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HUNTERS POINT
SSIC. NO. 5090.3

Tetra Tech EM Inc.
135 Main Street, Suite 1800 ◆ San Francisco, CA 94105 ◆ (415) 543-4880 ◆ FAX (415) 543-5480

May 5, 2003

Mr. G. Patrick Brooks, R.G.
Remedial Project Manager
Naval Facilities Engineering Command
Southwest Division
1230 Columbia Street, Suite 1100
San Diego, CA 92101

Subject: **User Data Package 4 – Results of the Post-Injection Round 2 Groundwater Sampling**
Parcel C Treatability Study Support
Hunters Point Shipyard, San Francisco, California
Contract Number N68711-00-D-0005, Delivery Order 0013

Dear Mr. Brooks:

Between February 4 and February 7, 2003, Tetra Tech EM Inc. (Tetra Tech) completed post-injection round 2 groundwater sampling for the Ferox^{sm} Injection Technology demonstration at Parcel C, Remedial Unit C4, of Hunters Point Shipyard. This work was conducted under the above-referenced delivery order from the U.S. Department of the Navy (Navy), Naval Facilities Engineering Command, Southwest Division, under the Indefinite Quantity Contract for Architectural-Engineering Services to Provide CERCLA/RCRA/UST Studies.

The technology demonstration project is being conducted in association with, and partially funded by, the Navy's Alternative Restoration Technology Team, Naval Facilities Engineering Service Center (NFESC). This user data package summarizes the results of field activities, which included groundwater sampling of 19 monitoring wells and measurement of groundwater levels in 24 monitoring wells.

Enclosure 1 of this letter report provides copies of the groundwater sampling forms, Enclosure 2 provides copies of the chain-of-custody forms for the samples, Enclosure 3 provides the groundwater level measurement forms, Enclosure 4 provides the analytical laboratory reports, and Enclosure 5 provides the data validation reports. Groundwater sampling, groundwater level measurement, laboratory analysis, and data validation are discussed below.

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TETRA TECH EM INC.

TRANSMITTAL/DELIVERABLE RECEIPT

Contract No. N68711-00-D-0005 Document Control No. DS.A013.10174

TO: Mr. Ron Fuller, Code 02R1.RF
Contracting Officer
Naval Facilities Engineering Command
Southwest Division
1230 Columbia Street, Suite 1100
San Diego, CA 92101-8517

DATE: 5/5/03
DO: 013
LOCATION:
Hunters Point Shipyard, San Francisco
California

FROM:
Michael Wanta, Contract Manager

DOCUMENT TITLE AND DATE:
User Data Package 4 – Results of the Post-Injection Round 2 Groundwater Sampling, Parcel C Treatability Study Support, May 5, 2003

TYPE: ☐ Contractual Deliverable ☒ Technical Deliverable (DS) ☐ Other (TC)

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GROUNDWATER SAMPLING

Tetra Tech collected groundwater samples from 19 monitoring wells between February 4 and February 7, 2003. Samples were collected from the following monitoring wells:

IR28MW211F	IR28MW275F	IR28MW311A	IR28MW341F	IR28MW342F
IR28MW351F	IR28MW355F	IR28MW356F	IR28MW357F	IR28MW358F
IR28MW359F	IR28MW360F	IR28MW361F	IR28MW362F (F2)	IR28MW932F
IR28MW933F5	IR28MW934F5	IR28IW938F	IR28IW939F	

Samples were sent to an off-site laboratory for a subset of the following analyses: volatile organic compounds (VOC), total iron, dissolved iron, dissolved arsenic, dissolved manganese, alkalinity, chloride, nitrate, ethane, ethene, and dissolved hydrogen. Table 1 at the end of this letter summarizes specific sampling requirements. In addition, groundwater was analyzed during purging for the following parameters: temperature, specific conductance, dissolved oxygen, pH, oxidation-reduction potential, and turbidity. Enclosures 1 and 2 present the groundwater sampling forms and chain-of-custody records.

GROUNDWATER LEVEL MEASUREMENT

Tetra Tech measured groundwater levels in 24 monitoring wells on February 4, 2003, prior to the commencement of groundwater sampling. Water level measurements were collected from the following wells:

IR28MW211F	IR28MW275F	IR28MW310F	IR28MW311A	IR28MW341F
IR28MW342F	IR28MW351F	IR28MW355F	IR28MW356F	IR28MW357F
IR28MW358F	IR28MW359F	IR28MW360F	IR28MW361F	IR28MW362F
IR28MW393F	IR28MW932F	IR28MW935F	IR28MW936F	IR28MW937F
IR28IW938F	IR28IW939F	IR28MW940F	IR28MW402F	

Enclosure 3 provides the groundwater level measurement forms.

LABORATORY ANALYSIS

Groundwater samples were sent for analysis to Columbia Analytical Services in Redding, California, a pre-qualified subcontractor laboratory. The laboratory was approved by NFESC and evaluated by Tetra Tech to ensure that it can meet the technical requirements of the laboratory scope of work and produce data of acceptable quality. Table 2 at the end of this letter summarizes the validated analytical results. Enclosure 4 provides the analytical laboratory reports for the post-injection round 2 sampling.

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DATA VALIDATION

Data generated during field and laboratory activities must be validated and verified to ensure that they are defensible and of acceptable quality. An independent third-party contractor validated laboratory data for metals and VOCs. Table 2 at the end of this letter summarizes the validated analytical results. Enclosure 5 provides the data validation reports for the post-injection round 2 sampling.

If you have any questions or comments about this user data package, please contact me at (215) 656-8720 or Doug Bielskis at (415) 222-8242.

Sincerely,

John McCall, P.E.
Project Manager

Enclosures:
1. Groundwater Sampling Forms
2. Chain-of-Custody Forms
3. Groundwater Level Measurement Forms
4. Analytical Laboratory Reports
5. Data Validation Reports

cc: Dr. D.B. Chan, NFESC
Mr. Keith Forman, Southwest Division
Mr. Dave DeMars, Southwest Division
Ms. Diane Silva (Admin. Record), Southwest Division
Mr. Doug Bielskis, Tetra Tech EM Inc.
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TABLE 1: GROUNDWATER SAMPLING REQUIREMENTS

User Data Package 4, Parcel C Treatability Study Support
Hunters Point Shipyard, San Francisco, California

Monitoring Well	Volatile Organic Compounds	Total Iron	Dissolved Iron	Dissolved Arsenic	Dissolved Manganese	Nitrate	Chloride	Alkalinity	Ethane	Ethene	Dissolved Hydrogen
IR28MW211F	X	X	X	--	--	--	X	X	X	X	X
IR28MW275F	X	X	X	--	--	--	X	X	X	X	X
IR28MW311A	X	X	X	--	--	--	X	X	X	X	X
IR28MW341F	X	X	X	--	--	X	X	X	X	X	X
IR28MW342F	X	X	X	--	--	--	X	X	X	X	X
IR28MW351F	X	X	X	X	X	--	X	X	X	X	X
IR28MW355F	X	X	X	X	X	--	X	X	X	X	X
IR28MW356F	X	X	X	X	X	--	X	X	X	X	X
IR28MW357F	X	X	X	X	X	--	X	X	X	X	X
IR28MW358F	X	X	X	X	X	--	X	X	X	X	X
IR28MW359F	X	X	X	--	--	X	X	X	X	X	X
IR28MW360F	X	X	X	X	X	X	X	X	X	X	X
IR28MW361F	X	X	X	--	--	X	X	X	X	X	X
IR28MW362F (F2)	X	X	X	--	--	X	X	X	X	X	X
IR28MW932F	X	X	X	X	X	--	X	X	X	X	X
IR28MW933F5	X	X	X	--	--	X	X	X	X	X	X
IR28MW934F5	X	X	X	--	--	--	X	X	X	X	X
IR28IW938F	X	X	X	X	X	--	X	X	X	X	X
IR28IW939F	X	X	X	X	X	--	X	X	X	X	X
Total	**19**	**19**	**19**	**9**	**9**	**6**	**19**	**19**	**19**	**19**	**19**

Note:

-- Analyte was not sampled for at this location.

TABLE 2: ANALYTICAL RESULTS FOR POST-INJECTION ROUND 2 GROUNDWATER SAMPLES

User Data Package 4, Parcel C Treatability Study Support

Hunters Point Shipyard, San Francisco, California

Sample Location ID	IR28IW938F	IR28IW939F	IR28MW211F	IR28MW275F	IR28MW311A	IR28MW311A (DUP)
Sample Date	02/05/2003	02/07/2003	02/07/2003	02/05/2003	02/04/2003	02/04/2003
Matrix	WATER	WATER	WATER	WATER	WATER	WATER
Sample ID	0306H005	0306H026	0306H025	0306H012	0306H002	0306H003
VOLATILE ORGANIC COMPOUNDS (µg/L)						
1,1,1-TRICHLOROETHANE	< 1	< 2	< 1	< 1	< 1	< 1
1,1,2,2-TETRACHLOROETHANE	< 1	< 2	< 1	< 1	< 1	< 1
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	< 1	< 2	< 1	< 1	* 0.9 J *	* 0.8 J *
1,1,2-TRICHLOROETHANE	* 0.6 J *	* 7 *	* 14 *	< 1	< 1	< 1
1,1-DICHLOROETHANE	< 1	* 0.8 J *	* 0.4 J *	< 1	< 1	< 1
1,1-DICHLOROETHENE	< 1	* 2 *	* 2 *	< 1	< 1	< 1
1,2,3-TRICHLOROBENZENE	< 1	< 2	< 1	< 1	< 1	< 1
1,2,4-TRICHLOROBENZENE	< 1	< 2	< 1	< 1	< 1	< 1
1,2-DIBROMO-3-CHLOROPROPANE	< 5	< 10	< 5	< 5	< 5	< 5
1,2-DIBROMOETHANE	< 1	< 2	< 1	< 1	< 1	< 1
1,2-DICHLOROBENZENE	< 1	< 2	< 1	< 1	< 1	< 1
1,2-DICHLOROETHANE	* 1 *	* 39 *	* 40 *	< 1	< 1	< 1
1,2-DICHLOROPROPANE	< 1	* 1 J *	* 0.6 J *	< 1	< 1	< 1
1,3-DICHLOROBENZENE	< 1	< 2	< 1	< 1	< 1	< 1
1,4-DICHLOROBENZENE	< 1	< 2	< 1	< 1	< 1	< 1
2-BUTANONE	< 5	< 10	< 5	< 5	< 5	< 5
2-HEXANONE	< 5	< 10	< 5	< 5	< 5	< 5
4-METHYL-2-PENTANONE	< 5	< 10	* 0.2 J *	< 5	< 5	< 5
ACETONE	NA	< 10	< 5	NA	NA	< 5
BENZENE	< 1	* 1 J *	< 1	< 1	< 1	< 1
BROMOCHLOROMETHANE	< 1	< 2	< 1	< 1	< 1	< 1
BROMODICHLOROMETHANE	< 1	< 2	< 1	< 1	< 1	< 1
BROMOFORM	< 1	< 2	< 1	< 1	< 1	< 1
BROMOMETHANE	< 1	< 2	* 0.3 J *	< 1	< 1	< 1
CARBON DISULFIDE	< 1	< 2	< 1	< 1	< 1	< 1
CARBON TETRACHLORIDE	< 1	< 2	< 1	< 1	< 1	< 1
CHLOROBENZENE	< 1	< 2	< 1	< 1	< 1	< 1
CHLOROETHANE	< 1	< 2	< 1	< 1	< 1	< 1
CHLOROFORM	< 1	* 48 *	* 9 *	< 1	< 1	< 1
CHLOROMETHANE	< 1	< 2	* 0.2 J *	< 1	< 1	< 1

Notes to table on page 13

TABLE 2: ANALYTICAL RESULTS FOR POST-INJECTION ROUND 2 GROUNDWATER SAMPLES (Continued)

User Data Package 4, Parcel C Treatability Study Support
Hunters Point Shipyard, San Francisco, California

Sample Location ID	IR28IW938F	IR28IW939F	IR28MW211F	IR28MW275F	IR28MW311A	IR28MW311A (DUP)
Sample Date	02/05/2003	02/07/2003	02/07/2003	02/05/2003	02/04/2003	02/04/2003
Matrix	WATER	WATER	WATER	WATER	WATER	WATER
Sample ID	0306H005	0306H026	0306H025	0306H012	0306H002	0306H003
VOLATILE ORGANIC COMPOUNDS (µg/L)						
CIS-1,2-DICHLOROETHENE	* 1 *	* 10 *	* 8 *	* 3 *	* 2 *	* 2 *
CIS-1,3-DICHLOROPROPENE	< 1	< 2	< 1	< 1	< 1	< 1
DIBROMOCHLOROMETHANE	< 1	< 2	< 1	< 1	< 1	< 1
DICHLORODIFLUOROMETHANE	< 1	< 2	< 1	< 1	< 1	< 1
ETHYLBENZENE	< 1	< 2	< 1	< 1	< 1	< 1
ISOPROPYLBENZENE	< 1	< 2	< 1	< 1	< 1	< 1
METHYLENE CHLORIDE	< 2	* 23 *	* 12 *	< 2	< 2	< 2
STYRENE	< 1	< 2	< 1	< 1	< 1	< 1
TERT-BUTYL METHYL ETHER	< 1	< 2	* 0.09 J *	< 1	< 1	< 1
TETRACHLOROETHENE	< 1	* 1 J *	* 0.3 J *	* 23 *	< 1	< 1
TOLUENE	* 0.5 J *	< 2	< 1	* 0.7 J *	* 0.3 J *	* 0.4 J *
TRANS-1,2-DICHLOROETHENE	< 1	< 2	* 0.2 J *	< 1	< 1	< 1
TRANS-1,3-DICHLOROPROPENE	< 1	< 2	< 1	< 1	< 1	< 1
TRICHLOROETHENE	* 28 *	* 520 *	* 730 *	* 70 *	* 4 *	* 5 *
TRICHLOROFLUOROMETHANE	< 1	< 2	< 1	< 1	* 2 *	* 2 *
VINYL CHLORIDE	< 1	< 2	* 0.7 J *	< 1	< 1	< 1
XYLENE (TOTAL)	< 1	< 2	< 1	< 1	< 1	< 1
TOTAL METALS (µg/L)						
IRON	* 93,000 *	* 430 *	* 480 *	* 76 J *	* 68 J *	* 43 J *
DISSOLVED METALS (µg/L)						
ARSENIC	< 1	< 1	NA	NA	NA	NA
IRON	< 15	* 68 J *	* 190 *	< 11	< 4	< 4
MANGANESE	* 140 *	* 670 *	NA	NA	NA	NA
DISSOLVED GASES (µg/L)						
ETHANE	* 7 *	* 83 *	* 64 *	< 0.3	* 0.3 J *	NA
ETHENE	* 4 *	* 49 *	* 48 *	< 0.4	< 0.4	NA
HYDROGEN IN WATER	* 89 *	< 5	< 5	< 5	< 5	NA

Notes to table on page 13

TABLE 2: ANALYTICAL RESULTS FOR POST-INJECTION ROUND 2 GROUNDWATER SAMPLES (Continued)

User Data Package 4, Parcel C Treatability Study Support
Hunters Point Shipyard, San Francisco, California

Sample Location ID	IR28IW938F	IR28IW939F	IR28MW211F	IR28MW275F	IR28MW311A	IR28MW311A (DUP)
Sample Date	02/05/2003	02/07/2003	02/07/2003	02/05/2003	02/04/2003	02/04/2003
Matrix	WATER	WATER	WATER	WATER	WATER	WATER
Sample ID	0306H005	0306H026	0306H025	0306H012	0306H002	0306H003
ANIONS (µg/L)						
CHLORIDE	* 120,000 *	* 140,000 *	* 200,000 *	* 12,000 *	* 14,000,000 *	NA
ALKALINITY (µg/L)						
TOTAL ALKALINITY	* 94,000 *	* 72,000 *	* 30,000 *	* 140,000 *	* 240,000 *	NA

Notes to table on page 13

TABLE 2: ANALYTICAL RESULTS FOR POST-INJECTION ROUND 2 GROUNDWATER SAMPLES (Continued)

User Data Package 4, Parcel C Treatability Study Support
Hunters Point Shipyard, San Francisco, California

Sample Location ID	IR28MW341F	IR28MW342F	IR28MW351F	IR28MW355F	IR28MW356F	IR28MW357F
Sample Date	02/06/2003	02/05/2003	02/05/2003	02/05/2003	02/05/2003	02/05/2003
Matrix	WATER	WATER	WATER	WATER	WATER	WATER
Sample ID	0306H019	0306H010	0306H011	0306H008	0306H009	0306H006
VOLATILE ORGANIC COMPOUNDS (µg/L)						
1,1,1-TRICHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1
1,1,2,2-TETRACHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	< 1	< 1	* 1 *	< 1	< 1	< 1
1,1,2-TRICHLOROETHANE	* 3 *	* 1 *	< 1	< 1	< 1	< 1
1,1-DICHLOROETHANE	< 1	* 0.4 J *	< 1	< 1	< 1	< 1
1,1-DICHLOROETHENE	* 0.5 J *	* 0.3 J *	< 1	< 1	< 1	< 1
1,2,3-TRICHLOROBENZENE	< 1	< 1	< 1	< 1	< 1	< 1
1,2,4-TRICHLOROBENZENE	< 1	< 1	< 1	< 1	< 1	< 1
1,2-DIBROMO-3-CHLOROPROPANE	< 5	< 5	< 5	< 5	< 5	< 5
1,2-DIBROMOETHANE	< 1	< 1	< 1	< 1	< 1	< 1
1,2-DICHLOROBENZENE	< 1	< 1	< 1	< 1	< 1	< 1
1,2-DICHLOROETHANE	* 4 *	* 13 *	* 0.7 J *	< 1	< 1	< 1
1,2-DICHLOROPROPANE	< 1	* 0.3 J *	< 1	< 1	< 1	< 1
1,3-DICHLOROBENZENE	< 1	< 1	< 1	< 1	< 1	< 1
1,4-DICHLOROBENZENE	< 1	< 1	< 1	< 1	< 1	< 1
2-BUTANONE	< 5	< 5	< 5	< 5	< 5	< 5
2-HEXANONE	< 5	< 5	< 5	< 5	< 5	< 5
4-METHYL-2-PENTANONE	< 5	< 5	< 5	< 5	< 5	< 5
ACETONE	< 5	NA	NA	NA	NA	NA
BENZENE	* 0.2 J *	* 0.2 J *	< 1	< 1	< 1	< 1
BROMOCHLOROMETHANE	< 1	< 1	< 1	< 1	< 1	< 1
BROMODICHLOROMETHANE	< 1	< 1	< 1	< 1	< 1	< 1
BROMOFORM	< 1	< 1	< 1	< 1	< 1	< 1
BROMOMETHANE	< 1	< 1	< 1	< 1	< 1	< 1
CARBON DISULFIDE	< 1	< 1	< 1	< 1	< 1	< 1
CARBON TETRACHLORIDE	< 1	< 1	* 2 *	< 1	* 5 *	< 1
CHLOROBENZENE	< 1	< 1	< 1	< 1	< 1	< 1
CHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1
CHLOROFORM	* 6 *	* 20 *	< 2	< 1	< 4	< 2
CHLOROMETHANE	< 1	< 1	< 1	< 1	< 1	< 1

Notes to table on page 13

TABLE 2: ANALYTICAL RESULTS FOR POST-INJECTION ROUND 2 GROUNDWATER SAMPLES (Continued)

User Data Package 4, Parcel C Treatability Study Support
Hunters Point Shipyard, San Francisco, California

Sample Location ID	IR28MW341F	IR28MW342F	IR28MW351F	IR28MW355F	IR28MW356F	IR28MW357F
Sample Date	02/06/2003	02/05/2003	02/05/2003	02/05/2003	02/05/2003	02/05/2003
Matrix	WATER	WATER	WATER	WATER	WATER	WATER
Sample ID	0306H019	0306H010	0306H011	0306H008	0306H009	0306H006
VOLATILE ORGANIC COMPOUNDS (µg/L)						
CIS-1,2-DICHLOROETHENE	* 2 *	* 3 *	* 5 *	< 1	* 6 *	< 1
CIS-1,3-DICHLOROPROPENE	< 1	< 1	< 1	< 1	< 1	< 1
DIBROMOCHLOROMETHANE	< 1	< 1	< 1	< 1	< 1	< 1
DICHLORODIFLUOROMETHANE	< 1	< 1	< 1	< 1	< 1	< 1
ETHYLBENZENE	< 1	< 1	< 1	< 1	< 1	< 1
ISOPROPYLBENZENE	< 1	< 1	< 1	< 1	< 1	< 1
METHYLENE CHLORIDE	< 7	* 15 *	< 2	< 2	< 2	< 2
STYRENE	< 1	< 1	< 1	< 1	< 1	< 1
TERT-BUTYL METHYL ETHER	< 1	< 1	< 1	< 1	< 1	< 1
TETRACHLOROETHENE	< 1	* 1 *	* 0.4 J *	< 1	< 1	< 1
TOLUENE	< 2	* 0.4 J *	* 0.3 J *	* 0.6 J *	* 0.4 J *	* 0.3 J *
TRANS-1,2-DICHLOROETHENE	< 1	< 1	< 1	< 1	< 1	< 1
TRANS-1,3-DICHLOROPROPENE	< 1	< 1	< 1	< 1	< 1	< 1
TRICHLOROETHENE	* 160 J *	* 79 *	* 42 *	* 17 *	* 39 *	* 53 *
TRICHLOROFLUOROMETHANE	< 1	< 1	* 4 *	< 1	< 1	< 1
VINYL CHLORIDE	< 1	< 1	< 1	< 1	< 1	< 1
XYLENE (TOTAL)	< 1	< 1	< 1	< 1	< 1	< 1
TOTAL METALS (µg/L)						
IRON	* 630 *	* 360 *	* 200 *	* 38 J *	* 21 J *	* 1,100 *
DISSOLVED METALS (µg/L)						
ARSENIC	NA	NA	< 1	* 7 *	* 3 *	* 4 *
IRON	< 10	* 56 J *	< 20	< 4	< 4	< 4
MANGANESE	NA	NA	* 190 *	* 1 J *	< 1	* 86 *
DISSOLVED GASES (µg/L)						
ETHANE	* 48 *	* 64 *	< 0.3	< 0.3	< 0.3	* 0.6 *
ETHENE	* 20 *	* 21 *	< 0.4	< 0.4	< 0.4	< 0.4
HYDROGEN IN WATER	< 5	< 5	< 5	< 5	< 5	< 5

Notes to table on page 13

TABLE 2: ANALYTICAL RESULTS FOR POST-INJECTION ROUND 2 GROUNDWATER SAMPLES (Continued)

User Data Package 4, Parcel C Treatability Study Support
Hunters Point Shipyard, San Francisco, California

Sample Location ID	IR28MW341F	IR28MW342F	IR28MW351F	IR28MW355F	IR28MW356F	IR28MW357F
Sample Date	02/06/2003	02/05/2003	02/05/2003	02/05/2003	02/05/2003	02/05/2003
Matrix	WATER	WATER	WATER	WATER	WATER	WATER
Sample ID	0306H019	0306H010	0306H011	0306H008	0306H009	0306H006
ANIONS (µg/L)						
CHLORIDE	* 110,000 *	* 140,000 *	* 2,500,000 *	* 74,000 *	* 170,000 *	* 71,000 *
NITRATE AS NITROGEN	< 15	NA	NA	NA	NA	NA
ALKALINITY (µg/L)						
TOTAL ALKALINITY	* 21,000 *	* 52,000 *	* 110,000 *	* 150,000 *	* 160,000 *	* 130,000 *

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TABLE 2: ANALYTICAL RESULTS FOR POST-INJECTION ROUND 2 GROUNDWATER SAMPLES (Continued)

User Data Package 4, Parcel C Treatability Study Support

Hunters Point Shipyard, San Francisco, California

Sample Location ID	IR28MW357F (DUP)	IR28MW358F	IR28MW359F	IR28MW360F	IR28MW361F	IR28MW362F
Sample Date	02/05/2003	02/06/2003	02/06/2003	02/07/2003	02/06/2003	02/06/2003
Matrix	WATER	WATER	WATER	WATER	WATER	WATER
Sample ID	0306H007	0306H016	0306H014	0306H023	0306H018	0306H017
VOLATILE ORGANIC COMPOUNDS (µg/L)						
1,1,1-TRICHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1
1,1,2,2-TETRACHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1
1,1,2-TRICHLOROETHANE	< 1	< 1	< 1	* 0.7 J *	< 1	* 7 *
1,1-DICHLOROETHANE	< 1	< 1	< 1	* 0.2 J *	< 1	* 0.3 J *
1,1-DICHLOROETHENE	< 1	< 1	< 1	* 0.2 J *	< 1	* 0.6 J *
1,2,3-TRICHLOROBENZENE	< 1	< 1	< 1	< 1	< 1	< 1
1,2,4-TRICHLOROBENZENE	< 1	< 1	< 1	< 1	< 1	< 1
1,2-DIBROMO-3-CHLOROPROPANE	< 5	< 5	< 5	< 5	< 5	< 5
1,2-DIBROMOETHANE	< 1	< 1	< 1	< 1	< 1	< 1
1,2-DICHLOROBENZENE	< 1	< 1	< 1	< 1	< 1	< 1
1,2-DICHLOROETHANE	< 1	< 1	< 1	* 4 *	< 1	* 31 *
1,2-DICHLOROPROPANE	< 1	< 1	< 1	* 0.2 J *	< 1	* 0.4 J *
1,3-DICHLOROBENZENE	< 1	< 1	< 1	< 1	< 1	< 1
1,4-DICHLOROBENZENE	< 1	< 1	< 1	< 1	< 1	< 1
2-BUTANONE	< 5	< 5	< 5	< 5	< 5	< 5
2-HEXANONE	< 5	< 5	< 5	< 5	< 5	< 5
4-METHYL-2-PENTANONE	< 5	< 5	< 5	< 5	< 5	< 5
ACETONE	NA	NA	NA	< 5	NA	< 5
BENZENE	< 1	< 1	< 1	* 0.2 J *	< 1	* 0.6 J *
BROMOCHLOROMETHANE	< 1	< 1	< 1	< 1	< 1	< 1
BROMODICHLOROMETHANE	< 1	< 1	< 1	< 1	< 1	< 1
BROMOFORM	< 1	< 1	< 1	< 1	< 1	< 1
BROMOMETHANE	< 1	< 1	< 1	< 1	< 1	< 1
CARBON DISULFIDE	< 1	< 1	< 1	< 1	< 1	< 1
CARBON TETRACHLORIDE	< 1	< 1	* 0.3 J *	* 2 *	* 0.8 J *	< 1
CHLOROBENZENE	< 1	< 1	< 1	< 1	< 1	< 1
CHLOROETHANE	< 1	< 1	< 1	< 1	< 1	< 1
CHLOROFORM	< 2	< 1	* 2 *	* 24 *	* 12 *	* 3 *
CHLOROMETHANE	< 1	< 1	< 1	* 0.2 J *	< 1	< 1

Notes to table on page 13

TABLE 2: ANALYTICAL RESULTS FOR POST-INJECTION ROUND 2 GROUNDWATER SAMPLES (Continued)

User Data Package 4, Parcel C Treatability Study Support

Hunters Point Shipyard, San Francisco, California

Sample Location ID	IR28MW357F (DUP)	IR28MW358F	IR28MW359F	IR28MW360F	IR28MW361F	IR28MW362F
Sample Date	02/05/2003	02/06/2003	02/06/2003	02/07/2003	02/06/2003	02/06/2003
Matrix	WATER	WATER	WATER	WATER	WATER	WATER
Sample ID	0306H007	0306H016	0306H014	0306H023	0306H018	0306H017
VOLATILE ORGANIC COMPOUNDS (µg/L)						
CIS-1,2-DICHLOROETHENE	< 1	< 1	< 1	* 12 *	* 2 *	* 5 *
CIS-1,3-DICHLOROPROPENE	< 1	< 1	< 1	< 1	< 1	< 1
DIBROMOCHLOROMETHANE	< 1	< 1	< 1	< 1	< 1	< 1
DICHLORODIFLUOROMETHANE	< 1	< 1	< 1	< 1	< 1	< 1
ETHYLBENZENE	< 1	< 1	< 1	< 1	< 1	< 1
ISOPROPYLBENZENE	< 1	< 1	< 1	< 1	< 1	< 1
METHYLENE CHLORIDE	< 2	< 2	< 2	< 2	< 2	* 16 *
STYRENE	< 1	< 1	< 1	< 1	< 1	< 1
TERT-BUTYL METHYL ETHER	< 1	< 1	< 1	< 1	< 1	< 1
TETRACHLOROETHENE	< 1	< 1	< 1	* 7 *	< 1	< 1
TOLUENE	< 1	< 1	< 1	< 1	< 1	< 1
TRANS-1,2-DICHLOROETHENE	< 1	< 1	< 1	* 0.4 J *	< 1	< 1
TRANS-1,3-DICHLOROPROPENE	< 1	< 1	< 1	< 1	< 1	< 1
TRICHLOROETHENE	* 52 *	* 1 *	* 47 *	* 610 *	* 100 *	* 78 *
TRICHLOROFLUOROMETHANE	< 1	< 1	< 1	< 1	< 1	< 1
VINYL CHLORIDE	< 1	< 1	< 1	< 1	< 1	* 0.4 J *
XYLENE (TOTAL)	< 1	< 1	< 1	< 1	< 1	< 1
TOTAL METALS (µg/L)						
IRON	* 750 *	* 110 *	< 48	* 310 *	* 9,600 *	* 210 *
DISSOLVED METALS (µg/L)						
ARSENIC	* 3 *	* 4 J *	NA	* 3 J *	NA	NA
IRON	< 4	< 4	< 4	< 4	< 4	* 42 J *
MANGANESE	* 74 *	* 4 J *	NA	* 71 *	NA	NA
DISSOLVED GASES (µg/L)						
ETHANE	NA	< 0.3	< 0.3	* 18 *	* 4 *	* 35 *
ETHENE	NA	< 0.4	< 0.4	* 2 *	* 2 J *	* 36 *
HYDROGEN IN WATER	NA	< 5	< 5	< 5	< 5	* 230 *

Notes to table on page 13

TABLE 2: ANALYTICAL RESULTS FOR POST-INJECTION ROUND 2 GROUNDWATER SAMPLES (Continued)

User Data Package 4, Parcel C Treatability Study Support
Hunters Point Shipyard, San Francisco, California

Sample Location ID	IR28MW357F (DUP)	IR28MW358F	IR28MW359F	IR28MW360F	IR28MW361F	IR28MW362F
Sample Date	02/05/2003	02/06/2003	02/06/2003	02/07/2003	02/06/2003	02/06/2003
Matrix	WATER	WATER	WATER	WATER	WATER	WATER
Sample ID	0306H007	0306H016	0306H014	0306H023	0306H018	0306H017
ANIONS (µg/L)						
CHLORIDE	NA	* 50,000 *	* 73,000 *	* 71,000 *	* 88,000 *	* 140,000 *
NITRATE AS NITROGEN	NA	NA	* 2,900 *	* 1,600 *	* 50 *	< 15
ALKALINITY (µg/L)						
TOTAL ALKALINITY	NA	* 200,000 *	* 140,000 *	* 88,000 *	* 120,000 *	* 19,000 *

Notes to table on page 13

TABLE 2: ANALYTICAL RESULTS FOR POST-INJECTION ROUND 2 GROUNDWATER SAMPLES (Continued)

User Data Package 4, Parcel C Treatability Study Support

Hunters Point Shipyard, San Francisco, California

Sample Location ID	IR28MW932F	IR28MW933F5	IR28MW934F5
Sample Date	02/07/2003	02/06/2003	02/06/2003
Matrix	WATER	WATER	WATER
Sample ID	0306H024	0306H015	0306H020
VOLATILE ORGANIC COMPOUNDS (µg/L)			
1,1,1-TRICHLOROETHANE	< 1	< 1	< 1
1,1,2,2-TETRACHLOROETHANE	< 1	< 1	< 1
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	< 1	< 1	< 1
1,1,2-TRICHLOROETHANE	* 1 *	< 1	* 1 *
1,1-DICHLOROETHANE	* 1 *	< 1	< 1
1,1-DICHLOROETHENE	* 0.4 J *	< 1	< 1
1,2,3-TRICHLOROBENZENE	< 1	< 1	< 1
1,2,4-TRICHLOROBENZENE	< 1	< 1	< 1
1,2-DIBROMO-3-CHLOROPROPANE	< 5	< 5	< 5
1,2-DIBROMOETHANE	< 1	< 1	< 1
1,2-DICHLOROBENZENE	< 1	< 1	< 1
1,2-DICHLOROETHANE	* 35 *	< 1	* 0.6 J *
1,2-DICHLOROPROPANE	* 0.4 J *	< 1	* 0.3 J *
1,3-DICHLOROBENZENE	< 1	< 1	< 1
1,4-DICHLOROBENZENE	< 1	< 1	< 1
2-BUTANONE	< 5	< 5	< 5
2-HEXANONE	< 5	< 5	< 5
4-METHYL-2-PENTANONE	< 5	< 5	< 5
ACETONE	< 5	NA	NA
BENZENE	< 1	< 1	< 1
BROMOCHLOROMETHANE	< 1	< 1	< 1
BROMODICHLOROMETHANE	< 1	< 1	< 1
BROMOFORM	< 1	< 1	< 1
BROMOMETHANE	* 0.2 J *	< 1	< 1
CARBON DISULFIDE	< 1	< 1	< 1
CARBON TETRACHLORIDE	< 1	* 0.8 J *	* 29 *
CHLOROBENZENE	< 1	< 1	< 1
CHLOROETHANE	< 1	< 1	< 1
CHLOROFORM	* 30 *	* 3 *	* 74 *
CHLOROMETHANE	* 0.3 J *	< 1	< 1

Notes to table on page 13

TABLE 2: ANALYTICAL RESULTS FOR POST-INJECTION ROUND 2 GROUNDWATER SAMPLES (Continued)

User Data Package 4, Parcel C Treatability Study Support

Hunters Point Shipyard, San Francisco, California

Sample Location ID	IR28MW932F	IR28MW933F5	IR28MW934F5
Sample Date	02/07/2003	02/06/2003	02/06/2003
Matrix	WATER	WATER	WATER
Sample ID	0306H024	0306H015	0306H020
VOLATILE ORGANIC COMPOUNDS (µg/L)			
CIS-1,2-DICHLOROETHENE	* 28 *	* 0.6 J *	* 41 *
CIS-1,3-DICHLOROPROPENE	< 1	< 1	< 1
DIBROMOCHLOROMETHANE	< 1	< 1	< 1
DICHLORODIFLUOROMETHANE	< 1	< 1	< 1
ETHYLBENZENE	< 1	< 1	< 1
ISOPROPYLBENZENE	< 1	< 1	< 1
METHYLENE CHLORIDE	< 4	< 2	< 2
STYRENE	< 1	< 1	< 1
TERT-BUTYL METHYL ETHER	< 1	< 1	< 1
TETRACHLOROETHENE	* 1 *	< 1	< 1
TOLUENE	< 1	< 1	< 1
TRANS-1,2-DICHLOROETHENE	* 0.4 J *	< 1	< 1
TRANS-1,3-DICHLOROPROPENE	< 1	< 1	< 1
TRICHLOROETHENE	* 110 *	* 26 *	* 490 *
TRICHLOROFLUOROMETHANE	< 1	< 1	< 1
VINYL CHLORIDE	* 1 *	< 1	< 1
XYLENE (TOTAL)	* 0.3 J *	< 1	< 1
TOTAL METALS (µg/L)			
IRON	* 470 *	* 1,100 *	* 230 *
DISSOLVED METALS (µg/L)			
ARSENIC	< 1	NA	NA
IRON	* 87 J *	< 4	< 4
MANGANESE	* 720 *	NA	NA
DISSOLVED GASES (µg/L)			
ETHANE	* 54 *	* 4 *	< 0.3
ETHENE	* 34 *	< 0.4	< 0.4
HYDROGEN IN WATER	* 28 *	< 5	< 5

Notes to table on page 13

TABLE 2: ANALYTICAL RESULTS FOR POST-INJECTION ROUND 2 GROUNDWATER SAMPLES (Continued)

User Data Package 4, Parcel C Treatability Study Support
Hunters Point Shipyard, San Francisco, California

Sample Location ID	IR28MW932F	IR28MW933F5	IR28MW934F5
Sample Date	02/07/2003	02/06/2003	02/06/2003
Matrix	WATER	WATER	WATER
Sample ID	0306H024	0306H015	0306H020
ANIONS (µg/L)			
CHLORIDE	* 110,000 *	* 130,000 *	* 230,000 *
NITRATE AS NITROGEN	NA	* 600 *	NA
ALKALINITY (µg/L)			
TOTAL ALKALINITY	* 77,000 *	* 49,000 *	* 100,000 *

Notes to table on page 13

TABLE 2: ANALYTICAL RESULTS FOR POST-INJECTION ROUND 2 GROUNDWATER SAMPLES (Continued)

User Data Package 4, Parcel C Treatability Study Support
Hunters Point Shipyard, San Francisco, California

Notes: < = Chemical was analyzed for and was not detected at the associated reporting limit
J = Estimated value
NA = Not analyzed

All detected concentrations are flanked by asterisks (*).

ENCLOSURE 1
GROUNDWATER SAMPLING FORMS

TETRA TECH INC.
MONITORING WELL SAMPLING SHEET

Well No.: 1R28MW211F

Sheet 1 of 2

Personnel: D. CHENG

Day: FRIDAY

Date: 2/7/03

Casing Volume = NA Gallons

Initial depth to water: 7.03 ft. below top of casing

[casing volume = water column height (ft) x 0.03 gal/ft (0.75-inch well) or 0.163 gal/ft (2-inch well) or 0.652 gal/ft (4-inch well)]

Organic Vapor Concentrations
Top of Casing: 156.1 ppm Background: 0 ppm

Groundwater Parameters

Time	Cumulative Volume Purged (L)	Discharge Rate (mL/min)	Depth to water (ft. below TOC)	Temperature (°C)	Specific Conductivity (mS/cm)	Dissolved Oxygen (mg/L)	pH	ORP (mv)	Turbidity (NTU)	PID/OVM (ppm)
1049	0	—	7.03	16.01	0.706	1.32	7.74	-422.8	8.88	0
1052	1	218	7.05	16.32	0.709	0.45	7.74	-451.9	5.38	0
1055	2	218	7.06	16.45	0.710	0.47	7.77	-486.6	4.95	0
1058	3	218	7.07	16.51	0.712	0.45	7.78	-480.7	4.42	0
1102	4	218	7.08	16.55	0.712	0.36	7.81	-477.6	4.26	0
1105	5	218	7.08	16.56	0.712	0.32	7.82	-470.3	3.96	0
1108	6	218	7.09	16.57	0.711	0.31	7.84	-483.5 ~~-456.5~~	4.22	0
1113	7	218	7.09	16.58	0.711	0.28	7.86	-468.4	3.66	0
1116	8	218	7.10	16.59	0.711	0.31	7.87	-448.9	3.43	0
1119	9	218	7.10	16.59	0.712	0.31	7.88	-471.4	3.78	0
1123	10	218	7.10	16.59	0.712	0.29	7.89	-449.9	3.77	0

After sampling and, if accessible, depth to bottom: 15.69 ft. below TOC Purged Dry? NO

Field Measurement Equipment Used

Equipment	Model	Serial Number	Equipment	Model	Serial Number
Water Quality Meter	YSI 556	556	Filter Apparatus	0.45 μm	NA
Water Level Meter	Solinst 122	425	Other Turbidimeter	DRT-15CE	745
Pump	Geopump 2	948	Other		
PID	OVM 580B	002	Other		

Groundwater Samples Collected (check all that apply)

Analytes of Concern (Off-Site Lab)		Fate and Transport Data (Off-Site Lab)	
Fe (Total)	X	Chloride	X
Fe (Dis.)	X	Alkalinity	X
As (Dis.)		Ethane	X
Mn (Dis.)		Ethene	X
VOCs	X	Hydrogen	X

Field Test Kit Analyses

	Unfiltered	Filtered
Fe^{2+} (mg/L)	NA	NA
Mn^{2+} (mg/L)		

Filter where turbidity > 50 NTU.

Downhole Dissolved Oxygen

Top (mg/L)	
Middle (mg/L)	NA
Bottom (mg/L)	

Sample Number: 03061H025

Sample Date/Time: 2/7/03 1140

QA/QC Sample(s)? [X] None [ ] Field Dup [ ] MS/MSD

Dup. Sample Time _____ Dup. Sample Number _____

Comments: Pump intake at 10' bgs

Method of Extraction:
- [ ] Submersible Pump
- [X] Peristaltic Pump
- [ ] Disposable Bailer

Method of Sampling:
- [ ] Submersible Pump
- [X] Peristaltic Pump
- [ ] Disposable Bailer

Revised 10/31/02

TETRA TECH INC.
MONITORING WELL SAMPLING SHEET

Well No.: 1R28MW3MF

Sheet 2 of 2

Personnel: D. CHENG

Day: FRIDAY

Date: 2/7/03

Casing Volume = NA Gallons

Initial depth to water: ft. below top of casing

[casing volume = water column height (ft) x 0.03 gal/ft (0.75-inch well) or 0.163 gal/ft (2-inch well) or 0.652 gal/ft (4-inch well)]

Organic Vapor Concentrations
Top of Casing: 156.1 ppm Background: Φ ppm

Groundwater Parameters

Time	Cumulative Volume Purged (L)	Discharge Rate (mL/min)	Depth to water (ft. below TOC)	Temperature (°C)	Specific Conductivity (mS/cm)	Dissolved Oxygen (mg/L)	pH	ORP (mv)	Turbidity (NTU)	PID/OVM (ppm)
1127	11	218	7.10	16.60	0.713	0.31	7.90	-443.6	3.48	0
1131	12	218	7.10	16.61	0.713	0.27	7.91	-447.2	3.38	0

After sampling and, if accessible, depth to bottom: 15.69 ft. below TOC Purged Dry? N

Field Measurement Equipment Used

Equipment	Model	Serial Number	Equipment	Model	Serial Number
Water Quality Meter			Filter Apparatus		
Water Level Meter			Other		
Pump			Other		
PID			Other		

Groundwater Samples Collected (check all that apply)

Analytes of Concern

Off-Site Lab

Fe (Total)
Fe (Dis.)
As (Dis.)
Mn (Dis.)
VOCs

Fate and Transport Data

Off-Site Lab

Chloride
Alkalinity
Ethane
Ethene
Hydrogen

Field Test Kit Analyses

	Unfiltered	Filtered
Fe^{2+} (mg/L)		
Mn^{2+} (mg/L)		

Filter where turbidity > 50 NTU.

Downhole Dissolved Oxygen

Top (mg/L)
Middle (mg/L)
Bottom (mg/L)

Sample Number: Sample Date/Time:

QA/QC Sample(s)? ☐ None ☐ Field Dup ☐ MS/MSD

Dup. Sample Time _____ Dup. Sample Number _____

Comments:

Method of Extraction:
☐ Submersible Pump
☐ Peristaltic Pump
☐ Disposable Bailer

Method of Sampling:
☐ Submersible Pump
☐ Peristaltic Pump
☐ Disposable Bailer

Revised 10/31/02

TETRA TECH INC.
MONITORING WELL SAMPLING SHEET

Well No.: 1R28MW275F

Sheet 1 of 1

Personnel: D. CHENG

Day: WEDNESDAY

Date: 2/5/03

Casing Volume = NA Gallons

Initial depth to water: 6.54 ft. below top of casing

[casing volume = water column height (ft) x 0.03 gal/ft (0.75-inch well) or 0.163 gal/ft (2-inch well) or 0.652 gal/ft (4-inch well)]

Organic Vapor Concentrations
Top of Casing: 10.2 ppm Background: 0 ppm

Groundwater Parameters

Time	Cumulative Volume Purged (L)	Discharge Rate (mL/min)	Depth to water (ft. below TOC)	Temperature (°C)	Specific Conductivity (mS/cm)	Dissolved Oxygen (mg/L)	pH	ORP (mv)	Turbidity (NTU)	PID/OVM (ppm)
1547	0	—	6.54	15.29	0.358	4.56	7.16	200.1	7.63	0
1551	1	185	7.41	15.15	0.358	4.49	7.06	198.2	2.66	0
1559	6	500	9.19	15.25	0.331	4.92	7.05	221.1	2.17	0
1604	7	200	9.20	15.30	0.339	4.25	7.04	211.7	1.45	0
1608	8	200	9.21	15.36	0.343	3.93	7.04	201.3	1.56	0
1614	9	185	9.23	15.42	0.344	3.74	7.04	199.4	4.03	0
1618	10	185	9.27	15.44	0.344	3.45	7.03	199.4	3.55	0
1623	11	160	9.28	15.41	0.344	3.41	7.04	199.9	3.23	0
1629	12	160	9.28	15.42	0.346	3.39	7.03	196.8	3.07	0

MODIFIED UNCHANGED

After sampling and, if accessible, depth to bottom: 12.25 ft. below TOC Purged Dry? NO

Field Measurement Equipment Used

Equipment	Model	Serial Number	Equipment	Model	Serial Number
Water Quality Meter	YSI 556	02M0605 AB	Filter Apparatus	0.45 µm	N/A
Water Level Meter	Solinst 122	429	Other Turbidimeter	DRT-15CE	745
Pump	Geopump 2	448	Other		
PID	OVM 580B	002	Other		

Groundwater Samples Collected (check all that apply)

Analytes of Concern (Off-Site Lab)		Fate and Transport Data (Off-Site Lab)	
Fe (Total)	X	Chloride	X
Fe (Dis.)	X	Alkalinity	X
As (Dis.)		Ethane	X
Mn (Dis.)		Ethene	X
VOCs	X	Hydrogen	X

Field Test Kit Analyses

	Unfiltered	Filtered
Fe^{2+} (mg/L)	N/A	N/A
Mn^{2+} (mg/L)		

Filter where turbidity > 50 NTU.

Downhole Dissolved Oxygen

Top (mg/L)	
Middle (mg/L)	N/A
Bottom (mg/L)	

Sample Number: 03061H012

Sample Date/Time: 2/5/03 1640

QA/QC Sample(s)? ☑ None ☐ Field Dup ☐ MS/MSD

Dup. Sample Time _____ Dup. Sample Number _____

Comments: Pump intake at 10' bgs

Method of Extraction:
- ☐ Submersible Pump
- ☒ Peristaltic Pump
- ☐ Disposable Bailer

Method of Sampling:
- ☐ Submersible Pump
- ☒ Peristaltic Pump
- ☐ Disposable Bailer

Revised 10/31/02

TETRA TECH INC.
MONITORING WELL SAMPLING SHEET

Well No.: 1R28MW311A

Sheet 1 of 1

Personnel: H. Cheng, D. Cheng

Day: TUESDAY

Date: 2/4/03

Casing Volume = NA Gallons

Initial depth to water: 4.81 ft. below top of casing

[casing volume = water column height (ft) x 0.03 gal/ft (0.75-inch well) or 0.163 gal/ft (2-inch well) or 0.652 gal/ft (4-inch well)]

Organic Vapor Concentrations
Top of Casing: 0 ppm Background: 0 ppm

Groundwater Parameters

Time	Cumulative Volume Purged (L)	Discharge Rate (mL/min)	Depth to water (ft. below TOC)	Temperature (°C)	Specific Conductivity (mS/cm)	Dissolved Oxygen (mg/L)	pH	ORP (mv)	Turbidity (NTU)	PID/OVM (ppm)
1543	0	300	4.84	17.10	34.72	0.22	6.87	182.6	1.50	0
1546	1	300	4.85	17.18	34.75	0.09	6.87	175.6	0.74	0
1549	2	343	4.86	17.26	34.83	0.03	6.87	168.1	0.56	0
1551	3	343	4.86	17.30	34.86	0.03	6.87	164.4	0.60	0
1553	4	343	4.86	17.33	34.85	0.03	6.86	163.6	0.65	0
1556	5	343	4.86	17.31	34.85	0.02	6.88	153.0	0.98	0
1558	6	343	4.86	17.30	34.85	0.02	6.88	149.0	1.47	0
1600	7	343	4.86	17.30	34.84	0.01	6.87	144.3	1.77	0
~~1702~~ 1602	8	343	4.86	17.29	34.83	0.01	6.88	140.2	1.96	0
~~1704~~ 1604	9	343	4.86	17.28	34.82	0.01	6.88	137.0	2.09	0

After sampling and, if accessible, depth to bottom: 19.57 ft. below TOC Purged Dry? N

Field Measurement Equipment Used

Equipment	Model	Serial Number	Equipment	Model	Serial Number
Water Quality Meter	YSI 556	02J0179 A1	Filter Apparatus	0.45 µm	NA
Water Level Meter	SOLINST	122 004623-1	Other TURBIDIMETER	DRT-15CE	745
Pump	GEOPUMP 2	8	Other		
PID	THERMO 580B	73360-373	Other		

Groundwater Samples Collected (check all that apply)

Analytes of Concern (Off-Site Lab)		Fate and Transport Data: Off-Site Lab	
Fe (Total)	X	Chloride	X
Fe (Dis.)	X	Alkalinity	X
As (Dis.)		Ethane	X
Mn (Dis.)		Ethene	X
VOCs	X	Hydrogen	X

Field Test Kit Analyses

	Unfiltered	Filtered
Fe^{2+} (mg/L)	NA	NA
Mn^{2+} (mg/L)		

Filter where turbidity > 50 NTU.

Downhole Dissolved Oxygen

Top (mg/L)	
Middle (mg/L)	N/A
Bottom (mg/L)	

Sample Number: 03064002

Sample Date/Time: 2/4/03 1610

QA/QC Sample(s)? ☐ None ☒ Field Dup ☐ MS/MSD

Dup. Sample Time 1620 Dup. Sample Number 03064003

Comments:

Method of Extraction:
- ☐ Submersible Pump
- ☒ Peristaltic Pump
- ☐ Disposable Bailer

Method of Sampling:
- ☐ Submersible Pump
- ☒ Peristaltic Pump
- ☐ Disposable Bailer

Revised 10/31/02

TETRA TECH INC.
MONITORING WELL SAMPLING SHEET

Well No.: 1R28MW341F

Sheet 1 of 1

Personnel: D. CHENG

Day: THURSDAY

Date: 2/6/03

Casing Volume = NA Gallons

Initial depth to water: 7.62 ft. below top of casing

[casing volume = water column height (ft) x 0.03 gal/ft (0.75-inch well) or 0.163 gal/ft (2-inch well) or 0.652 gal/ft (4-inch well)]

Organic Vapor Concentrations
Top of Casing: 63.9 ppm Background: 0 ppm

Groundwater Parameters

Time	Cumulative Volume Purged (L)	Discharge Rate (mL/min)	Depth to water (ft. below TOC)	Temperature (°C)	Specific Conductivity (mS/cm)	Dissolved Oxygen (mg/L)	pH	ORP (mv)	Turbidity (NTU)	PID/OVM (ppm)
1548	0	–	7.62	16.61	0.367	2.71	8.74	-396.0	47.5	0
1553	1	160	7.72	16.78	0.362	1.53	8.84	-425.6	34.2	0
1557	2	185	7.67	16.87	0.369	0.77	8.87	-424.9	22.4	0
1603	3	185	7.68	16.91	0.374	0.58	8.81	-405.2	16.7	0
1607	4	185	7.68	16.97	0.382	0.43	8.76	-390.1	12.7	0
1612	5	185	7.70	17.01	0.393	0.41	8.68	-455.4	9.4	0
1617	6	185	7.70	17.03	0.398	0.32	8.63	-467.2	9.9	0
1621	7	185	7.72	17.02	0.409	0.33	8.59	-466.6	7.1	0
1626	8	185	7.72	17.04	0.416	0.35	8.54	-473.2	5.8	0
1631	9	185	7.73	17.04	0.421	0.33	8.51	-471.3	4.9	0

After sampling and, if accessible, depth to bottom: 16.65 ft. below TOC Purged Dry? NO

Field Measurement Equipment Used

Equipment	Model	Serial Number	Equipment	Model	Serial Number
Water Quality Meter	YSI 556	02I0179 A1	Filter Apparatus	0.45 µm	NA
Water Level Meter	Solinst 122	429	Other Turbidimeter	DRT-15CE	745
Pump	Geopump 2	948	Other		
PID	OVM 580B	002	Other		

Groundwater Samples Collected (check all that apply)

Analytes of Concern (Off-Site Lab)		Fate and Transport Data (Off-Site Lab)	
Fe (Total)	X	Chloride	X
Fe (Dis.)	X	Alkalinity	X
As (Dis.)		Ethane	X
Mn (Dis.)		Ethene	X
VOCs	X	Hydrogen	X
		Nitrate	X

Field Test Kit Analyses

	Unfiltered	Filtered
Fe^{2+} (mg/L)	NA	NA
Mn^{2+} (mg/L)		

Filter where turbidity > 50 NTU.

Downhole Dissolved Oxygen

Top (mg/L)	
Middle (mg/L)	NA
Bottom (mg/L)	

Sample Number: 0306H019

Sample Date/Time: 2/6/03 1640

QA/QC Sample(s)? [X] None [ ] Field Dup [ ] MS/MSD

Dup. Sample Time _____ Dup. Sample Number _____

Comments: Pump intake at 15' bgs

Method of Extraction:
- [ ] Submersible Pump
- [X] Peristaltic Pump
- [ ] Disposable Bailer

Method of Sampling:
- [ ] Submersible Pump
- [X] Peristaltic Pump
- [ ] Disposable Bailer

Revised 10/31/02

TETRA TECH INC.
MONITORING WELL SAMPLING SHEET

Well No.: 1R28MW342F

Sheet 1 of 2

Personnel: D. CHENG

Day: WEDNESDAY

Date: 2/5/03

Casing Volume = NA Gallons

Initial depth to water: 6.94 ft. below top of casing

[casing volume = water column height (ft) x 0.03 gal/ft (0.75-inch well) or 0.163 gal/ft (2-inch well) or 0.652 gal/ft (4-inch well)]

Organic Vapor Concentrations
Top of Casing: 10.7 ppm Background: 0 ppm

Groundwater Parameters

Time	Cumulative Volume Purged (L)	Discharge Rate (mL/min)	Depth to water (ft. below TOC)	Temperature (°C)	Specific Conductivity (mS/cm)	Dissolved Oxygen (mg/L)	pH	ORP (mv)	Turbidity (NTU)	PID/OVM (ppm)
1402	0	–	6.94	15.89	0.502	1.12	8.79	-454.2	141	0
1407	1	200	6.95	16.09	0.504	0.36	8.82	-453.0	68.5	0
1411	2	200	6.96	16.17	0.510	0.22	8.79	-390.2	48.0	0
1415	3	200	6.97	16.21	0.513	0.20	8.77	-412.1	38.9	0
1418	4	240	~~6.98~~ 6.97	16.23	0.515	0.21	8.73	-453.3	26.2	0
1422	5	240	6.98	16.24	0.515	0.15	8.71	-460.4	21.2	0
1425	6	240	~~6.98~~ 6.96	16.25	0.517	0.18	8.69	-468.7	18.6	0
1440	7	240	6.98	16.26	0.51	0.37	8.68	-474.0	50.3	0
1443	8	240	6.98	16.29	0.512	0.24	8.68	-521.4	30.0	0
1447	9	240	6.98	16.29	0.514	0.18	8.67	-526.5	24.0	0
1450	10	240	6.98	16.24	0.520	0.14	8.66	-530.3	16.1	0

After sampling and, if accessible, depth to bottom: 14.66 ft. below TOC Purged Dry? NO

Field Measurement Equipment Used

Equipment	Model	Serial Number	Equipment	Model	Serial Number
Water Quality Meter	YSI 556	02M0605 A03	Filter Apparatus	0.45 µm	N/A
Water Level Meter	Solinst 122	429	Other Turbidimeter	DRT-150	745
Pump	Geopump 2	948	Other		
PID	OVM 580B	002	Other		

Groundwater Samples Collected (check all that apply)

Analytes of Concern (Off-Site Lab)		Fate and Transport Data (Off-Site Lab)	
Fe (Total)	X	Chloride	X
Fe (Dis.)	X	Alkalinity	X
As (Dis.)		Ethane	
Mn (Dis.)		Ethene	X
VOCs	X	Hydrogen	X

Field Test Kit Analyses

	Unfiltered	Filtered
Fe^{2+} (mg/L)	N/A	N/A
Mn^{2+} (mg/L)		

Filter where turbidity > 50 NTU.

Downhole Dissolved Oxygen

Top (mg/L)	
Middle (mg/L)	N/A
Bottom (mg/L)	

Sample Number: 030601 0

Sample Date/Time: 2/5/03 1520

QA/QC Sample(s)? [X] None [ ] Field Dup [ ] MS/MSD

Dup. Sample Time _____ Dup. Sample Number _____

Comments: Pump intake at 10' bgs

Method of Extraction:
[ ] Submersible Pump
[X] Peristaltic Pump
[ ] Disposable Bailer

Method of Sampling:
[ ] Submersible Pump
[X] Peristaltic Pump
[ ] Disposable Bailer

Revised 10/31/02

TETRA TECH INC.
MONITORING WELL SAMPLING SHEET

Well No.: 1R28MW342F

Sheet 2 of 2

Personnel: D. CHENG

Day: WEDNESDAY

Date: 2/5/03

Casing Volume = NA Gallons

Initial depth to water: 6.94 ft. below top of casing

[casing volume = water column height (ft) x 0.03 gal/ft (0.75-inch well) or 0.163 gal/ft (2-inch well) or 0.652 gal/ft (4-inch well)]

Organic Vapor Concentrations
Top of Casing: 10.7 ppm Background: 0 ppm

Groundwater Parameters

Time	Cumulative Volume Purged (L)	Discharge Rate (mL/min)	Depth to water (ft. below TOC)	Temperature (°C)	Specific Conductivity (mS/cm)	Dissolved Oxygen (mg/L)	pH	ORP (mv)	Turbidity (NTU)	PID/OVM (ppm)
1453	11	240	6.98	16.24	0.524	0.13	8.64	-529.9	12.0	0
1456	12	240	6.98	16.27	0.524	0.11	8.64	-528.6	11.8	0
1459	13	240	6.98	16.29	0.529	0.11	8.62	-530.3	9.4	0
1502	14	240	6.98	16.29	0.529	0.11	8.62	-557.9	9.2	0
1506	15	240	7.00	16.27	0.532	0.12	8.61	-578.2	6.98	0
1509	16	240	7.00	16.27	0.532	0.12	8.61	-576.7	6.48	0
1511	17	240	7.00	16.30	0.534	0.11	8.61	-569.0	6.08	0

After sampling and, if accessible, depth to bottom: 14.66 ft. below TOC Purged Dry? NO

Field Measurement Equipment Used

Equipment	Model	Serial Number	Equipment	Model	Serial Number
Water Quality Meter			Filter Apparatus		
Water Level Meter			Other		
Pump			Other		
PID			Other		

NA

Groundwater Samples Collected (check all that apply)

Analytes of Concern	Off-Site Lab	Fate and Transport Data	Off-Site Lab	Field Test Kit Analyses	Unfiltered	Filtered
Fe (Total)		Chloride		Fe^{2+} (mg/L)		
Fe (Dis.)		Alkalinity		Mn^{2+} (mg/L)		
As (Dis.)		Ethane		Filter where turbidity > 50 NTU.		
Mn (Dis.)		Ethene		Downhole Dissolved Oxygen		
VOCs		Hydrogen		Top (mg/L)		
				Middle (mg/L)		
				Bottom (mg/L)		

Sample Number: Sample Date/Time:

QA/QC Sample(s)? ☐ None ☐ Field Dup ☐ MS/MSD

Dup. Sample Time _____ Dup. Sample Number _____

Comments:

Method of Extraction:
☐ Submersible Pump
☐ Peristaltic Pump
☐ Disposable Bailer

Method of Sampling:
☐ Submersible Pump
☐ Peristaltic Pump
☐ Disposable Bailer

Revised 10/31/02

TETRA TECH INC.
MONITORING WELL SAMPLING SHEET

Well No.: 1R28MW35TF

Sheet 1 of 1

Personnel: H. Cheng

Day: WEDNESDAY

Date: 2/5/03

Casing Volume = NA Gallons

Initial depth to water: 7.05 ft. below top of casing

[casing volume = water column height (ft) x 0.03 gal/ft (0.75-inch well) or 0.163 gal/ft (2-inch well) or 0.652 gal/ft (4-inch well)]

Organic Vapor Concentrations
Top of Casing: 1.7 ppm Background: 0 ppm

Groundwater Parameters

Time	Cumulative Volume Purged (L)	Discharge Rate (mL/min)	Depth to water (ft. below TOC)	Temperature (°C)	Specific Conductivity (mS/cm)	Dissolved Oxygen (mg/L)	pH	ORP (mv)	Turbidity (NTU)	PID/OVM (ppm)
1532	0	180	7.15	16.71	3.499	3.00	7.58	140.6	4.37	0
1537	1	180	7.16	17.11	7.471	1.60	7.01	39.0	51.2	0
1541	2	120	7.16	17.21	7.814	0.96	6.94	33.2	45.1	0
1545	3	240	7.18	17.30	7.948	0.67	6.95	47.8	31.8	0
1548	4	240	7.18	17.33	7.932	0.62	6.95	46.2	23.4	0
1551	5	240	7.18	17.36	7.804	0.51	6.97	46.0	19.5	0
1554	6	240	7.18	17.39	7.609	0.46	6.99	48.1	15.1	0
1558	7	240	7.19	17.42	7.424	0.42	7.01	52.1	9.74	0
1601	8	240	7.20	17.47	7.390	0.38	7.01	55.5	7.23	0
1604	9	240	7.20	17.50	7.379	0.37	7.01	59.9	5.33	0
1607	10	240	7.20	17.52	7.369	0.35	7.02	61.5	4.63	0

After sampling and, if accessible, depth to bottom: 60.09 ft. below TOC Purged Dry? N

Field Measurement Equipment Used

Equipment	Model	Serial Number	Equipment	Model	Serial Number
Water Quality Meter	YSI 556	02J0179 A1	Filter Apparatus	0.45 µm	NA
Water Level Meter	SOLINST 122	122 004623-1	Other Turbidimeter	DRT. 15CE	746
Pump	FLUTE	154	Other		
PID	Thermo 580B	73360-373	Other		

Groundwater Samples Collected (check all that apply)

Analytes of Concern (Off-Site Lab)		Fate and Transport Data (Off-Site Lab)		Field Test Kit Analyses	Unfiltered	Filtered
Fe (Total)	X	Chloride	X	Fe^{2+} (mg/L)	NA	NA
Fe (Dis.)	X	Alkalinity	X	Mn^{2+} (mg/L)		
As (Dis.)	X	Ethane	X	Filter where turbidity > 50 NTU.		
Mn (Dis.)	X	Ethene	X	Downhole Dissolved Oxygen		
VOCs	X	Hydrogen	X	Top (mg/L)	NA	
				Middle (mg/L)		
				Bottom (mg/L)		

Sample Number: 0306H011

Sample Date/Time: 2/5/03 1615

QA/QC Sample(s)? [X] None [ ] Field Dup [ ] MS/MSD

Dup. Sample Time _____ Dup. Sample Number _____

Comments: Pump intake at 55' bgs

Method of Extraction:
[X] Submersible Pump
[ ] Peristaltic Pump
[ ] Disposable Bailer

Method of Sampling:
[X] Submersible Pump
[ ] Peristaltic Pump
[ ] Disposable Bailer

Revised 10/31/02

TETRA TECH INC.
MONITORING WELL SAMPLING SHEET

Well No.: 1R28MW355F

Sheet 1 of 1

Personnel: D. CHENG

Day: WEDNESDAY

Date: 2/5/03

Casing Volume = NA Gallons

Initial depth to water: 7.17 ft. below top of casing

[casing volume = water column height (ft) x 0.03 gal/ft (0.75-inch well) or 0.163 gal/ft (2-inch well) or 0.652 gal/ft (4-inch well)]

Organic Vapor Concentrations
Top of Casing: 2.0 ppm Background: 0 ppm

Modified micropurge @ 500 mL/min

Groundwater Parameters

Time	Cumulative Volume Purged (L)	Discharge Rate (mL/min)	Depth to water (ft. below TOC)	Temperature (°C)	Specific Conductivity (mS/cm)	Dissolved Oxygen (mg/L)	pH	ORP (mv)	Turbidity (NTU)	PID/OVM (ppm)
1119	0	–	7.17	15.71	0.648	6.87	7.91	69.0	148	0
1123	1	150	7.70	16.06	0.648	6.64	7.89	74.1	23.8	0
1131	6	500	9.26	16.55	0.649	6.61	7.86	105.1	3.25	0
1135	7	120	9.32	16.45	0.649	6.27	7.89	151.1	1.89	0
1142	8	96	9.43	16.34	0.650	6.11	7.84	153.2	2.58	0
1148	9	96	9.54	16.31	0.649	6.30	7.82	154.4	1.26	0

After sampling and, if accessible, depth to bottom: 24.34 ft. below TOC Purged Dry? NO

Field Measurement Equipment Used

Equipment	Model	Serial Number	Equipment	Model	Serial Number
Water Quality Meter	YSI 556	02M0605 AB	Filter Apparatus	0.45 µm	N/A
Water Level Meter	Solinst 122	429	Other Turbidimeter	DRT-15CE	745
Pump	Geopump 2	948	Other		
PID	OVM 580B	002	Other		

Groundwater Samples Collected (check all that apply)

Analytes of Concern (Off-Site Lab)		Fate and Transport Data (Off-Site Lab)	
Fe (Total)	X	Chloride	X
Fe (Dis.)	X	Alkalinity	X
As (Dis.)	X	Ethane	X
Mn (Dis.)	X	Ethene	X
VOCs	X	Hydrogen	X

Field Test Kit Analyses

	Unfiltered	Filtered
Fe^{2+} (mg/L)	NA	NA
Mn^{2+} (mg/L)		

Filter where turbidity > 50 NTU.

Downhole Dissolved Oxygen

Top (mg/L)	
Middle (mg/L)	NA
Bottom (mg/L)	

Sample Number: 030608

Sample Date/Time: 2/5/03 1155

QA/QC Sample(s)? [X] None [ ] Field Dup [ ] MS/MSD

Dup. Sample Time _____ Dup. Sample Number _____

Comments: Pump intake at 15' bgs

Method of Extraction:
- [ ] Submersible Pump
- [X] Peristaltic Pump
- [ ] Disposable Bailer

Method of Sampling:
- [ ] Submersible Pump
- [X] Peristaltic Pump
- [ ] Disposable Bailer

Revised 10/31/02

TETRA TECH INC.
MONITORING WELL SAMPLING SHEET

Well No.: IR28MW356F

Sheet 1 of 1

Personnel: H. Chang

Day: WEDNESDAY

Date: 2/5/03

Casing Volume = NA Gallons

Initial depth to water: 7.11 ft. below top of casing

[casing volume = water column height (ft) x 0.03 gal/ft (0.75-inch well) or 0.163 gal/ft (2-inch well) or 0.652 gal/ft (4-inch well)]

Organic Vapor Concentrations
Top of Casing: 1.3 ppm Background: 0 ppm

Groundwater Parameters

Time	Cumulative Volume Purged (L)	Discharge Rate (mL/min)	Depth to water (ft. below TOC)	Temperature (°C)	Specific Conductivity (mS/cm)	Dissolved Oxygen (mg/L)	pH	ORP (mv)	Turbidity (NTU)	PID/OVM (ppm)
1401	0	240	7.34	16.52	0.986	~~6.59~~ 6.36	7.36	164.1	1.13	0
1406	1	150	7.65	16.57	0.988	6.26	7.35	162.1	0.78	0
1409	3	600	8.20	16.74	0.991	6.32	7.35	157.5	0.63	0
1411	4	600	8.51	16.78	0.990	6.30	7.35	156.1	0.68	0
1412	5	600	8.85	16.77	0.990	6.27	7.35	154.4	0.84	0
1414	6	600	9.08	16.78	0.989	6.30	7.35	153.4	0.65	0
1415	7	600	9.30	16.79	0.989	6.30	7.34	152.5	0.74	0
1419	8	200	9.35	16.76	0.988	6.12	7.35	151.6	0.66	0
1423	9	200	9.37	16.72	0.988	5.93	7.34	150.5	0.55	0
1428	10	200	9.38	16.71	0.988	5.88	7.34	150.1	0.32	0
1432	11	200	9.38	16.70	0.988	5.85	7.34	149.7	0.42	0

MODIFIED INCREMENTS →

After sampling and, if accessible, depth to bottom: 20.18 ft. below TOC Purged Dry? N

Field Measurement Equipment Used

Equipment	Model	Serial Number	Equipment	Model	Serial Number
Water Quality Meter	YSI 556	02J0179 A1	Filter Apparatus	0.45 µm	NA
Water Level Meter	SOLINST 122	122 004623-1	Other Turbidimeter	DRT-15CE	746
Pump	Geopump 2	008	Other		
PID	THERMO SYS	73360-373	Other		

Groundwater Samples Collected (check all that apply)

Analytes of Concern (Off-Site Lab)		Fate and Transport Data: Off-Site Lab	
Fe (Total)	X	Chloride	X
Fe (Dis.)	X	Alkalinity	X
As (Dis.)	X	Ethane	X
Mn (Dis.)	X	Ethene	X
VOCs	X	Hydrogen	X

Field Test Kit Analyses

	Unfiltered	Filtered
Fe^{2+} (mg/L)	NA	NA
Mn^{2+} (mg/L)		

Filter where turbidity > 50 NTU.

Downhole Dissolved Oxygen

Top (mg/L)	NA
Middle (mg/L)	
Bottom (mg/L)	

Sample Number: 03064009

Sample Date/Time: 2/5/03 1445

QA/QC Sample(s)? [X] None [ ] Field Dup [ ] MS/MSD

Dup. Sample Time _____ Dup. Sample Number _____

Comments: Pump intake at 15' bgs

Method of Extraction:
- [ ] Submersible Pump
- [X] Peristaltic Pump
- [ ] Disposable Bailer

Method of Sampling:
- [ ] Submersible Pump
- [X] Peristaltic Pump
- [ ] Disposable Bailer

Revised 10/31/02

TETRA TECH INC.
MONITORING WELL SAMPLING SHEET

Well No.: 1R28MW357F

Sheet 1 of 2

Personnel: H. Cheng

Day: WEDNESDAY

Date: 2/5/03

Casing Volume = NA Gallons

Initial depth to water: 6.71 ft. below top of casing

[casing volume = water column height (ft) x 0.03 gal/ft (0.75-inch well) or 0.163 gal/ft (2-inch well) or 0.652 gal/ft (4-inch well)]

Organic Vapor Concentrations
Top of Casing: 1.8 ppm Background: 0 ppm

Groundwater Parameters

Time	Cumulative Volume Purged (L)	Discharge Rate (mL/min)	Depth to water (ft. below TOC)	Temperature (°C)	Specific Conductivity (mS/cm)	Dissolved Oxygen (mg/L)	pH	ORP (mv)	Turbidity (NTU)	PID/OVM (ppm)
0932	0	133	6.80	15.69	0.738	4.71	7.10	214.4	12.66	0
0941	1	133	7.05	16.03	0.627	3.45	7.28	204.1	12.23	0
0945	1.5	133	7.10	16.07	0.610	3.39	7.27	199.5	12.44	0
0946	3	600	7.45	16.54	0.567	3.20	7.25	222.1	12.26	0
0949	5	600	7.82	16.58	0.563	3.06	7.25	279.1	12.46	0
0953	7	600	8.13	16.58	0.563	3.08	7.25	192.3	11.82	0
0957	9	600	8.42	16.61	0.564	3.17	7.24	368.1	11.77	0
1000	11	343	8.52	16.58	0.564	2.75	7.24	341.1	11.47	0
1003	12	343	8.53	16.55	0.567	2.70	7.23	347.7	11.50	0
1006	13	300	8.55	16.54	0.566	2.64	7.23	357.2	11.83	0
1009	14	300	8.58	16.53	0.566	2.54	7.22	324.3	12.16	0

modified incorrect →

After sampling and, if accessible, depth to bottom: 20.33 ft. below TOC Purged Dry? N

Field Measurement Equipment Used

Equipment	Model	Serial Number	Equipment	Model	Serial Number
Water Quality Meter	YSI 556	02J0179 A1	Filter Apparatus	0.45 µm	NA
Water Level Meter	SOLINST 122	122 004623-1	Other TURBIDIMETER	DRT-15CE	746
Pump	GEOPUMP 2	008	Other		
PID	THERMO 580B	73360-373	Other		

Groundwater Samples Collected (check all that apply)

Analytes of Concern (Off-Site Lab)		Fate and Transport Data: Off-Site Lab		Field Test Kit Analyses	Unfiltered	Filtered
Fe (Total)	X	Chloride	X	Fe^{2+} (mg/L)	NA	NA
Fe (Dis.)	X	Alkalinity	X	Mn^{2+} (mg/L)		
As (Dis.)	X	Ethane	X	Filter where turbidity > 50 NTU.		
Mn (Dis.)	X	Ethene	X	Downhole Dissolved Oxygen		
VOCs	X	Hydrogen	X	Top (mg/L)	NA	
				Middle (mg/L)		
				Bottom (mg/L)		

Sample Number: 03064006 Sample Date/Time: 2/5/03 1020

QA/QC Sample(s)? ☐ None ☒ Field Dup ☐ MS/MSD

Dup. Sample Time 1040 Dup. Sample Number 03064007

Comments:

Method of Extraction:
- ☐ Submersible Pump
- ☒ Peristaltic Pump
- ☐ Disposable Bailer

Method of Sampling:
- ☐ Submersible Pump
- ☒ Peristaltic Pump
- ☐ Disposable Bailer

Revised 10/31/02

TETRA TECH INC.
MONITORING WELL SAMPLING SHEET

Well No.: 1R28MW357F

Sheet 2 of 2

Personnel: H. Cheng

Day: WEDNESDAY

Date: 2/5/03

Casing Volume = NA Gallons

Initial depth to water: 6.71 ft. below top of casing

[casing volume = water column height (ft) x 0.03 gal/ft (0.75-inch well) or 0.163 gal/ft (2-inch well) or 0.652 gal/ft (4-inch well)]

Organic Vapor Concentrations
Top of Casing: 1.8 ppm Background: 0 ppm

Groundwater Parameters

Time	Cumulative Volume Purged (L)	Discharge Rate (mL/min)	Depth to water (ft. below TOC)	Temperature (°C)	Specific Conductivity (mS/cm)	Dissolved Oxygen (mg/L)	pH	ORP (mv)	Turbidity (NTU)	PID/OVM (ppm)
1011	15	300	8.60	16.53	0.567	2.50	7.21	306.4	11.89	0
1015	16	300	8.60	16.52	0.566	2.52	7.21	305.1	11.42	0
1018	17	300	8.61	16.52	0.567	2.49	7.21	308.2	11.35	0

After sampling and, if accessible, depth to bottom: 20.33 ft. below TOC Purged Dry? N

Field Measurement Equipment Used

Equipment	Model	Serial Number	Equipment	Model	Serial Number
Water Quality Meter			Filter Apparatus		
Water Level Meter			Other		
Pump			Other		
PID			Other		

SEE PAGE 1

Groundwater Samples Collected (check all that apply)

Analytes of Concern (Off-Site Lab)		Fate and Transport Data: Off-Site Lab	
Fe (Total)	X	Chloride	X
Fe (Dis.)	X	Alkalinity	X
As (Dis.)	X	Ethane	X
Mn (Dis.)	X	Ethene	X
VOCs	X	Hydrogen	X

Field Test Kit Analyses

	Unfiltered	Filtered
Fe^{2+} (mg/L)	NA	NA
Mn^{2+} (mg/L)		

Filter where turbidity > 50 NTU.

Downhole Dissolved Oxygen

Top (mg/L)	NA
Middle (mg/L)	
Bottom (mg/L)	

Sample Number: 030604006

Sample Date/Time: 2/5/03 1020

QA/QC Sample(s)? [ ] None [X] Field Dup [ ] MS/MSD

Dup. Sample Time 1040 Dup. Sample Number 030604007

Comments:

Method of Extraction:
[ ] Submersible Pump
[X] Peristaltic Pump
[ ] Disposable Bailer

Method of Sampling:
[ ] Submersible Pump
[X] Peristaltic Pump
[ ] Disposable Bailer

Revised 10/31/02

TETRA TECH INC.
MONITORING WELL SAMPLING SHEET

Well No.: 1R28MW358F

Sheet 1 of 1

Personnel: H. Cheng, D. Cheng

Day: TUESDAY

Date: 2/4/03

Casing Volume = NA Gallons

Initial depth to water: 6.41 ft. below top of casing

[casing volume = water column height (ft) x 0.03 gal/ft (0.75-inch well) or 0.163 gal/ft (2-inch well) or 0.652 gal/ft (4-inch well)]

Organic Vapor Concentrations
Top of Casing: Ø ppm Background: Ø ppm

Groundwater Parameters

	Time	Cumulative Volume Purged (L)	Discharge Rate (mL/min)	Depth to water (ft. below TOC)	Temperature (°C)	Specific Conductivity (mS/cm)	Dissolved Oxygen (mg/L)	pH	ORP (mv)	Turbidity (NTU)	PID/OVM (ppm)
	1445	Ø	—	6.41	16.66	Ø.683	Ø.88	7.46	1Ø7.4	2.25	Ø
Modified micropurge	1449	1	3ØØ	7.34	16.75	Ø.678	Ø.79	7.52	1Ø6.Ø	1.98	Ø
	1453	5	2ØØØ	9.5Ø	16.84	Ø.677	Ø.78	7.5Ø	76.2	2.Ø3	Ø
	1520	14	Pump controller malfunctioning								
2/5	1105	15	2ØØØ	7.55	14.9Ø	Ø.71Ø	7.Ø1	7.48	2Ø2.3	4.59	Ø
	1121	23	2ØØ	1Ø.47	16.64	Ø.72Ø	6.38	7.45	163.3	3.66	Ø
	1124	24	2ØØ	1Ø.78	16.34	Ø.722	6.Ø5	7.45	157.3	3.35	Ø
	1144	~~125~~ 1Ø (MS)	Micro purge unsuccessful - purge dry								
2/6	1139	NA		12.76	16.Ø1	Ø.621	5.34	7.41	231.2	5.47	Ø
	~~1140~~ (MS)										

After sampling and, if accessible, depth to bottom: 2Ø.31 ft. below TOC Purged Dry? Y

Field Measurement Equipment Used

Equipment	Model	Serial Number	Equipment	Model	Serial Number
Water Quality Meter	YSI 556	Ø2JØ179 A1	Filter Apparatus	Ø.45 μm	NA
Water Level Meter	SOLINST	122 ØØ4623-1	Other TURBIDIMETER	DRT-15CE	745
Pump	FULTZ	8	Other PUMP	GEOPUMP 2	ØØ8
PID	THERMO SYS	7336Ø-373	Other		

Groundwater Samples Collected (check all that apply)

Analytes of Concern (Off-Site Lab)		Fate and Transport Data: Off-Site Lab	
Fe (Total)	X	Chloride	X
Fe (Dis.)	X	Alkalinity	X
As (Dis.)	X	Ethane	X
Mn (Dis.)	X	Ethene	X
VOCs	X	Hydrogen	X

Field Test Kit Analyses

	Unfiltered	Filtered
Fe^{2+} (mg/L)	N/A	N/A
Mn^{2+} (mg/L)		

Filter where turbidity > 50 NTU.

Downhole Dissolved Oxygen
Top (mg/L)
Middle (mg/L) N/A
Bottom (mg/L)

Sample Number: Ø3Ø6MØ16

Sample Date/Time: 2/6/Ø3 114Ø

QA/QC Sample(s)? ☐ None ☐ Field Dup ☒ MS/MSD

Dup. Sample Time _____ Dup. Sample Number _____

Comments: Pump intake at 16' bgs

Method of Extraction:
- ☒ Submersible Pump
- ☐ Peristaltic Pump
- ☐ Disposable Bailer

Method of Sampling:
- ☐ Submersible Pump
- ☒ Peristaltic Pump
- ☐ Disposable Bailer

Revised 10/31/02

TETRA TECH INC.
MONITORING WELL SAMPLING SHEET

Well No.: 1R28MW359F

Sheet 1 of 1

Personnel: H. Cheng

Day: THURSDAY

Date: 2/6/03

Casing Volume = NA Gallons

Initial depth to water: 6.72 ft. below top of casing

[casing volume = water column height (ft) x 0.03 gal/ft (0.75-inch well) or 0.163 gal/ft (2-inch well) or 0.652 gal/ft (4-inch well)]

Organic Vapor Concentrations
Top of Casing: 31 ppm Background: 0 ppm

Groundwater Parameters

Time	Cumulative Volume Purged (L)	Discharge Rate (mL/min)	Depth to water (ft. below TOC)	Temperature (°C)	Specific Conductivity (mS/cm)	Dissolved Oxygen (mg/L)	pH	ORP (mv)	Turbidity (NTU)	PID/OVM (ppm)
0950	0	160	6.89	15.72	0.603	3.92	7.34	196.0	19.5	0
MODIFIED INCORPORATE → 0956	1	160	7.28	16.06	0.586	3.82	7.30	195.0	11.8	0
0959	2	600	7.63	16.50	0.579	4.07	7.29	199.4	7.2	0
1001	4	600	8.06	16.57	0.578	4.02	7.29	207.9	3.01	0
1004	6	600	8.60	16.56	0.577	3.96	7.29	215.5	1.98	0
1007	8	600	8.94	16.56	0.576	3.85	7.30	219.8	1.26	0
1012	9	240	8.94	16.35	0.576	3.68	7.29	226.3	1.23	0
1016	10	240	9.00	16.30	0.576	3.55	7.28	230.1	1.27	0
1023	11	171	9.10	16.28	0.577	3.41	7.28	236.3	1.24	0
1028	12	171	9.15	16.26	0.576	3.34	7.28	239.9	1.31	0
1033	13	171	9.18	16.26	0.576	3.28	7.27	242.9	1.28	0

After sampling and, if accessible, depth to bottom: 20.35 ft. below TOC Purged Dry? N

Field Measurement Equipment Used

Equipment	Model	Serial Number	Equipment	Model	Serial Number
Water Quality Meter	YSI 556	02M0605 AB	Filter Apparatus	0.45 µm	NA
Water Level Meter	SOLINST 122	122 004623-1	Other Turbidimeter	DRT-15CE	745
Pump	GEOPUMP 2	008	Other		
PID	Thermo 580B	73360-373	Other		

Groundwater Samples Collected (check all that apply)

Analytes of Concern (Off-Site Lab)		Fate and Transport Data (Off-Site Lab)	
Fe (Total)	X	Chloride	X
Fe (Dis.)	X	Alkalinity	X
As (Dis.)		Ethane	X
Mn (Dis.)		Ethene	X
VOCs	X	Hydrogen	X
		Nitrate	X

Field Test Kit Analyses

	Unfiltered	Filtered
Fe^{2+} (mg/L)	NA	NA
Mn^{2+} (mg/L)		

Filter where turbidity > 50 NTU.

Downhole Dissolved Oxygen

Top (mg/L)	
Middle (mg/L)	NA
Bottom (mg/L)	

Sample Number: 0306M014

Sample Date/Time: 2/6/03 1040

QA/QC Sample(s)? (X) None ( ) Field Dup (X) MS/MSD

Dup. Sample Time _____ Dup. Sample Number _____

Comments: Pump intake at 15' bgs

Method of Extraction:
- ( ) Submersible Pump
- (X) Peristaltic Pump
- ( ) Disposable Bailer

Method of Sampling:
- ( ) Submersible Pump
- (X) Peristaltic Pump
- ( ) Disposable Bailer

Revised 10/31/02

TETRA TECH INC.
MONITORING WELL SAMPLING SHEET

Well No.: 1R28MW36ØF

Sheet 1 of 1

Personnel: D. CHENG

Day: FRIDAY

Date: 2/7/Ø3

Casing Volume = NA Gallons

Initial depth to water: 6.75 ft. below top of casing

[casing volume = water column height (ft) x 0.03 gal/ft (0.75-inch well) or 0.163 gal/ft (2-inch well) or 0.652 gal/ft (4-inch well)]

Organic Vapor Concentrations
Top of Casing: 2Ø.7 ppm Background: Ø ppm

Groundwater Parameters

Time	Cumulative Volume Purged (L)	Discharge Rate (mL/min)	Depth to water (ft. below TOC)	Temperature (°C)	Specific Conductivity (mS/cm)	Dissolved Oxygen (mg/L)	pH	ORP (mv)	Turbidity (NTU)	PID/OVM (ppm)
Ø945	Ø	-	6.75	15.65	Ø.545	2.36	7.13	265.5	14.2	Ø
Ø95Ø	1	185	6.76	15.84	Ø.519	2.12	7.16	258.Ø	1Ø.6	Ø
Ø954	2	185	6.78	15.98	Ø.51Ø	1.85	7.18	253.1	1Ø.3	Ø
Ø959	3	185	6.79	16.Ø2	Ø.5Ø7	1.55	7.18	242.7	9.82	Ø
1ØØ2	4	185	6.8Ø	16.Ø5	Ø.5Ø6	1.49	7.18	242.9	9.36	Ø
1ØØ6	5	185	6.8Ø	16.Ø4	Ø.5Ø6	1.41	7.17	246.3	8.66	Ø
1Ø1Ø	6	185	6.81	16.Ø7	Ø.5Ø5	1.36	7.17	253.2	8.1Ø	Ø
1Ø14	7	185	6.82	16.Ø8	Ø.5Ø5	1.32	7.17	253.3	7.82	Ø
1Ø17	8	185	6.82	16.Ø9	Ø.5Ø5	1.26	7.17	253.3	7.31	Ø

After sampling and, if accessible, depth to bottom: 2Ø.33 ft. below TOC Purged Dry? NO

Field Measurement Equipment Used

Equipment	Model	Serial Number	Equipment	Model	Serial Number
Water Quality Meter	YSI 556	556	Filter Apparatus	Ø.45 µm	NA
Water Level Meter	Solinst 122	425	Other Turbidimeter	DRT-15CE	745
Pump	Geopump 2	948	Other		
PID	OVM 580B	1ØØ2	Other		

Groundwater Samples Collected (check all that apply)

Analytes of Concern (Off-Site Lab)		Fate and Transport Data: Off-Site Lab	
Fe (Total)	X	Chloride	X
Fe (Dis.)	X	Alkalinity	X
As (Dis.)	X	Ethane	X
Mn (Dis.)	X	Ethene	X
VOCs	X	Hydrogen	X
		Nitrate	X

Field Test Kit Analyses

	Unfiltered	Filtered
Fe^{2+} (mg/L)	NA	NA
Mn^{2+} (mg/L)		

Filter where turbidity > 50 NTU.

Downhole Dissolved Oxygen

Top (mg/L)	
Middle (mg/L)	NA
Bottom (mg/L)	

Sample Number: Ø3ØØ1Ø23

Sample Date/Time: ~~Ø3ØØ1Ø23~~ 2/7/Ø3 1Ø25

QA/QC Sample(s)? [X] None [ ] Field Dup [ ] MS/MSD

Dup. Sample Time _____ Dup. Sample Number _____

Comments: Pump intake at 15' bgs

Method of Extraction:
- [ ] Submersible Pump
- [X] Peristaltic Pump
- [ ] Disposable Bailer

Method of Sampling:
- [ ] Submersible Pump
- [X] Peristaltic Pump
- [ ] Disposable Bailer

Revised 10/31/02

TETRA TECH INC.
MONITORING WELL SAMPLING SHEET

Well No.: 1R28MW361F

Sheet 1 of 2

Personnel: H. Cheng

Day: Thursday

Date: 2/6/03

Casing Volume = NA Gallons

Initial depth to water: 6.90 ft. below top of casing

[casing volume = water column height (ft) x 0.03 gal/ft (0.75-inch well) or 0.163 gal/ft (2-inch well) or 0.652 gal/ft (4-inch well)]

Organic Vapor Concentrations
Top of Casing: 10.9 ppm Background: 0 ppm

Groundwater Parameters

Time	Cumulative Volume Purged (L)	Discharge Rate (mL/min)	Depth to water (ft. below TOC)	Temperature (°C)	Specific Conductivity (mS/cm)	Dissolved Oxygen (mg/L)	pH	ORP (mv)	Turbidity (NTU)	PID/OVM (ppm)
1217	0	180	7.02	15.97	0.654	0.78	8.12	-451.1	13.95	0
1224	1	180	7.42	16.32	0.650	0.36	8.13	-493.6	11.86	0
1227	3	600	7.85	16.63	0.649	0.09	8.11	-592.1	11.66	0
1230	5	600	8.28	16.64	0.650	0.08	8.11	-546.1	12.09	0
1233	7	600	8.60	16.63	0.650	0.08	8.11	-460.3	13.22	0
1236	9	600	8.94	16.62	0.652	0.10	8.09	-525.1	17.45	0
1237	10	200	8.99	16.62	0.653	0.09	8.08	-540.6	27.8	0
1243	11	240	8.96	16.52	0.655	0.18	8.06	-483.9	41.9	0
1247	12	212	9.01	16.52	0.656	0.39	8.05	-450.2	47.2	0
1251	13	212	9.06	16.50	0.659	0.69	8.02	-469.6	65.2	0
1255	14	212	9.10	16.51	0.659	0.89	8.02	-448.3	61.4	0

MODIFIED INCREMENTS →

After sampling and, if accessible, depth to bottom: 20.17 ft. below TOC Purged Dry? N

Field Measurement Equipment Used

Equipment	Model	Serial Number	Equipment	Model	Serial Number
Water Quality Meter	YSI 556	02M0605 AB	Filter Apparatus	0.45μm	NA
Water Level Meter	SOLINST 122	122004623-1	Other Turbidimeter	DRT-15CE	745
Pump	Geopump 2	008	Other		
PID	Thermo 580B	73360-373	Other		

Groundwater Samples Collected (check all that apply)

Analytes of Concern (Off-Site Lab)		Fate and Transport Data: Off-Site Lab	
Fe (Total)	X	Chloride	X
Fe (Dis.)	X	Alkalinity	X
As (Dis.)		Ethane	X
Mn (Dis.)		Ethene	X
VOCs	X	Hydrogen	X
		Nitrate	X

Field Test Kit Analyses

	Unfiltered	Filtered
Fe^{2+} (mg/L)	NA	NA
Mn^{2+} (mg/L)		

Filter where turbidity > 50 NTU.

Downhole Dissolved Oxygen

Top (mg/L)	NA
Middle (mg/L)	
Bottom (mg/L)	

Sample Number: 03060018

Sample Date/Time: 2/6/03 1315

QA/QC Sample(s)? [X] None [ ] Field Dup [ ] MS/MSD

Dup. Sample Time _____ Dup. Sample Number _____

Comments: Pump intake at 15' bgs

Method of Extraction:
- [ ] Submersible Pump
- [X] Peristaltic Pump
- [ ] Disposable Bailer

Method of Sampling:
- [ ] Submersible Pump
- [X] Peristaltic Pump
- [ ] Disposable Bailer

Revised 10/31/02

TETRA TECH INC.
MONITORING WELL SAMPLING SHEET

Well No.: 1E20MW361F

Sheet 2 of 2

Personnel: H. Cheng

Day: Thursday

Date: 2/6/03

Casing Volume = NA Gallons

Initial depth to water: 6.90 ft. below top of casing

[casing volume = water column height (ft) x 0.03 gal/ft (0.75-inch well) or 0.163 gal/ft (2-inch well) or 0.652 gal/ft (4-inch well)]

Organic Vapor Concentrations
Top of Casing: 10.9 ppm Background: 0 ppm

Groundwater Parameters

Time	Cumulative Volume Purged (L)	Discharge Rate (mL/min)	Depth to water (ft. below TOC)	Temperature (°C)	Specific Conductivity (mS/cm)	Dissolved Oxygen (mg/L)	pH	ORP (mv)	Turbidity (NTU)	PID/OVM (ppm)
1259	15	200	9.10	16.50	0.659	0.41	8.00	-440.1	67.6	0
1306	16	200	9.12	16.51	0.660	0.47	7.99	-443.2	64.2	0
1311	17	200	9.13	16.51	0.660	0.49	7.99	-448.3	61.4	0

After sampling and, if accessible, depth to bottom: 20.17 ft. below TOC Purged Dry? N

Field Measurement Equipment Used

Equipment	Model	Serial Number	Equipment	Model	Serial Number
Water Quality Meter			Filter Apparatus		
Water Level Meter			Other		
Pump			Other		
PID			Other		

SEE FIRST PAGE

Groundwater Samples Collected (check all that apply)

Analytes of Concern (Off-Site Lab)		Fate and Transport Data (Off-Site Lab)	
Fe (Total)	X	Chloride	X
Fe (Dis.)	X	Alkalinity	X
As (Dis.)		Ethane	X
Mn (Dis.)		Ethene	X
VOCs	X	Hydrogen	X
		Nitrate	X

Field Test Kit Analyses

	Unfiltered	Filtered
Fe^{2+} (mg/L)	NA	NA
Mn^{2+} (mg/L)		

Filter where turbidity > 50 NTU.

Downhole Dissolved Oxygen

Top (mg/L)	
Middle (mg/L)	NA
Bottom (mg/L)	

Sample Number: 0306M018

Sample Date/Time: 2/6/03 1315

QA/QC Sample(s)? [X] None [ ] Field Dup [ ] MS/MSD

Dup. Sample Time _____ Dup. Sample Number _____

Comments: Pump intake at 15' bgs

Method of Extraction:
- [ ] Submersible Pump
- [X] Peristaltic Pump
- [ ] Disposable Bailer

Method of Sampling:
- [ ] Submersible Pump
- [X] Peristaltic Pump
- [ ] Disposable Bailer

Revised 10/31/02

TETRA TECH INC.
MONITORING WELL SAMPLING SHEET

Well No.: IR28MW362F

Sheet 1 of 1

Personnel: D. CHENG

Day: THURSDAY

Date: 2/6/03

Casing Volume = NA Gallons

Initial depth to water: 7.17 ft. below top of casing

[casing volume = water column height (ft) x 0.03 gal/ft (0.75-inch well) or 0.163 gal/ft (2-inch well) or 0.652 gal/ft (4-inch well)]

Organic Vapor Concentrations
Top of Casing: 4.8 ppm Background: Ø ppm

Groundwater Parameters

Time	Cumulative Volume Purged (L)	Discharge Rate (mL/min)	Depth to water (ft. below TOC)	Temperature (°C)	Specific Conductivity (mS/cm)	Dissolved Oxygen (mg/L)	pH	ORP (mv)	Turbidity (NTU)	PID/OVM (ppm)
1146	Ø	–	7.17	15.93	Ø.494	2.62	7.81	-426.7	1Ø.5	Ø
1151	1	141	7.18	16.16	Ø.494	1.Ø5	8.Ø2	-444.Ø	5.Ø6	Ø
1157	2	141	7.18	16.25	Ø.496	Ø.59	8.11	-469.Ø	3.5Ø	Ø
12Ø2	3	141	7.19	16.32	Ø.492	Ø.35	8.16	-478.Ø	2.43	Ø
12Ø7	4	141	7.19	16.35	Ø.487	Ø.29	8.19	-5Ø9.2	2.42	Ø
1213	5	141	7.2Ø	16.4Ø	Ø.485	Ø.27	8.22	-487.5	1.71	Ø
1218	6	141	7.2Ø	16.36	Ø.485	Ø.23	8.23	-436.3	1.56	Ø
1223	7	141	7.2Ø	16.37	Ø.484	Ø.21	8.25	-44Ø.7	1.52	Ø
1228	8	141	7.21	16.4Ø	Ø.485	Ø.21	8.27	-436.Ø	1.61	Ø

After sampling and, if accessible, depth to bottom: 16.92 ft. below TOC Purged Dry? NO

Field Measurement Equipment Used

Equipment	Model	Serial Number	Equipment	Model	Serial Number
Water Quality Meter	YSI 556	Ø23Ø179 A1	Filter Apparatus	Ø.45 µm	NA
Water Level Meter	Solinst 122	429	Other Turbidimeter	DRT-15CE	745
Pump	Geopump 2	948	Other		
PID	OVM 58ØB	ØØ2	Other		

Groundwater Samples Collected (check all that apply)

Analytes of Concern (Off-Site Lab)		Fate and Transport Data: Off-Site Lab	
Fe (Total)	X	Chloride	X
Fe (Dis.)	X	Alkalinity	X
As (Dis.)		Ethane	X
Mn (Dis.)		Ethene	X
VOCs	X	Hydrogen	X
		Nitrate	X

Field Test Kit Analyses

	Unfiltered	Filtered
Fe^{2+} (mg/L)		
Mn^{2+} (mg/L)	NA	NA

Filter where turbidity > 50 NTU.

Downhole Dissolved Oxygen

Top (mg/L)	
Middle (mg/L)	NA
Bottom (mg/L)	

Sample Number: Ø3ØGHØ17

Sample Date/Time: 2/6/Ø3 124Ø

QA/QC Sample(s)? [X] None [ ] Field Dup [ ] MS/MSD

Dup. Sample Time _____ Dup. Sample Number _____

Comments: Pump intake at 19' bgs

Method of Extraction:
- [ ] Submersible Pump
- [X] Peristaltic Pump
- [ ] Disposable Bailer

Method of Sampling:
- [ ] Submersible Pump
- [X] Peristaltic Pump
- [ ] Disposable Bailer

Revised 10/31/02

TETRA TECH INC.
MONITORING WELL SAMPLING SHEET

Well No.: 1R28MW932F

Sheet 1 of 1

Personnel: H. Cheng

Day: Friday

Date: 2/7/03

Casing Volume = NA Gallons

Initial depth to water: 6.98 ft. below top of casing

[casing volume = water column height (ft) x 0.03 gal/ft (0.75-inch well) or 0.163 gal/ft (2-inch well) or 0.652 gal/ft (4-inch well)]

Organic Vapor Concentrations
Top of Casing: 28.4 ppm Background: 0 ppm

Groundwater Parameters

Time	Cumulative Volume Purged (L)	Discharge Rate (mL/min)	Depth to water (ft. below TOC)	Temperature (°C)	Specific Conductivity (mS/cm)	Dissolved Oxygen (mg/L)	pH	ORP (mv)	Turbidity (NTU)	PID/OVM (ppm)
0943	0	160	7.02	16.21	0.560	3.26	8.02	-149.9	14.61	0
0948	1	160	7.19	16.27	0.522	1.00	8.36	-199.3	7.62	0
0953	2	160	7.21	16.35	0.506	0.49	8.46	-204.7	6.19	0
0959	3	160	7.21	16.37	0.500	0.33	8.45	-210.7	4.95	0
1004	4	160	7.22	16.43	0.492	0.25	8.43	-229.2	4.16	0
1010	5	160	7.22	16.48	0.481	0.23	8.38	-293.0	3.68	0
1016	6	160	7.22	16.52	0.480	0.18	8.36	-310.9	2.90	0
1021	7	160	7.22	16.53	0.483	0.18	8.34	-310.6	2.51	0
1026	8	160	7.22	16.54	0.482	0.18	8.33	-313.4	2.22	0

After sampling and, if accessible, depth to bottom: 30.57 ft. below TOC Purged Dry? NO

Field Measurement Equipment Used

Equipment	Model	Serial Number	Equipment	Model	Serial Number
Water Quality Meter	YSI 556	02J0179 A1	Filter Apparatus	0.45 µm	NA
Water Level Meter	Solinst 122	122 004624-1	Other Turbidimeter	DRT-15CE	745
Pump	Geopump 2	008	Other		
PID	Thermo 580B	733600-373	Other		

Groundwater Samples Collected (check all that apply)

Analytes of Concern (Off-Site Lab)		Fate and Transport Data (Off-Site Lab)	
Fe (Total)	X	Chloride	X
Fe (Dis.)	X	Alkalinity	X
As (Dis.)	X	Ethane	X
Mn (Dis.)	X	Ethene	X
VOCs	X	Hydrogen	X

Field Test Kit Analyses

	Unfiltered	Filtered
Fe^{2+} (mg/L)	NA	NA
Mn^{2+} (mg/L)		

Filter where turbidity > 50 NTU.

Downhole Dissolved Oxygen

Top (mg/L)	
Middle (mg/L)	NA
Bottom (mg/L)	

Sample Number: 030HO24

Sample Date/Time: 2/7/03 1030

QA/QC Sample(s)? [X] None [ ] Field Dup [ ] MS/MSD

Dup. Sample Time _____ Dup. Sample Number _____

Comments: Pump intake at 29' bgs

Method of Extraction:
- [ ] Submersible Pump
- [X] Peristaltic Pump
- [ ] Disposable Bailer

Method of Sampling:
- [ ] Submersible Pump
- [X] Peristaltic Pump
- [ ] Disposable Bailer

Revised 10/31/02

TETRA TECH INC.
MONITORING WELL SAMPLING SHEET

Well No.: 1R28MW933FS

Sheet 1 of 2

Personnel: D. CHENG

Day: THURSDAY

Date: 2/6/03

Casing Volume = NA Gallons

Initial depth to water: ft. below top of casing

[casing volume = water column height (ft) x 0.03 gal/ft (0.75-inch well) or 0.163 gal/ft (2-inch well) or 0.652 gal/ft (4-inch well)]

Organic Vapor Concentrations
Top of Casing: 0 ppm Background: 0 ppm

Groundwater Parameters

Time	Cumulative Volume Purged (L)	Discharge Rate (mL/min)	Depth to water (ft. below TOC)	Temperature (°C)	Specific Conductivity (mS/cm)	Dissolved Oxygen (mg/L)	pH	ORP (mv)	Turbidity (NTU)	PID/OVM (ppm)
0951	0	–	NA	16.47	0.838	3.74	7.63	-188.4	424	0
0956	1	185	"	16.58	0.659	1.20	7.20	-178.7	189	0
1001	2	185	"	16.72	0.628	0.50	7.13	-172.1	54.2	0
1005	3	185	"	16.76	0.609	0.31	7.11	-166.6	34.1	0
1009	4	185	"	16.82	0.598	0.23	7.10	-164.7	37.9	0
1014	5	185	"	16.90	0.590	0.19	7.08	-179.3	40.9	0
1018	6	185	"	17.01	0.583	0.17	7.08	-193.6	55.0	0
1022	7	185	"	16.93	0.578	0.17	7.07	-204.7	125	0
1027	8	141	"	16.85	0.573	0.16	7.06	-230.9	135	0
1033	9	141	"	16.79	0.571	0.17	7.05	-225.7	72.3	0
1038	10	141	"	16.77	0.572	0.17	7.04	-229.8	53.0	0

After sampling and, if accessible, depth to bottom: NA ft. below TOC Purged Dry? NO

Field Measurement Equipment Used

Equipment	Model	Serial Number	Equipment	Model	Serial Number
Water Quality Meter	YSI 556	02J0179 A1	Filter Apparatus	0.45 µm	NA
Water Level Meter			Other Turbidimeter	DRT-15CE	246 795
Pump	Geopump 2	948	Other		
PID	OVM 580B	002	Other		

Groundwater Samples Collected (check all that apply)

Analytes of Concern	Off-Site Lab	Fate and Transport Data	Off-Site Lab
Fe (Total)	X	Chloride	X
Fe (Dis.)	X	Alkalinity	X
As (Dis.)		Ethane	X
Mn (Dis.)		Ethene	X
VOCs	X	Hydrogen	X
		Nitrate	X

Field Test Kit Analyses

	Unfiltered	Filtered
Fe^{2+} (mg/L)	NA	NA
Mn^{2+} (mg/L)		

Filter where turbidity > 50 NTU.

Downhole Dissolved Oxygen

Top (mg/L)	NA
Middle (mg/L)	
Bottom (mg/L)	

Sample Number: 0306H015

Sample Date/Time: 2/6/03 1115

QA/QC Sample(s)? [X] None [ ] Field Dup [ ] MS/MSD

Dup. Sample Time _____ Dup. Sample Number _____

Comments: Pump intake at ~29.5' bgs

Method of Extraction:
- [ ] Submersible Pump
- [X] Peristaltic Pump
- [ ] Disposable Bailer

Method of Sampling:
- [ ] Submersible Pump
- [X] Peristaltic Pump
- [ ] Disposable Bailer

Revised 10/31/02

TETRA TECH INC.
MONITORING WELL SAMPLING SHEET

Well No.: 1R28MW933F5

Sheet 2 of 2

Personnel: D. CHENG

Day: THURSDAY

Date: 2/6/03

Casing Volume = NA Gallons

Initial depth to water: ft. below top of casing

[casing volume = water column height (ft) x 0.03 gal/ft (0.75-inch well) or 0.163 gal/ft (2-inch well) or 0.652 gal/ft (4-inch well)]

Organic Vapor Concentrations
Top of Casing: Φ ppm Background: Φ ppm

Groundwater Parameters

Time	Cumulative Volume Purged (L)	Discharge Rate (mL/min)	Depth to water (ft. below TOC)	Temperature (°C)	Specific Conductivity (mS/cm)	Dissolved Oxygen (mg/L)	pH	ORP (mv)	Turbidity (NTU)	PID/OVM (ppm)
1049	11	141	NA	16.78	0.571	0.17	7.04	-237.7	48.3	0
1049	12	141	"	16.80	0.569	0.17	7.04	-241.6	32.2	0
1053	13	141	"	16.85	0.566	0.17	7.03	-224.1	30.3	0
1059	14	141	"	16.86	0.565	0.17	7.03	-232.9	29.7	0
1104	15	141	"	16.89	0.562	0.16	7.03	-261.7	31.1	0

After sampling and, if accessible, depth to bottom: NA ft. below TOC Purged Dry? N

Field Measurement Equipment Used

Equipment	Model	Serial Number	Equipment	Model	Serial Number
Water Quality Meter			Filter Apparatus		
Water Level Meter			Other		
Pump			Other		
PID			Other		

Groundwater Samples Collected (check all that apply)

Analytes of Concern	Off-Site Lab	Fate and Transport Data	Off-Site Lab	Field Test Kit Analyses	Unfiltered	Filtered
Fe (Total)		Chloride		Fe^{2+} (mg/L)		
Fe (Dis.)		Alkalinity		Mn^{2+} (mg/L)		
As (Dis.)		Ethane		Filter where turbidity > 50 NTU.		
Mn (Dis.)		Ethene		Downhole Dissolved Oxygen		
VOCs		Hydrogen		Top (mg/L)		
				Middle (mg/L)		
				Bottom (mg/L)		

Sample Number: Sample Date/Time:

QA/QC Sample(s)? ☐ None ☐ Field Dup ☐ MS/MSD

Dup. Sample Time Dup. Sample Number

Comments:

Method of Extraction:
☐ Submersible Pump
☐ Peristaltic Pump
☐ Disposable Bailer

Method of Sampling:
☐ Submersible Pump
☐ Peristaltic Pump
☐ Disposable Bailer

Revised 10/31/02

TETRA TECH INC.
MONITORING WELL SAMPLING SHEET

Well No.: 1R28MW934FS

Sheet 1 of 2

Personnel: H. Cheng

Day: Thursday

Date: 2/6/03

Casing Volume = NA Gallons

Initial depth to water: NA ft. below top of casing

[casing volume = water column height (ft) x 0.03 gal/ft (0.75-inch well) or 0.163 gal/ft (2-inch well) or 0.652 gal/ft (4-inch well)]

Organic Vapor Concentrations
Top of Casing: Φ ppm Background: Φ ppm

Groundwater Parameters

Time	Cumulative Volume Purged (L)	Discharge Rate (mL/min)	Depth to water (ft. below TOC)	Temperature (°C)	Specific Conductivity (mS/cm)	Dissolved Oxygen (mg/L)	pH	ORP (mv)	Turbidity (NTU)	PID/OVM (ppm)
1559	Φ	133	NA	16.51	Φ.95Φ	Φ.72	7.Φ5	-46.5	185.1	Φ
16Φ6	1	15Φ	"	16.67	Φ.987	Φ.27	6.98	-17.Φ	151.5	Φ
1612	2	15Φ	"	16.79	Φ.987	Φ.24	6.95	16.Φ	4Φ.2	Φ
1617	3	15Φ	"	16.81	Φ.985	Φ.33	6.93	36.3	21.8	Φ
1623	4	15Φ	"	16.85	Φ.987	Φ.38	6.9Φ	56.8	26.Φ	Φ
1629	5	15Φ	"	16.87	Φ.985	Φ.37	6.88	74.Φ	13.9	Φ
1636	6	15Φ	"	16.91	Φ.982	Φ.34	6.86	92.9	12.3	Φ
1641	7	191	"	16.89	Φ.982	Φ.35	6.84	1Φ9.5	6.23	Φ
1646	8	191	"	16.9Φ	Φ.981	Φ.36	6.83	118.6	4.88	Φ
1651	9	191	"	16.9Φ	Φ.982	Φ.36	6.82	13Φ.5	4.21	Φ
1656	1Φ	191	"	16.91	Φ.983	Φ.37	6.82	135.2	3.56	Φ

After sampling and, if accessible, depth to bottom: NA ft. below TOC Purged Dry? N

Field Measurement Equipment Used

Equipment	Model	Serial Number	Equipment	Model	Serial Number
Water Quality Meter		Φ2MΦ6Φ5AB	Filter Apparatus	Φ.45 μm	NA
Water Level Meter	—	—	Other Turbidimeter	DRT-15CE	745
Pump	Grapino 2	ΦΦ8	Other		
PID	Thermo 580B	7336Φ-373	Other		

Groundwater Samples Collected (check all that apply)

Analytes of Concern (Off-Site Lab)		Fate and Transport Data: Off-Site Lab	
Fe (Total)	X	Chloride	X
Fe (Dis.)	X	Alkalinity	X
As (Dis.)		Ethane	X
Mn (Dis.)		Ethene	X
VOCs	X	Hydrogen	X

Field Test Kit Analyses

	Unfiltered	Filtered
Fe^{2+} (mg/L)	NA	NA
Mn^{2+} (mg/L)		

Filter where turbidity > 50 NTU.

Downhole Dissolved Oxygen

Top (mg/L)	
Middle (mg/L)	N/A
Bottom (mg/L)	

Sample Number: ΦΦ3Φ6MΦ2Φ

Sample Date/Time: 3/6/Φ3 171Φ

QA/QC Sample(s)? [X] None [ ] Field Dup [ ] MS/MSD

Dup. Sample Time _____ Dup. Sample Number _____

Comments: Pump intake at ~29.5' bgs.

Method of Extraction:
- [ ] Submersible Pump
- [X] Peristaltic Pump
- [ ] Disposable Bailer

Method of Sampling:
- [ ] Submersible Pump
- [X] Peristaltic Pump
- [ ] Disposable Bailer

Revised 10/31/02

TETRA TECH INC.
MONITORING WELL SAMPLING SHEET

Well No.: 1R28MW934F5

Sheet 2 of 2

Personnel: H. Chung

Day: Thursday

Date: 2/6/03

Casing Volume = NA Gallons

Initial depth to water: NA ft. below top of casing

[casing volume = water column height (ft) x 0.03 gal/ft (0.75-inch well) or 0.163 gal/ft (2-inch well) or 0.652 gal/ft (4-inch well)]

Organic Vapor Concentrations
Top of Casing: 0.0 ppm Background: 0 ppm

Groundwater Parameters

Time	Cumulative Volume Purged (L)	Discharge Rate (mL/min)	Depth to water (ft. below TOC)	Temperature (°C)	Specific Conductivity (mS/cm)	Dissolved Oxygen (mg/L)	pH	ORP (mv)	Turbidity (NTU)	PID/OVM (ppm)
1701	11	191	NA	16.92	0.983	0.37	6.81	138.1	3.22	0

After sampling and, if accessible, depth to bottom: NA ft. below TOC Purged Dry? NO

Field Measurement Equipment Used

Equipment	Model	Serial Number	Equipment	Model	Serial Number
Water Quality Meter			Filter Apparatus		
Water Level Meter			Other		
Pump			Other		
PID			Other		

SEE FIRST PAGE

Groundwater Samples Collected (check all that apply)

Analytes of Concern (Off-Site Lab)		Fate and Transport Data (Off-Site Lab)	
Fe (Total)	X	Chloride	X
Fe (Dis.)	X	Alkalinity	X
As (Dis.)		Ethane	X
Mn (Dis.)		Ethene	X
VOCs	X	Hydrogen	X

Field Test Kit Analyses

	Unfiltered	Filtered
Fe^{2+} (mg/L)	NA	NA
Mn^{2+} (mg/L)		

Filter where turbidity > 50 NTU.

Downhole Dissolved Oxygen

Top (mg/L)	
Middle (mg/L)	NA
Bottom (mg/L)	

Sample Number: 0306H020

Sample Date/Time: 2/6/03 1710

QA/QC Sample(s)? [X] None [ ] Field Dup [ ] MS/MSD

Dup. Sample Time _____ Dup. Sample Number _____

Comments: Pump intake at -29.5' bgs

Method of Extraction:
- [ ] Submersible Pump
- [X] Peristaltic Pump
- [ ] Disposable Bailer

Method of Sampling:
- [ ] Submersible Pump
- [X] Peristaltic Pump
- [ ] Disposable Bailer

Revised 10/31/02

TETRA TECH INC.
MONITORING WELL SAMPLING SHEET

Well No.: 1R281W938F

Sheet 1 of 1

Personnel: D. CHENG

Day: WEDNESDAY

Date: 2/5/03

Casing Volume = NA Gallons

Initial depth to water: 7.24 ft. below top of casing

[casing volume = water column height (ft) x 0.03 gal/ft (0.75-inch well) or 0.163 gal/ft (2-inch well) or 0.652 gal/ft (4-inch well)]

Organic Vapor Concentrations
Top of Casing: 18.2 ppm Background: 0 ppm

Groundwater Parameters

Time	Cumulative Volume Purged (L)	Discharge Rate (mL/min)	Depth to water (ft. below TOC)	Temperature (°C)	Specific Conductivity (mS/cm)	Dissolved Oxygen (mg/L)	pH	ORP (mv)	Turbidity (NTU)	PID/OVM (ppm)
0926	0	—	7.24	16.34	0.480	0.17	8.82	-700.0	0.46	0
0929	1	200	7.43	16.70	0.458	0.06	8.80	-690.1	3.76	0
0933	2	160	7.48	16.64	0.454	0.07	8.84	-648.1	62.2	0
0937	3	160	7.51	16.65	0.453	0.22	8.85	-671.9	191	0
0941	4	160	7.54	16.67	0.453	0.65	8.87	-700.6	231	0
0948	11	240	7.82	16.92	0.454	0.22	8.84	-690.8	257	0
0957	12	300	7.80	16.86	0.455	0.64	8.84	-693.2	254	0
1000	13	300	7.78	16.82	0.454	0.45	8.85	-683.3	251	0
1002	14	300	7.81	16.83	0.453	0.46	8.85	-689.7	254	0

Modified micropurge @ 400 ml/min

After sampling and, if accessible, depth to bottom: 15.73 ft. below TOC Purged Dry? NO

Field Measurement Equipment Used

Equipment	Model	Serial Number	Equipment	Model	Serial Number
Water Quality Meter	YSI 556	02M0605 AB	Filter Apparatus	0.45 µm	N/A
Water Level Meter solinst 122	~~OVM 5808~~	~~002~~ 429	Other Turbidimeter	DRT-15CE	745
Pump	Geopump 2	948	Other		
PID	OVM 5808	002	Other		

Groundwater Samples Collected (check all that apply)

Analytes of Concern (Off-Site Lab)		Fate and Transport Data (Off-Site Lab)	
Fe (Total)	X	Chloride	X
Fe (Dis.)	X	Alkalinity	X
As (Dis.)	X	Ethane	X
Mn (Dis.)	X	Ethene	X
VOCs	X	Hydrogen	X

Field Test Kit Analyses

	Unfiltered	Filtered
Fe^{2+} (mg/L)	NA	NA
Mn^{2+} (mg/L)		

Filter where turbidity > 50 NTU.

Downhole Dissolved Oxygen

Top (mg/L)	NA
Middle (mg/L)	
Bottom (mg/L)	

Sample Number: 03060005

Sample Date/Time: 2/5/03 1010

QA/QC Sample(s)? [X] None [ ] Field Dup [ ] MS/MSD

Dup. Sample Time _____ Dup. Sample Number _____

Comments: Pump intake at 131 bgs

Method of Extraction:
- [ ] Submersible Pump
- [X] Peristaltic Pump
- [ ] Disposable Bailer

Method of Sampling:
- [ ] Submersible Pump
- [X] Peristaltic Pump
- [ ] Disposable Bailer

Revised 10/31/02

TETRA TECH INC.
MONITORING WELL SAMPLING SHEET

Well No.: 1R281W939F

Sheet 1 of 1

Personnel: H. Cheng

Day: Friday

Date: 2/7/03

Casing Volume = NA Gallons

Initial depth to water: 7.24 ft. below top of casing

[casing volume = water column height (ft) x 0.03 gal/ft (0.75-inch well) or 0.163 gal/ft (2-inch well) or 0.652 gal/ft (4-inch well)]

Organic Vapor Concentrations
Top of Casing: 106.7 ppm Background: 0 ppm

Groundwater Parameters

Time	Cumulative Volume Purged (L)	Discharge Rate (mL/min)	Depth to water (ft. below TOC)	Temperature (°C)	Specific Conductivity (mS/cm)	Dissolved Oxygen (mg/L)	pH	ORP (mv)	Turbidity (NTU)	PID/OVM (ppm)
1057	0	160	7.25	16.15	0.588	3.20	8.39	-346.5	4.83	0
1102	1	160	7.26	16.28	0.591	0.51	8.48	-369.9	4.29	0
1107	2	171	7.27	16.36	0.591	0.37	8.50	-350.1	3.99	0
1111	3	171	7.28	16.40	0.591	0.31	8.51	-370.5	3.79	0
1116	4	171	7.29	16.40	0.591	0.25	8.51	-340.1	3.68	0
1120	5	171	7.29	16.41	0.591	0.22	8.51	-348.7	3.54	0
1125	6	171	7.30	16.43	0.591	0.21	8.52	-370.1	3.46	0
1130	7	185	7.30	16.43	0.591	0.20	8.52	-390.2	3.18	0
1135	8	185	7.30	16.44	0.591	0.19	8.52	-420.7	3.15	0
1139	9	185	7.30	16.45	0.591	0.18	8.52	-423.4	3.33	0
1144	10	185	7.30	16.45	0.591	0.18	8.52	-427.1	3.26	0

After sampling and, if accessible, depth to bottom: 20.32 ft. below TOC Purged Dry? N

Field Measurement Equipment Used

Equipment	Model	Serial Number	Equipment	Model	Serial Number
Water Quality Meter	YSI 556	02J0179 A1	Filter Apparatus	0.45 µm	NA
Water Level Meter	Solinst-122	122 004624-1	Other Turbid. meter	DRT-15C	745
Pump	Grundfos	008	Other		
PID	Thermo	73360-373	Other		

Groundwater Samples Collected (check all that apply)

Analytes of Concern (Off-Site Lab)		Fate and Transport Data (Off-Site Lab)	
Fe (Total)	X	Chloride	X
Fe (Dis.)	X	Alkalinity	X
As (Dis.)	X	Ethane	X
Mn (Dis.)	X	Ethene	X
VOCs	X	Hydrogen	X

Field Test Kit Analyses

	Unfiltered	Filtered
Fe^{2+} (mg/L)	NA	NA
Mn^{2+} (mg/L)		

Filter where turbidity > 50 NTU.

Downhole Dissolved Oxygen

Top (mg/L)	
Middle (mg/L)	NA
Bottom (mg/L)	

Sample Number: 030604026

Sample Date/Time: 2/7/03 1145

QA/QC Sample(s)? [X] None [ ] Field Dup [ ] MS/MSD

Dup. Sample Time _____ Dup. Sample Number _____

Comments: Pump intake at 15' bgs

Method of Extraction:
[ ] Submersible Pump
[X] Peristaltic Pump
[ ] Disposable Bailer

Method of Sampling:
[ ] Submersible Pump
[X] Peristaltic Pump
[ ] Disposable Bailer

Revised 10/31/02

ENCLOSURE 2
CHAIN-OF-CUSTODY FORMS

Tetra Tech EM Inc.
San Francisco Office

135 Main St. Suite 1800
San Francisco. CA 94105
415-543-4880
Fax 415-543-5480

Chain of Custody Record No. 4381

4381

Lab PO#:	Lab:
022277	Columbia

Project name:	TtEMI technical contact:	Field samplers:
Ferox Injection Tech. Demo.	Deb Kutsal	Hwakong Cheng

Project (CTO) number:	TtEMI project manager:	Field samplers' signatures:
GA06013035020709	John McCall	[signature]

Preservative Added: HCl; HCl; HNO3; HNO3; HNO3

Sample ID	Sample Location (Pt. ID)	Date	Time	Matrix	MS / MSD	40 ml VOA	1 liter Amber	500 ml Poly	Sleeve	Glass Jar	VOA	SVOA	Pest/PCBs	Metals	TPH Purgeables	TPH Extractables	Ethane/Ethene	Diss. Hydrogen	Total Fe	Diss. Fe	Chloride	Alkalinity	Diss As/Mn
030604001	Trip blank	2/4/03	1200	WATER	-	2					X												
030604002	1R28MW311A		1610		-	7	-	3			X						X	X	X	X	X		
030604003	1R28MW311A duplicate		1620		-	3	-	2			X								X	X			
030604004	Equipment Rinsate		1640		-	3	-	1			X								X				
030604005	1R28IW938F	2/5/03	1010		-	7	-	3			X						X	X	X	X	X	X	
030604006	1R28MW357F		1020		-	7	-	3			X						X	X	X	X	X	X	
030604007	1R28MW357F DUP		1040		-	3	-	2			X								X	X	-	X	
030604008	1R28MW~~342F~~ 355F		1155		-	7	-	3			X						X	X	X	X	X	X	
030604009	1R28MW356F		1115		-	7	-	3			X						X	X	X	X	X	X	
030604010	1R28MW342F		1520		-	7	-	3			X						X	X	X	X	X		
030604011	1R28MW351F		1615		-	7	-	3			X						X	X	X	X	X	X	
030604012	1R28MW275F		1640		-	7	-	3			X						X	X	X	X	X		

	Name (print)	Company Name	Date	Time
Relinquished by: [signature]	Hwakong Cheng	TtEMI	2/6/03	1930
Received by: Fed Ex				
Relinquished by:				
Received by:				
Relinquished by:				
Received by:				

Turnaround time/remarks:

Dissolved metals samples are field filtered

Fed Ex #: 8368 9469 4638

WHITE-Laboratory Copy YELLOW-Sample Tracker PINK-File Copy

N00217.000697
HUNTERS POINT
SSIC NO. 5090.3

ENCLOSURE (2)
CHAIN-OF-CUSTODY FORMS

CHAIN OF CUSTODY RECORD NO. 4382
PAGE 1 OF 2

USER DATA PACKAGE 4 - RESULTS OF THE POST-INJECTION ROUND 2 SAMPLING, PARCEL C TREATABILITY STUDY SUPPORT

THE ABOVE IDENTIFIED PAGE IS NOT AVAILABLE.

EXTENSIVE RESEARCH WAS PERFORMED BY SOUTHWEST DIVISION TO LOCATE THIS PAGE. THIS PAGE HAS BEEN INSERTED AS A PLACEHOLDER AND WILL BE REPLACED SHOULD THE MISSING ITEM BE LOCATED.

QUESTIONS MAY BE DIRECTED TO:

DIANE C. SILVA
RECORDS MANAGEMENT SPECIALIST
SOUTHWEST DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
1220 PACIFIC HIGHWAY
SAN DIEGO, CA 92132

TELEPHONE: (619) 532-3676

Tetra Tech EM Inc.
San Francisco Office

135 Main St. Suite 1800
San Francisco. CA 94105
415-543-4880
Fax 415-543-5480

Chain of Custody Record No. 4382

4382

Lab PO#:	022277
Lab:	Columbia
Project name:	Ferox Injection Tech. Demo.
TtEMI technical contact:	Dob Lutsal
Field samplers:	Hwakong Chang
Project (CTO) number:	019100013 030502070 9
TtEMI project manager:	John McCall
Field samplers' signatures:	

Preservative Added: HCl; HNO3; HNO3; 1; HNO3; 1; HCl; 1

No./Container Types: 40 ml VOA; 1 liter Amber; 500 ml Poly; Sleeve; Glass Jar

Analysis Required: VOA; SVOA; Pest/PCBs; Metals; TPH Purgeables; TPH Extractables; Total Fe; Diss. As/Mn; Nitrate; Diss. Fe; Alkalinity/Chloride; Ethane/Ethene; Diss. Fe

Sample ID	Sample Location (Pt. ID)	Date	Time	Matrix	MS / MSD	40 ml VOA	1 liter Amber	500 ml Poly	Sleeve	Glass Jar	VOA	SVOA	Pest/PCBs	Metals	TPH Purgeables	TPH Extractables	Total Fe	Diss. As/Mn	Nitrate	Diss. Fe	Alkalinity/Chloride	Ethane/Ethene	Diss. Fe
0306H013	Equipment Rinsate	2/5/03	1710	WATER	~~2~~	3	-	2			X						X	X					
0306H014	1R28MW359F	2/6/03	1040		-	7	-	3			X						X	-	X	X	X	X	X
0306H015	1R28MW933F5		1115		-	7	-	3			X						X	-	X	X	X	X	X
0306H016	1R28MW358F		1140		X	10	-	6			X						X	X	-	X	X	X	X
0306H017	1R28MW362F		1240		-	7	-	3			X						X	-	X	X	X	X	X
0306H018	1R28MW361F		1315		-	7	-	3			X						X	-	X	X	X	X	X
0306H019	1R28MW341F		1640		-	7	-	3			X						X	-	X	X	X	X	X
0306H020	1R28MW934F5		1710		-	7	-	3			X						X	-	X	X	X	X	X
0306H021	Equipment Rinsate		1730		-	3	-	2			X						X	X					

	Name (print)	Company Name	Date	Time
Relinquished by:	Hwakong Chang	TtEMI	2/6/03	1930
Received by: Fed Ex				
Relinquished by:				
Received by:				
Relinquished by:				
Received by:				

Turnaround time/remarks:

MS/MSD for 0306H016 for VOCs, Total Fe, Diss Fe, As, & Mn, and chloride.
Dissolved metals are field filtered.

Fed Ex #: 8368 9469 4638

WHITE-Laboratory Copy YELLOW-Sample Tracker PINK-File Copy

Tetra Tech EM Inc.
San Francisco Office

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Chain of Custody Record No. 4383

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4383

Lab PO#:	Ø22277
Lab:	COLUMBIA
Project name:	FEROX INJ TECH DEMO
TtEMI technical contact:	DEB KUTSAL
Field samplers:	HWAKONG CHENG
Project (CTO) number:	69016013030502Ø709
TtEMI project manager:	JOHN MCCALL
Field samplers' signatures:	[signature]

Preservative Added: HCl; HNO3; HNO3; HNO3; HCl; —; —; —

No./Container Types: 40 ml VOA; 1 liter Amber; 500 ml Poly; Sleeve; Glass Jar

Analysis Required: VOA; SVOA; Pest/PCBs; Metals; TPH Purgeables; TPH Extractables; Total Fe; Diss Fe; Diss As, Mn; Ethane/Ethene; Diss Hydrogen; Alkalinity/Chloride; Nitrate

Sample ID	Sample Location (Pt. ID)	Date	Time	Matrix	MS / MSD	40 ml VOA	1 liter Amber	500 ml Poly	Sleeve	Glass Jar	VOA	SVOA	Pest/PCBs	Metals	TPH Purgeables	TPH Extractables	Total Fe	Diss Fe	Diss As, Mn	Ethane/Ethene	Diss Hydrogen	Alkalinity/Chloride	Nitrate
Ø3Ø6HØ22	TRIP BLANK	2/7/03	ØØ9ØØ	WATER	–	3					X												
Ø3Ø6HØ23	1R28MW36ØF	↓	1Ø25	↓	–	7	–	3			X						X	X	X	X	X	X	X
Ø3Ø6HØ24	1R28MW932F		1Ø3Ø		–	7	–	3			X						X	X	X	X	X	X	
Ø3Ø6HØ25	1R28MW211F		114Ø		–	7	–	3			X						X	X	–	X	X	X	
Ø3Ø6HØ26	~~1R28MW~~ 1R28IW939F		1145		–	7	–	3			X						X	X	X	X	X	X	
Ø3Ø6HØ27	EQUIPMENT RINSATE		12ØØ		–	3	–	2			X						X	X	X				

	Name (print)	Company Name	Date	Time
Relinquished by: [signature]	HWAKONG CHENG	TtEMI	2/7/03	14ØØ
Received by: SHIPPED VIA FEDEX				
Relinquished by:				
Received by:				
Relinquished by:				
Received by:				

Turnaround time/remarks:
DISS. METALS ARE FIELD FILTERED

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ENCLOSURE 3
GROUNDWATER LEVEL MEASUREMENT FORMS

TETRA TECH EM INC.
GROUNDWATER LEVEL MEASUREMENTS LOG

Type of organic vapor meter used (circle): (PID) FID

Well Identification Number	Organic Vapor Information: PID/FID Reading (ppm)	Organic Vapor Information: Date	Water Level Information: Well previously equilibrated? (Yes/No)	Water Level Information: If not previously equilibrated, pressure detected when cap removed? (NA/Yes/No)	Depth to Groundwater Information: Time	Depth to Groundwater Information: Date	Depth to Groundwater Information: Depth to Groundwater[1] from Pump Platform or Riser, if present (feet)	Depth to Groundwater Information: Thickness of Pump Platform or Riser, if present (feet)	Depth to Groundwater Information: Depth to Groundwater[1] from Top of PVC Casing (feet)	Depth to Well Bottom from Top of PVC Casing[2] (feet)	Comments
1R28MW935F	6.8	2/4/03	YES	NA	1158	2/4/03	NA	NA	7.06	19.52	Long tone at 7.06 silt residue on probe
1R28MW361F	10.9	↓	↓	↓	1202	↓	↓	↓	6.82	20.17	Silt residue on probe
1R28MW940F	4.2	↓	↓	↓	1204	↓	↓	↓	7.02	20.44	Silt residue on probe
1R28MW342F	10.7	↓	↓	↓	1213	↓	↓	↓	6.85	14.66	Soft bottom Slurry residue on probe
1R28MW360F	20.7	↓	↓	↓	1216	↓	↓	↓	6.58	20.33	Long tone at 6.58' Silt residue on probe
1R28MW355F	2.0	↓	↓	↓	1219	↓	↓	↓	7.12	20.34	
1R28MW352F	1.3	↓	↓	↓	1222	↓	↓	↓	7.08	20.18	Long tone at 7.08'
1R28MW359F	3.1	↓	↓	↓	1156	↓	↓	↓	6.63	20.35	~~Silt residue on probe~~
1R28MW937F	10.2	↓	↓	↓	1207	↓	↓	↓	6.95	20.06	Long tone at 6.95 Silt residue on probe
1R28MW341F	63.9	↓	↓	↓	1210	↓	↓	↓	7.19	16.65	Soft bottom Slurry residue on probe

Notes: 1 Where bladder pump sampling platform or riser is present, depth to water must be corrected to depth from top of PVC casing.
2 Note if access to well bottom is limited by presence of dedicated bladder pump.

Field Staff: H. CHENG, D. CHENG

Field Staff Signature: [signature]

Page No.: 1/3

Date: 2/4/03

TETRA TECH EM INC.
GROUNDWATER LEVEL MEASUREMENTS LOG

Type of organic vapor meter used (circle): PID FID

Well Identification Number	Organic Vapor Information: PID/FID Reading (ppm)	Organic Vapor Information: Date	Water Level Information: Well previously equilibrated? (Yes/No)	Water Level Information: If not previously equilibrated, pressure detected when cap removed? (NA/Yes/No)	Depth to Groundwater Information: Time	Depth to Groundwater Information: Date	Depth to Groundwater Information: Depth to Groundwater[1] from Pump Platform or Riser, if present (feet)	Depth to Groundwater Information: Thickness of Pump Platform or Riser, if present (feet)	Depth to Groundwater Information: Depth to Groundwater[1] from Top of PVC Casing (feet)	Depth to Well Bottom from Top of PVC Casing[2] (feet)	Comments
1R28MW351F	1.7	2/4/03	YES	N/A	1144	2/4/03	NA	NA	7.06	60.09 ~~[illegible]~~	Long tone at 7.06'
1R28MW936F	162.1	↓	↓	↓	1139	↓	↓	↓	5.19	19.99	slurry residue on probe
1R28MW211F	156.1	↓	↓	↓	1135	↓	↓	↓	6.90	15.69	Slurry residue on probe.
1R28MW362F	4.8	↓	↓	↓	1132	↓	↓	↓	7.07	16.88	
1R28MW139F	106.7	↓	↓	↓	1128	↓	↓	↓	7.09	20.32	~~Soft bottom, slurry residue on~~ Long tone at 7.09- probe
1R28MW932F	28.4	↓	↓	↓	1126	↓	↓	↓	6.90	30.57	
1R28MW938F	18.2	↓	↓	↓	1147	↓	↓	↓	7.21	~15.73	Long tone at 7.21 ~~Soft bottom, slurry residue on~~ probe
1R28MW357F	1.8	↓	↓	↓	1152	↓	↓	↓	6.63	20.33	Silt residue on probe
1R28MW358F	0	↓	↓	↓	1154	↓	↓	↓	6.71	20.31	
1R28MW275F	10.2	↓	↓	↓	1124	↓	↓	↓	6.49	12.25	

Notes: 1 Where bladder pump sampling platform or riser is present, depth to water must be corrected to depth from top of PVC casing.
2 Note if access to well bottom is limited by presence of dedicated bladder pump.

Field Staff: H. CHENG, D. CHENG

Field Staff Signature: [illegible]

Page No.: 2/3

Date: 2/4/03

TETRA TECH EM INC.
GROUNDWATER LEVEL MEASUREMENTS LOG

Type of organic vapor meter used (circle): PID FID

Well Identification Number	Organic Vapor Information		Water Level Information							Depth to Well Bottom from Top of PVC Casing[2] (feet)	Comments
					Depth to Groundwater Information						
	PID/FID Reading (ppm)	Date	Well previously equilibrated? (Yes/No)	If not previously equilibrated, pressure detected when cap removed? (NA/Yes/No)	Time	Date	Depth to Groundwater[1] from Pump Platform or Riser, if present (feet)	Thickness of Pump Platform or Riser, if present (feet)	Depth to Groundwater[1] from Top of PVC Casing (feet)		
1R28MW3ΦF	4Φ.2	2/4/Φ3	YES	NA	1120	2/4/Φ3	NA	NA	5.51	35.43	long beep at 5.51'
1R28MW311A	Φ	↓	↓	↓	1117	↓	↓	↓	4.81	19.57	
1R28MW393F	Φ	↓	↓	↓	1114	↓	↓	↓	5.33	58.81	long beep at 5.33'
1R28MW4Φ2F	4.2	↓	↓	↓	111Φ	↓	↓	↓	5.43	42.32	

Notes: 1 Where bladder pump sampling platform or riser is present, depth to water must be corrected to depth from top of PVC casing.
2 Note if access to well bottom is limited by presence of dedicated bladder pump.

Field Staff: H. CHENG, D. CHENG

Field Staff Signature: [signature]

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Date: 2/4/Φ3

ENCLOSURE 4
ANALYTICAL LABORATORY REPORTS

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT ID.

0306H001

Lab Name: COLUMBIA ANALYTICAL SERVICES - REDDING

Case No.: D9467 SDG No.: D9467 Lab Sample ID: D9467001

Matrix: WATER Level: LOW Lab File ID: R030519

Sample Volume: 10.0 ML Date Received: 02/07/03

Date Analyzed: 02/12/03

Dilution Factor: 1.0

CAS NO.	COMPOUND Units: UG/L	MDL	RL	RESULT	Q
75-71-8	Dichlorodifluoromethane	0.26	1.0	1.0	U
74-87-3	Chloromethane	0.20	1.0	1.0	U
75-01-4	Vinyl chloride	0.26	1.0	1.0	U
74-83-9	Bromomethane	0.32	1.0	1.0	U
75-00-3	Chloroethane	0.28	1.0	1.0	U
75-69-4	Trichlorofluoromethane	0.29	1.0	1.0	U
75-35-4	1,1-Dichloroethene	0.29	1.0	1.0	U
76-13-1	1,1,2-Trichlorotrifluoroetha	0.27	1.0	1.0	U
67-64-1	Acetone	0.62	5.0	1.0	J
75-15-0	Carbon disulfide	0.25	1.0	1.0	U
75-09-2	Methylene chloride	0.15	2.0	0.20	J
156-60-5	trans-1,2-Dichloroethene	0.28	1.0	1.0	U
1634-04-4	Methyl tert-butylether	0.22	1.0	1.0	U
75-34-3	1,1-Dichloroethane	0.12	1.0	1.0	U
156-59-2	cis-1,2-Dichloroethene	0.23	1.0	1.0	U
78-93-3	2-Butanone	0.71	5.0	5.0	U
74-97-5	Bromochloromethane	0.15	1.0	1.0	U
67-66-3	Chloroform	0.11	1.0	0.80	J
71-55-6	1,1,1-Trichloroethane	0.22	1.0	1.0	U
56-23-5	Carbon tetrachloride	0.21	1.0	1.0	U
71-43-2	Benzene	0.13	1.0	1.0	U
107-06-2	1,2-Dichloroethane	0.24	1.0	1.0	U
79-01-6	Trichloroethene	0.24	1.0	1.0	U
78-87-5	1,2-Dichloropropane	0.12	1.0	1.0	U
75-27-4	Bromodichloromethane	0.11	1.0	1.0	U
10061-01-5	cis-1,3-Dichloropropene	0.21	1.0	1.0	U
108-10-1	4-Methyl-2-pentanone	0.47	5.0	5.0	U
108-88-3	Toluene	0.23	1.0	1.0	U
10061-02-6	trans-1,3-Dichloropropene	0.20	1.0	1.0	U
79-00-5	1,1,2-Trichloroethane	0.28	1.0	1.0	U
127-18-4	Tetrachloroethene	0.26	1.0	1.0	U
591-78-6	2-Hexanone	0.33	5.0	5.0	U
124-48-1	Dibromochloromethane	0.11	1.0	1.0	U
106-93-4	1,2-Dibromoethane	0.19	1.0	1.0	U
108-90-7	Chlorobenzene	0.11	1.0	1.0	U
100-41-4	Ethylbenzene	0.21	1.0	1.0	U
100-42-5	Styrene	0.11	1.0	1.0	U
75-25-2	Bromoform	0.19	1.0	1.0	U

FORM I VOA SW846

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT ID.

0306H001

Lab Name: COLUMBIA ANALYTICAL SERVICES - REDDING

Case No.: D9467 SDG No.: D9467 Lab Sample ID: D9467001

Matrix: WATER Level: LOW Lab File ID: R030519

Sample Volume: 10.0 ML Date Received: 02/07/03

Date Analyzed: 02/12/03

Dilution Factor: 1.0

CAS NO.	COMPOUND Units: UG/L	MDL	RL	RESULT	Q
1330-20-7	Xylene (total)	0.64	1.0	1.0	U
98-82-8	Isopropylbenzene	0.24	1.0	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	0.10	1.0	1.0	U
541-73-1	1,3-Dichlorobenzene	0.26	1.0	1.0	U
106-46-7	1,4-Dichlorobenzene	0.10	1.0	1.0	U
95-50-1	1,2-Dichlorobenzene	0.10	1.0	1.0	U
96-12-8	1,2-Dibromo-3-chloropropane	0.68	5.0	5.0	U
120-82-1	1,2,4-Trichlorobenzene	0.090	1.0	1.0	U
87-61-6	1,2,3-Trichlorobenzene	0.14	1.0	1.0	U

FORM I VOA SW846

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT ID.

0306H002

Lab Name: COLUMBIA ANALYTICAL SERVICES - REDDING

Case No.: D9467 SDG No.: D9467 Lab Sample ID: D9467002

Matrix: WATER Level: LOW Lab File ID: R030520

Sample Volume: 10.0 ML Date Received: 02/07/03

Date Analyzed: 02/12/03

Dilution Factor: 1.0

CAS NO.	COMPOUND Units: UG/L	MDL	RL	RESULT	Q
75-71-8	Dichlorodifluoromethane	0.26	1.0	1.0	U
74-87-3	Chloromethane	0.20	1.0	1.0	U
75-01-4	Vinyl chloride	0.26	1.0	1.0	U
74-83-9	Bromomethane	0.32	1.0	1.0	U
75-00-3	Chloroethane	0.28	1.0	1.0	U
75-69-4	Trichlorofluoromethane	0.29	1.0	2.0	
75-35-4	1,1-Dichloroethene	0.29	1.0	1.0	U
76-13-1	1,1,2-Trichlorotrifluoroetha	0.27	1.0	0.90	J
67-64-1	Acetone	0.62	5.0	5.0	U
75-15-0	Carbon disulfide	0.25	1.0	1.0	U
75-09-2	Methylene chloride	0.15	2.0	0.20	J
156-60-5	trans-1,2-Dichloroethene	0.28	1.0	1.0	U
1634-04-4	Methyl tert-butylether	0.22	1.0	1.0	U
75-34-3	1,1-Dichloroethane	0.12	1.0	1.0	U
156-59-2	cis-1,2-Dichloroethene	0.23	1.0	2.0	
78-93-3	2-Butanone	0.71	5.0	5.0	U
74-97-5	Bromochloromethane	0.15	1.0	1.0	U
67-66-3	Chloroform	0.11	1.0	1.0	U
71-55-6	1,1,1-Trichloroethane	0.22	1.0	1.0	U
56-23-5	Carbon tetrachloride	0.21	1.0	1.0	U
71-43-2	Benzene	0.13	1.0	1.0	U
107-06-2	1,2-Dichloroethane	0.24	1.0	1.0	U
79-01-6	Trichloroethene	0.24	1.0	4.0	
78-87-5	1,2-Dichloropropane	0.12	1.0	1.0	U
75-27-4	Bromodichloromethane	0.11	1.0	1.0	U
10061-01-5	cis-1,3-Dichloropropene	0.21	1.0	1.0	U
108-10-1	4-Methyl-2-pentanone	0.47	5.0	5.0	U
108-88-3	Toluene	0.23	1.0	0.30	J
10061-02-6	trans-1,3-Dichloropropene	0.20	1.0	1.0	U
79-00-5	1,1,2-Trichloroethane	0.28	1.0	1.0	U
127-18-4	Tetrachloroethene	0.26	1.0	1.0	U
591-78-6	2-Hexanone	0.33	5.0	5.0	U
124-48-1	Dibromochloromethane	0.11	1.0	1.0	U
106-93-4	1,2-Dibromoethane	0.19	1.0	1.0	U
108-90-7	Chlorobenzene	0.11	1.0	1.0	U
100-41-4	Ethylbenzene	0.21	1.0	1.0	U
100-42-5	Styrene	0.11	1.0	1.0	U
75-25-2	Bromoform	0.19	1.0	1.0	U

FORM I VOA SW846

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT ID.

0306H002

Lab Name: COLUMBIA ANALYTICAL SERVICES - REDDING

Case No.: D9467 SDG No.: D9467 Lab Sample ID: D9467002

Matrix: WATER Level: LOW Lab File ID: R030520

Sample Volume: 10.0 ML Date Received: 02/07/03

Date Analyzed: 02/12/03

Dilution Factor: 1.0

CAS NO.	COMPOUND Units: UG/L	MDL	RL	RESULT	Q
1330-20-7	Xylene (total)	0.64	1.0	1.0	U
98-82-8	Isopropylbenzene	0.24	1.0	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	0.10	1.0	1.0	U
541-73-1	1,3-Dichlorobenzene	0.26	1.0	1.0	U
106-46-7	1,4-Dichlorobenzene	0.10	1.0	1.0	U
95-50-1	1,2-Dichlorobenzene	0.10	1.0	1.0	U
96-12-8	1,2-Dibromo-3-chloropropane	0.68	5.0	5.0	U
120-82-1	1,2,4-Trichlorobenzene	0.090	1.0	1.0	U
87-61-6	1,2,3-Trichlorobenzene	0.14	1.0	1.0	U

FORM I VOA SW846

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT ID.

0306H003

Lab Name: COLUMBIA ANALYTICAL SERVICES - REDDING

Case No.: D9467 SDG No.: D9467 Lab Sample ID: D9467003

Matrix: WATER Level: LOW Lab File ID: R030521

Sample Volume: 10.0 ML Date Received: 02/07/03

Date Analyzed: 02/12/03

Dilution Factor: 1.0

CAS NO.	COMPOUND Units: UG/L	MDL	RL	RESULT	Q
75-71-8	Dichlorodifluoromethane	0.26	1.0	1.0	U
74-87-3	Chloromethane	0.20	1.0	1.0	U
75-01-4	Vinyl chloride	0.26	1.0	1.0	U
74-83-9	Bromomethane	0.32	1.0	1.0	U
75-00-3	Chloroethane	0.28	1.0	1.0	U
75-69-4	Trichlorofluoromethane	0.29	1.0	2.0	
75-35-4	1,1-Dichloroethene	0.29	1.0	1.0	U
76-13-1	1,1,2-Trichlorotrifluoroetha	0.27	1.0	0.80	J
67-64-1	Acetone	0.62	5.0	0.70	J
75-15-0	Carbon disulfide	0.25	1.0	1.0	U
75-09-2	Methylene chloride	0.15	2.0	0.30	J
156-60-5	trans-1,2-Dichloroethene	0.28	1.0	1.0	U
1634-04-4	Methyl tert-butylether	0.22	1.0	1.0	U
75-34-3	1,1-Dichloroethane	0.12	1.0	1.0	U
156-59-2	cis-1,2-Dichloroethene	0.23	1.0	2.0	
78-93-3	2-Butanone	0.71	5.0	5.0	U
74-97-5	Bromochloromethane	0.15	1.0	1.0	U
67-66-3	Chloroform	0.11	1.0	1.0	U
71-55-6	1,1,1-Trichloroethane	0.22	1.0	1.0	U
56-23-5	Carbon tetrachloride	0.21	1.0	1.0	U
71-43-2	Benzene	0.13	1.0	1.0	U
107-06-2	1,2-Dichloroethane	0.24	1.0	1.0	U
79-01-6	Trichloroethene	0.24	1.0	5.0	
78-87-5	1,2-Dichloropropane	0.12	1.0	1.0	U
75-27-4	Bromodichloromethane	0.11	1.0	1.0	U
10061-01-5	cis-1,3-Dichloropropene	0.21	1.0	1.0	U
108-10-1	4-Methyl-2-pentanone	0.47	5.0	5.0	U
108-88-3	Toluene	0.23	1.0	0.40	J
10061-02-6	trans-1,3-Dichloropropene	0.20	1.0	1.0	U
79-00-5	1,1,2-Trichloroethane	0.28	1.0	1.0	U
127-18-4	Tetrachloroethene	0.26	1.0	1.0	U
591-78-6	2-Hexanone	0.33	5.0	5.0	U
124-48-1	Dibromochloromethane	0.11	1.0	1.0	U
106-93-4	1,2-Dibromoethane	0.19	1.0	1.0	U
108-90-7	Chlorobenzene	0.11	1.0	1.0	U
100-41-4	Ethylbenzene	0.21	1.0	1.0	U
100-42-5	Styrene	0.11	1.0	1.0	U
75-25-2	Bromoform	0.19	1.0	1.0	U

FORM I VOA SW846

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT ID.

0306H003

Lab Name: COLUMBIA ANALYTICAL SERVICES - REDDING

Case No.: D9467 SDG No.: D9467 Lab Sample ID: D9467003

Matrix: WATER Level: LOW Lab File ID: R030521

Sample Volume: 10.0 ML Date Received: 02/07/03

Date Analyzed: 02/12/03

Dilution Factor: 1.0

CAS NO.	COMPOUND Units: UG/L	MDL	RL	RESULT	Q
1330-20-7	Xylene (total)	0.64	1.0	1.0	U
98-82-8	Isopropylbenzene	0.24	1.0	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	0.10	1.0	1.0	U
541-73-1	1,3-Dichlorobenzene	0.26	1.0	1.0	U
106-46-7	1,4-Dichlorobenzene	0.10	1.0	1.0	U
95-50-1	1,2-Dichlorobenzene	0.10	1.0	1.0	U
96-12-8	1,2-Dibromo-3-chloropropane	0.68	5.0	5.0	U
120-82-1	1,2,4-Trichlorobenzene	0.090	1.0	1.0	U
87-61-6	1,2,3-Trichlorobenzene	0.14	1.0	1.0	U

FORM I VOA SW846

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT ID.

0306H004

Lab Name: COLUMBIA ANALYTICAL SERVICES - REDDING

Case No.: D9467 SDG No.: D9467 Lab Sample ID: D9467004

Matrix: WATER Level: LOW Lab File ID: R030522

Sample Volume: 10.0 ML Date Received: 02/07/03

Date Analyzed: 02/12/03

Dilution Factor: 1.0

CAS NO.	COMPOUND Units: UG/L	MDL	RL	RESULT	Q
75-71-8	Dichlorodifluoromethane	0.26	1.0	1.0	U
74-87-3	Chloromethane	0.20	1.0	1.0	U
75-01-4	Vinyl chloride	0.26	1.0	1.0	U
74-83-9	Bromomethane	0.32	1.0	1.0	U
75-00-3	Chloroethane	0.28	1.0	1.0	U
75-69-4	Trichlorofluoromethane	0.29	1.0	1.0	U
75-35-4	1,1-Dichloroethene	0.29	1.0	1.0	U
76-13-1	1,1,2-Trichlorotrifluoroetha	0.27	1.0	1.0	U
67-64-1	Acetone	0.62	5.0	2.0	J
75-15-0	Carbon disulfide	0.25	1.0	1.0	U
75-09-2	Methylene chloride	0.15	2.0	0.20	J
156-60-5	trans-1,2-Dichloroethene	0.28	1.0	1.0	U
1634-04-4	Methyl tert-butylether	0.22	1.0	1.0	U
75-34-3	1,1-Dichloroethane	0.12	1.0	1.0	U
156-59-2	cis-1,2-Dichloroethene	0.23	1.0	1.0	U
78-93-3	2-Butanone	0.71	5.0	5.0	U
74-97-5	Bromochloromethane	0.15	1.0	1.0	U
67-66-3	Chloroform	0.11	1.0	1.0	U
71-55-6	1,1,1-Trichloroethane	0.22	1.0	1.0	U
56-23-5	Carbon tetrachloride	0.21	1.0	1.0	U
71-43-2	Benzene	0.13	1.0	1.0	U
107-06-2	1,2-Dichloroethane	0.24	1.0	1.0	U
79-01-6	Trichloroethene	0.24	1.0	1.0	U
78-87-5	1,2-Dichloropropane	0.12	1.0	1.0	U
75-27-4	Bromodichloromethane	0.11	1.0	1.0	U
10061-01-5	cis-1,3-Dichloropropene	0.21	1.0	1.0	U
108-10-1	4-Methyl-2-pentanone	0.47	5.0	5.0	U
108-88-3	Toluene	0.23	1.0	1.0	U
10061-02-6	trans-1,3-Dichloropropene	0.20	1.0	1.0	U
79-00-5	1,1,2-Trichloroethane	0.28	1.0	1.0	U
127-18-4	Tetrachloroethene	0.26	1.0	1.0	U
591-78-6	2-Hexanone	0.33	5.0	5.0	U
124-48-1	Dibromochloromethane	0.11	1.0	1.0	U
106-93-4	1,2-Dibromoethane	0.19	1.0	1.0	U
108-90-7	Chlorobenzene	0.11	1.0	1.0	U
100-41-4	Ethylbenzene	0.21	1.0	1.0	U
100-42-5	Styrene	0.11	1.0	1.0	U
75-25-2	Bromoform	0.19	1.0	1.0	U

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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT ID.

0306H004

Lab Name: COLUMBIA ANALYTICAL SERVICES - REDDING

Case No.: D9467 SDG No.: D9467 Lab Sample ID: D9467004

Matrix: WATER Level: LOW Lab File ID: R030522

Sample Volume: 10.0 ML Date Received: 02/07/03

Date Analyzed: 02/12/03

Dilution Factor: 1.0

CAS NO.	COMPOUND Units: UG/L	MDL	RL	RESULT	Q
1330-20-7	Xylene (total)	0.64	1.0	1.0	U
98-82-8	Isopropylbenzene	0.24	1.0	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	0.10	1.0	1.0	U
541-73-1	1,3-Dichlorobenzene	0.26	1.0	1.0	U
106-46-7	1,4-Dichlorobenzene	0.10	1.0	1.0	U
95-50-1	1,2-Dichlorobenzene	0.10	1.0	1.0	U
96-12-8	1,2-Dibromo-3-chloropropane	0.68	5.0	5.0	U
120-82-1	1,2,4-Trichlorobenzene	0.090	1.0	1.0	U
87-61-6	1,2,3-Trichlorobenzene	0.14	1.0	1.0	U

FORM I VOA SW846

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT ID.

0306H005

Lab Name: COLUMBIA ANALYTICAL SERVICES - REDDING

Case No.: D9467 SDG No.: D9467 Lab Sample ID: D9467005

Matrix: WATER Level: LOW Lab File ID: R030523

Sample Volume: 10.0 ML Date Received: 02/07/03

Date Analyzed: 02/12/03

Dilution Factor: 1.0

CAS NO.	COMPOUND Units: UG/L	MDL	RL	RESULT	Q
75-71-8	Dichlorodifluoromethane	0.26	1.0	1.0	U
74-87-3	Chloromethane	0.20	1.0	1.0	U
75-01-4	Vinyl chloride	0.26	1.0	1.0	U
74-83-9	Bromomethane	0.32	1.0	1.0	U
75-00-3	Chloroethane	0.28	1.0	1.0	U
75-69-4	Trichlorofluoromethane	0.29	1.0	1.0	U
75-35-4	1,1-Dichloroethene	0.29	1.0	1.0	U
76-13-1	1,1,2-Trichlorotrifluoroetha	0.27	1.0	1.0	U
67-64-1	Acetone	0.62	5.0	5.0	U
75-15-0	Carbon disulfide	0.25	1.0	1.0	U
75-09-2	Methylene chloride	0.15	2.0	2.0	
156-60-5	trans-1,2-Dichloroethene	0.28	1.0	1.0	U
1634-04-4	Methyl tert-butylether	0.22	1.0	1.0	U
75-34-3	1,1-Dichloroethane	0.12	1.0	1.0	U
156-59-2	cis-1,2-Dichloroethene	0.23	1.0	1.0	
78-93-3	2-Butanone	0.71	5.0	5.0	U
74-97-5	Bromochloromethane	0.15	1.0	1.0	U
67-66-3	Chloroform	0.11	1.0	0.30	J
71-55-6	1,1,1-Trichloroethane	0.22	1.0	1.0	U
56-23-5	Carbon tetrachloride	0.21	1.0	1.0	U
71-43-2	Benzene	0.13	1.0	1.0	U
107-06-2	1,2-Dichloroethane	0.24	1.0	1.0	
79-01-6	Trichloroethene	0.24	1.0	28	
78-87-5	1,2-Dichloropropane	0.12	1.0	1.0	U
75-27-4	Bromodichloromethane	0.11	1.0	1.0	U
10061-01-5	cis-1,3-Dichloropropene	0.21	1.0	1.0	U
108-10-1	4-Methyl-2-pentanone	0.47	5.0	5.0	U
108-88-3	Toluene	0.23	1.0	0.50	J
10061-02-6	trans-1,3-Dichloropropene	0.20	1.0	1.0	U
79-00-5	1,1,2-Trichloroethane	0.28	1.0	0.60	J
127-18-4	Tetrachloroethene	0.26	1.0	1.0	U
591-78-6	2-Hexanone	0.33	5.0	5.0	U
124-48-1	Dibromochloromethane	0.11	1.0	1.0	U
106-93-4	1,2-Dibromoethane	0.19	1.0	1.0	U
108-90-7	Chlorobenzene	0.11	1.0	1.0	U
100-41-4	Ethylbenzene	0.21	1.0	1.0	U
100-42-5	Styrene	0.11	1.0	1.0	U
75-25-2	Bromoform	0.19	1.0	1.0	U

FORM I VOA SW846

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT ID.

0306H005

Lab Name: COLUMBIA ANALYTICAL SERVICES - REDDING

Case No.: D9467 SDG No.: D9467 Lab Sample ID: D9467005

Matrix: WATER Level: LOW Lab File ID: R030523

Sample Volume: 10.0 ML Date Received: 02/07/03

Date Analyzed: 02/12/03

Dilution Factor: 1.0

CAS NO.	COMPOUND Units: UG/L	MDL	RL	RESULT	Q
1330-20-7	Xylene (total)	0.64	1.0	1.0	U
98-82-8	Isopropylbenzene	0.24	1.0	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	0.10	1.0	1.0	U
541-73-1	1,3-Dichlorobenzene	0.26	1.0	1.0	U
106-46-7	1,4-Dichlorobenzene	0.10	1.0	1.0	U
95-50-1	1,2-Dichlorobenzene	0.10	1.0	1.0	U
96-12-8	1,2-Dibromo-3-chloropropane	0.68	5.0	5.0	U
120-82-1	1,2,4-Trichlorobenzene	0.090	1.0	1.0	U
87-61-6	1,2,3-Trichlorobenzene	0.14	1.0	1.0	U

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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT ID.

0306H006

Lab Name: COLUMBIA ANALYTICAL SERVICES - REDDING

Case No.: D9467 SDG No.: D9467 Lab Sample ID: D9467006

Matrix: WATER Level: LOW Lab File ID: R030546

Sample Volume: 10.0 ML Date Received: 02/07/03

Date Analyzed: 02/13/03

Dilution Factor: 1.0

CAS NO.	COMPOUND Units: UG/L	MDL	RL	RESULT	Q
75-71-8	Dichlorodifluoromethane	0.26	1.0	1.0	U
74-87-3	Chloromethane	0.20	1.0	1.0	U
75-01-4	Vinyl chloride	0.26	1.0	1.0	U
74-83-9	Bromomethane	0.32	1.0	1.0	U
75-00-3	Chloroethane	0.28	1.0	1.0	U
75-69-4	Trichlorofluoromethane	0.29	1.0	1.0	U
75-35-4	1,1-Dichloroethene	0.29	1.0	1.0	U
76-13-1	1,1,2-Trichlorotrifluoroetha	0.27	1.0	1.0	U
67-64-1	Acetone	0.62	5.0	5.0	U
75-15-0	Carbon disulfide	0.25	1.0	1.0	U
75-09-2	Methylene chloride	0.15	2.0	0.40	J
156-60-5	trans-1,2-Dichloroethene	0.28	1.0	1.0	U
1634-04-4	Methyl tert-butylether	0.22	1.0	1.0	U
75-34-3	1,1-Dichloroethane	0.12	1.0	1.0	U
156-59-2	cis-1,2-Dichloroethene	0.23	1.0	1.0	U
78-93-3	2-Butanone	0.71	5.0	5.0	U
74-97-5	Bromochloromethane	0.15	1.0	1.0	U
67-66-3	Chloroform	0.11	1.0	2.0	
71-55-6	1,1,1-Trichloroethane	0.22	1.0	1.0	U
56-23-5	Carbon tetrachloride	0.21	1.0	1.0	U
71-43-2	Benzene	0.13	1.0	1.0	U
107-06-2	1,2-Dichloroethane	0.24	1.0	1.0	U
79-01-6	Trichloroethene	0.24	1.0	58	E
78-87-5	1,2-Dichloropropane	0.12	1.0	1.0	U
75-27-4	Bromodichloromethane	0.11	1.0	1.0	U
10061-01-5	cis-1,3-Dichloropropene	0.21	1.0	1.0	U
108-10-1	4-Methyl-2-pentanone	0.47	5.0	5.0	U
108-88-3	Toluene	0.23	1.0	0.30	J
10061-02-6	trans-1,3-Dichloropropene	0.20	1.0	1.0	U
79-00-5	1,1,2-Trichloroethane	0.28	1.0	1.0	U
127-18-4	Tetrachloroethene	0.26	1.0	1.0	U
591-78-6	2-Hexanone	0.33	5.0	5.0	U
124-48-1	Dibromochloromethane	0.11	1.0	1.0	U
106-93-4	1,2-Dibromoethane	0.19	1.0	1.0	U
108-90-7	Chlorobenzene	0.11	1.0	1.0	U
100-41-4	Ethylbenzene	0.21	1.0	1.0	U
100-42-5	Styrene	0.11	1.0	1.0	U
75-25-2	Bromoform	0.19	1.0	1.0	U

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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT ID.

0306H006

Lab Name: COLUMBIA ANALYTICAL SERVICES - REDDING

Case No.: D9467 SDG No.: D9467 Lab Sample ID: D9467006

Matrix: WATER Level: LOW Lab File ID: R030546

Sample Volume: 10.0 ML Date Received: 02/07/03

Date Analyzed: 02/13/03

Dilution Factor: 1.0

CAS NO.	COMPOUND Units: UG/L	MDL	RL	RESULT	Q
1330-20-7	Xylene (total)	0.64	1.0	1.0	U
98-82-8	Isopropylbenzene	0.24	1.0	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	0.10	1.0	1.0	U
541-73-1	1,3-Dichlorobenzene	0.26	1.0	1.0	U
106-46-7	1,4-Dichlorobenzene	0.10	1.0	1.0	U
95-50-1	1,2-Dichlorobenzene	0.10	1.0	1.0	U
96-12-8	1,2-Dibromo-3-chloropropane	0.68	5.0	5.0	U
120-82-1	1,2,4-Trichlorobenzene	0.090	1.0	1.0	U
87-61-6	1,2,3-Trichlorobenzene	0.14	1.0	1.0	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT ID.

0306H006DL

Lab Name: COLUMBIA ANALYTICAL SERVICES - REDDING

Case No.: D9467 SDG No.: D9467 Lab Sample ID: D9467006DL

Matrix: WATER Level: LOW Lab File ID: R030548

Sample Volume: 10.0 ML Date Received: 02/07/03

Date Analyzed: 02/13/03

Dilution Factor: 4.0

CAS NO.	COMPOUND Units: UG/L	MDL	RL	RESULT	Q
75-71-8	Dichlorodifluoromethane	1.0	4.0	4.0	U
74-87-3	Chloromethane	0.80	4.0	4.0	U
75-01-4	Vinyl chloride	1.0	4.0	4.0	U
74-83-9	Bromomethane	1.3	4.0	4.0	U
75-00-3	Chloroethane	1.1	4.0	4.0	U
75-69-4	Trichlorofluoromethane	1.2	4.0	4.0	U
75-35-4	1,1-Dichloroethene	1.2	4.0	4.0	U
76-13-1	1,1,2-Trichlorotrifluoroetha	1.1	4.0	4.0	U
67-64-1	Acetone	2.5	20	20	U
75-15-0	Carbon disulfide	1.0	4.0	4.0	U
75-09-2	Methylene chloride	0.60	8.0	0.80	DJ
156-60-5	trans-1,2-Dichloroethene	1.1	4.0	4.0	U
1634-04-4	Methyl tert-butylether	0.88	4.0	4.0	U
75-34-3	1,1-Dichloroethane	0.48	4.0	4.0	U
156-59-2	cis-1,2-Dichloroethene	0.92	4.0	4.0	U
78-93-3	2-Butanone	2.8	20	20	U
74-97-5	Bromochloromethane	0.60	4.0	4.0	U
67-66-3	Chloroform	0.44	4.0	2.0	DJ
71-55-6	1,1,1-Trichloroethane	0.88	4.0	4.0	U
56-23-5	Carbon tetrachloride	0.84	4.0	4.0	U
71-43-2	Benzene	0.52	4.0	4.0	U
107-06-2	1,2-Dichloroethane	0.96	4.0	4.0	U
79-01-6	Trichloroethene	0.96	4.0	53	D
78-87-5	1,2-Dichloropropane	0.48	4.0	4.0	U
75-27-4	Bromodichloromethane	0.44	4.0	4.0	U
10061-01-5	cis-1,3-Dichloropropene	0.84	4.0	4.0	U
108-10-1	4-Methyl-2-pentanone	1.9	20	20	U
108-88-3	Toluene	0.92	4.0	4.0	U
10061-02-6	trans-1,3-Dichloropropene	0.80	4.0	4.0	U
79-00-5	1,1,2-Trichloroethane	1.1	4.0	4.0	U
127-18-4	Tetrachloroethene	1.0	4.0	4.0	U
591-78-6	2-Hexanone	1.3	20	20	U
124-48-1	Dibromochloromethane	0.44	4.0	4.0	U
106-93-4	1,2-Dibromoethane	0.76	4.0	4.0	U
108-90-7	Chlorobenzene	0.44	4.0	4.0	U
100-41-4	Ethylbenzene	0.84	4.0	4.0	U
100-42-5	Styrene	0.44	4.0	4.0	U
75-25-2	Bromoform	0.76	4.0	4.0	U

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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT ID.

0306H006DL

Lab Name: COLUMBIA ANALYTICAL SERVICES - REDDING

Case No.: D9467 SDG No.: D9467 Lab Sample ID: D9467006DL

Matrix: WATER Level: LOW Lab File ID: R030548

Sample Volume: 10.0 ML Date Received: 02/07/03

Date Analyzed: 02/13/03

Dilution Factor: 4.0

CAS NO.	COMPOUND Units: UG/L	MDL	RL	RESULT	Q
1330-20-7	Xylene (total)	2.6	4.0	4.0	U
98-82-8	Isopropylbenzene	0.96	4.0	4.0	U
79-34-5	1,1,2,2-Tetrachloroethane	0.40	4.0	4.0	U
541-73-1	1,3-Dichlorobenzene	1.0	4.0	4.0	U
106-46-7	1,4-Dichlorobenzene	0.40	4.0	4.0	U
95-50-1	1,2-Dichlorobenzene	0.40	4.0	4.0	U
96-12-8	1,2-Dibromo-3-chloropropane	2.7	20	20	U
120-82-1	1,2,4-Trichlorobenzene	0.36	4.0	4.0	U
87-61-6	1,2,3-Trichlorobenzene	0.56	4.0	4.0	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT ID.

0306H007

Lab Name: COLUMBIA ANALYTICAL SERVICES - REDDING

Case No.: D9467 SDG No.: D9467 Lab Sample ID: D9467007

Matrix: WATER Level: LOW Lab File ID: R030525

Sample Volume: 10.0 ML Date Received: 02/07/03

Date Analyzed: 02/12/03

Dilution Factor: 1.0

CAS NO.	COMPOUND Units: UG/L	MDL	RL	RESULT	Q
75-71-8	Dichlorodifluoromethane	0.26	1.0	1.0	U
74-87-3	Chloromethane	0.20	1.0	1.0	U
75-01-4	Vinyl chloride	0.26	1.0	1.0	U
74-83-9	Bromomethane	0.32	1.0	1.0	U
75-00-3	Chloroethane	0.28	1.0	1.0	U
75-69-4	Trichlorofluoromethane	0.29	1.0	1.0	U
75-35-4	1,1-Dichloroethene	0.29	1.0	1.0	U
76-13-1	1,1,2-Trichlorotrifluoroetha	0.27	1.0	1.0	U
67-64-1	Acetone	0.62	5.0	5.0	U
75-15-0	Carbon disulfide	0.25	1.0	1.0	U
75-09-2	Methylene chloride	0.15	2.0	0.30	J
156-60-5	trans-1,2-Dichloroethene	0.28	1.0	1.0	U
1634-04-4	Methyl tert-butylether	0.22	1.0	1.0	U
75-34-3	1,1-Dichloroethane	0.12	1.0	1.0	U
156-59-2	cis-1,2-Dichloroethene	0.23	1.0	1.0	U
78-93-3	2-Butanone	0.71	5.0	5.0	U
74-97-5	Bromochloromethane	0.15	1.0	1.0	U
67-66-3	Chloroform	0.11	1.0	2.0	
71-55-6	1,1,1-Trichloroethane	0.22	1.0	1.0	U
56-23-5	Carbon tetrachloride	0.21	1.0	1.0	U
71-43-2	Benzene	0.13	1.0	1.0	U
107-06-2	1,2-Dichloroethane	0.24	1.0	1.0	U
79-01-6	Trichloroethene	0.24	1.0	55	E
78-87-5	1,2-Dichloropropane	0.12	1.0	1.0	U
75-27-4	Bromodichloromethane	0.11	1.0	1.0	U
10061-01-5	cis-1,3-Dichloropropene	0.21	1.0	1.0	U
108-10-1	4-Methyl-2-pentanone	0.47	5.0	5.0	U
108-88-3	Toluene	0.23	1.0	1.0	U
10061-02-6	trans-1,3-Dichloropropene	0.20	1.0	1.0	U
79-00-5	1,1,2-Trichloroethane	0.28	1.0	1.0	U
127-18-4	Tetrachloroethene	0.26	1.0	1.0	U
591-78-6	2-Hexanone	0.33	5.0	5.0	U
124-48-1	Dibromochloromethane	0.11	1.0	1.0	U
106-93-4	1,2-Dibromoethane	0.19	1.0	1.0	U
108-90-7	Chlorobenzene	0.11	1.0	1.0	U
100-41-4	Ethylbenzene	0.21	1.0	1.0	U
100-42-5	Styrene	0.11	1.0	1.0	U
75-25-2	Bromoform	0.19	1.0	1.0	U

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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT ID.

0306H007

Lab Name: COLUMBIA ANALYTICAL SERVICES - REDDING

Case No.: D9467 SDG No.: D9467 Lab Sample ID: D9467007

Matrix: WATER Level: LOW Lab File ID: R030525

Sample Volume: 10.0 ML Date Received: 02/07/03

Date Analyzed: 02/12/03

Dilution Factor: 1.0

CAS NO.	COMPOUND Units: UG/L	MDL	RL	RESULT	Q
1330-20-7	Xylene (total)	0.64	1.0	1.0	U
98-82-8	Isopropylbenzene	0.24	1.0	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	0.10	1.0	1.0	U
541-73-1	1,3-Dichlorobenzene	0.26	1.0	1.0	U
106-46-7	1,4-Dichlorobenzene	0.10	1.0	1.0	U
95-50-1	1,2-Dichlorobenzene	0.10	1.0	1.0	U
96-12-8	1,2-Dibromo-3-chloropropane	0.68	5.0	5.0	U
120-82-1	1,2,4-Trichlorobenzene	0.090	1.0	1.0	U
87-61-6	1,2,3-Trichlorobenzene	0.14	1.0	1.0	U

FORM I VOA SW846

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT ID.

0306H007DL

Lab Name: COLUMBIA ANALYTICAL SERVICES - REDDING

Case No.: D9467 SDG No.: D9467 Lab Sample ID: D9467007DL

Matrix: WATER Level: LOW Lab File ID: R030547

Sample Volume: 10.0 ML Date Received: 02/07/03

Date Analyzed: 02/13/03

Dilution Factor: 2.0

CAS NO.	COMPOUND Units: UG/L	MDL	RL	RESULT	Q
75-71-8	Dichlorodifluoromethane	0.52	2.0	2.0	U
74-87-3	Chloromethane	0.40	2.0	2.0	U
75-01-4	Vinyl chloride	0.52	2.0	2.0	U
74-83-9	Bromomethane	0.64	2.0	2.0	U
75-00-3	Chloroethane	0.56	2.0	2.0	U
75-69-4	Trichlorofluoromethane	0.58	2.0	2.0	U
75-35-4	1,1-Dichloroethene	0.58	2.0	2.0	U
76-13-1	1,1,2-Trichlorotrifluoroetha	0.54	2.0	2.0	U
67-64-1	Acetone	1.2	10	10	U
75-15-0	Carbon disulfide	0.50	2.0	2.0	U
75-09-2	Methylene chloride	0.30	4.0	0.70	DJ
156-60-5	trans-1,2-Dichloroethene	0.56	2.0	2.0	U
1634-04-4	Methyl tert-butylether	0.44	2.0	2.0	U
75-34-3	1,1-Dichloroethane	0.24	2.0	2.0	U
156-59-2	cis-1,2-Dichloroethene	0.46	2.0	2.0	U
78-93-3	2-Butanone	1.4	10	10	U
74-97-5	Bromochloromethane	0.30	2.0	2.0	U
67-66-3	Chloroform	0.22	2.0	2.0	D
71-55-6	1,1,1-Trichloroethane	0.44	2.0	2.0	U
56-23-5	Carbon tetrachloride	0.42	2.0	2.0	U
71-43-2	Benzene	0.26	2.0	2.0	U
107-06-2	1,2-Dichloroethane	0.48	2.0	2.0	U
79-01-6	Trichloroethene	0.48	2.0	52	D
78-87-5	1,2-Dichloropropane	0.24	2.0	2.0	U
75-27-4	Bromodichloromethane	0.22	2.0	2.0	U
10061-01-5	cis-1,3-Dichloropropene	0.42	2.0	2.0	U
108-10-1	4-Methyl-2-pentanone	0.94	10	10	U
108-88-3	Toluene	0.46	2.0	0.80	DJ
10061-02-6	trans-1,3-Dichloropropene	0.40	2.0	2.0	U
79-00-5	1,1,2-Trichloroethane	0.56	2.0	2.0	U
127-18-4	Tetrachloroethene	0.52	2.0	2.0	U
591-78-6	2-Hexanone	0.66	10	10	U
124-48-1	Dibromochloromethane	0.22	2.0	2.0	U
106-93-4	1,2-Dibromoethane	0.38	2.0	2.0	U
108-90-7	Chlorobenzene	0.22	2.0	2.0	U
100-41-4	Ethylbenzene	0.42	2.0	2.0	U
100-42-5	Styrene	0.22	2.0	2.0	U
75-25-2	Bromoform	0.38	2.0	2.0	U

FORM I VOA SW846

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT ID.

0306H007DL

Lab Name: COLUMBIA ANALYTICAL SERVICES - REDDING

Case No.: D9467 SDG No.: D9467 Lab Sample ID: D9467007DL

Matrix: WATER Level: LOW Lab File ID: R030547

Sample Volume: 10.0 ML Date Received: 02/07/03

Date Analyzed: 02/13/03

Dilution Factor: 2.0

CAS NO.	COMPOUND Units: UG/L	MDL	RL	RESULT	Q
1330-20-7	Xylene (total)	1.3	2.0	2.0	U
98-82-8	Isopropylbenzene	0.48	2.0	2.0	U
79-34-5	1,1,2,2-Tetrachloroethane	0.20	2.0	2.0	U
541-73-1	1,3-Dichlorobenzene	0.52	2.0	2.0	U
106-46-7	1,4-Dichlorobenzene	0.20	2.0	2.0	U
95-50-1	1,2-Dichlorobenzene	0.20	2.0	2.0	U
96-12-8	1,2-Dibromo-3-chloropropane	1.4	10	10	U
120-82-1	1,2,4-Trichlorobenzene	0.18	2.0	2.0	U
87-61-6	1,2,3-Trichlorobenzene	0.28	2.0	2.0	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT ID.

0306H008

Lab Name: COLUMBIA ANALYTICAL SERVICES - REDDING

Case No.: D9467 SDG No.: D9467 Lab Sample ID: D9467008

Matrix: WATER Level: LOW Lab File ID: R030526

Sample Volume: 10.0 ML Date Received: 02/07/03

Date Analyzed: 02/12/03

Dilution Factor: 1.0

CAS NO.	COMPOUND Units: UG/L	MDL	RL	RESULT	Q
75-71-8	Dichlorodifluoromethane	0.26	1.0	1.0	U
74-87-3	Chloromethane	0.20	1.0	1.0	U
75-01-4	Vinyl chloride	0.26	1.0	1.0	U
74-83-9	Bromomethane	0.32	1.0	1.0	U
75-00-3	Chloroethane	0.28	1.0	1.0	U
75-69-4	Trichlorofluoromethane	0.29	1.0	1.0	U
75-35-4	1,1-Dichloroethene	0.29	1.0	1.0	U
76-13-1	1,1,2-Trichlorotrifluoroetha	0.27	1.0	1.0	U
67-64-1	Acetone	0.62	5.0	5.0	U
75-15-0	Carbon disulfide	0.25	1.0	1.0	U
75-09-2	Methylene chloride	0.15	2.0	0.20	J
156-60-5	trans-1,2-Dichloroethene	0.28	1.0	1.0	U
1634-04-4	Methyl tert-butylether	0.22	1.0	1.0	U
75-34-3	1,1-Dichloroethane	0.12	1.0	1.0	U
156-59-2	cis-1,2-Dichloroethene	0.23	1.0	1.0	U
78-93-3	2-Butanone	0.71	5.0	5.0	U
74-97-5	Bromochloromethane	0.15	1.0	1.0	U
67-66-3	Chloroform	0.11	1.0	1.0	
71-55-6	1,1,1-Trichloroethane	0.22	1.0	1.0	U
56-23-5	Carbon tetrachloride	0.21	1.0	1.0	U
71-43-2	Benzene	0.13	1.0	1.0	U
107-06-2	1,2-Dichloroethane	0.24	1.0	1.0	U
79-01-6	Trichloroethene	0.24	1.0	17	
78-87-5	1,2-Dichloropropane	0.12	1.0	1.0	U
75-27-4	Bromodichloromethane	0.11	1.0	1.0	U
10061-01-5	cis-1,3-Dichloropropene	0.21	1.0	1.0	U
108-10-1	4-Methyl-2-pentanone	0.47	5.0	5.0	U
108-88-3	Toluene	0.23	1.0	0.60	J
10061-02-6	trans-1,3-Dichloropropene	0.20	1.0	1.0	U
79-00-5	1,1,2-Trichloroethane	0.28	1.0	1.0	U
127-18-4	Tetrachloroethene	0.26	1.0	1.0	U
591-78-6	2-Hexanone	0.33	5.0	5.0	U
124-48-1	Dibromochloromethane	0.11	1.0	1.0	U
106-93-4	1,2-Dibromoethane	0.19	1.0	1.0	U
108-90-7	Chlorobenzene	0.11	1.0	1.0	U
100-41-4	Ethylbenzene	0.21	1.0	1.0	U
100-42-5	Styrene	0.11	1.0	1.0	U
75-25-2	Bromoform	0.19	1.0	1.0	U

FORM I VOA SW846

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT ID.

0306H008

Lab Name: COLUMBIA ANALYTICAL SERVICES - REDDING

Case No.: D9467 SDG No.: D9467 Lab Sample ID: D9467008

Matrix: WATER Level: LOW Lab File ID: R030526

Sample Volume: 10.0 ML Date Received: 02/07/03

Date Analyzed: 02/12/03

Dilution Factor: 1.0

CAS NO.	COMPOUND Units: UG/L	MDL	RL	RESULT	Q
1330-20-7	Xylene (total)	0.64	1.0	1.0	U
98-82-8	Isopropylbenzene	0.24	1.0	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	0.10	1.0	1.0	U
541-73-1	1,3-Dichlorobenzene	0.26	1.0	1.0	U
106-46-7	1,4-Dichlorobenzene	0.10	1.0	1.0	U
95-50-1	1,2-Dichlorobenzene	0.10	1.0	1.0	U
96-12-8	1,2-Dibromo-3-chloropropane	0.68	5.0	5.0	U
120-82-1	1,2,4-Trichlorobenzene	0.090	1.0	1.0	U
87-61-6	1,2,3-Trichlorobenzene	0.14	1.0	1.0	U

FORM I VOA SW846

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT ID.

0306H009

Lab Name: COLUMBIA ANALYTICAL SERVICES - REDDING

Case No.: D9467 SDG No.: D9467 Lab Sample ID: D9467009

Matrix: WATER Level: LOW Lab File ID: R030527

Sample Volume: 10.0 ML Date Received: 02/07/03

Date Analyzed: 02/12/03

Dilution Factor: 1.0

CAS NO.	COMPOUND Units: UG/L	MDL	RL	RESULT	Q
75-71-8	Dichlorodifluoromethane	0.26	1.0	1.0	U
74-87-3	Chloromethane	0.20	1.0	1.0	U
75-01-4	Vinyl chloride	0.26	1.0	1.0	U
74-83-9	Bromomethane	0.32	1.0	1.0	U
75-00-3	Chloroethane	0.28	1.0	1.0	U
75-69-4	Trichlorofluoromethane	0.29	1.0	1.0	U
75-35-4	1,1-Dichloroethene	0.29	1.0	1.0	U
76-13-1	1,1,2-Trichlorotrifluoroetha	0.27	1.0	1.0	U
67-64-1	Acetone	0.62	5.0	5.0	U
75-15-0	Carbon disulfide	0.25	1.0	1.0	U
75-09-2	Methylene chloride	0.15	2.0	2.0	U
156-60-5	trans-1,2-Dichloroethene	0.28	1.0	1.0	U
1634-04-4	Methyl tert-butylether	0.22	1.0	1.0	U
75-34-3	1,1-Dichloroethane	0.12	1.0	1.0	U
156-59-2	cis-1,2-Dichloroethene	0.23	1.0	6.0	
78-93-3	2-Butanone	0.71	5.0	5.0	U
74-97-5	Bromochloromethane	0.15	1.0	1.0	U
67-66-3	Chloroform	0.11	1.0	4.0	
71-55-6	1,1,1-Trichloroethane	0.22	1.0	1.0	U
56-23-5	Carbon tetrachloride	0.21	1.0	5.0	
71-43-2	Benzene	0.13	1.0	1.0	U
107-06-2	1,2-Dichloroethane	0.24	1.0	1.0	U
79-01-6	Trichloroethene	0.24	1.0	39	
78-87-5	1,2-Dichloropropane	0.12	1.0	1.0	U
75-27-4	Bromodichloromethane	0.11	1.0	1.0	U
10061-01-5	cis-1,3-Dichloropropene	0.21	1.0	1.0	U
108-10-1	4-Methyl-2-pentanone	0.47	5.0	5.0	U
108-88-3	Toluene	0.23	1.0	0.40	J
10061-02-6	trans-1,3-Dichloropropene	0.20	1.0	1.0	U
79-00-5	1,1,2-Trichloroethane	0.28	1.0	1.0	U
127-18-4	Tetrachloroethene	0.26	1.0	1.0	U
591-78-6	2-Hexanone	0.33	5.0	5.0	U
124-48-1	Dibromochloromethane	0.11	1.0	1.0	U
106-93-4	1,2-Dibromoethane	0.19	1.0	1.0	U
108-90-7	Chlorobenzene	0.11	1.0	1.0	U
100-41-4	Ethylbenzene	0.21	1.0	1.0	U
100-42-5	Styrene	0.11	1.0	1.0	U
75-25-2	Bromoform	0.19	1.0	1.0	U

FORM I VOA SW846

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT ID.

0306H009

Lab Name: COLUMBIA ANALYTICAL SERVICES - REDDING

Case No.: D9467 SDG No.: D9467 Lab Sample ID: D9467009

Matrix: WATER Level: LOW Lab File ID: R030527

Sample Volume: 10.0 ML Date Received: 02/07/03

Date Analyzed: 02/12/03

Dilution Factor: 1.0

CAS NO.	COMPOUND Units: UG/L	MDL	RL	RESULT	Q
1330-20-7	Xylene (total)	0.64	1.0	1.0	U
98-82-8	Isopropylbenzene	0.24	1.0	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	0.10	1.0	1.0	U
541-73-1	1,3-Dichlorobenzene	0.26	1.0	1.0	U
106-46-7	1,4-Dichlorobenzene	0.10	1.0	1.0	U
95-50-1	1,2-Dichlorobenzene	0.10	1.0	1.0	U
96-12-8	1,2-Dibromo-3-chloropropane	0.68	5.0	5.0	U
120-82-1	1,2,4-Trichlorobenzene	0.090	1.0	1.0	U
87-61-6	1,2,3-Trichlorobenzene	0.14	1.0	1.0	U

FORM I VOA SW846

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT ID.

0306H010

Lab Name: COLUMBIA ANALYTICAL SERVICES - REDDING

Case No.: D9467 SDG No.: D9467 Lab Sample ID: D9467010

Matrix: WATER Level: LOW Lab File ID: R030528

Sample Volume: 10.0 ML Date Received: 02/07/03

Date Analyzed: 02/12/03

Dilution Factor: 1.0

CAS NO.	COMPOUND Units: UG/L	MDL	RL	RESULT	Q
75-71-8	Dichlorodifluoromethane	0.26	1.0	1.0	U
74-87-3	Chloromethane	0.20	1.0	1.0	U
75-01-4	Vinyl chloride	0.26	1.0	1.0	U
74-83-9	Bromomethane	0.32	1.0	1.0	U
75-00-3	Chloroethane	0.28	1.0	1.0	U
75-69-4	Trichlorofluoromethane	0.29	1.0	1.0	U
75-35-4	1,1-Dichloroethene	0.29	1.0	0.30	J
76-13-1	1,1,2-Trichlorotrifluoroetha	0.27	1.0	1.0	U
67-64-1	Acetone	0.62	5.0	5.0	U
75-15-0	Carbon disulfide	0.25	1.0	1.0	U
75-09-2	Methylene chloride	0.15	2.0	15	
156-60-5	trans-1,2-Dichloroethene	0.28	1.0	1.0	U
1634-04-4	Methyl tert-butylether	0.22	1.0	1.0	U
75-34-3	1,1-Dichloroethane	0.12	1.0	0.40	J
156-59-2	cis-1,2-Dichloroethene	0.23	1.0	3.0	
78-93-3	2-Butanone	0.71	5.0	5.0	U
74-97-5	Bromochloromethane	0.15	1.0	1.0	U
67-66-3	Chloroform	0.11	1.0	20	
71-55-6	1,1,1-Trichloroethane	0.22	1.0	1.0	U
56-23-5	Carbon tetrachloride	0.21	1.0	1.0	U
71-43-2	Benzene	0.13	1.0	0.20	J
107-06-2	1,2-Dichloroethane	0.24	1.0	13	
79-01-6	Trichloroethene	0.24	1.0	84	E
78-87-5	1,2-Dichloropropane	0.12	1.0	0.30	J
75-27-4	Bromodichloromethane	0.11	1.0	1.0	U
10061-01-5	cis-1,3-Dichloropropene	0.21	1.0	1.0	U
108-10-1	4-Methyl-2-pentanone	0.47	5.0	5.0	U
108-88-3	Toluene	0.23	1.0	0.40	J
10061-02-6	trans-1,3-Dichloropropene	0.20	1.0	1.0	U
79-00-5	1,1,2-Trichloroethane	0.28	1.0	1.0	
127-18-4	Tetrachloroethene	0.26	1.0	1.0	
591-78-6	2-Hexanone	0.33	5.0	5.0	U
124-48-1	Dibromochloromethane	0.11	1.0	1.0	U
106-93-4	1,2-Dibromoethane	0.19	1.0	1.0	U
108-90-7	Chlorobenzene	0.11	1.0	1.0	U
100-41-4	Ethylbenzene	0.21	1.0	1.0	U
100-42-5	Styrene	0.11	1.0	1.0	U
75-25-2	Bromoform	0.19	1.0	1.0	U

FORM I VOA SW846

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT ID.

0306H010

Lab Name: COLUMBIA ANALYTICAL SERVICES - REDDING

Case No.: D9467 SDG No.: D9467 Lab Sample ID: D9467010

Matrix: WATER Level: LOW Lab File ID: R030528

Sample Volume: 10.0 ML Date Received: 02/07/03

Date Analyzed: 02/12/03

Dilution Factor: 1.0

CAS NO.	COMPOUND Units: UG/L	MDL	RL	RESULT	Q
1330-20-7	Xylene (total)	0.64	1.0	1.0	U
98-82-8	Isopropylbenzene	0.24	1.0	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	0.10	1.0	1.0	U
541-73-1	1,3-Dichlorobenzene	0.26	1.0	1.0	U
106-46-7	1,4-Dichlorobenzene	0.10	1.0	1.0	U
95-50-1	1,2-Dichlorobenzene	0.10	1.0	1.0	U
96-12-8	1,2-Dibromo-3-chloropropane	0.68	5.0	5.0	U
120-82-1	1,2,4-Trichlorobenzene	0.090	1.0	1.0	U
87-61-6	1,2,3-Trichlorobenzene	0.14	1.0	1.0	U

FORM I VOA SW846

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT ID.

0306H010DL

Lab Name: COLUMBIA ANALYTICAL SERVICES - REDDING

Case No.: D9467 SDG No.: D9467 Lab Sample ID: D9467010DL

Matrix: WATER Level: LOW Lab File ID: R030549

Sample Volume: 10.0 ML Date Received: 02/07/03

Date Analyzed: 02/13/03

Dilution Factor: 5.0

CAS NO.	COMPOUND Units: UG/L	MDL	RL	RESULT	Q
75-71-8	Dichlorodifluoromethane	1.3	5.0	5.0	U
74-87-3	Chloromethane	1.0	5.0	5.0	U
75-01-4	Vinyl chloride	1.3	5.0	5.0	U
74-83-9	Bromomethane	1.6	5.0	5.0	U
75-00-3	Chloroethane	1.4	5.0	5.0	U
75-69-4	Trichlorofluoromethane	1.4	5.0	5.0	U
75-35-4	1,1-Dichloroethene	1.4	5.0	5.0	U
76-13-1	1,1,2-Trichlorotrifluoroetha	1.4	5.0	5.0	U
67-64-1	Acetone	3.1	25	25	U
75-15-0	Carbon disulfide	1.2	5.0	5.0	U
75-09-2	Methylene chloride	0.75	10	15	D
156-60-5	trans-1,2-Dichloroethene	1.4	5.0	5.0	U
1634-04-4	Methyl tert-butylether	1.1	5.0	5.0	U
75-34-3	1,1-Dichloroethane	0.60	5.0	5.0	U
156-59-2	cis-1,2-Dichloroethene	1.2	5.0	3.0	DJ
78-93-3	2-Butanone	3.5	25	25	U
74-97-5	Bromochloromethane	0.75	5.0	5.0	U
67-66-3	Chloroform	0.55	5.0	20	D
71-55-6	1,1,1-Trichloroethane	1.1	5.0	5.0	U
56-23-5	Carbon tetrachloride	1.0	5.0	5.0	U
71-43-2	Benzene	0.65	5.0	5.0	U
107-06-2	1,2-Dichloroethane	1.2	5.0	13	D
79-01-6	Trichloroethene	1.2	5.0	79	D
78-87-5	1,2-Dichloropropane	0.60	5.0	5.0	U
75-27-4	Bromodichloromethane	0.55	5.0	5.0	U
10061-01-5	cis-1,3-Dichloropropene	1.0	5.0	5.0	U
108-10-1	4-Methyl-2-pentanone	2.4	25	25	U
108-88-3	Toluene	1.2	5.0	5.0	U
10061-02-6	trans-1,3-Dichloropropene	1.0	5.0	5.0	U
79-00-5	1,1,2-Trichloroethane	1.4	5.0	5.0	U
127-18-4	Tetrachloroethene	1.3	5.0	5.0	U
591-78-6	2-Hexanone	1.6	25	25	U
124-48-1	Dibromochloromethane	0.55	5.0	5.0	U
106-93-4	1,2-Dibromoethane	0.95	5.0	5.0	U
108-90-7	Chlorobenzene	0.55	5.0	5.0	U
100-41-4	Ethylbenzene	1.0	5.0	5.0	U
100-42-5	Styrene	0.55	5.0	5.0	U
75-25-2	Bromoform	0.95	5.0	5.0	U

FORM I VOA SW846

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT ID.

0306H010DL

Lab Name: COLUMBIA ANALYTICAL SERVICES - REDDING

Case No.: D9467 SDG No.: D9467 Lab Sample ID: D9467010DL

Matrix: WATER Level: LOW Lab File ID: R030549

Sample Volume: 10.0 ML Date Received: 02/07/03

Date Analyzed: 02/13/03

Dilution Factor: 5.0

CAS NO.	COMPOUND Units: UG/L	MDL	RL	RESULT	Q
1330-20-7	Xylene (total)	3.2	5.0	5.0	U
98-82-8	Isopropylbenzene	1.2	5.0	5.0	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	5.0	5.0	U
541-73-1	1,3-Dichlorobenzene	1.3	5.0	5.0	U
106-46-7	1,4-Dichlorobenzene	0.50	5.0	5.0	U
95-50-1	1,2-Dichlorobenzene	0.50	5.0	5.0	U
96-12-8	1,2-Dibromo-3-chloropropane	3.4	25	25	U
120-82-1	1,2,4-Trichlorobenzene	0.45	5.0	5.0	U
87-61-6	1,2,3-Trichlorobenzene	0.70	5.0	5.0	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT ID.

0306H011

Lab Name: COLUMBIA ANALYTICAL SERVICES - REDDING

Case No.: D9467 SDG No.: D9467 Lab Sample ID: D9467011

Matrix: WATER Level: LOW Lab File ID: R030529

Sample Volume: 10.0 ML Date Received: 02/07/03

Date Analyzed: 02/12/03

Dilution Factor: 1.0

CAS NO.	COMPOUND Units: UG/L	MDL	RL	RESULT	Q
75-71-8	Dichlorodifluoromethane	0.26	1.0	1.0	U
74-87-3	Chloromethane	0.20	1.0	1.0	U
75-01-4	Vinyl chloride	0.26	1.0	1.0	U
74-83-9	Bromomethane	0.32	1.0	1.0	U
75-00-3	Chloroethane	0.28	1.0	1.0	U
75-69-4	Trichlorofluoromethane	0.29	1.0	4.0	
75-35-4	1,1-Dichloroethene	0.29	1.0	1.0	U
76-13-1	1,1,2-Trichlorotrifluoroetha	0.27	1.0	1.0	
67-64-1	Acetone	0.62	5.0	5.0	U
75-15-0	Carbon disulfide	0.25	1.0	1.0	U
75-09-2	Methylene chloride	0.15	2.0	0.20	J
156-60-5	trans-1,2-Dichloroethene	0.28	1.0	1.0	U
1634-04-4	Methyl tert-butylether	0.22	1.0	1.0	U
75-34-3	1,1-Dichloroethane	0.12	1.0	1.0	U
156-59-2	cis-1,2-Dichloroethene	0.23	1.0	5.0	
78-93-3	2-Butanone	0.71	5.0	5.0	U
74-97-5	Bromochloromethane	0.15	1.0	1.0	U
67-66-3	Chloroform	0.11	1.0	2.0	
71-55-6	1,1,1-Trichloroethane	0.22	1.0	1.0	U
56-23-5	Carbon tetrachloride	0.21	1.0	2.0	
71-43-2	Benzene	0.13	1.0	1.0	U
107-06-2	1,2-Dichloroethane	0.24	1.0	0.70	J
79-01-6	Trichloroethene	0.24	1.0	45	E
78-87-5	1,2-Dichloropropane	0.12	1.0	1.0	U
75-27-4	Bromodichloromethane	0.11	1.0	1.0	U
10061-01-5	cis-1,3-Dichloropropene	0.21	1.0	1.0	U
108-10-1	4-Methyl-2-pentanone	0.47	5.0	5.0	U
108-88-3	Toluene	0.23	1.0	0.30	J
10061-02-6	trans-1,3-Dichloropropene	0.20	1.0	1.0	U
79-00-5	1,1,2-Trichloroethane	0.28	1.0	1.0	U
127-18-4	Tetrachloroethene	0.26	1.0	0.40	J
591-78-6	2-Hexanone	0.33	5.0	5.0	U
124-48-1	Dibromochloromethane	0.11	1.0	1.0	U
106-93-4	1,2-Dibromoethane	0.19	1.0	1.0	U
108-90-7	Chlorobenzene	0.11	1.0	1.0	U
100-41-4	Ethylbenzene	0.21	1.0	1.0	U
100-42-5	Styrene	0.11	1.0	1.0	U
75-25-2	Bromoform	0.19	1.0	1.0	U

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VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT ID.

0306H011

Lab Name: COLUMBIA ANALYTICAL SERVICES - REDDING

Case No.: D9467 SDG No.: D9467 Lab Sample ID: D9467011

Matrix: WATER Level: LOW Lab File ID: R030529

Sample Volume: 10.0 ML Date Received: 02/07/03

Date Analyzed: 02/12/03

Dilution Factor: 1.0

CAS NO.	COMPOUND Units: UG/L	MDL	RL	RESULT	Q
1330-20-7	Xylene (total)	0.64	1.0	1.0	U
98-82-8	Isopropylbenzene	0.24	1.0	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	0.10	1.0	1.0	U
541-73-1	1,3-Dichlorobenzene	0.26	1.0	1.0	U
106-46-7	1,4-Dichlorobenzene	0.10	1.0	1.0	U
95-50-1	1,2-Dichlorobenzene	0.10	1.0	1.0	U
96-12-8	1,2-Dibromo-3-chloropropane	0.68	5.0	5.0	U
120-82-1	1,2,4-Trichlorobenzene	0.090	1.0	1.0	U
87-61-6	1,2,3-Trichlorobenzene	0.14	1.0	1.0	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT ID.

0306H011DL

Lab Name: COLUMBIA ANALYTICAL SERVICES - REDDING

Case No.: D9467 SDG No.: D9467 Lab Sample ID: D9467011DL

Matrix: WATER Level: LOW Lab File ID: R030550

Sample Volume: 10.0 ML Date Received: 02/07/03

Date Analyzed: 02/13/03

Dilution Factor: 2.0

CAS NO.	COMPOUND Units: UG/L	MDL	RL	RESULT	Q
75-71-8	Dichlorodifluoromethane	0.52	2.0	2.0	U
74-87-3	Chloromethane	0.40	2.0	2.0	U
75-01-4	Vinyl chloride	0.52	2.0	2.0	U
74-83-9	Bromomethane	0.64	2.0	2.0	U
75-00-3	Chloroethane	0.56	2.0	2.0	U
75-69-4	Trichlorofluoromethane	0.58	2.0	4.0	D
75-35-4	1,1-Dichloroethene	0.58	2.0	2.0	U
76-13-1	1,1,2-Trichlorotrifluoroetha	0.54	2.0	1.0	DJ
67-64-1	Acetone	1.2	10	2.0	DJ
75-15-0	Carbon disulfide	0.50	2.0	2.0	U
75-09-2	Methylene chloride	0.30	4.0	0.40	DJ
156-60-5	trans-1,2-Dichloroethene	0.56	2.0	2.0	U
1634-04-4	Methyl tert-butylether	0.44	2.0	2.0	U
75-34-3	1,1-Dichloroethane	0.24	2.0	2.0	U
156-59-2	cis-1,2-Dichloroethene	0.46	2.0	5.0	D
78-93-3	2-Butanone	1.4	10	10	U
74-97-5	Bromochloromethane	0.30	2.0	2.0	U
67-66-3	Chloroform	0.22	2.0	2.0	D
71-55-6	1,1,1-Trichloroethane	0.44	2.0	2.0	U
56-23-5	Carbon tetrachloride	0.42	2.0	2.0	D
71-43-2	Benzene	0.26	2.0	2.0	U
107-06-2	1,2-Dichloroethane	0.48	2.0	2.0	U
79-01-6	Trichloroethene	0.48	2.0	42	D
78-87-5	1,2-Dichloropropane	0.24	2.0	2.0	U
75-27-4	Bromodichloromethane	0.22	2.0	2.0	U
10061-01-5	cis-1,3-Dichloropropene	0.42	2.0	2.0	U
108-10-1	4-Methyl-2-pentanone	0.94	10	10	U
108-88-3	Toluene	0.46	2.0	2.0	U
10061-02-6	trans-1,3-Dichloropropene	0.40	2.0	2.0	U
79-00-5	1,1,2-Trichloroethane	0.56	2.0	2.0	U
127-18-4	Tetrachloroethene	0.52	2.0	2.0	U
591-78-6	2-Hexanone	0.66	10	10	U
124-48-1	Dibromochloromethane	0.22	2.0	2.0	U
106-93-4	1,2-Dibromoethane	0.38	2.0	2.0	U
108-90-7	Chlorobenzene	0.22	2.0	2.0	U
100-41-4	Ethylbenzene	0.42	2.0	2.0	U
100-42-5	Styrene	0.22	2.0	2.0	U
75-25-2	Bromoform	0.38	2.0	2.0	U

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VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT ID.

0306H011DL

Lab Name: COLUMBIA ANALYTICAL SERVICES - REDDING

Case No.: D9467 SDG No.: D9467 Lab Sample ID: D9467011DL

Matrix: WATER Level: LOW Lab File ID: R030550

Sample Volume: 10.0 ML Date Received: 02/07/03

Date Analyzed: 02/13/03

Dilution Factor: 2.0

CAS NO.	COMPOUND Units: UG/L	MDL	RL	RESULT	Q
1330-20-7	Xylene (total)	1.3	2.0	2.0	U
98-82-8	Isopropylbenzene	0.48	2.0	2.0	U
79-34-5	1,1,2,2-Tetrachloroethane	0.20	2.0	2.0	U
541-73-1	1,3-Dichlorobenzene	0.52	2.0	2.0	U
106-46-7	1,4-Dichlorobenzene	0.20	2.0	2.0	U
95-50-1	1,2-Dichlorobenzene	0.20	2.0	2.0	U
96-12-8	1,2-Dibromo-3-chloropropane	1.4	10	10	U
120-82-1	1,2,4-Trichlorobenzene	0.18	2.0	2.0	U
87-61-6	1,2,3-Trichlorobenzene	0.28	2.0	2.0	U

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VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT ID.

0306H012

Lab Name: COLUMBIA ANALYTICAL SERVICES - REDDING

Case No.: D9467 SDG No.: D9467 Lab Sample ID: D9467012

Matrix: WATER Level: LOW Lab File ID: R030530

Sample Volume: 10.0 ML Date Received: 02/07/03

Date Analyzed: 02/12/03

Dilution Factor: 1.0

CAS NO.	COMPOUND Units: UG/L	MDL	RL	RESULT	Q
75-71-8	Dichlorodifluoromethane	0.26	1.0	1.0	U
74-87-3	Chloromethane	0.20	1.0	1.0	U
75-01-4	Vinyl chloride	0.26	1.0	1.0	U
74-83-9	Bromomethane	0.32	1.0	1.0	U
75-00-3	Chloroethane	0.28	1.0	1.0	U
75-69-4	Trichlorofluoromethane	0.29	1.0	1.0	U
75-35-4	1,1-Dichloroethene	0.29	1.0	1.0	U
76-13-1	1,1,2-Trichlorotrifluoroetha	0.27	1.0	1.0	U
67-64-1	Acetone	0.62	5.0	5.0	U
75-15-0	Carbon disulfide	0.25	1.0	1.0	U
75-09-2	Methylene chloride	0.15	2.0	0.20	J
156-60-5	trans-1,2-Dichloroethene	0.28	1.0	1.0	U
1634-04-4	Methyl tert-butylether	0.22	1.0	1.0	U
75-34-3	1,1-Dichloroethane	0.12	1.0	1.0	U
156-59-2	cis-1,2-Dichloroethene	0.23	1.0	3.0	
78-93-3	2-Butanone	0.71	5.0	5.0	U
74-97-5	Bromochloromethane	0.15	1.0	1.0	U
67-66-3	Chloroform	0.11	1.0	1.0	
71-55-6	1,1,1-Trichloroethane	0.22	1.0	1.0	U
56-23-5	Carbon tetrachloride	0.21	1.0	1.0	U
71-43-2	Benzene	0.13	1.0	1.0	U
107-06-2	1,2-Dichloroethane	0.24	1.0	1.0	U
79-01-6	Trichloroethene	0.24	1.0	73	E
78-87-5	1,2-Dichloropropane	0.12	1.0	1.0	U
75-27-4	Bromodichloromethane	0.11	1.0	1.0	U
10061-01-5	cis-1,3-Dichloropropene	0.21	1.0	1.0	U
108-10-1	4-Methyl-2-pentanone	0.47	5.0	5.0	U
108-88-3	Toluene	0.23	1.0	0.70	J
10061-02-6	trans-1,3-Dichloropropene	0.20	1.0	1.0	U
79-00-5	1,1,2-Trichloroethane	0.28	1.0	1.0	U
127-18-4	Tetrachloroethene	0.26	1.0	23	
591-78-6	2-Hexanone	0.33	5.0	5.0	U
124-48-1	Dibromochloromethane	0.11	1.0	1.0	U
106-93-4	1,2-Dibromoethane	0.19	1.0	1.0	U
108-90-7	Chlorobenzene	0.11	1.0	1.0	U
100-41-4	Ethylbenzene	0.21	1.0	1.0	U
100-42-5	Styrene	0.11	1.0	1.0	U
75-25-2	Bromoform	0.19	1.0	1.0	U

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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT ID.

0306H012

Lab Name: COLUMBIA ANALYTICAL SERVICES - REDDING

Case No.: D9467 SDG No.: D9467 Lab Sample ID: D9467012

Matrix: WATER Level: LOW Lab File ID: R030530

Sample Volume: 10.0 ML Date Received: 02/07/03

Date Analyzed: 02/12/03

Dilution Factor: 1.0

CAS NO.	COMPOUND Units: UG/L	MDL	RL	RESULT	Q
1330-20-7	Xylene (total)	0.64	1.0	1.0	U
98-82-8	Isopropylbenzene	0.24	1.0	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	0.10	1.0	1.0	U
541-73-1	1,3-Dichlorobenzene	0.26	1.0	1.0	U
106-46-7	1,4-Dichlorobenzene	0.10	1.0	1.0	U
95-50-1	1,2-Dichlorobenzene	0.10	1.0	1.0	U
96-12-8	1,2-Dibromo-3-chloropropane	0.68	5.0	5.0	U
120-82-1	1,2,4-Trichlorobenzene	0.090	1.0	1.0	U
87-61-6	1,2,3-Trichlorobenzene	0.14	1.0	1.0	U

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VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT ID.

0306H012DL

Lab Name: COLUMBIA ANALYTICAL SERVICES - REDDING

Case No.: D9467 SDG No.: D9467 Lab Sample ID: D9467012DL

Matrix: WATER Level: LOW Lab File ID: R030551

Sample Volume: 10.0 ML Date Received: 02/07/03

Date Analyzed: 02/13/03

Dilution Factor: 5.0

CAS NO.	COMPOUND Units: UG/L	MDL	RL	RESULT	Q
75-71-8	Dichlorodifluoromethane	1.3	5.0	5.0	U
74-87-3	Chloromethane	1.0	5.0	5.0	U
75-01-4	Vinyl chloride	1.3	5.0	5.0	U
74-83-9	Bromomethane	1.6	5.0	5.0	U
75-00-3	Chloroethane	1.4	5.0	5.0	U
75-69-4	Trichlorofluoromethane	1.4	5.0	5.0	U
75-35-4	1,1-Dichloroethene	1.4	5.0	5.0	U
76-13-1	1,1,2-Trichlorotrifluoroetha	1.4	5.0	5.0	U
67-64-1	Acetone	3.1	25	25	U
75-15-0	Carbon disulfide	1.2	5.0	5.0	U
75-09-2	Methylene chloride	0.75	10	0.80	DJ
156-60-5	trans-1,2-Dichloroethene	1.4	5.0	5.0	U
1634-04-4	Methyl tert-butylether	1.1	5.0	5.0	U
75-34-3	1,1-Dichloroethane	0.60	5.0	5.0	U
156-59-2	cis-1,2-Dichloroethene	1.2	5.0	3.0	DJ
78-93-3	2-Butanone	3.5	25	25	U
74-97-5	Bromochloromethane	0.75	5.0	5.0	U
67-66-3	Chloroform	0.55	5.0	1.0	DJ
71-55-6	1,1,1-Trichloroethane	1.1	5.0	5.0	U
56-23-5	Carbon tetrachloride	1.0	5.0	5.0	U
71-43-2	Benzene	0.65	5.0	5.0	U
107-06-2	1,2-Dichloroethane	1.2	5.0	5.0	U
79-01-6	Trichloroethene	1.2	5.0	70	D
78-87-5	1,2-Dichloropropane	0.60	5.0	5.0	U
75-27-4	Bromodichloromethane	0.55	5.0	5.0	U
10061-01-5	cis-1,3-Dichloropropene	1.0	5.0	5.0	U
108-10-1	4-Methyl-2-pentanone	2.4	25	25	U
108-88-3	Toluene	1.2	5.0	5.0	U
10061-02-6	trans-1,3-Dichloropropene	1.0	5.0	5.0	U
79-00-5	1,1,2-Trichloroethane	1.4	5.0	5.0	U
127-18-4	Tetrachloroethene	1.3	5.0	22	D
591-78-6	2-Hexanone	1.6	25	25	U
124-48-1	Dibromochloromethane	0.55	5.0	5.0	U
106-93-4	1,2-Dibromoethane	0.95	5.0	5.0	U
108-90-7	Chlorobenzene	0.55	5.0	5.0	U
100-41-4	Ethylbenzene	1.0	5.0	5.0	U
100-42-5	Styrene	0.55	5.0	5.0	U
75-25-2	Bromoform	0.95	5.0	5.0	U

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VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT ID.

0306H012DL

Lab Name: COLUMBIA ANALYTICAL SERVICES - REDDING

Case No.: D9467 SDG No.: D9467

Matrix: WATER Level: LOW

Sample Volume: 10.0 ML

Lab Sample ID: D9467012DL

Lab File ID: R030551

Date Received: 02/07/03

Date Analyzed: 02/13/03

Dilution Factor: 5.0

CAS NO.	COMPOUND Units: UG/L	MDL	RL	RESULT	Q
1330-20-7	Xylene (total)	3.2	5.0	5.0	U
98-82-8	Isopropylbenzene	1.2	5.0	5.0	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	5.0	5.0	U
541-73-1	1,3-Dichlorobenzene	1.3	5.0	5.0	U
106-46-7	1,4-Dichlorobenzene	0.50	5.0	5.0	U
95-50-1	1,2-Dichlorobenzene	0.50	5.0	5.0	U
96-12-8	1,2-Dibromo-3-chloropropane	3.4	25	25	U
120-82-1	1,2,4-Trichlorobenzene	0.45	5.0	5.0	U
87-61-6	1,2,3-Trichlorobenzene	0.70	5.0	5.0	U

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SW846

Columbia Analytical Services, Inc.

TOTAL METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

0306H002

Contract: TTEMI/HUNTER'S PT

Lab Code: RDD Case No.: SAS No.: SDG NO.: D9467

Matrix (soil/water): WATER Lab Sample ID: D9467002

Level (low/med): LOW Date Received: 02/07/03

Concentration Units (ug/L or mg/kg dry weight): µG/L

CAS No.	Analyte	Concentration	C	Q	M
7439-89-6	Iron	4.0	U		P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

TOTAL METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

0306H002T

Contract: TTEMI/HUNTER'S PT

Lab Code: RDD Case No.: SAS No.: SDG NO.: D9467

Matrix (soil/water): WATER Lab Sample ID: D9467013

Level (low/med): LOW Date Received: 02/07/03

Concentration Units (ug/L or mg/kg dry weight): µG/L

CAS No.	Analyte	Concentration	C	Q	M
7439-89-6	Iron	68.1	B		P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

Columbia Analytical Services, Inc.

TOTAL METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

0306H003

Contract: TTEMI/HUNTER'S PT

Lab Code: RDD Case No.: SAS No.: SDG NO.: D9467

Matrix (soil/water): WATER Lab Sample ID: D9467003

Level (low/med): LOW Date Received: 02/07/03

Concentration Units (ug/L or mg/kg dry weight): µG/L

CAS No.	Analyte	Concentration	C	Q	M
7439-89-6	Iron	4.0	U		P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

Columbia Analytical Services, Inc.

TOTAL METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

0306H003T

Contract: TTEMI/HUNTER'S PT

Lab Code: RDD Case No.: SAS No.: SDG NO.: D9467

Matrix (soil/water): WATER Lab Sample ID: D9467014

Level (low/med): LOW Date Received: 02/07/03

Concentration Units (ug/L or mg/kg dry weight): µG/L

CAS No.	Analyte	Concentration	C	Q	M
7439-89-6	Iron	43.0	B		P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

Columbia Analytical Services, Inc.

TOTAL METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

0306H004T

Contract: TTEMI/HUNTER'S PT

Lab Code: RDD Case No.: SAS No.: SDG NO.: D9467

Matrix (soil/water): WATER Lab Sample ID: D9467015

Level (low/med): LOW Date Received: 02/07/03

Concentration Units (ug/L or mg/kg dry weight): µG/L

CAS No.	Analyte	Concentration	C	Q	M
7439-89-6	Iron	4.0	U		P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

TOTAL METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

0306H005

Contract: TTEMI/HUNTER'S PT

Lab Code: RDD Case No.: SAS No.: SDG NO.: D9467

Matrix (soil/water): WATER Lab Sample ID: D9467005

Level (low/med): LOW Date Received: 02/07/03

Concentration Units (ug/L or mg/kg dry weight): µG/L

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	1.0	U		F
7439-89-6	Iron	15.1	B		P
7439-96-5	Manganese	137			P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

Columbia Analytical Services, Inc.

TOTAL METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

0306H005T

Contract: TTEMI/HUNTER'S PT

Lab Code: RDD Case No.: SAS No.: SDG NO.: D9467

Matrix (soil/water): WATER Lab Sample ID: D9467016

Level (low/med): LOW Date Received: 02/07/03

Concentration Units (ug/L or mg/kg dry weight): µG/L

CAS No.	Analyte	Concentration	C	Q	M
7439-89-6	Iron	93200			P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

Columbia Analytical Services, Inc.

TOTAL METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

0306H006

Contract: TTEMI/HUNTER'S PT

Lab Code: RDD Case No.: SAS No.: SDG NO.: D9467

Matrix (soil/water): WATER Lab Sample ID: D9467006

Level (low/med): LOW Date Received: 02/07/03

Concentration Units (ug/L or mg/kg dry weight): µG/L

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	3.5			F
7439-89-6	Iron	4.0	U		P
7439-96-5	Manganese	85.5			P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

Columbia Analytical Services, Inc.

TOTAL METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

0306H006T

Contract: TTEMI/HUNTER'S PT

Lab Code: RDD Case No.: SAS No.: SDG NO.: D9467

Matrix (soil/water): WATER Lab Sample ID: D9467017

Level (low/med): LOW Date Received: 02/07/03

Concentration Units (ug/L or mg/kg dry weight): µG/L

CAS No.	Analyte	Concentration	C	Q	M
7439-89-6	Iron	1060			P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

Columbia Analytical Services, Inc.

TOTAL METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

0306H007

Contract: TTEMI/HUNTER'S PT

Lab Code: RDD Case No.: SAS No.: SDG NO.: D9467

Matrix (soil/water): WATER Lab Sample ID: D9467007

Level (low/med): LOW Date Received: 02/07/03

Concentration Units (ug/L or mg/kg dry weight): µG/L

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	3.1			F
7439-89-6	Iron	4.0	U		P
7439-96-5	Manganese	73.9			P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

TOTAL METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

0306H007T

Contract: TTEMI/HUNTER'S PT

Lab Code: RDD Case No.: SAS No.: SDG NO.: D9467

Matrix (soil/water): WATER Lab Sample ID: D9467018

Level (low/med): LOW Date Received: 02/07/03

Concentration Units (ug/L or mg/kg dry weight): µG/L

CAS No.	Analyte	Concentration	C	Q	M
7439-89-6	Iron	746			P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

Columbia Analytical Services, Inc.

TOTAL METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

0306H008

Contract: TTEMI/HUNTER'S PT

Lab Code: RDD Case No.: SAS No.: SDG NO.: D9467

Matrix (soil/water): WATER Lab Sample ID: D9467008

Level (low/med): LOW Date Received: 02/07/03

Concentration Units (ug/L or mg/kg dry weight): µG/L

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	7.2			F
7439-89-6	Iron	4.4	B		P
7439-96-5	Manganese	1.4	B		P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

Columbia Analytical Services, Inc.

TOTAL METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

0306H008T

Contract: TTEMI/HUNTER'S PT

Lab Code: RDD Case No.: SAS No.: SDG NO.: D9467

Matrix (soil/water): WATER Lab Sample ID: D9467019

Level (low/med): LOW Date Received: 02/07/03

Concentration Units (ug/L or mg/kg dry weight): µG/L

CAS No.	Analyte	Concentration	C	Q	M
7439-89-6	Iron	37.5	B		P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

Columbia Analytical Services, Inc.

TOTAL METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

0306H009

Contract: TTEMI/HUNTER'S PT

Lab Code: RDD Case No.: SAS No.: SDG NO.: D9467

Matrix (soil/water): WATER Lab Sample ID: D9467009

Level (low/med): LOW Date Received: 02/07/03

Concentration Units (ug/L or mg/kg dry weight): µG/L

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	3.0			F
7439-89-6	Iron	4.0	U		P
7439-96-5	Manganese	1.0	U		P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

Columbia Analytical Services, Inc.

TOTAL METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

0306H009T

Contract: TTEMI/HUNTER'S PT

Lab Code: RDD Case No.: SAS No.: SDG NO.: D9467

Matrix (soil/water): WATER Lab Sample ID: D9467020

Level (low/med): LOW Date Received: 02/07/03

Concentration Units (ug/L or mg/kg dry weight): µG/L

CAS No.	Analyte	Concentration	C	Q	M
7439-89-6	Iron	20.7	B		P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

Columbia Analytical Services, Inc.

TOTAL METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

0306H010

Contract: TTEMI/HUNTER'S PT

Lab Code: RDD Case No.: SAS No.: SDG NO.: D9467

Matrix (soil/water): WATER Lab Sample ID: D9467010

Level (low/med): LOW Date Received: 02/07/03

Concentration Units (ug/L or mg/kg dry weight): µG/L

CAS No.	Analyte	Concentration	C	Q	M
7439-89-6	Iron	55.6	B		P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

Columbia Analytical Services, Inc.

TOTAL METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

0306H010T

Contract: TTEMI/HUNTER'S PT

Lab Code: RDD Case No.: SAS No.: SDG NO.: D9467

Matrix (soil/water): WATER Lab Sample ID: D9467021

Level (low/med): LOW Date Received: 02/07/03

Concentration Units (ug/L or mg/kg dry weight): µG/L

CAS No.	Analyte	Concentration	C	Q	M
7439-89-6	Iron	363			P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

Columbia Analytical Services, Inc.

TOTAL METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

0306H011

Contract: TTEMI/HUNTER'S PT

Lab Code: RDD Case No.: SAS No.: SDG NO.: D9467

Matrix (soil/water): WATER Lab Sample ID: D9467011

Level (low/med): LOW Date Received: 02/07/03

Concentration Units (ug/L or mg/kg dry weight): µG/L

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	1.0	U		F
7439-89-6	Iron	19.7	B		P
7439-96-5	Manganese	190			P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

Columbia Analytical Services, Inc.

TOTAL METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

0306H011T

Contract: TTEMI/HUNTER'S PT

Lab Code: RDD Case No.: SAS No.: SDG NO.: D9467

Matrix (soil/water): WATER Lab Sample ID: D9467022

Level (low/med): LOW Date Received: 02/07/03

Concentration Units (ug/L or mg/kg dry weight): µG/L

CAS No.	Analyte	Concentration	C	Q	M
7439-89-6	Iron	200			P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

Columbia Analytical Services, Inc.

TOTAL METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

0306H012

Contract: TTEMI/HUNTER'S PT

Lab Code: RDD Case No.: SAS No.: SDG NO.: D9467

Matrix (soil/water): WATER Lab Sample ID: D9467012

Level (low/med): LOW Date Received: 02/07/03

Concentration Units (ug/L or mg/kg dry weight): µG/L

CAS No.	Analyte	Concentration	C	Q	M
7439-89-6	Iron	10.7	B		P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

Columbia Analytical Services, Inc.

TOTAL METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

0306H012T

Contract: TTEMI/HUNTER'S PT

Lab Code: RDD Case No.: SAS No.: SDG NO.: D9467

Matrix (soil/water): WATER Lab Sample ID: D9467023

Level (low/med): LOW Date Received: 02/07/03

Concentration Units (ug/L or mg/kg dry weight): µG/L

CAS No.	Analyte	Concentration	C	Q	M
7439-89-6	Iron	76.4	B		P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

Report of Analytical Results

Client Sample ID: 0306H002
Sample Description: None
Sample Matrix: Water
Site: N/A

Date Collected: 02/04/03 16:10 (Tue)
Date Received: 02/07/03 10:20 (Fri)

Reference No: D9467
Lab Sample ID: D9467002

CATEGORY NAME Analytical Parameter	Result	Units	Reporting Level	Date/Time of Analysis	Analytical Method(s)
GENERAL					
Alkalinity as CaCO3	242	mg/L	10	02/13/03 09:00	EPA310.1
ANIONS					
Chloride	14100	mg/L	1000	02/14/03 10:53	EPA300.0

(19560)

Report of Analytical Results

Client Sample ID: 0306H005
Sample Description: None
Sample Matrix: Water
Site: N/A

Date Collected: 02/05/03 10:10 (Wed)
Date Received: 02/07/03 10:20 (Fri)

Reference No: D9467
Lab Sample ID: D9467005

CATEGORY NAME Analytical Parameter	Result	Units	Reporting Level	Date/Time of Analysis	Analytical Method(s)
GENERAL					
Alkalinity as CaCO3	94	mg/L	10	02/13/03 09:00	EPA310.1
ANIONS					
Chloride	118	mg/L	10	02/13/03 14:59	EPA300.0

(19560)

Report of Analytical Results

Client Sample ID: 0306H006
Sample Description: None
Sample Matrix: Water
Site: N/A

Date Collected: 02/05/03 10:20 (Wed)
Date Received: 02/07/03 10:20 (Fri)

Reference No: D9467
Lab Sample ID: D9467006

CATEGORY NAME Analytical Parameter	Result	Units	Reporting Level	Date/Time of Analysis	Analytical Method(s)
GENERAL					
Alkalinity as CaCO3	127	mg/L	10	02/13/03 09:00	EPA310.1
ANIONS					
Chloride	70.7	mg/L	10	02/13/03 19:05	EPA300.0

(19560)

Report of Analytical Results

Client Sample ID: 0306H008
Sample Description: None
Sample Matrix: Water
Site: N/A

Date Collected: 02/05/03 11:55 (Wed)
Date Received: 02/07/03 10:20 (Fri)

Reference No: D9467
Lab Sample ID: D9467008

CATEGORY NAME Analytical Parameter	Result	Units	Reporting Level	Date/Time of Analysis	Analytical Method(s)
GENERAL					
Alkalinity as CaCO3	148	mg/L	10	02/13/03 09:00	EPA310.1
ANIONS					
Chloride	73.9	mg/L	10	02/13/03 19:23	EPA300.0

(19560)

Report of Analytical Results

Client Sample ID: 0306H009
Sample Description: None
Sample Matrix: Water
Site: N/A

Date Collected: 02/05/03 14:45 (Wed)
Date Received: 02/07/03 10:20 (Fri)

Reference No: D9467
Lab Sample ID: D9467009

CATEGORY NAME Analytical Parameter	Result	Units	Reporting Level	Date/Time of Analysis	Analytical Method(s)
GENERAL					
Alkalinity as CaCO3	158	mg/L	10	02/13/03 09:00	EPA310.1
ANIONS					
Chloride	168	mg/L	10	02/13/03 19:40	EPA300.0

(19560)

Report of Analytical Results

Client Sample ID: 0306H010
Sample Description: None
Sample Matrix: Water
Site: N/A

Date Collected: 02/05/03 15:20 (Wed)
Date Received: 02/07/03 10:20 (Fri)

Reference No: D9467
Lab Sample ID: D9467010

CATEGORY NAME Analytical Parameter	Result	Units	Reporting Level	Date/Time of Analysis	Analytical Method(s)
GENERAL					
Alkalinity as CaCO3	52	mg/L	10	02/13/03 09:00	EPA310.1
ANIONS					
Chloride	139	mg/L	10	02/13/03 19:58	EPA300.0

(19560)

Report of Analytical Results

Client Sample ID: 0306H011
Sample Description: None
Sample Matrix: Water
Site: N/A

Date Collected: 02/05/03 16:15 (Wed)
Date Received: 02/07/03 10:20 (Fri)

Reference No: D9467
Lab Sample ID: D9467011

CATEGORY NAME Analytical Parameter	Result	Units	Reporting Level	Date/Time of Analysis	Analytical Method(s)
GENERAL					
Alkalinity as CaCO3	106	mg/L	10	02/13/03 09:00	EPA310.1
ANIONS					
Chloride	2510	mg/L	200	02/14/03 11:29	EPA300.0

(19560)

Report of Analytical Results

Client Sample ID: 0306H012
Sample Description: None
Sample Matrix: Water
Site: N/A

Date Collected: 02/05/03 16:40 (Wed)
Date Received: 02/07/03 10:20 (Fri)

Reference No: D9467
Lab Sample ID: D9467012

CATEGORY NAME Analytical Parameter	Result	Units	Reporting Level	Date/Time of Analysis	Analytical Method(s)
GENERAL					
Alkalinity as CaCO3	140	mg/L	10	02/13/03 09:00	EPA310.1
ANIONS					
Chloride	12.0	mg/L	2.0	02/14/03 11:46	EPA300.0

(19560)

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Tetra Tech**
Client Project ID: **Hunter's Point**

CAS Project ID: P2300230

Hydrogen

Test Code: RSK 175
Instrument ID: HP5890A/TCD #8
Analyst: Wade Henton/Regan Lau
Sampling Media: Liquid
Test Notes:

Date(s) Collected: 2/4 - 2/5/03
Date Received: 2/11/03
Date(s) Analyzed: 2/13/03
Volume(s) Analyzed: 0.10 ml

Client Sample ID	CAS Sample ID	D.F.	Hydrogen µg/L Result	MRL	MDL	Data Qualifier
0306H002	P2300230-001	1.00	ND	17.0	5.00	
0306H005	P2300230-002	1.00	**88.5**	17.0	5.00	
0306H006	P2300230-003	1.00	ND	17.0	5.00	
0306H008	P2300230-004	1.00	ND	17.0	5.00	
0306H009	P2300230-005	1.00	ND	17.0	5.00	
0306H010	P2300230-006	1.00	ND	17.0	5.00	
0306H011	P2300230-007	1.00	ND	17.0	5.00	
0306H012	P2300230-008	1.00	ND	17.0	5.00	
Method Control Sample	P030213-MB	1.00	ND	17.0	5.00	

The Method Control Sample is laboratory water carried through the entire analytical process.
ND = Compound was analyzed for, but not detected above the **laboratory detection limit**.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By: RG Date: 2/20/03

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Tetra Tech**
Client Sample ID: **0306H002**
Client Project ID: **Hunter's Point**

CAS Project ID: P2300230
CAS Sample ID: P2300230-001

Test Code: RSK 175
Instrument ID: HP5890A/FID #10
Analyst: Wade Henton/Regan Lau
Sampling Media: Liquid
Test Notes:

Date Collected: 2/4/03
Date Received: 2/11/03
Date Analyzed: 2/14/03
Volume(s) Analyzed: 0.10 ml(s)

D.F. = 1.00

CAS #	Compound	Result µg/L	MRL µg/L	Detection Limit µg/L	Data Qualifier
74-85-1	Ethene	ND	1.5	0.40	
74-84-0	Ethane	**0.30**	0.50	0.30	**J**

ND = Compound was analyzed for, but not detected above the **laboratory detection limit**.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The analyte was positively identified below the laboratory method reporting limit;
the associated numerical value is considered estimated.

Verified By: RG Date: 2/20/03

00230SVG.RD1 - Sample

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Tetra Tech**
Client Sample ID: **0306H005**
Client Project ID: **Hunter's Point**

CAS Project ID: P2300230
CAS Sample ID: P2300230-002

Test Code: RSK 175
Instrument ID: HP5890A/FID #10
Analyst: Wade Henton/Regan Lau
Sampling Media: Liquid
Test Notes:

Date Collected: 2/5/03
Date Received: 2/11/03
Date Analyzed: 2/14/03
Volume(s) Analyzed: 0.10 ml

D.F. = 1.00

CAS #	Compound	Result µg/L	MRL µg/L	Detection Limit µg/L	Data Qualifier
74-85-1	Ethene	**3.5**	1.5	0.40	
74-84-0	Ethane	**6.5**	0.50	0.30	

ND = Compound was analyzed for, but not detected above the **laboratory detection limit.**
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By: RG Date: 2/20/03

00230SVG.RDI - Sample (2)

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Tetra Tech**
Client Sample ID: **0306H006**
Client Project ID: **Hunter's Point**

CAS Project ID: P2300230
CAS Sample ID: P2300230-003

Test Code: RSK 175
Instrument ID: HP5890A/FID #10
Analyst: Wade Henton/Regan Lau
Sampling Media: Liquid
Test Notes:

Date Collected: 2/5/03
Date Received: 2/11/03
Date Analyzed: 2/14/03
Volume(s) Analyzed: 0.10 ml

D.F. = 1.00

CAS #	Compound	Result µg/L	MRL µg/L	Detection Limit µg/L	Data Qualifier
74-85-1	Ethene	ND	1.5	0.40	
74-84-0	Ethane	**0.55**	0.50	0.30	

ND = Compound was analyzed for, but not detected above the **laboratory detection limit.**
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By: RG Date: 2/20/03

00230SVG.RD1- Sample (3)

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Tetra Tech**
Client Sample ID: **0306H008**
Client Project ID: **Hunter's Point**

CAS Project ID: P2300230
CAS Sample ID: P2300230-004

Test Code: RSK 175
Instrument ID: HP5890A/FID #10
Analyst: Wade Henton/Regan Lau
Sampling Media: Liquid
Test Notes:

Date Collected: 2/5/03
Date Received: 2/11/03
Date Analyzed: 2/14/03
Volume(s) Analyzed: 0.10 ml

D.F. = 1.00

CAS #	Compound	Result µg/L	MRL µg/L	Detection Limit µg/L	Data Qualifier
74-85-1	Ethene	ND	1.5	0.40	
74-84-0	Ethane	ND	0.50	0.30	

ND = Compound was analyzed for, but not detected above the **laboratory detection limit.**
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By: RG Date: 2/20/03

00230SVG.RD1- Sample (4)

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Tetra Tech**
Client Sample ID: **0306H009**
Client Project ID: **Hunter's Point**

CAS Project ID: P2300230
CAS Sample ID: P2300230-005

Test Code: RSK 175
Instrument ID: HP5890A/FID #10
Analyst: Wade Henton/Regan Lau
Sampling Media: Liquid
Test Notes:

Date Collected: 2/5/03
Date Received: 2/11/03
Date Analyzed: 2/14/03
Volume(s) Analyzed: 0.10 ml

D.F. = 1.00

CAS #	Compound	Result µg/L	MRL µg/L	Detection Limit µg/L	Data Qualifier
74-85-1	Ethene	ND	1.5	0.40	
74-84-0	Ethane	ND	0.50	0.30	

ND = Compound was analyzed for, but not detected above the **laboratory detection limit**.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By: RG Date: 2/20/03

00230SVG.RD1- Sample (5)

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Tetra Tech**
Client Sample ID: **0306H011**
Client Project ID: **Hunter's Point**

CAS Project ID: P2300230
CAS Sample ID: P2300230-007

Test Code: RSK 175
Instrument ID: HP5890A/FID #10
Analyst: Wade Henton/Regan Lau
Sampling Media: Liquid
Test Notes:

Date Collected: 2/5/03
Date Received: 2/11/03
Date Analyzed: 2/14/03
Volume(s) Analyzed: 0.10 ml

D.F. = 1.00

CAS #	Compound	Result µg/L	MRL µg/L	Detection Limit µg/L	Data Qualifier
74-85-1	Ethene	ND	1.5	0.40	
74-84-0	Ethane	ND	0.50	0.30	

ND = Compound was analyzed for, but not detected above the **laboratory detection limit**.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By: RG Date: 2/20/03

00230SVG.RD1 - Sample (7)

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Tetra Tech**
Client Sample ID: **0306H012**
Client Project ID: **Hunter's Point**

CAS Project ID: P2300230
CAS Sample ID: P2300230-008

Test Code: RSK 175
Instrument ID: HP5890A/FID #10
Analyst: Wade Henton/Regan Lau
Sampling Media: Liquid
Test Notes:

Date Collected: 2/5/03
Date Received: 2/11/03
Date Analyzed: 2/14/03
Volume(s) Analyzed: 0.10 ml

D.F. = 1.00

CAS #	Compound	Result µg/L	MRL µg/L	Detection Limit µg/L	Data Qualifier
74-85-1	Ethene	ND	1.5	0.40	
74-84-0	Ethane	ND	0.50	0.30	

ND = Compound was analyzed for, but not detected above the **laboratory detection limit.**
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By: RG Date: 2/20/03

00230SVG.RD1- Sample (8)

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT ID.

0306H013

Lab Name: COLUMBIA ANALYTICAL SERVICES - REDDING

Case No.: D9468 SDG No.: D9468

Matrix: WATER Level: LOW

Sample Volume: 10.0 ML

Lab Sample ID: D9468001

Lab File ID: R030531

Date Received: 02/07/03

Date Analyzed: 02/12/03

Dilution Factor: 1.0

CAS NO.	COMPOUND Units: UG/L	MDL	RL	RESULT	Q
75-71-8	Dichlorodifluoromethane	0.26	1.0	1.0	U
74-87-3	Chloromethane	0.20	1.0	1.0	U
75-01-4	Vinyl chloride	0.26	1.0	1.0	U
74-83-9	Bromomethane	0.32	1.0	1.0	U
75-00-3	Chloroethane	0.28	1.0	1.0	U
75-69-4	Trichlorofluoromethane	0.29	1.0	1.0	U
76-13-1	1,1,2-Trichlorotrifluoroetha	0.27	1.0	1.0	U
75-35-4	1,1-Dichloroethene	0.29	1.0	1.0	U
67-64-1	Acetone	0.62	5.0	5.0	
75-15-0	Carbon disulfide	0.25	1.0	1.0	U
75-09-2	Methylene chloride	0.15	2.0	0.30	J
1634-04-4	Methyl tert-butylether	0.22	1.0	1.0	U
75-34-3	1,1-Dichloroethane	0.12	1.0	1.0	U
156-60-5	trans-1,2-Dichloroethene	0.28	1.0	1.0	U
78-93-3	2-Butanone	0.71	5.0	0.90	J
74-97-5	Bromochloromethane	0.15	1.0	1.0	U
67-66-3	Chloroform	0.11	1.0	0.20	J
156-59-2	cis-1,2-Dichloroethene	0.23	1.0	1.0	U
71-55-6	1,1,1-Trichloroethane	0.22	1.0	1.0	U
56-23-5	Carbon tetrachloride	0.21	1.0	1.0	U
71-43-2	Benzene	0.13	1.0	1.0	U
107-06-2	1,2-Dichloroethane	0.24	1.0	1.0	U
79-01-6	Trichloroethene	0.24	1.0	1.0	U
78-87-5	1,2-Dichloropropane	0.12	1.0	1.0	U
75-27-4	Bromodichloromethane	0.11	1.0	1.0	U
10061-01-5	cis-1,3-Dichloropropene	0.21	1.0	1.0	U
108-10-1	4-Methyl-2-pentanone	0.47	5.0	5.0	U
108-88-3	Toluene	0.23	1.0	0.30	J
10061-02-6	trans-1,3-Dichloropropene	0.20	1.0	1.0	U
127-18-4	Tetrachloroethene	0.26	1.0	1.0	U
79-00-5	1,1,2-Trichloroethane	0.28	1.0	1.0	U
591-78-6	2-Hexanone	0.33	5.0	5.0	U
124-48-1	Dibromochloromethane	0.11	1.0	1.0	U
106-93-4	1,2-Dibromoethane	0.19	1.0	1.0	U
108-90-7	Chlorobenzene	0.11	1.0	1.0	U
100-41-4	Ethylbenzene	0.21	1.0	1.0	U
1330-20-7	Xylene (total)	0.64	1.0	1.0	U
100-42-5	Styrene	0.11	1.0	1.0	U

SW846

FORM I VOA

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT ID.

0306H013

Lab Name: COLUMBIA ANALYTICAL SERVICES - REDDING

Case No.: D9468 SDG No.: D9468

Matrix: WATER Level: LOW

Sample Volume: 10.0 ML

Lab Sample ID: D9468001

Lab File ID: R030531

Date Received: 02/07/03

Date Analyzed: 02/12/03

Dilution Factor: 1.0

CAS NO.	COMPOUND Units: UG/L	MDL	RL	RESULT	Q
75-25-2	Bromoform	0.19	1.0	1.0	U
98-82-8	Isopropylbenzene	0.24	1.0	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	0.10	1.0	1.0	U
541-73-1	1,3-Dichlorobenzene	0.26	1.0	1.0	U
106-46-7	1,4-Dichlorobenzene	0.10	1.0	1.0	U
95-50-1	1,2-Dichlorobenzene	0.10	1.0	1.0	U
96-12-8	1,2-Dibromo-3-chloropropane	0.68	5.0	5.0	U
120-82-1	1,2,4-Trichlorobenzene	0.090	1.0	1.0	U
87-61-6	1,2,3-Trichlorobenzene	0.14	1.0	1.0	U

FORM I VOA

SW846

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT ID.

0306H014

Lab Name: COLUMBIA ANALYTICAL SERVICES - REDDING

Case No.: D9468 SDG No.: D9468 Lab Sample ID: D9468002

Matrix: WATER Level: LOW Lab File ID: R030532

Sample Volume: 10.0 ML Date Received: 02/07/03

Date Analyzed: 02/12/03

Dilution Factor: 1.0

CAS NO.	COMPOUND Units: UG/L	MDL	RL	RESULT	Q
75-71-8	Dichlorodifluoromethane	0.26	1.0	1.0	U
74-87-3	Chloromethane	0.20	1.0	1.0	U
75-01-4	Vinyl chloride	0.26	1.0	1.0	U
74-83-9	Bromomethane	0.32	1.0	1.0	U
75-00-3	Chloroethane	0.28	1.0	1.0	U
75-69-4	Trichlorofluoromethane	0.29	1.0	1.0	U
76-13-1	1,1,2-Trichlorotrifluoroetha	0.27	1.0	1.0	U
75-35-4	1,1-Dichloroethene	0.29	1.0	1.0	U
67-64-1	Acetone	0.62	5.0	5.0	U
75-15-0	Carbon disulfide	0.25	1.0	1.0	U
75-09-2	Methylene chloride	0.15	2.0	2.0	U
1634-04-4	Methyl tert-butylether	0.22	1.0	1.0	U
75-34-3	1,1-Dichloroethane	0.12	1.0	1.0	U
156-60-5	trans-1,2-Dichloroethene	0.28	1.0	1.0	U
78-93-3	2-Butanone	0.71	5.0	5.0	U
74-97-5	Bromochloromethane	0.15	1.0	1.0	U
67-66-3	Chloroform	0.11	1.0	2.0	
156-59-2	cis-1,2-Dichloroethene	0.23	1.0	1.0	U
71-55-6	1,1,1-Trichloroethane	0.22	1.0	1.0	U
56-23-5	Carbon tetrachloride	0.21	1.0	0.30	J
71-43-2	Benzene	0.13	1.0	1.0	U
107-06-2	1,2-Dichloroethane	0.24	1.0	1.0	U
79-01-6	Trichloroethene	0.24	1.0	48	E
78-87-5	1,2-Dichloropropane	0.12	1.0	1.0	U
75-27-4	Bromodichloromethane	0.11	1.0	1.0	U
10061-01-5	cis-1,3-Dichloropropene	0.21	1.0	1.0	U
108-10-1	4-Methyl-2-pentanone	0.47	5.0	5.0	U
108-88-3	Toluene	0.23	1.0	0.40	J
10061-02-6	trans-1,3-Dichloropropene	0.20	1.0	1.0	U
127-18-4	Tetrachloroethene	0.26	1.0	1.0	U
79-00-5	1,1,2-Trichloroethane	0.28	1.0	1.0	U
591-78-6	2-Hexanone	0.33	5.0	5.0	U
124-48-1	Dibromochloromethane	0.11	1.0	1.0	U
106-93-4	1,2-Dibromoethane	0.19	1.0	1.0	U
108-90-7	Chlorobenzene	0.11	1.0	1.0	U
100-41-4	Ethylbenzene	0.21	1.0	1.0	U
1330-20-7	Xylene (total)	0.64	1.0	1.0	U
100-42-5	Styrene	0.11	1.0	1.0	U

FORM I VOA SW846

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT ID.

0306H014

Lab Name: COLUMBIA ANALYTICAL SERVICES - REDDING

Case No.: D9468 SDG No.: D9468

Matrix: WATER Level: LOW

Sample Volume: 10.0 ML

Lab Sample ID: D9468002

Lab File ID: R030532

Date Received: 02/07/03

Date Analyzed: 02/12/03

Dilution Factor: 1.0

CAS NO.	COMPOUND Units: UG/L	MDL	RL	RESULT	Q
75-25-2	Bromoform	0.19	1.0	1.0	U
98-82-8	Isopropylbenzene	0.24	1.0	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	0.10	1.0	1.0	U
541-73-1	1,3-Dichlorobenzene	0.26	1.0	1.0	U
106-46-7	1,4-Dichlorobenzene	0.10	1.0	1.0	U
95-50-1	1,2-Dichlorobenzene	0.10	1.0	1.0	U
96-12-8	1,2-Dibromo-3-chloropropane	0.68	5.0	5.0	U
120-82-1	1,2,4-Trichlorobenzene	0.090	1.0	1.0	U
87-61-6	1,2,3-Trichlorobenzene	0.14	1.0	1.0	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT ID.

0306H014DL

Lab Name: COLUMBIA ANALYTICAL SERVICES - REDDING

Case No.: D9468 SDG No.: D9468 Lab Sample ID: D9468002DL

Matrix: WATER Level: LOW Lab File ID: R030552

Sample Volume: 10.0 ML Date Received: 02/07/03

Date Analyzed: 02/13/03

Dilution Factor: 2.0

CAS NO.	COMPOUND Units: UG/L	MDL	RL	RESULT	Q
75-71-8	Dichlorodifluoromethane	0.52	2.0	2.0	U
74-87-3	Chloromethane	0.40	2.0	2.0	U
75-01-4	Vinyl chloride	0.52	2.0	2.0	U
74-83-9	Bromomethane	0.64	2.0	2.0	U
75-00-3	Chloroethane	0.56	2.0	2.0	U
75-69-4	Trichlorofluoromethane	0.58	2.0	2.0	U
76-13-1	1,1,2-Trichlorotrifluoroetha	0.54	2.0	2.0	U
75-35-4	1,1-Dichloroethene	0.58	2.0	2.0	U
67-64-1	Acetone	1.2	10	10	U
75-15-0	Carbon disulfide	0.50	2.0	2.0	U
75-09-2	Methylene chloride	0.30	4.0	4.0	U
1634-04-4	Methyl tert-butylether	0.44	2.0	2.0	U
75-34-3	1,1-Dichloroethane	0.24	2.0	2.0	U
156-60-5	trans-1,2-Dichloroethene	0.56	2.0	2.0	U
78-93-3	2-Butanone	1.4	10	10	U
74-97-5	Bromochloromethane	0.30	2.0	2.0	U
67-66-3	Chloroform	0.22	2.0	2.0	D
156-59-2	cis-1,2-Dichloroethene	0.46	2.0	2.0	U
71-55-6	1,1,1-Trichloroethane	0.44	2.0	2.0	U
56-23-5	Carbon tetrachloride	0.42	2.0	2.0	U
71-43-2	Benzene	0.26	2.0	2.0	U
107-06-2	1,2-Dichloroethane	0.48	2.0	2.0	U
79-01-6	Trichloroethene	0.48	2.0	47	D
78-87-5	1,2-Dichloropropane	0.24	2.0	2.0	U
75-27-4	Bromodichloromethane	0.22	2.0	2.0	U
10061-01-5	cis-1,3-Dichloropropene	0.42	2.0	2.0	U
108-10-1	4-Methyl-2-pentanone	0.94	10	10	U
108-88-3	Toluene	0.46	2.0	0.90	DJ
10061-02-6	trans-1,3-Dichloropropene	0.40	2.0	2.0	U
127-18-4	Tetrachloroethene	0.52	2.0	2.0	U
79-00-5	1,1,2-Trichloroethane	0.56	2.0	2.0	U
591-78-6	2-Hexanone	0.66	10	10	U
124-48-1	Dibromochloromethane	0.22	2.0	2.0	U
106-93-4	1,2-Dibromoethane	0.38	2.0	2.0	U
108-90-7	Chlorobenzene	0.22	2.0	2.0	U
100-41-4	Ethylbenzene	0.42	2.0	2.0	U
1330-20-7	Xylene (total)	1.3	2.0	2.0	U
100-42-5	Styrene	0.22	2.0	2.0	U

FORM I VOA SW846

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT ID.

0306H014DL

Lab Name: COLUMBIA ANALYTICAL SERVICES - REDDING

Case No.: D9468 SDG No.: D9468 Lab Sample ID: D9468002DL

Matrix: WATER Level: LOW Lab File ID: R030552

Sample Volume: 10.0 ML Date Received: 02/07/03

Date Analyzed: 02/13/03

Dilution Factor: 2.0

CAS NO.	COMPOUND Units: UG/L	MDL	RL	RESULT	Q
75-25-2	Bromoform	0.38	2.0	2.0	U
98-82-8	Isopropylbenzene	0.48	2.0	2.0	U
79-34-5	1,1,2,2-Tetrachloroethane	0.20	2.0	2.0	U
541-73-1	1,3-Dichlorobenzene	0.52	2.0	2.0	U
106-46-7	1,4-Dichlorobenzene	0.20	2.0	2.0	U
95-50-1	1,2-Dichlorobenzene	0.20	2.0	2.0	U
96-12-8	1,2-Dibromo-3-chloropropane	1.4	10	2.0	DJ
120-82-1	1,2,4-Trichlorobenzene	0.18	2.0	2.0	U
87-61-6	1,2,3-Trichlorobenzene	0.28	2.0	2.0	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT ID.

0306H015

Lab Name: COLUMBIA ANALYTICAL SERVICES - REDDING

Case No.: D9468 SDG No.: D9468 Lab Sample ID: D9468003

Matrix: WATER Level: LOW Lab File ID: R030533

Sample Volume: 10.0 ML Date Received: 02/07/03

Date Analyzed: 02/12/03

Dilution Factor: 1.0

CAS NO.	COMPOUND Units: UG/L	MDL	RL	RESULT	Q
75-71-8	Dichlorodifluoromethane	0.26	1.0	1.0	U
74-87-3	Chloromethane	0.20	1.0	1.0	U
75-01-4	Vinyl chloride	0.26	1.0	1.0	U
74-83-9	Bromomethane	0.32	1.0	1.0	U
75-00-3	Chloroethane	0.28	1.0	1.0	U
75-69-4	Trichlorofluoromethane	0.29	1.0	1.0	U
76-13-1	1,1,2-Trichlorotrifluoroetha	0.27	1.0	1.0	U
75-35-4	1,1-Dichloroethene	0.29	1.0	1.0	U
67-64-1	Acetone	0.62	5.0	5.0	U
75-15-0	Carbon disulfide	0.25	1.0	1.0	U
75-09-2	Methylene chloride	0.15	2.0	0.80	J
1634-04-4	Methyl tert-butylether	0.22	1.0	1.0	U
75-34-3	1,1-Dichloroethane	0.12	1.0	1.0	U
156-60-5	trans-1,2-Dichloroethene	0.28	1.0	1.0	U
78-93-3	2-Butanone	0.71	5.0	5.0	U
74-97-5	Bromochloromethane	0.15	1.0	1.0	U
67-66-3	Chloroform	0.11	1.0	3.0	
156-59-2	cis-1,2-Dichloroethene	0.23	1.0	0.60	J
71-55-6	1,1,1-Trichloroethane	0.22	1.0	1.0	U
56-23-5	Carbon tetrachloride	0.21	1.0	0.80	J
71-43-2	Benzene	0.13	1.0	1.0	U
107-06-2	1,2-Dichloroethane	0.24	1.0	1.0	U
79-01-6	Trichloroethene	0.24	1.0	26	
78-87-5	1,2-Dichloropropane	0.12	1.0	1.0	U
75-27-4	Bromodichloromethane	0.11	1.0	1.0	U
10061-01-5	cis-1,3-Dichloropropene	0.21	1.0	1.0	U
108-10-1	4-Methyl-2-pentanone	0.47	5.0	5.0	U
108-88-3	Toluene	0.23	1.0	0.30	J
10061-02-6	trans-1,3-Dichloropropene	0.20	1.0	1.0	U
127-18-4	Tetrachloroethene	0.26	1.0	1.0	U
79-00-5	1,1,2-Trichloroethane	0.28	1.0	1.0	U
591-78-6	2-Hexanone	0.33	5.0	5.0	U
124-48-1	Dibromochloromethane	0.11	1.0	1.0	U
106-93-4	1,2-Dibromoethane	0.19	1.0	1.0	U
108-90-7	Chlorobenzene	0.11	1.0	1.0	U
100-41-4	Ethylbenzene	0.21	1.0	1.0	U
1330-20-7	Xylene (total)	0.64	1.0	1.0	U
100-42-5	Styrene	0.11	1.0	1.0	U

FORM I VOA SW846

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT ID.

0306H015

Lab Name: COLUMBIA ANALYTICAL SERVICES - REDDING

Case No.: D9468 SDG No.: D9468 Lab Sample ID: D9468003

Matrix: WATER Level: LOW Lab File ID: R030533

Sample Volume: 10.0 ML Date Received: 02/07/03

Date Analyzed: 02/12/03

Dilution Factor: 1.0

CAS NO.	COMPOUND Units: UG/L	MDL	RL	RESULT	Q
75-25-2	Bromoform	0.19	1.0	1.0	U
98-82-8	Isopropylbenzene	0.24	1.0	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	0.10	1.0	1.0	U
541-73-1	1,3-Dichlorobenzene	0.26	1.0	1.0	U
106-46-7	1,4-Dichlorobenzene	0.10	1.0	1.0	U
95-50-1	1,2-Dichlorobenzene	0.10	1.0	1.0	U
96-12-8	1,2-Dibromo-3-chloropropane	0.68	5.0	5.0	U
120-82-1	1,2,4-Trichlorobenzene	0.090	1.0	1.0	U
87-61-6	1,2,3-Trichlorobenzene	0.14	1.0	1.0	U

FORM I VOA SW846

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT ID.

0306H016

Lab Name: COLUMBIA ANALYTICAL SERVICES - REDDING

Case No.: D9468 SDG No.: D9468 Lab Sample ID: D9468004

Matrix: WATER Level: LOW Lab File ID: R030534

Sample Volume: 10.0 ML Date Received: 02/07/03

Date Analyzed: 02/12/03

Dilution Factor: 1.0

CAS NO.	COMPOUND Units: UG/L	MDL	RL	RESULT	Q
75-71-8	Dichlorodifluoromethane	0.26	1.0	1.0	U
74-87-3	Chloromethane	0.20	1.0	1.0	U
75-01-4	Vinyl chloride	0.26	1.0	1.0	U
74-83-9	Bromomethane	0.32	1.0	1.0	U
75-00-3	Chloroethane	0.28	1.0	1.0	U
75-69-4	Trichlorofluoromethane	0.29	1.0	1.0	U
76-13-1	1,1,2-Trichlorotrifluoroetha	0.27	1.0	1.0	U
75-35-4	1,1-Dichloroethene	0.29	1.0	1.0	U
67-64-1	Acetone	0.62	5.0	5.0	U
75-15-0	Carbon disulfide	0.25	1.0	1.0	U
75-09-2	Methylene chloride	0.15	2.0	2.0	U
1634-04-4	Methyl tert-butylether	0.22	1.0	1.0	U
75-34-3	1,1-Dichloroethane	0.12	1.0	1.0	U
156-60-5	trans-1,2-Dichloroethene	0.28	1.0	1.0	U
78-93-3	2-Butanone	0.71	5.0	5.0	U
74-97-5	Bromochloromethane	0.15	1.0	1.0	U
67-66-3	Chloroform	0.11	1.0	1.0	U
156-59-2	cis-1,2-Dichloroethene	0.23	1.0	1.0	U
71-55-6	1,1,1-Trichloroethane	0.22	1.0	1.0	U
56-23-5	Carbon tetrachloride	0.21	1.0	1.0	U
71-43-2	Benzene	0.13	1.0	1.0	U
107-06-2	1,2-Dichloroethane	0.24	1.0	1.0	U
79-01-6	Trichloroethene	0.24	1.0	1.0	
78-87-5	1,2-Dichloropropane	0.12	1.0	1.0	U
75-27-4	Bromodichloromethane	0.11	1.0	1.0	U
10061-01-5	cis-1,3-Dichloropropene	0.21	1.0	1.0	U
108-10-1	4-Methyl-2-pentanone	0.47	5.0	5.0	U
108-88-3	Toluene	0.23	1.0	1.0	U
10061-02-6	trans-1,3-Dichloropropene	0.20	1.0	1.0	U
127-18-4	Tetrachloroethene	0.26	1.0	1.0	U
79-00-5	1,1,2-Trichloroethane	0.28	1.0	1.0	U
591-78-6	2-Hexanone	0.33	5.0	5.0	U
124-48-1	Dibromochloromethane	0.11	1.0	1.0	U
106-93-4	1,2-Dibromoethane	0.19	1.0	1.0	U
108-90-7	Chlorobenzene	0.11	1.0	1.0	U
100-41-4	Ethylbenzene	0.21	1.0	1.0	U
1330-20-7	Xylene (total)	0.64	1.0	1.0	U
100-42-5	Styrene	0.11	1.0	1.0	U

FORM I VOA SW846

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT ID.

0306H016

Lab Name: COLUMBIA ANALYTICAL SERVICES - REDDING

Case No.: D9468 SDG No.: D9468 Lab Sample ID: D9468004

Matrix: WATER Level: LOW Lab File ID: R030534

Sample Volume: 10.0 ML Date Received: 02/07/03

Date Analyzed: 02/12/03

Dilution Factor: 1.0

CAS NO.	COMPOUND Units: UG/L	MDL	RL	RESULT	Q
75-25-2	Bromoform	0.19	1.0	1.0	U
98-82-8	Isopropylbenzene	0.24	1.0	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	0.10	1.0	1.0	U
541-73-1	1,3-Dichlorobenzene	0.26	1.0	1.0	U
106-46-7	1,4-Dichlorobenzene	0.10	1.0	1.0	U
95-50-1	1,2-Dichlorobenzene	0.10	1.0	1.0	U
96-12-8	1,2-Dibromo-3-chloropropane	0.68	5.0	5.0	U
120-82-1	1,2,4-Trichlorobenzene	0.090	1.0	1.0	U
87-61-6	1,2,3-Trichlorobenzene	0.14	1.0	1.0	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT ID.

0306H017

Lab Name: COLUMBIA ANALYTICAL SERVICES - REDDING

Case No.: D9468 SDG No.: D9468 Lab Sample ID: D9468005

Matrix: WATER Level: LOW Lab File ID: R030553

Sample Volume: 10.0 ML Date Received: 02/07/03

Date Analyzed: 02/13/03

Dilution Factor: 1.0

CAS NO.	COMPOUND Units: UG/L	MDL	RL	RESULT	Q
75-71-8	Dichlorodifluoromethane	0.26	1.0	1.0	U
74-87-3	Chloromethane	0.20	1.0	1.0	U
75-01-4	Vinyl chloride	0.26	1.0	0.40	J
74-83-9	Bromomethane	0.32	1.0	1.0	U
75-00-3	Chloroethane	0.28	1.0	1.0	U
75-69-4	Trichlorofluoromethane	0.29	1.0	1.0	U
76-13-1	1,1,2-Trichlorotrifluoroetha	0.27	1.0	1.0	U
75-35-4	1,1-Dichloroethene	0.29	1.0	0.60	J
67-64-1	Acetone	0.62	5.0	1.0	J
75-15-0	Carbon disulfide	0.25	1.0	1.0	U
75-09-2	Methylene chloride	0.15	2.0	16	
1634-04-4	Methyl tert-butylether	0.22	1.0	1.0	U
75-34-3	1,1-Dichloroethane	0.12	1.0	0.30	J
156-60-5	trans-1,2-Dichloroethene	0.28	1.0	1.0	U
78-93-3	2-Butanone	0.71	5.0	5.0	U
74-97-5	Bromochloromethane	0.15	1.0	1.0	U
67-66-3	Chloroform	0.11	1.0	3.0	
156-59-2	cis-1,2-Dichloroethene	0.23	1.0	5.0	
71-55-6	1,1,1-Trichloroethane	0.22	1.0	1.0	U
56-23-5	Carbon tetrachloride	0.21	1.0	1.0	U
71-43-2	Benzene	0.13	1.0	0.60	J
107-06-2	1,2-Dichloroethane	0.24	1.0	31	
79-01-6	Trichloroethene	0.24	1.0	82	E
78-87-5	1,2-Dichloropropane	0.12	1.0	0.40	J
75-27-4	Bromodichloromethane	0.11	1.0	1.0	U
10061-01-5	cis-1,3-Dichloropropene	0.21	1.0	1.0	U
108-10-1	4-Methyl-2-pentanone	0.47	5.0	5.0	U
108-88-3	Toluene	0.23	1.0	0.40	J
10061-02-6	trans-1,3-Dichloropropene	0.20	1.0	1.0	U
127-18-4	Tetrachloroethene	0.26	1.0	1.0	U
79-00-5	1,1,2-Trichloroethane	0.28	1.0	7.0	
591-78-6	2-Hexanone	0.33	5.0	5.0	U
124-48-1	Dibromochloromethane	0.11	1.0	1.0	U
106-93-4	1,2-Dibromoethane	0.19	1.0	1.0	U
108-90-7	Chlorobenzene	0.11	1.0	1.0	U
100-41-4	Ethylbenzene	0.21	1.0	1.0	U
1330-20-7	Xylene (total)	0.64	1.0	1.0	U
100-42-5	Styrene	0.11	1.0	1.0	U

FORM I VOA SW846

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT ID.

0306H017

Lab Name: COLUMBIA ANALYTICAL SERVICES - REDDING

Case No.: D9468 SDG No.: D9468 Lab Sample ID: D9468005

Matrix: WATER Level: LOW Lab File ID: R030553

Sample Volume: 10.0 ML Date Received: 02/07/03

Date Analyzed: 02/13/03

Dilution Factor: 1.0

CAS NO.	COMPOUND Units: UG/L	MDL	RL	RESULT	Q
75-25-2	Bromoform	0.19	1.0	1.0	U
98-82-8	Isopropylbenzene	0.24	1.0	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	0.10	1.0	1.0	U
541-73-1	1,3-Dichlorobenzene	0.26	1.0	1.0	U
106-46-7	1,4-Dichlorobenzene	0.10	1.0	1.0	U
95-50-1	1,2-Dichlorobenzene	0.10	1.0	1.0	U
96-12-8	1,2-Dibromo-3-chloropropane	0.68	5.0	5.0	U
120-82-1	1,2,4-Trichlorobenzene	0.090	1.0	1.0	U
87-61-6	1,2,3-Trichlorobenzene	0.14	1.0	1.0	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT ID.

0306H017DL

Lab Name: COLUMBIA ANALYTICAL SERVICES - REDDING

Case No.: D9468 SDG No.: D9468 Lab Sample ID: D9468005DL

Matrix: WATER Level: LOW Lab File ID: R030576

Sample Volume: 10.0 ML Date Received: 02/07/03

Date Analyzed: 02/14/03

Dilution Factor: 4.0

CAS NO.	COMPOUND Units: UG/L	MDL	RL	RESULT	Q
75-71-8	Dichlorodifluoromethane	1.0	4.0	4.0	U
74-87-3	Chloromethane	0.80	4.0	4.0	U
75-01-4	Vinyl chloride	1.0	4.0	4.0	U
74-83-9	Bromomethane	1.3	4.0	4.0	U
75-00-3	Chloroethane	1.1	4.0	4.0	U
75-69-4	Trichlorofluoromethane	1.2	4.0	4.0	U
76-13-1	1,1,2-Trichlorotrifluoroetha	1.1	4.0	4.0	U
75-35-4	1,1-Dichloroethene	1.2	4.0	4.0	U
67-64-1	Acetone	2.5	20	20	U
75-15-0	Carbon disulfide	1.0	4.0	4.0	U
75-09-2	Methylene chloride	0.60	8.0	13	D
1634-04-4	Methyl tert-butylether	0.88	4.0	4.0	U
75-34-3	1,1-Dichloroethane	0.48	4.0	4.0	U
156-60-5	trans-1,2-Dichloroethene	1.1	4.0	4.0	U
78-93-3	2-Butanone	2.8	20	20	U
74-97-5	Bromochloromethane	0.60	4.0	4.0	U
67-66-3	Chloroform	0.44	4.0	2.0	DJ
156-59-2	cis-1,2-Dichloroethene	0.92	4.0	4.0	D
71-55-6	1,1,1-Trichloroethane	0.88	4.0	4.0	U
56-23-5	Carbon tetrachloride	0.84	4.0	4.0	U
71-43-2	Benzene	0.52	4.0	4.0	U
107-06-2	1,2-Dichloroethane	0.96	4.0	27	D
79-01-6	Trichloroethene	0.96	4.0	78	D
78-87-5	1,2-Dichloropropane	0.48	4.0	4.0	U
75-27-4	Bromodichloromethane	0.44	4.0	4.0	U
10061-01-5	cis-1,3-Dichloropropene	0.84	4.0	4.0	U
108-10-1	4-Methyl-2-pentanone	1.9	20	20	U
108-88-3	Toluene	0.92	4.0	4.0	U
10061-02-6	trans-1,3-Dichloropropene	0.80	4.0	4.0	U
127-18-4	Tetrachloroethene	1.0	4.0	4.0	U
79-00-5	1,1,2-Trichloroethane	1.1	4.0	5.0	D
591-78-6	2-Hexanone	1.3	20	20	U
124-48-1	Dibromochloromethane	0.44	4.0	4.0	U
106-93-4	1,2-Dibromoethane	0.76	4.0	4.0	U
108-90-7	Chlorobenzene	0.44	4.0	4.0	U
100-41-4	Ethylbenzene	0.84	4.0	4.0	U
1330-20-7	Xylene (total)	2.6	4.0	4.0	U
100-42-5	Styrene	0.44	4.0	4.0	U

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VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT ID.

0306H017DL

Lab Name: COLUMBIA ANALYTICAL SERVICES - REDDING

Case No.: D9468 SDG No.: D9468 Lab Sample ID: D9468005DL

Matrix: WATER Level: LOW Lab File ID: R030576

Sample Volume: 10.0 ML Date Received: 02/07/03

Date Analyzed: 02/14/03

Dilution Factor: 4.0

CAS NO.	COMPOUND Units: UG/L	MDL	RL	RESULT	Q
75-25-2	Bromoform	0.76	4.0	4.0	U
98-82-8	Isopropylbenzene	0.96	4.0	4.0	U
79-34-5	1,1,2,2-Tetrachloroethane	0.40	4.0	4.0	U
541-73-1	1,3-Dichlorobenzene	1.0	4.0	4.0	U
106-46-7	1,4-Dichlorobenzene	0.40	4.0	4.0	U
95-50-1	1,2-Dichlorobenzene	0.40	4.0	4.0	U
96-12-8	1,2-Dibromo-3-chloropropane	2.7	20	20	U
120-82-1	1,2,4-Trichlorobenzene	0.36	4.0	4.0	U
87-61-6	1,2,3-Trichlorobenzene	0.56	4.0	4.0	U

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VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT ID.

0306H018

Lab Name: COLUMBIA ANALYTICAL SERVICES - REDDING

Case No.: D9468 SDG No.: D9468 Lab Sample ID: D9468006

Matrix: WATER Level: LOW Lab File ID: R030554

Sample Volume: 10.0 ML Date Received: 02/07/03

Date Analyzed: 02/13/03

Dilution Factor: 1.0

CAS NO.	COMPOUND	Units: UG/L	MDL	RL	RESULT	Q
75-71-8	Dichlorodifluoromethane		0.26	1.0	1.0	U
74-87-3	Chloromethane		0.20	1.0	1.0	U
75-01-4	Vinyl chloride		0.26	1.0	1.0	U
74-83-9	Bromomethane		0.32	1.0	1.0	U
75-00-3	Chloroethane		0.28	1.0	1.0	U
75-69-4	Trichlorofluoromethane		0.29	1.0	1.0	U
76-13-1	1,1,2-Trichlorotrifluoroetha		0.27	1.0	1.0	U
75-35-4	1,1-Dichloroethene		0.29	1.0	1.0	U
67-64-1	Acetone		0.62	5.0	5.0	U
75-15-0	Carbon disulfide		0.25	1.0	1.0	U
75-09-2	Methylene chloride		0.15	2.0	0.50	J
1634-04-4	Methyl tert-butylether		0.22	1.0	1.0	U
75-34-3	1,1-Dichloroethane		0.12	1.0	1.0	U
156-60-5	trans-1,2-Dichloroethene		0.28	1.0	1.0	U
78-93-3	2-Butanone		0.71	5.0	5.0	U
74-97-5	Bromochloromethane		0.15	1.0	1.0	U
67-66-3	Chloroform		0.11	1.0	12	
156-59-2	cis-1,2-Dichloroethene		0.23	1.0	2.0	
71-55-6	1,1,1-Trichloroethane		0.22	1.0	1.0	U
56-23-5	Carbon tetrachloride		0.21	1.0	0.80	J
71-43-2	Benzene		0.13	1.0	1.0	U
107-06-2	1,2-Dichloroethane		0.24	1.0	1.0	U
79-01-6	Trichloroethene		0.24	1.0	120	E
78-87-5	1,2-Dichloropropane		0.12	1.0	1.0	U
75-27-4	Bromodichloromethane		0.11	1.0	1.0	U
10061-01-5	cis-1,3-Dichloropropene		0.21	1.0	1.0	U
108-10-1	4-Methyl-2-pentanone		0.47	5.0	5.0	U
108-88-3	Toluene		0.23	1.0	0.50	J
10061-02-6	trans-1,3-Dichloropropene		0.20	1.0	1.0	U
127-18-4	Tetrachloroethene		0.26	1.0	1.0	U
79-00-5	1,1,2-Trichloroethane		0.28	1.0	1.0	U
591-78-6	2-Hexanone		0.33	5.0	5.0	U
124-48-1	Dibromochloromethane		0.11	1.0	1.0	U
106-93-4	1,2-Dibromoethane		0.19	1.0	1.0	U
108-90-7	Chlorobenzene		0.11	1.0	1.0	U
100-41-4	Ethylbenzene		0.21	1.0	1.0	U
1330-20-7	Xylene (total)		0.64	1.0	1.0	U
100-42-5	Styrene		0.11	1.0	1.0	U

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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT ID.

0306H018

Lab Name: COLUMBIA ANALYTICAL SERVICES - REDDING

Case No.: D9468 SDG No.: D9468 Lab Sample ID: D9468006

Matrix: WATER Level: LOW Lab File ID: R030554

Sample Volume: 10.0 ML Date Received: 02/07/03

Date Analyzed: 02/13/03

Dilution Factor: 1.0

CAS NO.	COMPOUND Units: UG/L	MDL	RL	RESULT	Q
75-25-2	Bromoform	0.19	1.0	1.0	U
98-82-8	Isopropylbenzene	0.24	1.0	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	0.10	1.0	1.0	U
541-73-1	1,3-Dichlorobenzene	0.26	1.0	1.0	U
106-46-7	1,4-Dichlorobenzene	0.10	1.0	1.0	U
95-50-1	1,2-Dichlorobenzene	0.10	1.0	1.0	U
96-12-8	1,2-Dibromo-3-chloropropane	0.68	5.0	5.0	U
120-82-1	1,2,4-Trichlorobenzene	0.090	1.0	1.0	U
87-61-6	1,2,3-Trichlorobenzene	0.14	1.0	1.0	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT ID.

0306H018DL

Lab Name: COLUMBIA ANALYTICAL SERVICES - REDDING

Case No.: D9468 SDG No.: D9468 Lab Sample ID: D9468006DL

Matrix: WATER Level: LOW Lab File ID: R030601

Sample Volume: 10.0 ML Date Received: 02/07/03

Date Analyzed: 02/18/03

Dilution Factor: 8.0

CAS NO.	COMPOUND Units: UG/L	MDL	RL	RESULT	Q
75-71-8	Dichlorodifluoromethane	2.1	8.0	8.0	U
74-87-3	Chloromethane	1.6	8.0	8.0	U
75-01-4	Vinyl chloride	2.1	8.0	8.0	U
74-83-9	Bromomethane	2.6	8.0	8.0	U
75-00-3	Chloroethane	2.2	8.0	8.0	U
75-69-4	Trichlorofluoromethane	2.3	8.0	8.0	U
76-13-1	1,1,2-Trichlorotrifluoroetha	2.2	8.0	8.0	U
75-35-4	1,1-Dichloroethene	2.3	8.0	8.0	U
67-64-1	Acetone	5.0	40	40	U
75-15-0	Carbon disulfide	2.0	8.0	8.0	U
75-09-2	Methylene chloride	1.2	16	16	U
1634-04-4	Methyl tert-butylether	1.8	8.0	8.0	U
75-34-3	1,1-Dichloroethane	0.96	8.0	8.0	U
156-60-5	trans-1,2-Dichloroethene	2.2	8.0	8.0	U
78-93-3	2-Butanone	5.7	40	40	U
74-97-5	Bromochloromethane	1.2	8.0	8.0	U
67-66-3	Chloroform	0.88	8.0	10	D
156-59-2	cis-1,2-Dichloroethene	1.8	8.0	8.0	U
71-55-6	1,1,1-Trichloroethane	1.8	8.0	8.0	U
56-23-5	Carbon tetrachloride	1.7	8.0	8.0	U
71-43-2	Benzene	1.0	8.0	8.0	U
107-06-2	1,2-Dichloroethane	1.9	8.0	8.0	U
79-01-6	Trichloroethene	1.9	8.0	100	D
78-87-5	1,2-Dichloropropane	0.96	8.0	8.0	U
75-27-4	Bromodichloromethane	0.88	8.0	8.0	U
10061-01-5	cis-1,3-Dichloropropene	1.7	8.0	8.0	U
108-10-1	4-Methyl-2-pentanone	3.8	40	40	U
108-88-3	Toluene	1.8	8.0	8.0	U
10061-02-6	trans-1,3-Dichloropropene	1.6	8.0	8.0	U
127-18-4	Tetrachloroethene	2.1	8.0	8.0	U
79-00-5	1,1,2-Trichloroethane	2.2	8.0	8.0	U
591-78-6	2-Hexanone	2.6	40	40	U
124-48-1	Dibromochloromethane	0.88	8.0	8.0	U
106-93-4	1,2-Dibromoethane	1.5	8.0	8.0	U
108-90-7	Chlorobenzene	0.88	8.0	8.0	U
100-41-4	Ethylbenzene	1.7	8.0	8.0	U
1330-20-7	Xylene (total)	5.1	8.0	8.0	U
100-42-5	Styrene	0.88	8.0	8.0	U

FORM I VOA SW846

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT ID.

0306H018DL

Lab Name: COLUMBIA ANALYTICAL SERVICES - REDDING

Case No.: D9468 SDG No.: D9468 Lab Sample ID: D9468006DL

Matrix: WATER Level: LOW Lab File ID: R030601

Sample Volume: 10.0 ML Date Received: 02/07/03

Date Analyzed: 02/18/03

Dilution Factor: 8.0

CAS NO.	COMPOUND Units: UG/L	MDL	RL	RESULT	Q
75-25-2	Bromoform	1.5	8.0	8.0	U
98-82-8	Isopropylbenzene	1.9	8.0	8.0	U
79-34-5	1,1,2,2-Tetrachloroethane	0.80	8.0	8.0	U
541-73-1	1,3-Dichlorobenzene	2.1	8.0	8.0	U
106-46-7	1,4-Dichlorobenzene	0.80	8.0	8.0	U
95-50-1	1,2-Dichlorobenzene	0.80	8.0	8.0	U
96-12-8	1,2-Dibromo-3-chloropropane	5.4	40	40	U
120-82-1	1,2,4-Trichlorobenzene	0.72	8.0	8.0	U
87-61-6	1,2,3-Trichlorobenzene	1.1	8.0	8.0	U

FORM I VOA SW846

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT ID.

0306H019

Lab Name: COLUMBIA ANALYTICAL SERVICES - REDDING

Case No.: D9468 SDG No.: D9468 Lab Sample ID: D9468007

Matrix: WATER Level: LOW Lab File ID: R030555

Sample Volume: 10.0 ML Date Received: 02/07/03

Date Analyzed: 02/13/03

Dilution Factor: 1.0

CAS NO.	COMPOUND Units: UG/L	MDL	RL	RESULT	Q
75-71-8	Dichlorodifluoromethane	0.26	1.0	1.0	U
74-87-3	Chloromethane	0.20	1.0	1.0	U
75-01-4	Vinyl chloride	0.26	1.0	1.0	U
74-83-9	Bromomethane	0.32	1.0	1.0	U
75-00-3	Chloroethane	0.28	1.0	1.0	U
75-69-4	Trichlorofluoromethane	0.29	1.0	1.0	U
76-13-1	1,1,2-Trichlorotrifluoroetha	0.27	1.0	1.0	U
75-35-4	1,1-Dichloroethene	0.29	1.0	0.50	J
67-64-1	Acetone	0.62	5.0	0.80	J
75-15-0	Carbon disulfide	0.25	1.0	1.0	U
75-09-2	Methylene chloride	0.15	2.0	7.0	
1634-04-4	Methyl tert-butylether	0.22	1.0	1.0	U
75-34-3	1,1-Dichloroethane	0.12	1.0	1.0	U
156-60-5	trans-1,2-Dichloroethene	0.28	1.0	1.0	U
78-93-3	2-Butanone	0.71	5.0	5.0	U
74-97-5	Bromochloromethane	0.15	1.0	1.0	U
67-66-3	Chloroform	0.11	1.0	6.0	
156-59-2	cis-1,2-Dichloroethene	0.23	1.0	2.0	
71-55-6	1,1,1-Trichloroethane	0.22	1.0	1.0	U
56-23-5	Carbon tetrachloride	0.21	1.0	1.0	U
71-43-2	Benzene	0.13	1.0	0.20	J
107-06-2	1,2-Dichloroethane	0.24	1.0	4.0	
79-01-6	Trichloroethene	0.24	1.0	160	E
78-87-5	1,2-Dichloropropane	0.12	1.0	1.0	U
75-27-4	Bromodichloromethane	0.11	1.0	1.0	U
10061-01-5	cis-1,3-Dichloropropene	0.21	1.0	1.0	U
108-10-1	4-Methyl-2-pentanone	0.47	5.0	5.0	U
108-88-3	Toluene	0.23	1.0	2.0	
10061-02-6	trans-1,3-Dichloropropene	0.20	1.0	1.0	U
127-18-4	Tetrachloroethene	0.26	1.0	1.0	U
79-00-5	1,1,2-Trichloroethane	0.28	1.0	3.0	
591-78-6	2-Hexanone	0.33	5.0	5.0	U
124-48-1	Dibromochloromethane	0.11	1.0	1.0	U
106-93-4	1,2-Dibromoethane	0.19	1.0	1.0	U
108-90-7	Chlorobenzene	0.11	1.0	1.0	U
100-41-4	Ethylbenzene	0.21	1.0	1.0	U
1330-20-7	Xylene (total)	0.64	1.0	1.0	U
100-42-5	Styrene	0.11	1.0	1.0	U

FORM I VOA SW846

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT ID.

0306H019

Lab Name: COLUMBIA ANALYTICAL SERVICES - REDDING

Case No.: D9468 SDG No.: D9468 Lab Sample ID: D9468007

Matrix: WATER Level: LOW Lab File ID: R030555

Sample Volume: 10.0 ML Date Received: 02/07/03

Date Analyzed: 02/13/03

Dilution Factor: 1.0

CAS NO.	COMPOUND Units: UG/L	MDL	RL	RESULT	Q
75-25-2	Bromoform	0.19	1.0	1.0	U
98-82-8	Isopropylbenzene	0.24	1.0	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	0.10	1.0	1.0	U
541-73-1	1,3-Dichlorobenzene	0.26	1.0	1.0	U
106-46-7	1,4-Dichlorobenzene	0.10	1.0	1.0	U
95-50-1	1,2-Dichlorobenzene	0.10	1.0	1.0	U
96-12-8	1,2-Dibromo-3-chloropropane	0.68	5.0	5.0	U
120-82-1	1,2,4-Trichlorobenzene	0.090	1.0	1.0	U
87-61-6	1,2,3-Trichlorobenzene	0.14	1.0	1.0	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT ID.

0306H019DL

Lab Name: COLUMBIA ANALYTICAL SERVICES - REDDING

Case No.: D9468 SDG No.: D9468 Lab Sample ID: D9468007DL

Matrix: WATER Level: LOW Lab File ID: R030578

Sample Volume: 10.0 ML Date Received: 02/07/03

Date Analyzed: 02/14/03

Dilution Factor: 8.0

CAS NO.	COMPOUND Units: UG/L	MDL	RL	RESULT	Q
75-71-8	Dichlorodifluoromethane	2.1	8.0	8.0	U
74-87-3	Chloromethane	1.6	8.0	8.0	U
75-01-4	Vinyl chloride	2.1	8.0	8.0	U
74-83-9	Bromomethane	2.6	8.0	8.0	U
75-00-3	Chloroethane	2.2	8.0	8.0	U
75-69-4	Trichlorofluoromethane	2.3	8.0	8.0	U
76-13-1	1,1,2-Trichlorotrifluoroetha	2.2	8.0	8.0	U
75-35-4	1,1-Dichloroethene	2.3	8.0	8.0	U
67-64-1	Acetone	5.0	40	40	U
75-15-0	Carbon disulfide	2.0	8.0	8.0	U
75-09-2	Methylene chloride	1.2	16	4.0	DJ
1634-04-4	Methyl tert-butylether	1.8	8.0	8.0	U
75-34-3	1,1-Dichloroethane	0.96	8.0	8.0	U
156-60-5	trans-1,2-Dichloroethene	2.2	8.0	8.0	U
78-93-3	2-Butanone	5.7	40	40	U
74-97-5	Bromochloromethane	1.2	8.0	8.0	U
67-66-3	Chloroform	0.88	8.0	4.0	DJ
156-59-2	cis-1,2-Dichloroethene	1.8	8.0	8.0	U
71-55-6	1,1,1-Trichloroethane	1.8	8.0	8.0	U
56-23-5	Carbon tetrachloride	1.7	8.0	8.0	U
71-43-2	Benzene	1.0	8.0	8.0	U
107-06-2	1,2-Dichloroethane	1.9	8.0	8.0	U
79-01-6	Trichloroethene	1.9	8.0	160	D
78-87-5	1,2-Dichloropropane	0.96	8.0	8.0	U
75-27-4	Bromodichloromethane	0.88	8.0	8.0	U
10061-01-5	cis-1,3-Dichloropropene	1.7	8.0	8.0	U
108-10-1	4-Methyl-2-pentanone	3.8	40	40	U
108-88-3	Toluene	1.8	8.0	8.0	U
10061-02-6	trans-1,3-Dichloropropene	1.6	8.0	8.0	U
127-18-4	Tetrachloroethene	2.1	8.0	8.0	U
79-00-5	1,1,2-Trichloroethane	2.2	8.0	8.0	U
591-78-6	2-Hexanone	2.6	40	40	U
124-48-1	Dibromochloromethane	0.88	8.0	8.0	U
106-93-4	1,2-Dibromoethane	1.5	8.0	8.0	U
108-90-7	Chlorobenzene	0.88	8.0	8.0	U
100-41-4	Ethylbenzene	1.7	8.0	8.0	U
1330-20-7	Xylene (total)	5.1	8.0	8.0	U
100-42-5	Styrene	0.88	8.0	8.0	U

FORM I VOA SW846

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT ID.

0306H019DL

Lab Name: COLUMBIA ANALYTICAL SERVICES - REDDING

Case No.: D9468 SDG No.: D9468 Lab Sample ID: D9468007DL

Matrix: WATER Level: LOW Lab File ID: R030578

Sample Volume: 10.0 ML Date Received: 02/07/03

Date Analyzed: 02/14/03

Dilution Factor: 8.0

CAS NO.	COMPOUND Units: UG/L	MDL	RL	RESULT	Q
75-25-2	Bromoform	1.5	8.0	8.0	U
98-82-8	Isopropylbenzene	1.9	8.0	8.0	U
79-34-5	1,1,2,2-Tetrachloroethane	0.80	8.0	8.0	U
541-73-1	1,3-Dichlorobenzene	2.1	8.0	8.0	U
106-46-7	1,4-Dichlorobenzene	0.80	8.0	8.0	U
95-50-1	1,2-Dichlorobenzene	0.80	8.0	8.0	U
96-12-8	1,2-Dibromo-3-chloropropane	5.4	40	40	U
120-82-1	1,2,4-Trichlorobenzene	0.72	8.0	8.0	U
87-61-6	1,2,3-Trichlorobenzene	1.1	8.0	8.0	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT ID.

0306H020

Lab Name: COLUMBIA ANALYTICAL SERVICES - REDDING

Case No.: D9468 SDG No.: D9468 Lab Sample ID: D9468008

Matrix: WATER Level: LOW Lab File ID: R030556

Sample Volume: 10.0 ML Date Received: 02/07/03

Date Analyzed: 02/13/03

Dilution Factor: 1.0

CAS NO.	COMPOUND Units: UG/L	MDL	RL	RESULT	Q
75-71-8	Dichlorodifluoromethane	0.26	1.0	1.0	U
74-87-3	Chloromethane	0.20	1.0	1.0	U
75-01-4	Vinyl chloride	0.26	1.0	1.0	U
74-83-9	Bromomethane	0.32	1.0	1.0	U
75-00-3	Chloroethane	0.28	1.0	1.0	U
75-69-4	Trichlorofluoromethane	0.29	1.0	1.0	U
76-13-1	1,1,2-Trichlorotrifluoroetha	0.27	1.0	1.0	U
75-35-4	1,1-Dichloroethene	0.29	1.0	1.0	U
67-64-1	Acetone	0.62	5.0	5.0	U
75-15-0	Carbon disulfide	0.25	1.0	1.0	U
75-09-2	Methylene chloride	0.15	2.0	0.20	J
1634-04-4	Methyl tert-butylether	0.22	1.0	1.0	U
75-34-3	1,1-Dichloroethane	0.12	1.0	1.0	U
156-60-5	trans-1,2-Dichloroethene	0.28	1.0	1.0	U
78-93-3	2-Butanone	0.71	5.0	5.0	U
74-97-5	Bromochloromethane	0.15	1.0	1.0	U
67-66-3	Chloroform	0.11	1.0	73	E
156-59-2	cis-1,2-Dichloroethene	0.23	1.0	44	E
71-55-6	1,1,1-Trichloroethane	0.22	1.0	1.0	U
56-23-5	Carbon tetrachloride	0.21	1.0	29	
71-43-2	Benzene	0.13	1.0	1.0	U
107-06-2	1,2-Dichloroethane	0.24	1.0	0.60	J
79-01-6	Trichloroethene	0.24	1.0	420	E
78-87-5	1,2-Dichloropropane	0.12	1.0	0.30	J
75-27-4	Bromodichloromethane	0.11	1.0	1.0	U
10061-01-5	cis-1,3-Dichloropropene	0.21	1.0	1.0	U
108-10-1	4-Methyl-2-pentanone	0.47	5.0	5.0	U
108-88-3	Toluene	0.23	1.0	0.70	J
10061-02-6	trans-1,3-Dichloropropene	0.20	1.0	1.0	U
127-18-4	Tetrachloroethene	0.26	1.0	1.0	U
79-00-5	1,1,2-Trichloroethane	0.28	1.0	1.0	
591-78-6	2-Hexanone	0.33	5.0	5.0	U
124-48-1	Dibromochloromethane	0.11	1.0	1.0	U
106-93-4	1,2-Dibromoethane	0.19	1.0	1.0	U
108-90-7	Chlorobenzene	0.11	1.0	1.0	U
100-41-4	Ethylbenzene	0.21	1.0	1.0	U
1330-20-7	Xylene (total)	0.64	1.0	1.0	U
100-42-5	Styrene	0.11	1.0	1.0	U

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VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT ID.

0306H020

Lab Name: COLUMBIA ANALYTICAL SERVICES - REDDING

Case No.: D9468 SDG No.: D9468 Lab Sample ID: D9468008

Matrix: WATER Level: LOW Lab File ID: R030556

Sample Volume: 10.0 ML Date Received: 02/07/03

Date Analyzed: 02/13/03

Dilution Factor: 1.0

CAS NO.	COMPOUND Units: UG/L	MDL	RL	RESULT	Q
75-25-2	Bromoform	0.19	1.0	1.0	U
98-82-8	Isopropylbenzene	0.24	1.0	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	0.10	1.0	1.0	U
541-73-1	1,3-Dichlorobenzene	0.26	1.0	1.0	U
106-46-7	1,4-Dichlorobenzene	0.10	1.0	1.0	U
95-50-1	1,2-Dichlorobenzene	0.10	1.0	1.0	U
96-12-8	1,2-Dibromo-3-chloropropane	0.68	5.0	5.0	U
120-82-1	1,2,4-Trichlorobenzene	0.090	1.0	1.0	U
87-61-6	1,2,3-Trichlorobenzene	0.14	1.0	1.0	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT ID.

0306H020DL

Lab Name: COLUMBIA ANALYTICAL SERVICES - REDDING

Case No.: D9468 SDG No.: D9468 Lab Sample ID: D9468008DL

Matrix: WATER Level: LOW Lab File ID: R030579

Sample Volume: 10.0 ML Date Received: 02/07/03

Date Analyzed: 02/14/03

Dilution Factor: 20.0

CAS NO.	COMPOUND Units: UG/L	MDL	RL	RESULT	Q
75-71-8	Dichlorodifluoromethane	5.2	20	20	U
74-87-3	Chloromethane	4.0	20	20	U
75-01-4	Vinyl chloride	5.2	20	20	U
74-83-9	Bromomethane	6.4	20	20	U
75-00-3	Chloroethane	5.6	20	20	U
75-69-4	Trichlorofluoromethane	5.8	20	20	U
76-13-1	1,1,2-Trichlorotrifluoroetha	5.4	20	20	U
75-35-4	1,1-Dichloroethene	5.8	20	20	U
67-64-1	Acetone	12	100	100	U
75-15-0	Carbon disulfide	5.0	20	20	U
75-09-2	Methylene chloride	3.0	40	40	U
1634-04-4	Methyl tert-butylether	4.4	20	20	U
75-34-3	1,1-Dichloroethane	2.4	20	20	U
156-60-5	trans-1,2-Dichloroethene	5.6	20	20	U
78-93-3	2-Butanone	14	100	100	U
74-97-5	Bromochloromethane	3.0	20	20	U
67-66-3	Chloroform	2.2	20	74	D
156-59-2	cis-1,2-Dichloroethene	4.6	20	41	D
71-55-6	1,1,1-Trichloroethane	4.4	20	20	U
56-23-5	Carbon tetrachloride	4.2	20	30	D
71-43-2	Benzene	2.6	20	20	U
107-06-2	1,2-Dichloroethane	4.8	20	20	U
79-01-6	Trichloroethene	4.8	20	490	D
78-87-5	1,2-Dichloropropane	2.4	20	20	U
75-27-4	Bromodichloromethane	2.2	20	20	U
10061-01-5	cis-1,3-Dichloropropene	4.2	20	20	U
108-10-1	4-Methyl-2-pentanone	9.4	100	100	U
108-88-3	Toluene	4.6	20	20	U
10061-02-6	trans-1,3-Dichloropropene	4.0	20	20	U
127-18-4	Tetrachloroethene	5.2	20	20	U
79-00-5	1,1,2-Trichloroethane	5.6	20	20	U
591-78-6	2-Hexanone	6.6	100	100	U
124-48-1	Dibromochloromethane	2.2	20	20	U
106-93-4	1,2-Dibromoethane	3.8	20	20	U
108-90-7	Chlorobenzene	2.2	20	20	U
100-41-4	Ethylbenzene	4.2	20	20	U
1330-20-7	Xylene (total)	13	20	20	U
100-42-5	Styrene	2.2	20	20	U

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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT ID.

0306H020DL

Lab Name: COLUMBIA ANALYTICAL SERVICES - REDDING

Case No.: D9468 SDG No.: D9468 Lab Sample ID: D9468008DL

Matrix: WATER Level: LOW Lab File ID: R030579

Sample Volume: 10.0 ML Date Received: 02/07/03

Date Analyzed: 02/14/03

Dilution Factor: 20.0

CAS NO.	COMPOUND Units: UG/L	MDL	RL	RESULT	Q
75-25-2	Bromoform	3.8	20	20	U
98-82-8	Isopropylbenzene	4.8	20	20	U
79-34-5	1,1,2,2-Tetrachloroethane	2.0	20	20	U
541-73-1	1,3-Dichlorobenzene	5.2	20	20	U
106-46-7	1,4-Dichlorobenzene	2.0	20	20	U
95-50-1	1,2-Dichlorobenzene	2.0	20	20	U
96-12-8	1,2-Dibromo-3-chloropropane	14	100	100	U
120-82-1	1,2,4-Trichlorobenzene	1.8	20	20	U
87-61-6	1,2,3-Trichlorobenzene	2.8	20	20	U

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VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT ID.

0306H021

Lab Name: COLUMBIA ANALYTICAL SERVICES - REDDING

Case No.: D9468 SDG No.: D9468 Lab Sample ID: D9468009

Matrix: WATER Level: LOW Lab File ID: R030557

Sample Volume: 10.0 ML Date Received: 02/07/03

Date Analyzed: 02/13/03

Dilution Factor: 1.0

CAS NO.	COMPOUND Units: UG/L	MDL	RL	RESULT	Q
75-71-8	Dichlorodifluoromethane	0.26	1.0	1.0	U
74-87-3	Chloromethane	0.20	1.0	1.0	U
75-01-4	Vinyl chloride	0.26	1.0	1.0	U
74-83-9	Bromomethane	0.32	1.0	1.0	U
75-00-3	Chloroethane	0.28	1.0	1.0	U
75-69-4	Trichlorofluoromethane	0.29	1.0	1.0	U
76-13-1	1,1,2-Trichlorotrifluoroetha	0.27	1.0	1.0	U
75-35-4	1,1-Dichloroethene	0.29	1.0	1.0	U
67-64-1	Acetone	0.62	5.0	3.0	J
75-15-0	Carbon disulfide	0.25	1.0	1.0	U
75-09-2	Methylene chloride	0.15	2.0	0.20	J
1634-04-4	Methyl tert-butylether	0.22	1.0	1.0	U
75-34-3	1,1-Dichloroethane	0.12	1.0	1.0	U
156-60-5	trans-1,2-Dichloroethene	0.28	1.0	1.0	U
78-93-3	2-Butanone	0.71	5.0	5.0	U
74-97-5	Bromochloromethane	0.15	1.0	1.0	U
67-66-3	Chloroform	0.11	1.0	0.20	J
156-59-2	cis-1,2-Dichloroethene	0.23	1.0	1.0	U
71-55-6	1,1,1-Trichloroethane	0.22	1.0	1.0	U
56-23-5	Carbon tetrachloride	0.21	1.0	1.0	U
71-43-2	Benzene	0.13	1.0	1.0	U
107-06-2	1,2-Dichloroethane	0.24	1.0	1.0	U
79-01-6	Trichloroethene	0.24	1.0	1.0	U
78-87-5	1,2-Dichloropropane	0.12	1.0	1.0	U
75-27-4	Bromodichloromethane	0.11	1.0	1.0	U
10061-01-5	cis-1,3-Dichloropropene	0.21	1.0	1.0	U
108-10-1	4-Methyl-2-pentanone	0.47	5.0	5.0	U
108-88-3	Toluene	0.23	1.0	0.40	J
10061-02-6	trans-1,3-Dichloropropene	0.20	1.0	1.0	U
127-18-4	Tetrachloroethene	0.26	1.0	1.0	U
79-00-5	1,1,2-Trichloroethane	0.28	1.0	1.0	U
591-78-6	2-Hexanone	0.33	5.0	5.0	U
124-48-1	Dibromochloromethane	0.11	1.0	1.0	U
106-93-4	1,2-Dibromoethane	0.19	1.0	1.0	U
108-90-7	Chlorobenzene	0.11	1.0	1.0	U
100-41-4	Ethylbenzene	0.21	1.0	1.0	U
1330-20-7	Xylene (total)	0.64	1.0	1.0	U
100-42-5	Styrene	0.11	1.0	1.0	U

FORM I VOA SW846

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT ID.

0306H021

Lab Name: COLUMBIA ANALYTICAL SERVICES - REDDING

Case No.: D9468 SDG No.: D9468 Lab Sample ID: D9468009

Matrix: WATER Level: LOW Lab File ID: R030557

Sample Volume: 10.0 ML Date Received: 02/07/03

Date Analyzed: 02/13/03

Dilution Factor: 1.0

CAS NO.	COMPOUND Units: UG/L	MDL	RL	RESULT	Q
75-25-2	Bromoform	0.19	1.0	1.0	U
98-82-8	Isopropylbenzene	0.24	1.0	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	0.10	1.0	1.0	U
541-73-1	1,3-Dichlorobenzene	0.26	1.0	1.0	U
106-46-7	1,4-Dichlorobenzene	0.10	1.0	1.0	U
95-50-1	1,2-Dichlorobenzene	0.10	1.0	1.0	U
96-12-8	1,2-Dibromo-3-chloropropane	0.68	5.0	5.0	U
120-82-1	1,2,4-Trichlorobenzene	0.090	1.0	1.0	U
87-61-6	1,2,3-Trichlorobenzene	0.14	1.0	1.0	U

FORM I VOA SW846

Columbia Analytical Services, Inc.

TOTAL METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

0306H013

Contract: TTEMI/HUNTER'S PT

Lab Code: RDD Case No.: SAS No.: SDG NO.: D9468

Matrix (soil/water): WATER Lab Sample ID: D9468001

Level (low/med): LOW Date Received: 2/07/03

Concentration Units (ug/L or mg/kg dry weight): µG/L

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	1.0	U	N	F
7439-89-6	Iron	4.0	U		P
7439-96-5	Manganese	1.0	U		P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

Columbia Analytical Services, Inc.

TOTAL METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

0306H013T

Contract: TTEMI/HUNTER'S PT

Lab Code: RDD Case No.: SAS No.: SDG NO.: D9468

Matrix (soil/water): WATER Lab Sample ID: D9468010

Level (low/med): LOW Date Received: 2/07/03

Concentration Units (ug/L or mg/kg dry weight): µG/L

CAS No.	Analyte	Concentration	C	Q	M
7439-89-6	Iron	4.0	U		P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

Columbia Analytical Services, Inc.

TOTAL METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

0306H014

Contract: TTEMI/HUNTER'S PT

Lab Code: RDD Case No.: SAS No.: SDG NO.: D9468

Matrix (soil/water): WATER Lab Sample ID: D9468002

Level (low/med): LOW Date Received: 2/07/03

Concentration Units (ug/L or mg/kg dry weight): µG/L

CAS No.	Analyte	Concentration	C	Q	M
7439-89-6	Iron	4.0	U		P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

Columbia Analytical Services, Inc.

TOTAL METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

0306H014T

Contract: TTEMI/HUNTER'S PT

Lab Code: RDD Case No.: SAS No.: SDG NO.: D9468

Matrix (soil/water): WATER Lab Sample ID: D9468011

Level (low/med): LOW Date Received: 2/07/03

Concentration Units (ug/L or mg/kg dry weight): µG/L

CAS No.	Analyte	Concentration	C	Q	M
7439-89-6	Iron	47.7	B		P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

Columbia Analytical Services, Inc.

TOTAL METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

0306H015

Contract: TTEMI/HUNTER'S PT

Lab Code: RDD Case No.: SAS No.: SDG NO.: D9468

Matrix (soil/water): WATER Lab Sample ID: D9468003

Level (low/med): LOW Date Received: 2/07/03

Concentration Units (ug/L or mg/kg dry weight): µG/L

CAS No.	Analyte	Concentration	C	Q	M
7439-89-6	Iron	4.0	U		P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

Columbia Analytical Services, Inc.

TOTAL METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

0306H015T

Contract: TTEMI/HUNTER'S PT

Lab Code: RDD Case No.: SAS No.: SDG NO.: D9468

Matrix (soil/water): WATER Lab Sample ID: D9468012

Level (low/med): LOW Date Received: 2/07/03

Concentration Units (ug/L or mg/kg dry weight): µG/L

CAS No.	Analyte	Concentration	C	Q	M
7439-89-6	Iron	1100			P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

Columbia Analytical Services, Inc.

TOTAL METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

0306H016

Contract: TTEMI/HUNTER'S PT

Lab Code: RDD Case No.: SAS No.: SDG NO.: D9468

Matrix (soil/water): WATER Lab Sample ID: D9468004

Level (low/med): LOW Date Received: 2/07/03

Concentration Units (ug/L or mg/kg dry weight): µG/L

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	4.3		N	F
7439-89-6	Iron	4.0	U		P
7439-96-5	Manganese	4.1	B		P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

Columbia Analytical Services, Inc.

TOTAL METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

0306H016T

Contract: TTEMI/HUNTER'S PT

Lab Code: RDD Case No.: SAS No.: SDG NO.: D9468

Matrix (soil/water): WATER Lab Sample ID: D9468013

Level (low/med): LOW Date Received: 2/07/03

Concentration Units (ug/L or mg/kg dry weight): µG/L

CAS No.	Analyte	Concentration	C	Q	M
7439-89-6	Iron	114			P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

Columbia Analytical Services, Inc.

TOTAL METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

0306H017

Contract: TTEMI/HUNTER'S PT

Lab Code: RDD Case No.: SAS No.: SDG NO.: D9468

Matrix (soil/water): WATER Lab Sample ID: D9468005

Level (low/med): LOW Date Received: 2/07/03

Concentration Units (ug/L or mg/kg dry weight): µG/L

CAS No.	Analyte	Concentration	C	Q	M
7439-89-6	Iron	42.1	B		P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

Columbia Analytical Services, Inc.

TOTAL METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

0306H017T

Contract: TTEMI/HUNTER'S PT

Lab Code: RDD Case No.: SAS No.: SDG NO.: D9468

Matrix (soil/water): WATER Lab Sample ID: D9468014

Level (low/med): LOW Date Received: 2/07/03

Concentration Units (ug/L or mg/kg dry weight): µG/L

CAS No.	Analyte	Concentration	C	Q	M
7439-89-6	Iron	209			P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

Columbia Analytical Services, Inc.

TOTAL METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

0306H018

Contract: TTEMI/HUNTER'S PT

Lab Code: RDD Case No.: SAS No.: SDG NO.: D9468

Matrix (soil/water): WATER Lab Sample ID: D9468006

Level (low/med): LOW Date Received: 2/07/03

Concentration Units (ug/L or mg/kg dry weight): µG/L

CAS No.	Analyte	Concentration	C	Q	M
7439-89-6	Iron	4.0	U		P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

Columbia Analytical Services, Inc.

TOTAL METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

0306H018T

Contract: TTEMI/HUNTER'S PT

Lab Code: RDD Case No.: SAS No.: SDG NO.: D9468

Matrix (soil/water): WATER Lab Sample ID: D9468015

Level (low/med): LOW Date Received: 2/07/03

Concentration Units (ug/L or mg/kg dry weight): µG/L

CAS No.	Analyte	Concentration	C	Q	M
7439-89-6	Iron	9630			P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

Columbia Analytical Services, Inc.

TOTAL METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

0306H019

Contract: TTEMI/HUNTER'S PT

Lab Code: RDD Case No.: SAS No.: SDG NO.: D9468

Matrix (soil/water): WATER Lab Sample ID: D9468007

Level (low/med): LOW Date Received: 2/07/03

Concentration Units (ug/L or mg/kg dry weight): µG/L

CAS No.	Analyte	Concentration	C	Q	M
7439-89-6	Iron	10.0	B		P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

Columbia Analytical Services, Inc.

TOTAL METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

0306H019T

Contract: TTEMI/HUNTER'S PT

Lab Code: RDD Case No.: SAS No.: SDG NO.: D9468

Matrix (soil/water): WATER Lab Sample ID: D9468016

Level (low/med): LOW Date Received: 2/07/03

Concentration Units (ug/L or mg/kg dry weight): µG/L

CAS No.	Analyte	Concentration	C	Q	M
7439-89-6	Iron	625			P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

Columbia Analytical Services, Inc.

TOTAL METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

0306H020

Contract: TTEMI/HUNTER'S PT

Lab Code: RDD Case No.: SAS No.: SDG NO.: D9468

Matrix (soil/water): WATER Lab Sample ID: D9468008

Level (low/med): LOW Date Received: 2/07/03

Concentration Units (ug/L or mg/kg dry weight): µG/L

CAS No.	Analyte	Concentration	C	Q	M
7439-89-6	Iron	4.0	U		P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

Columbia Analytical Services, Inc.

TOTAL METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

0306H020T

Contract: TTEMI/HUNTER'S PT

Lab Code: RDD Case No.: SAS No.: SDG NO.: D9468

Matrix (soil/water): WATER Lab Sample ID: D9468017

Level (low/med): LOW Date Received: 2/07/03

Concentration Units (ug/L or mg/kg dry weight): µG/L

CAS No.	Analyte	Concentration	C	Q	M
7439-89-6	Iron	229			P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

Columbia Analytical Services, Inc.

TOTAL METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

0306H021

Contract: TTEMI/HUNTER'S PT

Lab Code: RDD Case No.: SAS No.: SDG NO.: D9468

Matrix (soil/water): WATER Lab Sample ID: D9468009

Level (low/med): LOW Date Received: 2/07/03

Concentration Units (ug/L or mg/kg dry weight): µG/L

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	1.0	U	N	F
7439-96-5	Manganese	1.0	U		P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

Columbia Analytical Services, Inc.

TOTAL METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

0306H021T

Contract: TTEMI/HUNTER'S PT

Lab Code: RDD Case No.: SAS No.: SDG NO.: D9468

Matrix (soil/water): WATER Lab Sample ID: D9468018

Level (low/med): LOW Date Received: 2/07/03

Concentration Units (ug/L or mg/kg dry weight): µG/L

CAS No.	Analyte	Concentration	C	Q	M
7439-89-6	Iron	4.0	U		P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

Report of Analytical Results

Client Sample ID: 0306H014
Sample Description: None
Sample Matrix: Water
Site: N/A

Date Collected: 02/06/03 10:40 (Thu)
Date Received: 02/07/03 10:15 (Fri)

Reference No: D9468
Lab Sample ID: D9468002

CATEGORY NAME Analytical Parameter	Result	Units	Reporting Level	Date/Time of Analysis	Analytical Method(s)
GENERAL					
Alkalinity as CaCO3	138	mg/L	10	02/13/03 09:00	EPA310.1
ANIONS					
Chloride	72.7	mg/L	5.0	02/07/03 18:45	EPA300.0
NUTRIENTS					
Nitrate as N	2.91	mg/L	0.10	02/07/03 15:14	EPA300.0

(19552)

Report of Analytical Results

Client Sample ID: 0306H015
Sample Description: None
Sample Matrix: Water
Site: N/A

Date Collected: 02/06/03 11:15 (Thu)
Date Received: 02/07/03 10:15 (Fri)

Reference No: D9468
Lab Sample ID: D9468003

CATEGORY NAME Analytical Parameter	Result	Units	Reporting Level	Date/Time of Analysis	Analytical Method(s)
GENERAL					
Alkalinity as CaCO3	49	mg/L	10	02/13/03 09:00	EPA310.1
ANIONS					
Chloride	130	mg/L	10	02/07/03 19:03	EPA300.0
NUTRIENTS					
Nitrate as N	0.60	mg/L	0.10	02/07/03 15:31	EPA300.0

(19552)

Report of Analytical Results

Client Sample ID: 0306H016
Sample Description: None
Sample Matrix: Water
Site: N/A

Date Collected: 02/06/03 11:40 (Thu)
Date Received: 02/07/03 10:15 (Fri)

Reference No: D9468
Lab Sample ID: D9468004

CATEGORY NAME Analytical Parameter	Result	Units	Reporting Level	Date/Time of Analysis	Analytical Method(s)
GENERAL					
Alkalinity as CaCO3	200	mg/L	10	02/13/03 09:00	EPA310.1
ANIONS					
Chloride	49.9	mg/L	5.0	02/07/03 19:20	EPA300.0

(19552)

Report of Analytical Results

Client Sample ID: 0306H017
Sample Description: None
Sample Matrix: Water
Site: N/A

Date Collected: 02/06/03 12:40 (Thu)
Date Received: 02/07/03 10:15 (Fri)

Reference No: D9468
Lab Sample ID: D9468005

CATEGORY NAME Analytical Parameter	Result	Units	Reporting Level	Date/Time of Analysis	Analytical Method(s)
GENERAL					
Alkalinity as CaCO3	19	mg/L	10	02/13/03 09:00	EPA310.1
ANIONS					
Chloride	136	mg/L	10	02/11/03 12:36	EPA300.0
NUTRIENTS					
Nitrate as N	0.02 U	mg/L	0.10	02/07/03 16:42	EPA300.0

(19552)

Report of Analytical Results

Client Sample ID: 0306H018
Sample Description: None
Sample Matrix: Water
Site: N/A

Date Collected: 02/06/03 13:15 (Thu)
Date Received: 02/07/03 10:15 (Fri)

Reference No: D9468
Lab Sample ID: D9468006

CATEGORY NAME Analytical Parameter	Result	Units	Reporting Level	Date/Time of Analysis	Analytical Method(s)
GENERAL					
Alkalinity as CaCO3	122	mg/L	10	02/13/03 09:00	EPA310.1
ANIONS					
Chloride	87.6	mg/L	10	02/11/03 12:54	EPA300.0
NUTRIENTS					
Nitrate as N	0.05 B	mg/L	0.10	02/07/03 16:59	EPA300.0

(19552)

Report of Analytical Results

Client Sample ID: 0306H019
Sample Description: None
Sample Matrix: Water
Site: N/A

Date Collected: 02/06/03 16:40 (Thu)
Date Received: 02/07/03 10:15 (Fri)

Reference No: D9468
Lab Sample ID: D9468007

CATEGORY NAME Analytical Parameter	Result	Units	Reporting Level	Date/Time of Analysis	Analytical Method(s)
GENERAL					
Alkalinity as CaCO3	21	mg/L	10	02/13/03 09:00	EPA310.1
ANIONS					
Chloride	112	mg/L	10	02/11/03 13:11	EPA300.0
NUTRIENTS					
Nitrate as N	0.02 U	mg/L	0.10	02/07/03 17:17	EPA300.0

(19552)

Report of Analytical Results

Client Sample ID: 0306H020
Sample Description: None
Sample Matrix: Water
Site: N/A

Date Collected: 02/06/03 17:10 (Thu)
Date Received: 02/07/03 10:15 (Fri)

Reference No: D9468
Lab Sample ID: D9468008

CATEGORY NAME Analytical Parameter	Result	Units	Reporting Level	Date/Time of Analysis	Analytical Method(s)
GENERAL					
Alkalinity as CaCO3	103	mg/L	10	02/13/03 09:00	EPA310.1
ANIONS					
Chloride	233	mg/L	20	02/11/03 14:22	EPA300.0

(19552)

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Tetra Tech**
Client Project ID: **Hunter's Point**

CAS Project ID: P2300229

Hydrogen

Test Code: RSK 175
Instrument ID: HP5890A/TCD #8
Analyst: Michelle Sakamoto/Regan Lau
Sampling Media: Liquid
Test Notes:

Date(s) Collected: 2/6/03
Date Received: 2/11/03
Date(s) Analyzed: 2/13/03
Volume(s) Analyzed: 0.10 ml

Client Sample ID	CAS Sample ID	D.F.	Hydrogen µg/L Result	MRL	MDL	Data Qualifier
0306H014	P2300229-001	1.00	ND	17.0	5.00	
0306H015	P2300229-002	1.00	ND	17.0	5.00	
0306H016	P2300229-003	1.00	ND	17.0	5.00	
0306H017	P2300229-004	1.00	226	17.0	5.00	
0306H018	P2300229-005	1.00	ND	17.0	5.00	
0306H019	P2300229-006	1.00	ND	17.0	5.00	
0306H020	P2300229-007	1.00	ND	17.0	5.00	
Method Control Sample	P030213-MB	1.00	ND	17.0	5.00	

The Method Control Sample is laboratory water carried through the entire analytical process.
ND = Compound was analyzed for, but not detected above the **laboratory detection limit**.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By: RG Date: 2/20/03

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Tetra Tech**
Client Sample ID: **0306H014**
Client Project ID: **Hunter's Point**

CAS Project ID: P2300229
CAS Sample ID: P2300229-001

Test Code: RSK 175
Instrument ID: HP5890A/FID #10
Analyst: Wade Henton/Regan Lau
Sampling Media: Liquid
Test Notes:

Date Collected: 2/6/03
Date Received: 2/11/03
Date Analyzed: 2/14/03
Volume(s) Analyzed: 0.10 ml(s)

D.F. = 1.00

CAS #	Compound	Result µg/L	MRL µg/L	Detection Limit µg/L	Data Qualifier
74-85-1	Ethene	ND	1.5	0.40	
74-84-0	Ethane	ND	0.50	0.30	

ND = Compound was analyzed for, but not detected above the **laboratory detection limit.**
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By: RC Date: 2/20/03

00229SVG.RD1 - Sample

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Tetra Tech**
Client Sample ID: **0306H015**
Client Project ID: **Hunter's Point**

CAS Project ID: P2300229
CAS Sample ID: P2300229-002

Test Code: RSK 175
Instrument ID: HP5890A/FID #10
Analyst: Wade Henton/Regan Lau
Sampling Media: Liquid
Test Notes:

Date Collected: 2/6/03
Date Received: 2/11/03
Date Analyzed: 2/14/03
Volume(s) Analyzed: 0.10 ml

D.F. = 1.00

CAS #	Compound	Result µg/L	MRL µg/L	Detection Limit µg/L	Data Qualifier
74-85-1	Ethene	ND	1.5	0.40	
74-84-0	Ethane	4.4	0.50	0.30	

ND = Compound was analyzed for, but not detected above the **laboratory detection limit.**
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By: RG Date: 2/20/03

00229SVG RD1- Sample (2)

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Tetra Tech**
Client Sample ID: **0306H016**
Client Project ID: **Hunter's Point**

CAS Project ID: P2300229
CAS Sample ID: P2300229-003

Test Code: RSK 175
Instrument ID: HP5890A/FID #10
Analyst: Wade Henton/Regan Lau
Sampling Media: Liquid
Test Notes:

Date Collected: 2/6/03
Date Received: 2/11/03
Date Analyzed: 2/14/03
Volume(s) Analyzed: 0.10 ml

D.F. = 1.00

CAS #	Compound	Result µg/L	MRL µg/L	Detection Limit µg/L	Data Qualifier
74-85-1	Ethene	ND	1.5	0.40	
74-84-0	Ethane	ND	0.50	0.30	

ND = Compound was analyzed for, but not detected above the **laboratory detection limit**.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By: RG Date: 2/20/03

00229SVG.RD1- Sample (3)

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Tetra Tech**
Client Sample ID: **0306H017**
Client Project ID: **Hunter's Point**

CAS Project ID: P2300229
CAS Sample ID: P2300229-004

Test Code: RSK 175
Instrument ID: HP5890A/FID #10
Analyst: Wade Henton/Regan Lau
Sampling Media: Liquid
Test Notes:

Date Collected: 2/6/03
Date Received: 2/11/03
Date Analyzed: 2/14/03
Volume(s) Analyzed: 0.10 ml

D.F. = 1.00

CAS #	Compound	Result µg/L	MRL µg/L	Detection Limit µg/L	Data Qualifier
74-85-1	Ethene	**36**	1.5	0.40	
74-84-0	Ethane	**35**	0.50	0.30	

ND = Compound was analyzed for, but not detected above the **laboratory detection limit**.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By: RG Date: 2/20/03

00229SVG.RD1- Sample (4)

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Tetra Tech**
Client Sample ID: **0306H018**
Client Project ID: **Hunter's Point**

CAS Project ID: P2300229
CAS Sample ID: P2300229-005

Test Code: RSK 175
Instrument ID: HP5890A/FID #10
Analyst: Wade Henton/Regan Lau
Sampling Media: Liquid
Test Notes:

Date Collected: 2/6/03
Date Received: 2/11/03
Date Analyzed: 2/14/03
Volume(s) Analyzed: 0.10 ml

D.F. = 1.00

CAS #	Compound	Result µg/L	MRL µg/L	Detection Limit µg/L	Data Qualifier
74-85-1	Ethene	**1.5**	1.5	0.40	
74-84-0	Ethane	**3.7**	0.50	0.30	

ND = Compound was analyzed for, but not detected above the **laboratory detection limit.**
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By: RG Date: 2/20/03

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Tetra Tech**
Client Sample ID: **0306H019**
Client Project ID: **Hunter's Point**

CAS Project ID: P2300229
CAS Sample ID: P2300229-006

Test Code: RSK 175
Instrument ID: HP5890A/FID #10
Analyst: Wade Henton/Regan Lau
Sampling Media: Liquid
Test Notes:

Date Collected: 2/6/03
Date Received: 2/11/03
Date Analyzed: 2/14/03
Volume(s) Analyzed: 0.10 ml

D.F. = 1.00

CAS #	Compound	Result µg/L	MRL µg/L	Detection Limit µg/L	Data Qualifier
74-85-1	Ethene	**20**	1.5	0.40	
74-84-0	Ethane	**48**	0.50	0.30	

ND = Compound was analyzed for, but not detected above the **laboratory detection limit.**
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By: Ru Date: 2/20/03

00229SVG.RD1- Sample (6)

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Tetra Tech**
Client Sample ID: **0306H020**
Client Project ID: **Hunter's Point**

CAS Project ID: P2300229
CAS Sample ID: P2300229-007

Test Code:	RSK 175	Date Collected:	2/6/03
Instrument ID:	HP5890A/FID #10	Date Received:	2/11/03
Analyst:	Wade Henton/Regan Lau	Date Analyzed:	2/14/03
Sampling Media:	Liquid	Volume(s) Analyzed:	0.10 ml
Test Notes:			

D.F. = 1.00

CAS #	Compound	Result µg/L	MRL µg/L	Detection Limit µg/L	Data Qualifier
74-85-1	Ethene	ND	1.5	0.40	
74-84-0	Ethane	ND	0.50	0.30	

ND = Compound was analyzed for, but not detected above the **laboratory detection limit**.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By: RG Date: 2/20/03

00229SVG RD1- Sample (7)

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT ID.

0306H022

Lab Name: COLUMBIA ANALYTICAL SERVICES - REDDING

Case No.: D9478 SDG No.: D9478

Matrix: WATER Level: LOW

Sample Volume: 10.0 ML

Lab Sample ID: D9478001

Lab File ID: K030479

Date Received: 02/08/03

Date Analyzed: 02/20/03

Dilution Factor: 1.0

CAS NO.	COMPOUND Units: UG/L	MDL	RL	RESULT	Q
107-06-2	1,2-Dichloroethane	0.070	1.0	1.0	U
78-87-5	1,2-Dichloropropane	0.090	1.0	1.0	U
79-01-6	Trichloroethene	0.10	1.0	1.0	U
87-61-6	1,2,3-Trichlorobenzene	0.11	1.0	1.0	U
75-71-8	Dichlorodifluoromethane	0.14	1.0	1.0	U
74-87-3	Chloromethane	0.19	1.0	1.0	U
75-01-4	Vinyl chloride	0.13	1.0	1.0	U
74-83-9	Bromomethane	0.16	1.0	1.0	U
75-00-3	Chloroethane	0.16	1.0	1.0	U
75-69-4	Trichlorofluoromethane	0.070	1.0	1.0	U
75-35-4	1,1-Dichloroethene	0.15	1.0	1.0	U
76-13-1	1,1,2-Trichlorotrifluoroetha	0.13	1.0	1.0	U
67-64-1	Acetone	0.73	5.0	2.0	J
75-15-0	Carbon disulfide	0.080	1.0	1.0	U
75-09-2	Methylene chloride	0.090	2.0	0.10	J
156-60-5	trans-1,2-Dichloroethene	0.10	1.0	1.0	U
1634-04-4	Methyl tert-butylether	0.060	1.0	1.0	U
75-34-3	1,1-Dichloroethane	0.11	1.0	1.0	U
156-59-2	cis-1,2-Dichloroethene	0.11	1.0	1.0	U
78-93-3	2-Butanone	0.27	5.0	5.0	U
74-97-5	Bromochloromethane	0.10	1.0	1.0	U
67-66-3	Chloroform	0.11	1.0	0.80	J
71-55-6	1,1,1-Trichloroethane	0.11	1.0	1.0	U
56-23-5	Carbon tetrachloride	0.11	1.0	1.0	U
71-43-2	Benzene	0.070	1.0	1.0	U
96-12-8	1,2-Dibromo-3-chloropropane	0.66	5.0	5.0	U
120-82-1	1,2,4-Trichlorobenzene	0.12	1.0	1.0	U
75-27-4	Bromodichloromethane	0.10	1.0	1.0	U
10061-01-5	cis-1,3-Dichloropropene	0.080	1.0	1.0	U
108-10-1	4-Methyl-2-pentanone	0.14	5.0	5.0	U
108-88-3	Toluene	0.10	1.0	1.0	U
10061-02-6	trans-1,3-Dichloropropene	0.11	1.0	1.0	U
79-00-5	1,1,2-Trichloroethane	0.13	1.0	1.0	U
127-18-4	Tetrachloroethene	0.13	1.0	1.0	U
591-78-6	2-Hexanone	0.37	5.0	5.0	U
124-48-1	Dibromochloromethane	0.12	1.0	1.0	U
106-93-4	1,2-Dibromoethane	0.13	1.0	1.0	U
108-90-7	Chlorobenzene	0.12	1.0	1.0	U

FORM I VOA SW846

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT ID.

0306H022

Lab Name: COLUMBIA ANALYTICAL SERVICES - REDDING

Case No.: D9478 SDG No.: D9478 Lab Sample ID: D9478001

Matrix: WATER Level: LOW Lab File ID: K030479

Sample Volume: 10.0 ML Date Received: 02/08/03

Date Analyzed: 02/20/03

Dilution Factor: 1.0

CAS NO.	COMPOUND Units: UG/L	MDL	RL	RESULT	Q
100-41-4	Ethylbenzene	0.11	1.0	1.0	U
98-82-8	Isopropylbenzene	0.12	1.0	1.0	U
100-42-5	Styrene	0.10	1.0	1.0	U
75-25-2	Bromoform	0.13	1.0	1.0	U
1330-20-7	Xylene (total)	0.12	1.0	1.0	U
106-46-7	1,4-Dichlorobenzene	0.13	1.0	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	0.15	1.0	1.0	U
541-73-1	1,3-Dichlorobenzene	0.16	1.0	1.0	U
95-50-1	1,2-Dichlorobenzene	0.12	1.0	1.0	U

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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT ID.

0306H023

Lab Name: COLUMBIA ANALYTICAL SERVICES - REDDING

Case No.: D9478 SDG No.: D9478 Lab Sample ID: D9478002

Matrix: WATER Level: LOW Lab File ID: K030480

Sample Volume: 10.0 ML Date Received: 02/08/03

Date Analyzed: 02/20/03

Dilution Factor: 1.0

CAS NO.	COMPOUND Units: UG/L	MDL	RL	RESULT	Q
107-06-2	1,2-Dichloroethane	0.070	1.0	4.0	
78-87-5	1,2-Dichloropropane	0.090	1.0	0.20	J
79-01-6	Trichloroethene	0.10	1.0	470	E
87-61-6	1,2,3-Trichlorobenzene	0.11	1.0	1.0	U
75-71-8	Dichlorodifluoromethane	0.14	1.0	1.0	U
74-87-3	Chloromethane	0.19	1.0	0.20	J
75-01-4	Vinyl chloride	0.13	1.0	1.0	U
74-83-9	Bromomethane	0.16	1.0	1.0	U
75-00-3	Chloroethane	0.16	1.0	1.0	U
75-69-4	Trichlorofluoromethane	0.070	1.0	1.0	U
75-35-4	1,1-Dichloroethene	0.15	1.0	0.20	J
76-13-1	1,1,2-Trichlorotrifluoroetha	0.13	1.0	1.0	U
67-64-1	Acetone	0.73	5.0	2.0	J
75-15-0	Carbon disulfide	0.080	1.0	1.0	U
75-09-2	Methylene chloride	0.090	2.0	1.0	J
156-60-5	trans-1,2-Dichloroethene	0.10	1.0	0.40	J
1634-04-4	Methyl tert-butylether	0.060	1.0	1.0	U
75-34-3	1,1-Dichloroethane	0.11	1.0	0.20	J
156-59-2	cis-1,2-Dichloroethene	0.11	1.0	12	
78-93-3	2-Butanone	0.27	5.0	5.0	U
74-97-5	Bromochloromethane	0.10	1.0	1.0	U
67-66-3	Chloroform	0.11	1.0	24	
71-55-6	1,1,1-Trichloroethane	0.11	1.0	1.0	U
56-23-5	Carbon tetrachloride	0.11	1.0	2.0	
71-43-2	Benzene	0.070	1.0	0.20	J
96-12-8	1,2-Dibromo-3-chloropropane	0.66	5.0	5.0	U
120-82-1	1,2,4-Trichlorobenzene	0.12	1.0	1.0	U
75-27-4	Bromodichloromethane	0.10	1.0	1.0	U
10061-01-5	cis-1,3-Dichloropropene	0.080	1.0	1.0	U
108-10-1	4-Methyl-2-pentanone	0.14	5.0	5.0	U
108-88-3	Toluene	0.10	1.0	0.90	J
10061-02-6	trans-1,3-Dichloropropene	0.11	1.0	1.0	U
79-00-5	1,1,2-Trichloroethane	0.13	1.0	0.70	J
127-18-4	Tetrachloroethene	0.13	1.0	7.0	
591-78-6	2-Hexanone	0.37	5.0	5.0	U
124-48-1	Dibromochloromethane	0.12	1.0	1.0	U
106-93-4	1,2-Dibromoethane	0.13	1.0	1.0	U
108-90-7	Chlorobenzene	0.12	1.0	1.0	U

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VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT ID.

0306H023

Lab Name: COLUMBIA ANALYTICAL SERVICES - REDDING

Case No.: D9478 SDG No.: D9478 Lab Sample ID: D9478002

Matrix: WATER Level: LOW Lab File ID: K030480

Sample Volume: 10.0 ML Date Received: 02/08/03

Date Analyzed: 02/20/03

Dilution Factor: 1.0

CAS NO.	COMPOUND Units: UG/L	MDL	RL	RESULT	Q
100-41-4	Ethylbenzene	0.11	1.0	1.0	U
98-82-8	Isopropylbenzene	0.12	1.0	1.0	U
100-42-5	Styrene	0.10	1.0	1.0	U
75-25-2	Bromoform	0.13	1.0	1.0	U
1330-20-7	Xylene (total)	0.12	1.0	1.0	U
106-46-7	1,4-Dichlorobenzene	0.13	1.0	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	0.15	1.0	1.0	U
541-73-1	1,3-Dichlorobenzene	0.16	1.0	1.0	U
95-50-1	1,2-Dichlorobenzene	0.12	1.0	1.0	U

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VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT ID.

0306H023DL

Lab Name: COLUMBIA ANALYTICAL SERVICES - REDDING

Case No.: D9478 SDG No.: D9478 Lab Sample ID: D9478002DL

Matrix: WATER Level: LOW Lab File ID: K030485

Sample Volume: 10.0 ML Date Received: 02/08/03

Date Analyzed: 02/20/03

Dilution Factor: 20.0

CAS NO.	COMPOUND Units: UG/L	MDL	RL	RESULT	Q
107-06-2	1,2-Dichloroethane	1.4	20	5.0	DJ
78-87-5	1,2-Dichloropropane	1.8	20	20	U
79-01-6	Trichloroethene	2.0	20	610	D
87-61-6	1,2,3-Trichlorobenzene	2.2	20	20	U
75-71-8	Dichlorodifluoromethane	2.8	20	20	U
74-87-3	Chloromethane	3.8	20	20	U
75-01-4	Vinyl chloride	2.6	20	20	U
74-83-9	Bromomethane	3.2	20	20	U
75-00-3	Chloroethane	3.2	20	20	U
75-69-4	Trichlorofluoromethane	1.4	20	20	U
75-35-4	1,1-Dichloroethene	3.0	20	20	U
76-13-1	1,1,2-Trichlorotrifluoroetha	2.6	20	20	U
67-64-1	Acetone	15	100	22	DJ
75-15-0	Carbon disulfide	1.6	20	20	U
75-09-2	Methylene chloride	1.8	40	4.0	DJ
156-60-5	trans-1,2-Dichloroethene	2.0	20	20	U
1634-04-4	Methyl tert-butylether	1.2	20	20	U
75-34-3	1,1-Dichloroethane	2.2	20	20	U
156-59-2	cis-1,2-Dichloroethene	2.2	20	11	DJ
78-93-3	2-Butanone	5.4	100	100	U
74-97-5	Bromochloromethane	2.0	20	20	U
67-66-3	Chloroform	2.2	20	28	D
71-55-6	1,1,1-Trichloroethane	2.2	20	20	U
56-23-5	Carbon tetrachloride	2.2	20	20	U
71-43-2	Benzene	1.4	20	20	U
96-12-8	1,2-Dibromo-3-chloropropane	13	100	100	U
120-82-1	1,2,4-Trichlorobenzene	2.4	20	20	U
75-27-4	Bromodichloromethane	2.0	20	20	U
10061-01-5	cis-1,3-Dichloropropene	1.6	20	20	U
108-10-1	4-Methyl-2-pentanone	2.8	100	100	U
108-88-3	Toluene	2.0	20	20	U
10061-02-6	trans-1,3-Dichloropropene	2.2	20	20	U
79-00-5	1,1,2-Trichloroethane	2.6	20	20	U
127-18-4	Tetrachloroethene	2.6	20	7.0	DJ
591-78-6	2-Hexanone	7.4	100	100	U
124-48-1	Dibromochloromethane	2.4	20	20	U
106-93-4	1,2-Dibromoethane	2.6	20	20	U
108-90-7	Chlorobenzene	2.4	20	20	U

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VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT ID.

0306H023DL

Lab Name: COLUMBIA ANALYTICAL SERVICES - REDDING

Case No.: D9478 SDG No.: D9478 Lab Sample ID: D9478002DL

Matrix: WATER Level: LOW Lab File ID: K030485

Sample Volume: 10.0 ML Date Received: 02/08/03

Date Analyzed: 02/20/03

Dilution Factor: 20.0

CAS NO.	COMPOUND Units: UG/L	MDL	RL	RESULT	Q
100-41-4	Ethylbenzene	2.2	20	20	U
98-82-8	Isopropylbenzene	2.4	20	20	U
100-42-5	Styrene	2.0	20	20	U
75-25-2	Bromoform	2.6	20	20	U
1330-20-7	Xylene (total)	2.4	20	20	U
106-46-7	1,4-Dichlorobenzene	2.6	20	20	U
79-34-5	1,1,2,2-Tetrachloroethane	3.0	20	20	U
541-73-1	1,3-Dichlorobenzene	3.2	20	20	U
95-50-1	1,2-Dichlorobenzene	2.4	20	20	U

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VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT ID.

0306H024

Lab Name: COLUMBIA ANALYTICAL SERVICES - REDDING

Case No.: D9478 SDG No.: D9478 Lab Sample ID: D9478003

Matrix: WATER Level: LOW Lab File ID: K030481

Sample Volume: 10.0 ML Date Received: 02/08/03

Date Analyzed: 02/20/03

Dilution Factor: 1.0

CAS NO.	COMPOUND Units: UG/L	MDL	RL	RESULT	Q
107-06-2	1,2-Dichloroethane	0.070	1.0	35	
78-87-5	1,2-Dichloropropane	0.090	1.0	0.40	J
79-01-6	Trichloroethene	0.10	1.0	120	E
87-61-6	1,2,3-Trichlorobenzene	0.11	1.0	1.0	U
75-71-8	Dichlorodifluoromethane	0.14	1.0	1.0	U
74-87-3	Chloromethane	0.19	1.0	0.30	J
75-01-4	Vinyl chloride	0.13	1.0	1.0	
74-83-9	Bromomethane	0.16	1.0	0.20	J
75-00-3	Chloroethane	0.16	1.0	1.0	U
75-69-4	Trichlorofluoromethane	0.070	1.0	1.0	U
75-35-4	1,1-Dichloroethene	0.15	1.0	0.40	J
76-13-1	1,1,2-Trichlorotrifluoroetha	0.13	1.0	1.0	U
67-64-1	Acetone	0.73	5.0	2.0	J
75-15-0	Carbon disulfide	0.080	1.0	1.0	U
75-09-2	Methylene chloride	0.090	2.0	4.0	
156-60-5	trans-1,2-Dichloroethene	0.10	1.0	0.40	J
1634-04-4	Methyl tert-butylether	0.060	1.0	1.0	U
75-34-3	1,1-Dichloroethane	0.11	1.0	1.0	
156-59-2	cis-1,2-Dichloroethene	0.11	1.0	28	
78-93-3	2-Butanone	0.27	5.0	5.0	U
74-97-5	Bromochloromethane	0.10	1.0	1.0	U
67-66-3	Chloroform	0.11	1.0	30	
71-55-6	1,1,1-Trichloroethane	0.11	1.0	1.0	U
56-23-5	Carbon tetrachloride	0.11	1.0	1.0	U
71-43-2	Benzene	0.070	1.0	1.0	U
96-12-8	1,2-Dibromo-3-chloropropane	0.66	5.0	5.0	U
120-82-1	1,2,4-Trichlorobenzene	0.12	1.0	1.0	U
75-27-4	Bromodichloromethane	0.10	1.0	1.0	U
10061-01-5	cis-1,3-Dichloropropene	0.080	1.0	1.0	U
108-10-1	4-Methyl-2-pentanone	0.14	5.0	5.0	U
108-88-3	Toluene	0.10	1.0	0.60	J
10061-02-6	trans-1,3-Dichloropropene	0.11	1.0	1.0	U
79-00-5	1,1,2-Trichloroethane	0.13	1.0	1.0	
127-18-4	Tetrachloroethene	0.13	1.0	1.0	
591-78-6	2-Hexanone	0.37	5.0	5.0	U
124-48-1	Dibromochloromethane	0.12	1.0	1.0	U
106-93-4	1,2-Dibromoethane	0.13	1.0	1.0	U
108-90-7	Chlorobenzene	0.12	1.0	1.0	U

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VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT ID.

0306H024

Lab Name: COLUMBIA ANALYTICAL SERVICES - REDDING

Case No.: D9478 SDG No.: D9478 Lab Sample ID: D9478003

Matrix: WATER Level: LOW Lab File ID: K030481

Sample Volume: 10.0 ML Date Received: 02/08/03

Date Analyzed: 02/20/03

Dilution Factor: 1.0

CAS NO.	COMPOUND Units: UG/L	MDL	RL	RESULT	Q
100-41-4	Ethylbenzene	0.11	1.0	1.0	U
98-82-8	Isopropylbenzene	0.12	1.0	1.0	U
100-42-5	Styrene	0.10	1.0	1.0	U
75-25-2	Bromoform	0.13	1.0	1.0	U
1330-20-7	Xylene (total)	0.12	1.0	0.30	J
106-46-7	1,4-Dichlorobenzene	0.13	1.0	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	0.15	1.0	1.0	U
541-73-1	1,3-Dichlorobenzene	0.16	1.0	1.0	U
95-50-1	1,2-Dichlorobenzene	0.12	1.0	1.0	U

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VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT ID.

0306H024DL

Lab Name: COLUMBIA ANALYTICAL SERVICES - REDDING

Case No.: D9478 SDG No.: D9478 Lab Sample ID: D9478003DL

Matrix: WATER Level: LOW Lab File ID: K030486

Sample Volume: 10.0 ML Date Received: 02/08/03

Date Analyzed: 02/20/03

Dilution Factor: 10.0

CAS NO.	COMPOUND Units: UG/L	MDL	RL	RESULT	Q
107-06-2	1,2-Dichloroethane	0.70	10	40	D
78-87-5	1,2-Dichloropropane	0.90	10	10	U
79-01-6	Trichloroethene	1.0	10	110	D
87-61-6	1,2,3-Trichlorobenzene	1.1	10	10	U
75-71-8	Dichlorodifluoromethane	1.4	10	10	U
74-87-3	Chloromethane	1.9	10	2.0	DJ
75-01-4	Vinyl chloride	1.3	10	2.0	DJ
74-83-9	Bromomethane	1.6	10	10	U
75-00-3	Chloroethane	1.6	10	10	U
75-69-4	Trichlorofluoromethane	0.70	10	10	U
75-35-4	1,1-Dichloroethene	1.5	10	10	U
76-13-1	1,1,2-Trichlorotrifluoroetha	1.3	10	10	U
67-64-1	Acetone	7.3	50	13	DJ
75-15-0	Carbon disulfide	0.80	10	10	U
75-09-2	Methylene chloride	0.90	20	6.0	DJ
156-60-5	trans-1,2-Dichloroethene	1.0	10	10	U
1634-04-4	Methyl tert-butylether	0.60	10	10	U
75-34-3	1,1-Dichloroethane	1.1	10	10	U
156-59-2	cis-1,2-Dichloroethene	1.1	10	23	D
78-93-3	2-Butanone	2.7	50	3.0	DJ
74-97-5	Bromochloromethane	1.0	10	10	U
67-66-3	Chloroform	1.1	10	35	D
71-55-6	1,1,1-Trichloroethane	1.1	10	10	U
56-23-5	Carbon tetrachloride	1.1	10	10	U
71-43-2	Benzene	0.70	10	10	U
96-12-8	1,2-Dibromo-3-chloropropane	6.6	50	50	U
120-82-1	1,2,4-Trichlorobenzene	1.2	10	10	U
75-27-4	Bromodichloromethane	1.0	10	10	U
10061-01-5	cis-1,3-Dichloropropene	0.80	10	10	U
108-10-1	4-Methyl-2-pentanone	1.4	50	50	U
108-88-3	Toluene	1.0	10	10	U
10061-02-6	trans-1,3-Dichloropropene	1.1	10	10	U
79-00-5	1,1,2-Trichloroethane	1.3	10	2.0	DJ
127-18-4	Tetrachloroethene	1.3	10	10	U
591-78-6	2-Hexanone	3.7	50	50	U
124-48-1	Dibromochloromethane	1.2	10	10	U
106-93-4	1,2-Dibromoethane	1.3	10	10	U
108-90-7	Chlorobenzene	1.2	10	10	U

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VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT ID.

0306H024DL

Lab Name: COLUMBIA ANALYTICAL SERVICES - REDDING

Case No.: D9478 SDG No.: D9478 Lab Sample ID: D9478003DL

Matrix: WATER Level: LOW Lab File ID: K030486

Sample Volume: 10.0 ML Date Received: 02/08/03

Date Analyzed: 02/20/03

Dilution Factor: 10.0

CAS NO.	COMPOUND Units: UG/L	MDL	RL	RESULT	Q
100-41-4	Ethylbenzene	1.1	10	10	U
98-82-8	Isopropylbenzene	1.2	10	10	U
100-42-5	Styrene	1.0	10	10	U
75-25-2	Bromoform	1.3	10	10	U
1330-20-7	Xylene (total)	1.2	10	10	U
106-46-7	1,4-Dichlorobenzene	1.3	10	10	U
79-34-5	1,1,2,2-Tetrachloroethane	1.5	10	10	U
541-73-1	1,3-Dichlorobenzene	1.6	10	10	U
95-50-1	1,2-Dichlorobenzene	1.2	10	10	U

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VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT ID.

0306H025

Lab Name: COLUMBIA ANALYTICAL SERVICES - REDDING

Case No.: D9478 SDG No.: D9478 Lab Sample ID: D9478004

Matrix: WATER Level: LOW Lab File ID: K030482

Sample Volume: 10.0 ML Date Received: 02/08/03

Date Analyzed: 02/20/03

Dilution Factor: 1.0

CAS NO.	COMPOUND Units: UG/L	MDL	RL	RESULT	Q
107-06-2	1,2-Dichloroethane	0.070	1.0	40	
78-87-5	1,2-Dichloropropane	0.090	1.0	0.60	J
79-01-6	Trichloroethene	0.10	1.0	520	E
87-61-6	1,2,3-Trichlorobenzene	0.11	1.0	1.0	U
75-71-8	Dichlorodifluoromethane	0.14	1.0	1.0	U
74-87-3	Chloromethane	0.19	1.0	0.20	J
75-01-4	Vinyl chloride	0.13	1.0	0.70	J
74-83-9	Bromomethane	0.16	1.0	0.30	J
75-00-3	Chloroethane	0.16	1.0	1.0	U
75-69-4	Trichlorofluoromethane	0.070	1.0	1.0	U
75-35-4	1,1-Dichloroethene	0.15	1.0	2.0	
76-13-1	1,1,2-Trichlorotrifluoroetha	0.13	1.0	1.0	U
67-64-1	Acetone	0.73	5.0	5.0	U
75-15-0	Carbon disulfide	0.080	1.0	1.0	U
75-09-2	Methylene chloride	0.090	2.0	12	
156-60-5	trans-1,2-Dichloroethene	0.10	1.0	0.20	J
1634-04-4	Methyl tert-butylether	0.060	1.0	0.090	J
75-34-3	1,1-Dichloroethane	0.11	1.0	0.40	J
156-59-2	cis-1,2-Dichloroethene	0.11	1.0	8.0	
78-93-3	2-Butanone	0.27	5.0	2.0	J
74-97-5	Bromochloromethane	0.10	1.0	1.0	U
67-66-3	Chloroform	0.11	1.0	9.0	
71-55-6	1,1,1-Trichloroethane	0.11	1.0	1.0	U
56-23-5	Carbon tetrachloride	0.11	1.0	1.0	U
71-43-2	Benzene	0.070	1.0	1.0	U
96-12-8	1,2-Dibromo-3-chloropropane	0.66	5.0	5.0	U
120-82-1	1,2,4-Trichlorobenzene	0.12	1.0	1.0	U
75-27-4	Bromodichloromethane	0.10	1.0	1.0	U
10061-01-5	cis-1,3-Dichloropropene	0.080	1.0	1.0	U
108-10-1	4-Methyl-2-pentanone	0.14	5.0	0.20	J
108-88-3	Toluene	0.10	1.0	0.70	J
10061-02-6	trans-1,3-Dichloropropene	0.11	1.0	1.0	U
79-00-5	1,1,2-Trichloroethane	0.13	1.0	14	
127-18-4	Tetrachloroethene	0.13	1.0	0.30	J
591-78-6	2-Hexanone	0.37	5.0	5.0	U
124-48-1	Dibromochloromethane	0.12	1.0	1.0	U
106-93-4	1,2-Dibromoethane	0.13	1.0	1.0	U
108-90-7	Chlorobenzene	0.12	1.0	1.0	U

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VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT ID.

0306H025

Lab Name: COLUMBIA ANALYTICAL SERVICES - REDDING

Case No.: D9478 SDG No.: D9478 Lab Sample ID: D9478004

Matrix: WATER Level: LOW Lab File ID: K030482

Sample Volume: 10.0 ML Date Received: 02/08/03

Date Analyzed: 02/20/03

Dilution Factor: 1.0

CAS NO.	COMPOUND Units: UG/L	MDL	RL	RESULT	Q
100-41-4	Ethylbenzene	0.11	1.0	1.0	U
98-82-8	Isopropylbenzene	0.12	1.0	1.0	U
100-42-5	Styrene	0.10	1.0	1.0	U
75-25-2	Bromoform	0.13	1.0	1.0	U
1330-20-7	Xylene (total)	0.12	1.0	1.0	U
106-46-7	1,4-Dichlorobenzene	0.13	1.0	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	0.15	1.0	1.0	U
541-73-1	1,3-Dichlorobenzene	0.16	1.0	1.0	U
95-50-1	1,2-Dichlorobenzene	0.12	1.0	1.0	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT ID.

0306H025DL

Lab Name: COLUMBIA ANALYTICAL SERVICES - REDDING

Case No.: D9478 SDG No.: D9478 Lab Sample ID: D9478004DL

Matrix: WATER Level: LOW Lab File ID: K030487

Sample Volume: 10.0 ML Date Received: 02/08/03

Date Analyzed: 02/20/03

Dilution Factor: 20.0

CAS NO.	COMPOUND Units: UG/L	MDL	RL	RESULT	Q
107-06-2	1,2-Dichloroethane	1.4	20	44	D
78-87-5	1,2-Dichloropropane	1.8	20	20	U
79-01-6	Trichloroethene	2.0	20	730	D
87-61-6	1,2,3-Trichlorobenzene	2.2	20	20	U
75-71-8	Dichlorodifluoromethane	2.8	20	20	U
74-87-3	Chloromethane	3.8	20	4.0	DJ
75-01-4	Vinyl chloride	2.6	20	20	U
74-83-9	Bromomethane	3.2	20	20	U
75-00-3	Chloroethane	3.2	20	20	U
75-69-4	Trichlorofluoromethane	1.4	20	20	U
75-35-4	1,1-Dichloroethene	3.0	20	20	U
76-13-1	1,1,2-Trichlorotrifluoroetha	2.6	20	20	U
67-64-1	Acetone	15	100	24	DJ
75-15-0	Carbon disulfide	1.6	20	20	U
75-09-2	Methylene chloride	1.8	40	17	DJ
156-60-5	trans-1,2-Dichloroethene	2.0	20	20	U
1634-04-4	Methyl tert-butylether	1.2	20	20	U
75-34-3	1,1-Dichloroethane	2.2	20	20	U
156-59-2	cis-1,2-Dichloroethene	2.2	20	7.0	DJ
78-93-3	2-Butanone	5.4	100	6.0	DJ
74-97-5	Bromochloromethane	2.0	20	20	U
67-66-3	Chloroform	2.2	20	11	DJ
71-55-6	1,1,1-Trichloroethane	2.2	20	20	U
56-23-5	Carbon tetrachloride	2.2	20	20	U
71-43-2	Benzene	1.4	20	20	U
96-12-8	1,2-Dibromo-3-chloropropane	13	100	100	U
120-82-1	1,2,4-Trichlorobenzene	2.4	20	20	U
75-27-4	Bromodichloromethane	2.0	20	20	U
10061-01-5	cis-1,3-Dichloropropene	1.6	20	20	U
108-10-1	4-Methyl-2-pentanone	2.8	100	100	U
108-88-3	Toluene	2.0	20	20	U
10061-02-6	trans-1,3-Dichloropropene	2.2	20	20	U
79-00-5	1,1,2-Trichloroethane	2.6	20	14	DJ
127-18-4	Tetrachloroethene	2.6	20	20	U
591-78-6	2-Hexanone	7.4	100	100	U
124-48-1	Dibromochloromethane	2.4	20	20	U
106-93-4	1,2-Dibromoethane	2.6	20	20	U
108-90-7	Chlorobenzene	2.4	20	20	U

FORM I VOA SW846

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT ID.

0306H025DL

Lab Name: COLUMBIA ANALYTICAL SERVICES - REDDING

Case No.: D9478 SDG No.: D9478 Lab Sample ID: D9478004DL

Matrix: WATER Level: LOW Lab File ID: K030487

Sample Volume: 10.0 ML Date Received: 02/08/03

Date Analyzed: 02/20/03

Dilution Factor: 20.0

CAS NO.	COMPOUND Units: UG/L	MDL	RL	RESULT	Q
100-41-4	Ethylbenzene	2.2	20	20	U
98-82-8	Isopropylbenzene	2.4	20	20	U
100-42-5	Styrene	2.0	20	20	U
75-25-2	Bromoform	2.6	20	20	U
1330-20-7	Xylene (total)	2.4	20	20	U
106-46-7	1,4-Dichlorobenzene	2.6	20	20	U
79-34-5	1,1,2,2-Tetrachloroethane	3.0	20	20	U
541-73-1	1,3-Dichlorobenzene	3.2	20	20	U
95-50-1	1,2-Dichlorobenzene	2.4	20	20	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT ID.

0306H026

Lab Name: COLUMBIA ANALYTICAL SERVICES - REDDING

Case No.: D9478 SDG No.: D9478 Lab Sample ID: D9478005

Matrix: WATER Level: LOW Lab File ID: K030488

Sample Volume: 10.0 ML Date Received: 02/08/03

Date Analyzed: 02/20/03

Dilution Factor: 2.0

CAS NO.	COMPOUND Units: UG/L	MDL	RL	RESULT	Q
107-06-2	1,2-Dichloroethane	0.14	2.0	39	
78-87-5	1,2-Dichloropropane	0.18	2.0	1.0	J
79-01-6	Trichloroethene	0.20	2.0	440	E
87-61-6	1,2,3-Trichlorobenzene	0.22	2.0	2.0	U
75-71-8	Dichlorodifluoromethane	0.28	2.0	2.0	U
74-87-3	Chloromethane	0.38	2.0	2.0	U
75-01-4	Vinyl chloride	0.26	2.0	2.0	U
74-83-9	Bromomethane	0.32	2.0	2.0	U
75-00-3	Chloroethane	0.32	2.0	2.0	U
75-69-4	Trichlorofluoromethane	0.14	2.0	2.0	U
75-35-4	1,1-Dichloroethene	0.30	2.0	2.0	U
76-13-1	1,1,2-Trichlorotrifluoroetha	0.26	2.0	2.0	U
67-64-1	Acetone	1.5	10	2.0	J
75-15-0	Carbon disulfide	0.16	2.0	2.0	U
75-09-2	Methylene chloride	0.18	4.0	23	
156-60-5	trans-1,2-Dichloroethene	0.20	2.0	2.0	U
1634-04-4	Methyl tert-butylether	0.12	2.0	2.0	U
75-34-3	1,1-Dichloroethane	0.22	2.0	0.80	J
156-59-2	cis-1,2-Dichloroethene	0.22	2.0	10	
78-93-3	2-Butanone	0.54	10	1.0	J
74-97-5	Bromochloromethane	0.20	2.0	2.0	U
67-66-3	Chloroform	0.22	2.0	48	
71-55-6	1,1,1-Trichloroethane	0.22	2.0	2.0	U
56-23-5	Carbon tetrachloride	0.22	2.0	2.0	U
71-43-2	Benzene	0.14	2.0	1.0	J
96-12-8	1,2-Dibromo-3-chloropropane	1.3	10	10	U
120-82-1	1,2,4-Trichlorobenzene	0.24	2.0	2.0	U
75-27-4	Bromodichloromethane	0.20	2.0	2.0	U
10061-01-5	cis-1,3-Dichloropropene	0.16	2.0	2.0	U
108-10-1	4-Methyl-2-pentanone	0.28	10	10	U
108-88-3	Toluene	0.20	2.0	0.30	J
10061-02-6	trans-1,3-Dichloropropene	0.22	2.0	2.0	U
79-00-5	1,1,2-Trichloroethane	0.26	2.0	7.0	
127-18-4	Tetrachloroethene	0.26	2.0	1.0	J
591-78-6	2-Hexanone	0.74	10	10	U
124-48-1	Dibromochloromethane	0.24	2.0	2.0	U
106-93-4	1,2-Dibromoethane	0.26	2.0	2.0	U
108-90-7	Chlorobenzene	0.24	2.0	2.0	U

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VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT ID.

0306H026

Lab Name: COLUMBIA ANALYTICAL SERVICES - REDDING

Case No.: D9478 SDG No.: D9478 Lab Sample ID: D9478005

Matrix: WATER Level: LOW Lab File ID: K030488

Sample Volume: 10.0 ML Date Received: 02/08/03

Date Analyzed: 02/20/03

Dilution Factor: 2.0

CAS NO.	COMPOUND Units: UG/L	MDL	RL	RESULT	Q
100-41-4	Ethylbenzene	0.22	2.0	2.0	U
98-82-8	Isopropylbenzene	0.24	2.0	2.0	U
100-42-5	Styrene	0.20	2.0	2.0	U
75-25-2	Bromoform	0.26	2.0	2.0	U
1330-20-7	Xylene (total)	0.24	2.0	2.0	U
106-46-7	1,4-Dichlorobenzene	0.26	2.0	2.0	U
79-34-5	1,1,2,2-Tetrachloroethane	0.30	2.0	2.0	U
541-73-1	1,3-Dichlorobenzene	0.32	2.0	2.0	U
95-50-1	1,2-Dichlorobenzene	0.24	2.0	2.0	U

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VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT ID.

0306H026DL

Lab Name: COLUMBIA ANALYTICAL SERVICES - REDDING

Case No.: D9478 SDG No.: D9478 Lab Sample ID: D9478005DL

Matrix: WATER Level: LOW Lab File ID: K030489

Sample Volume: 10.0 ML Date Received: 02/08/03

Date Analyzed: 02/20/03

Dilution Factor: 20.0

CAS NO.	COMPOUND Units: UG/L	MDL	RL	RESULT	Q
107-06-2	1,2-Dichloroethane	1.4	20	44	D
78-87-5	1,2-Dichloropropane	1.8	20	20	U
79-01-6	Trichloroethene	2.0	20	520	D
87-61-6	1,2,3-Trichlorobenzene	2.2	20	20	U
75-71-8	Dichlorodifluoromethane	2.8	20	20	U
74-87-3	Chloromethane	3.8	20	20	U
75-01-4	Vinyl chloride	2.6	20	20	U
74-83-9	Bromomethane	3.2	20	20	U
75-00-3	Chloroethane	3.2	20	20	U
75-69-4	Trichlorofluoromethane	1.4	20	20	U
75-35-4	1,1-Dichloroethene	3.0	20	20	U
76-13-1	1,1,2-Trichlorotrifluoroetha	2.6	20	20	U
67-64-1	Acetone	15	100	20	DJ
75-15-0	Carbon disulfide	1.6	20	20	U
75-09-2	Methylene chloride	1.8	40	30	DJ
156-60-5	trans-1,2-Dichloroethene	2.0	20	20	U
1634-04-4	Methyl tert-butylether	1.2	20	20	U
75-34-3	1,1-Dichloroethane	2.2	20	20	U
156-59-2	cis-1,2-Dichloroethene	2.2	20	10	DJ
78-93-3	2-Butanone	5.4	100	100	U
74-97-5	Bromochloromethane	2.0	20	20	U
67-66-3	Chloroform	2.2	20	56	D
71-55-6	1,1,1-Trichloroethane	2.2	20	20	U
56-23-5	Carbon tetrachloride	2.2	20	20	U
71-43-2	Benzene	1.4	20	20	U
96-12-8	1,2-Dibromo-3-chloropropane	13	100	100	U
120-82-1	1,2,4-Trichlorobenzene	2.4	20	20	U
75-27-4	Bromodichloromethane	2.0	20	20	U
10061-01-5	cis-1,3-Dichloropropene	1.6	20	20	U
108-10-1	4-Methyl-2-pentanone	2.8	100	100	U
108-88-3	Toluene	2.0	20	20	U
10061-02-6	trans-1,3-Dichloropropene	2.2	20	20	U
79-00-5	1,1,2-Trichloroethane	2.6	20	7.0	DJ
127-18-4	Tetrachloroethene	2.6	20	20	U
591-78-6	2-Hexanone	7.4	100	100	U
124-48-1	Dibromochloromethane	2.4	20	20	U
106-93-4	1,2-Dibromoethane	2.6	20	20	U
108-90-7	Chlorobenzene	2.4	20	20	U

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VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT ID.

0306H026DL

Lab Name: COLUMBIA ANALYTICAL SERVICES - REDDING

Case No.: D9478 SDG No.: D9478 Lab Sample ID: D9478005DL

Matrix: WATER Level: LOW Lab File ID: K030489

Sample Volume: 10.0 ML Date Received: 02/08/03

Date Analyzed: 02/20/03

Dilution Factor: 20.0

CAS NO.	COMPOUND Units: UG/L	MDL	RL	RESULT	Q
100-41-4	Ethylbenzene	2.2	20	20	U
98-82-8	Isopropylbenzene	2.4	20	20	U
100-42-5	Styrene	2.0	20	20	U
75-25-2	Bromoform	2.6	20	20	U
1330-20-7	Xylene (total)	2.4	20	20	U
106-46-7	1,4-Dichlorobenzene	2.6	20	20	U
79-34-5	1,1,2,2-Tetrachloroethane	3.0	20	20	U
541-73-1	1,3-Dichlorobenzene	3.2	20	20	U
95-50-1	1,2-Dichlorobenzene	2.4	20	20	U

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VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT ID.

0306H027

Lab Name: COLUMBIA ANALYTICAL SERVICES - REDDING

Case No.: D9478 SDG No.: D9478 Lab Sample ID: D9478006

Matrix: WATER Level: LOW Lab File ID: K030490

Sample Volume: 10.0 ML Date Received: 02/08/03

Date Analyzed: 02/20/03

Dilution Factor: 1.0

CAS NO.	COMPOUND Units: UG/L	MDL	RL	RESULT	Q
107-06-2	1,2-Dichloroethane	0.070	1.0	1.0	U
78-87-5	1,2-Dichloropropane	0.090	1.0	1.0	U
79-01-6	Trichloroethene	0.10	1.0	1.0	U
87-61-6	1,2,3-Trichlorobenzene	0.11	1.0	1.0	U
75-71-8	Dichlorodifluoromethane	0.14	1.0	1.0	U
74-87-3	Chloromethane	0.19	1.0	1.0	U
75-01-4	Vinyl chloride	0.13	1.0	1.0	U
74-83-9	Bromomethane	0.16	1.0	1.0	U
75-00-3	Chloroethane	0.16	1.0	1.0	U
75-69-4	Trichlorofluoromethane	0.070	1.0	1.0	U
75-35-4	1,1-Dichloroethene	0.15	1.0	1.0	U
76-13-1	1,1,2-Trichlorotrifluoroetha	0.13	1.0	1.0	U
67-64-1	Acetone	0.73	5.0	4.0	J
75-15-0	Carbon disulfide	0.080	1.0	1.0	U
75-09-2	Methylene chloride	0.090	2.0	0.30	J
156-60-5	trans-1,2-Dichloroethene	0.10	1.0	1.0	U
1634-04-4	Methyl tert-butylether	0.060	1.0	1.0	U
75-34-3	1,1-Dichloroethane	0.11	1.0	1.0	U
156-59-2	cis-1,2-Dichloroethene	0.11	1.0	1.0	U
78-93-3	2-Butanone	0.27	5.0	0.50	J
74-97-5	Bromochloromethane	0.10	1.0	1.0	U
67-66-3	Chloroform	0.11	1.0	1.0	U
71-55-6	1,1,1-Trichloroethane	0.11	1.0	1.0	U
56-23-5	Carbon tetrachloride	0.11	1.0	1.0	U
71-43-2	Benzene	0.070	1.0	1.0	U
96-12-8	1,2-Dibromo-3-chloropropane	0.66	5.0	5.0	U
120-82-1	1,2,4-Trichlorobenzene	0.12	1.0	1.0	U
75-27-4	Bromodichloromethane	0.10	1.0	1.0	U
10061-01-5	cis-1,3-Dichloropropene	0.080	1.0	1.0	U
108-10-1	4-Methyl-2-pentanone	0.14	5.0	5.0	U
108-88-3	Toluene	0.10	1.0	0.40	J
10061-02-6	trans-1,3-Dichloropropene	0.11	1.0	1.0	U
79-00-5	1,1,2-Trichloroethane	0.13	1.0	1.0	U
127-18-4	Tetrachloroethene	0.13	1.0	1.0	U
591-78-6	2-Hexanone	0.37	5.0	5.0	U
124-48-1	Dibromochloromethane	0.12	1.0	1.0	U
106-93-4	1,2-Dibromoethane	0.13	1.0	1.0	U
108-90-7	Chlorobenzene	0.12	1.0	1.0	U

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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT ID.

0306H027

Lab Name: COLUMBIA ANALYTICAL SERVICES - REDDING

Case No.: D9478 SDG No.: D9478 Lab Sample ID: D9478006

Matrix: WATER Level: LOW Lab File ID: K030490

Sample Volume: 10.0 ML Date Received: 02/08/03

Date Analyzed: 02/20/03

Dilution Factor: 1.0

CAS NO.	COMPOUND Units: UG/L	MDL	RL	RESULT	Q
100-41-4	Ethylbenzene	0.11	1.0	1.0	U
98-82-8	Isopropylbenzene	0.12	1.0	1.0	U
100-42-5	Styrene	0.10	1.0	1.0	U
75-25-2	Bromoform	0.13	1.0	1.0	U
1330-20-7	Xylene (total)	0.12	1.0	1.0	U
106-46-7	1,4-Dichlorobenzene	0.13	1.0	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	0.15	1.0	1.0	U
541-73-1	1,3-Dichlorobenzene	0.16	1.0	1.0	U
95-50-1	1,2-Dichlorobenzene	0.12	1.0	1.0	U

FORM I VOA SW846

Columbia Analytical Services, Inc.

TOTAL METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

0306H023

Contract: TTEMI/HUNTER'S PT

Lab Code: RDD Case No.: SAS No.: SDG NO.: D9478

Matrix (soil/water): WATER Lab Sample ID: D9478002

Level (low/med): LOW Date Received: 02/08/03

Concentration Units (ug/L or mg/kg dry weight): µG/L

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	3.0	B		F
7439-89-6	Iron	4.0	U		P
7439-96-5	Manganese	70.8			P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

Columbia Analytical Services, Inc.

TOTAL METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

0306H023T

Contract: TTEMI/HUNTER'S PT

Lab Code: RDD Case No.: SAS No.: SDG NO.: D9478

Matrix (soil/water): WATER Lab Sample ID: D9478007

Level (low/med): LOW Date Received: 02/08/03

Concentration Units (ug/L or mg/kg dry weight): µG/L

CAS No.	Analyte	Concentration	C	Q	M
7439-89-6	Iron	311			P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

TOTAL METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

0306H024

Contract: TTEMI/HUNTER'S PT

Lab Code: RDD Case No.: SAS No.: SDG NO.: D9478

Matrix (soil/water): WATER Lab Sample ID: D9478003

Level (low/med): LOW Date Received: 02/08/03

Concentration Units (ug/L or mg/kg dry weight): µG/L

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	1.0	U		F
7439-89-6	Iron	86.7	B		P
7439-96-5	Manganese	720			P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

Columbia Analytical Services, Inc.

TOTAL METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

0306H024T

Contract: TTEMI/HUNTER'S PT

Lab Code: RDD Case No.: SAS No.: SDG NO.: D9478

Matrix (soil/water): WATER Lab Sample ID: D9478008

Level (low/med): LOW Date Received: 02/08/03

Concentration Units (ug/L or mg/kg dry weight): µG/L

CAS No.	Analyte	Concentration	C	Q	M
7439-89-6	Iron	468			P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

TOTAL METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

0306H025

Contract: TTEMI/HUNTER'S PT

Lab Code: RDD Case No.: SAS No.: SDG NO.: D9478

Matrix (soil/water): WATER Lab Sample ID: D9478004

Level (low/med): LOW Date Received: 02/08/03

Concentration Units (ug/L or mg/kg dry weight): µG/L

CAS No.	Analyte	Concentration	C	Q	M
7439-89-6	Iron	185			P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

TOTAL METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

0306H025T

Contract: TTEMI/HUNTER'S PT

Lab Code: RDD Case No.: SAS No.: SDG NO.: D9478

Matrix (soil/water): WATER Lab Sample ID: D9478009

Level (low/med): LOW Date Received: 02/08/03

Concentration Units (ug/L or mg/kg dry weight): µG/L

CAS No.	Analyte	Concentration	C	Q	M
7439-89-6	Iron	479			P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

Columbia Analytical Services, Inc.

TOTAL METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

0306H026

Contract: TTEMI/HUNTER'S PT

Lab Code: RDD Case No.: SAS No.: SDG NO.: D9478

Matrix (soil/water): WATER Lab Sample ID: D9478005

Level (low/med): LOW Date Received: 02/08/03

Concentration Units (ug/L or mg/kg dry weight): µG/L

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	1.0	U		F
7439-89-6	Iron	67.7	B		P
7439-96-5	Manganese	665			P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

Columbia Analytical Services, Inc.

TOTAL METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

0306H026T

Contract: TTEMI/HUNTER'S PT

Lab Code: RDD Case No.: SAS No.: SDG NO.: D9478

Matrix (soil/water): WATER Lab Sample ID: D9478010

Level (low/med): LOW Date Received: 02/08/03

Concentration Units (ug/L or mg/kg dry weight): µG/L

CAS No.	Analyte	Concentration	C	Q	M
7439-89-6	Iron	428			P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

TOTAL METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

0306H027

Contract: TTEMI/HUNTER'S PT

Lab Code: RDD Case No.: SAS No.: SDG NO.: D9478

Matrix (soil/water): WATER Lab Sample ID: D9478006

Level (low/med): LOW Date Received: 02/08/03

Concentration Units (ug/L or mg/kg dry weight): µG/L

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	1.0	U		F
7439-89-6	Iron	9.9	B		P
7439-96-5	Manganese	1.0	U		P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

Columbia Analytical Services, Inc.

TOTAL METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

0306H027T

Contract: TTEMI/HUNTER'S PT

Lab Code: RDD Case No.: SAS No.: SDG NO.: D9478

Matrix (soil/water): WATER Lab Sample ID: D9478011

Level (low/med): LOW Date Received: 02/08/03

Concentration Units (ug/L or mg/kg dry weight): µG/L

CAS No.	Analyte	Concentration	C	Q	M
7439-89-6	Iron	4.0	U		P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

Report of Analytical Results

Client Sample ID: 0306H023
Sample Description: None
Sample Matrix: Water
Site: N/A

Date Collected: 02/07/03 10:25 (Fri)
Date Received: 02/08/03 09:40 (Sat)

Reference No: D9478
Lab Sample ID: D9478002

CATEGORY NAME Analytical Parameter	Result	Units	Reporting Level	Date/Time of Analysis	Analytical Method(s)
GENERAL					
Alkalinity as CaCO3	88	mg/L	10	02/13/03 09:00	EPA310.1
ANIONS					
Chloride	71.3	mg/L	10	02/11/03 11:26	EPA300.0
NUTRIENTS					
Nitrate as N	1.60	mg/L	0.10	02/09/03 01:42	EPA300.0

(19553)

Report of Analytical Results

Client Sample ID: 0306H024
Sample Description: None
Sample Matrix: Water
Site: N/A

Date Collected: 02/07/03 10:30 (Fri)
Date Received: 02/08/03 09:40 (Sat)

Reference No: D9478
Lab Sample ID: D9478003

CATEGORY NAME Analytical Parameter	Result	Units	Reporting Level	Date/Time of Analysis	Analytical Method(s)
GENERAL					
Alkalinity as CaCO3	77	mg/L	10	02/13/03 09:00	EPA310.1
ANIONS					
Chloride	108	mg/L	10	02/11/03 11:43	EPA300.0

(19553)

Report of Analytical Results

Client Sample ID: 0306H025
Sample Description: None
Sample Matrix: Water
Site: N/A

Date Collected: 02/07/03 11:40 (Fri)
Date Received: 02/08/03 09:40 (Sat)

Reference No: D9478
Lab Sample ID: D9478004

CATEGORY NAME Analytical Parameter	Result	Units	Reporting Level	Date/Time of Analysis	Analytical Method(s)
GENERAL					
Alkalinity as CaCO3	30	mg/L	10	02/13/03 09:00	EPA310.1
ANIONS					
Chloride	201	mg/L	20	02/11/03 12:00	EPA300.0

(19553)

Report of Analytical Results

Client Sample ID: 0306H026
Sample Description: None
Sample Matrix: Water
Site: N/A

Date Collected: 02/07/03 11:45 (Fri)
Date Received: 02/08/03 09:40 (Sat)

Reference No: D9478
Lab Sample ID: D9478005

CATEGORY NAME Analytical Parameter	Result	Units	Reporting Level	Date/Time of Analysis	Analytical Method(s)
GENERAL					
Alkalinity as CaCO3	72	mg/L	10	02/13/03 09:00	EPA310.1
ANIONS					
Chloride	143	mg/L	10	02/11/03 12:19	EPA300.0

(19553)

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Tetra Tech**
Client Project ID: **Hunter's Point**

CAS Project ID: P2300228

Hydrogen

Test Code: RSK 175
Instrument ID: HP5890A/TCD #8
Analyst: Michelle Sakamoto/Regan Lau
Sampling Media: Liquid
Test Notes:

Date(s) Collected: 2/7/03
Date Received: 2/11/03
Date(s) Analyzed: 2/13/03
Volume(s) Analyzed: 0.10 ml

Client Sample ID	CAS Sample ID	D.F.	Hydrogen µg/L Result	MRL	MDL	Data Qualifier
0306H023	P2300228-001	1.00	ND	17.0	5.00	
0306H024	P2300228-002	1.00	**27.6**	17.0	5.00	
0306H024	P2300228-002DUP	1.00	**27.5**	17.0	5.00	
0306H025	P2300228-003	1.00	ND	17.0	5.00	
0306H026	P2300228-004	1.00	ND	17.0	5.00	
Method Control Sample	P030213-MB	1.00	ND	17.0	5.00	

The Method Control Sample is laboratory water carried through the entire analytical process.
ND = Compound was analyzed for, but not detected above the **laboratory detection limit.**
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By: RG Date: 2/21/03

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Tetra Tech**
Client Sample ID: **0306H023**
Client Project ID: **Hunter's Point**

CAS Project ID: P2300228
CAS Sample ID: P2300228-001

Test Code: RSK 175
Instrument ID: HP5890A/FID #10
Analyst: Wade Henton/Regan Lau
Sampling Media: Liquid
Test Notes:

Date Collected: 2/7/03
Date Received: 2/11/03
Date Analyzed: 2/14/03
Volume(s) Analyzed: 0.10 ml(s)

D.F. = 1.00

CAS #	Compound	Result µg/L	MRL µg/L	Detection Limit µg/L	Data Qualifier
74-85-1	Ethene	1.7	1.5	0.40	
74-84-0	Ethane	18	0.50	0.30	

ND = Compound was analyzed for, but not detected above the **laboratory detection limit**.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By: RG Date: 2/21/03

00228SVG.RD1- Sample

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Tetra Tech**
Client Sample ID: **0306H024**
Client Project ID: **Hunter's Point**

CAS Project ID: P2300228
CAS Sample ID: P2300228-002

Test Code: RSK 175
Instrument ID: HP5890A/FID #10
Analyst: Wade Henton/Regan Lau
Sampling Media: Liquid
Test Notes:

Date Collected: 2/7/03
Date Received: 2/11/03
Date Analyzed: 2/14/03
Volume(s) Analyzed: 0.10 ml

D.F. = 1.00

CAS #	Compound	Result µg/L	MRL µg/L	Detection Limit µg/L	Data Qualifier
74-85-1	Ethene	34	1.5	0.40	
74-84-0	Ethane	54	0.50	0.30	

ND = Compound was analyzed for, but not detected above the **laboratory detection limit.**
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By: RG Date: 2/21/03

00228SVG.RD1- Sample (2)

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Tetra Tech**
Client Sample ID: **0306H025**
Client Project ID: **Hunter's Point**

CAS Project ID: P2300228
CAS Sample ID: P2300228-003

Test Code: RSK 175
Instrument ID: HP5890A/FID #10
Analyst: Wade Henton/Regan Lau
Sampling Media: Liquid
Test Notes:

Date Collected: 2/7/03
Date Received: 2/11/03
Date Analyzed: 2/14/03
Volume(s) Analyzed: 0.10 ml

D.F. = 1.00

CAS #	Compound	Result µg/L	MRL µg/L	Detection Limit µg/L	Data Qualifier
74-85-1	Ethene	48	1.5	0.40	
74-84-0	Ethane	64	0.50	0.30	

ND = Compound was analyzed for, but not detected above the **laboratory detection limit**.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By: RG Date: 2/21/03

00228SVG.RD1 - Sample (3)

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Tetra Tech**
Client Sample ID: **0306H026**
Client Project ID: **Hunter's Point**

CAS Project ID: P2300228
CAS Sample ID: P2300228-004

Test Code: RSK 175
Instrument ID: HP5890A/FID #10
Analyst: Wade Henton/Regan Lau
Sampling Media: Liquid
Test Notes:

Date Collected: 2/7/03
Date Received: 2/11/03
Date Analyzed: 2/14/03
Volume(s) Analyzed: 0.10 ml

D.F. = 1.00

CAS #	Compound	Result µg/L	MRL µg/L	Detection Limit µg/L	Data Qualifier
74-85-1	Ethene	49	1.5	0.40	
74-84-0	Ethane	83	0.50	0.30	

ND = Compound was analyzed for, but not detected above the **laboratory detection limit**.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By: RG Date: 2/21/03

00228SVG.RD1 - Sample (4)

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Tetra Tech**
Client Sample ID: **0306H026**
Client Project ID: **Hunter's Point**

CAS Project ID: P2300228
CAS Sample ID: P2300228-004DUP

Test Code: RSK 175
Instrument ID: HP5890A/FID #10
Analyst: Wade Henton/Regan Lau
Sampling Media: Liquid
Test Notes:

Date Collected: 2/7/03
Date Received: 2/11/03
Date Analyzed: 2/14/03
Volume(s) Analyzed: 0.10 ml

D.F. = 1.00

CAS #	Compound	Result µg/L	MRL µg/L	Detection Limit µg/L	Data Qualifier
74-85-1	Ethene	**49**	1.5	0.40	
74-84-0	Ethane	**84**	0.50	0.30	

ND = Compound was analyzed for, but not detected above the **laboratory detection limit.**
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By: RG Date: 2/21/03

00228SVG RD1- Dup (4)

ENCLOSURE 5
DATA VALIDATION REPORTS

Tetra Tech EM Inc.
DATA VALIDATION REPORT

Site:	Hunters Point Shipyard
Project Name:	DO-013
Laboratory:	Columbia Analytical Services - Redding
Data Reviewer:	Sandra Obleas, The DV Group
Review Date:	March 28, 2003

Sample Delivery Group (SDG) No.: D9467

Sample Nos.:		
	0306H001	0306H007
	0306H002 *	0306H008
	0306H003	0306H009
	0306H004	0306H010
	0306H005	0306H011 *
	0306H006	0306H012

* Full Validation Sample

Matrix: Water

Collection Date(s): February 4 and 5, 2003

The data were qualified according to the U.S. Environmental Protection Agency (EPA) documents "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review" (October 1999), "USEPA Contract Laboratory National Functional Guidelines for Low Concentration Organic Data" (EPA 2001), and "USEPA Contract Laboratory Program National Functional Guidelines For Inorganic Data Review" (February 1994). In addition, the TtEMI documents "Data Validation Guidelines for CLP Organic Analyses," "Data Validation Guidelines for CLP Inorganic Analyses," "Data Validation Guidelines for Non-CLP Organic Analyses," "Data Validation Guidelines for Non-CLP Inorganic and Physical Analyses" (August 2001), and the document entitled "TtEMI Comprehensive Long-term Environmental Action Navy II Analytical Services Statement of Work" (May 2000) were used along with other specified criteria in EPA methods. Data validation requirements are presented below.

I certify that all data validation criteria outlined in the above referenced documents were assessed, and any qualifications made to the data were in accordance with those documents.

_____

Certified by

DATA VALIDATION REQUIREMENTS

Full validation includes all parameters listed below. An asterisk (*) indicates cursory validation parameters.

CLP Organic Parameters

*	Holding times
	GC/MS instrument performance check
*	Initial and continuing calibrations
*	Blanks
*	Surrogate recovery
*	Matrix spike/matrix spike duplicate
*	Laboratory control sample or blank spike
*	Field duplicates
*	Internal standard performance
	Target compound identification
	Tentatively identified compounds
	Compound quantitation
	Reported detection limits
	System performance
*	Overall assessment of data for the SDG

CLP Inorganic Parameters

*	Holding times
*	Initial and continuing calibrations
*	Blanks
*	Matrix spike
*	Laboratory control sample or blank spike
*	Field duplicates
*	Matrix duplicates
	ICP interference check sample
	GFAA quality control
*	ICP serial dilution
	Sample result verification
	Analyte quantitation
	Reported detection limits
*	Overall assessment of data for the SDG

Non-CLP Organic and Inorganic Parameters

*	Method compliance
*	Holding times
*	Initial and continuing calibrations
*	Blanks
*	Matrix spike/matrix spike duplicate
*	Laboratory control sample or blank spike
*	Field duplicates
*	Matrix duplicates
*	Surrogate recovery
	Analyte quantitation
	Reported detection limits
*	Overall assessment of data for the SDG

DATA VALIDATION QUALIFIERS AND CODES

Data Validation Qualifiers

UJ Estimated nondetected result

J Estimated detected result

R Rejected result

NJ Tentatively Identified Compound (TIC)

Data Validation Qualifier Codes

U1, U2, U4	Laboratory method blank, Field blank, Common blank contamination
J1, UJ1, R3	Noncompliance with instrument performance criteria
J2, UJ2	Duplicate precision exceedance
J3, UJ3, R2	Surrogate, Matrix spike, Laboratory control sample (LCS) exceedance
J4, UJ4	Serial Dilution
J5, UJ5, R1	Holding time exceedance
J7, UJ7, R7	Calibration exceedance
J8	Compound above calibration range
J9, UJ9	ICP Interference check sample; Compound identification
J0, UJ0, R0	Internal standard exceedance
J	Quantification below reporting limit

TABLE 1
CURSORY DATA VALIDATION SUMMARY

Analysis	Holding Times	Surrogates	MS/MSD	Matrix Duplicates	LCS	Blanks	Calibrations	Internal Standards	Field Duplicates	Other
VOA 8260	√	√	N/A	N/A	√	pg. 6	pg. 6	√	pg. 7	pg. 7
Metals	√	N/A	N/A	N/A	√	pg. 9	√	N/A	pg. 9	pg. 9

Notes:
√ indicates that all quality control criteria were met for the parameter as specified in the prescribed methods and data validation guidelines.
N/A indicates the parameter is not applicable to an analysis.
If criteria were not met and the data were qualified, a page number is indicated where the qualification is detailed.
The data were evaluated for all validation criteria and were found to be in control except where noted. Any outliers are described in the text.

TABLE 2
FULL DATA VALIDATION SUMMARY
Samples 0306H002 and 0306H011

Analysis	GC/MS Tuning	Target Compound List Identification	Compound or Analyte Quantification	Reported Detection Limits	Tentatively Identified Compounds	System Performance	Interference Check Sample	Graphite Furnace Quality Control
VOA 8260	√	√	√	√	N/A	√	N/A	N/A
Metals	N/A	N/A	√	√	N/A	√	√	√

Notes:

√ indicates that all quality control criteria were met for the parameter as specified in the prescribed methods and data validation guidelines.
N/A indicates the parameter is not applicable to an analysis.
If criteria were not met and the data were qualified, a page number is indicated where the qualification is detailed.
The data were evaluated for all validation criteria and were found to be in control except where noted. Any outliers found are described below.

DATA ASSESSMENT

VOLATILES (8260) ANALYSIS

I. Blank Contamination

A. Due to common laboratory contamination, the following results are considered nondetected (U4).

- Methylene chloride in samples 0306H001, 0306H002, 0306H003, 0306H004, 0306H005, 0306H006, 0306H007, 0306H008, 0306H011, 0306H012, 0306H006DL, 0306H007DL, 0306H010DL, 0306H011DL, and 0306H012DL.
- Acetone in samples 0306H001, 0306H003, 0306H004, and 0306H011DL.

Methylene chloride and Acetone are considered common laboratory contaminants when found at levels less than 5x the CRQL in environmental samples and not found in the associated blanks.

B. Due to field, trip, and equipment rinsate blank contamination, the following results are considered nondetected (U2).

- Chloroform in samples 0306H005, 0306H006, 0306H007, 0306H008, 0306H009, 0306H011, 0306H012, 0306H006DL, 0306H007DL, 0306H010DL, 0306H011DL, and 0306H012DL.

The following compounds were detected in the associated field, trip, and equipment rinsate blanks at the concentrations noted below.

Compound	Blank ID	Concentration, µg/L
Chloroform	0306H001 (trip blank)	0.8

Detected results less than 5x the maximum blank contamination were qualified.

II. Calibrations

A. Due to severe calibration problems, the following detected results are qualified as estimated (J7) and the nondetected results are rejected (R7).

- Acetone in all samples.

The following relative response factor (RRF) did not meet the QC limit of >0.05.

Calibration Date	Compound	RRF
2/12/03 1146 Cont. Cal.	Acetone	0.044
2/13/03 0949 Cont. Cal.	Acetone	0.039

III. Other Qualifications

A. The following results are qualified as estimated (J).

- Chloroform detected result was reported below the contract required report limit (RL) for sample 0306H001.
- 1,1,2-Trichlorotrifluoroethane and Toluene detected results were reported below the contract required report limit (RL) for samples 0306H002, 0306H003, and 0306H005.
- Toluene detected result was reported below the contract required report limit (RL) for sample 0306H006 and 0306H007DL, 0306H008, 0306H009, and 0306H012.
- 1,1-Dichloroethane, 1,1-Dichloroethene, 1,2-Dichloropropane, Benzene, and Toluene detected results were reported below the contract required report limit (RL) for sample 0306H010.
- cis-1,2-Dichloroethene detected result was reported below the contract required report limit (RL) for samples 0306H010DL and 0306H012DL.
- 1,2-Dichloroethane, Tetrachloroethene, and Toluene detected results were reported below the contract required report limit (RL) for sample 0306H011.
- 1,1,2-Trichlorotrifluoroethane detected result was reported below the contract required report limit (RL) for sample 0306H011DL.

Detected results reported below the RL are considered to be qualitatively acceptable, but quantitatively unreliable due to the uncertainty in analytical precision near the limit of detection.

B. The following result was qualified as estimated (J8) due to exceed calibration range.

- Trichloroethene for samples 0306H006, 0306H007, 0306H010, 0306H011, and 0306H012.

IV. Field Duplicate

A. The following RPDs were obtained for the field duplicate samples: 0306H002 / 0306H003:

- 29% for Toluene.

For water samples, the field RPD guideline is $\pm$ 25%. The data are not qualified on the basis of field duplicate results.

B. The following RPDs were obtained for the field duplicate samples: 0306H006 / 0306H007:

- 200% for Toluene.

For water samples, the field RPD guideline is $\pm$ 25%. The data are not qualified on the basis of field duplicate results.

Full Validation Criteria for Samples 0306H002 and 0306H011

V. GC/MS Tuning

A. The ion abundance criteria were met for the bromofluorobenzene (BFB) GC/MS performance check. The samples were analyzed within 12 hours of the associated performance check.

VI. Target Compound List (TCL) Identification

A. The relative retention times, mass spectra, and peak identifications of the samples were evaluated. Target compound identification was considered to be correct.

VII. Compound Quantitation and Reported Detection Limits

A. Sample results were recalculated with the proper dilution factors, weights, volumes, and percent moisture used to calculate the sample results. The samples were correctly quantitated. The reported detection limits were consistent with the contract required report limits and reflect any dilutions, weights, volumes, and percent moisture.

VIII. Tentatively Identified Compounds (TICs)

A. TICs not performed.

IX. System Performance

A. The samples were evaluated for reconstructed ion chromatogram (RIC) baseline shifts, extraneous peaks, loss of resolution, and peak tailing. No system degradation was noted.

CLP METALS ANALYSIS

I. Blank Contamination

A. Due to calibration and method blank contamination, the following results are considered nondetected (U1).

- Dissolved Iron for samples 0306H005, 0306H008, 0306H011, and 0306H012.

The following metals were detected in the associated calibration and method blanks at the concentrations noted below.

Analyte	Blank ID	Concentration, ug/L
Dissolved Iron	PBW	7.6

Detected results less than 5x the maximum blank contamination were qualified.

II. Other Qualifications

A. The following results are qualified as estimated (J).

- Dissolved Iron detected result was reported above the IDL but below the CRDL for sample 0306H010.
- Dissolved Manganese detected result was reported above the IDL but below the CRDL for sample 0306H008.
- Total Iron detected result was reported above the IDL but below the CRDL for samples 0306H002, 0306H003, 0306H008, 0306H009, and 0306H012.

Results above the IDL but below the CRDL are considered qualitatively acceptable but quantitatively unreliable due to uncertainties in the analytical precision near the limit of detection.

III. Field Duplicate

A. The following RPDs were obtained for the field duplicate samples:

- 0306H002 / 0306H003: 45% for Total Iron.
- 0306H006 / 0306H007: 35% for Total Iron.

For water samples, the field RPD guideline is $\pm$ 25%. The data are not qualified on the basis of field duplicate results.

Full Validation Criteria for Samples 0306H002 and 0306H011

IV. Analyte Quantitation and Reported Detection Limits

A. Sample results were recalculated, with the proper dilution factors, weights, volumes, and percent moisture used to calculate the sample results. The samples were found to be correctly quantitated. The reported detection limits were consistent with the contract required report limits and reflect any dilutions, weights, volumes, and percent moisture.

V. Graphite Furnace Atomic Absorption (GFAA) Analysis

A. GFAA was not performed.

VI. ICP Interference Check Sample

A. ICSAB percent recoveries were acceptable and spectral interference was not found.

OVERALL ASSESSMENT OF DATA

I. Method Compliance and Additional Comments

A. All analyses were conducted within all specifications of the requested methods.

II. Usability

A. Due to severe calibration problems in the Volatiles analysis, the following were rejected: Acetone for thirteen samples and estimated four samples. RRFs were less than 0.05.

B. Due to common laboratory contamination in the Volatile analyses, the following were considered nondetected: Methylene chloride for fifteen samples; and Acetone for four samples. Due to trip blank contamination, the following were considered nondetected: Chloroform for twelve samples. Due to uncertainty in the analytical precision near the limit of detection, the following were qualified as estimated: Chloroform for one sample; 1,1,2-Trichlorotrifluoroethane for four samples; Toluene for ten samples; 1,1-Dichloroethane, 1,1-Dichloroethene, 1,2-Dichloropropane, and Benzene for one sample; cis-1,2-Dichloroethene for two samples; 1,2-Dichloroethane and Tetrachloroethene for one sample. The following exceeded the calibration range: Trichloroethene for five samples.

C. Volatile samples 0306H006, 0306H007, 0306H010, 0306H011, and 0306H012 were reanalyzed at a dilution due to Trichloroethene results exceeding the calibration range. The diluted results should be used as the final validated results as follows: Trichloroethene for samples 0306H006DL, 0306H007DL, 0306H010DL, 0306H011DL, and 0306H012DL. Original and diluted results agree for all samples.

D. Due to method blank contamination in the Metals analyses, the following were considered nondetected: Dissolved Iron for four samples. Due to uncertainty in the analytical precision near the limit of detection, the following were qualified as estimated: Dissolved Iron for one sample; Dissolved Manganese for one sample; and Total Iron for five samples.

E. The quality control criteria reviewed, other than those discussed above, were met and are considered acceptable. Sample results that were found to be rejected (R) are unusable for all purposes. Sample results that were found to be estimated (J) are usable for limited purposes only. Based upon the cursory and full data validation all other results are considered valid and usable for all purposes. In general, the few results of rejected data and the small number of qualifiers added to the data indicate high usability.

Tetra Tech EM Inc.
DATA VALIDATION REPORT

Site:	Hunters Point Shipyard
Project Name:	DO-013
Laboratory:	Columbia Analytical Services - Redding
Data Reviewer:	Sandra Obleas, The DV Group
Review Date:	March 28, 2003

Sample Delivery Group (SDG) No.: D9468

Sample Nos.:	0306H013	0306H018
	0306H014	0306H019 *
	0306H015	0306H020
	0306H016	0306H021
	0306H017	

* Full Validation Sample

Matrix: Water

Collection Date(s): February 5 and 6, 2003

The data were qualified according to the U.S. Environmental Protection Agency (EPA) documents "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review" (October 1999), "USEPA Contract Laboratory National Functional Guidelines for Low Concentration Organic Data" (EPA 2001), and "USEPA Contract Laboratory Program National Functional Guidelines For Inorganic Data Review" (February 1994). In addition, the TtEMI documents "Data Validation Guidelines for CLP Organic Analyses," "Data Validation Guidelines for CLP Inorganic Analyses," "Data Validation Guidelines for Non-CLP Organic Analyses," "Data Validation Guidelines for Non-CLP Inorganic and Physical Analyses" (August 2001), and the document entitled "TtEMI Comprehensive Long-term Environmental Action Navy II Analytical Services Statement of Work" (May 2000) were used along with other specified criteria in EPA methods. Data validation requirements are presented below.

I certify that all data validation criteria outlined in the above referenced documents were assessed, and any qualifications made to the data were in accordance with those documents.

_____
Certified by

DATA VALIDATION REQUIREMENTS

Full validation includes all parameters listed below. An asterisk (*) indicates cursory validation parameters.

CLP Organic Parameters

*	Holding times
	GC/MS instrument performance check
*	Initial and continuing calibrations
*	Blanks
*	Surrogate recovery
*	Matrix spike/matrix spike duplicate
*	Laboratory control sample or blank spike
*	Field duplicates
*	Internal standard performance
	Target compound identification
	Tentatively identified compounds
	Compound quantitation
	Reported detection limits
	System performance
*	Overall assessment of data for the SDG

CLP Inorganic Parameters

*	Holding times
*	Initial and continuing calibrations
*	Blanks
*	Matrix spike
*	Laboratory control sample or blank spike
*	Field duplicates
*	Matrix duplicates
	ICP interference check sample
	GFAA quality control
*	ICP serial dilution
	Sample result verification
	Analyte quantitation
	Reported detection limits
*	Overall assessment of data for the SDG

Non-CLP Organic and Inorganic Parameters

*	Method compliance
*	Holding times
*	Initial and continuing calibrations
*	Blanks
*	Matrix spike/matrix spike duplicate
*	Laboratory control sample or blank spike
*	Field duplicates
*	Matrix duplicates
*	Surrogate recovery
	Analyte quantitation
	Reported detection limits
*	Overall assessment of data for the SDG

DATA VALIDATION QUALIFIERS AND CODES

Data Validation Qualifiers

UJ Estimated nondetected result

J Estimated detected result

R Rejected result

NJ Tentatively Identified Compound (TIC)

Data Validation Qualifier Codes

U1, U2, U4	Laboratory method blank, Field blank, Common blank contamination
J1, UJ1, R3	Noncompliance with instrument performance criteria
J2, UJ2	Duplicate precision exceedance
J3, UJ3, R2	Surrogate, Matrix spike, Laboratory control sample (LCS) exceedance
J4, UJ4	Serial Dilution
J5, UJ5, R1	Holding time exceedance
J7, UJ7, R7	Calibration exceedance
J8	Compound above calibration range
J9, UJ9	ICP Interference check sample; Compound identification
J0, UJ0, R0	Internal standard exceedance
J	Quantification below reporting limit

TABLE 1
CURSORY DATA VALIDATION SUMMARY

Analysis	Holding Times	Surrogates	MS/MSD	Matrix Duplicates	LCS	Blanks	Calibrations	Internal Standards	Field Duplicates	Other
VOA 8260	√	pg. 6	√	N/A	√	pg. 6	pg. 7	√	N/A	pg. 7, 8
Metals	√	N/A	pg. 9	N/A	√	pg. 9	√	N/A	N/A	pg. 9

Notes:
√ indicates that all quality control criteria were met for the parameter as specified in the prescribed methods and data validation guidelines.
N/A indicates the parameter is not applicable to an analysis.
If criteria were not met and the data were qualified, a page number is indicated where the qualification is detailed.
The data were evaluated for all validation criteria and were found to be in control except where noted. Any outliers are described in the text.

TABLE 2
FULL DATA VALIDATION SUMMARY
Sample 0306H019

Analysis	GC/MS Tuning	Target Compound List Identification	Compound or Analyte Quantification	Reported Detection Limits	Tentatively Identified Compounds	System Performance	Interference Check Sample	Graphite Furnace Quality Control
VOA 8260	√	√	√	√	N/A	√	N/A	N/A
Metals	N/A	N/A	√	√	N/A	√	√	N/A

Notes:

√ indicates that all quality control criteria were met for the parameter as specified in the prescribed methods and data validation guidelines.
N/A indicates the parameter is not applicable to an analysis.
If criteria were not met and the data were qualified, a page number is indicated where the qualification is detailed.
The data were evaluated for all validation criteria and were found to be in control except where noted. Any outliers found are described below.

DATA ASSESSMENT

VOLATILES (8260) ANALYSIS

I. Surrogate Recovery

A. Due to surrogate recovery problems, the following detected and nondetected results are qualified as estimated (J3 / UJ3).

- Volatiles in sample 0306H019DL.

The surrogates outside of QC limits are listed below.

Sample ID	Surrogate	%R	QC Limits
0306H019DL	Dibromofluoromethane	73	75-125%

Low recoveries indicate that detected and nondetected results may be biased low.

II. Blank Contamination

A. Due to common laboratory contamination, the following results are considered nondetected (U4).

- Methylene chloride in samples 0306H013, 0306H015, 0306H018, 0306H019, 0306H020, 0306H021, 0306H017DL, and 0306H019DL.
- Acetone in samples 0306H013, 0306H003, 0306H017, 0306H019, and 0306H021.

Methylene chloride and Acetone are considered common laboratory contaminants when found at levels less than 5x the CRQL in environmental samples and not found in the associated blanks.

B. Due to field, trip, and equipment rinsate blank contamination, the following results are considered nondetected (U2).

- Chloroform in samples 0306H014DL, 0306H017DL, and 0306H019DL.
- Toluene in samples 0306H014, 0306H015, 0306H017, 0306H018, 0306H019, 0306H020, and 0306H014DL.

The following compounds were detected in the associated field, trip, and equipment rinsate blanks at the concentrations noted below.

Compound	Blank ID	Concentration, µg/L
Chloroform	0306H021	0.2
Toluene	(equipment rinsate)	0.4

Detected results less than 5x the maximum blank contamination were qualified.

III. Calibrations

A. Due to severe calibration problems, the following detected results are qualified as estimated (J7) and the nondetected results are rejected (R7).

- Acetone in all samples.

The following relative response factor (RRF) did not meet the QC limit of >0.05.

Calibration Date	Compound	RRF
2/12/03 1146 Cont. Cal.	Acetone	0.044
2/13/03 0949 Cont. Cal.	Acetone	0.039
2/14/03 1006 Cont. Cal.	Acetone	0.041
2/18/03 1027 Cont. Cal.	Acetone	0.044

B. Due to continuing calibration problems, the following nondetected results are qualified as estimated (UJ7).

- Trichlorofluoromethane in samples 0306H017DL, 0306H019DL, and 0306H020DL.

The following continuing calibrations had percent differences (%D) of >25%.

Calibration Date	Compound	%D
2/14/03 1006	Trichlorofluoromethane	42.5

IV. Other Qualifications

A. The following results are qualified as estimated (J).

- 2-Butanone, Chloroform, and Toluene detected result was reported below the contract required report limit (RL) for sample 0306H013.
- Carbon tetrachloride detected result was reported below the contract required report limit (RL) for sample 0306H014.
- 1,2-Dibromo-3-chloropropane detected result was reported below the contract required report limit (RL) for sample 0306H014DL.
- Carbon tetrachloride and cis-1,2-Dichloroethene detected results were reported below the contract required report limit (RL) for sample 0306H015.
- 1,1-Dichloroethane, 1,1-Dichloroethene, 1,2-Dichloropropane, Benzene, and Vinyl chloride detected results were reported below the contract required report limit (RL) for sample 0306H017.
- Carbon tetrachloride detected result was reported below the contract required report limit (RL) for sample 0306H018.
- 1,1-Dichloroethene and Benzene detected results were reported below the contract required report limit (RL) for sample 0306H019.
- 1,2-Dichloroethane and 1,2-Dichloropropane detected results were reported below the contract required report limit (RL) for sample 0306H020.
- Chloroform and Toluene detected result was reported below the contract required report limit (RL) for sample 0306H021.

Detected results reported below the RL are considered to be qualitatively acceptable, but quantitatively unreliable due to the uncertainty in analytical precision near the limit of detection.

B. The following result was qualified as estimated (J8) due to exceed calibration range.

- Trichloroethene for samples 0306H014, 0306H017, 0306H018, 0306H019, and 0306H020.
- Chloroform and cis-1,2-Dichloroethene for sample 0306H020.

Full Validation Criteria for Sample 0306H019

V. GC/MS Tuning

A. The ion abundance criteria were met for the bromofluorobenzene (BFB) GC/MS performance check. The samples were analyzed within 12 hours of the associated performance check.

VI. Target Compound List (TCL) Identification

A. The relative retention times, mass spectra, and peak identifications of the samples were evaluated. Target compound identification was considered to be correct.

VII. Compound Quantitation and Reported Detection Limits

A. Sample results were recalculated with the proper dilution factors, weights, volumes, and percent moisture used to calculate the sample results. The samples were correctly quantitated. The reported detection limits were consistent with the contract required report limits and reflect any dilutions, weights, volumes, and percent moisture.

VIII. Tentatively Identified Compounds (TICs)

A. TICs not performed.

IX. System Performance

A. The samples were evaluated for reconstructed ion chromatogram (RIC) baseline shifts, extraneous peaks, loss of resolution, and peak tailing. No system degradation was noted.

CLP METALS ANALYSIS

I. Blank Contamination

A. Due to calibration and method blank contamination, the following results are considered nondetected (U1).

- Dissolved Iron for sample 0306H019.
- Total Iron for sample 0306H014.

The following metals were detected in the associated calibration and method blanks at the concentrations noted below.

Analyte	Blank ID	Concentration, ug/L
Dissolved Iron	PBW	7.6
Total Iron	CCB3	10.6

Detected results less than 5x the maximum blank contamination were qualified.

II. Matrix Spike (MS)

A. Due to accuracy problems in the MS analysis, the following detected results are qualified as estimated (J3).

- Dissolved Arsenic for sample 0306H016.

The recoveries outside the QC limits are listed below.

Sample ID	Analyte	%R	QC Limits
0306H016	Dissolved Arsenic	127.1	75 - 125%

Spike recoveries above 125% indicate that detected results may be biased high.

III. Other Qualifications

A. The following results are qualified as estimated (J).

- Dissolved Iron detected result was reported above the IDL but below the CRDL for sample 0306H017.
- Dissolved Manganese detected result was reported above the IDL but below the CRDL for sample 0306H016.

Results above the IDL but below the CRDL are considered qualitatively acceptable but quantitatively unreliable due to uncertainties in the analytical precision near the limit of detection.

Full Validation Criteria for Sample 0306H019

IV. Analyte Quantitation and Reported Detection Limits

A. Sample results were recalculated, with the proper dilution factors, weights, volumes, and percent moisture used to calculate the sample results. The samples were found to be correctly quantitated. The reported detection limits were consistent with the contract required report limits and reflect any dilutions, weights, volumes, and percent moisture.

V. Graphite Furnace Atomic Absorption (GFAA) Analysis

A. GFAA was not performed.

VI. ICP Interference Check Sample

A. ICSAB percent recoveries were acceptable and spectral interference was not found.

OVERALL ASSESSMENT OF DATA

I. Method Compliance and Additional Comments

A. All analyses were conducted within all specifications of the requested methods.

II. Usability

A. Due to severe calibration problems in the Volatiles analysis, the following were rejected: Acetone for ten samples and estimated four samples. RRFs were less than 0.05.

B. Due to surrogate recovery problems in the Volatile analyses, forty-six analytes were qualified as estimated for one sample. Due to common laboratory contamination, the following were considered nondetected: Methylene chloride for eight samples; and Acetone for five samples. Due to equipment rinsate contamination, the following were considered nondetected: Chloroform for three samples and Toluene for seven samples. Due to continuing calibration problems, Trichlorofluoromethane was qualified as estimated for three samples. Due to uncertainty in the analytical precision near the limit of detection, the following were qualified as estimated: 2-Butanone for one sample; Chloroform for two samples; Toluene for two samples; Carbon tetrachloride for three samples; 1,2-Dibromo-3-chloropropane for one sample; cis-1,2-Dichloroethene for one sample; 1,1-Dichloroethane for one sample; 1,1-Dichloroethene and Benzene for two samples; 1,2-Dichloropropane for two samples; Vinyl chloride for one sample; 1,2-Dichloroethane for one sample. The following exceeded the calibration range: Trichloroethene for five samples; Chloroform and cis-1,2-Dichloroethene for one sample.

C. Volatile samples 0306H014, 0306H017, 0306H018, 0306H019, and 0306H020 were reanalyzed at a dilution due to Trichloroethene, Chloroform and cis-1,2-Dichloroethene results exceeding the calibration range. The diluted results should be used as the final validated results as follows: Trichloroethene for samples 0306H014DL, 0306H017DL, 0306H018DL, 0306H019DL, and 0306H020DL; Chloroform and cis-1,2-Dichloroethene for sample 0306H020. Original and diluted results agree for all samples.

D. Due to calibration and method blank contamination in the Metals analyses, the following were considered nondetected: Dissolved Iron for one sample; Total Iron for one sample. Due to matrix spike problems, Dissolved Arsenic was qualified as estimated for one sample. Due to uncertainty in the analytical precision near the limit of detection, the following were qualified as estimated: Dissolved Iron for one sample and Dissolved Manganese for one sample.

E. The quality control criteria reviewed, other than those discussed above, were met and are considered acceptable. Sample results that were found to be rejected (R) are unusable for all purposes. Sample results that were found to be estimated (J) are usable for limited purposes only. Based upon the cursory and full data validation all other results are considered valid and usable for all purposes. In general, the few results of rejected data and the small number of qualifiers added to the data indicate high usability.

Tetra Tech EM Inc.
DATA VALIDATION REPORT

Site:	Hunters Point Shipyard
Project Name:	DO-013
Laboratory:	Columbia Analytical Services - Redding
Data Reviewer:	Sandra Obleas, The DV Group
Review Date:	March 28, 2003

Sample Delivery Group (SDG) No.: D9478

Sample Nos.:
0306H023
0306H024 *
0306H025
0306H026
0306H027

* Full Validation Sample

Matrix: Water

Collection Date(s): February 7, 2003

The data were qualified according to the U.S. Environmental Protection Agency (EPA) documents "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review" (October 1999), "USEPA Contract Laboratory National Functional Guidelines for Low Concentration Organic Data" (EPA 2001), and "USEPA Contract Laboratory Program National Functional Guidelines For Inorganic Data Review" (February 1994). In addition, the TtEMI documents "Data Validation Guidelines for CLP Organic Analyses," "Data Validation Guidelines for CLP Inorganic Analyses," "Data Validation Guidelines for Non-CLP Organic Analyses," "Data Validation Guidelines for Non-CLP Inorganic and Physical Analyses" (August 2001), and the document entitled "TtEMI Comprehensive Long-term Environmental Action Navy II Analytical Services Statement of Work" (May 2000) were used along with other specified criteria in EPA methods. Data validation requirements are presented below.

I certify that all data validation criteria outlined in the above referenced documents were assessed, and any qualifications made to the data were in accordance with those documents.

_____
Certified by

DATA VALIDATION REQUIREMENTS

Full validation includes all parameters listed below. An asterisk (*) indicates cursory validation parameters.

CLP Organic Parameters

*	Holding times
	GC/MS instrument performance check
*	Initial and continuing calibrations
*	Blanks
*	Surrogate recovery
*	Matrix spike/matrix spike duplicate
*	Laboratory control sample or blank spike
*	Field duplicates
*	Internal standard performance
	Target compound identification
	Tentatively identified compounds
	Compound quantitation
	Reported detection limits
	System performance
*	Overall assessment of data for the SDG

CLP Inorganic Parameters

*	Holding times
*	Initial and continuing calibrations
*	Blanks
*	Matrix spike
*	Laboratory control sample or blank spike
*	Field duplicates
*	Matrix duplicates
	ICP interference check sample
	GFAA quality control
*	ICP serial dilution
	Sample result verification
	Analyte quantitation
	Reported detection limits
*	Overall assessment of data for the SDG

Non-CLP Organic and Inorganic Parameters

*	Method compliance
*	Holding times
*	Initial and continuing calibrations
*	Blanks
*	Matrix spike/matrix spike duplicate
*	Laboratory control sample or blank spike
*	Field duplicates
*	Matrix duplicates
*	Surrogate recovery
	Analyte quantitation
	Reported detection limits
*	Overall assessment of data for the SDG

DATA VALIDATION QUALIFIERS AND CODES

Data Validation Qualifiers

UJ	Estimated nondetected result
J	Estimated detected result
R	Rejected result
NJ	Tentatively Identified Compound (TIC)

Data Validation Qualifier Codes

U1, U2, U4	Laboratory method blank, Field blank, Common blank contamination
J1, UJ1, R3	Noncompliance with instrument performance criteria
J2, UJ2	Duplicate precision exceedance
J3, UJ3, R2	Surrogate, Matrix spike, Laboratory control sample (LCS) exceedance
J4, UJ4	Serial Dilution
J5, UJ5, R1	Holding time exceedance
J7, UJ7, R7	Calibration exceedance
J8	Compound above calibration range
J9, UJ9	ICP Interference check sample; Compound identification
J0, UJ0, R0	Internal standard exceedance
J	Quantification below reporting limit

TABLE 1
CURSORY DATA VALIDATION SUMMARY

Analysis	Holding Times	Surrogates	MS/MSD	Matrix Duplicates	LCS	Blanks	Calibrations	Internal Standards	Field Duplicates	Other
VOA 8260	√	√	N/A	N/A	√	pg. 6	√	√	N/A	pg. 6,7
Metals	√	N/A	N/A	N/A	√	pg. 8	√	N/A	N/A	pg. 8

Notes:
√ indicates that all quality control criteria were met for the parameter as specified in the prescribed methods and data validation guidelines.
N/A indicates the parameter is not applicable to an analysis.
If criteria were not met and the data were qualified, a page number is indicated where the qualification is detailed.
The data were evaluated for all validation criteria and were found to be in control except where noted. Any outliers are described in the text.

TABLE 2
FULL DATA VALIDATION SUMMARY
Sample 0306H024

Analysis	GC/MS Tuning	Target Compound List Identification	Compound or Analyte Quantification	Reported Detection Limits	Tentatively Identified Compounds	System Performance	Interference Check Sample	Graphite Furnace Quality Control
VOA 8260	√	√	√	√	N/A	√	N/A	N/A
Metals	N/A	N/A	√	√	N/A	√	√	N/A

Notes:

√ indicates that all quality control criteria were met for the parameter as specified in the prescribed methods and data validation guidelines.
N/A indicates the parameter is not applicable to an analysis.
If criteria were not met and the data were qualified, a page number is indicated where the qualification is detailed.
The data were evaluated for all validation criteria and were found to be in control except where noted. Any outliers found are described below.

DATA ASSESSMENT

VOLATILES (8260) ANALYSIS

I. Blank Contamination

A. Due to common laboratory contamination, the following results are considered nondetected (U4).

- Methylene chloride in samples 0306H022, 0306H023, 0306H024, 0306H027, 0306H023DL, 0306H024DL, 0306H025DL, and 0306H026DL.
- Acetone in samples 0306H022, 0306H023, 0306H024, 0306H026, 0306H027, 0306H023DL, 0306H024DL, 0306H025DL, and 0306H026DL.

Methylene chloride and Acetone are considered common laboratory contaminants when found at levels less than 5x the CRQL in environmental samples and not found in the associated blanks.

B. Due to field, trip, and equipment rinsate blank contamination, the following results are considered nondetected (U2).

- Chloroform in samples 0306H023DL, 0306H024DL, 0306H025DL, and 0306H026DL.
- 2-Butanone in samples 0306H025, 0306H026, 0306H024DL, and 0306H025DL.
- Toluene in samples 0306H023, 0306H024, 0306H025, and 0306H026.

The following compounds were detected in the associated field, trip, and equipment rinsate blanks at the concentrations noted below.

Compound	Blank ID	Concentration, µg/L
Chloroform	0306H022 (trip blank)	0.8
2-Butanone	0306H027	0.5
Toluene	(equipment rinsate)	0.4

Detected results less than 5x the maximum blank contamination were qualified.

II. Other Qualifications

A. The following results are qualified as estimated (J).

- Chloroform detected result was reported below the contract required report limit (RL) for sample 0306H022.
- 1,1,2-Trichloroethane, 1,1-Dichloroethane, 1,1-Dichloroethene, 1,2-Dichloropropane, Benzene, Chloromethane, and trans-1,2-Dichloroethene detected results were reported below the contract required report limit (RL) for sample 0306H023.
- 1,1-Dichloroethane, cis-1,2-Dichloroethene, and Tetrachloroethene detected results were reported below the contract required report limit (RL) for sample 0306H023DL.
- 1,1-Dichloroethene, 1,2-Dichloropropane, Bromomethane, Chloromethane, trans-1,2-Dichloroethene, and Xylene(s) detected results were reported below the contract required report limit (RL) for sample 0306H024.
- 1,1,2-Trichloroethane, Chloromethane, and Vinyl chloride detected results were reported below the contract required report limit (RL) for sample 0306H024DL.
- 1,1-Dichloroethane, 1,2-Dichloropropane, 4-Methyl-2-pentanone, Bromomethane, Chloromethane, Methyl-tert-butyl ether, Tetrachloroethene, trans-1,2-Dichloroethene,

and Vinyl chloride detected results were reported below the contract required report limit (RL) for sample 0306H025.

- 1,1,2-Trichloroethane, Chloromethane, and cis-1,2-Dichloroethene detected results were reported below the contract required report limit (RL) for sample 0306H025DL.
- 1,1-Dichloroethane, 1,2-Dichloropropane, Benzene, and Tetrachloroethene detected results were reported below the contract required report limit (RL) for sample 0306H026.
- 1,1,2-Trichloroethane and cis-1,2-Dichloroethene detected results were reported below the contract required report limit (RL) for sample 0306H026DL.
- 2-Butanone and Toluene detected result was reported below the contract required report limit (RL) for sample 0306H027.

Detected results reported below the RL are considered to be qualitatively acceptable, but quantitatively unreliable due to the uncertainty in analytical precision near the limit of detection.

B. The following result was qualified as estimated (J8) due to exceed calibration range.

- Trichloroethene for samples 0306H023, 0306H024, 0306H025, and 0306H026.

Full Validation Criteria for Sample 0306H024

III. GC/MS Tuning

A. The ion abundance criteria were met for the bromofluorobenzene (BFB) GC/MS performance check. The samples were analyzed within 12 hours of the associated performance check.

IV. Target Compound List (TCL) Identification

A. The relative retention times, mass spectra, and peak identifications of the samples were evaluated. Target compound identification was considered to be correct.

V. Compound Quantitation and Reported Detection Limits

A. Sample results were recalculated with the proper dilution factors, weights, volumes, and percent moisture used to calculate the sample results. The samples were correctly quantitated. The reported detection limits were consistent with the contract required report limits and reflect any dilutions, weights, volumes, and percent moisture.

VI. Tentatively Identified Compounds (TICs)

A. TICs not performed.

VII. System Performance

A. The samples were evaluated for reconstructed ion chromatogram (RIC) baseline shifts, extraneous peaks, loss of resolution, and peak tailing. No system degradation was noted.

CLP METALS ANALYSIS

I. Blank Contamination

A. Due to calibration and method blank contamination, the following results are considered nondetected (U1).

- Dissolved Iron for sample 0306H027.

The following metals were detected in the associated calibration and method blanks at the concentrations noted below.

Analyte	Blank ID	Concentration, ug/L
Dissolved Iron	ICB	6.7

Detected results less than 5x the maximum blank contamination were qualified.

II. Other Qualifications

A. The following results are qualified as estimated (J).

- Dissolved Arsenic detected result was reported above the IDL but below the CRDL for sample 0306H023.
- Dissolved Iron detected result was reported above the IDL but below the CRDL for samples 0306H024 and 0306H025.

Results above the IDL but below the CRDL are considered qualitatively acceptable but quantitatively unreliable due to uncertainties in the analytical precision near the limit of detection.

Full Validation Criteria for Sample 0306H024

III. Analyte Quantitation and Reported Detection Limits

A. Sample results were recalculated, with the proper dilution factors, weights, volumes, and percent moisture used to calculate the sample results. The samples were found to be correctly quantitated. The reported detection limits were consistent with the contract required report limits and reflect any dilutions, weights, volumes, and percent moisture.

IV. Graphite Furnace Atomic Absorption (GFAA) Analysis

A. GFAA was not performed.

V. ICP Interference Check Sample

A. ICSAB percent recoveries were acceptable and spectral interference was not found.

OVERALL ASSESSMENT OF DATA

I. Method Compliance and Additional Comments

A. All analyses were conducted within all specifications of the requested methods.

II. Usability

A. Due to common laboratory contamination in the Volatile analyses, the following were considered nondetected: Methylene chloride for eight samples; and Acetone for nine samples. Due to equipment rinsate contamination, the following were considered nondetected: Chloroform for four samples; 2-Butanone for four samples; and Toluene for four samples. Due to uncertainty in the analytical precision near the limit of detection, the following were qualified as estimated: Chloroform for one sample; 1,1,2-Trichloroethane for four samples; 1,1-Dichloroethane for four samples; 1,1-Dichloroethene for two samples; 1,2-Dichloropropane for four samples; Benzene for two samples; Chloromethane for five samples; trans-1,2-Dichloroethene for three samples; cis-1,2-Dichloroethene for three samples; Tetrachloroethene for three samples; Bromomethane for two samples; Xylene(s) for one sample; Vinyl chloride for two samples; 4-Methyl-2-pentanone and Methyl-tert-butyl ether for one sample; and 2-Butanone and Toluene for one sample. The following exceeded the calibration range: Trichloroethene for four samples.

B. Volatile samples 0306H023, 0306H024, 0306H025, and 0306H026 were reanalyzed at a dilution due to Trichloroethene results exceeding the calibration range. The diluted results should be used as the final validated results as follows: Trichloroethene for samples 0306H023DL, 0306H024DL, 0306H025DL, and 0306H026DL. Original and diluted results agree for all samples.

C. Due to calibration and method blank contamination in the Metals analyses, the following were considered nondetected: Dissolved Iron for one sample. Due to uncertainty in the analytical precision near the limit of detection, the following were qualified as estimated: Dissolved Arsenic for one sample and Dissolved Iron for two samples.

D. The quality control criteria reviewed, other than those discussed above, were met and are considered acceptable. Sample results that were found to be rejected (R) are unusable for all purposes. Sample results that were found to be estimated (J) are usable for limited purposes only. Based upon the cursory and full data validation all other results are considered valid and usable for all purposes. In general, the absence of rejected data and the small number of qualifiers added to the data indicate high usability.