Unknown

From: Ken Schreuder
Sent: Wednesday, July 20, 2011 9:11 AM
To: Don Connell (fcswdd@wyoming.com)
Cc: Mike McDonald (mmcdonal@wyoming.com)
Subject: Sand Draw Comments

I'll be starting on the District's comments on the Sand Draw Landfill application next week. One thing I'd like to include is a discussion of the disparity between how DEQ has regulated Lander and Sand Draw. I want to point out that quite a few years ago DEQ approved ongoing operation of Lander until 2024, despite the fact that GW data at the time was much worse than Sand Draw is now. From what I understand, changes to the District's operations in the old landfill area, including vertical expansion, have resulted in decreases in the levels of contaminants.

Here's what I need:

- Please provide copies of historical correspondence (DEQ and District) regarding the closure date of Lander. I want to see what was discussed regarding groundwater impacts and DEQ's rationale for allowing it to operate until 2024.
- Summary of historical groundwater – I will contact Lowham/Walsh to see if there is something in the Lander permit application I can use.

Ken Schreuder, P.E., P.G.
Senior Engineer / Geologist

Trihydro Corporation
OUR SAFETY IS MY RESPONSIBILITY

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November 24, 2010

EXHIBIT
tabbies DEQ 58

Mr. Jim Hedges, Chairman
Fremont County Solid Waste Disposal District
P.O. Box 1400
Lander, WY 82520

RE: Groundwater Data Evaluation, Sand Draw Landfill, Fremont County, WY

Dear Mr. Hedges:

Trihydro Corporation (Trihydro) has completed additional groundwater data evaluation activities for the Sand Draw Landfill, on behalf of the Fremont County Solid Waste Disposal District (FCSWDD). The purpose of this project was to evaluate the repeatability and precision of laboratory data. The scope of work for this project included activities that are not required by the current environmental monitoring plan for the landfill or Chapter 2 of the Wyoming Solid Waste Rules and Regulations (WSWRR), and were not requested by the Wyoming Department of Environmental Quality (WDEQ), Solid and Hazardous Waste Division (SHWD). This letter describes sampling activities, laboratory results, and data validation conclusions regarding groundwater samples collected from monitoring well R-9D in August 2010.

Field Activities

The 2010 third quarter routine groundwater monitoring event at the Sand Draw Landfill was completed by Trihydro on August 16 and 17, 2010. Routine groundwater monitoring activities were completed in accordance with the January 8, 2010, environmental monitoring plan prepared by Inberg-Miller Engineers, and included sampling and analysis of groundwater from nine wells, including well R-9D. Previous monitoring activities associated with well R-9D indicated the presence of a number of volatile organic compounds (VOCs) that may indicate a release of contaminants from the landfill. TestAmerica Laboratories, Inc (TLI) located in Arvada, Colorado analyzed the groundwater samples collected in conjunction with the 2010 third quarter routine groundwater monitoring event. The associated laboratory data were provided and summarized in the October 15, 2010, environmental monitoring report prepared by Trihydro.

In addition to the routine groundwater monitoring activities described above, ten additional quality assurance/quality control (QA/QC) samples were collected by Trihydro from well R-9D in August 2010, but labeled with references to a fictitious well "MW-25." Two sets of each of the following samples were collected:

- A parent sample from R-9D (labeled as MW-25).
- A duplicate sample from R-9D (labeled as BD-8-17-10).
- A matrix spike (MS) from R-9D (labeled as MW-25 MS).
- A matrix spike duplicate (MSD) from R-9D (labeled as MW-25 MSD).
- An equipment blank sample (labeled as Equipment Blank).

The additional QA/QC samples were collected in duplicate with the routine groundwater samples using standard operating procedures. The equipment blank was prepared by placing a short (approximately 3-ft long) piece of new nylon cordage into a new disposable PVC bailer. The retail distilled/de-ionized water used to rinse reusable equipment during standard field decontamination procedures was poured directly from the retail container into the top of the bailer until the bailer was full. The distilled/de-ionized water was then emptied from the bottom of the bailer into sample bottles provided by the laboratory.

The additional QA/QC samples were sent under separate chain-of-custodies (CoCs) to both TLI, and to Energy Laboratories (ELI) located in Casper, Wyoming. ELI was selected to analyze one set of the additional QA/QC samples because it had analyzed historical groundwater samples from the Sand Draw Landfill.

Laboratory Activities

The samples were received by the laboratories in good condition with temperatures of 2.2°C at TLI, and 10°C at ELI. The high temperature of 10°C for the samples received by ELI was required qualification due to insufficient preservation and was addressed in the data validation report (Attachment D).

Each laboratory was asked to analyze the samples for Appendix A VOCs (*ref.* WSWRR Chapter 2, Appendix A). The laboratories were also asked to prepare matrix spike and matrix spike duplicate results from the samples to assess repeatability. The samples were analyzed as requested, and matrix spikes were prepared on a standard subset of parameters and spiked with a known concentration of those analytes.

As per WDEQ/SHWD guidance dated May 6, 2008, constituents were reported to the method detection limit (MDL). Results between the reporting limit (RL; also known as the practical quantitation limit, or PQL) and MDL were flagged by the laboratories, and were considered estimated values. The MDL is a statistical number defined as the minimum concentration of an analyte that can be measured and reported with a 99% confidence that the value is above zero. The MDL is usually based on the variability of a set of replicate analyses. Since the samples were reported to the MDL, the RLs and the MDLs were provided by the laboratories.

Laboratory analyses of blind samples were reported by TLI under Job Number 280-6467-1, and by ELI under Laboratory ID C10080682. The laboratory reports are provided as Attachments A and C, respectively. Laboratory results are summarized in Tables 1 and 2.

Data Validation Review

Trihydro completed reviews of the laboratory reports and performed Tier II data validations. The data validation review process was conducted to check for data precision, accuracy, method compliance, and completeness. Trihydro evaluated the data in general accordance with validation criteria set forth in the USEPA Contract Laboratory Program (CLP) *National Functional Guidelines for Superfund Organic Methods Data Review* (USEPA-540-R-08-01, June 2008), with additional reference to USEPA CLP *National Functional Guidelines for Organic Data Review* (USEPA 540/R-99-008, October 1999). Review of duplicates was conducted in accordance with USEPA *Region I Laboratory Data Validation Function Guidelines for Evaluation of Organic Analysis* (December 1996). The data validation reviews for TLI and ELI are provided as Attachments B and D, respectively.

The results of the data validations indicated the laboratory results were complete, accurate, precise, and in compliance with the associated methodology, with the following notations:

- TLI (Job Number 280-6467-1) - J flags added by the laboratory (estimated concentrations) were preserved in the data and included in the Data Qualification Summary table at the end of the data validation report.
- TLI (Job Number 280-6467-1) - Methylene chloride was detected in the method blank at a concentration of 0.431 µg/L. Because methylene chloride was also detected at a concentration of 0.36 µg/L in sample MW-25 (R-9D), it was qualified with a U flag (evaluated to be undetected at the reporting limit) in the Data Qualification Summary table at the end of the data validation report.
- ELI (Lab ID C10080682) - J flags added by the laboratory (estimated concentrations) were preserved in the data and included in the Data Qualification Summary table at the end of each data validation report.
- ELI (Lab ID C10080682) – Because samples were received by the laboratory at 10°C, analytes that were not detected were qualified with a UJ flag (estimated reporting limit) in the Data Qualification Summary table at the end of the data validation report.

Sample Comparability

As previously discussed, the goal of this evaluation was to evaluate precision and repeatability of the laboratory data. Measurements of data precision are necessary to demonstrate the reproducibility of the

analytical data. Evaluation of precision is accomplished using the relative percent difference (RPD). The RPD is defined as the absolute difference between the primary and duplicate samples divided by the mean and expressed as a percentage. Data validation field duplicate RPD limits for water are set at 0-30%.

Results for sample R-9D from TLI (Job Number 280-6445-1), samples MW-25 and BD-8-17-10 from TLI (Job Number 280-6467-1), and samples MW-25 and BD-8-17-10 from ELI (Lab ID C10080682) were compared to each other to determine precision within and between laboratories. Acetone and trichlorofluoromethane were detected by both laboratories. Both acetone and trichlorofluoromethane were detected between the MDL and the RL in the results from TLI, and trichlorofluoromethane was detected between the MDL and RL in the results from ELI. No other detections were reported for the samples.

Acetone was detected at a concentration of 55 ug/L in sample MW-25, and a concentration of 42 ug/L in sample BD-8-17-10 by ELI. Acetone was detected at a concentration of 6.5 ug/L in sample BD-8-17-10 by TLI. Acetone was also detected in the equipment blank sent to ELI at a concentration of 4 ug/L. No detections of acetone were reported in any of the method blanks. Acetone is identified as a common laboratory contaminant and is considered a poor performer by the CLP guidelines. Both laboratories were asked to do a quality check for the actual presence of acetone in the samples and both laboratories came back with no changes.

With the exception of acetone, the repeatability within and between laboratories was acceptable. Cases where a result was detected in one sample and undetected in another sample were noted with a DL. These data are considered acceptable if the detected result is either less than, or within two times the reporting limit. In most cases RPD values could not be calculated since the parent and duplicate samples were reported as undetected results.

The MS and MSD results were also compared. Since each laboratory used different amounts to spike each sample, samples could not be compared between laboratories. Within each laboratory, RPD values were calculated at less than the laboratory set RPD value of 20% and were determined to be acceptable.

Several detections were reported in the equipment blanks sent to each laboratory (Table 2). Equipment blank detections included 2-butanone, acetone, bromodichloromethane, bromoform, chloroform, dibromochloromethane, and toluene. With the exception of chloroform, the detections in the equipment blank were between the MDL and the RL. Chloroform is identified as a common laboratory contaminant in the CLP guidance documents. Cases where a result was detected in one sample and undetected in another sample were noted as "DL" in Table 1. These data are considered acceptable if the detected result is either less than or is within two times the reporting limit. In most cases RPD values could not be calculated since the parent and duplicate samples were reported as undetected results. With the exception

of acetone and toluene, the repeatability within and between laboratories was below 30%. Acetone and toluene results were determined to be acceptable since the detected concentrations were less than the reporting limit, and an accurate RPD could not be calculated.

Conclusions

Based on the data validation review and the subsequent comparison of data both within and between the laboratories, the precision/repeatability of the data was found to be acceptable. Further studies and comparisons between the two laboratories do not appear to be necessary at this time.

The noted detections of VOCs in the equipment blanks raise questions regarding the potential source(s) of the contamination. Based on the procedures used to prepare the equipment blanks, the cordage and the retail distilled/de-ionized water could be potential sources of trace contamination. Regardless, the lack of detections of these VOCs in the groundwater samples suggests that the cross-contamination of the groundwater samples is not an issue. Further investigation of the VOC detections in the equipment blanks will be evaluated during future sampling events by varying the procedures used to prepare the equipment blanks.

Trihydro appreciates the opportunity to assist the FCSWDD with this project. Please let us know if you have any questions regarding the noted field, laboratory, or data validation review.

Sincerely,
Trihydro Corporation

Ken Schreuder, P.E., P.G.
Senior Engineer/Geologist

Christina Hiegel, P.E.
Civil/Environmental Engineer

09Y-001-003

Attachments

TABLES

TABLE 1. COMPARISON OF LABORATORIES AND MATRIX SPIKES
SAND DRAW LANDFILL, FREMONT COUNTY, WY

	TestAmerica, Inc (TLI)										Energy Laboratories, Inc (ELI)						RPD Calculations	
	280-6467-1 10/17/10						280-6445-1 10/17/10				C10080682 10/17/10						TLI DUP to ELI MW-25	TLI DUP to ELI DUP
Analyte	MW-25[2]	BD-8-17-10	RPD	MS[3]	MSD[3]	RPD	R-9D	MS[3]	MSD[3]	RPD	MW-25[2]	BD-8-17-10	RPD	MS[4]	MSD[4]	RPD		
1,1,1,2-Tetrachloroethane	ND(1.0)	ND(1.0)	NC	--	--	--	ND(1.0)	--	--	--	ND(1.0)	ND(1.0)	NC	--	--	--	--	--
1,1,1-Trichloroethane	ND(1.0)	ND(1.0)	NC	4.69	5.1	8.4%	ND(1.0)	4.78	4.7	1.7%	ND(1.0)	ND(1.0)	NC	11	13	16.7%	--	--
1,1,2,2-Tetrachloroethane	ND(0.42)	ND(0.42)	NC	--	--	--	ND(0.42)	--	--	--	ND(1.0)	ND(1.0)	NC	--	--	--	--	--
1,1,2-Trichloroethane	ND(1.0)	ND(1.0)	NC	--	--	--	ND(1.0)	--	--	--	ND(1.0)	ND(1.0)	NC	--	--	--	--	--
1,1-Dichloroethane	ND(1.0)	ND(1.0)	NC	4.9	5.05	3.0%	ND(1.0)	4.51	4.45	1.3%	ND(1.0)	ND(1.0)	NC	--	--		--	--
1,1-Dichloroethene	ND(1.0)	ND(1.0)	NC	5.13	5.95	14.8%	ND(1.0)	4.24	4.11	3.1%	ND(1.0)	ND(1.0)	NC	10	12	18.2%	--	--
1,2,3-Trichloropropane	NA	NA	NA	--	--	--	ND(0.02)	--	--	--	ND(1.0)	ND(1.0)	NC	--	--	--	--	--
1,2-Dibromo-3-Chloropropane	NA	NA	NA	--	--	--	ND(0.02)	--	--	--	ND(5.0)	ND(5.0)	NC	--	--	--	--	--
1,2-Dibromoethane	NA	NA	NA	--	--	--	ND(0.02)	--	--	--	ND(1.0)	ND(1.0)	NC	--	--	--	--	--
1,2-Dichlorobenzene	ND(1.0)	ND(1.0)	NC	--	--	--	ND(1.0)	--	--	--	ND(1.0)	ND(1.0)	NC	11	12	8.7%	--	--
1,2-Dichloroethane	ND(1.0)	ND(1.0)	NC	--	--	--	ND(1.0)	--	--	--	ND(1.0)	ND(1.0)	NC	11	12	8.7%	--	--
1,2-Dichloropropane	ND(1.0)	ND(1.0)	NC	4.7	4.74	0.8%	ND(1.0)	4.31	4.24	1.6%	ND(1.0)	ND(1.0)	NC	11	12	8.7%	--	--
1,4-Dichlorobenzene	ND(1.0)	ND(1.0)	NC	5.15	5.1	1.0%	ND(1.0)	4.51	4.45	1.3%	ND(1.0)	ND(1.0)	NC	10	12	18.2%	--	--
2-Butanone (MEK)	ND(6.0)	ND(6.0)	NC	--	--	--	ND(6.0)	--	--	--	ND(20)	ND(20)	NC	--	--	--	--	--
2-Hexanone	ND(5.0)	ND(5.0)	NC	--	--	--	ND(5.0)	--	--	--	ND(20)	ND(20)	NC	--	--	--	--	--
4-Methyl-2-Pentanone	ND(5.0)	ND(5.0)	NC	--	--	--	ND(5.0)	--	--	--	ND(20)	ND(20)	NC	--	--	--	--	--
Acetone	ND(10)	6.5	DL	--	--	--	ND(10)	--	--	--	55	42	26.8%	--	--	--	***157.7%***	***146.4%***
Acrylonitrile	ND(20)	ND(20)	NC	--	--	--	ND(20)	--	--	--	ND(20)	ND(20)	NC	--	--	--	--	--
Benzene	ND(1.0)	ND(1.0)	NC	4.87	5.18	6.2%	ND(1.0)	4.28	4.24	0.9%	ND(1.0)	ND(1.0)	NC	12	13	8.0%	--	--
Bromochloromethane	ND(1.0)	ND(1.0)	NC	--	--	--	ND(1.0)	--	--	--	ND(1.0)	ND(1.0)	NC	--	--	--	--	--
Bromodichloromethane	ND(1.0)	ND(1.0)	NC	4.92	4.7	4.6%	ND(1.0)	4.72	4.52	4.3%	ND(1.0)	ND(1.0)	NC	11	12	8.7%	--	--
Bromoform	ND(1.0)	ND(1.0)	NC	--	--	--	ND(1.0)	--	--	--	ND(1.0)	ND(1.0)	NC	11	12	8.7%	--	--
Bromomethane	ND(2.0)	ND(2.0)	NC	--	--	--	ND(2.0)	--	--	--	ND(1.0)	ND(1.0)	NC	--	--	--	--	--
Carbon Disulfide	ND(2.0)	ND(2.0)	NC	--	--	--	ND(2.0)	--	--	--	ND(2.0)	ND(2.0)	NC	--	--	--	--	--
Carbon tetrachloride	ND(1.0)	ND(1.0)	NC	4.88	5.41	10.3%	ND(1.0)	5.55	5.48	1.3%	ND(1.0)	ND(1.0)	NC	11	12	8.7%	--	--
Chlorobenzene	ND(1.0)	ND(1.0)	NC	5.01	5.11	2.0%	ND(1.0)	4.51	4.38	2.9%	ND(1.0)	ND(1.0)	NC	10	11	9.5%	--	--
Chloroethane	ND(2.0)	ND(2.0)	NC	--	--	--	ND(2.0)	--	--	--	ND(1.0)	ND(1.0)	NC	--	--	--	--	--
Chloroform	ND(1.0)	ND(1.0)	NC	5.04	5.08	0.8%	ND(1.0)	4.57	4.46	2.4%	ND(1.0)	ND(1.0)	NC	11	12	8.7%	--	--
Chloromethane	ND(2.0)	ND(2.0)	NC	--	--	--	ND(2.0)	--	--	--	ND(1.0)	ND(1.0)	NC	--	--	--	--	--
cis-1,2-Dichloroethene	ND(1.0)	ND(1.0)	NC	--	--	--	ND(1.0)	--	--	--	ND(1.0)	ND(1.0)	NC	11	12	8.7%	--	--
cis-1,3-Dichloropropene	ND(0.85)	ND(0.85)	NC	--	--	--	ND(0.85)	--	--	--	ND(1.0)	ND(1.0)	NC	--	--	--	--	--
Dibromochloromethane	ND(1.0)	ND(1.0)	NC	--	--	--	ND(1.0)	--	--	--	ND(1.0)	ND(1.0)	NC	11	12	8.7%	--	--

TABLE 1. COMPARISON OF LABORATORIES AND MATRIX SPIKES
SAND DRAW LANDFILL, FREMONT COUNTY, WY

	TestAmerica, Inc (TLI)										Energy Laboratories, Inc (ELI)						RPD Calculations	
	280-6467-1 10/17/10						280-6445-1 10/17/10				C10080682 10/17/10						TLI DUP to ELI MW-25	TLI DUP to ELI DUP
Analyte	MW-25[2]	BD-8-17-10	RPD	MS[3]	MSD[3]	RPD	R-9D	MS[3]	MSD[3]	RPD	MW-25[2]	BD-8-17-10	RPD	MS[4]	MSD[4]	RPD		
Dibromomethane	ND(1.0)	ND(1.0)	NC	--	--	--	ND(1.0)	--	--	--	ND(1.0)	ND(1.0)	NC	--	--	--	--	--
Ethylbenzene	ND(1.0)	ND(1.0)	NC	4.97	5.33	7.0%	ND(1.0)	4.33	4.24	2.1%	ND(1.0)	ND(1.0)	NC	11	12	8.7%	--	--
m,p-Xylene	NR	NR	NR	--	--	--	NR	--	--	--	ND(1.0)	ND(1.0)	NC	21	23	9.1%	--	--
Methyl Iodide	ND(1.0)	ND(1.0)	NC	--	--	--	ND(1.0)	--	--	--	ND(1.0)	ND(1.0)	NC	--	--	--	--	--
Methylene Chloride	ND(2.0)	ND(2.0)	NC	5.36	5.22	2.6%	ND(2.0)	4.33	4.24	2.1%	ND(1.0)	ND(1.0)	NC	--	--	--	--	--
o-Xylene	NR	NR	NR	--	--	--	NR	--	--	--	ND(1.0)	ND(1.0)	NC	11	12	8.7%	--	--
Styrene	ND(1.0)	ND(1.0)	NC	--	--	--	ND(1.0)	--	--	--	ND(1.0)	ND(1.0)	NC	11	12	8.7%	--	--
Tetrachloroethene	ND(1.0)	ND(1.0)	NC	4.77	5.43	12.9%	ND(1.0)	4.31	4.29	0.5%	ND(1.0)	ND(1.0)	NC	10	12	18.2%	--	--
Toluene	ND(1.0)	ND(1.0)	NC	4.82	5.12	6.0%	ND(1.0)	4.38	4.25	3.0%	ND(1.0)	ND(1.0)	NC	10	11	9.5%	--	--
trans-1,2-Dichloroethene	ND(1.0)	ND(1.0)	NC	4.92	5.29	7.2%	ND(1.0)	4.53	4.63	2.2%	ND(1.0)	ND(1.0)	NC	11	13	16.7%	--	--
trans-1,3-Dichloropropene	ND(0.85)	ND(0.85)	NC	--	--	--	ND(0.85)	--	--	--	ND(1.0)	ND(1.0)	NC	--	--	--	--	--
Trans-1,4-Dichloro-2-Butene	ND(3.0)	ND(3.0)	NC	--	--	--	ND(3.0)	--	--	--	ND(1.0)	ND(1.0)	NC	--	--	--	--	--
Trichloroethene	ND(1.0)	ND(1.0)	NC	4.62	5.05	8.9%	ND(1.0)	4.36	4.29	1.6%	ND(1.0)	ND(1.0)	NC	10	12	18.2%	--	--
Trichlorofluoromethane	ND(2.00)	0.35	DL	--	--	--	ND(2.0)	--	--	--	0.4	0.4	0.0%	--	--	--	13.3%	13.3%
Vinyl acetate	ND(3.0)	ND(3.0)	NC	--	--	--	ND(3.0)	--	--	--	ND(1.0)	ND(1.0)	NC	--	--	--	--	--
Vinyl Chloride	ND(1.0)	ND(1.0)	NC	--	--	--	ND(1.0)	--	--	--	ND(1.0)	ND(1.0)	NC	11	13	16.7%	--	--
Xylenes, Total	ND(2.0)	ND(2.0)	NC	--	--	--	ND(2.0)	--	--	--	ND(1.0)	ND(1.0)	NC	--	--	--	--	--

Abbreviations

DL - One result was detected and the other was not detected. Results were within 2 times or were less than the reporting limits.

NA = Analyte not analyzed by laboratory using Method 8260B

MS - Matrix Spike, original sample spiked

MSD - Matrix Spike Duplicate, orginal sample spiked

NC - Not Calculated since both results were undetected

NR = Analyte is not required per Solid Waste Chapter 2, Appendix A

RPD - Relative Percent Difference

Notes

1. Originally detected below the reporting limit but evaluated to be undetect and due to blank contamination during validation review.
2. Sample MW-25 was a faux sample ID used for well R-9D.
3. MS/MSD samples were spiked with a subset list of target analytes at 5 ug/L, final recoveries are listed and compared.
4. MS/MSD samples were spiked with a subset list of target analytes at 10 ug/L, final recoveries are listed and compared.
5. Results provided in units of µg/L for Solid Waste 846 (SW846) Method 8260B
6. RPD calculated results less than 30% are acceptable for water analyses; however, if the results are less than the reporting limit, accurate RPDs cannot be calculated.

TABLE 2. COMPARISON OF EQUIPMENT BLANKS AND RELATIVE PERCENT DIFFERENCES
SAND DRAW LANDFILL, FREMONT COUNTY, WY

	TLI 280-6467-1 10/17/10	TLI 280-6445-1 10/17/10	ELI C10080682 10/18/10	RPD Calculations		
Analyte	EB-1	EB-2	EB	EB-1 to EB-2	EB-1 to EB	EB-2 to EB
1,1,1,2-Tetrachloroethane	ND(1.0)	ND(1.0)	ND(1.0)	NC	NC	NC
1,1,1-Trichloroethane	ND(1.0)	ND(1.0)	ND(1.0)	NC	NC	NC
1,1,2,2-Tetrachloroethane	ND(0.42)	ND(0.42)	ND(1.00)	NC	NC	NC
1,1,2-Trichloroethane	ND(1.0)	ND(1.0)	ND(1.0)	NC	NC	NC
1,1-Dichloroethane	ND(1.0)	ND(1.0)	ND(1.0)	NC	NC	NC
1,1-Dichloroethene	ND(1.0)	ND(1.0)	ND(1.0)	NC	NC	NC
1,2,3-Trichloropropane	NA	NA	ND(1.0)	NC	NC	NC
1,2-Dibromo-3-Chloropropane	NA	NA	ND(5.0)	NC	NC	NC
1,2-Dibromoethane	NA	NA	ND(1.0)	NC	NC	NC
1,2-Dichlorobenzene	ND(1.0)	ND(1.0)	ND(1.0)	NC	NC	NC
1,2-Dichloroethane	ND(1.0)	ND(1.0)	ND(1.0)	NC	NC	NC
1,2-Dichloropropane	ND(1.0)	ND(1.0)	ND(1.0)	NC	NC	NC
1,4-Dichlorobenzene	ND(1.0)	ND(1.0)	ND(1.0)	NC	NC	NC
2-Butanone (MEK)	3.0	ND(6.0)	2	DL	***40.0%***	DL
2-Hexanone	ND(5.0)	ND(5.0)	ND(20)	NC	NC	NC
4-Methyl-2-Pentanone	ND(5.0)	ND(5.0)	ND(20)	NC	NC	NC
Acetone	ND(10)	ND(10)	4	NC	DL	DL
Acrylonitrile	ND(20)	ND(20)	ND(20)	NC	NC	NC
Benzene	ND(1.0)	ND(1.0)	ND(1.0)	NC	NC	NC
Bromochloromethane	ND(1.0)	ND(1.0)	ND(1.0)	NC	NC	NC
Bromodichloromethane	0.78	0.91	0.7	15.4%	10.8%	26.1%
Bromoform	ND(1.0)	ND(1.0)	0.1	NC	DL	DL
Bromomethane	ND(2.0)	ND(2.0)	ND(2.0)	NC	NC	NC
Carbon Disulfide	ND(2.0)	ND(2.0)	ND(2.0)	NC	NC	NC
Carbon tetrachloride	ND(1.0)	ND(1.0)	ND(1.0)	NC	NC	NC
Chlorobenzene	ND(1.0)	ND(1.0)	ND(1.0)	NC	NC	NC
Chloroethane	ND(2.0)	ND(2.0)	ND(1.0)	NC	NC	NC
Chloroform	3.2	3.5	3.0	9.0%	6.5%	15.4%
Chloromethane	ND(2.0)	ND(2.0)	ND(1.0)	NC	NC	NC
cis-1,2-Dichloroethene	ND(1.0)	ND(1.0)	ND(1.0)	NC	NC	NC
cis-1,3-Dichloropropene	ND(0.85)	ND(0.85)	ND(1.0)	NC	NC	NC
Dibromochloromethane	0.38	0.4	0.4	5.1%	5.1%	0.0%
Dibromomethane	ND(1.0)	ND(1.0)	ND(1.0)	NC	NC	NC
Ethylbenzene	ND(1.0)	ND(1.0)	ND(1.0)	NC	NC	NC
m,p-Xylene	NR	NR	ND(1.0)	NA	NA	NA

TABLE 2. COMPARISON OF EQUIPMENT BLANKS AND RELATIVE PERCENT DIFFERENCES
SAND DRAW LANDFILL, FREMONT COUNTY, WY

	TLI 280-6467-1 10/17/10	TLI 280-6445-1 10/17/10	ELI C10080682 10/18/10	RPD Calculations		
Analyte	EB-1	EB-2	EB	EB-1 to EB-2	EB-1 to EB	EB-2 to EB
Methyl Iodide	ND(1.0)	ND(1.0)	ND(1.0)	NC	NC	NC
Methylene Chloride	ND(2.0)	0.35	ND(1.0)	NC	NC	DL
o-Xylene	NR	NR	ND(1.0)	NA	NA	NA
Styrene	0.62	ND(1.0)	ND(1.0)	NC	DL	NC
Tetrachloroethene	ND(1.0)	ND(1.0)	ND(1.0)	NC	NC	NC
Toluene	ND(1.0)	0.58	0.8	DL	DL	***31.9%***
trans-1,2-Dichloroethene	ND(1.0)	ND(1.0)	ND(1.0)	NC	NC	NC
trans-1,3-Dichloropropene	ND(0.85)	ND(0.85)	ND(1.0)	NC	NC	NC
Trans-1,4-Dichloro-2-Butene	ND(3.0)	ND(3.0)	ND(1.0)	NC	NC	NC
Trichloroethene	ND(1.0)	ND(1.0)	ND(1.0)	NC	NC	NC
Trichlorofluoromethane	ND(2.0)	ND(2.0)	ND(1.0)	NC	NC	NC
Vinyl acetate	ND(3.0)	ND(3.0)	ND(1.0)	NC	NC	NC
Vinyl Chloride	ND(1.0)	ND(1.0)	ND(1.0)	NC	NC	NC
Xylenes, Total	ND(2.0)	ND(2.0)	ND(1.0)	NC	NC	NC

Abbreviations

DL = One result was detected and the other was not detected. Results were within 2 times or were less than the reporting limits.

EB = Equipment blank

ELI = Energy Laboratories, Inc

NA = Analyte not analyzed by laboratory using Method 8260B

NC = Not calculated because both analytes were non-detect, or not analyzed

ND(1.0) = Not detected (Reporting Limit)

NR = Analyte is not required per Solid Waste Chapter 2, Appendix A

RPD = Relative percent difference

TLI = Test America, Inc.

Notes

1. Results provided in units of µg/L for Solid Waste 846 (SW846) Method 8260B

2. RPD calculated results less than 30% are acceptable for water analyses; however, if the results are less than the reporting limit, accurate RPDs cannot be calculated.

3. RPDs that exceed 30% are noted by ***bold italics***.

ATTACHMENT A

ANALYTICAL REPORT

JOB NO. 280-6467-1

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

Job Number: 280-6467-1

Job Description: Fremont County Landfill

For:
Trihydro Corporation
1252 Commerce Drive
Laramie, WY 82070

Attention: Mr. Bill Brewer

Approved for release.
Donna R Rydberg
Project Manager II
8/30/2010 3:54 PM

Donna R Rydberg
Project Manager II
donna.rydberg@testamericainc.com
08/30/2010

The test results in this report relate only to the samples in this report and meet all requirements of NELAC, with any exceptions noted. Pursuant to NELAP, this report shall not be reproduced except in full, without the written approval of the laboratory. All questions regarding this report should be directed to the TestAmerica Denver Project Manager.

The Lab Certification ID# is E87667.

Reporting limits are adjusted for sample size used, dilutions and moisture content if applicable.

Table of Contents

CASE NARRATIVE

Client: Trihydro Corporation

Project: Fremont County Landfill

Report Number: 280-6467-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

Sample Receipt

Three samples and a MS/MSD were received at the TestAmerica Denver Laboratory on August 18, 2010. The samples arrived in good condition, properly preserved and on ice. The temperature of the cooler upon receipt was 2.2°C.

Method 8260B - Volatile Organic Compounds

Samples MW-25 (280-6467-1), EQUIP BLANK (280-6467-2) and BD-8-17-10 (280-6467-3) were analyzed for volatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 08/25/2010 and 08/26/2010.

Methylene Chloride was detected in method blank MB 280-28834/6 at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged "J". If the associated samples reported a result above the MDL and/or RL, the result has been "B" flagged.

A MS/MSD was performed on sample MW-25 (280-6467-1) as requested on the chain of custody and was in control.

No other anomalies were observed.

EXECUTIVE SUMMARY - Detections

Client: Trihydro Corporation

Job Number: 280-6467-1

Lab Sample ID / Analyte	Client Sample ID	Result / Qualifier		Reporting Limit	Units	Method
280-6467-1	MW-25					
Methylene Chloride		0.36	J B	2.0	ug/L	8260B
280-6467-2	EQUIP BLANK					
Bromodichloromethane		0.78	J	1.0	ug/L	8260B
2-Butanone (MEK)		3.0	J	6.0	ug/L	8260B
Chloroform		3.2		1.0	ug/L	8260B
Dibromochloromethane		0.38	J	1.0	ug/L	8260B
Toluene		0.62	J	1.0	ug/L	8260B
280-6467-3	BD-8-17-10					
Acetone		6.5	J	10	ug/L	8260B
Trichlorofluoromethane		0.35	J	2.0	ug/L	8260B

METHOD SUMMARY

Client: Trihydro Corporation

Job Number: 280-6467-1

Description	Lab Location	Method	Preparation Method
Matrix: Water			
Volatile Organic Compounds (GC/MS)	TAL DEN	SW846 8260B	
Purge and Trap	TAL DEN		SW846 5030B

Lab References:

TAL DEN = TestAmerica Denver

Method References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

METHOD / ANALYST SUMMARY

Client: Trihydro Corporation

Job Number: 280-6467-1

Method	Analyst	Analyst ID
SW846 8260B	Ryerson, Joseph L	JLR

SAMPLE SUMMARY

Client: Trihydro Corporation

Job Number: 280-6467-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
280-6467-1	MW-25	Water	08/17/2010 1700	08/18/2010 0930
280-6467-1MS	MW-25	Water	08/17/2010 1700	08/18/2010 0930
280-6467-1MSD	MW-25	Water	08/17/2010 1700	08/18/2010 0930
280-6467-2	EQUIP BLANK	Water	08/17/2010 1700	08/18/2010 0930
280-6467-3	BD-8-17-10	Water	08/17/2010 1700	08/18/2010 0930

SAMPLE RESULTS

Client: Trihydro Corporation

Job Number: 280-6467-1

Client Sample ID: **MW-25**

Lab Sample ID: 280-6467-1
Client Matrix: Water

Date Sampled: 08/17/2010 1700
Date Received: 08/18/2010 0930

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 280-28834	Instrument ID: MSV_MS1
Preparation:	5030B		Lab File ID: ms2881.D
Dilution:	1.0		Initial Weight/Volume: 20 mL
Date Analyzed:	08/25/2010 2248		Final Weight/Volume: 20 mL
Date Prepared:	08/25/2010 2248		

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	ND		1.9	10
Acrylonitrile	ND		1.4	20
Benzene	ND		0.16	1.0
Bromochloromethane	ND		0.10	1.0
Bromodichloromethane	ND		0.17	1.0
Bromoform	ND		0.19	1.0
Bromomethane	ND		0.21	2.0
2-Butanone (MEK)	ND		2.0	6.0
Carbon disulfide	ND		0.45	2.0
Carbon tetrachloride	ND		0.19	1.0
Chlorobenzene	ND		0.17	1.0
Chloroethane	ND		0.41	2.0
Chloroform	ND		0.16	1.0
Chloromethane	ND		0.30	2.0
cis-1,2-Dichloroethene	ND		0.15	1.0
cis-1,3-Dichloropropene	ND		0.16	0.85
Dibromochloromethane	ND		0.17	1.0
Dibromomethane	ND		0.17	1.0
1,2-Dichlorobenzene	ND		0.15	1.0
1,4-Dichlorobenzene	ND		0.16	1.0
1,1-Dichloroethane	ND		0.22	1.0
1,2-Dichloroethane	ND		0.13	1.0
1,1-Dichloroethene	ND		0.23	1.0
1,2-Dichloropropane	ND		0.18	1.0
Ethylbenzene	ND		0.16	1.0
2-Hexanone	ND		1.7	5.0
Iodomethane	ND		0.23	1.0
Methylene Chloride	0.36	J B	0.32	2.0
4-Methyl-2-pentanone (MIBK)	ND		0.98	5.0
Styrene	ND		0.17	1.0
1,1,1,2-Tetrachloroethane	ND		0.21	1.0
1,1,2,2-Tetrachloroethane	ND		0.21	0.42
Tetrachloroethene	ND		0.20	1.0
Toluene	ND		0.17	1.0
trans-1,4-Dichloro-2-butene	ND		0.80	3.0
trans-1,2-Dichloroethene	ND		0.15	1.0
trans-1,3-Dichloropropene	ND		0.19	0.85
1,1,1-Trichloroethane	ND		0.16	1.0
1,1,2-Trichloroethane	ND		0.27	1.0
Trichloroethene	ND		0.16	1.0
Trichlorofluoromethane	ND		0.29	2.0
Vinyl acetate	ND		0.94	3.0
Vinyl chloride	ND		0.40	1.0
Xylenes, Total	ND		0.19	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits

Client: Trihydro Corporation

Job Number: 280-6467-1

Client Sample ID: MW-25

Lab Sample ID: 280-6467-1
Client Matrix: Water

Date Sampled: 08/17/2010 1700
Date Received: 08/18/2010 0930

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 280-28834	Instrument ID: MSV_MS1
Preparation:	5030B		Lab File ID: ms2881.D
Dilution:	1.0		Initial Weight/Volume: 20 mL
Date Analyzed:	08/25/2010 2248		Final Weight/Volume: 20 mL
Date Prepared:	08/25/2010 2248		

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	105		78 - 120
Dibromofluoromethane (Surr)	104		77 - 120
1,2-Dichloroethane-d4 (Surr)	104		70 - 127
Toluene-d8 (Surr)	112		80 - 125

Client: Trihydro Corporation

Job Number: 280-6467-1

Client Sample ID: EQUIP BLANK

Lab Sample ID: 280-6467-2
Client Matrix: Water

Date Sampled: 08/17/2010 1700
Date Received: 08/18/2010 0930

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 280-28834	Instrument ID: MSV_MS1
Preparation:	5030B		Lab File ID: ms2886.D
Dilution:	1.0		Initial Weight/Volume: 20 mL
Date Analyzed:	08/26/2010 0031		Final Weight/Volume: 20 mL
Date Prepared:	08/26/2010 0031		

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	ND		1.9	10
Acrylonitrile	ND		1.4	20
Benzene	ND		0.16	1.0
Bromochloromethane	ND		0.10	1.0
Bromodichloromethane	0.78	J	0.17	1.0
Bromoform	ND		0.19	1.0
Bromomethane	ND		0.21	2.0
2-Butanone (MEK)	3.0	J	2.0	6.0
Carbon disulfide	ND		0.45	2.0
Carbon tetrachloride	ND		0.19	1.0
Chlorobenzene	ND		0.17	1.0
Chloroethane	ND		0.41	2.0
Chloroform	3.2		0.16	1.0
Chloromethane	ND		0.30	2.0
cis-1,2-Dichloroethene	ND		0.15	1.0
cis-1,3-Dichloropropene	ND		0.16	0.85
Dibromochloromethane	0.38	J	0.17	1.0
Dibromomethane	ND		0.17	1.0
1,2-Dichlorobenzene	ND		0.15	1.0
1,4-Dichlorobenzene	ND		0.16	1.0
1,1-Dichloroethane	ND		0.22	1.0
1,2-Dichloroethane	ND		0.13	1.0
1,1-Dichloroethene	ND		0.23	1.0
1,2-Dichloropropane	ND		0.18	1.0
Ethylbenzene	ND		0.16	1.0
2-Hexanone	ND		1.7	5.0
Iodomethane	ND		0.23	1.0
Methylene Chloride	ND		0.32	2.0
4-Methyl-2-pentanone (MIBK)	ND		0.98	5.0
Styrene	ND		0.17	1.0
1,1,1,2-Tetrachloroethane	ND		0.21	1.0
1,1,2,2-Tetrachloroethane	ND		0.21	0.42
Tetrachloroethene	ND		0.20	1.0
Toluene	0.62	J	0.17	1.0
trans-1,4-Dichloro-2-butene	ND		0.80	3.0
trans-1,2-Dichloroethene	ND		0.15	1.0
trans-1,3-Dichloropropene	ND		0.19	0.85
1,1,1-Trichloroethane	ND		0.16	1.0
1,1,2-Trichloroethane	ND		0.27	1.0
Trichloroethene	ND		0.16	1.0
Trichlorofluoromethane	ND		0.29	2.0
Vinyl acetate	ND		0.94	3.0
Vinyl chloride	ND		0.40	1.0
Xylenes, Total	ND		0.19	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits

Client: Trihydro Corporation

Job Number: 280-6467-1

Client Sample ID: EQUIP BLANK

Lab Sample ID: 280-6467-2
Client Matrix: Water

Date Sampled: 08/17/2010 1700
Date Received: 08/18/2010 0930

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 280-28834		Instrument ID:	MSV_MS1
Preparation:	5030B			Lab File ID:	ms2886.D
Dilution:	1.0			Initial Weight/Volume:	20 mL
Date Analyzed:	08/26/2010 0031			Final Weight/Volume:	20 mL
Date Prepared:	08/26/2010 0031				

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	109		78 - 120
Dibromofluoromethane (Surr)	95		77 - 120
1,2-Dichloroethane-d4 (Surr)	97		70 - 127
Toluene-d8 (Surr)	113		80 - 125

Client: Trihydro Corporation

Job Number: 280-6467-1

Client Sample ID: BD-8-17-10

Lab Sample ID: 280-6467-3
Client Matrix: Water

Date Sampled: 08/17/2010 1700
Date Received: 08/18/2010 0930

8260B Volatile Organic Compounds (GC/MS)

Method: 8260B
Preparation: 5030B
Dilution: 1.0
Date Analyzed: 08/26/2010 0051
Date Prepared: 08/26/2010 0051

Analysis Batch: 280-28834

Instrument ID: MSV_MS1
Lab File ID: ms2887.D
Initial Weight/Volume: 20 mL
Final Weight/Volume: 20 mL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	6.5	J	1.9	10
Acrylonitrile	ND		1.4	20
Benzene	ND		0.16	1.0
Bromochloromethane	ND		0.10	1.0
Bromodichloromethane	ND		0.17	1.0
Bromoform	ND		0.19	1.0
Bromomethane	ND		0.21	2.0
2-Butanone (MEK)	ND		2.0	6.0
Carbon disulfide	ND		0.45	2.0
Carbon tetrachloride	ND		0.19	1.0
Chlorobenzene	ND		0.17	1.0
Chloroethane	ND		0.41	2.0
Chloroform	ND		0.16	1.0
Chloromethane	ND		0.30	2.0
cis-1,2-Dichloroethene	ND		0.15	1.0
cis-1,3-Dichloropropene	ND		0.16	0.85
Dibromochloromethane	ND		0.17	1.0
Dibromomethane	ND		0.17	1.0
1,2-Dichlorobenzene	ND		0.15	1.0
1,4-Dichlorobenzene	ND		0.16	1.0
1,1-Dichloroethane	ND		0.22	1.0
1,2-Dichloroethane	ND		0.13	1.0
1,1-Dichloroethene	ND		0.23	1.0
1,2-Dichloropropane	ND		0.18	1.0
Ethylbenzene	ND		0.16	1.0
2-Hexanone	ND		1.7	5.0
Iodomethane	ND		0.23	1.0
Methylene Chloride	ND		0.32	2.0
4-Methyl-2-pentanone (MIBK)	ND		0.98	5.0
Styrene	ND		0.17	1.0
1,1,1,2-Tetrachloroethane	ND		0.21	1.0
1,1,2,2-Tetrachloroethane	ND		0.21	0.42
Tetrachloroethene	ND		0.20	1.0
Toluene	ND		0.17	1.0
trans-1,4-Dichloro-2-butene	ND		0.80	3.0
trans-1,2-Dichloroethene	ND		0.15	1.0
trans-1,3-Dichloropropene	ND		0.19	0.85
1,1,1-Trichloroethane	ND		0.16	1.0
1,1,2-Trichloroethane	ND		0.27	1.0
Trichloroethene	ND		0.16	1.0
Trichlorofluoromethane	0.35	J	0.29	2.0
Vinyl acetate	ND		0.94	3.0
Vinyl chloride	ND		0.40	1.0
Xylenes, Total	ND		0.19	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits

Client: Trihydro Corporation

Job Number: 280-6467-1

Client Sample ID: BD-8-17-10

Lab Sample ID: 280-6467-3
Client Matrix: Water

Date Sampled: 08/17/2010 1700
Date Received: 08/18/2010 0930

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 280-28834		Instrument ID:	MSV_MS1
Preparation:	5030B			Lab File ID:	ms2887.D
Dilution:	1.0			Initial Weight/Volume:	20 mL
Date Analyzed:	08/26/2010 0051			Final Weight/Volume:	20 mL
Date Prepared:	08/26/2010 0051				

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene (Surr)	105		78 - 120
Dibromofluoromethane (Surr)	100		77 - 120
1,2-Dichloroethane-d4 (Surr)	101		70 - 127
Toluene-d8 (Surr)	115		80 - 125

DATA REPORTING QUALIFIERS

Client: Trihydro Corporation

Job Number: 280-6467-1

Lab Section	Qualifier	Description
GC/MS VOA		
	B	Compound was found in the blank and sample.
	F	MS or MSD exceeds the control limits
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
	F	RPD of the MS and MSD exceeds the control limits

QUALITY CONTROL RESULTS

Client: Trihydro Corporation

Job Number: 280-6467-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS VOA					
Analysis Batch:280-28834					
LCS 280-28834/4	Lab Control Sample	T	Water	8260B	
LCSD 280-28834/5	Lab Control Sample Duplicate	T	Water	8260B	
MB 280-28834/6	Method Blank	T	Water	8260B	
280-6467-1	MW-25	T	Water	8260B	
280-6467-1MS	Matrix Spike	T	Water	8260B	
280-6467-1MSD	Matrix Spike Duplicate	T	Water	8260B	
280-6467-2	EQUIP BLANK	T	Water	8260B	
280-6467-3	BD-8-17-10	T	Water	8260B	

Report Basis
T = Total

Client: Trihydro Corporation

Job Number: 280-6467-1

Surrogate Recovery Report

8260B Volatile Organic Compounds (GC/MS)

Client Matrix: Water

Lab Sample ID	Client Sample ID	BFB %Rec	DBFM %Rec	DCA %Rec	TOL %Rec
280-6467-1	MW-25	105	104	104	112
280-6467-2	EQUIP BLANK	109	95	97	113
280-6467-3	BD-8-17-10	105	100	101	115
MB 280-28834/6		105	102	104	110
LCS 280-28834/4		97	101	102	106
LCSD 280-28834/5		101	102	100	106
280-6467-1 MS	MW-25 MS	100	98	99	108
280-6467-1 MSD	MW-25 MSD	101	96	93	110

Surrogate	Acceptance Limits
BFB = 4-Bromofluorobenzene (Surr)	78-120
DBFM = Dibromofluoromethane (Surr)	77-120
DCA = 1,2-Dichloroethane-d4 (Surr)	70-127
TOL = Toluene-d8 (Surr)	80-125

Client: Trihydro Corporation

Job Number: 280-6467-1

Method Blank - Batch: 280-28834

Method: 8260B
Preparation: 5030B

Lab Sample ID: MB 280-28834/6
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 08/25/2010 2225
Date Prepared: 08/25/2010 2225

Analysis Batch: 280-28834
Prep Batch: N/A
Units: ug/L

Instrument ID: MSV_MS1
Lab File ID: ms2880.D
Initial Weight/Volume: 20 mL
Final Weight/Volume: 20 mL

Analyte	Result	Qual	MDL	RL
Acetone	ND		1.9	10
Acrylonitrile	ND		1.4	20
Benzene	ND		0.16	1.0
Bromochloromethane	ND		0.10	1.0
Bromodichloromethane	ND		0.17	1.0
Bromoform	ND		0.19	1.0
Bromomethane	ND		0.21	2.0
2-Butanone (MEK)	ND		2.0	6.0
Carbon disulfide	ND		0.45	2.0
Carbon tetrachloride	ND		0.19	1.0
Chlorobenzene	ND		0.17	1.0
Chloroethane	ND		0.41	2.0
Chloroform	ND		0.16	1.0
Chloromethane	ND		0.30	2.0
cis-1,2-Dichloroethene	ND		0.15	1.0
cis-1,3-Dichloropropene	ND		0.16	0.85
Dibromochloromethane	ND		0.17	1.0
Dibromomethane	ND		0.17	1.0
1,2-Dichlorobenzene	ND		0.15	1.0
1,4-Dichlorobenzene	ND		0.16	1.0
1,1-Dichloroethane	ND		0.22	1.0
1,2-Dichloroethane	ND		0.13	1.0
1,1-Dichloroethene	ND		0.23	1.0
1,2-Dichloropropane	ND		0.18	1.0
Ethylbenzene	ND		0.16	1.0
2-Hexanone	ND		1.7	5.0
Iodomethane	ND		0.23	1.0
Methylene Chloride	0.431	J	0.32	2.0
4-Methyl-2-pentanone (MIBK)	ND		0.98	5.0
Styrene	ND		0.17	1.0
1,1,1,2-Tetrachloroethane	ND		0.21	1.0
1,1,2,2-Tetrachloroethane	ND		0.21	0.42
Tetrachloroethene	ND		0.20	1.0
Toluene	ND		0.17	1.0
trans-1,4-Dichloro-2-butene	ND		0.80	3.0
trans-1,2-Dichloroethene	ND		0.15	1.0
trans-1,3-Dichloropropene	ND		0.19	0.85
1,1,1-Trichloroethane	ND		0.16	1.0
1,1,2-Trichloroethane	ND		0.27	1.0
Trichloroethene	ND		0.16	1.0
Trichlorofluoromethane	ND		0.29	2.0
Vinyl acetate	ND		0.94	3.0
Vinyl chloride	ND		0.40	1.0

Client: Trihydro Corporation

Job Number: 280-6467-1

Method Blank - Batch: 280-28834

Method: 8260B
Preparation: 5030B

Lab Sample ID:	MB 280-28834/6	Analysis Batch:	280-28834	Instrument ID:	MSV_MS1
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	ms2880.D
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	20 mL
Date Analyzed:	08/25/2010 2225			Final Weight/Volume:	20 mL
Date Prepared:	08/25/2010 2225				

Analyte	Result	Qual	MDL	RL
Xylenes, Total	ND		0.19	2.0

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene (Surr)	105	78 - 120
Dibromofluoromethane (Surr)	102	77 - 120
1,2-Dichloroethane-d4 (Surr)	104	70 - 127
Toluene-d8 (Surr)	110	80 - 125

Client: Trihydro Corporation

Job Number: 280-6467-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 280-28834

Method: 8260B
Preparation: 5030B

LCS Lab Sample ID:	LCS 280-28834/4	Analysis Batch:	280-28834	Instrument ID:	MSV_MS1
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	ms2876.D
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	20 mL
Date Analyzed:	08/25/2010 2104			Final Weight/Volume:	20 mL
Date Prepared:	08/25/2010 2104				

LCSD Lab Sample ID:	LCSD 280-28834/5	Analysis Batch:	280-28834	Instrument ID:	MSV_MS1
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	ms2878.D
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	20 mL
Date Analyzed:	08/25/2010 2144			Final Weight/Volume:	20 mL
Date Prepared:	08/25/2010 2144				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Benzene	101	100	77 - 120	1	20		
Bromodichloromethane	100	97	78 - 120	3	20		
Carbon tetrachloride	100	102	80 - 120	2	21		
Chlorobenzene	95	94	78 - 120	2	20		
Chloroform	99	98	78 - 120	1	20		
1,4-Dichlorobenzene	91	90	77 - 120	1	23		
1,1-Dichloroethane	98	99	77 - 120	1	21		
1,1-Dichloroethene	105	108	68 - 133	3	20		
1,2-Dichloropropane	100	95	76 - 120	5	20		
Ethylbenzene	98	97	78 - 120	1	26		
Methylene Chloride	104	101	71 - 120	3	20		
Tetrachloroethene	97	99	77 - 120	2	20		
Toluene	103	102	73 - 120	1	20		
trans-1,2-Dichloroethene	100	99	80 - 120	1	24		
1,1,1-Trichloroethane	99	98	78 - 120	0	20		
Trichloroethene	99	98	78 - 122	1	20		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
4-Bromofluorobenzene (Surr)	97	101	78 - 120
Dibromofluoromethane (Surr)	101	102	77 - 120
1,2-Dichloroethane-d4 (Surr)	102	100	70 - 127
Toluene-d8 (Surr)	106	106	80 - 125

Client: Trihydro Corporation

Job Number: 280-6467-1

Laboratory Control/
Laboratory Duplicate Data Report - Batch: 280-28834

Method: 8260B
Preparation: 5030B

LCS Lab Sample ID:	LCS 280-28834/4	Units:	ug/L	LCSD Lab Sample ID:	LCSD 280-28834/5
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Date Analyzed:	08/25/2010 2104			Date Analyzed:	08/25/2010 2144
Date Prepared:	08/25/2010 2104			Date Prepared:	08/25/2010 2144

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Benzene	5.00	5.00	5.03	4.99
Bromodichloromethane	5.00	5.00	4.99	4.83
Carbon tetrachloride	5.00	5.00	4.99	5.11
Chlorobenzene	5.00	5.00	4.76	4.68
Chloroform	5.00	5.00	4.95	4.88
1,4-Dichlorobenzene	5.00	5.00	4.55	4.50
1,1-Dichloroethane	5.00	5.00	4.89	4.93
1,1-Dichloroethene	5.00	5.00	5.24	5.39
1,2-Dichloropropane	5.00	5.00	4.98	4.75
Ethylbenzene	5.00	5.00	4.90	4.85
Methylene Chloride	5.00	5.00	5.21	5.05
Tetrachloroethene	5.00	5.00	4.84	4.93
Toluene	5.00	5.00	5.14	5.10
trans-1,2-Dichloroethene	5.00	5.00	4.99	4.95
1,1,1-Trichloroethane	5.00	5.00	4.94	4.92
Trichloroethene	5.00	5.00	4.96	4.90

Client: Trihydro Corporation

Job Number: 280-6467-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-28834

Method: 8260B
Preparation: 5030B

MS Lab Sample ID:	280-6467-1	Analysis Batch: 280-28834	Instrument ID: MSV_MS1
Client Matrix:	Water	Prep Batch: N/A	Lab File ID: ms2883.D
Dilution:	1.0		Initial Weight/Volume: 20 mL
Date Analyzed:	08/25/2010 2330		Final Weight/Volume: 20 mL
Date Prepared:	08/25/2010 2330		

MSD Lab Sample ID:	280-6467-1	Analysis Batch: 280-28834	Instrument ID: MSV_MS1
Client Matrix:	Water	Prep Batch: N/A	Lab File ID: ms2884.D
Dilution:	1.0		Initial Weight/Volume: 20 mL
Date Analyzed:	08/25/2010 2350		Final Weight/Volume: 20 mL
Date Prepared:	08/25/2010 2350		

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Benzene	97	104	77 - 120	6	20		
Bromodichloromethane	98	94	78 - 120	5	20		
Carbon tetrachloride	98	108	80 - 120	10	21		
Chlorobenzene	100	102	78 - 120	2	20		
Chloroform	101	102	78 - 120	1	20		
1,4-Dichlorobenzene	103	102	77 - 120	1	23		
1,1-Dichloroethane	98	101	77 - 120	3	21		
1,1-Dichloroethene	103	119	68 - 133	15	20		
1,2-Dichloropropane	94	95	76 - 120	1	20		
Ethylbenzene	99	107	78 - 120	7	26		
Methylene Chloride	100	97	71 - 120	3	20		
Tetrachloroethene	95	109	77 - 120	13	20		
Toluene	96	102	73 - 120	6	20		
trans-1,2-Dichloroethene	98	106	80 - 120	7	24		
1,1,1-Trichloroethane	94	102	78 - 120	8	20		
Trichloroethene	92	101	78 - 122	9	20		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
4-Bromofluorobenzene (Surr)	100	101	78 - 120
Dibromofluoromethane (Surr)	98	96	77 - 120
1,2-Dichloroethane-d4 (Surr)	99	93	70 - 127
Toluene-d8 (Surr)	108	110	80 - 125

Client: Trihydro Corporation

Job Number: 280-6467-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-28834

Method: 8260B
Preparation: 5030B

MS Lab Sample ID:	280-6467-1	Units: ug/L	
Client Matrix:	Water		
Dilution:	1.0		
Date Analyzed:	08/25/2010 2330		
Date Prepared:	08/25/2010 2330		

MSD Lab Sample ID:	280-6467-1
Client Matrix:	Water
Dilution:	1.0
Date Analyzed:	08/25/2010 2350
Date Prepared:	08/25/2010 2350

Analyte	Sample Result/Qual		MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Benzene	ND		5.00	5.00	4.87	5.18
Bromodichloromethane	ND		5.00	5.00	4.92	4.70
Carbon tetrachloride	ND		5.00	5.00	4.88	5.41
Chlorobenzene	ND		5.00	5.00	5.01	5.11
Chloroform	ND		5.00	5.00	5.04	5.08
1,4-Dichlorobenzene	ND		5.00	5.00	5.15	5.10
1,1-Dichloroethane	ND		5.00	5.00	4.90	5.05
1,1-Dichloroethene	ND		5.00	5.00	5.13	5.95
1,2-Dichloropropane	ND		5.00	5.00	4.70	4.74
Ethylbenzene	ND		5.00	5.00	4.97	5.33
Methylene Chloride	0.36	J	5.00	5.00	5.36	5.22
Tetrachloroethene	ND		5.00	5.00	4.77	5.43
Toluene	ND		5.00	5.00	4.82	5.12
trans-1,2-Dichloroethene	ND		5.00	5.00	4.92	5.29
1,1,1-Trichloroethane	ND		5.00	5.00	4.69	5.10
Trichloroethene	ND		5.00	5.00	4.62	5.05

Client: Trihydro Corporation

Job Number: 280-6467-1

Laboratory Chronicle

Lab ID: 280-6467-1 Client ID: MW-25

Sample Date/Time: 08/17/2010 17:00 Received Date/Time: 08/18/2010 09:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	280-6467-B-1		280-28834		08/25/2010 22:48	1	TAL DEN	JLR
A:8260B	280-6467-B-1		280-28834		08/25/2010 22:48	1	TAL DEN	JLR

Lab ID: 280-6467-1 Client ID: MW-25

Sample Date/Time: 08/17/2010 17:00 Received Date/Time: 08/18/2010 09:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	280-6467-A-1 MS		280-28834		08/25/2010 23:30	1	TAL DEN	JLR
A:8260B	280-6467-A-1 MS		280-28834		08/25/2010 23:30	1	TAL DEN	JLR

Lab ID: 280-6467-1 Client ID: MW-25

Sample Date/Time: 08/17/2010 17:00 Received Date/Time: 08/18/2010 09:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	280-6467-B-1 MSD		280-28834		08/25/2010 23:50	1	TAL DEN	JLR
A:8260B	280-6467-B-1 MSD		280-28834		08/25/2010 23:50	1	TAL DEN	JLR

Lab ID: 280-6467-2 Client ID: EQUIP BLANK

Sample Date/Time: 08/17/2010 17:00 Received Date/Time: 08/18/2010 09:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	280-6467-C-2		280-28834		08/26/2010 00:31	1	TAL DEN	JLR
A:8260B	280-6467-C-2		280-28834		08/26/2010 00:31	1	TAL DEN	JLR

Lab ID: 280-6467-3 Client ID: BD-8-17-10

Sample Date/Time: 08/17/2010 17:00 Received Date/Time: 08/18/2010 09:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	280-6467-B-3		280-28834		08/26/2010 00:51	1	TAL DEN	JLR
A:8260B	280-6467-B-3		280-28834		08/26/2010 00:51	1	TAL DEN	JLR

Lab ID: MB Client ID: N/A

Sample Date/Time: N/A Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	MB 280-28834/6		280-28834		08/25/2010 22:25	1	TAL DEN	JLR
A:8260B	MB 280-28834/6		280-28834		08/25/2010 22:25	1	TAL DEN	JLR

Client: Trihydro Corporation

Job Number: 280-6467-1

Laboratory Chronicle

Lab ID: LCS Client ID: N/A

Sample Date/Time: N/A Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	LCS 280-28834/4		280-28834		08/25/2010 21:04	1	TAL DEN	JLR
A:8260B	LCS 280-28834/4		280-28834		08/25/2010 21:04	1	TAL DEN	JLR

Lab ID: LCSD Client ID: N/A

Sample Date/Time: N/A Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	LCSD 280-28834/5		280-28834		08/25/2010 21:44	1	TAL DEN	JLR
A:8260B	LCSD 280-28834/5		280-28834		08/25/2010 21:44	1	TAL DEN	JLR

Lab References:
TAL DEN = TestAmerica Denver

Chain of Custody Record

Sampler ID _____

Temperature on Receipt 2.2 / 12.3 °C 8/18

Drinking Water? Yes ☐ No ☐

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TAL-4124-260 (0508)

Client: Trihydro	Project Manager: Bill Brewer		Date: 8/17/10	Chain of Custody Number: 136135	
Address: 350 Garfield	Telephone Number (Area Code)/Fax Number		Lab Number	Page _____ of _____	
City: Lander	State: WY	Zip Code: 82520	Site Contact	Lab Contact: Donna	
Project Name and Location (State): FCSWDD WY			Carrier/Waybill Number		
Contract/Purchase Order/Quote No.: 2221					

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/ NaOH	Analysis (Attach list if more space is needed): 8260	Special Instructions/ Conditions of Receipt
MW-25	8/17/10	17:00	X							X			X	WYDEQ SHWD App A VOCs
MW-25 MS			X							X			X	
MW-25 MSD			X							X			X	
Equip Blank			X							X			X	
TB-8-17-10			X							X			X	

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Possible Hazard Identification: ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown	Sample Disposal: ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months	(A fee may be assessed if samples are retained longer than 1 month)	
Turn Around Time Required: ☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other _____	QC Requirements (Specify)		
1. Relinquished By: Tom A Mast	Date: 8/17/10	Time: 17:30	1. Received By: [signature] Date: 8.18.10 Time: 0830
2. Relinquished By	Date	Time	2. Received By Date Time
3. Relinquished By	Date	Time	3. Received By Date Time
Comments			

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

08/30/2010

Login Sample Receipt Check List

Client: Trihydro Corporation

Job Number: 280-6467-1

Login Number: 6467

List Source: TestAmerica Denver

Creator: Harrington, Nicholas

List Number: 1

Question	T / F/ NA	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	False	SEE CUR
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	

ATTACHMENT B

TIER II DATA VALIDATION REPORT SUMMARY

LABORATORY PROJECT ID: 280-6467-1

Tier II Data Validation Report Summary

Client: Fremont County SWDD	Laboratory: TestAmerica, Arvada, CO
Project Name: 2010-2011 Environmental Monitoring	Sample Matrix: Water
Project Number: 09Y-001-003	Sample Start Date: 8/17/2010
Date Validated: 10/15/2010	Sample End Date: 8/17/2010
Parameters Included: Volatile Organic Compounds (VOC) by Solid Waste 846 (SW846) Method 8260B	
Laboratory Project ID: 280-6467-1	
Data Validator: Storm John, Environmental Statistician	

DATA EVALUATION CRITERIA SUMMARY

A Tier II Data Validation was performed by Trihydro Corporation's Chemical Data Evaluation Services Group on the analytical data report package generated by TestAmerica in Arvada, CO evaluating samples from the Sand Draw Landfill site, located in Fremont County, WY.

Precision, accuracy, method compliance, and completeness of this data package were assessed during this data review. Precision was determined by evaluating the calculated relative percent difference (RPD) values of samples from field duplicate pairs. Laboratory accuracy was established by reviewing the demonstrated percent recoveries of matrix spike (MS) and matrix spike duplicate (MSD) samples, and of laboratory control samples (LCS) and laboratory control sample duplicates (LCSD) to verify that data are not biased. Additionally, field accuracy was established by collecting an equipment blank to monitor for possible ambient or cross contamination during sampling. Method compliance was established by reviewing holding times, detection limits, surrogate recoveries, method blanks, and the LCS and LCSD percent recoveries against method-specific requirements. Completeness was evaluated by determining the overall ratio of the number of samples planned versus the number of samples with valid analyses. Determination of completeness included a review of the chain-of-custody (CoC), laboratory analytical methods, and other necessary documents associated with this analytical data set.

Data were evaluated in general accordance with validation criteria set forth in the United States Environmental Protection Agency (USEPA) Contract Laboratory Program (CLP) National Functional Guidelines (NFG) for Superfund Organic Methods Data Review, document number USEPA-540-R-08-01, June 2008 with additional reference to the USEPA CLP NFGs for Organic Data Review, document number EPA 540/R-99-008, October 1999. Review of duplicates is conducted in accordance with USEPA Region 1 Laboratory Data Validation Functional Guidelines for Evaluation of Organic Analysis, December 1996 or as specified by the method (as applicable).

SAMPLE NUMBERS TABLE

Client Sample ID	Laboratory Sample Number
MW-25	280-6467-1
EQUIP BLANK	280-6467-2
BD-8-17-10	280-6467-3

Tier II Data Validation Report Summary

The samples were analyzed for the required analytes. Assessment of CoC completeness is included in Section #3. The laboratory data were reviewed to evaluate compliance with the required methods and the quality of the reported data. A leading check mark (✓) indicates that the referenced validation criteria were deemed acceptable. A preceding crossed circle (⊘) indicates validation criteria for which the data may have been qualified by the data validator. Details are noted in the tables below.

Validation Criteria

- ✓ Data Completeness
- ✓ CoC Documentation
- ✓ Holding Times and Preservation
- ⊘ Laboratory Blanks
- ✓ System Monitoring Compounds (i.e., Surrogates)
- ✓ Laboratory Control Samples/Laboratory Control Sample Duplicates (LCS/LCSD)
- ✓ Matrix Spike/Matrix Spike Duplicates (MS/MSD)
- ✓ Field Duplicates
- ✓ Equipment Blank

OVERALL DATA PACKAGE ASSESSMENT

Based on a data validation review, the data are acceptable as delivered; exceptions (i.e., rejected data) are noted below. Data qualified by the laboratory are discussed in Section #2.

The purpose of validating data and assigning qualifiers is to assist in proper data interpretation. Data which are not qualified meet the site data quality objectives. If values are assigned qualifiers other than an R (rejected, data not usable), the data may be used for site evaluation, with the reasons for qualification being given consideration when interpreting sample concentrations. Data points which are assigned an R qualifier should not be used for site evaluation purposes. Text identified in **bold font** indicates that further action and/or qualification of the data were required. Data were qualified with J data flags by the laboratory if the result was greater than or equal to the method detection limit (MDL) but less than the reporting limit (RL). Laboratory J flags were preserved in the data and included in the Data Qualification Summary table at the end of this report. Additional data validation qualifiers were added for the items noted with crossed circles, above. Please see the Data Qualification Summary table at the end of this report for a complete list of samples and analytes qualified.

Data qualifiers used during this validation included:

J – Estimated concentration

U – Evaluated to be undetected at the reporting limit

Data Completeness

The analyses were performed as requested on the CoC records. The associated samples were received by the laboratory and analyzed properly. No data points were rejected. The data completeness measure for this data package is 100% and is acceptable.

VALIDATION CRITERIA CHECKLIST	
1. Was the report free of non-conformances related to the analytical data identified by the laboratory?	No
Comments: The laboratory noted the following non-conformances related to the analytical data in the Case Narrative. Method 8260B-VOC: Methylene chloride was detected in the method blank in analysis batch 280-28834 (no preparation batch) at a level that was above the method detection limit (MDL) but below the reporting limit (RL). The value should be considered an estimate, and has been flagged "J." If the associated samples reported a result above the MDL and/or RL, the result was "B" flagged. A MS/MSD was performed on sample MW-25 as requested on the chain of custody and was in control.	
2. Were data qualification flags or other notes used by the laboratory? If yes, define.	Yes
Comments: The following data qualification flags were used by the laboratory. B: Compound was found in the blank sample F: RPD of the MS and MSD or the MS or MSD exceeds the control limits. J: Result was less than the RL but greater than or equal to the MDL and the concentration is an approximate value.	
3. Were sample CoC forms complete?	Yes
Comments: The CoC forms were complete from the field to the laboratory. Custody was maintained as evidenced by proper signatures, dates, and times of receipt.	
4. Were detection limits in accordance with the quality assurance project plan (QAPP), permit, or method, or indicated as acceptable?	Yes
Comments: The detection limits were acceptable. No dilutions were required.	
5. Were the requested analytical methods in compliance with the QAPP, permit, or CoC?	Yes
Comments: The requested analytical methods were in compliance with the CoC.	
6. Were samples received in good condition within method specified requirements?	Yes
Comments: The samples were received on wet ice, intact, and in good condition with cooler temperatures within the 4°C +/- 2°C acceptance range at 2.2°C as reported in the Case Narrative. Custody seals were present and intact on the shipping containers. The laboratory noted that one VOA vial was broken for sample BD-8-17-10; however, sufficient volume remained in the other associated vials to complete the requested analysis.	
7. Were samples analyzed within method specified or technical holding times?	Yes
Comments: The samples were analyzed within the method specified or technical holding times.	
8. Were reported units appropriate for the sample matrix/matrices and method(s) of analyses?	Yes
Comments: The sample results were reported in units of µg/L and are acceptable for the matrices and analyses requested.	
9. Do the laboratory reports include all constituents requested to be reported?	Yes
Comments: The laboratory reported the requested constituents in accordance with the CoC.	
10. Was there indication from the laboratory that the initial or continuing calibration verification results were within acceptable limits?	N/A
Comments: Initial and continuing calibration data were not included as part of this data set; however, these data are assumed to be acceptable as the laboratory did not note that any calibration verification results were outside acceptable limits.	
11. Was the total number of laboratory blank samples prepared equal to at least 5% of the total number of samples, or analyzed as required by the method?	Yes
Comments: The total number of laboratory blank samples prepared was equal to at least 5% of the total number of samples.	

VALIDATION CRITERIA CHECKLIST	
12. Were laboratory blank samples free of analyte contamination?	No
Comments: The laboratory blank samples were free of analyte contamination with the following exception. Methylene chloride was detected in the method blank at a concentration of 0.431 µg/L. For the associated samples, methylene chloride was flagged with a B, by the laboratory, to indicate that the compound was detected in the method blank sample. **Methylene chloride was detected at a concentration of 0.36 µg/L in sample MW-25. Based on USEPA NFG requirements, methylene chloride was qualified as U (instead of the laboratory B) indicating that the compound is undetected at the reporting limit, as indicated by a method blank detection.**	
13. Was the total number of matrix spike samples prepared equal to at least 5% of the total number of samples, or analyzed as required by the method?	Yes
Comments: The total number of matrix spike samples prepared was equal to at least 5% of the total number of samples. Matrix spike samples for Method 8260B analysis batch 280-28834 were prepared from sample MW-25.	
14. Were MS/MSD percent recoveries and MS/MSD RPDs within data validation or laboratory quality control (QC) limits?	Yes
Comments: The project specific MS/MSD percent recoveries and MS/MSD RPDs were within laboratory QC limits.	
15. Was the total number of LCSs analyzed equal to at least 5% of the total number of samples, or analyzed as required by the method?	Yes
Comments: The total number of LSC/LCSD samples analyzed was equal to at least 5% of the total number of samples required.	
16. Were LCS/LCSD percent recoveries and LCS/LCSD RPDs within data validation or laboratory QC limits?	Yes
Comments: The LCS/LCSD percent recoveries and LCS/LCSD RPDs were within laboratory QC limits.	
17. Were surrogate recoveries within laboratory QC limits?	Yes
Comments: The surrogate recoveries were within laboratory QC limits.	
18. Was the number of equipment, trip, or field blanks collected equal to at least 10% of the total number of samples, or as required by the project guidelines, QAPP, SAP, or permit?	Yes
Comments: The number of equipment, trip, or field blanks collected was equal to at least 10% of the total number of samples. One equipment blank, EQUIP BLANK, was collected with the data set. No trip or field blank were submitted with this data set and were not required per the sampling event.	
19. Were the trip blank, field blank, and/or equipment blank samples free of analyte contamination?	No
Comments: The equipment blank sample was free of analyte contamination with the exceptions shown in the table below.	

Method	Analyte	Detected Concentration (µg/L)
SW 8260B	2-Butanone	3.0
SW 8260B	Bromodichloromethane	0.78
SW 8260B	Chloroform	3.2
SW 8260B	Dibromochloromethane	0.38
SW 8260B	Toluene	0.62

These analytes were not detected in the associated samples. No further action was deemed necessary.

20. Was the number of field duplicates collected equal to at least 10% of the total number of samples, or as required by the project guidelines, QAPP, SAP, or permit?	Yes
Comments: The number of field duplicates collected was equal to at least 10% of the total number of samples. Sample BD-8-17-10 was collected as a duplicate of sample MW-25.	

VALIDATION CRITERIA CHECKLIST	
21. Were field duplicate RPD values within data validation QC limits (soil 0-50%, water 0-30%, or air 0-25%)?	Yes
Comments: The field duplicate RPD values were within data validation QC limits of 0-30% for water. However, an RPD value could not be calculated because the analyte was detected in one of the duplicate samples and was undetected in the other sample. No data were qualified since the detection was less than the reporting limit. Field duplicate RPD values could not be calculated for those analytes which were not detected in both the duplicate and parent sample.	
22. Were laboratory duplicate RPD values within laboratory QC limits?	N/A
Comments: A laboratory duplicate was not prepared with this data set.	

FIELD DUPLICATE SUMMARY

Client Sample ID: MW-25 Field Duplicate Sample ID: BD-8-17-10			
Analyte	Laboratory Result (µg/L)	Duplicate Result (µg/L)	Relative Percent Difference (RPD)
Acetone	ND (10)	6.5	DL
Methylene Chloride	0.36	ND(2.0)	DL
Trichlorofluoromethane	ND (2.0)	0.35	DL

Field duplicate RPD control limits are not to exceed 30% for water as established by USEPA Region 1 Laboratory Data Validation Function Guidelines for Evaluation of Organic Analysis, December 1996.

DL – Indicates that the analyte was detected in one of the duplicate samples and was undetected in the other sample, and therefore an RPD could not be calculated. No data were qualified since the detection was within less than the reporting limit.

DATA QUALIFICATION SUMMARY

Analyte	Method	Field Sample ID	Lab Sample ID	Result (µg/L)	Reviewer Qualifier	Reviewer Qualifier Reason
2-Butanone	SW 8260B	EQUIP BLANK	280-6467-2	3	J	Flagged by the Lab: Result between MDL and RL.
Acetone	SW 8260B	BD-8-17-10	280-6467-3	6.5	J	Flagged by the Lab: Result between MDL and RL.
Bromodichloromethane	SW 8260B	EQUIP BLANK	280-6467-2	0.78	J	Flagged by the Lab: Result between MDL and RL.
Dibromochloromethane	SW 8260B	EQUIP BLANK	280-6467-2	0.38	J	Flagged by the Lab: Result between MDL and RL.
Methylene Chloride	SW 8260B	MW-25	280-6467-1	0.36	U	Method blank detection
Toluene	SW 8260B	EQUIP BLANK	280-6467-2	0.62	J	Flagged by the Lab: Result between MDL and RL.
Trichlorofluoromethane	SW 8260B	BD-8-17-10	280-6467-3	0.35	J	Flagged by the Lab: Result between MDL and RL.

ATTACHMENT C

ANALYTICAL SUMMARY REPORT

JOB NO. C10080682

ENERGY LABORATORIES
www.energylab.com
Analytical Excellence Since 1952
Helena, MT 877-472-0711 • Billings, MT 800-735-4489 • Casper, WY 888-235-0515
Gillette, WY 866-686-7175 • Rapid City, SD 888-672-1225 • College Station, TX 888-690-2218

ANALYTICAL SUMMARY REPORT

September 02, 2010

Trihydro Corporation
350 Garfield St Solar Ste
Lander, WY 82520

Workorder No.: C10080682

Project Name: FCSWDD

Energy Laboratories, Inc. received the following 5 samples for Trihydro Corporation on 8/18/2010 for analysis.

Sample ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
C10080682-001	MW-25	08/17/10 17:00	08/18/10	Aqueous	VOCs, 40 CFR Part 258 App I
C10080682-004	Equipment Blank	08/17/10 17:00	08/18/10	Aqueous	Same As Above
C10080682-005	BD-8-17-10	08/17/10 17:00	08/18/10	Aqueous	Same As Above

This report was prepared by Energy Laboratories, Inc., 2393 Salt Creek Hwy., Casper, WY 82601. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

The results as reported relate only to the item(s) submitted for testing.

If you have any questions regarding these test results, please call.

Report Approved By:

CLIENT: Trihydro Corporation
Project: FCSWDD
Sample Delivery Group: C10080682

Report Date: 09/02/10

CASE NARRATIVE

"J" QUALIFIER COMMENTS

All "J" qualified analyte concentrations are below the laboratory minimum recommended Reporting Limit (RL) and above the calculated method detection limit (MDL). Inorganic analytes reported with "J" qualifiers should be verified against the corresponding method blank and continuing calibration blanks. Inorganic "J" quantitations near the MDL may be suspect due to possible method background levels, sample matrix effects, and/or daily variability in instrument signal-to-noise levels.

LABORATORY ANALYTICAL REPORT

Client: Trihydro Corporation
Project: FCSWDD
Lab ID: C10080682-001
Client Sample ID: MW-25

Report Date: 09/02/10
Collection Date: 08/17/10 17:00
DateReceived: 08/18/10
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
VOLATILE ORGANIC COMPOUNDS							
1,1,1,2-Tetrachloroethane	ND	ug/L		1.0		SW8260B	08/31/10 14:53 / jlr
1,1,1-Trichloroethane	ND	ug/L		1.0		SW8260B	08/31/10 14:53 / jlr
1,1,2,2-Tetrachloroethane	ND	ug/L		1.0		SW8260B	08/31/10 14:53 / jlr
1,1,2-Trichloroethane	ND	ug/L		1.0		SW8260B	08/31/10 14:53 / jlr
1,1-Dichloroethane	ND	ug/L		1.0		SW8260B	08/31/10 14:53 / jlr
1,1-Dichloroethene	ND	ug/L		1.0		SW8260B	08/31/10 14:53 / jlr
1,2,3-Trichloropropane	ND	ug/L		1.0		SW8260B	08/31/10 14:53 / jlr
1,2-Dibromo-3-chloropropane	ND	ug/L		5.0		SW8260B	08/31/10 14:53 / jlr
1,2-Dibromoethane	ND	ug/L		1.0		SW8260B	08/31/10 14:53 / jlr
1,2-Dichlorobenzene	ND	ug/L		1.0		SW8260B	08/31/10 14:53 / jlr
1,2-Dichloroethane	ND	ug/L		1.0		SW8260B	08/31/10 14:53 / jlr
1,2-Dichloropropane	ND	ug/L		1.0		SW8260B	08/31/10 14:53 / jlr
1,4-Dichlorobenzene	ND	ug/L		1.0		SW8260B	08/31/10 14:53 / jlr
2-Hexanone	ND	ug/L		20		SW8260B	08/31/10 14:53 / jlr
Acetone	55	ug/L		20		SW8260B	08/31/10 14:53 / jlr
Acrylonitrile	ND	ug/L		20		SW8260B	08/31/10 14:53 / jlr
Benzene	ND	ug/L		1.0		SW8260B	08/31/10 14:53 / jlr
Bromochloromethane	ND	ug/L		1.0		SW8260B	08/31/10 14:53 / jlr
Bromodichloromethane	ND	ug/L		1.0		SW8260B	08/31/10 14:53 / jlr
Bromoform	ND	ug/L		1.0		SW8260B	08/31/10 14:53 / jlr
Bromomethane	ND	ug/L		1.0		SW8260B	08/31/10 14:53 / jlr
Carbon disulfide	ND	ug/L		2.0		SW8260B	08/31/10 14:53 / jlr
Carbon tetrachloride	ND	ug/L		1.0		SW8260B	08/31/10 14:53 / jlr
Chlorobenzene	ND	ug/L		1.0		SW8260B	08/31/10 14:53 / jlr
Chlorodibromomethane	ND	ug/L		1.0		SW8260B	08/31/10 14:53 / jlr
Chloroethane	ND	ug/L		1.0		SW8260B	08/31/10 14:53 / jlr
Chloroform	ND	ug/L		1.0		SW8260B	08/31/10 14:53 / jlr
Chloromethane	ND	ug/L		1.0		SW8260B	08/31/10 14:53 / jlr
cis-1,2-Dichloroethene	ND	ug/L		1.0		SW8260B	08/31/10 14:53 / jlr
cis-1,3-Dichloropropene	ND	ug/L		1.0		SW8260B	08/31/10 14:53 / jlr
Dibromomethane	ND	ug/L		1.0		SW8260B	08/31/10 14:53 / jlr
Ethylbenzene	ND	ug/L		1.0		SW8260B	08/31/10 14:53 / jlr
Iodomethane	ND	ug/L		1.0		SW8260B	08/31/10 14:53 / jlr
m+p-Xylenes	ND	ug/L		1.0		SW8260B	08/31/10 14:53 / jlr
Methyl ethyl ketone	ND	ug/L		20		SW8260B	08/31/10 14:53 / jlr
Methyl isobutyl ketone	ND	ug/L		20		SW8260B	08/31/10 14:53 / jlr
Methylene chloride	ND	ug/L		1.0		SW8260B	08/31/10 14:53 / jlr
o-Xylene	ND	ug/L		1.0		SW8260B	08/31/10 14:53 / jlr
Styrene	ND	ug/L		1.0		SW8260B	08/31/10 14:53 / jlr
Tetrachloroethene	ND	ug/L		1.0		SW8260B	08/31/10 14:53 / jlr
Toluene	ND	ug/L		1.0		SW8260B	08/31/10 14:53 / jlr
trans-1,2-Dichloroethene	ND	ug/L		1.0		SW8260B	08/31/10 14:53 / jlr
trans-1,3-Dichloropropene	ND	ug/L		1.0		SW8260B	08/31/10 14:53 / jlr
trans-1,4-Dichloro-2-butene	ND	ug/L		1.0		SW8260B	08/31/10 14:53 / jlr

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

LABORATORY ANALYTICAL REPORT

Client: Trihydro Corporation
Project: FCSWDD
Lab ID: C10080682-001
Client Sample ID: MW-25

Report Date: 09/02/10
Collection Date: 08/17/10 17:00
DateReceived: 08/18/10
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
VOLATILE ORGANIC COMPOUNDS							
Trichloroethene	ND	ug/L		1.0		SW8260B	08/31/10 14:53 / jlr
Trichlorofluoromethane	0.4	ug/L	J	1.0		SW8260B	08/31/10 14:53 / jlr
Vinyl acetate	ND	ug/L		1.0		SW8260B	08/31/10 14:53 / jlr
Vinyl chloride	ND	ug/L		1.0		SW8260B	08/31/10 14:53 / jlr
Xylenes, Total	ND	ug/L		1.0		SW8260B	08/31/10 14:53 / jlr
Surr: 1,2-Dichlorobenzene-d4	126	%REC	S	80-120		SW8260B	08/31/10 14:53 / jlr
Surr: Dibromofluoromethane	98.0	%REC		70-130		SW8260B	08/31/10 14:53 / jlr
Surr: p-Bromofluorobenzene	117	%REC		80-120		SW8260B	08/31/10 14:53 / jlr
Surr: Toluene-d8	100	%REC		80-120		SW8260B	08/31/10 14:53 / jlr

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
J - Estimated value. The analyte was present but less than the reporting limit.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
S - Spike recovery outside of advisory limits.

LABORATORY ANALYTICAL REPORT

Client: Trihydro Corporation
Project: FCSWDD
Lab ID: C10080682-004
Client Sample ID: Equipment Blank

Report Date: 09/02/10
Collection Date: 08/17/10 17:00
DateReceived: 08/18/10
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
VOLATILE ORGANIC COMPOUNDS							
1,1,1,2-Tetrachloroethane	ND	ug/L		1.0		SW8260B	08/31/10 15:29 / jlr
1,1,1-Trichloroethane	ND	ug/L		1.0		SW8260B	08/31/10 15:29 / jlr
1,1,2,2-Tetrachloroethane	ND	ug/L		1.0		SW8260B	08/31/10 15:29 / jlr
1,1,2-Trichloroethane	ND	ug/L		1.0		SW8260B	08/31/10 15:29 / jlr
1,1-Dichloroethane	ND	ug/L		1.0		SW8260B	08/31/10 15:29 / jlr
1,1-Dichloroethene	ND	ug/L		1.0		SW8260B	08/31/10 15:29 / jlr
1,2,3-Trichloropropane	ND	ug/L		1.0		SW8260B	08/31/10 15:29 / jlr
1,2-Dibromo-3-chloropropane	ND	ug/L		5.0		SW8260B	08/31/10 15:29 / jlr
1,2-Dibromoethane	ND	ug/L		1.0		SW8260B	08/31/10 15:29 / jlr
1,2-Dichlorobenzene	ND	ug/L		1.0		SW8260B	08/31/10 15:29 / jlr
1,2-Dichloroethane	ND	ug/L		1.0		SW8260B	08/31/10 15:29 / jlr
1,2-Dichloropropane	ND	ug/L		1.0		SW8260B	08/31/10 15:29 / jlr
1,4-Dichlorobenzene	ND	ug/L		1.0		SW8260B	08/31/10 15:29 / jlr
2-Hexanone	ND	ug/L		20		SW8260B	08/31/10 15:29 / jlr
Acetone	4	ug/L	J	20		SW8260B	08/31/10 15:29 / jlr
Acrylonitrile	ND	ug/L		20		SW8260B	08/31/10 15:29 / jlr
Benzene	ND	ug/L		1.0		SW8260B	08/31/10 15:29 / jlr
Bromochloromethane	ND	ug/L		1.0		SW8260B	08/31/10 15:29 / jlr
Bromodichloromethane	0.7	ug/L	J	1.0		SW8260B	08/31/10 15:29 / jlr
Bromoform	0.1	ug/L	J	1.0		SW8260B	08/31/10 15:29 / jlr
Bromomethane	ND	ug/L		1.0		SW8260B	08/31/10 15:29 / jlr
Carbon disulfide	ND	ug/L		2.0		SW8260B	08/31/10 15:29 / jlr
Carbon tetrachloride	ND	ug/L		1.0		SW8260B	08/31/10 15:29 / jlr
Chlorobenzene	ND	ug/L		1.0		SW8260B	08/31/10 15:29 / jlr
Chlorodibromomethane	0.4	ug/L	J	1.0		SW8260B	08/31/10 15:29 / jlr
Chloroethane	ND	ug/L		1.0		SW8260B	08/31/10 15:29 / jlr
Chloroform	3.0	ug/L		1.0		SW8260B	08/31/10 15:29 / jlr
Chloromethane	ND	ug/L		1.0		SW8260B	08/31/10 15:29 / jlr
cis-1,2-Dichloroethene	ND	ug/L		1.0		SW8260B	08/31/10 15:29 / jlr
cis-1,3-Dichloropropene	ND	ug/L		1.0		SW8260B	08/31/10 15:29 / jlr
Dibromomethane	ND	ug/L		1.0		SW8260B	08/31/10 15:29 / jlr
Ethylbenzene	ND	ug/L		1.0		SW8260B	08/31/10 15:29 / jlr
Iodomethane	ND	ug/L		1.0		SW8260B	08/31/10 15:29 / jlr
m+p-Xylenes	ND	ug/L		1.0		SW8260B	08/31/10 15:29 / jlr
Methyl ethyl ketone	2	ug/L	J	20		SW8260B	08/31/10 15:29 / jlr
Methyl isobutyl ketone	ND	ug/L		20		SW8260B	08/31/10 15:29 / jlr
Methylene chloride	ND	ug/L		1.0		SW8260B	08/31/10 15:29 / jlr
o-Xylene	ND	ug/L		1.0		SW8260B	08/31/10 15:29 / jlr
Styrene	ND	ug/L		1.0		SW8260B	08/31/10 15:29 / jlr
Tetrachloroethene	ND	ug/L		1.0		SW8260B	08/31/10 15:29 / jlr
Toluene	0.8	ug/L	J	1.0		SW8260B	08/31/10 15:29 / jlr
trans-1,2-Dichloroethene	ND	ug/L		1.0		SW8260B	08/31/10 15:29 / jlr
trans-1,3-Dichloropropene	ND	ug/L		1.0		SW8260B	08/31/10 15:29 / jlr
trans-1,4-Dichloro-2-butene	ND	ug/L		1.0		SW8260B	08/31/10 15:29 / jlr

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
J - Estimated value. The analyte was present but less than the reporting limit.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Client: Trihydro Corporation
Project: FCSWDD
Lab ID: C10080682-004
Client Sample ID: Equipment Blank

Report Date: 09/02/10
Collection Date: 08/17/10 17:00
DateReceived: 08/18/10
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
VOLATILE ORGANIC COMPOUNDS							
Trichloroethene	ND	ug/L		1.0		SW8260B	08/31/10 15:29 / jlr
Trichlorofluoromethane	ND	ug/L		1.0		SW8260B	08/31/10 15:29 / jlr
Vinyl acetate	ND	ug/L		1.0		SW8260B	08/31/10 15:29 / jlr
Vinyl chloride	ND	ug/L		1.0		SW8260B	08/31/10 15:29 / jlr
Xylenes, Total	ND	ug/L		1.0		SW8260B	08/31/10 15:29 / jlr
Surr: 1,2-Dichlorobenzene-d4	122	%REC	S	80-120		SW8260B	08/31/10 15:29 / jlr
Surr: Dibromofluoromethane	98.0	%REC		70-130		SW8260B	08/31/10 15:29 / jlr
Surr: p-Bromofluorobenzene	117	%REC		80-120		SW8260B	08/31/10 15:29 / jlr
Surr: Toluene-d8	99.0	%REC		80-120		SW8260B	08/31/10 15:29 / jlr

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
S - Spike recovery outside of advisory limits.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Client: Trihydro Corporation
Project: FCSWDD
Lab ID: C10080682-005
Client Sample ID: BD-8-17-10

Report Date: 09/02/10
Collection Date: 08/17/10 17:00
DateReceived: 08/18/10
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
VOLATILE ORGANIC COMPOUNDS							
1,1,1,2-Tetrachloroethane	ND	ug/L		1.0		SW8260B	08/31/10 16:04 / jlr
1,1,1-Trichloroethane	ND	ug/L		1.0		SW8260B	08/31/10 16:04 / jlr
1,1,2,2-Tetrachloroethane	ND	ug/L		1.0		SW8260B	08/31/10 16:04 / jlr
1,1,2-Trichloroethane	ND	ug/L		1.0		SW8260B	08/31/10 16:04 / jlr
1,1-Dichloroethane	ND	ug/L		1.0		SW8260B	08/31/10 16:04 / jlr
1,1-Dichloroethene	ND	ug/L		1.0		SW8260B	08/31/10 16:04 / jlr
1,2,3-Trichloropropane	ND	ug/L		1.0		SW8260B	08/31/10 16:04 / jlr
1,2-Dibromo-3-chloropropane	ND	ug/L		5.0		SW8260B	08/31/10 16:04 / jlr
1,2-Dibromoethane	ND	ug/L		1.0		SW8260B	08/31/10 16:04 / jlr
1,2-Dichlorobenzene	ND	ug/L		1.0		SW8260B	08/31/10 16:04 / jlr
1,2-Dichloroethane	ND	ug/L		1.0		SW8260B	08/31/10 16:04 / jlr
1,2-Dichloropropane	ND	ug/L		1.0		SW8260B	08/31/10 16:04 / jlr
1,4-Dichlorobenzene	ND	ug/L		1.0		SW8260B	08/31/10 16:04 / jlr
2-Hexanone	ND	ug/L		20		SW8260B	08/31/10 16:04 / jlr
Acetone	42	ug/L		20		SW8260B	08/31/10 16:04 / jlr
Acrylonitrile	ND	ug/L		20		SW8260B	08/31/10 16:04 / jlr
Benzene	ND	ug/L		1.0		SW8260B	08/31/10 16:04 / jlr
Bromochloromethane	ND	ug/L		1.0		SW8260B	08/31/10 16:04 / jlr
Bromodichloromethane	ND	ug/L		1.0		SW8260B	08/31/10 16:04 / jlr
Bromoform	ND	ug/L		1.0		SW8260B	08/31/10 16:04 / jlr
Bromomethane	ND	ug/L		1.0		SW8260B	08/31/10 16:04 / jlr
Carbon disulfide	ND	ug/L		2.0		SW8260B	08/31/10 16:04 / jlr
Carbon tetrachloride	ND	ug/L		1.0		SW8260B	08/31/10 16:04 / jlr
Chlorobenzene	ND	ug/L		1.0		SW8260B	08/31/10 16:04 / jlr
Chlorodibromomethane	ND	ug/L		1.0		SW8260B	08/31/10 16:04 / jlr
Chloroethane	ND	ug/L		1.0		SW8260B	08/31/10 16:04 / jlr
Chloroform	ND	ug/L		1.0		SW8260B	08/31/10 16:04 / jlr
Chloromethane	ND	ug/L		1.0		SW8260B	08/31/10 16:04 / jlr
cis-1,2-Dichloroethene	ND	ug/L		1.0		SW8260B	08/31/10 16:04 / jlr
cis-1,3-Dichloropropene	ND	ug/L		1.0		SW8260B	08/31/10 16:04 / jlr
Dibromomethane	ND	ug/L		1.0		SW8260B	08/31/10 16:04 / jlr
Ethylbenzene	ND	ug/L		1.0		SW8260B	08/31/10 16:04 / jlr
Iodomethane	ND	ug/L		1.0		SW8260B	08/31/10 16:04 / jlr
m+p-Xylenes	ND	ug/L		1.0		SW8260B	08/31/10 16:04 / jlr
Methyl ethyl ketone	ND	ug/L		20		SW8260B	08/31/10 16:04 / jlr
Methyl isobutyl ketone	ND	ug/L		20		SW8260B	08/31/10 16:04 / jlr
Methylene chloride	ND	ug/L		1.0		SW8260B	08/31/10 16:04 / jlr
o-Xylene	ND	ug/L		1.0		SW8260B	08/31/10 16:04 / jlr
Styrene	ND	ug/L		1.0		SW8260B	08/31/10 16:04 / jlr
Tetrachloroethene	ND	ug/L		1.0		SW8260B	08/31/10 16:04 / jlr
Toluene	ND	ug/L		1.0		SW8260B	08/31/10 16:04 / jlr
trans-1,2-Dichloroethene	ND	ug/L		1.0		SW8260B	08/31/10 16:04 / jlr
trans-1,3-Dichloropropene	ND	ug/L		1.0		SW8260B	08/31/10 16:04 / jlr
trans-1,4-Dichloro-2-butene	ND	ug/L		1.0		SW8260B	08/31/10 16:04 / jlr

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

LABORATORY ANALYTICAL REPORT

Client: Trihydro Corporation
Project: FCSWDD
Lab ID: C10080682-005
Client Sample ID: BD-8-17-10

Report Date: 09/02/10
Collection Date: 08/17/10 17:00
DateReceived: 08/18/10
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
VOLATILE ORGANIC COMPOUNDS							
Trichloroethene	ND	ug/L		1.0		SW8260B	08/31/10 16:04 / jlr
Trichlorofluoromethane	0.4	ug/L	J	1.0		SW8260B	08/31/10 16:04 / jlr
Vinyl acetate	ND	ug/L		1.0		SW8260B	08/31/10 16:04 / jlr
Vinyl chloride	ND	ug/L		1.0		SW8260B	08/31/10 16:04 / jlr
Xylenes, Total	ND	ug/L		1.0		SW8260B	08/31/10 16:04 / jlr
Surr: 1,2-Dichlorobenzene-d4	128	%REC	S	80-120		SW8260B	08/31/10 16:04 / jlr
Surr: Dibromofluoromethane	105	%REC		70-130		SW8260B	08/31/10 16:04 / jlr
Surr: p-Bromofluorobenzene	118	%REC		80-120		SW8260B	08/31/10 16:04 / jlr
Surr: Toluene-d8	100	%REC		80-120		SW8260B	08/31/10 16:04 / jlr

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
J - Estimated value. The analyte was present but less than the reporting limit.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
S - Spike recovery outside of advisory limits.

DATES REPORT

Lab Order: C10080682
Client: Trihydro Corporation
Project: FCSWDD
Report Date:

Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	TCLP Date	Prep Date Method Batch	Analysis Date
C10080682-001A	MW-25	8/17/2010 17:00:00	Aqueous	VOCs, 40 CFR Part 258 App I		NA	8/31/2010
C10080682-004A	Equipment Blank	8/17/2010 17:00:00	Aqueous	VOCs, 40 CFR Part 258 App I		NA	8/31/2010
C10080682-005A	BD-8-17-10	8/17/2010 17:00:00	Aqueous	VOCs, 40 CFR Part 258 App I		NA	8/31/2010

QA/QC Summary Report

Client: Trihydro Corporation
Project: FCSWDD

Report Date: 09/02/10
Work Order: C10080682

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW8260B										Batch: R136728
Sample ID: 31-Aug-10_MBLK_8	53 Method Blank					Run: 5975VOC1_100831A				08/31/10 14:17
1,1,1,2-Tetrachloroethane		ND	ug/L	1.0						
1,1,1-Trichloroethane		ND	ug/L	1.0						
1,1,2,2-Tetrachloroethane		ND	ug/L	1.0						
1,1,2-Trichloroethane		ND	ug/L	1.0						
1,1-Dichloroethane		ND	ug/L	1.0						
1,1-Dichloroethene		ND	ug/L	1.0						
1,2,3-Trichloropropane		ND	ug/L	1.0						
1,2-Dibromo-3-chloropropane		ND	ug/L	5.0						
1,2-Dibromoethane		ND	ug/L	1.0						
1,2-Dichlorobenzene		ND	ug/L	1.0						
1,2-Dichloroethane		ND	ug/L	1.0						
1,2-Dichloropropane		ND	ug/L	1.0						
1,4-Dichlorobenzene		ND	ug/L	1.0						
2-Hexanone		ND	ug/L	20						
Acetone		ND	ug/L	20						
Acrylonitrile		ND	ug/L	20						
Benzene		ND	ug/L	1.0						
Bromochloromethane		ND	ug/L	1.0						
Bromodichloromethane		ND	ug/L	1.0						
Bromoform		ND	ug/L	1.0						
Bromomethane		ND	ug/L	1.0						
Carbon disulfide		ND	ug/L	2.0						
Carbon tetrachloride		ND	ug/L	1.0						
Chlorobenzene		ND	ug/L	1.0						
Chlorodibromomethane		ND	ug/L	1.0						
Chloroethane		ND	ug/L	1.0						
Chloroform		ND	ug/L	1.0						
Chloromethane		ND	ug/L	1.0						
cis-1,2-Dichloroethene		ND	ug/L	1.0						
cis-1,3-Dichloropropene		ND	ug/L	1.0						
Dibromomethane		ND	ug/L	1.0						
Ethylbenzene		ND	ug/L	1.0						
Iodomethane		ND	ug/L	1.0						
m+p-Xylenes		ND	ug/L	1.0						
Methyl ethyl ketone		ND	ug/L	20						
Methyl isobutyl ketone		ND	ug/L	20						
Methylene chloride		ND	ug/L	1.0						
o-Xylene		ND	ug/L	1.0						
Styrene		ND	ug/L	1.0						
Tetrachloroethene		ND	ug/L	1.0						
Toluene		ND	ug/L	1.0						
trans-1,2-Dichloroethene		ND	ug/L	1.0						
trans-1,3-Dichloropropene		ND	ug/L	1.0						
trans-1,4-Dichloro-2-butene		ND	ug/L	1.0						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Client: Trihydro Corporation
Project: FCSWDD

Report Date: 09/02/10
Work Order: C10080682

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW8260B										Batch: R136728
Sample ID: 31-Aug-10_MBLK_8	53	Method Blank				Run: 5975VOC1_100831A				08/31/10 14:17
Trichloroethene		ND	ug/L	1.0						
Trichlorofluoromethane		ND	ug/L	1.0						
Vinyl acetate		ND	ug/L	1.0						
Vinyl chloride		ND	ug/L	1.0						
Xylenes, Total		ND	ug/L	1.0						
Surr: 1,2-Dichlorobenzene-d4				1.0	124	80	120			S
Surr: Dibromofluoromethane				1.0	89	70	130			
Surr: p-Bromofluorobenzene				1.0	115	80	120			
Surr: Toluene-d8				1.0	99	80	120			
Sample ID: C10080682-001AMS	27	Sample Matrix Spike				Run: 5975VOC1_100831A				08/31/10 20:48
1,1,1-Trichloroethane		11	ug/L	1.0	112	70	130			
1,1-Dichloroethene		10	ug/L	1.0	103	70	130			
1,2-Dichlorobenzene		11	ug/L	1.0	106	70	130			
1,2-Dichloroethane		11	ug/L	1.0	106	70	130			
1,2-Dichloropropane		11	ug/L	1.0	109	70	130			
1,4-Dichlorobenzene		10	ug/L	1.0	105	70	130			
Benzene		12	ug/L	1.0	115	70	130			
Bromodichloromethane		11	ug/L	1.0	108	70	130			
Bromoform		11	ug/L	1.0	107	70	130			
Carbon tetrachloride		11	ug/L	1.0	111	70	130			
Chlorobenzene		10	ug/L	1.0	103	70	130			
Chlorodibromomethane		11	ug/L	1.0	107	70	130			
Chloroform		11	ug/L	1.0	108	70	130			
cis-1,2-Dichloroethene		11	ug/L	1.0	106	70	130			
Ethylbenzene		11	ug/L	1.0	107	70	130			
m+p-Xylenes		21	ug/L	1.0	107	70	130			
o-Xylene		11	ug/L	1.0	107	70	130			
Styrene		11	ug/L	1.0	112	70	130			
Tetrachloroethene		10	ug/L	1.0	104	70	130			
Toluene		10	ug/L	1.0	103	70	130			
trans-1,2-Dichloroethene		11	ug/L	1.0	114	70	130			
Trichloroethene		10	ug/L	1.0	104	70	130			
Vinyl chloride		11	ug/L	1.0	112	70	130			
Surr: 1,2-Dichlorobenzene-d4				1.0	108	80	120			
Surr: Dibromofluoromethane				1.0	102	70	130			
Surr: p-Bromofluorobenzene				1.0	108	80	120			
Surr: Toluene-d8				1.0	109	80	120			
Sample ID: C10080682-001AMSD	27	Sample Matrix Spike Duplicate				Run: 5975VOC1_100831A				08/31/10 21:23
1,1,1-Trichloroethane		13	ug/L	1.0	126	70	130	12	20	
1,1-Dichloroethene		12	ug/L	1.0	122	70	130	17	20	
1,2-Dichlorobenzene		12	ug/L	1.0	120	70	130	12	20	
1,2-Dichloroethane		12	ug/L	1.0	120	70	130	12	20	
1,2-Dichloropropane		12	ug/L	1.0	124	70	130	13	20	

Qualifiers:

RL - Analyte reporting limit.
ND - Not detected at the reporting limit.
S - Spike recovery outside of advisory limits.

QA/QC Summary Report

Client: Trihydro Corporation
Project: FCSWDD

Report Date: 09/02/10
Work Order: C10080682

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW8260B										Batch: R136728
Sample ID: C10080682-001AMSD	27	Sample Matrix Spike Duplicate				Run: 5975VOC1_100831A				08/31/10 21:23
1,4-Dichlorobenzene		12	ug/L	1.0	120	70	130	14	20	
Benzene		13	ug/L	1.0	129	70	130	11	20	
Bromodichloromethane		12	ug/L	1.0	123	70	130	13	20	
Bromoform		12	ug/L	1.0	123	70	130	14	20	
Carbon tetrachloride		12	ug/L	1.0	125	70	130	12	20	
Chlorobenzene		11	ug/L	1.0	115	70	130	11	20	
Chlorodibromomethane		12	ug/L	1.0	120	70	130	11	20	
Chloroform		12	ug/L	1.0	120	70	130	11	20	
cis-1,2-Dichloroethene		12	ug/L	1.0	116	70	130	9.4	20	
Ethylbenzene		12	ug/L	1.0	118	70	130	9.3	20	
m+p-Xylenes		23	ug/L	1.0	117	70	130	9.1	20	
o-Xylene		12	ug/L	1.0	118	70	130	9.6	20	
Styrene		12	ug/L	1.0	122	70	130	8.2	20	
Tetrachloroethene		12	ug/L	1.0	117	70	130	11	20	
Toluene		11	ug/L	1.0	113	70	130	9.3	20	
trans-1,2-Dichloroethene		13	ug/L	1.0	128	70	130	12	20	
Trichloroethene		12	ug/L	1.0	117	70	130	12	20	
Vinyl chloride		13	ug/L	1.0	127	70	130	13	20	
Surr: 1,2-Dichlorobenzene-d4				1.0	109	80	120	0	10	
Surr: Dibromofluoromethane				1.0	105	70	130	0	10	
Surr: p-Bromofluorobenzene				1.0	109	80	120	0	10	
Surr: Toluene-d8				1.0	108	80	120	0	10	
Sample ID: 31-Aug-10_LCS_3	53	Laboratory Control Sample				Run: 5975VOC1_100831A				08/31/10 11:01
1,1,1,2-Tetrachloroethane		11	ug/L	1.0	106	70	130			
1,1,1-Trichloroethane		11	ug/L	1.0	105	70	130			
1,1,2,2-Tetrachloroethane		10	ug/L	1.0	102	70	130			
1,1,2-Trichloroethane		10	ug/L	1.0	102	70	130			
1,1-Dichloroethane		10	ug/L	1.0	102	70	130			
1,1-Dichloroethene		9.8	ug/L	1.0	98	70	130			
1,2,3-Trichloropropane		10	ug/L	1.0	105	70	130			
1,2-Dibromo-3-chloropropane		10	ug/L	5.0	102	70	130			
1,2-Dibromoethane		10.0	ug/L	1.0	100	70	130			
1,2-Dichlorobenzene		11	ug/L	1.0	106	70	130			
1,2-Dichloroethane		10	ug/L	1.0	104	70	130			
1,2-Dichloropropane		11	ug/L	1.0	109	70	130			
1,4-Dichlorobenzene		11	ug/L	1.0	107	70	130			
2-Hexanone		100	ug/L	20	103	70	130			
Acetone		85	ug/L	20	85	70	130			
Acrylonitrile		93	ug/L	20	93	70	130			
Benzene		11	ug/L	1.0	114	70	130			
Bromochloromethane		11	ug/L	1.0	107	70	130			
Bromodichloromethane		11	ug/L	1.0	106	70	130			
Bromoform		10	ug/L	1.0	103	70	130			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Client: Trihydro Corporation
Project: FCSWDD

Report Date: 09/02/10
Work Order: C10080682

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW8260B										Batch: R136728
Sample ID: 31-Aug-10_LCS_3	53	Laboratory Control Sample				Run: 5975VOC1_100831A				08/31/10 11:01
Bromomethane		9.7	ug/L	1.0	97	70	130			
Carbon disulfide		11	ug/L	2.0	106	70	130			
Carbon tetrachloride		10	ug/L	1.0	105	70	130			
Chlorobenzene		10	ug/L	1.0	105	70	130			
Chlorodibromomethane		11	ug/L	1.0	106	70	130			
Chloroethane		10.0	ug/L	1.0	100	70	130			
Chloroform		10	ug/L	1.0	100	70	130			
Chloromethane		10	ug/L	1.0	103	70	130			
cis-1,2-Dichloroethene		9.9	ug/L	1.0	99	70	130			
cis-1,3-Dichloropropene		12	ug/L	1.0	117	70	130			
Dibromomethane		11	ug/L	1.0	107	70	130			
Ethylbenzene		11	ug/L	1.0	110	70	130			
Iodomethane		11	ug/L	1.0	109	70	130			
m+p-Xylenes		22	ug/L	1.0	110	70	130			
Methyl ethyl ketone		99	ug/L	20	99	70	130			
Methyl isobutyl ketone		100	ug/L	20	105	70	130			
Methylene chloride		9.8	ug/L	1.0	98	70	130			
o-Xylene		11	ug/L	1.0	108	70	130			
Styrene		11	ug/L	1.0	112	70	130			
Tetrachloroethene		11	ug/L	1.0	109	70	130			
Toluene		10	ug/L	1.0	104	70	130			
trans-1,2-Dichloroethene		11	ug/L	1.0	108	70	130			
trans-1,3-Dichloropropene		12	ug/L	1.0	122	70	130			
trans-1,4-Dichloro-2-butene		11	ug/L	1.0	110	70	130			
Trichloroethene		11	ug/L	1.0	107	70	130			
Trichlorofluoromethane		10	ug/L	1.0	100	70	130			
Vinyl acetate		13	ug/L	1.0	125	70	130			
Vinyl chloride		11	ug/L	1.0	108	70	130			
Xylenes, Total		33	ug/L	1.0	110	70	130			
Surr: 1,2-Dichlorobenzene-d4				1.0	107	80	120			
Surr: Dibromofluoromethane				1.0	95	70	130			
Surr: p-Bromofluorobenzene				1.0	106	80	120			
Surr: Toluene-d8				1.0	109	80	120			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

Workorder Receipt Checklist

C10080682

Trihydro Corporation

Login completed by: Edith McPike
Date Received: 8/18/2010

Reviewed by: BL2000\tedwards
Received by: em

Reviewed Date: 8/23/2010
Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature:	10°C On Ice		
Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☐	No ☐	Not Applicable ☑

Contact and Corrective Action Comments:

None

Chain of Custody and Analytical Request Record

ENERGY LABORATORIES

Page ____ of ____

PLEASE PRINT (Provide as much information as possible.)

Company Name:	Project Name, PWS, Permit, Etc.	Sample Origin	EPA/State Compliance:
Trihydro	FCSWDD	State: WY	Yes ☐ No ☐
Report Mail Address:	**Contact Name:** Phone/Fax:	Email:	Sampler: (Please Print)
350 Garfield Lander WY 82520	Bill Brewer 307 HS-7474		
Invoice Address:	**Invoice Contact & Phone:**	**Purchase Order:**	**Quote/Bottle Order:**
			31098

Special Report/Formats:

- ☐ DW
- ☐ POTW/WWTP
- ☐ State: _____
- ☐ Other: _____
- ☐ EDD/EDT (Electronic Data) Format: _____
- ☐ LEVEL IV
- ☐ NELAC

Number of Containers
Sample Type: A W S V B O D/W
Air Water Soils/Solids Vegetation Bioassay Other DW - Drinking Water

ANALYSIS REQUESTED

8260 VOCs

SEE ATTACHED

Standard Turnaround (TAT)

R U S H

Contact ELI prior to **RUSH** sample submittal for charges and scheduling – See Instruction Page

Comments:

WY DEQ SHWD APPA VOCs

Shipped by: FedEx

Cooler ID(s): C-1198

Receipt Temp: 10 °C

On Ice: Y N

Custody Seal: On Bottle Y N; On Cooler Y N

Intact Y N

Signature Match Y N

	SAMPLE IDENTIFICATION (Name, Location, Interval, etc.)	Collection Date	Collection Time	MATRIX
1	MW-25	8/17/10	17:00	H2O
2	MW-25 MS			
3	MW-25 MSD			
4	~~Water~~			
5	Equipment Blank			
6	TD-8-17-10	X	X	
7				
8				
9				
10				

LABORATORY USE ONLY

C10080688

Custody Record MUST be Signed

Relinquished by (print)	Date/Time	Signature	Received by (print)	Date/Time	Signature
Sam Halpenny	8/17/10 17:30	Sam Halpenny			

Received by Laboratory: [illegible] 8-18-10 9:00

Sample Disposal: Return to Client: _____ Lab Disposal: _____

In certain circumstances, samples submitted to Energy Laboratories, Inc. may be subcontracted to other certified laboratories in order to complete the analysis requested. This serves as notice of this possibility. All sub-contract data will be clearly notated on your analytical report.

Visit our web site at www.energylab.com for additional information, downloadable fee schedule, forms, and links

ATTACHMENT D

TIER II DATA VALIDATION REPORT SUMMARY

LABORATORY PROJECT ID: C10080682

Tier II Data Validation Report Summary

Client: Fremont County SWDD	Laboratory: Energy Laboratories, Casper, WY
Project Name: 2010-2011 Environmental Monitoring	Sample Matrix: Water
Project Number: 09Y-001-003	Sample Start Date: 8/17/2010
Date Validated: 10/15/2010	Sample End Date: 8/17/2010
Parameters Included: Volatile Organic Compounds (VOC) by Solid Waste 846 (SW846) Method 8260B	
Laboratory Project ID: C10080682	
Data Validator: Storm John, Environmental Statistician	

DATA EVALUATION CRITERIA SUMMARY

A Tier II Data Validation was performed by Trihydro Corporation's Chemical Data Evaluation Services Group on the analytical data report package generated by Energy Laboratories in Casper, WY evaluating samples from the Sand Draw Landfill site, located in Fremont County, WY.

Precision, accuracy, method compliance, and completeness of this data package were assessed during this data review. Precision was determined by evaluating the calculated relative percent difference (RPD) values of samples from field duplicate pairs. Laboratory accuracy was established by reviewing the demonstrated percent recoveries of matrix spike (MS) and matrix spike duplicate (MSD) samples, and of laboratory control samples (LCS) and laboratory control sample duplicates (LCSD) to verify that data are not biased. Additionally, field accuracy was established by collecting an equipment blank to monitor for possible ambient or cross contamination during sampling. Method compliance was established by reviewing holding times, detection limits, surrogate recoveries, method blanks, and the LCS and LCSD percent recoveries against method-specific requirements. Completeness was evaluated by determining the overall ratio of the number of samples planned versus the number of samples with valid analyses. Determination of completeness included a review of the chain-of-custody (CoC), laboratory analytical methods, and other necessary documents associated with this analytical data set.

Data were evaluated in general accordance with validation criteria set forth in the United States Environmental Protection Agency (USEPA) Contract Laboratory Program (CLP) National Functional Guidelines for Superfund Organic Methods Data Review, document number USEPA-540-R-08-01, June 2008 with additional reference to the USEPA CLP National Functional Guidelines for Organic Data Review, document number EPA 540/R-99-008, October 1999. Review of duplicates is conducted in accordance with USEPA Region 1 Laboratory Data Validation Functional Guidelines for Evaluation of Organic Analysis, December 1996 or as specified by the method (as applicable).

SAMPLE NUMBERS TABLE

Client Sample ID	Laboratory Sample Number
MW-25	C10080682-001
EQUIP BLANK	C10080682-004
BD-8-17-10	C10080682-005

Tier II Data Validation Report Summary

The samples were analyzed for the required analytes. Assessment of CoC completeness is included in Section #3. The laboratory data were reviewed to evaluate compliance with the required methods and the quality of the reported data. A leading check mark (✓) indicates that the referenced validation criteria were deemed acceptable. A preceding crossed circle (⊘) indicates validation criteria for which the data may have been qualified by the data validator. Details are noted in the tables below.

Validation Criteria

- ✓ Data Completeness
- ✓ CoC Documentation
- ⊘ Holding Times and Preservation
- ✓ Laboratory Blanks
- ✓ System Monitoring Compounds (i.e., Surrogates)
- ✓ Laboratory Control Samples/Laboratory Control Sample Duplicates (LCS/LCSD)
- ✓ Matrix Spike/Matrix Spike Duplicates (MS/MSD)
- ✓ Field Duplicates
- ✓ Equipment Blank

OVERALL DATA PACKAGE ASSESSMENT

Based on a data validation review, the data are acceptable as delivered; exceptions (i.e., rejected data) are noted below. Data qualified by the laboratory are discussed in Section #2.

The purpose of validating data and assigning qualifiers is to assist in proper data interpretation. Data which are not qualified meet the site data quality objectives. If values are assigned qualifiers other than an R (rejected, data not usable), the data may be used for site evaluation, with the reasons for qualification being given consideration when interpreting sample concentrations. Data points which are assigned an R qualifier should not be used for site evaluation purposes. Text identified in **bold font** indicates that further action and/or qualification of the data were required. Data were qualified with J data flags by the laboratory if the result was greater than or equal to the method detection limit (MDL) but less than the limit of quantitation (LOQ). Laboratory J flags were preserved in the data and included in the Data Qualification Summary table at the end of this report.

Data qualifiers used during this validation included:

J – Estimated concentration

UJ – Estimated reporting limit

Data Completeness

The analyses were performed as requested on the CoC records. The associated samples were received by the laboratory and analyzed properly. No data points were rejected. The data completeness measure for this data package is 100% and is acceptable.

VALIDATION CRITERIA CHECKLIST	
1. Was the report free of non-conformances related to the analytical data identified by the laboratory?	Yes
Comments: No non-conformances related to the analytical data were discussed in the Case Narrative.	
2. Were data qualification flags or other notes used by the laboratory? If yes, define.	Yes
Comments: The following data qualification flags were used by the laboratory. J: Estimated value. The analyte was present but less than the reporting limit. S: Spike recovery outside of advisory limits.	
3. Were sample CoC forms complete?	Yes
Comments: The CoC forms were complete from the field to the laboratory. Custody was maintained as evidenced by proper signatures, dates, and times of receipt.	
4. Were detection limits in accordance with the quality assurance project plan (QAPP), permit, or method, or indicated as acceptable?	Yes
Comments: The detection limits were acceptable. No dilutions were required.	
5. Were the requested analytical methods in compliance with the QAPP, permit, or CoC?	Yes
Comments: The requested analytical methods were in compliance with the CoC.	
6. Were samples received in good condition within method specified requirements?	No
Comments: The samples were received on ice, intact, and in good condition but with cooler temperatures outside the 4°C +/- 2°C acceptance range at 10.0°C as reported on the Work Order Receipt Checklist. The laboratory reported that ice was present in the cooler. **Based on shipment logs and information from the sampler, the samples were packed late in the day on August 17, 2010 and shipped. The samples arrived at the laboratory and were logged at 9:00AM the next day. Based on professional judgment of the validator, the analytes were qualified as J for detected analytes and UJ for undetected analytes.**	
7. Were samples analyzed within method specified or technical holding times?	Yes
Comments: The samples were analyzed within the method specified holding times.	
8. Were reported units appropriate for the sample matrix/matrices and method(s) of analyses?	Yes
Comments: The sample results were reported in units of µg/L and are acceptable for the matrices and analyses requested.	
9. Do the laboratory reports include all constituents requested to be reported?	Yes
Comments: The laboratory reported the requested constituents in accordance with the CoC.	
10. Was there indication from the laboratory that the initial or continuing calibration verification results were within acceptable limits?	N/A
Comments: Initial and continuing calibration data were not included as part of this data set; however, these data are assumed to be acceptable as the laboratory did not note that any calibration verification results were outside acceptable limits.	
11. Was the total number of laboratory blank samples prepared equal to at least 5% of the total number of samples, or analyzed as required by the method?	Yes
Comments: The total number of laboratory blank samples prepared was equal to at least 5% of the total number of samples.	
12. Were laboratory blank samples free of analyte contamination?	Yes
Comments: The laboratory blank samples were free of analyte contamination.	

VALIDATION CRITERIA CHECKLIST	
13. Was the total number of matrix spike samples prepared equal to at least 5% of the total number of samples, or analyzed as required by the method?	Yes
Comments: The total number of matrix spike samples prepared was equal to at least 5% of the total number of samples. Matrix spike samples for Method 8260B analysis batch R136728 were prepared from sample MW-25.	
14. Were MS/MSD percent recoveries and MS/MSD RPDs within data validation or laboratory quality control (QC) limits?	Yes
Comments: The project specific MS/MSD percent recoveries and MS/MSD RPDs were within laboratory QC limits.	
15. Was the total number of LCSs analyzed equal to at least 5% of the total number of samples, or analyzed as required by the method?	Yes
Comments: The total number of LSC/LCSD samples analyzed was equal to at least 5% of the total number of samples required.	
16. Were LCS/LCSD percent recoveries and LCS/LCSD RPDs within data validation or laboratory QC limits?	Yes
Comments: The LCS/LCSD percent recoveries and LCS/LCSD RPDs were within laboratory QC limits.	
17. Were surrogate recoveries within laboratory QC limits?	No
Comments: The surrogate recoveries were within laboratory QC limits with the following exceptions. The recovery of the surrogate *1,2-Dichlorobenzene-D_4* was outside laboratory QC limits of 80-120% at 128%, 122%, and 126% in samples BD-8-17-10, Equipment Blank, and MW-25, respectively. None of the analytes associated with this surrogate was detected in the samples; therefore, no data qualification was necessary.	
18. Was the number of equipment, trip, or field blanks collected equal to at least 10% of the total number of samples, or as required by the project guidelines, QAPP, SAP, or permit?	Yes
Comments: The number of equipment, trip, or field blanks collected was equal to at least 10% of the total number of samples. One equipment blank, EQUIPMENT BLANK, was collected with the data set. No trip or field blank were submitted with this data set and were not required per the sampling event.	
19. Were the trip blank, field blank, and/or equipment blank samples free of analyte contamination?	No

Comments: The equipment blank sample was free of analyte contamination with the exceptions shown in the table below.

Method	Analyte	Detected Concentration (µg/L)
SW 8260B	Acetone	4
SW 8260B	Bromodichloromethane	0.7
SW 8260B	Bromoform	0.1
SW 8260B	Chlorodibromomethane	0.4
SW 8260B	Chloroform	3.0
SW 8260B	Methyl ethyl ketone	2
SW 8260B	Toluene	0.8

Acetone was detected in samples BD-8-17-10 and MW-25 at concentrations greater than 10 times the blank concentration. The remaining analytes were not detected in the associated samples. No further action was deemed necessary.

20. Was the number of field duplicates collected equal to at least 10% of the total number of samples, or as required by the project guidelines, QAPP, SAP, or permit?	Yes
Comments: The number of field duplicates collected was equal to at least 10% of the total number of samples. Sample BD-8-17-10 was collected as a duplicate of sample MW-25.	

VALIDATION CRITERIA CHECKLIST	
21. Were field duplicate RPD values within data validation QC limits (soil 0-50%, water 0-30%, or air 0-25%)?	Yes
Comments: The field duplicate RPD values were within data validation QC limits of 0-30% for water. Field duplicate RPD values are presented in the Field Duplicate Summary table at the end of this report. Field duplicate RPD values could not be calculated for those analytes which were not detected in both the duplicate and parent sample.	
22. Were laboratory duplicate RPD values within laboratory QC limits?	N/A
Comments: A laboratory duplicate was not prepared with this data set.	

FIELD DUPLICATE SUMMARY

Client Sample ID: MW-25 Field Duplicate Sample ID: BD-8-17-10			
Analyte	Laboratory Result (µg/L)	Duplicate Result (µg/L)	Relative Percent Difference (RPD)
Acetone	55	42	26.8%
Trichlorofluoromethane	0.4	0.4	0%

Field duplicate RPD control limits are not to exceed 30% for water as established by USEPA Region 1 Laboratory Data Validation Function Guidelines for Evaluation of Organic Analysis, December 1996.

DATA QUALIFICATION SUMMARY

Analyte	Method	Field Sample ID	Lab Sample ID	Result (µg/L)	Reviewer Qualifier	Reviewer Qualifier Reason
1,1,1,2-Tetrachloroethane	SW8260B	MW-25	C10080682-001	ND(1.0)	UJ	Sample received with temperature above 6 degrees Celsius.
1,1,1,2-Tetrachloroethane	SW8260B	Equipment Blank	C10080682-004	ND(1.0)	UJ	Sample received with temperature above 6 degrees Celsius.
1,1,1,2-Tetrachloroethane	SW8260B	BD-8-17-10	C10080682-005	ND(1.0)	UJ	Sample received with temperature above 6 degrees Celsius.
1,1,1-Trichloroethane	SW8260B	MW-25	C10080682-001	ND(1.0)	UJ	Sample received with temperature above 6 degrees Celsius.
1,1,1-Trichloroethane	SW8260B	Equipment Blank	C10080682-004	ND(1.0)	UJ	Sample received with temperature above 6 degrees Celsius.
1,1,1-Trichloroethane	SW8260B	BD-8-17-10	C10080682-005	ND(1.0)	UJ	Sample received with temperature above 6 degrees Celsius.
1,1,2,2-Tetrachloroethane	SW8260B	MW-25	C10080682-001	ND(1.0)	UJ	Sample received with temperature above 6 degrees Celsius.
1,1,2,2-Tetrachloroethane	SW8260B	Equipment Blank	C10080682-004	ND(1.0)	UJ	Sample received with temperature above 6 degrees Celsius.
1,1,2,2-Tetrachloroethane	SW8260B	BD-8-17-10	C10080682-005	ND(1.0)	UJ	Sample received with temperature above 6 degrees Celsius.
1,1,2-Trichloroethane	SW8260B	MW-25	C10080682-001	ND(1.0)	UJ	Sample received with temperature above 6 degrees Celsius.
1,1,2-Trichloroethane	SW8260B	Equipment Blank	C10080682-004	ND(1.0)	UJ	Sample received with temperature above 6 degrees Celsius.
1,1,2-Trichloroethane	SW8260B	BD-8-17-10	C10080682-005	ND(1.0)	UJ	Sample received with temperature above 6 degrees Celsius.
1,1-Dichloroethane	SW8260B	MW-25	C10080682-001	ND(1.0)	UJ	Sample received with temperature above 6 degrees Celsius.
1,1-Dichloroethane	SW8260B	Equipment Blank	C10080682-004	ND(1.0)	UJ	Sample received with temperature above 6 degrees Celsius.
1,1-Dichloroethane	SW8260B	BD-8-17-10	C10080682-005	ND(1.0)	UJ	Sample received with temperature above 6 degrees Celsius.
1,1-Dichloroethene	SW8260B	MW-25	C10080682-001	ND(1.0)	UJ	Sample received with temperature above 6 degrees Celsius.
1,1-Dichloroethene	SW8260B	Equipment Blank	C10080682-004	ND(1.0)	UJ	Sample received with temperature above 6 degrees Celsius.
1,1-Dichloroethene	SW8260B	BD-8-17-10	C10080682-005	ND(1.0)	UJ	Sample received with temperature above 6 degrees Celsius.
1,2,3-Trichloropropane	SW8260B	MW-25	C10080682-001	ND(1.0)	UJ	Sample received with temperature above 6 degrees Celsius.
1,2,3-Trichloropropane	SW8260B	Equipment Blank	C10080682-004	ND(1.0)	UJ	Sample received with temperature above 6 degrees Celsius.
1,2,3-Trichloropropane	SW8260B	BD-8-17-10	C10080682-005	ND(1.0)	UJ	Sample received with temperature above 6 degrees Celsius.
1,2-Dibromo 3-chloropropane	SW8260B	MW-25	C10080682-001	ND(5.0)	UJ	Sample received with temperature above 6 degrees Celsius.
1,2-Dibromo 3-chloropropane	SW8260B	Equipment Blank	C10080682-004	ND(5.0)	UJ	Sample received with temperature above 6 degrees Celsius.
1,2-Dibromo 3-chloropropane	SW8260B	BD-8-17-10	C10080682-005	ND(5.0)	UJ	Sample received with temperature above 6 degrees Celsius.
1,2-Dibromoethane	SW8260B	MW-25	C10080682-001	ND(1.0)	UJ	Sample received with temperature above 6 degrees Celsius.
1,2-Dibromoethane	SW8260B	Equipment Blank	C10080682-004	ND(1.0)	UJ	Sample received with temperature above 6 degrees Celsius.
1,2-Dibromoethane	SW8260B	BD-8-17-10	C10080682-005	ND(1.0)	UJ	Sample received with temperature above 6 degrees Celsius.

Analyte	Method	Field Sample ID	Lab Sample ID	Result (µg/L)	Reviewer Qualifier	Reviewer Qualifier Reason
1,2-Dichlorobenzene	SW8260B	MW-25	C10080682-001	ND(1.0)	UJ	Sample received with temperature above 6 degrees Celsius.
1,2-Dichlorobenzene	SW8260B	Equipment Blank	C10080682-004	ND(1.0)	UJ	Sample received with temperature above 6 degrees Celsius.
1,2-Dichlorobenzene	SW8260B	BD-8-17-10	C10080682-005	ND(1.0)	UJ	Sample received with temperature above 6 degrees Celsius.
1,2-Dichloroethane	SW8260B	MW-25	C10080682-001	ND(1.0)	UJ	Sample received with temperature above 6 degrees Celsius.
1,2-Dichloroethane	SW8260B	Equipment Blank	C10080682-004	ND(1.0)	UJ	Sample received with temperature above 6 degrees Celsius.
1,2-Dichloroethane	SW8260B	BD-8-17-10	C10080682-005	ND(1.0)	UJ	Sample received with temperature above 6 degrees Celsius.
1,2-Dichloropropane	SW8260B	MW-25	C10080682-001	ND(1.0)	UJ	Sample received with temperature above 6 degrees Celsius.
1,2-Dichloropropane	SW8260B	Equipment Blank	C10080682-004	ND(1.0)	UJ	Sample received with temperature above 6 degrees Celsius.
1,2-Dichloropropane	SW8260B	BD-8-17-10	C10080682-005	ND(1.0)	UJ	Sample received with temperature above 6 degrees Celsius.
1,4-Dichlorobenzene	SW8260B	MW-25	C10080682-001	ND(1.0)	UJ	Sample received with temperature above 6 degrees Celsius.
1,4-Dichlorobenzene	SW8260B	Equipment Blank	C10080682-004	ND(1.0)	UJ	Sample received with temperature above 6 degrees Celsius.
1,4-Dichlorobenzene	SW8260B	BD-8-17-10	C10080682-005	ND(1.0)	UJ	Sample received with temperature above 6 degrees Celsius.
2-Butanone	SW8260B	MW-25	C10080682-001	ND(20)	UJ	Sample received with temperature above 6 degrees Celsius.
2-Butanone	SW8260B	Equipment Blank	C10080682-004	2	J	Sample received with temperature above 6 degrees Celsius.
2-Butanone	SW8260B	BD-8-17-10	C10080682-005	ND(20)	UJ	Sample received with temperature above 6 degrees Celsius.
2-Hexanone	SW8260B	MW-25	C10080682-001	ND(20)	UJ	Sample received with temperature above 6 degrees Celsius.
2-Hexanone	SW8260B	Equipment Blank	C10080682-004	ND(20)	UJ	Sample received with temperature above 6 degrees Celsius.
2-Hexanone	SW8260B	BD-8-17-10	C10080682-005	ND(20)	UJ	Sample received with temperature above 6 degrees Celsius.
4-Methyl 2-Pentanone	SW8260B	MW-25	C10080682-001	ND(20)	UJ	Sample received with temperature above 6 degrees Celsius.
4-Methyl 2-Pentanone	SW8260B	Equipment Blank	C10080682-004	ND(20)	UJ	Sample received with temperature above 6 degrees Celsius.
4-Methyl 2-Pentanone	SW8260B	BD-8-17-10	C10080682-005	ND(20)	UJ	Sample received with temperature above 6 degrees Celsius.
Acetone	SW8260B	MW-25	C10080682-001	55	J	Sample received with temperature above 6 degrees Celsius.
Acetone	SW8260B	Equipment Blank	C10080682-004	4	J	Sample received with temperature above 6 degrees Celsius.
Acetone	SW8260B	BD-8-17-10	C10080682-005	42	J	Sample received with temperature above 6 degrees Celsius.
Acrylonitrile	SW8260B	MW-25	C10080682-001	ND(20)	UJ	Sample received with temperature above 6 degrees Celsius.
Acrylonitrile	SW8260B	Equipment Blank	C10080682-004	ND(20)	UJ	Sample received with temperature above 6 degrees Celsius.
Acrylonitrile	SW8260B	BD-8-17-10	C10080682-005	ND(20)	UJ	Sample received with temperature above 6 degrees Celsius.
Benzene	SW8260B	MW-25	C10080682-001	ND(1.0)	UJ	Sample received with temperature above 6 degrees Celsius.

Analyte	Method	Field Sample ID	Lab Sample ID	Result (µg/L)	Reviewer Qualifier	Reviewer Qualifier Reason
Benzene	SW8260B	Equipment Blank	C10080682-004	ND(1.0)	UJ	Sample received with temperature above 6 degrees Celsius.
Benzene	SW8260B	BD-8-17-10	C10080682-005	ND(1.0)	UJ	Sample received with temperature above 6 degrees Celsius.
Bromochloromethane	SW8260B	MW-25	C10080682-001	ND(1.0)	UJ	Sample received with temperature above 6 degrees Celsius.
Bromochloromethane	SW8260B	Equipment Blank	C10080682-004	ND(1.0)	UJ	Sample received with temperature above 6 degrees Celsius.
Bromochloromethane	SW8260B	BD-8-17-10	C10080682-005	ND(1)	UJ	Sample received with temperature above 6 degrees Celsius.
Bromodichloromethane	SW8260B	MW-25	C10080682-001	ND(1.0)	UJ	Sample received with temperature above 6 degrees Celsius.
Bromodichloromethane	SW8260B	Equipment Blank	C10080682-004	0.7	J	Sample received with temperature above 6 degrees Celsius.
Bromodichloromethane	SW8260B	BD-8-17-10	C10080682-005	ND(1.0)	UJ	Sample received with temperature above 6 degrees Celsius.
Bromoform	SW8260B	MW-25	C10080682-001	ND(1)	UJ	Sample received with temperature above 6 degrees Celsius.
Bromoform	SW8260B	Equipment Blank	C10080682-004	0.1	J	Sample received with temperature above 6 degrees Celsius.
Bromoform	SW8260B	BD-8-17-10	C10080682-005	ND(1.0)	UJ	Sample received with temperature above 6 degrees Celsius.
Bromomethane	SW8260B	MW-25	C10080682-001	ND(1.0)	UJ	Sample received with temperature above 6 degrees Celsius.
Bromomethane	SW8260B	Equipment Blank	C10080682-004	ND(1.0)	UJ	Sample received with temperature above 6 degrees Celsius.
Bromomethane	SW8260B	BD-8-17-10	C10080682-005	ND(1.0)	UJ	Sample received with temperature above 6 degrees Celsius.
Carbon Disulfide	SW8260B	MW-25	C10080682-001	ND(2.0)	UJ	Sample received with temperature above 6 degrees Celsius.
Carbon Disulfide	SW8260B	Equipment Blank	C10080682-004	ND(2.0)	UJ	Sample received with temperature above 6 degrees Celsius.
Carbon Disulfide	SW8260B	BD-8-17-10	C10080682-005	ND(2.0)	UJ	Sample received with temperature above 6 degrees Celsius.
Carbon tetrachloride	SW8260B	MW-25	C10080682-001	ND(1.0)	UJ	Sample received with temperature above 6 degrees Celsius.
Carbon tetrachloride	SW8260B	Equipment Blank	C10080682-004	ND(1.0)	UJ	Sample received with temperature above 6 degrees Celsius.
Carbon tetrachloride	SW8260B	BD-8-17-10	C10080682-005	ND(1.0)	UJ	Sample received with temperature above 6 degrees Celsius.
Chlorobenzene	SW8260B	MW-25	C10080682-001	ND(1.0)	UJ	Sample received with temperature above 6 degrees Celsius.
Chlorobenzene	SW8260B	Equipment Blank	C10080682-004	ND(1.0)	UJ	Sample received with temperature above 6 degrees Celsius.
Chlorobenzene	SW8260B	BD-8-17-10	C10080682-005	ND(1.0)	UJ	Sample received with temperature above 6 degrees Celsius.
Chloroethane	SW8260B	MW-25	C10080682-001	ND(1.0)	UJ	Sample received with temperature above 6 degrees Celsius.
Chloroethane	SW8260B	Equipment Blank	C10080682-004	ND(1.0)	UJ	Sample received with temperature above 6 degrees Celsius.
Chloroethane	SW8260B	BD-8-17-10	C10080682-005	ND(1.0)	UJ	Sample received with temperature above 6 degrees Celsius.
Chloroform	SW8260B	MW-25	C10080682-001	ND(1.0)	UJ	Sample received with temperature above 6 degrees Celsius.
Chloroform	SW8260B	Equipment Blank	C10080682-004	3.0	J	Sample received with temperature above 6 degrees Celsius.

Analyte	Method	Field Sample ID	Lab Sample ID	Result (µg/L)	Reviewer Qualifier	Reviewer Qualifier Reason
Chloroform	SW8260B	BD-8-17-10	C10080682-005	ND(1.0)	UJ	Sample received with temperature above 6 degrees Celsius.
Chloromethane	SW8260B	MW-25	C10080682-001	ND(1.0)	UJ	Sample received with temperature above 6 degrees Celsius.
Chloromethane	SW8260B	Equipment Blank	C10080682-004	ND(1.0)	UJ	Sample received with temperature above 6 degrees Celsius.
Chloromethane	SW8260B	BD-8-17-10	C10080682-005	ND(1.0)	UJ	Sample received with temperature above 6 degrees Celsius.
cis-1,2-Dichloroethene	SW8260B	MW-25	C10080682-001	ND(1.0)	UJ	Sample received with temperature above 6 degrees Celsius.
cis-1,2-Dichloroethene	SW8260B	Equipment Blank	C10080682-004	ND(1.0)	UJ	Sample received with temperature above 6 degrees Celsius.
cis-1,2-Dichloroethene	SW8260B	BD-8-17-10	C10080682-005	ND(1.0)	UJ	Sample received with temperature above 6 degrees Celsius.
cis-1,3-dichloropropene	SW8260B	MW-25	C10080682-001	ND(1.0)	UJ	Sample received with temperature above 6 degrees Celsius.
cis-1,3-dichloropropene	SW8260B	Equipment Blank	C10080682-004	ND(1.0)	UJ	Sample received with temperature above 6 degrees Celsius.
cis-1,3-dichloropropene	SW8260B	BD-8-17-10	C10080682-005	ND(1.0)	UJ	Sample received with temperature above 6 degrees Celsius.
Dibromochloromethane	SW8260B	MW-25	C10080682-001	ND(1.0)	UJ	Sample received with temperature above 6 degrees Celsius.
Dibromochloromethane	SW8260B	Equipment Blank	C10080682-004	0.4	J	Sample received with temperature above 6 degrees Celsius.
Dibromochloromethane	SW8260B	BD-8-17-10	C10080682-005	ND(1.0)	UJ	Sample received with temperature above 6 degrees Celsius.
Dibromomethane	SW8260B	MW-25	C10080682-001	ND(1.0)	UJ	Sample received with temperature above 6 degrees Celsius.
Dibromomethane	SW8260B	Equipment Blank	C10080682-004	ND(1.0)	UJ	Sample received with temperature above 6 degrees Celsius.
Dibromomethane	SW8260B	BD-8-17-10	C10080682-005	ND(1.0)	UJ	Sample received with temperature above 6 degrees Celsius.
Ethylbenzene	SW8260B	MW-25	C10080682-001	ND(1.0)	UJ	Sample received with temperature above 6 degrees Celsius.
Ethylbenzene	SW8260B	Equipment Blank	C10080682-004	ND(1.0)	UJ	Sample received with temperature above 6 degrees Celsius.
Ethylbenzene	SW8260B	BD-8-17-10	C10080682-005	ND(1.0)	UJ	Sample received with temperature above 6 degrees Celsius.
m,p-Xylene	SW8260B	MW-25	C10080682-001	ND(1.0)	UJ	Sample received with temperature above 6 degrees Celsius.
m,p-Xylene	SW8260B	Equipment Blank	C10080682-004	ND(1.0)	UJ	Sample received with temperature above 6 degrees Celsius.
m,p-Xylene	SW8260B	BD-8-17-10	C10080682-005	ND(1.0)	UJ	Sample received with temperature above 6 degrees Celsius.
Methyl Iodide	SW8260B	MW-25	C10080682-001	ND(1.0)	UJ	Sample received with temperature above 6 degrees Celsius.
Methyl Iodide	SW8260B	Equipment Blank	C10080682-004	ND(1.0)	UJ	Sample received with temperature above 6 degrees Celsius.
Methyl Iodide	SW8260B	BD-8-17-10	C10080682-005	ND(1.0)	UJ	Sample received with temperature above 6 degrees Celsius.
Methylene Chloride	SW8260B	MW-25	C10080682-001	ND(1.0)	UJ	Sample received with temperature above 6 degrees Celsius.
Methylene Chloride	SW8260B	Equipment Blank	C10080682-004	ND(1.0)	UJ	Sample received with temperature above 6 degrees Celsius.
Methylene Chloride	SW8260B	BD-8-17-10	C10080682-005	ND(1.0)	UJ	Sample received with temperature above 6 degrees Celsius.

Analyte	Method	Field Sample ID	Lab Sample ID	Result (µg/L)	Reviewer Qualifier	Reviewer Qualifier Reason
o-Xylene	SW8260B	MW-25	C10080682-001	ND(1.0)	UJ	Sample received with temperature above 6 degrees Celsius.
o-Xylene	SW8260B	Equipment Blank	C10080682-004	ND(1.0)	UJ	Sample received with temperature above 6 degrees Celsius.
o-Xylene	SW8260B	BD-8-17-10	C10080682-005	ND(1.0)	UJ	Sample received with temperature above 6 degrees Celsius.
Styrene	SW8260B	MW-25	C10080682-001	ND(1.0)	UJ	Sample received with temperature above 6 degrees Celsius.
Styrene	SW8260B	Equipment Blank	C10080682-004	ND(1.0)	UJ	Sample received with temperature above 6 degrees Celsius.
Styrene	SW8260B	BD-8-17-10	C10080682-005	ND(1.0)	UJ	Sample received with temperature above 6 degrees Celsius.
Tetrachloroethene	SW8260B	MW-25	C10080682-001	ND(1.0)	UJ	Sample received with temperature above 6 degrees Celsius.
Tetrachloroethene	SW8260B	Equipment Blank	C10080682-004	ND(1.0)	UJ	Sample received with temperature above 6 degrees Celsius.
Tetrachloroethene	SW8260B	BD-8-17-10	C10080682-005	ND(1.0)	UJ	Sample received with temperature above 6 degrees Celsius.
Toluene	SW8260B	MW-25	C10080682-001	ND(1)	UJ	Sample received with temperature above 6 degrees Celsius.
Toluene	SW8260B	Equipment Blank	C10080682-004	0.8	J	Sample received with temperature above 6 degrees Celsius.
Toluene	SW8260B	BD-8-17-10	C10080682-005	ND(1.0)	UJ	Sample received with temperature above 6 degrees Celsius.
trans-1,2-Dichloroethene	SW8260B	MW-25	C10080682-001	ND(1.0)	UJ	Sample received with temperature above 6 degrees Celsius.
trans-1,2-Dichloroethene	SW8260B	Equipment Blank	C10080682-004	ND(1.0)	UJ	Sample received with temperature above 6 degrees Celsius.
trans-1,2-Dichloroethene	SW8260B	BD-8-17-10	C10080682-005	ND(1.0)	UJ	Sample received with temperature above 6 degrees Celsius.
trans-1,3-Dichloropropene	SW8260B	MW-25	C10080682-001	ND(1.0)	UJ	Sample received with temperature above 6 degrees Celsius.
trans-1,3-Dichloropropene	SW8260B	Equipment Blank	C10080682-004	ND(1.0)	UJ	Sample received with temperature above 6 degrees Celsius.
trans-1,3-Dichloropropene	SW8260B	BD-8-17-10	C10080682-005	ND(1.0)	UJ	Sample received with temperature above 6 degrees Celsius.
trans-1,4-Dichloro-2-Butene	SW8260B	MW-25	C10080682-001	ND(1.0)	UJ	Sample received with temperature above 6 degrees Celsius.
trans-1,4-Dichloro-2-Butene	SW8260B	Equipment Blank	C10080682-004	ND(1.0)	UJ	Sample received with temperature above 6 degrees Celsius.
trans-1,4-Dichloro-2-Butene	SW8260B	BD-8-17-10	C10080682-005	ND(1.0)	UJ	Sample received with temperature above 6 degrees Celsius.
Trichloroethene	SW8260B	MW-25	C10080682-001	ND(1.0)	UJ	Sample received with temperature above 6 degrees Celsius.
Trichloroethene	SW8260B	Equipment Blank	C10080682-004	ND(1.0)	UJ	Sample received with temperature above 6 degrees Celsius.
Trichloroethene	SW8260B	BD-8-17-10	C10080682-005	ND(1.0)	UJ	Sample received with temperature above 6 degrees Celsius.
Trichlorofluoromethane	SW8260B	MW-25	C10080682-001	0.4	J	Sample received with temperature above 6 degrees Celsius.
Trichlorofluoromethane	SW8260B	Equipment Blank	C10080682-004	ND(1.0)	UJ	Sample received with temperature above 6 degrees Celsius.
Trichlorofluoromethane	SW8260B	BD-8-17-10	C10080682-005	0.4	J	Sample received with temperature above 6 degrees Celsius.
Vinyl Acetate	SW8260B	MW-25	C10080682-001	ND(1.0)	UJ	Sample received with temperature above 6 degrees Celsius.

Analyte	Method	Field Sample ID	Lab Sample ID	Result (µg/L)	Reviewer Qualifier	Reviewer Qualifier Reason
Vinyl Acetate	SW8260B	Equipment Blank	C10080682-004	ND(1.0)	UJ	Sample received with temperature above 6 degrees Celsius.
Vinyl Acetate	SW8260B	BD-8-17-10	C10080682-005	ND(1.0)	UJ	Sample received with temperature above 6 degrees Celsius.
Vinyl Chloride	SW8260B	MW-25	C10080682-001	ND(1.0)	UJ	Sample received with temperature above 6 degrees Celsius.
Vinyl Chloride	SW8260B	Equipment Blank	C10080682-004	ND(1.0)	UJ	Sample received with temperature above 6 degrees Celsius.
Vinyl Chloride	SW8260B	BD-8-17-10	C10080682-005	ND(1.0)	UJ	Sample received with temperature above 6 degrees Celsius.
Xylenes, Total	SW8260B	MW-25	C10080682-001	ND(1.0)	UJ	Sample received with temperature above 6 degrees Celsius.
Xylenes, Total	SW8260B	Equipment Blank	C10080682-004	ND(1.0)	UJ	Sample received with temperature above 6 degrees Celsius.
Xylenes, Total	SW8260B	BD-8-17-10	C10080682-005	ND(1.0)	UJ	Sample received with temperature above 6 degrees Celsius.