are collected using passive diffusion bag (PDB) samplers (*User's Guide for Polyethylene-Based Passive Diffusion Bag Samplers to Obtain Volatile Organic Compound Concentrations in Wells,* USGS, Water-Resources Investigations Report, 01-4060, 2001) as approved by the USEPA (May 5, 2004).

Groundwater from the Wescosa well is collected from a spigot.

Although it is not a site-related contaminant, the USEPA has requested that methyl tertiary butyl ether (MTBE) be analyzed in groundwater samples collected from site monitoring wells. Therefore, following the removal of PDB samplers, a grab groundwater sample is collected from each well using a bailer.

Fourth Quarter 2011 Activities

The following activities were conducted during the fourth quarter 2011:

- September 13, 2011: Collected samples from the GWETS influent, midpoint and effluent.

- September 23, 2011: Submitted the *USEPA Third Quarter 2011 Monitoring Report* for the Watkins-Johnson Superfund Site, 440 Kings Village Road, Scotts Valley, California.

- September 23, 2011: System was shut-down for carbon change out.

- October 18, 2011: Performed groundwater monitoring and sampling, which included: collection of water level measurements at wells WJ-11, WJ-37A, WJ-41, WJ-43, and KV-1 through KV-4; and the collection of groundwater samples at wells WJ-11, WJ-37A, WJ-41, WJ-43, Wescosa Well, KV-1, KV-2 at 180, 190, and 200 feet below top of casing (BTOC), KV-3 at 172 and 182 feet BTOC, and KV-4.

- November 8, 9, and 10, 2011: ARCADIS' subcontractor, BAKER Corporation, completed the carbon change out.

- November 11, 2011: System restart attempted. Carbon was observed in the effluent after the restart. The system was immediately shutdown to assess the carbon vessels. Following internal inspection and repair of the carbon vessels, the system restart is anticipated in December 2011.

Groundwater-Level Measurements

As approved by the USEPA (January 27, 2003), site-wide depth-to-water measurements were no longer required as part of the revised monitoring program. Table 1 presents a summary of groundwater elevation data for selected Regional Zone and Perched Zone wells. Groundwater elevations for wells at the Site and the upgradient offsite wells are presented on Figure 2.

During the fourth quarter 2011 Regional Zone wells WJ-11, WJ-37A, WJ-41, WJ-43, and KV-1 through KV-4 were gauged. The Wescosa Well is sampled via a spigot, therefore gauging is not possible.

Groundwater Quality Conditions

Regional Zone wells WJ-11, WJ-37A, WJ-41, WJ-43, upgradient monitoring wells KV-1, KV-2, KV-3, KV-4 and the Wescosa Well were sampled October 18, 2011.

The samples were submitted to Curtis & Tompkins, Ltd., Analytical Laboratories (C&T) under chain of custody for analysis of volatile organic compounds (VOCs) using USEPA Test Method 8260B. The analytical results are presented in Table 2.

PCE and TCE concentrations detected during the current quarter in Regional Zone groundwater wells at the Site are shown on Figure 3.

Summary of Soil Vapor Extraction System Operation

The SVE system was shut down following USEPA approval in April 2001. ARCADIS submitted the final *VLEACH Modeling Report* (*ARCADIS, July 2, 2003, Final Modeling Report VLEACH Analysis of Current Conditions, Watkins-Johnson Superfund Site, Scotts Valley, California)* to the USEPA on July 2, 2003 for consideration for final shutdown of the SVE. EPA provided approval of the VLEACH report to ARCADIS in a letter dated May 8, 2008. No vapor samples were collected during the current quarter.

Summary of Groundwater Extraction and Treatment System Operation

The GWETS began operation in 1986. The Perched Zone infiltration gallery was shut down with USEPA approval in May 2000. Discharge is authorized under NPDES Order Number R3-2006-0067, Permit Number CAG993002.

In 2008, ARCADIS proposed the shutdown of extraction well RA-2 to evaluate groundwater conditions and quality at the Site under a no-pumping state (*Proposal for RA-2 Shutdown and Groundwater Concentration Rebound Evaluation, ARCADIS,* November 6, 2008). With approval from the USEPA (letter from USEPA to ARCADIS dated November 21, 2008), extraction well RA-2 was shut down on December 19, 2008 and the RA-2 shutdown rebound evaluation commenced. On July 2, 2009, ARCADIS submitted the *Summary of RA-2 Shutdown and Groundwater Concentration Rebound Evaluation* to the USEPA, with the recommendation that the treatment system be permanently shut down because remedial goals for the Site had been reached. The USEPA requested in an email dated August 17, 2009 that the GWETS be restarted. The GWETS was formally restarted on November 19, 2009 following system modifications due to the facility no longer requiring the water, and the replacement of a failed pump in RA-2.

As required by the current NPDES permit, effective as of April 2008, when the system is in operation, samples are collected monthly from three locations: the GWETS LPGAC influent (TS-IN), the midpoint between the two LPGAC vessels (TS-MID), and the LPGAC effluent (TS-OUT).

Routine sampling of the GWETS is performed monthly, and the September event occurred on September 13, 2011. Sample results were received from the laboratory

on September 20, 2011. The effluent sample (TS-OUT) contained detections of PCE at 0.6 micrograms per liter (μg/L) which is below the NPDES permit requirements for PCE of 0.8 μg/L. ARCADIS notified the Regional Water Quality Control Board (RWQCB) and promptly shut the GWETS down on September 23, 2011 to prevent a potential discharge of treated water above permit A carbon change out was completed between November 8, 9, and 10, 2011, and a system re-started was attempted on November 11, 2011. Due to carbon observed in the effluent, the system was immediately shut down. System inspections, repairs and restart will be completed in December 2011. Results for the GWETS sampling event are presented on Table 3. During the current quarter, 1,318,100 gallons of treated water were discharged to Bean Creek (Table 4).

Summary of Groundwater Quality Data Validation

Groundwater quality data were reviewed and assigned qualifiers in accordance with the *Laboratory Data Validation Functional Guidelines for Evaluating Organic Analyses* (USEPA, 1985). The results were acceptable, and no qualifiers were assigned. Sample results for the quality control (QC) batch were accepted by the laboratory based on percent recoveries and completeness of the QC data. The quality assurance/quality control (QA/QC) data validation summary for groundwater is included in Appendix A.

Summary

During the fourth quarter 2011 system sampling (9/13/11), the PCE concentration in the system influent was 4.2 µg/L. The TCE concentration in the system influent was <0.5 µg/L. All influent concentrations were treated to below permit limits prior to discharge.

Acetone was detected at each monitoring well (except the Wescosa Well) at concentrations ranging from 21 micrograms per liter (µg/L; KV-3 at 172 feet BTOC) to 58 µg/L (KV-2 at 190 feet BTOC). . At the Wescosa Well location, vinyl chloride, carbon disulfide, and 1, 2-DCA were detected at concentrations of 4.2 µg/L, 1.2 µg/L, and 8.1 µg/L, respectively.

During the fourth quarter 2011, PCE was detected above the MCL (5 µg/L) in WJ-11 at a concentration of 25 µg/L, WJ-37A at a concentration of 22 µg/L, WJ-43 at a concentration of 23 µg/L, and at upgradient monitoring well KV-2 at PDB bag depths of 180, 190 and 200 feet BTOC at a concentration of 48 µg/L, 24 µg/L and 8.0 µg/L, respectively, and from the duplicate sample collected at KV-2 at 180 feet BTOC with

a concentration of 50 µg/L; all other wells were below the MCL. TCE was not detected above the MCL (5 µg/L) at any of the wells sampled this quarter.

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

Sincerely,

ARCADIS

Liz Sewell

Liz Sewell, PG
Senior Project Manager

Attachments:

Table 1	Summary of Groundwater Elevation Data – Selected Wells
Table 2	Results of Laboratory Analyses for Selected Purgeable Halocarbons
Table 3	Results of Laboratory Analyses for Volatile Organic Compounds in the Treatment System Samples
Table 4	Summary of Groundwater Extraction, Usage and Discharge to Bean Creek
Figure 1	Regional and Perched Zone Groundwater Wells and Soil Vapor Wells
Figure 2	Regional Zone Groundwater Elevations (October 2011)
Figure 3	Groundwater Analytical Results – PCE and TCE (October 2011)
Appendix A	Quality Assurance Report
Appendix B	Groundwater Sampling Field Forms
Appendix C	Laboratory Analytical Results

Copies:

Wei Liu, PhD, PG
California Regional Water
Quality Control Board
Central Coast Region
895 Aerovista Place, Suite 101
San Luis Obispo, California 93401-7906

Ms. Barbara Cook
California Environmental Protection
Agency
Department of Toxic Substances Control
(email only) bcook@dtsc.ca.gov

Santa Cruz Public Library
230D Mt. Herman Road
Scotts Valley, California 95066

Mr. Charles McKniesh
Scotts Valley Water District
2 Civic Center Drive
Scotts Valley, California 95067

Patrick C. O'Connor
Aviza Technology
440 Kings Village Rd
Scotts Valley, Ca 95066

Joseph A. Pugh, Esq.
TriQuint Semiconductor
Corporate / Patent Attorney
2300 N.E. Brookwood Parkway
Hillsboro, Oregon 97124

Mr. Stuart I. Block
Cox, Castle & Nicholson LLP
555 California Street, 10th Floor
San Francisco, California 94104

Ms. Kimberly McMorrow
Wilson Sonsini Goodrich & Rosati
650 Page Mill Road
Palo Alto, California 94304

Mr. Scott Carson
Santa Cruz County
Environmental Health Service
701 Ocean Street, Room 312
Santa Cruz, California 95060

Mr. Rick Collins
ARCADIS
(email only)
Richard.Collins@arcadis-us.com

ARCADIS

Tables

Table 1
Summary of Groundwater Elevation Data – Selected Wells

Watkins-Johnson Superfund Site

Scotts Valley, California

USEPA Fourth Quarter 2011 Monitoring Report

Monitoring Well	Date	TOC Elevation (feet msl)	Depth to Water (ft btoc)	Groundwater Elevation (ft amsl)	Change from Previous Measurement (ft)	Quarter
AP-1	02/02/07	532.49	188.52	343.97	---	1st 2007
AP-1	02/12/08	532.49	190.15	342.34	-1.63	1st 2008
AP-3N	02/02/07	523.05	175.52	347.53	---	1st 2007
AP-3N	02/12/08	523.05	175.86	347.19	-0.34	1st 2008
AP-3N	03/20/09	523.05	174.56	348.49	1.30	2nd 2009
AP-3N	04/21/09	523.05	194.60	328.45	-20.04	2nd 2009
AP-3N	05/21/09	523.05	174.65	348.40	19.95	2nd 2009
DH-7	02/23/10	469.18	98.90	370.28	---	1st 2010
M-1	02/02/07	524.38	180.02	344.36	---	1st 2007
M-1	02/12/08	524.38	179.85	344.53	0.17	1st 2008
MW-2	10/20/09	482.21	DRY	DRY	---	4th 2009
OB-1	02/02/07	453.16	107.33	345.83	---	1st 2007
OB-1	02/12/08	453.16	108.90	344.26	-1.57	1st 2008
OB-1	03/20/09	453.16	105.82	347.34	3.08	2nd 2009
OB-1	04/21/09	453.16	107.35	345.81	-1.53	2nd 2009
OB-1	05/21/09	453.16	105.30	347.86	3.60	2nd 2009
OB-1	02/23/10	453.16	105.63	347.53	0.19	1st 2010
OB-2	02/02/07	455.23	109.15	346.08	---	1st 2007
OB-2	02/12/08	455.23	110.85	344.38	-1.70	1st 2008
OB-2	12/19/08	455.23	111.50	343.73	-0.65	1st 2009
OB-2	02/23/09	455.23	108.76	346.47	2.74	1st 2009
OB-2	03/20/09	455.23	107.80	347.43	0.96	2nd 2009
OB-2	04/21/09	455.23	107.26	347.97	0.54	2nd 2009
OB-2	05/21/09	455.23	107.22	348.01	0.04	2nd 2009
OB-2	02/23/10	455.23	107.40	347.83	-0.18	1st 2010
OB-3	02/02/07	455.97	109.60	346.37	---	1st 2007
OB-3	02/18/07	455.97	111.20	344.77	-1.60	1st 2008
PZE-6	10/20/09	453.49	DRY	DRY	---	4th 2009
RA-1	02/02/07	453.92	108.10	345.82	---	1st 2007
RA-1	02/18/07	453.92	109.70	344.22	-1.60	1st 2008
RA-1	12/05/08	453.92	110.73	343.19	-1.03	1st 2009
RA-1	12/19/08	453.92	110.30	343.62	0.43	1st 2009
RA-1	02/23/09	453.92	107.30	346.62	3.00	1st 2009
RA-1	03/20/09	453.92	106.30	347.62	1.00	2nd 2009
RA-1	04/21/09	453.92	105.90	348.02	0.40	2nd 2009
RA-1	05/21/09	453.92	105.85	348.07	1.45	2nd 2009
RA-2	02/02/07	454.44	125.60	328.84	---	1st 2007
RA-2	02/12/08	454.44	117.68	336.76	7.92	1st 2008
RA-2	12/05/08	454.44	118.70	335.74	-1.02	1st 2009
RA-2	12/19/08	454.44	116.20	338.24	2.50	1st 2009
RA-2	02/23/09	454.44	108.25	346.19	7.95	1st 2009
RA-2	03/20/09	454.44	102.20	352.24	6.05	2nd 2009
RA-2	04/21/09	454.44	106.90	347.54	-4.70	2nd 2009
RA-2	05/21/09	454.44	106.85	347.59	1.40	2nd 2009
RA-3	02/02/07	469.78	125.54	344.24	---	1st 2007
RA-3	02/12/08	469.78	125.72	344.06	-0.18	1st 2008
RA-3	12/05/08	469.78	126.90	342.88	-1.18	1st 2009
RA-3	12/19/08	469.78	126.90	342.88	0.00	1st 2009
RA-3	02/23/09	469.78	124.90	344.88	2.00	1st 2009
RA-3	03/20/09	469.78	124.30	345.48	0.60	2nd 2009
RA-3	04/21/09	469.78	124.23	345.55	0.07	2nd 2009
RA-3	05/21/09	469.78	124.46	345.32	0.44	2nd 2009
RA-4	12/05/08	450.09	106.50	343.59	---	1st 2009
RA-4	12/19/08	450.09	106.46	343.63	0.04	1st 2009

Table 1
Summary of Groundwater Elevation Data – Selected Wells

Watkins-Johnson Superfund Site

Scotts Valley, California

USEPA Fourth Quarter 2011 Monitoring Report

Monitoring Well	Date	TOC Elevation (feet msl)	Depth to Water (ft btoc)	Groundwater Elevation (ft amsl)	Change from Previous Measurement (ft)	Quarter
SUPPLY WELL	02/02/07	483.20	136.34	346.86	---	1st 2007
SUPPLY WELL	02/12/08	483.20	136.15	347.05	0.19	1st 2008
SUPPLY WELL	02/23/10	483.20	135.32	347.88	0.83	1st 2010
VWD #9 Monitor We	05/13/08	528.00	181.50	346.50	---	2nd 2008
WJ-11	02/02/07	467.46	120.58	346.88	---	1st 2007
WJ-11	02/12/08	467.46	122.43	345.03	-1.85	1st 2008
WJ-11	12/05/08	467.46	123.35	344.11	-0.92	1st 2009
WJ-11	12/19/08	467.46	123.34	344.12	0.01	1st 2009
WJ-11	02/23/09	467.46	120.67	346.79	2.67	1st 2009
WJ-11	03/20/09	467.46	119.70	347.76	0.97	2nd 2009
WJ-11	04/21/09	467.46	119.10	348.36	0.60	2nd 2009
WJ-11	05/21/09	467.46	118.91	348.55	0.19	2nd 2009
WJ-11	02/23/10	467.46	119.51	347.95	-0.60	1st 2010
WJ-11	05/12/10	467.46	119.57	347.89	-0.06	2nd 2010
WJ-11	08/19/10	467.46	119.72	347.74	-0.15	3rd 2010
WJ-11*	11/17/10	470.22	120.09	350.13	2.39	4th 2010
WJ-11*	02/09/11	470.22	119.84	350.38	0.25	1st 2011
WJ-11*	04/13/11	470.22	118.76	351.46	1.08	2nd 2011
WJ-11*	07/19/11	470.22	118.24	351.98	0.52	3rd 2011
WJ-11*	**10/18/11**	**470.22**	**117.73**	**352.49**	**0.51**	**4th 2011**
WJ-21	02/02/07	unk	133.84	NA	---	1st 2007
WJ-21	02/12/08	unk	133.86	NA	NA	1st 2008
WJ-22	02/02/07	477.89	134.20	343.69	---	1st 2007
WJ-22	02/12/08	477.89	134.15	343.74	0.05	1st 2008
WJ-25A	02/02/07	459.42	132.21	327.21	---	1st 2007
WJ-25A	02/12/08	459.42	116.50	342.92	15.71	1st 2008
WJ-25A	12/05/08	459.42	116.45	342.97	0.05	1st 2009
WJ-25A	12/19/08	459.42	116.40	343.02	0.05	1st 2009
WJ-25A	02/23/09	459.42	128.38	331.04	-11.98	1st 2009
WJ-25A	03/20/09	459.42	116.22	343.20	12.16	2nd 2009
WJ-25A	04/21/09	459.42	116.39	343.03	-0.17	2nd 2009
WJ-25A	05/21/09	459.42	113.57	345.85	2.82	2nd 2009
WJ-26	02/02/07	477.90	131.02	346.88	---	1st 2007
WJ-26	02/12/08	477.90	132.72	345.18	-1.70	1st 2008
WJ-29A	02/02/07	448.90	102.64	346.26	---	1st 2007
WJ-29A	02/12/08	448.90	103.35	345.55	-0.71	1st 2008
WJ-29A	02/23/09	448.90	102.55	346.35	0.80	1st 2009
WJ-29A	03/20/09	448.90	101.70	347.20	0.85	2nd 2009
WJ-29A	04/21/09	448.90	101.50	347.40	0.20	2nd 2009
WJ-29A	05/21/09	448.90	101.51	347.39	-0.01	2nd 2009
WJ-37	10/20/09	461.91	85.37	376.54	---	4th 2009
WJ-37A	02/02/07	462.54	115.85	346.69	---	1st 2007
WJ-37A	02/12/08	462.54	117.65	344.89	-1.80	1st 2008
WJ-37A	12/05/08	462.54	118.65	343.89	-1.00	1st 2009
WJ-37A	12/19/08	462.54	118.15	344.39	0.50	1st 2009
WJ-37A	02/23/09	462.54	115.80	346.74	2.35	1st 2009
WJ-37A	03/20/09	462.54	114.83	347.71	0.97	2nd 2009
WJ-37A	04/21/09	462.54	114.30	348.24	0.53	2nd 2009
WJ-37A	05/21/09	462.54	114.15	348.39	0.15	2nd 2009
WJ-37A	02/23/10	462.54	114.73	347.81	-0.58	1st 2010
WJ-37A	05/12/10	462.54	114.79	347.75	-0.06	2nd 2010
WJ-37A	08/19/10	462.54	114.93	347.61	-0.14	3rd 2010

Table 1
Summary of Groundwater Elevation Data – Selected Wells
Watkins-Johnson Superfund Site
Scotts Valley, California
USEPA Fourth Quarter 2011 Monitoring Report

Monitoring Well	Date	TOC Elevation (feet msl)	Depth to Water (ft btoc)	Groundwater Elevation (ft amsl)	Change from Previous Measurement (ft)	Quarter
WJ-37A*	11/17/10	465.28	115.32	349.96	2.35	4th 2010
WJ-37A*	02/09/11	465.28	115.03	350.25	0.29	1st 2011
WJ-37A*	04/13/11	465.28	113.91	351.37	1.12	2nd 2011
WJ-37A*	07/19/11	465.28	113.51	351.77	0.40	3rd 2011
WJ-37A*	**10/18/11**	**465.28**	**112.94**	**352.34**	**0.57**	**4th 2011**
WJ-41	05/01/07	522.63	175.91	346.72	---	3rd 2006
WJ-41	08/15/07	522.63	176.83	345.80	-0.92	4th 2006
WJ-41	11/13/07	522.63	174.50	348.13	2.33	1st 2007
WJ-41	02/12/08	522.63	177.08	345.55	-2.58	1st 2008
WJ-41	05/13/08	522.63	177.40	345.23	-0.32	2nd 2008
WJ-41	08/05/08	522.63	177.77	344.86	-0.37	3rd 2008
WJ-41	12/05/08	522.63	178.90	343.73	-1.13	1st 2009
WJ-41	12/19/08	522.63	177.78	344.85	1.12	1st 2009
WJ-41	02/23/09	522.63	175.12	347.51	2.66	1st 2009
WJ-41	03/20/09	522.63	174.20	348.43	0.92	2nd 2009
WJ-41	04/21/09	522.63	173.84	348.79	0.36	2nd 2009
WJ-41	05/21/09	522.63	173.75	348.88	0.09	2nd 2009
WJ-41	08/06/09	522.63	173.80	348.83	-0.05	3rd 2009
WJ-41	10/20/09	522.63	173.94	348.69	-0.14	4th 2009
WJ-41	02/23/10	522.63	173.96	348.67	-0.02	1st 2010
WJ-41	05/12/10	522.63	174.23	348.40	-0.27	2nd 2010
WJ-41	08/19/10	522.63	174.49	348.14	-0.26	3rd 2010
WJ-41*	11/17/10	523.65	174.83	348.82	0.68	4th 2010
WJ-41*	02/09/11	523.65	174.61	349.04	0.22	1st 2011
WJ-41*	04/13/11	523.65	173.09	350.56	1.52	2nd 2011
WJ-41*	07/19/11	523.65	173.11	350.54	-0.02	3rd 2011
WJ-41*	**10/18/11**	**523.65**	**172.63**	**351.02**	**0.48**	**4th 2011**
WJ-43	05/01/07	467.48	120.96	346.52	---	3rd 2006
WJ-43	08/15/07	467.48	121.95	345.53	-0.99	4th 2006
WJ-43	11/13/07	467.48	123.30	344.18	-1.35	1st 2007
WJ-43	02/12/08	467.48	122.59	344.89	0.71	1st 2008
WJ-43	05/13/08	467.48	122.72	344.76	-0.13	2nd 2008
WJ-43	08/05/08	467.48	123.13	344.35	-0.41	3rd 2008
WJ-43	12/05/08	467.48	123.50	343.98	-0.37	1st 2009
WJ-43	12/19/08	467.48	123.50	343.98	0.00	1st 2009
WJ-43	02/23/09	467.48	120.82	346.66	2.68	1st 2009
WJ-43	03/20/09	467.48	119.84	347.64	0.98	2nd 2009
WJ-43	04/21/09	467.48	119.25	348.23	0.59	2nd 2009
WJ-43	05/21/09	467.48	119.10	348.38	0.15	2nd 2009
WJ-43	08/06/09	467.48	119.18	348.30	-0.08	3rd 2009
WJ-43	10/20/09	467.48	119.39	348.09	-0.21	4th 2009
WJ-43	02/23/10	467.48	119.62	347.86	-0.23	1st 2010
WJ-43	05/12/10	467.48	119.71	347.77	-0.09	2nd 2010
WJ-43	08/19/10	467.48	119.82	347.66	-0.11	3rd 2010
WJ-43*	11/17/10	470.19	120.23	349.96	2.30	4th 2010
WJ-43*	02/09/11	470.19	119.96	350.23	0.27	1st 2011
WJ-43*	04/13/11	470.19	118.93	351.26	1.03	2nd 2011
WJ-43*	07/19/11	470.19	118.42	351.77	0.51	3rd 2011
WJ-43*	**10/18/11**	**470.19**	**117.86**	**352.33**	**0.56**	**4th 2011**

Table 1
Summary of Groundwater Elevation Data – Selected Wells

Watkins-Johnson Superfund Site

Scotts Valley, California

USEPA Fourth Quarter 2011 Monitoring Report

Monitoring Well	Date	TOC Elevation (feet msl)	Depth to Water (ft btoc)	Groundwater Elevation (ft amsl)	Change from Previous Measurement (ft)	Quarter
WJ-48	02/02/07	453.54	107.22	346.32	---	1st 2007
WJ-48	02/12/08	453.54	108.94	344.60	-1.72	1st 2008
WJ-48	02/23/10	453.54	105.60	347.94	3.34	1st 2010
WJ-49	02/02/07	459.72	113.35	346.37	---	1st 2007
WJ-49	02/12/08	459.72	118.91	340.81	-5.56	1st 2008
WJ-51	10/20/09	490.74	DRY	DRY	---	4th 2009
KV-1*	01/05/11	526.51	175.51	351.00	0.00	1st 2011
KV-1*	02/09/11	526.51	175.32	351.19	-0.19	1st 2011
KV-1*	04/13/11	526.51	174.31	352.20	1.01	2nd 2011
KV-1*	07/19/11	526.51	173.84	352.67	0.47	3rd 2011
KV-1*	**10/18/11**	**526.51**	**173.13**	**353.38**	**0.71**	**4th 2011**
KV-2*	01/05/11	527.70	176.79	350.91	0.00	1st 2011
KV-2*	02/09/11	527.70	176.71	350.99	-0.08	1st 2011
KV-2*	04/13/11	527.70	175.54	352.16	1.17	2nd 2011
KV-2*	07/19/11	527.70	174.93	352.77	0.61	3rd 2011
KV-2*	**10/18/11**	**527.70**	**171.57**	**356.13**	**3.36**	**4th 2011**
KV-3*	11/17/10	528.19	137.21	390.98	0.00	4th 2010
KV-3*	01/05/11	528.19	135.37	392.82	-1.84	1st 2011
KV-3*	02/09/11	528.19	---	---	**---**	1st 2011
KV-3*	04/13/11	528.19	135.09	393.10	---	2nd 2011
KV-3*	07/19/11	528.19	133.89	394.30	1.20	3rd 2011
KV-3*	**10/18/11**	**528.19**	**133.13**	**395.06**	**0.76**	**4th 2011**
KV-4*	01/05/11	527.69	172.84	354.85	0.00	1st 2011
KV-4*	02/09/11	527.69	172.75	354.94	-0.09	1st 2011
KV-4*	04/13/11	527.69	171.87	355.82	0.88	2nd 2011
KV-4*	07/19/11	527.69	171.13	356.56	0.74	3rd 2011
KV-4*	**10/18/11**	**527.69**	**169.87**	**357.82**	**1.26**	**4th 2011**

Notes:

ft = feet
ft amsl = feet above mean sea level
ft btoc = feet below top of casing
--- unable to gauge water level
DRY well casing is dry
* Surveyed / Re-surveyed by Muir Consulting on 12/10/10

Table 2

Results of Laboratory Analyses for Selected Purgeable Halocarbons

Watkins-Johnson Superfund Site

Scotts Valley, California

USEPA Fourth Quarter 2011 Monitoring Report

Regional Monitoring Well	Sample Date	PCE µg/L	TCE µg/L	1,1-DCE µg/L	1,1-DCA µg/L	cis-1,2-DCE µg/L	CFM µg/L	Freon 113 µg/L	1,1,1-TCA µg/L	1,1,2-TCA µg/L	MTBE µg/L
Treatment Standard		**5**	**5**	**6**	**5**	**6**	**100**	**---**	**200**	**32**	**---**
KV-1 - 180	1/5/2011	0.9	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5	<0.5
KV-1 - 180	02/09/11	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5	<0.5
KV-1 - 180	04/13/11	1.1	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5	<0.5
KV-1 - 180	07/19/11	1.4	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5	<0.5
KV-1 - 180	**10/18/11**	**1.3**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<5.0**	**<0.5**	**<0.5**	**<0.5**
KV-2 -180	01/05/11	35	0.8	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5	<0.5
KV-2 - 180	02/09/11	22	1.1	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5	<0.5
KV-2-180/Dup 2	02/09/11	21	1.0	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5	---
KV-2 - 180	04/13/11	39	0.9	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5	<0.5
KV-2-180/Dup 2	04/13/11	40	0.9	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5	---
KV-2 - 180	07/19/11	53	1.8	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5	<0.5
KV-2-180/Dup 2	07/19/11	51	1.7	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5	---
KV-2 - 180	**10/18/11**	**48**	**1.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<5.0**	**<0.5**	**<0.5**	**<0.5**
KV-2-180/Dup 2	**10/18/11**	**50**	**1.7**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<5.0**	**<0.5**	**<0.5**	**<0.5**
KV-2 - 190	01/05/11	14	1.4	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5	---
KV-2 - 190	02/09/11	11	1.6	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5	**---**
KV-2 - 190	04/13/11	19	1.2	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5	---
KV-2-190	07/19/11	27	1.9	<0.5	<0.5	<0.5	<0.5	<5.1	<0.5	<0.5	---
KV-2-190	**10/18/11**	**24**	**1.9**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<5.0**	**<0.5**	**<0.5**	**<0.5**
KV-2 - 200	01/05/11	3.7	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5	---
KV-2 - 200	02/09/11	1.6	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5	---
KV-2 - 200	04/13/11	5.9	1.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5	---
KV-2-200	07/19/11	8.1	2.4	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5	---
KV-2-200	**10/18/11**	**8.0**	**2.3**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<5.0**	**<0.5**	**<0.5**	**<0.5**
KV-3 - 172	11/17/10	<0.5	1.2	<0.5	<0.5	0.5	<0.5	<5.0	<0.5	<0.5	<0.5
KV-3 -172	01/05/11	0.7	1.0	<0.5	<0.5	0.7	<0.5	<5.0	<0.5	<0.5	<0.5
KV-3 - 172	02/17/11	<0.5	1.3	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5	<0.5
KV-3 - 172	04/13/11	1.0	1.6	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5	<0.5
KV-3 - 172	07/19/11	1.1	1.8	<0.5	<0.5	0.6	<0.5	<5.0	<0.5	<0.5	<0.5
KV-3 - 172	**10/18/11**	**1.0**	**1.8**	**<0.5**	**<0.5**	**0.6**	**<0.5**	**<5.0**	**<0.5**	**<0.5**	**<0.5**
KV-3 - 182	11/17/10	<0.5	1.2	<0.5	<0.5	0.5	<0.5	<5.0	<0.5	<0.5	<0.5
KV-3 - 182	01/05/11	0.5	0.9	<0.5	<0.5	0.6	<0.5	<5.0	<0.5	<0.5	---
KV-3 - 182	02/17/11	<0.5	1.4	<0.5	<0.5	0.6	<0.5	<5.0	<0.5	<0.5	**---**
KV-3 - 182	04/13/11	1.1	1.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5	---
KV-3 - 182	07/19/11	1.2	1.4	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5	---
KV-3 - 182	**10/18/11**	**1.0**	**1.4**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<5.0**	**<0.5**	**<0.5**	**<0.5**
KV-4 -185	01/05/11	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5	<0.5
KV-4 / Dup-1	01/05/11	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5	---
KV-4 -185	02/09/11	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5	<0.5
KV-4 -185	04/13/11	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5	<0.5
KV-4 -185	07/19/11	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5	<0.5
KV-4 -185	**10/18/11**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<5.0**	**<0.5**	**<0.5**	**<0.5**
Wescosa Well	11/17/10	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5	<0.5
Wescosa Well	02/09/11	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5	<0.5
Wescosa Well	04/13/11	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5	<0.5
Wescosa Well	07/19/11	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5	<0.5
Wescosa Well	**10/18/11**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<5.0**	**<0.5**	**<0.5**	**<0.5**

Table 2

Results of Laboratory Analyses for Selected Purgeable Halocarbons

Watkins-Johnson Superfund Site

Scotts Valley, California

USEPA Fourth Quarter 2011 Monitoring Report

Regional Monitoring Well	Sample Date	PCE µg/L	TCE µg/L	1,1-DCE µg/L	1,1-DCA µg/L	cis-1,2-DCE µg/L	CFM µg/L	Freon 113 µg/L	1,1,1-TCA µg/L	1,1,2-TCA µg/L	MTBE µg/L
Treatment Standard		**5**	**5**	**6**	**5**	**6**	**100**	**---**	**200**	**32**	**---**
WJ-11	01/03/85	---	<1	---	---	<1	---	---	---	---	---
WJ-11	08/02/86	0.03	<0.01	---	---	---	---	---	---	---	---
WJ-11	11/26/86	<1	<1	---	---	---	---	---	---	---	---
WJ-11	12/10/86	<1	<1	---	---	---	---	---	---	---	---
WJ-11	01/07/87	<1	<1	---	---	---	---	---	---	---	---
WJ-11	01/29/87	<0.5	<0.5	---	---	---	---	---	---	---	---
WJ-11	05/23/87	<0.5	<0.5	---	---	<0.5	---	---	---	---	---
WJ-11	08/26/87	<0.5	<0.5	---	---	---	---	---	---	---	---
WJ-11	09/11/91	<0.5	<0.5	---	---	<0.5	---	---	---	---	---
WJ-11	03/03/92	---	<0.5	---	---	<0.5	---	---	---	---	---
WJ-11	12/08/92	---	<0.5	---	---	<0.5	---	---	---	---	---
WJ-11	06/14/93	---	<0.5	---	---	<0.5	---	---	---	---	---
WJ-11	11/18/05	7.2	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<0.5	<0.5	---
WJ-11	02/06/06	8.4	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<0.5	<0.5	---
WJ-11	04/24/06	16	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<0.5	<0.5	---
WJ-11	02/02/07	8.6	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
WJ-11	12/19/08	9.5	<0.5	<0.5	<0.5	<0.5	<1.0	<2.0	<0.5	<0.5	**---**
WJ-11	02/20/09	23	<0.5	<0.5	<0.5	<0.5	<1.0	<2.0	<0.5	<0.5	**---**
WJ-11	03/20/09	16	<0.5	<0.5	<0.5	<0.5	<1.0	<2.0	<0.5	<0.5	---
WJ-11	04/21/09	16	<0.5	<0.5	<0.5	<0.5	<1.0	<2.0	<0.5	<0.5	---
WJ-11	05/20/09	15	<0.5	<0.5	<0.5	<0.5	<1.0	<2.0	<0.5	<0.5	---
WJ-11	02/23/10	20	<0.5	<0.5	<0.5	<0.5	<1.0	<2.0	<0.5	<0.5	---
WJ-11	05/12/10	2.1	<0.5	<0.5	<0.5	<0.5	<1.0	<2.0	<0.5	<0.5	---
WJ-11	08/19/10	2.0	<0.5	<0.5	<0.5	<0.5	<1.0	<2.0	<0.5	<0.5	---
WJ-11	11/17/10	13.0	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5	<0.5
WJ-11	02/09/11	11.0	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5	<0.5
WJ-11	04/13/11	26.0	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5	<0.5
WJ-11	07/19/11	20.0	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5	<0.5
WJ-11	**10/18/11**	**25**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<5.0**	**<0.5**	**<0.5**	**<0.5**
WJ-25A	07/03/02	<0.50	<0.50	<0.10	<0.50	<0.50	<0.50	<0.50	<0.40	<0.50	---
WJ-25A	02/02/07	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
WJ-25A	12/19/08	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<2.0	<0.5	<0.5	**---**
WJ-25A	02/20/09	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<2.0	<0.5	<0.5	**---**
WJ-25A	03/20/09	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<2.0	<0.5	<0.5	---
WJ-25A	04/21/09	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<2.0	<0.5	<0.5	---
WJ-25A	05/20/09	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<2.0	<0.5	<0.5	---
WJ-26	06/15/96	<0.5	0.7	<0.5	<0.5	<0.5	<0.5	1.9	0.6	0.6	---
WJ-26	06/02/99	<0.5	1.1	0.5	<0.5	<0.5	<0.5	5.1	1.1	1	---
WJ-26	12/13/99	<0.5	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.8	---
WJ-26	06/16/00	<0.5	0.7	<0.5	<0.5	<0.5	<0.5	1.9	0.6	0.6	---
WJ-26	12/15/00	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	1.58	<0.500	<0.500	---
WJ-26	06/11/01	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<1.0	<0.50	<0.50	---
WJ-26	06/11/01	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<1.0	<0.50	<0.50	---
WJ-26	01/31/02	<0.50	0.52	<0.50	<0.50	<0.50	<0.50	2.2	<0.50	<0.50	---
WJ-26	06/27/02	<0.50	<0.50	<0.10	<0.50	<0.50	<0.50	1.1	<0.40	<0.50	---
WJ-26	02/02/07	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.99	<0.50	<0.50	<0.50
WJ-29A	06/14/96	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	---
WJ-29A	06/02/99	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5	---
WJ-29A	12/13/99	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	---
WJ-29A	06/15/00	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	---

Table 2

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Scotts Valley, California

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Regional Monitoring Well	Sample Date	PCE µg/L	TCE µg/L	1,1-DCE µg/L	1,1-DCA µg/L	cis-1,2-DCE µg/L	CFM µg/L	Freon 113 µg/L	1,1,1-TCA µg/L	1,1,2-TCA µg/L	MTBE µg/L
Treatment Standard		**5**	**5**	**6**	**5**	**6**	**100**	**---**	**200**	**32**	**---**
WJ-29A	12/15/00	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	---
WJ-29A	06/07/01	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<1.0	<0.50	<0.50	---
WJ-29A	01/31/02	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<1.0	<0.50	<0.50	---
WJ-29A	06/25/02	<0.50	<0.50	<0.10	<0.50	<0.50	<0.50	<0.50	<0.40	<0.50	---
WJ-29A	02/02/07	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
WJ-37 (perched)	10/20/2009[2]	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5	<0.5
WJ-37A	05/25/87	<0.5	---	---	---	---	---	---	---	---	---
WJ-37A	08/24/87	<0.5	<0.5	---	---	---	---	---	---	---	---
WJ-37A	11/17/87	<0.5	<0.5	---	---	---	---	---	---	---	---
WJ-37A	03/10/88	<1	---	---	---	---	---	---	---	---	---
WJ-37A	06/19/88	<1	---	---	---	---	---	---	---	---	---
WJ-37A	09/15/88	<1	---	---	---	---	---	---	---	---	---
WJ-37A	06/22/89	---	<0.5	---	---	---	---	---	---	---	---
WJ-37A	09/02/89	---	<0.5	---	---	<0.5	---	---	---	---	---
WJ-37A	06/20/90	---	<0.5	---	---	<0.5	---	---	---	---	---
WJ-37A	09/18/90	---	<0.5	---	---	<0.5	---	---	---	---	---
WJ-37A	09/12/91	---	<0.5	---	---	<0.5	---	---	---	---	---
WJ-37A	03/04/92	---	<0.5	---	---	<0.5	---	---	---	---	---
WJ-37A	09/15/92	0.73	<0.5	---	---	<0.5	---	---	---	---	---
WJ-37A	12/08/92	ND	ND	---	---	---	---	---	---	---	---
WJ-37A	12/10/92	<0.5	<0.5	---	---	<0.5	---	---	---	---	---
WJ-37A	06/14/93	ND	ND	---	---	---	---	---	---	---	---
WJ-37A	06/16/93	<0.5	<0.5	---	---	<0.5	---	---	---	---	---
WJ-37A	12/14/93	0.5	ND	---	---	---	---	---	---	---	---
WJ-37A	12/15/93	0.5	<0.5	---	---	<0.5	---	---	---	---	---
WJ-37A	06/15/94	---	<0.5	---	---	<0.5	---	---	---	---	---
WJ-37A	12/20/94	ND	ND	---	---	---	---	---	---	---	---
WJ-37A	12/22/94	<0.5	<0.5	---	---	<0.5	---	---	---	---	---
WJ-37A	06/05/95	ND	ND	---	---	---	---	---	---	---	---
WJ-37A	06/07/95	<0.5	0.8	---	---	<0.5	---	---	---	---	---
WJ-37A	12/27/95	---	<0.5	---	---	<0.5	---	---	---	---	---
WJ-37A	06/12/96	<0.5	<0.5	---	---	<0.5	---	---	---	---	---
WJ-37A	06/18/96	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	---
WJ-37A	12/16/96	---	<0.5	---	---	<0.5	---	---	---	---	---
WJ-37A	06/23/97	---	<0.5	---	---	<0.5	---	---	---	---	---
WJ-37A	06/22/98	<0.5	<0.5	---	---	---	---	---	---	---	---
WJ-37A	06/24/98	<0.5	<0.5	---	---	<0.5	---	---	---	---	---
WJ-37A	06/01/99	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5	---
WJ-37A	06/19/00	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	---
WJ-37A	06/06/01	0.63	<0.50	<0.50	<0.50	<0.50	<0.50	<1.0	<0.50	<0.50	---
WJ-37A	06/27/02	0.63	<0.50	<0.10	<0.50	<0.50	<0.50	<0.50	<0.40	<0.50	---
WJ-37A	11/18/05	1.8	<0.5	<0.5	<0.5	<0.5	<1.0	2.4	<0.5	<0.5	---
WJ-37A	02/06/06	1	<0.5	<0.5	<0.5	<0.5	<1.0	0.9	<0.5	<0.5	---
WJ-37A	04/24/06	2.1	<0.5	<0.5	<0.5	<0.5	<1.0	1.4	<0.5	<0.5	---
WJ-37A	02/02/07	0.97	0.55	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
WJ-37A	12/19/08	22	6.4	<0.5	<0.5	<0.5	<1.0	<2.0	<0.5	<0.5	---
WJ-37A	02/20/09	42	6.4	<0.5	<0.5	<0.5	<1.0	<2.0	<0.5	<0.5	---
WJ-37A	03/20/09	25	9.3	<0.5	<0.5	0.6	<1.0	<2.0	<0.5	<0.5	---
WJ-37A	04/21/09	23	6.4	<0.5	<0.5	<0.5	<1.0	<2.0	<0.5	<0.5	---
WJ-37A	05/20/09	17	3.7	<0.5	<0.5	<0.5	<1.0	<2.0	<0.5	<0.5	---

Table 2
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Watkins-Johnson Superfund Site

Scotts Valley, California

USEPA Fourth Quarter 2011 Monitoring Report

Regional Monitoring Well	Sample Date	PCE µg/L	TCE µg/L	1,1-DCE µg/L	1,1-DCA µg/L	cis-1,2-DCE µg/L	CFM µg/L	Freon 113 µg/L	1,1,1-TCA µg/L	1,1,2-TCA µg/L	MTBE µg/L
Treatment Standard		**5**	**5**	**6**	**5**	**6**	**100**	**---**	**200**	**32**	**---**
WJ-37A	02/23/10	20	0.7	<0.5	<0.5	<0.5	<1.0	<2.0	<0.5	<0.5	---
WJ-37A	05/12/10	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<2.0	<0.5	<0.5	---
WJ-37A	08/19/10	22	0.9	<0.5	<0.5	<0.5	<1.0	<2.0	<0.5	<0.5	---
WJ-37A	11/17/10	25	0.9	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5	<0.5
WJ-37A	02/09/11	20	1.1	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5	<0.5
WJ-37A	04/13/11	26	1.9	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5	<0.5
WJ-37A	07/19/11	31	1.8	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5	<0.5
WJ-37A	**10/18/11**	**22**	**1.1**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<5.0**	**<0.5**	**<0.5**	**<0.5**
WJ-41	06/15/88	<1.0	<1.0	---	---	---	---	---	---	---	---
WJ-41	09/13/88	<1.0	<1.0	---	---	---	---	---	---	---	---
WJ-41	11/30/88	<0.5	<0.5	---	---	---	---	---	---	---	---
WJ-41	06/21/89	---	<0.5	---	---	---	---	---	---	---	---
WJ-41	12/11/90	---	<0.5	---	<0.5	---	<0.5	---	<0.5	<0.5	---
WJ-41	03/12/91	---	<0.5	---	---	---	---	---	---	---	---
WJ-41	05/14/91	---	<0.5	---	---	<0.5	---	---	---	---	---
WJ-41	06/26/91	---	<0.5	---	<0.5	<0.5	<0.5	---	<0.5	<0.5	---
WJ-41	12/09/91	---	<0.5	---	---	<0.5	---	---	---	---	---
WJ-41	03/03/92	---	<0.5	---	---	<0.5	---	---	---	---	---
WJ-41	09/15/92	---	<0.5	ND	ND	<0.5	ND	---	ND	ND	---
WJ-41	06/14/94	---	<0.5	---	---	<0.5	---	---	---	---	---
WJ-41	06/07/95	---	0.8	ND	ND	<0.5	ND	ND	ND	ND	---
WJ-41	06/13/96	<0.5	4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	---
WJ-41	09/25/96	---	0.9	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	---
WJ-41	12/17/96	---	0.8	---	---	<0.5	---	---	---	---	---
WJ-41	06/26/97	---	3.3	---	---	<0.5	---	---	---	---	---
WJ-41	12/15/97	1.8	11	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5	---
WJ-41	03/12/98	1.2	6.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	---
WJ-41	06/22/98	0.9	4.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	---
WJ-41	12/14/98	---	7.2	---	---	<0.5	---	---	---	---	---
WJ-41	03/17/99	1.3	7.7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	---
WJ-41	03/17/99	1.1	6.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	---
WJ-41	06/01/99	1.6	8.9	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5	---
WJ-41	06/01/99	1.7	9.1	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5	---
WJ-41	10/15/99	2.09	9.72	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	---
WJ-41	10/15/99	2.16	9.54	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	---
WJ-41	12/18/99	4.1	18.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	---
WJ-41	03/08/00	1.31	6.84	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	---
WJ-41	03/08/00	1.36	6.56	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	---
WJ-41	05/05/00	1.82	9.24	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	---
WJ-41	06/14/00	3	15	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	---
WJ-41	07/21/00	1.64	7.81	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	---
WJ-41	09/28/00	3.4	16.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	---
WJ-41	10/26/00	4.1	20.9	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	---
WJ-41	11/28/00	2.8	13.8	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	---
WJ-41	12/15/00	3.43	17	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	---
WJ-41	12/15/00	3.37	17	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	---
WJ-41	01/17/01	4.37	22.5	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	---
WJ-41	02/09/01	2.79	21.6	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	---
WJ-41	04/30/01	4.23	13.2	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	---
WJ-41	05/15/01	2.43	17.4	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	---
WJ-41	06/12/01	0.89	4.2	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	---

Table 2

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Regional Monitoring Well	Sample Date	PCE µg/L	TCE µg/L	1,1-DCE µg/L	1,1-DCA µg/L	cis-1,2-DCE µg/L	CFM µg/L	Freon 113 µg/L	1,1,1-TCA µg/L	1,1,2-TCA µg/L	MTBE µg/L
Treatment Standard		**5**	**5**	**6**	**5**	**6**	**100**	**---**	**200**	**32**	**---**
WJ-41	07/31/01	2.2	12	<0.50	<0.50	<0.50	<0.50	<1.0	<0.50	<0.50	---
WJ-41	07/31/01	2.4	13	<0.50	<0.50	<0.50	<0.50	<1.0	<0.50	<0.50	---
WJ-41	08/30/01	2.8	6.2	<0.50	<0.50	<0.50	<0.50	<1.0	<0.50	<0.50	---
WJ-41	09/20/01	2.4	12	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	---
WJ-41	10/25/01	2.4	12	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	---
WJ-41	11/21/01	2.8	14	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	---
WJ-41	01/31/02	5	1.1	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	---
WJ-41	01/31/02	5	1	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	---
WJ-41	03/27/02	<0.50	1.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	---
WJ-41	05/10/02	1.9	12	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	---
WJ-41	07/02/02	0.54	2.2	<0.10	<0.50	<0.50	<0.50	<1.0	<0.40	<0.50	---
WJ-41	09/24/02	0.56	2.3	<0.10	<0.50	<0.50	<0.50	<0.50	<0.40	<0.50	---
WJ-41	11/24/02	0.79	2.7	<0.10	<0.50	<0.50	<0.50	<0.50	<0.40	<0.50	---
WJ-41	12/26/02	0.65	2.3	<0.10	<0.50	<0.50	<0.50	<0.50	<0.40	<0.50	---
WJ-41	01/31/03	1.4	7.4	<0.10	<0.50	<0.50	<0.50	<0.50	<0.40	<0.50	---
WJ-41	01/31/03	1.4	7.4	<0.10	<0.50	<0.50	<0.50	<0.50	<0.40	<0.50	---
WJ-41	05/13/03	2	11	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	---
WJ-41	08/14/03	4.8	33	<0.10	<0.5	<0.5	<0.5	<0.5	<0.4	<0.5	---
WJ-41	11/19/03	3.9	21	<0.10	<0.50	<0.50	<0.50	<0.50	<0.40	<0.50	---
WJ-41	11/19/03	2.8	15	<0.10	<0.50	<0.50	<0.50	<0.50	<0.40	<0.50	---
WJ-41	11/19/03	2.7	15	<0.10	<0.50	<0.50	<0.50	<0.50	<0.40	<0.50	<0.50
WJ-41	12/30/03	2.9	14	<0.10	<0.50	<0.50	<0.50	<0.50	<0.40	<0.50	---
WJ-41	12/30/03	1.2	2.8	<0.10	<0.50	<0.50	<0.50	<0.50	<0.40	<0.50	---
WJ-41	12/30/03	0.99	2.6	<0.10	<0.50	<0.50	<0.50	<0.50	<0.40	<0.50	---
WJ-41	01/28/04	1.1	4.9	<0.10	<0.50	<0.50	<0.50	<0.50	<0.40	<0.50	---
WJ-41	01/28/04	0.94	3.2	<0.10	<0.50	<0.50	<0.50	<0.50	<0.40	<0.50	---
WJ-41	01/28/04	0.84	2.9	<0.10	<0.50	<0.50	<0.50	<0.50	<0.40	<0.50	---
WJ-41	01/28/04	0.96	3.4	<0.10	<0.50	<0.50	<0.50	<0.50	<0.40	<0.50	---
WJ-41	01/28/04	0.6	2.4	<0.10	<0.50	<0.50	<0.50	<0.50	<0.40	<0.50	---
WJ-41	02/25/04	1.4	9.6	<0.10	<0.50	<0.50	<0.50	<0.50	<0.40	<0.50	---
WJ-41	02/25/04	0.8	2.4	<0.10	<0.50	<0.50	<0.50	<0.50	<0.40	<0.50	---
WJ-41	02/25/04	0.7	2.2	<0.10	<0.50	<0.50	<0.50	<0.50	<0.40	<0.50	---
WJ-41	02/25/04	0.59	2.3	<0.10	<0.50	<0.50	<0.50	<0.50	<0.40	<0.50	---
WJ-41	03/25/04	1.7	14	<0.10	<0.50	<0.50	<0.50	<0.50	<0.40	<0.50	---
WJ-41	03/25/04	0.53	2	<0.10	<0.50	<0.50	<0.50	<0.50	<0.40	<0.50	---
WJ-41	03/25/04	0.61	2.2	<0.10	<0.50	<0.50	<0.50	<0.50	<0.40	<0.50	---
WJ-41	03/25/04	0.52	1.9	<0.10	<0.50	<0.50	<0.50	<0.50	<0.40	<0.50	---
WJ-41	05/11/04	3	14	<0.10	<0.20	<0.50	<0.50	<0.50	<0.40	<0.50	---
WJ-41	08/03/04	2.8	16	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	---
WJ-41	08/03/04	2.6	17	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	---
WJ-41	11/02/04	4.5	19	<0.5	<0.5	<0.5	<1.0	<1.0	<0.5	<0.5	---
WJ-41	11/02/04	3.9	22	<0.10	<0.50	<0.50	<0.50	<0.50	<0.40	<0.50	---
WJ-41	02/10/05	3.6	19	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	---
WJ-41	05/03/05	3.1	16	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5	<0.5
WJ-41	05/03/05	2.6	16	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5	<0.5
WJ-41	08/05/05	2.9	19	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5	<0.5
WJ-41	08/05/05	3	18	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5	<0.5
WJ-41	11/18/05	1.1	14	<0.5	<0.5	<0.5	<1.0	<0.5	<0.5	<0.5	---
WJ-41	11/18/05	0.9	13	<0.5	<0.5	<0.5	<1.0	<0.5	<0.5	<0.5	---
WJ-41	02/06/06	1.5	11	<0.5	<0.5	<0.5	<1.0	<0.5	<0.5	<0.5	---
WJ-41	02/06/06	1.6	12	<0.5	<0.5	<0.5	<1.0	<0.5	<0.5	<0.5	---

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Regional Monitoring Well	Sample Date	PCE µg/L	TCE µg/L	1,1-DCE µg/L	1,1-DCA µg/L	cis-1,2-DCE µg/L	CFM µg/L	Freon 113 µg/L	1,1,1-TCA µg/L	1,1,2-TCA µg/L	MTBE µg/L
Treatment Standard		**5**	**5**	**6**	**5**	**6**	**100**	**---**	**200**	**32**	**---**
WJ-41	04/24/06	2.3	14	<0.5	<0.5	<0.5	<1.0	<0.5	<0.5	<0.5	---
WJ-41	08/03/06	3.2	17	<0.5	<0.5	<0.5	<1.0	<0.5	<0.5	<0.5	---
WJ-41	08/03/06	3.4	17	<0.5	<0.5	<0.5	<1.0	<0.5	<0.5	<0.5	---
WJ-41	11/03/06	3.2	16	<0.5	<0.5	<0.5	<1.0	<0.5	<0.5	<0.5	---
WJ-41	02/02/07	4	16	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Dup	02/02/07	3.7	16	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
WJ-41	05/01/07	1.4	16	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	---
WJ-41	08/15/07	3.7	18	<0.50	<0.50	<0.50	<0.50	<2.0	<0.50	<0.50	<0.50
WJ-41	11/13/07	3.5	14	<0.50	<0.50	<0.50	<0.50	<2.0	<0.50	<0.50	---
Dup	11/13/07	3.5	14	<0.50	<0.50	<0.50	<0.50	<2.0	<0.50	<0.50	---
WJ-41	02/12/08	3.0	12	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	---
Dup	02/12/08	3.3	12	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	---
WJ-41	05/13/08	2.5	11	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	---
Dup	05/13/08	2.7	12	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	---
WJ-41	08/05/08	2.7	10	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	---
Dup	08/05/08	2.4	11	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	---
WJ-41	12/19/08	<0.5	5.5	<0.5	<0.5	<0.5	<1.0	<2.0	<0.5	<0.5	---
Dup	12/19/08	0.5	5.9	<0.5	<0.5	<0.5	<1.0	<2.0	<0.5	<0.5	---
WJ-41	02/20/09	1.1	5.6	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	---
Dup	02/20/09	1.2	5.8	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	---
WJ-41	03/20/09	0.7	6.4	<0.5	<0.5	<0.5	<1.0	<2.0	<0.5	<0.5	---
Dup	03/20/09	0.7	6.4	<0.5	<0.5	<0.5	<1.0	<2.0	<0.5	<0.5	---
WJ-41	04/21/09	1.5	8.2	<0.5	<0.5	<0.5	<1.0	<2.0	<0.5	<0.5	---
Dup	04/21/09	1.4	8.2	<0.5	<0.5	<0.5	<1.0	<2.0	<0.5	<0.5	---
WJ-41	05/20/09	1.3	8.7	<0.5	<0.5	<0.5	<1.0	<2.0	<0.5	<0.5	---
Dup	05/20/09	1.3	8.8	<0.5	<0.5	<0.5	<1.0	<2.0	<0.5	<0.5	---
WJ-41	08/06/09	1.7	6.9	<0.5	<0.5	<0.5	<1.0	<2.0	<0.5	<0.5	---
Dup	08/06/09	1.8	7	<0.5	<0.5	<0.5	<1.0	<2.0	<0.5	<0.5	---
WJ-41	10/20/09	0.7	1.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5	<0.5
Dup	10/20/09	0.6	1.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5	<0.5
WJ-41	02/23/10	0.8	2.1	<0.5	<0.5	<0.5	<1.0	<2.0	<0.5	<0.5	---
WJ-41	05/12/10	2.0	8.9	<0.5	<0.5	<0.5	<0.5	<5.1	<0.5	<0.5	---
WJ-41	08/19/10	2.8	9.8	<0.5	<0.5	<0.5	<1.0	<2.0	<0.5	<0.5	---
Dup	08/19/10	3.2	11	<0.5	<0.5	<0.5	<1.0	<2.0	<0.5	<0.5	---
WJ-41	11/17/10	2.1	6.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5	<0.5
Dup	11/17/10	2.4	6.8	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5	<0.5
WJ-41	02/09/11	1.6	6.2	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5	<0.5
Dup	02/09/11	1.6	6.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5	<0.5
WJ-41	04/13/11	0.7	2.4	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5	<0.5
Dup	04/13/11	0.8	2.2	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5	<0.5
WJ-41	07/19/11	2.0	5.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5	<0.5
WJ-41	**10/18/11**	**1.4**	**3.8**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<5.0**	**<0.5**	**<0.5**	**<0.5**
WJ-41/Dup 1	**10/18/11**	**1.6**	**3.9**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<5.0**	**<0.5**	**<0.5**	**<0.5**
WJ-43	06/14/88	<1.0	<1.0	---	---	---	---	---	---	---	---
WJ-43	09/14/88	<1.0	<1.0	---	---	---	---	---	---	---	---
WJ-43	09/14/88	<1.0	<1.0	---	---	---	---	---	---	---	---
WJ-43	03/29/89	---	<0.12	<0.13	---	---	<0.5	<0.5	<0.03	<0.02	---
WJ-43	06/22/89	---	<0.5	<0.5	<0.5	---	<0.5	<0.5	<0.5	<0.5	---
WJ-43	06/22/89	<0.5	<0.5	---	---	---	---	---	---	---	---
WJ-43	09/21/89	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	---
WJ-43	12/13/89	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	---

Table 2

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Regional Monitoring Well	Sample Date	PCE µg/L	TCE µg/L	1,1-DCE µg/L	1,1-DCA µg/L	cis-1,2-DCE µg/L	CFM µg/L	Freon 113 µg/L	1,1,1-TCA µg/L	1,1,2-TCA µg/L	MTBE µg/L
Treatment Standard		**5**	**5**	**6**	**5**	**6**	**100**	**---**	**200**	**32**	**---**
WJ-43	03/20/90	---	<0.5	---	<0.5	<0.5	---	---	---	<0.5	---
WJ-43	12/11/90	---	<0.5	---	<0.5	<0.5	<0.5	---	<0.5	<0.5	---
WJ-43	03/12/91	---	<0.5	---	---	---	---	---	---	---	---
WJ-43	06/25/91	---	<0.5	---	<0.5	<1.0	<0.5	---	<0.5	<0.5	---
WJ-43	12/09/91	---	<0.5	---	---	<0.5	---	---	---	---	---
WJ-43	06/16/92	---	<0.5	---	---	<0.5	---	---	---	---	---
WJ-43	12/08/92	---	<0.5	ND	ND	<0.5	ND	---	ND	ND	---
WJ-43	06/15/93	---	<0.5	ND	---	<0.5	ND	ND	ND	0.59	---
WJ-43	06/14/94	---	<0.5	---	---	<0.5	---	---	---	---	---
WJ-43	06/06/95	---	<0.5	ND	ND	<0.5	ND	ND	ND	ND	---
WJ-43	06/10/96	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	---
WJ-43	06/24/97	---	<0.5	---	---	<0.5	---	---	---	---	---
WJ-43	06/23/98	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	---
WJ-43	06/02/99	2.70	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5	---
WJ-43	06/19/00	5.90	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	---
WJ-43	06/07/01	8.00	<0.50	<0.50	<0.50	<0.50	<0.50	<1.0	<0.50	<0.50	---
WJ-43	05/09/02	4.90	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	---
WJ-43	06/26/02	9.80	<0.50	<0.10	<0.50	<0.50	<0.50	<0.50	<0.40	<0.50	---
WJ-43	01/31/03	6.00	<0.50	<0.10	<0.50	<0.50	<0.50	<0.50	<0.40	<0.50	---
WJ-43	05/13/03	5.90	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	---
WJ-43	05/13/03	5.80	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	---
WJ-43	08/14/03	5.40	<0.5	<0.10	<0.5	<0.5	<0.5	<0.5	<0.4	<0.5	---
WJ-43	11/19/03	5.30	<0.50	<0.10	<0.50	<0.50	<0.50	<0.50	<0.40	<0.50	---
WJ-43	11/19/03	4.70	<0.50	<0.10	<0.50	<0.50	<0.50	<0.50	<0.40	<0.50	---
WJ-43	12/30/03	4.60	<0.50	<0.10	<0.50	<0.50	<0.50	<0.50	<0.40	<0.50	---
WJ-43	12/30/03	5.90	<0.50	<0.10	<0.50	<0.50	<0.50	<0.50	<0.40	<0.50	---
WJ-43	01/28/04	6.10	<0.50	<0.10	<0.50	<0.50	<0.50	<0.50	<0.40	<0.50	---
WJ-43	01/28/04	7.10	<0.50	<0.10	<0.50	<0.50	<0.50	<0.50	<0.40	<0.50	---
WJ-43	01/28/04	7.00	<0.50	<0.10	<0.50	<0.50	<0.50	<0.50	<0.40	<0.50	---
WJ-43	01/28/04	5.20	<0.50	<0.10	<0.50	<0.50	<0.50	<0.50	<0.40	<0.50	---
WJ-43	02/25/04	8.80	<0.50	<0.10	<0.50	<0.50	<0.50	<0.50	<0.40	<0.50	---
WJ-43	02/25/04	7.80	<0.50	<0.10	<0.50	<0.50	<0.50	<0.50	<0.40	<0.50	---
WJ-43	02/25/04	6.10	<0.50	<0.10	<0.50	<0.50	<0.50	<0.50	<0.40	<0.50	---
WJ-43	03/25/04	8.90	<0.50	<0.10	<0.50	<0.50	<0.50	<0.50	<0.40	<0.50	---
WJ-43	03/25/04	8.90	<0.50	<0.10	<0.50	<0.50	<0.50	<0.50	<0.40	<0.50	---
WJ-43	03/25/04	9.20	<0.50	<0.10	<0.50	<0.50	<0.50	<0.50	<0.40	<0.50	---
WJ-43	05/11/04	10.00	<0.50	<0.10	<0.20	<0.50	<0.50	<0.50	<0.40	<0.50	---
WJ-43	08/03/04	13.00	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	---
WJ-43	11/02/04	8.60	<0.50	<0.10	<0.50	<0.50	<0.50	<0.50	<0.40	<0.50	---
WJ-43	02/10/05	17	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	---
WJ-43	05/03/05	25	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5	<0.5
WJ-43	08/05/05	29	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5	<0.5
WJ-43	11/18/05	23	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<0.5	<0.5	---
WJ-43	02/06/06	21	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<0.5	<0.5	---
WJ-43	04/24/06	34	0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<0.5	<0.5	---
WJ-43	04/24/06	33	0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<0.5	<0.5	---
WJ-43	08/03/06	46	0.6	<0.5	<0.5	<0.5	<1.0	<0.5	<0.5	<0.5	---
WJ-43	11/03/06	31	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<0.5	<0.5	---
WJ-43	02/02/07	25	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
WJ-43	05/01/07	28	0.9	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	---
Dup	05/01/07	31	0.9	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	---

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Regional Monitoring Well	Sample Date	PCE µg/L	TCE µg/L	1,1-DCE µg/L	1,1-DCA µg/L	cis-1,2-DCE µg/L	CFM µg/L	Freon 113 µg/L	1,1,1-TCA µg/L	1,1,2-TCA µg/L	MTBE µg/L
Treatment Standard		**5**	**5**	**6**	**5**	**6**	**100**	**---**	**200**	**32**	**---**
WJ-43	08/15/07	45	1.0	<0.50	<0.50	<0.50	<0.50	<2.0	<0.50	<0.50	<0.50
Dup	08/15/07	44	0.8	<0.50	<0.50	<0.50	<0.50	<2.0	<0.50	<0.50	<0.50
WJ-43	11/13/07	24	<0.5	<0.50	<0.50	<0.50	<0.50	<2.0	<0.50	<0.50	---
WJ-43	02/12/08	20	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	---
WJ-43	05/13/08	30	0.6	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	---
WJ-43	08/05/08	35	0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	---
WJ-43	12/19/08	17	<0.5	<0.5	<0.5	<0.5	<1.0	<2.0	<0.5	<0.5	---
WJ-43	02/20/09	21	<0.5	<0.5	<0.5	<0.5	<1.0	<2.0	<0.5	<0.5	---
WJ-43	03/20/09	12	<0.5	<0.5	<0.5	<0.5	<1.0	<2.0	<0.5	<0.5	---
WJ-43	04/21/09	11	<0.5	<0.5	<0.5	<0.5	<1.0	<2.0	<0.5	<0.5	---
WJ-43	05/20/09	12	<0.5	<0.5	<0.5	<0.5	<1.0	<2.0	<0.5	<0.5	---
WJ-43	08/06/09	13	<0.5	<0.5	<0.5	<0.5	<1.0	<2.0	<0.5	<0.5	---
WJ-43	10/20/09	18	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5	<0.5
WJ-43	02/23/10	20	<0.5	<0.5	<0.5	<0.5	<1.0	<2.0	<0.5	<0.5	---
WJ-43	05/12/10	30	0.6	<0.5	<0.5	<0.5	<1.1	<2.0	<0.5	<0.5	---
WJ-43	08/19/10	36	0.5	<0.5	<0.5	<0.5	<1.1	<2.0	<0.5	<0.5	---
WJ-43	11/17/10	34	0.6	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5	<0.5
WJ-43	02/09/11	31	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5	<0.5
WJ-43	04/13/11	27	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5	<0.5
WJ-43	07/19/11	30	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5	<0.5
WJ-43	**10/18/11**	**23**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<5.0**	**<0.5**	**<0.5**	**<0.5**
WJ-48	06/14/96	<0.5	0.8	<0.5	<0.5	<0.5	<0.5	3.7	<0.5	<0.5	---
WJ-48	06/02/99	<0.5	2.7	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5	---
WJ-48	12/18/99	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	---
WJ-48	06/15/00	<0.5	0.8	<0.5	<0.5	<0.5	<0.5	3.7	<0.5	<0.5	---
WJ-48	12/14/00	<0.500	0.724	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	---
WJ-48	06/07/01	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<1.0	<0.50	<0.50	---
WJ-48	01/31/02	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<1.0	<0.50	<0.50	---
WJ-48	06/27/02	<0.50	<0.50	<0.10	<0.50	<0.50	<0.50	1.5	<0.40	<0.50	---
WJ-48	06/27/02	<0.50	<0.50	<0.10	<0.50	<0.50	<0.50	1.3	<0.40	<0.50	---
WJ-48	02/02/07	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.78	<0.50	<0.50	<0.50
WJ-48	02/23/10	<0.50	<0.50	<0.90	<0.50	<0.50	<1.0	<2.0	<0.50	<0.50	---
WJ-49	06/18/96	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	---
WJ-49	06/02/99	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5	---
WJ-49	06/19/00	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	---
WJ-49	06/08/01	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<1.0	<0.50	<0.50	---
WJ-49	07/01/02	<0.50	<0.50	<0.10	<0.50	<0.50	<0.50	<0.50	<0.40	<0.50	---
WJ-49	02/02/07	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
SUPPLY WELL	03/30/89	<0.03	0.61	---	---	---	---	---	---	---	---
SUPPLY WELL	06/28/89	<0.5	29	---	---	---	---	---	---	---	---
SUPPLY WELL	09/20/89	<0.5	<0.5	---	---	---	---	---	---	---	---
SUPPLY WELL	02/06/06	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<0.5	<0.5	---
SUPPLY WELL	02/02/07	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	---
SUPPLY WELL	02/23/10	<0.50	<0.50	<0.50	<0.50	<0.50	<1.0	<2.0	<0.50	<0.50	---
AP-3N	06/12/96	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	---
AP-3N	06/26/97	---	<0.5	---	---	---	---	---	---	---	---
AP-3N	03/12/98	<0.5	<0.5	---	---	---	---	---	---	---	---
AP-3N	06/22/98	<0.5	<0.5	---	---	---	---	---	---	---	---
AP-3N	03/17/99	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	---

Table 2

Results of Laboratory Analyses for Selected Purgeable Halocarbons

Watkins-Johnson Superfund Site

Scotts Valley, California

USEPA Fourth Quarter 2011 Monitoring Report

Regional Monitoring Well	Sample Date	PCE µg/L	TCE µg/L	1,1-DCE µg/L	1,1-DCA µg/L	cis-1,2-DCE µg/L	CFM µg/L	Freon 113 µg/L	1,1,1-TCA µg/L	1,1,2-TCA µg/L	MTBE µg/L
Treatment Standard		**5**	**5**	**6**	**5**	**6**	**100**	**---**	**200**	**32**	**---**
AP-3N	06/01/99	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5	---
AP-3N	10/15/99	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	---
AP-3N	12/18/99	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	---
AP-3N	03/08/00	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	---
AP-3N	06/13/00	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	---
AP-3N	09/28/00	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	---
AP-3N	12/15/00	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	---
AP-3N	04/30/01	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	---
AP-3N	06/11/01	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<1.0	<0.50	<0.50	---
AP-3N	09/20/01	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<1.0	<0.50	<0.50	---
AP-3N	01/31/02	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<1.0	<0.50	<0.50	---
AP-3N	05/09/02	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	---
AP-3N	07/02/02	<0.50	<0.50	<0.10	<0.50	<0.50	<0.50	<0.50	<0.40	<0.50	---
AP-3N	09/26/02	<0.50	<0.50	<0.10	<0.50	<0.50	<0.50	<0.50	<0.40	<0.50	---
AP-3N	04/24/06	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<0.5	<0.5	---
AP-3N	02/02/07	<0.50	1	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	---
BC-6	05/11/04	<0.50	<0.50	<0.10	<0.20	<0.50	<0.50	<0.50	<0.40	<0.50	---
BC-6	08/19/04	<0.50	<0.50	<0.10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	---
BC-6	11/02/04	<0.50	<0.50	<0.10	<0.50	<0.50	<0.50	<0.50	<0.40	<0.50	---
BC-6	02/10/05	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	---
BC-6	05/03/05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5	---
BC-6	08/05/05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5	---
BC-6	11/18/05	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<0.5	<0.5	---
BC-6	02/06/06	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<0.5	<0.5	---
BC-6	04/24/06	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<0.5	<0.5	---
BC-6	08/03/06	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<0.5	<0.5	---
BC-6	11/03/06	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<0.5	<0.5	---
BC-6	02/02/07	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	---
BC-7	05/11/04	<0.50	<0.50	<0.10	<0.20	<0.50	<0.50	<0.50	<0.40	<0.50	---
BC-7	08/19/04	<0.50	<0.50	<0.10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	---
BC-7	11/02/04	<0.50	<0.50	<0.10	<0.50	<0.50	<0.50	<0.50	<0.40	<0.50	---
BC-7	02/10/05	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	---
BC-7	05/03/05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5	---
BC-7	08/05/05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5	---
BC-7	11/18/05	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<0.5	<0.5	---
BC-7	02/06/06	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<0.5	<0.5	---
BC-7	04/24/06	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<0.5	<0.5	---
BC-7	08/03/06	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<0.5	<0.5	---
BC-7	11/03/06	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<0.5	<0.5	---
BC-7	02/02/07	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	---
BCDP	05/11/04	<0.50	<0.50	<0.10	<0.20	<0.50	<0.50	<0.50	<0.40	<0.50	---
BCDP	08/19/04	<0.50	<0.50	<0.10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	---
BCDP	11/02/04	<0.50	<0.50	<0.10	<0.50	<0.50	<0.50	<0.50	<0.40	<0.50	---
BCDP	02/10/05	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	---
BCDP	05/03/05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5	---
BCDP	08/05/05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5	---
BCDP	11/18/05	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<0.5	<0.5	---
BCDP	02/06/06	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<0.5	<0.5	---
BCDP	04/24/06	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<0.5	<0.5	---
BCDP	08/03/06	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<0.5	<0.5	---

Table 2
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Regional Monitoring Well	Sample Date	PCE µg/L	TCE µg/L	1,1-DCE µg/L	1,1-DCA µg/L	cis-1,2-DCE µg/L	CFM µg/L	Freon 113 µg/L	1,1,1-TCA µg/L	1,1,2-TCA µg/L	MTBE µg/L
Treatment Standard		**5**	**5**	**6**	**5**	**6**	**100**	**---**	**200**	**32**	**---**
BCDP	11/03/06	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<0.5	<0.5	---
BCDP	02/02/07	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	---
OB-1	02/02/07	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	---
OB-1	02/23/10	<0.50	<0.50	<0.50	<0.50	<0.50	<1.0	<2.0	<0.50	<0.50	---
OB-2	02/23/10	<0.50	<0.50	<0.50	<0.50	<0.50	<1.0	<2.0	<0.50	<0.50	---
OB-3	06/15/96	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	---
OB-3	06/02/99	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5	---
OB-3	06/16/00	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	---
OB-3	06/08/01	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<1.0	<0.50	<0.50	---
OB-3	07/03/02	<0.50	<0.50	<0.10	<0.50	<0.50	<0.50	<0.50	<0.40	<0.50	---
OB-3	02/02/07	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	---
RA-1	12/19/08	<0.50	<0.50	<0.50	<0.50	<0.50	<1.0	<2.0	<0.50	<0.50	---
RA-1	02/20/09	<0.50	<0.50	<0.50	<0.50	<0.50	<1.0	<2.0	<0.50	<0.50	---
RA-1	03/20/09	<0.50	<0.50	<0.50	<0.50	<0.50	<1.0	<2.0	<0.50	<0.50	---
RA-1	04/21/09	<0.50	<0.50	<0.50	<0.50	<0.50	<1.0	<2.0	<0.50	<0.50	---
RA-1	05/20/09	<0.50	<0.50	<0.50	<0.50	<0.50	<1.0	<2.0	<0.50	<0.50	---
RA-2	12/19/08[1]	---	---	---	---	---	---	---	---	---	---
RA-2	02/20/09	<0.50	<0.50	<0.50	<0.50	<0.50	<1.0	2.9	<0.50	<0.50	---
RA-2	03/20/09	<0.50	4.2	<0.50	<0.50	<0.50	<1.0	<2.0	<0.50	<0.50	---
RA-2	04/21/09	0.5	4.4	<0.50	<0.50	<0.50	<1.0	<2.0	<0.50	<0.50	---
RA-2	05/20/09	0.5	<0.50	<0.50	<0.50	<0.50	<1.0	4.7	<0.50	<0.50	---
RA-3	12/19/08	<0.50	<0.50	<0.50	<0.50	<0.50	<1.0	<2.0	<0.50	<0.50	---
RA-3	02/20/09	<0.50	<0.50	<0.50	<0.50	<0.50	<1.0	<2.0	<0.50	<0.50	---
RA-3	03/20/09	<0.50	<0.50	<0.50	<0.50	<0.50	<1.0	<2.0	<0.50	<0.50	---
RA-3	04/21/09	<0.50	<0.50	<0.50	<0.50	<0.50	<1.0	<2.0	<0.50	<0.50	---
RA-3	05/20/09	<0.50	<0.50	<0.50	<0.50	<0.50	<1.0	<2.0	<0.50	<0.50	---
RA-4	12/19/08	<0.50	<0.50	<0.50	<0.50	<0.50	<1.0	<2.0	<0.50	<0.50	---
RA-4	02/20/09	<0.50	<0.50	<0.50	<0.50	<0.50	<1.0	<2.0	<0.50	<0.50	---
RA-4	03/20/09	<0.50	<0.50	<0.50	<0.50	<0.50	<1.0	<2.0	<0.50	<0.50	---
RA-4	04/21/09	<0.50	<0.50	<0.50	<0.50	<0.50	<1.0	<2.0	<0.50	<0.50	---
RA-4	05/20/09	<0.50	<0.50	<0.50	<0.50	<0.50	<1.0	<2.0	<0.50	<0.50	---
SVWD-9	05/13/08	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<2.0	<0.50	<0.50	---
SVWD-9M	05/13/08	6.3	<0.50	<0.50	<0.50	<0.50	<0.50	<2.0	<0.50	<0.50	---
Field Blank	05/09/02	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	---
Field Blank	09/24/02	<0.50	<0.50	<0.10	<0.50	<0.50	<0.50	<0.50	<0.40	<0.50	---
Field Blank	11/19/03	<0.50	<0.50	<0.10	<0.50	<0.50	<0.50	<0.50	<0.40	<0.50	---
Field Blank	12/30/03	<0.50	<0.50	<0.10	<0.50	<0.50	<0.50	<0.50	<0.40	<0.50	---
Field Blank	01/28/04	<0.50	<0.50	<0.10	<0.50	<0.50	<0.50	<0.50	<0.40	<0.50	---
Field Blank	02/25/04	<0.50	<0.50	<0.10	<0.50	<0.50	<0.50	<0.50	<0.40	<0.50	---
Field Blank	03/25/04	<0.50	<0.50	<0.10	<0.50	<0.50	0.52	<0.50	<0.40	<0.50	---
Field Blank	05/11/04	<0.50	<0.50	<0.10	<0.20	<0.50	0.59	<0.50	<0.40	<0.50	---
Field Blank	08/05/05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5	---
Field Blank	11/13/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	---
Trip Blank	06/11/96	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	---
Trip Blank	09/28/00	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	---
Trip Blank	12/14/00	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	---
Trip Blank	03/27/02	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	---

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Treatment Standard		**5**	**5**	**6**	**5**	**6**	**100**	**---**	**200**	**32**	**---**
Trip Blank	07/03/02	<0.50	<0.50	<0.10	<0.50	<0.50	<0.50	<0.50	<0.40	<0.50	---
Trip Blank	11/19/03	<0.50	<0.50	<0.10	<0.50	<0.50	<0.50	<0.50	<0.40	<0.50	---
Trip Blank	12/30/03	<0.50	<0.50	<0.10	<0.50	<0.50	<0.50	<0.50	<0.40	<0.50	---
Trip Blank	01/28/04	<0.50	<0.50	<0.10	<0.50	<0.50	<0.50	<0.50	<0.40	<0.50	---
Trip Blank	02/25/04	<0.50	<0.50	<0.10	<0.50	<0.50	<0.50	<0.50	<0.40	<0.50	---
Trip Blank	03/25/04	<0.50	<0.50	<0.10	<0.50	<0.50	<0.50	<0.50	<0.40	<0.50	---
Trip Blank	05/11/04	<0.50	<0.50	<0.10	<0.20	<0.50	0.57	<0.50	<0.40	<0.50	---
Trip Blank	08/03/04	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	---
Trip Blank	08/19/04	<0.50	<0.50	<0.10	<0.50	<0.50	<0.50	<0.50	<0.40	<0.50	---
Trip Blank	02/10/05	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	---
Trip Blank	05/03/05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5	---
Trip Blank	08/05/05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5	---
Trip Blank	11/18/05	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<0.5	<0.5	---
Trip Blank	02/06/06	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<0.5	<0.5	---
Trip Blank	04/24/06	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<0.5	<0.5	---
Trip Blank	08/03/06	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<0.5	<0.5	---
Trip Blank	11/03/06	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<0.5	<0.5	---
Trip Blank	02/02/07	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	---
Trip Blank	05/01/07	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	---
Trip Blank	08/15/07	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<2.0	<0.50	<0.50	<0.50
Trip Blank	11/13/07	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<2.0	<0.50	<0.50	---
Trip Blank	02/12/08	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<2.0	<0.50	<0.50	---
Trip Blank	05/13/08	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<2.0	<0.50	<0.50	---
Trip Blank	08/06/09	<0.50	<0.50	<0.50	<0.50	<0.50	<1.0	<2.0	<0.50	<0.50	---
Trip Blank	10/20/09	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5	<0.5
Trip Blank	02/23/10	<0.50	<0.50	<0.50	<0.50	<0.50	<1.0	<2.0	<0.50	<0.50	---
Trip Blank	08/19/10	<0.50	<0.50	<0.50	<0.50	<0.50	<1.0	<2.0	<0.50	<0.50	---
Trip Blank	11/17/10	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5	<0.5
Trip Blank	02/09/11	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5	<0.5
Trip Blank	04/13/11	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5	<0.5
Trip Blank	07/19/11	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5	<0.5
Trip Blank	**10/18/11**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<5.0**	**<0.5**	**<0.5**	**<0.5**
PDB Blank	08/19/10	<0.50	<0.50	<0.50	<0.50	<0.50	<1.0	<2.0	<0.50	<0.50	---
PDB Blank	11/17/10	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5	<0.5

Table 2
Results of Laboratory Analyses for Selected Purgeable Halocarbons

Watkins-Johnson Superfund Site

Scotts Valley, California

USEPA Fourth Quarter 2011 Monitoring Report

Regional Monitoring Well	Sample Date	PCE µg/L	TCE µg/L	1,1-DCE µg/L	1,1-DCA µg/L	cis-1,2-DCE µg/L	CFM µg/L	Freon 113 µg/L	1,1,1-TCA µg/L	1,1,2-TCA µg/L	MTBE µg/L
Treatment Standard		**5**	**5**	**6**	**5**	**6**	**100**	**---**	**200**	**32**	**---**

Notes:

1 RA-2 sample collected from TS-IN of the GWETS for the December 19, 2008 event. Refer to Table 3 for GWETS analytical results.

2 WJ-37 sample from October 20, 2009 was a pre-purging grab sample as the well contained only 5 to 6 inches of water and did not recharge following purging.

3 Wescosa Well is located located on an adjacent property and owned by a separate party.

Analyses performed by Sequoia Analytical, Morgan Hill, California prior to 5-3-05.
Beginning 5-3-05, analyses performed by Curtis & Tompkins Ltd., Berkeley, California.

February 2, 2007 analyses performed by BC Laboratories, Inc. in Bakersfield, California.

Selected purgeable halocarbons analyzed by United States Environmental Protection Agency (USEPA) Method 8260B.

Notes (cont):

PCE	tetrachloroethene
TCE	trichloroethene
1,1-DCE	1,1-dichloroethene
1,1-DCA	1,1-dichloroethane
cis-1,2-DCE	cis-1,2-dichloroethene
CFM	chloroform
1,1,1-TCA	1,1,1-trichloroethane
1,1,2-TCA	1,1,2-trichloroethane
MTBE	methyl tertiary-butyl ether
µg/L	micrograms per liter
NA	not analyzed
PDB	Passive diffusion bag
<	Symbol indicates not detected at or above laboratory detection limit as noted.
---	data not available

Dup	Duplicate sample.
b	sample collected using bailer after purge with grundfos pump
c	sample collected from PDB set at 198 feet btoc
d	sample collected from PDB set at 183.5 feet btoc
e	sample collected from PDB set at 191 feet btoc
f	Laboratory reports acetone at 19 µg/L.
g	Laboratory reports acetone at 19 µg/L.
h	acetone at 43 µg/L and 2-butanone at 13 µg/L.
i	Laboratory reports acetone at 41 µg/L and 2-butanone at 12 µg/L.
j	sample collected from PDB set at 166 feet btoc
k	sample collected from PDB set at 130 feet btoc
l	sample collected from PDB set at 148 feet btoc
m	acetone at 22 µg/L and attributed to laboratory artifact.
n	acetone at 44 µg/L and 2-butanone at 14 µg/L and attributed to laboratory
o	Laboratory reports acetone at 43 µg/L and 2-butanone at 18 µg/L and
J	Laboratory qualifier = estimated value.

Table 3
Results of Laboratory Analyses for Volatile Organic Compounds in the Treatment System

Watkins-Johnson Superfund Site

Scotts Valley, California

USEPA Fourth Quarter 2011 Monitoring Report

Sample Identification	Sampling Location	Date Sampled	PCE (µg/L)	TCE (µg/L)	cis-1,2-DCE (µg/L)	trans-1,2-DCE (µg/L)	Vinyl Cloride	Freon 113 (µg/L)	Chromium (µg/L)	Hexavalent Chromium (µg/L)	Nickel (µg/L)
Permit Limits for Effluent Water			**0.8**	**2.7**	**6**	**10**	**0.5**		**50**	**10**	**52**
TS-IN	**Treatment System Influent Water**	09/13/11	4.2	<0.5	<0.5	<0.5	<0.5	<2.0	8.3	3.5	280
TS-MID	**Water Between LPGAC Vessels**	09/13/11	5.3	1.1	<0.5	<0.5	<0.5	<2.0	<5.0	4.6	<5.0
TS-OUT	**Treatment System Effluent Water**	09/13/11	0.6	<0.5	<0.5	<0.5	<0.5	<2.0	<5.0	1.2	<5.0

Notes:

Detected values shown in bold.
Analysis performed using United States Environmental Protection Agency (USEPA) Method 8260B.
Analyses performed by Curtis & Tompkins Ltd., Berkeley, California.
--- Not Analyzed.

TS-IN	Treatment System Influent Water		
TS-MID	Water between LPGAC vessels	LPGAC	Liquid phase granular activated carbon
TS-OUT	Treatment System Effluent Water	PCE	Tetrachloroethene
1,1,1-TCA	1,1,1-Trichloroethane	TCE	Trichloroethene
MTBE	methyl tertiary butyl ether	µg/L	Micrograms per liter
cis-1,2-DCE	cis-1,2-Dichloroethene	<	Symbol indicates not detected at or above the laboratory reporting limit as noted.

Table 4
Summary of Groundwater Extraction, Usage, and Discharge to Bean Creek

Watkins-Johnson Superfund Site

Scotts Valley, California

USEPA Fourth Quarter 2011 Monitoring Report

Month	Notes	Groundwater Extracted (gallons)	Treated Water Reused by Facility[1] (gallons)	Treated Water Discharged to Bean Creek (gallons)	Perched Zone Infiltration[2]
Fourth Quarter 2011					
Sep-11		1,318,100	0	1,318,100	0
4th Quarter 2011 Total		**1,318,100**	**0**	**1,318,100**	**0**

Notes:

1 Following December 2008 system shutdown, facility no longer reuses treated water.

2 The groundwater infiltration system has been shut off since May 2000.

3 Total monthly volumes were estimated based on average daily flow rates between site visits on June 2, July 6 and August 17.

4 The site system was off upon arrival but restarted.

ARCADIS

Figures

LEGEND:

● WJ-41	WELL SCREENED IN THE REGIONAL ZONE OF THE SANTA MARGARITA FORMATION
○ RA-4	REMEDIAL ACTION WELL SCREENED IN THE REGIONAL ZONE OF THE SANTA MARGARITA FORMATION
⊕ DH-1	WELL SCREENED IN THE PERCHED ZONE OF THE SANTA MARGARITA FORMATION
⊕ RA-5	REMEDIAL ACTION WELL SCREENED IN THE PERCHED ZONE OF THE SANTA MARGARITA FORMATION
✸ PZE-4	PERCHED ZONE EXTRACTION WELL SCREENED IN THE SANTA MARGARITA AQUIFER
☒ PZI-4	PERCHED ZONE INFILTRATION WELL
+ SV-1	SOIL VAPOR EXTRACTION WELL
⊠ MW-1B	SOIL VAPOR MONITORING WELL SCREENED IN THE PERCHED ZONE
⊠ WJ-27A	ABANDONED WELL
620	TOPOGRAPHIC ELEVATION CONTOUR IN FEET ABOVE MEAN SEA LEVEL

100 0 100 200
SCALE FEET

FORMER WATKINS-JOHNSON COMPANY SITE
GROUNDWATER MAP
440 KINGS VILLAGE ROAD
SCOTTS VALLEY, CALIFORNIA

REGIONAL AND PERCHED ZONE GROUNDWATER WELLS AND SOIL VAPOR WELLS

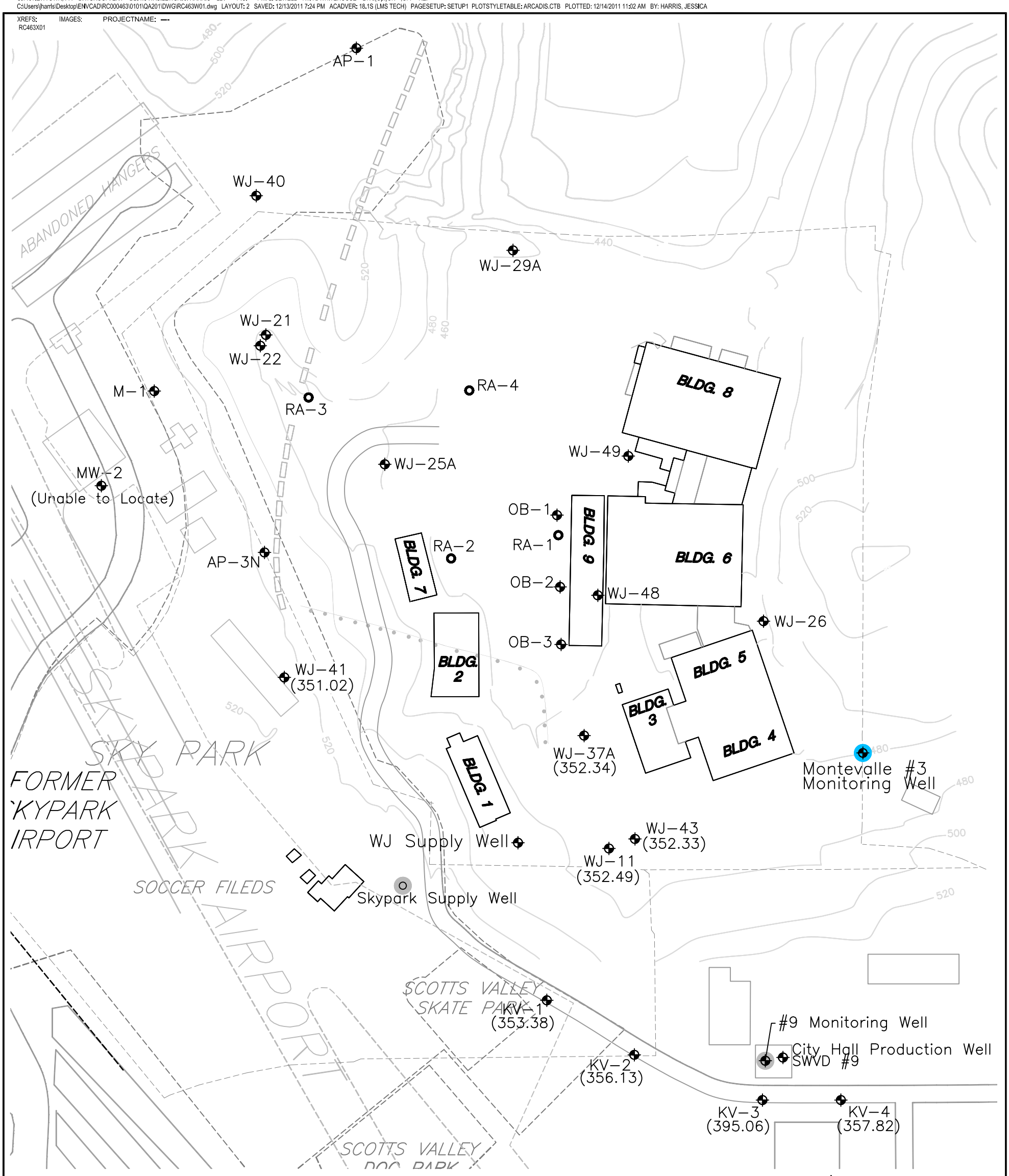
ARCADIS

FIGURE
1

CITY:FULLERTON DIV/GROUP:ENV LD:R.HUBATCH PIC:L.A. SMITH PM:L.SEWELL TM:H. WHITEHOUSE LYR:(Opt)ON=*;OFF=*REF*
G:\ENVCAD\Fullerton\ACT\RC0004630100\MG109\CAD\Revised Map 7_24_09.dwg LAYOUT: FIG1 SAVED: 7/24/2009 8:29 AM ACADVER: 17.0S (LMS TECH) PAGESETUP: ---- PLOTSTYLETABLE: ARCADIS.CTB PLOTTED: 7/24/2009 8:41 AM BY: HUBATCH, RICK
XREFS: IMAGES: SVG PHASE 0100
Agmwgr.tif

CITY: NEWTOWN, PA DIV/GROUP: ENV DB: M. WASILEWSKI/J. HARRIS LD:-- PIC:-- PM: L. SEWELL TM: H. WHITEHOUSE LYR:(Opt)ON=*:OFF=*REF*
C:\Users\jharris\Desktop\ENVCAD\RC000463\0101\QA201\DWG\RC463W01.dwg LAYOUT: 2 SAVED: 12/13/2011 7:24 PM ACADVER: 18.1S (LMS TECH) PAGESETUP: SETUP1 PLOTSTYLETABLE: ARCADIS.CTB PLOTTED: 12/14/2011 11:02 AM BY: HARRIS, JESSICA

XREFS: RC463X01 IMAGES: PROJECTNAME: ---



LEGEND:

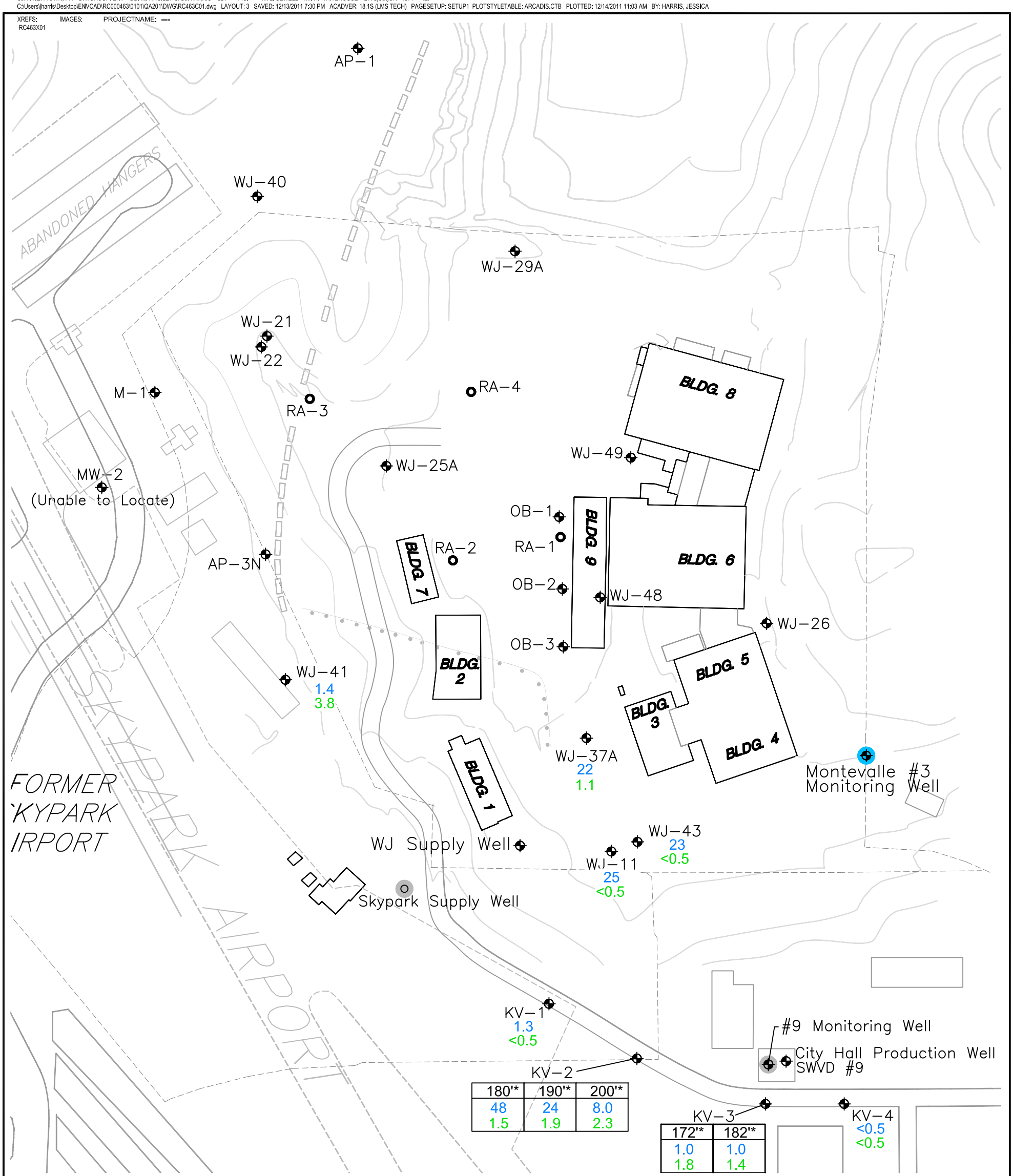
WJ-26	REGIONAL ZONE MONITORING WELL
RA-2	ONSITE EXTRACTION WELL
	OFFSITE PRODUCTION WELL SCREENED IN THE SANTA MARGARITA AQUIFER
	OFFSITE PRODUCTION/MONITORING WELL NOT SCREENED IN THE SANTA MARGARITA AQUIFER
	PARCEL BOUNDARY
(352.49)	GROUNDWATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL

FORMER WATKINS-JOHNSON COMPANY SITE
440 KINGS VILLAGE ROAD
SCOTTS VALLEY, CALIFORNIA
USEPA FOURTH QUARTER 2011 MONITORING REPORT

REGIONAL ZONE GROUNDWATER ELEVATIONS (OCTOBER 2011)

ARCADIS

FIGURE
2



LEGEND:

WJ-26	REGIONAL ZONE MONITORING WELL
RA-2	ONSITE EXTRACTION WELL
	OFFSITE PRODUCTION WELL SCREENED IN THE SANTA MARGARITA AQUIFER
	OFFSITE PRODUCTION/MONITORING WELL NOT SCREENED IN THE SANTA MARGARITA AQUIFER
	PARCEL BOUNDARY

WJ-43	WELL
23	PCE CONCENTRATION (µg/L)
<0.5	TCE CONCENTRATION (µg/L)

PCE	TETRACHLOROETHENE
TCE	TRICHLOROETHENE
µg/L	MICROGRAMS PER LITER
*	DEPTH OF PDB PLACEMENT

FORMER WATKINS-JOHNSON COMPANY SITE
440 KINGS VILLAGE ROAD
SCOTTS VALLEY, CALIFORNIA
USEPA FOURTH QUARTER 2011 MONITORING REPORT

GROUNDWATER ANALYTICAL RESULTS PCE AND TCE (OCTOBER 2011)

ARCADIS

FIGURE
3

Appendix A

Quality Assurance Report

Site: Watkins-Johnson Superfund Site
440 Kings Village Road
Analyzing Lab: Curtis & Tompkins, Ltd.
Reviewer: Dennis Dyke
Date: November 15, 2011
Data Validation Report #: 15051

Sample Delivery Groups (SDGs): 231023, 232065, and 232066

31 Water Samples
Volatile Organic Compounds (VOCs) by EPA Method 8260B
Metals by EPA Method 6010B
Hexavalent Chromium by EPA Method 7199

QA/QC Data Review Summary

I. Introduction

The following water samples were collected and submitted to Curtis & Tompkins, Ltd. Analytical Laboratories in Berkeley, California (C&T) for analysis of the analytes listed in the header using United States Environmental Protection Agency (USEPA) analytical methods.

SDG	Sample ID	Lab ID	Sample Date	Field Duplicate Parent Sample
231023	TS-OUT	231023-001	9/13/11	
	TS-MID	231023-002	9/13/11	
	TS-IN	231023-003	9/13/11	
	TB091311	231023-004	9/13/11	
231065	WJ-11	232065-001	10/18/11	
	WJ-37A	232065-002	10/18/11	
	WJ-41	232065-003	10/18/11	
	WJ-43	232065-004	10/18/11	
	KV-1	232065-005	10/18/11	
	KV-2@180	232065-006	10/18/11	
	KV-2@190	232065-007	10/18/11	
	KV-2@200	232065-008	10/18/11	
	DUP1	232065-009	10/18/11	WJ-41
	DUP2	232065-010	10/18/11	KV-2@180
	KV-3@172	232065-011	10/18/11	
	KV-3@182	232065-012	10/18/11	
	KV-4@185	232065-013	10/18/11	
	WESCOSA WELL	232065-014	10/18/11	
	TB10182011	232065-015	10/18/11	
231065	WJ-11 (GRAB)	232066-001	10/18/11	
	WJ-37A (GRAB)	232066-002	10/18/11	
	WJ-41 (GRAB)	232066-003	10/18/11	
	WJ-43 (GRAB)	232066-004	10/18/11	
	KV-1 (GRAB)	232066-005	10/18/11	
	KV-2@180 (GRAB)	232066-006	10/18/11	
	KV-2@190 (GRAB)	232066-007	10/18/11	
	KV-2@200 (GRAB)	232066-008	10/18/11	
	DUP1 (GRAB)	232066-009	10/18/11	WJ-41 (GRAB)
	DUP2 (GRAB)	232066-010	10/18/11	KV-2@180 (GRAB)
	KV-3@172 (GRAB)	232066-011	10/18/11	
	KV-3@182 (GRAB)	232066-012	10/18/11	
	KV-4@185 (GRAB)	232066-013	10/18/11	
	WESCOSA WELL	232066-014	10/18/11	

This document was prepared in accordance with USEPA documents *Contract Laboratory Program National Functional Guidelines for Organic Data Review* (1999) and the *Quality Assurance Project Plan (QAPP) for Remedial Design/Remedial Action, Watkins-Johnson Company, Scotts Valley, California,* April 12, 1993.

II. Validity

A. Results are valid for the project purposes, subject to the comments in Section III.

III. Comments

A. Proper sample preservation was maintained after sample collection and the EPA-recommended holding time was met for all sample analyses.

B. No dilutions were required; the reporting limits are adequate for assessments.

C. Elevated surrogate recoveries were observed in the VOC analyses of several samples. No sample results required qualification because the associated target compounds were not detected in the affected samples.

D. All matrix spike/matrix spike duplicate sample (MS/MSD) and laboratory control sample/laboratory control sample duplicate (LCS/LCSD) analyses met the QC acceptance limits.

E. Target analytes were not detected in any of the associated laboratory method blanks or trip blanks.

F. The relative percent differences (RPDs) between the field duplicate sample results were acceptable at less than 50%.

G. Integration sheets, chromatograms, and reference scans are produced to positively identify compounds reported above quantitation limits for samples designated as laboratory quality control samples. These data were not reviewed, but are retained by the laboratories.

H. All analytical results are considered valid and no qualifiers were attached to any results. For this batch of samples analyses, the completeness goal is met.

I. Other quality control criteria were met and considered acceptable.

Appendix B

Groundwater Sampling Field Forms

Site Visit Report

ARCADIS Project Number: 0101. NA211
RC000463.~~0040.MD800~~

Dates of Site Visit: 09/13/11

ARCADIS Project Name: SVG

Location of Project: Scotts Valley

ARCADIS Personnel Present: H. Tauscher

Other Persons Present:

Purpose of Site Visit: Monthly System sampling
~~Quarterly Groundwater Monitoring~~

Date & Time:	Activities:
09/13/11 0800	- Leave for Scotts Valley site, grab ice along the way.
0900	- Arrive @ site. No need to have the gate opened, followed postal carrier in. System running upon arrival. No leaks or other issues. Sample, label samples and trip blanks.
1055	- Depart site for office
1155	Arrive @ San Jose office, courier is not scheduled until around 1400 hours.
	1413 - courier arrives, sign over samples & COC.

Rental Equipment Used

Qty	Rental ID	Description	Rental Period	Return Conf. #

Weather:

Signature & Date:

Eqpt Billing Log to Accounting
Date: Initials:

ARCADIS

Document Control Number: TGM - _____
TGM + *project number plus date as follows: xxxxxxxx.xxxx.xxxxx - dd/mm/year*

TAILGATE HEALTH & SAFETY MEETING FORM

This form documents the tailgate meeting conducted in accordance with the Project HASP. Personnel who perform work operations on-site during the day are required to attend this meeting and to acknowledge their attendance, at least daily.

Project Name: AVIZA SVG			**Project Location:** Scotts Valley
Date: 09/13/11	**Time:** 0900	**Conducted by:** Heather Tausher	**Signature/Title:** [signature] / Field Technician IV
Client: Aviza		**Client Contact:** Katie Wynne	**Subcontractor companies:**

TRACKing the Tailgate Meeting

Think through the Tasks (list the tasks for the day):

1 Drive to the site
2 Sample system
3 inspect system
4
5
6

Other Hazardous Activities - Check the box if there are any other ARCADIS, Client or other party activities that may pose hazards to ARCADIS operations ☐ If there are none, write "None" here: None

If yes, describe them here: _____

How will they be controlled? _____

Prework Authorization - check activities to be conducted that require permit issuance or completion of a checklist or similar before work begins:

	Doc #		Doc #		Doc #
☒ Not applicable		☐ Working at Height		☐ Confined Space	
☐ Energy Isolation (LOTO)		☐ Excavation/Trenching		☐ Hot Work	
☐ Mechanical Lifting Ops		☐ Overhead & Buried Utilities		☐ Other permit	

Discuss following questions (for some review previous day's post activities). **Check if yes :**

		☐ Topics from Corp H&S to cover?
☐ Incidents from day before to review?	☐ Lessons learned from the day before?	☐ Any Stop Work Interventions yesterday?
☐ Any corrective actions from yesterday?	☐ Will any work deviate from plan?	☐ If deviations, notify PM & client
☐ JLAs or procedures are available?	☐ Field teams to "dirty" JLAs, as needed?	☐ All equipment checked & OK?
☒ Staff has appropriate PPE?	☒ Staff knows Emergency Plan (EAP)?	☒ Staff knows gathering points?

Comments: _____

Recognize the hazards (check all those that are discussed) (Examples are provided) and **Assess** the Risks (Low, Medium, High - circle risk level) - Provide an overall assessment of hazards to be encountered today and briefly list them under the hazard category.

☐ Gravity (i.e., ladder, scaffold, trips) (L M H)	☒ Motion (i.e., traffic, moving water) (L M H) driving pumps on system	☐ Mechanical (i.e., augers, motors) (L M H)
☒ Electrical (i.e., utilities, lightning) (L M H) groundwater treatment system	☐ Pressure (i.e., gas cylinders, wells) (L M H)	☒ Environment (i.e., heat, cold, ice) (L M H) weather
☒ Chemical (i.e., fuel, acid, paint) (L M H) preservatives in sample containers	☒ Biological (i.e., ticks, poison ivy) (L M H) spider webs	☐ Radiation (i.e., alpha, sun, laser) (L M H)
☒ Sound (i.e., machinery, generators) (L M H) running system	☒ Personal (i.e. alone, night, not fit) (L M H) alone	☒ Driving (i.e. car, ATV, boat, dozer) (L M H) to and from site

Continue TRACK Process on Page 2

TAILGATE HEALTH & SAFETY MEETING FORM - Pg. 2

Control the hazards (Check all and discuss those methods to control the hazards that will be implemented for the day): Review the HASP, applicable JLAs, and other control processes. Discuss and document any additional control processes.

[X] **STOP WORK AUTHORITY** (Must be addressed in every Tailgate meeting - (*See statements below*)

[ ] Elimination	[ ] Substitution	[ ] Isolation
[ ] Engineering controls	[ ] Administrative controls	[X] Monitoring
[X] General PPE Usage	[ ] Hearing Conservation	[ ] Respiratory Protection
[X] Personal Hygiene	[ ] Exposure Guidelines	[ ] Decon Procedures
[X] Emergency Action Plan (EAP)	[ ] Fall Protection	[X] Work Zones/Site Control
[ ] JLA to be developed/used ***(specify)***	[ ] LPO conducted ***(specify job/JLA)***	[ ] Traffic Control
[ ]	[ ]	[ ] Other ***(specify)***
[ ]	[ ]	[ ]

Signature and Certification Section - Site Staff and Visitors

Name/Company/Signature	Initial & Sign in Time	Initial & Sign out Time	I have read and understand the HASP
Heather Tauscher / Arcadis / Heather Tauscher	HT 0900		

Important Information and Numbers

All site staff should arrive fit for work. If not, they should report to the supervisor any restrictions or concerns.

In the event of an injury, employees will call WorkCare at 1.800.455.6155 and then notify the field supervisor who will, in turn, notify Corp H&S at 1.720.344.3844.

In the event of a motor vehicle accident, employees will notify the field supervisor who will then notify Corp H&S at 1.720.344.3844 and then Corp Legal at 1.720.344.3756.

In the event of a utility strike or other damage to property of a client or 3rd party, employees will immediately notify the field supervisor, who will then immediately notify Corp Legal at 1.678.373.9556 and Corp H&S at 1.720.344.3500

Visitor Name/Co - not involved in work

In Out

In Out

In Out

In Out

I will STOP the job any time anyone is concerned or uncertain about health & safety or if anyone identifies a hazard or additional mitigation not recorded in the site, project, job or task hazard assessment.

I will be alert to any changes in personnel, conditions at the work site or hazards not covered by the original hazard assessments.

If it is necessary to STOP THE JOB, I will perform TRACK; and then amend the hazard assessments or the HASP as needed.

I will not assist a subcontractor or other party with their work unless it is absolutely necessary and then only after I have done TRACK and I have thoroughly controlled the hazard.

Post Daily Activities Review - Review at end of day or before next day's work (Check those applicable and explain:)

[ ] Lessons learned and best practices learned today: _____

[ ] Incidents that occurred today: _____

[ ] Any Stop Work interventions today? _____

[ ] Corrective/Preventive Actions needed for future work: _____

[ ] Any other H&S issues: _____

Keep H&S 1st in all things

WorkCare - 1.800.455.6155
Near Loss Hotline - 1.866.242.4304

SVG
Watkins-Johnson Superfund Facility
Scotts Valley, CA

Date & Time: 09/13/11 @0936
Technician: H. Taubcher
Weather: clear, calm, warm
Ambient Temperature: 70's

Reviewed By: _____ **Date:** _____

System Status	ON	OFF	Alarm	Comments
Operational Status	X			
Well RA-2	X			

System Components	Value	Units	Normal	Comments
Influent Pressure From Well	25	PSI	25	
RA-2 Flow	93	GPM	90	
Position of Throttle Valve	100	% Open	100	
Carbon Vessels				
Influent Temperature	—	Celsius	~16	
Mid Pressure	—	PSI		
Out Pressure	—	PSI		
System Totals				
System Totalizer	50775800	Gallons		
Building Tank Supply	61796983	Gallons		
Timer Settings				
Run Start Time	0700	HHMM	700	
Run Time Duration	9.5	Hrs	9.5	
Electrical Meter				
Electrical Meter Reading	1277 x16	KWH		

Inspections	Yes	No	Comments
High/High Alarm Checked?	X		RA-2 stops, yellow light spins
Samples taken?	X		
Any Leaks in Piping or Tanks?		X	
Creek Inspected?		X	

Health and Safety Equipment	Yes	No	Comments
Fire Extinguisher(s) Checked?	X		Date of exp:
Eye-Wash in Truck?	X		Date of exp:
First-Aid Kit in Truck?	X		
old totalizer	4312942		

Maintenance Performed	Yes	No	Date
Pumps Greased		X	

Additional Comments/Maintenance Performed

CHAIN OF CUSTODY

Curtis & Tompkins Laboratories
ENVIRONMENTAL ANALYTICAL TESTING LABORATORY
In Business Since 1878

2323 Fifth Street
Berkeley, CA 94710

Phone (510) 486-0900
Fax (510) 486-0532

Chain of Custody # _____

C&T LOGIN # _____

Project No: R0000463.0101.NAZ.11
Project Name: Scotts Valley Aviza
Project P. O. No:
EDD Format: Report Level ☐ II ☐ III ☐ IV
Turnaround Time: ☐ RUSH _____ ☒ Standard

Sampler: H. Tillesher
Report To: Katie Wynne
Company: ARCADIS
Telephone: on file
Email:

Lab No.	Sample ID.	Date Collected	Time Collected	Water	Solid	# of Containers	HCl	H2SO4	HNO3	NaOH	None	Hex Chrome 7199 None	RCRA 8 + LIST HCL	Total Chrome/Nickel HNO3
	TS-OUT	09/13/11	1025	X		5	X		X		X			
	TS-MID	09/13/11	1030	X		5	X		X		X			
	TS-IN	09/13/11	1035	X		5	X		X		X			
	TB091311	09/13/11	—			2	X						X	

Notes: temp blank

SAMPLE RECEIPT
☒ Intact
☒ Cold
☒ On Ice
☐ Ambient

RELINQUISHED BY:		RECEIVED BY:	
[signature]	DATE: 9/13/11 TIME: 1413	[signature]	DATE: 9/13/11 TIME: 1413
	DATE: TIME:		DATE: TIME:
	DATE: TIME:		DATE: TIME:

ARCADIS

Document Control Number: TGM - _____
TGM + *project number plus date as follows: xxxxxxxx.xxxx.xxxxx - dd/mm/year*

TAILGATE HEALTH & SAFETY MEETING FORM

This form documents the tailgate meeting conducted in accordance with the Project HASP. Personnel who perform work operations on-site during the day are required to attend this meeting and to acknowledge their attendance, at least daily.

Project Name: AVIZA			**Project Location:** Scotts Valley
Date: 10/18/11	**Time:**	**Conducted by:** Heather Tauscher	**Signature/Title:** [signature] / Field Technician IV
Client:		**Client Contact:**	**Subcontractor companies:** Statewide Traffic Safety

TRACKing the Tailgate Meeting

Think through the Tasks (list the tasks for the day):

1 GW Monitoring 3 _____ 5 _____
2 _____ 4 _____ 6 _____

Other Hazardous Activities - Check the box if there are any other ARCADIS, Client or other party activities that may pose hazards to ARCADIS operations ☐ If there are none, write "None" here: None

If yes, describe them here: _____

How will they be controlled? _____

Prework Authorization - check activities to be conducted that require permit issuance or completion of a checklist or similar before work begins:

	Doc #		Doc #		Doc #
☒ Not applicable		☐ Working at Height		☐ Confined Space	
☐ Energy Isolation (LOTO)		☐ Excavation/Trenching		☐ Hot Work	
☐ Mechanical Lifting Ops		☐ Overhead & Buried Utilities		☐ Other permit	

Discuss following questions (for some review previous day's post activities). **Check if yes** :

☐ Incidents from day before to review?	☐ Lessons learned from the day before?	☐ Topics from Corp H&S to cover?
☐ Any corrective actions from yesterday?	☐ Will any work deviate from plan?	☐ Any Stop Work Interventions yesterday?
☐ JLAs or procedures are available?	☐ Field teams to "dirty" JLAs, as needed?	☐ If deviations, notify PM & client
☐ Staff has appropriate PPE?	☐ Staff knows Emergency Plan (EAP)?	☐ All equipment checked & OK?
		☐ Staff knows gathering points?

Comments: _____

Recognize the hazards (check all those that are discussed) (Examples are provided) and **A**ssess the Risks (Low, Medium, High - circle risk level) - Provide an overall assessment of hazards to be encountered today and briefly list them under the hazard category.

☐ Gravity (i.e., ladder, scaffold, trips) (L M H)	☒ Motion (i.e., traffic, moving water) (L M H)	☒ Mechanical (i.e., augers, motors) (L M H)
☐ Electrical (i.e., utilities, lightning) (L M H)	☒ Pressure (i.e., gas cylinders, wells) (L M H)	☐ Environment (i.e., heat, cold, ice) (L M H)
☒ Chemical (i.e., fuel, acid, paint) (L M H)	☒ Biological (i.e., ticks, poison ivy) (L M H)	☐ Radiation (i.e., alpha, sun, laser) (L M H)
☐ Sound (i.e., machinery, generators) (L M H)	☒ Personal (i.e. alone, night, not fit) (L M H)	☒ Driving (i.e. car, ATV, boat, dozer) (L M H)

Continue TRACK Process on Page 2

RECORD OF WATER LEVEL MEASUREMENTS

Date: ~~07-~~ ~~-11~~ 10/18/11

Tools used (circle one): Interface Probe / DTW Meter / Measuring Tape

Project Name: SVG

Job No.: RC000463.0101.NA211

Location: Scotts Valley

ARCADIS Personnel: H. Tauscher

Well Number	Time Measured	Depth to Product (DTP) (feet)	**Depth to Water (DTW) (feet)**	Depth to Bottom (DTB) (feet)	Product Thickness = DTW - DTP (feet)	Remarks:
KV-1	0920	N/A	173.13		N/A	
KV-2	0948		171.57			
KV-3	1029		133.13			
KV-4	1105		169.87			
WJ-41	1140		172.63	199.11		
WJ-43	1245		117.86	167.88		
WJ-11	1215		117.73	129.79		
WJ-37A	1300	—	112.94	168.29		

ARCADIS

ARCADIS Passive Diffusion Bag (PDB) Groundwater Sampling Form

Project Number:	RC000463.0101.NA211	**Sample Date:**	~~07- -11~~ 10/18/11
Project Name:	Scotts Valley	**Well Name:**	KV-1
Sampling Event:	Quarterly Sampling July 2011	**Number of PDB Stations:**	1
Task Manager:	Katie Wynne	**Depth to Water:**	173.13
Sampler(s):	H. Tauscher	**Depth to Bottom:**	
Weather:	overcast, cool, calm, 60'S	**pH:**	5.07
Sample Time Interval:		**Depth to Bag:**	
Start:	0915		
Finish:	0940	**Actual Depth to Bag (if different)**	

PDB SAMPLES

Station	Volume	Preservative	Analysis	Comments
PDB 1	See attached table			

QUALITY CONTROL SAMPLES

Type	Comments
☐ Field Duplicate	
☐ MS/MSD	
☐ Field Blank	
☐ Equipment Rinse	
☐ Other:	

PDB REPLACEMENT X YES NO

Additional Comments:

Sample time = 0925

8260B

MTBE

ARCADIS Passive Diffusion Bag (PDB) Groundwater Sampling Form

Project Number:	RC000463.0101.NA211	**Sample Date:**	~~07-~~ 10/18/11 -11
Project Name:	Scotts Valley	**Well Name:**	KV-2
Sampling Event:	Quarterly Sampling July 2011	**Number of PDB Stations:**	3
Task Manager:	Katie Wynne	**Depth to Water:**	171.57
Sampler(s):	H. Tauscher	**Depth to Bottom:**	
Weather:	overcast, cool, calm, 60's	**pH:**	5.41
Sample Time Interval:		**Depth to Bag:**	
Start:	0943		
Finish:	1025	**Actual Depth to Bag (if different)**	

PDB SAMPLES

Station	Volume	Preservative	Analysis	Comments
PDBs 1 thru 4	See attached table			

QUALITY CONTROL SAMPLES

Type	Comments
☐ Field Duplicate	
☐ MS/MSD	
☐ Field Blank	
☐ Equipment Rinse	
☐ Other:	

PDB REPLACEMENT X YES NO

Additional Comments:

Sample times —

@ 180 — 0950

@ 190 — 1000

@ 200 — 1013

DUP2 — 1010

ARCADIS Passive Diffusion Bag (PDB) Groundwater Sampling Form

Project Number:	RC000463.0101.NA211	**Sample Date:**	~~07- -11~~ 10/18/11
Project Name:	Scotts Valley	**Well Name:**	KV-3
Sampling Event:	Quarterly Sampling July 2011	**Number of PDB Stations:**	
Task Manager:	Katie Wynne	**Depth to Water:**	133.13
Sampler(s):	H. Tauscher	**Depth to Bottom:**	
Weather:	overcast, cool, calm, 60's	**pH:**	5.97
Sample Time Interval:		**Depth to Bag:**	
Start:	1027		
Finish:	1055	**Actual Depth to Bag (if different)**	

PDB SAMPLES

Station	Volume	Preservative	Analysis	Comments
PDB 1	See attached table			
PDB 2	See attached table			

QUALITY CONTROL SAMPLES

Type	Comments
☐ Field Duplicate	
☐ MS/MSD	
☐ Field Blank	
☐ Equipment Rinse	
☐ Other:	

PDB REPLACEMENT X YES NO

Additional Comments:

sample times

@ @172 = 1030

@ 182 = 1040

ARCADIS Passive Diffusion Bag (PDB) Groundwater Sampling Form

10/18/11

Project Number:	RC000463.0101.NA211	**Sample Date:**	~~07- -11~~
Project Name:	Scotts Valley	**Well Name:**	KV-4
Sampling Event:	Quarterly Sampling July 2011	**Number of PDB Stations:**	1
Task Manager:	Katie Wynne	**Depth to Water:**	169.87
Sampler(s):	H. Tauscher	**Depth to Bottom:**	
Weather:	Clear, calm, warm, 70's	**pH:**	6.73
Sample Time Interval:		**Depth to Bag:**	
Start:	1103		
Finish:	1129	**Actual Depth to Bag (if different)**	

PDB SAMPLES

Station	Volume	Preservative	Analysis	Comments
PDB 1	See attached table			

QUALITY CONTROL SAMPLES

Type	Comments
☐ Field Duplicate	
☐ MS/MSD	
☐ Field Blank	
☐ Equipment Rinse	
☐ Other:	

PDB REPLACEMENT X YES NO

Additional Comments:

Sample time = 1121

Water Sampling Log

Project Number RC000463.0101.NA211 Date ~~07~~ 10/18/11 -11

Project Name SVG Well Number WJ-11

Weather overcast calm, clear Sampling Time: Begin 1210 End 1250

Samplers Name H. Tauscher

Evacuation Data

Measuring Point (MP) TOC

Total Sounded Depth of Well Below MP 129.79

Depth to Water Below MP 117.73

Water Column in Well

Gallons per Foot

Gallons in Well

Diameter of Casing

Calculated Gallons Purged Prior to Sampling

Sampling Pump Intake Setting (feet below measuring point)

Purge Method:

PVC Bailer ☐ Diaphragm Pump ☐ size

Disposable Bailer ☐ Submersible Pump ☐ size

Other

Field Parameters

Start Time

Time	Cumulative Gallons	Temperature °F/°C	Specific Cond. µS/cm	pH	DO	ORP	Other	Color
			x	8.04				
			x					
			x					
			x					
			x					
			x					

Sampling

Sampling Method Grab

Actual Gallons Purged Prior to Sampling

Time Depth to Water Color Other

Remarks

Sample time = 1220

Well Casing Volumes (gal/ft)

1 - 1/4" = 0.077 1 - 1/2" = 0.10 2" = 0.16 3" = 0.37 3 1/2 = 0.50 4" = 0.65 6" = 1.46

Water Sampling Log

Project Number RC000463.0101.NA211 Date ~~07-~~ 10/18/11 ~~-11~~

Project Name SVG Well Number WJ-37A

Weather clear, calm, warm, 70's Sampling Time: Begin 1257 End 1313

Samplers Name H. Tauscher

Evacuation Data

Measuring Point (MP) TOC

Total Sounded Depth of Well Below MP 168.29

Depth to Water Below MP 112.94

Water Column in Well

Gallons per Foot

Gallons in Well

Diameter of Casing

Calculated Gallons Purged Prior to Sampling

Sampling Pump Intake Setting (feet below measuring point)

Purge Method:

PVC Bailer ☐ Diaphragm Pump ☐ size

Disposable Bailer ☐ Submersible Pump ☐ size

Other

Field Parameters

Start Time

Time	Cumulative Gallons	Temperature °F/°C	Specific Cond. µS/cm	pH	DO	ORP	Other	Color
			x	7.11				
			x					
			x					
			x					
			x					
			x					

Sampling

Sampling Method Grab

Actual Gallons Purged Prior to Sampling

Time Depth to Water Color Other

Remarks

Sample time - 1300

Well Casing Volumes (gal/ft)

1 - 1/4" = 0.077 1 - 1/2" = 0.10 2" = 0.16 3" = 0.37 3 1/2 = 0.50 4" = 0.65 6" = 1.46

ARCADIS Passive Diffusion Bag (PDB) Groundwater Sampling Form

Project Number:	RC000463.0101.NA211	**Sample Date:**	~~07 11~~ 10/18/11
Project Name:	Scotts Valley	**Well Name:**	WJ-41
Sampling Event:	Quarterly Sampling July 2011	**Number of PDB Stations:**	1
Task Manager:	Katie Wynne	**Depth to Water:**	172.63
Sampler(s):	H. Tauscher	**Depth to Bottom:**	199.11
Weather:	clear, calm, warm, 70's	**pH:**	8.13
Sample Time Interval:		**Depth to Bag:**	
Start:	1135		
Finish:	1230	**Actual Depth to Bag (if different)**	

PDB SAMPLES

Station	Volume	Preservative	Analysis	Comments
PDB 1	See attached table			

QUALITY CONTROL SAMPLES

Type	Comments
☐ Field Duplicate	
☐ MS/MSD	
☐ Field Blank	
☐ Equipment Rinse	
☐ Other:_____	

PDB REPLACEMENT | X YES | NO

Additional Comments:

Sample time – 1145

Dup 1 – 1230

ARCADIS Passive Diffusion Bag (PDB) Groundwater Sampling Form

Project Number:	RC000463.0101.NA211	**Sample Date:**	~~07- -11~~ 10/18/11
Project Name:	Scotts Valley	**Well Name:**	WJ-43
Sampling Event:	Quarterly Sampling July 2011	**Number of PDB Stations:**	1
Task Manager:	Katie Wynne	**Depth to Water:**	117.86
Sampler(s):	H. Tauscher	**Depth to Bottom:**	167.88
Weather:	clear, calm, warm, 70's	**pH:**	7.33
Sample Time Interval:		**Depth to Bag:**	
Start:	1243		
Finish:	1255	**Actual Depth to Bag (if different)**	

PDB SAMPLES

Station	Volume	Preservative	Analysis	Comments
PDB 1	See attached table			

QUALITY CONTROL SAMPLES

Type	Comments
☐ Field Duplicate	
☐ MS/MSD	
☐ Field Blank	
☐ Equipment Rinse	
☐ Other:_____	

PDB REPLACEMENT | X YES | NO

Additional Comments:

Sample time ~ 1247

Water Sampling Log

Project Number RC000463.0101.NA211 Date ~~07 -11~~ 10/18/11

Project Name SVG Well Number Wescosa

Weather Clear, calm, warm Sampling Time: Begin _____ End _____

Samplers Name H. Tauscher

Evacuation Data

Measuring Point (MP) TOC

Total Sounded Depth of Well Below MP N/A

Depth to Water Below MP _____

Water Column in Well _____

Gallons per Foot _____

Gallons in Well _____

Diameter of Casing _____

Calculated Gallons Purged Prior to Sampling _____

Sampling Pump Intake Setting (feet below measuring point) _____

Purge Method:

PVC Bailer ☐ Diaphragm Pump ☐ size _____

Disposable Bailer ☐ Submersible Pump ☐ size _____

Other _____

Field Parameters

Start Time _____

Time	Cumulative Gallons	Temperature °F/°C	Specific Cond. µS/cm	pH	DO	ORP	Other	Color
			x	6.85				
			x					
			x					
			x					
			x					
			x					

Sampling

Sampling Method _____

Actual Gallons Purged Prior to Sampling _____

Time _____ Depth to Water _____ Color _____ Other _____ _____

Remarks Sample time = 1323

Well Casing Volumes (gal/ft)

1 - 1/4" = 0.077 1 - 1/2" = 0.10 2" = 0.16 3" = 0.37 3 1/2 = 0.50 4" = 0.65 6" = 1.46

ARCADIS Geraghty Miller, Inc.

Daily
Calibration Form

Date: 10/18/11
Time: 0730

Technician Name: H. Tauscher
Project # RC000463.0101.NA211

Horiba Meter # 4084008 **Auto 4 Solution** Expiration date: 07/12

pH 4.00 = 3.98
Conductivity: 0.446
Turbidity: 0.0
DO: 9.37
Temp: 18.23 °C
Comments: ORP = 216

PH Meter Meter / Meter # _____ / _____ Solution Expiration date: _____

pH 4.00 = _____ Temp. ____
pH 7.00 = _____ Temp. ____
pH 10.00= _____ Temp ____
N/A
Comments: _____

Conductivity Meter Meter / Meter # _____ / _____ Solution Expiration date: _____

Standard used _____ Reading of Standard _____ Temp. _____
N/A
Comments: _____

D.O. Meter Meter / Meter # _____ / _____ Solution Expiration date: _____

Standard used _____ Temp. _____ Reading of Standard _____
N/A
Comments: _____

Turbidity Meter Meter / Meter # _____ / _____ Solution Expiration date: _____

Standard used _____ Temp. _____ Reading of Standard _____
N/A
Comments: _____

PID/OVM Meter / Meter # _____ / _____ Solution Expiration date: _____

Gas used _____ Reading of Standard _____
N/A
Comments: _____

STATEWIDE
TRAFFIC SAFETY & SIGNS

506194

☐ Poway ☐ Anaheim ☐ Long Beach ☐ San Jose
☐ Nipomo ☒ Sacramento ☐ Fairfield ☐ Fresno ☐ Bakersfield

TT 1777

TRAFFIC CONTROL WORK ORDER REPORT

CONTRACTOR: Arcadis	CONTACT: [illegible]	PHONE:	DATE: 12-18-11
LOCATION:		CONTRACT#	JOB #

Work Description: T-13 2-man [illegible]

8a on site

DATE 12-18-11

CUSTOMER Arcadis CITY Scotts Valley

CLOSURE LOCATION/STREET Scotts Valley Rd

JOBSITE CONTACT 210-672-2128

FWY	ST	HWY/STREET LANE CLOSURES	Length/ Qty	TCSC Work Window Start Time	TCSC Work Window End Time	TCSC Work Window Total Hours	Contractor Work Window Start Time	Contractor Work Window End Time	Contractor Work Window Total Hours	Equipment Notes
☐	☐	1 Lane 1 Direction (T-10)								3 RWA
☐	☐	2 Lanes 1 Direction (T-10)								2 FS
☐	☐	3 Lanes 1 Direction (T-10)								2 BPTS
☐	☐	Additional 1 Lane Different Location (T-10)								7 scoops
☐	☐	Additional 2 Lanes Different Location (T-10)								20 cones
☐	☐	Additional 3 Lanes Different Location (T-10)								
☐	☐	Connector Closure Only (T-14 Mod)								
☐	☐	Off-Ramp Closure during Lane/Street Closure (T-14 Mod)								
☐	☐	On-Ramp Closure during Lane/Street Closure (T-14)								
☐	☐	Connector Closure during Lane Closure (T-14 Mod)								
☐	☐	Complete Freeway/Street Closure (T-14A)								
☐	☒	Flagging (T-13)		8A	12P	4				
☐	☐	Movin Lane Closure (T-15, T-16)								
☐	☐									
☐	☐									

	QTY	Asset #	Start Time	End Time	Total Hours	Notes
Impact Attenuator Vehicle TL-3 & Driver						
Pilot Car Truck	1	724				
Additional Man						
Additional Lanes						
Portable Changeable Message Sign						
Portable Light Towers						
Arrow Boards						

EMPLOYEE	Reg Hrs	OT	DT
Taylor Parsons	4		
Timmy Rinella	4		

Foreman [signature]

Contractor [signature]

R/E Inspector

White - dispatch / Pink - billing / Blue - other / Canary - customer

SSS-TC-WO 01/2011

Curtis & Tompkins, Ltd.
Analytical Laboratory Since 1878
2323 Fifth Street
Berkeley, CA 94710
(510) 486-0900 Phone
(510) 486-0532 Fax

CHAIN OF CUSTODY

C & T LOGIN #: _____

Sampler: Heather Tauscher

Project No.: R3000463.0101.NA211

Report To: Katie Wynne

Project Name: Scotts Valley Arizona

Company: on file

Project P.O.:

Telephone:

Turnaround Time: Standard

Fax:

Analysis: 8260B

Lab No.	Sample ID.	Sampling Date Time	Matrix: Soil	Matrix: Water	Matrix: Waste	# of Containers	Preservative: HCL	Preservative: H_2SO_4	Preservative: HNO_3	Preservative: ICE	8260B
	WJ-11	10/18/11 @ 1220		X		3	X				X
	WJ-37A	1300		X		3	X				X
	WJ-41	1145		X		3	X				X
	WJ-43	1247		X		3	X				X
	KV-1	0925		X		3	X				X
	KV-2 @ 180	0950		X		3	X				X
	KV-2 @ 190	1000		X		3	X				X
	KV-2 @ 200	1013		X		3	X				X
	DUP 1	1230		X		3	X				X
	DUP 2	1010		X		3	X				X
	KV-3 @ 172	1030		X		3	X				X
	KV-3 @ 182	1040		X		3	X				X
	KV-4 @ 185	1121		X		3	X				X

Notes: Hmp blank

SAMPLE RECEIPT: ☑ Intact ☑ Cold ☑ On Ice ☐ Ambient

Preservative Correct? ☐ Yes ☐ No ☐ N/A

RELINQUISHED BY:	RECEIVED BY:
[signature] 10/18/11 1421 DATE / TIME	[signature] 10/18/11 1421 DATE / TIME
DATE / TIME	DATE / TIME
DATE / TIME	DATE / TIME

SIGNATURE

Curtis & Tompkins, Ltd.
Analytical Laboratory Since 1878
2323 Fifth Street
Berkeley, CA 94710
(510) 486-0900 Phone
(510) 486-0532 Fax

CHAIN OF CUSTODY

C & T LOGIN #: _____

Sampler: Heather Tuscher

Project No.: RC000463.0101.NA211

Report To: Katie Wynne

Project Name: Scotts Valley Aviza

Company: on file

Project P.O.:

Telephone: on file

Turnaround Time: Standard

Fax: on file

Analysis

Lab No.	Sample ID.	Sampling Date Time	Matrix: Soil	Matrix: Water	Matrix: Waste		# of Containers	Preservative: HCL	Preservative: H_2SO_4	Preservative: HNO_3	Preservative: ICE		8260B
	WESOSA well	10/18/11 @ 1323		X			3	X					X
	TB10182011	10/18/11 @ —		X			2	X					X

Notes:

SAMPLE RECEIPT
☐ Intact ☑ Cold
☑ On Ice ☐ Ambient

Preservative Correct?
☐ Yes ☐ No ☐ N/A

RELINQUISHED BY:

Heather Tuscher — 10/18/11 1421 — DATE / TIME

DATE / TIME

DATE / TIME

RECEIVED BY:

[illegible] — 10/18/11 1421 — DATE / TIME

DATE / TIME

DATE / TIME

SIGNATURE

Curtis & Tompkins, Ltd.
Analytical Laboratory Since 1878
2323 Fifth Street
Berkeley, CA 94710
(510) 486-0900 Phone
(510) 486-0532 Fax

CHAIN OF CUSTODY

C & T LOGIN #: _____

Sampler: Heather Tauscher

Project No.: 12C0004463.0101.NA211

Report To: Katie Wynne

Project Name: Scotts Valley Aviza

Company: ~~On file~~

Project P.O.:

Telephone: ~~On file~~

Turnaround Time: Standard

Fax:

Analysis: MTBE

Lab No.	Sample ID.	Sampling Date Time	Matrix: Soil	Matrix: Water	Matrix: Waste		# of Containers	Preservative: HCL	Preservative: H_2SO_4	Preservative: HNO_3	Preservative: ICE		MTBE
	WJ-11 (Grab)	10/18/11 @ 1220		X			3	X					X
	WJ-37A (Grab)	@ 1300		X			3	X					X
	WJ-41 (Grab)	@ 1145		X			3	X					X
	WJ-43 (Grab)	@ 1247		X			3	X					X
	KV-1 (Grab)	@ 0925		X			3	X					X
	KV-2 @ 180 (Grab)	@ 0950		X			3	X					X
	KV-2 @ 190 (Grab)	@ 1000		X			3	X					X
	KV-2 @ 200 (Grab)	@ 1013		X			3	X					X
	DUP-1 (Grab)	@ 1230		X			3	X					X
	Dup 2 (Grab)	@ 1010		X			3	X					X
	KV-3 @ 172 (Grab)	@ 1030		X			3	X					X
	KV-3 @ 182 (Grab)	@ 1040		X			3	X					X
	KV-4 @ 165 (Grab)	@ 1121		X			3	X					X

Notes:

SAMPLE RECEIPT
☒ Intact ☒ Cold
☒ On Ice ☐ Ambient

Preservative Correct?
☐ Yes ☐ No ☐ N/A

RELINQUISHED BY:
Heather Tauscher 10/18/11 1421 DATE / TIME
DATE / TIME
DATE / TIME

RECEIVED BY:
[signature] 10/18/11 1421 DATE / TIME
DATE / TIME
DATE / TIME

SIGNATURE

Curtis & Tompkins, Ltd.
Analytical Laboratory Since 1878
2323 Fifth Street
Berkeley, CA 94710
(510) 486-0900 Phone
(510) 486-0532 Fax

CHAIN OF CUSTODY

C & T LOGIN #: _____

Sampler: Heather Tauscher

Project No.: RL0004463.D101.NA211 **Report To:** Katie Wynne

Project Name: Scotts Valley Aviza **Company:** on file

Project P.O.: **Telephone:**

Turnaround Time: Standard **Fax:**

Analysis

Lab No.	Sample ID.	Sampling Date Time	Matrix: Soil	Matrix: Water	Matrix: Waste		# of Containers	Preservative: HCL	Preservative: H_2SO_4	Preservative: HNO_3	Preservative: ICE		MTBE
	WESCOSA Well	10/18/11 @ 1323		X			3	X					X

Notes:

SAMPLE RECEIPT
☒ Intact ☒ Cold
☒ On Ice ☐ Ambient

Preservative Correct?
☐ Yes ☐ No ☐ N/A

RELINQUISHED BY:
Heather Tauscher 10/18/11 1421 DATE / TIME
DATE / TIME
DATE / TIME

RECEIVED BY:
10/18/11 1421 DATE / TIME
DATE / TIME
DATE / TIME

SIGNATURE

Appendix C

Laboratory Analytical Results

Curtis & Tompkins, Ltd.
Analytical Laboratories, Since 1878

Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878
2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

Laboratory Job Number 231023
ANALYTICAL REPORT

Arcadis 2000 Powell St Emeryville, CA 94608	Project : RC000463 Location : SVG Level : II

Sample ID	Lab ID
TS-OUT	231023-001
TS-MID	231023-002
TS-IN	231023-003
TB091311	231023-004

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

Signature: Desirée N. Tetrault
Project Manager

Date: 09/20/2011

NELAP # 01107CA

Curtis & Tompkins, Ltd.

CASE NARRATIVE

Laboratory number:	**231023**
Client:	**Arcadis**
Project:	**RC000463**
Location:	**SVG**
Request Date:	**09/13/11**
Samples Received:	**09/13/11**

This data package contains sample and QC results for four water samples, requested for the above referenced project on 09/13/11. The samples were received cold and intact.

Volatile Organics by GC/MS (EPA 8260B):
High surrogate recovery was observed for toluene-d8 in TB091311 (lab # 231023-004); no target analytes were detected in the sample. No other analytical problems were encountered.

Metals (EPA 6010B):
No analytical problems were encountered.

Hexavalent Chromium by Ion Chromatograph (EPA 7199):
No analytical problems were encountered.

CHAIN OF CUSTODY

Curtis & Tompkins Laboratories
ENVIRONMENTAL ANALYTICAL TESTING LABORATORY
In Business Since 1878

2323 Fifth Street
Berkeley, CA 94710

Phone (510) 486-0900
Fax (510) 486-0532

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Chain of Custody #

C&T LOGIN # 231023

Project No: RC000463.0101.NAZ11
Sampler: H. Tauscher
Project Name: Scotts Valley Aviza
Report To: Katie Wynne
Project P. O. No:
Company: ARCADIS
EDD Format: Report Level ☐ II ☐ III ☐ IV
Telephone: on file
Turnaround Time: ☐ RUSH ☒ Standard
Email:

Lab No.	Sample ID.	SAMPLING Date Collected	SAMPLING Time Collected	MATRIX Water	MATRIX Solid	# of Containers	CHEMICAL PRESERVATIVE HCl	H2SO4	HNO3	NaOH	None	ANALYTICAL REQUEST: Hex Chrome 7199 NONE	8260B/8010 LST HCL	Total Chrome/Nickel HNO3
1	TS-OUT	09/13/11	1025	X		5	X		X		X			
2	TS-MID	09/13/11	1030	X		5	X		X		X			
3	TS-IN	09/13/11	1035	X		5	X		X		X			
4	TB091311	09/13/11	—			2	X						X	

Notes: temp blank

SAMPLE RECEIPT
☒ Intact
☒ Cold
☒ On Ice
☐ Ambient

RELINQUISHED BY:
DATE: 09/13/11 TIME: 1413
DATE: TIME:
DATE: TIME:

RECEIVED BY:
DATE: 9/13/11 TIME: 1413
DATE: TIME:
DATE: TIME:

COOLER RECEIPT CHECKLIST

Curtis & Tompkins, Ltd.

Login # 231023 Date Received 9/13/11 Number of coolers 1
Client ARCADIS Project Scotts Valley Ariza

Date Opened 9/13/11 By (print) Vidia Qashi (sign)
Date Logged in ↓ By (print) ↓ (sign) ↓

1. Did cooler come with a shipping slip (airbill, etc) YES (NO)
   Shipping info
2A. Were custody seals present? .... ☐ YES (circle) on cooler on samples ☒ NO
   How many Name Date
2B. Were custody seals intact upon arrival? YES NO (N/A)
3. Were custody papers dry and intact when received? (YES) NO
4. Were custody papers filled out properly (ink, signed, etc)? (YES) NO
5. Is the project identifiable from custody papers? (If so fill out top of form) (YES) NO
6. Indicate the packing in cooler: (if other, describe)

   ☐ Bubble Wrap ☒ Foam blocks ☐ Bags ☐ None
   ☐ Cloth material ☐ Cardboard ☐ Styrofoam ☐ Paper towels
7. Temperature documentation: * Notify PM if temperature exceeds 6°C

   Type of ice used: ☒ Wet ☐ Blue/Gel ☐ None Temp(°C) 8.6

   ☐ Samples Received on ice & cold without a temperature blank

   ☒ Samples received on ice directly from the field. Cooling process had begun
8. Were Method 5035 sampling containers present? YES (NO)
   If YES, what time were they transferred to freezer?
9. Did all bottles arrive unbroken/unopened? (YES) NO
10. Are samples in the appropriate containers for indicated tests? (YES) NO
11. Are sample labels present, in good condition and complete? (YES) NO
12. Do the sample labels agree with custody papers? (YES) NO
13. Was sufficient amount of sample sent for tests requested? (YES) NO
14. Are the samples appropriately preserved? (YES) NO N/A
15. Did you check preservatives for all bottles for each sample? (YES) NO N/A
16. Did you document your preservative check? (YES) NO N/A
17. Did you change the hold time in LIMS for unpreserved VOAs? YES NO (N/A)
18. Are bubbles > 6mm absent in VOA samples? (YES) NO N/A
19. Was the client contacted concerning this sample delivery? YES (NO)
   If YES, Who was called? By Date:

COMMENTS

Rev 8, 6/11

Curtis & Tompkins Sample Preservation for 231023

Sample	pH: <2	>12	Other
-001a	[ ]	[ ]	_____
b	[ ]	[ ]	_____
c	[ ]	[ ]	_____
d	[X]	[ ]	_____
e	[ ]	[ ]	_____
-002a	[ ]	[ ]	_____
b	[ ]	[ ]	_____
c	[ ]	[ ]	_____
d	[X]	[ ]	_____
e	[ ]	[ ]	_____
-003a	[ ]	[ ]	_____
b	[ ]	[ ]	_____
c	[ ]	[ ]	_____
d	[X]	[ ]	_____
e	[ ]	[ ]	_____

Analyst: VQ
Date: 9/13/11

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Curtis & Tompkins, Ltd.

Purgeable Halocarbons by GC/MS

Lab #:	231023	Location:	SVG
Client:	Arcadis	Prep:	EPA 5030B
Project#:	RC000463	Analysis:	EPA 8260B
Field ID:	TS-OUT	Batch#:	178933
Lab ID:	231023-001	Sampled:	09/13/11
Matrix:	Water	Received:	09/13/11
Units:	ug/L	Analyzed:	09/14/11
Diln Fac:	1.000		

Analyte	Result	RL
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	20
trans-1,2-Dichloroethene	ND	0.5
1,1-Dichloroethane	ND	0.5
cis-1,2-Dichloroethene	ND	0.5
Chloroform	ND	1.0
1,1,1-Trichloroethane	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
cis-1,3-Dichloropropene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
Tetrachloroethene	0.6	0.5
Dibromochloromethane	ND	0.5
Chlorobenzene	ND	0.5
Bromoform	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	125	73-145
Toluene-d8	115	80-120
Bromofluorobenzene	115	80-120

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Halocarbons by GC/MS

Lab #:	231023	Location:	SVG
Client:	Arcadis	Prep:	EPA 5030B
Project#:	RC000463	Analysis:	EPA 8260B
Field ID:	TS-MID	Batch#:	178933
Lab ID:	231023-002	Sampled:	09/13/11
Matrix:	Water	Received:	09/13/11
Units:	ug/L	Analyzed:	09/14/11
Diln Fac:	1.000		

Analyte	Result	RL
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	20
trans-1,2-Dichloroethene	ND	0.5
1,1-Dichloroethane	ND	0.5
cis-1,2-Dichloroethene	ND	0.5
Chloroform	ND	1.0
1,1,1-Trichloroethane	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Trichloroethene	1.1	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
cis-1,3-Dichloropropene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
Tetrachloroethene	5.3	0.5
Dibromochloromethane	ND	0.5
Chlorobenzene	ND	0.5
Bromoform	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	126	73-145
Toluene-d8	114	80-120
Bromofluorobenzene	115	80-120

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Halocarbons by GC/MS

Lab #:	231023	Location:	SVG
Client:	Arcadis	Prep:	EPA 5030B
Project#:	RC000463	Analysis:	EPA 8260B
Field ID:	TS-IN	Batch#:	178933
Lab ID:	231023-003	Sampled:	09/13/11
Matrix:	Water	Received:	09/13/11
Units:	ug/L	Analyzed:	09/14/11
Diln Fac:	1.000		

Analyte	Result	RL
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	20
trans-1,2-Dichloroethene	ND	0.5
1,1-Dichloroethane	ND	0.5
cis-1,2-Dichloroethene	ND	0.5
Chloroform	ND	1.0
1,1,1-Trichloroethane	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
cis-1,3-Dichloropropene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
Tetrachloroethene	4.2	0.5
Dibromochloromethane	ND	0.5
Chlorobenzene	ND	0.5
Bromoform	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	125	73-145
Toluene-d8	112	80-120
Bromofluorobenzene	115	80-120

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Halocarbons by GC/MS

Lab #:	231023	Location:	SVG
Client:	Arcadis	Prep:	EPA 5030B
Project#:	RC000463	Analysis:	EPA 8260B
Field ID:	TB091311	Batch#:	178933
Lab ID:	231023-004	Sampled:	09/13/11
Matrix:	Water	Received:	09/13/11
Units:	ug/L	Analyzed:	09/14/11
Diln Fac:	1.000		

Analyte	Result	RL
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	20
trans-1,2-Dichloroethene	ND	0.5
1,1-Dichloroethane	ND	0.5
cis-1,2-Dichloroethene	ND	0.5
Chloroform	ND	1.0
1,1,1-Trichloroethane	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
cis-1,3-Dichloropropene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
Chlorobenzene	ND	0.5
Bromoform	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	123	73-145
Toluene-d8	124 *	80-120
Bromofluorobenzene	116	80-120

*= Value outside of QC limits; see narrative
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Halocarbons by GC/MS

Lab #:	231023	Location:	SVG
Client:	Arcadis	Prep:	EPA 5030B
Project#:	RC000463	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	178933
Units:	ug/L	Analyzed:	09/14/11
Diln Fac:	1.000		

Type: BS Lab ID: QC608945

Analyte	Spiked	Result	%REC	Limits
1,1-Dichloroethene	25.00	22.97	92	64-133
Trichloroethene	25.00	25.45	102	78-120
Chlorobenzene	25.00	26.55	106	80-120

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	121	73-145
Toluene-d8	111	80-120
Bromofluorobenzene	110	80-120

Type: BSD Lab ID: QC608946

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
1,1-Dichloroethene	25.00	21.70	87	64-133	6	20
Trichloroethene	25.00	24.77	99	78-120	3	20
Chlorobenzene	25.00	25.94	104	80-120	2	20

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	120	73-145
Toluene-d8	110	80-120
Bromofluorobenzene	111	80-120

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Halocarbons by GC/MS

Lab #:	231023	Location:	SVG
Client:	Arcadis	Prep:	EPA 5030B
Project#:	RC000463	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC608947	Batch#:	178933
Matrix:	Water	Analyzed:	09/14/11
Units:	ug/L		

Analyte	Result	RL
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	20
trans-1,2-Dichloroethene	ND	0.5
1,1-Dichloroethane	ND	0.5
cis-1,2-Dichloroethene	ND	0.5
Chloroform	ND	1.0
1,1,1-Trichloroethane	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
cis-1,3-Dichloropropene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
Chlorobenzene	ND	0.5
Bromoform	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	121	73-145
Toluene-d8	120	80-120
Bromofluorobenzene	120	80-120

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Halocarbons by GC/MS

Lab #:	231023	Location:	SVG
Client:	Arcadis	Prep:	EPA 5030B
Project#:	RC000463	Analysis:	EPA 8260B
Field ID:	ZZZZZZZZZZ	Batch#:	178933
MSS Lab ID:	230896-009	Sampled:	09/07/11
Matrix:	Water	Received:	09/08/11
Units:	ug/L	Analyzed:	09/14/11
Diln Fac:	1.000		

Type: MS Lab ID: QC609053

Analyte	MSS Result	Spiked	Result	%REC	Limits
1,1-Dichloroethene	0.1778	25.00	22.02	87	73-126
Trichloroethene	0.2324	25.00	25.63	102	69-122
Chlorobenzene	<0.1000	25.00	26.69	107	80-120

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	123	73-145
Toluene-d8	108	80-120
Bromofluorobenzene	106	80-120

Type: MSD Lab ID: QC609054

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
1,1-Dichloroethene	25.00	21.12	84	73-126	4	20
Trichloroethene	25.00	24.41	97	69-122	5	20
Chlorobenzene	25.00	25.94	104	80-120	3	20

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	120	73-145
Toluene-d8	110	80-120
Bromofluorobenzene	105	80-120

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Chromium

Lab #:	231023	Location:	SVG
Client:	Arcadis	Prep:	EPA 3010A
Project#:	RC000463	Analysis:	EPA 6010B
Analyte:	Chromium	Sampled:	09/13/11
Matrix:	Water	Received:	09/13/11
Units:	ug/L	Prepared:	09/15/11
Diln Fac:	1.000	Analyzed:	09/17/11
Batch#:	179016		

Field ID	Type	Lab ID	Result	RL
TS-OUT	SAMPLE	231023-001	ND	5.0
TS-MID	SAMPLE	231023-002	ND	5.0
TS-IN	SAMPLE	231023-003	8.3	5.0
	BLANK	QC609312	ND	5.0

ND= Not Detected
RL= Reporting Limit

12.0

Curtis & Tompkins, Ltd.

Nickel

Lab #:	231023	Location:	SVG
Client:	Arcadis	Prep:	EPA 3010A
Project#:	RC000463	Analysis:	EPA 6010B
Analyte:	Nickel	Sampled:	09/13/11
Matrix:	Water	Received:	09/13/11
Units:	ug/L	Prepared:	09/15/11
Diln Fac:	1.000	Analyzed:	09/17/11
Batch#:	179016		

Field ID	Type	Lab ID	Result	RL
TS-OUT	SAMPLE	231023-001	ND	5.0
TS-MID	SAMPLE	231023-002	ND	5.0
TS-IN	SAMPLE	231023-003	280	5.0
	BLANK	QC609312	ND	5.0

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Chromium

Lab #:	231023	Location:	SVG
Client:	Arcadis	Prep:	EPA 3010A
Project#:	RC000463	Analysis:	EPA 6010B
Analyte:	Chromium	Batch#:	179016
Field ID:	ZZZZZZZZZZ	Sampled:	09/14/11
MSS Lab ID:	231053-001	Received:	09/14/11
Matrix:	Water	Prepared:	09/15/11
Units:	ug/L	Analyzed:	09/17/11
Diln Fac:	1.000		

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
BS	QC609313		200.0	185.5	93	80-120		
BSD	QC609314		200.0	183.7	92	80-120	1	20
MS	QC609315	<1.529	200.0	183.2	92	70-120		
MSD	QC609316		200.0	187.8	94	70-120	2	22

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Batch QC Report

Nickel

Lab #:	231023	Location:	SVG
Client:	Arcadis	Prep:	EPA 3010A
Project#:	RC000463	Analysis:	EPA 6010B
Analyte:	Nickel	Batch#:	179016
Field ID:	ZZZZZZZZZZ	Sampled:	09/14/11
MSS Lab ID:	231053-001	Received:	09/14/11
Matrix:	Water	Prepared:	09/15/11
Units:	ug/L	Analyzed:	09/17/11
Diln Fac:	1.000		

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
BS	QC609313		500.0	464.9	93	80-120		
BSD	QC609314		500.0	458.8	92	80-120	1	20
MS	QC609315	3.717	500.0	441.9	88	66-120		
MSD	QC609316		500.0	452.2	90	66-120	2	22

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Hexavalent Chromium

Lab #:	231023	Location:	SVG
Client:	Arcadis	Prep:	METHOD
Project#:	RC000463	Analysis:	EPA 7199
Matrix:	Water	Batch#:	178920
Units:	ug/L	Received:	09/13/11
Diln Fac:	1.000		

Field ID:	TS-OUT	Sampled:	09/13/11 10:25
Type:	SAMPLE	Analyzed:	09/13/11 22:12
Lab ID:	231023-001		

Analyte	Result	RL
Hexavalent Chromium	1.2	0.50

Field ID:	TS-MID	Sampled:	09/13/11 10:30
Type:	SAMPLE	Analyzed:	09/13/11 22:24
Lab ID:	231023-002		

Analyte	Result	RL
Hexavalent Chromium	4.6	0.50

Field ID:	TS-IN	Sampled:	09/13/11 10:35
Type:	SAMPLE	Analyzed:	09/13/11 22:37
Lab ID:	231023-003		

Analyte	Result	RL
Hexavalent Chromium	3.5	0.50

Type:	BLANK	Analyzed:	09/13/11 21:46
Lab ID:	QC608887		

Analyte	Result	RL
Hexavalent Chromium	ND	0.50

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Hexavalent Chromium

Lab #:	231023	Location:	SVG
Client:	Arcadis	Prep:	METHOD
Project#:	RC000463	Analysis:	EPA 7199
Field ID:	TS-OUT	Batch#:	178920
MSS Lab ID:	231023-001	Sampled:	09/13/11 10:25
Matrix:	Water	Received:	09/13/11
Units:	ug/L		

Type:	LCS	Diln Fac:	1.000
Lab ID:	QC608888	Analyzed:	09/13/11 21:59

Analyte	Spiked	Result	%REC	Limits
Hexavalent Chromium	20.00	20.94	105	90-110

Type:	MS	Diln Fac:	1.010
Lab ID:	QC608889	Analyzed:	09/13/11 23:02

Analyte	MSS Result	Spiked	Result	%REC	Limits
Hexavalent Chromium	1.203	10.10	11.00	97	85-115

Type:	MSD	Diln Fac:	1.010
Lab ID:	QC608890	Analyzed:	09/13/11 23:15

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Hexavalent Chromium	10.10	11.20	99	85-115	2	30

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.
Analytical Laboratories, Since 1878

Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878
2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

Laboratory Job Number 232065
ANALYTICAL REPORT

Arcadis	Project : RC000463
2000 Powell St	Location : Scotts Valley Aviza
Emeryville, CA 94608	Level : II

Sample ID	Lab ID
WJ-11	232065-001
WJ-37A	232065-002
WJ-41	232065-003
WJ-43	232065-004
KV-1	232065-005
KV-2@180	232065-006
KV-2@190	232065-007
KV-2@200	232065-008
DUP1	232065-009
DUP2	232065-010
KV-3@172	232065-011
KV-3@182	232065-012
KV-4@185	232065-013
WESCOSA WELL	232065-014
TB10182011	232065-015

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

Signature: Desirée N. Tétrault
Project Manager

Date: 10/31/2011

NELAP # 01107CA

Curtis & Tompkins, Ltd.

CASE NARRATIVE

Laboratory number:	**232065**
Client:	**Arcadis**
Project:	**RC000463**
Location:	**Scotts Valley Aviza**
Request Date:	**10/18/11**
Samples Received:	**10/18/11**

This data package contains sample and QC results for fifteen water samples, requested for the above referenced project on 10/18/11. The samples were received cold and intact.

Volatile Organics by GC/MS (EPA 8260B):
High surrogate recoveries were observed for bromofluorobenzene in many samples. No other analytical problems were encountered.

Curtis & Tompkins, Ltd.
Analytical Laboratory Since 1878
2323 Fifth Street
Berkeley, CA 94710
(510) 486-0900 Phone
(510) 486-0532 Fax

CHAIN OF CUSTODY

C & T LOGIN #: 232065

Project No.: RC000463.0101.NA211
Project Name: Scotts Valley Aviza
Project P.O.:
Turnaround Time: Standard

Sampler: Heather Tauscher
Report To: Katie Wynne
Company:
Telephone: on file
Fax:

Lab No.	Sample ID.	Sampling Date Time	Matrix: Soil	Matrix: Water	Matrix: Waste	# of Containers	Preservative: HCL	Preservative: H_2SO_4	Preservative: HNO_3	Preservative: ICE	Analysis: 8260B
1	WJ-11	10/18/11 @ 1220		X		3	X				X
2	WJ-37A	1300		X		3	X				X
3	WJ-41	1145		X		3	X				X
4	WJ-43	1247		X		3	X				X
5	KV-1	0925		X		3	X				X
6	KV-2 @ 180	0950		X		3	X				X
7	KV-2 @ 190	1000		X		3	X				X
8	KV-2 @ 200	1013		X		3	X				X
9	DUP 1	1230		X		3	X				X
10	DUP 2	1010		X		3	X				X
11	KV-3 @ 172	1030		X		3	X				X
12	KV-3 @ 182	1040		X		3	X				X
13	KV-4 @ 185	1121		X		3	X				X

Notes:
Trip blank

SAMPLE RECEIPT
☑ Intact ☑ Cold
☑ On Ice ☐ Ambient

Preservative Correct?
☐ Yes ☐ No ☐ N/A

RELINQUISHED BY:	DATE / TIME	RECEIVED BY:	DATE / TIME
[signature]	10/18/11 1421	[signature]	10/18/11 1421
[signature]	10/18/11 1730	[signature]	10/18/11 1730
	DATE / TIME		DATE / TIME

SIGNATURE

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CHAIN OF CUSTODY

C & T LOGIN #: 232065

Project No.: RC000463.0101.NA211
Project Name: Scotts Valley Aviza
Project P.O.:
Turnaround Time: Standard

Sampler: Heather Tauscher
Report To: Katie Wynne
Company: on file
Telephone:
Fax:

Analysis

Lab No.	Sample ID.	Sampling Date Time	Matrix: Soil	Matrix: Water	Matrix: Waste	# of Containers	Preservative: HCL	Preservative: H_2SO_4	Preservative: HNO_3	Preservative: ICE	8260B
14	Wescosa Well	10/18/11 @ 1323		X		3	X				X
15	TB10182011	10/18/11 @ —		X		2	X				X

Notes:

SAMPLE RECEIPT
☑ Intact ☑ Cold
☑ On Ice ☐ Ambient

Preservative Correct?
☐ Yes ☐ No ☐ N/A

RELINQUISHED BY:
Heather Tauscher — 10/18/11 1421 DATE / TIME
[signature] — 10/18/11 1730 DATE / TIME
DATE / TIME

RECEIVED BY:
[signature] — 10/18/11 1421 DATE / TIME
[signature] — 1730 10/18/11 DATE / TIME
DATE / TIME

SIGNATURE

COOLER RECEIPT CHECKLIST

Curtis & Tompkins, Ltd.

Login # 232065 Date Received 10/18/11 Number of coolers 1
Client ARCADIS Project Scotts Valley Aviza

Date Opened 10/18/11 By (print) Vidya Darshi (sign) [signature]
Date Logged in 10/19/11 By (print) L-CHOY (sign) [signature]

1. Did cooler come with a shipping slip (airbill, etc) _____ YES (NO)
   Shipping info _____

2A. Were custody seals present? .... ☐ YES (circle) on cooler on samples ☒ NO
   How many _____ Name _____ Date _____
2B. Were custody seals intact upon arrival? _____ YES NO (N/A)
3. Were custody papers dry and intact when received? _____ (YES) NO
4. Were custody papers filled out properly (ink, signed, etc)? _____ (YES) NO
5. Is the project identifiable from custody papers? (If so fill out top of form) (YES) NO
6. Indicate the packing in cooler: (if other, describe) _____

☐ Bubble Wrap ☒ Foam blocks ☐ Bags ☐ None
☐ Cloth material ☐ Cardboard ☐ Styrofoam ☐ Paper towels

7. Temperature documentation: * Notify PM if temperature exceeds 6°C

Type of ice used: ☒ Wet ☐ Blue/Gel ☐ None Temp(°C) 2.5

☐ Samples Received on ice & cold without a temperature blank

☒ Samples received on ice directly from the field. Cooling process had begun

8. Were Method 5035 sampling containers present? _____ YES (NO)
   If YES, what time were they transferred to freezer? _____
9. Did all bottles arrive unbroken/unopened? _____ (YES) NO
10. Are there any missing / extra samples? _____ YES (NO)
11. Are samples in the appropriate containers for indicated tests? _____ (YES) NO
12. Are sample labels present, in good condition and complete? _____ (YES) NO
13. Do the sample labels agree with custody papers? _____ YES (NO)
14. Was sufficient amount of sample sent for tests requested? _____ (YES) NO
15. Are the samples appropriately preserved? _____ (YES) NO N/A
16. Did you check preservatives for all bottles for each sample? _____ YES NO (N/A)
17. Did you document your preservative check? _____ YES NO (N/A)
18. Did you change the hold time in LIMS for unpreserved VOAs? _____ YES NO (N/A)
19. Did you change the hold time in LIMS for preserved terracores? _____ YES NO (N/A)
20. Are bubbles > 6mm absent in VOA samples? _____ (YES) NO N/A
21. Was the client contacted concerning this sample delivery? _____ YES (NO)
   If YES, Who was called? _____ By _____ Date: _____

COMMENTS
13)-a3 sample label ID does not agree w/ COC. sample label ID reads KV-4

Rev 8, 6/11

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	232065	Location:	Scotts Valley Aviza
Client:	Arcadis	Prep:	EPA 5030B
Project#:	RC000463	Analysis:	EPA 8260B
Field ID:	WJ-11	Batch#:	180585
Lab ID:	232065-001	Sampled:	10/18/11
Matrix:	Water	Received:	10/18/11
Units:	ug/L	Analyzed:	10/27/11
Diln Fac:	1.000		

Analyte	Result	RL
Freon 12	ND	1.0
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Acetone	26	10
Freon 113	ND	5.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	25	0.5

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	232065	Location:	Scotts Valley Aviza
Client:	Arcadis	Prep:	EPA 5030B
Project#:	RC000463	Analysis:	EPA 8260B
Field ID:	WJ-11	Batch#:	180585
Lab ID:	232065-001	Sampled:	10/18/11
Matrix:	Water	Received:	10/18/11
Units:	ug/L	Analyzed:	10/27/11
Diln Fac:	1.000		

Analyte	Result	RL
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	ND	0.5
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	ND	0.5
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	2.0
Naphthalene	ND	2.0
1,2,3-Trichlorobenzene	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	115	80-127
1,2-Dichloroethane-d4	108	73-145
Toluene-d8	97	80-120
Bromofluorobenzene	99	80-120

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	232065	Location:	Scotts Valley Aviza
Client:	Arcadis	Prep:	EPA 5030B
Project#:	RC000463	Analysis:	EPA 8260B
Field ID:	WJ-37A	Batch#:	180585
Lab ID:	232065-002	Sampled:	10/18/11
Matrix:	Water	Received:	10/18/11
Units:	ug/L	Analyzed:	10/27/11
Diln Fac:	1.000		

Analyte	Result	RL
Freon 12	ND	1.0
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Acetone	31	10
Freon 113	ND	5.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	1.1	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	22	0.5

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	232065	Location:	Scotts Valley Aviza
Client:	Arcadis	Prep:	EPA 5030B
Project#:	RC000463	Analysis:	EPA 8260B
Field ID:	WJ-37A	Batch#:	180585
Lab ID:	232065-002	Sampled:	10/18/11
Matrix:	Water	Received:	10/18/11
Units:	ug/L	Analyzed:	10/27/11
Diln Fac:	1.000		

Analyte	Result	RL
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	ND	0.5
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	ND	0.5
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	2.0
Naphthalene	ND	2.0
1,2,3-Trichlorobenzene	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	114	80-127
1,2-Dichloroethane-d4	111	73-145
Toluene-d8	101	80-120
Bromofluorobenzene	96	80-120

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	232065	Location:	Scotts Valley Aviza
Client:	Arcadis	Prep:	EPA 5030B
Project#:	RC000463	Analysis:	EPA 8260B
Field ID:	WJ-41	Batch#:	180635
Lab ID:	232065-003	Sampled:	10/18/11
Matrix:	Water	Received:	10/18/11
Units:	ug/L	Analyzed:	10/28/11
Diln Fac:	1.000		

Analyte	Result	RL
Freon 12	ND	1.0
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Acetone	50	10
Freon 113	ND	5.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	3.8	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	1.4	0.5

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	232065	Location:	Scotts Valley Aviza
Client:	Arcadis	Prep:	EPA 5030B
Project#:	RC000463	Analysis:	EPA 8260B
Field ID:	WJ-41	Batch#:	180635
Lab ID:	232065-003	Sampled:	10/18/11
Matrix:	Water	Received:	10/18/11
Units:	ug/L	Analyzed:	10/28/11
Diln Fac:	1.000		

Analyte	Result	RL
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	ND	0.5
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	ND	0.5
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	2.0
Naphthalene	ND	2.0
1,2,3-Trichlorobenzene	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	116	80-127
1,2-Dichloroethane-d4	110	73-145
Toluene-d8	99	80-120
Bromofluorobenzene	96	80-120

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	232065	Location:	Scotts Valley Aviza
Client:	Arcadis	Prep:	EPA 5030B
Project#:	RC000463	Analysis:	EPA 8260B
Field ID:	WJ-43	Batch#:	180635
Lab ID:	232065-004	Sampled:	10/18/11
Matrix:	Water	Received:	10/18/11
Units:	ug/L	Analyzed:	10/28/11
Diln Fac:	1.000		

Analyte	Result	RL
Freon 12	ND	1.0
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Acetone	22	10
Freon 113	ND	5.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	23	0.5

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	232065	Location:	Scotts Valley Aviza
Client:	Arcadis	Prep:	EPA 5030B
Project#:	RC000463	Analysis:	EPA 8260B
Field ID:	WJ-43	Batch#:	180635
Lab ID:	232065-004	Sampled:	10/18/11
Matrix:	Water	Received:	10/18/11
Units:	ug/L	Analyzed:	10/28/11
Diln Fac:	1.000		

Analyte	Result	RL
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	ND	0.5
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	ND	0.5
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	2.0
Naphthalene	ND	2.0
1,2,3-Trichlorobenzene	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	113	80-127
1,2-Dichloroethane-d4	110	73-145
Toluene-d8	98	80-120
Bromofluorobenzene	95	80-120

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	232065	Location:	Scotts Valley Aviza
Client:	Arcadis	Prep:	EPA 5030B
Project#:	RC000463	Analysis:	EPA 8260B
Field ID:	KV-1	Batch#:	180635
Lab ID:	232065-005	Sampled:	10/18/11
Matrix:	Water	Received:	10/18/11
Units:	ug/L	Analyzed:	10/28/11
Diln Fac:	1.000		

Analyte	Result	RL
Freon 12	ND	1.0
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Acetone	40	10
Freon 113	ND	5.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	1.3	0.5

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	232065	Location:	Scotts Valley Aviza
Client:	Arcadis	Prep:	EPA 5030B
Project#:	RC000463	Analysis:	EPA 8260B
Field ID:	KV-1	Batch#:	180635
Lab ID:	232065-005	Sampled:	10/18/11
Matrix:	Water	Received:	10/18/11
Units:	ug/L	Analyzed:	10/28/11
Diln Fac:	1.000		

Analyte	Result	RL
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	ND	0.5
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	ND	0.5
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	2.0
Naphthalene	ND	2.0
1,2,3-Trichlorobenzene	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	117	80-127
1,2-Dichloroethane-d4	108	73-145
Toluene-d8	98	80-120
Bromofluorobenzene	96	80-120

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	232065	Location:	Scotts Valley Aviza
Client:	Arcadis	Prep:	EPA 5030B
Project#:	RC000463	Analysis:	EPA 8260B
Field ID:	KV-2@180	Batch#:	180635
Lab ID:	232065-006	Sampled:	10/18/11
Matrix:	Water	Received:	10/18/11
Units:	ug/L	Analyzed:	10/28/11
Diln Fac:	1.000		

Analyte	Result	RL
Freon 12	ND	1.0
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Acetone	22	10
Freon 113	ND	5.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	1.5	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	48	0.5

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	232065	Location:	Scotts Valley Aviza
Client:	Arcadis	Prep:	EPA 5030B
Project#:	RC000463	Analysis:	EPA 8260B
Field ID:	KV-2@180	Batch#:	180635
Lab ID:	232065-006	Sampled:	10/18/11
Matrix:	Water	Received:	10/18/11
Units:	ug/L	Analyzed:	10/28/11
Diln Fac:	1.000		

Analyte	Result	RL
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	ND	0.5
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	ND	0.5
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	2.0
Naphthalene	ND	2.0
1,2,3-Trichlorobenzene	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	113	80-127
1,2-Dichloroethane-d4	108	73-145
Toluene-d8	100	80-120
Bromofluorobenzene	100	80-120

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	232065	Location:	Scotts Valley Aviza
Client:	Arcadis	Prep:	EPA 5030B
Project#:	RC000463	Analysis:	EPA 8260B
Field ID:	KV-2@190	Batch#:	180635
Lab ID:	232065-007	Sampled:	10/18/11
Matrix:	Water	Received:	10/18/11
Units:	ug/L	Analyzed:	10/28/11
Diln Fac:	1.000		

Analyte	Result	RL
Freon 12	ND	1.0
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Acetone	58	10
Freon 113	ND	5.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	1.9	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	24	0.5

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	232065	Location:	Scotts Valley Aviza
Client:	Arcadis	Prep:	EPA 5030B
Project#:	RC000463	Analysis:	EPA 8260B
Field ID:	KV-2@190	Batch#:	180635
Lab ID:	232065-007	Sampled:	10/18/11
Matrix:	Water	Received:	10/18/11
Units:	ug/L	Analyzed:	10/28/11
Diln Fac:	1.000		

Analyte	Result	RL
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	ND	0.5
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	ND	0.5
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	2.0
Naphthalene	ND	2.0
1,2,3-Trichlorobenzene	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	113	80-127
1,2-Dichloroethane-d4	109	73-145
Toluene-d8	98	80-120
Bromofluorobenzene	99	80-120

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	232065	Location:	Scotts Valley Aviza
Client:	Arcadis	Prep:	EPA 5030B
Project#:	RC000463	Analysis:	EPA 8260B
Field ID:	KV-2@200	Batch#:	180635
Lab ID:	232065-008	Sampled:	10/18/11
Matrix:	Water	Received:	10/18/11
Units:	ug/L	Analyzed:	10/28/11
Diln Fac:	1.000		

Analyte	Result	RL
Freon 12	ND	1.0
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Acetone	40	10
Freon 113	ND	5.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	2.3	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	8.0	0.5

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	232065	Location:	Scotts Valley Aviza
Client:	Arcadis	Prep:	EPA 5030B
Project#:	RC000463	Analysis:	EPA 8260B
Field ID:	KV-2@200	Batch#:	180635
Lab ID:	232065-008	Sampled:	10/18/11
Matrix:	Water	Received:	10/18/11
Units:	ug/L	Analyzed:	10/28/11
Diln Fac:	1.000		

Analyte	Result	RL
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	ND	0.5
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	ND	0.5
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	2.0
Naphthalene	ND	2.0
1,2,3-Trichlorobenzene	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	114	80-127
1,2-Dichloroethane-d4	109	73-145
Toluene-d8	99	80-120
Bromofluorobenzene	100	80-120

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	232065	Location:	Scotts Valley Aviza
Client:	Arcadis	Prep:	EPA 5030B
Project#:	RC000463	Analysis:	EPA 8260B
Field ID:	DUP1	Batch#:	180635
Lab ID:	232065-009	Sampled:	10/18/11
Matrix:	Water	Received:	10/18/11
Units:	ug/L	Analyzed:	10/28/11
Diln Fac:	1.000		

Analyte	Result	RL
Freon 12	ND	1.0
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Acetone	47	10
Freon 113	ND	5.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	3.9	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	1.6	0.5

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	232065	Location:	Scotts Valley Aviza
Client:	Arcadis	Prep:	EPA 5030B
Project#:	RC000463	Analysis:	EPA 8260B
Field ID:	DUP1	Batch#:	180635
Lab ID:	232065-009	Sampled:	10/18/11
Matrix:	Water	Received:	10/18/11
Units:	ug/L	Analyzed:	10/28/11
Diln Fac:	1.000		

Analyte	Result	RL
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	ND	0.5
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	ND	0.5
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	2.0
Naphthalene	ND	2.0
1,2,3-Trichlorobenzene	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	117	80-127
1,2-Dichloroethane-d4	108	73-145
Toluene-d8	97	80-120
Bromofluorobenzene	97	80-120

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	232065	Location:	Scotts Valley Aviza
Client:	Arcadis	Prep:	EPA 5030B
Project#:	RC000463	Analysis:	EPA 8260B
Field ID:	DUP2	Batch#:	180647
Lab ID:	232065-010	Sampled:	10/18/11
Matrix:	Water	Received:	10/18/11
Units:	ug/L	Analyzed:	10/28/11
Diln Fac:	1.000		

Analyte	Result	RL
Freon 12	ND	1.0
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Acetone	ND	10
Freon 113	ND	5.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	1.7	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	50	0.5

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	232065	Location:	Scotts Valley Aviza
Client:	Arcadis	Prep:	EPA 5030B
Project#:	RC000463	Analysis:	EPA 8260B
Field ID:	DUP2	Batch#:	180647
Lab ID:	232065-010	Sampled:	10/18/11
Matrix:	Water	Received:	10/18/11
Units:	ug/L	Analyzed:	10/28/11
Diln Fac:	1.000		

Analyte	Result	RL
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	ND	0.5
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	ND	0.5
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	2.0
Naphthalene	ND	2.0
1,2,3-Trichlorobenzene	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	111	80-127
1,2-Dichloroethane-d4	108	73-145
Toluene-d8	103	80-120
Bromofluorobenzene	120	80-120

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	232065	Location:	Scotts Valley Aviza
Client:	Arcadis	Prep:	EPA 5030B
Project#:	RC000463	Analysis:	EPA 8260B
Field ID:	KV-3@172	Batch#:	180647
Lab ID:	232065-011	Sampled:	10/18/11
Matrix:	Water	Received:	10/18/11
Units:	ug/L	Analyzed:	10/28/11
Diln Fac:	1.000		

Analyte	Result	RL
Freon 12	ND	1.0
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Acetone	21	10
Freon 113	ND	5.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	0.6	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	1.8	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	1.0	0.5
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	ND	0.5
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	ND	0.5
2-Chlorotoluene	ND	0.5

*= Value outside of QC limits; see narrative
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	232065	Location:	Scotts Valley Aviza
Client:	Arcadis	Prep:	EPA 5030B
Project#:	RC000463	Analysis:	EPA 8260B
Field ID:	KV-3@172	Batch#:	180647
Lab ID:	232065-011	Sampled:	10/18/11
Matrix:	Water	Received:	10/18/11
Units:	ug/L	Analyzed:	10/28/11
Diln Fac:	1.000		

Analyte	Result	RL
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	2.0
Naphthalene	ND	2.0
1,2,3-Trichlorobenzene	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	114	80-127
1,2-Dichloroethane-d4	110	73-145
Toluene-d8	102	80-120
Bromofluorobenzene	122 *	80-120

*= Value outside of QC limits; see narrative
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	232065	Location:	Scotts Valley Aviza
Client:	Arcadis	Prep:	EPA 5030B
Project#:	RC000463	Analysis:	EPA 8260B
Field ID:	KV-3@182	Batch#:	180647
Lab ID:	232065-012	Sampled:	10/18/11
Matrix:	Water	Received:	10/18/11
Units:	ug/L	Analyzed:	10/28/11
Diln Fac:	1.000		

Analyte	Result	RL
Freon 12	ND	1.0
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Acetone	39	10
Freon 113	ND	5.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	1.4	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	1.0	0.5
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	ND	0.5
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	ND	0.5
2-Chlorotoluene	ND	0.5

*= Value outside of QC limits; see narrative
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	232065	Location:	Scotts Valley Aviza
Client:	Arcadis	Prep:	EPA 5030B
Project#:	RC000463	Analysis:	EPA 8260B
Field ID:	KV-3@182	Batch#:	180647
Lab ID:	232065-012	Sampled:	10/18/11
Matrix:	Water	Received:	10/18/11
Units:	ug/L	Analyzed:	10/28/11
Diln Fac:	1.000		

Analyte	Result	RL
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	2.0
Naphthalene	ND	2.0
1,2,3-Trichlorobenzene	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	114	80-127
1,2-Dichloroethane-d4	111	73-145
Toluene-d8	103	80-120
Bromofluorobenzene	122 *	80-120

*= Value outside of QC limits; see narrative
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	232065	Location:	Scotts Valley Aviza
Client:	Arcadis	Prep:	EPA 5030B
Project#:	RC000463	Analysis:	EPA 8260B
Field ID:	KV-4@185	Batch#:	180647
Lab ID:	232065-013	Sampled:	10/18/11
Matrix:	Water	Received:	10/18/11
Units:	ug/L	Analyzed:	10/28/11
Diln Fac:	1.000		

Analyte	Result	RL
Freon 12	ND	1.0
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Acetone	23	10
Freon 113	ND	5.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	ND	0.5
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	ND	0.5
2-Chlorotoluene	ND	0.5

*= Value outside of QC limits; see narrative
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	232065	Location:	Scotts Valley Aviza
Client:	Arcadis	Prep:	EPA 5030B
Project#:	RC000463	Analysis:	EPA 8260B
Field ID:	KV-4@185	Batch#:	180647
Lab ID:	232065-013	Sampled:	10/18/11
Matrix:	Water	Received:	10/18/11
Units:	ug/L	Analyzed:	10/28/11
Diln Fac:	1.000		

Analyte	Result	RL
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	2.0
Naphthalene	ND	2.0
1,2,3-Trichlorobenzene	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	112	80-127
1,2-Dichloroethane-d4	111	73-145
Toluene-d8	102	80-120
Bromofluorobenzene	122 *	80-120

*= Value outside of QC limits; see narrative
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	232065	Location:	Scotts Valley Aviza
Client:	Arcadis	Prep:	EPA 5030B
Project#:	RC000463	Analysis:	EPA 8260B
Field ID:	WESCOSA WELL	Batch#:	180647
Lab ID:	232065-014	Sampled:	10/18/11
Matrix:	Water	Received:	10/18/11
Units:	ug/L	Analyzed:	10/28/11
Diln Fac:	1.000		

Analyte	Result	RL
Freon 12	ND	1.0
Chloromethane	ND	1.0
Vinyl Chloride	4.2	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Acetone	ND	10
Freon 113	ND	5.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	1.2	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	8.1	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	ND	0.5
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	ND	0.5
2-Chlorotoluene	ND	0.5

*= Value outside of QC limits; see narrative
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	232065	Location:	Scotts Valley Aviza
Client:	Arcadis	Prep:	EPA 5030B
Project#:	RC000463	Analysis:	EPA 8260B
Field ID:	WESCOSA WELL	Batch#:	180647
Lab ID:	232065-014	Sampled:	10/18/11
Matrix:	Water	Received:	10/18/11
Units:	ug/L	Analyzed:	10/28/11
Diln Fac:	1.000		

Analyte	Result	RL
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	2.0
Naphthalene	ND	2.0
1,2,3-Trichlorobenzene	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	112	80-127
1,2-Dichloroethane-d4	110	73-145
Toluene-d8	102	80-120
Bromofluorobenzene	121 *	80-120

*= Value outside of QC limits; see narrative
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	232065	Location:	Scotts Valley Aviza
Client:	Arcadis	Prep:	EPA 5030B
Project#:	RC000463	Analysis:	EPA 8260B
Field ID:	TB10182011	Batch#:	180647
Lab ID:	232065-015	Sampled:	10/18/11
Matrix:	Water	Received:	10/18/11
Units:	ug/L	Analyzed:	10/28/11
Diln Fac:	1.000		

Analyte	Result	RL
Freon 12	ND	1.0
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Acetone	ND	10
Freon 113	ND	5.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	ND	0.5
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	ND	0.5
2-Chlorotoluene	ND	0.5

*= Value outside of QC limits; see narrative
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	232065	Location:	Scotts Valley Aviza
Client:	Arcadis	Prep:	EPA 5030B
Project#:	RC000463	Analysis:	EPA 8260B
Field ID:	TB10182011	Batch#:	180647
Lab ID:	232065-015	Sampled:	10/18/11
Matrix:	Water	Received:	10/18/11
Units:	ug/L	Analyzed:	10/28/11
Diln Fac:	1.000		

Analyte	Result	RL
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	2.0
Naphthalene	ND	2.0
1,2,3-Trichlorobenzene	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	112	80-127
1,2-Dichloroethane-d4	110	73-145
Toluene-d8	103	80-120
Bromofluorobenzene	122 *	80-120

*= Value outside of QC limits; see narrative
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	232065	Location:	Scotts Valley Aviza
Client:	Arcadis	Prep:	EPA 5030B
Project#:	RC000463	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	180585
Units:	ug/L	Analyzed:	10/27/11
Diln Fac:	1.000		

Type: BS Lab ID: QC615785

Analyte	Spiked	Result	%REC	Limits
1,1-Dichloroethene	37.50	38.77	103	64-133
Benzene	37.50	38.90	104	80-122
Trichloroethene	37.50	36.36	97	78-120
Toluene	37.50	38.60	103	80-120
Chlorobenzene	37.50	38.43	102	80-120

Surrogate	%REC	Limits
Dibromofluoromethane	110	80-127
1,2-Dichloroethane-d4	102	73-145
Toluene-d8	98	80-120
Bromofluorobenzene	93	80-120

Type: BSD Lab ID: QC615786

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
1,1-Dichloroethene	37.50	35.81	95	64-133	8	20
Benzene	37.50	36.87	98	80-122	5	20
Trichloroethene	37.50	34.62	92	78-120	5	20
Toluene	37.50	37.11	99	80-120	4	20
Chlorobenzene	37.50	36.80	98	80-120	4	20

Surrogate	%REC	Limits
Dibromofluoromethane	107	80-127
1,2-Dichloroethane-d4	101	73-145
Toluene-d8	99	80-120
Bromofluorobenzene	93	80-120

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	232065	Location:	Scotts Valley Aviza
Client:	Arcadis	Prep:	EPA 5030B
Project#:	RC000463	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC615787	Batch#:	180585
Matrix:	Water	Analyzed:	10/27/11
Units:	ug/L		

Analyte	Result	RL
Freon 12	ND	1.0
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Acetone	ND	10
Freon 113	ND	5.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	232065	Location:	Scotts Valley Aviza
Client:	Arcadis	Prep:	EPA 5030B
Project#:	RC000463	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC615787	Batch#:	180585
Matrix:	Water	Analyzed:	10/27/11
Units:	ug/L		

Analyte	Result	RL
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	ND	0.5
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	ND	0.5
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	2.0
Naphthalene	ND	2.0
1,2,3-Trichlorobenzene	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	111	80-127
1,2-Dichloroethane-d4	103	73-145
Toluene-d8	100	80-120
Bromofluorobenzene	99	80-120

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	232065	Location:	Scotts Valley Aviza
Client:	Arcadis	Prep:	EPA 5030B
Project#:	RC000463	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	180635
Units:	ug/L	Analyzed:	10/28/11
Diln Fac:	1.000		

Type: BS Lab ID: QC615980

Analyte	Spiked	Result	%REC	Limits
1,1-Dichloroethene	25.00	27.61	110	64-133
Benzene	25.00	27.50	110	80-122
Trichloroethene	25.00	24.62	98	78-120
Toluene	25.00	26.16	105	80-120
Chlorobenzene	25.00	26.05	104	80-120

Surrogate	%REC	Limits
Dibromofluoromethane	110	80-127
1,2-Dichloroethane-d4	103	73-145
Toluene-d8	96	80-120
Bromofluorobenzene	91	80-120

Type: BSD Lab ID: QC615981

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
1,1-Dichloroethene	25.00	26.77	107	64-133	3	20
Benzene	25.00	26.13	105	80-122	5	20
Trichloroethene	25.00	23.75	95	78-120	4	20
Toluene	25.00	25.31	101	80-120	3	20
Chlorobenzene	25.00	25.34	101	80-120	3	20

Surrogate	%REC	Limits
Dibromofluoromethane	122	80-127
1,2-Dichloroethane-d4	107	73-145
Toluene-d8	101	80-120
Bromofluorobenzene	96	80-120

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	232065	Location:	Scotts Valley Aviza
Client:	Arcadis	Prep:	EPA 5030B
Project#:	RC000463	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC615982	Batch#:	180635
Matrix:	Water	Analyzed:	10/28/11
Units:	ug/L		

Analyte	Result	RL
Freon 12	ND	1.0
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Acetone	ND	10
Freon 113	ND	5.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	232065	Location:	Scotts Valley Aviza
Client:	Arcadis	Prep:	EPA 5030B
Project#:	RC000463	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC615982	Batch#:	180635
Matrix:	Water	Analyzed:	10/28/11
Units:	ug/L		

Analyte	Result	RL
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	ND	0.5
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	ND	0.5
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	2.0
Naphthalene	ND	2.0
1,2,3-Trichlorobenzene	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	114	80-127
1,2-Dichloroethane-d4	106	73-145
Toluene-d8	98	80-120
Bromofluorobenzene	96	80-120

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	232065	Location:	Scotts Valley Aviza
Client:	Arcadis	Prep:	EPA 5030B
Project#:	RC000463	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	180647
Units:	ug/L	Analyzed:	10/28/11
Diln Fac:	1.000		

Type: BS Lab ID: QC616022

Analyte	Spiked	Result	%REC	Limits
1,1-Dichloroethene	25.00	28.26	113	64-133
Benzene	25.00	28.31	113	80-122
Trichloroethene	25.00	26.40	106	78-120
Toluene	25.00	26.94	108	80-120
Chlorobenzene	25.00	26.01	104	80-120

Surrogate	%REC	Limits
Dibromofluoromethane	110	80-127
1,2-Dichloroethane-d4	109	73-145
Toluene-d8	102	80-120
Bromofluorobenzene	102	80-120

Type: BSD Lab ID: QC616023

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
1,1-Dichloroethene	25.00	27.84	111	64-133	2	20
Benzene	25.00	27.70	111	80-122	2	20
Trichloroethene	25.00	25.86	103	78-120	2	20
Toluene	25.00	26.66	107	80-120	1	20
Chlorobenzene	25.00	25.72	103	80-120	1	20

Surrogate	%REC	Limits
Dibromofluoromethane	111	80-127
1,2-Dichloroethane-d4	108	73-145
Toluene-d8	102	80-120
Bromofluorobenzene	103	80-120

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	232065	Location:	Scotts Valley Aviza
Client:	Arcadis	Prep:	EPA 5030B
Project#:	RC000463	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC616024	Batch#:	180647
Matrix:	Water	Analyzed:	10/28/11
Units:	ug/L		

Analyte	Result	RL
Freon 12	ND	1.0
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Acetone	ND	10
Freon 113	ND	5.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	ND	0.5
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	ND	0.5
2-Chlorotoluene	ND	0.5

*= Value outside of QC limits; see narrative
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	232065	Location:	Scotts Valley Aviza
Client:	Arcadis	Prep:	EPA 5030B
Project#:	RC000463	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC616024	Batch#:	180647
Matrix:	Water	Analyzed:	10/28/11
Units:	ug/L		

Analyte	Result	RL
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	2.0
Naphthalene	ND	2.0
1,2,3-Trichlorobenzene	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	112	80-127
1,2-Dichloroethane-d4	108	73-145
Toluene-d8	102	80-120
Bromofluorobenzene	122 *	80-120

*= Value outside of QC limits; see narrative
ND= Not Detected
RL= Reporting Limit