Premier Environmental Services

DATA VALIDATION SUMMARY REPORT
OF THE
LAWRENCE AVIATION SUPERFUND SITE
PORT JEFFERSON, NY

ORGANIC AND INORGANIC ANALYSES
IN AQUEOUS SAMPLES

TEST AMERICA LABORATORIES, INC.
SOUTH BURLINGTON, VT

SDG NUMBER: 200-3445-1

March, 2011

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DATA VALIDATION FOR:	**Volatile Organic Compounds (VOC's)**
SITE:	**Lawrence Aviation Superfund Site**
CONTRACT LAB:	**Test America Laboratories, Inc. South Burlington, VT**
PROJECT NO.:	**200-3445-1**
REVIEWER:	**Renee Cohen**
DATE REVIEW COMPLETED:	**March, 2011**
MATRIX:	**Aqueous**

The data validation was performed according to the guidelines in the USEPA National Functional Guidelines for Superfund Organic Methods Data Review (EPA-540-R-08-01, June 2008). All data are considered valid and acceptable except those analytes which have been deemed unusable "R" (unreliable). Due to various QC problems some analytes may have been qualified with a "J" (estimated), "N" (presumptive evidence for the presence of the material), "U" (non-detect), or "JN" (presumptive evidence for the presence of the material at an estimated value) flag. All actions are detailed on the attached sheets.

Table 1 of this report includes a cross reference between the field sample ID and laboratory sample ID used to perform data validation. Definitions of the data qualifiers that may be used in this report are located in Appendix A of this report. Qualified data result pages are located in Appendix B of this report. Copies of the Chain of Custody (COC) documents are located in Appendix C of this report.

This sample set included the analysis of six (6) aqueous samples, one (1) Field Blank sample and one (1) Trip Blank sample. The samples were collected January 19, 2011 and January 20, 2011. The samples were shipped to Test America Laboratories located in South Burlington, VT. They were received on January 22, 2011 for the analyses requested on the COC documentation. The samples in this data set were analyzed for Volatile Organic Analytes (VOA) in accordance with USEPA CLP Method SOM01.2 trace level analyses for the aqueous samples in this data set.

ORGANIC DATA ASSESSMENT

1. OVERVIEW:

Samples associated with this data set were analyzed for Volatile Organic Analytes (VOA) as noted by the COC documentation that accompanied the sample set to the laboratory. All analyses were performed in accordance with USEPA CLP Method SOM01.2 for Trace Level Water Analyses. A summary of the applicable QC will be discussed at each section of the report.

Laboratory report 200-3445 consists of the analysis of six (6) aqueous samples, one (1) Field Blank sample and one (1) Trip Blank sample. These samples are summarized in Table 1 of this report. Each of these samples was analyzed for Volatile Organic Analytes.

2. HOLDING TIME:

The amount of an analyte in a sample can change with time due to chemical instability, degradation, volatilization, etc. If the specified holding time is exceeded, the data may not be valid. The USEPA CLP method specifies Technical Holding times for aqueous and solid and soil samples. The Technical Holding Time is based on collection date. The holding time for a properly preserved aqueous sample that is cooled and pH preserved to 2 or below is fourteen (14) days from sample collection.

The samples in laboratory report 200-13445 were collected January 19-20, 2011. The samples were received at the laboratory on January 22, 2011. All aqueous sample analyses associated with this data set were completed by January 28, 2011. All sample analyses were performed within the technical holding times cited in this method.

3. SURROGATES:

Samples to be analyzed for Volatile Organic Analytes (VOA) are fortified with either thirteen (13) or fourteen (14) Deuterated Monitoring Compounds (DMC's). These DMC's are added to each sample prior to sample purging. The method recommended Deuterated Monitoring Surrogate Compounds include:

Vinyl Chloride-d3	**Chloroethane-d5**
1,1-Dichloroethene-d2	**2-Butanone-d5**
Chloroform-d	**1,2-Dichloroethane-d4**
Benzene-d6	**1,2-Dichloropropane-d6**
Toluene-d8	**trans-1,3-Dichloropropene-d4**
2-Hexanone-d5	**1,4-Dioxane-d8****
1,1,2,2-Tetrachloroethane-d2	**1,2-Dichlorobenzene-d4**

**** only reported in the low/medium non-aqueous Volatile Organic Analyses.**

The laboratory reported CLP method specified recovery limits that are cited for the aqueous samples reported in this data set. 1,4-Dioxane-d8 is not added as a Deuterated Monitoring Compound (DMC) in the Trace Volatile Organic Analyses associated with this data set.

The recovery of each Deuterated Monitoring Compound (DMC) met QC criteria in each of the aqueous field samples associated with this data set.

ORGANIC DATA ASSESSMENT

4. MATRIX SPIKE/SPIKE DUPLICATE, MS/MSD:

The MS/MSD data are generated to determine the long-term precision and accuracy of the analytical method in various matrices and to demonstrate acceptable compound recovery by the laboratory at the time of sample analysis. The MS/MSD may be used in conjunction with other QC criteria for additional qualification of data.

Site Specific MS/MSD analysis was not reported with the samples in this data set.

5. BLANK CONTAMINATION:

Quality assurance (QA) blanks, such as the method, trip, field, or rinse blanks are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Trip blanks measure cross-contamination of samples during shipment. Field and rinse blanks measure cross-contamination of samples during field operations. Samples were only qualified with those QC samples associated with the particular blank.

This method requires the preparation and analysis of a laboratory storage blank. This laboratory storage blank is kept with the site samples and analyzed with the site samples.

A) Method Blank contamination

Two (2) method blank samples are associated with the Trace Level Volatile Organic analyses (aqueous samples) in this data set. Each of these method blank samples was free from contamination of target analytes with the exception that listed below:

Date of Analysis	Batch ID	Analyte	Concentration (ug/l)
1/24/11	12583	Carbon Disulfide	0.095 J
		Chloroform	0.050 J
		Methyl tert butyl ether	0.068 J
		TIC – RT 6.92	3.2 XJ
		TIC – RT 7.86	0.65 JN
		TIC – RT 10.69	0.63 J
		Total Alkanes	14 J
1/28/11	12879	Acetone	1.5 J
		Carbon Disulfide	0.10 J
		Methyl tert butyl ether	0.079
		Trichloroethene	0.12
		Tetrachloroethene	0.053
		TIC – RT 6.92	3.1 XJ
		TIC – RT 7.86	1.1 JN
		TIC – RT 10.69	1.1 J
		Total Alkanes	13 J

The TIC detected at retention time 6.92 has been qualified "J" estimated and "X" to indicate a contaminant this is related to the Deuterated Monitoring Compound (DMC) and column bleed. This unknown Tentatively Identified Compound was detected in each of the aqueous samples associated with this data set. This unknown compound TIC has been negated and qualified "U". Other TIC's detected at retention times 7.86 and 10.69 are associated with these method blank samples. When detected in associated field samples these TIC's have been negated and qualified "U".

Qualified data result pages are located in Appendix B of this report.

5. BLANK CONTAMINATION (cont'd):

The aqueous storage blank sample associated with the soils in this data set is identified as VHBLK01. This storage blank sample is free from contamination of target analytes. This storage blank sample also contained three (3) TIC's that have been attributed to method blank contamination. These TIC's have been negated and qualified "U".

Qualified data result pages are located in Appendix B of this report.

B) Field or Equipment Rinse Blank (ERB) contamination

The Field Blank sample FB 01202011 was free from contamination of all target analytes with the exception of Methyl tert-butyl ether (0.044 JB ug/l). This analyte as well as some of the TIC's detected in the Field Blank sample are associated with method blank contamination. These have been negated and qualified "U".

C) Trip Blank contamination

The Trip Blank sample (220-3445-8) was analyzed with this data set. The Trip Blank sample was free from contamination of all target analytes with the exception of Acetone (1.3 J ug/l). Acetone has been negated in all associated samples in which Acetone was not negated due to method blank contamination. The Trip Blank sample also detected and unknown alkane as a TIC . This unknown alkane was detected in a number of the samples and was not attributed to method blank contamination. This unknown alkane (Retention Time 3.45) has been negated and qualified "U". In addition four (4) Tentatively Identified Compounds (TIC's) were in this sample. The unknown TIC at retention time 6.92 has been qualified "J" estimated and "X" to indicate a contaminant this is related column bleed. Three (3) of the unknown compounds were all detected in the associated method blank sample. These unknown compounds have been negated and qualified "U" when detected in each of the field samples associated with this data set.

Qualified data result pages are located in Appendix B of this report.

6. GC/MS CALIBRATION:

Satisfactory instrument calibration is established to ensure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of giving acceptable performance at the beginning of an experimental sequence. The continuing calibration verifies that the instrument is giving satisfactory daily performance. USEPA CLP method states the concentration levels of target analytes that must be analyzed and reported for Initial Calibration of the GC/MS.

A) RESPONSE FACTOR

Trace Volatile Organic Analysis - The response factor measures the instrument's response to specific chemical compounds. USEPA CLP criteria of the cited method requires that the response factor of all target analytes listed in Table 3 and the DMC's must be greater than or equal to 0.010. All other target analytes must have an RRF greater than or equal to 0.050 in both initial and continuing calibration analyses. Target analytes are qualified if the minimum RRF criteria are not in either the initial calibration analysis or the opening and closing continuing calibration standard analysis. Positive results are qualified "J". Non-detect results are qualified if the minimum RRF <0.050 (or 0.010 for specifics) are qualified "R", unusable

The laboratory performed an aqueous (Trace Volatile Organic Analysis) initial calibration on January 14, 2011 (Inst. J.i). The laboratory summarized the RRF data on the CLP Form 6A. The laboratory included all raw data and instrument summary forms in the data report for review. The RRF of all target compounds met QC criteria in this initial calibration curve analysis.

The aqueous samples in this data set were analyzed in two (2) continuing calibration sequences. The opening and closing CCV standards are reported with each continuing calibration sequence. The RRF criteria for each of the opening and closing CCV standards met the QC criteria specified in the cited data validation guidelines.

6. GC/MS CALIBRATION (cont'd):

B) PERCENT RELATIVE STANDARD DEVIATION (RSD) AND PERCENT DIFFERENCE (%D):

Trace Volatile Organic Analyses - Percent RSD is calculated from the initial calibration and is used to indicate the stability of the specific compound response factor over increasing concentration. Percent D compares the response factor of the compounds in the continuing calibration standard to the mean response factor (RRF) from the initial calibration. Percent D is a measure of the instrument's daily performance. US EPA data validation criteria states that the percent RSD must be less than or equal to 40% for the volatile compounds and surrogate compounds listed in Table 3 and there associated Deuterated Monitoring compounds. All other %RSD must be less than or equal to 30% in the initial calibration curve analysis.

The %D in the opening CCV standard must be <40% for the compounds listed in Table 3 of the method. All other volatile organic compounds have a criteria <50% in the closing continuing calibration standard. A value outside of these limits indicates potential detection and quantitation errors. For these reasons, all positive results are flagged as estimated, "J" and non-detects may be flagged "UJ", based on professional judgment. If %RSD and %D grossly exceed QC criteria (>90%), non-detects data may be qualified "R", unusable.

The laboratory performed an aqueous (Trace Volatile Organic Analysis) initial calibration on January 14, 2011 (Inst. J.i). The laboratory summarized the %RSD data on the CLP Form 6A. The laboratory included all raw data and instrument summary forms in the data report for review. The %RSD of all target compounds met QC criteria in this initial calibration curve analysis.

The aqueous samples in this data set were analyzed within two (2) continuing calibration sequences. The opening and closing CCV standards are reported on each day of analysis. The %Difference criteria for each of the opening and closing CCV standard met the QC criteria specified in the cited data validation guidelines.

7. GC/MS MASS SPECTROMETER TUNING:

Tuning and performance criteria are established to ensure adequate mass resolution, proper identification of compounds, and to some degree, sufficient instrument sensitivity. These criteria are not sample specific. Instrument performance is determined using standard materials. Therefore, these criteria should be met in all circumstances. The tuning standard for volatile organics is Bromofluorobenzene (BFB).

The tune criteria listed in the data report met or exceeded that required by the method. All tuning criteria associated with these sample analyses were met.

ORGANIC DATA ASSESSMENT

8. GC/MS INTERNAL STANDARDS PERFORMANCE:

Internal standard (IS) performance criteria ensure that the GC/MS sensitivity and response are stable during every run. The method recommends that the internal standard area count must not vary by more than a factor of 2 (-50%to +100%) from the associated continuing calibration standard. The method recommends that the retention time of the internal standard must not vary more than ±30 seconds from the associated continuing calibration standard. The EPA CLP validation guidelines state that if the area count is outside the (-50% to +100%) range of the associated standard, all of the positive results for compounds quantitated using that IS are qualified estimated, "J", and all non-detects below 50% are qualified "UJ", non-detects above 100% should not be qualified or "R" if there is a severe loss of sensitivity. The internal standard area count evaluation criteria are applied to all field and QC samples.

All samples were spiked with the internal standards Chlorobenzene-d5, 1,4-Difluorobenzene and 1,4-Dichlorobenzene-d4 prior to analysis. The area counts and retention time of each internal standard met QC criteria in all field samples and QC samples associated with this data set.

9. COMPOUND IDENTIFICATION:

Target compounds are identified on the GC/MS by using the analyte's relative retention time (RRT) and by comparison to the ion spectra obtained from known standards. For the results to be a positive hit, the sample peak must be within ± 0.06 RRT units of the standard compound, and have an ion spectra which has a ratio of the primary and secondary ion intensities with 20% of that in the standard compound. The laboratory reported each sample to the Contract Required Quantitation Limit (CRQL) listed in the cited method.

Six (6) aqueous samples, one (1) Field Blank sample and one (1) Trip Blank sample are associated with this data set. The samples were analyzed using USEPA CLP Method SOM01.2. Tentatively Identified Compounds (TIC's) were reported when detected with this data set.

Panther Technologies requested that the sample neutralization step be performed by the laboratory prior to analysis.

Each of the aqueous samples in this data set were initially analyzed without dilution and reported to the base reporting limit. Samples were diluted and reanalyzed when the concentration of a target analyte exceeded the concentration of calibration range.

Sample MW-5, MW-1, MW-3, MW-4, MW-6 was analyzed and reported without dilution. Methyl tert-butyl ether was detected at these sample points at a concentration greater than the CRQL. This analyte was detected in the associated method blank sample however the concentration detected at these sample points was greater than 2X the CRQL and therefore cannot be attributed to the method blank. This concentration has not been qualified by this data validator.

Sample MW-2 was initially analyzed without dilution. The concentration of Trichloroethene exceeded the calibration range of the instrument. Sample MW-2 was reanalyzed using a dilution factor of 7.1. Trichloroethene was reported at a concentration of 100 D ug/l. The reporting limit was elevated to reflect this dilution factor.

Qualified data result pages are located in Appendix B of this report.

ORGANIC DATA ASSESSMENT

10. FIELD DUPLICATE ANALYSES:

Field duplicate samples are collected and analyzed as an indication of overall precision. Field duplicate results are expected to have more variability than laboratory duplicate samples.

Sample MW-4 (200-3445-5) and MW-6 (200-3445-6) are field duplicate samples. Below is a summary of the detected analytes in this field duplicate sample analysis.

MW-4 (200-3445-5)/MW-6 (200-3445-6)

Analyte	Result (ug/l)	Result (ug/l)	RPD (%)
Chloromethane	0.15 J	ND	NC
Acetone	7.7 B	6.3 B	20
Methyl tert butyl ether	2.3 B	2.4 B	4.25
2-Butanone	ND	0.67 J	NC
1,1-Dichloroethane	0.24 J	0.25 J	4.08
Chloroform	0.48	0.48	0
1,1,1-Trichloroethane	0.24 J	0.25 J	4.08
Benzene	0.032 J	0.031 J	3.17
Trichloroethene	0.072 JB	ND	NC
Tetrachloroethene	0.076 JB	ND	NC
m,p-Xylene	0.38	ND	NC

ND denotes Not Detected
NC denotes Not Calculated

A review of this field duplicate data set indicates that most target analytes detected are detected at comparable concentrations. The validation guidelines do not provide guidance for the review of field duplicate samples therefore sample data has not been qualified based on the results of the field duplicate sample analysis.

11. SYSTEM PERFORMANCE AND OVERALL ASSESSMENT

Analytical/method QC criteria was met for these analyses except where explained in the laboratory case narrative and the detailed in this validation report. The data reported by the laboratory agrees with the raw data provided in the final report. The laboratory provided a complete data package and reported all data using acceptable protocols and laboratory qualifiers as defined in the report package. All QC anomalies associated with this data set have been explained in the above sections of this data validation report.

All sample results are reported to the method detection limit except where detailed above. Reporting limits and positive results are adjusted based on the sample volume/weight utilized for each extraction procedure. All data provided for this data set is acceptable for use, with noted data qualifiers.

Appendix B of this report contains copies of qualified data result pages.

DATA VALIDATION FOR:	**Target Analyte List of Metals (TAL)**
SITE:	**Lawrence Aviation Superfund Site**
CONTRACT LAB:	**Test America Laboratories South Burlington, VT**
SDG NO.:	**200-3445-1**
REVIEWER:	**Renee Cohen**
DATE REVIEW COMPLETED:	**March, 2011**
MATRIX:	**Aqueous**

The Chain of Custody (COC) documentation associated with this data set listed eight (8) aqueous samples. These samples were collected January 19, 2011 and January 20, 2011 and received at Test America Laboratories located in South Burlington, VT on January 22, 2011.

The data evaluation was performed according to the guidelines noted in the "National Functional Guidelines for Inorganic Data Review", January 2010 and the USEPA Region II SOP for the Review of Inorganic Data (HW-2, Rev. 13 (10/06).

Several factors should be noted for all persons using this data. Persons using this data should be aware that no result is guaranteed to be accurate even if it has passed all QC tests. The main purpose of this review is to appropriately qualify outliers and to determine whether the results presented meet the specific site/project criteria for data quality and data use.

Table 1 of this report contains a cross reference between the Field Sample ID's and the Laboratory Sample ID's. Appendix A of this report contains a summary of the data qualifiers that may be used in the report. Appendix B contains the qualified data result pages. Appendix C contains the Chain of Custody (COC) documents associated with this data set.

The samples in this data set were analyzed for TAL metals. These samples were also analyzed for Volatile Organic Analytes (VOA) and miscellaneous wet chemistry analytes. The data review associated with these analyses is located in stand alone data reports that are enclosed with this complete report.

1. OVERVIEW

Eight (8) aqueous samples were collected January 19, 2011 and January 20, 2011 and received at Test America Laboratories located in South Burlington, VT on January 22, 2011. Six (6) aqueous samples, one (1) Field Blank sample and one (1) Trip Blank are associated with this data set. All samples with the exception of the Trip Blank sample were marked on the COC documents for TAL Metal analyses. Table 1 of this report lists each of the field sample and laboratory sample ID's. The samples were analyzed for the parameters listed on the COC documents. A full deliverable report was required to report the sample results.

2. HOLDING TIME

The amount of an analyte in a sample can change with time due to chemical instability, degradation, volatilization, etc. If the specified holding time is exceeded, the data may not be valid. Metals with the exception of Mercury, is required to be digested and analyzed within 180 days of Verified Time of Sample Receipt (VTSR). Mercury samples are to be digested and analyzed within 26 days of VTSR.

The aqueous samples were prepared and analyzed for the Target Analyte Metals (TAL). The ICP Metals were prepared in one (1) batch on January 25, 2011. The digestates were analyzed in one (1) sequence on January 25, 2011. The samples were prepared for Mercury analysis on January 25, 2011 and analyzed in one (1) sequence on January 26, 2011.

3. CALIBRATION ANALYSIS

Inductively Coupled Plasma (ICP) was utilized for these analyses. The ICP was calibrated using the calibration standards required by the manufacturer. An initial calibration verification (ICV) standard is then analyzed to verify instrument calibration. One (1) continuing calibration standard was analyzed after each ten (10) field samples. One (1) analytical sequence is associated with this data set. All target analytes were analyzed and reported. The laboratory reported provided raw data of each sequence for review. All ICV and CCV standards associated with this data set met QC criteria in each of these analytical sequences.

The Mercury analyses were performed in one (1) analytical sequence. The samples associated with this data set were analyzed on January 26, 2011. The laboratory reported provided raw data for this sequence to review. Review of the raw data to the results reported on the summary forms was made. All raw data matched that reported on the summary forms. All QC criteria were met in the data associated with this data set.

4. ICP CRDL STANDARD

The CRDL standard is used for the verification of instrument linearity near the CRDL. The CRDL standard control limits are 70%-130% recovery. If the CRDL standard falls outside of the control limits, associated data less than or equal to the 10X the CRDL are qualified estimated (J or UJ) or rejected (R) depending on the recovery of the CRDL standard and the concentration of the analyte in the sample. When the CRDL standard exceeds the control limit, indicating a high bias samples are qualified estimated (J or UJ).

In accordance with the cited method a CRDL standard is not required for the ICP or Mercury analytical sequence.

5. ICP INTERFERENCE CHECK STANDARD

The Interference Check Standard (ICS) is used to verify the laboratory interelement and background correction factors of the ICP. Two solutions comprise the ICS A and ICS AB. Solution A consists of the interferent metals while solution AB is the group of target analytes and the interferents metals. An ICS analysis consists of analyzing both solutions consecutively for all wavelengths used for each analyte reported by ICP. The ICP ICS standards are to be analyzed at the beginning and end of each analytical run. The results are to fall within control limits of +/-20% of the true value.

The laboratory analyzed two (2) ICSA and two (2) ICSAB standards with this ICP analytical sequence. These QC samples are used to verify the laboratories interelement and background correction factors of the ICP. The recovery of all target analytes with the exception of Selenium (135%) in the final ICSAB standard met QC criteria in the analytical sequence associated with this data set. Selenium was not detected in any of the samples in this data set. Based on the high recovery of Selenium in the standard and the associated sample results, Selenium has not been qualified.

6. MATRIX SPIKE (MS) ANALYSIS

The spike sample analysis provides information about the effect of the sample matrix upon the digestion and measurement methodology. The spike control limits are 75%-125% when the sample concentration is less than four (4) times the spike added. If the matrix spike recoveries fall in the range of 30%-74%, the sample results are may be biased low and are qualified as estimated (J or UJ). If the matrix spike recoveries fall in the range of 126%-200%, sample results may be biased high. Positive results are qualified estimated (J). If the spike recovery is greater than 125% and the reported sample results are less than the IDL the data point is acceptable for use. If the matrix spike recovery is greater than 200%, the associated sample data are unusable and are rejected (R). If matrix spike results are less than 30%, the associated non-detect results are qualified unusable and rejected (R), and the results reported above the IDL are qualified estimated (J).

Site specific MS analysis was not prepared or analyzed with these ICP Metal or CVAA Mercury analyses.

7. POST DIGESTION SPIKE ANALYSIS

The post digestion spike sample analysis provides additional information about the effect of the sample matrix upon the digestion and measurement methodology. The post digestion spike is performed for each analyte that the pre-digestion spike recovery falls outside the 75-125% control limit.

Post digestion spike analysis was not reported with this data set.

8. DUPLICATE SAMPLE ANALYSIS

The laboratory duplicate sample analysis is used to evaluate the laboratory precision of the method for each analyte. If the duplicate sample analysis results for a particular analyte fall outside the control windows of 20% RPD or +/- CRDL, whichever is appropriate depending upon the concentration of the sample, the associated sample results are qualified "J" estimated.

Laboratory duplicate analysis was not reported with this data set.

9. ICP SERIAL DILUTION

The serial dilution analysis indicates whether significant physical or chemical interference's exist due to the sample matrix. If the concentration of any analyte in the original sample is greater than 50 times the instrument detection limit (IDL), an analysis of a 5-fold dilution samples must yield results which have a percent difference (%D) of less than or equal to 10 with the original sample results. If the %D of the serial dilution exceeds the 10% (and is not greater than 100%) for a particular analyte, all the associated sample results are qualified estimated (J).

Serial dilution analysis was performed on sample MW-5 (200-3445-1). The %Difference of all detected target analytes met QC criteria in the serial dilution analysis.

10. BLANKS

Blank analyses are assessed to determine the existence and magnitude of contamination problems. The criteria for the evaluation of blanks applies to all blanks, including but not limited to reagent blanks, method blanks and field blanks. The responsibility for action in the case of an unsuitable blank result depends upon the circumstances and the origin of the blank itself. If the problem with any blank exists, then all associated data must be carefully evaluated to determine whether there is inherent variability in the data for that case, or the problem is an isolated occurrence not affecting other data.

The laboratory provided a summary report form for the method blank associated the sample preparation batch. The ICP preparation blank was free from contamination of all target analytes above the reporting limit. Low concentrations of Aluminum (-63 J ug/l) and Antimony (3.7 J ug/l) were detected and reported with a "J" qualifier. A review of the concentrations in the associated samples indicates that the Antimony when detected was comparable to that in the method blank sample and all Antimony results have been qualified "UJ" estimated. Results of Aluminum are substantially higher than that that in the method blank. No qualifiers are associated with the Aluminum sample results.

The preparation blank associated with the Mercury sample analysis detected Mercury at a concentration of -0.032 J ug/l. Sample data was not qualified based on the this low level method blank contamination.

The laboratory provided summary forms to report the ICB and CCB analyses. All QC criteria were met in the ICB/CCB analyses associated with this data set.

The Field Blank sample (FB 01202011) was free from contamination of all target with the exception of Copper (10.2 J ug/l) and Manganese (3.7 J ug/l). When detected in associated samples at a concentration comparable to that in the Field Blank sample the results have been qualified "U".

Qualified data result pages are located in Appendix B of this report.

11. LABORATORY CONTROL SAMPLE ANALYSIS (LCS)

The laboratory control sample (LCS) analysis provides information about the efficiency of the laboratory digestion procedure. If the recovery of any analyte is outside the established control limits, then laboratory performance and method accuracy are in question. Professional judgment is used to determine of data should be qualified or rejected.

The ICP LCS sample was fortified with all target analytes. Recovery limits of 70%-130% were applied to each target analyte. The recovery of all target analytes met QC criteria in the LCS sample.

The laboratory did not prepare and analyzed a Mercury LCS sample with this sample batch. The method does not require that the sample batch prepare and analyze a Laboratory Control Sample (LCS). An LCS can be used as a control of the sample digestion procedure. Without the preparation of the LCS sample control of the preparation batch is not able to be determined. Sample data is not qualified estimated based on this QC item.

12. FIELD DUPLICATE SAMPLE ANALYSIS

Field duplicate samples are collected and analyzed as an indication of overall precision. These results are expected to have more variability than laboratory duplicate samples. Analytes reported above the reporting limit are listed below. Data was not qualified based on the RPD of field duplicate sample analyses.

Sample MW-4 (200-3445-5) was collected in duplicate. Field duplicate data is summarized in the report in which the parent sample is reported. Below is a summary of detected target analytes.

Sample ID: MW-4 (200-3445-5)/MW-6 (200-3445-6)

Analyte	Result (ug/l)	Result (ug/l)	RPD (%)
Aluminum	2400	2410	<1
Antimony	3.5 J	ND	NC
Barium	66.9 J	70.5 J	5.24
Calcium	20100	20700	2.94
Chromium	135	138	2.20
Iron	26.4 J	24.3 J	8.28
Magnesium	8810	8950	1.58
Manganese	15300	15900	3.85
Nickel	18.9 J	19.9. J	5.15
Potassium	22600	23000	1.75
Sodium	25300	25900	2.34
Zinc	32.1 J	7.8 J	>100
Mercury	0.091 J	0.22 J	18.1

ND denotes not detected
NC denotes not calculated

A review of the compounds detected in each of the field duplicate samples was made. The RPD among the duplicate samples indicates acceptable precision with the exception of Zinc. Zinc was detected at concentrations between the MDL and reporting limit. Concentrations detected in this range tend to be more variable. No action was taken based on the results of the field duplicate samples in this data set.

13. INSTRUMENT QC DATA

The laboratory provided the required annual and semiannual ICP Instrument QC summary report forms in this data report. This information was not reviewed by this data validator. All annual and semiannual QC studies were performed by the laboratory.

14. COMPOUND IDENTIFICATION

Seven (7) aqueous samples were analyzed for TAL Metals. The sample was analyzed in accordance with the required method (ISM01.1/1.2 Hg). The samples data was reported in the units ug/l (ppb).

ICP Analysis - Each of the ICP sample digestates in this data set were initially analyzed and reported without dilution. Each of the ICP digestates was reanalyzed with dilution to report the concentration of Manganese detected at each sample point.

15. SYSTEM PERFORMANCE AND OVERALL ASSESSMENT

This data set included the reporting of seven (7) aqueous samples. The samples were analyzed for the TAL metals list. A copy of the Chain of Custody is located in Appendix C of this report. The sample results are reported in accordance with the cited method.

The TAL metals reported in this data set are acceptable for use with the noted data qualifiers. All data qualifiers are explained in the above text.

Qualified data result pages are located in Appendix B of this report.

Data Validation Report

DATA VALIDATION FOR:	**Miscellaneous Wet Chemistry**
SITE:	**Lawrence Aviation Superfund Site**
CONTRACT LAB:	**Test America Laboratories South Burlington, VT**
SDG:	**200-3445-1**
REVIEWER:	**Renee Cohen**
DATE REVIEW COMPLETED:	**March, 2011**
MATRIX:	**Aqueous**

The Chain of Custody (COC) documentation associated with this data set listed eight (8) aqueous samples. The samples were collected on January 19, 2011 and January 20, 2011. The samples were shipped to Test America Laboratories located in South Burlington, VT. The samples were then subcontracted to the Test America Laboratories location in Savannah , GA for these analyses.

The data evaluation was performed in accordance with the QAPP that was developed for this site as well as method recommended QC practices. Several factors should be noted for all persons using this data. Persons using this data should be aware that no result is guaranteed to be accurate even if it has passed all QC tests. The main purpose of this review is to appropriately qualify outliers and to determine whether the results presented meet the specific site/project criteria for data quality and data use.

Table 1 of this report contains a cross reference between the Field Sample ID's and the Laboratory Sample ID's. Appendix A of this report contains a summary of the data qualifiers that may be used in the report. Appendix B contains the qualified data result pages. Appendix C contains the Chain of Custody (COC) documents associated with this data set.

The samples in this data set were analyzed for Miscellaneous Wet Chemistry parameters that were specified on the COC documents that accompanied the samples to the laboratory. This data review is associated with these Miscellaneous Wet Chemistry Analyses.

1. OVERVIEW

Eight (8) aqueous samples were collected January 19-20, 2011 and received at Test America Laboratories located in South Burlington, VT on January 22, 2011. The laboratory subcontracted five (5) of the samples in this data set for the subset of wet chemistry analytes that were listed on the COC documentation to the Test America Laboratory located in Savannah GA.

Table 1 of this report is a summary of the field sample ID and laboratory sample ID. The samples in this data set were analyzed for the parameters listed on the COC documents. A full data deliverable was generated to report these analyses.

These samples were analyzed for Chloride (EPA Method 300.0), Fluoride (EPA Method 300.0), Sulfate (EPA Method 300.0), Total Dissolved Solids (SM2540C), Total Suspended Solids (SM2540D), Alkalinity (SM2320B) and Total Organic Carbon (SM5310B).

2. HOLDING TIME

The amount of an analyte in a sample can change with time due to chemical instability, degradation, volatilization, etc. If the specified holding time is exceeded, the data may not be valid. The miscellaneous wet chemistry analytes have specific holding times cited in the approved method.

The samples in this data set were prepared and analyzed for the cited analyses within the method specified holding times.

3. CALIBRATION ANALYSIS

The laboratory summarized the initial and continuing calibration data associated with each of the wet chemistry analytes where applicable. All initial and continuing calibration standard analyses associated with this data set met QC criteria.

4. MATRIX SPIKE (MS) ANALYSIS

Multiple samples were utilized for the matrix spike analyses for each of these parameters. Acceptable recovery of the MS is +/- 25% of the True Value. Sample MW-2 (200-3445) was utilized for the site specific matrix spike analysis of the Anions (Chloride, Sulfate). The percent recovery of each analyte in the MS sample met QC criteria.

5. DUPLICATE SAMPLE ANALYSIS

The laboratory duplicate sample analysis is used to evaluate the laboratory precision of the method for each analyte. If the duplicate sample analysis results for a particular analyte fall outside the control windows of 20% RPD or +/- CRDL, whichever is appropriate depending upon the concentration of the sample.

Test America did not prepare site specific duplicate analysis in this data set.

6. BLANKS

Blank analyses are assessed to determine the existence and magnitude of contamination problems. The criteria for the evaluation of blanks applies to all blanks, including but not limited to reagent blanks, method blanks and field blanks. The responsibility for action in the case of an unsuitable blank result depends upon the circumstances and the origin of the blank itself. If the problem with any blank exists, then all associated data must be carefully evaluated to determine whether there is inherent variability in the data for that case, or the problem is an isolated occurrence not affecting other data.

The laboratory prepared and analyzed a method blank/preparation blank with each batch of samples for all of the Wet Chemistry analytes. Each of the method blank and/or preparation blank samples associated with this data set was free from contamination of the target analyte above the reporting limit.

7. LABORATORY CONTROL SAMPLE ANALYSIS (LCS)

The laboratory control sample (LCS) analysis provides information about the efficiency of the laboratory digestion procedure. If the recovery of any analyte is outside the established control limits, then laboratory performance and method accuracy are in question. Professional judgment is used to determine of data should be qualified or rejected.

The laboratory reported LCS and/or LCSD recovery for each of the analyses reported with this data set. The recovery of each LCS and/or LCSD met QC criteria.

8. COMPOUND IDENTIFICATION

All samples results are reported in accordance with the cited methods. Each of the samples in this data set were prepared and analyzed without dilution with the exception of the Ion Chromatography analyses (300.0) and Total Organic Carbon. The Chloride and Sulfate analyses were analyzed using a dilution (1:5) due to the color and appearance of the sample. Reporting limits have been elevated to reflect the sample dilution utilized for these analyses. In addition the Total Organic Carbon in samples MW-5, MW-1, MW-3 and MW-4 have been analyzed and reported using a 1:100 dilution analysis. The laboratory case narrative did not cite the reason for this dilution analysis.

9. FIELD DUPLICATE DATA RESULTS:

Field duplicate samples are taken and analyzed as an indication of overall precision. These measure both field and laboratory precision; therefore, the results may have more variability than lab duplicate samples. Soil samples are also expected to have a greater variance due to the difficulties associated with collecting exact duplicate soil samples. Data was not qualified based on the results of the field duplicate sample data.

Field duplicate samples were not analyzed in this data set.

10. SYSTEM PERFORMANCE AND OVERALL ASSESSMENT

The inorganic analyses associated with this data set included the reporting of five (5) aqueous samples. The samples were analyzed for Miscellaneous Wet Chemistry analytes as noted on the COC documents that accompanied the data set. A copy of the Chain of Custody is located in Appendix C of this report. The sample results are reported in accordance with the cited methods.

The Miscellaneous Wet Chemistry data results are acceptable for use without data qualification.

TABLE 1

FIELD SAMPLE ID	LABORATORY ID
MW-5	200-3445-1
MW-1	200-3445-2
MW-2	200-3445-3
MW-3	200-3445-4
MW-4	200-3445-5
MW-6	200-3445-6
FB 01202011	200-3445-7
TRIP BLANK	200-3445-8
VHBLK01	200-3445-9 STOBLK

APPENDIX A

DATA QUALIFIER DEFINITIONS

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

J - The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

N - The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification."

NJ - The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.

UJ - The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

R - The sample results are unreliable/unusable. The presence or absence of the analyte cannot be verified.

K – The analyte is present. The reported value may be biased high. The actual value is expected to be lower than reported.

L - The analyte is present. The reported value may be biased low. The actual value is expected to be higher than reported.

UL – The analyte was not detected, and the reported quantitation limit is probably higher than reported.

APPENDIX B

Client: Panther Technologies

Job Number: 200-3445-1
Sdg Number: 200-3445-1

Client Sample ID: **MW-5**

Lab Sample ID: 200-3445-1
Client Matrix: Water

Date Sampled: 01/19/2011 1400
Date Received: 01/22/2011 0850

SOM01.2/VOA_Tr Trace Water

Method: SOM01.2/VOA_Tr
Preparation: SOM01.2/VOA_PR
Dilution: 1.0
Date Analyzed: 01/28/2011 2230
Date Prepared: 01/28/2011 2230

Analysis Batch: 200-12879

Instrument ID: J.i
Lab File ID: jcim18.d
Initial Weight/Volume: 25 mL
Final Weight/Volume: 25 mL

Analyte	Result (ug/L)	Qualifier	RL
Dichlorodifluoromethane	0.50	U	0.50
Chloromethane	0.50	U	0.50
Vinyl chloride	0.50	U	0.50
Bromomethane	0.50	U	0.50
Chloroethane	0.50	U	0.50
Trichlorofluoromethane	0.50	U	0.50
1,1-Dichloroethene	0.50	U	0.50
1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U	0.50
Acetone	5.5 U	~~B~~	5.0
Carbon disulfide	0.50	U	0.50
Methyl acetate	0.50	U	0.50
Methylene chloride	0.50	U	0.50
trans-1,2-Dichloroethene	0.50	U	0.50
Methyl tert-butyl ether	2.0	~~B~~	0.50
1,1-Dichloroethane	0.50	U	0.50
cis-1,2-Dichloroethene	0.50	U	0.50
2-Butanone	5.0	U	5.0
Bromochloromethane	0.50	U	0.50
Chloroform	0.19	J	0.50
1,1,1-Trichloroethane	0.50	U	0.50
Cyclohexane	0.50	U	0.50
Carbon tetrachloride	0.50	U	0.50
Benzene	0.12	J	0.50
1,2-Dichloroethane	0.50	U	0.50
Trichloroethene	0.075 U	~~J B~~	0.50
Methylcyclohexane	0.50	U	0.50
1,2-Dichloropropane	0.50	U	0.50
Bromodichloromethane	0.50	U	0.50
cis-1,3-Dichloropropene	0.50	U	0.50
4-Methyl-2-pentanone	5.0	U	5.0
Toluene	0.50	U	0.50
trans-1,3-Dichloropropene	0.50	U	0.50
1,1,2-Trichloroethane	0.50	U	0.50
Tetrachloroethene	0.50	U	0.50
2-Hexanone	5.0	U	5.0
Dibromochloromethane	0.50	U	0.50
1,2-Dibromoethane	0.50	U	0.50
Chlorobenzene	0.50	U	0.50
Ethylbenzene	0.50	U	0.50
o-Xylene	0.50	U	0.50
m,p-Xylene	0.50	U	0.50
Styrene	0.50	U	0.50
Bromoform	1.1		0.50
Isopropylbenzene	0.50	U	0.50
1,1,2,2-Tetrachloroethane	0.50	U	0.50
1,3-Dichlorobenzene	0.50	U	0.50

Client: Panther Technologies

Job Number: 200-3445-1
Sdg Number: 200-3445-1

Client Sample ID: **MW-5**

Lab Sample ID: 200-3445-1
Client Matrix: Water

Date Sampled: 01/19/2011 1400
Date Received: 01/22/2011 0850

SOM01.2/VOA_Tr Trace Water

Method:	SOM01.2/VOA_Tr	Analysis Batch: 200-12879		Instrument ID:	J.i
Preparation:	SOM01.2/VOA_PR			Lab File ID:	jcim18.d
Dilution:	1.0			Initial Weight/Volume:	25 mL
Date Analyzed:	01/28/2011 2230			Final Weight/Volume:	25 mL
Date Prepared:	01/28/2011 2230				

Analyte	Result (ug/L)	Qualifier	RL
1,4-Dichlorobenzene	0.50	U	0.50
1,2-Dichlorobenzene	0.50	U	0.50
1,2-Dibromo-3-chloropropane	0.50	U	0.50
1,2,4-Trichlorobenzene	0.50	U	0.50
1,2,3-Trichlorobenzene	0.50	U	0.50

Surrogate	%Rec	Qualifier	Acceptance Limits
Vinyl chloride-d3	110		65 - 131
Chloroethane-d5	115		71 - 131
1,1-Dichloroethene-d2	85		55 - 104
2-Butanone-d5	97		49 - 155
Chloroform-d	108		78 - 121
1,2-Dichloroethane-d4	105		78 - 129
Benzene-d6	111		77 - 124
1,2-Dichloropropane-d6	104		79 - 124
Toluene-d8	111		77 - 121
trans-1,3-Dichloropropene-d4	105		73 - 121
2-Hexanone-d5	107		28 - 135
1,1,2,2-Tetrachloroethane-d2	108		73 - 125
1,2-Dichlorobenzene-d4	104		80 - 131

Client: Panther Technologies

Job Number: 200-3445-1
Sdg Number: 200-3445-1

Client Sample ID: **MW-5**

Lab Sample ID: 200-3445-1
Client Matrix: Water

Date Sampled: 01/19/2011 1400
Date Received: 01/22/2011 0850

SOM01.2/VOA_Tr Trace Water

Method:	SOM01.2/VOA_Tr	Analysis Batch: 200-12879	Instrument ID: J.i
Preparation:	SOM01.2/VOA_PR		Lab File ID: jcim18.d
Dilution:	1.0		Initial Weight/Volume: 25 mL
Date Analyzed:	01/28/2011 2230		Final Weight/Volume: 25 mL
Date Prepared:	01/28/2011 2230		

Tentatively Identified Compounds **Number TIC's Found:** 6

Cas Number	Analyte	RT	Est. Result (ug/L)	Qualifier
420-56-4	Trimethylsilyl fluoride	1.74	7.7	J N
	Unknown alkane	3.45	0.53 U	~~B J~~
	Unknown	6.92	3.1 U	~~B X J~~
541-05-9	Cyclotrisiloxane, hexamethyl-	7.87	0.77 U	~~B J N~~
	Unknown siloxane derivative	10.69	0.71 U	~~B J~~
	Unknown	11.57	6.4	J

Targeted Tentatively Identified Compounds

Cas Number	Analyte	Est. Result (ug/L)	Qualifier
	Total Alkanes	13 U	J

Client: Panther Technologies

Job Number: 200-3445-1
Sdg Number: 200-3445-1

Client Sample ID: **MW-1**

Lab Sample ID: 200-3445-2
Client Matrix: Water

Date Sampled: 01/20/2011 1530
Date Received: 01/22/2011 0850

SOM01.2/VOA_Tr Trace Water

Method:	SOM01.2/VOA_Tr	Analysis Batch: 200-12879		Instrument ID:	J.i
Preparation:	SOM01.2/VOA_PR			Lab File ID:	jcim19.d
Dilution:	1.0			Initial Weight/Volume:	25 mL
Date Analyzed:	01/28/2011 2255			Final Weight/Volume:	25 mL
Date Prepared:	01/28/2011 2255				

Analyte	Result (ug/L)	Qualifier	RL
Dichlorodifluoromethane	0.50	U	0.50
Chloromethane	0.50	U	0.50
Vinyl chloride	0.50	U	0.50
Bromomethane	0.50	U	0.50
Chloroethane	0.50	U	0.50
Trichlorofluoromethane	0.50	U	0.50
1,1-Dichloroethene	0.50	U	0.50
1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U	0.50
Acetone	4.8 U	~~J B~~	5.0
Carbon disulfide	0.50	U	0.50
Methyl acetate	0.50	U	0.50
Methylene chloride	0.50	U	0.50
trans-1,2-Dichloroethene	0.50	U	0.50
Methyl tert-butyl ether	2.2	~~B~~	0.50
1,1-Dichloroethane	0.22	J	0.50
cis-1,2-Dichloroethene	0.50	U	0.50
2-Butanone	0.94	J	5.0
Bromochloromethane	0.50	U	0.50
Chloroform	0.45	J	0.50
1,1,1-Trichloroethane	0.24	J	0.50
Cyclohexane	0.50	U	0.50
Carbon tetrachloride	0.50	U	0.50
Benzene	0.031	J	0.50
1,2-Dichloroethane	0.50	U	0.50
Trichloroethene	0.067 U	~~J B~~	0.50
Methylcyclohexane	0.50	U	0.50
1,2-Dichloropropane	0.50	U	0.50
Bromodichloromethane	0.50	U	0.50
cis-1,3-Dichloropropene	0.50	U	0.50
4-Methyl-2-pentanone	5.0	U	5.0
Toluene	0.50	U	0.50
trans-1,3-Dichloropropene	0.50	U	0.50
1,1,2-Trichloroethane	0.50	U	0.50
Tetrachloroethene	0.060 U	~~J B~~	0.50
2-Hexanone	5.0	U	5.0
Dibromochloromethane	0.50	U	0.50
1,2-Dibromoethane	0.50	U	0.50
Chlorobenzene	0.50	U	0.50
Ethylbenzene	0.50	U	0.50
o-Xylene	0.50	U	0.50
m,p-Xylene	0.50	U	0.50
Styrene	0.50	U	0.50
Bromoform	0.50	U	0.50
Isopropylbenzene	0.50	U	0.50
1,1,2,2-Tetrachloroethane	0.50	U	0.50
1,3-Dichlorobenzene	0.50	U	0.50

Client: Panther Technologies

Job Number: 200-3445-1
Sdg Number: 200-3445-1

Client Sample ID: MW-1

Lab Sample ID: 200-3445-2
Client Matrix: Water

Date Sampled: 01/20/2011 1530
Date Received: 01/22/2011 0850

SOM01.2/VOA_Tr Trace Water

Method:	SOM01.2/VOA_Tr	Analysis Batch: 200-12879		Instrument ID:	J.i
Preparation:	SOM01.2/VOA_PR			Lab File ID:	jcim19.d
Dilution:	1.0			Initial Weight/Volume:	25 mL
Date Analyzed:	01/28/2011 2255			Final Weight/Volume:	25 mL
Date Prepared:	01/28/2011 2255				

Analyte	Result (ug/L)	Qualifier	RL
1,4-Dichlorobenzene	0.50	U	0.50
1,2-Dichlorobenzene	0.50	U	0.50
1,2-Dibromo-3-chloropropane	0.50	U	0.50
1,2,4-Trichlorobenzene	0.50	U	0.50
1,2,3-Trichlorobenzene	0.50	U	0.50

Surrogate	%Rec	Qualifier	Acceptance Limits
Vinyl chloride-d3	111		65 - 131
Chloroethane-d5	121		71 - 131
1,1-Dichloroethene-d2	88		55 - 104
2-Butanone-d5	100		49 - 155
Chloroform-d	112		78 - 121
1,2-Dichloroethane-d4	108		78 - 129
Benzene-d6	115		77 - 124
1,2-Dichloropropane-d6	102		79 - 124
Toluene-d8	113		77 - 121
trans-1,3-Dichloropropene-d4	112		73 - 121
2-Hexanone-d5	108		28 - 135
1,1,2,2-Tetrachloroethane-d2	109		73 - 125
1,2-Dichlorobenzene-d4	110		80 - 131

Client: Panther Technologies

Job Number: 200-3445-1
Sdg Number: 200-3445-1

Client Sample ID: **MW-1**

Lab Sample ID: 200-3445-2
Client Matrix: Water

Date Sampled: 01/20/2011 1530
Date Received: 01/22/2011 0850

SOM01.2/VOA_Tr Trace Water

Method:	SOM01.2/VOA_Tr	Analysis Batch: 200-12879		Instrument ID:	J.i
Preparation:	SOM01.2/VOA_PR			Lab File ID:	jcim19.d
Dilution:	1.0			Initial Weight/Volume:	25 mL
Date Analyzed:	01/28/2011 2255			Final Weight/Volume:	25 mL
Date Prepared:	01/28/2011 2255				

Tentatively Identified Compounds **Number TIC's Found:** 6

Cas Number	Analyte	RT	Est. Result (ug/L)	Qualifier
420-56-4	Trimethylsilyl fluoride	1.75	2.6	J N
	Unknown alkane	3.45	0.54 U	~~B J~~
	Unknown	6.92	3.2 U	~~B X J~~
541-05-9	Cyclotrisiloxane, hexamethyl-	7.86	0.63 U	B J N
	Unknown siloxane derivative	10.69	0.62 U	B J
	Unknown	11.57	7.7	J

Targeted Tentatively Identified Compounds

Cas Number	Analyte	Est. Result (ug/L)	Qualifier
	Total Alkanes	14 U (B) (RC)	~~J~~

Client: Panther Technologies

Job Number: 200-3445-1
Sdg Number: 200-3445-1

Client Sample ID: MW-2

Lab Sample ID: 200-3445-3
Client Matrix: Water

Date Sampled: 01/20/2011 1800
Date Received: 01/22/2011 0850

SOM01.2/VOA_Tr Trace Water

Method: SOM01.2/VOA_Tr
Preparation: SOM01.2/VOA_PR
Dilution: 1.0
Date Analyzed: 01/24/2011 1109
Date Prepared: 01/24/2011 1109

Analysis Batch: 200-12583

Instrument ID: J.i
Lab File ID: jcif08.d
Initial Weight/Volume: 25 mL
Final Weight/Volume: 25 mL

Analyte	Result (ug/L)	Qualifier	RL
Dichlorodifluoromethane	0.50	U	0.50
Chloromethane	0.50	U	0.50
Vinyl chloride	0.50	U	0.50
Bromomethane	0.50	U	0.50
Chloroethane	0.50	U	0.50
Trichlorofluoromethane	0.50	U	0.50
1,1-Dichloroethene	0.50	U	0.50
1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U	0.50
Acetone	2.7 U	~~J~~	5.0
Carbon disulfide	0.50	U	0.50
Methyl acetate	0.50	U	0.50
Methylene chloride	0.50	U	0.50
trans-1,2-Dichloroethene	0.50	U	0.50
Methyl tert-butyl ether	0.96 U	~~B~~	0.50
1,1-Dichloroethane	0.073	J	0.50
cis-1,2-Dichloroethene	0.33	J	0.50
2-Butanone	5.0	U	5.0
Bromochloromethane	0.50	U	0.50
Chloroform	0.16 U	~~J B~~	0.50
1,1,1-Trichloroethane	0.10	J	0.50
Cyclohexane	0.50	U	0.50
Carbon tetrachloride	0.50	U	0.50
Benzene	0.030	J	0.50
1,2-Dichloroethane	0.50	U	0.50
Trichloroethene	100 D	~~E~~	~~0.50~~ 3.55
Methylcyclohexane	0.50	U	0.50
1,2-Dichloropropane	0.50	U	0.50
Bromodichloromethane	0.50	U	0.50
cis-1,3-Dichloropropene	0.50	U	0.50
4-Methyl-2-pentanone	5.0	U	5.0
Toluene	0.14	J	0.50
trans-1,3-Dichloropropene	0.50	U	0.50
1,1,2-Trichloroethane	0.50	U	0.50
Tetrachloroethene	1.2		0.50
2-Hexanone	5.0	U	5.0
Dibromochloromethane	0.50	U	0.50
1,2-Dibromoethane	0.50	U	0.50
Chlorobenzene	0.50	U	0.50
Ethylbenzene	0.50	U	0.50
o-Xylene	0.50	U	0.50
m,p-Xylene	0.060	J	0.50
Styrene	0.50	U	0.50
Bromoform	0.50	U	0.50
Isopropylbenzene	0.50	U	0.50
1,1,2,2-Tetrachloroethane	0.50	U	0.50
1,3-Dichlorobenzene	0.50	U	0.50

Client: Panther Technologies

Job Number: 200-3445-1
Sdg Number: 200-3445-1

Client Sample ID: **MW-2**

Lab Sample ID: 200-3445-3
Client Matrix: Water

Date Sampled: 01/20/2011 1800
Date Received: 01/22/2011 0850

SOM01.2/VOA_Tr Trace Water

Method:	SOM01.2/VOA_Tr	Analysis Batch: 200-12583		Instrument ID:	J.i
Preparation:	SOM01.2/VOA_PR			Lab File ID:	jcif08.d
Dilution:	1.0			Initial Weight/Volume:	25 mL
Date Analyzed:	01/24/2011 1109			Final Weight/Volume:	25 mL
Date Prepared:	01/24/2011 1109				

Analyte	Result (ug/L)	Qualifier	RL
1,4-Dichlorobenzene	0.50	U	0.50
1,2-Dichlorobenzene	0.50	U	0.50
1,2-Dibromo-3-chloropropane	0.50	U	0.50
1,2,4-Trichlorobenzene	0.50	U	0.50
1,2,3-Trichlorobenzene	0.50	U	0.50

Surrogate	%Rec	Qualifier	Acceptance Limits
Vinyl chloride-d3	107		65 - 131
Chloroethane-d5	104		71 - 131
1,1-Dichloroethene-d2	79		55 - 104
2-Butanone-d5	102		49 - 155
Chloroform-d	98		78 - 121
1,2-Dichloroethane-d4	100		78 - 129
Benzene-d6	104		77 - 124
1,2-Dichloropropane-d6	96		79 - 124
Toluene-d8	105		77 - 121
trans-1,3-Dichloropropene-d4	101		73 - 121
2-Hexanone-d5	102		28 - 135
1,1,2,2-Tetrachloroethane-d2	99		73 - 125
1,2-Dichlorobenzene-d4	98		80 - 131

Client: Panther Technologies

Job Number: 200-3445-1
Sdg Number: 200-3445-1

Client Sample ID: **MW-2**

Lab Sample ID: 200-3445-3
Client Matrix: Water

Date Sampled: 01/20/2011 1800
Date Received: 01/22/2011 0850

SOM01.2/VOA_Tr Trace Water

Method:	SOM01.2/VOA_Tr	Analysis Batch: 200-12583	Instrument ID: J.i
Preparation:	SOM01.2/VOA_PR		Lab File ID: jcif08.d
Dilution:	1.0		Initial Weight/Volume: 25 mL
Date Analyzed:	01/24/2011 1109		Final Weight/Volume: 25 mL
Date Prepared:	01/24/2011 1109		

Tentatively Identified Compounds **Number TIC's Found:** 7

Cas Number	Analyte	RT	Est. Result (ug/L)	Qualifier
420-56-4	Trimethylsilyl fluoride	1.75	24	J N
	Unknown alkane	3.45	0.54 U	~~B J~~
	Unknown	4.15	2.9	J
	Unknown	6.92	3.0 U	~~B X J~~
541-05-9	Cyclotrisiloxane, hexamethyl-	7.86	0.69 U	B J N
	Unknown siloxane derivative	10.69	0.68 U	B J
	Unknown alkane	11.57	7.6	J

Targeted Tentatively Identified Compounds

Cas Number	Analyte	Est. Result (ug/L)	Qualifier
	Total Alkanes	200	J

Client: Panther Technologies

Job Number: 200-3445-1
Sdg Number: 200-3445-1

Client Sample ID: MW-3

Lab Sample ID: 200-3445-4
Client Matrix: Water

Date Sampled: 01/20/2011 1315
Date Received: 01/22/2011 0850

SOM01.2/VOA_Tr Trace Water

Method: SOM01.2/VOA_Tr
Preparation: SOM01.2/VOA_PR
Dilution: 1.0
Date Analyzed: 01/28/2011 2320
Date Prepared: 01/28/2011 2320

Analysis Batch: 200-12879

Instrument ID: J.i
Lab File ID: jcim20.d
Initial Weight/Volume: 25 mL
Final Weight/Volume: 25 mL

Analyte	Result (ug/L)	Qualifier	RL
Dichlorodifluoromethane	0.50	U	0.50
Chloromethane	0.50	U	0.50
Vinyl chloride	0.50	U	0.50
Bromomethane	0.50	U	0.50
Chloroethane	0.50	U	0.50
Trichlorofluoromethane	0.50	U	0.50
1,1-Dichloroethene	0.50	U	0.50
1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U	0.50
Acetone	9.3	B	5.0
Carbon disulfide	0.50	U	0.50
Methyl acetate	0.50	U	0.50
Methylene chloride	0.50	U	0.50
trans-1,2-Dichloroethene	0.50	U	0.50
Methyl tert-butyl ether	1.3	B	0.50
1,1-Dichloroethane	0.14	J	0.50
cis-1,2-Dichloroethene	0.50	U	0.50
2-Butanone	5.0	U	5.0
Bromochloromethane	0.50	U	0.50
Chloroform	0.30	J	0.50
1,1,1-Trichloroethane	0.13	J	0.50
Cyclohexane	0.50	U	0.50
Carbon tetrachloride	0.040	J	0.50
Benzene	0.50	U	0.50
1,2-Dichloroethane	0.50	U	0.50
Trichloroethene	0.068	J B	0.50
Methylcyclohexane	0.50	U	0.50
1,2-Dichloropropane	0.50	U	0.50
Bromodichloromethane	0.50	U	0.50
cis-1,3-Dichloropropene	0.50	U	0.50
4-Methyl-2-pentanone	5.0	U	5.0
Toluene	0.50	U	0.50
trans-1,3-Dichloropropene	0.50	U	0.50
1,1,2-Trichloroethane	0.50	U	0.50
Tetrachloroethene	0.094	J B	0.50
2-Hexanone	5.0	U	5.0
Dibromochloromethane	0.50	U	0.50
1,2-Dibromoethane	0.50	U	0.50
Chlorobenzene	0.50	U	0.50
Ethylbenzene	0.50	U	0.50
o-Xylene	0.50	U	0.50
m,p-Xylene	0.50	U	0.50
Styrene	0.50	U	0.50
Bromoform	1.8		0.50
Isopropylbenzene	0.50	U	0.50
1,1,2,2-Tetrachloroethane	0.50	U	0.50
1,3-Dichlorobenzene	0.50	U	0.50

Client: Panther Technologies

Job Number: 200-3445-1
Sdg Number: 200-3445-1

Client Sample ID: MW-3

Lab Sample ID: 200-3445-4
Client Matrix: Water

Date Sampled: 01/20/2011 1315
Date Received: 01/22/2011 0850

SOM01.2/VOA_Tr Trace Water

Method:	SOM01.2/VOA_Tr	Analysis Batch: 200-12879		Instrument ID:	J.i
Preparation:	SOM01.2/VOA_PR			Lab File ID:	jcim20.d
Dilution:	1.0			Initial Weight/Volume:	25 mL
Date Analyzed:	01/28/2011 2320			Final Weight/Volume:	25 mL
Date Prepared:	01/28/2011 2320				

Analyte	Result (ug/L)	Qualifier	RL
1,4-Dichlorobenzene	0.50	U	0.50
1,2-Dichlorobenzene	0.50	U	0.50
1,2-Dibromo-3-chloropropane	0.50	U	0.50
1,2,4-Trichlorobenzene	0.50	U	0.50
1,2,3-Trichlorobenzene	0.50	U	0.50

Surrogate	%Rec	Qualifier	Acceptance Limits
Vinyl chloride-d3	108		65 - 131
Chloroethane-d5	117		71 - 131
1,1-Dichloroethene-d2	86		55 - 104
2-Butanone-d5	97		49 - 155
Chloroform-d	106		78 - 121
1,2-Dichloroethane-d4	105		78 - 129
Benzene-d6	110		77 - 124
1,2-Dichloropropane-d6	98		79 - 124
Toluene-d8	110		77 - 121
trans-1,3-Dichloropropene-d4	104		73 - 121
2-Hexanone-d5	105		28 - 135
1,1,2,2-Tetrachloroethane-d2	104		73 - 125
1,2-Dichlorobenzene-d4	111		80 - 131

Client: Panther Technologies

Job Number: 200-3445-1
Sdg Number: 200-3445-1

Client Sample ID: MW-3

Lab Sample ID: 200-3445-4
Client Matrix: Water

Date Sampled: 01/20/2011 1315
Date Received: 01/22/2011 0850

SOM01.2/VOA_Tr Trace Water

Method:	SOM01.2/VOA_Tr	Analysis Batch: 200-12879		Instrument ID:	J.i
Preparation:	SOM01.2/VOA_PR			Lab File ID:	jcim20.d
Dilution:	1.0			Initial Weight/Volume:	25 mL
Date Analyzed:	01/28/2011 2320			Final Weight/Volume:	25 mL
Date Prepared:	01/28/2011 2320				

Tentatively Identified Compounds **Number TIC's Found:** 6

Cas Number	Analyte	RT	Est. Result (ug/L)	Qualifier
420-56-4	Trimethylsilyl fluoride	1.75	1.8	J N
	Unknown	6.92	3.0 U	~~B X J~~
541-05-9	Cyclotrisiloxane, hexamethyl-	7.87	0.63 U	~~B J N~~
	Unknown siloxane derivative	10.69	0.65 U	~~B J~~
	Unknown	11.57	6.5	J
591-17-3	Benzene, 1-bromo-3-methyl-	12.31	1.6	J N

Targeted Tentatively Identified Compounds

Cas Number	Analyte	Est. Result (ug/L)	Qualifier
	Total Alkanes		

Client: Panther Technologies

Job Number: 200-3445-1
Sdg Number: 200-3445-1

Client Sample ID: **MW-4**

Lab Sample ID: 200-3445-5
Client Matrix: Water

Date Sampled: 01/20/2011 1130
Date Received: 01/22/2011 0850

SOM01.2/VOA_Tr Trace Water

Method: SOM01.2/VOA_Tr
Preparation: SOM01.2/VOA_PR
Dilution: 1.0
Date Analyzed: 01/28/2011 2345
Date Prepared: 01/28/2011 2345

Analysis Batch: 200-12879

Instrument ID: J.i
Lab File ID: jcim21.d
Initial Weight/Volume: 25 mL
Final Weight/Volume: 25 mL

Analyte	Result (ug/L)	Qualifier	RL
Dichlorodifluoromethane	0.50	U	0.50
Chloromethane	0.15	J	0.50
Vinyl chloride	0.50	U	0.50
Bromomethane	0.50	U	0.50
Chloroethane	0.50	U	0.50
Trichlorofluoromethane	0.50	U	0.50
1,1-Dichloroethene	0.50	U	0.50
1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U	0.50
Acetone	7.7 U	~~B~~	5.0
Carbon disulfide	0.50	U	0.50
Methyl acetate	0.50	U	0.50
Methylene chloride	0.50	U	0.50
trans-1,2-Dichloroethene	0.50	U	0.50
Methyl tert-butyl ether	2.3	~~B~~	0.50
1,1-Dichloroethane	0.24	J	0.50
cis-1,2-Dichloroethene	0.50	U	0.50
2-Butanone	5.0	U	5.0
Bromochloromethane	0.50	U	0.50
Chloroform	0.48	J	0.50
1,1,1-Trichloroethane	0.24	J	0.50
Cyclohexane	0.50	U	0.50
Carbon tetrachloride	0.50	U	0.50
Benzene	0.032	J	0.50
1,2-Dichloroethane	0.50	U	0.50
Trichloroethene	0.072 U	~~J B~~	0.50
Methylcyclohexane	0.50	U	0.50
1,2-Dichloropropane	0.50	U	0.50
Bromodichloromethane	0.50	U	0.50
cis-1,3-Dichloropropene	0.50	U	0.50
4-Methyl-2-pentanone	5.0	U	5.0
Toluene	0.50	U	0.50
trans-1,3-Dichloropropene	0.50	U	0.50
1,1,2-Trichloroethane	0.50	U	0.50
Tetrachloroethene	0.076 U	~~J B~~	0.50
2-Hexanone	5.0	U	5.0
Dibromochloromethane	0.50	U	0.50
1,2-Dibromoethane	0.50	U	0.50
Chlorobenzene	0.50	U	0.50
Ethylbenzene	0.50	U	0.50
o-Xylene	0.50	U	0.50
m,p-Xylene	0.50	U	0.50
Styrene	0.50	U	0.50
Bromoform	0.50	U	0.50
Isopropylbenzene	0.50	U	0.50
1,1,2,2-Tetrachloroethane	0.50	U	0.50
1,3-Dichlorobenzene	0.50	U	0.50

Client: Panther Technologies

Job Number: 200-3445-1
Sdg Number: 200-3445-1

Client Sample ID: MW-4

Lab Sample ID: 200-3445-5
Client Matrix: Water

Date Sampled: 01/20/2011 1130
Date Received: 01/22/2011 0850

SOM01.2/VOA_Tr Trace Water

Method:	SOM01.2/VOA_Tr	Analysis Batch: 200-12879		Instrument ID:	J.i
Preparation:	SOM01.2/VOA_PR			Lab File ID:	jcim21.d
Dilution:	1.0			Initial Weight/Volume:	25 mL
Date Analyzed:	01/28/2011 2345			Final Weight/Volume:	25 mL
Date Prepared:	01/28/2011 2345				

Analyte	Result (ug/L)	Qualifier	RL
1,4-Dichlorobenzene	0.50	U	0.50
1,2-Dichlorobenzene	0.50	U	0.50
1,2-Dibromo-3-chloropropane	0.50	U	0.50
1,2,4-Trichlorobenzene	0.50	U	0.50
1,2,3-Trichlorobenzene	0.50	U	0.50

Surrogate	%Rec	Qualifier	Acceptance Limits
Vinyl chloride-d3	110		65 - 131
Chloroethane-d5	113		71 - 131
1,1-Dichloroethene-d2	87		55 - 104
2-Butanone-d5	100		49 - 155
Chloroform-d	109		78 - 121
1,2-Dichloroethane-d4	106		78 - 129
Benzene-d6	110		77 - 124
1,2-Dichloropropane-d6	98		79 - 124
Toluene-d8	111		77 - 121
trans-1,3-Dichloropropene-d4	103		73 - 121
2-Hexanone-d5	111		28 - 135
1,1,2,2-Tetrachloroethane-d2	100		73 - 125
1,2-Dichlorobenzene-d4	113		80 - 131

Client: Panther Technologies

Job Number: 200-3445-1
Sdg Number: 200-3445-1

Client Sample ID: **MW-4**

Lab Sample ID: 200-3445-5
Client Matrix: Water

Date Sampled: 01/20/2011 1130
Date Received: 01/22/2011 0850

SOM01.2/VOA_Tr Trace Water

Method:	SOM01.2/VOA_Tr	Analysis Batch: 200-12879		Instrument ID:	J.i
Preparation:	SOM01.2/VOA_PR			Lab File ID:	jcim21.d
Dilution:	1.0			Initial Weight/Volume:	25 mL
Date Analyzed:	01/28/2011 2345			Final Weight/Volume:	25 mL
Date Prepared:	01/28/2011 2345				

Tentatively Identified Compounds **Number TIC's Found:** 6

Cas Number	Analyte	RT	Est. Result (ug/L)	Qualifier
420-56-4	Trimethylsilyl fluoride	1.75	2.9	J N
	Unknown alkane	3.45	0.53 U	~~B J~~
	Unknown	6.92	3.1 U	~~B X J~~
541-05-9	Cyclotrisiloxane, hexamethyl-	7.86	0.55 U	~~B J~~ N
	Unknown siloxane derivative	10.69	0.55 U	~~B J~~
	Unknown	11.57	8.9	J

Targeted Tentatively Identified Compounds

Cas Number	Analyte	Est. Result (ug/L)	Qualifier
	Total Alkanes	13 U	~~J~~

Client: Panther Technologies

Job Number: 200-3445-1
Sdg Number: 200-3445-1

Client Sample ID: **MW-6**

Lab Sample ID: 200-3445-6
Client Matrix: Water

Date Sampled: 01/20/2011 1200
Date Received: 01/22/2011 0850

SOM01.2/VOA_Tr Trace Water

Method: SOM01.2/VOA_Tr
Preparation: SOM01.2/VOA_PR
Dilution: 1.0
Date Analyzed: 01/29/2011 0010
Date Prepared: 01/29/2011 0010

Analysis Batch: 200-12879

Instrument ID: J.i
Lab File ID: jcim22.d
Initial Weight/Volume: 25 mL
Final Weight/Volume: 25 mL

Analyte	Result (ug/L)	Qualifier	RL
Dichlorodifluoromethane	0.50	U	0.50
Chloromethane	0.50	U	0.50
Vinyl chloride	0.50	U	0.50
Bromomethane	0.50	U	0.50
Chloroethane	0.50	U	0.50
Trichlorofluoromethane	0.50	U	0.50
1,1-Dichloroethene	0.50	U	0.50
1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U	0.50
Acetone	6.3 U	~~B~~	5.0
Carbon disulfide	0.50	U	0.50
Methyl acetate	0.50	U	0.50
Methylene chloride	0.50	U	0.50
trans-1,2-Dichloroethene	0.50	U	0.50
Methyl tert-butyl ether	2.4	~~B~~	0.50
1,1-Dichloroethane	0.25	J	0.50
cis-1,2-Dichloroethene	0.50	U	0.50
2-Butanone	0.67	J	5.0
Bromochloromethane	0.50	U	0.50
Chloroform	0.48	J	0.50
1,1,1-Trichloroethane	0.26	J	0.50
Cyclohexane	0.50	U	0.50
Carbon tetrachloride	0.50	U	0.50
Benzene	0.031	J	0.50
1,2-Dichloroethane	0.50	U	0.50
Trichloroethene	0.50	U	0.50
Methylcyclohexane	0.50	U	0.50
1,2-Dichloropropane	0.50	U	0.50
Bromodichloromethane	0.50	U	0.50
cis-1,3-Dichloropropene	0.50	U	0.50
4-Methyl-2-pentanone	5.0	U	5.0
Toluene	0.50	U	0.50
trans-1,3-Dichloropropene	0.50	U	0.50
1,1,2-Trichloroethane	0.50	U	0.50
Tetrachloroethene	0.50	U	0.50
2-Hexanone	5.0	U	5.0
Dibromochloromethane	0.50	U	0.50
1,2-Dibromoethane	0.50	U	0.50
Chlorobenzene	0.50	U	0.50
Ethylbenzene	0.50	U	0.50
o-Xylene	0.50	U	0.50
m,p-Xylene	0.50	U	0.50
Styrene	0.50	U	0.50
Bromoform	0.50	U	0.50
Isopropylbenzene	0.50	U	0.50
1,1,2,2-Tetrachloroethane	0.50	U	0.50
1,3-Dichlorobenzene	0.50	U	0.50

Client: Panther Technologies

Job Number: 200-3445-1
Sdg Number: 200-3445-1

Client Sample ID: MW-6

Lab Sample ID: 200-3445-6
Client Matrix: Water

Date Sampled: 01/20/2011 1200
Date Received: 01/22/2011 0850

SOM01.2/VOA_Tr Trace Water

Method:	SOM01.2/VOA_Tr	Analysis Batch: 200-12879		Instrument ID:	J.i
Preparation:	SOM01.2/VOA_PR			Lab File ID:	jcim22.d
Dilution:	1.0			Initial Weight/Volume:	25 mL
Date Analyzed:	01/29/2011 0010			Final Weight/Volume:	25 mL
Date Prepared:	01/29/2011 0010				

Analyte	Result (ug/L)	Qualifier	RL
1,4-Dichlorobenzene	0.50	U	0.50
1,2-Dichlorobenzene	0.50	U	0.50
1,2-Dibromo-3-chloropropane	0.50	U	0.50
1,2,4-Trichlorobenzene	0.50	U	0.50
1,2,3-Trichlorobenzene	0.50	U	0.50

Surrogate	%Rec	Qualifier	Acceptance Limits
Vinyl chloride-d3	111		65 - 131
Chloroethane-d5	114		71 - 131
1,1-Dichloroethene-d2	89		55 - 104
2-Butanone-d5	97		49 - 155
Chloroform-d	114		78 - 121
1,2-Dichloroethane-d4	112		78 - 129
Benzene-d6	111		77 - 124
1,2-Dichloropropane-d6	103		79 - 124
Toluene-d8	113		77 - 121
trans-1,3-Dichloropropene-d4	103		73 - 121
2-Hexanone-d5	104		28 - 135
1,1,2,2-Tetrachloroethane-d2	104		73 - 125
1,2-Dichlorobenzene-d4	107		80 - 131

Client: Panther Technologies

Job Number: 200-3445-1
Sdg Number: 200-3445-1

Client Sample ID: MW-6

Lab Sample ID: 200-3445-6
Client Matrix: Water

Date Sampled: 01/20/2011 1200
Date Received: 01/22/2011 0850

SOM01.2/VOA_Tr Trace Water

Method:	SOM01.2/VOA_Tr	Analysis Batch: 200-12879		Instrument ID:	J.i
Preparation:	SOM01.2/VOA_PR			Lab File ID:	jcim22.d
Dilution:	1.0			Initial Weight/Volume:	25 mL
Date Analyzed:	01/29/2011 0010			Final Weight/Volume:	25 mL
Date Prepared:	01/29/2011 0010				

Tentatively Identified Compounds **Number TIC's Found:** 5

Cas Number	Analyte	RT	Est. Result (ug/L)	Qualifier
420-56-4	Trimethylsilyl fluoride	1.75	9.9	J N
	Unknown alkane	3.45	0.51 U	~~B J~~
	Unknown	6.92	3.0 U	~~B X J~~
541-05-9	Cyclotrisiloxane, hexamethyl-	7.87	0.52 U	~~B J N~~
	Unknown	11.57	8.9	J

Targeted Tentatively Identified Compounds

Cas Number	Analyte	Est. Result (ug/L)	Qualifier
	Total Alkanes	13 U	~~J~~

Client: Panther Technologies

Job Number: 200-3445-1
Sdg Number: 200-3445-1

Client Sample ID: **FB 01202011**

Lab Sample ID: 200-3445-7
Client Matrix: Water

Date Sampled: 01/20/2011 1600
Date Received: 01/22/2011 0850

SOM01.2/VOA_Tr Trace Water

Method: SOM01.2/VOA_Tr
Preparation: SOM01.2/VOA_PR
Dilution: 1.0
Date Analyzed: 01/24/2011 1314
Date Prepared: 01/24/2011 1314

Analysis Batch: 200-12583

Instrument ID: J.i
Lab File ID: jcif13.d
Initial Weight/Volume: 25 mL
Final Weight/Volume: 25 mL

Analyte	Result (ug/L)	Qualifier	RL
Dichlorodifluoromethane	0.50	U	0.50
Chloromethane	0.50	U	0.50
Vinyl chloride	0.50	U	0.50
Bromomethane	0.50	U	0.50
Chloroethane	0.50	U	0.50
Trichlorofluoromethane	0.50	U	0.50
1,1-Dichloroethene	0.50	U	0.50
1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U	0.50
Acetone	2.9 U	~~J~~	5.0
Carbon disulfide	0.50	U	0.50
Methyl acetate	0.50	U	0.50
Methylene chloride	0.50	U	0.50
trans-1,2-Dichloroethene	0.50	U	0.50
Methyl tert-butyl ether	0.044 U	~~J B~~	0.50
1,1-Dichloroethane	0.50	U	0.50
cis-1,2-Dichloroethene	0.50	U	0.50
2-Butanone	5.0	U	5.0
Bromochloromethane	0.50	U	0.50
Chloroform	0.50	U	0.50
1,1,1-Trichloroethane	0.50	U	0.50
Cyclohexane	0.50	U	0.50
Carbon tetrachloride	0.50	U	0.50
Benzene	0.50	U	0.50
1,2-Dichloroethane	0.50	U	0.50
Trichloroethene	0.50	U	0.50
Methylcyclohexane	0.50	U	0.50
1,2-Dichloropropane	0.50	U	0.50
Bromodichloromethane	0.50	U	0.50
cis-1,3-Dichloropropene	0.50	U	0.50
4-Methyl-2-pentanone	5.0	U	5.0
Toluene	0.50	U	0.50
trans-1,3-Dichloropropene	0.50	U	0.50
1,1,2-Trichloroethane	0.50	U	0.50
Tetrachloroethene	0.50	U	0.50
2-Hexanone	5.0	U	5.0
Dibromochloromethane	0.50	U	0.50
1,2-Dibromoethane	0.50	U	0.50
Chlorobenzene	0.50	U	0.50
Ethylbenzene	0.50	U	0.50
o-Xylene	0.50	U	0.50
m,p-Xylene	0.50	U	0.50
Styrene	0.50	U	0.50
Bromoform	0.50	U	0.50
Isopropylbenzene	0.50	U	0.50
1,1,2,2-Tetrachloroethane	0.50	U	0.50
1,3-Dichlorobenzene	0.50	U	0.50

Client: Panther Technologies

Job Number: 200-3445-1
Sdg Number: 200-3445-1

Client Sample ID: **FB 01202011**

Lab Sample ID: 200-3445-7
Client Matrix: Water

Date Sampled: 01/20/2011 1600
Date Received: 01/22/2011 0850

SOM01.2/VOA_Tr Trace Water

Method:	SOM01.2/VOA_Tr	Analysis Batch: 200-12583		Instrument ID:	J.i
Preparation:	SOM01.2/VOA_PR			Lab File ID:	jcif13.d
Dilution:	1.0			Initial Weight/Volume:	25 mL
Date Analyzed:	01/24/2011 1314			Final Weight/Volume:	25 mL
Date Prepared:	01/24/2011 1314				

Analyte	Result (ug/L)	Qualifier	RL
1,4-Dichlorobenzene	0.50	U	0.50
1,2-Dichlorobenzene	0.50	U	0.50
1,2-Dibromo-3-chloropropane	0.50	U	0.50
1,2,4-Trichlorobenzene	0.50	U	0.50
1,2,3-Trichlorobenzene	0.50	U	0.50

Surrogate	%Rec	Qualifier	Acceptance Limits
Vinyl chloride-d3	105		65 - 131
Chloroethane-d5	107		71 - 131
1,1-Dichloroethene-d2	81		55 - 104
2-Butanone-d5	94		49 - 155
Chloroform-d	99		78 - 121
1,2-Dichloroethane-d4	101		78 - 129
Benzene-d6	106		77 - 124
1,2-Dichloropropane-d6	96		79 - 124
Toluene-d8	107		77 - 121
trans-1,3-Dichloropropene-d4	100		73 - 121
2-Hexanone-d5	101		28 - 135
1,1,2,2-Tetrachloroethane-d2	94		73 - 125
1,2-Dichlorobenzene-d4	106		80 - 131

Client: Panther Technologies

Job Number: 200-3445-1
Sdg Number: 200-3445-1

Client Sample ID: **FB 01202011**

Lab Sample ID: 200-3445-7
Client Matrix: Water

Date Sampled: 01/20/2011 1600
Date Received: 01/22/2011 0850

SOM01.2/VOA_Tr Trace Water

Method:	SOM01.2/VOA_Tr	Analysis Batch: 200-12583		Instrument ID:	J.i
Preparation:	SOM01.2/VOA_PR			Lab File ID:	jcif13.d
Dilution:	1.0			Initial Weight/Volume:	25 mL
Date Analyzed:	01/24/2011 1314			Final Weight/Volume:	25 mL
Date Prepared:	01/24/2011 1314				

Tentatively Identified Compounds **Number TIC's Found:** 2

Cas Number	Analyte	RT	Est. Result (ug/L)	Qualifier
	Unknown alkane	3.45	0.55 U	~~B J~~
	Unknown	6.92	3.0 U	~~B X J~~

Targeted Tentatively Identified Compounds

Cas Number	Analyte	Est. Result (ug/L)	Qualifier
	Total Alkanes	14 U	~~J~~

Client: Panther Technologies

Job Number: 200-3445-1
Sdg Number: 200-3445-1

Client Sample ID: TRIP BLANK

Lab Sample ID: 200-3445-8
Client Matrix: Water

Date Sampled: 01/20/2011 0000
Date Received: 01/22/2011 0850

SOM01.2/VOA_Tr Trace Water

Method:	SOM01.2/VOA_Tr	Analysis Batch: 200-12583		Instrument ID:	J.i
Preparation:	SOM01.2/VOA_PR			Lab File ID:	jcif14.d
Dilution:	1.0			Initial Weight/Volume:	25 mL
Date Analyzed:	01/24/2011 1339			Final Weight/Volume:	25 mL
Date Prepared:	01/24/2011 1339				

Analyte	Result (ug/L)	Qualifier	RL
Dichlorodifluoromethane	0.50	U	0.50
Chloromethane	0.50	U	0.50
Vinyl chloride	0.50	U	0.50
Bromomethane	0.50	U	0.50
Chloroethane	0.50	U	0.50
Trichlorofluoromethane	0.50	U	0.50
1,1-Dichloroethene	0.50	U	0.50
1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U	0.50
Acetone	1.3	J	5.0
Carbon disulfide	0.50	U	0.50
Methyl acetate	0.50	U	0.50
Methylene chloride	0.50	U	0.50
trans-1,2-Dichloroethene	0.50	U	0.50
Methyl tert-butyl ether	0.50	U	0.50
1,1-Dichloroethane	0.50	U	0.50
cis-1,2-Dichloroethene	0.50	U	0.50
2-Butanone	5.0	U	5.0
Bromochloromethane	0.50	U	0.50
Chloroform	0.50	U	0.50
1,1,1-Trichloroethane	0.50	U	0.50
Cyclohexane	0.50	U	0.50
Carbon tetrachloride	0.50	U	0.50
Benzene	0.50	U	0.50
1,2-Dichloroethane	0.50	U	0.50
Trichloroethene	0.50	U	0.50
Methylcyclohexane	0.50	U	0.50
1,2-Dichloropropane	0.50	U	0.50
Bromodichloromethane	0.50	U	0.50
cis-1,3-Dichloropropene	0.50	U	0.50
4-Methyl-2-pentanone	5.0	U	5.0
Toluene	0.50	U	0.50
trans-1,3-Dichloropropene	0.50	U	0.50
1,1,2-Trichloroethane	0.50	U	0.50
Tetrachloroethene	0.50	U	0.50
2-Hexanone	5.0	U	5.0
Dibromochloromethane	0.50	U	0.50
1,2-Dibromoethane	0.50	U	0.50
Chlorobenzene	0.50	U	0.50
Ethylbenzene	0.50	U	0.50
o-Xylene	0.50	U	0.50
m,p-Xylene	0.50	U	0.50
Styrene	0.50	U	0.50
Bromoform	0.50	U	0.50
Isopropylbenzene	0.50	U	0.50
1,1,2,2-Tetrachloroethane	0.50	U	0.50
1,3-Dichlorobenzene	0.50	U	0.50

Client: Panther Technologies

Job Number: 200-3445-1
Sdg Number: 200-3445-1

Client Sample ID: **TRIP BLANK**

Lab Sample ID: 200-3445-8
Client Matrix: Water

Date Sampled: 01/20/2011 0000
Date Received: 01/22/2011 0850

SOM01.2/VOA_Tr Trace Water

Method:	SOM01.2/VOA_Tr	Analysis Batch: 200-12583		Instrument ID:	J.i
Preparation:	SOM01.2/VOA_PR			Lab File ID:	jcif14.d
Dilution:	1.0			Initial Weight/Volume:	25 mL
Date Analyzed:	01/24/2011 1339			Final Weight/Volume:	25 mL
Date Prepared:	01/24/2011 1339				

Analyte	Result (ug/L)	Qualifier	RL
1,4-Dichlorobenzene	0.50	U	0.50
1,2-Dichlorobenzene	0.50	U	0.50
1,2-Dibromo-3-chloropropane	0.50	U	0.50
1,2,4-Trichlorobenzene	0.50	U	0.50
1,2,3-Trichlorobenzene	0.50	U	0.50

Surrogate	%Rec	Qualifier	Acceptance Limits
Vinyl chloride-d3	109		65 - 131
Chloroethane-d5	106		71 - 131
1,1-Dichloroethene-d2	84		55 - 104
2-Butanone-d5	95		49 - 155
Chloroform-d	101		78 - 121
1,2-Dichloroethane-d4	97		78 - 129
Benzene-d6	107		77 - 124
1,2-Dichloropropane-d6	98		79 - 124
Toluene-d8	110		77 - 121
trans-1,3-Dichloropropene-d4	103		73 - 121
2-Hexanone-d5	96		28 - 135
1,1,2,2-Tetrachloroethane-d2	97		73 - 125
1,2-Dichlorobenzene-d4	107		80 - 131

Client: Panther Technologies

Job Number: 200-3445-1
Sdg Number: 200-3445-1

Client Sample ID: **TRIP BLANK**

Lab Sample ID: 200-3445-8
Client Matrix: Water

Date Sampled: 01/20/2011 0000
Date Received: 01/22/2011 0850

SOM01.2/VOA_Tr Trace Water

Method:	SOM01.2/VOA_Tr	Analysis Batch: 200-12583		Instrument ID:	J.i
Preparation:	SOM01.2/VOA_PR			Lab File ID:	jcif14.d
Dilution:	1.0			Initial Weight/Volume:	25 mL
Date Analyzed:	01/24/2011 1339			Final Weight/Volume:	25 mL
Date Prepared:	01/24/2011 1339				

Tentatively Identified Compounds **Number TIC's Found:** 4

Cas Number	Analyte	RT	Est. Result (ug/L)	Qualifier
	Unknown alkane	3.45	0.53	B J
	Unknown	6.92	2.9 U	~~B X J~~
541-05-9	Cyclotrisiloxane, hexamethyl-	7.86	0.60 U	~~B J N~~
	Unknown siloxane derivative	10.69	0.58 U	~~B J~~

Targeted Tentatively Identified Compounds

Cas Number	Analyte	Est. Result (ug/L)	Qualifier
	Total Alkanes	13 U	~~J~~

Client: Panther Technologies

Job Number: 200-3445-1
Sdg Number: 200-3445-1

Client Sample ID: VHBLK01

Lab Sample ID: 200-3445-9STOBLK
Client Matrix: Water

Date Sampled: 01/22/2011 0930
Date Received: 01/22/2011 0850

SOM01.2/VOA_Tr Trace Water

Method:	SOM01.2/VOA_Tr	Analysis Batch: 200-12879		Instrument ID:	J.i
Preparation:	SOM01.2/VOA_PR			Lab File ID:	jcim24.d
Dilution:	1.0			Initial Weight/Volume:	25 mL
Date Analyzed:	01/29/2011 0100			Final Weight/Volume:	25 mL
Date Prepared:	01/29/2011 0100				

Analyte	Result (ug/L)	Qualifier	RL
Dichlorodifluoromethane	0.50	U	0.50
Chloromethane	0.50	U	0.50
Vinyl chloride	0.50	U	0.50
Bromomethane	0.50	U	0.50
Chloroethane	0.50	U	0.50
Trichlorofluoromethane	0.50	U	0.50
1,1-Dichloroethene	0.50	U	0.50
1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U	0.50
Acetone	5.0	U	5.0
Carbon disulfide	0.50	U	0.50
Methyl acetate	0.50	U	0.50
Methylene chloride	0.50	U	0.50
trans-1,2-Dichloroethene	0.50	U	0.50
Methyl tert-butyl ether	0.50	U	0.50
1,1-Dichloroethane	0.50	U	0.50
cis-1,2-Dichloroethene	0.50	U	0.50
2-Butanone	5.0	U	5.0
Bromochloromethane	0.50	U	0.50
Chloroform	0.50	U	0.50
1,1,1-Trichloroethane	0.50	U	0.50
Cyclohexane	0.50	U	0.50
Carbon tetrachloride	0.50	U	0.50
Benzene	0.50	U	0.50
1,2-Dichloroethane	0.50	U	0.50
Trichloroethene	0.50	U	0.50
Methylcyclohexane	0.50	U	0.50
1,2-Dichloropropane	0.50	U	0.50
Bromodichloromethane	0.50	U	0.50
cis-1,3-Dichloropropene	0.50	U	0.50
4-Methyl-2-pentanone	5.0	U	5.0
Toluene	0.50	U	0.50
trans-1,3-Dichloropropene	0.50	U	0.50
1,1,2-Trichloroethane	0.50	U	0.50
Tetrachloroethene	0.50	U	0.50
2-Hexanone	5.0	U	5.0
Dibromochloromethane	0.50	U	0.50
1,2-Dibromoethane	0.50	U	0.50
Chlorobenzene	0.50	U	0.50
Ethylbenzene	0.50	U	0.50
o-Xylene	0.50	U	0.50
m,p-Xylene	0.50	U	0.50
Styrene	0.50	U	0.50
Bromoform	0.50	U	0.50
Isopropylbenzene	0.50	U	0.50
1,1,2,2-Tetrachloroethane	0.50	U	0.50
1,3-Dichlorobenzene	0.50	U	0.50

Client: Panther Technologies

Job Number: 200-3445-1
Sdg Number: 200-3445-1

Client Sample ID: VHBLK01

Lab Sample ID: 200-3445-9STOBLK
Client Matrix: Water

Date Sampled: 01/22/2011 0930
Date Received: 01/22/2011 0850

SOM01.2/VOA_Tr Trace Water

Method:	SOM01.2/VOA_Tr	Analysis Batch: 200-12879		Instrument ID:	J.i
Preparation:	SOM01.2/VOA_PR			Lab File ID:	jcim24.d
Dilution:	1.0			Initial Weight/Volume:	25 mL
Date Analyzed:	01/29/2011 0100			Final Weight/Volume:	25 mL
Date Prepared:	01/29/2011 0100				

Analyte	Result (ug/L)	Qualifier	RL
1,4-Dichlorobenzene	0.50	U	0.50
1,2-Dichlorobenzene	0.50	U	0.50
1,2-Dibromo-3-chloropropane	0.50	U	0.50
1,2,4-Trichlorobenzene	0.50	U	0.50
1,2,3-Trichlorobenzene	0.50	U	0.50

Surrogate	%Rec	Qualifier	Acceptance Limits
Vinyl chloride-d3	112		65 - 131
Chloroethane-d5	116		71 - 131
1,1-Dichloroethene-d2	88		55 - 104
2-Butanone-d5	90		49 - 155
Chloroform-d	110		78 - 121
1,2-Dichloroethane-d4	103		78 - 129
Benzene-d6	110		77 - 124
1,2-Dichloropropane-d6	96		79 - 124
Toluene-d8	111		77 - 121
trans-1,3-Dichloropropene-d4	103		73 - 121
2-Hexanone-d5	97		28 - 135
1,1,2,2-Tetrachloroethane-d2	98		73 - 125
1,2-Dichlorobenzene-d4	113		80 - 131

Client: Panther Technologies

Job Number: 200-3445-1
Sdg Number: 200-3445-1

Client Sample ID: VHBLK01

Lab Sample ID: 200-3445-9STOBLK
Client Matrix: Water

Date Sampled: 01/22/2011 0930
Date Received: 01/22/2011 0850

SOM01.2/VOA_Tr Trace Water

Method:	SOM01.2/VOA_Tr	Analysis Batch: 200-12879		Instrument ID:	J.i
Preparation:	SOM01.2/VOA_PR			Lab File ID:	jcim24.d
Dilution:	1.0			Initial Weight/Volume:	25 mL
Date Analyzed:	01/29/2011 0100			Final Weight/Volume:	25 mL
Date Prepared:	01/29/2011 0100				

Tentatively Identified Compounds **Number TIC's Found:** 4

Cas Number	Analyte	RT	Est. Result (ug/L)	Qualifier
	Unknown alkane	3.45	0.51	B J
	Unknown	6.92	3.0 U	~~B X J~~
541-05-9	Cyclotrisiloxane, hexamethyl-	7.86	0.61 U	~~B J N~~
	Unknown siloxane derivative	10.69	0.52 U	~~B J~~

Targeted Tentatively Identified Compounds

Cas Number	Analyte	Est. Result (ug/L)	Qualifier
	Total Alkanes	13 U	J

Client: Panther Technologies

Job Number: 200-3445-1
Sdg Number: 200-3445-1

Client Sample ID: MW-5

Lab Sample ID: 200-3445-1
Client Matrix: Water

Date Sampled: 01/19/2011 1400
Date Received: 01/22/2011 0850

ISM01.2/HG ISM01.2 Mercury

Method: ISM01.2/HG
Preparation: ISM01.2/HG
Dilution: 1.0
Date Analyzed: 01/26/2011 1211
Date Prepared: 01/25/2011 1100

Analysis Batch: 200-12682
Prep Batch: 200-12607

Instrument ID: MEPCV3
Lab File ID: 012611A.PRN
Initial Weight/Volume: 50 mL
Final Weight/Volume: 50 mL

Analyte	Result (ug/L)	Qualifier	MDLE	RL
Mercury	0.16	J	0.015	0.20

ISM01.2/ICP ISM01.2 Metals (ICP)

Method: ISM01.2/ICP
Preparation: ISM01.2/ICP
Dilution: 1.0
Date Analyzed: 01/25/2011 1715
Date Prepared: 01/25/2011 0820

Analysis Batch: 200-12644
Prep Batch: 200-12588

Instrument ID: METICP7
Lab File ID: 012511-02.ttx
Initial Weight/Volume: 100 mL
Final Weight/Volume: 100 mL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Aluminum	2010		40.0	200
Antimony	4.1 UJ	~~J~~	2.6	60.0
Arsenic	10.0	U	2.9	10.0
Barium	41.4	J	13.0	200
Beryllium	5.0	U	0.88	5.0
Cadmium	5.0	U	0.63	5.0
Calcium	18400		430	5000
Chromium	157		0.49	10.0
Cobalt	50.0	U	1.1	50.0
Copper	25.0	U	2.9	25.0
Iron	252		15.0	100
Lead	10.0	U	2.3	10.0
Magnesium	11200		240	5000
Nickel	18.7	J	1.2	40.0
Potassium	20400		150	5000
Selenium	35.0	U	4.5	35.0
Silver	10.0	U	1.6	10.0
Sodium	26800		100	5000
Thallium	25.0	U	3.0	25.0
Vanadium	50.0	U	2.4	50.0
Zinc	8.8	J	1.4	60.0

Method: ISM01.2/ICP
Preparation: ISM01.2/ICP
Dilution: 100
Date Analyzed: 01/25/2011 1805
Date Prepared: 01/25/2011 0820

Analysis Batch: 200-12644
Prep Batch: 200-12588

Instrument ID: METICP7
Lab File ID: 012511-02.ttx
Initial Weight/Volume: 100 mL
Final Weight/Volume: 100 mL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Manganese	14200		71.0	1500

Client: Panther Technologies

Job Number: 200-3445-1
Sdg Number: 200-3445-1

Client Sample ID: **MW-1**

Lab Sample ID: 200-3445-2
Client Matrix: Water

Date Sampled: 01/20/2011 1530
Date Received: 01/22/2011 0850

ISM01.2/HG ISM01.2 Mercury

Method:	ISM01.2/HG	Analysis Batch: 200-12682		Instrument ID:	MEPCV3
Preparation:	ISM01.2/HG	Prep Batch: 200-12607		Lab File ID:	012611A.PRN
Dilution:	1.0			Initial Weight/Volume:	50 mL
Date Analyzed:	01/26/2011 1213			Final Weight/Volume:	50 mL
Date Prepared:	01/25/2011 1100				

Analyte	Result (ug/L)	Qualifier	MDLE	RL
Mercury	0.56		0.015	0.20

ISM01.2/ICP ISM01.2 Metals (ICP)

Method:	ISM01.2/ICP	Analysis Batch: 200-12644		Instrument ID:	METICP7
Preparation:	ISM01.2/ICP	Prep Batch: 200-12588		Lab File ID:	012511-02.ttx
Dilution:	1.0			Initial Weight/Volume:	100 mL
Date Analyzed:	01/25/2011 1725			Final Weight/Volume:	100 mL
Date Prepared:	01/25/2011 0820				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Aluminum	3560		40.0	200
Antimony	5.6 U J	~~J~~	2.6	60.0
Arsenic	10.0	U	2.9	10.0
Barium	54.5	J	13.0	200
Beryllium	5.0	U	0.88	5.0
Cadmium	0.77	J	0.63	5.0
Calcium	20500		430	5000
Chromium	141		0.49	10.0
Cobalt	50.0	U	1.1	50.0
Copper	3.2 U	~~J~~	2.9	25.0
Iron	267		15.0	100
Lead	10.0	U	2.3	10.0
Magnesium	9370		240	5000
Nickel	88.5		1.2	40.0
Potassium	14100		150	5000
Selenium	35.0	U	4.5	35.0
Silver	10.0	U	1.6	10.0
Sodium	27100		100	5000
Thallium	25.0	U	3.0	25.0
Vanadium	50.0	U	2.4	50.0
Zinc	30.2	J	1.4	60.0

Method:	ISM01.2/ICP	Analysis Batch: 200-12644		Instrument ID:	METICP7
Preparation:	ISM01.2/ICP	Prep Batch: 200-12588		Lab File ID:	012511-02.ttx
Dilution:	10			Initial Weight/Volume:	100 mL
Date Analyzed:	01/25/2011 1815			Final Weight/Volume:	100 mL
Date Prepared:	01/25/2011 0820				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Manganese	2670		7.1	150

Client: Panther Technologies

Job Number: 200-3445-1
Sdg Number: 200-3445-1

Client Sample ID: MW-2

Lab Sample ID: 200-3445-3
Client Matrix: Water

Date Sampled: 01/20/2011 1800
Date Received: 01/22/2011 0850

ISM01.2/HG ISM01.2 Mercury

Method: ISM01.2/HG
Preparation: ISM01.2/HG
Dilution: 1.0
Date Analyzed: 01/26/2011 1215
Date Prepared: 01/25/2011 1100

Analysis Batch: 200-12682
Prep Batch: 200-12607

Instrument ID: MEPCV3
Lab File ID: 012611A.PRN
Initial Weight/Volume: 50 mL
Final Weight/Volume: 50 mL

Analyte	Result (ug/L)	Qualifier	MDLE	RL
Mercury	0.20	U	0.015	0.20

ISM01.2/ICP ISM01.2 Metals (ICP)

Method: ISM01.2/ICP
Preparation: ISM01.2/ICP
Dilution: 1.0
Date Analyzed: 01/25/2011 1731
Date Prepared: 01/25/2011 0820

Analysis Batch: 200-12644
Prep Batch: 200-12588

Instrument ID: METICP7
Lab File ID: 012511-02.ttx
Initial Weight/Volume: 100 mL
Final Weight/Volume: 100 mL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Aluminum	3640		40.0	200
Antimony	60.0	U	2.6	60.0
Arsenic	3.7	J	2.9	10.0
Barium	24.5	J	13.0	200
Beryllium	5.0	U	0.88	5.0
Cadmium	5.0	U	0.63	5.0
Calcium	12700		430	5000
Chromium	22.6		0.49	10.0
Cobalt	50.0	U	1.1	50.0
Copper	8.9 U	J	2.9	25.0
Iron	521		15.0	100
Lead	3.2	J	2.3	10.0
Magnesium	3060	J	240	5000
Nickel	133		1.2	40.0
Potassium	18300		150	5000
Selenium	35.0	U	4.5	35.0
Silver	10.0	U	1.6	10.0
Sodium	19800		100	5000
Thallium	25.0	U	3.0	25.0
Vanadium	6.5	J	2.4	50.0
Zinc	20.9	J	1.4	60.0

Method: ISM01.2/ICP
Preparation: ISM01.2/ICP
Dilution: 10
Date Analyzed: 01/25/2011 1820
Date Prepared: 01/25/2011 0820

Analysis Batch: 200-12644
Prep Batch: 200-12588

Instrument ID: METICP7
Lab File ID: 012511-02.ttx
Initial Weight/Volume: 100 mL
Final Weight/Volume: 100 mL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Manganese	750		7.1	150

Client: Panther Technologies

Job Number: 200-3445-1
Sdg Number: 200-3445-1

Client Sample ID: MW-3

Lab Sample ID: 200-3445-4
Client Matrix: Water

Date Sampled: 01/20/2011 1315
Date Received: 01/22/2011 0850

ISM01.2/HG ISM01.2 Mercury

Method:	ISM01.2/HG	Analysis Batch: 200-12682		Instrument ID:	MEPCV3
Preparation:	ISM01.2/HG	Prep Batch: 200-12607		Lab File ID:	012611A.PRN
Dilution:	1.0			Initial Weight/Volume:	50 mL
Date Analyzed:	01/26/2011 1217			Final Weight/Volume:	50 mL
Date Prepared:	01/25/2011 1100				

Analyte	Result (ug/L)	Qualifier	MDLE	RL
Mercury	0.20	J	0.015	0.20

ISM01.2/ICP ISM01.2 Metals (ICP)

Method:	ISM01.2/ICP	Analysis Batch: 200-12644		Instrument ID:	METICP7
Preparation:	ISM01.2/ICP	Prep Batch: 200-12588		Lab File ID:	012511-02.ttx
Dilution:	1.0			Initial Weight/Volume:	100 mL
Date Analyzed:	01/25/2011 1735			Final Weight/Volume:	100 mL
Date Prepared:	01/25/2011 0820				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Aluminum	1330		40.0	200
Antimony	60.0	U	2.6	60.0
Arsenic	10.0	U	2.9	10.0
Barium	90.8	J	13.0	200
Beryllium	5.0	U	0.88	5.0
Cadmium	5.0	U	0.63	5.0
Calcium	13100		430	5000
Chromium	90.4		0.49	10.0
Cobalt	-1.78041-005		1.1	50.0
Copper	25.0	U	2.9	25.0
Iron	179		15.0	100
Lead	10.0	U	2.3	10.0
Magnesium	6270		240	5000
Nickel	95.4		1.2	40.0
Potassium	17300		150	5000
Selenium	35.0	U	4.5	35.0
Silver	10.0	U	1.6	10.0
Sodium	16700		100	5000
Thallium	25.0	U	3.0	25.0
Vanadium	50.0	U	2.4	50.0
Zinc	59.8	J	1.4	60.0

Method:	ISM01.2/ICP	Analysis Batch: 200-12644		Instrument ID:	METICP7
Preparation:	ISM01.2/ICP	Prep Batch: 200-12588		Lab File ID:	012511-02.ttx
Dilution:	50			Initial Weight/Volume:	100 mL
Date Analyzed:	01/25/2011 1825			Final Weight/Volume:	100 mL
Date Prepared:	01/25/2011 0820				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Manganese	10200		35.5	750

Client: Panther Technologies

Job Number: 200-3445-1
Sdg Number: 200-3445-1

Client Sample ID: **MW-4**

Lab Sample ID: 200-3445-5
Client Matrix: Water

Date Sampled: 01/20/2011 1130
Date Received: 01/22/2011 0850

ISM01.2/HG ISM01.2 Mercury

Method: ISM01.2/HG
Preparation: ISM01.2/HG
Dilution: 1.0
Date Analyzed: 01/26/2011 1219
Date Prepared: 01/25/2011 1100

Analysis Batch: 200-12682
Prep Batch: 200-12607

Instrument ID: MEPCV3
Lab File ID: 012611A.PRN
Initial Weight/Volume: 50 mL
Final Weight/Volume: 50 mL

Analyte	Result (ug/L)	Qualifier	MDLE	RL
Mercury	0.091	J	0.015	0.20

ISM01.2/ICP ISM01.2 Metals (ICP)

Method: ISM01.2/ICP
Preparation: ISM01.2/ICP
Dilution: 1.0
Date Analyzed: 01/25/2011 1741
Date Prepared: 01/25/2011 0820

Analysis Batch: 200-12644
Prep Batch: 200-12588

Instrument ID: METICP7
Lab File ID: 012511-02.ttx
Initial Weight/Volume: 100 mL
Final Weight/Volume: 100 mL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Aluminum	2400		40.0	200
Antimony	3.5 UJ	~~J~~	2.6	60.0
Arsenic	10.0	U	2.9	10.0
Barium	66.9	J	13.0	200
Beryllium	5.0	U	0.88	5.0
Cadmium	5.0	U	0.63	5.0
Calcium	20100		430	5000
Chromium	135		0.49	10.0
Cobalt	50.0	U	1.1	50.0
Copper	25.0	U	2.9	25.0
Iron	26.4	J	15.0	100
Lead	10.0	U	2.3	10.0
Magnesium	8810		240	5000
Nickel	18.9	J	1.2	40.0
Potassium	22600		150	5000
Selenium	35.0	U	4.5	35.0
Silver	10.0	U	1.6	10.0
Sodium	25300		100	5000
Thallium	25.0	U	3.0	25.0
Vanadium	50.0	U	2.4	50.0
Zinc	32.1	J	1.4	60.0

Method: ISM01.2/ICP
Preparation: ISM01.2/ICP
Dilution: 100
Date Analyzed: 01/25/2011 1830
Date Prepared: 01/25/2011 0820

Analysis Batch: 200-12644
Prep Batch: 200-12588

Instrument ID: METICP7
Lab File ID: 012511-02.ttx
Initial Weight/Volume: 100 mL
Final Weight/Volume: 100 mL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Manganese	15300		71.0	1500

Client: Panther Technologies

Job Number: 200-3445-1
Sdg Number: 200-3445-1

Client Sample ID: MW-6

Lab Sample ID: 200-3445-6
Client Matrix: Water

Date Sampled: 01/20/2011 1200
Date Received: 01/22/2011 0850

ISM01.2/HG ISM01.2 Mercury

Method:	ISM01.2/HG	Analysis Batch: 200-12682		Instrument ID:	MEPCV3
Preparation:	ISM01.2/HG	Prep Batch: 200-12607		Lab File ID:	012611A.PRN
Dilution:	1.0			Initial Weight/Volume:	50 mL
Date Analyzed:	01/26/2011 1221			Final Weight/Volume:	50 mL
Date Prepared:	01/25/2011 1100				

Analyte	Result (ug/L)	Qualifier	MDLE	RL
Mercury	0.11	J	0.015	0.20

ISM01.2/ICP ISM01.2 Metals (ICP)

Method:	ISM01.2/ICP	Analysis Batch: 200-12644		Instrument ID:	METICP7
Preparation:	ISM01.2/ICP	Prep Batch: 200-12588		Lab File ID:	012511-02.ttx
Dilution:	1.0			Initial Weight/Volume:	100 mL
Date Analyzed:	01/25/2011 1746			Final Weight/Volume:	100 mL
Date Prepared:	01/25/2011 0820				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Aluminum	2410		40.0	200
Antimony	60.0	U	2.6	60.0
Arsenic	10.0	U	2.9	10.0
Barium	70.5	J	13.0	200
Beryllium	5.0	U	0.88	5.0
Cadmium	5.0	U	0.63	5.0
Calcium	20700		430	5000
Chromium	138		0.49	10.0
Cobalt	50.0	U	1.1	50.0
Copper	25.0	U	2.9	25.0
Iron	24.3	J	15.0	100
Lead	10.0	U	2.3	10.0
Magnesium	8950		240	5000
Nickel	19.9	J	1.2	40.0
Potassium	23000		150	5000
Selenium	35.0	U	4.5	35.0
Silver	10.0	U	1.6	10.0
Sodium	25900		100	5000
Thallium	25.0	U	3.0	25.0
Vanadium	50.0	U	2.4	50.0
Zinc	7.8	J	1.4	60.0

Method:	ISM01.2/ICP	Analysis Batch: 200-12644		Instrument ID:	METICP7
Preparation:	ISM01.2/ICP	Prep Batch: 200-12588		Lab File ID:	012511-02.ttx
Dilution:	100			Initial Weight/Volume:	100 mL
Date Analyzed:	01/25/2011 1835			Final Weight/Volume:	100 mL
Date Prepared:	01/25/2011 0820				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Manganese	15900		71.0	1500

Client: Panther Technologies

Job Number: 200-3445-1
Sdg Number: 200-3445-1

Client Sample ID: **FB 01202011**

Lab Sample ID: 200-3445-7
Client Matrix: Water

Date Sampled: 01/20/2011 1600
Date Received: 01/22/2011 0850

ISM01.2/HG ISM01.2 Mercury

Method:	ISM01.2/HG	Analysis Batch: 200-12682		Instrument ID:	MEPCV3
Preparation:	ISM01.2/HG	Prep Batch: 200-12607		Lab File ID:	012611A.PRN
Dilution:	1.0			Initial Weight/Volume:	50 mL
Date Analyzed:	01/26/2011 1223			Final Weight/Volume:	50 mL
Date Prepared:	01/25/2011 1100				

Analyte	Result (ug/L)	Qualifier	MDLE	RL
Mercury	0.026	J	0.015	0.20

ISM01.2/ICP ISM01.2 Metals (ICP)

Method:	ISM01.2/ICP	Analysis Batch: 200-12644		Instrument ID:	METICP7
Preparation:	ISM01.2/ICP	Prep Batch: 200-12588		Lab File ID:	012511-02.ttx
Dilution:	1.0			Initial Weight/Volume:	100 mL
Date Analyzed:	01/25/2011 1751			Final Weight/Volume:	100 mL
Date Prepared:	01/25/2011 0820				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Aluminum	200	U	40.0	200
Antimony	60.0	U	2.6	60.0
Arsenic	10.0	U	2.9	10.0
Barium	200	U	13.0	200
Beryllium	5.0	U	0.88	5.0
Cadmium	5.0	U	0.63	5.0
Calcium	5000	U	430	5000
Chromium	10.0	U	0.49	10.0
Cobalt	50.0	U	1.1	50.0
Copper	10.2	J	2.9	25.0
Iron	100	U	15.0	100
Lead	10.0	U	2.3	10.0
Magnesium	5000	U	240	5000
Manganese	3.7	J	0.71	15.0
Nickel	40.0	U	1.2	40.0
Potassium	5000	U	150	5000
Selenium	35.0	U	4.5	35.0
Silver	10.0	U	1.6	10.0
Sodium	5000	U	100	5000
Thallium	25.0	U	3.0	25.0
Vanadium	50.0	U	2.4	50.0
Zinc	60.0	U	1.4	60.0

APPENDIX C

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Burlington
30 Community Drive, Suite 11
South Burlington, VT 05403 Tel: 802 660 1990

CHAIN OF CUSTODY RECORD

Report to:
Company: PANTHER TECHNOLOGIES INC.
Address: 220 ROUTE 70 EAST, STE B.
MEDFORD, NJ 08055
Contact: KEVIN DYSON
Phone: (609) 714-2420
Fax: (609) 714-2495
Contract/ Quote:

Invoice to:
Company:
Address: - SAME -
Contact:
Phone:
Fax:

Sampler's Name: JON SIMPSON
Sampler's Signature:

Proj. No.: J303001
Project Name: LAWRENCE AVIATION JPFD SITE

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Matrix[1]	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	No/Type of Containers[2] VOA	A/G 1 Lt.	250 ml	P/O 125 ml	250 ml	Lab/Sample ID (Lab Use Only)
W	1/19	1400		X	MW-5	4	1	2	1		
W	1/20	1530		X	MW-1						
W	1/20	1800		X	MW-2						
W	1/20	1315		X	MW-3						
W	1/20	1130		X	MW-4						
W	1/20	1200		X	MW-6			1			
W	1/20	1600		X	FB 01202011			1			
W	1/20			X	TRIP BLANK	3					

ANALYSIS REQUESTED
- 15Mol.1 ICP, 15Mol.1 - Hg Metals
- 50Mol.2 - Vol
- Alkalinity, Chloride, Sulfate
- SM5310 - TOC
- 2540C - TDS, 2540D - TSS

Lab Use Only
Due Date:
Temp. of coolers when received (C°): 1: 1.5°C | 2 | 3 | 4 | 5
Custody Seal: N / Y
Intact: N / Y
Screened For Radioactivity: ☐

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
	1/21/11	1500		1/22/11	0850
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time

Remarks: SAMPLES CONTAIN RESIDUAL KMNO4 OXIDIZER HANDLE WITH CAUTION. NEUTRALIZE WITH ASCORBIC ACID.

Client's delivery of samples constitutes acceptance of TestAmerica terms and conditions contained in the Price Schedule.

[1]Matrix WW - Wastewater W - Water S - Soil L - Liquid A - Air bag C - Charcoal Tube SL - Sludge O - Oil
[2]Container VOA - 40 ml vial A/G - Amber / Or Glass 1 Liter 250 ml - Glass wide mouth P/O - Plastic or other _____

TestAmerica Cannot accept verbal changes. Please Fax written changes to (802) 660-1919

TAL-8234(1007) 02/03/2011

Chain of Custody Record

TestAmerica

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Goff, Sara S	Carrier Tracking No(s):	COC No: 200-1722.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: sara.goff@testamericainc.com		Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.				Job #: 200-3445-1

Address: 5102 LaRoche Avenue,	Due Date Requested: 1/28/2011 2/4/11	Analysis Requested	Preservation Codes:
City: Savannah	TAT Requested (days):		A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2SO3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - ph 4-5, Z - other (specify)
State, Zip: GA, 31404			
Phone: 912-354-7858(Tel) 912-352-0165(Fax)	PO #:		
Email:	WO #:		Other:
Project Name: Lawrence Aviation	Project #: 20001957		
Site:	SSOW#:		

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	2320B/ (MOD) Local Method	2540C	2540D	300_0_280/ (MOD) Chloride, Sulfate	SM5310_TOC_B/ (MOD) Local Method	Total Number of containers	Special Instructions/Note:
			Preservation Code:										
MW-5 (200-3445-1)	1/19/11	14:00 Eastern		Water			X	X	X	X	X	3	
MW-1 (200-3445-2)	1/20/11	15:30 Eastern		Water			X	X	X	X	X	3	
MW-2 (200-3445-3)	1/20/11	18:00 Eastern		Water			X	X	X	X	X	3	
MW-3 (200-3445-4)	1/20/11	13:15 Eastern		Water			X	X	X	X	X	3	
MW-4 (200-3445-5)	1/20/11	11:30 Eastern		Water			X	X	X	X	X	3	

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by: | Date: | Time: | Method of Shipment:

Relinquished by: Joan L Martin	Date/Time: 01/24/11 1500	Company: TA	Received by: Beth A Doughty	Date/Time: 01.25.11 c 0946	Company: TAL-SAV
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: 2.3

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01/03/2011