Data Validation Summary Report, Revision 1
July through December 2013
Annual Remedial Performance Sampling
Nevada Environmental Response Trust (NERT)
Henderson, Nevada

Prepared for

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ATTACHMENT

LIST OF ACRONYMS AND ABBREVIATIONS

CCB	Continuing Calibration Blank
DQO	Data Quality Objectives
DUP	Duplicate
DVSR	Data Validation Summary Report
EB	Equipment Blank
FB	Field Blank
FD	Field Duplicate
ICB	Initial Calibration Blank
ICV	Initial Calibration Verification
LCS/LCSD	Laboratory Control Sample / Laboratory Control Sample Duplicate
LDC	Laboratory Data Consultants, Inc.
MS/MSD	Matrix Spike / Matrix Spike Duplicate
PARCCS	Precision, Accuracy, Representativeness, Comparability, Completeness, Sensitivity
PQL	Practical Quantitation Limit
QA/QC	Quality Assurance / Quality Control
QAPP	Quality Assurance Project Plan
RPD	Relative Percent Difference
SDG	Sample Delivery Group
SQL	Sample Quantitation Limit
TDS	Total Dissolved Solids
TOC	Total Organic Carbon
TOX	Total Organic Halides
USEPA	United States Environmental Protection Agency
ug/L	Micrograms per Liter
mg/L	Milligram per Liter
%D	Percent Difference
%R	Percent Recovery

1.0 INTRODUCTION

This data validation summary report (DVSR) has been prepared by Laboratory Data Consultants, Inc. (LDC) to assess the validity and usability of laboratory analytical data from the Annual Remedial Performance Sampling conducted at the Nevada Environmental Response Trust (NERT) site in Henderson, Nevada. The assessment was performed by ENVIRON as a part of the *Revised Phase B Quality Assurance Project Plan Tronox LLC Facility, Henderson, Nevada* dated May 2009 and included the collection and analyses of 457 environmental and quality control (QC) samples. The analyses were performed by the following methods:

Metals by Environmental Protection Agency (EPA) Method 200.7

Wet Chemistry:
Hexavalent Chromium by EPA Method 218.6
Chloride, Nitrate as Nitrogen, Nitrite as Nitrogen, and Sulfate (Anions) by EPA Method 300.0
Chlorate by EPA Method 300.1
Perchlorate by EPA Method 314.0
Ammonia as Nitrogen by EPA Method 350.1
Phenols by EPA Method 420.1
Nitrate/Nitrite as Nitrogen and Total Inorganic Nitrogen by Calculation Method
Specific Conductance by Standard Method 2510
Total Dissolved Solids (TDS) by Standard Method 2540C
pH by Standard Method 4500 H+B
Total Organic Carbon (TOC) by Standard Method 5310C
Total Organic Halides (TOX) by EPA SW-846 Method 9020

Laboratory analytical services were provided by TestAmerica, Inc. The samples were grouped into sample delivery groups (SDGs). The water samples are associated with QA/QC samples designed to document the data quality of the entire SDG or a sub-group of samples within an SDG. Table I is a cross-reference table listing each sample, analysis, SDG, collection date, laboratory sample number, matrix, and validation level.

The laboratory analytical data were validated in accordance with procedures described in the Nevada Division of Environmental Protection (NDEP) *Data Verification and Validation Requirements - Supplement* established for the BMI Plant Sites and Common Areas Projects, Henderson, Nevada, April 13, 2009. Consistent with the NDEP requirements, approximately ninety percent of the analytical data (410 of the 457 samples) were validated according to Stage 2B data validation procedures and ten percent of the analytical data (47 of the 457 samples) were validated according to Stage 4 data validation procedures. The analytical data were evaluated for quality assurance and quality control (QA/QC) based on the following documents: *Basic Remediation Company (BRC) Standard Operating Procedures (SOP) 40 Data Review/Validation,* Revision 4, May 2009; *Revised Phase B Quality Assurance Project Plan Tronox LLC Facility, Henderson, Nevada (*QAPP), Revision, May 2009; Nevada Department of Environmental Protection (NDEP) *Revised Guidance on Qualifying Data due to Blank Contamination for the BMI Complex and Common Areas*, January 5 2012; *Contract Laboratory Program National Functional Guidelines for Inorganic Data Review*, October 2004; and the *EPA SW 846 Third Edition, Test Methods for Evaluating Solid Waste,* update I, July 1992; update IIA, August 1993; update II, September 1994; update IIB, January 1995; update III, December 1996; update IV, February 2007.

This report summarizes the QA/QC evaluation of the data according to precision, accuracy, representativeness, completeness, comparability, and sensitivity (PARCCS) relative to the project data quality objectives (DQOs). This report provides a quantitative and qualitative assessment of the data and identifies potential sources of error, uncertainty, and bias that may affect the overall usability.

The PARCCS summary report evaluates and summarizes the results of QA/QC data validation for the entire sampling program. Each analytical fraction has a separate section for each of the PARCCS criteria. These sections interpret specific QC deviations and their effects on both individual data points and the analyses as a whole. Section 5.0 presents a summary of the PARCCS criteria by comparing quantitative parameters with acceptability criteria defined in the project DQO's. Qualitative PARCCS criteria are also summarized in this section.

Precision and Accuracy of Environmental Data

Environmental data quality depends on sample collection procedures, analytical methods and instrumentation, documentation, and sample matrix properties. Both sampling procedures and laboratory analyses contain potential sources of uncertainty, error, and/or bias, which affect the overall quality of a measurement. Errors for sample data may result from incomplete equipment decontamination, inappropriate sampling techniques, sample heterogeneity, improper filtering, and improper preservation. The accuracy of analytical results is dependent on selecting appropriate analytical methods, maintaining equipment properly, and complying with QC requirements. The sample matrix also is an important factor in the ability to obtain precise and accurate results within a given media.

Environmental and laboratory QA/QC samples assess the effects of sampling procedures and evaluate laboratory contamination, laboratory performance, and matrix effects. QA/QC samples include: equipment blanks (EBs), field blanks (FBs), field duplicates (FDs), method blanks, laboratory control samples and laboratory control sample duplicates (LCS/LCSDs), laboratory duplicates (DUP), and matrix spike/matrix spike duplicates (MS/MSDs).

Before conducting the PARCCS evaluation, the analytical data were validated according to the BRC SOP-40 (July 2007), QAPP (May 2009), Functional Guidelines (USEPA 2004), and EPA SW 846 Test Methods. Samples not meeting the acceptance criteria were qualified with a flag, an abbreviation indicating a deficiency with the data. The following are flags used in data validation.

J- Estimated The associated numerical value is an estimated quantity with a negative bias. The analyte was detected but the reported value may not be accurate or precise.

J+ Estimated The associated numerical value is an estimated quantity with a positive bias. The analyte was detected but the reported value may not be accurate or precise.

J Estimated The associated numerical value is an estimated quantity. It is not possible to assess the direction of the potential bias. The analyte was detected but the reported value may not be accurate or precise. The "J" qualification indicates the data fell outside the QC limits, but the exceedance was not sufficient to cause rejection of the data.

R Rejected The data is unusable (the compound or analyte may or may not be present). Use of the "R" qualifier indicates a significant variance from functional guideline acceptance criteria. Either resampling or reanalysis is necessary to determine the presence or absence of the rejected analyte. The "R" designation is also applied to yield only one complete set of data for a given sample and eliminate redundant data.

U Nondetected Analyses were performed for the compound or analyte, but it was not detected. The "U" flag is used to qualify any result that is detected in an environmental sample and associated blank at less than the PQL.

UJ Estimated/Nondetected Analyses were performed for the compound or analyte, but it was not detected and the sample quantitation or detection limit is an estimated quantity due to poor accuracy or precision. This qualification is also used to flag possible false negative results in the case where low bias in the analytical system is indicated by low calibration response, surrogate, or other spike recovery.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

A Indicates the finding is based upon technical validation criteria.
P Indicates the finding is related to a protocol/contractual deviation.

The hierarchy of flags is listed below:

R > J	The R flag will always take precedence over the J qualifier.
J > J+ or J-	A non-biased (J) flag will always supersede biased (J+ or J-) flags since it is not possible to assess the direction of the potential bias.
J = J+ plus J-	Adding biased (J+, J-) flags with opposite signs will result in a non-biased flag (J).
UJ = U plus J or J+ or J-	The UJ flag is used when a non-detected (U) flag is added to a biased (J+ or J-) or non-biased flag (J).

Table II lists the reason codes used. Reason codes explain why flags have been applied and identify possible limitations of data use. Reason codes are cumulative except when one of the flags is R then only the reason code associated to the R flag will be used.

Table III presents the overall qualified results after all the flags or validation qualifiers and associated reason codes have been applied.

Once the data are reviewed and qualified according to the BRC SOP-40, QAPP, functional guidelines, and EPA Test Methods, the data set is then evaluated using PARCCS criteria. PARCCS criteria provide an evaluation of overall data usability. The following is a discussion of PARCCS criteria as related to the project DQOs.

Precision is a measure of the agreement or reproducibility of analytical results under a given set of conditions. It is a quantity that cannot be measured directly but is calculated from percent recovery data. Precision is expressed as the relative percent difference (RPD):

$$RPD = (D1-D2)/\{1/2(D1+D2)\} \text{ X } 100$$

where:
D1 = reported concentration for the sample
D2 = reported concentration for the duplicate

Precision is primarily assessed by calculating an RPD from the percent recoveries of the spiked compounds for each sample in the MS/MSD pair. In the absence of an MS/MSD pair, a laboratory duplicate or LCS/LCSD pair can be analyzed as an alternative means of assessing precision. An additional measure of sampling precision was obtained by collecting and analyzing field duplicate samples, which were compared using the RPD result as the evaluation criteria.

MS and MSD samples are field samples spiked by the laboratory with target analytes prior to preparation and analysis. These samples measure the overall efficiency of the analytical method in recovering target analytes from an environmental matrix. A LCS is similar to an MS/MSD sample in that the LCS is spiked with the same target analytes prior to preparation and analysis. However, the LCS is prepared using a controlled interference-free matrix instead of a field sample aliquot. Laboratory reagent water is used to prepare aqueous LCS. The LCS measures laboratory efficiency in recovering target analytes from either an aqueous matrix in the absence of matrix interferences.

One primary sample is analyzed and accompanied by an unspiked laboratory duplicate. The data reviewer compares the reported results of the primary analysis and the laboratory duplicate, then calculates RPDs, which are used to assess laboratory precision.

Laboratory and field sampling precision are evaluated by calculating RPDs for aqueous field sample duplicate pairs. The sampler collects two field samples at the same location and under identically controlled conditions. The laboratory then analyzes the samples under identical conditions.

An RPD outside the numerical QC limit in either MS/MSD samples or LCS/LCSD indicates imprecision. Imprecision is the variance in the consistency with which the laboratory arrives at a particular reported result. Thus, the actual analyte concentration may be higher or lower than the reported result.

Possible causes of poor precision include sample matrix interference, improper sample collection or handling, inconsistent sample preparation, and poor instrument stability. In some duplicate pairs, results maybe reported in either the primary or duplicate samples at levels below the practical quantitation limit (PQL) or non-detected. Since these values are considered to be estimates, RPD exceedances from these duplicate pairs do not suggest a significant impact on the data quality.

Accuracy is a measure of the agreement of an experimental determination and the true value of the parameter being measured. It is used to identify bias in a given measurement system. Recoveries outside acceptable QC limits may be caused by factors such as instrumentation, analyst error, or matrix interference. Accuracy is assessed through the analysis of MS, MSD, LCS, and LCSD. In some cases, samples from multiple SDGs were within one QC batch and therefore are associated with the same laboratory QC samples. Accuracy of inorganic analyses is determined using the percent recoveries of MS and LCS analyses.

Percent recovery (%R) is calculated using the following equation:

$$\%R = (A-B)/C \times 100$$

where:
A = measured concentration in the spiked sample
B = measured concentration of the spike compound in the unspiked sample
C = concentration of the spike

The percent recovery of each analyte spiked in MS/MSD samples and LCS/LCSD is evaluated with the acceptance criteria specified by the previously noted documents. Spike recoveries outside the acceptable QC accuracy limits provide an indication of bias, where the reported data may overestimate or underestimate the actual concentration of compounds detected or quantitation limits reported for environmental samples.

Representativeness is a qualitative parameter that expresses the degree to which the sample data are characteristic of a population. It is evaluated by reviewing the QC results of blanks, samples and holding times. Positive detects of compounds in the blank samples identify compounds that may have been introduced into the samples during sample collection, transport, preparation, or analysis. The QA/QC blanks collected and analyzed are method blanks, EBs, and FBs.

A method blank is a laboratory grade water or solid matrix that contains the method reagents and has undergone the same preparation and analysis as the environmental samples. The method blank provides a measure of the combined contamination derived from the laboratory source water, glassware, instruments, reagents, and sample preparation steps. Method blanks are prepared for each sample of a similar matrix extracted by the same method at a similar concentration level.

Initial and continuing calibration blanks (ICB/CCBs) consist of acidified laboratory grade water, which are injected at the beginning and at a regular frequency during each 12 - hour sample analysis run. These blanks estimate residual contaminants from the previous sample or standards analysis and measure baseline shifts that commonly occur in emission and absorption spectroscopy.

Equipment blanks consist of analyte-free water poured over or through the sample collection equipment. The water is collected in a sample container for laboratory analysis. These blanks are collected after the sampling equipment is decontaminated and measure efficiency of the decontamination procedure. Equipment blanks were collected and analyzed for all target analytes.

Field blanks consist of analyte-free source water stored at the sample collection site. The water is collected from each source water used during each sampling event. Field blanks were collected and analyzed for all target analytes.

Contaminants found in both the environmental sample and the blank sample are assumed to be laboratory artifacts if both values are less than the PQL or if a sample result and blank contaminant value were greater than the PQL and less than 10 times the blank contaminant value. The blanks and associated samples were evaluated according to the NDEP *BMI Plant Sites and Common Areas Projects, Henderson, Nevada, Revised Guidance on Qualifying Data due to Blank Contamination for the BMI Complex and Common Areas*, January 5 2012.

Holding times are evaluated to assure that the sample integrity is intact for accurate sample preparation and analysis. Holding times will be specific for each method and matrix analyzed. Holding time exceedance can cause loss of sample constituents due to biodegradation, precipitation, volatization, and chemical degradation. In accordance with EPA guidance (USEPA 2004), sample results for analyses that were performed after the method holding time but less than two times the method holding time were qualified as estimated (J- or UJ) and sample results for analyses that were performed after two times the method holding time were qualified as rejected (R), with the exception of specific pH results detailed in Attachment B, Section I. Although the holding time for some pH analyses was exceeded by more than two times the holding time, using professional judgment the associated sample results were qualified as estimated (J/UJ) because the sample condition and integrity was maintained during collection, transport, and storage.

Comparability is a qualitative expression of the confidence with which one data set may be compared to another. It provides an assessment of the equivalence of the analytical results to data obtained from other analyses. It is important that data sets be comparable if they are used in conjunction with other data sets. The factors affecting comparability include the following: sample collection and handling techniques, matrix type, and analytical method. If these aspects of sampling and analysis are carried out according to standard analytical procedures, the data are considered comparable. Comparability is also dependent upon other PARCCS criteria, because only when precision, accuracy, and representativeness are known can data sets be compared with confidence.

Completeness is defined as the percentage of acceptable sample results compared to the total number of sample results. Completeness is evaluated to determine if an acceptable amount of usable data were obtained so that a valid scientific site assessment can be completed. Completeness equals the total number of sample results for each fraction minus the total number of rejected sample results divided by the total number of sample results multiplied by 100. As specified in the project DQOs, the goal for

completeness for target analytes in each analytical fraction is 90 percent.

Percent completeness is calculated using the following equation:

$$\%C = (T - R)/T \times 100$$

where:
%C = percent completeness
T = total number of sample results
R = total number of rejected sample results

Completeness is also determined by comparing the planned number of samples per method and matrix as specified in the QAPP, with the number determined above.

Sensitivity is the ability of an analytical method or instrument to discriminate between measurement responses representing different concentrations. This capability is established during the planning phase to meet the DQOs. It is important that calibration requirements, detection limits (DLs), and PQLs presented in the QAPP are achieved and that target analytes can be detected at concentrations necessary to support the DQOs. In addition, sample results are compared to method blank and field blank results to identify potential effects of laboratory background and field procedures on sensitivity.

The following sections present a review of QC data for each analytical method.

2.0 METALS

A total of 276 water samples were analyzed for metals by EPA Method 200.7. All metal data were assessed to be valid since none of the 298 total results were rejected based on holding time and QC exceedances. This section discusses the QA/QC supporting documentation as defined by the PARCCS criteria and evaluated based on the DQOs.

2.1 Precision and Accuracy

2.1.1 Instrument Calibration

Initial and continuing calibration verification results provide a means of evaluating accuracy within a particular SDG. Correlation coefficient (r) and percent recovery (%R) are the two major parameters used to measure the effectiveness of instrument calibration. The correlation coefficient indicates the linearity of the calibration curve. %R is used to verify the ongoing calibration acceptability of the analytical system. The most critical of the two calibration parameters, r, has the potential to affect data accuracy across an SDG when it is outside the acceptable QC limits. %R exceedances suggest more routine instrumental anomalies, which typically impact all sample results for the affected analytes.

The correlation coefficients in the initial calibrations met the acceptance criteria of ≥ 0.995.

Although CCV %Rs outside of acceptance criteria demonstrate a high bias, the affected compounds in the associated samples were non-detected and did not warrant the qualification of the data.

2.1.2 MS/MSD Samples

Due to high MS/MSD %Rs outside of acceptance criteria as stated in the QAPP, the chromium results for 9 samples were qualified as detected estimated (J+). The details regarding the qualification of results are presented in Attachment A, Section VI.

2.1.3 LCS/LCSD Samples

All LCS/LCSD %Rs and RPDs met acceptance criteria as stated in the QAPP.

2.1.4 ICP Interference Check Sample

All ICP interference check %Rs met acceptance criteria as stated in the QAPP.

2.1.5 ICP Serial Dilution

All ICP serial dilution %Ds met acceptance criteria as stated in the QAPP.

2.1.6 FD Samples

The field duplicate samples were evaluated for acceptable precision with RPDs or difference in instances the results were less than five times the reporting limit for the compounds. The field duplicate RPDs or differences were within the acceptance criteria. The field duplicate RPDs or differences are presented in detail in Attachment A, Section XIII.

2.1.7 Analyte Quantitation and Target Identification

Raw data were evaluated for the Stage 4 samples. All analyte quantitation and target identifications were acceptable.

2.2 Representativeness

2.2.1 Sample Preservation and Holding Times

The evaluation of holding times to verify compliance with the method was conducted. All samples met the 180-day analysis holding time criteria for metals.

2.2.2 Blanks

Method blanks, ICB/CCBs, EBs, and FBs were analyzed to evaluate representativeness. The concentration for an individual target compound in any of the types of QA/QC blanks was used for data qualification.

If contaminants were detected in a blank, corrective actions were made for the chemical analytical data during data validation. The corrective action consisted of amending the laboratory reported results based on the following criteria.

> Results Below the PQL If a sample result and blank contaminant value were less than the PQL, the sample result was amended as estimated (J) at the concentration reported in the sample results.
>
> Results Above the PQL If a sample result and blank contaminant value were greater than the PQL and less than 10 times the blank contaminant value, the sample result was qualified as detected estimated (J+) at the concentration reported in the sample results.
>
> No Action If blank contaminant values were less than the PQL and associated sample results were greater than the PQL, or if blank contaminant values were greater than the PQL and associated sample results were greater than 10 times the blank contaminant value, the result was not amended.

2.2.2.1 Method and Calibration Blanks

The chromium results in samples PC-56, PC-59, PC-90, PC-91, and PC-97 (all sampled on 11/6/13) were qualified as detected estimated (J) due to contaminants detected in the method or calibration blanks. The details regarding the qualification of results are presented in Attachment A, Section IV.

2.2.2.2 EBs and FBs

No data were qualified due to contaminants detected in the equipment blanks for this analysis.

2.3 Comparability

The laboratory used standard analytical methods for all of the analyses. In all cases, the Sample Quantitation Limits (SQLs) attained were at or below the PQLs. The comparability of the metals data is regarded as acceptable.

2.4 Completeness

The completeness level attained for metal field samples was 100 percent. This percentage was calculated as the total number of accepted sample results divided by the total number of sample results multiplied by 100.

2.5 Sensitivity

The calibration was evaluated for instrument sensitivity and was determined to be technically acceptable. All laboratory PQLs met the specified requirements described in the QAPP.

3.0 WET CHEMISTRY

A total of 24 water samples were analyzed for hexavalent chromium by EPA Method 218.6; 6 water samples were analyzed for anions by EPA Method 300.0; 2 water samples were analyzed for chlorate by EPA Method 300.1, ammonia as nitrogen by EPA Method 350.1, and nitrate/nitrite as nitrogen and total inorganic nitrogen by Calculation Method; 457 water samples were analyzed for perchlorate by EPA Method 314.0; 4 water samples were analyzed for phenols by EPA Method 420.1, specific conductance by Standard Method 2510, TOC by Standard Method 5310C, and TOX by EPA SW-846 Method 9020; 451 water samples were analyzed for TDS by Standard Method 2540C; and 259 water samples were analyzed for pH by Standard Method 4500 H+B. All wet chemistry data were assessed to be valid since none of the 1,278 total results were rejected based on holding time and QC exceedances. This section discusses the QA/QC supporting documentation as defined by the PARCCS criteria and evaluated based on the DQOs.

3.1 Precision and Accuracy

3.1.1 Instrument Calibration

As previously discussed in Section 2.1.1, initial and continuing calibration results provide a means of evaluating accuracy.

Instrument calibrations were evaluated for all wet chemistry methods. The correlation coefficients in the initial calibrations were within the acceptance criteria of ≥ 0.995 and the %Rs in the continuing calibration verifications met the acceptance criteria of 90-110%.

3.1.2 Surrogate

Surrogates were evaluated for chlorate analysis by EPA Method 300.1. All surrogate %Rs met the acceptance criteria as stated in the QAPP.

3.1.3 MS/MSD Samples

MS/MSD samples were evaluated for all wet chemistry methods with the exception of chlorate by EPA Method 300.1, perchlorate by EPA Method 314.0, specific conductance by Standard Method 2510, TDS by Standard Method 2540C, pH by Standard Method 4500 H+B, and TOC by Standard Method 5310C. Due to high MS/MSD %R outside of acceptance criteria as stated in the QAPP, the chloride result for sample M-10 (sampled on 9/5/13) was qualified as detected estimated (J+). The details regarding the qualification of results are presented in Attachment B, Section V.

3.1.4 DUP Samples

DUP samples were evaluated for specific conductance by Standard Method 2510, TDS by Standard Method 2540C, and pH by Standard Method 4500 H+B. All DUP RPDs met the acceptance criteria as stated in the QAPP.

3.1.5 LCS/LCSD Samples

LCS/LCSD samples were evaluated for all wet chemistry methods. All LCS/LCSD %Rs and RPDs met the acceptance criteria as stated in the QAPP.

3.1.6 FD Samples

FD samples were evaluated for hexavalent chromium by EPA Method 218.6, perchlorate by EPA Method 314.0, TDS by Standard Method 2540C, and pH by Standard Method 4500 H+B. The field duplicate samples were evaluated for acceptable precision with RPDs or difference in instances the results were less than five times the reporting limit for the compounds. The field duplicate RPDs or differences were within the acceptance criteria. The details regarding the qualification of results are presented in Attachment B, Section X.

3.1.7 Analyte Quantitation and Target Identification

Raw data were evaluated for the Stage 4 samples. All analyte quantitation and target identifications were acceptable.

In instances where data was reanalyzed and multiple results reported, data was qualified as unusable by the validators in order to yield only one complete set of data for a given sample.

3.2 Representativeness

3.2.1 Sample Preservation and Holding Times

The evaluation of holding times to verify compliance with all wet chemistry methods was conducted. All water samples met the 48-hour analysis holding time criteria for nitrate as nitrogen and nitrite as nitrogen, the 7-day analysis holding time criteria for TDS, and the 28-day analysis holding time criteria for ammonia as nitrogen, chlorate, chloride, sulfate, phenols, specific conductance, TOC, TOX, and perchlorate.

Due to holding time criteria exceedance, 163 results for hexavalent chromium and pH were qualified as detected estimated (J-/J) or non-detected estimated (UJ). The analysis holding time criteria for water samples is 24 hours for hexavalent chromium and 48 hours for pH.

Due to low pH in the unfiltered sample containers, the TDS results for samples ART-1, ART-2, ART-7, ART-8, and ART-9 (all sampled on 11/4/13) were analyzed utilizing the filtered sample containers. The associated results were qualified as detected estimated (J-). Total dissolved solids analysis should be performed upon unfiltered sample containers.

The details regarding the qualification of results are presented in Attachment B, Section I.

3.2.2 Blanks

As previously discussed in Section 2.2.2, method blanks, ICB/CCBs, EBs, and FBs were analyzed to evaluate representativeness.

3.2.2.1 Method and Calibration Blanks

Method and calibration blanks were evaluated for all wet chemistry methods with the exception of pH by Standard Method 4500 H+B. No contaminants were detected in the method or calibration blanks for this analysis.

3.2.2.2 EBs and FBs

EBs and FBs were evaluated for hexavalent chromium by EPA Method 218.6, perchlorate by EPA Method 314.0, TDS by Standard Method 2540C, and pH by Standard Method 4500 H+B. No data were qualified due to contaminants detected in the equipment and field blanks for this analysis.

3.3 Comparability

The laboratory used standard analytical methods for all of the analyses. In all cases, the SQLs attained were at or below the PQLs. The comparability of the data is regarded as acceptable.

3.4 Completeness

The completeness level attained for wet chemistry field samples was 100 percent. This percentage was calculated as the total number of accepted sample results divided by the total number of sample results multiplied by 100.

3.5 Sensitivity

The calibration was evaluated for instrument sensitivity and was determined to be technically acceptable. All laboratory PQLs met the specified requirements described in the QAPP.

4.0 VARIANCES IN ANALYTICAL PERFORMANCE

The laboratory used standard analytical methods for all of the analyses throughout the project. No systematic variances in analytical performance were noted in the laboratory case narratives.

5.0 SUMMARY OF PARCCS CRITERIA

The validation reports present the PARCCS results for all SDGs. Each PARCCS criterion is discussed in detail in the following sections.

5.1 Precision and Accuracy

Precision and accuracy were evaluated using data quality indicators such as calibration, surrogates, MS/MSD, DUP, LCS/LCSD, and field duplicates. The precision and accuracy of the data set were considered acceptable after integration of result qualification.

All calibrations were performed as required and met the acceptance criteria. All surrogate, MS/MSD, DUP, LCS/LCSD, and field duplicate percent recoveries, RPDs, and difference met acceptance criteria with the exceptions noted in Sections 2.1.2 and 3.1.3. All ICP interference check sample %Rs met acceptance criteria.

5.2 Representativeness

All samples for each method and matrix were evaluated for holding time compliance. All samples were associated with a method blank in each individual SDG. The representativeness of the project data is considered acceptable after integration of result qualification.

5.3 Comparability

Sampling frequency requirements were met in obtaining necessary equipment blanks, field blanks and field duplicates. The laboratory used standard analytical methods for the analyses. The analytical results were reported in correct standard units. Sample integrity criteria were met. Sample preservation and holding times were within QC criteria with the exceptions noted in Section 3.2.1. The overall comparability is considered acceptable after integration of result qualification.

5.4 Completeness

Of the 1,576 total analytes reported, none of the sample results were rejected. The completeness for the SDGs is as follows:

Parameter	Total Analytes	No. of Rejects	% Completeness
Metals	298	0	100
Wet Chemistry	1,278	0	100
Total	**1,576**	**0**	**100**

The completeness percentage based on rejected data met the 90 percent DQO goal.

5.5 Sensitivity

Sensitivity was achieved by the laboratory to support the DQOs. Calibration concentrations and PQLs met the project requirements and low level contamination in the method blanks, equipment blanks, and field blanks did not affect sensitivity.

6.0 CONCLUSIONS AND RECOMMENDATIONS

The analytical data quality assessment for the water sample laboratory analytical results generated during the Annual Remedial Performance Sampling at the Nevada Environmental Response Trust (NERT) site in Henderson, Nevada established that the overall project requirements and completeness levels were met. Sample results that were found to be estimated (J) are usable for limited purposes only. Based upon the Stage 2B and Stage 4 data validation all other results are considered valid and usable for all purposes.

7.0 REFERENCES

NDEP 2009. Data Verification and Validation Requirements - Supplement established for the BMI Plant Sites and Common Areas Projects, Henderson, Nevada. April 13.

NDEP 2012. Revised Guidance on Qualifying Data due to Blank Contamination for the BMI Complex and Common Areas. January 5.

Basic Remediation Company (BRC), 2009. Standard Operating Procedures, SOP-40 Data Review/Validation. Revision 4. May.

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(Eaton et al., 1998) *Standard Method for the Examination of Water and Wastewater* (20th ed.). Washington, DC: American Public Health Association.

TABLE I

SDG	Client Sample ID	Lab Sample ID	Matrix	Sample Date	QC Type	Validation Level	Metals (200.7)	Hex. Chrom. (218.6)	Anions (300.0)	Chlorate (300.1)	ClO_4 (314.0)	NH_3-N (350.1)	Phenols (420.1)	NO_3/NO_2-N, TIN (Calc)	Spec. Cond. (SM2510)	TDS (SM2540C)	pH (SM4500H+B)	TOC (SM5310C)	TOX (SW9020)
440-50529-1	ART-1	440-50529-1	Water	20130701		Stage 2B					X					X			
440-50529-1	ART-1DUP	440-50529-1DUP	Water	20130701	DUP	Stage 2B										X			
440-50529-1	ART-2	440-50529-2	Water	20130701		Stage 2B					X					X			
440-50529-1	ART-3	440-50529-3	Water	20130701		Stage 2B					X					X			
440-50529-1	ART-4	440-50529-4	Water	20130701		Stage 2B					X					X			
440-50529-1	ART-6	440-50529-5	Water	20130701		Stage 2B					X					X			
440-50529-1	ART-7	440-50529-6	Water	20130701		Stage 2B					X					X			
440-50529-1	ART-8	440-50529-7	Water	20130701		Stage 2B					X					X			
440-50529-1	ART-9	440-50529-8	Water	20130701		Stage 2B					X					X			
440-50529-1	PC-99R2/R3	440-50529-9	Water	20130701		Stage 2B					X					X			
440-50529-1	PC-115R	440-50529-10	Water	20130701		Stage 2B					X					X			
440-50529-1	PC-116R	440-50529-11	Water	20130701		Stage 2B					X					X			
440-50529-1	PC-117	440-50529-12	Water	20130701		Stage 2B					X					X			
440-50529-1	PC-118	440-50529-13	Water	20130701		Stage 2B					X					X			
440-50529-1	PC-119	440-50529-14	Water	20130701		Stage 2B					X					X			
440-50529-1	PC-120	440-50529-15	Water	20130701		Stage 2B					X					X			
440-50529-1	PC-121	440-50529-16	Water	20130701		Stage 2B					X					X			
440-50529-1	PC-133	440-50529-17	Water	20130701		Stage 2B					X					X			
440-51645-1	PC-86	440-51645-1	Water	20130710		Stage 2B					X					X			
440-51645-1	PC-86DUP	440-51645-1DUP	Water	20130710	DUP	Stage 2B										X			
440-51645-1	PC-90	440-51645-2	Water	20130710		Stage 2B					X					X			
440-51645-1	PC-91	440-51645-3	Water	20130710		Stage 2B					X					X			
440-51645-1	PC-97	440-51645-4	Water	20130710		Stage 2B					X					X			
440-51645-1	PC-18	440-51645-5	Water	20130711		Stage 2B					X					X			
440-51645-1	PC-55	440-51645-6	Water	20130710		Stage 2B					X					X			
440-51645-1	PC-101R	440-51645-7	Water	20130711		Stage 2B					X					X			
440-51645-1	PC-101RDUP	440-51645-7DUP	Water	20130711	DUP	Stage 2B										X			
440-51645-1	MW-K4	440-51645-8	Water	20130711		Stage 2B					X					X			
440-51645-1	ARP-1	440-51645-9	Water	20130711		Stage 2B					X					X			
440-51645-1	ARP-2A	440-51645-10	Water	20130711		Stage 2B					X					X			
440-51645-1	ARP-3A	440-51645-11	Water	20130711		Stage 2B					X					X			
440-51645-1	ARP-4A	440-51645-12	Water	20130711		Stage 2B					X					X			
440-51645-1	ARP-5A	440-51645-13	Water	20130711		Stage 2B					X					X			
440-51645-1	ARP-6B	440-51645-14	Water	20130711		Stage 2B					X					X			
440-51645-1	ARP-7	440-51645-15	Water	20130711		Stage 2B					X					X			
440-51645-1	PC-53	440-51645-16	Water	20130711		Stage 2B					X					X			
440-51645-1	PC-103	440-51645-17	Water	20130711		Stage 2B					X					X			
440-51645-1	MW-K5	440-51645-18	Water	20130711		Stage 2B					X					X			
440-51645-1	M-83	440-51645-19	Water	20130711		Stage 2B					X					X			
440-51645-1	PC-98R	440-51645-20	Water	20130711		Stage 2B					X					X			
440-51645-1	PC-58	440-51645-21	Water	20130710		Stage 2B					X					X			
440-51645-1	PC-56	440-51645-22	Water	20130710		Stage 2B					X					X			
440-51645-1	PC-60	440-51645-23	Water	20130710		Stage 2B					X					X			
440-51645-1	PC-59	440-51645-24	Water	20130710		Stage 2B					X					X			
440-51645-1	PC-62	440-51645-25	Water	20130710		Stage 2B					X					X			
440-51645-1	PC-68	440-51645-26	Water	20130710		Stage 2B					X					X			
440-51645-1	PC-122	440-51645-27	Water	20130711		Stage 2B					X					X			
440-51645-1	EB-1	440-51645-28	Water	20130710	EB	Stage 2B					X								
440-53556-1	ART-1	440-53556-1	Water	20130805		Stage 4	X				X					X			
440-53556-1	ART-1MS	440-53556-1MS	Water	20130805	MS	Stage 4	X												
440-53556-1	ART-1MSD	440-53556-1MSD	Water	20130805	MSD	Stage 4	X												
440-53556-1	ART-2	440-53556-2	Water	20130805		Stage 4	X				X					X			
440-53556-1	ART-3	440-53556-3	Water	20130805		Stage 4	X				X					X			
440-53556-1	ART-4	440-53556-4	Water	20130805		Stage 4	X				X					X			
440-53556-1	ART-6	440-53556-5	Water	20130805		Stage 4	X				X					X			
440-53556-1	ART-7	440-53556-6	Water	20130805		Stage 4	X				X					X			
440-53556-1	ART-8	440-53556-7	Water	20130805		Stage 4	X				X					X			
440-53556-1	ART-9	440-53556-8	Water	20130805		Stage 4	X				X					X			
440-53556-1	PC-99R2/R3	440-53556-9	Water	20130805		Stage 4	X				X					X			
440-53556-1	PC-115R	440-53556-10	Water	20130805		Stage 4	X				X					X			
440-53556-1	PC-116R	440-53556-11	Water	20130805		Stage 4	X				X					X			
440-53556-1	PC-116RMS	440-53556-11MS	Water	20130805	MS	Stage 4	X												

SDG	Client Sample ID	Lab Sample ID	Matrix	Sample Date	QC Type	Validation Level	Metals (200.7)	Hex. Chrom. (218.6)	Anions (300.0)	Chlorate (300.1)	ClO_4 (314.0)	NH_3-N (350.1)	Phenols (420.1)	NO_3/NO_2-N, TIN (Calc)	Spec. Cond. (SM2510)	TDS (SM2540C)	pH (SM4500H+B)	TOC (SM5310C)	TOX (SW9020)
440-53556-1	PC-116RMSD	440-53556-11MSD	Water	20130805	MSD	Stage 4	X												
440-53556-1	PC-117	440-53556-12	Water	20130805		Stage 4	X				X					X			
440-53556-1	PC-118	440-53556-13	Water	20130805		Stage 4	X				X					X			
440-53556-1	PC-119	440-53556-14	Water	20130805		Stage 4	X				X					X			
440-53556-1	PC-120	440-53556-15	Water	20130805		Stage 4	X				X					X			
440-53556-1	PC-121	440-53556-16	Water	20130805		Stage 4	X				X					X			
440-53556-1	PC-133	440-53556-17	Water	20130805		Stage 4	X				X					X			
440-54568-1	I-S	440-54568-1	Water	20130814		Stage 2B	X				X					X	X		
440-54568-1	I-SMS	440-54568-1MS	Water	20130814	MS	Stage 2B	X												
440-54568-1	I-SMSD	440-54568-1MSD	Water	20130814	MSD	Stage 2B	X												
440-54568-1	I-C	440-54568-2	Water	20130814		Stage 2B	X				X					X	X		
440-54568-1	I-N	440-54568-3	Water	20130814		Stage 2B	X				X					X	X		
440-54568-1	I-H	440-54568-4	Water	20130814		Stage 2B	X				X					X	X		
440-54568-1	I-O	440-54568-5	Water	20130814		Stage 2B	X				X					X	X		
440-54568-1	I-P	440-54568-6	Water	20130814		Stage 2B	X				X					X	X		
440-54568-1	I-D	440-54568-7	Water	20130814		Stage 2B	X				X					X	X		
440-54568-1	I-G	440-54568-8	Water	20130814		Stage 2B	X				X					X	X		
440-54568-1	I-U	440-54568-9	Water	20130814		Stage 2B	X				X					X	X		
440-54568-1	I-M	440-54568-10	Water	20130814		Stage 2B	X				X					X	X		
440-54568-1	I-T	440-54568-11	Water	20130814		Stage 2B	X				X					X	X		
440-54568-1	I-TMS	440-54568-11MS	Water	20130814	MS	Stage 2B	X												
440-54568-1	I-TMSD	440-54568-11MSD	Water	20130814	MSD	Stage 2B	X												
440-54568-1	I-E	440-54568-12	Water	20130814		Stage 2B	X				X					X	X		
440-54568-1	I-Q	440-54568-13	Water	20130814		Stage 2B	X				X					X	X		
440-54568-1	I-F	440-54568-14	Water	20130814		Stage 2B	X				X					X	X		
440-54568-1	I-FDUP	440-54568-14DUP	Water	20130814	DUP	Stage 2B											X		
440-54682-1	ART-6	440-56582-1	Water	20130909		Stage 2B					X					X			
440-54862-1	M-64	440-54862-1	Water	20130819		Stage 2B	X				X					X	X		
440-54862-1	M-64MS	440-54862-1MS	Water	20130819	MS	Stage 2B	X												
440-54862-1	M-64MSD	440-54862-1MSD	Water	20130819	MSD	Stage 2B	X												
440-54862-1	M-65	440-54862-2	Water	20130819		Stage 2B	X				X					X	X		
440-54862-1	M-66	440-54862-3	Water	20130819	FD3	Stage 2B	X				X					X	X		
440-54862-1	M-66DUP	440-54862-3DUP	Water	20130819	DUP	Stage 2B											X		
440-54862-1	M-79	440-54862-4	Water	20130819		Stage 2B	X				X					X	X		
440-54862-1	M-79	440-54862-4RE	Water	20130819	RE	Stage 2B					X								
440-54862-1	M-69	440-54862-5	Water	20130819		Stage 2B	X				X					X	X		
440-54862-1	M-135	440-54862-6	Water	20130819		Stage 2B	X				X					X	X		
440-54862-1	M-135	440-54862-6RE	Water	20130819	RE	Stage 2B					X								
440-54862-1	M-131	440-54862-7	Water	20130819		Stage 2B	X				X					X	X		
440-54862-1	M-131	440-54862-7RE	Water	20130819	RE	Stage 2B					X								
440-54862-1	M-57A	440-54862-8	Water	20130819		Stage 2B	X				X					X	X		
440-54862-1	M-57A	440-54862-8RE	Water	20130819	RE	Stage 2B					X								
440-54862-1	M-37	440-54862-9	Water	20130819		Stage 2B	X	X			X					X	X		
440-54862-1	M-37MS	440-54862-9MS	Water	20130819	MS	Stage 2B		X											
440-54862-1	M-37MSD	440-54862-9MSD	Water	20130819	MSD	Stage 2B		X											
440-54862-1	I-L	440-54862-10	Water	20130819		Stage 2B	X				X					X	X		
440-54862-1	I-LDUP	440-54862-10DUP	Water	20130819	DUP	Stage 2B											X		
440-54862-1	I-L	440-54862-10RE	Water	20130819	RE	Stage 2B					X								
440-54862-1	I-R	440-54862-11	Water	20130819		Stage 2B	X				X					X	X		
440-54862-1	I-RDUP	440-54862-11DUP	Water	20130819	DUP	Stage 2B											X		
440-54862-1	I-RMS	440-54862-11MS	Water	20130819	MS	Stage 2B	X												
440-54862-1	I-RMSD	440-54862-11MSD	Water	20130819	MSD	Stage 2B	X												
440-54862-1	I-B	440-54862-12	Water	20130819		Stage 2B	X				X					X	X		
440-54862-1	EB-1	440-54862-13	Water	20130819	EB	Stage 2B	X	X			X					X	X		
440-54862-1	M-25	440-54862-14	Water	20130819		Stage 2B	X				X					X	X		
440-54862-1	M-25	440-54862-14RE	Water	20130819	RE	Stage 2B					X								
440-54862-1	I-AR	440-54862-15	Water	20130819		Stage 2B	X				X					X	X		
440-54862-1	VD-3	440-54862-16	Water	20130819	FD3	Stage 2B	X				X					X	X		
440-54862-1	VD-3	440-54862-16RE	Water	20130819	RE,FD3	Stage 2B					X								
440-54975-1	PC-124	440-54975-1	Water	20130820		Stage 2B	X				X					X	X		
440-54975-1	PC-124DUP	440-54975-1DUP	Water	20130820	DUP	Stage 2B										X			
440-54975-1	PC-125	440-54975-2	Water	20130820		Stage 2B	X				X					X	X		

SDG	Client Sample ID	Lab Sample ID	Matrix	Sample Date	QC Type	Validation Level	Metals (200.7)	Hex. Chrom. (218.6)	Anions (300.0)	Chlorate (300.1)	ClO_4 (314.0)	NH_3-N (350.1)	Phenols (420.1)	NO_3/NO_2-N, TIN (Calc)	Spec. Cond. (SM2510)	TDS (SM2540C)	pH (SM4500H+B)	TOC (SM5310C)	TOX (SW9020)
440-54975-1	PC-126	440-54975-3	Water	20130820		Stage 2B	X				X					X	X		
440-54975-1	PC-127	440-54975-4	Water	20130820		Stage 2B	X				X					X	X		
440-54975-1	M-95	440-54975-5	Water	20130820		Stage 2B	X	X			X					X	X		
440-54975-1	PC-54	440-54975-6	Water	20130820		Stage 2B	X				X					X	X		
440-54975-1	PC-54MS	440-54975-6MS	Water	20130820	MS	Stage 2B	X												
440-54975-1	PC-54MSD	440-54975-6MSD	Water	20130820	MSD	Stage 2B	X												
440-54975-1	M-48A	440-54975-7	Water	20130820		Stage 2B	X				X					X	X		
440-54975-1	M-48ADUP	440-54975-7DUP	Water	20130820	DUP	Stage 2B											X		
440-54975-1	M-23	440-54975-8	Water	20130820		Stage 2B	X				X					X	X		
440-54975-1	M-23DUP	440-54975-8DUP	Water	20130820	DUP	Stage 2B											X		
440-54975-1	I-V	440-54975-9	Water	20130820		Stage 2B	X				X					X	X		
440-54975-1	I-I	440-54975-10	Water	20130820		Stage 2B	X				X					X	X		
440-54975-1	I-Z	440-54975-11	Water	20130820		Stage 2B	X				X					X	X		
440-54975-1	I-J	440-54975-12	Water	20130820		Stage 2B	X				X					X	X		
440-54975-1	I-K	440-54975-13	Water	20130820		Stage 2B	X				X					X	X		
440-54975-1	M-68	440-54975-14	Water	20130820		Stage 2B	X				X					X	X		
440-54975-1	M-67	440-54975-15	Water	20130820		Stage 2B	X				X					X	X		
440-54975-1	M-67DUP	440-54975-15DUP	Water	20130820	DUP	Stage 2B											X		
440-55076-1	PC-123	440-55076-1	Water	20130821		Stage 2B	X				X					X	X		
440-55076-1	PC-128	440-55076-2	Water	20130821		Stage 2B	X				X					X	X		
440-55076-1	PC-130	440-55076-3	Water	20130821		Stage 2B	X				X					X	X		
440-55076-1	PC-130	440-55076-3RE	Water	20130821	RE	Stage 2B					X								
440-55076-1	PC-131	440-55076-4	Water	20130821		Stage 2B	X				X					X	X		
440-55076-1	PC-131	440-55076-4RE	Water	20130821	RE	Stage 2B					X								
440-55076-1	PC-132	440-55076-5	Water	20130821		Stage 2B	X				X					X	X		
440-55076-1	PC-132	440-55076-5RE	Water	20130821	RE	Stage 2B					X								
440-55076-1	PC-71	440-55076-6	Water	20130821		Stage 2B	X				X					X	X		
440-55076-1	PC-71	440-55076-6RE	Water	20130821	RE	Stage 2B					X								
440-55076-1	PC-72	440-55076-7	Water	20130821		Stage 2B	X				X					X	X		
440-55076-1	PC-73	440-55076-8	Water	20130821		Stage 2B	X				X					X	X		
440-55076-1	PC-73MS	440-55076-8MS	Water	20130821	MS	Stage 2B	X												
440-55076-1	PC-73MSD	440-55076-8MSD	Water	20130821	MSD	Stage 2B	X												
440-55076-1	PC-37	440-55076-9	Water	20130821		Stage 2B	X				X					X	X		
440-55076-1	M-44	440-55076-10	Water	20130821	FD1	Stage 2B	X	X			X					X	X		
440-55076-1	M-44DUP	440-55076-10DUP	Water	20130821	DUP	Stage 2B											X		
440-55076-1	M-44	440-55076-10RE	Water	20130821	RE,FD1	Stage 2B					X								
440-55076-1	VD-1	440-55076-11	Water	20130821	FD1	Stage 2B	X	X			X					X	X		
440-55076-1	VD-1MS	440-55076-11MS	Water	20130821	MS	Stage 2B		X											
440-55076-1	VD-1MSD	440-55076-11MSD	Water	20130821	MSD	Stage 2B		X											
440-55076-1	VD-1	440-55076-11RE	Water	20130821	RE,FD1	Stage 2B					X								
440-55104-1	H-28A	440-55104-1	Water	20130821		Stage 2B	X		X		X		X		X	X	X	X	X
440-55104-1	H-28ADUP	440-55104-1DUP	Water	20130821	DUP	Stage 2B											X		
440-55104-1	H-28AMS	440-55104-1MS	Water	20130821	MS	Stage 2B	X						X						X
440-55104-1	H-28AMSD	440-55104-1MSD	Water	20130821	MSD	Stage 2B	X						X						X
440-55104-1	M-6A	440-55104-2	Water	20130821		Stage 2B	X		X		X		X		X	X	X	X	X
440-55218-1	PC-129	440-55218-1	Water	20130822		Stage 2B	X				X					X	X		
440-55218-1	PC-129DUP	440-55218-1DUP	Water	20130822	DUP	Stage 2B											X		
440-55218-1	PC-129	440-55218-1RE	Water	20130822	RE	Stage 2B					X								
440-55218-1	M-19	440-55218-2	Water	20130822		Stage 2B	X				X					X	X		
440-55218-1	M-35	440-55218-3	Water	20130822		Stage 2B	X				X					X	X		
440-55218-1	M-74	440-55218-4	Water	20130822		Stage 2B	X				X					X	X		
440-55218-1	M-73	440-55218-5	Water	20130822		Stage 2B	X				X					X	X		
440-55218-1	M-81A	440-55218-6	Water	20130822		Stage 2B	X				X					X	X		
440-55674-1	PC-86	440-55674-1	Water	20130828		Stage 2B	X				X					X	X		
440-55674-1	PC-86MS	440-55674-1MS	Water	20130828	MS	Stage 2B	X												
440-55674-1	PC-86MSD	440-55674-1MSD	Water	20130828	MSD	Stage 2B	X												
440-55674-1	PC-90	440-55674-2	Water	20130828		Stage 2B	X				X					X	X		
440-55674-1	PC-91	440-55674-3	Water	20130828		Stage 2B	X				X					X	X		
440-55674-1	PC-97	440-55674-4	Water	20130828		Stage 2B	X				X					X	X		
440-55674-1	PC-18	440-55674-5	Water	20130828		Stage 2B	X				X					X	X		
440-55674-1	ARP-1	440-55674-6	Water	20130828		Stage 2B	X				X					X	X		
440-55674-1	PC-58	440-55674-7	Water	20130828		Stage 2B	X				X					X	X		

SDG	Client Sample ID	Lab Sample ID	Matrix	Sample Date	QC Type	Validation Level	Metals (200.7)	Hex. Chrom. (218.6)	Anions (300.0)	Chlorate (300.1)	ClO_4 (314.0)	NH_3-N (350.1)	Phenols (420.1)	NO_3/NO_2-N, TIN (Calc)	Spec. Cond. (SM2510)	TDS (SM2540C)	pH (SM4500H+B)	TOC (SM5310C)	TOX (SW9020)
440-55674-1	PC-56	440-55674-8	Water	20130828		Stage 2B	X				X					X	X		
440-55674-1	PC-60	440-55674-9	Water	20130828		Stage 2B	X				X					X	X		
440-55674-1	PC-59	440-55674-10	Water	20130828		Stage 2B	X				X					X	X		
440-55674-1	PC-62	440-55674-11	Water	20130828		Stage 2B	X				X					X	X		
440-55674-1	PC-62MS	440-55674-11MS	Water	20130828	MS	Stage 2B	X												
440-55674-1	PC-62MSD	440-55674-11MSD	Water	20130828	MSD	Stage 2B	X												
440-55674-1	PC-68	440-55674-12	Water	20130828		Stage 2B	X				X					X	X		
440-55674-1	PC-94	440-55674-13	Water	20130828		Stage 2B	X				X					X	X		
440-55769-1	ART-7B	440-55769-1	Water	20130829		Stage 2B	X				X					X	X		
440-55769-1	PC-122	440-55769-2	Water	20130829		Stage 2B	X				X					X	X		
440-55769-1	PC-53	440-55769-3	Water	20130829		Stage 2B	X				X					X	X		
440-55769-1	MW-K5	440-55769-4	Water	20130829		Stage 2B	X				X					X	X		
440-55769-1	ARP-7	440-55769-5	Water	20130829		Stage 2B	X				X					X	X		
440-55769-1	ARP-6B	440-55769-6	Water	20130829		Stage 2B	X				X					X	X		
440-55769-1	ARP-5A	440-55769-7	Water	20130829		Stage 2B	X				X					X	X		
440-55769-1	ARP-4A	440-55769-8	Water	20130829		Stage 2B	X				X					X	X		
440-55769-1	MW-K4	440-55769-9	Water	20130829		Stage 2B	X				X					X	X		
440-55769-1	PC-101R	440-55769-10	Water	20130829		Stage 2B	X				X					X	X		
440-55769-1	PC-101RMS	440-55769-10MS	Water	20130829	MS	Stage 2B	X												
440-55769-1	PC-101RMSD	440-55769-10MSD	Water	20130829	MSD	Stage 2B	X												
440-55769-1	ARP-3A	440-55769-11	Water	20130829		Stage 2B	X				X					X	X		
440-55769-1	EB-1	440-55769-12	Water	20130829	EB	Stage 2B					X								
440-55769-1	ARP-2A	440-55769-13	Water	20130829		Stage 2B	X				X					X	X		
440-55769-1	PC-103	440-55769-14	Water	20130829		Stage 2B	X				X					X	X		
440-55769-1	PC-98R	440-55769-15	Water	20130829		Stage 2B	X				X					X	X		
440-55769-1	PC-55	440-55769-16	Water	20130829		Stage 2B	X				X					X	X		
440-55769-1	PC-55DUP	440-55769-16DUP	Water	20130829	DUP	Stage 2B											X		
440-55874-1	M-83	440-55874-1	Water	20130830		Stage 2B	X				X					X	X		
440-56136-1	M-80	440-56136-1	Water	20130904		Stage 4	X				X					X	X		
440-56136-1	M-80MS	440-56136-1MS	Water	20130904	MS	Stage 4	X												
440-56136-1	M-80MSD	440-56136-1MSD	Water	20130904	MSD	Stage 4	X												
440-56136-1	M-80	440-56136-1RE	Water	20130904	RE	Stage 4					X								
440-56136-1	M-70	440-56136-2	Water	20130904		Stage 4	X				X					X	X		
440-56136-1	M-70	440-56136-2RE	Water	20130904	RE	Stage 4					X								
440-56136-1	M-71	440-56136-3	Water	20130904		Stage 4	X				X					X	X		
440-56136-1	M-71	440-56136-3RE	Water	20130904	RE	Stage 4					X								
440-56136-1	M-72	440-56136-4	Water	20130904		Stage 4	X				X					X	X		
440-56136-1	I-AA	440-56136-5	Water	20130904		Stage 4	X				X					X	X		
440-56136-1	I-AA	440-56136-5RE	Water	20130904	RE	Stage 4					X								
440-56136-1	I-AB	440-56136-6	Water	20130904		Stage 4	X				X					X	X		
440-56136-1	I-AB	440-56136-6RE	Water	20130904	RE	Stage 4					X								
440-56136-1	I-Y	440-56136-7	Water	20130904		Stage 4	X				X					X	X		
440-56136-1	M-22A	440-56136-8	Water	20130904		Stage 4	X				X					X	X		
440-56136-1	M-38	440-56136-9	Water	20130904		Stage 4	X	X			X					X	X		
440-56136-1	M-38DUP	440-56136-9DUP	Water	20130904	DUP	Stage 4											X		
440-56136-1	M-38MS	440-56136-9MS	Water	20130904	MS	Stage 4		X											
440-56136-1	M-38MSD	440-56136-9MSD	Water	20130904	MSD	Stage 4		X											
440-56136-1	M-14A	440-56136-10	Water	20130904	FD5	Stage 4	X				X					X	X		
440-56136-1	VD-5	440-56136-11	Water	20130904	FD5	Stage 4	X				X					X	X		
440-56136-1	VD-5MS	440-56136-11MS	Water	20130904	MS	Stage 4	X												
440-56136-1	VD-5MSD	440-56136-11MSD	Water	20130904	MSD	Stage 4	X												
440-56136-1	VD-5	440-56136-11RE	Water	20130904	RE,FD5	Stage 4					X								
440-56136-1	I-W	440-56136-12	Water	20130904		Stage 4	X				X					X	X		
440-56136-1	I-WDUP	440-56136-12DUP	Water	20130904	DUP	Stage 4											X		
440-56136-1	I-W	440-56136-12RE	Water	20130904	RE	Stage 4					X								
440-56136-1	EB-2	440-56136-13	Water	20130904	EB	Stage 4	X	X			X					X	X		
440-56249-1	M-5A	440-56249-1	Water	20130904		Stage 2B	X		X		X		X		X	X	X	X	X
440-56249-1	M-5AMS	440-56249-1MS	Water	20130904	MS	Stage 2B							X						
440-56249-1	M-5AMSD	440-56249-1MSD	Water	20130904	MSD	Stage 2B							X						
440-56249-1	M-7B	440-56249-2	Water	20130904		Stage 2B	X		X		X		X		X	X	X	X	X
440-56249-1	M-7BDUP	440-56249-2DUP	Water	20130904	DUP	Stage 2B									X				
440-56333-1	M-31A	440-56333-1	Water	20130905		Stage 2B	X				X					X	X		

SDG	Client Sample ID	Lab Sample ID	Matrix	Sample Date	QC Type	Validation Level	Metals (200.7)	Hex. Chrom. (218.6)	Anions (300.0)	Chlorate (300.1)	ClO_4 (314.0)	NH_3-N (350.1)	Phenols (420.1)	NO_3/NO_2-N, TIN (Calc)	Spec. Cond. (SM2510)	TDS (SM2540C)	pH (SM4500H+B)	TOC (SM5310C)	TOX (SW9020)
440-56333-1	M-31ADUP	440-56333-1DUP	Water	20130905	DUP	Stage 2B											X		
440-56333-1	M-31A	440-56333-1RE	Water	20130905	RE	Stage 2B					X								
440-56333-1	PC-136	440-56333-2	Water	20130905		Stage 2B	X				X					X	X		
440-56333-1	PC-136	440-56333-2RE	Water	20130905	RE	Stage 2B					X								
440-56333-1	PC-144	440-56333-3	Water	20130905	FD2	Stage 2B	X				X					X	X		
440-56333-1	PC-135A	440-56333-4	Water	20130905		Stage 2B	X				X					X	X		
440-56333-1	PC-135A	440-56333-4RE	Water	20130905	RE	Stage 2B					X								
440-56333-1	M-12A	440-56333-5	Water	20130905	FD4	Stage 2B	X	X			X					X	X		
440-56333-1	M-11	440-56333-6	Water	20130905		Stage 2B	X	X			X					X	X		
440-56333-1	M-11MS	440-56333-6MS	Water	20130905	MS	Stage 2B		X											
440-56333-1	M-11MSD	440-56333-6MSD	Water	20130905	MSD	Stage 2B		X											
440-56333-1	VD-2	440-56333-7	Water	20130905	FD2	Stage 2B	X				X					X	X		
440-56333-1	VD-2	440-56333-7RE	Water	20130905	RE,FD2	Stage 2B					X								
440-56333-1	VD-4	440-56333-8	Water	20130905	FD4	Stage 2B	X	X			X					X	X		
440-56333-1	VD-4	440-56333-8RE	Water	20130905	RE,FD4	Stage 2B					X								
440-56361-1	M-10	440-56361-1	Water	20130905		Stage 2B	X	X	X	X	X	X		X		X	X		
440-56361-1	M-10MS	440-56361-1MS	Water	20130905	MS	Stage 2B			X										
440-56361-1	M-10MSD	440-56361-1MSD	Water	20130905	MSD	Stage 2B			X										
440-56471-1	PC-150	440-56471-1	Water	20130906		Stage 4	X				X					X	X		
440-56471-1	PC-150DUP	440-56471-1DUP	Water	20130906	DUP	Stage 4											X		
440-56471-1	PC-149	440-56471-2	Water	20130906		Stage 4	X				X					X	X		
440-56471-1	PC-149MS	440-56471-2MS	Water	20130906	MS	Stage 4	X												
440-56471-1	PC-149MSD	440-56471-2MSD	Water	20130906	MSD	Stage 4	X												
440-56471-1	PC-148	440-56471-3	Water	20130906		Stage 4	X				X					X	X		
440-56471-1	PC-148	440-56471-3RE	Water	20130906	RE	Stage 4					X								
440-56471-1	M-99	440-56471-4	Water	20130906		Stage 4	X				X					X	X		
440-56471-1	M-99	440-56471-4RE	Water	20130906	RE	Stage 4					X								
440-56477-1	ART-1	440-56477-1	Water	20130906		Stage 2B					X					X			
440-56477-1	ART-1DUP	440-56477-1DUP	Water	20130906	DUP	Stage 2B										X			
440-56477-1	ART-2	440-56477-2	Water	20130906		Stage 2B					X					X			
440-56477-1	ART-3	440-56477-3	Water	20130906		Stage 2B					X					X			
440-56477-1	ART-4	440-56477-4	Water	20130906		Stage 2B					X					X			
440-56477-1	ART-7	440-56477-5	Water	20130906		Stage 2B					X					X			
440-56477-1	ART-8	440-56477-6	Water	20130906		Stage 2B					X					X			
440-56477-1	ART-9	440-56477-7	Water	20130906		Stage 2B					X					X			
440-56477-1	PC-99R2/R3	440-56477-8	Water	20130906		Stage 2B					X					X			
440-56477-1	PC-115R	440-56477-9	Water	20130906		Stage 2B					X					X			
440-56477-1	PC-116R	440-56477-10	Water	20130906		Stage 2B					X					X			
440-56477-1	PC-116R	440-56477-10RE	Water	20130906	RE	Stage 2B					X								
440-56477-1	PC-117	440-56477-11	Water	20130906		Stage 2B					X					X			
440-56477-1	PC-118	440-56477-12	Water	20130906		Stage 2B					X					X			
440-56477-1	PC-119	440-56477-13	Water	20130906		Stage 2B					X					X			
440-56477-1	PC-120	440-56477-14	Water	20130906		Stage 2B					X					X			
440-56477-1	PC-121	440-56477-15	Water	20130906		Stage 2B					X					X			
440-56477-1	PC-133	440-56477-16	Water	20130906		Stage 2B					X					X			
440-57563-1	PC-97	440-57563-1	Water	20130919		Stage 2B					X					X			
440-57563-1	PC-97DUP	440-57563-1DUP	Water	20130919	DUP	Stage 2B										X			
440-57563-1	PC-90	440-57563-2	Water	20130919		Stage 2B					X					X			
440-57563-1	PC-91	440-57563-3	Water	20130919		Stage 2B					X					X			
440-57563-1	PC-86	440-57563-4	Water	20130919		Stage 2B					X					X			
440-57563-1	PC-86	440-57563-4RE	Water	20130919	RE	Stage 2B					X								
440-57563-1	PC-58	440-57563-5	Water	20130919		Stage 2B					X					X			
440-57563-1	PC-60	440-57563-6	Water	20130919		Stage 2B					X					X			
440-57563-1	PC-59	440-57563-7	Water	20130919		Stage 2B					X					X			
440-57563-1	EB-1	440-57563-8	Water	20130919	EB	Stage 2B					X								
440-57563-1	PC-62	440-57563-9	Water	20130919		Stage 2B					X					X			
440-57563-1	PC-68	440-57563-10	Water	20130919		Stage 2B					X					X			
440-57630-1	PC-122	440-57630-1	Water	20130920		Stage 2B					X					X			
440-57630-1	PC-53	440-57630-2	Water	20130920		Stage 2B					X					X			
440-57630-1	PC-53	440-57630-2RE	Water	20130920	RE	Stage 2B					X								
440-57630-1	MW-K5	440-57630-3	Water	20130920		Stage 2B					X					X			
440-57630-1	ARP-7	440-57630-4	Water	20130920		Stage 2B					X					X			

SDG	Client Sample ID	Lab Sample ID	Matrix	Sample Date	QC Type	Validation Level	Metals (200.7)	Hex. Chrom. (218.6)	Anions (300.0)	Chlorate (300.1)	ClO_4 (314.0)	NH_3-N (350.1)	Phenols (420.1)	NO_3/NO_2-N, TIN (Calc)	Spec. Cond. (SM2510)	TDS (SM2540C)	pH (SM4500H+B)	TOC (SM5310C)	TOX (SW9020)
440-57630-1	ARP-6B	440-57630-5	Water	20130920		Stage 2B					X					X			
440-57630-1	ARP-5A	440-57630-6	Water	20130920		Stage 2B					X					X			
440-57630-1	ARP-4A	440-57630-7	Water	20130920		Stage 2B					X					X			
440-57630-1	PC-101R	440-57630-8	Water	20130920		Stage 2B					X					X			
440-57630-1	MW-K4	440-57630-9	Water	20130920		Stage 2B					X					X			
440-57630-1	ARP-3A	440-57630-10	Water	20130920		Stage 2B					X					X			
440-57630-1	ARP-2A	440-57630-11	Water	20130920		Stage 2B					X					X			
440-57630-1	PC-103	440-57630-12	Water	20130920		Stage 2B					X					X			
440-57630-1	PC-98R	440-57630-13	Water	20130920		Stage 2B					X					X			
440-57630-1	ARP-1	440-57630-14	Water	20130920		Stage 2B					X					X			
440-57832-1	PC-55	440-57832-1	Water	20130924		Stage 2B					X					X			
440-57832-1	PC-55	440-57832-1RE	Water	20130924	RE	Stage 2B					X								
440-57832-1	PC-18	440-57832-2	Water	20130924		Stage 2B					X					X			
440-57832-1	PC-18	440-57832-2RE	Water	20130924	RE	Stage 2B					X								
440-57832-1	M-83	440-57832-3	Water	20130924		Stage 2B					X					X			
440-58695-1	ART-4	440-58695-1	Water	20131003		Stage 2B					X					X			
440-58695-1	ART-3	440-58695-2	Water	20131003		Stage 2B					X					X			
440-58695-1	ART-8	440-58695-3	Water	20131003		Stage 2B					X					X			
440-58695-1	ART-2	440-58695-4	Water	20131003		Stage 2B					X					X			
440-58695-1	ART-7	440-58695-5	Water	20131003		Stage 2B					X					X			
440-58695-1	ART-9	440-58695-6	Water	20131003		Stage 2B					X					X			
440-58695-1	PC-120	440-58695-7	Water	20131003		Stage 2B					X					X			
440-58695-1	PC-119	440-58695-8	Water	20131003		Stage 2B					X					X			
440-58695-1	PC-117	440-58695-9	Water	20131003		Stage 2B					X					X			
440-58695-1	PC-116R	440-58695-10	Water	20131003		Stage 2B					X					X			
440-58695-1	PC-99R2/R3	440-58695-11	Water	20131003		Stage 2B					X					X			
440-58695-1	PC-115R	440-58695-12	Water	20131003		Stage 2B					X					X			
440-58695-1	PC-133	440-58695-13	Water	20131003		Stage 2B					X					X			
440-58695-1	PC-121	440-58695-14	Water	20131003		Stage 2B					X					X			
440-59168-1	ART-1	440-59168-1	Water	20131007		Stage 2B					X					X			
440-59168-1	ART-6	440-59168-2	Water	20131007		Stage 2B					X					X			
440-59168-1	PC-118	440-59168-3	Water	20131007		Stage 2B					X					X			
440-59335-1	PC-122	440-59355-1	Water	20131010		Stage 2B					X					X			
440-59335-1	PC-53	440-59355-2	Water	20131010		Stage 2B					X					X			
440-59335-1	MW-K5	440-59355-3	Water	20131010		Stage 2B					X					X			
440-59335-1	ARP-7	440-59355-4	Water	20131010		Stage 2B					X					X			
440-59335-1	ARP-6B	440-59355-5	Water	20131010		Stage 2B					X					X			
440-59335-1	ARP-5A	440-59355-6	Water	20131010		Stage 2B					X					X			
440-59335-1	ARP-4A	440-59355-7	Water	20131010		Stage 2B					X					X			
440-59335-1	PC-101R	440-59355-8	Water	20131010		Stage 2B					X					X			
440-59335-1	MW-K4	440-59355-9	Water	20131010		Stage 2B					X					X			
440-59335-1	ARP-3A	440-59355-10	Water	20131010		Stage 2B					X					X			
440-59335-1	ARP-2A	440-59355-11	Water	20131010		Stage 2B					X					X			
440-59335-1	PC-98R	440-59355-12	Water	20131010		Stage 2B					X					X			
440-59335-1	PC-103	440-59355-13	Water	20131010		Stage 2B					X					X			
440-59416-1	PC-97	440-59416-1	Water	20131008		Stage 4					X					X			
440-59416-1	PC-90	440-59416-2	Water	20131008		Stage 4					X					X			
440-59416-1	PC-91	440-59416-3	Water	20131008		Stage 4					X					X			
440-59416-1	PC-68	440-59416-4	Water	20131008		Stage 4					X					X			
440-59416-1	PC-62	440-59416-5	Water	20131008		Stage 4					X					X			
440-59416-1	PC-59	440-59416-6	Water	20131008		Stage 4					X					X			
440-59416-1	PC-60	440-59416-7	Water	20131008		Stage 4					X					X			
440-59416-1	PC-56	440-59416-8	Water	20131008		Stage 4					X					X			
440-59416-1	PC-58	440-59416-9	Water	20131008		Stage 4					X					X			
440-59416-1	PC-18	440-59416-10	Water	20131008		Stage 4					X					X			
440-59416-1	ARP-1	440-59416-11	Water	20131008		Stage 4					X					X			
440-59416-1	EB-1	440-59416-12	Water	20131008	EB	Stage 4					X								
440-59608-1	PC-86	440-59608-1	Water	20131011		Stage 2B					X					X			
440-59608-1	M-83	440-59608-2	Water	20131011		Stage 2B					X					X			
440-59608-1	PC-55	440-59608-3	Water	20131011		Stage 2B					X					X			
440-61402-1	ART-1	440-61402-1	Water	20131104		Stage 2B	X				X					X	X		
440-61402-1	ART-2	440-61402-2	Water	20131104		Stage 2B	X				X					X	X		

SDG	Client Sample ID	Lab Sample ID	Matrix	Sample Date	QC Type	Validation Level	Metals (200.7)	Hex. Chrom. (218.6)	Anions (300.0)	Chlorate (300.1)	ClO_4 (314.0)	NH_3-N (350.1)	Phenols (420.1)	NO_3/NO_2-N, TIN (Calc)	Spec. Cond. (SM2510)	TDS (SM2540C)	pH (SM4500H+B)	TOC (SM5310C)	TOX (SW9020)
440-61402-1	ART-3	440-61402-3	Water	20131104		Stage 2B	X				X					X	X		
440-61402-1	ART-4	440-61402-4	Water	20131104		Stage 2B	X				X					X	X		
440-61402-1	ART-6	440-61402-5	Water	20131104		Stage 2B	X				X					X	X		
440-61402-1	ART-7	440-61402-6	Water	20131104		Stage 2B	X				X					X	X		
440-61402-1	ART-8	440-61402-7	Water	20131104		Stage 2B	X				X					X	X		
440-61402-1	ART-9	440-61402-8	Water	20131104		Stage 2B	X				X					X	X		
440-61402-1	PC-99R2/R3	440-61402-9	Water	20131104		Stage 2B	X				X					X	X		
440-61402-1	PC-115R	440-61402-10	Water	20131104		Stage 2B	X				X					X	X		
440-61402-1	PC-115RMS	440-61402-10MS	Water	20131104	MS	Stage 2B	X												
440-61402-1	PC-115RMSD	440-61402-10MSD	Water	20131104	MSD	Stage 2B	X												
440-61402-1	PC-116R	440-61402-11	Water	20131104		Stage 2B	X				X					X	X		
440-61402-1	PC-117	440-61402-12	Water	20131104		Stage 2B	X				X					X	X		
440-61402-1	PC-117MS	440-61402-12MS	Water	20131104	MS	Stage 2B	X												
440-61402-1	PC-117MSD	440-61402-12MSD	Water	20131104	MSD	Stage 2B	X												
440-61402-1	PC-118	440-61402-13	Water	20131104		Stage 2B	X				X					X	X		
440-61402-1	PC-119	440-61402-14	Water	20131104		Stage 2B	X				X					X	X		
440-61402-1	PC-120	440-61402-15	Water	20131104		Stage 2B	X				X					X	X		
440-61402-1	PC-120DUP	440-61402-15DUP	Water	20131104	DUP	Stage 2B											X		
440-61402-1	PC-121	440-61402-16	Water	20131104		Stage 2B	X				X					X	X		
440-61402-1	PC-133	440-61402-17	Water	20131104		Stage 2B	X				X					X	X		
440-61866-1	PC-97	440-61866-1	Water	20131106		Stage 2B	X				X					X	X		
440-61866-1	PC-97DUP	440-61866-1DUP	Water	20131106	DUP	Stage 2B										X			
440-61866-1	PC-97MS	440-61866-1MS	Water	20131106	MS	Stage 2B	X												
440-61866-1	PC-97MSD	440-61866-1MSD	Water	20131106	MSD	Stage 2B	X												
440-61866-1	PC-90	440-61866-2	Water	20131106		Stage 2B	X				X					X	X		
440-61866-1	PC-91	440-61866-3	Water	20131106		Stage 2B	X				X					X	X		
440-61866-1	PC-94	440-61866-4	Water	20131106		Stage 2B	X				X					X	X		
440-61866-1	PC-58	440-61866-5	Water	20131106		Stage 2B	X				X					X	X		
440-61866-1	PC-58DUP	440-61866-5DUP	Water	20131106	DUP	Stage 2B											X		
440-61866-1	PC-56	440-61866-6	Water	20131106		Stage 2B	X				X					X	X		
440-61866-1	PC-56DUP	440-61866-6DUP	Water	20131106	DUP	Stage 2B											X		
440-61866-1	PC-60	440-61866-7	Water	20131106		Stage 2B	X				X					X	X		
440-61866-1	PC-59	440-61866-8	Water	20131106		Stage 2B	X				X					X	X		
440-61866-1	PC-62	440-61866-9	Water	20131106		Stage 2B	X				X					X	X		
440-61866-1	PC-68	440-61866-10	Water	20131106		Stage 2B	X				X					X	X		
440-61866-1	PC-86	440-61866-11	Water	20131106		Stage 2B	X				X					X	X		
440-61866-1	PC-86MS	440-61866-11MS	Water	20131106	MS	Stage 2B	X												
440-61866-1	PC-86MSD	440-61866-11MSD	Water	20131106	MSD	Stage 2B	X												
440-61866-1	ART-7B	440-61866-12	Water	20131107		Stage 2B	X				X					X	X		
440-61866-1	PC-122	440-61866-13	Water	20131107		Stage 2B	X				X					X	X		
440-61866-1	PC-53	440-61866-14	Water	20131107		Stage 2B	X				X					X	X		
440-61866-1	MW-K5	440-61866-15	Water	20131107		Stage 2B	X				X					X	X		
440-61866-1	ARP-7	440-61866-16	Water	20131107		Stage 2B	X				X					X	X		
440-61866-1	ARP-6B	440-61866-17	Water	20131107		Stage 2B	X				X					X	X		
440-61866-1	ARP-5A	440-61866-18	Water	20131107		Stage 2B	X				X					X	X		
440-61866-1	ARP-4A	440-61866-19	Water	20131107		Stage 2B	X				X					X	X		
440-61866-1	PC-101R	440-61866-20	Water	20131107		Stage 2B	X				X					X	X		
440-61866-1	MW-K4	440-61866-21	Water	20131107		Stage 2B	X				X					X	X		
440-61866-1	ARP-3A	440-61866-22	Water	20131107		Stage 2B	X				X					X	X		
440-61866-1	ARP-2A	440-61866-23	Water	20131107		Stage 2B	X				X					X	X		
440-61866-1	PC-103	440-61866-24	Water	20131107		Stage 2B	X				X					X	X		
440-61866-1	PC-98R	440-61866-25	Water	20131107		Stage 2B	X				X					X	X		
440-61866-1	PC-98RDUP	440-61866-25DUP	Water	20131107	DUP	Stage 2B											X		
440-62043-1	PC-18	440-62043-1	Water	20131108		Stage 2B	X				X					X	X		
440-62043-1	PC-18MS	440-62043-1MS	Water	20131108	MS	Stage 2B	X												
440-62043-1	PC-18MSD	440-62043-1MSD	Water	20131108	MSD	Stage 2B	X												
440-62043-1	ARP-1	440-62043-2	Water	20131108		Stage 2B	X				X					X	X		
440-62043-1	EB-1	440-62043-3	Water	20131108	EB	Stage 2B					X								
440-62043-1	PC-55	440-62043-4	Water	20131108		Stage 2B	X				X					X	X		
440-62127-1	PC-71	440-62127-1	Water	20131111		Stage 2B	X				X					X	X		
440-62127-1	PC-71MS	440-62127-1MS	Water	20131111	MS	Stage 2B	X												
440-62127-1	PC-71MSD	440-62127-1MSD	Water	20131111	MSD	Stage 2B	X												

SDG	Client Sample ID	Lab Sample ID	Matrix	Sample Date	QC Type	Validation Level	Metals (200.7)	Hex. Chrom. (218.6)	Anions (300.0)	Chlorate (300.1)	ClO_4 (314.0)	NH_3-N (350.1)	Phenols (420.1)	NO_3/NO_2-N, TIN (Calc)	Spec. Cond. (SM2510)	TDS (SM2540C)	pH (SM4500H+B)	TOC (SM5310C)	TOX (SW9020)
440-62127-1	PC-72	440-62127-2	Water	20131111		Stage 2B	X				X					X	X		
440-62127-1	PC-73	440-62127-3	Water	20131111		Stage 2B	X				X					X	X		
440-62127-1	PC-37	440-62127-4	Water	20131111		Stage 2B	X				X					X	X		
440-62127-1	M-23	440-62127-5	Water	20131111		Stage 2B	X				X					X	X		
440-62127-1	VD-1	440-62127-6	Water	20131111	FD6	Stage 2B	X				X					X	X		
440-62127-1	FB-1	440-62127-7	Water	20131111	FB	Stage 2B	X	X			X					X	X		
440-62127-1	M-44	440-62127-8	Water	20131111		Stage 2B	X	X			X					X	X		
440-62127-1	M-95	440-62127-9	Water	20131111		Stage 2B	X	X			X					X	X		
440-62129-1	PC-123	440-62129-1	Water	20131111		Stage 2B	X				X					X	X		
440-62129-1	PC-128	440-62129-2	Water	20131111		Stage 2B	X				X					X	X		
440-62129-1	PC-129	440-62129-3	Water	20131111		Stage 2B	X				X					X	X		
440-62129-1	PC-130	440-62129-4	Water	20131111		Stage 2B	X				X					X	X		
440-62129-1	PC-131	440-62129-5	Water	20131111		Stage 2B	X				X					X	X		
440-62129-1	PC-132	440-62129-6	Water	20131111		Stage 2B	X				X					X	X		
440-62129-1	PC-124	440-62129-7	Water	20131111		Stage 2B	X				X					X	X		
440-62129-1	PC-125	440-62129-8	Water	20131111		Stage 2B	X				X					X	X		
440-62129-1	PC-126	440-62129-9	Water	20131111		Stage 2B	X				X					X	X		
440-62129-1	PC-126MS	440-62129-9MS	Water	20131111	MS	Stage 2B	X												
440-62129-1	PC-126MSD	440-62129-9MSD	Water	20131111	MSD	Stage 2B	X												
440-62129-1	PC-127	440-62129-10	Water	20131111		Stage 2B	X				X					X	X		
440-62129-1	PC-127DUP	440-62129-10DUP	Water	20131111	DUP	Stage 2B											X		
440-62129-1	PC-54	440-62129-11	Water	20131111		Stage 2B	X				X					X	X		
440-62129-1	M-48A	440-62129-12	Water	20131111	FD6	Stage 2B	X				X					X	X		
440-62282-1	PC-136	440-62282-1	Water	20131112		Stage 2B	X				X					X	X		
440-62282-1	PC-136DUP	440-62282-1DUP	Water	20131112	DUP	Stage 2B										X	X		
440-62282-1	PC-136MS	440-62282-1MS	Water	20131112	MS	Stage 2B	X												
440-62282-1	PC-136MSD	440-62282-1MSD	Water	20131112	MSD	Stage 2B	X												
440-62282-1	PC-144	440-62282-2	Water	20131112	FD7	Stage 2B	X				X					X	X		
440-62282-1	PC-135A	440-62282-3	Water	20131112		Stage 2B	X				X					X	X		
440-62282-1	PC-148	440-62282-4	Water	20131112		Stage 2B	X				X					X	X		
440-62282-1	PC-149	440-62282-5	Water	20131112		Stage 2B	X				X					X	X		
440-62282-1	PC-150	440-62282-6	Water	20131112		Stage 2B	X				X					X	X		
440-62282-1	VD-2	440-62282-7	Water	20131112	FD7	Stage 2B	X				X					X	X		
440-62282-1	M-37	440-62282-8	Water	20131112	FD8	Stage 2B	X	X			X					X	X		
440-62282-1	M-25	440-62282-9	Water	20131112		Stage 2B	X				X					X	X		
440-62282-1	VD-3	440-62282-10	Water	20131112	FD8	Stage 2B	X	X			X					X	X		
440-62282-1	M-64	440-62282-11	Water	20131112		Stage 2B	X				X					X	X		
440-62282-1	M-64MS	440-62282-11MS	Water	20131112	MS	Stage 2B	X												
440-62282-1	M-64MSD	440-62282-11MSD	Water	20131112	MSD	Stage 2B	X												
440-62282-1	EB-1	440-62282-12	Water	20131112	EB	Stage 2B	X	X			X					X	X		
440-62282-1	EB-1MS	440-62282-12MS	Water	20131112	MS	Stage 2B		X											
440-62282-1	EB-1MSD	440-62282-12MSD	Water	20131112	MSD	Stage 2B		X											
440-62282-1	M-65	440-62282-13	Water	20131112		Stage 2B	X				X					X	X		
440-62282-1	M-66	440-62282-14	Water	20131112		Stage 2B	X				X					X	X		
440-62286-1	I-O	440-62286-1	Water	20131112		Stage 2B	X				X					X	X		
440-62286-1	I-ODUP	440-62286-1DUP	Water	20131112	DUP	Stage 2B										X			
440-62286-1	I-OMS	440-62286-1MS	Water	20131112	MS	Stage 2B	X												
440-62286-1	I-OMSD	440-62286-1MSD	Water	20131112	MSD	Stage 2B	X												
440-62286-1	I-W	440-62286-2	Water	20131112		Stage 2B	X				X					X	X		
440-62286-1	I-P	440-62286-3	Water	20131112		Stage 2B	X				X					X	X		
440-62286-1	I-H	440-62286-4	Water	20131112		Stage 2B	X				X					X	X		
440-62286-1	I-HDUP	440-62286-4DUP	Water	20131112	DUP	Stage 2B											X		
440-62286-1	I-U	440-62286-5	Water	20131112		Stage 2B	X				X					X	X		
440-62286-1	I-T	440-62286-6	Water	20131112		Stage 2B	X				X					X	X		
440-62286-1	I-G	440-62286-7	Water	20131112		Stage 2B	X				X					X	X		
440-62286-1	I-Q	440-62286-8	Water	20131112		Stage 2B	X				X					X	X		
440-62286-1	I-F	440-62286-9	Water	20131112		Stage 2B	X				X					X	X		
440-62286-1	I-FDUP	440-62286-9DUP	Water	20131112	DUP	Stage 2B											X		
440-62286-1	I-X	440-62286-10	Water	20131112		Stage 2B	X				X					X	X		
440-62286-1	I-N	440-62286-11	Water	20131112		Stage 2B	X				X					X	X		
440-62286-1	I-NMS	440-62286-11MS	Water	20131112	MS	Stage 2B	X												
440-62286-1	I-NMSD	440-62286-11MSD	Water	20131112	MSD	Stage 2B	X												

SDG	Client Sample ID	Lab Sample ID	Matrix	Sample Date	QC Type	Validation Level	Metals (200.7)	Hex. Chrom. (218.6)	Anions (300.0)	Chlorate (300.1)	ClO_4 (314.0)	NH_3-N (350.1)	Phenols (420.1)	NO_3/NO_2-N, TIN (Calc)	Spec. Cond. (SM2510)	TDS (SM2540C)	pH (SM4500H+B)	TOC (SM5310C)	TOX (SW9020)
440-62286-1	I-E	440-62286-12	Water	20131112		Stage 2B	X				X					X	X		
440-62286-1	I-EDUP	440-62286-12DUP	Water	20131112	DUP	Stage 2B											X		
440-62286-1	I-M	440-62286-13	Water	20131112		Stage 2B	X				X					X	X		
440-62286-1	I-D	440-62286-14	Water	20131112		Stage 2B	X				X					X	X		
440-62286-1	I-C	440-62286-15	Water	20131112		Stage 2B	X				X					X	X		
440-62286-1	I-S	440-62286-16	Water	20131112		Stage 2B	X				X					X	X		
440-62286-1	I-L	440-62286-17	Water	20131112		Stage 2B	X				X					X	X		
440-62286-1	I-Y	440-62286-18	Water	20131112		Stage 2B	X				X					X	X		
440-62286-1	I-R	440-62286-19	Water	20131112		Stage 2B	X				X					X	X		
440-62286-1	I-B	440-62286-20	Water	20131112		Stage 2B	X				X					X	X		
440-62286-1	I-AB	440-62286-21	Water	20131112		Stage 2B	X				X					X	X		
440-62286-1	I-AA	440-62286-22	Water	20131112		Stage 2B	X				X					X	X		
440-62286-1	I-AR	440-62286-23	Water	20131112		Stage 2B	X				X					X	X		
440-62441-1	M-10	440-62444-1	Water	20131113		Stage 4	X	X	X	X	X	X		X		X	X		
440-62441-1	M-10DUP	440-62444-1DUP	Water	20131113	DUP	Stage 4											X		
440-62441-1	M-10MS	440-62444-1MS	Water	20131113	MS	Stage 4						X							
440-62441-1	M-10MSD	440-62444-1MSD	Water	20131113	MSD	Stage 4						X							
440-62442-1	M-68	440-62442-1	Water	20131113		Stage 2B	X				X					X	X		
440-62442-1	M-68DUP	440-62442-1DUP	Water	20131113	DUP	Stage 2B										X			
440-62442-1	M-68MS	440-62442-1MS	Water	20131113	MS	Stage 2B	X												
440-62442-1	M-68MSD	440-62442-1MSD	Water	20131113	MSD	Stage 2B	X												
440-62442-1	M-74	440-62442-2	Water	20131113		Stage 2B	X				X					X	X		
440-62442-1	M-74DUP	440-62442-2DUP	Water	20131113	DUP	Stage 2B											X		
440-62442-1	M-73	440-62442-3	Water	20131113		Stage 2B	X				X					X	X		
440-62442-1	I-V	440-62442-4	Water	20131113		Stage 2B	X				X					X	X		
440-62442-1	M-31A	440-62442-5	Water	20131113		Stage 2B	X				X					X	X		
440-62442-1	M-31ADUP	440-62442-5DUP	Water	20131113	DUP	Stage 2B											X		
440-62442-1	M-12A	440-62442-6	Water	20131113	FD9	Stage 2B	X	X			X					X	X		
440-62442-1	M-11	440-62442-7	Water	20131113		Stage 2B	X	X			X					X	X		
440-62442-1	M-52	440-62442-8	Water	20131113		Stage 2B	X				X					X	X		
440-62442-1	VD-4	440-62442-9	Water	20131113	FD9	Stage 2B	X	X			X					X	X		
440-62442-1	EB-2	440-62442-10	Water	20131113	EB	Stage 2B	X	X			X					X	X		
440-62447-1	M-79	440-62447-1	Water	20131113		Stage 2B	X				X					X	X		
440-62447-1	M-79MS	440-62447-1MS	Water	20131113	MS	Stage 2B	X												
440-62447-1	M-79MSD	440-62447-1MSD	Water	20131113	MSD	Stage 2B	X												
440-62447-1	M-69	440-62447-2	Water	20131113		Stage 2B	X				X					X	X		
440-62447-1	M-135	440-62447-3	Water	20131113		Stage 2B	X				X					X	X		
440-62447-1	M-131	440-62447-4	Water	20131113		Stage 2B	X				X					X	X		
440-62447-1	M-57A	440-62447-5	Water	20131113		Stage 2B	X				X					X	X		
440-62447-1	M-35	440-62447-6	Water	20131113		Stage 2B	X				X					X	X		
440-62447-1	M-19	440-62447-7	Water	20131113		Stage 2B	X				X					X	X		
440-62447-1	M-67	440-62447-8	Water	20131113		Stage 2B	X				X					X	X		
440-62447-1	I-I	440-62447-9	Water	20131113		Stage 2B	X				X					X	X		
440-62447-1	I-Z	440-62447-10	Water	20131113		Stage 2B	X				X					X	X		
440-62447-1	I-J	440-62447-11	Water	20131113		Stage 2B	X				X					X	X		
440-62447-1	I-JMS	440-62447-11MS	Water	20131113	MS	Stage 2B	X												
440-62447-1	I-JMSD	440-62447-11MSD	Water	20131113	MSD	Stage 2B	X												
440-62447-1	I-K	440-62447-12	Water	20131113		Stage 2B	X				X					X	X		
440-62447-1	I-KDUP	440-62447-12DUP	Water	20131113	DUP	Stage 2B											X		
440-62549-1	M-99	440-62549-1	Water	20131114		Stage 2B	X				X					X	X		
440-62549-1	M-99DUP	440-62549-1DUP	Water	20131114	DUP	Stage 2B										X			
440-62549-1	M-83	440-62549-2	Water	20131114		Stage 2B	X				X					X	X		
440-62549-1	M-80	440-62549-3	Water	20131114		Stage 2B	X				X					X	X		
440-62549-1	M-80MS	440-62549-3MS	Water	20131114	MS	Stage 2B	X												
440-62549-1	M-80MSD	440-62549-3MSD	Water	20131114	MSD	Stage 2B	X												
440-62549-1	M-81A	440-62549-4	Water	20131114		Stage 2B	X				X					X	X		
440-62549-1	M-70	440-62549-5	Water	20131114		Stage 2B	X				X					X	X		
440-62549-1	M-71	440-62549-6	Water	20131114		Stage 2B	X				X					X	X		
440-62549-1	M-72	440-62549-7	Water	20131114		Stage 2B	X				X					X	X		
440-62549-1	M-72DUP	440-62549-7DUP	Water	20131114	DUP	Stage 2B											X		
440-62549-1	M-22A	440-62549-8	Water	20131114	FD11	Stage 2B	X				X					X	X		
440-62549-1	M-14A	440-62549-9	Water	20131114		Stage 2B	X				X					X	X		

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440-62549-1	M-38	440-62549-10	Water	20131114	FD10	Stage 2B	X	X			X					X	X		
440-62549-1	M-38DUP	440-62549-10DUP	Water	20131114	DUP	Stage 2B											X		
440-62549-1	VD-5	440-62549-11	Water	20131114	FD10	Stage 2B	X	X			X					X	X		
440-62549-1	VD-6	440-62549-12	Water	20131114	FD11	Stage 2B	X				X					X	X		
440-63928-1	ART-1	440-63928-1	Water	20131202		Stage 2B					X					X			
440-63928-1	ART-2	440-63928-2	Water	20131202		Stage 2B					X					X			
440-63928-1	ART-3	440-63928-3	Water	20131202		Stage 2B					X					X			
440-63928-1	ART-4	440-63928-4	Water	20131202		Stage 2B					X					X			
440-63928-1	ART-7	440-63928-5	Water	20131202		Stage 2B					X					X			
440-63928-1	ART-8	440-63928-6	Water	20131202		Stage 2B					X					X			
440-63928-1	ART-9	440-63928-7	Water	20131202		Stage 2B					X					X			
440-63928-1	PC-99R2/R3	440-63928-8	Water	20131202		Stage 2B					X					X			
440-63928-1	PC-115R	440-63928-9	Water	20131202		Stage 2B					X					X			
440-63928-1	PC-116R	440-63928-10	Water	20131202		Stage 2B					X					X			
440-63928-1	PC-117	440-63928-11	Water	20131202		Stage 2B					X					X			
440-63928-1	PC-118	440-63928-12	Water	20131202		Stage 2B					X					X			
440-63928-1	PC-118DUP	440-63928-12DUP	Water	20131202	DUP	Stage 2B										X			
440-63928-1	PC-119	440-63928-13	Water	20131202		Stage 2B					X					X			
440-63928-1	PC-120	440-63928-14	Water	20131202		Stage 2B					X					X			
440-63928-1	PC-121	440-63928-15	Water	20131202		Stage 2B					X					X			
440-63928-1	PC-133	440-63928-16	Water	20131202		Stage 2B					X					X			
440-64096-1	ART-6	440-64096-1	Water	20131203		Stage 2B					X					X			
440-64922-1	PC-97	440-64922-1	Water	20131211		Stage 2B					X					X			
440-64922-1	PC-90	440-64922-2	Water	20131211		Stage 2B					X					X			
440-64922-1	PC-91	440-64922-3	Water	20131211		Stage 2B					X					X			
440-64922-1	PC-58	440-64922-4	Water	20131211		Stage 2B					X					X			
440-64922-1	PC-56	440-64922-5	Water	20131211		Stage 2B					X					X			
440-64922-1	PC-60	440-64922-6	Water	20131211		Stage 2B					X					X			
440-64922-1	PC-60DUP	440-64922-6DUP	Water	20131211	DUP	Stage 2B										X			
440-64922-1	PC-59	440-64922-7	Water	20131211		Stage 2B					X					X			
440-64922-1	PC-62	440-64922-8	Water	20131211		Stage 2B					X					X			
440-64922-1	PC-68	440-64922-9	Water	20131211		Stage 2B					X					X			
440-64922-1	PC-86	440-64922-10	Water	20131211		Stage 2B					X					X			
440-64922-1	PC-18	440-64922-11	Water	20131211		Stage 2B					X					X			
440-65073-1	PC-122	440-65073-1	Water	20131212		Stage 2B					X					X			
440-65073-1	PC-53	440-65073-2	Water	20131212		Stage 2B					X					X			
440-65073-1	MW-K5	440-65073-3	Water	20131212		Stage 2B					X					X			
440-65073-1	ARP-7	440-65073-4	Water	20131212		Stage 2B					X					X			
440-65073-1	ARP-6B	440-65073-5	Water	20131212		Stage 2B					X					X			
440-65073-1	ARP-5A	440-65073-6	Water	20131212		Stage 2B					X					X			
440-65073-1	ARP-4A	440-65073-7	Water	20131212		Stage 2B					X					X			
440-65073-1	PC-101R	440-65073-8	Water	20131212		Stage 2B					X					X			
440-65073-1	MW-K4	440-65073-9	Water	20131212		Stage 2B					X					X			
440-65073-1	ARP-3A	440-65073-10	Water	20131212		Stage 2B					X					X			
440-65073-1	ARP-2A	440-65073-11	Water	20131212		Stage 2B					X					X			
440-65073-1	EB-1	440-65073-12	Water	20131212	EB	Stage 2B					X								
440-65073-1	PC-103	440-65073-13	Water	20131212		Stage 2B					X					X			
440-65073-1	PC-98R	440-65073-14	Water	20131212		Stage 2B					X					X			
440-65073-1	ARP-1	440-65073-15	Water	20131212		Stage 2B					X					X			
440-65073-1	M-83	440-65073-16	Water	20131212		Stage 2B					X					X			
440-65193-1	PC-55	440-65193-1	Water	20131213		Stage 2B					X					X			

TABLE II

Table II. Qualification Codes and Definitions

Reason Code	Explanation
a	qualified due to low abundance (radiochemical activity)
be	qualified due to equipment blank contamination
bf	qualified due to field blank contamination
bl	qualified due to lab blank contamination
bt	qualified due to trip blank contamination
bp	qualified due to pump blank contamination (wells w/o dedicated pumps, when contamination is detected in the Pump Blk)
br	qualified due to filter blank contamination (aqueous Hexavalent Chromium and Dissolved sample fractions)
c	qualified due to calibration problems
cp	qualified due to insufficient ingrowth (radiochemical only)
dc	duel column confirmation %D exceeded
e	concentration exceeded the calibration range
fd	qualified due to field duplicate imprecision
h	qualified due to holding time exceedance
i	qualified due to internal standard areas
k	qualified as Estimated Maximum Possible Concentrations (dioxins and PCB congeners)
l	qualified due to LCS recoveries
ld	qualified due to lab duplicate imprecision (matrix duplicate, MSD, LCSD)
m	qualified due to matrix spike recoveries
nb	qualified due to negative lab blank contamination (nondetect results only)
nd	qualified due to non-detected target analyte
o	other
p	qualified as a false positive due to contamination during shipping
pH	sample preservation not within acceptance range
q	qualified due to quantitation problem
s	qualified due to surrogate recoveries
sd	serial dilution did not meet control criteria
sp	detected value reported >SQL <PQL
st	sample receipt temperature exceeded
t	qualified due to elevated helium tracer concentrations
vh	volatile headspace detected in aqueous sample containers submitted for VOC analysis
x	qualified due to low % solids
z	qualified due to ICS results

TABLE III

Table III. Overall Qualified Results

SDG	Client Sample ID	Sample Date	Method	Client Analyte ID	Analyte	Lab Result	Lab Qualifier	PQL	Units	Validator Qualifier	Reason Code	Reason Code Definition	Qualification Finding	
440-54568-1	I-S	20130814	200.7	7440-47-3	Chromium	1.4		0.0020	mg/l	J+	m	Matrix Spike %R	129/135	%
440-61866-1	PC-56	20131106	200.7	7440-47-3	Chromium	0.0027	JB	0.0020	mg/l	J	bl	Method Blank	0.00435	mg/L
440-61866-1	PC-59	20131106	200.7	7440-47-3	Chromium	0.0020	JB	0.0020	mg/l	J	bl	Method Blank	0.00435	mg/L
440-61866-1	PC-90	20131106	200.7	7440-47-3	Chromium	0.0034	JB	0.0020	mg/l	J	bl	Method Blank	0.00435	mg/L
440-61866-1	PC-91	20131106	200.7	7440-47-3	Chromium	0.0025	JB	0.0020	mg/l	J	bl	Method Blank	0.00435	mg/L
440-61866-1	PC-97	20131106	200.7	7440-47-3	Chromium	0.0022	JB	0.0020	mg/l	J	bl	Method Blank	0.00435	mg/L
440-62127-1	M-23	20131111	200.7	7440-47-3	Chromium	0.38		0.010	mg/l	J+	m	Matrix Spike %R	136	%
440-62127-1	M-44	20131111	200.7	7440-47-3	Chromium	1.2		0.010	mg/l	J+	m	Matrix Spike %R	136	%
440-62127-1	M-95	20131111	200.7	7440-47-3	Chromium	0.75		0.010	mg/l	J+	m	Matrix Spike %R	136	%
440-62127-1	PC-37	20131111	200.7	7440-47-3	Chromium	0.22		0.010	mg/l	J+	m	Matrix Spike %R	136	%
440-62127-1	PC-71	20131111	200.7	7440-47-3	Chromium	0.71		0.010	mg/l	J+	m	Matrix Spike %R	136	%
440-62127-1	PC-72	20131111	200.7	7440-47-3	Chromium	0.23		0.010	mg/l	J+	m	Matrix Spike %R	136	%
440-62127-1	PC-73	20131111	200.7	7440-47-3	Chromium	0.50		0.010	mg/l	J+	m	Matrix Spike %R	136	%
440-62127-1	VD-1	20131111	200.7	7440-47-3	Chromium	1.8		0.010	mg/l	J+	m	Matrix Spike %R	136	%
440-56361-1	M-10	20130905	218.6	18540-29-9	Chromium, hexavalent	45	H	0.25	ug/l	J-	h	Holding Time	51.5	Hours
440-62127-1	FB-1	20131111	218.6	18540-29-9	Chromium, hexavalent		UH	0.25	ug/l	UJ	h	Holding Time	29.25	Hours
440-62127-1	M-44	20131111	218.6	18540-29-9	Chromium, hexavalent	910	H	5.0	ug/l	J-	h	Holding Time	25.75	Hours
440-62442-1	EB-2	20131113	218.6	18540-29-9	Chromium, hexavalent		UH	0.25	ug/l	UJ	h	Holding Time	27	Hours
440-56361-1	M-10	20130905	300.0	16887-00-6	Chloride	150		40	mg/l	J+	m	Matrix Spike %R	145/142	%
440-61402-1	ART-1	20131104	SM2540C	TDS	Total Dissolved Solids	6500		50	mg/l	J-	o	Other	Filtered sample analyzed	
440-61402-1	ART-2	20131104	SM2540C	TDS	Total Dissolved Solids	9900		100	mg/l	J-	o	Other	Filtered sample analyzed	
440-61402-1	ART-7	20131104	SM2540C	TDS	Total Dissolved Solids	8200		50	mg/l	J-	o	Other	Filtered sample analyzed	
440-61402-1	ART-8	20131104	SM2540C	TDS	Total Dissolved Solids	10000		100	mg/l	J-	o	Other	Filtered sample analyzed	
440-61402-1	ART-9	20131104	SM2540C	TDS	Total Dissolved Solids	6500		50	mg/l	J-	o	Other	Filtered sample analyzed	
440-54862-1	EB-1	20130819	SM4500H+B	C-006	pH	7.09	HF	0.100	s.u.	J	h	Holding Time	9	Days
440-54862-1	I-AR	20130819	SM4500H+B	C-006	pH	7.46	HF	0.100	s.u.	J	h	Holding Time	9	Days
440-54862-1	I-B	20130819	SM4500H+B	C-006	pH	7.54	HF	0.100	s.u.	J	h	Holding Time	9	Days
440-54862-1	I-L	20130819	SM4500H+B	C-006	pH	7.65	HF	0.100	s.u.	J	h	Holding Time	9	Days
440-54862-1	I-R	20130819	SM4500H+B	C-006	pH	7.07	HF	0.100	s.u.	J	h	Holding Time	9	Days
440-54862-1	M-131	20130819	SM4500H+B	C-006	pH	7.89	HF	0.100	s.u.	J	h	Holding Time	9	Days

Table III. Overall Qualified Results

SDG	Client Sample ID	Sample Date	Method	Client Analyte ID	Analyte	Lab Result	Lab Qualifier	PQL	Units	Validator Qualifier	Reason Code	Reason Code Definition	Qualification Finding	
440-54862-1	M-135	20130819	SM4500H+B	C-006	pH	7.90	HF	0.100	s.u.	J	h	Holding Time	9	Days
440-54862-1	M-25	20130819	SM4500H+B	C-006	pH	7.84	HF	0.100	s.u.	J	h	Holding Time	9	Days
440-54862-1	M-37	20130819	SM4500H+B	C-006	pH	7.41	HF	0.100	s.u.	J	h	Holding Time	9	Days
440-54862-1	M-57A	20130819	SM4500H+B	C-006	pH	7.89	HF	0.100	s.u.	J	h	Holding Time	9	Days
440-54862-1	M-64	20130819	SM4500H+B	C-006	pH	7.81	HF	0.100	s.u.	J	h	Holding Time	9	Days
440-54862-1	M-65	20130819	SM4500H+B	C-006	pH	7.60	HF	0.100	s.u.	J	h	Holding Time	9	Days
440-54862-1	M-66	20130819	SM4500H+B	C-006	pH	7.51	HF	0.100	s.u.	J	h	Holding Time	9	Days
440-54862-1	M-69	20130819	SM4500H+B	C-006	pH	7.77	HF	0.100	s.u.	J	h	Holding Time	9	Days
440-54862-1	M-79	20130819	SM4500H+B	C-006	pH	7.74	HF	0.100	s.u.	J	h	Holding Time	9	Days
440-54862-1	VD-3	20130819	SM4500H+B	C-006	pH	7.52	HF	0.100	s.u.	J	h	Holding Time	9	Days
440-54975-1	I-I	20130820	SM4500H+B	C-006	pH	7.71	HF	0.100	s.u.	J	h	Holding Time	8	Days
440-54975-1	I-J	20130820	SM4500H+B	C-006	pH	7.74	HF	0.100	s.u.	J	h	Holding Time	8	Days
440-54975-1	I-K	20130820	SM4500H+B	C-006	pH	7.72	HF	0.100	s.u.	J	h	Holding Time	8	Days
440-54975-1	I-V	20130820	SM4500H+B	C-006	pH	7.70	HF	0.100	s.u.	J	h	Holding Time	8	Days
440-54975-1	I-Z	20130820	SM4500H+B	C-006	pH	7.80	HF	0.100	s.u.	J	h	Holding Time	8	Days
440-54975-1	M-23	20130820	SM4500H+B	C-006	pH	7.80	HF	0.100	s.u.	J	h	Holding Time	8	Days
440-54975-1	M-48A	20130820	SM4500H+B	C-006	pH	7.97	HF	0.100	s.u.	J	h	Holding Time	8	Days
440-54975-1	M-67	20130820	SM4500H+B	C-006	pH	7.80	HF	0.100	s.u.	J	h	Holding Time	8	Days
440-54975-1	M-68	20130820	SM4500H+B	C-006	pH	7.75	HF	0.100	s.u.	J	h	Holding Time	8	Days
440-54975-1	M-95	20130820	SM4500H+B	C-006	pH	7.76	HF	0.100	s.u.	J	h	Holding Time	8	Days
440-54975-1	PC-124	20130820	SM4500H+B	C-006	pH	7.64	HF	0.100	s.u.	J	h	Holding Time	8	Days
440-54975-1	PC-125	20130820	SM4500H+B	C-006	pH	7.67	HF	0.100	s.u.	J	h	Holding Time	8	Days
440-54975-1	PC-126	20130820	SM4500H+B	C-006	pH	7.69	HF	0.100	s.u.	J	h	Holding Time	8	Days
440-54975-1	PC-127	20130820	SM4500H+B	C-006	pH	7.78	HF	0.100	s.u.	J	h	Holding Time	8	Days
440-54975-1	PC-54	20130820	SM4500H+B	C-006	pH	7.78	HF	0.100	s.u.	J	h	Holding Time	8	Days
440-55076-1	M-44	20130821	SM4500H+B	C-006	pH	7.42	HF	0.100	s.u.	J	h	Holding Time	8	Days
440-55076-1	PC-123	20130821	SM4500H+B	C-006	pH	7.55	HF	0.100	s.u.	J	h	Holding Time	8	Days
440-55076-1	PC-128	20130821	SM4500H+B	C-006	pH	7.50	HF	0.100	s.u.	J	h	Holding Time	8	Days
440-55076-1	PC-130	20130821	SM4500H+B	C-006	pH	7.38	HF	0.100	s.u.	J	h	Holding Time	8	Days
440-55076-1	PC-131	20130821	SM4500H+B	C-006	pH	7.39	HF	0.100	s.u.	J	h	Holding Time	8	Days
440-55076-1	PC-132	20130821	SM4500H+B	C-006	pH	7.39	HF	0.100	s.u.	J	h	Holding Time	8	Days
440-55076-1	PC-37	20130821	SM4500H+B	C-006	pH	7.43	HF	0.100	s.u.	J	h	Holding Time	8	Days
440-55076-1	PC-71	20130821	SM4500H+B	C-006	pH	7.45	HF	0.100	s.u.	J	h	Holding Time	8	Days
440-55076-1	PC-72	20130821	SM4500H+B	C-006	pH	7.51	HF	0.100	s.u.	J	h	Holding Time	8	Days
440-55076-1	PC-73	20130821	SM4500H+B	C-006	pH	7.41	HF	0.100	s.u.	J	h	Holding Time	8	Days
440-55076-1	VD-1	20130821	SM4500H+B	C-006	pH	7.55	HF	0.100	s.u.	J	h	Holding Time	8	Days
440-55218-1	M-19	20130822	SM4500H+B	C-006	pH	7.91	HF	0.100	s.u.	J	h	Holding Time	8	Days

Table III. Overall Qualified Results

SDG	Client Sample ID	Sample Date	Method	Client Analyte ID	Analyte	Lab Result	Lab Qualifier	PQL	Units	Validator Qualifier	Reason Code	Reason Code Definition	Qualification Finding	
440-55218-1	M-35	20130822	SM4500H+B	C-006	pH	7.89	HF	0.100	s.u.	J	h	Holding Time	8	Days
440-55218-1	M-73	20130822	SM4500H+B	C-006	pH	7.69	HF	0.100	s.u.	J	h	Holding Time	8	Days
440-55218-1	M-74	20130822	SM4500H+B	C-006	pH	7.81	HF	0.100	s.u.	J	h	Holding Time	8	Days
440-55218-1	M-81A	20130822	SM4500H+B	C-006	pH	7.79	HF	0.100	s.u.	J	h	Holding Time	8	Days
440-55218-1	PC-129	20130822	SM4500H+B	C-006	pH	7.80	HF	0.100	s.u.	J	h	Holding Time	8	Days
440-55674-1	ARP-1	20130828	SM4500H+B	C-006	pH	7.83	HF	0.100	s.u.	J	h	Holding Time	6	Days
440-55674-1	PC-18	20130828	SM4500H+B	C-006	pH	7.53	HF	0.100	s.u.	J	h	Holding Time	6	Days
440-55674-1	PC-56	20130828	SM4500H+B	C-006	pH	7.62	HF	0.100	s.u.	J	h	Holding Time	6	Days
440-55674-1	PC-58	20130828	SM4500H+B	C-006	pH	7.84	HF	0.100	s.u.	J	h	Holding Time	6	Days
440-55674-1	PC-59	20130828	SM4500H+B	C-006	pH	7.75	HF	0.100	s.u.	J	h	Holding Time	6	Days
440-55674-1	PC-60	20130828	SM4500H+B	C-006	pH	7.83	HF	0.100	s.u.	J	h	Holding Time	6	Days
440-55674-1	PC-62	20130828	SM4500H+B	C-006	pH	7.82	HF	0.100	s.u.	J	h	Holding Time	6	Days
440-55674-1	PC-68	20130828	SM4500H+B	C-006	pH	7.73	HF	0.100	s.u.	J	h	Holding Time	6	Days
440-55674-1	PC-86	20130828	SM4500H+B	C-006	pH	7.77	HF	0.100	s.u.	J	h	Holding Time	6	Days
440-55674-1	PC-90	20130828	SM4500H+B	C-006	pH	7.68	HF	0.100	s.u.	J	h	Holding Time	6	Days
440-55674-1	PC-91	20130828	SM4500H+B	C-006	pH	7.68	HF	0.100	s.u.	J	h	Holding Time	6	Days
440-55674-1	PC-94	20130828	SM4500H+B	C-006	pH	7.58	HF	0.100	s.u.	J	h	Holding Time	6	Days
440-55674-1	PC-97	20130828	SM4500H+B	C-006	pH	7.66	HF	0.100	s.u.	J	h	Holding Time	6	Days
440-55769-1	ARP-2A	20130829	SM4500H+B	C-006	pH	7.53	HF	0.100	s.u.	J	h	Holding Time	6	Days
440-55769-1	ARP-3A	20130829	SM4500H+B	C-006	pH	7.36	HF	0.100	s.u.	J	h	Holding Time	6	Days
440-55769-1	ARP-4A	20130829	SM4500H+B	C-006	pH	7.34	HF	0.100	s.u.	J	h	Holding Time	6	Days
440-55769-1	ARP-5A	20130829	SM4500H+B	C-006	pH	7.54	HF	0.100	s.u.	J	h	Holding Time	6	Days
440-55769-1	ARP-6B	20130829	SM4500H+B	C-006	pH	7.28	HF	0.100	s.u.	J	h	Holding Time	6	Days
440-55769-1	ARP-7	20130829	SM4500H+B	C-006	pH	7.23	HF	0.100	s.u.	J	h	Holding Time	6	Days
440-55769-1	ART-7B	20130829	SM4500H+B	C-006	pH	7.13	HF	0.100	s.u.	J	h	Holding Time	6	Days
440-55769-1	MW-K4	20130829	SM4500H+B	C-006	pH	7.37	HF	0.100	s.u.	J	h	Holding Time	6	Days
440-55769-1	MW-K5	20130829	SM4500H+B	C-006	pH	7.20	HF	0.100	s.u.	J	h	Holding Time	6	Days
440-55769-1	PC-101R	20130829	SM4500H+B	C-006	pH	7.22	HF	0.100	s.u.	J	h	Holding Time	6	Days
440-55769-1	PC-103	20130829	SM4500H+B	C-006	pH	7.43	HF	0.100	s.u.	J	h	Holding Time	6	Days
440-55769-1	PC-122	20130829	SM4500H+B	C-006	pH	7.28	HF	0.100	s.u.	J	h	Holding Time	6	Days
440-55769-1	PC-53	20130829	SM4500H+B	C-006	pH	7.48	HF	0.100	s.u.	J	h	Holding Time	6	Days
440-55769-1	PC-55	20130829	SM4500H+B	C-006	pH	7.43	HF	0.100	s.u.	J	h	Holding Time	6	Days
440-55769-1	PC-98R	20130829	SM4500H+B	C-006	pH	7.31	HF	0.100	s.u.	J	h	Holding Time	6	Days
440-55874-1	M-83	20130830	SM4500H+B	C-006	pH	7.79	HF	0.100	s.u.	J	h	Holding Time	6	Days
440-56361-1	M-10	20130905	SM4500H+B	C-006	pH	6.94	HF	0.100	s.u.	J	h	Holding Time	5	Days
440-61402-1	ART-1	20131104	SM4500H+B	C-006	pH	7.53	HF	0.100	s.u.	J	h	Holding Time	10	Days
440-61402-1	ART-2	20131104	SM4500H+B	C-006	pH	7.29	HF	0.100	s.u.	J	h	Holding Time	10	Days

Table III. Overall Qualified Results

SDG	Client Sample ID	Sample Date	Method	Client Analyte ID	Analyte	Lab Result	Lab Qualifier	PQL	Units	Validator Qualifier	Reason Code	Reason Code Definition	Qualification Finding	
440-61402-1	ART-3	20131104	SM4500H+B	C-006	pH	7.21	HF	0.100	s.u.	J	h	Holding Time	49.75	Hours
440-61402-1	ART-4	20131104	SM4500H+B	C-006	pH	7.38	HF	0.100	s.u.	J	h	Holding Time	49	Hours
440-61402-1	ART-6	20131104	SM4500H+B	C-006	pH	7.65	HF	0.100	s.u.	J	h	Holding Time	48.25	Hours
440-61402-1	ART-7	20131104	SM4500H+B	C-006	pH	7.27	HF	0.100	s.u.	J	h	Holding Time	10	Days
440-61402-1	ART-8	20131104	SM4500H+B	C-006	pH	7.31	HF	0.100	s.u.	J	h	Holding Time	10	Days
440-61402-1	ART-9	20131104	SM4500H+B	C-006	pH	7.39	HF	0.100	s.u.	J	h	Holding Time	10	Days
440-61402-1	PC-115R	20131104	SM4500H+B	C-006	pH	7.39	HF	0.100	s.u.	J	h	Holding Time	52	Hours
440-61402-1	PC-116R	20131104	SM4500H+B	C-006	pH	7.31	HF	0.100	s.u.	J	h	Holding Time	52	Hours
440-61402-1	PC-117	20131104	SM4500H+B	C-006	pH	7.50	HF	0.100	s.u.	J	h	Holding Time	51.75	Hours
440-61402-1	PC-118	20131104	SM4500H+B	C-006	pH	7.48	HF	0.100	s.u.	J	h	Holding Time	51.75	Hours
440-61402-1	PC-119	20131104	SM4500H+B	C-006	pH	7.41	HF	0.100	s.u.	J	h	Holding Time	51.75	Hours
440-61402-1	PC-120	20131104	SM4500H+B	C-006	pH	7.37	HF	0.100	s.u.	J	h	Holding Time	51.5	Hours
440-61402-1	PC-121	20131104	SM4500H+B	C-006	pH	7.35	HF	0.100	s.u.	J	h	Holding Time	51.5	Hours
440-61402-1	PC-133	20131104	SM4500H+B	C-006	pH	7.44	HF	0.100	s.u.	J	h	Holding Time	50.75	Hours
440-61402-1	PC-99R2/R3	20131104	SM4500H+B	C-006	pH	7.30	HF	0.100	s.u.	J	h	Holding Time	52	Hours
440-61866-1	PC-56	20131106	SM4500H+B	C-006	pH	7.62	HF	0.100	s.u.	J	h	Holding Time	57	Hours
440-61866-1	PC-58	20131106	SM4500H+B	C-006	pH	7.82	HF	0.100	s.u.	J	h	Holding Time	56.25	Hours
440-61866-1	PC-59	20131106	SM4500H+B	C-006	pH	7.69	HF	0.100	s.u.	J	h	Holding Time	56.5	Hours
440-61866-1	PC-60	20131106	SM4500H+B	C-006	pH	7.78	HF	0.100	s.u.	J	h	Holding Time	56.75	Hours
440-61866-1	PC-62	20131106	SM4500H+B	C-006	pH	7.67	HF	0.100	s.u.	J	h	Holding Time	56.25	Hours
440-61866-1	PC-68	20131106	SM4500H+B	C-006	pH	7.66	HF	0.100	s.u.	J	h	Holding Time	55.75	Hours
440-61866-1	PC-86	20131106	SM4500H+B	C-006	pH	7.72	HF	0.100	s.u.	J	h	Holding Time	55.5	Hours
440-61866-1	PC-90	20131106	SM4500H+B	C-006	pH	7.66	HF	0.100	s.u.	J	h	Holding Time	57.75	Hours
440-61866-1	PC-91	20131106	SM4500H+B	C-006	pH	7.62	HF	0.100	s.u.	J	h	Holding Time	57.5	Hours
440-61866-1	PC-94	20131106	SM4500H+B	C-006	pH	7.55	HF	0.100	s.u.	J	h	Holding Time	57.25	Hours
440-61866-1	PC-97	20131106	SM4500H+B	C-006	pH	7.62	HF	0.100	s.u.	J	h	Holding Time	58.25	Hours
440-62043-1	ARP-1	20131108	SM4500H+B	C-006	pH	7.54	HF	0.100	s.u.	J	h	Holding Time	3	Days
440-62043-1	PC-18	20131108	SM4500H+B	C-006	pH	7.26	HF	0.100	s.u.	J	h	Holding Time	3	Days
440-62043-1	PC-55	20131108	SM4500H+B	C-006	pH	7.48	HF	0.100	s.u.	J	h	Holding Time	3	Days
440-62286-1	I-AA	20131112	SM4500H+B	C-006	pH	7.34	HF	0.100	s.u.	J	h	Holding Time	3	Days
440-62286-1	I-AB	20131112	SM4500H+B	C-006	pH	7.39	HF	0.100	s.u.	J	h	Holding Time	3	Days
440-62286-1	I-AR	20131112	SM4500H+B	C-006	pH	7.10	HF	0.100	s.u.	J	h	Holding Time	3	Days
440-62286-1	I-B	20131112	SM4500H+B	C-006	pH	7.14	HF	0.100	s.u.	J	h	Holding Time	3	Days
440-62286-1	I-C	20131112	SM4500H+B	C-006	pH	7.45	HF	0.100	s.u.	J	h	Holding Time	3	Days
440-62286-1	I-D	20131112	SM4500H+B	C-006	pH	7.20	HF	0.100	s.u.	J	h	Holding Time	3	Days
440-62286-1	I-E	20131112	SM4500H+B	C-006	pH	6.98	HF	0.100	s.u.	J	h	Holding Time	3	Days
440-62286-1	I-F	20131112	SM4500H+B	C-006	pH	7.18	HF	0.100	s.u.	J	h	Holding Time	3	Days

Table III. Overall Qualified Results

SDG	Client Sample ID	Sample Date	Method	Client Analyte ID	Analyte	Lab Result	Lab Qualifier	PQL	Units	Validator Qualifier	Reason Code	Reason Code Definition	Qualification Finding	
440-62286-1	I-G	20131112	SM4500H+B	C-006	pH	6.85	HF	0.100	s.u.	J	h	Holding Time	3	Days
440-62286-1	I-L	20131112	SM4500H+B	C-006	pH	7.34	HF	0.100	s.u.	J	h	Holding Time	3	Days
440-62286-1	I-M	20131112	SM4500H+B	C-006	pH	7.12	HF	0.100	s.u.	J	h	Holding Time	3	Days
440-62286-1	I-N	20131112	SM4500H+B	C-006	pH	7.54	HF	0.100	s.u.	J	h	Holding Time	3	Days
440-62286-1	I-Q	20131112	SM4500H+B	C-006	pH	7.32	HF	0.100	s.u.	J	h	Holding Time	3	Days
440-62286-1	I-R	20131112	SM4500H+B	C-006	pH	7.01	HF	0.100	s.u.	J	h	Holding Time	3	Days
440-62286-1	I-S	20131112	SM4500H+B	C-006	pH	7.25	HF	0.100	s.u.	J	h	Holding Time	3	Days
440-62286-1	I-X	20131112	SM4500H+B	C-006	pH	7.27	HF	0.100	s.u.	J	h	Holding Time	3	Days
440-62286-1	I-Y	20131112	SM4500H+B	C-006	pH	7.07	HF	0.100	s.u.	J	h	Holding Time	3	Days
440-62442-1	EB-2	20131113	SM4500H+B	C-006	pH	6.31	HF	0.100	s.u.	J	h	Holding Time	50.5	Hours
440-62442-1	I-V	20131113	SM4500H+B	C-006	pH	7.11	HF	0.100	s.u.	J	h	Holding Time	50	Hours
440-62442-1	M-12A	20131113	SM4500H+B	C-006	pH	7.84	HF	0.100	s.u.	J	h	Holding Time	48.5	Hours
440-62442-1	M-31A	20131113	SM4500H+B	C-006	pH	7.55	HF	0.100	s.u.	J	h	Holding Time	49	Hours
440-62442-1	M-52	20131113	SM4500H+B	C-006	pH	7.35	HF	0.100	s.u.	J	h	Holding Time	49.5	Hours
440-62442-1	M-68	20131113	SM4500H+B	C-006	pH	7.18	HF	0.100	s.u.	J	h	Holding Time	50.5	Hours
440-62442-1	M-73	20131113	SM4500H+B	C-006	pH	7.21	HF	0.100	s.u.	J	h	Holding Time	50	Hours
440-62442-1	M-74	20131113	SM4500H+B	C-006	pH	7.22	HF	0.100	s.u.	J	h	Holding Time	50.25	Hours
440-62442-1	VD-4	20131113	SM4500H+B	C-006	pH	7.87	HF	0.100	s.u.	J	h	Holding Time	48.5	Hours
440-62447-1	I-I	20131113	SM4500H+B	C-006	pH	7.10	HF	0.100	s.u.	J	h	Holding Time	51.75	Hours
440-62447-1	I-J	20131113	SM4500H+B	C-006	pH	7.04	HF	0.100	s.u.	J	h	Holding Time	51.5	Hours
440-62447-1	I-K	20131113	SM4500H+B	C-006	pH	7.08	HF	0.100	s.u.	J	h	Holding Time	51.5	Hours
440-62447-1	I-Z	20131113	SM4500H+B	C-006	pH	7.38	HF	0.100	s.u.	J	h	Holding Time	51.5	Hours
440-62447-1	M-131	20131113	SM4500H+B	C-006	pH	7.44	HF	0.100	s.u.	J	h	Holding Time	53	Hours
440-62447-1	M-135	20131113	SM4500H+B	C-006	pH	7.38	HF	0.100	s.u.	J	h	Holding Time	53.25	Hours
440-62447-1	M-19	20131113	SM4500H+B	C-006	pH	7.28	HF	0.100	s.u.	J	h	Holding Time	52.25	Hours
440-62447-1	M-35	20131113	SM4500H+B	C-006	pH	7.16	HF	0.100	s.u.	J	h	Holding Time	52.5	Hours
440-62447-1	M-57A	20131113	SM4500H+B	C-006	pH	7.42	HF	0.100	s.u.	J	h	Holding Time	52.75	Hours
440-62447-1	M-67	20131113	SM4500H+B	C-006	pH	7.15	HF	0.100	s.u.	J	h	Holding Time	51.75	Hours
440-62447-1	M-69	20131113	SM4500H+B	C-006	pH	7.09	HF	0.100	s.u.	J	h	Holding Time	53.5	Hours
440-62447-1	M-79	20131113	SM4500H+B	C-006	pH	7.23	HF	0.100	s.u.	J	h	Holding Time	53.75	Hours
440-62549-1	M-14A	20131114	SM4500H+B	C-006	pH	7.47	HF	0.100	s.u.	J	h	Holding Time	4	Days
440-62549-1	M-22A	20131114	SM4500H+B	C-006	pH	7.14	HF	0.100	s.u.	J	h	Holding Time	4	Days
440-62549-1	M-38	20131114	SM4500H+B	C-006	pH	7.21	HF	0.100	s.u.	J	h	Holding Time	4	Days
440-62549-1	M-70	20131114	SM4500H+B	C-006	pH	7.29	HF	0.100	s.u.	J	h	Holding Time	4	Days
440-62549-1	M-71	20131114	SM4500H+B	C-006	pH	6.86	HF	0.100	s.u.	J	h	Holding Time	4	Days
440-62549-1	M-72	20131114	SM4500H+B	C-006	pH	6.98	HF	0.100	s.u.	J	h	Holding Time	4	Days
440-62549-1	M-80	20131114	SM4500H+B	C-006	pH	7.59	HF	0.100	s.u.	J	h	Holding Time	4	Days

Table III. Overall Qualified Results

SDG	Client Sample ID	Sample Date	Method	Client Analyte ID	Analyte	Lab Result	Lab Qualifier	PQL	Units	Validator Qualifier	Reason Code	Reason Code Definition	Qualification Finding	
440-62549-1	M-81A	20131114	SM4500H+B	C-006	pH	7.28	HF	0.100	s.u.	J	h	Holding Time	4	Days
440-62549-1	M-83	20131114	SM4500H+B	C-006	pH	7.29	HF	0.100	s.u.	J	h	Holding Time	4	Days
440-62549-1	M-99	20131114	SM4500H+B	C-006	pH	7.49	HF	0.100	s.u.	J	h	Holding Time	4	Days
440-62549-1	VD-5	20131114	SM4500H+B	C-006	pH	7.24	HF	0.100	s.u.	J	h	Holding Time	4	Days
440-62549-1	VD-6	20131114	SM4500H+B	C-006	pH	7.16	HF	0.100	s.u.	J	h	Holding Time	4	Days

ATTACHMENT A

Metals Data Validation Report

Metals by EPA Method 200.7

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. ICPMS Tune

ICP-MS was not utilized in these SDGs.

III. Calibration

The initial and continuing calibrations were performed at the required frequency.

The calibration standards criteria were met with the following exceptions:

SDG	Date	Lab. Reference/ID	Analyte	%R (Limits)	Associated Samples	Flag	A or P
440-53556-1	8/13/13	CCV (22:23)	Chromium	113 (90-110)	PC-115R PC-116R PC-117 PC-118 PC-119 PC-120 PC-121 PC-133 PC-116RMS PC-116RMSD	J+ (all detects)	P

IV. Blanks

Method blanks were reviewed for each matrix as applicable. No metal contaminants were found in the preparation blanks with the following exceptions:

SDGs	Method Blank ID	Analyte	Maximum Concentration	Associated Samples
440-56249-1	PB (prep blank)	Sodium	0.618 mg/L	All samples in SDG 440-56249-1
440-56249-1	ICB/CCB	Sodium	0.840 mg/L	All samples in SDG 440-56249-1
440-55104-1	PB (prep blank)	Sodium	0.249 mg/L	All samples in SDG 440-55104-1
440-55104-1	ICB/CCB	Sodium	0.276 mg/L	All samples in SDG 440-55104-1

SDGs	Method Blank ID	Analyte	Maximum Concentration	Associated Samples
440-61866-1	PB (prep blank)	Chromium	0.00435 mg/L	PC-97 PC-90 PC-91 PC-94 PC-58 PC-56 PC-60 PC-59 PC-62 PC-68 PC-86 ART-7B PC-122 PC-53 MW-K5 ARP-7 ARP-6B ARP-5A ARP-4A PC-101R

Sample concentrations were compared to concentrations detected in the method blanks as required by the QAPP. No sample data was qualified with the following exceptions:

SDG	Sample	Analyte	Reported Concentration	Modified Final Concentration
440-61866-1	PC-97	Chromium	0.0022 mg/L	0.0022J mg/L
440-61866-1	PC-90	Chromium	0.0034 mg/L	0.0034J mg/L
440-61866-1	PC-91	Chromium	0.0025 mg/L	0.0025J mg/L
440-61866-1	PC-56	Chromium	0.0027 mg/L	0.0027J mg/L
440-61866-1	PC-59	Chromium	0.0020 mg/L	0.0020J mg/L

Samples EB-1 (from SDGs 440-54862-1 and 440-62282-1) and EB-2 (from SDG 440-56136-1) were identified as equipment blanks. No metal contaminants found were found.

Sample FB-1 (from SDG 440-62127-1) was identified as a field blank. No metal contaminants found were found.

V. ICP Interference Check Sample (ICS) Analysis

The frequency of analysis was met.

The criteria for analysis were met.

VI. Matrix Spike Analysis

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits with the following exceptions:

SDGs	Spike ID (Associated Samples)	Analyte	MS (%R) (Limits)	MSD (%R) (Limits)	RPD (Limits)	Flag	A or P
440-54568-1	I-SMS/MSD (I-S)	Chromium	129 (75-125)	135 (75-125)	-	J+ (all detects)	A
440-62127-1	PC-71MS/MSD (All samples in SDG 440-62127-1)	Chromium	136 (75-125)	-	-	J+ (all detects)	A

VII. Duplicate Sample Analysis

The laboratory has indicated that there were no duplicate (DUP) analyses specified for the samples in these SDGs, and therefore duplicate analyses were not performed for these SDGs.

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

IX. Internal Standards (ICP-MS)

ICP-MS was not utilized in these SDGs.

X. ICP Serial Dilution

ICP serial dilution analysis was performed by the laboratory. The analysis criteria were met.

XI. Sample Result Verification

All sample result verifications were acceptable for samples on which a Stage 4 review was performed. Raw data were not evaluated for the samples reviewed by Stage 2B criteria.

XII. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XIII. Field Duplicates

Samples M-12A and VD-4 (from SDG 440-62442-1), samples M-66 and VD-3 (from SDG 440-54862-1), samples M-44 and VD-1 (from SDG 440-55076-1), samples M-38 and VD-5 (from SDG 440-62549-1), samples M-22A and VD-6 (from SDG 440-62549-1), samples M-14A and VD-5 (from SDG 440-56136-1), samples PC-144 and VD-2 (from SDG 440-56333-1), samples M-12A and VD-4 (from SDG 440-56333-1), samples M-48A (from SDG 440-62129-1) and VD-1 (from SDG 440-62127-1), samples PC-144 and VD-2 (from SDG 440-62282-1), and samples M-37 and VD-3 (from SDG 440-62282-1) were identified as field duplicates. No metals were detected in any of the samples with the following exceptions:

SDG	Analyte	Concentration (mg/L)		RPD (Limits)	Difference (Limits)	Flag	A or P
		M-12A	VD-4				
440-62442-1	Chromium	8.3	8.2	1 (≤30)	-	-	-

SDG	Analyte	Concentration (mg/L)		RPD (Limits)	Difference (Limits)	Flag	A or P
		M-66	VD-3				
440-54862-1	Chromium	22	24	9 (≤30)	-	-	-

SDG	Analyte	Concentration (mg/L)		RPD (Limits)	Difference (Limits)	Flag	A or P
		M-44	VD-1				
440-55076-1	Chromium	0.94	0.93	1 (≤30)	-	-	-

SDG	Analyte	Concentration (mg/L)		RPD (Limits)	Difference	Flag	A or P
		M-38	VD-5				
440-62549-1	Chromium	18	20	11 (≤30)	-	-	-

SDG	Analyte	Concentration (mg/L)		RPD (Limits)	Difference	Flag	A or P
		M-22A	VD-6				
440-62549-1	Chromium	20	22	10 (≤30)	-	-	-

SDG	Analyte	Concentration (mg/L)		RPD (Limits)	Difference (Limits)	Flag	A or P
		M-14A	VD-5				
440-56136-1	Chromium	0.056	0.049	-	0.007 (≤0.025)	-	-

SDG	Analyte	Concentration (mg/L)		RPD (Limits)	Difference (Limits)	Flag	A or P
		PC-144	VD-2				
440-56333-1	Chromium	0.82	0.73	12 (≤30)	-	-	-

SDG	Analyte	Concentration (mg/L)		RPD (Limits)	Difference (Limits)	Flag	A or P
		M-12A	VD-4				
440-56333-1	Chromium	9.0	9.0	0 (≤30)	-	-	-

SDG	Analyte	Concentration (mg/L)		RPD (Limits)	Difference (Limits)	Flag	A or P
		M-48A	VD-1				
440-62127-1 440-62129-1	Chromium	1.8	1.7	6 (≤30)	-	-	-

SDG	Analyte	Concentration (mg/L)		RPD (Limits)	Difference (Limits)	Flag	A or P
		PC-144	VD-2				
440-62282-1	Chromium	0.58	0.54	7 (≤30)	-	-	-

SDG	Analyte	Concentration (mg/L)		RPD (Limits)	Difference (Limits)	Flag	A or P
		M-37	VD-3				
440-62282-1	Chromium	0.035	0.054	-	0.019 (≤0.025)	-	-

2013 Annual Remedial Performance Sampling
Metals - Data Qualification Summary - SDGs 440-62286-1, 440-53556-1, 440-56249-1, 440-56361-1, 440-62442-1, 440-56471-1, 440-54568-1, 440-54862-1, 440-62444-1, 440-54975-1, 440-62447-1, 440-55076-1, 440-62549-1, 440-55104-1, 440-55218-1, 440-55674-1, 440-55769-1, 440-55874-1, 440-56136-1, 440-56333-1, 440-61402-1, 440-61866-1, 440-62043-1, 440-62127-1, 440-62129-1, 440-62282-1

SDG	Sample	Analyte	Flag	A or P	Reason
440-53556-1	PC-115R PC-116R PC-117 PC-118 PC-119 PC-120 PC-121 PC-133	Chromium	J+ (all detects)	P	Calibration (%R)
440-54568-1 440-62127-1	I-S PC-71 PC-72 PC-73 PC-37 M-23 VD-1 FB-1 M-44 M-95	Chromium	J+ (all detects)	A	Matrix spike/Matrix spike duplicate (%R)

2013 Annual Remedial Performance Sampling
Metals - Laboratory Blank Data Qualification Summary - SDGs 440-62286-1, 440-53556-1, 440-56249-1, 440-56361-1, 440-62442-1, 440-56471-1, 440-54568-1, 440-54862-1, 440-62444-1, 440-54975-1, 440-62447-1, 440-55076-1, 440-62549-1, 440-55104-1, 440-55218-1, 440-55674-1, 440-55769-1, 440-55874-1, 440-56136-1, 440-56333-1, 440-61402-1, 440-61866-1, 440-62043-1, 440-62127-1, 440-62129-1, 440-62282-1

SDG	Sample	Analyte	Modified Final Concentration	A or P
440-61866-1	PC-97	Chromium	0.0022J mg/L	A
440-61866-1	PC-90	Chromium	0.0034J mg/L	A
440-61866-1	PC-91	Chromium	0.0025J mg/L	A
440-61866-1	PC-56	Chromium	0.0027J mg/L	A
440-61866-1	PC-59	Chromium	0.0020J mg/L	A

2013 Annual Remedial Performance Sampling
Metals - Field Blank Data Qualification Summary - SDGs 440-62286-1, 440-53556-1, 440-56249-1, 440-56361-1, 440-62442-1, 440-56471-1, 440-54568-1, 440-54862-1, 440-62444-1, 440-54975-1, 440-62447-1, 440-55076-1, 440-62549-1, 440-55104-1, 440-55218-1, 440-55674-1, 440-55769-1, 440-55874-1, 440-56136-1, 440-56333-1, 440-61402-1, 440-61866-1, 440-62043-1, 440-62127-1, 440-62129-1, 440-62282-1

No Sample Data Qualified in these SDGs

ATTACHMENT B

Wet Chemistry Data Validation Report

Hexavalent Chromium by EPA Method 218.6
Chloride, Nitrate as Nitrogen, Nitrite as Nitrogen, and Sulfate by EPA Method 300.0
Chlorate by EPA Method 300.1B
Perchlorate by EPA Method 314.0
Ammonia as Nitrogen by EPA Method 350.1
Phenols by EPA Method 420.1
Nitrate/Nitrite as Nitrogen and Total Inorganic Nitrogen by Calculation Method
Specific Conductance by Standard Method 2510B
Total Dissolved Solids by Standard Method 2540C
pH by Standard Method 4500 H+B
Total Organic Carbon by Standard Method 5310C
Toxic Organic Halides by EPA SW 846 Method 9020B

I. Technical Holding Times

All technical holding time requirements were met with the following exceptions:

SDG	Sample	Analyte	Total Time From Sample Collection Until Analysis	Required Holding Time From Sample Collection Until Analysis	Flag	A or P
440-62286-1	I-G I-Q I-F I-X I-N I-E I-M I-D I-C I-S I-L I-Y I-R I-B I-AB I-AA I-AR I-FDUP I-EDUP	pH	3 days	48 hours	J (all detects) UJ (all non-detects)	P
440-62442-1	EB-2	Hexavalent chromium	27 hours	24 hours	J- (all detects) UJ (all non-detects)	P
440-62442-1	M-68 EB-2	pH	50.5 hours	48 hours	J (all detects) UJ (all non-detects)	P
440-62442-1	M-74 M-74DUP	pH	50.25 hours	48 hours	J (all detects) UJ (all non-detects)	P
440-62442-1	M-73 I-V	pH	50 hours	48 hours	J (all detects) UJ (all non-detects)	P
440-62442-1	M-31A M-31ADUP	pH	49 hours	48 hours	J (all detects) UJ (all non-detects)	P

SDG	Sample	Analyte	Total Time From Sample Collection Until Analysis	Required Holding Time From Sample Collection Until Analysis	Flag	A or P
440-62442-1	M-12A VD-4	pH	48.5 hours	48 hours	J (all detects) UJ (all non-detects)	P
440-62442-1	M-52	pH	49.5 hours	48 hours	J (all detects) UJ (all non-detects)	P
440-56361-1	M-10	Hexavalent chromium	51.5 hours	24 hours	J- (all detects) R (all non-detects)	P
440-56361-1	M-10	pH	5 days	48 hours	J (all detects) UJ (all non-detects)	P
440-54862-1	M-64 M-65 M-66 M-79 M-69 M-135 M-131 M-57A M-37 I-L I-R I-B EB-1 M-25 I-AR VD-3 M-66DUP I-LDUP I-RDUP	pH	9 days	48 hours	J (all detects) UJ (all non-detects)	P
440-62447-1	M-79	pH	53.75 hours	48 hours	J (all detects) UJ (all non-detects)	P
440-62447-1	M-69	pH	53.5 hours	48 hours	J (all detects) UJ (all non-detects)	P
440-62447-1	M-135	pH	53.25 hours	48 hours	J (all detects) UJ (all non-detects)	P
440-62447-1	M-131	pH	53 hours	48 hours	J (all detects) UJ (all non-detects)	P
440-62447-1	M-57A	pH	52.75 hours	48 hours	J (all detects) UJ (all non-detects)	P
440-62447-1	M-35	pH	52.5 hours	48 hours	J (all detects) UJ (all non-detects)	P
440-62447-1	M-19	pH	52.25 hours	48 hours	J (all detects) UJ (all non-detects)	P

SDG	Sample	Analyte	Total Time From Sample Collection Until Analysis	Required Holding Time From Sample Collection Until Analysis	Flag	A or P
440-62447-1	M-67 I-I	pH	51.75 hours	48 hours	J (all detects) UJ (all non-detects)	P
440-62447-1	I-Z I-J I-K I-KDUP	pH	51.5 hours	48 hours	J (all detects) UJ (all non-detects)	P
440-54975-1	PC-124 PC-125 PC-126 PC-127 M-95 PC-54 M-48A M-23 I-V I-I I-Z I-J I-K M-68 M–67 M-48ADUP M-23DUP M–67DUP	pH	8 days	48 hours	J (all detects) UJ (all non-detects)	P
440-62549-1	M-99 M-83 M-80 M-81A M-70 M-71 M-72 M-22A M-14A M-38 VD-5 VD-6 M-72DUP M-38DUP	pH	4 days	48 hours	J (all detects) UJ (all non-detects)	P
440-55076-1	PC-123 PC-128 PC-130 PC-131 PC-132 PC-71 PC-72 PC-73 PC-37 M-44 VD-1 M-44DUP	pH	8 days	48 hours	J (all detects) UJ (all non-detects)	P
440-55218-1	PC-129 M-19 M-35 M-74 M-73 M-81A PC-129DUP	pH	8 days	48 hours	J (all detects) UJ (all non-detects)	P

SDG	Sample	Analyte	Total Time From Sample Collection Until Analysis	Required Holding Time From Sample Collection Until Analysis	Flag	A or P
440-55674-1	All samples in SDG 440-55674-1	pH	6 days	48 hours	J (all detects) UJ (all non-detects)	P
440-55769-1	ART-7B PC-122 PC-53 MW-K5 ARP-7 ARP-6B ARP-5A ARP-4A MW-K4 PC-101R ARP-3A ARP-2A PC-103 PC-98R PC-55 PC-55DUP	pH	6 days	48 hours	J (all detects) UJ (all non-detects)	P
440-55874-1	All samples in SDG 440-55874-1	pH	6 days	48 hours	J (all detects) UJ (all non-detects)	P
440-61402-1	ART-3	pH	49.75 hours	48 hours	J (all detects) UJ (all non-detects)	P
440-61402-1	ART-4	pH	49 hours	48 hours	J (all detects) UJ (all non-detects)	P
440-61402-1	ART-6	pH	48.25 hours	48 hours	J (all detects) UJ (all non-detects)	P
440-61402-1	PC-99R2/R3 PC-115R PC-116R	pH	52 hours	48 hours	J (all detects) UJ (all non-detects)	P
440-61402-1	PC-117 PC-118 PC-119	pH	51.75 hours	48 hours	J (all detects) UJ (all non-detects)	P
440-61402-1	PC-120 PC-121 PC-120DUP	pH	51.5 hours	48 hours	J (all detects) UJ (all non-detects)	P
440-61402-1	PC-133	pH	50.75 hours	48 hours	J (all detects) UJ (all non-detects)	P
440-61402-1	ART-1 ART-2 ART-7 ART-8 ART-9	pH	10 days	48 hours	J (all detects) UJ (all non-detects)	P
440-61866-1	PC-97	pH	58.25 hours	48 hours	J (all detects) UJ (all non-detects)	P

SDG	Sample	Analyte	Total Time From Sample Collection Until Analysis	Required Holding Time From Sample Collection Until Analysis	Flag	A or P
440-61866-1	PC-90	pH	57.75 hours	48 hours	J (all detects) UJ (all non-detects)	P
440-61866-1	PC-91	pH	57.5 hours	48 hours	J (all detects) UJ (all non-detects)	P
440-61866-1	PC-94	pH	57.25 hours	48 hours	J (all detects) UJ (all non-detects)	P
440-61866-1	PC-58 PC-58DUP PC-62	pH	56.25 hours	48 hours	J (all detects) UJ (all non-detects)	P
440-61866-1	PC-56 PC-56DUP	pH	57 hours	48 hours	J (all detects) UJ (all non-detects)	P
440-61866-1	PC-60	pH	56.75 hours	48 hours	J (all detects) UJ (all non-detects)	P
440-61866-1	PC-59	pH	56.5 hours	48 hours	J (all detects) UJ (all non-detects)	P
440-61866-1	PC-68	pH	55.75 hours	48 hours	J (all detects) UJ (all non-detects)	P
440-61866-1	PC-86	pH	55.5 hours	48 hours	J (all detects) UJ (all non-detects)	P
440-62043-1	PC-18 ARP-1 PC-55	pH	3 days	48 hours	J (all detects) UJ (all non-detects)	P
440-62127-1	FB-1	Hexavalent chromium	29.25 hours	24 hours	J- (all detects) UJ (all non-detects)	P
440-62127-1	M-44	Hexavalent chromium	25.75 hours	24 hours	J- (all detects) UJ (all non-detects)	P

Although the holding time for some pH analyses was exceeded by more than two times the holding time, using professional judgment the associated sample results were qualified as estimated (J/UJ) because the sample condition and integrity was maintained during collection, transport, and storage.

All samples were received in good condition with the following exceptions:

SDG	Sample	Analyte	Finding	Criteria	Flag	A or P
440-61402-1	ART-1 ART-2 ART-7 ART-8 ART-9	Total dissolved solids	Due to low pH in the unfiltered sample, filtered sample was used to analyze for total dissolved solids.	Unfiltered sample should be analyzed for total dissolved solids.	J- (all detects) UJ (all non-detects)	P

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. Initial Calibration

All criteria for the initial calibration of each method were met.

III. Continuing Calibration

Continuing calibration frequency and analysis criteria were met for each method when applicable.

IV. Blanks

Method blanks were reviewed for each matrix as applicable. No contaminant concentrations were found in the initial, continuing, and preparation blanks.

Samples EB-1 (from SDGs 440-62282-1, 440-59416-1, 440-54862-1, 440-65073-1, 440-55769-1, 440-57563-1, and 440-62043-1) and EB-2 (from SDGs 440-62442-1 and 440-56136-1) were identified as equipment blanks. No contaminant concentrations were found with the following exceptions:

SDG	Blank ID	Sampling Date	Analyte	Concentration	Associated Samples
440-51645-1	EB-1	7/10/13	Perchlorate	0.99 ug/L	PC-86 PC-90 PC-91 PC-97 PC-55 PC-58 PC-56 PC-60 PC-59 PC-62 PC-68

SDG	Blank ID	Sampling Date	Analyte	Concentration	Associated Samples
440-54862-1	EB-1	8/19/13	Total dissolved solids	55 mg/L	M-64 M-65 M-66 M-79 M-69 M-135 M-131 M-57A M-37 I-L I-R I-B M-25 I-AR VD-3
440-54862-1	EB-1	8/19/13	Perchlorate	1.6 ug/L	M-64 M-65 M-66 M-79 M-79RE M-69 M-135 M-135RE M-131 M-131RE M-57A M-57ARE M-37 I-L I-LRE I-R I-B M-25 M-25RE I-AR VD-3 VD-3RE
440-56136-1	EB-2	9/4/13	Perchlorate	1.7 ug/L	M-80 M-70 M-71 M-72 I-AA I-AB I-Y M-22A M-38 M-14A VD-5 I-W M-80RE M-70RE M-71RE I-AARE I-ABRE VD-5RE I-WRE

Sample FB-1 (from SDGs 440-62127-1 and 440-62129-1) was identified as a field blank. No contaminant concentrations were found with the following exceptions:

SDG	Blank ID	Sampling Date	Analyte	Concentration	Associated Samples
440-62127-1	FB-1	11/11/13	Perchlorate	0.93 ug/L	PC-71 PC-72 PC-73 PC-37 M-23 VD-1 M-44 M-95
440-62129-1	FB-1	11/11/13	Perchlorate	0.93 ug/L	All samples in SDG 440-62129-1

Sample concentrations were compared to concentrations detected in the field blanks as required by the QAPP. No sample data was qualified.

V. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VI. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits with the following exceptions:

SDG	Spike ID (Associated Samples)	Analyte	MS (%R) (Limits)	MSD (%R) (Limits)	RPD (Limits)	Flag	A or P
440-56361-1	M-10MS/MSD (All samples in SDG 440-56361-1)	Chloride	145 (75-125)	142 (75-125)	-	J+ (all detects)	A

VII. Duplicates

Duplicate (DUP) sample analyses were reviewed for each matrix as applicable. Results were within QC limits.

VIII. Laboratory Control Samples

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

IX. Sample Result Verification

All sample result verifications were acceptable for samples on which a Stage 4 review was performed. Raw data were not evaluated for the samples reviewed by Stage 2B criteria.

X. Overall Assessment of Data

The overall assessment of data was acceptable. In the case where more than one result was reported for an individual sample, the least technically acceptable results were rejected as follows:

SDG	Sample	Compound	Flag	A or P
440-56471-1	PC-148RE M-99RE	Perchlorate	R	A
440-57630-1	PC-53RE	Perchlorate	R	A
440-57832-1	PC-55RE PC-18RE	Perchlorate	R	A
440-54862-1	M-79RE M-135RE M-131RE M-57ARE I-LRE M-25RE VD-3RE	Perchlorate	R	A
440-55076-1	PC-130RE PC-131RE PC-132RE PC-71RE M-44RE VD-1RE	Perchlorate	R	A
440-55218-1	PC-129RE	Perchlorate	R	A
440-56136-1	M-80RE M-70RE M-71RE I-AARE I-ABRE VD-5RE I-WRE	Perchlorate	R	A
440-56333-1	M-31ARE PC-136RE PC-135ARE VD-2RE VD-4RE	Perchlorate	R	A
440-56477-1	PC-116RRE	Perchlorate	R	A
440-57563-1	PC-86RE	Perchlorate	R	A

Data flags are summarized at the end of this report if data has been qualified.

XI. Field Duplicates

Samples M-12A and VD-4 (from SDG 440-62442-1), samples M-66 and VD-3 (from SDG 440-54862-1), samples M-66 and VD-3RE (from SDG 440-54862-1), samples M-38 and VD-5 (from SDG 440-62549-1), samples M-22A and VD-6 (from SDG 440-62549-1), samples M-44 and VD-1 (from SDG 440-55076-1), samples M-44RE and VD-1RE (from SDG 440-55076-1), samples M-14A and VD-5 (from SDG 440-56136-1), samples M-14A and VD-5RE (from SDG 440-56136-1), samples PC-144 and VD-2 (from SDG 440-56333-1), samples PC-144 and VD-2RE (from SDG 440-56333-1), samples M-12A and VD-4 (from SDG 440-56333-1), samples M-12A and VD-4RE (from SDG 440-56333-1), samples M-48A (from SDG 440-62129-1) and VD-1 (from SDG 440-62127-1), samples PC-144 and VD-2 (from SDG 440-62282-1), and samples M-37 and VD-3 (from SDG 440-62282-1) were identified as field duplicates. No contaminant concentrations were detected in any of the samples with the following exceptions:

SDG	Analyte	Concentration		RPD (Limits)	Difference (Limits)	Flag	A or P
		M-12A	VD-4				
440-62442-1	Total dissolved solids	6700 mg/L	6800 mg/L	1 (≤30)	-	-	-
440-62442-1	pH	7.84 units	7.87 units	0 (≤30)	-	-	-
440-62442-1	Hexavalent Chromium	8000 ug/L	7900 ug/L	1 (≤30)	-	-	-
440-62442-1	Perchlorate	160000 ug/L	150000 ug/L	6 (≤30)	-	-	-

SDG	Analyte	Concentration		RPD (Limits)	Difference (Limits)	Flag	A or P
		M-66	VD-3				
440-54862-1	Total dissolved solids	19000 mg/L	17000 mg/L	11 (≤30)	-	-	-
440-54862-1	pH	7.51 Units	7.52 Units	0 (≤30)	-	-	-
440-54862-1	Perchlorate	2400000 ug/L	2700000 ug/L	12 (≤30)	-	-	-

SDG	Analyte	Concentration (ug/L)		RPD (Limits)	Difference (Limits)	Flag	A or P
		M-66	VD-3RE				
440-54862-1	Perchlorate	2400000	2700000	12 (≤30)	-	-	-

SDG	Analyte	Concentration		RPD (Limits)	Difference (Limits)	Flag	A or P
		M-38	VD-5				
440-62549-1	Total dissolved solids	12000 mg/L	12000 mg/L	0 (≤30)	-	-	-
440-62549-1	pH	7.21 unit	7.24 unit	0 (≤30)	-	-	-
440-62549-1	Hexavalent chromium	16000 ug/L	16000 ug/L	0 (≤30)	-	-	-
440-62549-1	Perchlorate	650000 ug/L	700000 ug/L	7 (≤30)	-	-	-

SDG	Analyte	Concentration		RPD (Limits)	Difference (Limits)	Flag	A or P
		M-22A	VD-6				
440-62549-1	Total dissolved solids	13000 mg/L	13000 mg/L	0 (≤30)	-	-	-
440-62549-1	pH	7.14 unit	7.16 unit	0 (≤30)	-	-	-
440-62549-1	Perchlorate	1300000 ug/L	1300000 ug/L	0 (≤30)	-	-	-

SDG	Analyte	Concentration		RPD (Limits)	Difference (Limits)	Flag	A or P
		M-44	VD-1				
440-55076-1	Total dissolved solids	9100 mg/L	9000 mg/L	1 (≤30)	-	-	-
440-55076-1	pH	7.42 Units	7.55 Units	2 (≤30)	-	-	-
440-55076-1	Hexavalent chromium	920 ug/L	940 ug/L	2 (≤30)	-	-	-
440-55076-1	Perchlorate	770000 ug/L	780000 ug/L	1 (≤30)	-	-	-

SDG	Analyte	Concentration		RPD (Limits)	Difference (Limits)	Flag	A or P
		M-44RE	VD-1RE				
440-55076-1	Perchlorate	770000	700000	10 (≤30)	-	-	-

SDG	Analyte	Concentration		RPD (Limits)	Difference (Limits)	Flag	A or P
		M-14A	VD-5				
440-56136-1	Total dissolved solids	3500 mg/L	3500 mg/L	0 (≤30)	-	-	-

SDG	Analyte	Concentration		RPD (Limits)	Difference (Limits)	Flag	A or P
		M-14A	VD-5				
440-56136-1	pH	7.81 units	7.80 units	0 (≤30)	-	-	-
440-56136-1	Perchlorate	47000 ug/L	45000 ug/L	4 (≤30)	-	-	-

SDG	Analyte	Concentration		RPD (Limits)	Difference (Limits)	Flag	A or P
		M-14A	VD-5RE				
440-56136-1	Perchlorate	47000	42000	11 (≤30)	-	-	-

SDG	Analyte	Concentration		RPD (Limits)	Difference (Limits)	Flag	A or P
		PC-144	VD-2				
440-56333-1	Total dissolved solids	6500 mg/L	6600 mg/L	2 (≤30)	-	-	-
440-56333-1	pH	7.33 units	7.35 units	0 (≤30)	-	-	-
440-56333-1	Perchlorate	330000 ug/L	350000 ug/L	6 (≤30)	-	-	-

SDG	Analyte	Concentration (ug/L)		RPD (Limits)	Difference (Limits)	Flag	A or P
		PC-144	VD-2RE				
440-56333-1	Perchlorate	330000	320000	3 (≤30)	-	-	-

SDG	Analyte	Concentration		RPD (Limits)	Difference (Limits)	Flag	A or P
		M-12A	VD-4				
440-56333-1	Total dissolved solids	6400 mg/L	6400 mg/L	0 (≤30)	-	-	-
440-56333-1	pH	8.01 units	8.02 units	0 (≤30)	-	-	-
440-56333-1	Hexavalent Chromium	7700 ug/L	8100 ug/L	5 (≤30)	-	-	-
440-56333-1	Perchlorate	170000 ug/L	190000 ug/L	11 (≤30)	-	-	-

SDG	Analyte	Concentration (ug/L)		RPD (Limits)	Difference (Limits)	Flag	A or P
		M-12A	VD-4RE				
440-56333-1	Perchlorate	170000	160000	6 (≤30)	-	-	-

SDG	Analyte	Concentration		RPD (Limits)	Difference (Limits)	Flag	A or P
		VD-1	M-48A				
440-62127-1 440-62129-1	Total dissolved solids	4400 mg/L	4300 mg/L	2 (≤30)	-	-	-
440-62127-1 440-62129-1	pH	7.23 units	7.18 units	1 (≤30)	-	-	-
440-62127-1 440-62129-1	Perchlorate	170000 ug/L	150000 ug/L	13 (≤30)	-	-	-

SDG	Analyte	Concentration		RPD (Limits)	Difference (Limits)	Flag	A or P
		PC-144	VD-2				
440-62282-1	Total dissolved solids	6700 mg/L	6800 mg/L	1 (≤30)	-	-	-
440-62282-1	pH	7.17 units	7.19 units	0 (≤30)	-	-	-
440-62282-1	Perchlorate	260000 ug/L	260000 ug/L	0 (≤30)	-	-	-

SDG	Analyte	Concentration		RPD (Limits)	Difference (Limits)	Flag	A or P
		M-37	VD-3				
440-62282-1	Total dissolved solids	6100 mg/L	6400 mg/L	5 (≤30)	-	-	-
440-62282-1	pH	6.96 units	6.96 units	0 (≤30)	-	-	-
440-62282-1	Hexavalent Chromium	32 ug/L	42 ug/L	27 (≤30)	-	-	-
440-62282-1	Perchlorate	1300000 ug/L	1300000 ug/L	0 (≤30)	-	-	-

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SDG	Sample	Analyte	Flag	A or P	Reason
440-62286-1 440-62442-1 440-56361-1 440-54862-1	I-G I-Q I-F I-X I-N I-E I-M I-D I-C I-S I-L I-Y I-R I-B I-AB I-AA I-AR M-68 EB-2 M-74 M-73 I-V M-31A M-12A VD-4 M-52 M-10 M-64 M-65 M-66 M-79 M-69 M-135 M-131 M-57A M-37 I-L I-R I-B EB-1 M-25 I-AR VD-3	pH	J (all detects) UJ (all non-detects)	P	Technical holding time

SDG	Sample	Analyte	Flag	A or P	Reason
440-62447-1 440-54975-1 440-62549-1 440-55076-1 440-55218-1 440-55674-1	M-79 M-69 M-135 M-131 M-57A M-35 M-19 M-67 I-I I-Z I-J I-K PC-124 PC-125 PC-126 PC-127 M-95 PC-54 M-48A M-23 I-V I-I I-Z I-J I-K M-68 M–67 M-99 M-83 M-80 M-81A M-70 M-71 M-72 M-22A M-14A M-38 VD-5 VD-6 PC-123 PC-128 PC-130 PC-131 PC-132 PC-71 PC-72 PC-73 PC-37 M-44 VD-1 PC-129 M-19 M-35 M-74 M-73 M-81A PC-86 PC-90 PC-91 PC-97 PC-18 ARP-1 PC-58 PC-56 PC-60 PC-59 PC-62 PC-68 PC-94	pH	J (all detects) UJ (all non-detects)	P	Technical holding time (continued)

SDG	Sample	Analyte	Flag	A or P	Reason
440-55769-1 440-55874-1 440-61402-1 440-61866-1 440-62043-1	ART-7B PC-122 PC-53 MW-K5 ARP-7 ARP-6B ARP-5A ARP-4A MW-K4 PC-101R ARP-3A ARP-2A PC-103 PC-98R PC-55 M-83 ART-3 ART-4 ART-6 PC-99R2/R3 PC-115R PC-116R PC-117 PC-118 PC-119 PC-120 PC-121 PC-133 ART-1 ART-2 ART-7 ART-8 ART-9 PC-97 PC-90 PC-91 PC-94 PC-58 PC-62 PC-56 PC-60 PC-59 PC-68 PC-86 PC-18 ARP-1 PC-55	pH	J (all detects) UJ (all non-detects)	P	Technical holding time (continued)
440-62442-1 440-62127-1	EB-2 FB-1 M-44	Hexavalent chromium	J- (all detects) UJ (all non-detects)	P	Technical holding time
440-56361-1	M-10	Hexavalent chromium	J- (all detects) R (all non-detects)	P	Technical holding time
440-61402-1	ART-1 ART-2 ART-7 ART-8 ART-9	Total dissolved solids	J- (all detects) UJ (all non-detects)	P	Sample condition
440-56361-1	M-10	Chloride	J+ (all detects)	A	Matrix spike/Matrix spike duplicate (%R)

SDG	Sample	Analyte	Flag	A or P	Reason
440-56471-1 440-57630-1 440-57832-1 440-54862-1 440-55076-1 440-55218-1 440-56136-1 440-56333-1 440-56477-1 440-57563-1	PC-148RE M-99RE PC-53RE PC-55RE PC-18RE M-79RE M-135RE M-131RE M-57ARE I-LRE M-25RE VD-3RE PC-130RE PC-131RE PC-132RE PC-71RE M-44RE VD-1RE PC-129RE M-80RE M-70RE M-71RE I-AARE I-ABRE VD-5RE I-WRE M-31ARE PC-136RE PC-135ARE VD-2RE VD-4RE PC-116RRE PC-86RE	Perchlorate	R	A	Overall assessment of data

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Wet Chemistry - Laboratory Blank Data Qualification Summary - SDGs 440-62286-1, 440-56249-1, 440-53556-1, 440-50529-1, 440-62442-1, 440-56361-1, 440-56471-1, 440-51645-1, 440-57630-1, 440-59416-1, 440-54568-1, 440-57832-1, 440-62444-1, 440-54862-1, 440-62447-1, 440-54975-1, 440-62549-1, 440-55076-1, 440-63928-1, 440-55104-1, 440-64096-1, 440-55218-1, 440-64922-1, 440-55674-1, 440-65073-1, 440-55769-1, 440-65193-1, 440-55874-1, 440-56136-1, 440-56333-1, 440-56477-1, 440-56582-1, 440-57563-1, 440-58695-1, 440-59168-1, 440-59355-1, 440-59608-1, 440-61402-1, 440-61866-1, 440-62043-1, 440-62127-1, 440-62129-1, 440-62282-1

No Sample Data Qualified in these SDGs

2013 Annual Remedial Performance Sampling
Wet Chemistry - Field Blank Data Qualification Summary - SDGs 440-62286-1, 440-56249-1, 440-53556-1, 440-50529-1, 440-62442-1, 440-56361-1, 440-56471-1, 440-51645-1, 440-57630-1, 440-59416-1, 440-54568-1, 440-57832-1, 440-62444-1, 440-54862-1, 440-62447-1, 440-54975-1, 440-62549-1, 440-55076-1, 440-63928-1, 440-55104-1, 440-64096-1, 440-55218-1, 440-64922-1, 440-55674-1, 440-65073-1, 440-55769-1, 440-65193-1, 440-55874-1, 440-56136-1, 440-56333-1, 440-56477-1, 440-56582-1, 440-57563-1, 440-58695-1, 440-59168-1, 440-59355-1, 440-59608-1, 440-61402-1, 440-61866-1, 440-62043-1, 440-62127-1, 440-62129-1, 440-62282-1

No Sample Data Qualified in these SDGs