

# Data Validation Summary Report (DVSR ID: TetraTech-M05-2017rev1) Soil Flushing Treatability Study Nevada Environmental Response Trust Site Henderson, Nevada

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## LIST OF ACRONYMS/ABBREVIATIONS

Acronyms/Abbreviations	Definition
ADR	Automated Data Review
CCB	continuing calibration blank
COD	chemical oxygen demand
DQO	data quality objectives
DUP	duplicate
DVSR	data validation summary report
EB	equipment blank
FD	field duplicate
ICB	initial calibration blank
LCS/LCSD	laboratory control sample / laboratory control sample duplicate
MDL	method detection limit
mg/L	milligram per liter
MS/MSD	matrix spike / matrix spike duplicate
%D	percent difference
%R	percent recovery
%RSD	percent relative standard deviation
PARCCS	precision, accuracy, representativeness, comparability, completeness, sensitivity
PQL	practical quantitation limit
QA	quality assurance
QAPP	quality assurance project plan
QC	quality control
RL	reporting limit
RPD	relative percent difference
SDG	sample delivery group
SQL	sample quantitation limit
Tetra Tech	Tetra Tech, Inc.
TDS	total dissolved solids
TOC	total organic carbon
USEPA	United States Environmental Protection Agency
µg/L	micrograms per liter

## 1.0 INTRODUCTION

On behalf of the Nevada Environmental Response Trust (NERT), Tetra Tech, Inc. (Tetra Tech) has prepared this Data Validation Summary Report (DVSR) to assess the validity and usability of laboratory analytical data from the Soil Flushing Treatability Study, located in Clark County, Nevada. Tetra Tech performed the treatability study, which included the collection and analyses of environmental soil and water samples for the project. Tetra Tech collected additional quality control (QC) samples used to aid in assessing data quality.

The Automated Data Review Software (ADR) was used to perform qualifier assignments to the data results for the treatability study data set. The ADR software was purchased from the commercial vendor Laboratory Data Consultants and has been vetted by various government and commercial organizations. The ADR software was configured to meet the NERT protocols and validation practices. In order to verify the quality of the ADR qualifier assignments a parallel manual validation was performed on several data packages. The results of the comparison showed that the ADR software was performing in a manner consistent with the manual validation and the NERT validation protocols.

The ADR software allows qualifier assignments to be attached to data based on how the software is programmed. The software is programmed to perform qualifier assignments in a manner that is protective to the environment and will assign qualifiers based on preset limits. The programming also follows the National Functional Guidelines (NFGs) and the specific Nevada Division of Environmental Protection (NDEP) validation guidance documents. The ADR software output data tables (located in Appendix E.1) contain the raw data from the electronic validation which is then reviewed to determine the final qualifier assignments. The review process uses professional judgement and NFG guidance to determine the final qualifiers. The final qualifiers are added to the database and are presented in the DVSR tables. Therefore, there will be some qualifiers in the ADR raw data that are excluded from the final data tables. After professional review, their inclusion was not warranted.

Test America, Inc. and subcontracted laboratories provided laboratory analytical services. The analyses were performed by the methods shown in Table 1 (located at the end of this report).

The lab assigned job numbers or sample delivery groups (SDGs) to all samples. The samples are associated with quality assurance and quality control (QA/QC) samples designed to document the data quality of the samples in each sampling round or within an SDG. Appendix E.1 contains all of the ADR output files describing all of the qualified data.

The laboratory analytical data were verified and validated in accordance with procedures described in the Nevada Division of Environmental Protection (NDEP) *Data Verification and Validation Requirements - Supplement April, 2009* established for the BMI Plant Sites and Common Areas Projects, Henderson, Nevada and correspondence by NDEP personnel. Samples were validated to stage 2A. The analytical data were evaluated for QA/QC based on the following documents: *Quality Assurance Project Plan (QAPP)*, Revision 1, July 18 2014; *NDEP Revised Guidance on Qualifying Data due to Blank Contamination for the BMI Complex and Common Areas*, January 5 2012; *National Functional Guidelines for Inorganic Superfund Data Review, August 2014*; *National Functional Guidelines for Superfund Organic Methods Data Review, August 2014*; 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. The Data Validation Stage 2A Checklist Summary reports are compiled in Appendix E.2. The data packages for this project are provided in Appendix E.3. Additionally, the DVSR Access Database deliverable that is aligned with the NDEP guidelines and requirements found in the June 5, 2013 NEPA guidance "Guidance on Unified Chemical Electronic Data Deliverable Format" is provided as Appendix E.4.

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.

## 2.0 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 medium.

Environmental and laboratory QA/QC samples provide information on the effects of sampling procedures and evaluate laboratory contamination, laboratory performance, and matrix effects. Field QA/QC samples include equipment blanks (EBs), field duplicates (FDs), and matrix spike/matrix spike duplicates (MS/MSDs). Laboratory QA/QC samples include method blanks, laboratory control samples/laboratory control sample duplicates (LCS/LCSDs), laboratory duplicates (DUP), and additional MS/MSDs needed to meet method requirements.

### 2.1 PRECISION

Precision is a measure of the agreement of analytical results under a given set of conditions. It is a quantity that is not measured directly but is calculated from concentrations. Precision can be expressed as the relative percent difference (RPD) between two measurements:

$$RPD = \frac{(C1 - C2) * 100}{(C1 + C2) / 2}$$

Where:

C1 = reported concentration for the sample

C2 = reported concentration for the duplicate

Precision can be expressed as the percent relative standard deviation (%RSD) between three or more measurements:

$$\%RSD = (s/\bar{a}) * 100$$

Where:

%RSD = percent relative standard deviation

s = standard deviation

$\bar{a}$  = mean of replicate analyses

Precision is assessed by calculating %RSD during initial calibrations and RPD from the concentrations 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 appropriateness of the analytical method and effectiveness in recovering target analytes from a particular environmental matrix. The LCS sample is spiked with the same target analytes as the MS/MSD using an interference-free matrix instead of a field sample aliquot. The LCS measures laboratory efficiency in recovering target analytes in the absence of matrix interferences. It is used to verify that the analyses are being performed in control.

The laboratory analyzes laboratory replicates. A field sample is analyzed and an unspiked duplicate of that sample is analyzed also. The data reviewer compares the reported results of the primary analysis and the laboratory duplicate and calculates RPDs to assess laboratory precision.

Calibration precision is determined by calculating %RSD. Laboratory and field sampling precision are evaluated by calculating RPDs for field sample duplicate pairs. The sampler collects two field samples at the same location and under identical conditions. The laboratory then analyzes the samples under identical conditions.

An RPD outside the allowed limit between 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. 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, instrument column fouling, and poor instrument stability. In duplicate pairs, results may be reported in either the primary or duplicate samples at levels below the practical quantitation limit (PQL) or non-detected. Since these values are estimated, RPD exceedances from these duplicate pairs do not suggest a significant impact to data quality.

## 2.2 ACCURACY

Accuracy is a measure of the closeness of agreement between a measured value and the true value of an analytical parameter. It may be 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 continuing calibrations, 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 is determined using the percent recovery 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 was evaluated with the acceptance criteria specified by the QAPP and laboratory limits. 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.

## 2.3 REPRESENTATIVENESS

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/or analyzed are method blanks, calibration blanks, and EBs.

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.



Several methods require the use of initial calibration blanks (ICBs) and continuing calibration blanks (CCBs). ICBs and CCBs are laboratory grade water that are analyzed at the beginning, during and at the end of sample analysis runs. The frequency is dependent on the analytical method. These blanks estimate residual contaminants from the previous sample or standards analysis and measure baseline shifts that commonly occur in emission and absorption spectroscopy.

EBs 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. EBs were collected and analyzed for contaminants of concern.

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 are specific for each method and matrix analyzed. Holding time exceedance can cause loss of sample constituents due to biodegradation, precipitation, volatilization, and chemical degradation. 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.

## 2.4 COMPARABILITY

Comparability is a qualitative characteristic that defines the extent to which the data for a chemical parameter measurement are consistent with, and may be compared with, data from other sampling events. Comparability is dependent upon the design of the sampling plans and execution of activities consistent with approved plans. Factors affecting comparability include sample collection and handling techniques, matrix type, and analytical method. Comparability is achieved through the use of standard techniques to collect representative samples, consistent application of analytical method protocols, and reporting analytical results with appropriate units. Comparability is also dependent upon other PARCCS criteria, because only when precision, accuracy, and representativeness are known can data sets be compared with confidence.

## 2.5 COMPLETENESS

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.

## 2.6 SENSITIVITY

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Sensitivity is the ability of an analytical method or instrument to discriminate between measurement responses representing different concentrations. It is generally used to describe the instrument detection limits (DLs) or PQLs established to meet project DQOs. The method detection limits (MDLs) represent the minimum concentration of a substance that can be measured and reported with 99 percent confidence that the analyte concentration is greater than zero. Sample quantitation limits (SQLs) are adjusted MDL values that reflect sample specific actions, such as dilutions or varying aliquot sizes. The laboratory data reports show MDL in place of the SQL. It was adjusted to reflect the sample analysis conditions. The PQL is the minimum concentration that can be reported based on the analysis of a specific matrix. It is often the lowest acceptable calibration point for the analyte. The laboratory data reports show RL in place of the PQL. The laboratory reported detected analytes down to the adjusted MDL for this project. All results reported between the MDL and RL were qualified "J" by the laboratory. Sample results are compared to method and field blank results to identify possible effects of laboratory background and field procedures on sensitivity.

## 3.0 VALIDATION RESULTS AND PARCCS

This section discusses the validation results and the associated PARCCS criteria. Before conducting the PARCCS evaluation, the analytical data were validated according to the QAPP (May 2014), Functional Guidelines (USEPA 2014), and EPA analytical methods. Table 2 (located at the end of this report) shows the method, parameters, and number of samples validated.

Samples not meeting the acceptance criteria were denoted with a validation qualifier that indicates a deficiency with the data. Table 3 (located at the end of this report) contains a list of validation qualifiers and their definitions used in data validation.

When more than one validation qualifier was applicable to a data point, the final validation qualifier applied was based on a hierarchy.

The hierarchy of validation qualifiers is listed below:

R > J	R takes precedence over the J qualifier.
J+	The high bias (J+) qualifier is applied to detected results only.
J > J+ or J-	The unbiased (J) qualifier supersedes biased (J+ or J-) qualifiers since it is not possible to assess the direction of the potential bias.
J = J+ plus J-	Adding biased (J+, J-) qualifiers with opposite signs will result in an unbiased qualifier (J).
UJ = U plus J	The UJ qualifier is used when a non-detected (U) flag is added to an unbiased flag (J).

## 3.1 PRECISION

### 3.1.1 Instrument Calibration

The objective of initial calibration is to ensure that an instrument is capable of producing acceptable qualitative and quantitative data by determining the ratio of instrument response to analyte concentration. %RSD is used to evaluate initial calibration results and provide a means of evaluating precision within an analytical system. Based on laboratory case narratives, all %RSDs were acceptable. Instrument calibration is not reviewed in Stage 2A validation.

### 3.1.2 MS/MSD and Lab Duplicate Samples

MS/MSD and lab duplicate RPDs outside of acceptance criteria as stated in the QAPP are shown in Table 4 (located at the end of this report).

### 3.1.3 LCS/LCSD Samples

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

### 3.1.4 FD Samples

For results > 5X the PQL, the field duplicate samples were evaluated for acceptable precision with RPDs. For results < 5X the PQL, samples were evaluated by the difference between the two measurements. Table 5 includes results where RPDs exceeded 30% for water samples or 50% for soil samples (including leached or soluble results) or the difference between the values was greater than the absolute value of the PQL.

## 3.2 ACCURACY

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### 3.2.1 Instrument Calibration

The instrument calibration errors as denoted in the data package case narrative were reviewed and any calibration errors were reviewed to determine if qualifications were needed. The few calibration errors noted in the case narratives did not lead to sample qualifications for this Stage 2A validation effort.

### 3.2.2 MS/MSD Samples

Many MS/MSD %Rs were outside of acceptance criteria shown in the QAPP. MS/MSD %R exceedances can be found in Table 6 (located at the end of this report). Analytes that were present in the parent sample in concentrations greater than 4 times the amount spiked were not qualified and are not presented in Table 6.

There are generally two modes of MS/MSD validation practice used to qualify data results. The first mode is to qualify only the parent sample of the MS/MSD or secondly qualify the batch of associated samples. To decide which mode of validation to use, professional judgement is used and is based on the nature of the samples associations and the heterogeneity of the soil matrix. For this Stage 2A MS/MSD validation only the parent samples were qualified. A list of parent samples qualified is presented in Table 6. One analyte was rejected because of low recoveries in the MS/MSD. The zinc result in TT-TP4-M3-20160310 was rejected because recovery was <30% and the analyte was not detected in the parent sample.

### 3.2.3 LCS/LCSD Samples

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

### 3.2.4 Interference Check Samples

The interference check samples were found to be compliant to the method and the QAPP.

### 3.2.5 Surrogates

Surrogates were analyzed in applicable methods. All surrogate %Rs met the acceptance criteria as stated in the QAPP.

### 3.2.6 Analyte Quantitation and Target Identification

The analyte quantitation and target identification are considered correct from the Stage 2A data validation effort.

## 3.3 REPRESENTATIVENESS

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### 3.3.1 Sample Preservation and Holding Times

Holding times and sample preservation were evaluated to verify compliance with the analytical method and NFGs. Samples listed in Table 7 (located at the end of this report) exceeded the allowed analytical holding times and were qualified. All samples met the preservation criteria.

Fifty-nine hexavalent chromium results and 2 nitrate results were qualified because of holding time infractions. Analytes detected above the PQL were qualified "J-", estimated biased low. Non-detected results were qualified "UJ" as they were analyzed within 2X of the holding times. One result was detected below the PQL and was qualified "J". Based on hierarchy of validation qualification, the "J" qualifier applied to detected results below the PQL supersedes the negative bias of the holding time infraction.

### 3.3.2 Blanks

Method blanks, ICBs, CCBs, and EBs were analyzed to evaluate representativeness. Only method blanks and EBs were evaluated in Stage 2A validation. The concentration of an analyte in any blank was used for data qualification. If contaminants were detected in a blank, the blank concentration was compared to the sample results. If the analyte was not detected in the sample, no qualification was applied to the sample. If the sample concentration was greater than 10 times the amount in the blank, no qualification was applied.

Qualified results were all detected below the PQL. For concentrations detected in the sample below the PQL, the sample result was qualified "J". Based on hierarchy of validation qualification, the "J" qualifier, in this case applied to detected results below the PQL, supersedes the positive bias associated with blank contamination.

#### 3.3.2.1 Method Blanks

Method blanks were reviewed and the outliers resulting in qualification are denoted in Table 8 (located at the end of this report).

#### 3.3.2.2 EBs

EBs were reviewed. Although several analytes were detected in the EBs, no results were qualified. .

## 3.4 COMPARABILITY

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The laboratory used standard analytical methods for all of the analyses. In all cases, the adjusted MDLs attained were at or below the PQLs. Target compounds detected below the PQLs were flagged "J" by the laboratory and should be considered estimated. The comparability of the data is acceptable.

## 3.5 COMPLETENESS

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

## 3.6 SENSITIVITY

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The calibrations were evaluated for instrument sensitivity and were determined to be technically acceptable. Due to high levels of analyte concentrations, many analytical runs were analyzed at dilutions. MDLs and PQLs were elevated.

## 4.0 CONCLUSIONS AND RECOMMENDATIONS

The analytical data quality assessment for the soil and water laboratory analytical results generated during the Soil Flushing Treatability Study at the NERT site in Henderson, Nevada established that the overall project requirements and completeness levels were met. A summary of the analytical work and validation stages can be found in Table 9, which is a cross-reference table listing each sample, analysis, SDG, collection date, laboratory sample number, matrix, and stage of validation. Most sample results were acceptable. The zinc result in TT-TP4-M3-20160310 was rejected for matrix effects. All other sample results were found to be useable. Sample results that were qualified as estimated are useable for their intended purpose.

## 5.0 REFERENCES

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- USEPA. (2014b). National Functional Guidelines for Superfund Organic Methods Data Review.

## Tables



**Table 1** Analytical Methods

Method	Parameters
EPA 218.6	Chromium, Hexavalent
EPA 300.0	Anions (Chloride, Nitrate, and/or Sulfate)
EPA 300.1B	Chlorate
EPA 314.0	Perchlorate
SM2320B	Alkalinity, Bicarbonate, Carbonate, and Hydroxide
SM2540C	Total Dissolved Solids
SM5310B	Total Organic Carbon
SW-6010B	Metals (Boron, Calcium, Iron, Magnesium, Manganese, Potassium, Sodium, Titanium)
SW-6010B_LCH	Metals (Calcium, Magnesium, Potassium, Sodium) (soluble)
SW-6020	Metals (Antimony, Arsenic, Barium, Beryllium, Cadmium, Chromium, Cobalt, Copper, Lead, Molybdenum, Nickel, Selenium, Silver, Zinc)
SW-7199	Chromium, Hexavalent
SW-7470A	Mercury
SW-7471A	Mercury
SW-9045C	pH
SW-9060	TOC

**Table 2** Samples Validated

Matrix	Method	Parameters	Samples Validated
Groundwater	EPA 218.6	Chromium, hexavalent	35
	EPA 300.0	Anions (Chloride, Nitrate, and/or Sulfate)	84
	EPA 300.1B	Chlorate	76
	EPA 314.0	Perchlorate	428
	SM2320B	Alkalinity, Bicarbonate, Carbonate, and Hydroxide	84
	SM2540C	Total Dissolved Solids	381
	SM5310B	Total Organic Carbon	257
	SW-6010B	Metals	76
	SW-6020	Metals	283
	SW-7199	Chromium, hexavalent	374
	SW-7470A	Mercury	77
Soil	EPA 300.0	Anions (Chloride, Nitrate, and/or Sulfate) (soluble)	87
	EPA 300.1B	Chlorate (soluble)	87
	EPA 314.0	Perchlorate	304
	SM2320B	Alkalinity (soluble)	87
	SM2540C	Total Dissolved Solids (soluble)	304
	SW-6010B	Metals	88
	SW-6010B_LCH	Metals (soluble)	87
	SW-6020	Metals	88
	SW-7199	Chromium, hexavalent	88
	SW-7471A	Mercury	88
	SW-9045C	pH	88
SW-9060	Total Organic Carbon	88	
Equipment Blanks	EPA 314.0	Perchlorate	8
	SW-6010B	Metals	8
	SW-6020	Metals	8
	SW-7199	Chromium, hexavalent	8
	SW-7470A	Mercury	8
	SW-9060	Total Organic Carbon	8

**Table 3** Validation Qualifiers and Definitions

Validation Qualifier	Definition
J-	The result is an estimated quantity, but the result may be biased low.
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
J+	The result is an estimated quantity, but the result may be biased high.
U	The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.
UJ	The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.

**Table 4** MS/MSD and Duplicate RPD Exceedances

SDG	Method	Sample	Analyte	RPD (%)	Allowed RPD (%)
440-143458-1	SM5310B	TT-TP4-M3-20160405 MS/MSD	Total Organic Carbon	25	20
440-146524-1	EPA 300.1B	TT-TP4-M3-20160505 MS/MSD	Chlorate	65	25
440-155570-1	EPA 300.0	TT-TP2-B3A-14 MS/MSD	Sulfate	21	20
440-155570-1	SW-6010B	TT-TP2-B3A-14 MS/MSD	Calcium	23	20
440-155631-1	EPA 314.0	TT-TP3-B2A-22 MS/MSD	Perchlorate	23	20
440-155767-1	EPA 314.0	TT-TP4-B2A-6DUP	Perchlorate	72	20

**Table 5** FD Exceedances

SDG	Method	Analyte	Units	Parent Sample ID	Parent Result	FD Result	RPD (%)	Difference *
440-104832-1	EPA 314.0	Perchlorate	mg/Kg	TT-TP1-B4-6	0.77	1.4	58	---
440-104832-1	EPA 314.0	Perchlorate	mg/Kg	TT-TP2-B1-22	520	7900	175	---
440-104832-1	SM2540C	Total Dissolved Solids	mg/L	TT-TP2-B1-22	600	1100	59	---
440-104925-1	EPA 300.0	Sulfate	mg/L	TT-TP2-B3-14	500	960	63	---
440-104925-1	EPA 300.1B	Chlorate	ug/L	TT-TP2-B3-14	47000	26000	58	---
440-104925-1	EPA 314.0	Perchlorate	mg/Kg	TT-TP3-B1-6	430	210	69	---
440-104925-1	EPA 314.0	Perchlorate	mg/Kg	TT-TP3-B4-14	0.49	0.9	59	---
440-104925-1	SM2320B	Alkalinity	mg/L	TT-TP2-B3-14	14	5.9	81	---
440-104925-1	SW-6010B	Boron	mg/Kg	TT-TP2-B3-14	26	10	89	---
440-104925-1	SW-6010B_LCH	Potassium	mg/L	TT-TP2-B3-14	0.83	1.5	58	---
440-104925-1	SW-6010B_LCH	Sodium	mg/L	TT-TP2-B3-14	60	140	80	---
440-104925-1	SW-6020	Arsenic	mg/Kg	TT-TP2-B3-14	25	14	56	---
440-104925-1	SW-6020	Barium	mg/Kg	TT-TP2-B3-14	68	120	55	---
440-105015-1	EPA 300.1B	Chlorate	ug/L	TT-TP4-B3-22	120	790	147	---
440-105015-1	EPA 314.0	Perchlorate	mg/Kg	TT-TP4-B3-22	170	68	86	---
440-105015-1	SM2320B	Alkalinity	mg/L	TT-TP4-B3-22	34	100	99	---
440-105015-1	SW-6010B_LCH	Sodium	mg/L	TT-TP4-B3-22	110	63	54	---
440-105015-1	SW-6020	Chromium	mg/Kg	TT-TP4-B3-22	37	66	56	---
440-105330-1	EPA 300.0	Chloride	mg/L	TT-TP4-L2-22	7	0.63	167	---

**Table 5** FD Exceedances

SDG	Method	Analyte	Units	Parent Sample ID	Parent Result	FD Result	RPD (%)	Difference *
440-105330-1	EPA 300.0	Nitrate	mg/L	TT-TP4-L2-22	3	31	165	---
440-105330-1	EPA 300.1B	Chlorate	ug/L	TT-TP4-L2-22	23000	53	199	---
440-105330-1	EPA 314.0	Perchlorate	mg/Kg	TT-TP4-L2-22	83	2.5	188	---
440-105330-1	SW-6010B	Boron	mg/Kg	TT-TP4-L2-22	8.8	19	73	---
440-105330-1	SW-6010B_LCH	Calcium	mg/L	TT-TP4-L2-22	6.3	1	145	---
440-105330-1	SW-6020	Arsenic	mg/Kg	TT-TP4-L2-22	13	25	63	---
440-105330-1	SW-6020	Chromium	mg/Kg	TT-TP4-L2-22	15	26	54	---
440-105406-1	EPA 300.0	Nitrate	mg/L	TT-TP3-L2-6	40	75	61	---
440-105406-1	EPA 314.0	Perchlorate	mg/Kg	TT-TP1-L2-14	1.3	3.1	82	---
440-138059-1	SM2320B	Alkalinity	mg/L	TT-TP4-M2-20160211	190	1200	145	---
440-138059-1	SW-6020	Barium	ug/L	TT-TP4-M2-20160211	53	35	41	---
440-143458-1	SW-6010B	Iron	mg/L	TT-TP4-M3-20160405	0.06	0.01 U	---	0.05
440-155501-1	SM2540C	Total Dissolved Solids	mg/L	TT-TP1-B4A-6	72	140	64	---
440-155570-1	EPA 300.0	Sulfate	mg/L	TT-TP2-B3A-14	830	310	91	---
440-155570-1	EPA 314.0	Perchlorate	mg/Kg	TT-TP2-B3A-14	4.1	12	98	---
440-155570-1	SW-6010B_LCH	Calcium	mg/L	TT-TP2-B3A-14	430	81	137	---
440-155575-1	EPA 314.0	Perchlorate	mg/Kg	TT-TP1-B2A-14	0.22	0.16	---	0.06
440-155575-1	EPA 314.0	Perchlorate	mg/Kg	TT-TP1-L2A-14	0.9	0.22	121	---
440-155575-1	SM2540C	Total Dissolved Solids	mg/L	TT-TP1-L2A-14	330	96	110	---

**Table 5** FD Exceedances

SDG	Method	Analyte	Units	Parent Sample ID	Parent Result	FD Result	RPD (%)	Difference *
440-155631-1	EPA 300.0	Chloride	mg/L	TT-TP3-L2A-6	12	1.1	166	---
440-155631-1	EPA 300.0	Nitrate	mg/L	TT-TP3-L2A-6	14	3.3	124	---
440-155631-1	EPA 300.0	Sulfate	mg/L	TT-TP3-L2A-6	17	4.3	119	---
440-155631-1	EPA 314.0	Perchlorate	mg/Kg	TT-TP2-B1A-22	22	210	162	---
440-155631-1	EPA 314.0	Perchlorate	mg/Kg	TT-TP3-B1A-6	1.5	9.4	145	---
440-155631-1	EPA 314.0	Perchlorate	mg/Kg	TT-TP3-B2A-22	3.6	0.18	181	---
440-155631-1	EPA 314.0	Perchlorate	mg/Kg	TT-TP3-B4A-14	0.12	4.4	189	---
440-155631-1	EPA 314.0	Perchlorate	mg/Kg	TT-TP3-L2A-6	88	1.9	192	---
440-155631-1	SM2540C	Total Dissolved Solids	mg/L	TT-TP2-B1A-22	1700	560	101	---
440-155631-1	SM2540C	Total Dissolved Solids	mg/L	TT-TP3-L2A-6	170	88	64	---
440-155631-1	SW-6020	Copper	mg/Kg	TT-TP3-L2A-6	40	16	86	---
440-155631-1	SW-6020	Copper	mg/Kg	TT-TP4-B3A-22	6	150	185	---
440-155631-1	SW-6020	Lead	mg/Kg	TT-TP4-B3A-22	4	11	93	---
440-155631-1	SW-6020	Zinc	mg/Kg	TT-TP3-L2A-6	190	32	142	---
440-155631-1	SW-6020	Zinc	mg/Kg	TT-TP4-B3A-22	19	130	149	---
440-155631-1	SW-7199	Chromium, Hexavalent	mg/Kg	TT-TP4-B3A-22	2.4	3.4	---	1
440-155720-1	EPA 314.0	Perchlorate	mg/Kg	TT-TP4-L2A-26	170	62	93	---
440-155720-1	SM2540C	Total Dissolved Solids	mg/L	TT-TP4-L2A-26	1400	730	63	---
440-155767-1	EPA 300.0	Chloride	mg/L	TT-TP4-B2A-22	1.5	5	108	---

**Table 5** FD Exceedances

SDG	Method	Analyte	Units	Parent Sample ID	Parent Result	FD Result	RPD (%)	Difference *
440-155767-1	EPA 300.0	Nitrate	mg/L	TT-TP4-B2A-22	2.2	7.4	108	---
440-155767-1	EPA 300.0	Sulfate	mg/L	TT-TP4-B2A-22	280	45	145	---
440-155767-1	EPA 300.1B	Chlorate	ug/L	TT-TP4-B2A-22	1100	14000	171	---
440-155767-1	EPA 314.0	Perchlorate	mg/Kg	TT-TP4-B2A-22	3.8	18	130	---
440-155767-1	EPA 314.0	Perchlorate	mg/Kg	TT-TP4-B2A-6	0.077	9	197	---
440-155767-1	SM2320B	Alkalinity	mg/L	TT-TP4-B2A-22	9.3	22	81	---
440-155767-1	SM2540C	Total Dissolved Solids	mg/L	TT-TP4-B2A-22	770	210	114	---
440-155767-1	SM2540C	Total Dissolved Solids	mg/L	TT-TP4-B2A-6	240	460	63	---
440-155767-1	SW-6010B	Boron	mg/Kg	TT-TP4-B2A-22	7.9	4.4	57	---
440-155767-1	SW-6010B_LCH	Calcium	mg/L	TT-TP4-B2A-22	180	26	150	---
440-155767-1	SW-6010B_LCH	Sodium	mg/L	TT-TP4-B2A-22	39	150	117	---
440-155767-1	SW-9060	Total Organic Carbon	mg/Kg	TT-TP4-B2A-22	840	9100	166	---

\* Used if results are <5x the PQL. Qualified if the difference is > PQL of parent or FD.



**Table 6** MS/MSD Recovery Exceedances

SDG	Lab Sample ID	Spiked Sample	Sample Date	Method	Filtered	Analyte	MS Recovery (%)	MSD Recovery (%)	Acceptance Range (%)
440-104698-1	440-104698-3	TT-TP1-B1-10	2015-03-17	SW-6010B	Unfiltered	Manganese	101	68	75-125
440-104698-1	440-104698-3	TT-TP1-B1-10	2015-03-17	SW-6020	Unfiltered	Barium	154	154	75-125
440-104698-1	440-104698-3	TT-TP1-B1-10	2015-03-17	SW-6020	Unfiltered	Copper	81	75	75-125
440-104832-1	440-104832-17	TT-TP1-B4-6	2015-03-18	EPA 314.0	N/A	Perchlorate	125	171	80-120
440-104832-1	440-104832-2	TT-TP1-B2-6	2015-03-17	SW-6010B	Unfiltered	Boron	57	61	75-125
440-104832-1	440-104832-2	TT-TP1-B2-6	2015-03-17	SW-6020	Unfiltered	Antimony	34	37	75-125
440-104832-1	440-104832-2	TT-TP1-B2-6	2015-03-17	SW-6020	Unfiltered	Arsenic	22	28	75-125
440-104832-1	440-104832-2	TT-TP1-B2-6	2015-03-17	SW-6020	Unfiltered	Copper	73	80	75-125
440-104832-1	440-104832-2	TT-TP1-B2-6	2015-03-17	SW-6020	Unfiltered	Nickel	70	77	75-125
440-104832-1	440-104832-2	TT-TP1-B2-6	2015-03-17	SW-6020	Unfiltered	Zinc	-40	-32	75-125
440-104925-1	440-104925-4	TT-TP2-B3-14	2015-03-18	EPA 314.0	N/A	Perchlorate	-35	-33	80-120
440-104925-1	440-104925-35	TT-TP3-B3-6	2015-03-19	EPA 314.0	N/A	Perchlorate	-6	1	80-120
440-104925-1	440-104925-4	TT-TP2-B3-14	2015-03-18	SW-6020	Unfiltered	Antimony	78	78	75-125
440-104925-1	440-104925-4	TT-TP2-B3-14	2015-03-18	SW-6020	Unfiltered	Barium	209	154	75-125
440-105015-1	440-105015-2	TT-TP4-B1-6	2015-03-19	SW-6020	Unfiltered	Antimony	65	68	75-125
440-105015-1	440-105015-2	TT-TP4-B1-6	2015-03-19	SW-6020	Unfiltered	Barium	188	183	75-125
440-105330-1	440-105330-6	TT-TP4-L2-22	2015-03-25	SW-6010B	Unfiltered	Manganese	154	110	75-125
440-105330-1	440-105330-6	TT-TP4-L2-22	2015-03-25	SW-6020	Unfiltered	Barium	165	126	75-125
440-105406-1	440-105406-2	TT-TP3-L2-6	2015-03-26	SW-6020	Unfiltered	Antimony	60	55	75-125

**Table 6** MS/MSD Recovery Exceedances

SDG	Lab Sample ID	Spiked Sample	Sample Date	Method	Filtered	Analyte	MS Recovery (%)	MSD Recovery (%)	Acceptance Range (%)
440-130588-1	440-130588-15	TT-TP2-L1-20151210	2015-12-10	EPA 300.0	N/A	Chloride	66	58	80-120
440-130588-1	440-130588-15	TT-TP2-L1-20151210	2015-12-10	EPA 300.0	N/A	Nitrate	76	76	80-120
440-130588-1	440-130588-9	TT-TP1-M3-20151210	2015-12-10	SW-6010B	Unfiltered	Potassium	57	65	75-125
440-140826-1	440-140826-5	TT-TP4-M3-20160310	2016-03-10	EPA 300.0	N/A	Nitrate	84	73	80-120
440-140826-1	440-140826-5	TT-TP4-M3-20160310	2016-03-10	SW-6020	Filtered	Zinc	0	0	75-125
440-142922-1	440-142922-1	TT-TP1-M1-20160330	2016-03-30	SW-7199	Filtered	Chromium, Hexavalent	72	71	85-115
440-143078-1	440-143078-5	TT-TP4-M3-20160331	2016-03-31	SW-6020	Filtered	Chromium, Total	-59	102	75-125
440-143078-1	440-143078-5	TT-TP4-M3-20160331	2016-03-31	SW-7199	Filtered	Chromium, Hexavalent	66	58	85-115
440-144411-1	440-144411-1	TT-TP1-M1-20160413	2016-04-13	SW-7199	Filtered	Chromium, Hexavalent	84	84	85-115
440-146524-1	440-146524-6	TT-TP4-M3-20160505	2016-05-05	SW-6010B	Filtered	Boron	80	66	75-125
440-146524-1	440-146524-6	TT-TP4-M3-20160505	2016-05-05	SW-6010B	Filtered	Potassium	75	67	75-125
440-146524-1	440-146524-6	TT-TP4-M3-20160505	2016-05-05	SW-6020	Filtered	Arsenic	132	138	75-125
440-147243-1	440-147243-7	TT-TP4-M3-20160511	2016-05-11	SM5310B	Unfiltered	Total Organic Carbon	109	121	80-120
440-148500-1	440-148500-7	TT-TP4-M3-20160526	2016-05-26	SW-7199	Filtered	Chromium, Hexavalent	80	81	85-115
440-149036-1	440-149036-5	TT-TP4-M3-20160602	2016-06-02	SW-7199	Filtered	Chromium, Hexavalent	81	85	85-115
440-150775-1	440-150775-7	TT-TP4-M3-20160622	2016-06-22	SW-7199	Filtered	Chromium, Hexavalent	84	83	85-115
440-155501-1	440-155501-11	TT-TP1-B4A-10	2016-08-11	EPA 314.0	N/A	Perchlorate	72	71	80-120
440-155570-1	440-155570-4	TT-TP2-B3A-14	2016-08-12	EPA 300.0	N/A	Nitrate	132	133	80-120
440-155570-1	440-155570-4	TT-TP2-B3A-14	2016-08-12	SW-6010B	Unfiltered	Manganese	259	253	75-125

**Table 6** MS/MSD Recovery Exceedances

SDG	Lab Sample ID	Spiked Sample	Sample Date	Method	Filtered	Analyte	MS Recovery (%)	MSD Recovery (%)	Acceptance Range (%)
440-155570-1	440-155570-4	TT-TP2-B3A-14	2016-08-12	SW-6020	Unfiltered	Antimony	71	68	75-125
440-155570-1	440-155570-4	TT-TP2-B3A-14	2016-08-12	SW-6020	Unfiltered	Arsenic	77	73	75-125
440-155570-1	440-155570-4	TT-TP2-B3A-14	2016-08-12	SW-6020	Unfiltered	Barium	219	207	75-125
440-155570-1	440-155570-4	TT-TP2-B3A-14	2016-08-12	SW-6020	Unfiltered	Beryllium	72	70	75-125
440-155575-1	440-155575-19	TT-TP1-L2A-14	2016-08-12	EPA 314.0	N/A	Perchlorate	129	116	80-120
440-155631-1	440-155631-57	TT-TP4-B3A-22	2016-08-15	SW-6010B	Unfiltered	Manganese	70	82	75-125
440-155631-1	440-155631-39	TT-TP3-L2A-6-DUP	2016-08-14	SW-6020	Unfiltered	Antimony	88	78	75-125
440-155631-1	440-155631-39	TT-TP3-L2A-6-DUP	2016-08-14	SW-6020	Unfiltered	Barium	80	140	75-125
440-155631-1	440-155631-39	TT-TP3-L2A-6-DUP	2016-08-14	SW-6020	Unfiltered	Beryllium	74	74	75-125
440-155631-1	440-155631-39	TT-TP3-L2A-6-DUP	2016-08-14	SW-6020	Unfiltered	Chromium, Total	77	77	75-125
440-155631-1	440-155631-39	TT-TP3-L2A-6-DUP	2016-08-14	SW-6020	Unfiltered	Cobalt	76	76	75-125
440-155631-1	440-155631-39	TT-TP3-L2A-6-DUP	2016-08-14	SW-6020	Unfiltered	Copper	72	73	75-125
440-155631-1	440-155631-39	TT-TP3-L2A-6-DUP	2016-08-14	SW-6020	Unfiltered	Nickel	76	78	75-125
440-155631-1	440-155631-39	TT-TP3-L2A-6-DUP	2016-08-14	SW-6020	Unfiltered	Selenium	78	78	75-125
440-155720-1	440-155720-21	TT-TP4-L2A-22	2016-08-16	SW-6020	Unfiltered	Antimony	83	78	75-125
440-155720-1	440-155720-21	TT-TP4-L2A-22	2016-08-16	SW-6020	Unfiltered	Barium	199	160	75-125
440-155720-1	440-155720-21	TT-TP4-L2A-22	2016-08-16	SW-6020	Unfiltered	Beryllium	75	75	75-125
440-155720-1	440-155720-21	TT-TP4-L2A-22	2016-08-16	SW-6020	Unfiltered	Chromium, Total	78	85	75-125
440-155720-1	440-155720-21	TT-TP4-L2A-22	2016-08-16	SW-6020	Unfiltered	Copper	76	80	75-125

**Table 6** MS/MSD Recovery Exceedances

SDG	Lab Sample ID	Spiked Sample	Sample Date	Method	Filtered	Analyte	MS Recovery (%)	MSD Recovery (%)	Acceptance Range (%)
440-155720-1	440-155720-21	TT-TP4-L2A-22	2016-08-16	SW-6020	Unfiltered	Nickel	80	77	75-125
440-155720-1	440-155720-21	TT-TP4-L2A-22	2016-08-16	SW-6020	Unfiltered	Zinc	73	75	75-125
440-155767-1	440-155767-2	TT-TP4-B2A-6	2016-08-16	EPA 314.0	N/A	Perchlorate	71	75	80-120
440-155767-1	440-155767-4	TT-TP4-B2A-10	2016-08-16	SW-6020	Unfiltered	Antimony	76	83	75-125
440-155767-1	440-155767-4	TT-TP4-B2A-10	2016-08-16	SW-6020	Unfiltered	Barium	136	145	75-125
440-155767-1	440-155767-4	TT-TP4-B2A-10	2016-08-16	SW-6020	Unfiltered	Chromium, Total	81	76	75-125
440-155767-1	440-155767-4	TT-TP4-B2A-10	2016-08-16	SW-6020	Unfiltered	Cobalt	76	76	75-125
440-155767-1	440-155767-4	TT-TP4-B2A-10	2016-08-16	SW-6020	Unfiltered	Copper	73	75	75-125
440-155767-1	440-155767-4	TT-TP4-B2A-10	2016-08-16	SW-6020	Unfiltered	Nickel	70	70	75-125
440-155767-1	440-155767-4	TT-TP4-B2A-10	2016-08-16	SW-6020	Unfiltered	Selenium	79	79	75-125

**Table 7** Holding Time Exceedances

SDG	Sample ID	Method	Analyte	Time Limit (hours)	Time Elapsed (hours)
440-130543-1	TT-TP4-M3-20151209	SW-7199	Chromium, Hexavalent	24	60.50
440-130588-1	TT-TP1-L1-20151210	SW-7199	Chromium, Hexavalent	24	47.75
440-130588-1	TT-TP1-L2-20151210	SW-7199	Chromium, Hexavalent	24	47.75
440-130588-1	TT-TP1-M1-20151210	SW-7199	Chromium, Hexavalent	24	39.50
440-130588-1	TT-TP1-M2-20151210	SW-7199	Chromium, Hexavalent	24	39.25
440-130588-1	TT-TP1-M3-20151210	SW-7199	Chromium, Hexavalent	24	48.00
440-130588-1	TT-TP2-L1-20151210	SW-7199	Chromium, Hexavalent	24	47.25
440-130588-1	TT-TP2-L2-20151210	SW-7199	Chromium, Hexavalent	24	47.75
440-130588-1	TT-TP2-M1-20151210	SW-7199	Chromium, Hexavalent	24	40.25
440-130588-1	TT-TP2-M2-20151210	SW-7199	Chromium, Hexavalent	24	40.00
440-130588-1	TT-TP3-L1-20151210	SW-7199	Chromium, Hexavalent	24	47.25
440-130588-1	TT-TP3-L2-20151210	SW-7199	Chromium, Hexavalent	24	47.25
440-130588-1	TT-TP3-M1-20151210	SW-7199	Chromium, Hexavalent	24	41.00
440-130588-1	TT-TP3-M1-20151210-DUP	SW-7199	Chromium, Hexavalent	24	43.25
440-130588-1	TT-TP3-M2-20151210	SW-7199	Chromium, Hexavalent	24	40.25
440-130588-1	TT-TP4-L1-20151210	SW-7199	Chromium, Hexavalent	24	43.25
440-130588-1	TT-TP4-L2-20151210	SW-7199	Chromium, Hexavalent	24	43.25
440-130588-1	TT-TP4-M1-20151210	SW-7199	Chromium, Hexavalent	24	41.25
440-130588-1	TT-TP4-M2-20151210	SW-7199	Chromium, Hexavalent	24	53.50
440-135664-1	TT-TP2-M2-20160120-DUP	SW-7199	Chromium, Hexavalent	24	32.25
440-138059-1	TT-TP1-L2-20160211	EPA 218.6	Chromium, Hexavalent	24	332.00
440-138059-1	TT-TP2-L1-20160211	EPA 218.6	Chromium, Hexavalent	24	332.25
440-138059-1	TT-TP2-L2-20160211	EPA 218.6	Chromium, Hexavalent	24	332.00
440-138059-1	TT-TP3-L1-20160211	EPA 218.6	Chromium, Hexavalent	24	332.25
440-138059-1	TT-TP3-M1-20160211	EPA 218.6	Chromium, Hexavalent	24	334.25
440-138059-1	TT-TP4-L1-20160211	EPA 218.6	Chromium, Hexavalent	24	332.50
440-138059-1	TT-TP4-L2-20160211	EPA 218.6	Chromium, Hexavalent	24	332.50
440-138059-1	TT-TP4-M1-20160211	EPA 218.6	Chromium, Hexavalent	24	333.50
440-138059-1	TT-TP4-M2-20160211	EPA 218.6	Chromium, Hexavalent	24	331.50
440-138059-1	TT-TP4-M2-20160211-DUP	EPA 218.6	Chromium, Hexavalent	24	331.50
440-138059-1	TT-TP4-M3-20160211	EPA 218.6	Chromium, Hexavalent	24	330.50
440-138657-1	TT-TP1-L1-20160218	EPA 218.6	Chromium, Hexavalent	24	179.50
440-138657-1	TT-TP1-L2-20160218	EPA 218.6	Chromium, Hexavalent	24	179.25
440-138657-1	TT-TP2-L1-20160218	EPA 218.6	Chromium, Hexavalent	24	179.75
440-138657-1	TT-TP2-L2-20160218	EPA 218.6	Chromium, Hexavalent	24	179.5

**Table 7** Holding Time Exceedances

SDG	Sample ID	Method	Analyte	Time Limit (hours)	Time Elapsed (hours)
440-138657-1	TT-TP3-L1-20160218	EPA 218.6	Chromium, Hexavalent	24	179.75
440-138657-1	TT-TP3-M1-20160218	EPA 218.6	Chromium, Hexavalent	24	182.5
440-138657-1	TT-TP3-M2-20160218	EPA 218.6	Chromium, Hexavalent	24	182
440-138657-1	TT-TP4-L1-20160218	EPA 218.6	Chromium, Hexavalent	24	180.25
440-138657-1	TT-TP4-L2-20160218	EPA 218.6	Chromium, Hexavalent	24	180
440-138657-1	TT-TP4-M1-20160218	EPA 218.6	Chromium, Hexavalent	24	181.5
440-138657-1	TT-TP4-M2-20160218	EPA 218.6	Chromium, Hexavalent	24	181
440-138657-1	TT-TP4-M3-20160218	EPA 218.6	Chromium, Hexavalent	24	180.5
440-138657-1	TT-TP4-M3-20160218-DUP	EPA 218.6	Chromium, Hexavalent	24	180.5
440-139965-1	TT-TP3-L1-20160303	SW-7199	Chromium, Hexavalent	24	24.15
440-139965-1	TT-TP3-L2-20160303	SW-7199	Chromium, Hexavalent	24	24.25
440-139965-1	TT-TP3-M2-20160303	SW-7199	Chromium, Hexavalent	24	25.5
440-139965-1	TT-TP4-M3-20160303-DUP	SW-7199	Chromium, Hexavalent	24	25
440-140696-1	TT-TP1-M3-20160309	SW-7199	Chromium, Hexavalent	24	25.75
440-140826-1	TT-TP2-L1-20160310	SW-7199	Chromium, Hexavalent	24	24.75
440-140826-1	TT-TP2-L2-20160310	SW-7199	Chromium, Hexavalent	24	24.75
440-140826-1	TT-TP3-M1-20160310	SW-7199	Chromium, Hexavalent	24	29.25
440-140826-1	TT-TP3-M2-20160310	SW-7199	Chromium, Hexavalent	24	29.5
440-140826-1	TT-TP4-L1-20160310	SW-7199	Chromium, Hexavalent	24	24.15
440-140826-1	TT-TP4-M3-20160310	EPA 300.0	Nitrate	48	149.75
440-142439-1	TT-TP2-L2-20160323	SW-7199	Chromium, Hexavalent	24	24.25
440-143273-1	TT-TP2-M2-2016	EPA 300.0	Nitrate	48	106.75
440-145020-1	TT-TP4-M2-20160420	SW-7199	Chromium, Hexavalent	24	25
440-146524-1	TT-TP1-L2-20160505	SW-7199	Chromium, Hexavalent	24	24.15
440-146524-1	TT-TP2-M2-20160505	SW-7199	Chromium, Hexavalent	24	29
440-146524-1	TT-TP3-M2-20160505	SW-7199	Chromium, Hexavalent	24	28.75

**Table 8** Method Blank Detections

SDG	Blank SampleID	Method	Analyte	Result	Units	Qualified Samples
440-104925-1	MB 440-245079/1-A	SW-6020	Zinc	16.4	ug/L	EB-03/19/15
440-105330-1	MB 440-245361/1-A	SW-7470A	Mercury	0.000171	mg/L	EB-03/25/15
440-137910-1	MB 440-311592/1-B	SW-6020	Copper	0.999 ug/L	ug/L	TT-TP1-M2-20160210
						TT-TP1-M1-20160210
						TT-TP2-M2-20160210
						TT-TP3-M2-20160210
440-138059-1	MB 440-311592/1-B	SW-6020	Copper	0.999 ug/L	ug/L	TT-TP3-M1-20160211
						TT-TP4-M2-20160211
						TT-TP4-M2-20160211-DUP

**Table 9** Sample Cross-Reference

SDG	Client Sample ID	Lab Sample ID	Matrix	Sample Date	QC Type	Validation Stage	Alkalinity and ions by SM2320	Anions by EPA 300.0	Chlorate by EPA 300.1B	Hexavalent Chromium by SW-7199	Hexavalent Chromium by EPA 218.6	Metals by SW-6010B	Metals by SW-6010B_LCH	Metals by SW-6020	Mercury by SW-7470A	Mercury by SW-7471A	Perchlorate by EPA 314.0	pH by SW9045C	TDS by SM2540C	TOC by SM5310	TOC by SW-9060
440-104698-1	TT-TP1-B1-10	440-104698-3	SO	2015-03-17	NORM	Stage 2A	X (s)	X (s)	X (s)	X		X	X (s)	X		X	X	X (s)	X (s)		X
440-104698-1	TT-TP1-B1-14	440-104698-4	SO	2015-03-17	NORM	Stage 2A											X		X (s)		
440-104698-1	TT-TP1-B1-18	440-104698-5	SO	2015-03-17	NORM	Stage 2A	X (s)	X (s)	X (s)	X		X	X (s)	X		X	X	X (s)	X (s)		X
440-104698-1	TT-TP1-B1-2	440-104698-1	SO	2015-03-17	NORM	Stage 2A											X		X (s)		
440-104698-1	TT-TP1-B1-22	440-104698-6	SO	2015-03-17	NORM	Stage 2A											X		X (s)		
440-104698-1	TT-TP1-B1-26	440-104698-7	SO	2015-03-17	NORM	Stage 2A											X		X (s)		
440-104698-1	TT-TP1-B1-6	440-104698-2	SO	2015-03-17	NORM	Stage 2A											X		X (s)		
440-104832-1	TT-TP1-B2-10	440-104832-3	SO	2015-03-17	NORM	Stage 2A											X		X (s)		
440-104832-1	TT-TP1-B2-14	440-104832-4	SO	2015-03-17	NORM	Stage 2A											X		X (s)		
440-104832-1	TT-TP1-B2-14-DUP	440-104832-5	SO	2015-03-17	FD	Stage 2A											X		X (s)		
440-104832-1	TT-TP1-B2-18	440-104832-6	SO	2015-03-17	NORM	Stage 2A											X		X (s)		
440-104832-1	TT-TP1-B2-2	440-104832-1	SO	2015-03-17	NORM	Stage 2A											X		X (s)		
440-104832-1	TT-TP1-B2-22	440-104832-7	SO	2015-03-17	NORM	Stage 2A	X (s)	X (s)	X (s)	X		X	X (s)	X		X	X	X (s)	X (s)		X
440-104832-1	TT-TP1-B2-26	440-104832-8	SO	2015-03-17	NORM	Stage 2A											X		X (s)		
440-104832-1	TT-TP1-B2-6	440-104832-2	SO	2015-03-17	NORM	Stage 2A	X (s)	X (s)	X (s)	X		X	X (s)	X		X	X	X (s)	X (s)		X
440-104832-1	TT-TP1-B3-10	440-104832-11	SO	2015-03-18	NORM	Stage 2A											X		X (s)		
440-104832-1	TT-TP1-B3-14	440-104832-12	SO	2015-03-18	NORM	Stage 2A											X		X (s)		
440-104832-1	TT-TP1-B3-18	440-104832-13	SO	2015-03-18	NORM	Stage 2A	X (s)	X (s)	X (s)	X		X	X (s)	X		X	X	X (s)	X (s)		X
440-104832-1	TT-TP1-B3-2	440-104832-9	SO	2015-03-18	NORM	Stage 2A											X		X (s)		
440-104832-1	TT-TP1-B3-22	440-104832-14	SO	2015-03-18	NORM	Stage 2A											X		X (s)		
440-104832-1	TT-TP1-B3-26	440-104832-15	SO	2015-03-18	NORM	Stage 2A											X		X (s)		
440-104832-1	TT-TP1-B3-6	440-104832-10	SO	2015-03-18	NORM	Stage 2A	X (s)	X (s)	X (s)	X		X	X (s)	X		X	X	X (s)	X (s)		X
440-104832-1	TT-TP1-B4-10	440-104832-19	SO	2015-03-18	NORM	Stage 2A											X		X (s)		
440-104832-1	TT-TP1-B4-14	440-104832-20	SO	2015-03-18	NORM	Stage 2A											X		X (s)		
440-104832-1	TT-TP1-B4-18	440-104832-21	SO	2015-03-18	NORM	Stage 2A											X		X (s)		
440-104832-1	TT-TP1-B4-2	440-104832-16	SO	2015-03-18	NORM	Stage 2A	X (s)	X (s)	X (s)	X		X	X (s)	X		X	X	X (s)	X (s)		X
440-104832-1	TT-TP1-B4-22	440-104832-22	SO	2015-03-18	NORM	Stage 2A											X		X (s)		
440-104832-1	TT-TP1-B4-26	440-104832-23	SO	2015-03-18	NORM	Stage 2A	X (s)	X (s)	X (s)	X		X	X (s)	X		X	X	X (s)	X (s)		X
440-104832-1	TT-TP1-B4-6	440-104832-17	SO	2015-03-18	NORM	Stage 2A											X		X (s)		
440-104832-1	TT-TP1-B4-6-DUP	440-104832-18	SO	2015-03-18	FD	Stage 2A											X		X (s)		
440-104832-1	TT-TP2-B1-10	440-104832-26	SO	2015-03-18	NORM	Stage 2A											X		X (s)		
440-104832-1	TT-TP2-B1-14	440-104832-27	SO	2015-03-18	NORM	Stage 2A	X (s)	X (s)	X (s)	X		X	X (s)	X		X	X	X (s)	X (s)		X



Table 9 Sample Cross-Reference

SDG	Client Sample ID	Lab Sample ID	Matrix	Sample Date	QC Type	Validation Stage	Alkalinity and ions by SM2320	Anions by EPA 300.0	Chlorate by EPA 300.1B	Hexavalent Chromium by SW-7199	Hexavalent Chromium by EPA 218.6	Metals by SW-6010B	Metals by SW-6010B_LCH	Metals by SW-6020	Mercury by SW-7470A	Mercury by SW-7471A	Perchlorate by EPA 314.0	pH by SW9045C	TDS by SM2540C	TOC by SM5310	TOC by SW-9060
440-104832-1	TT-TP2-B1-18	440-104832-28	SO	2015-03-18	NORM	Stage 2A											X		X (s)		
440-104832-1	TT-TP2-B1-2	440-104832-24	SO	2015-03-18	NORM	Stage 2A	X (s)	X (s)	X (s)	X		X	X (s)	X		X	X	X (s)	X (s)		X
440-104832-1	TT-TP2-B1-22	440-104832-29	SO	2015-03-18	NORM	Stage 2A											X		X (s)		
440-104832-1	TT-TP2-B1-22-DUP	440-104832-30	SO	2015-03-18	FD	Stage 2A											X		X (s)		
440-104832-1	TT-TP2-B1-26	440-104832-31	SO	2015-03-18	NORM	Stage 2A											X		X (s)		
440-104832-1	TT-TP2-B1-6	440-104832-25	SO	2015-03-18	NORM	Stage 2A											X		X (s)		
440-104832-1	TT-TP2-B2-10	440-104832-36	SO	2015-03-18	NORM	Stage 2A	X (s)	X (s)	X (s)	X		X	X (s)	X		X	X	X (s)	X (s)		X
440-104832-1	TT-TP2-B2-14	440-104832-37	SO	2015-03-18	NORM	Stage 2A											X		X (s)		
440-104832-1	TT-TP2-B2-18	440-104832-38	SO	2015-03-18	NORM	Stage 2A											X		X (s)		
440-104832-1	TT-TP2-B2-2	440-104832-34	SO	2015-03-18	NORM	Stage 2A											X		X (s)		
440-104832-1	TT-TP2-B2-22	440-104832-39	SO	2015-03-18	NORM	Stage 2A											X		X (s)		
440-104832-1	TT-TP2-B2-26	440-104832-40	SO	2015-03-18	NORM	Stage 2A	X (s)	X (s)	X (s)	X		X	X (s)	X		X	X	X (s)	X (s)		X
440-104832-1	TT-TP2-B2-6	440-104832-35	SO	2015-03-18	NORM	Stage 2A											X		X (s)		
440-104925-1	TT-TP2-B3-10	440-104925-3	SO	2015-03-18	NORM	Stage 2A											X		X (s)		
440-104925-1	TT-TP2-B3-14	440-104925-4	SO	2015-03-18	NORM	Stage 2A	X (s)	X (s)	X (s)	X		X	X (s)	X		X	X	X (s)	X (s)		X
440-104925-1	TT-TP2-B3-14-DUP	440-104925-5	SO	2015-03-18	FD	Stage 2A	X (s)	X (s)	X (s)	X		X	X (s)	X		X	X	X (s)	X (s)		X
440-104925-1	TT-TP2-B3-18	440-104925-6	SO	2015-03-18	NORM	Stage 2A											X		X (s)		
440-104925-1	TT-TP2-B3-2	440-104925-1	SO	2015-03-18	NORM	Stage 2A	X (s)	X (s)	X (s)	X		X	X (s)	X		X	X	X (s)	X (s)		X
440-104925-1	TT-TP2-B3-22	440-104925-7	SO	2015-03-18	NORM	Stage 2A											X		X (s)		
440-104925-1	TT-TP2-B3-26	440-104925-8	SO	2015-03-18	NORM	Stage 2A											X		X (s)		
440-104925-1	TT-TP2-B3-6	440-104925-2	SO	2015-03-18	NORM	Stage 2A											X		X (s)		
440-104925-1	TT-TP2-B4-10	440-104925-11	SO	2015-03-19	NORM	Stage 2A											X		X (s)		
440-104925-1	TT-TP2-B4-14	440-104925-12	SO	2015-03-19	NORM	Stage 2A											X		X (s)		
440-104925-1	TT-TP2-B4-18	440-104925-13	SO	2015-03-19	NORM	Stage 2A											X		X (s)		
440-104925-1	TT-TP2-B4-2	440-104925-9	SO	2015-03-19	NORM	Stage 2A											X		X (s)		
440-104925-1	TT-TP2-B4-22	440-104925-14	SO	2015-03-19	NORM	Stage 2A	X (s)	X (s)	X (s)	X		X	X (s)	X		X	X	X (s)	X (s)		X
440-104925-1	TT-TP2-B4-26	440-104925-15	SO	2015-03-19	NORM	Stage 2A											X		X (s)		
440-104925-1	TT-TP2-B4-6	440-104925-10	SO	2015-03-19	NORM	Stage 2A	X (s)	X (s)	X (s)	X		X	X (s)	X		X	X	X (s)	X (s)		X
440-104925-1	TT-TP3-B1-10	440-104925-19	SO	2015-03-19	NORM	Stage 2A	X (s)	X (s)	X (s)	X		X	X (s)	X		X	X	X (s)	X (s)		X
440-104925-1	TT-TP3-B1-14	440-104925-20	SO	2015-03-19	NORM	Stage 2A											X		X (s)		
440-104925-1	TT-TP3-B1-18	440-104925-21	SO	2015-03-19	NORM	Stage 2A	X (s)	X (s)	X (s)	X		X	X (s)	X		X	X	X (s)	X (s)		X
440-104925-1	TT-TP3-B1-2	440-104925-16	SO	2015-03-19	NORM	Stage 2A											X		X (s)		

Table 9 Sample Cross-Reference

SDG	Client Sample ID	Lab Sample ID	Matrix	Sample Date	QC Type	Validation Stage	Alkalinity and ions by SM2320	Anions by EPA 300.0	Chlorate by EPA 300.1B	Hexavalent Chromium by SW-7199	Hexavalent Chromium by EPA 218.6	Metals by SW-6010B	Metals by SW-6010B_LCH	Metals by SW-6020	Mercury by SW-7470A	Mercury by SW-7471A	Perchlorate by EPA 314.0	pH by SW9045C	TDS by SM2540C	TOC by SM5310	TOC by SW-9060
440-104925-1	TT-TP3-B1-22	440-104925-22	SO	2015-03-19	NORM	Stage 2A											X		X (s)		
440-104925-1	TT-TP3-B1-26	440-104925-23	SO	2015-03-19	NORM	Stage 2A											X		X (s)		
440-104925-1	TT-TP3-B1-6	440-104925-17	SO	2015-03-19	NORM	Stage 2A											X		X (s)		
440-104925-1	TT-TP3-B1-6-DUP	440-104925-18	SO	2015-03-19	FD	Stage 2A											X		X (s)		
440-104925-1	TT-TP3-B2-10	440-104925-26	SO	2015-03-19	NORM	Stage 2A											X		X (s)		
440-104925-1	TT-TP3-B2-14	440-104925-27	SO	2015-03-19	NORM	Stage 2A	X (s)	X (s)	X (s)	X		X	X (s)	X		X	X	X (s)	X (s)		X
440-104925-1	TT-TP3-B2-18	440-104925-28	SO	2015-03-19	NORM	Stage 2A											X		X (s)		
440-104925-1	TT-TP3-B2-2	440-104925-24	SO	2015-03-19	NORM	Stage 2A											X		X (s)		
440-104925-1	TT-TP3-B2-22	440-104925-29	SO	2015-03-19	NORM	Stage 2A											X		X (s)		
440-104925-1	TT-TP3-B2-22-DUP	440-104925-30	SO	2015-03-19	FD	Stage 2A											X		X (s)		
440-104925-1	TT-TP3-B2-26	440-104925-31	SO	2015-03-19	NORM	Stage 2A											X		X (s)		
440-104925-1	TT-TP3-B2-26-DUP	440-104925-32	SO	2015-03-19	FD	Stage 2A											X		X (s)		
440-104925-1	TT-TP3-B2-6	440-104925-25	SO	2015-03-19	NORM	Stage 2A				X		X		X		X	X	X	X (s)		X
440-104925-1	TT-TP3-B3-10	440-104925-36	SO	2015-03-19	NORM	Stage 2A	X (s)	X (s)	X (s)	X		X	X (s)	X		X	X	X (s)	X (s)		X
440-104925-1	TT-TP3-B3-14	440-104925-37	SO	2015-03-19	NORM	Stage 2A											X		X (s)		
440-104925-1	TT-TP3-B3-18	440-104925-38	SO	2015-03-19	NORM	Stage 2A											X		X (s)		
440-104925-1	TT-TP3-B3-2	440-104925-34	SO	2015-03-19	NORM	Stage 2A											X		X (s)		
440-104925-1	TT-TP3-B3-22	440-104925-39	SO	2015-03-19	NORM	Stage 2A											X		X (s)		
440-104925-1	TT-TP3-B3-26	440-104925-40	SO	2015-03-19	NORM	Stage 2A	X (s)	X (s)	X (s)	X		X	X (s)	X		X	X	X (s)	X (s)		X
440-104925-1	TT-TP3-B3-6	440-104925-35	SO	2015-03-19	NORM	Stage 2A											X		X (s)		
440-104925-1	TT-TP3-B4-10	440-104925-44	SO	2015-03-19	NORM	Stage 2A											X		X (s)		
440-104925-1	TT-TP3-B4-14	440-104925-45	SO	2015-03-19	NORM	Stage 2A											X		X (s)		
440-104925-1	TT-TP3-B4-14-DUP	440-104925-46	SO	2015-03-19	FD	Stage 2A											X		X (s)		
440-104925-1	TT-TP3-B4-18	440-104925-47	SO	2015-03-19	NORM	Stage 2A	X (s)	X (s)	X (s)	X		X	X (s)	X		X	X	X (s)	X (s)		X
440-104925-1	TT-TP3-B4-2	440-104925-42	SO	2015-03-19	NORM	Stage 2A	X (s)	X (s)	X (s)	X		X	X (s)	X		X	X	X (s)	X (s)		X
440-104925-1	TT-TP3-B4-22	440-104925-48	SO	2015-03-19	NORM	Stage 2A											X		X (s)		
440-104925-1	TT-TP3-B4-26	440-104925-49	SO	2015-03-19	NORM	Stage 2A											X		X (s)		
440-104925-1	TT-TP3-B4-6	440-104925-43	SO	2015-03-19	NORM	Stage 2A											X		X (s)		
440-105015-1	EB-03/20/15	440-105015-31	BW	2015-03-20	EB	Stage 2A				X		X		X	X		X				X
440-105015-1	TT-TP4-B1-10	440-105015-3	SO	2015-03-19	NORM	Stage 2A											X		X (s)		
440-105015-1	TT-TP4-B1-14	440-105015-4	SO	2015-03-19	NORM	Stage 2A	X (s)	X (s)	X (s)	X		X	X (s)	X		X	X	X (s)	X (s)		X
440-105015-1	TT-TP4-B1-18	440-105015-5	SO	2015-03-19	NORM	Stage 2A											X		X (s)		

Table 9 Sample Cross-Reference

SDG	Client Sample ID	Lab Sample ID	Matrix	Sample Date	QC Type	Validation Stage	Alkalinity and ions by SM2320	Anions by EPA 300.0	Chlorate by EPA 300.1B	Hexavalent Chromium by SW-7199	Hexavalent Chromium by EPA 218.6	Metals by SW-6010B	Metals by SW-6010B_LCH	Metals by SW-6020	Mercury by SW-7470A	Mercury by SW-7471A	Perchlorate by EPA 314.0	pH by SW9045C	TDS by SM2540C	TOC by SM5310	TOC by SW-9060
440-105015-1	TT-TP4-B1-2	440-105015-1	SO	2015-03-19	NORM	Stage 2A											X		X (s)		
440-105015-1	TT-TP4-B1-22	440-105015-6	SO	2015-03-19	NORM	Stage 2A											X		X (s)		
440-105015-1	TT-TP4-B1-26	440-105015-7	SO	2015-03-19	NORM	Stage 2A											X		X (s)		
440-105015-1	TT-TP4-B1-6	440-105015-2	SO	2015-03-19	NORM	Stage 2A	X (s)	X (s)	X (s)	X		X	X (s)	X		X	X	X (s)	X (s)		X
440-105015-1	TT-TP4-B2-10	440-105015-11	SO	2015-03-20	NORM	Stage 2A	X (s)	X (s)	X (s)	X		X	X (s)	X		X	X	X (s)	X (s)		X
440-105015-1	TT-TP4-B2-14	440-105015-12	SO	2015-03-20	NORM	Stage 2A											X		X (s)		
440-105015-1	TT-TP4-B2-18	440-105015-13	SO	2015-03-20	NORM	Stage 2A											X		X (s)		
440-105015-1	TT-TP4-B2-2	440-105015-8	SO	2015-03-20	NORM	Stage 2A											X		X (s)		
440-105015-1	TT-TP4-B2-22	440-105015-14	SO	2015-03-20	NORM	Stage 2A	X (s)	X (s)	X (s)	X		X	X (s)	X		X	X	X (s)	X (s)		X
440-105015-1	TT-TP4-B2-26	440-105015-15	SO	2015-03-20	NORM	Stage 2A											X		X (s)		
440-105015-1	TT-TP4-B2-6	440-105015-9	SO	2015-03-20	NORM	Stage 2A											X		X (s)		
440-105015-1	TT-TP4-B2-6-DUP	440-105015-10	SO	2015-03-20	FD	Stage 2A											X		X (s)		
440-105015-1	TT-TP4-B3-10	440-105015-18	SO	2015-03-20	NORM	Stage 2A											X		X (s)		
440-105015-1	TT-TP4-B3-14	440-105015-19	SO	2015-03-20	NORM	Stage 2A											X		X (s)		
440-105015-1	TT-TP4-B3-18	440-105015-20	SO	2015-03-20	NORM	Stage 2A											X		X (s)		
440-105015-1	TT-TP4-B3-2	440-105015-16	SO	2015-03-20	NORM	Stage 2A	X (s)	X (s)	X (s)	X		X	X (s)	X		X	X	X (s)	X (s)		X
440-105015-1	TT-TP4-B3-22	440-105015-21	SO	2015-03-20	NORM	Stage 2A	X (s)	X (s)	X (s)	X		X	X (s)	X		X	X	X (s)	X (s)		X
440-105015-1	TT-TP4-B3-22-DUP	440-105015-22	SO	2015-03-20	FD	Stage 2A	X (s)	X (s)	X (s)	X		X	X (s)	X		X	X	X (s)	X (s)		X
440-105015-1	TT-TP4-B3-26	440-105015-23	SO	2015-03-20	NORM	Stage 2A											X		X (s)		
440-105015-1	TT-TP4-B3-6	440-105015-17	SO	2015-03-20	NORM	Stage 2A											X		X (s)		
440-105015-1	TT-TP4-B4-10	440-105015-26	SO	2015-03-20	NORM	Stage 2A	X (s)	X (s)	X (s)	X		X	X (s)	X		X	X	X (s)	X (s)		X
440-105015-1	TT-TP4-B4-14	440-105015-27	SO	2015-03-20	NORM	Stage 2A											X		X (s)		
440-105015-1	TT-TP4-B4-18	440-105015-28	SO	2015-03-20	NORM	Stage 2A											X		X (s)		
440-105015-1	TT-TP4-B4-2	440-105015-24	SO	2015-03-20	NORM	Stage 2A											X		X (s)		
440-105015-1	TT-TP4-B4-22	440-105015-29	SO	2015-03-20	NORM	Stage 2A											X		X (s)		
440-105015-1	TT-TP4-B4-26	440-105015-30	SO	2015-03-20	NORM	Stage 2A	X (s)	X (s)	X (s)	X		X	X (s)	X		X	X	X (s)	X (s)		X
440-105015-1	TT-TP4-B4-6	440-105015-25	SO	2015-03-20	NORM	Stage 2A											X		X (s)		
440-105330-1	EB-03/25/15	440-105330-10	BW	2015-03-25	EB	Stage 2A				X		X		X	X		X				X
440-105330-1	TT-TP4-L2-10	440-105330-3	SO	2015-03-25	NORM	Stage 2A	X (s)	X (s)	X (s)	X		X	X (s)	X		X	X	X (s)	X (s)		X
440-105330-1	TT-TP4-L2-14	440-105330-4	SO	2015-03-25	NORM	Stage 2A											X		X (s)		
440-105330-1	TT-TP4-L2-18	440-105330-5	SO	2015-03-25	NORM	Stage 2A											X		X (s)		
440-105330-1	TT-TP4-L2-2	440-105330-1	SO	2015-03-25	NORM	Stage 2A											X		X (s)		

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SDG	Client Sample ID	Lab Sample ID	Matrix	Sample Date	QC Type	Validation Stage	Alkalinity and ions by SM2320	Anions by EPA 300.0	Chlorate by EPA 300.1B	Hexavalent Chromium by SW-7199	Hexavalent Chromium by EPA 218.6	Metals by SW-6010B	Metals by SW-6010B_LCH	Metals by SW-6020	Mercury by SW-7470A	Mercury by SW-7471A	Perchlorate by EPA 314.0	pH by SW9045C	TDS by SM2540C	TOC by SM5310	TOC by SW-9060
440-105330-1	TT-TP4-L2-22	440-105330-6	SO	2015-03-25	NORM	Stage 2A	X (s)	X (s)	X (s)	X		X	X (s)	X		X	X	X (s)	X (s)		X
440-105330-1	TT-TP4-L2-22-DUP	440-105330-7	SO	2015-03-25	FD	Stage 2A	X (s)	X (s)	X (s)	X		X	X (s)	X		X	X	X (s)	X (s)		X
440-105330-1	TT-TP4-L2-26	440-105330-8	SO	2015-03-25	NORM	Stage 2A											X		X (s)		
440-105330-1	TT-TP4-L2-26-DUP	440-105330-9	SO	2015-03-25	FD	Stage 2A											X		X (s)		
440-105330-1	TT-TP4-L2-6	440-105330-2	SO	2015-03-25	NORM	Stage 2A											X		X (s)		
440-105406-1	EB-03/26/15	440-105406-24	BW	2015-03-26	EB	Stage 2A				X		X		X	X		X				X
440-105406-1	TT-TP1-L2-10	440-105406-18	SO	2015-03-26	NORM	Stage 2A											X		X (s)		
440-105406-1	TT-TP1-L2-14	440-105406-19	SO	2015-03-26	NORM	Stage 2A											X		X (s)		
440-105406-1	TT-TP1-L2-14-DUP	440-105406-20	SO	2015-03-26	FD	Stage 2A											X		X (s)		
440-105406-1	TT-TP1-L2-18	440-105406-21	SO	2015-03-26	NORM	Stage 2A	X (s)	X (s)	X (s)	X		X	X (s)	X		X	X	X (s)	X (s)		X
440-105406-1	TT-TP1-L2-2	440-105406-16	SO	2015-03-26	NORM	Stage 2A											X		X (s)		
440-105406-1	TT-TP1-L2-22	440-105406-22	SO	2015-03-26	NORM	Stage 2A											X		X (s)		
440-105406-1	TT-TP1-L2-26	440-105406-23	SO	2015-03-26	NORM	Stage 2A											X		X (s)		
440-105406-1	TT-TP1-L2-6	440-105406-17	SO	2015-03-26	NORM	Stage 2A	X (s)	X (s)	X (s)	X		X	X (s)	X		X	X	X (s)	X (s)		X
440-105406-1	TT-TP2-L2-10	440-105406-11	SO	2015-03-26	NORM	Stage 2A											X		X (s)		
440-105406-1	TT-TP2-L2-14	440-105406-12	SO	2015-03-26	NORM	Stage 2A											X		X (s)		
440-105406-1	TT-TP2-L2-18	440-105406-13	SO	2015-03-26	NORM	Stage 2A											X		X (s)		
440-105406-1	TT-TP2-L2-2	440-105406-9	SO	2015-03-26	NORM	Stage 2A	X (s)	X (s)	X (s)	X		X	X (s)	X		X	X	X (s)	X (s)		X
440-105406-1	TT-TP2-L2-22	440-105406-14	SO	2015-03-26	NORM	Stage 2A											X		X (s)		
440-105406-1	TT-TP2-L2-26	440-105406-15	SO	2015-03-26	NORM	Stage 2A	X (s)	X (s)	X (s)	X		X	X (s)	X		X	X	X (s)	X (s)		X
440-105406-1	TT-TP2-L2-6	440-105406-10	SO	2015-03-26	NORM	Stage 2A											X		X (s)		
440-105406-1	TT-TP3-L2-10	440-105406-4	SO	2015-03-26	NORM	Stage 2A											X		X (s)		
440-105406-1	TT-TP3-L2-14	440-105406-5	SO	2015-03-26	NORM	Stage 2A	X (s)	X (s)	X (s)	X		X	X (s)	X		X	X	X (s)	X (s)		X
440-105406-1	TT-TP3-L2-18	440-105406-6	SO	2015-03-26	NORM	Stage 2A											X		X (s)		
440-105406-1	TT-TP3-L2-2	440-105406-1	SO	2015-03-26	NORM	Stage 2A											X		X (s)		
440-105406-1	TT-TP3-L2-22	440-105406-7	SO	2015-03-26	NORM	Stage 2A											X		X (s)		
440-105406-1	TT-TP3-L2-26	440-105406-8	SO	2015-03-26	NORM	Stage 2A											X		X (s)		
440-105406-1	TT-TP3-L2-6	440-105406-2	SO	2015-03-26	NORM	Stage 2A	X (s)	X (s)	X (s)	X		X	X (s)	X		X	X	X (s)	X (s)		X
440-105406-1	TT-TP3-L2-6-DUP	440-105406-3	SO	2015-03-26	FD	Stage 2A	X (s)	X (s)	X (s)	X		X	X (s)	X		X	X	X (s)	X (s)		X
440-130543-1	TT-TP4-M3-20151209	440-130543-1	WG	2015-12-09	NORM	Stage 2A	X	X	X	X		X		X	X		X		X	X	
440-130588-1	TT-TP1-L1-20151210	440-130588-17	WG	2015-12-10	NORM	Stage 2A	X	X		X				X			X		X	X	
440-130588-1	TT-TP1-L2-20151210	440-130588-18	WG	2015-12-10	NORM	Stage 2A	X	X		X				X			X		X	X	

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440-130588-1	TT-TP1-M1-20151210	440-130588-7	WG	2015-12-10	NORM	Stage 2A	X	X	X	X		X		X	X		X		X	X	
440-130588-1	TT-TP1-M2-20151210	440-130588-8	WG	2015-12-10	NORM	Stage 2A	X	X	X	X		X		X	X		X		X	X	
440-130588-1	TT-TP1-M3-20151210	440-130588-9	WG	2015-12-10	NORM	Stage 2A	X	X	X	X		X		X	X		X		X	X	
440-130588-1	TT-TP2-L1-20151210	440-130588-15	WG	2015-12-10	NORM	Stage 2A	X	X		X							X		X	X	
440-130588-1	TT-TP2-L2-20151210	440-130588-16	WG	2015-12-10	NORM	Stage 2A	X	X		X							X		X	X	
440-130588-1	TT-TP2-M1-20151210	440-130588-5	WG	2015-12-10	NORM	Stage 2A	X	X	X	X		X		X	X		X		X	X	
440-130588-1	TT-TP2-M2-20151210	440-130588-6	WG	2015-12-10	NORM	Stage 2A	X	X	X	X		X		X	X		X		X	X	
440-130588-1	TT-TP3-L1-20151210	440-130588-13	WG	2015-12-10	NORM	Stage 2A	X	X		X				X	X		X		X	X	
440-130588-1	TT-TP3-L2-20151210	440-130588-14	WG	2015-12-10	NORM	Stage 2A	X	X		X							X		X		
440-130588-1	TT-TP3-M1-20151210	440-130588-3	WG	2015-12-10	NORM	Stage 2A	X	X	X	X		X		X	X		X		X	X	
440-130588-1	TT-TP3-M1-20151210-DUP	440-130588-10	WG	2015-12-10	FD	Stage 2A	X	X	X	X		X		X	X		X		X	X	
440-130588-1	TT-TP3-M2-20151210	440-130588-4	WG	2015-12-10	NORM	Stage 2A	X	X	X	X		X		X	X		X		X	X	
440-130588-1	TT-TP4-L1-20151210	440-130588-11	WG	2015-12-10	NORM	Stage 2A	X	X		X							X		X	X	
440-130588-1	TT-TP4-L2-20151210	440-130588-12	WG	2015-12-10	NORM	Stage 2A	X	X		X							X		X	X	
440-130588-1	TT-TP4-M1-20151210	440-130588-1	WG	2015-12-10	NORM	Stage 2A	X	X	X	X		X		X	X		X		X	X	
440-130588-1	TT-TP4-M2-20151210	440-130588-2	WG	2015-12-10	NORM	Stage 2A	X	X	X	X		X		X	X		X		X	X	
440-132876-1	TT-TP2-L1-20160103	440-132876-4	WG	2016-01-03	NORM	Stage 2A								X			X		X		
440-132876-1	TT-TP2-L2-20160103	440-132876-3	WG	2016-01-03	NORM	Stage 2A								X			X		X	X	
440-132876-1	TT-TP2-M1-20160103	440-132876-1	WG	2016-01-03	NORM	Stage 2A								X			X		X	X	
440-132876-1	TT-TP2-M2-20160103	440-132876-2	WG	2016-01-03	NORM	Stage 2A								X			X		X	X	
440-132876-1	TT-TP2-M2-20160103-DUP	440-132876-5	WG	2016-01-03	FD	Stage 2A								X			X		X	X	
440-135664-1	TT-TP1-L1-20160120	440-135664-8	WG	2016-01-20	NORM	Stage 2A				X							X		X		
440-135664-1	TT-TP1-L2-20160120	440-135664-9	WG	2016-01-20	NORM	Stage 2A				X				X			X		X		
440-135664-1	TT-TP1-M1-20160120	440-135664-4	WG	2016-01-20	NORM	Stage 2A				X				X			X		X	X	
440-135664-1	TT-TP1-M2-20160120	440-135664-5	WG	2016-01-20	NORM	Stage 2A				X				X			X		X	X	
440-135664-1	TT-TP2-L1-20160120	440-135664-6	WG	2016-01-20	NORM	Stage 2A				X							X		X		
440-135664-1	TT-TP2-L2-20160120	440-135664-7	WG	2016-01-20	NORM	Stage 2A				X				X			X		X		
440-135664-1	TT-TP2-M1-20160120	440-135664-3	WG	2016-01-20	NORM	Stage 2A				X				X			X		X	X	
440-135664-1	TT-TP2-M2-20160120	440-135664-1	WG	2016-01-20	NORM	Stage 2A				X				X			X		X	X	
440-135664-1	TT-TP2-M2-20160120-DUP	440-135664-2	WG	2016-01-20	FD	Stage 2A				X				X			X		X	X	
440-137164-1	TT-TP1-M1-20160203	440-137164-1	WG	2016-02-03	NORM	Stage 2A				X				X			X		X	X	
440-137164-1	TT-TP1-M2-20160203	440-137164-2	WG	2016-02-03	NORM	Stage 2A				X				X			X		X	X	

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440-137164-1	TT-TP1-M3-20160203	440-137164-3	WG	2016-02-03	NORM	Stage 2A				X				X			X		X	X	
440-137164-1	TT-TP2-M1-20160203	440-137164-5	WG	2016-02-03	NORM	Stage 2A				X				X			X		X	X	
440-137164-1	TT-TP2-M2-20160203	440-137164-4	WG	2016-02-03	NORM	Stage 2A				X				X			X		X	X	
440-137164-1	TT-TP3-M1-20160203	440-137164-6	WG	2016-02-03	NORM	Stage 2A				X				X			X		X	X	
440-137358-1	TT-TP1-L1-20160204	440-137358-12	WG	2016-02-04	NORM	Stage 2A				X							X		X		
440-137358-1	TT-TP1-L2-20160204	440-137358-13	WG	2016-02-04	NORM	Stage 2A				X				X			X		X	X	
440-137358-1	TT-TP2-L1-20160204	440-137358-10	WG	2016-02-04	NORM	Stage 2A				X							X		X		
440-137358-1	TT-TP2-L2-20160204	440-137358-11	WG	2016-02-04	NORM	Stage 2A				X				X			X		X		
440-137358-1	TT-TP3-L1-20160204	440-137358-8	WG	2016-02-04	NORM	Stage 2A				X							X		X		
440-137358-1	TT-TP3-L2-20160204	440-137358-9	WG	2016-02-04	NORM	Stage 2A				X							X		X		
440-137358-1	TT-TP3-M2-20160204	440-137358-1	WG	2016-02-04	NORM	Stage 2A				X				X			X		X	X	
440-137358-1	TT-TP4-L1-20160204	440-137358-6	WG	2016-02-04	NORM	Stage 2A				X							X		X		
440-137358-1	TT-TP4-L2-20160204	440-137358-7	WG	2016-02-04	NORM	Stage 2A				X							X		X		
440-137358-1	TT-TP4-M1-20160204	440-137358-4	WG	2016-02-04	NORM	Stage 2A				X				X			X		X	X	
440-137358-1	TT-TP4-M2-20160204	440-137358-3	WG	2016-02-04	NORM	Stage 2A				X				X			X		X	X	
440-137358-1	TT-TP4-M3-20160204	440-137358-2	WG	2016-02-04	NORM	Stage 2A				X				X			X		X	X	
440-137358-1	TT-TP4-M3-20160204-DUP	440-137358-5	WG	2016-02-04	FD	Stage 2A				X				X			X		X	X	
440-137910-1	TT-TP1-M1-20160210	440-137910-2	WG	2016-02-10	NORM	Stage 2A	X	X	X		X	X		X	X		X		X	X	
440-137910-1	TT-TP1-M2-20160210	440-137910-1	WG	2016-02-10	NORM	Stage 2A	X	X	X		X	X		X	X		X		X	X	
440-137910-1	TT-TP1-M3-20160210	440-137910-3	WG	2016-02-10	NORM	Stage 2A	X	X	X		X	X		X	X		X		X	X	
440-137910-1	TT-TP2-M1-20160210	440-137910-4	WG	2016-02-10	NORM	Stage 2A	X	X	X		X	X		X	X		X		X	X	
440-137910-1	TT-TP2-M2-20160210	440-137910-5	WG	2016-02-10	NORM	Stage 2A	X	X	X		X	X		X	X		X		X	X	
440-137910-1	TT-TP3-M2-20160210	440-137910-6	WG	2016-02-10	NORM	Stage 2A	X	X	X		X	X		X	X		X		X	X	
440-138059-1	TT-TP1-L1-20160211	440-138059-9	WG	2016-02-11	NORM	Stage 2A											X				
440-138059-1	TT-TP1-L2-20160211	440-138059-10	WG	2016-02-11	NORM	Stage 2A					X			X			X		X		
440-138059-1	TT-TP2-L1-20160211	440-138059-7	WG	2016-02-11	NORM	Stage 2A					X						X				
440-138059-1	TT-TP2-L2-20160211	440-138059-8	WG	2016-02-11	NORM	Stage 2A					X						X		X		
440-138059-1	TT-TP3-L1-20160211	440-138059-5	WG	2016-02-11	NORM	Stage 2A					X						X				
440-138059-1	TT-TP3-L2-20160211	440-138059-6	WG	2016-02-11	NORM	Stage 2A											X				
440-138059-1	TT-TP3-M1-20160211	440-138059-1	WG	2016-02-11	NORM	Stage 2A	X	X	X		X	X		X	X		X		X	X	
440-138059-1	TT-TP4-L1-20160211	440-138059-3	WG	2016-02-11	NORM	Stage 2A					X						X				
440-138059-1	TT-TP4-L2-20160211	440-138059-4	WG	2016-02-11	NORM	Stage 2A					X						X				

Table 9 Sample Cross-Reference

SDG	Client Sample ID	Lab Sample ID	Matrix	Sample Date	QC Type	Validation Stage	Alkalinity and ions by SM2320	Anions by EPA 300.0	Chlorate by EPA 300.1B	Hexavalent Chromium by SW-7199	Hexavalent Chromium by EPA 218.6	Metals by SW-6010B	Metals by SW-6010B_LCH	Metals by SW-6020	Mercury by SW-7470A	Mercury by SW-7471A	Perchlorate by EPA 314.0	pH by SW9045C	TDS by SM2540C	TOC by SM5310	TOC by SW-9060
440-138059-1	TT-TP4-M1-20160211	440-138059-2	WG	2016-02-11	NORM	Stage 2A	X	X	X		X	X		X	X		X		X	X	
440-138059-1	TT-TP4-M2-20160211	440-138059-11	WG	2016-02-11	NORM	Stage 2A	X	X	X		X	X		X	X		X		X	X	
440-138059-1	TT-TP4-M2-20160211-DUP	440-138059-12	WG	2016-02-11	FD	Stage 2A	X	X	X		X	X		X	X		X		X	X	
440-138059-1	TT-TP4-M3-20160211	440-138059-13	WG	2016-02-11	NORM	Stage 2A	X	X	X		X	X		X	X		X		X	X	
440-138539-1	TT-TP1-M1-20160217	440-138539-1	WG	2016-02-17	NORM	Stage 2A					X			X			X		X	X	
440-138539-1	TT-TP1-M2-20160217	440-138539-2	WG	2016-02-17	NORM	Stage 2A					X			X			X		X	X	
440-138539-1	TT-TP1-M3-20160217	440-138539-3	WG	2016-02-17	NORM	Stage 2A					X			X			X		X	X	
440-138539-1	TT-TP2-M1-20160217	440-138539-4	WG	2016-02-17	NORM	Stage 2A					X			X			X		X	X	
440-138539-1	TT-TP2-M2-20160217	440-138539-5	WG	2016-02-17	NORM	Stage 2A					X			X			X		X	X	
440-138657-1	TT-TP1-L1-20160218	440-138657-13	WG	2016-02-18	NORM	Stage 2A					X						X				
440-138657-1	TT-TP1-L2-20160218	440-138657-14	WG	2016-02-18	NORM	Stage 2A					X			X			X		X		
440-138657-1	TT-TP2-L1-20160218	440-138657-11	WG	2016-02-18	NORM	Stage 2A					X						X		X		
440-138657-1	TT-TP2-L2-20160218	440-138657-12	WG	2016-02-18	NORM	Stage 2A					X			X			X		X		
440-138657-1	TT-TP3-L1-20160218	440-138657-9	WG	2016-02-18	NORM	Stage 2A					X						X				
440-138657-1	TT-TP3-L2-20160218	440-138657-10	WG	2016-02-18	NORM	Stage 2A											X				
440-138657-1	TT-TP3-M1-20160218	440-138657-1	WG	2016-02-18	NORM	Stage 2A					X			X			X		X	X	
440-138657-1	TT-TP3-M2-20160218	440-138657-2	WG	2016-02-18	NORM	Stage 2A					X			X			X		X	X	
440-138657-1	TT-TP4-L1-20160218	440-138657-7	WG	2016-02-18	NORM	Stage 2A					X			X			X		X		
440-138657-1	TT-TP4-L2-20160218	440-138657-8	WG	2016-02-18	NORM	Stage 2A					X			X			X		X		
440-138657-1	TT-TP4-M1-20160218	440-138657-3	WG	2016-02-18	NORM	Stage 2A					X			X			X		X	X	
440-138657-1	TT-TP4-M2-20160218	440-138657-4	WG	2016-02-18	NORM	Stage 2A					X			X			X		X	X	
440-138657-1	TT-TP4-M3-20160218	440-138657-5	WG	2016-02-18	NORM	Stage 2A					X			X			X		X	X	
440-138657-1	TT-TP4-M3-20160218-DUP	440-138657-6	WG	2016-02-18	FD	Stage 2A					X			X			X		X	X	
440-139185-1	TT-TP1-M1	440-139185-1	WG	2016-02-24	NORM	Stage 2A				X				X			X		X	X	
440-139185-1	TT-TP1-M2	440-139185-2	WG	2016-02-24	NORM	Stage 2A				X				X			X		X	X	
440-139185-1	TT-TP1-M3	440-139185-3	WG	2016-02-24	NORM	Stage 2A				X				X			X		X	X	
440-139185-1	TT-TP2-M1	440-139185-5	WG	2016-02-24	NORM	Stage 2A				X				X			X		X	X	
440-139185-1	TT-TP2-M2	440-139185-4	WG	2016-02-24	NORM	Stage 2A				X				X			X		X	X	
440-139326-1	TT-TP1-L1-20160225	440-139326-13	WG	2016-02-25	NORM	Stage 2A				X							X		X		
440-139326-1	TT-TP1-L2-20160225	440-139326-14	WG	2016-02-25	NORM	Stage 2A				X				X			X		X		
440-139326-1	TT-TP2-L1-20160225	440-139326-11	WG	2016-02-25	NORM	Stage 2A				X							X		X		
440-139326-1	TT-TP2-L2-20160225	440-139326-12	WG	2016-02-25	NORM	Stage 2A				X							X		X		

Table 9 Sample Cross-Reference

SDG	Client Sample ID	Lab Sample ID	Matrix	Sample Date	QC Type	Validation Stage	Alkalinity and ions by SM2320	Anions by EPA 300.0	Chlorate by EPA 300.1B	Hexavalent Chromium by SW-7199	Hexavalent Chromium by EPA 218.6	Metals by SW-6010B	Metals by SW-6010B_LCH	Metals by SW-6020	Mercury by SW-7470A	Mercury by SW-7471A	Perchlorate by EPA 314.0	pH by SW9045C	TDS by SM2540C	TOC by SM5310	TOC by SW-9060
440-139326-1	TT-TP3-L1-20160225	440-139326-9	WG	2016-02-25	NORM	Stage 2A				X							X		X		
440-139326-1	TT-TP3-L2-20160225	440-139326-10	WG	2016-02-25	NORM	Stage 2A				X				X			X		X		
440-139326-1	TT-TP3-M1-20160225	440-139326-1	WG	2016-02-25	NORM	Stage 2A				X				X			X		X	X	
440-139326-1	TT-TP3-M2-20160225	440-139326-2	WG	2016-02-25	NORM	Stage 2A				X							X		X	X	
440-139326-1	TT-TP4-L1-20160225	440-139326-7	WG	2016-02-25	NORM	Stage 2A				X							X		X		
440-139326-1	TT-TP4-L2-20160225	440-139326-8	WG	2016-02-25	NORM	Stage 2A				X							X		X		
440-139326-1	TT-TP4-M1-20160225	440-139326-3	WG	2016-02-25	NORM	Stage 2A				X				X			X		X	X	
440-139326-1	TT-TP4-M2-20160225	440-139326-4	WG	2016-02-25	NORM	Stage 2A				X				X			X		X	X	
440-139326-1	TT-TP4-M3-20160225	440-139326-5	WG	2016-02-25	NORM	Stage 2A				X				X			X		X	X	
440-139326-1	TT-TP4-M3-20160225-DUP	440-139326-6	WG	2016-02-25	FD	Stage 2A				X				X			X		X	X	
440-139843-1	TT-TP1-M1-20160302	440-139843-3	WG	2016-03-02	NORM	Stage 2A				X				X			X		X	X	
440-139843-1	TT-TP1-M2-20160302	440-139843-2	WG	2016-03-02	NORM	Stage 2A				X				X			X		X	X	
440-139843-1	TT-TP1-M3-20160302	440-139843-1	WG	2016-03-02	NORM	Stage 2A				X				X			X		X	X	
440-139843-1	TT-TP2-M1-20160302	440-139843-5	WG	2016-03-02	NORM	Stage 2A				X				X			X		X	X	
440-139843-1	TT-TP2-M2-20160302	440-139843-4	WG	2016-03-02	NORM	Stage 2A				X				X			X		X	X	
440-139965-1	TT-TP1-L1-20160303	440-139965-13	WG	2016-03-03	NORM	Stage 2A				X							X		X		
440-139965-1	TT-TP1-L2-20160303	440-139965-14	WG	2016-03-03	NORM	Stage 2A				X				X			X		X		
440-139965-1	TT-TP2-L1-20160303	440-139965-11	WG	2016-03-03	NORM	Stage 2A				X							X		X		
440-139965-1	TT-TP2-L2-20160303	440-139965-12	WG	2016-03-03	NORM	Stage 2A				X							X		X		
440-139965-1	TT-TP3-L1-20160303	440-139965-9	WG	2016-03-03	NORM	Stage 2A				X							X		X		
440-139965-1	TT-TP3-L2-20160303	440-139965-10	WG	2016-03-03	NORM	Stage 2A				X							X		X		
440-139965-1	TT-TP3-M1-20160303	440-139965-1	WG	2016-03-03	NORM	Stage 2A				X				X			X		X	X	
440-139965-1	TT-TP3-M2-20160303	440-139965-2	WG	2016-03-03	NORM	Stage 2A				X				X			X		X	X	
440-139965-1	TT-TP4-L1-20160303	440-139965-7	WG	2016-03-03	NORM	Stage 2A				X							X		X		
440-139965-1	TT-TP4-L2-20160303	440-139965-8	WG	2016-03-03	NORM	Stage 2A				X							X		X		
440-139965-1	TT-TP4-M1-20160303	440-139965-3	WG	2016-03-03	NORM	Stage 2A				X				X			X		X	X	
440-139965-1	TT-TP4-M2-20160303	440-139965-4	WG	2016-03-03	NORM	Stage 2A				X				X			X		X	X	
440-139965-1	TT-TP4-M3-20160303	440-139965-5	WG	2016-03-03	NORM	Stage 2A				X				X			X		X	X	
440-139965-1	TT-TP4-M3-20160303-DUP	440-139965-6	WG	2016-03-03	FD	Stage 2A				X				X			X		X	X	
440-140696-1	TT-TP1-M1-20160309	440-140696-3	WG	2016-03-09	NORM	Stage 2A	X	X	X	X		X		X	X		X		X	X	
440-140696-1	TT-TP1-M2-20160309	440-140696-2	WG	2016-03-09	NORM	Stage 2A	X	X	X	X		X		X	X		X		X	X	
440-140696-1	TT-TP1-M3-20160309	440-140696-1	WG	2016-03-09	NORM	Stage 2A	X	X	X	X		X		X	X		X		X	X	



Table 9 Sample Cross-Reference

SDG	Client Sample ID	Lab Sample ID	Matrix	Sample Date	QC Type	Validation Stage	Alkalinity and ions by SM2320	Anions by EPA 300.0	Chlorate by EPA 300.1B	Hexavalent Chromium by SW-7199	Hexavalent Chromium by EPA 218.6	Metals by SW-6010B	Metals by SW-6010B_LCH	Metals by SW-6020	Mercury by SW-7470A	Mercury by SW-7471A	Perchlorate by EPA 314.0	pH by SW9045C	TDS by SM2540C	TOC by SM5310	TOC by SW-9060
440-140696-1	TT-TP2-M1-20160309	440-140696-5	WG	2016-03-09	NORM	Stage 2A	X	X	X	X		X		X	X		X		X	X	
440-140696-1	TT-TP2-M2-20160309	440-140696-4	WG	2016-03-09	NORM	Stage 2A	X	X	X	X		X		X	X				X	X	
440-140826-1	TT-TP1-L1-20160310	440-140826-17	WG	2016-03-10	NORM	Stage 2A				X							X		X		
440-140826-1	TT-TP1-L2-20160310	440-140826-12	WG	2016-03-10	NORM	Stage 2A				X				X			X		X		
440-140826-1	TT-TP2-L1-20160310	440-140826-18	WG	2016-03-10	NORM	Stage 2A				X							X		X		
440-140826-1	TT-TP2-L2-20160310	440-140826-19	WG	2016-03-10	NORM	Stage 2A				X							X		X		
440-140826-1	TT-TP2-M2-20160309	440-140826-9	WG	2016-03-09	NORM	Stage 2A											X				
440-140826-1	TT-TP3-L1-20160310	440-140826-14	WG	2016-03-10	NORM	Stage 2A				X							X		X		
440-140826-1	TT-TP3-L2-20160310	440-140826-13	WG	2016-03-10	NORM	Stage 2A				X				X			X		X		
440-140826-1	TT-TP3-M1-20160310	440-140826-2	WG	2016-03-10	NORM	Stage 2A	X	X	X	X		X		X	X		X		X	X	
440-140826-1	TT-TP3-M2-20160310	440-140826-1	WG	2016-03-10	NORM	Stage 2A	X	X	X	X		X		X	X		X		X	X	
440-140826-1	TT-TP4-L1-20160310	440-140826-16	WG	2016-03-10	NORM	Stage 2A				X							X		X		
440-140826-1	TT-TP4-L2-20160310	440-140826-15	WG	2016-03-10	NORM	Stage 2A				X							X		X		
440-140826-1	TT-TP4-M1-20160310	440-140826-3	WG	2016-03-10	NORM	Stage 2A	X	X	X	X		X		X	X		X		X	X	
440-140826-1	TT-TP4-M2-20160310	440-140826-4	WG	2016-03-10	NORM	Stage 2A	X	X	X	X		X		X	X		X		X	X	
440-140826-1	TT-TP4-M3-20160310	440-140826-5	WG	2016-03-10	NORM	Stage 2A	X	X	X	X		X		X	X		X		X	X	
440-140826-1	TT-TP4-M3-20160310-DUP	440-140826-11	WG	2016-03-10	FD	Stage 2A	X	X	X	X		X		X	X		X		X	X	
440-141586-1	TT-TP1-M1-20160316	440-141586-1	WG	2016-03-16	NORM	Stage 2A				X				X			X		X	X	
440-141586-1	TT-TP1-M2-20160316	440-141586-2	WG	2016-03-16	NORM	Stage 2A				X				X			X		X	X	
440-141586-1	TT-TP1-M3-20160316	440-141586-3	WG	2016-03-16	NORM	Stage 2A				X				X			X		X	X	
440-141586-1	TT-TP2-M1-20160316	440-141586-4	WG	2016-03-16	NORM	Stage 2A				X				X			X		X	X	
440-141586-1	TT-TP2-M2-20160316	440-141586-5	WG	2016-03-16	NORM	Stage 2A				X				X			X		X	X	
440-141586-1	TT-TP3-M1-20160316	440-141586-6	WG	2016-03-16	NORM	Stage 2A				X				X			X		X	X	
440-141586-1	TT-TP3-M2-20160316	440-141586-7	WG	2016-03-16	NORM	Stage 2A				X				X			X		X	X	
440-141827-1	TT-TP1-L1-20160317	440-141827-11	WG	2016-03-17	NORM	Stage 2A				X							X		X		
440-141827-1	TT-TP1-L2-20160317	440-141827-12	WG	2016-03-17	NORM	Stage 2A				X							X		X		
440-141827-1	TT-TP2-L1-20160317	440-141827-9	WG	2016-03-17	NORM	Stage 2A				X							X		X		
440-141827-1	TT-TP2-L2-20160317	440-141827-10	WG	2016-03-17	NORM	Stage 2A				X							X		X		
440-141827-1	TT-TP3-L1-20160317	440-141827-7	WG	2016-03-17	NORM	Stage 2A											X				
440-141827-1	TT-TP3-L2-20160317	440-141827-8	WG	2016-03-17	NORM	Stage 2A				X							X		X		
440-141827-1	TT-TP4-L1-20160317	440-141827-5	WG	2016-03-17	NORM	Stage 2A				X							X		X		
440-141827-1	TT-TP4-L2-20160317	440-141827-6	WG	2016-03-17	NORM	Stage 2A				X							X		X		

Table 9 Sample Cross-Reference

SDG	Client Sample ID	Lab Sample ID	Matrix	Sample Date	QC Type	Validation Stage	Alkalinity and ions by SM2320	Anions by EPA 300.0	Chlorate by EPA 300.1B	Hexavalent Chromium by SW-7199	Hexavalent Chromium by EPA 218.6	Metals by SW-6010B	Metals by SW-6010B_LCH	Metals by SW-6020	Mercury by SW-7470A	Mercury by SW-7471A	Perchlorate by EPA 314.0	pH by SW9045C	TDS by SM2540C	TOC by SM5310	TOC by SW-9060
440-141827-1	TT-TP4-M1-20160317	440-141827-1	WG	2016-03-17	NORM	Stage 2A				X				X			X		X	X	
440-141827-1	TT-TP4-M2-20160317	440-141827-2	WG	2016-03-17	NORM	Stage 2A				X				X			X		X	X	
440-141827-1	TT-TP4-M3-20160317	440-141827-3	WG	2016-03-17	NORM	Stage 2A				X				X			X		X	X	
440-141827-1	TT-TP4-M3-20160317-DUP	440-141827-4	WG	2016-03-17	FD	Stage 2A				X				X			X		X	X	
440-142439-1	TT-TP1-L1-20160323	440-142439-14	WG	2016-03-23	NORM	Stage 2A				X							X		X		
440-142439-1	TT-TP1-L2-20160323	440-142439-15	WG	2016-03-23	NORM	Stage 2A				X							X		X		
440-142439-1	TT-TP1-M1-20160323	440-142439-1	WG	2016-03-23	NORM	Stage 2A				X				X			X		X	X	
440-142439-1	TT-TP1-M2-20160323	440-142439-2	WG	2016-03-23	NORM	Stage 2A				X				X			X		X	X	
440-142439-1	TT-TP1-M3-20160323	440-142439-3	WG	2016-03-23	NORM	Stage 2A				X							X		X	X	
440-142439-1	TT-TP2-L1-20160323	440-142439-12	WG	2016-03-23	NORM	Stage 2A				X							X		X		
440-142439-1	TT-TP2-L2-20160323	440-142439-13	WG	2016-03-23	NORM	Stage 2A				X							X		X		
440-142439-1	TT-TP2-M1-20160323	440-142439-4	WG	2016-03-23	NORM	Stage 2A				X				X			X		X	X	
440-142439-1	TT-TP2-M2-20160323	440-142439-5	WG	2016-03-23	NORM	Stage 2A				X				X			X		X	X	
440-142439-1	TT-TP3-L1-20160323	440-142439-10	WG	2016-03-23	NORM	Stage 2A				X							X		X		
440-142439-1	TT-TP3-L2-20160323	440-142439-11	WG	2016-03-23	NORM	Stage 2A				X							X		X		
440-142439-1	TT-TP3-M1-20160323	440-142439-6	WG	2016-03-23	NORM	Stage 2A				X				X			X		X	X	
440-142439-1	TT-TP3-M2-20160323	440-142439-7	WG	2016-03-23	NORM	Stage 2A				X				X			X		X	X	
440-142439-1	TT-TP4-L1-20160323	440-142439-8	WG	2016-03-23	NORM	Stage 2A											X				
440-142439-1	TT-TP4-L2-20160323	440-142439-9	WG	2016-03-23	NORM	Stage 2A				X							X		X		
440-142556-1	TT-TP4-M1-20160324	440-142556-1	WG	2016-03-24	NORM	Stage 2A				X				X			X		X	X	
440-142556-1	TT-TP4-M2-20160324	440-142556-2	WG	2016-03-24	NORM	Stage 2A				X				X			X		X	X	
440-142556-1	TT-TP4-M3-20160324	440-142556-3	WG	2016-03-24	NORM	Stage 2A				X				X			X		X	X	
440-142556-1	TT-TP4-M3-20160324-DUP	440-142556-4	WG	2016-03-24	FD	Stage 2A				X				X			X		X	X	
440-142922-1	TT-TP1-M1-20160330	440-142922-1	WG	2016-03-30	NORM	Stage 2A				X				X			X		X	X	
440-142922-1	TT-TP1-M2-20160330	440-142922-2	WG	2016-03-30	NORM	Stage 2A				X				X			X		X	X	
440-142922-1	TT-TP1-M3-20160330	440-142922-3	WG	2016-03-30	NORM	Stage 2A				X				X			X		X	X	
440-142922-1	TT-TP2-M1-20160330	440-142922-4	WG	2016-03-30	NORM	Stage 2A				X				X			X		X	X	
440-142922-1	TT-TP2-M2-20160330	440-142922-5	WG	2016-03-30	NORM	Stage 2A				X				X			X		X	X	
440-143078-1	TT-TP1-L1-20160331	440-143078-13	WG	2016-03-31	NORM	Stage 2A				X							X		X		
440-143078-1	TT-TP1-L2-20160331	440-143078-14	WG	2016-03-31	NORM	Stage 2A				X							X		X		
440-143078-1	TT-TP2-L1-20160331	440-143078-11	WG	2016-03-31	NORM	Stage 2A				X							X		X		
440-143078-1	TT-TP2-L2-20160331	440-143078-12	WG	2016-03-31	NORM	Stage 2A				X							X		X		

Table 9 Sample Cross-Reference

SDG	Client Sample ID	Lab Sample ID	Matrix	Sample Date	QC Type	Validation Stage	Alkalinity and ions by SM2320	Anions by EPA 300.0	Chlorate by EPA 300.1B	Hexavalent Chromium by SW-7199	Hexavalent Chromium by EPA 218.6	Metals by SW-6010B	Metals by SW-6010B_LCH	Metals by SW-6020	Mercury by SW-7470A	Mercury by SW-7471A	Perchlorate by EPA 314.0	pH by SW9045C	TDS by SM2540C	TOC by SM5310	TOC by SW-9060
440-143078-1	TT-TP3-L1-20160331	440-143078-9	WG	2016-03-31	NORM	Stage 2A											X				
440-143078-1	TT-TP3-L2-20160331	440-143078-10	WG	2016-03-31	NORM	Stage 2A				X							X		X		
440-143078-1	TT-TP3-M1-20160331	440-143078-1	WG	2016-03-31	NORM	Stage 2A				X				X			X		X	X	
440-143078-1	TT-TP3-M2-20160331	440-143078-2	WG	2016-03-31	NORM	Stage 2A				X				X			X		X	X	
440-143078-1	TT-TP4-L1-20160331	440-143078-7	WG	2016-03-31	NORM	Stage 2A				X							X		X		
440-143078-1	TT-TP4-M1-20160331	440-143078-3	WG	2016-03-31	NORM	Stage 2A				X				X			X		X	X	
440-143078-1	TT-TP4-M2-20160331	440-143078-4	WG	2016-03-31	NORM	Stage 2A				X				X			X		X	X	
440-143078-1	TT-TP4-M3-20160331	440-143078-5	WG	2016-03-31	NORM	Stage 2A				X				X			X		X	X	
440-143078-1	TT-TP4-M3-20160331-DUP	440-143078-6	WG	2016-03-31	FD	Stage 2A				X							X		X	X	
440-143273-1	TT-TP1-M1-2016	440-143273-1	WG	2016-04-04	NORM	Stage 2A	X	X	X	X		X		X	X		X		X	X	
440-143273-1	TT-TP1-M2-2016	440-143273-2	WG	2016-04-04	NORM	Stage 2A	X	X	X	X		X		X	X		X		X	X	
440-143273-1	TT-TP1-M3-2016	440-143273-3	WG	2016-04-04	NORM	Stage 2A	X	X	X	X		X		X	X		X		X	X	
440-143273-1	TT-TP2-M1-2016	440-143273-4	WG	2016-04-04	NORM	Stage 2A	X	X	X	X		X		X	X		X		X	X	
440-143273-1	TT-TP2-M2-2016	440-143273-5	WG	2016-04-04	NORM	Stage 2A	X	X	X	X		X		X	X		X		X	X	
440-143458-1	TT-TP1-L1-20160405	440-143458-8	WG	2016-04-05	NORM	Stage 2A				X							X		X		
440-143458-1	TT-TP1-L2-20160405	440-143458-9	WG	2016-04-05	NORM	Stage 2A				X							X		X		
440-143458-1	TT-TP2-L1-20160405	440-143458-10	WG	2016-04-05	NORM	Stage 2A				X							X		X		
440-143458-1	TT-TP2-L2-20160405	440-143458-11	WG	2016-04-05	NORM	Stage 2A				X							X		X		
440-143458-1	TT-TP3-L1-20160405	440-143458-12	WG	2016-04-05	NORM	Stage 2A				X							X		X		
440-143458-1	TT-TP3-L2-20160405	440-143458-13	WG	2016-04-05	NORM	Stage 2A				X							X		X		
440-143458-1	TT-TP3-M1-20160405	440-143458-1	WG	2016-04-05	NORM	Stage 2A	X	X	X	X		X		X	X		X		X	X	
440-143458-1	TT-TP3-M2-20160405	440-143458-2	WG	2016-04-05	NORM	Stage 2A	X	X	X	X		X		X	X		X		X	X	
440-143458-1	TT-TP4-L1-20160405	440-143458-14	WG	2016-04-05	NORM	Stage 2A				X							X		X		
440-143458-1	TT-TP4-L2-20160331	440-143458-6	WG	2016-03-31	NORM	Stage 2A				X							X		X		
440-143458-1	TT-TP4-L2-20160405	440-143458-15	WG	2016-04-05	NORM	Stage 2A				X							X		X		
440-143458-1	TT-TP4-M1-20160405	440-143458-3	WG	2016-04-05	NORM	Stage 2A	X	X	X	X		X		X	X		X		X	X	
440-143458-1	TT-TP4-M2-20160405	440-143458-4	WG	2016-04-05	NORM	Stage 2A	X	X	X	X		X		X	X		X		X	X	
440-143458-1	TT-TP4-M3-20160405	440-143458-5	WG	2016-04-05	NORM	Stage 2A	X	X	X	X		X		X	X		X		X	X	
440-143458-1	TT-TP4-M3-20160405-DUP	440-143458-7	WG	2016-04-05	FD	Stage 2A	X	X	X	X		X		X	X		X		X	X	
440-144411-1	TT-TP1-M1-20160413	440-144411-1	WG	2016-04-13	NORM	Stage 2A				X				X			X		X	X	
440-144411-1	TT-TP1-M2-20160413	440-144411-2	WG	2016-04-13	NORM	Stage 2A				X				X			X		X	X	
440-144411-1	TT-TP1-M3-20160413	440-144411-3	WG	2016-04-13	NORM	Stage 2A				X				X			X		X	X	

Table 9 Sample Cross-Reference

SDG	Client Sample ID	Lab Sample ID	Matrix	Sample Date	QC Type	Validation Stage	Alkalinity and ions by SM2320	Anions by EPA 300.0	Chlorate by EPA 300.1B	Hexavalent Chromium by SW-7199	Hexavalent Chromium by EPA 218.6	Metals by SW-6010B	Metals by SW-6010B_LCH	Metals by SW-6020	Mercury by SW-7470A	Mercury by SW-7471A	Perchlorate by EPA 314.0	pH by SW9045C	TDS by SM2540C	TOC by SM5310	TOC by SW-9060	
440-145020-1	TT-TP3-M1-20160420	440-145020-1	WG	2016-04-20	NORM	Stage 2A				X				X			X				X	
440-145020-1	TT-TP3-M2-20160420	440-145020-2	WG	2016-04-20	NORM	Stage 2A				X				X			X				X	
440-145020-1	TT-TP4-M1-20160420	440-145020-3	WG	2016-04-20	NORM	Stage 2A				X				X			X				X	
440-145020-1	TT-TP4-M2-20160420	440-145020-4	WG	2016-04-20	NORM	Stage 2A				X				X			X				X	
440-145020-1	TT-TP4-M3-20160420	440-145020-5	WG	2016-04-20	NORM	Stage 2A				X				X			X				X	
440-145020-1	TT-TP4-M3-20160420-DUP	440-145020-6	WG	2016-04-20	FD	Stage 2A				X				X			X				X	
440-145023-1	TT-TP1-L1-20160420	440-145023-1	WG	2016-04-20	NORM	Stage 2A				X							X					
440-145023-1	TT-TP1-L2-20160420	440-145023-2	WG	2016-04-20	NORM	Stage 2A				X				X			X					
440-145023-1	TT-TP2-L1-20160420	440-145023-3	WG	2016-04-20	NORM	Stage 2A				X							X					
440-145023-1	TT-TP2-L2-20160420	440-145023-4	WG	2016-04-20	NORM	Stage 2A				X				X			X					
440-145023-1	TT-TP3-L1-20160420	440-145023-5	WG	2016-04-20	NORM	Stage 2A											X					
440-145023-1	TT-TP3-L2-20160420	440-145023-6	WG	2016-04-20	NORM	Stage 2A				X				X			X					
440-145023-1	TT-TP4-L1-20160420	440-145023-7	WG	2016-04-20	NORM	Stage 2A				X							X					
440-145023-1	TT-TP4-L2-20160420	440-145023-8	WG	2016-04-20	NORM	Stage 2A				X							X					
440-145639-1	TT-TP1-M1-20160427	440-145639-1	WG	2016-04-27	NORM	Stage 2A				X				X			X			X	X	
440-145639-1	TT-TP1-M2-20160427	440-145639-2	WG	2016-04-27	NORM	Stage 2A				X				X			X			X	X	
440-145639-1	TT-TP1-M3-20160427	440-145639-3	WG	2016-04-27	NORM	Stage 2A				X				X			X			X	X	
440-145639-1	TT-TP2-M1-20160427	440-145639-4	WG	2016-04-27	NORM	Stage 2A				X				X			X			X	X	
440-145639-1	TT-TP2-M2-20160427	440-145639-5	WG	2016-04-27	NORM	Stage 2A				X				X			X			X	X	
440-145639-1	TT-TP3-M1--20160427	440-145639-6	WG	2016-04-27	NORM	Stage 2A				X				X			X			X	X	
440-145639-1	TT-TP3-M2-20160427	440-145639-7	WG	2016-04-27	NORM	Stage 2A				X				X			X			X	X	
440-145639-1	TT-TP4-M1-20160427	440-145639-8	WG	2016-04-27	NORM	Stage 2A				X				X			X			X	X	
440-145639-1	TT-TP4-M2-20160427	440-145639-9	WG	2016-04-27	NORM	Stage 2A				X				X			X			X	X	
440-145639-1	TT-TP4-M3-20160427	440-145639-10	WG	2016-04-27	NORM	Stage 2A				X				X			X			X	X	
440-145639-1	TT-TP4-M3-20160427-DUP	440-145639-11	WG	2016-04-27	FD	Stage 2A				X				X			X			X	X	
440-145766-1	TT-TP1-L1-20160428	440-145766-1	WG	2016-04-28	NORM	Stage 2A				X							X			X		
440-145766-1	TT-TP1-L2-20160428	440-145766-2	WG	2016-04-28	NORM	Stage 2A				X							X			X		
440-145766-1	TT-TP2-L1-20160428	440-145766-3	WG	2016-04-28	NORM	Stage 2A				X							X			X		
440-145766-1	TT-TP2-L2-20160428	440-145766-4	WG	2016-04-28	NORM	Stage 2A				X							X			X		
440-145766-1	TT-TP3-L1-20160428	440-145766-5	WG	2016-04-28	NORM	Stage 2A											X					
440-145766-1	TT-TP3-L2-20160428	440-145766-6	WG	2016-04-28	NORM	Stage 2A				X							X			X		
440-145766-1	TT-TP4-L1-20160428	440-145766-7	WG	2016-04-28	NORM	Stage 2A				X							X			X		

Table 9 Sample Cross-Reference

SDG	Client Sample ID	Lab Sample ID	Matrix	Sample Date	QC Type	Validation Stage	Alkalinity and ions by SM2320	Anions by EPA 300.0	Chlorate by EPA 300.1B	Hexavalent Chromium by SW-7199	Hexavalent Chromium by EPA 218.6	Metals by SW-6010B	Metals by SW-6010B_LCH	Metals by SW-6020	Mercury by SW-7470A	Mercury by SW-7471A	Perchlorate by EPA 314.0	pH by SW9045C	TDS by SM2540C	TOC by SM5310	TOC by SW-9060
440-145766-1	TT-TP4-L2-20160428	440-145766-8	WG	2016-04-28	NORM	Stage 2A				X							X		X		
440-146375-1	TT-TP1-M1-20160504	440-146375-1	WG	2016-05-04	NORM	Stage 2A	X	X	X	X		X		X	X		X		X	X	
440-146375-1	TT-TP1-M2-20160504	440-146375-2	WG	2016-05-04	NORM	Stage 2A	X	X	X	X		X		X	X		X		X	X	
440-146375-1	TT-TP1-M3-20160504	440-146375-3	WG	2016-05-04	NORM	Stage 2A	X	X	X	X		X		X	X		X		X	X	
440-146375-1	TT-TP2-M1-20160504	440-146375-4	WG	2016-05-04	NORM	Stage 2A	X	X	X	X		X		X	X		X		X	X	
440-146524-1	TT-TP1-L1-20160505	440-146524-13	WG	2016-05-05	NORM	Stage 2A				X							X		X		
440-146524-1	TT-TP1-L2-20160505	440-146524-14	WG	2016-05-05	NORM	Stage 2A				X							X		X		
440-146524-1	TT-TP2-L1-20160505	440-146524-8	WG	2016-05-05	NORM	Stage 2A				X							X		X		
440-146524-1	TT-TP2-L2-20160505	440-146524-7	WG	2016-05-05	NORM	Stage 2A				X				X			X		X		
440-146524-1	TT-TP2-M2-20160505	440-146524-1	WG	2016-05-05	NORM	Stage 2A	X	X	X	X		X		X	X		X		X	X	
440-146524-1	TT-TP3-L1-20160505	440-146524-10	WG	2016-05-05	NORM	Stage 2A				X							X		X		
440-146524-1	TT-TP3-L2-20160505	440-146524-9	WG	2016-05-05	NORM	Stage 2A				X				X			X		X		
440-146524-1	TT-TP3-M1-20160505	440-146524-3	WG	2016-05-05	NORM	Stage 2A	X	X	X	X		X		X	X		X		X	X	
440-146524-1	TT-TP3-M2-20160505	440-146524-2	WG	2016-05-05	NORM	Stage 2A	X	X	X	X		X		X	X		X		X	X	
440-146524-1	TT-TP4-L1-20160505	440-146524-12	WG	2016-05-05	NORM	Stage 2A				X							X		X		
440-146524-1	TT-TP4-L2-20160505	440-146524-11	WG	2016-05-05	NORM	Stage 2A				X				X					X		
440-146524-1	TT-TP4-M1-20160505	440-146524-4	WG	2016-05-05	NORM	Stage 2A	X	X	X	X		X		X	X		X		X	X	
440-146524-1	TT-TP4-M2-20160505	440-146524-5	WG	2016-05-05	NORM	Stage 2A	X	X	X	X		X		X	X		X		X	X	
440-146524-1	TT-TP4-M3-20160505	440-146524-6	WG	2016-05-05	NORM	Stage 2A	X	X	X	X		X		X	X		X		X	X	
440-147006-1	TT-TP1-M1-20160510	440-147006-1	WG	2016-05-10	NORM	Stage 2A				X							X		X	X	
440-147006-1	TT-TP1-M2-20160510	440-147006-2	WG	2016-05-10	NORM	Stage 2A				X							X		X	X	
440-147006-1	TT-TP1-M3-20160510	440-147006-3	WG	2016-05-10	NORM	Stage 2A				X							X		X	X	
440-147243-1	TT-TP1-L1-20160511	440-147243-8	WG	2016-05-11	NORM	Stage 2A				X							X		X		
440-147243-1	TT-TP1-L2-20160511	440-147243-9	WG	2016-05-11	NORM	Stage 2A				X							X		X		
440-147243-1	TT-TP2-L1-20160511	440-147243-10	WG	2016-05-11	NORM	Stage 2A				X							X		X		
440-147243-1	TT-TP2-L2-20160511	440-147243-11	WG	2016-05-11	NORM	Stage 2A				X				X			X		X		
440-147243-1	TT-TP2-M1-20160511	440-147243-1	WG	2016-05-11	NORM	Stage 2A				X				X			X		X	X	
440-147243-1	TT-TP2-M2-20160511	440-147243-2	WG	2016-05-11	NORM	Stage 2A				X				X			X		X	X	
440-147243-1	TT-TP3-L1-20160511	440-147243-12	WG	2016-05-11	NORM	Stage 2A				X							X		X		
440-147243-1	TT-TP3-L2-20160511	440-147243-13	WG	2016-05-11	NORM	Stage 2A				X				X			X		X	X	
440-147243-1	TT-TP3-M1-20160511	440-147243-3	WG	2016-05-11	NORM	Stage 2A				X				X			X		X	X	
440-147243-1	TT-TP3-M2-20160511	440-147243-4	WG	2016-05-11	NORM	Stage 2A				X				X			X		X	X	

Table 9 Sample Cross-Reference

SDG	Client Sample ID	Lab Sample ID	Matrix	Sample Date	QC Type	Validation Stage	Alkalinity and ions by SM2320	Anions by EPA 300.0	Chlorate by EPA 300.1B	Hexavalent Chromium by SW-7199	Hexavalent Chromium by EPA 218.6	Metals by SW-6010B	Metals by SW-6010B_LCH	Metals by SW-6020	Mercury by SW-7470A	Mercury by SW-7471A	Perchlorate by EPA 314.0	pH by SW9045C	TDS by SM2540C	TOC by SM5310	TOC by SW-9060
440-147243-1	TT-TP4-L1-20160511	440-147243-14	WG	2016-05-11	NORM	Stage 2A				X							X		X		
440-147243-1	TT-TP4-L2-20160511	440-147243-15	WG	2016-05-11	NORM	Stage 2A				X							X		X		
440-147243-1	TT-TP4-M1-20160511	440-147243-5	WG	2016-05-11	NORM	Stage 2A				X				X			X		X	X	
440-147243-1	TT-TP4-M2-20160511	440-147243-6	WG	2016-05-11	NORM	Stage 2A				X				X			X		X	X	
440-147243-1	TT-TP4-M3-20160511	440-147243-7	WG	2016-05-11	NORM	Stage 2A				X				X			X		X	X	
440-147243-1	TT-TP4-M3-20160511-DUP	440-147243-16	WG	2016-05-11	FD	Stage 2A				X				X			X		X	X	
440-147992-1	TT-TP1-L1-20160519	440-147992-12	WG	2016-05-19	NORM	Stage 2A				X							X		X		
440-147992-1	TT-TP1-L2-20160519	440-147992-13	WG	2016-05-19	NORM	Stage 2A				X				X			X		X		
440-147992-1	TT-TP1-M1-20160519	440-147992-1	WG	2016-05-19	NORM	Stage 2A				X				X			X		X	X	
440-147992-1	TT-TP1-M2-20160519	440-147992-2	WG	2016-05-19	NORM	Stage 2A				X				X			X		X	X	
440-147992-1	TT-TP1-M3-20160519	440-147992-3	WG	2016-05-19	NORM	Stage 2A				X				X			X		X	X	
440-147992-1	TT-TP2-L1-20160519	440-147992-14	WG	2016-05-19	NORM	Stage 2A				X							X		X		
440-147992-1	TT-TP2-L2-20160519	440-147992-15	WG	2016-05-19	NORM	Stage 2A				X				X			X		X		
440-147992-1	TT-TP2-M1-20160519	440-147992-4	WG	2016-05-19	NORM	Stage 2A				X				X			X		X	X	
440-147992-1	TT-TP2-M2-20160519	440-147992-5	WG	2016-05-19	NORM	Stage 2A				X				X			X		X	X	
440-147992-1	TT-TP3-L1-20160519	440-147992-16	WG	2016-05-19	NORM	Stage 2A				X							X		X		
440-147992-1	TT-TP3-L2-20160519	440-147992-17	WG	2016-05-19	NORM	Stage 2A				X							X		X		
440-147992-1	TT-TP3-M1-20160519	440-147992-6	WG	2016-05-19	NORM	Stage 2A				X							X		X	X	
440-147992-1	TT-TP3-M2-20160519	440-147992-7	WG	2016-05-19	NORM	Stage 2A				X							X		X	X	
440-147992-1	TT-TP4-L1-20160519	440-147992-18	WG	2016-05-19	NORM	Stage 2A				X							X		X		
440-147992-1	TT-TP4-L2-20160519	440-147992-19	WG	2016-05-19	NORM	Stage 2A				X							X		X		
440-147992-1	TT-TP4-M1-20160519	440-147992-8	WG	2016-05-19	NORM	Stage 2A				X				X			X		X	X	
440-147992-1	TT-TP4-M2-20160519	440-147992-9	WG	2016-05-19	NORM	Stage 2A				X				X			X		X	X	
440-147992-1	TT-TP4-M3-20160519	440-147992-10	WG	2016-05-19	NORM	Stage 2A				X				X			X		X	X	
440-147992-1	TT-TP4-M3-20160519-DUP	440-147992-11	WG	2016-05-19	FD	Stage 2A				X				X			X		X	X	
440-148308-1	TT-TP1-M1-20160524	440-148308-1	WG	2016-05-24	NORM	Stage 2A				X				X			X		X	X	
440-148308-1	TT-TP1-M2-20160524	440-148308-2	WG	2016-05-24	NORM	Stage 2A				X				X			X		X	X	
440-148308-1	TT-TP1-M3-20160524	440-148308-3	WG	2016-05-24	NORM	Stage 2A				X				X			X		X	X	
440-148383-1	TT-TP1-L1-20160525	440-148383-1	WG	2016-05-25	NORM	Stage 2A				X							X		X		
440-148383-1	TT-TP1-L2-20160525	440-148383-2	WG	2016-05-25	NORM	Stage 2A				X				X			X		X		
440-148383-1	TT-TP2-L1-20160525	440-148383-3	WG	2016-05-25	NORM	Stage 2A				X							X		X		
440-148383-1	TT-TP2-L2-20160525	440-148383-4	WG	2016-05-25	NORM	Stage 2A				X				X			X		X		

Table 9 Sample Cross-Reference

SDG	Client Sample ID	Lab Sample ID	Matrix	Sample Date	QC Type	Validation Stage	Alkalinity and ions by SM2320	Anions by EPA 300.0	Chlorate by EPA 300.1B	Hexavalent Chromium by SW-7199	Hexavalent Chromium by EPA 218.6	Metals by SW-6010B	Metals by SW-6010B_LCH	Metals by SW-6020	Mercury by SW-7470A	Mercury by SW-7471A	Perchlorate by EPA 314.0	pH by SW9045C	TDS by SM2540C	TOC by SM5310	TOC by SW-9060
440-148383-1	TT-TP3-L1-20160525	440-148383-5	WG	2016-05-25	NORM	Stage 2A				X							X		X		
440-148383-1	TT-TP3-L2-20160525	440-148383-6	WG	2016-05-25	NORM	Stage 2A				X							X		X		
440-148383-1	TT-TP4-L1-20160525	440-148383-7	WG	2016-05-25	NORM	Stage 2A				X				X			X		X		
440-148383-1	TT-TP4-L2-20160525	440-148383-8	WG	2016-05-25	NORM	Stage 2A				X				X			X		X		
440-148500-1	TT-TP2-M1-20160526	440-148500-1	WG	2016-05-26	NORM	Stage 2A				X				X			X		X	X	
440-148500-1	TT-TP2-M2-20160526	440-148500-2	WG	2016-05-26	NORM	Stage 2A				X				X			X		X	X	
440-148500-1	TT-TP3-M1-20160526	440-148500-3	WG	2016-05-26	NORM	Stage 2A				X				X			X		X	X	
440-148500-1	TT-TP3-M2-20160526	440-148500-4	WG	2016-05-26	NORM	Stage 2A				X				X			X		X	X	
440-148500-1	TT-TP4-M1-20160526	440-148500-5	WG	2016-05-26	NORM	Stage 2A				X				X			X		X	X	
440-148500-1	TT-TP4-M2-20160526	440-148500-6	WG	2016-05-26	NORM	Stage 2A				X				X			X		X	X	
440-148500-1	TT-TP4-M3-20160526	440-148500-7	WG	2016-05-26	NORM	Stage 2A				X				X			X		X	X	
440-148500-1	TT-TP4-M3-20160526-DUP	440-148500-8	WG	2016-05-26	FD	Stage 2A				X				X			X		X	X	
440-148926-1	TT-TP1-M1-20160601	440-148926-2	WG	2016-06-01	NORM	Stage 2A	X	X	X	X		X		X	X		X		X	X	
440-148926-1	TT-TP1-M2-20160601	440-148926-3	WG	2016-06-01	NORM	Stage 2A	X	X	X	X		X		X	X		X		X	X	
440-148926-1	TT-TP1-M3-20160601	440-148926-1	WG	2016-06-01	NORM	Stage 2A	X	X	X	X		X		X	X		X		X	X	
440-148926-1	TT-TP2-M1-20160601	440-148926-5	WG	2016-06-01	NORM	Stage 2A	X	X	X	X		X		X	X		X		X	X	
440-148926-1	TT-TP2-M2-20160601	440-148926-4	WG	2016-06-01	NORM	Stage 2A	X	X	X	X		X		X	X		X		X	X	
440-148926-1	TT-TP3-M1-20160601	440-148926-6	WG	2016-06-01	NORM	Stage 2A	X	X	X	X		X		X	X		X		X	X	
440-149036-1	TT-TP1-L1-20160602	440-149036-6	WG	2016-06-02	NORM	Stage 2A				X							X				
440-149036-1	TT-TP1-L2-20160602	440-149036-7	WG	2016-06-02	NORM	Stage 2A				X							X				
440-149036-1	TT-TP2-L1-20160602	440-149036-8	WG	2016-06-02	NORM	Stage 2A				X							X				
440-149036-1	TT-TP2-L2-20160602	440-149036-9	WG	2016-06-02	NORM	Stage 2A				X							X				
440-149036-1	TT-TP3-L1-20160602	440-149036-10	WG	2016-06-02	NORM	Stage 2A				X							X				
440-149036-1	TT-TP3-L2-20160602	440-149036-11	WG	2016-06-02	NORM	Stage 2A				X							X				
440-149036-1	TT-TP3-M2-20160602	440-149036-1	WG	2016-06-02	NORM	Stage 2A	X	X	X	X		X		X	X		X		X	X	
440-149036-1	TT-TP4-L1-20160602	440-149036-12	WG	2016-06-02	NORM	Stage 2A				X							X				
440-149036-1	TT-TP4-L2-20160602	440-149036-13	WG	2016-06-02	NORM	Stage 2A				X							X				
440-149036-1	TT-TP4-M1-20160602	440-149036-4	WG	2016-06-02	NORM	Stage 2A	X	X	X	X		X		X	X		X		X	X	
440-149036-1	TT-TP4-M2-20160602	440-149036-2	WG	2016-06-02	NORM	Stage 2A	X	X	X	X		X		X	X		X		X	X	
440-149036-1	TT-TP4-M2-20160602-DUP	440-149036-3	WG	2016-06-02	FD	Stage 2A	X	X	X	X		X		X	X		X		X	X	
440-149036-1	TT-TP4-M3-20160602	440-149036-5	WG	2016-06-02	NORM	Stage 2A	X	X	X	X		X		X	X		X		X	X	
440-149621-1	TT-TP1-L1-20160608	440-149621-15	WG	2016-06-08	NORM	Stage 2A				X							X				

Table 9 Sample Cross-Reference

SDG	Client Sample ID	Lab Sample ID	Matrix	Sample Date	QC Type	Validation Stage	Alkalinity and ions by SM2320	Anions by EPA 300.0	Chlorate by EPA 300.1B	Hexavalent Chromium by SW-7199	Hexavalent Chromium by EPA 218.6	Metals by SW-6010B	Metals by SW-6010B_LCH	Metals by SW-6020	Mercury by SW-7470A	Mercury by SW-7471A	Perchlorate by EPA 314.0	pH by SW9045C	TDS by SM2540C	TOC by SM5310	TOC by SW-9060
440-149621-1	TT-TP1-L2-20160608	440-149621-16	WG	2016-06-08	NORM	Stage 2A											X				
440-149621-1	TT-TP1-M1-20160608	440-149621-1	WG	2016-06-08	NORM	Stage 2A				X				X			X		X	X	
440-149621-1	TT-TP1-M2-20160608	440-149621-2	WG	2016-06-08	NORM	Stage 2A				X				X			X		X	X	
440-149621-1	TT-TP1-M3-20160608	440-149621-3	WG	2016-06-08	NORM	Stage 2A				X				X			X		X	X	
440-149621-1	TT-TP2-L1-20160608	440-149621-13	WG	2016-06-08	NORM	Stage 2A				X							X				
440-149621-1	TT-TP2-L2-20160608	440-149621-14	WG	2016-06-08	NORM	Stage 2A				X							X				
440-149621-1	TT-TP2-M1-20160608	440-149621-4	WG	2016-06-08	NORM	Stage 2A				X				X			X		X	X	
440-149621-1	TT-TP2-M2-20160608	440-149621-5	WG	2016-06-08	NORM	Stage 2A				X				X			X		X	X	
440-149621-1	TT-TP3-L1-20160608	440-149621-11	WG	2016-06-08	NORM	Stage 2A				X							X				
440-149621-1	TT-TP3-L2-20160608	440-149621-12	WG	2016-06-08	NORM	Stage 2A				X				X			X				
440-149621-1	TT-TP3-M1-20160608	440-149621-6	WG	2016-06-08	NORM	Stage 2A				X				X			X		X	X	
440-149621-1	TT-TP3-M2-20160608	440-149621-7	WG	2016-06-08	NORM	Stage 2A				X				X			X		X	X	
440-149621-1	TT-TP4-L1-20160608	440-149621-9	WG	2016-06-08	NORM	Stage 2A				X							X				
440-149621-1	TT-TP4-L2-20160608	440-149621-10	WG	2016-06-08	NORM	Stage 2A				X							X				
440-149621-1	TT-TP4-M2-20160608	440-149621-8	WG	2016-06-08	NORM	Stage 2A				X				X			X		X	X	
440-149732-1	TT-TP4-M1-20160609	440-149732-1	WG	2016-06-09	NORM	Stage 2A				X				X			X		X	X	
440-149732-1	TT-TP4-M3-20160609	440-149732-2	WG	2016-06-09	NORM	Stage 2A				X				X			X		X	X	
440-149732-1	TT-TP4-M3-20160609-DUP	440-149732-3	WG	2016-06-09	FD	Stage 2A				X				X			X		X	X	
440-150680-1	TT-TP1-M1-20160621	440-150680-1	WG	2016-06-21	NORM	Stage 2A				X				X			X		X	X	
440-150680-1	TT-TP1-M2-20160621	440-150680-2	WG	2016-06-21	NORM	Stage 2A				X				X			X		X	X	
440-150680-1	TT-TP1-M3-20160621	440-150680-3	WG	2016-06-21	NORM	Stage 2A				X				X			X		X	X	
440-150775-1	TT-TP1-L1-20160622	440-150775-9	WG	2016-06-22	NORM	Stage 2A				X							X		X		
440-150775-1	TT-TP1-L2-20160622	440-150775-10	WG	2016-06-22	NORM	Stage 2A				X				X			X		X		
440-150775-1	TT-TP2-L1-20160622	440-150775-11	WG	2016-06-22	NORM	Stage 2A				X							X		X		
440-150775-1	TT-TP2-L2-20160622	440-150775-12	WG	2016-06-22	NORM	Stage 2A				X							X		X		
440-150775-1	TT-TP2-M1-20160622	440-150775-1	WG	2016-06-22	NORM	Stage 2A				X				X			X		X	X	
440-150775-1	TT-TP2-M2-20160622	440-150775-2	WG	2016-06-22	NORM	Stage 2A				X				X			X		X	X	
440-150775-1	TT-TP3-L1-20160622	440-150775-13	WG	2016-06-22	NORM	Stage 2A				X							X		X		
440-150775-1	TT-TP3-L2-20160622	440-150775-14	WG	2016-06-22	NORM	Stage 2A				X							X		X		
440-150775-1	TT-TP3-M1-20160622	440-150775-3	WG	2016-06-22	NORM	Stage 2A				X				X			X		X	X	
440-150775-1	TT-TP3-M2-20160622	440-150775-4	WG	2016-06-22	NORM	Stage 2A				X				X			X		X	X	
440-150775-1	TT-TP4-L1-20160622	440-150775-15	WG	2016-06-22	NORM	Stage 2A				X							X		X		



Table 9 Sample Cross-Reference

SDG	Client Sample ID	Lab Sample ID	Matrix	Sample Date	QC Type	Validation Stage	Alkalinity and ions by SM2320	Anions by EPA 300.0	Chlorate by EPA 300.1B	Hexavalent Chromium by SW-7199	Hexavalent Chromium by EPA 218.6	Metals by SW-6010B	Metals by SW-6010B_LCH	Metals by SW-6020	Mercury by SW-7470A	Mercury by SW-7471A	Perchlorate by EPA 314.0	pH by SW9045C	TDS by SM2540C	TOC by SM5310	TOC by SW-9060
440-150775-1	TT-TP4-L2-20160622	440-150775-16	WG	2016-06-22	NORM	Stage 2A				X							X		X		
440-150775-1	TT-TP4-M1-20160622	440-150775-5	WG	2016-06-22	NORM	Stage 2A				X				X			X		X	X	
440-150775-1	TT-TP4-M2-20160622	440-150775-6	WG	2016-06-22	NORM	Stage 2A				X				X			X		X	X	
440-150775-1	TT-TP4-M3-20160622	440-150775-7	WG	2016-06-22	NORM	Stage 2A				X				X			X		X	X	
440-150775-1	TT-TP4-M3-20160622-DUP	440-150775-8	WG	2016-06-22	FD	Stage 2A				X				X			X		X	X	
440-151701-1	TT-TP1-L1-20160705	440-151701-9	WG	2016-07-05	NORM	Stage 2A				X							X		X		
440-151701-1	TT-TP1-L2-20160705	440-151701-10	WG	2016-07-05	NORM	Stage 2A				X							X		X		
440-151701-1	TT-TP1-M1-20160705	440-151701-1	WG	2016-07-05	NORM	Stage 2A				X				X			X		X	X	
440-151701-1	TT-TP1-M2-20160705	440-151701-2	WG	2016-07-05	NORM	Stage 2A				X				X			X		X	X	
440-151701-1	TT-TP1-M3-20160705	440-151701-3	WG	2016-07-05	NORM	Stage 2A				X				X			X		X	X	
440-151701-1	TT-TP2-L1-20160705	440-151701-11	WG	2016-07-05	NORM	Stage 2A				X							X		X		
440-151701-1	TT-TP2-L2-20160705	440-151701-12	WG	2016-07-05	NORM	Stage 2A				X							X		X		
440-151701-1	TT-TP2-M1-20160705	440-151701-4	WG	2016-07-05	NORM	Stage 2A				X				X			X		X	X	
440-151701-1	TT-TP2-M2-20160705	440-151701-5	WG	2016-07-05	NORM	Stage 2A				X				X			X		X	X	
440-151701-1	TT-TP3-L1-20160705	440-151701-13	WG	2016-07-05	NORM	Stage 2A				X							X		X		
440-151701-1	TT-TP3-L2-20160705	440-151701-14	WG	2016-07-05	NORM	Stage 2A				X							X		X		
440-151701-1	TT-TP3-M1-20160705	440-151701-6	WG	2016-07-05	NORM	Stage 2A				X				X			X		X	X	
440-151701-1	TT-TP3-M2-20160705	440-151701-7	WG	2016-07-05	NORM	Stage 2A				X				X			X		X	X	
440-151701-1	TT-TP4-L1-20160705	440-151701-15	WG	2016-07-05	NORM	Stage 2A				X							X		X		
440-151701-1	TT-TP4-L2-20160705	440-151701-16	WG	2016-07-05	NORM	Stage 2A				X							X		X		
440-151701-1	TT-TP4-M2-20160705	440-151701-8	WG	2016-07-05	NORM	Stage 2A				X				X			X		X	X	
440-151885-1	TT-TP4-M1-20160706	440-151885-1	WG	2016-07-06	NORM	Stage 2A				X				X			X		X	X	
440-151885-1	TT-TP4-M3-20160706	440-151885-2	WG	2016-07-06	NORM	Stage 2A				X				X			X		X	X	
440-151885-1	TT-TP4-M3-20160706-DUP	440-151885-3	WG	2016-07-06	FD	Stage 2A				X				X			X		X	X	
440-153790-1	TT-TP1-L1-20160727	440-153790-5	WG	2016-07-27	NORM	Stage 2A				X							X		X		
440-153790-1	TT-TP1-L2-20160727	440-153790-6	WG	2016-07-27	NORM	Stage 2A				X							X		X		
440-153790-1	TT-TP1-M1-20160727	440-153790-2	WG	2016-07-27	NORM	Stage 2A	X	X	X	X		X		X	X		X		X	X	
440-153790-1	TT-TP1-M2-20160727	440-153790-1	WG	2016-07-27	NORM	Stage 2A	X	X	X	X		X		X	X		X		X	X	
440-153790-1	TT-TP1-M3-20160727	440-153790-3	WG	2016-07-27	NORM	Stage 2A	X	X	X	X		X		X	X		X		X	X	
440-153790-1	TT-TP2-L1-20160727	440-153790-7	WG	2016-07-27	NORM	Stage 2A				X							X		X		
440-153790-1	TT-TP2-L2-20160727	440-153790-8	WG	2016-07-27	NORM	Stage 2A				X							X		X		
440-153790-1	TT-TP2-M1-20160727	440-153790-4	WG	2016-07-27	NORM	Stage 2A	X	X	X	X		X		X	X		X		X	X	

Table 9 Sample Cross-Reference

SDG	Client Sample ID	Lab Sample ID	Matrix	Sample Date	QC Type	Validation Stage	Alkalinity and ions by SM2320	Anions by EPA 300.0	Chlorate by EPA 300.1B	Hexavalent Chromium by SW-7199	Hexavalent Chromium by EPA 218.6	Metals by SW-6010B	Metals by SW-6010B_LCH	Metals by SW-6020	Mercury by SW-7470A	Mercury by SW-7471A	Perchlorate by EPA 314.0	pH by SW9045C	TDS by SM2540C	TOC by SM5310	TOC by SW-9060
440-153790-1	TT-TP3-L1-20160727	440-153790-9	WG	2016-07-27	NORM	Stage 2A				X							X		X		
440-153790-1	TT-TP3-L2-20160727	440-153790-10	WG	2016-07-27	NORM	Stage 2A				X							X		X		
440-153790-1	TT-TP4-L1-20160727	440-153790-11	WG	2016-07-27	NORM	Stage 2A				X							X		X		
440-153790-1	TT-TP4-L2-20160727	440-153790-12	WG	2016-07-27	NORM	Stage 2A				X							X		X		
440-153948-1	TT-TP2-M2-20160728	440-153948-1	WG	2016-07-28	NORM	Stage 2A	X	X	X	X		X		X	X		X		X	X	
440-153948-1	TT-TP3-M1-20160728	440-153948-3	WG	2016-07-28	NORM	Stage 2A	X	X	X	X		X		X	X		X		X	X	
440-153948-1	TT-TP3-M2-20160728	440-153948-2	WG	2016-07-28	NORM	Stage 2A	X	X	X	X		X		X	X		X		X	X	
440-153948-1	TT-TP4-M1-20160728	440-153948-4	WG	2016-07-28	NORM	Stage 2A	X	X	X	X		X		X	X		X		X	X	
440-153948-1	TT-TP4-M2-20160728	440-153948-5	WG	2016-07-28	NORM	Stage 2A	X	X	X	X		X		X	X		X		X	X	
440-153948-1	TT-TP4-M3-20160728	440-153948-6	WG	2016-07-28	NORM	Stage 2A	X	X	X	X		X		X	X		X		X	X	
440-153948-1	TT-TP4-M3-20160728-DUP	440-153948-7	WG	2016-07-28	FD	Stage 2A	X	X	X	X		X		X	X		X		X	X	
440-155501-1	TT-TP1-B1A-10	440-155501-3	SO	2016-08-11	NORM	Stage 2A	X (s)	X (s)	X (s)	X		X	X (s)	X		X	X	X (s)	X (s)		X
440-155501-1	TT-TP1-B1A-14	440-155501-4	SO	2016-08-11	NORM	Stage 2A											X		X (s)		
440-155501-1	TT-TP1-B1A-18	440-155501-5	SO	2016-08-11	NORM	Stage 2A	X (s)	X (s)	X (s)	X		X	X (s)	X		X	X	X (s)	X (s)		X
440-155501-1	TT-TP1-B1A-2	440-155501-1	SO	2016-08-11	NORM	Stage 2A											X		X (s)		
440-155501-1	TT-TP1-B1A-22	440-155501-6	SO	2016-08-11	NORM	Stage 2A											X		X (s)		
440-155501-1	TT-TP1-B1A-26	440-155501-7	SO	2016-08-11	NORM	Stage 2A											X		X (s)		
440-155501-1	TT-TP1-B1A-6	440-155501-2	SO	2016-08-11	NORM	Stage 2A											X		X (s)		
440-155501-1	TT-TP1-B3A-10	440-155501-18	SO	2016-08-11	NORM	Stage 2A											X		X (s)		
440-155501-1	TT-TP1-B3A-14	440-155501-19	SO	2016-08-11	NORM	Stage 2A											X		X (s)		
440-155501-1	TT-TP1-B3A-18	440-155501-20	SO	2016-08-11	NORM	Stage 2A	X (s)	X (s)	X (s)	X		X	X (s)	X		X	X	X (s)	X (s)		X
440-155501-1	TT-TP1-B3A-2	440-155501-16	SO	2016-08-11	NORM	Stage 2A											X		X (s)		
440-155501-1	TT-TP1-B3A-26	440-155501-21	SO	2016-08-11	NORM	Stage 2A											X		X (s)		
440-155501-1	TT-TP1-B3A-6	440-155501-17	SO	2016-08-11	NORM	Stage 2A	X (s)	X (s)	X (s)	X		X	X (s)	X		X	X	X (s)	X (s)		X
440-155501-1	TT-TP1-B4A-10	440-155501-11	SO	2016-08-11	NORM	Stage 2A											X		X (s)		
440-155501-1	TT-TP1-B4A-14	440-155501-12	SO	2016-08-11	NORM	Stage 2A											X		X (s)		
440-155501-1	TT-TP1-B4A-18	440-155501-13	SO	2016-08-11	NORM	Stage 2A											X		X (s)		
440-155501-1	TT-TP1-B4A-2	440-155501-8	SO	2016-08-11	NORM	Stage 2A	X (s)	X (s)	X (s)	X		X	X (s)	X		X	X	X (s)	X (s)		X
440-155501-1	TT-TP1-B4A-22	440-155501-14	SO	2016-08-11	NORM	Stage 2A											X		X (s)		
440-155501-1	TT-TP1-B4A-26	440-155501-15	SO	2016-08-11	NORM	Stage 2A	X (s)	X (s)	X (s)	X		X	X (s)	X		X	X	X (s)	X (s)		X
440-155501-1	TT-TP1-B4A-6	440-155501-9	SO	2016-08-11	NORM	Stage 2A											X		X (s)		
440-155501-1	TT-TP1-B4A-6-DUP	440-155501-10	SO	2016-08-11	FD	Stage 2A											X		X (s)		

Table 9 Sample Cross-Reference

SDG	Client Sample ID	Lab Sample ID	Matrix	Sample Date	QC Type	Validation Stage	Alkalinity and ions by SM2320	Anions by EPA 300.0	Chlorate by EPA 300.1B	Hexavalent Chromium by SW-7199	Hexavalent Chromium by EPA 218.6	Metals by SW-6010B	Metals by SW-6010B_LCH	Metals by SW-6020	Mercury by SW-7470A	Mercury by SW-7471A	Perchlorate by EPA 314.0	pH by SW9045C	TDS by SM2540C	TOC by SM5310	TOC by SW-9060
440-155570-1	TT-TP2-B3A-10	440-155570-3	SO	2016-08-12	NORM	Stage 2A											X		X (s)		
440-155570-1	TT-TP2-B3A-14	440-155570-4	SO	2016-08-12	NORM	Stage 2A	X (s)	X (s)	X (s)	X		X	X (s)	X		X	X	X (s)	X (s)		X
440-155570-1	TT-TP2-B3A-14-DUP	440-155570-5	SO	2016-08-12	FD	Stage 2A	X (s)	X (s)	X (s)	X		X	X (s)	X		X	X	X (s)	X (s)		X
440-155570-1	TT-TP2-B3A-18	440-155570-6	SO	2016-08-12	NORM	Stage 2A											X		X (s)		
440-155570-1	TT-TP2-B3A-2	440-155570-1	SO	2016-08-12	NORM	Stage 2A	X (s)	X (s)	X (s)	X		X	X (s)	X		X	X	X (s)	X (s)		X
440-155570-1	TT-TP2-B3A-22	440-155570-7	SO	2016-08-12	NORM	Stage 2A											X		X (s)		
440-155570-1	TT-TP2-B3A-26	440-155570-8	SO	2016-08-12	NORM	Stage 2A											X		X (s)		
440-155570-1	TT-TP2-B3A-6	440-155570-2	SO	2016-08-12	NORM	Stage 2A											X		X (s)		
440-155575-1	TT-TP1-B2A-10	440-155575-10	SO	2016-08-12	NORM	Stage 2A											X		X (s)		
440-155575-1	TT-TP1-B2A-14	440-155575-11	SO	2016-08-12	NORM	Stage 2A											X		X (s)		
440-155575-1	TT-TP1-B2A-14-DUP	440-155575-12	SO	2016-08-12	FD	Stage 2A											X		X (s)		
440-155575-1	TT-TP1-B2A-18	440-155575-13	SO	2016-08-12	NORM	Stage 2A											X		X (s)		
440-155575-1	TT-TP1-B2A-2	440-155575-8	SO	2016-08-12	NORM	Stage 2A											X		X (s)		
440-155575-1	TT-TP1-B2A-22	440-155575-14	SO	2016-08-12	NORM	Stage 2A	X (s)	X (s)	X (s)	X		X	X (s)	X		X	X	X (s)	X (s)		X
440-155575-1	TT-TP1-B2A-6	440-155575-9	SO	2016-08-12	NORM	Stage 2A	X (s)	X (s)	X (s)	X		X	X (s)	X		X	X	X (s)	X (s)		X
440-155575-1	TT-TP1-L2A-10	440-155575-18	SO	2016-08-12	NORM	Stage 2A											X		X (s)		
440-155575-1	TT-TP1-L2A-14	440-155575-19	SO	2016-08-12	NORM	Stage 2A											X		X (s)		
440-155575-1	TT-TP1-L2A-14-DUP	440-155575-20	SO	2016-08-12	FD	Stage 2A											X		X (s)		
440-155575-1	TT-TP1-L2A-18	440-155575-21	SO	2016-08-12	NORM	Stage 2A	X (s)	X (s)	X (s)	X		X	X (s)	X		X	X	X (s)	X (s)		X
440-155575-1	TT-TP1-L2A-2	440-155575-16	SO	2016-08-12	NORM	Stage 2A											X		X (s)		
440-155575-1	TT-TP1-L2A-22	440-155575-22	SO	2016-08-12	NORM	Stage 2A											X		X (s)		
440-155575-1	TT-TP1-L2A-26	440-155575-23	SO	2016-08-12	NORM	Stage 2A											X		X (s)		
440-155575-1	TT-TP1-L2A-6	440-155575-17	SO	2016-08-12	NORM	Stage 2A	X (s)	X (s)	X (s)	X		X	X (s)	X		X	X	X (s)	X (s)		X
440-155575-1	TT-TP2-B4A-10	440-155575-3	SO	2016-08-12	NORM	Stage 2A											X		X (s)		
440-155575-1	TT-TP2-B4A-14	440-155575-4	SO	2016-08-12	NORM	Stage 2A											X		X (s)		
440-155575-1	TT-TP2-B4A-18	440-155575-5	SO	2016-08-12	NORM	Stage 2A											X		X (s)		
440-155575-1	TT-TP2-B4A-2	440-155575-1	SO	2016-08-12	NORM	Stage 2A											X		X (s)		
440-155575-1	TT-TP2-B4A-22	440-155575-6	SO	2016-08-12	NORM	Stage 2A	X (s)	X (s)	X (s)	X		X	X (s)	X		X	X	X (s)	X (s)		X
440-155575-1	TT-TP2-B4A-26	440-155575-7	SO	2016-08-12	NORM	Stage 2A											X		X (s)		
440-155575-1	TT-TP2-B4A-6	440-155575-2	SO	2016-08-12	NORM	Stage 2A	X (s)	X (s)	X (s)	X		X	X (s)	X		X	X	X (s)	X (s)		X
440-155631-1	TT-TP2-B1A-10	440-155631-62	SO	2016-08-13	NORM	Stage 2A											X		X (s)		
440-155631-1	TT-TP2-B1A-14	440-155631-63	SO	2016-08-13	NORM	Stage 2A	X (s)	X (s)	X (s)	X		X	X (s)	X		X	X	X (s)	X (s)		X

Table 9 Sample Cross-Reference

SDG	Client Sample ID	Lab Sample ID	Matrix	Sample Date	QC Type	Validation Stage	Alkalinity and ions by SM2320	Anions by EPA 300.0	Chlorate by EPA 300.1B	Hexavalent Chromium by SW-7199	Hexavalent Chromium by EPA 218.6	Metals by SW-6010B	Metals by SW-6010B_LCH	Metals by SW-6020	Mercury by SW-7470A	Mercury by SW-7471A	Perchlorate by EPA 314.0	pH by SW9045C	TDS by SM2540C	TOC by SM5310	TOC by SW-9060
440-155631-1	TT-TP2-B1A-18	440-155631-64	SO	2016-08-13	NORM	Stage 2A											X		X (s)		
440-155631-1	TT-TP2-B1A-2	440-155631-60	SO	2016-08-13	NORM	Stage 2A	X (s)	X (s)	X (s)	X		X	X (s)	X		X	X	X (s)	X (s)		X
440-155631-1	TT-TP2-B1A-22	440-155631-65	SO	2016-08-13	NORM	Stage 2A											X		X (s)		
440-155631-1	TT-TP2-B1A-22-DUP	440-155631-66	SO	2016-08-13	FD	Stage 2A											X		X (s)		
440-155631-1	TT-TP2-B1A-26	440-155631-67	SO	2016-08-13	NORM	Stage 2A											X		X (s)		
440-155631-1	TT-TP2-B1A-6	440-155631-61	SO	2016-08-13	NORM	Stage 2A											X		X (s)		
440-155631-1	TT-TP2-B2A-10	440-155631-10	SO	2016-08-13	NORM	Stage 2A	X (s)	X (s)	X (s)	X		X	X (s)	X		X	X	X (s)	X (s)		X
440-155631-1	TT-TP2-B2A-14	440-155631-11	SO	2016-08-13	NORM	Stage 2A											X		X (s)		
440-155631-1	TT-TP2-B2A-18	440-155631-12	SO	2016-08-13	NORM	Stage 2A											X		X (s)		
440-155631-1	TT-TP2-B2A-2	440-155631-8	SO	2016-08-13	NORM	Stage 2A											X		X (s)		
440-155631-1	TT-TP2-B2A-22	440-155631-13	SO	2016-08-13	NORM	Stage 2A											X		X (s)		
440-155631-1	TT-TP2-B2A-26	440-155631-14	SO	2016-08-13	NORM	Stage 2A	X (s)	X (s)	X (s)	X		X	X (s)	X		X	X	X (s)	X (s)		X
440-155631-1	TT-TP2-B2A-6	440-155631-9	SO	2016-08-13	NORM	Stage 2A											X		X (s)		
440-155631-1	TT-TP2-L2A-10	440-155631-3	SO	2016-08-13	NORM	Stage 2A											X		X (s)		
440-155631-1	TT-TP2-L2A-14	440-155631-4	SO	2016-08-13	NORM	Stage 2A											X		X (s)		
440-155631-1	TT-TP2-L2A-18	440-155631-5	SO	2016-08-13	NORM	Stage 2A											X		X (s)		
440-155631-1	TT-TP2-L2A-2	440-155631-1	SO	2016-08-13	NORM	Stage 2A	X (s)	X (s)	X (s)	X		X	X (s)	X		X	X	X (s)	X (s)		X
440-155631-1	TT-TP2-L2A-22	440-155631-6	SO	2016-08-13	NORM	Stage 2A											X		X (s)		
440-155631-1	TT-TP2-L2A-26	440-155631-7	SO	2016-08-13	NORM	Stage 2A	X (s)	X (s)	X (s)	X		X	X (s)	X		X	X	X (s)	X (s)		X
440-155631-1	TT-TP2-L2A-6	440-155631-2	SO	2016-08-13	NORM	Stage 2A											X		X (s)		
440-155631-1	TT-TP3-B1A-10	440-155631-32	SO	2016-08-14	NORM	Stage 2A	X (s)	X (s)	X (s)	X		X	X (s)	X		X	X	X (s)	X (s)		X
440-155631-1	TT-TP3-B1A-14	440-155631-33	SO	2016-08-14	NORM	Stage 2A											X		X (s)		
440-155631-1	TT-TP3-B1A-18	440-155631-34	SO	2016-08-14	NORM	Stage 2A	X (s)	X (s)	X (s)	X		X	X (s)	X		X	X	X (s)	X (s)		X
440-155631-1	TT-TP3-B1A-2	440-155631-29	SO	2016-08-14	NORM	Stage 2A											X		X (s)		
440-155631-1	TT-TP3-B1A-22	440-155631-35	SO	2016-08-14	NORM	Stage 2A											X		X (s)		
440-155631-1	TT-TP3-B1A-28	440-155631-36	SO	2016-08-14	NORM	Stage 2A											X		X (s)		
440-155631-1	TT-TP3-B1A-6	440-155631-30	SO	2016-08-14	NORM	Stage 2A											X		X (s)		
440-155631-1	TT-TP3-B1A-6-DUP	440-155631-31	SO	2016-08-14	FD	Stage 2A											X		X (s)		
440-155631-1	TT-TP3-B2A-10	440-155631-47	SO	2016-08-14	NORM	Stage 2A											X		X (s)		
440-155631-1	TT-TP3-B2A-14	440-155631-48	SO	2016-08-14	NORM	Stage 2A	X (s)	X (s)	X (s)	X		X	X (s)	X		X	X	X (s)	X (s)		X
440-155631-1	TT-TP3-B2A-18	440-155631-49	SO	2016-08-14	NORM	Stage 2A											X		X (s)		
440-155631-1	TT-TP3-B2A-2	440-155631-45	SO	2016-08-14	NORM	Stage 2A											X		X (s)		

Table 9 Sample Cross-Reference

SDG	Client Sample ID	Lab Sample ID	Matrix	Sample Date	QC Type	Validation Stage	Alkalinity and ions by SM2320	Anions by EPA 300.0	Chlorate by EPA 300.1B	Hexavalent Chromium by SW-7199	Hexavalent Chromium by EPA 218.6	Metals by SW-6010B	Metals by SW-6010B_LCH	Metals by SW-6020	Mercury by SW-7470A	Mercury by SW-7471A	Perchlorate by EPA 314.0	pH by SW9045C	TDS by SM2540C	TOC by SM5310	TOC by SW-9060
440-155631-1	TT-TP3-B2A-22	440-155631-50	SO	2016-08-14	NORM	Stage 2A											X		X (s)		
440-155631-1	TT-TP3-B2A-22-DUP	440-155631-51	SO	2016-08-14	FD	Stage 2A											X		X (s)		
440-155631-1	TT-TP3-B2A-6	440-155631-46	SO	2016-08-14	NORM	Stage 2A	X (s)	X (s)	X (s)	X		X	X (s)	X		X	X	X (s)	X (s)		X
440-155631-1	TT-TP3-B3A-10	440-155631-17	SO	2016-08-13	NORM	Stage 2A	X (s)	X (s)	X (s)	X		X	X (s)	X		X	X	X (s)	X (s)		X
440-155631-1	TT-TP3-B3A-14	440-155631-18	SO	2016-08-13	NORM	Stage 2A											X		X (s)		
440-155631-1	TT-TP3-B3A-18	440-155631-19	SO	2016-08-13	NORM	Stage 2A											X		X (s)		
440-155631-1	TT-TP3-B3A-2	440-155631-15	SO	2016-08-13	NORM	Stage 2A											X		X (s)		
440-155631-1	TT-TP3-B3A-22	440-155631-20	SO	2016-08-13	NORM	Stage 2A											X		X (s)		
440-155631-1	TT-TP3-B3A-26	440-155631-21	SO	2016-08-13	NORM	Stage 2A	X (s)	X (s)	X (s)	X		X	X (s)	X		X	X	X (s)	X (s)		X
440-155631-1	TT-TP3-B3A-6	440-155631-16	SO	2016-08-13	NORM	Stage 2A											X		X (s)		
440-155631-1	TT-TP3-B4A-10	440-155631-24	SO	2016-08-14	NORM	Stage 2A											X		X (s)		
440-155631-1	TT-TP3-B4A-14	440-155631-25	SO	2016-08-14	NORM	Stage 2A											X		X (s)		
440-155631-1	TT-TP3-B4A-14-DUP	440-155631-26	SO	2016-08-14	FD	Stage 2A											X		X (s)		
440-155631-1	TT-TP3-B4A-18	440-155631-27	SO	2016-08-14	NORM	Stage 2A	X (s)	X (s)	X (s)	X		X	X (s)	X		X	X	X (s)	X (s)		X
440-155631-1	TT-TP3-B4A-2	440-155631-22	SO	2016-08-14	NORM	Stage 2A	X (s)	X (s)	X (s)	X		X	X (s)	X		X	X	X (s)	X (s)		X
440-155631-1	TT-TP3-B4A-22	440-155631-28	SO	2016-08-14	NORM	Stage 2A											X		X (s)		
440-155631-1	TT-TP3-B4A-6	440-155631-23	SO	2016-08-14	NORM	Stage 2A											X		X (s)		
440-155631-1	TT-TP3-L2A-10	440-155631-40	SO	2016-08-14	NORM	Stage 2A											X		X (s)		
440-155631-1	TT-TP3-L2A-14	440-155631-41	SO	2016-08-14	NORM	Stage 2A	X (s)	X (s)	X (s)	X		X	X (s)	X		X	X	X (s)	X (s)		X
440-155631-1	TT-TP3-L2A-18	440-155631-42	SO	2016-08-14	NORM	Stage 2A											X		X (s)		
440-155631-1	TT-TP3-L2A-2	440-155631-37	SO	2016-08-14	NORM	Stage 2A											X		X (s)		
440-155631-1	TT-TP3-L2A-22	440-155631-43	SO	2016-08-14	NORM	Stage 2A											X		X (s)		
440-155631-1	TT-TP3-L2A-26	440-155631-44	SO	2016-08-14	NORM	Stage 2A											X		X (s)		
440-155631-1	TT-TP3-L2A-6	440-155631-38	SO	2016-08-14	NORM	Stage 2A	X (s)	X (s)	X (s)	X		X	X (s)	X		X	X	X (s)	X (s)		X
440-155631-1	TT-TP3-L2A-6-DUP	440-155631-39	SO	2016-08-14	FD	Stage 2A	X (s)	X (s)	X (s)	X		X	X (s)	X		X	X	X (s)	X (s)		X
440-155631-1	TT-TP4-B3A-10	440-155631-54	SO	2016-08-15	NORM	Stage 2A											X		X (s)		
440-155631-1	TT-TP4-B3A-14	440-155631-55	SO	2016-08-15	NORM	Stage 2A											X		X (s)		
440-155631-1	TT-TP4-B3A-18	440-155631-56	SO	2016-08-15	NORM	Stage 2A											X		X (s)		
440-155631-1	TT-TP4-B3A-2	440-155631-52	SO	2016-08-15	NORM	Stage 2A	X (s)	X (s)	X (s)	X		X	X (s)	X		X	X	X (s)	X (s)		X
440-155631-1	TT-TP4-B3A-22	440-155631-57	SO	2016-08-15	NORM	Stage 2A	X (s)	X (s)	X (s)	X		X	X (s)	X		X	X	X (s)	X (s)		X
440-155631-1	TT-TP4-B3A-22-DUP	440-155631-58	SO	2016-08-15	FD	Stage 2A	X (s)	X (s)	X (s)	X		X	X (s)	X		X	X	X (s)	X (s)		X
440-155631-1	TT-TP4-B3A-26	440-155631-59	SO	2016-08-13	NORM	Stage 2A											X		X (s)		

Table 9 Sample Cross-Reference

SDG	Client Sample ID	Lab Sample ID	Matrix	Sample Date	QC Type	Validation Stage	Alkalinity and ions by SM2320	Anions by EPA 300.0	Chlorate by EPA 300.1B	Hexavalent Chromium by SW-7199	Hexavalent Chromium by EPA 218.6	Metals by SW-6010B	Metals by SW-6010B_LCH	Metals by SW-6020	Mercury by SW-7470A	Mercury by SW-7471A	Perchlorate by EPA 314.0	pH by SW9045C	TDS by SM2540C	TOC by SM5310	TOC by SW-9060
440-155631-1	TT-TP4-B3A-6	440-155631-53	SO	2016-08-15	NORM	Stage 2A											X		X (s)		
440-155720-1	TT-TP4-B1A-10	440-155720-10	SO	2016-08-16	NORM	Stage 2A											X		X (s)		
440-155720-1	TT-TP4-B1A-14	440-155720-11	SO	2016-08-16	NORM	Stage 2A	X (s)	X (s)	X (s)	X		X	X (s)	X		X	X	X (s)	X (s)		X
440-155720-1	TT-TP4-B1A-18	440-155720-12	SO	2016-08-16	NORM	Stage 2A											X		X (s)		
440-155720-1	TT-TP4-B1A-2	440-155720-8	SO	2016-08-16	NORM	Stage 2A											X		X (s)		
440-155720-1	TT-TP4-B1A-24	440-155720-15	SO	2016-08-16	NORM	Stage 2A											X		X (s)		
440-155720-1	TT-TP4-B1A-26	440-155720-13	SO	2016-08-16	NORM	Stage 2A											X		X (s)		
440-155720-1	TT-TP4-B1A-26-DUP	440-155720-14	SO	2016-08-16	FD	Stage 2A											X		X (s)		
440-155720-1	TT-TP4-B1A-6	440-155720-9	SO	2016-08-16	NORM	Stage 2A	X (s)	X (s)	X (s)	X		X	X (s)	X		X	X	X (s)	X (s)		X
440-155720-1	TT-TP4-B4A-10	440-155720-3	SO	2016-08-16	NORM	Stage 2A	X (s)	X (s)	X (s)	X		X	X (s)	X		X	X	X (s)	X (s)		X
440-155720-1	TT-TP4-B4A-14	440-155720-4	SO	2016-08-16	NORM	Stage 2A											X		X (s)		
440-155720-1	TT-TP4-B4A-18	440-155720-5	SO	2016-08-16	NORM	Stage 2A											X		X (s)		
440-155720-1	TT-TP4-B4A-2	440-155720-1	SO	2016-08-16	NORM	Stage 2A											X		X (s)		
440-155720-1	TT-TP4-B4A-22	440-155720-6	SO	2016-08-16	NORM	Stage 2A											X		X (s)		
440-155720-1	TT-TP4-B4A-26	440-155720-7	SO	2016-08-16	NORM	Stage 2A	X (s)	X (s)	X (s)	X		X	X (s)	X		X	X	X (s)	X (s)		X
440-155720-1	TT-TP4-B4A-6	440-155720-2	SO	2016-08-16	NORM	Stage 2A											X		X (s)		
440-155720-1	TT-TP4-L2A-10	440-155720-18	SO	2016-08-16	NORM	Stage 2A	X (s)	X (s)	X (s)	X		X	X (s)	X		X	X	X (s)	X (s)		X
440-155720-1	TT-TP4-L2A-14	440-155720-19	SO	2016-08-16	NORM	Stage 2A											X		X (s)		
440-155720-1	TT-TP4-L2A-18	440-155720-20	SO	2016-08-16	NORM	Stage 2A											X		X (s)		
440-155720-1	TT-TP4-L2A-2	440-155720-16	SO	2016-08-16	NORM	Stage 2A											X		X (s)		
440-155720-1	TT-TP4-L2A-22	440-155720-21	SO	2016-08-16	NORM	Stage 2A	X (s)	X (s)	X (s)	X		X	X (s)	X		X	X	X (s)	X (s)		X
440-155720-1	TT-TP4-L2A-26	440-155720-22	SO	2016-08-16	NORM	Stage 2A											X		X (s)		
440-155720-1	TT-TP4-L2A-26-DUP	440-155720-23	SO	2016-08-16	FD	Stage 2A											X		X (s)		
440-155720-1	TT-TP4-L2A-6	440-155720-17	SO	2016-08-16	NORM	Stage 2A											X		X (s)		
440-155767-1	TT-TP4-B2A-10	440-155767-4	SO	2016-08-16	NORM	Stage 2A	X (s)	X (s)	X (s)	X		X	X (s)	X		X	X	X (s)	X (s)		X
440-155767-1	TT-TP4-B2A-14	440-155767-5	SO	2016-08-16	NORM	Stage 2A											X		X (s)		
440-155767-1	TT-TP4-B2A-18	440-155767-6	SO	2016-08-16	NORM	Stage 2A											X		X (s)		
440-155767-1	TT-TP4-B2A-2	440-155767-1	SO	2016-08-16	NORM	Stage 2A											X		X (s)		
440-155767-1	TT-TP4-B2A-22	440-155767-7	SO	2016-08-16	NORM	Stage 2A	X (s)	X (s)	X (s)	X		X	X (s)	X		X	X	X (s)	X (s)		X
440-155767-1	TT-TP4-B2A-22-DUP	440-155767-9	SO	2016-08-16	FD	Stage 2A	X (s)	X (s)	X (s)	X		X	X (s)	X		X	X	X (s)	X (s)		X
440-155767-1	TT-TP4-B2A-26	440-155767-8	SO	2016-08-16	NORM	Stage 2A											X		X (s)		
440-155767-1	TT-TP4-B2A-6	440-155767-2	SO	2016-08-16	NORM	Stage 2A											X		X (s)		

**Table 9** Sample Cross-Reference

SDG	Client Sample ID	Lab Sample ID	Matrix	Sample Date	QC Type	Validation Stage	Alkalinity and ions by SM2320	Anions by EPA 300.0	Chlorate by EPA 300.1B	Hexavalent Chromium by SW-7199	Hexavalent Chromium by EPA 218.6	Metals by SW-6010B	Metals by SW-6010B_LCH	Metals by SW-6020	Mercury by SW-7470A	Mercury by SW-7471A	Perchlorate by EPA 314.0	pH by SW9045C	TDS by SM2540C	TOC by SM5310	TOC by SW-9060
440-155767-1	TT-TP4-B2A-6-DUP	440-155767-3	SO	2016-08-16	FD	Stage 2A											X		X (s)		
440-104698-1	EB-03/17/15	440-104698-8	BW	2015-03-17	EB	Stage 2A				X		X		X	X		X				X
440-104832-1	EB-03/18/15	440-104832-32	BW	2015-03-18	EB	Stage 2A				X		X		X	X		X				X
440-104832-1	EB-03/18/15-2	440-104832-33	BW	2015-03-18	EB	Stage 2A				X		X		X	X		X				X
440-104925-1	EB-03/19/15	440-104925-33	BW	2015-03-19	EB	Stage 2A				X		X		X	X		X				X
440-104925-1	EB-03/19/15-2	440-104925-41	BW	2015-03-19	EB	Stage 2A				X		X		X	X		X				X

(s) - soluble

**Appendix E.1**  
**Automated Data Review**  
**Data Tables**



# Data Review Summary

Lab Reporting Batch ID: 440-104698-1

Laboratory: TA IRV

EDD Filename: Prep440-104698-1

eQAPP Name: TetraTechInc\_NERT\_11302016

## *Validation Area*

## *Note*

<i>Validation Area</i>	<i>Note</i>
Technical Holding Times	A
Temperature	A
Initial Calibration	N
Continuing Calibration/Initial Calibration Verification	N
Method Blanks	SR
Surrogate/Tracer Spikes	A
Matrix Spike/Matrix Spike Duplicates	SR
Laboratory Duplicates	A
Laboratory Replicates	N
Laboratory Control Samples	A
Compound Quantitation	SR
Field Duplicates	N
Field Triplicates	N
Field Blanks	A

A = Acceptable, N = Not provided/applicable, SR = See report

The contents of this report reflect findings made by ADR during Automated Data Review, manual applied qualifiers are not considered. Please refer to the Overall Qualifier Summary report for manual qualifiers.

# Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 440-104698-1

Laboratory: TA IRV

EDD Filename: Prep440-104698-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method: 314.0**  
**Matrix: AQ**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
EB-03/17/15MS EB-03/17/15MSD (EB-03/17/15)	PERCHLORATE	121	123	80.00-120.00	-	PERCHLORATE	J+(all detects)

**Method: 6010B**  
**Matrix: SO**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
Tt-TP1-B1-10MS (TOT) Tt-TP1-B1-10MSD (TOT) (Tt-TP1-B1-10)	IRON	-787	-3020	75.00-125.00	-	IRON	J- (all detects) R (all non-detects)
Tt-TP1-B1-10MSD (TOT) (Tt-TP1-B1-10)	MANGANESE	-	68	75.00-125.00	-	MANGANESE	J-(all detects) UJ(all non-detects)
Tt-TP1-B1-10MS (TOT) Tt-TP1-B1-10MSD (TOT) (Tt-TP1-B1-10)	TITANIUM	364	216	75.00-125.00	-	TITANIUM	J+(all detects)

**Method: 6020**  
**Matrix: SO**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
Tt-TP1-B1-10MSD (TOT) (Tt-TP1-B1-10)	COPPER	-	75	80.00-120.00	-	COPPER	J-(all detects) UJ(all non-detects)
Tt-TP1-B1-10MS (TOT) Tt-TP1-B1-10MSD (TOT) (Tt-TP1-B1-10)	BARIUM	154	154	80.00-120.00	-	BARIUM	J+(all detects)

# Method Blank Outlier Report

Lab Reporting Batch ID: 440-104698-1

Laboratory: TA IRV

EDD Filename: Prep440-104698-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method:** 6010B

**Matrix:** AQ

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
MB 440-244433/1-A	3/25/2015 10:05:00 AM	IRON MAGNESIUM	0.0136 mg/L 0.0101 mg/L	EB-03/17/15

**Method:** 6010B\_Leach

**Matrix:** AQ

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
MB 440-245772/1-B	3/30/2015 12:18:00 PM	CALCIUM MAGNESIUM	0.0860 mg/L 0.0146 mg/L	Tt-TP1-B1-10 Tt-TP1-B1-18

**Method:** 6020

**Matrix:** AQ

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
MB 440-244681/1-A	3/27/2015 2:44:00 PM	ZINC	3.19 ug/L	EB-03/17/15

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# Data Qualifier Summary

Lab Reporting Batch ID: 440-104698-1

Laboratory: TA IRV

EDD Filename: Prep440-104698-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b> GENCHEM
<b>Method:</b> 300.1B_Leach <span style="float: right;"><b>Matrix:</b> AQ</span>

<b>Sample ID:</b> Tt-TP1-B1-18	<b>Collected:</b> 3/17/2015 11:25:00 AM	<b>Analysis Type:</b> RES	<b>Dilution:</b> 1						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chlorate	17	J	10	MDL	20	MRL	ug/L	J	sp

<b>Method Category:</b> METALS
<b>Method:</b> 6010B <span style="float: right;"><b>Matrix:</b> AQ</span>

<b>Sample ID:</b> EB-03/17/15	<b>Collected:</b> 3/17/2015 12:33:00 PM	<b>Analysis Type:</b> RES/TOT	<b>Dilution:</b> 1						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
TITANIUM	0.0026	J	0.0025	MDL	0.0050	MRL	mg/L	J	sp

<b>Method Category:</b> METALS
<b>Method:</b> 6010B <span style="float: right;"><b>Matrix:</b> SO</span>

<b>Sample ID:</b> Tt-TP1-B1-10	<b>Collected:</b> 3/17/2015 11:08:00 AM	<b>Analysis Type:</b> RES/TOT	<b>Dilution:</b> 5						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
IRON	12000		5.4	MDL	11	MRL	mg/Kg	J-	m
MANGANESE	190	F1	1.1	MDL	2.2	MRL	mg/Kg	J-	m
TITANIUM	600		1.1	MDL	2.2	MRL	mg/Kg	J+	m

<b>Method Category:</b> METALS
<b>Method:</b> 6020 <span style="float: right;"><b>Matrix:</b> AQ</span>

<b>Sample ID:</b> EB-03/17/15	<b>Collected:</b> 3/17/2015 12:33:00 PM	<b>Analysis Type:</b> RES/TOT	<b>Dilution:</b> 1						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.94	J	0.50	MDL	2.0	MRL	ug/L	J	sp

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

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# Data Qualifier Summary

Lab Reporting Batch ID: 440-104698-1

Laboratory: TA IRV

EDD Filename: Prep440-104698-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b>	METALS	
<b>Method:</b>	6020	<b>Matrix:</b> SO

<b>Sample ID:</b> Tt-TP1-B1-10		<b>Collected:</b> 3/17/2015 11:08:00 AM		<b>Analysis Type:</b> RE2/TOT				<b>Dilution:</b> 20	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
COPPER	27	F1	0.54	MDL	1.1	MRL	mg/Kg	J-	m

<b>Sample ID:</b> Tt-TP1-B1-10		<b>Collected:</b> 3/17/2015 11:08:00 AM		<b>Analysis Type:</b> RES/TOT				<b>Dilution:</b> 20	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	110	F1	0.27	MDL	0.54	MRL	mg/Kg	J+	m
MOLYBDENUM	0.85	J	0.54	MDL	1.1	MRL	mg/Kg	J	sp

<b>Sample ID:</b> Tt-TP1-B1-18		<b>Collected:</b> 3/17/2015 11:25:00 AM		<b>Analysis Type:</b> RE2/TOT				<b>Dilution:</b> 20	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BERYLLIUM	0.27	J	0.16	MDL	0.32	MRL	mg/Kg	J	sp

<b>Sample ID:</b> Tt-TP1-B1-18		<b>Collected:</b> 3/17/2015 11:25:00 AM		<b>Analysis Type:</b> RES/TOT				<b>Dilution:</b> 20	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.92	J	0.53	MDL	1.1	MRL	mg/Kg	J	sp

<b>Method Category:</b>	METALS	
<b>Method:</b>	7471A	<b>Matrix:</b> SO

<b>Sample ID:</b> Tt-TP1-B1-10		<b>Collected:</b> 3/17/2015 11:08:00 AM		<b>Analysis Type:</b> RES/TOT				<b>Dilution:</b> 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.014	J	0.013	MDL	0.022	MRL	mg/Kg	J	sp

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

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# Data Qualifier Summary

Lab Reporting Batch ID: 440-104698-1

Laboratory: TA IRV

EDD Filename: Prep440-104698-1

eQAPP Name: TetraTechInc\_NERT\_11302016

## Reason Code Legend

<i>Reason Code</i>	<i>Description</i>
bl	Method Blank Contamination
m	Matrix Spike Lower Estimation
m	Matrix Spike Lower Rejection
m	Matrix Spike Upper Estimation
sp	Reporting Limit Trace Value

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

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# Reporting Limit Outliers

Lab Reporting Batch ID: 440-104698-1

Laboratory: TA IRV

EDD Filename: Prep440-104698-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method:** 300.1B\_Leach  
**Matrix:** AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
Tt-TP1-B1-18	Chlorate	J	17	20	MRL	ug/L	J (all detects)

**Method:** 6010B  
**Matrix:** AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
EB-03/17/15	TITANIUM	J	0.0026	0.0050	MRL	mg/L	J (all detects)

**Method:** 6020  
**Matrix:** AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
EB-03/17/15	MOLYBDENUM	J	0.94	2.0	MRL	ug/L	J (all detects)

**Method:** 6020  
**Matrix:** SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
Tt-TP1-B1-10	MOLYBDENUM	J	0.85	1.1	MRL	mg/Kg	J (all detects)
Tt-TP1-B1-18	BERYLLIUM	J	0.27	0.32	MRL	mg/Kg	J (all detects)
	MOLYBDENUM	J	0.92	1.1	MRL	mg/Kg	J (all detects)

**Method:** 7471A  
**Matrix:** SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
Tt-TP1-B1-10	MERCURY	J	0.014	0.022	MRL	mg/Kg	J (all detects)

# Data Review Summary

Lab Reporting Batch ID: 440-104832-1

Laboratory: TA IRV

EDD Filename: Prep440-104832-1

eQAPP Name: TetraTechInc\_NERT\_11302016

## *Validation Area*

## *Note*

<i>Validation Area</i>	<i>Note</i>
Technical Holding Times	A
Temperature	A
Initial Calibration	N
Continuing Calibration/Initial Calibration Verification	N
Method Blanks	SR
Surrogate/Tracer Spikes	A
Matrix Spike/Matrix Spike Duplicates	SR
Laboratory Duplicates	A
Laboratory Replicates	N
Laboratory Control Samples	A
Compound Quantitation	SR
Field Duplicates	SR
Field Triplicates	N
Field Blanks	A

A = Acceptable, N = Not provided/applicable, SR = See report

The contents of this report reflect findings made by ADR during Automated Data Review, manual applied qualifiers are not considered. Please refer to the Overall Qualifier Summary report for manual qualifiers.



## Field Duplicate RPD Report

Lab Reporting Batch ID: 440-104832-1

Laboratory: TA IRV

EDD Filename: Prep440-104832-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method:** 2540C\_Leach

**Matrix:** AQ

<i>Analyte</i>	<i>Concentration (mg/L)</i>		<i>Sample RPD</i>	<i>eQAPP RPD</i>	<i>Flag</i>
	Tt-TP1-B4-6	Tt-TP1-B4-6-dup			
TOTAL DISSOLVED SOLIDS	72	68	6	30.00	No Qualifiers Applied

<i>Analyte</i>	<i>Concentration (mg/L)</i>		<i>Sample RPD</i>	<i>eQAPP RPD</i>	<i>Flag</i>
	Tt-TP2-B1-22	Tt-TP2-B1-22-dup			
TOTAL DISSOLVED SOLIDS	600	1100	59	30.00	J(all detects) UJ(all non-detects)

<i>Analyte</i>	<i>Concentration (mg/L)</i>		<i>Sample RPD</i>	<i>eQAPP RPD</i>	<i>Flag</i>
	Tt-TP1-B2-14	Tt-TP1-B2-14-dup			
TOTAL DISSOLVED SOLIDS	150	190	24	30.00	No Qualifiers Applied

**Method:** 314.0

**Matrix:** SO

<i>Analyte</i>	<i>Concentration (mg/Kg)</i>		<i>Sample RPD</i>	<i>eQAPP RPD</i>	<i>Flag</i>
	Tt-TP1-B4-6	Tt-TP1-B4-6-dup			
PERCHLORATE	0.77	1.4	58	30.00	J(all detects) UJ(all non-detects)

<i>Analyte</i>	<i>Concentration (mg/Kg)</i>		<i>Sample RPD</i>	<i>eQAPP RPD</i>	<i>Flag</i>
	Tt-TP2-B1-22	Tt-TP2-B1-22-dup			
PERCHLORATE	520	7900	175	30.00	J(all detects) UJ(all non-detects)

<i>Analyte</i>	<i>Concentration (mg/Kg)</i>		<i>Sample RPD</i>	<i>eQAPP RPD</i>	<i>Flag</i>
	Tt-TP1-B2-14	Tt-TP1-B2-14-dup			
PERCHLORATE	2.3	1.6	36	30.00	J(all detects) UJ(all non-detects)

# Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 440-104832-1

Laboratory: TA IRV

EDD Filename: Prep440-104832-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method: 314.0**  
**Matrix: AQ**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
EB-03/18/15MS EB-03/18/15MSD (EB-03/18/15)	PERCHLORATE	172	171	80.00-120.00	-	PERCHLORATE	J+(all detects)

**Method: 6010B\_Leach**  
**Matrix: AQ**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
Tt-TP1-B3-6MSD (TOT) (Tt-TP1-B3-6)	CALCIUM	-	12	75.00-125.00	-	CALCIUM	J-(all detects) R(all non-detects)

**Method: 300.1B\_Leach**  
**Matrix: AQ**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
Tt-TP1-B3-6MS Tt-TP1-B3-6MSD (Tt-TP1-B3-6)	Chlorate	130	130	75.00-125.00	-	Chlorate	J+(all detects)

**Method: 6010B**  
**Matrix: SO**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
Tt-TP1-B2-6MS (TOT) Tt-TP1-B2-6MSD (TOT) (Tt-TP1-B2-6)	IRON MANGANESE	-1859 12	-2617 -30	75.00-125.00 75.00-125.00	- -	IRON MANGANESE	J- (all detects) R (all non-detects)
Tt-TP1-B2-6MS (TOT) Tt-TP1-B2-6MSD (TOT) (Tt-TP1-B2-6)	BORON	57	61	75.00-125.00	-	BORON	J-(all detects) UJ(all non-detects)
Tt-TP1-B2-6MS (TOT) Tt-TP1-B2-6MSD (TOT) (Tt-TP1-B2-6)	TITANIUM	586	825	75.00-125.00	-	TITANIUM	J+(all detects)

# Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 440-104832-1

Laboratory: TA IRV

EDD Filename: Prep440-104832-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method: 6020**  
**Matrix: SO**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
Tt-TP1-B2-6MS (TOT) Tt-TP1-B2-6MSD (TOT) (Tt-TP1-B2-6)	ARSENIC ZINC	22 -40	28 -32	80.00-120.00 80.00-120.00	- -	ARSENIC ZINC	J-(all detects) R(all non-detects)
Tt-TP1-B2-6MS (TOT) Tt-TP1-B2-6MSD (TOT) (Tt-TP1-B2-6)	ANTIMONY COPPER NICKEL	34 73 70	37 - 77	80.00-120.00 80.00-120.00 80.00-120.00	- - -	ANTIMONY COPPER NICKEL	J-(all detects) UJ(all non-detects)

**Method: 314.0**  
**Matrix: SO**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
Tt-TP1-B3-6MS Tt-TP1-B3-6MSD (Tt-TP1-B3-6)	PERCHLORATE	-85	-44	80.00-120.00	-	PERCHLORATE	J-(all detects) R(all non-detects)
Tt-TP1-B4-6MS Tt-TP1-B4-6MSD (Tt-TP1-B4-6)	PERCHLORATE	125	171	80.00-120.00	-	PERCHLORATE	J+(all detects)
Tt-TP2-B1-22MS Tt-TP2-B1-22MSD (Tt-TP2-B1-22)	PERCHLORATE	1697	862	80.00-120.00	-	PERCHLORATE	J+(all detects)

## Method Blank Outlier Report

Lab Reporting Batch ID: 440-104832-1

Laboratory: TA IRV

EDD Filename: Prep440-104832-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method:** 6010B  
**Matrix:** AQ

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
MB 440-245023/1-A	3/27/2015 9:11:00 PM	IRON	0.0180 mg/L	EB-03/18/15 EB-03/18/15-2

**Method:** 6010B\_Leach  
**Matrix:** AQ

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
MB 440-245772/1-B	3/30/2015 12:18:00 PM	CALCIUM MAGNESIUM	0.0860 mg/L 0.0146 mg/L	Tt-TP1-B2-22 Tt-TP1-B2-6 Tt-TP1-B3-18 Tt-TP1-B3-6 Tt-TP1-B4-2 Tt-TP1-B4-26 Tt-TP2-B1-14 Tt-TP2-B1-2 Tt-TP2-B2-10 Tt-TP2-B2-26

**Method:** 6020  
**Matrix:** AQ

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
MB 440-245079/1-A	3/27/2015 3:02:00 PM	ZINC	16.4 ug/L	EB-03/18/15 EB-03/18/15-2

# Data Qualifier Summary

Lab Reporting Batch ID: 440-104832-1

Laboratory: TA IRV

EDD Filename: Prep440-104832-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b>	GENCHEM	
<b>Method:</b>	2540C_Leach	<b>Matrix:</b> AQ

<b>Sample ID:</b> Tt-TP2-B1-22	<b>Collected:</b> 3/18/2015 11:01:00 AM	<b>Analysis Type:</b> RES	<b>Dilution:</b> 1						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
TOTAL DISSOLVED SOLIDS	600		5.0	MDL	10	MRL	mg/L	J	fd

<b>Sample ID:</b> Tt-TP2-B1-22-dup	<b>Collected:</b> 3/18/2015 11:01:00 AM	<b>Analysis Type:</b> RES	<b>Dilution:</b> 1						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
TOTAL DISSOLVED SOLIDS	1100		5.0	MDL	10	MRL	mg/L	J	fd

<b>Method Category:</b>	GENCHEM	
<b>Method:</b>	314.0	<b>Matrix:</b> SO

<b>Sample ID:</b> Tt-TP1-B2-14	<b>Collected:</b> 3/17/2015 2:27:00 PM	<b>Analysis Type:</b> RES	<b>Dilution:</b> 10						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
PERCHLORATE	2.3		0.10	MDL	0.43	MRL	mg/Kg	J	fd

<b>Sample ID:</b> Tt-TP1-B2-14-dup	<b>Collected:</b> 3/17/2015 2:27:00 PM	<b>Analysis Type:</b> RES	<b>Dilution:</b> 10						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
PERCHLORATE	1.6		0.10	MDL	0.42	MRL	mg/Kg	J	fd

<b>Sample ID:</b> Tt-TP1-B3-6	<b>Collected:</b> 3/18/2015 8:06:00 AM	<b>Analysis Type:</b> RES	<b>Dilution:</b> 100						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
PERCHLORATE	11		1.1	MDL	4.5	MRL	mg/Kg	J-	m

<b>Sample ID:</b> Tt-TP1-B4-6	<b>Collected:</b> 3/18/2015 9:22:00 AM	<b>Analysis Type:</b> RES	<b>Dilution:</b> 10						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
PERCHLORATE	0.77	F1	0.10	MDL	0.44	MRL	mg/Kg	J+	m, fd

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

1/26/2017 2:57:28 PM

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# Data Qualifier Summary

Lab Reporting Batch ID: 440-104832-1

Laboratory: TA IRV

EDD Filename: Prep440-104832-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b>	GENCHEM	
<b>Method:</b>	314.0	<b>Matrix:</b> SO

Sample ID: Tt-TP1-B4-6-dup      Collected: 3/18/2015 9:22:00 AM      Analysis Type: RES      Dilution: 10

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
PERCHLORATE	1.4		0.10	MDL	0.44	MRL	mg/Kg	J	fd

3/18/2015 11:01:00

Sample ID: Tt-TP2-B1-22      Collected: AM      Analysis Type: RES      Dilution: 1000

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
PERCHLORATE	520		11	MDL	46	MRL	mg/Kg	J+	m, fd

3/18/2015 11:01:00

Sample ID: Tt-TP2-B1-22-dup      Collected: AM      Analysis Type: RES      Dilution: 10000

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
PERCHLORATE	7900		120	MDL	500	MRL	mg/Kg	J	fd

<b>Method Category:</b>	METALS	
<b>Method:</b>	6010B	<b>Matrix:</b> AQ

3/18/2015 12:00:00

Sample ID: EB-03/18/15      Collected: PM      Analysis Type: RES/TOT      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MANGANESE	0.012	J	0.010	MDL	0.020	MRL	mg/L	J	sp
TITANIUM	0.0038	J	0.0025	MDL	0.0050	MRL	mg/L	J	sp

3/18/2015 1:41:00 PM

Sample ID: EB-03/18/15-2      Collected: 3/18/2015 1:41:00 PM      Analysis Type: RES/TOT      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SODIUM	0.26	J	0.25	MDL	0.50	MRL	mg/L	J	sp

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

# Data Qualifier Summary

Lab Reporting Batch ID: 440-104832-1

Laboratory: TA IRV

EDD Filename: Prep440-104832-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b>	METALS	
<b>Method:</b>	6010B	<b>Matrix:</b> SO

Sample ID: Tt-TP1-B2-6      Collected: 3/17/2015 2:18:00 PM      Analysis Type: RES/TOT      Dilution: 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	24	F1	2.8	MDL	5.6	MRL	mg/Kg	J-	m
IRON	18000		5.6	MDL	11	MRL	mg/Kg	J-	m
MANGANESE	330		1.1	MDL	2.2	MRL	mg/Kg	J-	m
TITANIUM	470		1.1	MDL	2.2	MRL	mg/Kg	J+	m

Sample ID: Tt-TP1-B4-2      Collected: 3/18/2015 9:10:00 AM      Analysis Type: RES/TOT      Dilution: 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	4.3	J	2.7	MDL	5.4	MRL	mg/Kg	J	sp

3/18/2015 10:40:00

Sample ID: Tt-TP2-B1-2      Collected: AM      Analysis Type: RES/TOT      Dilution: 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	5.2	J	2.8	MDL	5.5	MRL	mg/Kg	J	sp

Sample ID: Tt-TP2-B2-10      Collected: 3/18/2015 1:10:00 PM      Analysis Type: RES/TOT      Dilution: 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	4.1	J	2.7	MDL	5.3	MRL	mg/Kg	J	sp

Sample ID: Tt-TP2-B2-26      Collected: 3/18/2015 1:31:00 PM      Analysis Type: RES/TOT      Dilution: 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	3.1	J	2.9	MDL	5.7	MRL	mg/Kg	J	sp

<b>Method Category:</b>	METALS	
<b>Method:</b>	6010B_Leach	<b>Matrix:</b> AQ

Sample ID: Tt-TP1-B2-6      Collected: 3/17/2015 2:18:00 PM      Analysis Type: RES/TOT      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
POTASSIUM	0.38	J	0.37	MDL	0.50	MRL	mg/L	J	sp

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

# Data Qualifier Summary

Lab Reporting Batch ID: 440-104832-1

Laboratory: TA IRV

EDD Filename: Prep440-104832-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b>	METALS	
<b>Method:</b>	6010B_Leach	<b>Matrix:</b> AQ

Sample ID: Tt-TP1-B3-18      Collected: 3/18/2015 8:20:00 AM      Analysis Type: RES/TOT      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MAGNESIUM	0.27	J B	0.012	MDL	0.40	MRL	mg/L	J	sp

Sample ID: Tt-TP1-B3-6      Collected: 3/18/2015 8:06:00 AM      Analysis Type: RES/TOT      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CALCIUM	52	B	0.050	MDL	0.10	MRL	mg/L	J-	m

<b>Method Category:</b>	METALS	
<b>Method:</b>	6020	<b>Matrix:</b> AQ

Sample ID: EB-03/18/15      Collected: 3/18/2015 12:00:00 PM      Analysis Type: RES/TOT      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
COPPER	1.1	J	0.50	MDL	2.0	MRL	ug/L	J	sp
MOLYBDENUM	0.79	J	0.50	MDL	2.0	MRL	ug/L	J	sp
NICKEL	1.2	J	0.50	MDL	2.0	MRL	ug/L	J	sp

Sample ID: EB-03/18/15-2      Collected: 3/18/2015 1:41:00 PM      Analysis Type: RES/TOT      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	0.68	J	0.50	MDL	1.0	MRL	ug/L	J	sp
NICKEL	0.59	J	0.50	MDL	2.0	MRL	ug/L	J	sp

<b>Method Category:</b>	METALS	
<b>Method:</b>	6020	<b>Matrix:</b> SO

Sample ID: Tt-TP1-B2-22      Collected: 3/17/2015 2:38:00 PM      Analysis Type: RES/TOT      Dilution: 20

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.82	J	0.53	MDL	1.1	MRL	mg/Kg	J	sp
SILVER	0.11	J	0.11	MDL	0.53	MRL	mg/Kg	J	sp

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing



# Data Qualifier Summary

Lab Reporting Batch ID: 440-104832-1

Laboratory: TA IRV

EDD Filename: Prep440-104832-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b>	METALS	
<b>Method:</b>	6020	<b>Matrix:</b> SO

**Sample ID:** Tt-TP1-B2-6      **Collected:** 3/17/2015 2:18:00 PM      **Analysis Type:** RES/TOT      **Dilution:** 20

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	2.4	F1	0.56	MDL	1.1	MRL	mg/Kg	J-	m
ARSENIC	47	F1	0.28	MDL	0.56	MRL	mg/Kg	J-	m
COPPER	23	F1	0.56	MDL	1.1	MRL	mg/Kg	J-	m
NICKEL	24	F1	0.56	MDL	1.1	MRL	mg/Kg	J-	m
SELENIUM	0.80	J	0.22	MDL	1.1	MRL	mg/Kg	J	sp
SILVER	0.19	J	0.11	MDL	0.56	MRL	mg/Kg	J	sp
ZINC	110	F1	5.6	MDL	11	MRL	mg/Kg	J-	m

**Sample ID:** Tt-TP1-B3-18      **Collected:** 3/18/2015 8:20:00 AM      **Analysis Type:** RES/TOT      **Dilution:** 20

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.68	J	0.52	MDL	1.0	MRL	mg/Kg	J	sp

**Sample ID:** Tt-TP1-B4-2      **Collected:** 3/18/2015 9:10:00 AM      **Analysis Type:** RES/TOT      **Dilution:** 20

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.56	J	0.54	MDL	1.1	MRL	mg/Kg	J	sp

**Sample ID:** Tt-TP1-B4-26      **Collected:** 3/18/2015 9:49:00 AM      **Analysis Type:** RES/TOT      **Dilution:** 20

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	1.1	J	0.80	MDL	1.6	MRL	mg/Kg	J	sp

3/18/2015 10:53:00

**Sample ID:** Tt-TP2-B1-14      **Collected:** AM      **Analysis Type:** RES/TOT      **Dilution:** 20

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.66	J	0.54	MDL	1.1	MRL	mg/Kg	J	sp

3/18/2015 10:40:00

**Sample ID:** Tt-TP2-B1-2      **Collected:** AM      **Analysis Type:** RES/TOT      **Dilution:** 20

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.83	J	0.55	MDL	1.1	MRL	mg/Kg	J	sp

\* denotes a non-reportable result

**Project Name and Number:** 114-520225-2015-MO5 - NERT Soil Flushing

# Data Qualifier Summary

Lab Reporting Batch ID: 440-104832-1

Laboratory: TA IRV

EDD Filename: Prep440-104832-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b>	METALS								
<b>Method:</b>	6020			<b>Matrix:</b>	SO				

Sample ID: Tt-TP2-B2-10      Collected: 3/18/2015 1:10:00 PM      Analysis Type: RES/TOT      Dilution: 20

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.65	J	0.53	MDL	1.1	MRL	mg/Kg	J	sp

Sample ID: Tt-TP2-B2-26      Collected: 3/18/2015 1:31:00 PM      Analysis Type: RES/TOT      Dilution: 20

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BERYLLIUM	0.31	J	0.17	MDL	0.34	MRL	mg/Kg	J	sp
MOLYBDENUM	0.62	J	0.57	MDL	1.1	MRL	mg/Kg	J	sp

<b>Method Category:</b>	METALS								
<b>Method:</b>	7199			<b>Matrix:</b>	SO				

Sample ID: Tt-TP2-B1-2      Collected: 3/18/2015 10:40:00 AM      Analysis Type: RES/TOT      Dilution: 10

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chromium, hexavalent	0.72	J	0.44	MDL	0.89	MRL	mg/Kg	J	sp

<b>Method Category:</b>	METALS								
<b>Method:</b>	7471A			<b>Matrix:</b>	SO				

Sample ID: Tt-TP1-B2-22      Collected: 3/17/2015 2:38:00 PM      Analysis Type: RES/TOT      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.015	J	0.013	MDL	0.021	MRL	mg/Kg	J	sp

Sample ID: Tt-TP1-B3-18      Collected: 3/18/2015 8:20:00 AM      Analysis Type: RES/TOT      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.015	J	0.012	MDL	0.021	MRL	mg/Kg	J	sp

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

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# Data Qualifier Summary

Lab Reporting Batch ID: 440-104832-1

Laboratory: TA IRV

EDD Filename: Prep440-104832-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b>	METALS	
<b>Method:</b>	7471A	<b>Matrix:</b> SO

Sample ID: Tt-TP1-B3-6

Collected: 3/18/2015 8:06:00 AM Analysis Type: RES/TOT

Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.022	J	0.014	MDL	0.023	MRL	mg/Kg	J	sp

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

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# Data Qualifier Summary

Lab Reporting Batch ID: 440-104832-1

Laboratory: TA IRV

EDD Filename: Prep440-104832-1

eQAPP Name: TetraTechInc\_NERT\_11302016

## Reason Code Legend

<i>Reason Code</i>	<i>Description</i>
bl	Method Blank Contamination
fd	Field Duplicate Precision
m	Matrix Spike Lower Estimation
m	Matrix Spike Lower Rejection
m	Matrix Spike Upper Estimation
sp	Reporting Limit Trace Value

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

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# Reporting Limit Outliers

Lab Reporting Batch ID: 440-104832-1

Laboratory: TA IRV

EDD Filename: Prep440-104832-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method:** 6010B  
**Matrix:** AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
EB-03/18/15	MANGANESE	J	0.012	0.020	MRL	mg/L	J (all detects)
	TITANIUM	J	0.0038	0.0050	MRL	mg/L	
EB-03/18/15-2	SODIUM	J	0.26	0.50	MRL	mg/L	J (all detects)

**Method:** 6010B\_Leach  
**Matrix:** AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
Tt-TP1-B2-6	POTASSIUM	J	0.38	0.50	MRL	mg/L	J (all detects)
Tt-TP1-B3-18	MAGNESIUM	J B	0.27	0.40	MRL	mg/L	J (all detects)

**Method:** 6020  
**Matrix:** AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
EB-03/18/15	COPPER	J	1.1	2.0	MRL	ug/L	J (all detects)
	MOLYBDENUM	J	0.79	2.0	MRL	ug/L	
	NICKEL	J	1.2	2.0	MRL	ug/L	
EB-03/18/15-2	BARIUM	J	0.68	1.0	MRL	ug/L	J (all detects)
	NICKEL	J	0.59	2.0	MRL	ug/L	

**Method:** 6010B  
**Matrix:** SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
Tt-TP1-B4-2	BORON	J	4.3	5.4	MRL	mg/Kg	J (all detects)
Tt-TP2-B1-2	BORON	J	5.2	5.5	MRL	mg/Kg	J (all detects)
Tt-TP2-B2-10	BORON	J	4.1	5.3	MRL	mg/Kg	J (all detects)
Tt-TP2-B2-26	BORON	J	3.1	5.7	MRL	mg/Kg	J (all detects)

**Method:** 6020  
**Matrix:** SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
Tt-TP1-B2-22	MOLYBDENUM	J	0.82	1.1	MRL	mg/Kg	J (all detects)
	SILVER	J	0.11	0.53	MRL	mg/Kg	
Tt-TP1-B2-6	SELENIUM	J	0.80	1.1	MRL	mg/Kg	J (all detects)
	SILVER	J	0.19	0.56	MRL	mg/Kg	
Tt-TP1-B3-18	MOLYBDENUM	J	0.68	1.0	MRL	mg/Kg	J (all detects)

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

## Reporting Limit Outliers

Lab Reporting Batch ID: 440-104832-1

Laboratory: TA IRV

EDD Filename: Prep440-104832-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method:** 6020

**Matrix:** SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
Tt-TP1-B4-2	MOLYBDENUM	J	0.56	1.1	MRL	mg/Kg	J (all detects)
Tt-TP1-B4-26	MOLYBDENUM	J	1.1	1.6	MRL	mg/Kg	J (all detects)
Tt-TP2-B1-14	MOLYBDENUM	J	0.66	1.1	MRL	mg/Kg	J (all detects)
Tt-TP2-B1-2	MOLYBDENUM	J	0.83	1.1	MRL	mg/Kg	J (all detects)
Tt-TP2-B2-10	MOLYBDENUM	J	0.65	1.1	MRL	mg/Kg	J (all detects)
Tt-TP2-B2-26	BERYLLIUM MOLYBDENUM	J J	0.31 0.62	0.34 1.1	MRL MRL	mg/Kg mg/Kg	J (all detects)

**Method:** 7199

**Matrix:** SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
Tt-TP2-B1-2	Chromium, hexavalent	J	0.72	0.89	MRL	mg/Kg	J (all detects)

**Method:** 7471A

**Matrix:** SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
Tt-TP1-B2-22	MERCURY	J	0.015	0.021	MRL	mg/Kg	J (all detects)
Tt-TP1-B3-18	MERCURY	J	0.015	0.021	MRL	mg/Kg	J (all detects)
Tt-TP1-B3-6	MERCURY	J	0.022	0.023	MRL	mg/Kg	J (all detects)

# Data Review Summary

Lab Reporting Batch ID: 440-104925-1

Laboratory: TA IRV

EDD Filename: Prep440-104925-1

eQAPP Name: TetraTechInc\_NERT\_11302016

## *Validation Area*

## *Note*

<i>Validation Area</i>	<i>Note</i>
Technical Holding Times	A
Temperature	A
Initial Calibration	N
Continuing Calibration/Initial Calibration Verification	N
Method Blanks	SR
Surrogate/Tracer Spikes	A
Matrix Spike/Matrix Spike Duplicates	SR
Laboratory Duplicates	A
Laboratory Replicates	N
Laboratory Control Samples	A
Compound Quantitation	SR
Field Duplicates	SR
Field Triplicates	N
Field Blanks	A

A = Acceptable, N = Not provided/applicable, SR = See report

The contents of this report reflect findings made by ADR during Automated Data Review, manual applied qualifiers are not considered. Please refer to the Overall Qualifier Summary report for manual qualifiers.

## Field Duplicate RPD Report

Lab Reporting Batch ID: 440-104925-1

Laboratory: TA IRV

EDD Filename: Prep440-104925-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method: 2320B\_Leach**  
**Matrix: AQ**

Analyte	Concentration (mg/L)		Sample RPD	eQAPP RPD	Flag
	Tt-TP2-B3-14	Tt-TP2-B3-14-dup			
Alkalinity as CaCO3	14	5.9	81	30.00	J (all detects) UJ (all non-detects)

**Method: 2540C\_Leach**  
**Matrix: AQ**

Analyte	Concentration (mg/L)		Sample RPD	eQAPP RPD	Flag
	Tt-TP3-B1-6	Tt-TP3-B1-6-dup			
TOTAL DISSOLVED SOLIDS	230	170	30	30.00	No Qualifiers Applied

Analyte	Concentration (mg/L)		Sample RPD	eQAPP RPD	Flag
	Tt-TP3-B2-22	Tt-TP3-B2-22-dup			
TOTAL DISSOLVED SOLIDS	240	240	0	30.00	No Qualifiers Applied

Analyte	Concentration (mg/L)		Sample RPD	eQAPP RPD	Flag
	Tt-TP3-B2-26	Tt-TP3-B2-26-dup			
TOTAL DISSOLVED SOLIDS	550	500	10	30.00	No Qualifiers Applied

Analyte	Concentration (mg/L)		Sample RPD	eQAPP RPD	Flag
	Tt-TP3-B4-14	Tt-TP3-B4-14-dup			
TOTAL DISSOLVED SOLIDS	160	190	17	30.00	No Qualifiers Applied

Analyte	Concentration (mg/L)		Sample RPD	eQAPP RPD	Flag
	Tt-TP2-B3-14	Tt-TP2-B3-14-dup			
TOTAL DISSOLVED SOLIDS	2400	3300	32	30.00	J(all detects) UJ(all non-detects)

**Method: 300.0\_Leach**  
**Matrix: AQ**

Analyte	Concentration (mg/L)		Sample RPD	eQAPP RPD	Flag
	Tt-TP2-B3-14	Tt-TP2-B3-14-dup			
CHLORIDE	150	180	18	30.00	No Qualifiers Applied
Nitrate as NO3	33	24	32	30.00	J(all detects)
SULFATE	500	960	63	30.00	UJ(all non-detects)

**Method: 300.1B\_Leach**  
**Matrix: AQ**

Analyte	Concentration (ug/L)		Sample RPD	eQAPP RPD	Flag
	Tt-TP2-B3-14	Tt-TP2-B3-14-dup			
Chlorate	47000	26000	58	30.00	J(all detects) UJ(all non-detects)

**Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing**



## Field Duplicate RPD Report

Lab Reporting Batch ID: 440-104925-1

Laboratory: TA IRV

EDD Filename: Prep440-104925-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method: 300.1B\_Leach**

**Matrix: AQ**

**Method: 6010B\_Leach**

**Matrix: AQ**

Analyte	Concentration (mg/L)		Sample RPD	eQAPP RPD	Flag
	Tt-TP2-B3-14 (TOT)	Tt-TP2-B3-14-dup (TOT)			
CALCIUM	540	510	6	30.00	No Qualifiers Applied
MAGNESIUM	9.6	14	37	30.00	J(all detects) UJ(all non-detects)
POTASSIUM	0.83	1.5	58	30.00	
SODIUM	60	140	80	30.00	

**Method: 314.0**

**Matrix: SO**

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	Tt-TP3-B1-6	Tt-TP3-B1-6-dup			
PERCHLORATE	430	210	69	30.00	J(all detects) UJ(all non-detects)

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	Tt-TP3-B2-22	Tt-TP3-B2-22-dup			
PERCHLORATE	4.6	4.6	0	30.00	No Qualifiers Applied

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	Tt-TP3-B2-26	Tt-TP3-B2-26-dup			
PERCHLORATE	3100	3100	0	30.00	No Qualifiers Applied

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	Tt-TP3-B4-14	Tt-TP3-B4-14-dup			
PERCHLORATE	0.49	0.90	59	30.00	J(all detects) UJ(all non-detects)

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	Tt-TP2-B3-14	Tt-TP2-B3-14-dup			
PERCHLORATE	5600	7400	28	30.00	No Qualifiers Applied

**Method: 6010B**

**Matrix: SO**

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	Tt-TP2-B3-14 (TOT)	Tt-TP2-B3-14-dup (TOT)			
IRON	12000	13000	8	30.00	No Qualifiers Applied
TITANIUM	560	590	5	30.00	
BORON	26	10	89	30.00	J(all detects) UJ(all non-detects)
MANGANESE	230	350	41	30.00	

**Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing**

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## Field Duplicate RPD Report

Lab Reporting Batch ID: 440-104925-1

Laboratory: TA IRV

EDD Filename: Prep440-104925-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method: 6020**  
**Matrix: SO**

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	Tt-TP2-B3-14 (TOT)	Tt-TP2-B3-14-dup (TOT)			
COBALT	4.3	5.0	15	30.00	No Qualifiers Applied
COPPER	9.5	12	23	30.00	
LEAD	5.8	7.1	20	30.00	
MOLYBDENUM	0.84	0.66	24	30.00	
NICKEL	13	13	0	30.00	
ZINC	30	25	18	30.00	
ARSENIC	25	14	56	30.00	J(all detects) UJ(all non-detects)
BARIUM	68	120	55	30.00	
BERYLLIUM	0.56	0.41	31	30.00	
CHROMIUM	18	12	40	30.00	

**Method: 7199**  
**Matrix: SO**

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	Tt-TP2-B3-14 (TOT)	Tt-TP2-B3-14-dup (TOT)			
Chromium, hexavalent	1.2	0.88 U	200	30.00	J(all detects) UJ(all non-detects)

**Method: 7471A**  
**Matrix: SO**

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	Tt-TP2-B3-14 (TOT)	Tt-TP2-B3-14-dup (TOT)			
MERCURY	0.021	0.014	40	30.00	J(all detects) UJ(all non-detects)

**Method: 9045C**  
**Matrix: SO**

Analyte	Concentration (SU)		Sample RPD	eQAPP RPD	Flag
	Tt-TP2-B3-14	Tt-TP2-B3-14-dup			
PH	7.60	7.54	1	30.00	No Qualifiers Applied

# QC Outlier Report: HoldingTimes

Lab Reporting Batch ID: 440-104925-1  
EDD Filename: Prep440-104925-1

Laboratory: TA IRV  
eQAPP Name: TetraTechInc\_NERT\_11302016

Method: 7199 Preparation Method: Gen Prep  
Matrix: AQ

<i>Sample ID</i>	<i>Type</i>	<i>Actual</i>	<i>Criteria</i>	<i>Units</i>	<i>Flag</i>
EB-03/19/15MS (RES/TOT)	Sampling To Analysis	30.75	24.00	HOURS	J- (all detects)
EB-03/19/15MSD (RES/TOT)		31.00	24.00	HOURS	UJ (all non-detects)

# Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 440-104925-1

Laboratory: TA IRV

EDD Filename: Prep440-104925-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method: 6010B\_Leach**  
**Matrix: AQ**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
Tt-TP2-B3-14MS (TOT) Tt-TP2-B3-14MSD (TOT) (Tt-TP2-B3-14)	CALCIUM	-248	289	75.00-125.00	-	CALCIUM	J-(all detects) R(all non-detects)

**Method: 300.0\_Leach**  
**Matrix: AQ**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
Tt-TP2-B3-14MS Tt-TP2-B3-14MSD (Tt-TP2-B3-14)	CHLORIDE SULFATE	-14 64	-30 9	80.00-120.00 80.00-120.00	- -	CHLORIDE SULFATE	J-(all detects) R(all non-detects)

**Method: 300.1B\_Leach**  
**Matrix: AQ**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
Tt-TP2-B3-2MS Tt-TP2-B3-2MSD (Tt-TP2-B3-2)	Chlorate	2	7	75.00-125.00	-	Chlorate	J-(all detects) R(all non-detects)
Tt-TP2-B3-14MS Tt-TP2-B3-14MSD (Tt-TP2-B3-14)	Chlorate	1	-562	75.00-125.00	-	Chlorate	J-(all detects) R(all non-detects)

**Method: 314.0**  
**Matrix: AQ**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
EB-03/19/15MS EB-03/19/15MSD (EB-03/19/15)	PERCHLORATE	167	168	80.00-120.00	-	PERCHLORATE	J+(all detects)

**Method: 6010B**  
**Matrix: SO**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
Tt-TP2-B3-14MS (TOT) Tt-TP2-B3-14MSD (TOT) (Tt-TP2-B3-14)	MANGANESE	31	48	75.00-125.00	-	MANGANESE	J- (all detects) UJ (all non-detects)

**Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing**

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# Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 440-104925-1

Laboratory: TA IRV

EDD Filename: Prep440-104925-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method: 6010B**  
**Matrix: SO**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
Tt-TP2-B3-14MS (TOT) Tt-TP2-B3-14MSD (TOT) (Tt-TP2-B3-14)	IRON TITANIUM	1793 423	1018 457	75.00-125.00 75.00-125.00	- -	IRON TITANIUM	J+(all detects)

**Method: 6020**  
**Matrix: SO**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
Tt-TP2-B3-14MS (TOT) Tt-TP2-B3-14MSD (TOT) (Tt-TP2-B3-14)	ANTIMONY	78	78	80.00-120.00	-	ANTIMONY	J-(all detects) UJ(all non-detects)
Tt-TP2-B3-14MS (TOT) Tt-TP2-B3-14MSD (TOT) (Tt-TP2-B3-14)	BARIUM	209	154	80.00-120.00	-	BARIUM	J+(all detects)

**Method: 314.0**  
**Matrix: SO**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
Tt-TP2-B3-14MS Tt-TP2-B3-14MSD (Tt-TP2-B3-14)	PERCHLORATE	-35	-33	80.00-120.00	-	PERCHLORATE	J-(all detects) R(all non-detects)
Tt-TP3-B3-6MS Tt-TP3-B3-6MSD (Tt-TP3-B3-6)	PERCHLORATE	-6	1	80.00-120.00	-	PERCHLORATE	J-(all detects) R(all non-detects)

# Method Blank Outlier Report

Lab Reporting Batch ID: 440-104925-1

Laboratory: TA IRV

EDD Filename: Prep440-104925-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method:</b> 6010B
<b>Matrix:</b> AQ

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
MB 440-245023/1-A	3/27/2015 9:11:00 PM	IRON	0.0180 mg/L	EB-03/19/15 EB-03/19/15-2

<b>Method:</b> 6010B_Leach
<b>Matrix:</b> AQ

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
MB 440-245772/1-B	3/30/2015 12:18:00 PM	CALCIUM MAGNESIUM	0.0860 mg/L 0.0146 mg/L	Tt-TP3-B4-18
MB 440-245825/1-B	3/30/2015 10:49:00 AM	CALCIUM MAGNESIUM	0.236 mg/L 0.0262 mg/L	Tt-TP2-B3-14 Tt-TP2-B3-14-dup Tt-TP2-B3-2 Tt-TP2-B4-22 Tt-TP2-B4-6 Tt-TP3-B1-10 Tt-TP3-B1-18 Tt-TP3-B2-14 Tt-TP3-B3-10 Tt-TP3-B3-26 Tt-TP3-B4-2

<b>Method:</b> 6020
<b>Matrix:</b> AQ

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
MB 440-245079/1-A	3/27/2015 3:02:00 PM	ZINC	16.4 ug/L	EB-03/19/15 EB-03/19/15-2

***The following samples and their listed target analytes were qualified due to contamination reported in this blank***

Sample ID	Analyte	Reported Result	Modified Final Result
EB-03/19/15(RES/TOT)	ZINC	6.1 ug/L	20J+ ug/L

# Data Qualifier Summary

Lab Reporting Batch ID: 440-104925-1

Laboratory: TA IRV

EDD Filename: Prep440-104925-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b> ALK	<b>Method:</b> 2320B_Leach	<b>Matrix:</b> AQ
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Sample ID: Tt-TP2-B3-14      Collected: 3/18/2015 2:36:00 PM      Analysis Type: RES      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Alkalinity as CaCO3	14		4.0	MDL	4.0	MRL	mg/L	J	fd

Sample ID: Tt-TP2-B3-14-dup      Collected: 3/18/2015 2:36:00 PM      Analysis Type: RES      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Alkalinity as CaCO3	5.9		4.0	MDL	4.0	MRL	mg/L	J	fd

<b>Method Category:</b> GENCHEM	<b>Method:</b> 2540C_Leach	<b>Matrix:</b> AQ
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Sample ID: Tt-TP2-B3-14      Collected: 3/18/2015 2:36:00 PM      Analysis Type: RES      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
TOTAL DISSOLVED SOLIDS	2400		10	MDL	20	MRL	mg/L	J	fd

Sample ID: Tt-TP2-B3-14-dup      Collected: 3/18/2015 2:36:00 PM      Analysis Type: RES      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
TOTAL DISSOLVED SOLIDS	3300		10	MDL	20	MRL	mg/L	J	fd

<b>Method Category:</b> GENCHEM	<b>Method:</b> 300.0_Leach	<b>Matrix:</b> AQ
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Sample ID: Tt-TP2-B3-14      Collected: 3/18/2015 2:36:00 PM      Analysis Type: RES      Dilution: 50

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHLORIDE	150		2.5	MDL	5.0	MRL	mg/L	J-	m

Sample ID: Tt-TP2-B3-14      Collected: 3/18/2015 2:36:00 PM      Analysis Type: RES2      Dilution: 10

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Nitrate as NO3	33		2.5	MDL	5.0	MRL	mg/L	J	fd

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

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# Data Qualifier Summary

Lab Reporting Batch ID: 440-104925-1

Laboratory: TA IRV

EDD Filename: Prep440-104925-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b>	GENCHEM	
<b>Method:</b>	300.0_Leach	<b>Matrix:</b> AQ

<b>Sample ID:</b> Tt-TP2-B3-14		<b>Collected:</b> 3/18/2015 2:36:00 PM			<b>Analysis Type:</b> RES3			<b>Dilution:</b> 10	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SULFATE	500		13	MDL	25	MRL	mg/L	J-	m, m, fd

<b>Sample ID:</b> Tt-TP2-B3-14-dup		<b>Collected:</b> 3/18/2015 2:36:00 PM			<b>Analysis Type:</b> RES			<b>Dilution:</b> 200	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SULFATE	960		50	MDL	100	MRL	mg/L	J	fd

<b>Sample ID:</b> Tt-TP2-B3-14-dup		<b>Collected:</b> 3/18/2015 2:36:00 PM			<b>Analysis Type:</b> RES2			<b>Dilution:</b> 5	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Nitrate as NO3	24		1.3	MDL	2.5	MRL	mg/L	J	fd

<b>Sample ID:</b> Tt-TP3-B3-10		<b>3/19/2015 12:51:00</b>			<b>Collected:</b> PM			<b>Analysis Type:</b> RES			<b>Dilution:</b> 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code			
CHLORIDE	0.41	J	0.25	MDL	0.50	MRL	mg/L	J	sp			

<b>Method Category:</b>	GENCHEM	
<b>Method:</b>	300.1B_Leach	<b>Matrix:</b> AQ

<b>Sample ID:</b> Tt-TP2-B3-14		<b>Collected:</b> 3/18/2015 2:36:00 PM			<b>Analysis Type:</b> RES			<b>Dilution:</b> 500	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chlorate	47000		5000	MDL	10000	MRL	ug/L	J-	m, fd

<b>Sample ID:</b> Tt-TP2-B3-14-dup		<b>Collected:</b> 3/18/2015 2:36:00 PM			<b>Analysis Type:</b> RES			<b>Dilution:</b> 200	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chlorate	26000		2000	MDL	4000	MRL	ug/L	J	fd

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

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# Data Qualifier Summary

Lab Reporting Batch ID: 440-104925-1

Laboratory: TA IRV

EDD Filename: Prep440-104925-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b>	GENCHEM	
<b>Method:</b>	300.1B_Leach	<b>Matrix:</b> AQ

Sample ID: Tt-TP2-B3-2      Collected: 3/18/2015 2:12:00 PM      Analysis Type: RES      Dilution: 10

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chlorate	2600		100	MDL	200	MRL	ug/L	J-	m

Sample ID: Tt-TP3-B4-18      Collected: 3/19/2015 2:00:00 PM      Analysis Type: RES      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chlorate	15	J	10	MDL	20	MRL	ug/L	J	sp

Sample ID: Tt-TP3-B4-2      Collected: 3/19/2015 1:40:00 PM      Analysis Type: RES      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chlorate	15	J	10	MDL	20	MRL	ug/L	J	sp

<b>Method Category:</b>	GENCHEM	
<b>Method:</b>	314.0	<b>Matrix:</b> SO

Sample ID: Tt-TP2-B3-14      Collected: 3/18/2015 2:36:00 PM      Analysis Type: RES      Dilution: 10000

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
PERCHLORATE	5600	F1	110	MDL	460	MRL	mg/Kg	J-	m

Sample ID: Tt-TP3-B1-6      Collected: 3/19/2015 9:31:00 AM      Analysis Type: RES      Dilution: 1000

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
PERCHLORATE	430		11	MDL	45	MRL	mg/Kg	J	fd

Sample ID: Tt-TP3-B1-6-dup      Collected: 3/19/2015 9:35:00 AM      Analysis Type: RES      Dilution: 1000

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
PERCHLORATE	210		10	MDL	44	MRL	mg/Kg	J	fd

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

# Data Qualifier Summary

Lab Reporting Batch ID: 440-104925-1

Laboratory: TA IRV

EDD Filename: Prep440-104925-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b>	GENCHEM	
<b>Method:</b>	314.0	<b>Matrix:</b> SO

<b>Sample ID:</b> Tt-TP3-B3-6	<b>Collected:</b> 3/19/2015 12:46:00 PM	<b>Analysis Type:</b> RES	<b>Dilution:</b> 10						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
PERCHLORATE	1.4	F1	0.11	MDL	0.45	MRL	mg/Kg	J-	m

<b>Sample ID:</b> Tt-TP3-B4-14	<b>Collected:</b> 3/19/2015 1:53:00 PM	<b>Analysis Type:</b> RES	<b>Dilution:</b> 10						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
PERCHLORATE	0.49		0.10	MDL	0.43	MRL	mg/Kg	J	fd

<b>Sample ID:</b> Tt-TP3-B4-14-dup	<b>Collected:</b> 3/19/2015 1:53:00 PM	<b>Analysis Type:</b> RES	<b>Dilution:</b> 10						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
PERCHLORATE	0.90		0.10	MDL	0.43	MRL	mg/Kg	J	fd

<b>Method Category:</b>	METALS	
<b>Method:</b>	6010B	<b>Matrix:</b> AQ

<b>Sample ID:</b> EB-03/19/15	<b>Collected:</b> 3/19/2015 11:50:00 AM	<b>Analysis Type:</b> RES/TOT	<b>Dilution:</b> 1						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SODIUM	0.28	J	0.25	MDL	0.50	MRL	mg/L	J	sp
TITANIUM	0.0026	J	0.0025	MDL	0.0050	MRL	mg/L	J	sp

<b>Sample ID:</b> EB-03/19/15-2	<b>Collected:</b> 3/19/2015 1:40:00 PM	<b>Analysis Type:</b> RES/TOT	<b>Dilution:</b> 1						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
TITANIUM	0.0034	J	0.0025	MDL	0.0050	MRL	mg/L	J	sp

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

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# Data Qualifier Summary

Lab Reporting Batch ID: 440-104925-1

Laboratory: TA IRV

EDD Filename: Prep440-104925-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b>	METALS	
<b>Method:</b>	6010B	<b>Matrix:</b> SO

Sample ID: Tt-TP2-B3-14      Collected: 3/18/2015 2:36:00 PM      Analysis Type: RE2/TOT      Dilution: 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	26		2.9	MDL	5.8	MRL	mg/Kg	J	fd

Sample ID: Tt-TP2-B3-14      Collected: 3/18/2015 2:36:00 PM      Analysis Type: RES/TOT      Dilution: 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
IRON	12000		5.8	MDL	12	MRL	mg/Kg	J+	m
MANGANESE	230		1.2	MDL	2.3	MRL	mg/Kg	J-	m, fd
TITANIUM	560		1.2	MDL	2.3	MRL	mg/Kg	J+	m

Sample ID: Tt-TP2-B3-14-dup      Collected: 3/18/2015 2:36:00 PM      Analysis Type: RE2/TOT      Dilution: 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	10		2.7	MDL	5.5	MRL	mg/Kg	J	fd

Sample ID: Tt-TP2-B3-14-dup      Collected: 3/18/2015 2:36:00 PM      Analysis Type: RES/TOT      Dilution: 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MANGANESE	350		1.1	MDL	2.2	MRL	mg/Kg	J	fd

<b>Method Category:</b>	METALS	
<b>Method:</b>	6010B_Leach	<b>Matrix:</b> AQ

Sample ID: Tt-TP2-B3-14      Collected: 3/18/2015 2:36:00 PM      Analysis Type: RES/TOT      Dilution: 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CALCIUM	540	B	0.10	MDL	0.20	MRL	mg/L	J	m, m
MAGNESIUM	9.6	B	0.024	MDL	0.80	MRL	mg/L	J	fd
POTASSIUM	0.83	J	0.74	MDL	1.0	MRL	mg/L	J	sp, fd
SODIUM	60		0.38	MDL	1.0	MRL	mg/L	J	fd

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

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# Data Qualifier Summary

Lab Reporting Batch ID: 440-104925-1

Laboratory: TA IRV

EDD Filename: Prep440-104925-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b>	METALS	
<b>Method:</b>	6010B_Leach	<b>Matrix:</b> AQ

Sample ID: Tt-TP2-B3-14-dup      Collected: 3/18/2015 2:36:00 PM      Analysis Type: RES/TOT      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MAGNESIUM	14	B	0.012	MDL	0.40	MRL	mg/L	J	fd
POTASSIUM	1.5		0.37	MDL	0.50	MRL	mg/L	J	fd
SODIUM	140		0.19	MDL	0.50	MRL	mg/L	J	fd

Sample ID: Tt-TP3-B1-10      Collected: 3/19/2015 9:35:00 AM      Analysis Type: RES/TOT      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
POTASSIUM	0.38	J	0.37	MDL	0.50	MRL	mg/L	J	sp

Sample ID: Tt-TP3-B4-18      Collected: 3/19/2015 2:00:00 PM      Analysis Type: RES/TOT      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
POTASSIUM	0.45	J	0.37	MDL	0.50	MRL	mg/L	J	sp

<b>Method Category:</b>	METALS	
<b>Method:</b>	6020	<b>Matrix:</b> AQ

3/19/2015 11:50:00

Sample ID: EB-03/19/15      Collected: AM      Analysis Type: RES/TOT      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	0.83	J	0.50	MDL	1.0	MRL	ug/L	J	sp
NICKEL	0.60	J	0.50	MDL	2.0	MRL	ug/L	J	sp
ZINC	6.1	J B	2.5	MDL	20	MRL	ug/L	J+	bl

Sample ID: EB-03/19/15-2      Collected: 3/19/2015 1:40:00 PM      Analysis Type: RES/TOT      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHROMIUM	1.4	J	0.50	MDL	2.0	MRL	ug/L	J	sp
NICKEL	0.56	J	0.50	MDL	2.0	MRL	ug/L	J	sp

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

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# Data Qualifier Summary

Lab Reporting Batch ID: 440-104925-1

Laboratory: TA IRV

EDD Filename: Prep440-104925-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b>	METALS	
<b>Method:</b>	6020	<b>Matrix:</b> SO

**Sample ID:** Tt-TP2-B3-14      **Collected:** 3/18/2015 2:36:00 PM      **Analysis Type:** RES/TOT      **Dilution:** 20

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.58	U F1	0.58	MDL	1.2	MRL	mg/Kg	UJ	m
ARSENIC	25		0.29	MDL	0.58	MRL	mg/Kg	J	fd
BARIUM	68	F1	0.29	MDL	0.58	MRL	mg/Kg	J+	m, fd
BERYLLIUM	0.56		0.17	MDL	0.35	MRL	mg/Kg	J	fd
CHROMIUM	18		0.58	MDL	1.2	MRL	mg/Kg	J	fd
MOLYBDENUM	0.84	J	0.58	MDL	1.2	MRL	mg/Kg	J	sp

**Sample ID:** Tt-TP2-B3-14-dup      **Collected:** 3/18/2015 2:36:00 PM      **Analysis Type:** RES/TOT      **Dilution:** 20

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ARSENIC	14		0.27	MDL	0.55	MRL	mg/Kg	J	fd
BARIUM	120		0.27	MDL	0.55	MRL	mg/Kg	J	fd
BERYLLIUM	0.41		0.16	MDL	0.33	MRL	mg/Kg	J	fd
CHROMIUM	12		0.55	MDL	1.1	MRL	mg/Kg	J	fd
MOLYBDENUM	0.66	J	0.55	MDL	1.1	MRL	mg/Kg	J	sp

**Sample ID:** Tt-TP2-B3-2      **Collected:** 3/18/2015 2:12:00 PM      **Analysis Type:** RES/TOT      **Dilution:** 20

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SILVER	0.11	J	0.11	MDL	0.56	MRL	mg/Kg	J	sp

**Sample ID:** Tt-TP3-B1-10      **Collected:** 3/19/2015 9:35:00 AM      **Analysis Type:** RES/TOT      **Dilution:** 20

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.57	J	0.56	MDL	1.1	MRL	mg/Kg	J	sp

**Sample ID:** Tt-TP3-B1-18      **Collected:** 3/19/2015 9:43:00 AM      **Analysis Type:** RES/TOT      **Dilution:** 20

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.56	J	0.56	MDL	1.1	MRL	mg/Kg	J	sp

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

# Data Qualifier Summary

Lab Reporting Batch ID: 440-104925-1

Laboratory: TA IRV

EDD Filename: Prep440-104925-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b> METALS
<b>Method:</b> 6020
<b>Matrix:</b> SO

<b>Sample ID:</b> Tt-TP3-B2-14		<b>Collected:</b> 3/19/2015 10:54:00 AM			<b>Analysis Type:</b> RES/TOT			<b>Dilution:</b> 20	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SILVER	0.23	J	0.11	MDL	0.54	MRL	mg/Kg	J	sp

<b>Sample ID:</b> Tt-TP3-B2-6		<b>Collected:</b> 3/19/2015 10:45:00 AM			<b>Analysis Type:</b> RES/TOT			<b>Dilution:</b> 20	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.58	J	0.53	MDL	1.1	MRL	mg/Kg	J	sp

<b>Sample ID:</b> Tt-TP3-B3-10		<b>Collected:</b> 3/19/2015 12:51:00 PM			<b>Analysis Type:</b> RES/TOT			<b>Dilution:</b> 20	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.57	J	0.54	MDL	1.1	MRL	mg/Kg	J	sp
SILVER	0.27	J	0.11	MDL	0.54	MRL	mg/Kg	J	sp

<b>Sample ID:</b> Tt-TP3-B3-26		<b>Collected:</b> 3/19/2015 1:07:00 PM			<b>Analysis Type:</b> RES/TOT			<b>Dilution:</b> 20	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	1.3	J	0.77	MDL	1.5	MRL	mg/Kg	J	sp

<b>Sample ID:</b> Tt-TP3-B4-18		<b>Collected:</b> 3/19/2015 2:00:00 PM			<b>Analysis Type:</b> RES/TOT			<b>Dilution:</b> 20	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.86	J	0.60	MDL	1.2	MRL	mg/Kg	J	sp

<b>Sample ID:</b> Tt-TP3-B4-2		<b>Collected:</b> 3/19/2015 1:40:00 PM			<b>Analysis Type:</b> RES/TOT			<b>Dilution:</b> 20	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.56	J	0.55	MDL	1.1	MRL	mg/Kg	J	sp

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

# Data Qualifier Summary

Lab Reporting Batch ID: 440-104925-1

Laboratory: TA IRV

EDD Filename: Prep440-104925-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b>	METALS	
<b>Method:</b>	7199	<b>Matrix:</b> SO

Sample ID: Tt-TP2-B3-14      Collected: 3/18/2015 2:36:00 PM      Analysis Type: RES/TOT      Dilution: 10

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chromium, hexavalent	1.2		0.46	MDL	0.92	MRL	mg/Kg	J	fd

Sample ID: Tt-TP2-B3-14-dup      Collected: 3/18/2015 2:36:00 PM      Analysis Type: RES/TOT      Dilution: 10

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chromium, hexavalent	0.44	U	0.44	MDL	0.88	MRL	mg/Kg	UJ	fd

<b>Method Category:</b>	METALS	
<b>Method:</b>	7471A	<b>Matrix:</b> SO

Sample ID: Tt-TP2-B3-14      Collected: 3/18/2015 2:36:00 PM      Analysis Type: RES/TOT      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.021	J	0.014	MDL	0.023	MRL	mg/Kg	J	sp, fd

Sample ID: Tt-TP2-B3-14-dup      Collected: 3/18/2015 2:36:00 PM      Analysis Type: RES/TOT      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.014	J	0.014	MDL	0.023	MRL	mg/Kg	J	sp, fd

Sample ID: Tt-TP2-B4-6      Collected: 3/19/2015 8:04:00 AM      Analysis Type: RES/TOT      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.013	J	0.013	MDL	0.022	MRL	mg/Kg	J	sp

Sample ID: Tt-TP3-B1-10      Collected: 3/19/2015 9:35:00 AM      Analysis Type: RES/TOT      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.020	J	0.013	MDL	0.022	MRL	mg/Kg	J	sp

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

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# Data Qualifier Summary

Lab Reporting Batch ID: 440-104925-1

Laboratory: TA IRV

EDD Filename: Prep440-104925-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b>	METALS	
<b>Method:</b>	7471A	<b>Matrix:</b> SO

**Sample ID:** Tt-TP3-B1-18      **Collected:** 3/19/2015 9:43:00 AM      **Analysis Type:** RES/TOT      **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.017	J	0.013	MDL	0.022	MRL	mg/Kg	J	sp

3/19/2015 10:54:00

**Sample ID:** Tt-TP3-B2-14      **Collected:** AM      **Analysis Type:** RES/TOT      **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.013	J	0.013	MDL	0.021	MRL	mg/Kg	J	sp

3/19/2015 12:51:00

**Sample ID:** Tt-TP3-B3-10      **Collected:** PM      **Analysis Type:** RES/TOT      **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.018	J	0.013	MDL	0.022	MRL	mg/Kg	J	sp

**Sample ID:** Tt-TP3-B3-26      **Collected:** 3/19/2015 1:07:00 PM      **Analysis Type:** RES/TOT      **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.020	J	0.019	MDL	0.031	MRL	mg/Kg	J	sp

**Sample ID:** Tt-TP3-B4-18      **Collected:** 3/19/2015 2:00:00 PM      **Analysis Type:** RES/TOT      **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.021	J	0.014	MDL	0.023	MRL	mg/Kg	J	sp

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

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# Data Qualifier Summary

Lab Reporting Batch ID: 440-104925-1

Laboratory: TA IRV

EDD Filename: Prep440-104925-1

eQAPP Name: TetraTechInc\_NERT\_11302016

## Reason Code Legend

<i>Reason Code</i>	<i>Description</i>
bl	Method Blank Contamination
fd	Field Duplicate Precision
m	Matrix Spike Lower Estimation
m	Matrix Spike Lower Rejection
m	Matrix Spike Upper Estimation
sp	Reporting Limit Trace Value

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

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# Reporting Limit Outliers

Lab Reporting Batch ID: 440-104925-1

Laboratory: TA IRV

EDD Filename: Prep440-104925-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method:** 300.0\_Leach  
**Matrix:** AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
Tt-TP3-B3-10	CHLORIDE	J	0.41	0.50	MRL	mg/L	J (all detects)

**Method:** 300.1B\_Leach  
**Matrix:** AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
Tt-TP3-B4-18	Chlorate	J	15	20	MRL	ug/L	J (all detects)
Tt-TP3-B4-2	Chlorate	J	15	20	MRL	ug/L	J (all detects)

**Method:** 6010B  
**Matrix:** AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
EB-03/19/15	SODIUM	J	0.28	0.50	MRL	mg/L	J (all detects)
	TITANIUM	J	0.0026	0.0050	MRL	mg/L	
EB-03/19/15-2	TITANIUM	J	0.0034	0.0050	MRL	mg/L	J (all detects)

**Method:** 6010B\_Leach  
**Matrix:** AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
Tt-TP2-B3-14	POTASSIUM	J	0.83	1.0	MRL	mg/L	J (all detects)
Tt-TP3-B1-10	POTASSIUM	J	0.38	0.50	MRL	mg/L	J (all detects)
Tt-TP3-B4-18	POTASSIUM	J	0.45	0.50	MRL	mg/L	J (all detects)

**Method:** 6020  
**Matrix:** AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
EB-03/19/15	BARIUM	J	0.83	1.0	MRL	ug/L	J (all detects)
	NICKEL	J	0.60	2.0	MRL	ug/L	
	ZINC	J B	6.1	20	MRL	ug/L	
EB-03/19/15-2	CHROMIUM	J	1.4	2.0	MRL	ug/L	J (all detects)
	NICKEL	J	0.56	2.0	MRL	ug/L	

## Reporting Limit Outliers

Lab Reporting Batch ID: 440-104925-1

Laboratory: TA IRV

EDD Filename: Prep440-104925-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method:** 6020  
**Matrix:** SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
Tt-TP2-B3-14	MOLYBDENUM	J	0.84	1.2	MRL	mg/Kg	J (all detects)
Tt-TP2-B3-14-dup	MOLYBDENUM	J	0.66	1.1	MRL	mg/Kg	J (all detects)
Tt-TP2-B3-2	SILVER	J	0.11	0.56	MRL	mg/Kg	J (all detects)
Tt-TP3-B1-10	MOLYBDENUM	J	0.57	1.1	MRL	mg/Kg	J (all detects)
Tt-TP3-B1-18	MOLYBDENUM	J	0.56	1.1	MRL	mg/Kg	J (all detects)
Tt-TP3-B2-14	SILVER	J	0.23	0.54	MRL	mg/Kg	J (all detects)
Tt-TP3-B2-6	MOLYBDENUM	J	0.58	1.1	MRL	mg/Kg	J (all detects)
Tt-TP3-B3-10	MOLYBDENUM SILVER	J J	0.57 0.27	1.1 0.54	MRL MRL	mg/Kg mg/Kg	J (all detects)
Tt-TP3-B3-26	MOLYBDENUM	J	1.3	1.5	MRL	mg/Kg	J (all detects)
Tt-TP3-B4-18	MOLYBDENUM	J	0.86	1.2	MRL	mg/Kg	J (all detects)
Tt-TP3-B4-2	MOLYBDENUM	J	0.56	1.1	MRL	mg/Kg	J (all detects)

**Method:** 7471A  
**Matrix:** SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
Tt-TP2-B3-14	MERCURY	J	0.021	0.023	MRL	mg/Kg	J (all detects)
Tt-TP2-B3-14-dup	MERCURY	J	0.014	0.023	MRL	mg/Kg	J (all detects)
Tt-TP2-B4-6	MERCURY	J	0.013	0.022	MRL	mg/Kg	J (all detects)
Tt-TP3-B1-10	MERCURY	J	0.020	0.022	MRL	mg/Kg	J (all detects)
Tt-TP3-B1-18	MERCURY	J	0.017	0.022	MRL	mg/Kg	J (all detects)
Tt-TP3-B2-14	MERCURY	J	0.013	0.021	MRL	mg/Kg	J (all detects)
Tt-TP3-B3-10	MERCURY	J	0.018	0.022	MRL	mg/Kg	J (all detects)
Tt-TP3-B3-26	MERCURY	J	0.020	0.031	MRL	mg/Kg	J (all detects)
Tt-TP3-B4-18	MERCURY	J	0.021	0.023	MRL	mg/Kg	J (all detects)

# Data Review Summary

Lab Reporting Batch ID: 440-105015-1

Laboratory: TA IRV

EDD Filename: Prep440-105015-1

eQAPP Name: TetraTechInc\_NERT\_11302016

## *Validation Area*

## *Note*

<i>Validation Area</i>	<i>Note</i>
Technical Holding Times	A
Temperature	A
Initial Calibration	N
Continuing Calibration/Initial Calibration Verification	N
Method Blanks	SR
Surrogate/Tracer Spikes	A
Matrix Spike/Matrix Spike Duplicates	SR
Laboratory Duplicates	A
Laboratory Replicates	N
Laboratory Control Samples	A
Compound Quantitation	SR
Field Duplicates	SR
Field Triplicates	N
Field Blanks	A

A = Acceptable, N = Not provided/applicable, SR = See report

The contents of this report reflect findings made by ADR during Automated Data Review, manual applied qualifiers are not considered. Please refer to the Overall Qualifier Summary report for manual qualifiers.

## Field Duplicate RPD Report

Lab Reporting Batch ID: 440-105015-1

Laboratory: TA IRV

EDD Filename: Prep440-105015-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method: 2320B\_Leach**  
**Matrix: AQ**

Analyte	Concentration (mg/L)		Sample RPD	eQAPP RPD	Flag
	Tt-TP4-B3-22	Tt-TP4-B3-22-dup			
Alkalinity as CaCO3	34	100	99	30.00	J (all detects) UJ (all non-detects)

**Method: 2540C\_Leach**  
**Matrix: AQ**

Analyte	Concentration (mg/L)		Sample RPD	eQAPP RPD	Flag
	Tt-TP4-B2-6	Tt-TP4-B2-6-dup			
TOTAL DISSOLVED SOLIDS	150	130	14	30.00	No Qualifiers Applied

Analyte	Concentration (mg/L)		Sample RPD	eQAPP RPD	Flag
	Tt-TP4-B3-22	Tt-TP4-B3-22-dup			
TOTAL DISSOLVED SOLIDS	500	320	44	30.00	J(all detects) UJ(all non-detects)

**Method: 300.0\_Leach**  
**Matrix: AQ**

Analyte	Concentration (mg/L)		Sample RPD	eQAPP RPD	Flag
	Tt-TP4-B3-22	Tt-TP4-B3-22-dup			
CHLORIDE	6.1	4.9	22	30.00	No Qualifiers Applied
SULFATE	19	18	5	30.00	
Nitrate as NO3	76	120	45	30.00	J(all detects) UJ(all non-detects)

**Method: 300.1B\_Leach**  
**Matrix: AQ**

Analyte	Concentration (ug/L)		Sample RPD	eQAPP RPD	Flag
	Tt-TP4-B3-22	Tt-TP4-B3-22-dup			
Chlorate	120	790	147	30.00	J(all detects) UJ(all non-detects)

**Method: 6010B\_Leach**  
**Matrix: AQ**

Analyte	Concentration (mg/L)		Sample RPD	eQAPP RPD	Flag
	Tt-TP4-B3-22 (TOT)	Tt-TP4-B3-22-dup (TOT)			
MAGNESIUM	1.9	2.1	10	30.00	No Qualifiers Applied
POTASSIUM	1.2	1.1	9	30.00	
CALCIUM	5.7	3.6	45	30.00	J(all detects) UJ(all non-detects)
SODIUM	110	63	54	30.00	

**Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing**

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# Field Duplicate RPD Report

Lab Reporting Batch ID: 440-105015-1

Laboratory: TA IRV

EDD Filename: Prep440-105015-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method: 314.0**  
**Matrix: SO**

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	Tt-TP4-B2-6	Tt-TP4-B2-6-dup			
PERCHLORATE	3.0	2.8	7	30.00	No Qualifiers Applied

  

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	Tt-TP4-B3-22	Tt-TP4-B3-22-dup			
PERCHLORATE	170	68	86	30.00	J(all detects) UJ(all non-detects)

**Method: 6010B**  
**Matrix: SO**

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	Tt-TP4-B3-22 (TOT)	Tt-TP4-B3-22-dup (TOT)			
BORON	17	16	6	30.00	No Qualifiers Applied
IRON	6900	5800	17	30.00	
TITANIUM	350	320	9	30.00	
MANGANESE	130	93	33	30.00	J(all detects) UJ(all non-detects)

**Method: 6020**  
**Matrix: SO**

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	Tt-TP4-B3-22 (TOT)	Tt-TP4-B3-22-dup (TOT)			
BARIUM	30	33	10	30.00	No Qualifiers Applied
BERYLLIUM	0.39	0.29	29	30.00	
COBALT	2.5	2.1	17	30.00	
COPPER	6.5	5.9	10	30.00	
ZINC	20	15	29	30.00	
ARSENIC	25	18	33	30.00	J(all detects) UJ(all non-detects)
CHROMIUM	37	66	56	30.00	
LEAD	4.1	2.9	34	30.00	
NICKEL	9.1	6.2	38	30.00	

**Method: 7471A**  
**Matrix: SO**

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	Tt-TP4-B3-22 (TOT)	Tt-TP4-B3-22-dup (TOT)			
MERCURY	0.026 U	0.023	200	30.00	J(all detects) UJ(all non-detects)

**Method: 9045C**  
**Matrix: SO**

Analyte	Concentration (SU)		Sample RPD	eQAPP RPD	Flag
	Tt-TP4-B3-22	Tt-TP4-B3-22-dup			
PH	8.86	8.80	1	30.00	No Qualifiers Applied

**Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing**

# Field Duplicate RPD Report

Lab Reporting Batch ID: 440-105015-1

Laboratory: TA IRV

EDD Filename: Prep440-105015-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method: 9045C**  
**Matrix: SO**

**Method: 9060**  
**Matrix: SO**

<i>Analyte</i>	<i>Concentration (mg/Kg)</i>		<i>Sample RPD</i>	<i>eQAPP RPD</i>	<i>Flag</i>
	<i>Tt-TP4-B3-22</i>	<i>Tt-TP4-B3-22-dup</i>			
TOTAL ORGANIC CARBON (TOC)	18000	18000	0	30.00	No Qualifiers Applied

# QC Outlier Report: HoldingTimes

Lab Reporting Batch ID: 440-105015-1

Laboratory: TA IRV

EDD Filename: Prep440-105015-1

eQAPP Name: TetraTechInc\_NERT\_11302016

Method: 7199

Preparation Method: Gen Prep

Matrix: AQ

<i>Sample ID</i>	<i>Type</i>	<i>Actual</i>	<i>Criteria</i>	<i>Units</i>	<i>Flag</i>
EB-03/20/15MS (RES/TOT)	Sampling To Analysis	24.50	24.00	HOURS	J- (all detects)
EB-03/20/15MSD (RES/TOT)		24.50	24.00	HOURS	UJ (all non-detects)



# Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 440-105015-1

Laboratory: TA IRV

EDD Filename: Prep440-105015-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method: 300.0\_Leach**  
**Matrix: AQ**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
Tt-TP4-B1-6MSD (Tt-TP4-B1-6)	Nitrate as NO3	-	122	80.00-120.00	-	Nitrate as NO3	J+(all detects)

**Method: 6010B**  
**Matrix: SO**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
Tt-TP4-B1-6MS (TOT) Tt-TP4-B1-6MSD (TOT) (Tt-TP4-B1-6)	IRON MANGANESE TITANIUM	1367 248 538	1777 - 474	75.00-125.00 75.00-125.00 75.00-125.00	- - -	IRON MANGANESE TITANIUM	J+ (all detects)

**Method: 6020**  
**Matrix: SO**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
Tt-TP4-B1-6MS (TOT) Tt-TP4-B1-6MSD (TOT) (Tt-TP4-B1-6)	ANTIMONY	65	68	80.00-120.00	-	ANTIMONY	J-(all detects) UJ(all non-detects)
Tt-TP4-B1-6MS (TOT) Tt-TP4-B1-6MSD (TOT) (Tt-TP4-B1-6)	BARIUM	188	183	80.00-120.00	-	BARIUM	J+(all detects)

**Method: 314.0**  
**Matrix: SO**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
Tt-TP4-B4-22MS Tt-TP4-B4-22MSD (Tt-TP4-B4-22)	PERCHLORATE	296	307	80.00-120.00	-	PERCHLORATE	J+(all detects)

# Method Blank Outlier Report

Lab Reporting Batch ID: 440-105015-1

Laboratory: TA IRV

EDD Filename: Prep440-105015-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method:** 6010B\_Leach

**Matrix:** AQ

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
MB 440-245825/1-B	3/30/2015 10:49:00 AM	CALCIUM MAGNESIUM	0.236 mg/L 0.0262 mg/L	Tt-TP4-B1-14 Tt-TP4-B1-6 Tt-TP4-B2-22 Tt-TP4-B3-22 Tt-TP4-B3-22-dup Tt-TP4-B4-26
MB 440-245996/1-B	4/1/2015 1:57:00 PM	CALCIUM	0.0808 mg/L	Tt-TP4-B2-10 Tt-TP4-B3-2 Tt-TP4-B4-10

**Method:** 6020

**Matrix:** AQ

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
MB 440-245829/1-A	3/30/2015 10:24:00 PM	MOLYBDENUM ZINC	0.529 ug/L 3.83 ug/L	EB-03/20/15

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# Data Qualifier Summary

Lab Reporting Batch ID: 440-105015-1

Laboratory: TA IRV

EDD Filename: Prep440-105015-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b> ALK		
<b>Method:</b> 2320B_Leach	<b>Matrix:</b> AQ	

Sample ID: Tt-TP4-B3-22      Collected: 3/20/2015 9:34:00 AM      Analysis Type: RES      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Alkalinity as CaCO3	34		4.0	MDL	4.0	MRL	mg/L	J	fd

Sample ID: Tt-TP4-B3-22-dup      Collected: 3/20/2015 9:34:00 AM      Analysis Type: RES      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Alkalinity as CaCO3	100		4.0	MDL	4.0	MRL	mg/L	J	fd

<b>Method Category:</b> GENCHEM		
<b>Method:</b> 2540C_Leach	<b>Matrix:</b> AQ	

Sample ID: Tt-TP4-B3-22      Collected: 3/20/2015 9:34:00 AM      Analysis Type: RES      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
TOTAL DISSOLVED SOLIDS	500		5.0	MDL	10	MRL	mg/L	J	fd

Sample ID: Tt-TP4-B3-22-dup      Collected: 3/20/2015 9:34:00 AM      Analysis Type: RES      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
TOTAL DISSOLVED SOLIDS	320		5.0	MDL	10	MRL	mg/L	J	fd

<b>Method Category:</b> GENCHEM		
<b>Method:</b> 300.0_Leach	<b>Matrix:</b> AQ	

Sample ID: Tt-TP4-B1-14      Collected: 3/19/2015 2:52:00 PM      Analysis Type: RES2      Dilution: 10

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHLORIDE	0.38	J	0.25	MDL	0.50	MRL	mg/L	J	sp

Sample ID: Tt-TP4-B1-6      Collected: 3/19/2015 2:43:00 PM      Analysis Type: RES      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Nitrate as NO3	22		0.25	MDL	0.50	MRL	mg/L	J+	m

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

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# Data Qualifier Summary

Lab Reporting Batch ID: 440-105015-1

Laboratory: TA IRV

EDD Filename: Prep440-105015-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b>	GENCHEM	
<b>Method:</b>	300.0_Leach	<b>Matrix:</b> AQ

<b>Sample ID:</b> Tt-TP4-B3-2	<b>Collected:</b> 3/20/2015 9:05:00 AM	<b>Analysis Type:</b> RES	<b>Dilution:</b> 1						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Nitrate as NO3	0.44	J	0.25	MDL	0.50	MRL	mg/L	J	sp

<b>Sample ID:</b> Tt-TP4-B3-2	<b>Collected:</b> 3/20/2015 9:05:00 AM	<b>Analysis Type:</b> RES2	<b>Dilution:</b> 1						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHLORIDE	0.40	J	0.25	MDL	0.50	MRL	mg/L	J	sp

<b>Sample ID:</b> Tt-TP4-B3-22	<b>Collected:</b> 3/20/2015 9:34:00 AM	<b>Analysis Type:</b> RES2	<b>Dilution:</b> 10						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Nitrate as NO3	76		2.5	MDL	5.0	MRL	mg/L	J	fd

<b>Sample ID:</b> Tt-TP4-B3-22-dup	<b>Collected:</b> 3/20/2015 9:34:00 AM	<b>Analysis Type:</b> RES2	<b>Dilution:</b> 20						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Nitrate as NO3	120		5.0	MDL	10	MRL	mg/L	J	fd

<b>Sample ID:</b> Tt-TP4-B4-10	<b>Collected:</b> 3/20/2015 10:14:00 AM	<b>Analysis Type:</b> RES2	<b>Dilution:</b> 1						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHLORIDE	0.44	J	0.25	MDL	0.50	MRL	mg/L	J	sp

<b>Method Category:</b>	GENCHEM	
<b>Method:</b>	300.1B_Leach	<b>Matrix:</b> AQ

<b>Sample ID:</b> Tt-TP4-B3-2	<b>Collected:</b> 3/20/2015 9:05:00 AM	<b>Analysis Type:</b> RES	<b>Dilution:</b> 1						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chlorate	18	J	10	MDL	20	MRL	ug/L	J	sp

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

# Data Qualifier Summary

Lab Reporting Batch ID: 440-105015-1

Laboratory: TA IRV

EDD Filename: Prep440-105015-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b>	GENCHEM	
<b>Method:</b>	300.1B_Leach	<b>Matrix:</b> AQ

<b>Sample ID:</b> Tt-TP4-B3-22		<b>Collected:</b> 3/20/2015 9:34:00 AM				<b>Analysis Type:</b> RES		<b>Dilution:</b> 2	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chlorate	120		20	MDL	40	MRL	ug/L	J	fd

<b>Sample ID:</b> Tt-TP4-B3-22-dup		<b>Collected:</b> 3/20/2015 9:34:00 AM				<b>Analysis Type:</b> RES		<b>Dilution:</b> 10	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chlorate	790		100	MDL	200	MRL	ug/L	J	fd

<b>Sample ID:</b> Tt-TP4-B4-10		<b>3/20/2015 10:14:00</b>				<b>Collected:</b> AM		<b>Analysis Type:</b> RES		<b>Dilution:</b> 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code		
Chlorate	15	J	10	MDL	20	MRL	ug/L	J	sp		

<b>Method Category:</b>	GENCHEM	
<b>Method:</b>	314.0	<b>Matrix:</b> SO

<b>Sample ID:</b> Tt-TP4-B3-22		<b>Collected:</b> 3/20/2015 9:34:00 AM				<b>Analysis Type:</b> RES		<b>Dilution:</b> 1000	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
PERCHLORATE	170		13	MDL	53	MRL	mg/Kg	J	fd

<b>Sample ID:</b> Tt-TP4-B3-22-dup		<b>Collected:</b> 3/20/2015 9:34:00 AM				<b>Analysis Type:</b> RES		<b>Dilution:</b> 100	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
PERCHLORATE	68		1.3	MDL	5.5	MRL	mg/Kg	J	fd

<b>Sample ID:</b> Tt-TP4-B4-22		<b>3/20/2015 10:27:00</b>				<b>Collected:</b> AM		<b>Analysis Type:</b> RES		<b>Dilution:</b> 100	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code		
PERCHLORATE	78		1.2	MDL	5.0	MRL	mg/Kg	J+	m		

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

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# Data Qualifier Summary

Lab Reporting Batch ID: 440-105015-1

Laboratory: TA IRV

EDD Filename: Prep440-105015-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b>	METALS	
<b>Method:</b>	6010B	<b>Matrix:</b> SO

Sample ID: Tt-TP4-B1-6      Collected: 3/19/2015 2:43:00 PM      Analysis Type: RES/TOT      Dilution: 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	5.3	J	2.7	MDL	5.4	MRL	mg/Kg	J	sp
IRON	15000		5.4	MDL	11	MRL	mg/Kg	J+	m
MANGANESE	270		1.1	MDL	2.2	MRL	mg/Kg	J+	m
TITANIUM	600		1.1	MDL	2.2	MRL	mg/Kg	J+	m

Sample ID: Tt-TP4-B3-22      Collected: 3/20/2015 9:34:00 AM      Analysis Type: RES/TOT      Dilution: 10

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MANGANESE	130		2.6	MDL	5.3	MRL	mg/Kg	J	fd

Sample ID: Tt-TP4-B3-22-dup      Collected: 3/20/2015 9:34:00 AM      Analysis Type: RES/TOT      Dilution: 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MANGANESE	93		1.4	MDL	2.8	MRL	mg/Kg	J	fd

3/20/2015 10:14:00

Sample ID: Tt-TP4-B4-10      Collected: AM      Analysis Type: RES/TOT      Dilution: 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	5.2	J	2.7	MDL	5.3	MRL	mg/Kg	J	sp

<b>Method Category:</b>	METALS	
<b>Method:</b>	6010B_Leach	<b>Matrix:</b> AQ

Sample ID: Tt-TP4-B1-6      Collected: 3/19/2015 2:43:00 PM      Analysis Type: RES/TOT      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MAGNESIUM	0.37	J B	0.012	MDL	0.40	MRL	mg/L	J	sp

Sample ID: Tt-TP4-B3-2      Collected: 3/20/2015 9:05:00 AM      Analysis Type: RES/TOT      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MAGNESIUM	0.33	J	0.012	MDL	0.40	MRL	mg/L	J	sp
POTASSIUM	0.43	J	0.37	MDL	0.50	MRL	mg/L	J	sp

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

# Data Qualifier Summary

Lab Reporting Batch ID: 440-105015-1

Laboratory: TA IRV

EDD Filename: Prep440-105015-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b>	METALS	
<b>Method:</b>	6010B_Leach	<b>Matrix:</b> AQ

Sample ID: Tt-TP4-B3-22      Collected: 3/20/2015 9:34:00 AM      Analysis Type: RES/TOT      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CALCIUM	5.7	B	0.050	MDL	0.10	MRL	mg/L	J	fd
SODIUM	110		0.19	MDL	0.50	MRL	mg/L	J	fd

Sample ID: Tt-TP4-B3-22-dup      Collected: 3/20/2015 9:34:00 AM      Analysis Type: RES/TOT      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CALCIUM	3.6	B	0.050	MDL	0.10	MRL	mg/L	J	fd
SODIUM	63		0.19	MDL	0.50	MRL	mg/L	J	fd

3/20/2015 10:14:00

Sample ID: Tt-TP4-B4-10      Collected: AM      Analysis Type: RES/TOT      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MAGNESIUM	0.16	J	0.012	MDL	0.40	MRL	mg/L	J	sp

<b>Method Category:</b>	METALS	
<b>Method:</b>	6020	<b>Matrix:</b> AQ

3/20/2015 11:20:00

Sample ID: EB-03/20/15      Collected: AM      Analysis Type: RES/TOT      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHROMIUM	0.56	J	0.50	MDL	2.0	MRL	ug/L	J	sp
COPPER	0.80	J	0.50	MDL	2.0	MRL	ug/L	J	sp
NICKEL	0.67	J	0.50	MDL	2.0	MRL	ug/L	J	sp

<b>Method Category:</b>	METALS	
<b>Method:</b>	6020	<b>Matrix:</b> SO

Sample ID: Tt-TP4-B1-14      Collected: 3/19/2015 2:52:00 PM      Analysis Type: RES/TOT      Dilution: 20

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.98	J	0.52	MDL	1.0	MRL	mg/Kg	J	sp
SILVER	0.12	J	0.10	MDL	0.52	MRL	mg/Kg	J	sp

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

# Data Qualifier Summary

Lab Reporting Batch ID: 440-105015-1

Laboratory: TA IRV

EDD Filename: Prep440-105015-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b>	METALS	
<b>Method:</b>	6020	<b>Matrix:</b> SO

Sample ID: Tt-TP4-B1-6      Collected: 3/19/2015 2:43:00 PM      Analysis Type: RES/TOT      Dilution: 20

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.54	U F1	0.54	MDL	1.1	MRL	mg/Kg	UJ	m
BARIUM	160	F1	0.27	MDL	0.54	MRL	mg/Kg	J+	m
MOLYBDENUM	0.70	J	0.54	MDL	1.1	MRL	mg/Kg	J	sp

Sample ID: Tt-TP4-B2-22      Collected: 3/20/2015 8:31:00 AM      Analysis Type: RES/TOT      Dilution: 20

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BERYLLIUM	0.31	J	0.16	MDL	0.33	MRL	mg/Kg	J	sp

Sample ID: Tt-TP4-B3-22      Collected: 3/20/2015 9:34:00 AM      Analysis Type: RES/TOT      Dilution: 20

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ARSENIC	25		0.33	MDL	0.66	MRL	mg/Kg	J	fd
BERYLLIUM	0.39	J	0.20	MDL	0.40	MRL	mg/Kg	J	sp
CHROMIUM	37		0.66	MDL	1.3	MRL	mg/Kg	J	fd
LEAD	4.1		0.33	MDL	0.66	MRL	mg/Kg	J	fd
NICKEL	9.1		0.66	MDL	1.3	MRL	mg/Kg	J	fd

Sample ID: Tt-TP4-B3-22-dup      Collected: 3/20/2015 9:34:00 AM      Analysis Type: RES/TOT      Dilution: 20

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ARSENIC	18		0.34	MDL	0.69	MRL	mg/Kg	J	fd
BERYLLIUM	0.29	J	0.21	MDL	0.41	MRL	mg/Kg	J	sp
CHROMIUM	66		0.69	MDL	1.4	MRL	mg/Kg	J	fd
LEAD	2.9		0.34	MDL	0.69	MRL	mg/Kg	J	fd
NICKEL	6.2		0.69	MDL	1.4	MRL	mg/Kg	J	fd

3/20/2015 10:31:00

Sample ID: Tt-TP4-B4-26      Collected: AM      Analysis Type: RES/TOT      Dilution: 20

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.83	J	0.56	MDL	1.1	MRL	mg/Kg	J	sp

\* denotes a non-reportable result

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# Data Qualifier Summary

Lab Reporting Batch ID: 440-105015-1

Laboratory: TA IRV

EDD Filename: Prep440-105015-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b>	METALS	
<b>Method:</b>	7471A	<b>Matrix:</b> SO

**Sample ID:** Tt-TP4-B1-6      **Collected:** 3/19/2015 2:43:00 PM      **Analysis Type:** RES/TOT      **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.019	J	0.013	MDL	0.022	MRL	mg/Kg	J	sp

**Sample ID:** Tt-TP4-B2-10      **Collected:** 3/20/2015 8:17:00 AM      **Analysis Type:** RES/TOT      **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.020	J	0.013	MDL	0.021	MRL	mg/Kg	J	sp

**Sample ID:** Tt-TP4-B2-22      **Collected:** 3/20/2015 8:31:00 AM      **Analysis Type:** RES/TOT      **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.017	J	0.013	MDL	0.022	MRL	mg/Kg	J	sp

**Sample ID:** Tt-TP4-B3-22      **Collected:** 3/20/2015 9:34:00 AM      **Analysis Type:** RES/TOT      **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.016	U	0.016	MDL	0.026	MRL	mg/Kg	UJ	fd

**Sample ID:** Tt-TP4-B3-22-dup      **Collected:** 3/20/2015 9:34:00 AM      **Analysis Type:** RES/TOT      **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.023	J	0.017	MDL	0.028	MRL	mg/Kg	J	sp, fd

**3/20/2015 10:14:00**

**Sample ID:** Tt-TP4-B4-10      **Collected:** AM      **Analysis Type:** RES/TOT      **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.016	J	0.013	MDL	0.021	MRL	mg/Kg	J	sp

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

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# Data Qualifier Summary

Lab Reporting Batch ID: 440-105015-1

Laboratory: TA IRV

EDD Filename: Prep440-105015-1

eQAPP Name: TetraTechInc\_NERT\_11302016

## Reason Code Legend

<i>Reason Code</i>	<i>Description</i>
bl	Method Blank Contamination
fd	Field Duplicate Precision
m	Matrix Spike Lower Estimation
m	Matrix Spike Upper Estimation
sp	Reporting Limit Trace Value

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

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# Reporting Limit Outliers

Lab Reporting Batch ID: 440-105015-1

Laboratory: TA IRV

EDD Filename: Prep440-105015-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method:** 300.0\_Leach  
**Matrix:** AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
Tt-TP4-B1-14	CHLORIDE	J	0.38	0.50	MRL	mg/L	J (all detects)
Tt-TP4-B3-2	CHLORIDE Nitrate as NO3	J J	0.40 0.44	0.50 0.50	MRL MRL	mg/L mg/L	J (all detects)
Tt-TP4-B4-10	CHLORIDE	J	0.44	0.50	MRL	mg/L	J (all detects)

**Method:** 300.1B\_Leach  
**Matrix:** AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
Tt-TP4-B3-2	Chlorate	J	18	20	MRL	ug/L	J (all detects)
Tt-TP4-B4-10	Chlorate	J	15	20	MRL	ug/L	J (all detects)

**Method:** 6010B\_Leach  
**Matrix:** AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
Tt-TP4-B1-6	MAGNESIUM	J B	0.37	0.40	MRL	mg/L	J (all detects)
Tt-TP4-B3-2	MAGNESIUM POTASSIUM	J J	0.33 0.43	0.40 0.50	MRL MRL	mg/L mg/L	J (all detects)
Tt-TP4-B4-10	MAGNESIUM	J	0.16	0.40	MRL	mg/L	J (all detects)

**Method:** 6020  
**Matrix:** AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
EB-03/20/15	CHROMIUM COPPER NICKEL	J J J	0.56 0.80 0.67	2.0 2.0 2.0	MRL MRL MRL	ug/L ug/L ug/L	J (all detects)

**Method:** 6010B  
**Matrix:** SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
Tt-TP4-B1-6	BORON	J	5.3	5.4	MRL	mg/Kg	J (all detects)
Tt-TP4-B4-10	BORON	J	5.2	5.3	MRL	mg/Kg	J (all detects)

## Reporting Limit Outliers

Lab Reporting Batch ID: 440-105015-1

Laboratory: TA IRV

EDD Filename: Prep440-105015-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method:** 6020

**Matrix:** SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
Tt-TP4-B1-14	MOLYBDENUM SILVER	J J	0.98 0.12	1.0 0.52	MRL MRL	mg/Kg mg/Kg	J (all detects)
Tt-TP4-B1-6	MOLYBDENUM	J	0.70	1.1	MRL	mg/Kg	J (all detects)
Tt-TP4-B2-22	BERYLLIUM	J	0.31	0.33	MRL	mg/Kg	J (all detects)
Tt-TP4-B3-22	BERYLLIUM	J	0.39	0.40	MRL	mg/Kg	J (all detects)
Tt-TP4-B3-22-dup	BERYLLIUM	J	0.29	0.41	MRL	mg/Kg	J (all detects)
Tt-TP4-B4-26	MOLYBDENUM	J	0.83	1.1	MRL	mg/Kg	J (all detects)

**Method:** 7471A

**Matrix:** SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
Tt-TP4-B1-6	MERCURY	J	0.019	0.022	MRL	mg/Kg	J (all detects)
Tt-TP4-B2-10	MERCURY	J	0.020	0.021	MRL	mg/Kg	J (all detects)
Tt-TP4-B2-22	MERCURY	J	0.017	0.022	MRL	mg/Kg	J (all detects)
Tt-TP4-B3-22-dup	MERCURY	J	0.023	0.028	MRL	mg/Kg	J (all detects)
Tt-TP4-B4-10	MERCURY	J	0.016	0.021	MRL	mg/Kg	J (all detects)

# Data Review Summary

Lab Reporting Batch ID: 440-105330-1

Laboratory: TA IRV

EDD Filename: Prep440-105330-1

eQAPP Name: TetraTechInc\_NERT\_11302016

## *Validation Area*

## *Note*

<i>Validation Area</i>	<i>Note</i>
Technical Holding Times	A
Temperature	A
Initial Calibration	N
Continuing Calibration/Initial Calibration Verification	N
Method Blanks	SR
Surrogate/Tracer Spikes	A
Matrix Spike/Matrix Spike Duplicates	SR
Laboratory Duplicates	A
Laboratory Replicates	N
Laboratory Control Samples	A
Compound Quantitation	SR
Field Duplicates	SR
Field Triplicates	N
Field Blanks	A

A = Acceptable, N = Not provided/applicable, SR = See report

The contents of this report reflect findings made by ADR during Automated Data Review, manual applied qualifiers are not considered. Please refer to the Overall Qualifier Summary report for manual qualifiers.

## Field Duplicate RPD Report

Lab Reporting Batch ID: 440-105330-1

Laboratory: TA IRV

EDD Filename: Prep440-105330-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method: 2320B\_Leach**  
**Matrix: AQ**

Analyte	Concentration (mg/L)		Sample RPD	eQAPP RPD	Flag
	Tt-TP4-L2-22	Tt-TP4-L2-22-dup			
Alkalinity as CaCO3	87	74	16	30.00	No Qualifiers Applied

**Method: 2540C\_Leach**  
**Matrix: AQ**

Analyte	Concentration (mg/L)		Sample RPD	eQAPP RPD	Flag
	Tt-TP4-L2-26	Tt-TP4-L2-26-dup			
TOTAL DISSOLVED SOLIDS	670	790	16	30.00	No Qualifiers Applied

Analyte	Concentration (mg/L)		Sample RPD	eQAPP RPD	Flag
	Tt-TP4-L2-22	Tt-TP4-L2-22-dup			
TOTAL DISSOLVED SOLIDS	240	280	15	30.00	No Qualifiers Applied

**Method: 300.0\_Leach**  
**Matrix: AQ**

Analyte	Concentration (mg/L)		Sample RPD	eQAPP RPD	Flag
	Tt-TP4-L2-22	Tt-TP4-L2-22-dup			
SULFATE	11	9.4	16	30.00	No Qualifiers Applied
CHLORIDE	7.0	0.63	167	30.00	J(all detects)
Nitrate as NO3	3.0	31	165	30.00	UJ(all non-detects)

**Method: 300.1B\_Leach**  
**Matrix: AQ**

Analyte	Concentration (ug/L)		Sample RPD	eQAPP RPD	Flag
	Tt-TP4-L2-22	Tt-TP4-L2-22-dup			
Chlorate	23000	53	199	30.00	J(all detects) UJ(all non-detects)

**Method: 6010B\_Leach**  
**Matrix: AQ**

Analyte	Concentration (mg/L)		Sample RPD	eQAPP RPD	Flag
	Tt-TP4-L2-22 (TOT)	Tt-TP4-L2-22-dup (TOT)			
POTASSIUM	0.49	0.57	15	30.00	No Qualifiers Applied
SODIUM	60	62	3	30.00	
CALCIUM	6.3	1.0	145	30.00	J(all detects)
MAGNESIUM	0.75	0.49	42	30.00	UJ(all non-detects)

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## Field Duplicate RPD Report

Lab Reporting Batch ID: 440-105330-1

Laboratory: TA IRV

EDD Filename: Prep440-105330-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method: 314.0**  
**Matrix: SO**

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	Tt-TP4-L2-26	Tt-TP4-L2-26-dup			
PERCHLORATE	380	460	19	30.00	No Qualifiers Applied

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	Tt-TP4-L2-22	Tt-TP4-L2-22-dup			
PERCHLORATE	83	2.5	188	30.00	J(all detects) UJ(all non-detects)

**Method: 6010B**  
**Matrix: SO**

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	Tt-TP4-L2-22 (TOT)	Tt-TP4-L2-22-dup (TOT)			
IRON	8500	10000	16	30.00	No Qualifiers Applied
MANGANESE	140	170	19	30.00	
TITANIUM	430	560	26	30.00	
BORON	8.8	19	73	30.00	J(all detects) UJ(all non-detects)

**Method: 6020**  
**Matrix: SO**

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	Tt-TP4-L2-22 (TOT)	Tt-TP4-L2-22-dup (TOT)			
BARIUM	46	55	18	30.00	No Qualifiers Applied
BERYLLIUM	0.32	0.38	17	30.00	
COBALT	3.4	3.8	11	30.00	
COPPER	7.9	8.8	11	30.00	
LEAD	4.3	4.7	9	30.00	
NICKEL	9.8	11	12	30.00	
ZINC	18	23	24	30.00	
ARSENIC	13	25	63	30.00	J(all detects) UJ(all non-detects)
CHROMIUM	15	26	54	30.00	

**Method: 7199**  
**Matrix: SO**

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	Tt-TP4-L2-22 (TOT)	Tt-TP4-L2-22-dup (TOT)			
Chromium, hexavalent	1.0	0.96 U	200	30.00	J(all detects) UJ(all non-detects)

**Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing**

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## Field Duplicate RPD Report

Lab Reporting Batch ID: 440-105330-1

Laboratory: TA IRV

EDD Filename: Prep440-105330-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method: 7471A**  
**Matrix: SO**

<i>Analyte</i>	<i>Concentration (mg/Kg)</i>		<i>Sample RPD</i>	<i>eQAPP RPD</i>	<i>Flag</i>
	<i>Tt-TP4-L2-22 (TOT)</i>	<i>Tt-TP4-L2-22-dup (TOT)</i>			
MERCURY	0.013	0.023	56	30.00	J(all detects) UJ(all non-detects)

**Method: 9045C**  
**Matrix: SO**

<i>Analyte</i>	<i>Concentration (SU)</i>		<i>Sample RPD</i>	<i>eQAPP RPD</i>	<i>Flag</i>
	<i>Tt-TP4-L2-22</i>	<i>Tt-TP4-L2-22-dup</i>			
PH	8.86	9.12	3	30.00	No Qualifiers Applied



# Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 440-105330-1

Laboratory: TA IRV

EDD Filename: Prep440-105330-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method: 6010B\_Leach**  
**Matrix: AQ**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
Tt-TP4-L2-22MS (TOT) (Tt-TP4-L2-22)	SODIUM	67	-	75.00-125.00	-	SODIUM	J-(all detects) UJ(all non-detects)

**Method: 300.1B\_Leach**  
**Matrix: AQ**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
Tt-TP4-L2-22MS (Tt-TP4-L2-22)	Chlorate	-95	-	75.00-125.00	-	Chlorate	J-(all detects) R(all non-detects)

**Method: 6010B**  
**Matrix: SO**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
Tt-TP4-L2-22MS (TOT) Tt-TP4-L2-22MSD (TOT) (Tt-TP4-L2-22)	IRON MANGANESE TITANIUM	4658 154 426	3905 - 358	75.00-125.00 75.00-125.00 75.00-125.00	- - -	IRON MANGANESE TITANIUM	J+ (all detects)

**Method: 6020**  
**Matrix: SO**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
Tt-TP4-L2-22MS (TOT) Tt-TP4-L2-22MSD (TOT) (Tt-TP4-L2-22)	BARIUM	165	126	80.00-120.00	-	BARIUM	J+(all detects)

**Method: 314.0**  
**Matrix: SO**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
Tt-TP4-L2-22MS Tt-TP4-L2-22MSD (Tt-TP4-L2-22)	PERCHLORATE	-594	-597	80.00-120.00	-	PERCHLORATE	J-(all detects) R(all non-detects)
Tt-TP4-L2-26MS Tt-TP4-L2-26MSD (Tt-TP4-L2-26)	PERCHLORATE	-1894	-904	80.00-120.00	-	PERCHLORATE	J-(all detects) R(all non-detects)

# Method Blank Outlier Report

Lab Reporting Batch ID: 440-105330-1

Laboratory: TA IRV

EDD Filename: Prep440-105330-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method:** 6010B\_Leach  
**Matrix:** AQ

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
MB 440-246276/1-B	4/1/2015 5:28:00 PM	CALCIUM	0.0625 mg/L	Tt-TP4-L2-10 Tt-TP4-L2-22 Tt-TP4-L2-22-dup

**Method:** 6020  
**Matrix:** AQ

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
MB 440-245829/1-A	3/30/2015 10:24:00 PM	MOLYBDENUM ZINC	0.529 ug/L 3.83 ug/L	EB-03/25/15

**Method:** 7470A  
**Matrix:** AQ

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
MB 440-245361/1-A	3/27/2015 2:18:00 PM	MERCURY	0.000171 mg/L	EB-03/25/15

**The following samples and their listed target analytes were qualified due to contamination reported in this blank**

Sample ID	Analyte	Reported Result	Modified Final Result
EB-03/25/15(RES/TOT)	MERCURY	0.00015 mg/L	0.00020J+ mg/L

# Data Qualifier Summary

Lab Reporting Batch ID: 440-105330-1

Laboratory: TA IRV

EDD Filename: Prep440-105330-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b>	GENCHEM	
<b>Method:</b>	300.0_Leach	<b>Matrix:</b> AQ

<b>Sample ID:</b> Tt-TP4-L2-10	<b>Collected:</b> 3/25/2015 1:28:00 PM	<b>Analysis Type:</b> RES	<b>Dilution:</b> 1						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHLORIDE	0.39	J	0.25	MDL	0.50	MRL	mg/L	J	sp

<b>Sample ID:</b> Tt-TP4-L2-22	<b>Collected:</b> 3/25/2015 1:42:00 PM	<b>Analysis Type:</b> RES	<b>Dilution:</b> 1						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Nitrate as NO3	3.0		0.25	MDL	0.50	MRL	mg/L	J	fd

<b>Sample ID:</b> Tt-TP4-L2-22	<b>Collected:</b> 3/25/2015 1:42:00 PM	<b>Analysis Type:</b> RES2	<b>Dilution:</b> 1						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHLORIDE	7.0		0.25	MDL	0.50	MRL	mg/L	J	fd

<b>Sample ID:</b> Tt-TP4-L2-22-dup	<b>Collected:</b> 3/25/2015 1:42:00 PM	<b>Analysis Type:</b> RES	<b>Dilution:</b> 1						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHLORIDE	0.63		0.25	MDL	0.50	MRL	mg/L	J	fd

<b>Sample ID:</b> Tt-TP4-L2-22-dup	<b>Collected:</b> 3/25/2015 1:42:00 PM	<b>Analysis Type:</b> RES2	<b>Dilution:</b> 20						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Nitrate as NO3	31		5.0	MDL	10	MRL	mg/L	J	fd

<b>Method Category:</b>	GENCHEM	
<b>Method:</b>	300.1B_Leach	<b>Matrix:</b> AQ

<b>Sample ID:</b> Tt-TP4-L2-22	<b>Collected:</b> 3/25/2015 1:42:00 PM	<b>Analysis Type:</b> RES	<b>Dilution:</b> 200						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chlorate	23000		2000	MDL	4000	MRL	ug/L	J-	m, fd

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

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# Data Qualifier Summary

Lab Reporting Batch ID: 440-105330-1

Laboratory: TA IRV

EDD Filename: Prep440-105330-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b>	GENCHEM	
<b>Method:</b>	300.1B_Leach	<b>Matrix:</b> AQ

Sample ID: Tt-TP4-L2-22-dup      Collected: 3/25/2015 1:42:00 PM      Analysis Type: RES      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chlorate	53		10	MDL	20	MRL	ug/L	J	fd

<b>Method Category:</b>	GENCHEM	
<b>Method:</b>	314.0	<b>Matrix:</b> SO

Sample ID: Tt-TP4-L2-22      Collected: 3/25/2015 1:42:00 PM      Analysis Type: RES      Dilution: 500

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
PERCHLORATE	83		5.3	MDL	23	MRL	mg/Kg	J-	m, fd

Sample ID: Tt-TP4-L2-22-dup      Collected: 3/25/2015 1:42:00 PM      Analysis Type: RES      Dilution: 10

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
PERCHLORATE	2.5		0.11	MDL	0.48	MRL	mg/Kg	J	fd

<b>Method Category:</b>	METALS	
<b>Method:</b>	6010B	<b>Matrix:</b> AQ

Sample ID: EB-03/25/15      Collected: 3/25/2015 2:00:00 PM      Analysis Type: RES/TOT      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SODIUM	0.40	J	0.25	MDL	0.50	MRL	mg/L	J	sp

<b>Method Category:</b>	METALS	
<b>Method:</b>	6010B	<b>Matrix:</b> SO

Sample ID: Tt-TP4-L2-22      Collected: 3/25/2015 1:42:00 PM      Analysis Type: RES/TOT      Dilution: 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	8.8		2.8	MDL	5.6	MRL	mg/Kg	J	fd
IRON	8500		5.6	MDL	11	MRL	mg/Kg	J+	m
MANGANESE	140	F1	1.1	MDL	2.3	MRL	mg/Kg	J+	m

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

# Data Qualifier Summary

Lab Reporting Batch ID: 440-105330-1

Laboratory: TA IRV

EDD Filename: Prep440-105330-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b>	METALS	
<b>Method:</b>	6010B	<b>Matrix:</b> SO

Sample ID: Tt-TP4-L2-22      Collected: 3/25/2015 1:42:00 PM      Analysis Type: RES/TOT      Dilution: 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
TITANIUM	430		1.1	MDL	2.3	MRL	mg/Kg	J+	m

Sample ID: Tt-TP4-L2-22-dup      Collected: 3/25/2015 1:42:00 PM      Analysis Type: RES/TOT      Dilution: 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	19		3.0	MDL	6.0	MRL	mg/Kg	J	fd

<b>Method Category:</b>	METALS	
<b>Method:</b>	6010B_Leach	<b>Matrix:</b> AQ

Sample ID: Tt-TP4-L2-10      Collected: 3/25/2015 1:28:00 PM      Analysis Type: RES/TOT      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
POTASSIUM	0.48	J	0.37	MDL	0.50	MRL	mg/L	J	sp

Sample ID: Tt-TP4-L2-22      Collected: 3/25/2015 1:42:00 PM      Analysis Type: RES/TOT      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CALCIUM	6.3	B	0.050	MDL	0.10	MRL	mg/L	J	fd
MAGNESIUM	0.75		0.012	MDL	0.40	MRL	mg/L	J	fd
POTASSIUM	0.49	J	0.37	MDL	0.50	MRL	mg/L	J	sp
SODIUM	60		0.19	MDL	0.50	MRL	mg/L	J-	m

Sample ID: Tt-TP4-L2-22-dup      Collected: 3/25/2015 1:42:00 PM      Analysis Type: RES/TOT      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CALCIUM	1.0	B	0.050	MDL	0.10	MRL	mg/L	J	fd
MAGNESIUM	0.49		0.012	MDL	0.40	MRL	mg/L	J	fd

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

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# Data Qualifier Summary

Lab Reporting Batch ID: 440-105330-1

Laboratory: TA IRV

EDD Filename: Prep440-105330-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b>	METALS	
<b>Method:</b>	6020	<b>Matrix:</b> AQ

Sample ID: EB-03/25/15      Collected: 3/25/2015 2:00:00 PM      Analysis Type: RES/TOT      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	0.55	J	0.50	MDL	1.0	MRL	ug/L	J	sp

<b>Method Category:</b>	METALS	
<b>Method:</b>	6020	<b>Matrix:</b> SO

Sample ID: Tt-TP4-L2-10      Collected: 3/25/2015 1:28:00 PM      Analysis Type: RES/TOT      Dilution: 20

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SILVER	0.12	J	0.11	MDL	0.55	MRL	mg/Kg	J	sp

Sample ID: Tt-TP4-L2-22      Collected: 3/25/2015 1:42:00 PM      Analysis Type: RES/TOT      Dilution: 20

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ARSENIC	13		0.28	MDL	0.56	MRL	mg/Kg	J	fd
BARIUM	46	F1	0.28	MDL	0.56	MRL	mg/Kg	J+	m
BERYLLIUM	0.32	J	0.17	MDL	0.34	MRL	mg/Kg	J	sp
CHROMIUM	15		0.56	MDL	1.1	MRL	mg/Kg	J	fd

Sample ID: Tt-TP4-L2-22-dup      Collected: 3/25/2015 1:42:00 PM      Analysis Type: RES/TOT      Dilution: 20

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ARSENIC	25		0.30	MDL	0.60	MRL	mg/Kg	J	fd
CHROMIUM	26		0.60	MDL	1.2	MRL	mg/Kg	J	fd

<b>Method Category:</b>	METALS	
<b>Method:</b>	7199	<b>Matrix:</b> SO

Sample ID: Tt-TP4-L2-22      Collected: 3/25/2015 1:42:00 PM      Analysis Type: RES/TOT      Dilution: 10

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chromium, hexavalent	1.0		0.45	MDL	0.90	MRL	mg/Kg	J	fd

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

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# Data Qualifier Summary

Lab Reporting Batch ID: 440-105330-1

Laboratory: TA IRV

EDD Filename: Prep440-105330-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b> METALS
<b>Method:</b> 7199 <span style="float: right;"><b>Matrix:</b> SO</span>

Sample ID: Tt-TP4-L2-22-dup Collected: 3/25/2015 1:42:00 PM Analysis Type: RES/TOT Dilution: 10

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chromium, hexavalent	0.48	U	0.48	MDL	0.96	MRL	mg/Kg	UJ	fd

<b>Method Category:</b> METALS
<b>Method:</b> 7470A <span style="float: right;"><b>Matrix:</b> AQ</span>

Sample ID: EB-03/25/15 Collected: 3/25/2015 2:00:00 PM Analysis Type: RES/TOT Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.00015	J B	0.00010	MDL	0.00020	MRL	mg/L	J+	bl

<b>Method Category:</b> METALS
<b>Method:</b> 7471A <span style="float: right;"><b>Matrix:</b> SO</span>

Sample ID: Tt-TP4-L2-22 Collected: 3/25/2015 1:42:00 PM Analysis Type: RES/TOT Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.013	J	0.013	MDL	0.022	MRL	mg/Kg	J	sp, fd

Sample ID: Tt-TP4-L2-22-dup Collected: 3/25/2015 1:42:00 PM Analysis Type: RES/TOT Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.023	J	0.014	MDL	0.024	MRL	mg/Kg	J	sp, fd

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

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# Data Qualifier Summary

Lab Reporting Batch ID: 440-105330-1

Laboratory: TA IRV

EDD Filename: Prep440-105330-1

eQAPP Name: TetraTechInc\_NERT\_11302016

## Reason Code Legend

<i>Reason Code</i>	<i>Description</i>
bl	Method Blank Contamination
fd	Field Duplicate Precision
m	Matrix Spike Lower Estimation
m	Matrix Spike Lower Rejection
m	Matrix Spike Upper Estimation
sp	Reporting Limit Trace Value

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

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# Reporting Limit Outliers

Lab Reporting Batch ID: 440-105330-1

Laboratory: TA IRV

EDD Filename: Prep440-105330-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method:** 300.0\_Leach  
**Matrix:** AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
Tt-TP4-L2-10	CHLORIDE	J	0.39	0.50	MRL	mg/L	J (all detects)

**Method:** 6010B  
**Matrix:** AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
EB-03/25/15	SODIUM	J	0.40	0.50	MRL	mg/L	J (all detects)

**Method:** 6010B\_Leach  
**Matrix:** AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
Tt-TP4-L2-10	POTASSIUM	J	0.48	0.50	MRL	mg/L	J (all detects)
Tt-TP4-L2-22	POTASSIUM	J	0.49	0.50	MRL	mg/L	J (all detects)

**Method:** 6020  
**Matrix:** AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
EB-03/25/15	BARIUM	J	0.55	1.0	MRL	ug/L	J (all detects)

**Method:** 7470A  
**Matrix:** AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
EB-03/25/15	MERCURY	J B	0.00015	0.00020	MRL	mg/L	J (all detects)

**Method:** 6020  
**Matrix:** SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
Tt-TP4-L2-10	SILVER	J	0.12	0.55	MRL	mg/Kg	J (all detects)
Tt-TP4-L2-22	BERYLLIUM	J	0.32	0.34	MRL	mg/Kg	J (all detects)

# Reporting Limit Outliers

Lab Reporting Batch ID: 440-105330-1

Laboratory: TA IRV

EDD Filename: Prep440-105330-1

eQAPP Name: TetraTechInc\_NERT\_11302016

Method: 7471A

Matrix: SO

<i>SampleID</i>	<i>Analyte</i>	<i>Lab Qual</i>	<i>Result</i>	<i>Reporting Limit</i>	<i>RL Type</i>	<i>Units</i>	<i>Flag</i>
Tt-TP4-L2-22	MERCURY	J	0.013	0.022	MRL	mg/Kg	J (all detects)
Tt-TP4-L2-22-dup	MERCURY	J	0.023	0.024	MRL	mg/Kg	J (all detects)

# Data Review Summary

Lab Reporting Batch ID: 440-105406-1

Laboratory: TA IRV

EDD Filename: Prep440-105406-1

eQAPP Name: TetraTechInc\_NERT\_11302016

## *Validation Area*

## *Note*

<i>Validation Area</i>	<i>Note</i>
Technical Holding Times	A
Temperature	A
Initial Calibration	N
Continuing Calibration/Initial Calibration Verification	N
Method Blanks	SR
Surrogate/Tracer Spikes	A
Matrix Spike/Matrix Spike Duplicates	SR
Laboratory Duplicates	A
Laboratory Replicates	N
Laboratory Control Samples	A
Compound Quantitation	SR
Field Duplicates	SR
Field Triplicates	N
Field Blanks	A

A = Acceptable, N = Not provided/applicable, SR = See report

The contents of this report reflect findings made by ADR during Automated Data Review, manual applied qualifiers are not considered. Please refer to the Overall Qualifier Summary report for manual qualifiers.

## Field Duplicate RPD Report

Lab Reporting Batch ID: 440-105406-1

Laboratory: TA IRV

EDD Filename: Prep440-105406-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method: 2320B\_Leach**  
**Matrix: AQ**

Analyte	Concentration (mg/L)		Sample RPD	eQAPP RPD	Flag
	Tt-TP3-L2-6	Tt-TP3-L2-6-dup			
Alkalinity as CaCO3	61	48	24	30.00	No Qualifiers Applied

**Method: 2540C\_Leach**  
**Matrix: AQ**

Analyte	Concentration (mg/L)		Sample RPD	eQAPP RPD	Flag
	Tt-TP3-L2-6	Tt-TP3-L2-6-dup			
TOTAL DISSOLVED SOLIDS	200	240	18	30.00	No Qualifiers Applied

Analyte	Concentration (mg/L)		Sample RPD	eQAPP RPD	Flag
	Tt-TP1-L2-14	Tt-TP1-L2-14-dup			
TOTAL DISSOLVED SOLIDS	220	190	15	30.00	No Qualifiers Applied

**Method: 300.0\_Leach**  
**Matrix: AQ**

Analyte	Concentration (mg/L)		Sample RPD	eQAPP RPD	Flag
	Tt-TP3-L2-6	Tt-TP3-L2-6-dup			
SULFATE	2.9	3.3	13	30.00	No Qualifiers Applied
CHLORIDE	0.41	0.67	48	30.00	J(all detects)
Nitrate as NO3	40	75	61	30.00	UJ(all non-detects)

**Method: 300.1B\_Leach**  
**Matrix: AQ**

Analyte	Concentration (ug/L)		Sample RPD	eQAPP RPD	Flag
	Tt-TP3-L2-6	Tt-TP3-L2-6-dup			
Chlorate	20 U	16	200	30.00	J(all detects) UJ(all non-detects)

**Method: 6010B\_Leach**  
**Matrix: AQ**

Analyte	Concentration (mg/L)		Sample RPD	eQAPP RPD	Flag
	Tt-TP3-L2-6 (TOT)	Tt-TP3-L2-6-dup (TOT)			
CALCIUM	2.7	2.2	20	30.00	No Qualifiers Applied
MAGNESIUM	0.36	0.49	31	30.00	J(all detects)
POTASSIUM	0.42	0.50 U	200	30.00	UJ(all non-detects)
SODIUM	81	50	47	30.00	

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## Field Duplicate RPD Report

Lab Reporting Batch ID: 440-105406-1

Laboratory: TA IRV

EDD Filename: Prep440-105406-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method: 314.0**  
**Matrix: SO**

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	Tt-TP3-L2-6	Tt-TP3-L2-6-dup			
PERCHLORATE	0.83	1.2	36	30.00	J(all detects) UJ(all non-detects)

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	Tt-TP1-L2-14	Tt-TP1-L2-14-dup			
PERCHLORATE	1.3	3.1	82	30.00	J(all detects) UJ(all non-detects)

**Method: 6010B**  
**Matrix: SO**

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	Tt-TP3-L2-6 (TOT)	Tt-TP3-L2-6-dup (TOT)			
BORON	6.7	7.1	6	30.00	No Qualifiers Applied
IRON	17000	17000	0	30.00	
MANGANESE	300	320	6	30.00	
TITANIUM	820	820	0	30.00	

**Method: 6020**  
**Matrix: SO**

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	Tt-TP3-L2-6 (TOT)	Tt-TP3-L2-6-dup (TOT)			
ARSENIC	5.5	5.4	2	30.00	No Qualifiers Applied
BARIUM	220	290	27	30.00	
BERYLLIUM	0.62	0.64	3	30.00	
CHROMIUM	14	15	7	30.00	
COBALT	7.0	7.4	6	30.00	
COPPER	16	17	6	30.00	
LEAD	7.7	7.9	3	30.00	
MOLYBDENUM	0.70	0.73	4	30.00	
NICKEL	16	16	0	30.00	
ZINC	35	35	0	30.00	
SILVER	0.55 U	0.12	200	30.00	

**Method: 7471A**  
**Matrix: SO**

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	Tt-TP3-L2-6 (TOT)	Tt-TP3-L2-6-dup (TOT)			
MERCURY	0.022 U	0.018	200	30.00	J(all detects) UJ(all non-detects)

**Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing**

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## Field Duplicate RPD Report

Lab Reporting Batch ID: 440-105406-1

Laboratory: TA IRV

EDD Filename: Prep440-105406-1

eQAPP Name: TetraTechInc\_NERT\_11302016

Method: 9045C

Matrix: SO

Analyte	Concentration (SU)		Sample RPD	eQAPP RPD	Flag
	Tt-TP3-L2-6	Tt-TP3-L2-6-dup			
PH	9.34	9.49	2	30.00	No Qualifiers Applied

# Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 440-105406-1

Laboratory: TA IRV

EDD Filename: Prep440-105406-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method: 6010B**  
**Matrix: SO**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
Tt-TP3-L2-6MS (TOT) Tt-TP3-L2-6MSD (TOT) (Tt-TP3-L2-6)	IRON	-1852	524	75.00-125.00	-	IRON	J (all detects) R (all non-detects)
Tt-TP3-L2-6MS (TOT) Tt-TP3-L2-6MSD (TOT) (Tt-TP3-L2-6)	MANGANESE TITANIUM	145 260	142 297	75.00-125.00 75.00-125.00	- -	MANGANESE TITANIUM	J+(all detects)

**Method: 6020**  
**Matrix: SO**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
Tt-TP3-L2-6MS (TOT) Tt-TP3-L2-6MSD (TOT) (Tt-TP3-L2-6)	ANTIMONY	60	55	80.00-120.00	-	ANTIMONY	J-(all detects) UJ(all non-detects)
Tt-TP3-L2-6MS (TOT) Tt-TP3-L2-6MSD (TOT) (Tt-TP3-L2-6)	BARIUM	149	160	80.00-120.00	-	BARIUM	J+(all detects)

# Method Blank Outlier Report

Lab Reporting Batch ID: 440-105406-1

Laboratory: TA IRV

EDD Filename: Prep440-105406-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method:** 6010B  
**Matrix:** AQ

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
MB 440-246404/1-A	4/2/2015 11:28:00 AM	CALCIUM	0.0660 mg/L	EB-03/26/15

**Method:** 6010B\_Leach  
**Matrix:** AQ

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
MB 440-246276/1-B	4/1/2015 5:28:00 PM	CALCIUM	0.0625 mg/L	Tt-TP1-L2-18 Tt-TP1-L2-6 Tt-TP2-L2-2 Tt-TP2-L2-26 Tt-TP3-L2-14 Tt-TP3-L2-6 Tt-TP3-L2-6-dup



# Data Qualifier Summary

Lab Reporting Batch ID: 440-105406-1

Laboratory: TA IRV

EDD Filename: Prep440-105406-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b>	GENCHEM	
<b>Method:</b>	300.0_Leach	<b>Matrix:</b> AQ

Sample ID: Tt-TP3-L2-6      Collected: 3/26/2015 8:04:00 AM      Analysis Type: RES      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHLORIDE	0.41	J	0.25	MDL	0.50	MRL	mg/L	J	sp, fd

Sample ID: Tt-TP3-L2-6      Collected: 3/26/2015 8:04:00 AM      Analysis Type: RES2      Dilution: 20

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Nitrate as NO3	40		5.0	MDL	10	MRL	mg/L	J	fd

Sample ID: Tt-TP3-L2-6-dup      Collected: 3/26/2015 8:04:00 AM      Analysis Type: RES      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHLORIDE	0.67		0.25	MDL	0.50	MRL	mg/L	J	fd

Sample ID: Tt-TP3-L2-6-dup      Collected: 3/26/2015 8:04:00 AM      Analysis Type: RES2      Dilution: 20

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Nitrate as NO3	75		5.0	MDL	10	MRL	mg/L	J	fd

<b>Method Category:</b>	GENCHEM	
<b>Method:</b>	300.1B_Leach	<b>Matrix:</b> AQ

3/26/2015 12:09:00

Sample ID: Tt-TP1-L2-18      Collected: PM      Analysis Type: RES      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chlorate	15	J	10	MDL	20	MRL	ug/L	J	sp

Sample ID: Tt-TP3-L2-6      Collected: 3/26/2015 8:04:00 AM      Analysis Type: RES      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chlorate	10	U	10	MDL	20	MRL	ug/L	UJ	fd

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

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# Data Qualifier Summary

Lab Reporting Batch ID: 440-105406-1

Laboratory: TA IRV

EDD Filename: Prep440-105406-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b>	GENCHEM	
<b>Method:</b>	300.1B_Leach	<b>Matrix:</b> AQ

Sample ID: Tt-TP3-L2-6-dup      Collected: 3/26/2015 8:04:00 AM      Analysis Type: RES      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chlorate	16	J	10	MDL	20	MRL	ug/L	J	sp, fd

<b>Method Category:</b>	GENCHEM	
<b>Method:</b>	314.0	<b>Matrix:</b> SO

Sample ID: Tt-TP1-L2-14      Collected: 3/26/2015 12:03:00 PM      Analysis Type: RES      Dilution: 10

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
PERCHLORATE	1.3		0.099	MDL	0.42	MRL	mg/Kg	J	fd

Sample ID: Tt-TP1-L2-14-dup      Collected: 3/26/2015 12:03:00 PM      Analysis Type: RES      Dilution: 10

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
PERCHLORATE	3.1		0.11	MDL	0.45	MRL	mg/Kg	J	fd

Sample ID: Tt-TP3-L2-6      Collected: 3/26/2015 8:04:00 AM      Analysis Type: RES      Dilution: 10

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
PERCHLORATE	0.83		0.10	MDL	0.44	MRL	mg/Kg	J	fd

Sample ID: Tt-TP3-L2-6-dup      Collected: 3/26/2015 8:04:00 AM      Analysis Type: RES      Dilution: 10

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
PERCHLORATE	1.2		0.11	MDL	0.45	MRL	mg/Kg	J	fd

<b>Method Category:</b>	METALS	
<b>Method:</b>	6010B	<b>Matrix:</b> AQ

Sample ID: EB-03/26/15      Collected: 3/26/2015 2:00:00 PM      Analysis Type: RES/TOT      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SODIUM	0.39	J	0.25	MDL	0.50	MRL	mg/L	J	sp

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

# Data Qualifier Summary

Lab Reporting Batch ID: 440-105406-1

Laboratory: TA IRV

EDD Filename: Prep440-105406-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b>	METALS	
<b>Method:</b>	6010B	<b>Matrix:</b> SO

Sample ID: Tt-TP3-L2-6      Collected: 3/26/2015 8:04:00 AM      Analysis Type: RES/TOT      Dilution: 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
IRON	17000		5.5	MDL	11	MRL	mg/Kg	J	m, m
MANGANESE	300		1.1	MDL	2.2	MRL	mg/Kg	J+	m
TITANIUM	820		1.1	MDL	2.2	MRL	mg/Kg	J+	m

<b>Method Category:</b>	METALS	
<b>Method:</b>	6010B_Leach	<b>Matrix:</b> AQ

Sample ID: Tt-TP3-L2-6      Collected: 3/26/2015 8:04:00 AM      Analysis Type: RES/TOT      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MAGNESIUM	0.36	J	0.012	MDL	0.40	MRL	mg/L	J	sp, fd
POTASSIUM	0.42	J	0.37	MDL	0.50	MRL	mg/L	J	sp, fd
SODIUM	81		0.19	MDL	0.50	MRL	mg/L	J	fd

Sample ID: Tt-TP3-L2-6-dup      Collected: 3/26/2015 8:04:00 AM      Analysis Type: RES/TOT      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MAGNESIUM	0.49		0.012	MDL	0.40	MRL	mg/L	J	fd
POTASSIUM	0.37	U	0.37	MDL	0.50	MRL	mg/L	UJ	fd
SODIUM	50		0.19	MDL	0.50	MRL	mg/L	J	fd

<b>Method Category:</b>	METALS	
<b>Method:</b>	6020	<b>Matrix:</b> AQ

Sample ID: EB-03/26/15      Collected: 3/26/2015 2:00:00 PM      Analysis Type: RES/TOT      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHROMIUM	0.70	J	0.50	MDL	2.0	MRL	ug/L	J	sp
NICKEL	0.59	J	0.50	MDL	2.0	MRL	ug/L	J	sp

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

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# Data Qualifier Summary

Lab Reporting Batch ID: 440-105406-1

Laboratory: TA IRV

EDD Filename: Prep440-105406-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b>	METALS	
<b>Method:</b>	6020	<b>Matrix:</b> SO

<b>Sample ID:</b> Tt-TP1-L2-18	<b>Collected:</b> 3/26/2015 12:09:00 PM	<b>Analysis Type:</b> RES/TOT	<b>Dilution:</b> 20						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BERYLLIUM	0.31	J	0.16	MDL	0.32	MRL	mg/Kg	J	sp

<b>Sample ID:</b> Tt-TP2-L2-2	<b>Collected:</b> 3/26/2015 9:56:00 AM	<b>Analysis Type:</b> RES/TOT	<b>Dilution:</b> 20						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.64	J	0.55	MDL	1.1	MRL	mg/Kg	J	sp

<b>Sample ID:</b> Tt-TP3-L2-14	<b>Collected:</b> 3/26/2015 8:15:00 AM	<b>Analysis Type:</b> RES/TOT	<b>Dilution:</b> 20						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.71	J	0.61	MDL	1.2	MRL	mg/Kg	J	sp

<b>Sample ID:</b> Tt-TP3-L2-6	<b>Collected:</b> 3/26/2015 8:04:00 AM	<b>Analysis Type:</b> RES/TOT	<b>Dilution:</b> 20						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.55	U F1	0.55	MDL	1.1	MRL	mg/Kg	UJ	m
BARIUM	220		0.27	MDL	0.55	MRL	mg/Kg	J+	m
MOLYBDENUM	0.70	J	0.55	MDL	1.1	MRL	mg/Kg	J	sp
SILVER	0.11	U	0.11	MDL	0.55	MRL	mg/Kg	UJ	fd

<b>Sample ID:</b> Tt-TP3-L2-6-dup	<b>Collected:</b> 3/26/2015 8:04:00 AM	<b>Analysis Type:</b> RES/TOT	<b>Dilution:</b> 20						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.73	J	0.55	MDL	1.1	MRL	mg/Kg	J	sp
SILVER	0.12	J	0.11	MDL	0.55	MRL	mg/Kg	J	sp, fd

<b>Method Category:</b>	METALS	
<b>Method:</b>	7471A	<b>Matrix:</b> SO

<b>Sample ID:</b> Tt-TP3-L2-14	<b>Collected:</b> 3/26/2015 8:15:00 AM	<b>Analysis Type:</b> RES/TOT	<b>Dilution:</b> 1						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.019	J	0.015	MDL	0.024	MRL	mg/Kg	J	sp

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

# Data Qualifier Summary

Lab Reporting Batch ID: 440-105406-1

Laboratory: TA IRV

EDD Filename: Prep440-105406-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b> METALS
<b>Method:</b> 7471A <span style="float: right;"><b>Matrix:</b> SO</span>

**Sample ID:** Tt-TP3-L2-6 **Collected:** 3/26/2015 8:04:00 AM **Analysis Type:** RES/TOT **Dilution:** 1

<i>Analyte</i>	<i>Lab Result</i>	<i>Lab Qual</i>	<i>DL</i>	<i>DL Type</i>	<i>RL</i>	<i>RL Type</i>	<i>Units</i>	<i>Data Review Qual</i>	<i>Reason Code</i>
MERCURY	0.013	U	0.013	MDL	0.022	MRL	mg/Kg	UJ	fd

**Sample ID:** Tt-TP3-L2-6-dup **Collected:** 3/26/2015 8:04:00 AM **Analysis Type:** RES/TOT **Dilution:** 1

<i>Analyte</i>	<i>Lab Result</i>	<i>Lab Qual</i>	<i>DL</i>	<i>DL Type</i>	<i>RL</i>	<i>RL Type</i>	<i>Units</i>	<i>Data Review Qual</i>	<i>Reason Code</i>
MERCURY	0.018	J	0.013	MDL	0.022	MRL	mg/Kg	J	sp, fd

\* denotes a non-reportable result

**Project Name and Number:** 114-520225-2015-MO5 - NERT Soil Flushing

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# Data Qualifier Summary

Lab Reporting Batch ID: 440-105406-1

Laboratory: TA IRV

EDD Filename: Prep440-105406-1

eQAPP Name: TetraTechInc\_NERT\_11302016

## Reason Code Legend

<i>Reason Code</i>	<i>Description</i>
bl	Method Blank Contamination
fd	Field Duplicate Precision
m	Matrix Spike Lower Estimation
m	Matrix Spike Lower Rejection
m	Matrix Spike Upper Estimation
sp	Reporting Limit Trace Value

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

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# Reporting Limit Outliers

Lab Reporting Batch ID: 440-105406-1

Laboratory: TA IRV

EDD Filename: Prep440-105406-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method:** 300.0\_Leach  
**Matrix:** AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
Tt-TP3-L2-6	CHLORIDE	J	0.41	0.50	MRL	mg/L	J (all detects)

**Method:** 300.1B\_Leach  
**Matrix:** AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
Tt-TP1-L2-18	Chlorate	J	15	20	MRL	ug/L	J (all detects)
Tt-TP3-L2-6-dup	Chlorate	J	16	20	MRL	ug/L	J (all detects)

**Method:** 6010B  
**Matrix:** AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
EB-03/26/15	SODIUM	J	0.39	0.50	MRL	mg/L	J (all detects)

**Method:** 6010B\_Leach  
**Matrix:** AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
Tt-TP3-L2-6	MAGNESIUM	J	0.36	0.40	MRL	mg/L	J (all detects)
	POTASSIUM	J	0.42	0.50	MRL	mg/L	

**Method:** 6020  
**Matrix:** AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
EB-03/26/15	CHROMIUM	J	0.70	2.0	MRL	ug/L	J (all detects)
	NICKEL	J	0.59	2.0	MRL	ug/L	

**Method:** 6020  
**Matrix:** SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
Tt-TP1-L2-18	BERYLLIUM	J	0.31	0.32	MRL	mg/Kg	J (all detects)
Tt-TP2-L2-2	MOLYBDENUM	J	0.64	1.1	MRL	mg/Kg	J (all detects)
Tt-TP3-L2-14	MOLYBDENUM	J	0.71	1.2	MRL	mg/Kg	J (all detects)
Tt-TP3-L2-6	MOLYBDENUM	J	0.70	1.1	MRL	mg/Kg	J (all detects)

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

## Reporting Limit Outliers

Lab Reporting Batch ID: 440-105406-1

Laboratory: TA IRV

EDD Filename: Prep440-105406-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method:** 6020  
**Matrix:** SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
Tt-TP3-L2-6-dup	MOLYBDENUM	J	0.73	1.1	MRL	mg/Kg	J (all detects)
	SILVER	J	0.12	0.55	MRL	mg/Kg	

**Method:** 7471A  
**Matrix:** SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
Tt-TP3-L2-14	MERCURY	J	0.019	0.024	MRL	mg/Kg	J (all detects)
Tt-TP3-L2-6-dup	MERCURY	J	0.018	0.022	MRL	mg/Kg	J (all detects)



# Data Review Summary

Lab Reporting Batch ID: 440-130543-1

Laboratory: TA IRV

EDD Filename: Prep440-130543-1

eQAPP Name: TetraTechInc\_NERT\_11302016

## *Validation Area*

## *Note*

<i>Validation Area</i>	<i>Note</i>
Technical Holding Times	SR
Temperature	A
Initial Calibration	N
Continuing Calibration/Initial Calibration Verification	N
Method Blanks	A
Surrogate/Tracer Spikes	A
Matrix Spike/Matrix Spike Duplicates	N
Laboratory Duplicates	N
Laboratory Replicates	N
Laboratory Control Samples	A
Compound Quantitation	SR
Field Duplicates	N
Field Triplicates	N
Field Blanks	N

A = Acceptable, N = Not provided/applicable, SR = See report

The contents of this report reflect findings made by ADR during Automated Data Review, manual applied qualifiers are not considered. Please refer to the Overall Qualifier Summary report for manual qualifiers.

# QC Outlier Report: HoldingTimes

Lab Reporting Batch ID: 440-130543-1

Laboratory: TA IRV

EDD Filename: Prep440-130543-1

eQAPP Name: TetraTechInc\_NERT\_11302016

Method: 7199

Preparation Method: Gen Prep

Matrix: AQ

<i>Sample ID</i>	<i>Type</i>	<i>Actual</i>	<i>Criteria</i>	<i>Units</i>	<i>Flag</i>
TT-TP4-M3-20151209 (RES/TOT)	Sampling To Analysis	60.50	24.00	HOURS	J- (all detects) R (all non-detects)

# Data Qualifier Summary

Lab Reporting Batch ID: 440-130543-1

Laboratory: TA IRV

EDD Filename: Prep440-130543-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b>	METALS								
<b>Method:</b>	6020				<b>Matrix:</b>	AQ			

Sample ID: TT-TP4-M3-20151209      Collected: 12/9/2015 1:41:00 PM      Analysis Type: RES/TOT      Dilution: 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	4.1	J	2.5	MDL	10	MRL	ug/L	J	sp

<b>Method Category:</b>	METALS								
<b>Method:</b>	7199				<b>Matrix:</b>	AQ			

Sample ID: TT-TP4-M3-20151209      Collected: 12/9/2015 1:41:00 PM      Analysis Type: RES/TOT      Dilution: 500

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chromium, hexavalent	18000	H	130	MDL	1000	MRL	ug/L	J-	h

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

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# Data Qualifier Summary

Lab Reporting Batch ID: 440-130543-1

Laboratory: TA IRV

EDD Filename: Prep440-130543-1

eQAPP Name: TetraTechInc\_NERT\_11302016

## Reason Code Legend

<i>Reason Code</i>	<i>Description</i>
h	Sampling to Analysis Rejection
sp	Reporting Limit Trace Value

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

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# Reporting Limit Outliers

Lab Reporting Batch ID: 440-130543-1

Laboratory: TA IRV

EDD Filename: Prep440-130543-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method:** 6020

**Matrix:** AQ

<i>SampleID</i>	<i>Analyte</i>	<i>Lab Qual</i>	<i>Result</i>	<i>Reporting Limit</i>	<i>RL Type</i>	<i>Units</i>	<i>Flag</i>
TT-TP4-M3-20151209	SELENIUM	J	4.1	10	MRL	ug/L	J (all detects)

# Data Review Summary

Lab Reporting Batch ID: 440-130588-1

Laboratory: TA IRV

EDD Filename: Prep440-130588-1

eQAPP Name: TetraTechInc\_NERT\_11302016

## *Validation Area*

## *Note*

<i>Validation Area</i>	<i>Note</i>
Technical Holding Times	SR
Temperature	A
Initial Calibration	N
Continuing Calibration/Initial Calibration Verification	N
Method Blanks	A
Surrogate/Tracer Spikes	A
Matrix Spike/Matrix Spike Duplicates	SR
Laboratory Duplicates	A
Laboratory Replicates	N
Laboratory Control Samples	A
Compound Quantitation	SR
Field Duplicates	SR
Field Triplicates	N
Field Blanks	N

A = Acceptable, N = Not provided/applicable, SR = See report

The contents of this report reflect findings made by ADR during Automated Data Review, manual applied qualifiers are not considered. Please refer to the Overall Qualifier Summary report for manual qualifiers.

## Field Duplicate RPD Report

Lab Reporting Batch ID: 440-130588-1

Laboratory: TA IRV

EDD Filename: Prep440-130588-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method: 2320B**  
**Matrix: AQ**

Analyte	Concentration (mg/L)		Sample RPD	eQAPP RPD	Flag
	Tt-TP3-M1-20151210	Tt-TP3-M1-20151210-DUP			
Alkalinity as CaCO3	130	130	0	30.00	No Qualifiers Applied
Bicarbonate ion as HCO3	160	160	0		

**Method: 2540C**  
**Matrix: AQ**

Analyte	Concentration (mg/L)		Sample RPD	eQAPP RPD	Flag
	Tt-TP3-M1-20151210	Tt-TP3-M1-20151210-DUP			
TOTAL DISSOLVED SOLIDS	11000	11000	0	30.00	No Qualifiers Applied

**Method: 300.0**  
**Matrix: AQ**

Analyte	Concentration (mg/L)		Sample RPD	eQAPP RPD	Flag
	Tt-TP3-M1-20151210	Tt-TP3-M1-20151210-DUP			
CHLORIDE	1400	1300	7	30.00	No Qualifiers Applied
Nitrate as N	16	15	6	30.00	
SULFATE	1500	1500	0	30.00	

**Method: 300.1B**  
**Matrix: AQ**

Analyte	Concentration (ug/L)		Sample RPD	eQAPP RPD	Flag
	Tt-TP3-M1-20151210	Tt-TP3-M1-20151210-DUP			
Chlorate	4200000	4300000	2	30.00	No Qualifiers Applied

**Method: 314.0**  
**Matrix: AQ**

Analyte	Concentration (ug/L)		Sample RPD	eQAPP RPD	Flag
	Tt-TP3-M1-20151210	Tt-TP3-M1-20151210-DUP			
PERCHLORATE	610000	580000	5	30.00	No Qualifiers Applied

**Method: 6010B**  
**Matrix: AQ**

Analyte	Concentration (mg/L)		Sample RPD	eQAPP RPD	Flag
	Tt-TP3-M1-20151210 (TOT)	Tt-TP3-M1-20151210-DUP (TOT)			
BORON	3.4	3.5	3	30.00	No Qualifiers Applied
CALCIUM	400	400	0	30.00	
MAGNESIUM	200	200	0	30.00	
POTASSIUM	25	24	4	30.00	
SODIUM	1800	1800	0	30.00	

**Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing**

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## Field Duplicate RPD Report

Lab Reporting Batch ID: 440-130588-1

Laboratory: TA IRV

EDD Filename: Prep440-130588-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method: 6020**  
**Matrix: AQ**

Analyte	Concentration (ug/L)		Sample RPD	eQAPP RPD	Flag
	Tt-TP3-M1-20151210 (TOT)	Tt-TP3-M1-20151210-DUP (TOT)			
ARSENIC	100	98	2	30.00	No Qualifiers Applied
BARIUM	30	30	0	30.00	
CHROMIUM	17000	17000	0	30.00	
MOLYBDENUM	40	39	3	30.00	
SELENIUM	3.8	5.2	31	30.00	J(all detects) UJ(all non-detects)

**Method: 7199**  
**Matrix: AQ**

Analyte	Concentration (ug/L)		Sample RPD	eQAPP RPD	Flag
	Tt-TP3-M1-20151210 (TOT)	Tt-TP3-M1-20151210-DUP (TOT)			
Chromium, hexavalent	19000	19000	0	30.00	No Qualifiers Applied

**Method: SM5310B**  
**Matrix: AQ**

Analyte	Concentration (mg/L)		Sample RPD	eQAPP RPD	Flag
	Tt-TP3-M1-20151210	Tt-TP3-M1-20151210-DUP			
Total organic carbon	1.3	1.3	0	30.00	No Qualifiers Applied



# QC Outlier Report: HoldingTimes

Lab Reporting Batch ID: 440-130588-1  
 EDD Filename: Prep440-130588-1

Laboratory: TA IRV  
 eQAPP Name: TetraTechInc\_NERT\_11302016

Method: 7199 Preparation Method: Gen Prep  
 Matrix: AQ

Sample ID	Type	Actual	Criteria	Units	Flag
Tt-TP1-L1-20151210 (RES/TOT)	Sampling To Analysis	47.75	24.00	HOURS	J- (all detects) UJ (all non-detects)
Tt-TP1-L2-20151210 (RES/TOT)		47.75	24.00	HOURS	
Tt-TP1-M1-20151210 (RES/TOT)		39.50	24.00	HOURS	
Tt-TP1-M2-20151210 (RES/TOT)		39.25	24.00	HOURS	
Tt-TP1-M3-20151210 (RES/TOT)		39.00	24.00	HOURS	
Tt-TP1-M3-20151210 (RE2/TOT)		48.00	24.00	HOURS	
Tt-TP2-L1-20151210 (RES/TOT)		47.25	24.00	HOURS	
Tt-TP2-L2-20151210 (RES/TOT)		47.75	24.00	HOURS	
Tt-TP2-M1-20151210 (RES/TOT)		40.25	24.00	HOURS	
Tt-TP2-M2-20151210 (RES/TOT)		40.00	24.00	HOURS	
Tt-TP3-L1-20151210 (RES/TOT)		47.25	24.00	HOURS	
Tt-TP3-L2-20151210 (RES/TOT)		47.25	24.00	HOURS	
Tt-TP3-M1-20151210 (RES/TOT)		41.00	24.00	HOURS	
Tt-TP3-M1-20151210-DUP (RES/TOT)		43.25	24.00	HOURS	
Tt-TP3-M2-20151210 (RES/TOT)		40.25	24.00	HOURS	
Tt-TP4-L1-20151210 (RES/TOT)		43.25	24.00	HOURS	
Tt-TP4-L2-20151210 (RES/TOT)		43.25	24.00	HOURS	
Tt-TP4-M2-20151210 (RES/TOT)		41.25	24.00	HOURS	
Tt-TP1-M3-20151210MS (RES/TOT)		Sampling To Analysis	48.25	24.00	
Tt-TP1-M3-20151210MSD (RES/TOT)	48.50		24.00	HOURS	
Tt-TP4-M1-20151210 (RES/TOT)	53.50		24.00	HOURS	

# Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 440-130588-1

Laboratory: TA IRV

EDD Filename: Prep440-130588-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method: 300.0**  
**Matrix: AQ**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
Tt-TP2-L1-20151210MS Tt-TP2-L1-20151210MSD (Tt-TP2-L1-20151210)	Nitrate as N	76	76	80.00-120.00	-	Nitrate as N	J- (all detects) UJ (all non-detects)
Tt-TP2-L1-20151210MS Tt-TP2-L1-20151210MSD (Tt-TP2-L1-20151210)	SULFATE	3	-8	80.00-120.00	-	SULFATE	J-(all detects) R(all non-detects)
Tt-TP2-L1-20151210MS Tt-TP2-L1-20151210MSD (Tt-TP2-L1-20151210)	CHLORIDE	66	58	80.00-120.00	-	CHLORIDE	J-(all detects) UJ(all non-detects)
Tt-TP1-M3-20151210MSD (Tt-TP1-M3-20151210)	Nitrate as N	-	47	80.00-120.00	-	Nitrate as N	J-(all detects) UJ(all non-detects)
Tt-TP1-M3-20151210MS Tt-TP1-M3-20151210MSD (Tt-TP1-M3-20151210)	CHLORIDE SULFATE	-66 45	-82 -162	80.00-120.00 80.00-120.00	- -	CHLORIDE SULFATE	J-(all detects) R(all non-detects)

**Method: 7199**  
**Matrix: AQ**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
Tt-TP1-M3-20151210MS (TOT) Tt-TP1-M3-20151210MSD (TOT) (Tt-TP1-M3-20151210)	Chromium, hexavalent	167	166	85.00-115.00	-	Chromium, hexavalent	J+(all detects)

**Method: 6020**  
**Matrix: AQ**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
Tt-TP1-M3-20151210MS (TOT) Tt-TP1-M3-20151210MSD (TOT) (Tt-TP1-M3-20151210)	CHROMIUM	2	-407	75.00-125.00	-	CHROMIUM	J-(all detects) R(all non-detects)

**Method: 6010B**  
**Matrix: AQ**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
Tt-TP1-M3-20151210MS (TOT) Tt-TP1-M3-20151210MSD (TOT) (Tt-TP1-M3-20151210)	CALCIUM MAGNESIUM SODIUM	-632 -39 -646	-510 -65 -539	75.00-125.00 75.00-125.00 75.00-125.00	- - -	CALCIUM MAGNESIUM SODIUM	J-(all detects) R(all non-detects)

**Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing**

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# Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 440-130588-1

Laboratory: TA IRV

EDD Filename: Prep440-130588-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method: 6010B**  
**Matrix: AQ**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
Tt-TP1-M3-20151210MS (TOT) Tt-TP1-M3-20151210MSD (TOT) (Tt-TP1-M3-20151210)	POTASSIUM	57	65	75.00-125.00	-	POTASSIUM	J-(all detects) UJ(all non-detects)

**Method: 300.1B**  
**Matrix: AQ**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
Tt-TP1-M3-20151210MS Tt-TP1-M3-20151210MSD (Tt-TP1-M3-20151210)	Chlorate	-9213	-3058	75.00-125.00	-	Chlorate	J-(all detects) R(all non-detects)

**Method: 314.0**  
**Matrix: AQ**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
Tt-TP1-M3-20151210MS Tt-TP1-M3-20151210MSD (Tt-TP1-M3-20151210)	PERCHLORATE	-2195	-2978	80.00-120.00	-	PERCHLORATE	J-(all detects) R(all non-detects)

# Data Qualifier Summary

Lab Reporting Batch ID: 440-130588-1

Laboratory: TA IRV

EDD Filename: Prep440-130588-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b>	GENCHEM	
<b>Method:</b>	300.0	<b>Matrix:</b> AQ

<b>Sample ID:</b> Tt-TP1-M3-20151210		<b>Collected:</b> PM		<b>12/10/2015 1:34:00</b>				<b>Analysis Type:</b> RE2		<b>Dilution:</b> 20	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code		
Nitrate as N	62	F1	1.1	MDL	2.2	MRL	mg/L	J-	m		

<b>Sample ID:</b> Tt-TP1-M3-20151210		<b>Collected:</b> PM		<b>12/10/2015 1:34:00</b>				<b>Analysis Type:</b> RE3		<b>Dilution:</b> 500	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code		
SULFATE	1400		130	MDL	250	MRL	mg/L	J-	m, m		

<b>Sample ID:</b> Tt-TP1-M3-20151210		<b>Collected:</b> PM		<b>12/10/2015 1:34:00</b>				<b>Analysis Type:</b> RES		<b>Dilution:</b> 500	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code		
CHLORIDE	1300		130	MDL	250	MRL	mg/L	J-	m		

<b>Sample ID:</b> Tt-TP2-L1-20151210		<b>Collected:</b> AM		<b>12/10/2015 10:50:00</b>				<b>Analysis Type:</b> RE2		<b>Dilution:</b> 100	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code		
Nitrate as N	31	F1	5.5	MDL	11	MRL	mg/L	J-	m		

<b>Sample ID:</b> Tt-TP2-L1-20151210		<b>Collected:</b> AM		<b>12/10/2015 10:50:00</b>				<b>Analysis Type:</b> RES		<b>Dilution:</b> 100	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code		
CHLORIDE	240	F1	25	MDL	50	MRL	mg/L	J-	m		
SULFATE	580		25	MDL	50	MRL	mg/L	J-	m		

<b>Sample ID:</b> Tt-TP3-L1-20151210		<b>Collected:</b> AM		<b>12/10/2015 10:30:00</b>				<b>Analysis Type:</b> RES		<b>Dilution:</b> 500	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code		
CHLORIDE	220	J	130	MDL	250	MRL	mg/L	J	sp		

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

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# Data Qualifier Summary

Lab Reporting Batch ID: 440-130588-1

Laboratory: TA IRV

EDD Filename: Prep440-130588-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b>	GENCHEM	
<b>Method:</b>	300.1B	<b>Matrix:</b> AQ

<b>Sample ID:</b> Tt-TP1-M3-20151210	<b>Collected:</b> PM	<b>12/10/2015 1:34:00</b>	<b>Analysis Type:</b> RES	<b>Dilution:</b> 20000					
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chlorate	3600000		200000	MDL	400000	MRL	ug/L	J-	m

<b>Method Category:</b>	METALS	
<b>Method:</b>	6010B	<b>Matrix:</b> AQ

<b>Sample ID:</b> Tt-TP1-M3-20151210	<b>Collected:</b> PM	<b>12/10/2015 1:34:00</b>	<b>Analysis Type:</b> RES/TOT	<b>Dilution:</b> 5					
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CALCIUM	530		0.25	MDL	0.50	MRL	mg/L	J-	m
MAGNESIUM	260		0.050	MDL	0.10	MRL	mg/L	J-	m
POTASSIUM	35	F1	1.3	MDL	2.5	MRL	mg/L	J-	m
SODIUM	1400		1.3	MDL	2.5	MRL	mg/L	J-	m

<b>Method Category:</b>	METALS	
<b>Method:</b>	6020	<b>Matrix:</b> AQ

<b>Sample ID:</b> Tt-TP1-M1-20151210	<b>Collected:</b> PM	<b>12/10/2015 12:26:00</b>	<b>Analysis Type:</b> RES/TOT	<b>Dilution:</b> 5					
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	4.6	J	2.5	MDL	10	MRL	ug/L	J	sp

<b>Sample ID:</b> Tt-TP1-M2-20151210	<b>Collected:</b> PM	<b>12/10/2015 12:59:00</b>	<b>Analysis Type:</b> RES/TOT	<b>Dilution:</b> 5					
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	4.4	J	2.5	MDL	10	MRL	ug/L	J	sp

<b>Sample ID:</b> Tt-TP1-M3-20151210	<b>Collected:</b> PM	<b>12/10/2015 1:34:00</b>	<b>Analysis Type:</b> RES/TOT	<b>Dilution:</b> 5					
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHROMIUM	13000		2.5	MDL	10	MRL	ug/L	J-	m
SELENIUM	5.3	J	2.5	MDL	10	MRL	ug/L	J	sp

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

# Data Qualifier Summary

Lab Reporting Batch ID: 440-130588-1

Laboratory: TA IRV

EDD Filename: Prep440-130588-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b>	METALS									
<b>Method:</b>	6020			<b>Matrix:</b> AQ						

<b>Sample ID:</b> Tt-TP2-M1-20151210		<b>Collected:</b> AM			<b>Analysis Type:</b> RES/TOT			<b>Dilution:</b> 5	
<b>12/10/2015 11:22:00</b>									
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	4.7	J	2.5	MDL	10	MRL	ug/L	J	sp

<b>Sample ID:</b> Tt-TP2-M2-20151210		<b>Collected:</b> AM			<b>Analysis Type:</b> RES/TOT			<b>Dilution:</b> 5	
<b>12/10/2015 11:48:00</b>									
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	4.7	J	2.5	MDL	10	MRL	ug/L	J	sp

<b>Sample ID:</b> Tt-TP3-L1-20151210		<b>Collected:</b> AM			<b>Analysis Type:</b> RES/TOT			<b>Dilution:</b> 1	
<b>12/10/2015 10:30:00</b>									
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	4.7	J	2.5	MDL	10	MRL	ug/L	J	sp
CHROMIUM	3.2	J	2.5	MDL	10	MRL	ug/L	J	sp
COPPER	5.5	J	2.5	MDL	10	MRL	ug/L	J	sp
NICKEL	5.4	J	2.5	MDL	10	MRL	ug/L	J	sp

<b>Sample ID:</b> Tt-TP3-M1-20151210		<b>Collected:</b> AM			<b>Analysis Type:</b> RES/TOT			<b>Dilution:</b> 5	
<b>12/10/2015 9:51:00</b>									
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	3.8	J	2.5	MDL	10	MRL	ug/L	J	sp, fd

<b>Sample ID:</b> Tt-TP3-M1-20151210-DUP		<b>Collected:</b> AM			<b>Analysis Type:</b> RES/TOT			<b>Dilution:</b> 5	
<b>12/10/2015 9:51:00</b>									
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	5.2	J	2.5	MDL	10	MRL	ug/L	J	sp, fd

<b>Sample ID:</b> Tt-TP3-M2-20151210		<b>Collected:</b> AM			<b>Analysis Type:</b> RES/TOT			<b>Dilution:</b> 5	
<b>12/10/2015 10:42:00</b>									
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	4.4	J	2.5	MDL	10	MRL	ug/L	J	sp

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

# Data Qualifier Summary

Lab Reporting Batch ID: 440-130588-1

Laboratory: TA IRV

EDD Filename: Prep440-130588-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b>	METALS	
<b>Method:</b>	6020	<b>Matrix:</b> AQ

<b>Sample ID:</b> Tt-TP4-M1-20151210	<b>Collected:</b> AM	<b>12/10/2015 9:12:00</b>	<b>Analysis Type:</b> RES/TOT	<b>Dilution:</b> 5					
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	5.5	J	2.5	MDL	10	MRL	ug/L	J	sp

<b>Sample ID:</b> Tt-TP4-M2-20151210	<b>Collected:</b> AM	<b>12/10/2015 9:14:00</b>	<b>Analysis Type:</b> RES/TOT	<b>Dilution:</b> 5					
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
NICKEL	4.2	J	2.5	MDL	10	MRL	ug/L	J	sp
SELENIUM	4.5	J	2.5	MDL	10	MRL	ug/L	J	sp

<b>Method Category:</b>	METALS	
<b>Method:</b>	7199	<b>Matrix:</b> AQ

<b>Sample ID:</b> Tt-TP1-L1-20151210	<b>Collected:</b> AM	<b>12/10/2015 11:20:00</b>	<b>Analysis Type:</b> RES/TOT	<b>Dilution:</b> 1					
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chromium, hexavalent	0.25	U H	0.25	MDL	2.0	MRL	ug/L	UJ	h

<b>Sample ID:</b> Tt-TP1-L2-20151210	<b>Collected:</b> AM	<b>12/10/2015 11:30:00</b>	<b>Analysis Type:</b> RES/TOT	<b>Dilution:</b> 1					
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chromium, hexavalent	0.25	U H	0.25	MDL	2.0	MRL	ug/L	UJ	h

<b>Sample ID:</b> Tt-TP1-M1-20151210	<b>Collected:</b> PM	<b>12/10/2015 12:26:00</b>	<b>Analysis Type:</b> RES/TOT	<b>Dilution:</b> 500					
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chromium, hexavalent	15000	H	130	MDL	1000	MRL	ug/L	J-	h

<b>Sample ID:</b> Tt-TP1-M2-20151210	<b>Collected:</b> PM	<b>12/10/2015 12:59:00</b>	<b>Analysis Type:</b> RES/TOT	<b>Dilution:</b> 500					
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chromium, hexavalent	16000	H	130	MDL	1000	MRL	ug/L	J-	h

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

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# Data Qualifier Summary

Lab Reporting Batch ID: 440-130588-1

Laboratory: TA IRV

EDD Filename: Prep440-130588-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b>	<b>METALS</b>									
<b>Method:</b>	<b>7199</b>			<b>Matrix: AQ</b>						

12/10/2015 1:34:00										
<b>Sample ID:</b> Tt-TP1-M3-20151210			<b>Collected:</b> PM			<b>Analysis Type:</b> RE2/TOT			<b>Dilution:</b> 500	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
Chromium, hexavalent	15000	H	130	MDL	1000	MRL	ug/L	J	m, h	

12/10/2015 10:50:00										
<b>Sample ID:</b> Tt-TP2-L1-20151210			<b>Collected:</b> AM			<b>Analysis Type:</b> RES/TOT			<b>Dilution:</b> 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
Chromium, hexavalent	1.5	J H	0.25	MDL	2.0	MRL	ug/L	J-	sp, h	

12/10/2015 11:05:00										
<b>Sample ID:</b> Tt-TP2-L2-20151210			<b>Collected:</b> AM			<b>Analysis Type:</b> RES/TOT			<b>Dilution:</b> 200	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
Chromium, hexavalent	1800	H	50	MDL	400	MRL	ug/L	J-	h	

12/10/2015 11:22:00										
<b>Sample ID:</b> Tt-TP2-M1-20151210			<b>Collected:</b> AM			<b>Analysis Type:</b> RES/TOT			<b>Dilution:</b> 500	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
Chromium, hexavalent	16000	H	130	MDL	1000	MRL	ug/L	J-	h	

12/10/2015 11:48:00										
<b>Sample ID:</b> Tt-TP2-M2-20151210			<b>Collected:</b> AM			<b>Analysis Type:</b> RES/TOT			<b>Dilution:</b> 500	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
Chromium, hexavalent	15000	H	130	MDL	1000	MRL	ug/L	J-	h	

12/10/2015 10:30:00										
<b>Sample ID:</b> Tt-TP3-L1-20151210			<b>Collected:</b> AM			<b>Analysis Type:</b> RES/TOT			<b>Dilution:</b> 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
Chromium, hexavalent	0.25	U H	0.25	MDL	2.0	MRL	ug/L	UJ	h	

12/10/2015 10:40:00										
<b>Sample ID:</b> Tt-TP3-L2-20151210			<b>Collected:</b> AM			<b>Analysis Type:</b> RES/TOT			<b>Dilution:</b> 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
Chromium, hexavalent	0.25	U H	0.25	MDL	2.0	MRL	ug/L	UJ	h	

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

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# Data Qualifier Summary

Lab Reporting Batch ID: 440-130588-1

Laboratory: TA IRV

EDD Filename: Prep440-130588-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b>	METALS									
<b>Method:</b>	7199			<b>Matrix:</b> AQ						

<b>Sample ID:</b> Tt-TP3-M1-20151210		<b>Collected:</b> AM			<b>Analysis Type:</b> RES/TOT			<b>Dilution:</b> 500	
<b>12/10/2015 9:51:00</b>									
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chromium, hexavalent	19000	H	130	MDL	1000	MRL	ug/L	J-	h

<b>Sample ID:</b> Tt-TP3-M1-20151210-DUP		<b>Collected:</b> AM			<b>Analysis Type:</b> RES/TOT			<b>Dilution:</b> 500	
<b>12/10/2015 9:51:00</b>									
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chromium, hexavalent	19000	H	130	MDL	1000	MRL	ug/L	J-	h

<b>Sample ID:</b> Tt-TP3-M2-20151210		<b>Collected:</b> AM			<b>Analysis Type:</b> RES/TOT			<b>Dilution:</b> 500	
<b>12/10/2015 10:42:00</b>									
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chromium, hexavalent	18000	H	130	MDL	1000	MRL	ug/L	J-	h

<b>Sample ID:</b> Tt-TP4-L1-20151210		<b>Collected:</b> AM			<b>Analysis Type:</b> RES/TOT			<b>Dilution:</b> 1	
<b>12/10/2015 10:06:00</b>									
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chromium, hexavalent	0.25	U H	0.25	MDL	2.0	MRL	ug/L	UJ	h

<b>Sample ID:</b> Tt-TP4-L2-20151210		<b>Collected:</b> AM			<b>Analysis Type:</b> RES/TOT			<b>Dilution:</b> 1	
<b>12/10/2015 10:15:00</b>									
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chromium, hexavalent	3.3	H	0.25	MDL	2.0	MRL	ug/L	J-	h

<b>Sample ID:</b> Tt-TP4-M1-20151210		<b>Collected:</b> AM			<b>Analysis Type:</b> RES/TOT			<b>Dilution:</b> 1000	
<b>12/10/2015 9:12:00</b>									
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chromium, hexavalent	19000	H	250	MDL	2000	MRL	ug/L	J-	h

<b>Sample ID:</b> Tt-TP4-M2-20151210		<b>Collected:</b> AM			<b>Analysis Type:</b> RES/TOT			<b>Dilution:</b> 500	
<b>12/10/2015 9:14:00</b>									
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chromium, hexavalent	18000	H	130	MDL	1000	MRL	ug/L	J-	h

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

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## ***Data Qualifier Summary***

Lab Reporting Batch ID: 440-130588-1

Laboratory: TA IRV

EDD Filename: Prep440-130588-1

eQAPP Name: TetraTechInc\_NERT\_11302016

\* denotes a non-reportable result

**Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing**

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# Data Qualifier Summary

Lab Reporting Batch ID: 440-130588-1

Laboratory: TA IRV

EDD Filename: Prep440-130588-1

eQAPP Name: TetraTechInc\_NERT\_11302016

## Reason Code Legend

<i>Reason Code</i>	<i>Description</i>
e	Sampling to Analysis Estimation
fd	Field Duplicate Precision
h	Sampling to Analysis Estimation
h	Sampling to Analysis Rejection
m	Matrix Spike Lower Estimation
m	Matrix Spike Lower Rejection
m	Matrix Spike Upper Estimation
sp	Reporting Limit Trace Value

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

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# Reporting Limit Outliers

Lab Reporting Batch ID: 440-130588-1

Laboratory: TA IRV

EDD Filename: Prep440-130588-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method: 300.0**  
**Matrix: AQ**

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
Tt-TP3-L1-20151210	CHLORIDE	J	220	250	MRL	mg/L	J (all detects)

**Method: 6020**  
**Matrix: AQ**

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
Tt-TP1-M1-20151210	SELENIUM	J	4.6	10	MRL	ug/L	J (all detects)
Tt-TP1-M2-20151210	SELENIUM	J	4.4	10	MRL	ug/L	J (all detects)
Tt-TP1-M3-20151210	SELENIUM	J	5.3	10	MRL	ug/L	J (all detects)
Tt-TP2-M1-20151210	SELENIUM	J	4.7	10	MRL	ug/L	J (all detects)
Tt-TP2-M2-20151210	SELENIUM	J	4.7	10	MRL	ug/L	J (all detects)
Tt-TP3-L1-20151210	ANTIMONY	J	4.7	10	MRL	ug/L	J (all detects)
	CHROMIUM	J	3.2	10	MRL	ug/L	
	COPPER	J	5.5	10	MRL	ug/L	
	NICKEL	J	5.4	10	MRL	ug/L	
Tt-TP3-M1-20151210	SELENIUM	J	3.8	10	MRL	ug/L	J (all detects)
Tt-TP3-M1-20151210-DUP	SELENIUM	J	5.2	10	MRL	ug/L	J (all detects)
Tt-TP3-M2-20151210	SELENIUM	J	4.4	10	MRL	ug/L	J (all detects)
Tt-TP4-M1-20151210	SELENIUM	J	5.5	10	MRL	ug/L	J (all detects)
Tt-TP4-M2-20151210	NICKEL	J	4.2	10	MRL	ug/L	J (all detects)
	SELENIUM	J	4.5	10	MRL	ug/L	

**Method: 7199**  
**Matrix: AQ**

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
Tt-TP2-L1-20151210	Chromium, hexavalent	J H	1.5	2.0	MRL	ug/L	J (all detects)

# Data Review Summary

Lab Reporting Batch ID: 440-132876-1

Laboratory: TA IRV

EDD Filename: Prep440-132876-1

eQAPP Name: TetraTechInc\_NERT\_11302016

## *Validation Area*

## *Note*

<i>Validation Area</i>	<i>Note</i>
Technical Holding Times	A
Temperature	A
Initial Calibration	N
Continuing Calibration/Initial Calibration Verification	N
Method Blanks	A
Surrogate/Tracer Spikes	N
Matrix Spike/Matrix Spike Duplicates	SR
Laboratory Duplicates	A
Laboratory Replicates	N
Laboratory Control Samples	A
Compound Quantitation	A
Field Duplicates	A
Field Triplicates	N
Field Blanks	N

A = Acceptable, N = Not provided/applicable, SR = See report

The contents of this report reflect findings made by ADR during Automated Data Review, manual applied qualifiers are not considered. Please refer to the Overall Qualifier Summary report for manual qualifiers.

# Field Duplicate RPD Report

Lab Reporting Batch ID: 440-132876-1

Laboratory: TA IRV

EDD Filename: Prep440-132876-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method: 2540C**  
**Matrix: AQ**

Analyte	Concentration (mg/L)		Sample RPD	eQAPP RPD	Flag
	TT-TP2-M2-20160103	TT-TP2-M2-20160103-Dup			
TOTAL DISSOLVED SOLIDS	9900	10000	1	30.00	No Qualifiers Applied

**Method: 314.0**  
**Matrix: AQ**

Analyte	Concentration (ug/L)		Sample RPD	eQAPP RPD	Flag
	TT-TP2-M2-20160103	TT-TP2-M2-20160103-Dup			
PERCHLORATE	440000	500000	13	30.00	No Qualifiers Applied

**Method: 6020**  
**Matrix: AQ**

Analyte	Concentration (ug/L)		Sample RPD	eQAPP RPD	Flag
	TT-TP2-M2-20160103 (DIS)	TT-TP2-M2-20160103-Dup (DIS)			
CHROMIUM	15000	14000	7	30.00	No Qualifiers Applied

**Method: SM5310B**  
**Matrix: AQ**

Analyte	Concentration (mg/L)		Sample RPD	eQAPP RPD	Flag
	TT-TP2-M2-20160103	TT-TP2-M2-20160103-Dup			
Total organic carbon	1.3	1.2	8	30.00	No Qualifiers Applied

# Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 440-132876-1

Laboratory: TA IRV

EDD Filename: Prep440-132876-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method: 314.0**  
**Matrix: AQ**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
TT-TP2-M2-20160103MS TT-TP2-M2-20160103MSD (TT-TP2-M2-20160103)	PERCHLORATE	-500	11493	80.00-120.00	-	PERCHLORATE	J (all detects) R (all non-detects)

**Method: 6020**  
**Matrix: AQ**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
TT-TP2-M2-20160103MS (DIS) TT-TP2-M2-20160103MSD (DIS) (TT-TP2-M2-20160103)	CHROMIUM	-148	-1108	75.00-125.00	-	CHROMIUM	J-(all detects) R(all non-detects)

# Data Qualifier Summary

Lab Reporting Batch ID: 440-132876-1

Laboratory: TA IRV

EDD Filename: Prep440-132876-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b>	GENCHEM	
<b>Method:</b>	314.0	<b>Matrix:</b> AQ

Sample ID: TT-TP2-M2-20160103      Collected: 1/3/2016 12:59:00 PM      Analysis Type: RES      Dilution: 10000

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
PERCHLORATE	440000		5000	MDL	10000	MRL	ug/L	J	m, m

<b>Method Category:</b>	METALS	
<b>Method:</b>	6020	<b>Matrix:</b> AQ

Sample ID: TT-TP2-M2-20160103      Collected: 1/3/2016 12:59:00 PM      Analysis Type: RES/DIS      Dilution: 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHROMIUM	15000		2.5	MDL	10	MRL	ug/L	J-	m

\* denotes a non-reportable result

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# Data Qualifier Summary

Lab Reporting Batch ID: 440-132876-1

Laboratory: TA IRV

EDD Filename: Prep440-132876-1

eQAPP Name: TetraTechInc\_NERT\_11302016

## Reason Code Legend

<i>Reason Code</i>	<i>Description</i>
m	Matrix Spike Lower Rejection
m	Matrix Spike Upper Estimation

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

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# Data Review Summary

Lab Reporting Batch ID: 440-135664-1

Laboratory: TA IRV

EDD Filename: Prep440-135664-1

eQAPP Name: TetraTechInc\_NERT\_11302016

## *Validation Area*

## *Note*

<i>Validation Area</i>	<i>Note</i>
Technical Holding Times	SR
Temperature	A
Initial Calibration	N
Continuing Calibration/Initial Calibration Verification	N
Method Blanks	A
Surrogate/Tracer Spikes	N
Matrix Spike/Matrix Spike Duplicates	SR
Laboratory Duplicates	A
Laboratory Replicates	N
Laboratory Control Samples	A
Compound Quantitation	A
Field Duplicates	A
Field Triplicates	N
Field Blanks	N

A = Acceptable, N = Not provided/applicable, SR = See report

The contents of this report reflect findings made by ADR during Automated Data Review, manual applied qualifiers are not considered. Please refer to the Overall Qualifier Summary report for manual qualifiers.

## Field Duplicate RPD Report

Lab Reporting Batch ID: 440-135664-1

Laboratory: TA IRV

EDD Filename: Prep440-135664-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method: 2540C**  
**Matrix: AQ**

Analyte	Concentration (mg/L)		Sample RPD	eQAPP RPD	Flag
	TT-TP2-M2-20160120	TT-TP2-M2-20160120-DUP			
TOTAL DISSOLVED SOLIDS	11000	11000	0	30.00	No Qualifiers Applied

**Method: 314.0**  
**Matrix: AQ**

Analyte	Concentration (ug/L)		Sample RPD	eQAPP RPD	Flag
	TT-TP2-M2-20160120	TT-TP2-M2-20160120-DUP			
PERCHLORATE	1800000	1900000	5	30.00	No Qualifiers Applied

**Method: 6020**  
**Matrix: AQ**

Analyte	Concentration (ug/L)		Sample RPD	eQAPP RPD	Flag
	TT-TP2-M2-20160120 (TOT)	TT-TP2-M2-20160120-DUP (TOT)			
CHROMIUM	13000	13000	0	30.00	No Qualifiers Applied

**Method: 7199**  
**Matrix: AQ**

Analyte	Concentration (ug/L)		Sample RPD	eQAPP RPD	Flag
	TT-TP2-M2-20160120 (TOT)	TT-TP2-M2-20160120-DUP (TOT)			
Chromium, hexavalent	14000	14000	0	30.00	No Qualifiers Applied

**Method: SM5310B**  
**Matrix: AQ**

Analyte	Concentration (mg/L)		Sample RPD	eQAPP RPD	Flag
	TT-TP2-M2-20160120	TT-TP2-M2-20160120-DUP			
Total organic carbon	1.3	1.4	7	30.00	No Qualifiers Applied

# QC Outlier Report: HoldingTimes

Lab Reporting Batch ID: 440-135664-1

Laboratory: TA IRV

EDD Filename: Prep440-135664-1

eQAPP Name: TetraTechInc\_NERT\_11302016

Method: 7199

Preparation Method: Gen Prep

Matrix: AQ

<i>Sample ID</i>	<i>Type</i>	<i>Actual</i>	<i>Criteria</i>	<i>Units</i>	<i>Flag</i>
TT-TP2-M2-20160120-DUP (RES/TOT)	Sampling To Analysis	32.25	24.00	HOURS	J- (all detects)
TT-TP2-M2-20160120MS (RES/TOT)		24.25	24.00	HOURS	UJ (all non-detects)
TT-TP2-M2-20160120MSD (RES/TOT)		24.50	24.00	HOURS	

# Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 440-135664-1

Laboratory: TA IRV

EDD Filename: Prep440-135664-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method: 7199**  
**Matrix: AQ**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
TT-TP2-M2-20160120MS (TOT) TT-TP2-M2-20160120MSD (TOT) (TT-TP2-M2-20160120)	Chromium, hexavalent	72	70	85.00-115.00	-	Chromium, hexavalent	J- (all detects) UJ (all non-detects)

**Method: 6020**  
**Matrix: AQ**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
TT-TP2-M2-20160120MS (TOT) TT-TP2-M2-20160120MSD (TOT) (TT-TP2-M2-20160120)	CHROMIUM	241	-115	75.00-125.00	-	CHROMIUM	J(all detects) R(all non-detects)

**Method: 314.0**  
**Matrix: AQ**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
TT-TP2-M2-20160120MS TT-TP2-M2-20160120MSD (TT-TP2-M2-20160120)	PERCHLORATE	36811	23920	80.00-120.00	-	PERCHLORATE	J+(all detects)

# Data Qualifier Summary

Lab Reporting Batch ID: 440-135664-1

Laboratory: TA IRV

EDD Filename: Prep440-135664-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b>	GENCHEM	
<b>Method:</b>	314.0	<b>Matrix:</b> AQ

Sample ID: TT-TP2-M2-20160120      Collected: 1/20/2016 9:29:00 AM      Analysis Type: RES      Dilution: 50000

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
PERCHLORATE	1800000		25000	MDL	50000	MRL	ug/L	J+	m

<b>Method Category:</b>	METALS	
<b>Method:</b>	6020	<b>Matrix:</b> AQ

Sample ID: TT-TP2-M2-20160120      Collected: 1/20/2016 9:29:00 AM      Analysis Type: RES/TOT      Dilution: 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHROMIUM	13000		2.5	MDL	10	MRL	ug/L	J	m, m

<b>Method Category:</b>	METALS	
<b>Method:</b>	7199	<b>Matrix:</b> AQ

Sample ID: TT-TP2-M2-20160120      Collected: 1/20/2016 9:29:00 AM      Analysis Type: RES/TOT      Dilution: 1000

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chromium, hexavalent	14000		250	MDL	2000	MRL	ug/L	J-	m

Sample ID: TT-TP2-M2-20160120-DUP      Collected: 1/20/2016 9:29:00 AM      Analysis Type: RES/TOT      Dilution: 1000

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chromium, hexavalent	14000	H	250	MDL	2000	MRL	ug/L	J-	h

\* denotes a non-reportable result

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# Data Qualifier Summary

Lab Reporting Batch ID: 440-135664-1

Laboratory: TA IRV

EDD Filename: Prep440-135664-1

eQAPP Name: TetraTechInc\_NERT\_11302016

## Reason Code Legend

<i>Reason Code</i>	<i>Description</i>
e	Sampling to Analysis Estimation
h	Sampling to Analysis Estimation
m	Matrix Spike Lower Estimation
m	Matrix Spike Lower Rejection
m	Matrix Spike Upper Estimation

\* denotes a non-reportable result

Project Name and Number: 100-SBO-T35000-2016-MO5 - NERT Soil Flushing

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# Data Review Summary

Lab Reporting Batch ID: 440-137164-1

Laboratory: TA IRV

EDD Filename: Prep440-137164-1

eQAPP Name: TetraTechInc\_NERT\_11302016

## *Validation Area*

## *Note*

<i>Validation Area</i>	<i>Note</i>
Technical Holding Times	A
Temperature	A
Initial Calibration	N
Continuing Calibration/Initial Calibration Verification	N
Method Blanks	A
Surrogate/Tracer Spikes	N
Matrix Spike/Matrix Spike Duplicates	SR
Laboratory Duplicates	N
Laboratory Replicates	N
Laboratory Control Samples	A
Compound Quantitation	A
Field Duplicates	N
Field Triplicates	N
Field Blanks	N

A = Acceptable, N = Not provided/applicable, SR = See report

The contents of this report reflect findings made by ADR during Automated Data Review, manual applied qualifiers are not considered. Please refer to the Overall Qualifier Summary report for manual qualifiers.



# QC Outlier Report: HoldingTimes

Lab Reporting Batch ID: 440-137164-1

Laboratory: TA IRV

EDD Filename: Prep440-137164-1

eQAPP Name: TetraTechInc\_NERT\_11302016

Method: 7199

Preparation Method: Gen Prep

Matrix: AQ

<i>Sample ID</i>	<i>Type</i>	<i>Actual</i>	<i>Criteria</i>	<i>Units</i>	<i>Flag</i>
TT-TP2-M1-20160203MS (RES/TOT)	Sampling To Analysis	29.75	24.00	HOURS	J- (all detects)
TT-TP2-M1-20160203MSD (RES/TOT)		30.00	24.00	HOURS	UJ (all non-detects)

# Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 440-137164-1

Laboratory: TA IRV

EDD Filename: Prep440-137164-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method: 7199**  
**Matrix: AQ**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
TT-TP2-M1-20160203MS (TOT) TT-TP2-M1-20160203MSD (TOT) (TT-TP2-M1-20160203)	Chromium, hexavalent	-121	-153	85.00-115.00	-	Chromium, hexavalent	J- (all detects) R (all non-detects)

**Method: 6020**  
**Matrix: AQ**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
TT-TP1-M1-20160203MS (TOT) TT-TP1-M1-20160203MSD (TOT) (TT-TP1-M1-20160203)	CHROMIUM	1513	-700	75.00-125.00	-	CHROMIUM	J(all detects) R(all non-detects)

# Data Qualifier Summary

Lab Reporting Batch ID: 440-137164-1

Laboratory: TA IRV

EDD Filename: Prep440-137164-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b>	METALS	
<b>Method:</b>	6020	<b>Matrix:</b> AQ

Sample ID: TT-TP1-M1-20160203      Collected: 2/3/2016 10:16:00 AM      Analysis Type: RES/TOT      Dilution: 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHROMIUM	8400		2.5	MDL	10	MRL	ug/L	J	m, m

<b>Method Category:</b>	METALS	
<b>Method:</b>	7199	<b>Matrix:</b> AQ

Sample ID: TT-TP2-M1-20160203      Collected: 2/3/2016 12:40:00 PM      Analysis Type: RES/TOT      Dilution: 1000

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chromium, hexavalent	9200		250	MDL	2000	MRL	ug/L	J-	m

\* denotes a non-reportable result

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# Data Qualifier Summary

Lab Reporting Batch ID: 440-137164-1

Laboratory: TA IRV

EDD Filename: Prep440-137164-1

eQAPP Name: TetraTechInc\_NERT\_11302016

## Reason Code Legend

<i>Reason Code</i>	<i>Description</i>
m	Matrix Spike Lower Rejection
m	Matrix Spike Upper Estimation

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

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# Data Review Summary

Lab Reporting Batch ID: 440-137358-1

Laboratory: TA IRV

EDD Filename: Prep440-137358-1

eQAPP Name: TetraTechInc\_NERT\_11302016

## *Validation Area*

## *Note*

<i>Validation Area</i>	<i>Note</i>
Technical Holding Times	A
Temperature	A
Initial Calibration	N
Continuing Calibration/Initial Calibration Verification	N
Method Blanks	A
Surrogate/Tracer Spikes	N
Matrix Spike/Matrix Spike Duplicates	SR
Laboratory Duplicates	A
Laboratory Replicates	N
Laboratory Control Samples	A
Compound Quantitation	SR
Field Duplicates	A
Field Triplicates	N
Field Blanks	N

A = Acceptable, N = Not provided/applicable, SR = See report

The contents of this report reflect findings made by ADR during Automated Data Review, manual applied qualifiers are not considered. Please refer to the Overall Qualifier Summary report for manual qualifiers.

## Field Duplicate RPD Report

Lab Reporting Batch ID: 440-137358-1

Laboratory: TA IRV

EDD Filename: Prep440-137358-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method: 2540C**  
**Matrix: AQ**

Analyte	Concentration (mg/L)		Sample RPD	eQAPP RPD	Flag
	TT-TP4-M3-20160204	TT-TP4-M3-20160204-DUP			
TOTAL DISSOLVED SOLIDS	11000	11000	0	30.00	No Qualifiers Applied

**Method: 314.0**  
**Matrix: AQ**

Analyte	Concentration (ug/L)		Sample RPD	eQAPP RPD	Flag
	TT-TP4-M3-20160204	TT-TP4-M3-20160204-DUP			
PERCHLORATE	800000	670000	18	30.00	No Qualifiers Applied

**Method: 6020**  
**Matrix: AQ**

Analyte	Concentration (ug/L)		Sample RPD	eQAPP RPD	Flag
	TT-TP4-M3-20160204 (TOT)	TT-TP4-M3-20160204-DUP (TOT)			
CHROMIUM	17000	17000	0	30.00	No Qualifiers Applied

**Method: 7199**  
**Matrix: AQ**

Analyte	Concentration (ug/L)		Sample RPD	eQAPP RPD	Flag
	TT-TP4-M3-20160204 (TOT)	TT-TP4-M3-20160204-DUP (TOT)			
Chromium, hexavalent	19000	19000	0	30.00	No Qualifiers Applied

**Method: SM5310B**  
**Matrix: AQ**

Analyte	Concentration (mg/L)		Sample RPD	eQAPP RPD	Flag
	TT-TP4-M3-20160204	TT-TP4-M3-20160204-DUP			
Total organic carbon	1.5	1.5	0	30.00	No Qualifiers Applied

# QC Outlier Report: HoldingTimes

Lab Reporting Batch ID: 440-137358-1  
EDD Filename: Prep440-137358-1

Laboratory: TA IRV  
eQAPP Name: TetraTechInc\_NERT\_11302016

Method: 7199 Preparation Method: Gen Prep  
Matrix: AQ

<i>Sample ID</i>	<i>Type</i>	<i>Actual</i>	<i>Criteria</i>	<i>Units</i>	<i>Flag</i>
TT-TP4-M3-20160204MS (RES/TOT)	Sampling To Analysis	26.00	24.00	HOURS	J- (all detects)
TT-TP4-M3-20160204MSD (RES/TOT)		26.25	24.00	HOURS	UJ (all non-detects)

# Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 440-137358-1

Laboratory: TA IRV

EDD Filename: Prep440-137358-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method: 7199**  
**Matrix: AQ**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
TT-TP4-M3-20160204MS (TOT) TT-TP4-M3-20160204MSD (TOT) (TT-TP4-M3-20160204)	Chromium, hexavalent	54	53	85.00-115.00	-	Chromium, hexavalent	J- (all detects) UJ (all non-detects)

**Method: 6020**  
**Matrix: AQ**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
TT-TP4-M3-20160204MS (TOT) TT-TP4-M3-20160204MSD (TOT) (TT-TP4-M3-20160204)	CHROMIUM	168	287	75.00-125.00	-	CHROMIUM	J+(all detects)

**Method: 314.0**  
**Matrix: AQ**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
TT-TP4-M3-20160204MS TT-TP4-M3-20160204MSD (TT-TP4-M3-20160204)	PERCHLORATE	-1345	-1730	80.00-120.00	-	PERCHLORATE	J-(all detects) R(all non-detects)



# Data Qualifier Summary

Lab Reporting Batch ID: 440-137358-1

Laboratory: TA IRV

EDD Filename: Prep440-137358-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b>	GENCHEM	
<b>Method:</b>	314.0	<b>Matrix:</b> AQ

Sample ID: TT-TP4-M3-20160204      Collected: 2/4/2016 10:23:00 AM      Analysis Type: RES      Dilution: 10000

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
PERCHLORATE	800000		5000	MDL	10000	MRL	ug/L	J-	m

<b>Method Category:</b>	METALS	
<b>Method:</b>	6020	<b>Matrix:</b> AQ

Sample ID: TT-TP1-L2-20160204      Collected: 2/4/2016 1:15:00 PM      Analysis Type: RES/TOT      Dilution: 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHROMIUM	5.2	J	2.5	MDL	10	MRL	ug/L	J	sp

Sample ID: TT-TP4-M3-20160204      Collected: 2/4/2016 10:23:00 AM      Analysis Type: RES/TOT      Dilution: 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHROMIUM	17000		2.5	MDL	10	MRL	ug/L	J+	m

<b>Method Category:</b>	METALS	
<b>Method:</b>	7199	<b>Matrix:</b> AQ

Sample ID: TT-TP4-L2-20160204      Collected: 2/4/2016 11:50:00 AM      Analysis Type: RES/TOT      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chromium, hexavalent	1.1	J	0.25	MDL	2.0	MRL	ug/L	J	sp

Sample ID: TT-TP4-M3-20160204      Collected: 2/4/2016 10:23:00 AM      Analysis Type: RES/TOT      Dilution: 1000

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chromium, hexavalent	19000		250	MDL	2000	MRL	ug/L	J-	m

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

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# Data Qualifier Summary

Lab Reporting Batch ID: 440-137358-1

Laboratory: TA IRV

EDD Filename: Prep440-137358-1

eQAPP Name: TetraTechInc\_NERT\_11302016

## Reason Code Legend

<i>Reason Code</i>	<i>Description</i>
m	Matrix Spike Lower Estimation
m	Matrix Spike Lower Rejection
m	Matrix Spike Upper Estimation
sp	Reporting Limit Trace Value

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

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# Reporting Limit Outliers

Lab Reporting Batch ID: 440-137358-1

Laboratory: TA IRV

EDD Filename: Prep440-137358-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method:** 6020

**Matrix:** AQ

<b>SampleID</b>	<b>Analyte</b>	<b>Lab Qual</b>	<b>Result</b>	<b>Reporting Limit</b>	<b>RL Type</b>	<b>Units</b>	<b>Flag</b>
TT-TP1-L2-20160204	CHROMIUM	J	5.2	10	MRL	ug/L	J (all detects)

**Method:** 7199

**Matrix:** AQ

<b>SampleID</b>	<b>Analyte</b>	<b>Lab Qual</b>	<b>Result</b>	<b>Reporting Limit</b>	<b>RL Type</b>	<b>Units</b>	<b>Flag</b>
TT-TP4-L2-20160204	Chromium, hexavalent	J	1.1	2.0	MRL	ug/L	J (all detects)

# Data Review Summary

Lab Reporting Batch ID: 16-0997

Laboratory: SSAL

EDD Filename: Prep440-137910-1

eQAPP Name: TetraTechInc\_NERT\_11302016

## *Validation Area*

## *Note*

<i>Validation Area</i>	<i>Note</i>
Technical Holding Times	A
Temperature	A
Initial Calibration	N
Continuing Calibration/Initial Calibration Verification	N
Method Blanks	SR
Surrogate/Tracer Spikes	A
Matrix Spike/Matrix Spike Duplicates	N
Laboratory Duplicates	A
Laboratory Replicates	N
Laboratory Control Samples	A
Compound Quantitation	SR
Field Duplicates	N
Field Triplicates	N
Field Blanks	N

A = Acceptable, N = Not provided/applicable, SR = See report

The contents of this report reflect findings made by ADR during Automated Data Review, manual applied qualifiers are not considered. Please refer to the Overall Qualifier Summary report for manual qualifiers.

# QC Outlier Report: HoldingTimes

Lab Reporting Batch ID: 16-0997  
EDD Filename: Prep440-137910-1

Laboratory: SSAL  
eQAPP Name: TetraTechInc\_NERT\_11302016

Method: 300.0      Preparation Method: Gen Prep  
Matrix: AQ

<i>Sample ID</i>	<i>Type</i>	<i>Actual</i>	<i>Criteria</i>	<i>Units</i>	<i>Flag</i>
TT-TP1-M1-20160210 (RES)	Sampling To Analysis	294.50	48.00	HOURS	J- (all detects) R (all non-detects)
TT-TP1-M2-20160210 (RES)		295.00	48.00	HOURS	
TT-TP1-M3-20160210 (RES)		296.75	48.00	HOURS	
TT-TP2-M1-20160210 (RES)		296.25	48.00	HOURS	
TT-TP2-M2-20160210 (RES)		296.00	48.00	HOURS	
TT-TP3-M2-20160210 (RES)		295.50	48.00	HOURS	

# Method Blank Outlier Report

Lab Reporting Batch ID: 16-0997

Laboratory: SSAL

EDD Filename: Prep440-137910-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method:** 6020  
**Matrix:** AQ

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
MB 440-311592/1-B	2/24/2016 5:44:00 PM	COPPER	0.999 ug/L	TT-TP1-M1-20160210 TT-TP1-M2-20160210 TT-TP1-M3-20160210 TT-TP2-M1-20160210 TT-TP2-M2-20160210 TT-TP3-M2-20160210

***The following samples and their listed target analytes were qualified due to contamination reported in this blank***

Sample ID	Analyte	Reported Result	Modified Final Result
TT-TP1-M1-20160210(RES/DIS)	COPPER	3.1 ug/L	10J+ ug/L
TT-TP1-M2-20160210(RES/DIS)	COPPER	4.0 ug/L	10J+ ug/L
TT-TP2-M2-20160210(RES/DIS)	COPPER	4.1 ug/L	10J+ ug/L
TT-TP3-M2-20160210(RES/DIS)	COPPER	4.6 ug/L	10J+ ug/L

# Data Qualifier Summary

Lab Reporting Batch ID: 16-0997

Laboratory: SSAL

EDD Filename: Prep440-137910-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b>	METALS	
<b>Method:</b>	6020	<b>Matrix:</b> AQ

<b>Sample ID:</b> TT-TP1-M1-20160210		<b>Collected:</b> 2/10/2016 11:10:00 AM		<b>Analysis Type:</b> RES/DIS				<b>Dilution:</b> 5	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
COPPER	3.1	J B	2.5	MDL	10	MRL	ug/L	J+	bl
SELENIUM	4.6	J	2.5	MDL	10	MRL	ug/L	J	sp
NICKEL	6.6	J	2.5	MDL	10	MRL	ug/L	J	sp

<b>Sample ID:</b> TT-TP1-M2-20160210		<b>Collected:</b> 2/10/2016 10:27:00 AM		<b>Analysis Type:</b> RES/DIS				<b>Dilution:</b> 5	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
COPPER	4.0	J B	2.5	MDL	10	MRL	ug/L	J+	bl
NICKEL	6.5	J	2.5	MDL	10	MRL	ug/L	J	sp
SELENIUM	5.5	J	2.5	MDL	10	MRL	ug/L	J	sp

<b>Sample ID:</b> TT-TP1-M3-20160210		<b>Collected:</b> 2/10/2016 11:56:00 AM		<b>Analysis Type:</b> RES/DIS				<b>Dilution:</b> 5	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
COPPER	6.4	J B	2.5	MDL	10	MRL	ug/L	J	sp
NICKEL	6.4	J	2.5	MDL	10	MRL	ug/L	J	sp
SELENIUM	5.0	J	2.5	MDL	10	MRL	ug/L	J	sp

<b>Sample ID:</b> TT-TP2-M1-20160210		<b>Collected:</b> 2/10/2016 12:34:00 PM		<b>Analysis Type:</b> RES/DIS				<b>Dilution:</b> 5	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
COPPER	5.4	J B	2.5	MDL	10	MRL	ug/L	J	sp
NICKEL	5.9	J	2.5	MDL	10	MRL	ug/L	J	sp
SELENIUM	4.3	J	2.5	MDL	10	MRL	ug/L	J	sp
ZINC	16	J	13	MDL	100	MRL	ug/L	J	sp

<b>Sample ID:</b> TT-TP2-M2-20160210		<b>Collected:</b> 2/10/2016 1:11:00 PM		<b>Analysis Type:</b> RES/DIS				<b>Dilution:</b> 5	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
COPPER	4.1	J B	2.5	MDL	10	MRL	ug/L	J+	bl
NICKEL	5.3	J	2.5	MDL	10	MRL	ug/L	J	sp
SELENIUM	4.7	J	2.5	MDL	10	MRL	ug/L	J	sp

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

# Data Qualifier Summary

Lab Reporting Batch ID: 16-0997

Laboratory: SSAL

EDD Filename: Prep440-137910-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method Category:** METALS

**Method:** 6020

**Matrix:** AQ

**Sample ID:** TT-TP3-M2-20160210

**Collected:** 2/10/2016 1:53:00 PM **Analysis Type:** RES/DIS

**Dilution:** 5

<b>Analyte</b>	<b>Lab Result</b>	<b>Lab Qual</b>	<b>DL</b>	<b>DL Type</b>	<b>RL</b>	<b>RL Type</b>	<b>Units</b>	<b>Data Review Qual</b>	<b>Reason Code</b>
COPPER	4.6	J B	2.5	MDL	10	MRL	ug/L	J+	bl
NICKEL	5.5	J	2.5	MDL	10	MRL	ug/L	J	sp
SELENIUM	3.9	J	2.5	MDL	10	MRL	ug/L	J	sp
ZINC	15	J	13	MDL	100	MRL	ug/L	J	sp

\* denotes a non-reportable result

**Project Name and Number:** 114-520225-2015-MO5 - NERT Soil Flushing

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# Data Qualifier Summary

Lab Reporting Batch ID: 16-0997

Laboratory: SSAL

EDD Filename: Prep440-137910-1

eQAPP Name: TetraTechInc\_NERT\_11302016

## Reason Code Legend

<i>Reason Code</i>	<i>Description</i>
bl	Method Blank Contamination
sp	Reporting Limit Trace Value

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

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## Reporting Limit Outliers

Lab Reporting Batch ID: 16-0997

Laboratory: SSAL

EDD Filename: Prep440-137910-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method:** 6020

**Matrix:** AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
TT-TP1-M1-20160210	COPPER	J B	3.1	10	MRL	ug/L	J (all detects)
	NICKEL	J	6.6	10	MRL	ug/L	
	SELENIUM	J	4.6	10	MRL	ug/L	
TT-TP1-M2-20160210	COPPER	J B	4.0	10	MRL	ug/L	J (all detects)
	NICKEL	J	6.5	10	MRL	ug/L	
	SELENIUM	J	5.5	10	MRL	ug/L	
TT-TP1-M3-20160210	COPPER	J B	6.4	10	MRL	ug/L	J (all detects)
	NICKEL	J	6.4	10	MRL	ug/L	
	SELENIUM	J	5.0	10	MRL	ug/L	
TT-TP2-M1-20160210	COPPER	J B	5.4	10	MRL	ug/L	J (all detects)
	NICKEL	J	5.9	10	MRL	ug/L	
	SELENIUM	J	4.3	10	MRL	ug/L	
	ZINC	J	16	100	MRL	ug/L	
TT-TP2-M2-20160210	COPPER	J B	4.1	10	MRL	ug/L	J (all detects)
	NICKEL	J	5.3	10	MRL	ug/L	
	SELENIUM	J	4.7	10	MRL	ug/L	
TT-TP3-M2-20160210	COPPER	J B	4.6	10	MRL	ug/L	J (all detects)
	NICKEL	J	5.5	10	MRL	ug/L	
	SELENIUM	J	3.9	10	MRL	ug/L	
	ZINC	J	15	100	MRL	ug/L	

# Data Review Summary

Lab Reporting Batch ID: 16-1018  
EDD Filename: Prep440-138059-1

Laboratory: SSAL  
eQAPP Name: TetraTechInc\_NERT\_11302016

## *Validation Area*

## *Note*

<i>Validation Area</i>	<i>Note</i>
Technical Holding Times	SR
Temperature	A
Initial Calibration	N
Continuing Calibration/Initial Calibration Verification	N
Method Blanks	SR
Surrogate/Tracer Spikes	A
Matrix Spike/Matrix Spike Duplicates	SR
Laboratory Duplicates	A
Laboratory Replicates	N
Laboratory Control Samples	A
Compound Quantitation	SR
Field Duplicates	SR
Field Triplicates	N
Field Blanks	N

A = Acceptable, N = Not provided/applicable, SR = See report

The contents of this report reflect findings made by ADR during Automated Data Review, manual applied qualifiers are not considered. Please refer to the Overall Qualifier Summary report for manual qualifiers.

## Field Duplicate RPD Report

Lab Reporting Batch ID: 16-1018

Laboratory: SSAL

EDD Filename: Prep440-138059-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method: 218.6\_SUB**  
**Matrix: AQ**

Analyte	Concentration (mg/L)		Sample RPD	eQAPP RPD	Flag
	TT-TP4-M2-20160211 (DIS)	TT-TP4-M2-20160211-DUP (DIS)			
Chromium, hexavalent	18.2	18.6	2	30.00	No Qualifiers Applied

**Method: 2320B**  
**Matrix: AQ**

Analyte	Concentration (mg/L)		Sample RPD	eQAPP RPD	Flag
	TT-TP4-M2-20160211	TT-TP4-M2-20160211-DUP			
Bicarbonate ion as HCO <sub>3</sub>	230	640	94		No Qualifiers Applied
Carbonate as CO <sub>3</sub>	2.4 U	380	200		
Alkalinity as CaCO <sub>3</sub>	190	1200	145	30.00	J(all detects) UJ(all non-detects)

**Method: 2540C**  
**Matrix: AQ**

Analyte	Concentration (mg/L)		Sample RPD	eQAPP RPD	Flag
	TT-TP4-M2-20160211	TT-TP4-M2-20160211-DUP			
TOTAL DISSOLVED SOLIDS	11000	11000	0	30.00	No Qualifiers Applied

**Method: 300.0\_SUB**  
**Matrix: AQ**

Analyte	Concentration (mg/L)		Sample RPD	eQAPP RPD	Flag
	TT-TP4-M2-20160211	TT-TP4-M2-20160211-DUP			
Nitrate as N	36.7	37.7	3	30.00	No Qualifiers Applied

**Method: 300.1B**  
**Matrix: AQ**

Analyte	Concentration (ug/L)		Sample RPD	eQAPP RPD	Flag
	TT-TP4-M2-20160211	TT-TP4-M2-20160211-DUP			
Chlorate	4400000	4400000	0	30.00	No Qualifiers Applied

**Method: 314.0**  
**Matrix: AQ**

Analyte	Concentration (ug/L)		Sample RPD	eQAPP RPD	Flag
	TT-TP4-M2-20160211	TT-TP4-M2-20160211-DUP			
PERCHLORATE	940000	950000	1	30.00	No Qualifiers Applied

**Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing**

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## Field Duplicate RPD Report

Lab Reporting Batch ID: 16-1018

Laboratory: SSAL

EDD Filename: Prep440-138059-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method: 6010B**  
**Matrix: AQ**

Analyte	Concentration (mg/L)		Sample RPD	eQAPP RPD	Flag
	TT-TP4-M2-20160211 (DIS)	TT-TP4-M2-20160211-DUP (DIS)			
BORON	3.5	3.5	0	30.00	No Qualifiers Applied
CALCIUM	400	430	7	30.00	
MAGNESIUM	190	190	0	30.00	
POTASSIUM	32	33	3	30.00	
SODIUM	2200	2300	4	30.00	

**Method: 6020**  
**Matrix: AQ**

Analyte	Concentration (ug/L)		Sample RPD	eQAPP RPD	Flag
	TT-TP4-M2-20160211 (DIS)	TT-TP4-M2-20160211-DUP (DIS)			
ARSENIC	110	110	0	30.00	No Qualifiers Applied
CHROMIUM	17000	17000	0	30.00	
COPPER	3.9	3.7	5	30.00	
MOLYBDENUM	43	43	0	30.00	
NICKEL	6.2	7.4	18	30.00	
SELENIUM	5.0	4.4	13	30.00	
BARIUM	53	35	41	30.00	J(all detects) UJ(all non-detects)

**Method: SM5310B**  
**Matrix: AQ**

Analyte	Concentration (mg/L)		Sample RPD	eQAPP RPD	Flag
	TT-TP4-M2-20160211	TT-TP4-M2-20160211-DUP			
Total organic carbon	1.5	1.4	7	30.00	No Qualifiers Applied

## QC Outlier Report: HoldingTimes

Lab Reporting Batch ID: 16-1018  
 EDD Filename: Prep440-138059-1

Laboratory: SSAL  
 eQAPP Name: TetraTechInc\_NERT\_11302016

Method: 218.6\_SUB Preparation Method: 218.6  
 Matrix: AQ

Sample ID	Type	Actual	Criteria	Units	Flag
TT-TP1-L2-20160211 (RES/DIS)	Sampling To Analysis	332.00	24.00	HOURS	J- (all detects) R (all non-detects)
TT-TP2-L1-20160211 (RES/DIS)		332.25	24.00	HOURS	
TT-TP2-L2-20160211 (RES/DIS)		332.00	24.00	HOURS	
TT-TP3-L1-20160211 (RES/DIS)		332.25	24.00	HOURS	
TT-TP3-M1-20160211 (RES/DIS)		334.25	24.00	HOURS	
TT-TP4-L1-20160211 (RES/DIS)		332.50	24.00	HOURS	
TT-TP4-L2-20160211 (RES/DIS)		332.50	24.00	HOURS	
TT-TP4-M1-20160211 (RES/DIS)		333.50	24.00	HOURS	
TT-TP4-M2-20160211 (RES/DIS)		331.50	24.00	HOURS	
TT-TP4-M2-20160211-DUP (RES/DIS)		331.50	24.00	HOURS	
TT-TP4-M3-20160211 (RES/DIS)		330.50	24.00	HOURS	

# Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 16-1018

Laboratory: SSAL

EDD Filename: Prep440-138059-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method: 6020**  
**Matrix: AQ**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
TT-TP4-M3-20160211MS (DIS) TT-TP4-M3-20160211MSD (DIS) (TT-TP4-M3-20160211)	CHROMIUM ZINC	1034 159	1452 146	75.00-125.00 75.00-125.00	- -	CHROMIUM ZINC	J+ (all detects)

**Method: 6010B**  
**Matrix: AQ**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
TT-TP4-M3-20160211MS (DIS) TT-TP4-M3-20160211MSD (DIS) (TT-TP4-M3-20160211)	CALCIUM MAGNESIUM SODIUM	953 255 2029	987 - 889	75.00-125.00 75.00-125.00 75.00-125.00	- - -	CALCIUM MAGNESIUM SODIUM	J+(all detects)

**Method: 300.1B**  
**Matrix: AQ**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
TT-TP4-M3-20160211MS TT-TP4-M3-20160211MSD (TT-TP4-M3-20160211)	Chlorate	-6443	-4122	75.00-125.00	-	Chlorate	J-(all detects) R(all non-detects)

**Method: 314.0**  
**Matrix: AQ**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
TT-TP4-M3-20160211MS TT-TP4-M3-20160211MSD (TT-TP4-M3-20160211)	PERCHLORATE	-2053	-1069	80.00-120.00	-	PERCHLORATE	J-(all detects) R(all non-detects)

# Method Blank Outlier Report

Lab Reporting Batch ID: 16-1018

Laboratory: SSAL

EDD Filename: Prep440-138059-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method:** 6020  
**Matrix:** AQ

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
MB 440-311592/1-B	2/24/2016 5:44:00 PM	COPPER	0.999 ug/L	TT-TP1-L2-20160211 TT-TP3-M1-20160211 TT-TP4-M1-20160211 TT-TP4-M2-20160211 TT-TP4-M2-20160211-DUP TT-TP4-M3-20160211

*The following samples and their listed target analytes were qualified due to contamination reported in this blank*

Sample ID	Analyte	Reported Result	Modified Final Result
TT-TP3-M1-20160211(RES/DIS)	COPPER	3.6 ug/L	10J+ ug/L
TT-TP4-M2-20160211(RES/DIS)	COPPER	3.9 ug/L	10J+ ug/L
TT-TP4-M2-20160211-DUP(RES/DIS)	COPPER	3.7 ug/L	10J+ ug/L



# Data Qualifier Summary

Lab Reporting Batch ID: 16-1018

Laboratory: SSAL

EDD Filename: Prep440-138059-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b> ALK									
<b>Method:</b> 2320B			<b>Matrix:</b> AQ						

<b>Sample ID:</b> TT-TP4-M2-20160211	<b>Collected:</b> 2/11/2016 12:36:00 PM	<b>Analysis Type:</b> RES	<b>Dilution:</b> 1						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Alkalinity as CaCO3	190		4.0	MDL	4.0	MRL	mg/L	J	fd

<b>Sample ID:</b> TT-TP4-M2-20160211-DUP	<b>Collected:</b> 2/11/2016 12:36:00 PM	<b>Analysis Type:</b> RES	<b>Dilution:</b> 1						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Alkalinity as CaCO3	1200		4.0	MDL	4.0	MRL	mg/L	J	fd

<b>Method Category:</b> GENCHEM									
<b>Method:</b> 300.1B			<b>Matrix:</b> AQ						

<b>Sample ID:</b> TT-TP4-M3-20160211	<b>Collected:</b> 2/11/2016 1:30:00 PM	<b>Analysis Type:</b> RES	<b>Dilution:</b> 20000						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chlorate	4500000		200000	MDL	400000	MRL	ug/L	J-	m

<b>Method Category:</b> GENCHEM									
<b>Method:</b> 314.0			<b>Matrix:</b> AQ						

<b>Sample ID:</b> TT-TP4-M3-20160211	<b>Collected:</b> 2/11/2016 1:30:00 PM	<b>Analysis Type:</b> RES	<b>Dilution:</b> 10000						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
PERCHLORATE	820000	F1	5000	MDL	10000	MRL	ug/L	J-	m

<b>Method Category:</b> METALS									
<b>Method:</b> 218.6_SUB			<b>Matrix:</b> AQ						

<b>Sample ID:</b> TT-TP1-L2-20160211	<b>Collected:</b> 2/11/2016 12:05:00 PM	<b>Analysis Type:</b> RES/DIS	<b>Dilution:</b> 10						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chromium, hexavalent	0.056		0.01	MDL	0.01	MRL	mg/L	J-	h

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

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# Data Qualifier Summary

Lab Reporting Batch ID: 16-1018

Laboratory: SSAL

EDD Filename: Prep440-138059-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b> METALS
<b>Method:</b> 218.6_SUB
<b>Matrix:</b> AQ

2/11/2016 11:50:00									
Sample ID: TT-TP2-L1-20160211	Collected: AM								
Analysis Type: RES/DIS	Dilution: 1								
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chromium, hexavalent	0.012		0.001	MDL	0.001	MRL	mg/L	J-	h

2/11/2016 11:55:00									
Sample ID: TT-TP2-L2-20160211	Collected: AM								
Analysis Type: RES/DIS	Dilution: 1000								
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chromium, hexavalent	3.47		1.0	MDL	1.0	MRL	mg/L	J-	h

2/11/2016 11:45:00									
Sample ID: TT-TP3-L1-20160211	Collected: AM								
Analysis Type: RES/DIS	Dilution: 1								
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chromium, hexavalent	0.009		0.001	MDL	0.001	MRL	mg/L	J-	h

2/11/2016 9:42:00 AM									
Sample ID: TT-TP3-M1-20160211	Collected: AM								
Analysis Type: RES/DIS	Dilution: 10								
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chromium, hexavalent	0.93		0.01	MDL	0.01	MRL	mg/L	J-	h

2/11/2016 11:30:00									
Sample ID: TT-TP4-L1-20160211	Collected: AM								
Analysis Type: RES/DIS	Dilution: 1								
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chromium, hexavalent	0.071		0.001	MDL	0.001	MRL	mg/L	J-	h

2/11/2016 11:37:00									
Sample ID: TT-TP4-L2-20160211	Collected: AM								
Analysis Type: RES/DIS	Dilution: 1								
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chromium, hexavalent	0.006		0.001	MDL	0.001	MRL	mg/L	J-	h

2/11/2016 10:27:00									
Sample ID: TT-TP4-M1-20160211	Collected: AM								
Analysis Type: RES/DIS	Dilution: 1000								
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chromium, hexavalent	18.4		1.0	MDL	1.0	MRL	mg/L	J-	h

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

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# Data Qualifier Summary

Lab Reporting Batch ID: 16-1018

Laboratory: SSAL

EDD Filename: Prep440-138059-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b> METALS
<b>Method:</b> 218.6_SUB <span style="float: right;"><b>Matrix:</b> AQ</span>

2/11/2016 12:36:00

Sample ID: TT-TP4-M2-20160211 Collected: PM Analysis Type: RES/DIS Dilution: 1000

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chromium, hexavalent	18.2		1.0	MDL	1.0	MRL	mg/L	J-	h

2/11/2016 12:36:00

Sample ID: TT-TP4-M2-20160211-DUP Collected: PM Analysis Type: RES/DIS Dilution: 1000

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chromium, hexavalent	18.6		1.0	MDL	1.0	MRL	mg/L	J-	h

2/11/2016 1:30:00 PM

Sample ID: TT-TP4-M3-20160211 Collected: 2/11/2016 1:30:00 PM Analysis Type: RES/DIS Dilution: 1000

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chromium, hexavalent	19.7		1.0	MDL	1.0	MRL	mg/L	J-	h

<b>Method Category:</b> METALS
<b>Method:</b> 6010B <span style="float: right;"><b>Matrix:</b> AQ</span>

2/11/2016 1:30:00 PM

Sample ID: TT-TP4-M3-20160211 Collected: 2/11/2016 1:30:00 PM Analysis Type: RES/DIS Dilution: 10

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CALCIUM	390		0.50	MDL	1.0	MRL	mg/L	J+	m
MAGNESIUM	200		0.10	MDL	0.20	MRL	mg/L	J+	m
SODIUM	2000		2.5	MDL	5.0	MRL	mg/L	J+	m

<b>Method Category:</b> METALS
<b>Method:</b> 6020 <span style="float: right;"><b>Matrix:</b> AQ</span>

2/11/2016 12:05:00

Sample ID: TT-TP1-L2-20160211 Collected: PM Analysis Type: RES/DIS Dilution: 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHROMIUM	8.4	J	2.5	MDL	10	MRL	ug/L	J	sp

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

# Data Qualifier Summary

Lab Reporting Batch ID: 16-1018

Laboratory: SSAL

EDD Filename: Prep440-138059-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b> METALS
<b>Method:</b> 6020
<b>Matrix:</b> AQ

**Sample ID:** TT-TP3-M1-20160211      **Collected:** 2/11/2016 9:42:00 AM      **Analysis Type:** RES/DIS      **Dilution:** 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
COBALT	3.9	J	2.5	MDL	5.0	MRL	ug/L	J	sp
COPPER	3.6	J B	2.5	MDL	10	MRL	ug/L	J+	bl
NICKEL	8.8	J	2.5	MDL	10	MRL	ug/L	J	sp
SELENIUM	3.1	J	2.5	MDL	10	MRL	ug/L	J	sp

**2/11/2016 10:27:00**

**Sample ID:** TT-TP4-M1-20160211      **Collected:** AM      **Analysis Type:** RES/DIS      **Dilution:** 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
COPPER	5.9	J B	2.5	MDL	10	MRL	ug/L	J	sp
NICKEL	5.0	J	2.5	MDL	10	MRL	ug/L	J	sp
SELENIUM	5.3	J	2.5	MDL	10	MRL	ug/L	J	sp

**2/11/2016 12:36:00**

**Sample ID:** TT-TP4-M2-20160211      **Collected:** PM      **Analysis Type:** RES/DIS      **Dilution:** 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	53		2.5	MDL	5.0	MRL	ug/L	J	fd
COPPER	3.9	J B	2.5	MDL	10	MRL	ug/L	J+	bl
NICKEL	6.2	J	2.5	MDL	10	MRL	ug/L	J	sp
SELENIUM	5.0	J	2.5	MDL	10	MRL	ug/L	J	sp

**2/11/2016 12:36:00**

**Sample ID:** TT-TP4-M2-20160211-DUP      **Collected:** PM      **Analysis Type:** RES/DIS      **Dilution:** 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	35		2.5	MDL	5.0	MRL	ug/L	J	fd
COPPER	3.7	J B	2.5	MDL	10	MRL	ug/L	J+	bl
NICKEL	7.4	J	2.5	MDL	10	MRL	ug/L	J	sp
SELENIUM	4.4	J	2.5	MDL	10	MRL	ug/L	J	sp

**Sample ID:** TT-TP4-M3-20160211      **Collected:** 2/11/2016 1:30:00 PM      **Analysis Type:** RES/DIS      **Dilution:** 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHROMIUM	18000		2.5	MDL	10	MRL	ug/L	J+	m
COPPER	9.9	J B	2.5	MDL	10	MRL	ug/L	J	sp

\* denotes a non-reportable result

**Project Name and Number:** 114-520225-2015-MO5 - NERT Soil Flushing

# Data Qualifier Summary

Lab Reporting Batch ID: 16-1018

Laboratory: SSAL

EDD Filename: Prep440-138059-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b> METALS
<b>Method:</b> 6020 <span style="float: right;"><b>Matrix:</b> AQ</span>

Sample ID: TT-TP4-M3-20160211

Collected: 2/11/2016 1:30:00 PM Analysis Type: RES/DIS

Dilution: 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
NICKEL	4.9	J	2.5	MDL	10	MRL	ug/L	J	sp
SELENIUM	5.4	J	2.5	MDL	10	MRL	ug/L	J	sp

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

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# Data Qualifier Summary

Lab Reporting Batch ID: 16-1018

Laboratory: SSAL

EDD Filename: Prep440-138059-1

eQAPP Name: TetraTechInc\_NERT\_11302016

## Reason Code Legend

<i>Reason Code</i>	<i>Description</i>
bl	Method Blank Contamination
fd	Field Duplicate Precision
h	Sampling to Analysis Rejection
m	Matrix Spike Lower Rejection
m	Matrix Spike Upper Estimation
sp	Reporting Limit Trace Value

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

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# Reporting Limit Outliers

Lab Reporting Batch ID: 16-1018

Laboratory: SSAL

EDD Filename: Prep440-138059-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method:** 6020  
**Matrix:** AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
TT-TP1-L2-20160211	CHROMIUM	J	8.4	10	MRL	ug/L	J (all detects)
TT-TP3-M1-20160211	COBALT	J	3.9	5.0	MRL	ug/L	J (all detects)
	COPPER	J B	3.6	10	MRL	ug/L	
	NICKEL	J	8.8	10	MRL	ug/L	
	SELENIUM	J	3.1	10	MRL	ug/L	
TT-TP4-M1-20160211	COPPER	J B	5.9	10	MRL	ug/L	J (all detects)
	NICKEL	J	5.0	10	MRL	ug/L	
	SELENIUM	J	5.3	10	MRL	ug/L	
TT-TP4-M2-20160211	COPPER	J B	3.9	10	MRL	ug/L	J (all detects)
	NICKEL	J	6.2	10	MRL	ug/L	
	SELENIUM	J	5.0	10	MRL	ug/L	
TT-TP4-M2-20160211-DUP	COPPER	J B	3.7	10	MRL	ug/L	J (all detects)
	NICKEL	J	7.4	10	MRL	ug/L	
	SELENIUM	J	4.4	10	MRL	ug/L	
TT-TP4-M3-20160211	COPPER	J B	9.9	10	MRL	ug/L	J (all detects)
	NICKEL	J	4.9	10	MRL	ug/L	
	SELENIUM	J	5.4	10	MRL	ug/L	

# Data Review Summary

Lab Reporting Batch ID: 16-1132  
EDD Filename: Prep440-138539-1

Laboratory: SSAL  
eQAPP Name: TetraTechInc\_NERT\_11302016

<i>Validation Area</i>	<i>Note</i>
Technical Holding Times	A
Temperature	A
Initial Calibration	N
Continuing Calibration/Initial Calibration Verification	N
Method Blanks	A
Surrogate/Tracer Spikes	N
Matrix Spike/Matrix Spike Duplicates	SR
Laboratory Duplicates	N
Laboratory Replicates	N
Laboratory Control Samples	A
Compound Quantitation	A
Field Duplicates	N
Field Triplicates	N
Field Blanks	N

A = Acceptable, N = Not provided/applicable, SR = See report

The contents of this report reflect findings made by ADR during Automated Data Review, manual applied qualifiers are not considered. Please refer to the Overall Qualifier Summary report for manual qualifiers.



# Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 16-1132

Laboratory: SSAL

EDD Filename: Prep440-138539-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method: 6020**

**Matrix: AQ**

<i>QC Sample ID (Associated Samples)</i>	<i>Compound</i>	<i>MS %R</i>	<i>MSD %R</i>	<i>%R Limits</i>	<i>RPD (Limits)</i>	<i>Affected Compounds</i>	<i>Flag</i>
TT-TP1-M1-20160217MS (DIS) TT-TP1-M1-20160217MSD (DIS) (TT-TP1-M1-20160217)	CHROMIUM	-90	-1	75.00-125.00	-	CHROMIUM	J- (all detects) R (all non-detects)

# Data Qualifier Summary

Lab Reporting Batch ID: 16-1132

Laboratory: SSAL

EDD Filename: Prep440-138539-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b> METALS	
<b>Method:</b> 6020	<b>Matrix:</b> AQ

Sample ID: TT-TP1-M1-20160217      Collected: 2/17/2016 11:27:00 AM      Analysis Type: RES/DIS      Dilution: 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHROMIUM	2600		2.5	MDL	10	MRL	ug/L	J-	m

\* denotes a non-reportable result

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# Data Qualifier Summary

Lab Reporting Batch ID: 16-1132

Laboratory: SSAL

EDD Filename: Prep440-138539-1

eQAPP Name: TetraTechInc\_NERT\_11302016

## Reason Code Legend

<i>Reason Code</i>	<i>Description</i>
m	Matrix Spike Lower Rejection

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

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# Data Review Summary

Lab Reporting Batch ID: 16-1185

Laboratory: SSAL

EDD Filename: Prep440-138657-1

eQAPP Name: TetraTechInc\_NERT\_11302016

## *Validation Area*

## *Note*

<i>Validation Area</i>	<i>Note</i>
Technical Holding Times	SR
Temperature	A
Initial Calibration	N
Continuing Calibration/Initial Calibration Verification	N
Method Blanks	A
Surrogate/Tracer Spikes	N
Matrix Spike/Matrix Spike Duplicates	SR
Laboratory Duplicates	A
Laboratory Replicates	N
Laboratory Control Samples	A
Compound Quantitation	SR
Field Duplicates	A
Field Triplicates	N
Field Blanks	N

A = Acceptable, N = Not provided/applicable, SR = See report

The contents of this report reflect findings made by ADR during Automated Data Review, manual applied qualifiers are not considered. Please refer to the Overall Qualifier Summary report for manual qualifiers.

## Field Duplicate RPD Report

Lab Reporting Batch ID: 16-1185

Laboratory: SSAL

EDD Filename: Prep440-138657-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method: 218.6\_SUB**  
**Matrix: AQ**

Analyte	Concentration (mg/L)		Sample RPD	eQAPP RPD	Flag
	TT-TP4-M3-20160218 (DIS)	TT-TP4-M3-20160218-DUP (DIS)			
Chromium, hexavalent	18.7	19.1	2	30.00	No Qualifiers Applied

**Method: 2540C**  
**Matrix: AQ**

Analyte	Concentration (mg/L)		Sample RPD	eQAPP RPD	Flag
	TT-TP4-M3-20160218	TT-TP4-M3-20160218-DUP			
TOTAL DISSOLVED SOLIDS	11000	11000	0	30.00	No Qualifiers Applied

**Method: 314.0**  
**Matrix: AQ**

Analyte	Concentration (ug/L)		Sample RPD	eQAPP RPD	Flag
	TT-TP4-M3-20160218	TT-TP4-M3-20160218-DUP			
PERCHLORATE	780000	740000	5	30.00	No Qualifiers Applied

**Method: 6020**  
**Matrix: AQ**

Analyte	Concentration (ug/L)		Sample RPD	eQAPP RPD	Flag
	TT-TP4-M3-20160218 (DIS)	TT-TP4-M3-20160218-DUP (DIS)			
CHROMIUM	13000	15000	14	30.00	No Qualifiers Applied

**Method: SM5310B**  
**Matrix: AQ**

Analyte	Concentration (mg/L)		Sample RPD	eQAPP RPD	Flag
	TT-TP4-M3-20160218	TT-TP4-M3-20160218-DUP			
Total organic carbon	1.5	1.6	6	30.00	No Qualifiers Applied

## QC Outlier Report: HoldingTimes

Lab Reporting Batch ID: 16-1185  
 EDD Filename: Prep440-138657-1

Laboratory: SSAL  
 eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method:</b> 218.6_SUB	<b>Preparation Method:</b> 218.6
<b>Matrix:</b> AQ	

Sample ID	Type	Actual	Criteria	Units	Flag
TT-TP1-L1-20160218 (RES/DIS)	Sampling To Analysis	179.50	24.00	HOURS	J- (all detects) R (all non-detects)
TT-TP1-L2-20160218 (RES/DIS)		179.25	24.00	HOURS	
TT-TP2-L1-20160218 (RES/DIS)		179.75	24.00	HOURS	
TT-TP2-L2-20160218 (RES/DIS)		179.50	24.00	HOURS	
TT-TP3-L1-20160218 (RES/DIS)		179.75	24.00	HOURS	
TT-TP3-M1-20160218 (RES/DIS)		182.50	24.00	HOURS	
TT-TP3-M2-20160218 (RES/DIS)		182.00	24.00	HOURS	
TT-TP4-L1-20160218 (RES/DIS)		180.25	24.00	HOURS	
TT-TP4-L2-20160218 (RES/DIS)		180.00	24.00	HOURS	
TT-TP4-M1-20160218 (RES/DIS)		181.50	24.00	HOURS	
TT-TP4-M2-20160218 (RES/DIS)		181.00	24.00	HOURS	
TT-TP4-M3-20160218 (RES/DIS)		180.50	24.00	HOURS	
TT-TP4-M3-20160218-DUP (RES/DIS)		180.50	24.00	HOURS	

# Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 16-1185

Laboratory: SSAL

EDD Filename: Prep440-138657-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method: 6020**  
**Matrix: AQ**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
TT-TP4-M3-20160218MS (DIS) TT-TP4-M3-20160218MSD (DIS) (TT-TP4-M3-20160218)	CHROMIUM	-176	2506	75.00-125.00	-	CHROMIUM	J (all detects) R (all non-detects)

**Method: 314.0**  
**Matrix: AQ**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
TT-TP4-M3-20160218MS TT-TP4-M3-20160218MSD (TT-TP4-M3-20160218)	PERCHLORATE	-1342	8113	80.00-120.00	-	PERCHLORATE	J(all detects) R(all non-detects)

# Data Qualifier Summary

Lab Reporting Batch ID: 16-1185

Laboratory: SSAL

EDD Filename: Prep440-138657-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b>	GENCHEM	
<b>Method:</b>	314.0	<b>Matrix:</b> AQ

<b>Sample ID:</b> TT-TP4-M3-20160218	<b>Collected:</b> 2/18/2016 11:25:00 AM	<b>Analysis Type:</b> RES	<b>Dilution:</b> 10000						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
PERCHLORATE	780000	F1	5000	MDL	10000	MRL	ug/L	J	m, m

<b>Method Category:</b>	METALS	
<b>Method:</b>	218.6_SUB	<b>Matrix:</b> AQ

<b>Sample ID:</b> TT-TP1-L1-20160218	<b>Collected:</b> 2/18/2016 12:30:00 PM	<b>Analysis Type:</b> RES/DIS	<b>Dilution:</b> 10						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chromium, hexavalent	0.023		0.01	MDL	0.01	MRL	mg/L	J-	h

<b>Sample ID:</b> TT-TP1-L2-20160218	<b>Collected:</b> 2/18/2016 12:40:00 PM	<b>Analysis Type:</b> RES/DIS	<b>Dilution:</b> 10						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chromium, hexavalent	0.111		0.01	MDL	0.01	MRL	mg/L	J-	h

<b>Sample ID:</b> TT-TP2-L1-20160218	<b>Collected:</b> 2/18/2016 12:20:00 PM	<b>Analysis Type:</b> RES/DIS	<b>Dilution:</b> 1						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chromium, hexavalent	0.022		0.001	MDL	0.001	MRL	mg/L	J-	h

<b>Sample ID:</b> TT-TP2-L2-20160218	<b>Collected:</b> 2/18/2016 12:25:00 PM	<b>Analysis Type:</b> RES/DIS	<b>Dilution:</b> 1000						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chromium, hexavalent	2.8		1.0	MDL	1.0	MRL	mg/L	J-	h

<b>Sample ID:</b> TT-TP3-L1-20160218	<b>Collected:</b> 2/18/2016 12:10:00 PM	<b>Analysis Type:</b> RES/DIS	<b>Dilution:</b> 1						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chromium, hexavalent	0.004		0.001	MDL	0.001	MRL	mg/L	J-	h

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

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# Data Qualifier Summary

Lab Reporting Batch ID: 16-1185

Laboratory: SSAL

EDD Filename: Prep440-138657-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b>	METALS	
<b>Method:</b>	218.6_SUB	<b>Matrix:</b> AQ

<b>Sample ID:</b> TT-TP3-M1-20160218		<b>Collected:</b> 2/18/2016 9:31:00 AM			<b>Analysis Type:</b> RES/DIS			<b>Dilution:</b> 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chromium, hexavalent	0.026		0.001	MDL	0.001	MRL	mg/L	J-	h

<b>Sample ID:</b> TT-TP3-M2-20160218		<b>Collected:</b> 2/18/2016 10:06:00 AM			<b>Analysis Type:</b> RES/DIS			<b>Dilution:</b> 1000	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chromium, hexavalent	5.2		1.0	MDL	1.0	MRL	mg/L	J-	h

<b>Sample ID:</b> TT-TP4-L1-20160218		<b>Collected:</b> 2/18/2016 11:50:00 AM			<b>Analysis Type:</b> RES/DIS			<b>Dilution:</b> 10	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chromium, hexavalent	0.068		0.01	MDL	0.01	MRL	mg/L	J-	h

<b>Sample ID:</b> TT-TP4-L2-20160218		<b>Collected:</b> 2/18/2016 12:00:00 PM			<b>Analysis Type:</b> RES/DIS			<b>Dilution:</b> 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chromium, hexavalent	0.006		0.001	MDL	0.001	MRL	mg/L	J-	h

<b>Sample ID:</b> TT-TP4-M1-20160218		<b>Collected:</b> 2/18/2016 10:33:00 AM			<b>Analysis Type:</b> RES/DIS			<b>Dilution:</b> 1000	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chromium, hexavalent	8.4		1.0	MDL	1.0	MRL	mg/L	J-	h

<b>Sample ID:</b> TT-TP4-M2-20160218		<b>Collected:</b> 2/18/2016 10:59:00 AM			<b>Analysis Type:</b> RES/DIS			<b>Dilution:</b> 1000	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chromium, hexavalent	17.0		1.0	MDL	1.0	MRL	mg/L	J-	h

<b>Sample ID:</b> TT-TP4-M3-20160218		<b>Collected:</b> 2/18/2016 11:25:00 AM			<b>Analysis Type:</b> RES/DIS			<b>Dilution:</b> 1000	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chromium, hexavalent	18.7		1.0	MDL	1.0	MRL	mg/L	J-	h

\* denotes a non-reportable result

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# Data Qualifier Summary

Lab Reporting Batch ID: 16-1185

Laboratory: SSAL

EDD Filename: Prep440-138657-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b> METALS
<b>Method:</b> 218.6_SUB <span style="float: right;"><b>Matrix:</b> AQ</span>

2/18/2016 11:25:00

Sample ID: TT-TP4-M3-20160218-DUP Collected: AM Analysis Type: RES/DIS Dilution: 1000

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chromium, hexavalent	19.1		1.0	MDL	1.0	MRL	mg/L	J-	h

<b>Method Category:</b> METALS
<b>Method:</b> 6020 <span style="float: right;"><b>Matrix:</b> AQ</span>

2/18/2016 11:50:00

Sample ID: TT-TP4-L1-20160218 Collected: AM Analysis Type: RES/DIS Dilution: 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHROMIUM	4.8	J	2.5	MDL	10	MRL	ug/L	J	sp

2/18/2016 12:00:00

Sample ID: TT-TP4-L2-20160218 Collected: PM Analysis Type: RES/DIS Dilution: 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHROMIUM	3.7	J	2.5	MDL	10	MRL	ug/L	J	sp

2/18/2016 11:25:00

Sample ID: TT-TP4-M3-20160218 Collected: AM Analysis Type: RES/DIS Dilution: 10

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHROMIUM	13000		5.0	MDL	20	MRL	ug/L	J	m, m

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

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# Data Qualifier Summary

Lab Reporting Batch ID: 16-1185

Laboratory: SSAL

EDD Filename: Prep440-138657-1

eQAPP Name: TetraTechInc\_NERT\_11302016

## Reason Code Legend

<i>Reason Code</i>	<i>Description</i>
h	Sampling to Analysis Rejection
m	Matrix Spike Lower Rejection
m	Matrix Spike Upper Estimation
sp	Reporting Limit Trace Value

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

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# Reporting Limit Outliers

Lab Reporting Batch ID: 16-1185

Laboratory: SSAL

EDD Filename: Prep440-138657-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method:** 6020

**Matrix:** AQ

<b>SampleID</b>	<b>Analyte</b>	<b>Lab Qual</b>	<b>Result</b>	<b>Reporting Limit</b>	<b>RL Type</b>	<b>Units</b>	<b>Flag</b>
TT-TP4-L1-20160218	CHROMIUM	J	4.8	10	MRL	ug/L	J (all detects)
TT-TP4-L2-20160218	CHROMIUM	J	3.7	10	MRL	ug/L	J (all detects)

# Data Review Summary

Lab Reporting Batch ID: 440-139185-1

Laboratory: TA IRV

EDD Filename: Prep440-139185-1

eQAPP Name: TetraTechInc\_NERT\_11302016

## *Validation Area*

## *Note*

<i>Validation Area</i>	<i>Note</i>
Technical Holding Times	A
Temperature	A
Initial Calibration	N
Continuing Calibration/Initial Calibration Verification	N
Method Blanks	A
Surrogate/Tracer Spikes	N
Matrix Spike/Matrix Spike Duplicates	N
Laboratory Duplicates	A
Laboratory Replicates	N
Laboratory Control Samples	A
Compound Quantitation	A
Field Duplicates	N
Field Triplicates	N
Field Blanks	N

A = Acceptable, N = Not provided/applicable, SR = See report

The contents of this report reflect findings made by ADR during Automated Data Review, manual applied qualifiers are not considered. Please refer to the Overall Qualifier Summary report for manual qualifiers.

## ***Data Qualifier Summary***

Lab Reporting Batch ID: 440-139185-1

Laboratory: TA IRV

EDD Filename: Prep440-139185-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**No Data Review Qualifiers Applied.**

# Data Review Summary

Lab Reporting Batch ID: 440-139326-1

Laboratory: TA IRV

EDD Filename: Prep440-139326-1

eQAPP Name: TetraTechInc\_NERT\_11302016

## *Validation Area*

## *Note*

<i>Validation Area</i>	<i>Note</i>
Technical Holding Times	A
Temperature	A
Initial Calibration	N
Continuing Calibration/Initial Calibration Verification	N
Method Blanks	A
Surrogate/Tracer Spikes	N
Matrix Spike/Matrix Spike Duplicates	SR
Laboratory Duplicates	A
Laboratory Replicates	N
Laboratory Control Samples	A
Compound Quantitation	SR
Field Duplicates	A
Field Triplicates	N
Field Blanks	N

A = Acceptable, N = Not provided/applicable, SR = See report

The contents of this report reflect findings made by ADR during Automated Data Review, manual applied qualifiers are not considered. Please refer to the Overall Qualifier Summary report for manual qualifiers.

# Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 440-139326-1

Laboratory: TA IRV

EDD Filename: Prep440-139326-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method: 6020**  
**Matrix: AQ**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
TT-TP4-M3-20160225MS (DIS) TT-TP4-M3-20160225MSD (DIS) (TT-TP4-M3-20160225)	CHROMIUM	-382	-165	75.00-125.00	-	CHROMIUM	J- (all detects) R (all non-detects)

**Method: 314.0**  
**Matrix: AQ**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
TT-TP4-M3-20160225MS TT-TP4-M3-20160225MSD (TT-TP4-M3-20160225)	PERCHLORATE	-1516	-2171	80.00-120.00	-	PERCHLORATE	J-(all detects) R(all non-detects)



# Data Qualifier Summary

Lab Reporting Batch ID: 440-139326-1

Laboratory: TA IRV

EDD Filename: Prep440-139326-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b> METALS
<b>Method:</b> 6020 <span style="float: right;"><b>Matrix:</b> AQ</span>

<b>Sample ID:</b> TT-TP3-L2-20160225		<b>Collected:</b> 2/25/2016 12:35:00 PM		<b>Analysis Type:</b> RES/DIS				<b>Dilution:</b> 10	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHROMIUM	16	J	5.0	MDL	20	MRL	ug/L	J	sp

<b>Sample ID:</b> TT-TP4-M3-20160225		<b>Collected:</b> 2/25/2016 12:14:00 PM		<b>Analysis Type:</b> RES/DIS				<b>Dilution:</b> 10	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHROMIUM	18000		5.0	MDL	20	MRL	ug/L	J-	m

<b>Method Category:</b> METALS
<b>Method:</b> 7199 <span style="float: right;"><b>Matrix:</b> AQ</span>

<b>Sample ID:</b> TT-TP3-L1-20160225		<b>Collected:</b> 2/25/2016 12:30:00 PM		<b>Analysis Type:</b> RES/DIS				<b>Dilution:</b> 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chromium, hexavalent	1.7	J	0.25	MDL	2.0	MRL	ug/L	J	sp

\* denotes a non-reportable result

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# Data Qualifier Summary

Lab Reporting Batch ID: 440-139326-1

Laboratory: TA IRV

EDD Filename: Prep440-139326-1

eQAPP Name: TetraTechInc\_NERT\_11302016

## Reason Code Legend

<i>Reason Code</i>	<i>Description</i>
m	Matrix Spike Lower Rejection
sp	Reporting Limit Trace Value

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

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# Reporting Limit Outliers

Lab Reporting Batch ID: 440-139326-1

Laboratory: TA IRV

EDD Filename: Prep440-139326-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method:** 6020

**Matrix:** AQ

<i>SampleID</i>	<i>Analyte</i>	<i>Lab Qual</i>	<i>Result</i>	<i>Reporting Limit</i>	<i>RL Type</i>	<i>Units</i>	<i>Flag</i>
TT-TP3-L2-20160225	CHROMIUM	J	16	20	MRL	ug/L	J (all detects)

**Method:** 7199

**Matrix:** AQ

<i>SampleID</i>	<i>Analyte</i>	<i>Lab Qual</i>	<i>Result</i>	<i>Reporting Limit</i>	<i>RL Type</i>	<i>Units</i>	<i>Flag</i>
TT-TP3-L1-20160225	Chromium, hexavalent	J	1.7	2.0	MRL	ug/L	J (all detects)

# Data Review Summary

Lab Reporting Batch ID: 440-139843-1

Laboratory: TA IRV

EDD Filename: Prep440-139843-1

eQAPP Name: TetraTechInc\_NERT\_11302016

## *Validation Area*

## *Note*

<i>Validation Area</i>	<i>Note</i>
Technical Holding Times	A
Temperature	A
Initial Calibration	N
Continuing Calibration/Initial Calibration Verification	N
Method Blanks	A
Surrogate/Tracer Spikes	N
Matrix Spike/Matrix Spike Duplicates	SR
Laboratory Duplicates	N
Laboratory Replicates	N
Laboratory Control Samples	A
Compound Quantitation	A
Field Duplicates	N
Field Triplicates	N
Field Blanks	N

A = Acceptable, N = Not provided/applicable, SR = See report

The contents of this report reflect findings made by ADR during Automated Data Review, manual applied qualifiers are not considered. Please refer to the Overall Qualifier Summary report for manual qualifiers.

# Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 440-139843-1

Laboratory: TA IRV

EDD Filename: Prep440-139843-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method: 7199**

**Matrix: AQ**

<i>QC Sample ID (Associated Samples)</i>	<i>Compound</i>	<i>MS %R</i>	<i>MSD %R</i>	<i>%R Limits</i>	<i>RPD (Limits)</i>	<i>Affected Compounds</i>	<i>Flag</i>
TT-TP1-M1-20160302MS (DIS) TT-TP1-M1-20160302MSD (DIS) (TT-TP1-M1-20160302)	Chromium, hexavalent	43	36	85.00-115.00	-	Chromium, hexavalent	J- (all detects) UJ (all non-detects)

# Data Qualifier Summary

Lab Reporting Batch ID: 440-139843-1

Laboratory: TA IRV

EDD Filename: Prep440-139843-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b> METALS	
<b>Method:</b> 7199	<b>Matrix:</b> AQ

Sample ID: TT-TP1-M1-20160302

Collected: 3/2/2016 12:56:00 PM Analysis Type: RES/DIS

Dilution: 100

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chromium, hexavalent	2900		25	MDL	200	MRL	ug/L	J-	m

\* denotes a non-reportable result

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# Data Qualifier Summary

Lab Reporting Batch ID: 440-139843-1

Laboratory: TA IRV

EDD Filename: Prep440-139843-1

eQAPP Name: TetraTechInc\_NERT\_11302016

## Reason Code Legend

<i>Reason Code</i>	<i>Description</i>
m	Matrix Spike Lower Estimation

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

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# Data Review Summary

Lab Reporting Batch ID: 440-139965-1

Laboratory: TA IRV

EDD Filename: Prep440-139965-1

eQAPP Name: TetraTechInc\_NERT\_11302016

## *Validation Area*

## *Note*

<i>Validation Area</i>	<i>Note</i>
Technical Holding Times	SR
Temperature	A
Initial Calibration	N
Continuing Calibration/Initial Calibration Verification	N
Method Blanks	A
Surrogate/Tracer Spikes	N
Matrix Spike/Matrix Spike Duplicates	SR
Laboratory Duplicates	A
Laboratory Replicates	N
Laboratory Control Samples	A
Compound Quantitation	SR
Field Duplicates	A
Field Triplicates	N
Field Blanks	N

A = Acceptable, N = Not provided/applicable, SR = See report

The contents of this report reflect findings made by ADR during Automated Data Review, manual applied qualifiers are not considered. Please refer to the Overall Qualifier Summary report for manual qualifiers.



## Field Duplicate RPD Report

Lab Reporting Batch ID: 440-139965-1

Laboratory: TA IRV

EDD Filename: Prep440-139965-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method: 2540C**  
**Matrix: AQ**

Analyte	Concentration (mg/L)		Sample RPD	eQAPP RPD	Flag
	TT-TP4-M3-20160303	TT-TP4-M3-20160303-DUP			
TOTAL DISSOLVED SOLIDS	11000	11000	0	30.00	No Qualifiers Applied

**Method: 314.0**  
**Matrix: AQ**

Analyte	Concentration (ug/L)		Sample RPD	eQAPP RPD	Flag
	TT-TP4-M3-20160303	TT-TP4-M3-20160303-DUP			
PERCHLORATE	680000	700000	3	30.00	No Qualifiers Applied

**Method: 6020**  
**Matrix: AQ**

Analyte	Concentration (ug/L)		Sample RPD	eQAPP RPD	Flag
	TT-TP4-M3-20160303 (DIS)	TT-TP4-M3-20160303-DUP (DIS)			
CHROMIUM	18000	19000	5	30.00	No Qualifiers Applied

**Method: 7199**  
**Matrix: AQ**

Analyte	Concentration (ug/L)		Sample RPD	eQAPP RPD	Flag
	TT-TP4-M3-20160303 (DIS)	TT-TP4-M3-20160303-DUP (DIS)			
Chromium, hexavalent	19000	18000	5	30.00	No Qualifiers Applied

**Method: SM5310B**  
**Matrix: AQ**

Analyte	Concentration (mg/L)		Sample RPD	eQAPP RPD	Flag
	TT-TP4-M3-20160303	TT-TP4-M3-20160303-DUP			
Total organic carbon	1.9	1.4	30	30.00	No Qualifiers Applied

# QC Outlier Report: HoldingTimes

Lab Reporting Batch ID: 440-139965-1  
EDD Filename: Prep440-139965-1

Laboratory: TA IRV  
eQAPP Name: TetraTechInc\_NERT\_11302016

Method: 7199 Preparation Method: Gen Prep  
Matrix: AQ

<i>Sample ID</i>	<i>Type</i>	<i>Actual</i>	<i>Criteria</i>	<i>Units</i>	<i>Flag</i>
TT-TP3-L2-20160303 (RES/DIS)	Sampling To Analysis	24.25	24.00	HOURS	J- (all detects)
TT-TP3-M2-20160303 (RES/DIS)		25.50	24.00	HOURS	UJ (all non-detects)
TT-TP4-M3-20160303-DUP (RES/DIS)		25.00	24.00	HOURS	
TT-TP4-M3-20160303MS (RES/DIS)		25.75	24.00	HOURS	
TT-TP4-M3-20160303MSD (RES/DIS)		25.75	24.00	HOURS	

# Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 440-139965-1

Laboratory: TA IRV

EDD Filename: Prep440-139965-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method: 7199**  
**Matrix: AQ**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
TT-TP4-M3-20160303MS (DIS) TT-TP4-M3-20160303MSD (DIS) (TT-TP4-M3-20160303)	Chromium, hexavalent	18	41	85.00-115.00	-	Chromium, hexavalent	J- (all detects) R (all non-detects)

**Method: 6020**  
**Matrix: AQ**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
TT-TP4-M3-20160303MS (DIS) TT-TP4-M3-20160303MSD (DIS) (TT-TP4-M3-20160303)	CHROMIUM	604	983	75.00-125.00	-	CHROMIUM	J+(all detects)

**Method: 314.0**  
**Matrix: AQ**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
TT-TP4-M3-20160303MS TT-TP4-M3-20160303MSD (TT-TP4-M3-20160303)	PERCHLORATE	-2884	-8802	80.00-120.00	-	PERCHLORATE	J-(all detects) R(all non-detects)

# Data Qualifier Summary

Lab Reporting Batch ID: 440-139965-1

Laboratory: TA IRV

EDD Filename: Prep440-139965-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b>	METALS	
<b>Method:</b>	6020	<b>Matrix:</b> AQ

Sample ID: TT-TP1-L2-20160303      Collected: 3/3/2016 12:41:00 PM      Analysis Type: RES/DIS      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHROMIUM	1.3	J	0.50	MDL	2.0	MRL	ug/L	J	sp

Sample ID: TT-TP4-M3-20160303      Collected: 3/3/2016 11:49:00 AM      Analysis Type: RES/DIS      Dilution: 10

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHROMIUM	18000		5.0	MDL	20	MRL	ug/L	J+	m

<b>Method Category:</b>	METALS	
<b>Method:</b>	7199	<b>Matrix:</b> AQ

Sample ID: TT-TP3-L1-20160303      Collected: 3/3/2016 12:18:00 PM      Analysis Type: RES/DIS      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chromium, hexavalent	1.4	J H	0.25	MDL	2.0	MRL	ug/L	J	sp

Sample ID: TT-TP3-L2-20160303      Collected: 3/3/2016 12:23:00 PM      Analysis Type: RES/DIS      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chromium, hexavalent	2.7	H	0.25	MDL	2.0	MRL	ug/L	J-	h

Sample ID: TT-TP3-M2-20160303      Collected: 3/3/2016 10:12:00 AM      Analysis Type: RES/DIS      Dilution: 100

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chromium, hexavalent	1100	H	25	MDL	200	MRL	ug/L	J-	h

Sample ID: TT-TP4-M3-20160303      Collected: 3/3/2016 11:49:00 AM      Analysis Type: RES/DIS      Dilution: 1000

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chromium, hexavalent	19000		250	MDL	2000	MRL	ug/L	J-	m, m

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

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# Data Qualifier Summary

Lab Reporting Batch ID: 440-139965-1

Laboratory: TA IRV

EDD Filename: Prep440-139965-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b> METALS
<b>Method:</b> 7199 <span style="float: right;"><b>Matrix:</b> AQ</span>

Sample ID: TT-TP4-M3-20160303-DUP

Collected: 3/3/2016 11:49:00 AM Analysis Type: RES/DIS

Dilution: 1000

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chromium, hexavalent	18000	H	250	MDL	2000	MRL	ug/L	J-	h

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

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# Data Qualifier Summary

Lab Reporting Batch ID: 440-139965-1

Laboratory: TA IRV

EDD Filename: Prep440-139965-1

eQAPP Name: TetraTechInc\_NERT\_11302016

## Reason Code Legend

<i>Reason Code</i>	<i>Description</i>
e	Sampling to Analysis Estimation
h	Sampling to Analysis Estimation
m	Matrix Spike Lower Estimation
m	Matrix Spike Lower Rejection
m	Matrix Spike Upper Estimation
sp	Reporting Limit Trace Value

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

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# Reporting Limit Outliers

Lab Reporting Batch ID: 440-139965-1

Laboratory: TA IRV

EDD Filename: Prep440-139965-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method:** 6020

**Matrix:** AQ

<b>SampleID</b>	<b>Analyte</b>	<b>Lab Qual</b>	<b>Result</b>	<b>Reporting Limit</b>	<b>RL Type</b>	<b>Units</b>	<b>Flag</b>
TT-TP1-L2-20160303	CHROMIUM	J	1.3	2.0	MRL	ug/L	J (all detects)

**Method:** 7199

**Matrix:** AQ

<b>SampleID</b>	<b>Analyte</b>	<b>Lab Qual</b>	<b>Result</b>	<b>Reporting Limit</b>	<b>RL Type</b>	<b>Units</b>	<b>Flag</b>
TT-TP3-L1-20160303	Chromium, hexavalent	J H	1.4	2.0	MRL	ug/L	J (all detects)

# Data Review Summary

Lab Reporting Batch ID: 440-140696-1

Laboratory: TA IRV

EDD Filename: Prep440-140696-1

eQAPP Name: TetraTechInc\_NERT\_11302016

## *Validation Area*

## *Note*

<i>Validation Area</i>	<i>Note</i>
Technical Holding Times	SR
Temperature	A
Initial Calibration	N
Continuing Calibration/Initial Calibration Verification	N
Method Blanks	A
Surrogate/Tracer Spikes	A
Matrix Spike/Matrix Spike Duplicates	SR
Laboratory Duplicates	N
Laboratory Replicates	N
Laboratory Control Samples	A
Compound Quantitation	SR
Field Duplicates	N
Field Triplicates	N
Field Blanks	N

A = Acceptable, N = Not provided/applicable, SR = See report

The contents of this report reflect findings made by ADR during Automated Data Review, manual applied qualifiers are not considered. Please refer to the Overall Qualifier Summary report for manual qualifiers.



## QC Outlier Report: HoldingTimes

Lab Reporting Batch ID: 440-140696-1

Laboratory: TA IRV

EDD Filename: Prep440-140696-1

eQAPP Name: TetraTechInc\_NERT\_11302016

Method: 300.0	Preparation Method: Gen Prep
Matrix: AQ	

Sample ID	Type	Actual	Criteria	Units	Flag
TT-TP1-M3-20160309 (RES)	Sampling To Analysis	61.75	48.00	HOURS	J- (all detects) UJ (all non-detects)
TT-TP2-M2-20160309 (RES2)	Sampling To Analysis	184.50	48.00	HOURS	J-(all detects) R(all non-detects)

Method: 7199	Preparation Method: Gen Prep
Matrix: AQ	

Sample ID	Type	Actual	Criteria	Units	Flag
TT-TP1-M1-20160309 (RES/DIS)	Sampling To Analysis	24.25	24.00	HOURS	J-(all detects)
TT-TP1-M1-20160309MS (RES/DIS)		24.50	24.00	HOURS	UJ(all non-detects)
TT-TP1-M1-20160309MSD (RES/DIS)		24.75	24.00	HOURS	
TT-TP1-M3-20160309 (RES/DIS)		25.75	24.00	HOURS	

# Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 440-140696-1

Laboratory: TA IRV

EDD Filename: Prep440-140696-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method: 7199**  
**Matrix: AQ**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
TT-TP1-M1-20160309MS (DIS) TT-TP1-M1-20160309MSD (DIS) (TT-TP1-M1-20160309)	Chromium, hexavalent	26	13	85.00-115.00	-	Chromium, hexavalent	J- (all detects) R (all non-detects)

**Method: 300.0**  
**Matrix: AQ**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
TT-TP2-M2-20160309MS (TT-TP2-M2-20160309)	Nitrate as N	79	-	80.00-120.00	-	Nitrate as N	J-(all detects) UJ(all non-detects)

# Data Qualifier Summary

Lab Reporting Batch ID: 440-140696-1

Laboratory: TA IRV

EDD Filename: Prep440-140696-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b>	GENCHEM	
<b>Method:</b>	300.0	<b>Matrix:</b> AQ

Sample ID: TT-TP2-M2-20160309      Collected: 3/9/2016 12:49:00 PM      Analysis Type: RES3      Dilution: 20

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Nitrate as N	54		1.1	MDL	2.2	MRL	mg/L	J-	m

<b>Method Category:</b>	METALS	
<b>Method:</b>	6020	<b>Matrix:</b> AQ

Sample ID: TT-TP1-M1-20160309      Collected: 3/9/2016 12:16:00 PM      Analysis Type: RES/DIS      Dilution: 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
COPPER	4.3	J	2.5	MDL	10	MRL	ug/L	J	sp
NICKEL	3.6	J	2.5	MDL	10	MRL	ug/L	J	sp
SELENIUM	4.0	J	2.5	MDL	10	MRL	ug/L	J	sp

Sample ID: TT-TP1-M2-20160309      Collected: 3/9/2016 11:35:00 AM      Analysis Type: RES/DIS      Dilution: 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
COPPER	4.2	J	2.5	MDL	10	MRL	ug/L	J	sp
NICKEL	6.2	J	2.5	MDL	10	MRL	ug/L	J	sp
SELENIUM	3.1	J	2.5	MDL	10	MRL	ug/L	J	sp

Sample ID: TT-TP1-M3-20160309      Collected: 3/9/2016 10:36:00 AM      Analysis Type: RES/DIS      Dilution: 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
COPPER	2.8	J	2.5	MDL	10	MRL	ug/L	J	sp
NICKEL	5.3	J	2.5	MDL	10	MRL	ug/L	J	sp
SELENIUM	4.2	J	2.5	MDL	10	MRL	ug/L	J	sp

Sample ID: TT-TP2-M1-20160309      Collected: 3/9/2016 1:22:00 PM      Analysis Type: RES/DIS      Dilution: 10

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
COPPER	6.4	J	5.0	MDL	20	MRL	ug/L	J	sp

\* denotes a non-reportable result

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# Data Qualifier Summary

Lab Reporting Batch ID: 440-140696-1

Laboratory: TA IRV

EDD Filename: Prep440-140696-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b>	METALS	
<b>Method:</b>	6020	<b>Matrix:</b> AQ

Sample ID: TT-TP2-M2-20160309      Collected: 3/9/2016 12:49:00 PM      Analysis Type: RES/DIS      Dilution: 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
COPPER	3.4	J	2.5	MDL	10	MRL	ug/L	J	sp
NICKEL	3.8	J	2.5	MDL	10	MRL	ug/L	J	sp
SELENIUM	4.3	J	2.5	MDL	10	MRL	ug/L	J	sp

<b>Method Category:</b>	METALS	
<b>Method:</b>	7199	<b>Matrix:</b> AQ

Sample ID: TT-TP1-M1-20160309      Collected: 3/9/2016 12:16:00 PM      Analysis Type: RE2/DIS      Dilution: 100

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chromium, hexavalent	4700	F1	25	MDL	200	MRL	ug/L	J-	m

Sample ID: TT-TP1-M3-20160309      Collected: 3/9/2016 10:36:00 AM      Analysis Type: RES/DIS      Dilution: 1000

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chromium, hexavalent	11000	H	250	MDL	2000	MRL	ug/L	J-	h

<b>Method Category:</b>	METALS	
<b>Method:</b>	7470A	<b>Matrix:</b> AQ

Sample ID: TT-TP1-M1-20160309      Collected: 3/9/2016 12:16:00 PM      Analysis Type: RES/DIS      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.00013	J	0.00010	MDL	0.00020	MRL	mg/L	J	sp

Sample ID: TT-TP1-M2-20160309      Collected: 3/9/2016 11:35:00 AM      Analysis Type: RES/DIS      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.00012	J	0.00010	MDL	0.00020	MRL	mg/L	J	sp

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

# Data Qualifier Summary

Lab Reporting Batch ID: 440-140696-1

Laboratory: TA IRV

EDD Filename: Prep440-140696-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b> METALS	
<b>Method:</b> 7470A	<b>Matrix:</b> AQ

Sample ID: TT-TP1-M3-20160309

Collected: 3/9/2016 10:36:00 AM Analysis Type: RES/DIS

Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.00012	J	0.00010	MDL	0.00020	MRL	mg/L	J	sp

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

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# Data Qualifier Summary

Lab Reporting Batch ID: 440-140696-1

Laboratory: TA IRV

EDD Filename: Prep440-140696-1

eQAPP Name: TetraTechInc\_NERT\_11302016

## Reason Code Legend

<i>Reason Code</i>	<i>Description</i>
e	Sampling to Analysis Estimation
h	Sampling to Analysis Estimation
m	Matrix Spike Lower Estimation
m	Matrix Spike Lower Rejection
sp	Reporting Limit Trace Value

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

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## Reporting Limit Outliers

Lab Reporting Batch ID: 440-140696-1

Laboratory: TA IRV

EDD Filename: Prep440-140696-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method:** 6020  
**Matrix:** AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
TT-TP1-M1-20160309	COPPER	J	4.3	10	MRL	ug/L	J (all detects)
	NICKEL	J	3.6	10	MRL	ug/L	
	SELENIUM	J	4.0	10	MRL	ug/L	
TT-TP1-M2-20160309	COPPER	J	4.2	10	MRL	ug/L	J (all detects)
	NICKEL	J	6.2	10	MRL	ug/L	
	SELENIUM	J	3.1	10	MRL	ug/L	
TT-TP1-M3-20160309	COPPER	J	2.8	10	MRL	ug/L	J (all detects)
	NICKEL	J	5.3	10	MRL	ug/L	
	SELENIUM	J	4.2	10	MRL	ug/L	
TT-TP2-M1-20160309	COPPER	J	6.4	20	MRL	ug/L	J (all detects)
TT-TP2-M2-20160309	COPPER	J	3.4	10	MRL	ug/L	J (all detects)
	NICKEL	J	3.8	10	MRL	ug/L	
	SELENIUM	J	4.3	10	MRL	ug/L	

**Method:** 7470A  
**Matrix:** AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
TT-TP1-M1-20160309	MERCURY	J	0.00013	0.00020	MRL	mg/L	J (all detects)
TT-TP1-M2-20160309	MERCURY	J	0.00012	0.00020	MRL	mg/L	J (all detects)
TT-TP1-M3-20160309	MERCURY	J	0.00012	0.00020	MRL	mg/L	J (all detects)

# Data Review Summary

Lab Reporting Batch ID: 440-140826-1

Laboratory: TA IRV

EDD Filename: Prep440-140826-1

eQAPP Name: TetraTechInc\_NERT\_11302016

## *Validation Area*

## *Note*

<i>Validation Area</i>	<i>Note</i>
Technical Holding Times	SR
Temperature	A
Initial Calibration	N
Continuing Calibration/Initial Calibration Verification	N
Method Blanks	A
Surrogate/Tracer Spikes	A
Matrix Spike/Matrix Spike Duplicates	SR
Laboratory Duplicates	A
Laboratory Replicates	N
Laboratory Control Samples	A
Compound Quantitation	SR
Field Duplicates	SR
Field Triplicates	N
Field Blanks	N

A = Acceptable, N = Not provided/applicable, SR = See report

The contents of this report reflect findings made by ADR during Automated Data Review, manual applied qualifiers are not considered. Please refer to the Overall Qualifier Summary report for manual qualifiers.



## Field Duplicate RPD Report

Lab Reporting Batch ID: 440-140826-1

Laboratory: TA IRV

EDD Filename: Prep440-140826-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method: 2320B**  
**Matrix: AQ**

Analyte	Concentration (mg/L)		Sample RPD	eQAPP RPD	Flag
	TT-TP4-M3-20160310	TT-TP4-M3-20160310-DUP			
Alkalinity as CaCO3	150	150	0	30.00	No Qualifiers Applied
Bicarbonate ion as HCO3	180	180	0		

**Method: 2540C**  
**Matrix: AQ**

Analyte	Concentration (mg/L)		Sample RPD	eQAPP RPD	Flag
	TT-TP4-M3-20160310	TT-TP4-M3-20160310-DUP			
TOTAL DISSOLVED SOLIDS	11000	11000	0	30.00	No Qualifiers Applied

**Method: 300.0**  
**Matrix: AQ**

Analyte	Concentration (mg/L)		Sample RPD	eQAPP RPD	Flag
	TT-TP4-M3-20160310	TT-TP4-M3-20160310-DUP			
CHLORIDE	1200	1300	8	30.00	No Qualifiers Applied
Nitrate as N	36	35	3	30.00	
SULFATE	1600	1500	6	30.00	

**Method: 300.1B**  
**Matrix: AQ**

Analyte	Concentration (ug/L)		Sample RPD	eQAPP RPD	Flag
	TT-TP4-M3-20160310	TT-TP4-M3-20160310-DUP			
Chlorate	4700000	4600000	2	30.00	No Qualifiers Applied

**Method: 314.0**  
**Matrix: AQ**

Analyte	Concentration (ug/L)		Sample RPD	eQAPP RPD	Flag
	TT-TP4-M3-20160310	TT-TP4-M3-20160310-DUP			
PERCHLORATE	620000	540000	14	30.00	No Qualifiers Applied

**Method: 6010B**  
**Matrix: AQ**

Analyte	Concentration (mg/L)		Sample RPD	eQAPP RPD	Flag
	TT-TP4-M3-20160310 (DIS)	TT-TP4-M3-20160310-DUP (DIS)			
BORON	18	19	5	30.00	No Qualifiers Applied
CALCIUM	2100	2100	0	30.00	
MAGNESIUM	1000	1100	10	30.00	
POTASSIUM	140	150	7	30.00	
SODIUM	10000	11000	10	30.00	

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## Field Duplicate RPD Report

Lab Reporting Batch ID: 440-140826-1

Laboratory: TA IRV

EDD Filename: Prep440-140826-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method: 6020**  
**Matrix: AQ**

Analyte	Concentration (ug/L)		Sample RPD	eQAPP RPD	Flag
	TT-TP4-M3-20160310 (DIS)	TT-TP4-M3-20160310-DUP (DIS)			
ARSENIC	110	110	0	30.00	No Qualifiers Applied
BARIUM	33	33	0	30.00	
CHROMIUM	17000	17000	0	30.00	
MOLYBDENUM	44	44	0	30.00	
SELENIUM	5.4	4.9	10	30.00	
COPPER	20 U	2.5	200	30.00	J(all detects) UJ(all non-detects)
NICKEL	20 U	3.4	200	30.00	

**Method: 7199**  
**Matrix: AQ**

Analyte	Concentration (ug/L)		Sample RPD	eQAPP RPD	Flag
	TT-TP4-M3-20160310 (DIS)	TT-TP4-M3-20160310-DUP (DIS)			
Chromium, hexavalent	18000	18000	0	30.00	No Qualifiers Applied

**Method: 7470A**  
**Matrix: AQ**

Analyte	Concentration (mg/L)		Sample RPD	eQAPP RPD	Flag
	TT-TP4-M3-20160310 (DIS)	TT-TP4-M3-20160310-DUP (DIS)			
MERCURY	0.00013	0.00020 U	200	30.00	J(all detects) UJ(all non-detects)

**Method: SM5310B**  
**Matrix: AQ**

Analyte	Concentration (mg/L)		Sample RPD	eQAPP RPD	Flag
	TT-TP4-M3-20160310	TT-TP4-M3-20160310-DUP			
Total organic carbon	2.0	1.6	22	30.00	No Qualifiers Applied

## QC Outlier Report: HoldingTimes

Lab Reporting Batch ID: 440-140826-1  
 EDD Filename: Prep440-140826-1

Laboratory: TA IRV  
 eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method:</b> 300.0	<b>Preparation Method:</b> Gen Prep
<b>Matrix:</b> AQ	

Sample ID	Type	Actual	Criteria	Units	Flag
TT-TP4-M3-20160310 (RES2)	Sampling To Analysis	149.75	48.00	HOURS	J- (all detects) R (all non-detects)
TT-TP4-M3-20160310MS (RES)		150.00	48.00	HOURS	
TT-TP4-M3-20160310MSD (RES)		150.25	48.00	HOURS	

<b>Method:</b> 7199	<b>Preparation Method:</b> Gen Prep
<b>Matrix:</b> AQ	

Sample ID	Type	Actual	Criteria	Units	Flag
TT-TP2-L1-20160310 (RES/DIS)	Sampling To Analysis	24.75	24.00	HOURS	J-(all detects) UJ(all non-detects)
TT-TP2-L2-20160310 (RES/DIS)		24.75	24.00	HOURS	
TT-TP3-M1-20160310 (RES/DIS)		29.25	24.00	HOURS	
TT-TP3-M2-20160310 (RES/DIS)		29.50	24.00	HOURS	
TT-TP4-M3-20160310 (RE2/DIS)		26.25	24.00	HOURS	
TT-TP4-M3-20160310MS (RES/DIS)		26.50	24.00	HOURS	
TT-TP4-M3-20160310MSD (RES/DIS)		26.75	24.00	HOURS	

# Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 440-140826-1

Laboratory: TA IRV

EDD Filename: Prep440-140826-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method: 7199**  
**Matrix: AQ**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
TT-TP4-M3-20160310MS (DIS) TT-TP4-M3-20160310MSD (DIS) (TT-TP4-M3-20160310)	Chromium, hexavalent	121	125	85.00-115.00	-	Chromium, hexavalent	J+ (all detects)

**Method: 300.0**  
**Matrix: AQ**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
TT-TP4-M3-20160310MSD (DIS) (TT-TP4-M3-20160310)	Nitrate as N	-	73	80.00-120.00	-	Nitrate as N	J-(all detects) UJ(all non-detects)

**Method: 6020**  
**Matrix: AQ**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
TT-TP4-M3-20160310MS (DIS) TT-TP4-M3-20160310MSD (DIS) (TT-TP4-M3-20160310)	CHROMIUM ZINC	-217 0	-142 0	75.00-125.00 75.00-125.00	- -	CHROMIUM ZINC	J-(all detects) R(all non-detects)

**Method: 6010B**  
**Matrix: AQ**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
TT-TP4-M3-20160310MS (DIS) TT-TP4-M3-20160310MSD (DIS) (TT-TP4-M3-20160310)	CALCIUM	472	44	75.00-125.00	-	CALCIUM	J(all detects) UJ(all non-detects)
TT-TP4-M3-20160310MS (DIS) TT-TP4-M3-20160310MSD (DIS) (TT-TP4-M3-20160310)	BORON IRON MAGNESIUM MANGANESE POTASSIUM SODIUM TITANIUM	490 445 365 440 459 1082 469	492 435 381 431 464 648 461	75.00-125.00 75.00-125.00 75.00-125.00 75.00-125.00 75.00-125.00 75.00-125.00 75.00-125.00	- - - - - - -	BORON IRON MAGNESIUM MANGANESE POTASSIUM SODIUM TITANIUM	J+(all detects)

# Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 440-140826-1

Laboratory: TA IRV

EDD Filename: Prep440-140826-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method: 314.0**  
**Matrix: AQ**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
TT-TP4-M3-20160310MS TT-TP4-M3-20160310MSD (TT-TP4-M3-20160310)	PERCHLORATE	-1194	-1042	80.00-120.00	-	PERCHLORATE	J-(all detects) R(all non-detects)

**Method: 300.1B**  
**Matrix: AQ**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
TT-TP4-M3-20160310MS TT-TP4-M3-20160310MSD (TT-TP4-M3-20160310)	Chlorate	-3970	-2214	75.00-125.00	-	Chlorate	J-(all detects) R(all non-detects)

# Data Qualifier Summary

Lab Reporting Batch ID: 440-140826-1

Laboratory: TA IRV

EDD Filename: Prep440-140826-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b>	GENCHEM	
<b>Method:</b>	300.0	<b>Matrix:</b> AQ

<b>Sample ID:</b> TT-TP4-M3-20160310	<b>Collected:</b> 3/10/2016 12:05:00 PM	<b>Analysis Type:</b> RES2	<b>Dilution:</b> 50						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Nitrate as N	36	H F1	2.8	MDL	5.5	MRL	mg/L	J-	m, h

<b>Method Category:</b>	GENCHEM	
<b>Method:</b>	300.1B	<b>Matrix:</b> AQ

<b>Sample ID:</b> TT-TP4-M3-20160310	<b>Collected:</b> 3/10/2016 12:05:00 PM	<b>Analysis Type:</b> RES	<b>Dilution:</b> 20000						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chlorate	4700000		200000	MDL	400000	MRL	ug/L	J-	m

<b>Method Category:</b>	GENCHEM	
<b>Method:</b>	314.0	<b>Matrix:</b> AQ

<b>Sample ID:</b> TT-TP4-M3-20160310	<b>Collected:</b> 3/10/2016 12:05:00 PM	<b>Analysis Type:</b> RES	<b>Dilution:</b> 10000						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
PERCHLORATE	620000		5000	MDL	10000	MRL	ug/L	J-	m

<b>Method Category:</b>	METALS	
<b>Method:</b>	6010B	<b>Matrix:</b> AQ

<b>Sample ID:</b> TT-TP4-M3-20160310	<b>Collected:</b> 3/10/2016 12:05:00 PM	<b>Analysis Type:</b> RES/DIS	<b>Dilution:</b> 25						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	18		0.25	MDL	1.3	MRL	mg/L	J+	m
CALCIUM	2100		1.3	MDL	2.5	MRL	mg/L	J	m, m
MAGNESIUM	1000		0.25	MDL	0.50	MRL	mg/L	J+	m
POTASSIUM	140		6.3	MDL	13	MRL	mg/L	J+	m
SODIUM	10000		6.3	MDL	13	MRL	mg/L	J+	m

\* denotes a non-reportable result

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# Data Qualifier Summary

Lab Reporting Batch ID: 440-140826-1

Laboratory: TA IRV

EDD Filename: Prep440-140826-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b>	METALS	
<b>Method:</b>	6020	<b>Matrix:</b> AQ

<b>Sample ID:</b> TT-TP3-L2-20160310		<b>Collected:</b> 3/10/2016 12:49:00 PM		<b>Analysis Type:</b> RES/DIS				<b>Dilution:</b> 2	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHROMIUM	3.5	J	1.0	MDL	4.0	MRL	ug/L	J	sp

<b>Sample ID:</b> TT-TP3-M1-20160310		<b>Collected:</b> 3/10/2016 10:12:00 AM		<b>Analysis Type:</b> RES/DIS				<b>Dilution:</b> 2	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	1.7	J	1.0	MDL	4.0	MRL	ug/L	J	sp

<b>Sample ID:</b> TT-TP4-M1-20160310		<b>Collected:</b> 3/10/2016 10:57:00 AM		<b>Analysis Type:</b> RES/DIS				<b>Dilution:</b> 5	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
COPPER	5.3	J	2.5	MDL	10	MRL	ug/L	J	sp
NICKEL	7.9	J	2.5	MDL	10	MRL	ug/L	J	sp
SELENIUM	3.2	J	2.5	MDL	10	MRL	ug/L	J	sp

<b>Sample ID:</b> TT-TP4-M2-20160310		<b>Collected:</b> 3/10/2016 11:31:00 AM		<b>Analysis Type:</b> RES/DIS				<b>Dilution:</b> 5	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
COPPER	3.1	J	2.5	MDL	10	MRL	ug/L	J	sp
NICKEL	3.1	J	2.5	MDL	10	MRL	ug/L	J	sp
SELENIUM	4.1	J	2.5	MDL	10	MRL	ug/L	J	sp

<b>Sample ID:</b> TT-TP4-M3-20160310		<b>Collected:</b> 3/10/2016 12:05:00 PM		<b>Analysis Type:</b> RE2/DIS				<b>Dilution:</b> 100	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ZINC	250	U	250	MDL	2000	MRL	ug/L	R	m

<b>Sample ID:</b> TT-TP4-M3-20160310		<b>Collected:</b> 3/10/2016 12:05:00 PM		<b>Analysis Type:</b> RES/DIS				<b>Dilution:</b> 10	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHROMIUM	17000		5.0	MDL	20	MRL	ug/L	J-	m
COPPER	5.0	U	5.0	MDL	20	MRL	ug/L	UJ	fd
NICKEL	5.0	U	5.0	MDL	20	MRL	ug/L	UJ	fd
SELENIUM	5.4	J	5.0	MDL	20	MRL	ug/L	J	sp

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

# Data Qualifier Summary

Lab Reporting Batch ID: 440-140826-1

Laboratory: TA IRV

EDD Filename: Prep440-140826-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b>	METALS	
<b>Method:</b>	6020	<b>Matrix:</b> AQ

<b>Sample ID:</b> TT-TP4-M3-20160310-DUP	<b>Collected:</b> 3/10/2016 12:05:00 PM	<b>Analysis Type:</b> RES/DIS	<b>Dilution:</b> 5						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
COPPER	2.5	J	2.5	MDL	10	MRL	ug/L	J	sp, fd
NICKEL	3.4	J	2.5	MDL	10	MRL	ug/L	J	sp, fd
SELENIUM	4.9	J	2.5	MDL	10	MRL	ug/L	J	sp

<b>Method Category:</b>	METALS	
<b>Method:</b>	7199	<b>Matrix:</b> AQ

<b>Sample ID:</b> TT-TP2-L1-20160310	<b>Collected:</b> 3/10/2016 12:57:00 PM	<b>Analysis Type:</b> RES/DIS	<b>Dilution:</b> 1						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chromium, hexavalent	19	H	0.25	MDL	2.0	MRL	ug/L	J-	h

<b>Sample ID:</b> TT-TP2-L2-20160310	<b>Collected:</b> 3/10/2016 1:00:00 PM	<b>Analysis Type:</b> RES/DIS	<b>Dilution:</b> 20						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chromium, hexavalent	1100	H	5.0	MDL	40	MRL	ug/L	J-	h

<b>Sample ID:</b> TT-TP3-L1-20160310	<b>Collected:</b> 3/10/2016 12:47:00 PM	<b>Analysis Type:</b> RES/DIS	<b>Dilution:</b> 1						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chromium, hexavalent	1.4	J	0.25	MDL	2.0	MRL	ug/L	J	sp

<b>Sample ID:</b> TT-TP3-M1-20160310	<b>Collected:</b> 3/10/2016 10:12:00 AM	<b>Analysis Type:</b> RES/DIS	<b>Dilution:</b> 1						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chromium, hexavalent	6.7	H	0.25	MDL	2.0	MRL	ug/L	J-	h

<b>Sample ID:</b> TT-TP3-M2-20160310	<b>Collected:</b> 3/10/2016 9:33:00 AM	<b>Analysis Type:</b> RES/DIS	<b>Dilution:</b> 20						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chromium, hexavalent	710	H	5.0	MDL	40	MRL	ug/L	J-	h

\* denotes a non-reportable result

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# Data Qualifier Summary

Lab Reporting Batch ID: 440-140826-1

Laboratory: TA IRV

EDD Filename: Prep440-140826-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b> METALS
<b>Method:</b> 7199
<b>Matrix:</b> AQ

3/10/2016 12:05:00

Sample ID: TT-TP4-M3-20160310      Collected: PM      Analysis Type: RES/DIS      Dilution: 1000

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chromium, hexavalent	18000		250	MDL	2000	MRL	ug/L	J+	m

<b>Method Category:</b> METALS
<b>Method:</b> 7470A
<b>Matrix:</b> AQ

3/10/2016 9:33:00 AM

Sample ID: TT-TP3-M2-20160310      Collected: AM      Analysis Type: RES/DIS      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.00011	J	0.00010	MDL	0.00020	MRL	mg/L	J	sp

3/10/2016 10:57:00

Sample ID: TT-TP4-M1-20160310      Collected: AM      Analysis Type: RES/DIS      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.00016	J	0.00010	MDL	0.00020	MRL	mg/L	J	sp

3/10/2016 12:05:00

Sample ID: TT-TP4-M3-20160310      Collected: PM      Analysis Type: RES/DIS      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.00013	J	0.00010	MDL	0.00020	MRL	mg/L	J	sp, fd

3/10/2016 12:05:00

Sample ID: TT-TP4-M3-20160310-DUP      Collected: PM      Analysis Type: RES/DIS      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.00010	U	0.00010	MDL	0.00020	MRL	mg/L	UJ	fd

\* denotes a non-reportable result

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# Data Qualifier Summary

Lab Reporting Batch ID: 440-140826-1

Laboratory: TA IRV

EDD Filename: Prep440-140826-1

eQAPP Name: TetraTechInc\_NERT\_11302016

## Reason Code Legend

<i>Reason Code</i>	<i>Description</i>
e	Sampling to Analysis Estimation
fd	Field Duplicate Precision
h	Sampling to Analysis Estimation
h	Sampling to Analysis Rejection
m	Matrix Spike Lower Estimation
m	Matrix Spike Lower Rejection
m	Matrix Spike Upper Estimation
sp	Reporting Limit Trace Value

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

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# Reporting Limit Outliers

Lab Reporting Batch ID: 440-140826-1

Laboratory: TA IRV

EDD Filename: Prep440-140826-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method:** 6020  
**Matrix:** AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
TT-TP3-L2-20160310	CHROMIUM	J	3.5	4.0	MRL	ug/L	J (all detects)
TT-TP3-M1-20160310	SELENIUM	J	1.7	4.0	MRL	ug/L	J (all detects)
TT-TP4-M1-20160310	COPPER	J	5.3	10	MRL	ug/L	J (all detects)
	NICKEL	J	7.9	10	MRL	ug/L	
	SELENIUM	J	3.2	10	MRL	ug/L	
TT-TP4-M2-20160310	COPPER	J	3.1	10	MRL	ug/L	J (all detects)
	NICKEL	J	3.1	10	MRL	ug/L	
	SELENIUM	J	4.1	10	MRL	ug/L	
TT-TP4-M3-20160310	SELENIUM	J	5.4	20	MRL	ug/L	J (all detects)
TT-TP4-M3-20160310-DUP	COPPER	J	2.5	10	MRL	ug/L	J (all detects)
	NICKEL	J	3.4	10	MRL	ug/L	
	SELENIUM	J	4.9	10	MRL	ug/L	

**Method:** 7199  
**Matrix:** AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
TT-TP3-L1-20160310	Chromium, hexavalent	J	1.4	2.0	MRL	ug/L	J (all detects)

**Method:** 7470A  
**Matrix:** AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
TT-TP3-M2-20160310	MERCURY	J	0.00011	0.00020	MRL	mg/L	J (all detects)
TT-TP4-M1-20160310	MERCURY	J	0.00016	0.00020	MRL	mg/L	J (all detects)
TT-TP4-M3-20160310	MERCURY	J	0.00013	0.00020	MRL	mg/L	J (all detects)

# Data Review Summary

Lab Reporting Batch ID: 440-141586-1

Laboratory: TA IRV

EDD Filename: Prep440-141586-1

eQAPP Name: TetraTechInc\_NERT\_11302016

## *Validation Area*

## *Note*

<i>Validation Area</i>	<i>Note</i>
Technical Holding Times	A
Temperature	A
Initial Calibration	N
Continuing Calibration/Initial Calibration Verification	N
Method Blanks	A
Surrogate/Tracer Spikes	N
Matrix Spike/Matrix Spike Duplicates	A
Laboratory Duplicates	A
Laboratory Replicates	N
Laboratory Control Samples	A
Compound Quantitation	SR
Field Duplicates	N
Field Triplicates	N
Field Blanks	N

A = Acceptable, N = Not provided/applicable, SR = See report

The contents of this report reflect findings made by ADR during Automated Data Review, manual applied qualifiers are not considered. Please refer to the Overall Qualifier Summary report for manual qualifiers.

# Data Qualifier Summary

Lab Reporting Batch ID: 440-141586-1

Laboratory: TA IRV

EDD Filename: Prep440-141586-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b> METALS	
<b>Method:</b> 6020	<b>Matrix:</b> AQ

Sample ID: TT-TP3-M1-20160316

Collected: 3/16/2016 1:38:00 PM Analysis Type: RES/DIS

Dilution: 10

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHROMIUM	5.5	J	5.0	MDL	20	MRL	ug/L	J	sp

\* denotes a non-reportable result

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# Data Qualifier Summary

Lab Reporting Batch ID: 440-141586-1

Laboratory: TA IRV

EDD Filename: Prep440-141586-1

eQAPP Name: TetraTechInc\_NERT\_11302016

## Reason Code Legend

<i>Reason Code</i>	<i>Description</i>
sp	Reporting Limit Trace Value

\* denotes a non-reportable result

**Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing**

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# Reporting Limit Outliers

Lab Reporting Batch ID: 440-141586-1

Laboratory: TA IRV

EDD Filename: Prep440-141586-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method:** 6020

**Matrix:** AQ

<b>SampleID</b>	<b>Analyte</b>	<b>Lab Qual</b>	<b>Result</b>	<b>Reporting Limit</b>	<b>RL Type</b>	<b>Units</b>	<b>Flag</b>
TT-TP3-M1-20160316	CHROMIUM	J	5.5	20	MRL	ug/L	J (all detects)

# Data Review Summary

Lab Reporting Batch ID: 440-141827-1

Laboratory: TA IRV

EDD Filename: Prep440-141827-1

eQAPP Name: TetraTechInc\_NERT\_11302016

## *Validation Area*

## *Note*

<i>Validation Area</i>	<i>Note</i>
Technical Holding Times	A
Temperature	A
Initial Calibration	N
Continuing Calibration/Initial Calibration Verification	N
Method Blanks	A
Surrogate/Tracer Spikes	N
Matrix Spike/Matrix Spike Duplicates	SR
Laboratory Duplicates	A
Laboratory Replicates	N
Laboratory Control Samples	A
Compound Quantitation	A
Field Duplicates	A
Field Triplicates	N
Field Blanks	N

A = Acceptable, N = Not provided/applicable, SR = See report

The contents of this report reflect findings made by ADR during Automated Data Review, manual applied qualifiers are not considered. Please refer to the Overall Qualifier Summary report for manual qualifiers.



## Field Duplicate RPD Report

Lab Reporting Batch ID: 440-141827-1

Laboratory: TA IRV

EDD Filename: Prep440-141827-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method: 2540C**  
**Matrix: AQ**

Analyte	Concentration (mg/L)		Sample RPD	eQAPP RPD	Flag
	TT-TP4-M3-20160317	TT-TP4-M3-20160317-DUP			
TOTAL DISSOLVED SOLIDS	11000	11000	0	30.00	No Qualifiers Applied

**Method: 314.0**  
**Matrix: AQ**

Analyte	Concentration (ug/L)		Sample RPD	eQAPP RPD	Flag
	TT-TP4-M3-20160317	TT-TP4-M3-20160317-DUP			
PERCHLORATE	780000	730000	7	30.00	No Qualifiers Applied

**Method: 6020**  
**Matrix: AQ**

Analyte	Concentration (ug/L)		Sample RPD	eQAPP RPD	Flag
	TT-TP4-M3-20160317 (DIS)	TT-TP4-M3-20160317-DUP (DIS)			
CHROMIUM	17000	18000	6	30.00	No Qualifiers Applied

**Method: 7199**  
**Matrix: AQ**

Analyte	Concentration (ug/L)		Sample RPD	eQAPP RPD	Flag
	TT-TP4-M3-20160317 (DIS)	TT-TP4-M3-20160317-DUP (DIS)			
Chromium, hexavalent	20000	18000	11	30.00	No Qualifiers Applied

**Method: SM5310B**  
**Matrix: AQ**

Analyte	Concentration (mg/L)		Sample RPD	eQAPP RPD	Flag
	TT-TP4-M3-20160317	TT-TP4-M3-20160317-DUP			
Total organic carbon	1.4	1.5	7	30.00	No Qualifiers Applied

# QC Outlier Report: HoldingTimes

Lab Reporting Batch ID: 440-141827-1  
EDD Filename: Prep440-141827-1

Laboratory: TA IRV  
eQAPP Name: TetraTechInc\_NERT\_11302016

Method: 7199 Preparation Method: Gen Prep  
Matrix: AQ

<i>Sample ID</i>	<i>Type</i>	<i>Actual</i>	<i>Criteria</i>	<i>Units</i>	<i>Flag</i>
TT-TP4-M3-20160317MS (RES/DIS)	Sampling To Analysis	25.25	24.00	HOURS	J- (all detects)
TT-TP4-M3-20160317MSD (RES/DIS)		25.50	24.00	HOURS	UJ (all non-detects)

# Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 440-141827-1

Laboratory: TA IRV

EDD Filename: Prep440-141827-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method: 7199**  
**Matrix: AQ**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
TT-TP4-M3-20160317MS (DIS) TT-TP4-M3-20160317MSD (DIS) (TT-TP4-M3-20160317)	Chromium, hexavalent	-21	-27	85.00-115.00	-	Chromium, hexavalent	J- (all detects) R (all non-detects)

**Method: 6020**  
**Matrix: AQ**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
TT-TP4-M3-20160317MS (DIS) (TT-TP4-M3-20160317)	CHROMIUM	12	-	75.00-125.00	-	CHROMIUM	J-(all detects) R(all non-detects)

**Method: 314.0**  
**Matrix: AQ**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
TT-TP4-M3-20160317MS TT-TP4-M3-20160317MSD (TT-TP4-M3-20160317)	PERCHLORATE	-5471	-3092	80.00-120.00	-	PERCHLORATE	J-(all detects) R(all non-detects)

# Data Qualifier Summary

Lab Reporting Batch ID: 440-141827-1

Laboratory: TA IRV

EDD Filename: Prep440-141827-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b> GENCHEM
<b>Method:</b> 314.0 <span style="float: right;"><b>Matrix:</b> AQ</span>

<b>Sample ID:</b> TT-TP4-M3-20160317	<b>Collected:</b> 3/17/2016 10:13:00 AM	<b>Analysis Type:</b> RES	<b>Dilution:</b> 10000						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
PERCHLORATE	780000		5000	MDL	10000	MRL	ug/L	J-	m

<b>Method Category:</b> METALS
<b>Method:</b> 6020 <span style="float: right;"><b>Matrix:</b> AQ</span>

<b>Sample ID:</b> TT-TP4-M3-20160317	<b>Collected:</b> 3/17/2016 10:13:00 AM	<b>Analysis Type:</b> RES/DIS	<b>Dilution:</b> 10						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHROMIUM	17000		5.0	MDL	20	MRL	ug/L	J-	m

<b>Method Category:</b> METALS
<b>Method:</b> 7199 <span style="float: right;"><b>Matrix:</b> AQ</span>

<b>Sample ID:</b> TT-TP4-M3-20160317	<b>Collected:</b> 3/17/2016 10:13:00 AM	<b>Analysis Type:</b> RES/DIS	<b>Dilution:</b> 1000						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chromium, hexavalent	20000		250	MDL	2000	MRL	ug/L	J-	m

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

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# Data Qualifier Summary

Lab Reporting Batch ID: 440-141827-1

Laboratory: TA IRV

EDD Filename: Prep440-141827-1

eQAPP Name: TetraTechInc\_NERT\_11302016

## Reason Code Legend

<i>Reason Code</i>	<i>Description</i>
m	Matrix Spike Lower Rejection

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

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# Data Review Summary

Lab Reporting Batch ID: 440-142439-1

Laboratory: TA IRV

EDD Filename: Prep440-142439-1

eQAPP Name: TetraTechInc\_NERT\_11302016

## *Validation Area*

## *Note*

<i>Validation Area</i>	<i>Note</i>
Technical Holding Times	SR
Temperature	A
Initial Calibration	N
Continuing Calibration/Initial Calibration Verification	N
Method Blanks	A
Surrogate/Tracer Spikes	N
Matrix Spike/Matrix Spike Duplicates	A
Laboratory Duplicates	A
Laboratory Replicates	N
Laboratory Control Samples	A
Compound Quantitation	SR
Field Duplicates	N
Field Triplicates	N
Field Blanks	N

A = Acceptable, N = Not provided/applicable, SR = See report

The contents of this report reflect findings made by ADR during Automated Data Review, manual applied qualifiers are not considered. Please refer to the Overall Qualifier Summary report for manual qualifiers.

# QC Outlier Report: HoldingTimes

Lab Reporting Batch ID: 440-142439-1  
EDD Filename: Prep440-142439-1

Laboratory: TA IRV  
eQAPP Name: TetraTechInc\_NERT\_11302016

Method: 7199 Preparation Method: Gen Prep  
Matrix: AQ

<i>Sample ID</i>	<i>Type</i>	<i>Actual</i>	<i>Criteria</i>	<i>Units</i>	<i>Flag</i>
TT-TP2-L2-20160323 (RES/DIS)	Sampling To Analysis	24.25	24.00	HOURS	J- (all detects) UJ (all non-detects)

# Data Qualifier Summary

Lab Reporting Batch ID: 440-142439-1

Laboratory: TA IRV

EDD Filename: Prep440-142439-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b> METALS
<b>Method:</b> 7199
<b>Matrix:</b> AQ

**Sample ID:** TT-TP2-L2-20160323      **Collected:** 3/23/2016 1:30:00 PM      **Analysis Type:** RES/DIS      **Dilution:** 20

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chromium, hexavalent	630	H	5.0	MDL	40	MRL	ug/L	J-	h

**Sample ID:** TT-TP3-L1-20160323      **Collected:** 3/23/2016 1:15:00 PM      **Analysis Type:** RES/DIS      **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chromium, hexavalent	1.3	J	0.25	MDL	2.0	MRL	ug/L	J	sp

**Sample ID:** TT-TP3-L2-20160323      **Collected:** 3/23/2016 1:20:00 PM      **Analysis Type:** RES/DIS      **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chromium, hexavalent	1.3	J	0.25	MDL	2.0	MRL	ug/L	J	sp

\* denotes a non-reportable result

**Project Name and Number:** 114-520225-2015-MO5 - NERT Soil Flushing

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# Data Qualifier Summary

Lab Reporting Batch ID: 440-142439-1

Laboratory: TA IRV

EDD Filename: Prep440-142439-1

eQAPP Name: TetraTechInc\_NERT\_11302016

## Reason Code Legend

<i>Reason Code</i>	<i>Description</i>
e	Sampling to Analysis Estimation
h	Sampling to Analysis Estimation
sp	Reporting Limit Trace Value

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

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# Reporting Limit Outliers

Lab Reporting Batch ID: 440-142439-1

Laboratory: TA IRV

EDD Filename: Prep440-142439-1

eQAPP Name: TetraTechInc\_NERT\_11302016

Method: 7199

Matrix: AQ

<i>SampleID</i>	<i>Analyte</i>	<i>Lab Qual</i>	<i>Result</i>	<i>Reporting Limit</i>	<i>RL Type</i>	<i>Units</i>	<i>Flag</i>
TT-TP3-L1-20160323	Chromium, hexavalent	J	1.3	2.0	MRL	ug/L	J (all detects)
TT-TP3-L2-20160323	Chromium, hexavalent	J	1.3	2.0	MRL	ug/L	J (all detects)

# Data Review Summary

Lab Reporting Batch ID: 440-142556-1

Laboratory: TA IRV

EDD Filename: Prep440-142556-1

eQAPP Name: TetraTechInc\_NERT\_11302016

## *Validation Area*

## *Note*

<i>Validation Area</i>	<i>Note</i>
Technical Holding Times	A
Temperature	A
Initial Calibration	N
Continuing Calibration/Initial Calibration Verification	N
Method Blanks	A
Surrogate/Tracer Spikes	N
Matrix Spike/Matrix Spike Duplicates	SR
Laboratory Duplicates	N
Laboratory Replicates	N
Laboratory Control Samples	A
Compound Quantitation	A
Field Duplicates	A
Field Triplicates	N
Field Blanks	N

A = Acceptable, N = Not provided/applicable, SR = See report

The contents of this report reflect findings made by ADR during Automated Data Review, manual applied qualifiers are not considered. Please refer to the Overall Qualifier Summary report for manual qualifiers.

## Field Duplicate RPD Report

Lab Reporting Batch ID: 440-142556-1

Laboratory: TA IRV

EDD Filename: Prep440-142556-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method: 2540C**  
**Matrix: AQ**

Analyte	Concentration (mg/L)		Sample RPD	eQAPP RPD	Flag
	TT-TP4-M3-20160324	TT-TP4-M3-20160324-DUP			
TOTAL DISSOLVED SOLIDS	11000	11000	0	30.00	No Qualifiers Applied

**Method: 314.0**  
**Matrix: AQ**

Analyte	Concentration (ug/L)		Sample RPD	eQAPP RPD	Flag
	TT-TP4-M3-20160324	TT-TP4-M3-20160324-DUP			
PERCHLORATE	580000	590000	2	30.00	No Qualifiers Applied

**Method: 6020**  
**Matrix: AQ**

Analyte	Concentration (ug/L)		Sample RPD	eQAPP RPD	Flag
	TT-TP4-M3-20160324 (DIS)	TT-TP4-M3-20160324-DUP (DIS)			
CHROMIUM	17000	17000	0	30.00	No Qualifiers Applied

**Method: 7199**  
**Matrix: AQ**

Analyte	Concentration (ug/L)		Sample RPD	eQAPP RPD	Flag
	TT-TP4-M3-20160324 (DIS)	TT-TP4-M3-20160324-DUP (DIS)			
Chromium, hexavalent	17000	17000	0	30.00	No Qualifiers Applied

**Method: SM5310B**  
**Matrix: AQ**

Analyte	Concentration (mg/L)		Sample RPD	eQAPP RPD	Flag
	TT-TP4-M3-20160324	TT-TP4-M3-20160324-DUP			
Total organic carbon	1.5	1.7	12	30.00	No Qualifiers Applied

# Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 440-142556-1

Laboratory: TA IRV

EDD Filename: Prep440-142556-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method: 7199**  
**Matrix: AQ**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
TT-TP4-M3-20160324MS (DIS) TT-TP4-M3-20160324MSD (DIS) (TT-TP4-M3-20160324)	Chromium, hexavalent	58	53	85.00-115.00	-	Chromium, hexavalent	J- (all detects) UJ (all non-detects)

**Method: 6020**  
**Matrix: AQ**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
TT-TP4-M3-20160324MS (DIS) TT-TP4-M3-20160324MSD (DIS) (TT-TP4-M3-20160324)	CHROMIUM	-212	-747	75.00-125.00	-	CHROMIUM	J-(all detects) R(all non-detects)

**Method: 314.0**  
**Matrix: AQ**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
TT-TP4-M3-20160324MS TT-TP4-M3-20160324MSD (TT-TP4-M3-20160324)	PERCHLORATE	-1311	-2467	80.00-120.00	-	PERCHLORATE	J-(all detects) R(all non-detects)

# Data Qualifier Summary

Lab Reporting Batch ID: 440-142556-1

Laboratory: TA IRV

EDD Filename: Prep440-142556-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b>	GENCHEM	
<b>Method:</b>	314.0	<b>Matrix:</b> AQ

<b>Sample ID:</b> TT-TP4-M3-20160324	<b>Collected:</b> 3/24/2016 12:21:00 PM	<b>Analysis Type:</b> RES	<b>Dilution:</b> 10000						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
PERCHLORATE	580000		5000	MDL	10000	MRL	ug/L	J-	m

<b>Method Category:</b>	METALS	
<b>Method:</b>	6020	<b>Matrix:</b> AQ

<b>Sample ID:</b> TT-TP4-M3-20160324	<b>Collected:</b> 3/24/2016 12:21:00 PM	<b>Analysis Type:</b> RES/DIS	<b>Dilution:</b> 10						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHROMIUM	17000		5.0	MDL	20	MRL	ug/L	J-	m

<b>Method Category:</b>	METALS	
<b>Method:</b>	7199	<b>Matrix:</b> AQ

<b>Sample ID:</b> TT-TP4-M3-20160324	<b>Collected:</b> 3/24/2016 12:21:00 PM	<b>Analysis Type:</b> RES/DIS	<b>Dilution:</b> 1000						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chromium, hexavalent	17000		250	MDL	2000	MRL	ug/L	J-	m

\* denotes a non-reportable result

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# Data Qualifier Summary

Lab Reporting Batch ID: 440-142556-1

Laboratory: TA IRV

EDD Filename: Prep440-142556-1

eQAPP Name: TetraTechInc\_NERT\_11302016

## Reason Code Legend

<i>Reason Code</i>	<i>Description</i>
m	Matrix Spike Lower Estimation
m	Matrix Spike Lower Rejection

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

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# Data Review Summary

Lab Reporting Batch ID: 440-142922-1

Laboratory: TA IRV

EDD Filename: Prep440-142922-1

eQAPP Name: TetraTechInc\_NERT\_11302016

## *Validation Area*

## *Note*

<i>Validation Area</i>	<i>Note</i>
Technical Holding Times	A
Temperature	A
Initial Calibration	N
Continuing Calibration/Initial Calibration Verification	N
Method Blanks	A
Surrogate/Tracer Spikes	N
Matrix Spike/Matrix Spike Duplicates	SR
Laboratory Duplicates	N
Laboratory Replicates	N
Laboratory Control Samples	A
Compound Quantitation	A
Field Duplicates	N
Field Triplicates	N
Field Blanks	N

A = Acceptable, N = Not provided/applicable, SR = See report

The contents of this report reflect findings made by ADR during Automated Data Review, manual applied qualifiers are not considered. Please refer to the Overall Qualifier Summary report for manual qualifiers.



# QC Outlier Report: HoldingTimes

Lab Reporting Batch ID: 440-142922-1  
EDD Filename: Prep440-142922-1

Laboratory: TA IRV  
eQAPP Name: TetraTechInc\_NERT\_11302016

Method: 7199 Preparation Method: Gen Prep  
Matrix: AQ

<i>Sample ID</i>	<i>Type</i>	<i>Actual</i>	<i>Criteria</i>	<i>Units</i>	<i>Flag</i>
TT-TP1-M1-20160330MS (RES/DIS)	Sampling To Analysis	24.25	24.00	HOURS	J- (all detects)
TT-TP1-M1-20160330MSD (RES/DIS)		24.50	24.00	HOURS	UJ (all non-detects)

# Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 440-142922-1

Laboratory: TA IRV

EDD Filename: Prep440-142922-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method: 7199**  
**Matrix: AQ**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
TT-TP1-M1-20160330MS (DIS) TT-TP1-M1-20160330MSD (DIS) (TT-TP1-M1-20160330)	Chromium, hexavalent	72	71	85.00-115.00	-	Chromium, hexavalent	J- (all detects) UJ (all non-detects)

**Method: 6020**  
**Matrix: AQ**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
TT-TP1-M1-20160330MS (DIS) TT-TP1-M1-20160330MSD (DIS) (TT-TP1-M1-20160330)	CHROMIUM	-7	-192	75.00-125.00	-	CHROMIUM	J-(all detects) R(all non-detects)

# Data Qualifier Summary

Lab Reporting Batch ID: 440-142922-1

Laboratory: TA IRV

EDD Filename: Prep440-142922-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b> METALS
<b>Method:</b> 6020 <span style="float: right;"><b>Matrix:</b> AQ</span>

3/30/2016 11:06:00

Sample ID: TT-TP1-M1-20160330 Collected: AM Analysis Type: RES/DIS Dilution: 10

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHROMIUM	6800		5.0	MDL	20	MRL	ug/L	J-	m

<b>Method Category:</b> METALS
<b>Method:</b> 7199 <span style="float: right;"><b>Matrix:</b> AQ</span>

3/30/2016 11:06:00

Sample ID: TT-TP1-M1-20160330 Collected: AM Analysis Type: RE2/DIS Dilution: 1000

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chromium, hexavalent	6300	F1	250	MDL	2000	MRL	ug/L	J-	m

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

# Data Qualifier Summary

Lab Reporting Batch ID: 440-142922-1

Laboratory: TA IRV

EDD Filename: Prep440-142922-1

eQAPP Name: TetraTechInc\_NERT\_11302016

## Reason Code Legend

<i>Reason Code</i>	<i>Description</i>
m	Matrix Spike Lower Estimation
m	Matrix Spike Lower Rejection

\* denotes a non-reportable result

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# Data Review Summary

Lab Reporting Batch ID: 440-143078-1

Laboratory: TA IRV

EDD Filename: Prep440-143078-1

eQAPP Name: TetraTechInc\_NERT\_11302016

## *Validation Area*

## *Note*

<i>Validation Area</i>	<i>Note</i>
Technical Holding Times	A
Temperature	A
Initial Calibration	N
Continuing Calibration/Initial Calibration Verification	N
Method Blanks	A
Surrogate/Tracer Spikes	N
Matrix Spike/Matrix Spike Duplicates	SR
Laboratory Duplicates	A
Laboratory Replicates	N
Laboratory Control Samples	A
Compound Quantitation	SR
Field Duplicates	A
Field Triplicates	N
Field Blanks	N

A = Acceptable, N = Not provided/applicable, SR = See report

The contents of this report reflect findings made by ADR during Automated Data Review, manual applied qualifiers are not considered. Please refer to the Overall Qualifier Summary report for manual qualifiers.

## Field Duplicate RPD Report

Lab Reporting Batch ID: 440-143078-1

Laboratory: TA IRV

EDD Filename: Prep440-143078-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method: 2540C**  
**Matrix: AQ**

Analyte	Concentration (mg/L)		Sample RPD	eQAPP RPD	Flag
	TT-TP4-M3-20160331	TT-TP4-M3-20160331-DUP			
TOTAL DISSOLVED SOLIDS	11000	11000	0	30.00	No Qualifiers Applied

**Method: 314.0**  
**Matrix: AQ**

Analyte	Concentration (ug/L)		Sample RPD	eQAPP RPD	Flag
	TT-TP4-M3-20160331	TT-TP4-M3-20160331-DUP			
PERCHLORATE	600000	640000	6	30.00	No Qualifiers Applied

**Method: 6020**  
**Matrix: AQ**

Analyte	Concentration (ug/L)		Sample RPD	eQAPP RPD	Flag
	TT-TP4-M3-20160331 (DIS)	TT-TP4-M3-20160331-DUP (DIS)			
CHROMIUM	16000	15000	6	30.00	No Qualifiers Applied

**Method: 7199**  
**Matrix: AQ**

Analyte	Concentration (ug/L)		Sample RPD	eQAPP RPD	Flag
	TT-TP4-M3-20160331 (DIS)	TT-TP4-M3-20160331-DUP (DIS)			
Chromium, hexavalent	16000	16000	0	30.00	No Qualifiers Applied

**Method: SM5310B**  
**Matrix: AQ**

Analyte	Concentration (mg/L)		Sample RPD	eQAPP RPD	Flag
	TT-TP4-M3-20160331	TT-TP4-M3-20160331-DUP			
Total organic carbon	1.5	1.5	0	30.00	No Qualifiers Applied

# Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 440-143078-1

Laboratory: TA IRV

EDD Filename: Prep440-143078-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method: 7199**  
**Matrix: AQ**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
TT-TP4-M3-20160331MS (DIS) TT-TP4-M3-20160331MSD (DIS) (TT-TP4-M3-20160331)	Chromium, hexavalent	66	58	85.00-115.00	-	Chromium, hexavalent	J- (all detects) UJ (all non-detects)

**Method: 314.0**  
**Matrix: AQ**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
TT-TP4-M3-20160331MS TT-TP4-M3-20160331MSD (TT-TP4-M3-20160331)	PERCHLORATE	3740	-8145	80.00-120.00	-	PERCHLORATE	J(all detects) R(all non-detects)

**Method: 6020**  
**Matrix: AQ**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
TT-TP4-M3-20160331MS (DIS) (TT-TP4-M3-20160331)	CHROMIUM	-59	-	75.00-125.00	-	CHROMIUM	J-(all detects) R(all non-detects)

# Data Qualifier Summary

Lab Reporting Batch ID: 440-143078-1

Laboratory: TA IRV

EDD Filename: Prep440-143078-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b>	GENCHEM	
<b>Method:</b>	314.0	<b>Matrix:</b> AQ

<b>Sample ID:</b> TT-TP4-M3-20160331	<b>Collected:</b> 3/31/2016 11:48:00 AM	<b>Analysis Type:</b> RES	<b>Dilution:</b> 10000						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
PERCHLORATE	600000		5000	MDL	10000	MRL	ug/L	J	m, m

<b>Method Category:</b>	METALS	
<b>Method:</b>	6020	<b>Matrix:</b> AQ

<b>Sample ID:</b> TT-TP4-M3-20160331	<b>Collected:</b> 3/31/2016 11:48:00 AM	<b>Analysis Type:</b> RES/DIS	<b>Dilution:</b> 10						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHROMIUM	16000		5.0	MDL	20	MRL	ug/L	J-	m

<b>Method Category:</b>	METALS	
<b>Method:</b>	7199	<b>Matrix:</b> AQ

<b>Sample ID:</b> TT-TP3-L2-20160331	<b>Collected:</b> 3/31/2016 12:15:00 PM	<b>Analysis Type:</b> RES/DIS	<b>Dilution:</b> 1						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chromium, hexavalent	1.4	J	0.25	MDL	2.0	MRL	ug/L	J	sp

<b>Sample ID:</b> TT-TP4-M3-20160331	<b>Collected:</b> 3/31/2016 11:48:00 AM	<b>Analysis Type:</b> RES/DIS	<b>Dilution:</b> 1000						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chromium, hexavalent	16000		250	MDL	2000	MRL	ug/L	J-	m

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

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# Data Qualifier Summary

Lab Reporting Batch ID: 440-143078-1

Laboratory: TA IRV

EDD Filename: Prep440-143078-1

eQAPP Name: TetraTechInc\_NERT\_11302016

## Reason Code Legend

<i>Reason Code</i>	<i>Description</i>
m	Matrix Spike Lower Estimation
m	Matrix Spike Lower Rejection
m	Matrix Spike Upper Estimation
sp	Reporting Limit Trace Value

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

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# Reporting Limit Outliers

Lab Reporting Batch ID: 440-143078-1

Laboratory: TA IRV

EDD Filename: Prep440-143078-1

eQAPP Name: TetraTechInc\_NERT\_11302016

Method: 7199

Matrix: AQ

<i>SampleID</i>	<i>Analyte</i>	<i>Lab Qual</i>	<i>Result</i>	<i>Reporting Limit</i>	<i>RL Type</i>	<i>Units</i>	<i>Flag</i>
TT-TP3-L2-20160331	Chromium, hexavalent	J	1.4	2.0	MRL	ug/L	J (all detects)

# Data Review Summary

Lab Reporting Batch ID: 440-143273-1

Laboratory: TA IRV

EDD Filename: Prep440-143273-1

eQAPP Name: TetraTechInc\_NERT\_11302016

## *Validation Area*

## *Note*

<i>Validation Area</i>	<i>Note</i>
Technical Holding Times	SR
Temperature	A
Initial Calibration	N
Continuing Calibration/Initial Calibration Verification	N
Method Blanks	SR
Surrogate/Tracer Spikes	A
Matrix Spike/Matrix Spike Duplicates	N
Laboratory Duplicates	A
Laboratory Replicates	N
Laboratory Control Samples	A
Compound Quantitation	SR
Field Duplicates	N
Field Triplicates	N
Field Blanks	N

A = Acceptable, N = Not provided/applicable, SR = See report

The contents of this report reflect findings made by ADR during Automated Data Review, manual applied qualifiers are not considered. Please refer to the Overall Qualifier Summary report for manual qualifiers.

# QC Outlier Report: HoldingTimes

Lab Reporting Batch ID: 440-143273-1  
EDD Filename: Prep440-143273-1

Laboratory: TA IRV  
eQAPP Name: TetraTechInc\_NERT\_11302016

Method: 300.0      Preparation Method: Gen Prep  
Matrix: AQ

<i>Sample ID</i>	<i>Type</i>	<i>Actual</i>	<i>Criteria</i>	<i>Units</i>	<i>Flag</i>
TT-TP2-M2-2016 (RES)	Sampling To Analysis	106.75	48.00	HOURS	J- (all detects) R (all non-detects)

# Method Blank Outlier Report

Lab Reporting Batch ID: 440-143273-1

Laboratory: TA IRV

EDD Filename: Prep440-143273-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method:** 6020  
**Matrix:** AQ

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
MB 440-322849/1-C	4/14/2016 9:56:00 PM	ZINC	3.82 ug/L	TT-TP1-M1-2016 TT-TP1-M2-2016 TT-TP1-M3-2016 TT-TP2-M1-2016 TT-TP2-M2-2016

# Data Qualifier Summary

Lab Reporting Batch ID: 440-143273-1

Laboratory: TA IRV

EDD Filename: Prep440-143273-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b>	GENCHEM	
<b>Method:</b>	300.0	<b>Matrix:</b> AQ

Sample ID: TT-TP2-M2-2016      Collected: 4/4/2016 1:32:00 PM      Analysis Type: RES      Dilution: 50

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Nitrate as N	68	H	2.8	MDL	5.5	MRL	mg/L	J-	h

<b>Method Category:</b>	METALS	
<b>Method:</b>	6010B	<b>Matrix:</b> AQ

Sample ID: TT-TP1-M1-2016      Collected: 4/4/2016 11:04:00 AM      Analysis Type: RES/DIS      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
IRON	0.013	J	0.010	MDL	0.040	MRL	mg/L	J	sp
MANGANESE	0.019	J	0.010	MDL	0.020	MRL	mg/L	J	sp

Sample ID: TT-TP1-M2-2016      Collected: 4/4/2016 11:51:00 AM      Analysis Type: RES/DIS      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MANGANESE	0.011	J	0.010	MDL	0.020	MRL	mg/L	J	sp

<b>Method Category:</b>	METALS	
<b>Method:</b>	6020	<b>Matrix:</b> AQ

Sample ID: TT-TP1-M1-2016      Collected: 4/4/2016 11:04:00 AM      Analysis Type: RES/DIS      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
COPPER	0.72	J	0.50	MDL	2.0	MRL	ug/L	J	sp
NICKEL	1.3	J	0.50	MDL	2.0	MRL	ug/L	J	sp
SELENIUM	0.53	J	0.50	MDL	2.0	MRL	ug/L	J	sp

Sample ID: TT-TP1-M2-2016      Collected: 4/4/2016 11:51:00 AM      Analysis Type: RES/DIS      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
COPPER	1.1	J	0.50	MDL	2.0	MRL	ug/L	J	sp
NICKEL	1.8	J	0.50	MDL	2.0	MRL	ug/L	J	sp
SELENIUM	0.68	J	0.50	MDL	2.0	MRL	ug/L	J	sp

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

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# Data Qualifier Summary

Lab Reporting Batch ID: 440-143273-1

Laboratory: TA IRV

EDD Filename: Prep440-143273-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b> METALS
<b>Method:</b> 6020
<b>Matrix:</b> AQ

Sample ID: TT-TP1-M3-2016      Collected: 4/4/2016 12:26:00 PM      Analysis Type: RES/DIS      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
COPPER	1.0	J	0.50	MDL	2.0	MRL	ug/L	J	sp
NICKEL	1.6	J	0.50	MDL	2.0	MRL	ug/L	J	sp
SELENIUM	0.81	J	0.50	MDL	2.0	MRL	ug/L	J	sp

Sample ID: TT-TP2-M1-2016      Collected: 4/4/2016 12:59:00 PM      Analysis Type: RES/DIS      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
COPPER	0.64	J	0.50	MDL	2.0	MRL	ug/L	J	sp
NICKEL	1.2	J	0.50	MDL	2.0	MRL	ug/L	J	sp

Sample ID: TT-TP2-M2-2016      Collected: 4/4/2016 1:32:00 PM      Analysis Type: RES/DIS      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
NICKEL	1.5	J	0.50	MDL	2.0	MRL	ug/L	J	sp
SELENIUM	0.70	J	0.50	MDL	2.0	MRL	ug/L	J	sp

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

# Data Qualifier Summary

Lab Reporting Batch ID: 440-143273-1

Laboratory: TA IRV

EDD Filename: Prep440-143273-1

eQAPP Name: TetraTechInc\_NERT\_11302016

## Reason Code Legend

<i>Reason Code</i>	<i>Description</i>
bl	Method Blank Contamination
h	Sampling to Analysis Rejection
sp	Reporting Limit Trace Value

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

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## Reporting Limit Outliers

Lab Reporting Batch ID: 440-143273-1

Laboratory: TA IRV

EDD Filename: Prep440-143273-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method:** 6010B

**Matrix:** AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
TT-TP1-M1-2016	IRON	J	0.013	0.040	MRL	mg/L	J (all detects)
	MANGANESE	J	0.019	0.020	MRL	mg/L	
TT-TP1-M2-2016	MANGANESE	J	0.011	0.020	MRL	mg/L	J (all detects)

**Method:** 6020

**Matrix:** AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
TT-TP1-M1-2016	COPPER	J	0.72	2.0	MRL	ug/L	J (all detects)
	NICKEL	J	1.3	2.0	MRL	ug/L	
	SELENIUM	J	0.53	2.0	MRL	ug/L	
TT-TP1-M2-2016	COPPER	J	1.1	2.0	MRL	ug/L	J (all detects)
	NICKEL	J	1.8	2.0	MRL	ug/L	
	SELENIUM	J	0.68	2.0	MRL	ug/L	
TT-TP1-M3-2016	COPPER	J	1.0	2.0	MRL	ug/L	J (all detects)
	NICKEL	J	1.6	2.0	MRL	ug/L	
	SELENIUM	J	0.81	2.0	MRL	ug/L	
TT-TP2-M1-2016	COPPER	J	0.64	2.0	MRL	ug/L	J (all detects)
	NICKEL	J	1.2	2.0	MRL	ug/L	
TT-TP2-M2-2016	NICKEL	J	1.5	2.0	MRL	ug/L	J (all detects)
	SELENIUM	J	0.70	2.0	MRL	ug/L	

# Data Review Summary

Lab Reporting Batch ID: 440-143458-1

Laboratory: TA IRV

EDD Filename: Prep440-143458-1

eQAPP Name: TetraTechInc\_NERT\_11302016

## *Validation Area*

## *Note*

<i>Validation Area</i>	<i>Note</i>
Technical Holding Times	A
Temperature	A
Initial Calibration	N
Continuing Calibration/Initial Calibration Verification	N
Method Blanks	SR
Surrogate/Tracer Spikes	A
Matrix Spike/Matrix Spike Duplicates	SR
Laboratory Duplicates	A
Laboratory Replicates	N
Laboratory Control Samples	A
Compound Quantitation	SR
Field Duplicates	SR
Field Triplicates	N
Field Blanks	N

A = Acceptable, N = Not provided/applicable, SR = See report

The contents of this report reflect findings made by ADR during Automated Data Review, manual applied qualifiers are not considered. Please refer to the Overall Qualifier Summary report for manual qualifiers.

## Field Duplicate RPD Report

Lab Reporting Batch ID: 440-143458-1

Laboratory: TA IRV

EDD Filename: Prep440-143458-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method: 2320B**  
**Matrix: AQ**

Analyte	Concentration (mg/L)		Sample RPD	eQAPP RPD	Flag
	TT-TP4-M3-20160405	TT-TP4-M3-20160405-DUP			
Alkalinity as CaCO3	160	160	0	30.00	No Qualifiers Applied
Bicarbonate ion as HCO3	200	200	0		

**Method: 2540C**  
**Matrix: AQ**

Analyte	Concentration (mg/L)		Sample RPD	eQAPP RPD	Flag
	TT-TP4-M3-20160405	TT-TP4-M3-20160405-DUP			
TOTAL DISSOLVED SOLIDS	11000	11000	0	30.00	No Qualifiers Applied

**Method: 300.0**  
**Matrix: AQ**

Analyte	Concentration (mg/L)		Sample RPD	eQAPP RPD	Flag
	TT-TP4-M3-20160405	TT-TP4-M3-20160405-DUP			
CHLORIDE	1000	1000	0	30.00	No Qualifiers Applied
Nitrate as N	160	190	17	30.00	
SULFATE	1400	1500	7	30.00	

**Method: 300.1B**  
**Matrix: AQ**

Analyte	Concentration (ug/L)		Sample RPD	eQAPP RPD	Flag
	TT-TP4-M3-20160405	TT-TP4-M3-20160405-DUP			
Chlorate	3600000	3600000	0	30.00	No Qualifiers Applied

**Method: 314.0**  
**Matrix: AQ**

Analyte	Concentration (ug/L)		Sample RPD	eQAPP RPD	Flag
	TT-TP4-M3-20160405	TT-TP4-M3-20160405-DUP			
PERCHLORATE	570000	580000	2	30.00	No Qualifiers Applied

**Method: 6010B**  
**Matrix: AQ**

Analyte	Concentration (mg/L)		Sample RPD	eQAPP RPD	Flag
	TT-TP4-M3-20160405 (DIS)	TT-TP4-M3-20160405-DUP (DIS)			
BORON	3.9	3.9	0	30.00	No Qualifiers Applied
CALCIUM	420	420	0	30.00	
MAGNESIUM	180	180	0	30.00	
POTASSIUM	32	32	0	30.00	
SODIUM	1900	2100	10	30.00	
IRON	0.060	0.040 U	200	30.00	J(all detects) UJ(all non-detects)

**Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing**

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## Field Duplicate RPD Report

Lab Reporting Batch ID: 440-143458-1

Laboratory: TA IRV

EDD Filename: Prep440-143458-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method:** 6020

**Matrix:** AQ

Analyte	Concentration (ug/L)		Sample RPD	eQAPP RPD	Flag
	TT-TP4-M3-20160405 (DIS)	TT-TP4-M3-20160405-DUP (DIS)			
ARSENIC	100	110	10	30.00	No Qualifiers Applied
BARIUM	33	32	3	30.00	
CHROMIUM	14000	15000	7	30.00	
COPPER	6.3	7.3	15	30.00	
MOLYBDENUM	43	46	7	30.00	
NICKEL	6.6	7.5	13	30.00	
SELENIUM	10 U	3.1	200	30.00	J(all detects) UJ(all non-detects)

**Method:** 7199

**Matrix:** AQ

Analyte	Concentration (ug/L)		Sample RPD	eQAPP RPD	Flag
	TT-TP4-M3-20160405 (DIS)	TT-TP4-M3-20160405-DUP (DIS)			
Chromium, hexavalent	15000	17000	12	30.00	No Qualifiers Applied

**Method:** SM5310B

**Matrix:** AQ

Analyte	Concentration (mg/L)		Sample RPD	eQAPP RPD	Flag
	TT-TP4-M3-20160405	TT-TP4-M3-20160405-DUP			
Total organic carbon	1.6	1.6	0	30.00	No Qualifiers Applied

# QC Outlier Report: HoldingTimes

Lab Reporting Batch ID: 440-143458-1  
EDD Filename: Prep440-143458-1

Laboratory: TA IRV  
eQAPP Name: TetraTechInc\_NERT\_11302016

Method: 7199 Preparation Method: Gen Prep  
Matrix: AQ

<i>Sample ID</i>	<i>Type</i>	<i>Actual</i>	<i>Criteria</i>	<i>Units</i>	<i>Flag</i>
TT-TP4-M3-20160405MS (RES/DIS)	Sampling To Analysis	24.25	24.00	HOURS	J- (all detects)
TT-TP4-M3-20160405MSD (RES/DIS)		26.00	24.00	HOURS	UJ (all non-detects)

# Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 440-143458-1

Laboratory: TA IRV

EDD Filename: Prep440-143458-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method: 7199**  
**Matrix: AQ**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
TT-TP4-M3-20160405MS (DIS) TT-TP4-M3-20160405MSD (DIS) (TT-TP4-M3-20160405)	Chromium, hexavalent	-486	-463	85.00-115.00	-	Chromium, hexavalent	J- (all detects) R (all non-detects)

**Method: 300.0**  
**Matrix: AQ**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
TT-TP4-M3-20160405MS TT-TP4-M3-20160405MSD (TT-TP4-M3-20160405)	Nitrate as N	130	7	80.00-120.00	-	Nitrate as N	J(all detects) R(all non-detects)
TT-TP4-M3-20160405MS TT-TP4-M3-20160405MSD (TT-TP4-M3-20160405)	CHLORIDE SULFATE	79 -101	-7 -203	80.00-120.00 80.00-120.00	- -	CHLORIDE SULFATE	J-(all detects) R(all non-detects)

**Method: 300.1B**  
**Matrix: AQ**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
TT-TP4-M3-20160405MS TT-TP4-M3-20160405MSD (TT-TP4-M3-20160405)	Chlorate	2025	6243	75.00-125.00	-	Chlorate	J+(all detects)

**Method: 6010B**  
**Matrix: AQ**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
TT-TP4-M3-20160405MS (DIS) TT-TP4-M3-20160405MSD (DIS) (TT-TP4-M3-20160405)	CALCIUM MAGNESIUM SODIUM	426 296 1174	308 - 1654	75.00-125.00 75.00-125.00 75.00-125.00	- - -	CALCIUM MAGNESIUM SODIUM	J+(all detects)

# Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 440-143458-1

Laboratory: TA IRV

EDD Filename: Prep440-143458-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method: 6020**  
**Matrix: AQ**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
TT-TP4-M3-20160405MS (DIS) TT-TP4-M3-20160405MSD (DIS) (TT-TP4-M3-20160405)	CHROMIUM	128	9	75.00-125.00	-	CHROMIUM	J(all detects) R(all non-detects)

**Method: SM5310B**  
**Matrix: AQ**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
TT-TP4-M3-20160405MSD (TT-TP4-M3-20160405)	Total organic carbon	-	-	80.00-120.00	25 (20.00)	Total organic carbon	J(all detects) UJ(all non-detects)

**Method: 314.0**  
**Matrix: AQ**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
TT-TP4-M3-20160405MS TT-TP4-M3-20160405MSD (TT-TP4-M3-20160405)	PERCHLORATE	-1700	-9295	80.00-120.00	-	PERCHLORATE	J-(all detects) R(all non-detects)

## Method Blank Outlier Report

Lab Reporting Batch ID: 440-143458-1

Laboratory: TA IRV

EDD Filename: Prep440-143458-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method:</b> 6010B
<b>Matrix:</b> AQ

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
MB 440-323718/1-B	4/14/2016 10:41:00 AM	CALCIUM	0.0693 mg/L	TT-TP3-M1-20160405 TT-TP3-M2-20160405 TT-TP4-M1-20160405 TT-TP4-M2-20160405 TT-TP4-M3-20160405 TT-TP4-M3-20160405-DUP

<b>Method:</b> 6020
<b>Matrix:</b> AQ

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
MB 440-323718/1-D	4/18/2016 11:10:00 AM	CHROMIUM ZINC	1.21 ug/L 4.73 ug/L	TT-TP3-M1-20160405 TT-TP3-M2-20160405 TT-TP4-M1-20160405 TT-TP4-M2-20160405 TT-TP4-M3-20160405 TT-TP4-M3-20160405-DUP



# Data Qualifier Summary

Lab Reporting Batch ID: 440-143458-1

Laboratory: TA IRV

EDD Filename: Prep440-143458-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b>	GENCHEM	
<b>Method:</b>	300.0	<b>Matrix:</b> AQ

Sample ID: TT-TP4-M3-20160405      Collected: 4/5/2016 12:38:00 PM      Analysis Type: RES      Dilution: 200

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Nitrate as N	160		11	MDL	22	MRL	mg/L	J	m, m

Sample ID: TT-TP4-M3-20160405      Collected: 4/5/2016 12:38:00 PM      Analysis Type: RES2      Dilution: 200

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHLORIDE	1000		50	MDL	100	MRL	mg/L	J-	m, m
SULFATE	1400		50	MDL	100	MRL	mg/L	J-	m

<b>Method Category:</b>	GENCHEM	
<b>Method:</b>	300.1B	<b>Matrix:</b> AQ

Sample ID: TT-TP4-M3-20160405      Collected: 4/5/2016 12:38:00 PM      Analysis Type: RES      Dilution: 10000

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chlorate	3600000		100000	MDL	200000	MRL	ug/L	J+	m

<b>Method Category:</b>	GENCHEM	
<b>Method:</b>	314.0	<b>Matrix:</b> AQ

Sample ID: TT-TP4-M3-20160405      Collected: 4/5/2016 12:38:00 PM      Analysis Type: RES      Dilution: 10000

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
PERCHLORATE	570000		5000	MDL	10000	MRL	ug/L	J-	m

<b>Method Category:</b>	GENCHEM	
<b>Method:</b>	SM5310B	<b>Matrix:</b> AQ

Sample ID: TT-TP4-M3-20160405      Collected: 4/5/2016 12:38:00 PM      Analysis Type: RES      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Total organic carbon	1.6	F2	0.65	MDL	1.0	MRL	mg/L	J	ld

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

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# Data Qualifier Summary

Lab Reporting Batch ID: 440-143458-1

Laboratory: TA IRV

EDD Filename: Prep440-143458-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b> METALS
<b>Method:</b> 6010B <span style="float: right;"><b>Matrix:</b> AQ</span>

Sample ID: TT-TP4-M2-20160405 Collected: 4/5/2016 12:01:00 PM Analysis Type: RES/DIS Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
IRON	0.010	J	0.010	MDL	0.040	MRL	mg/L	J	sp

Sample ID: TT-TP4-M3-20160405 Collected: 4/5/2016 12:38:00 PM Analysis Type: RE2/DIS Dilution: 100

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SODIUM	1900		25	MDL	50	MRL	mg/L	J+	m

Sample ID: TT-TP4-M3-20160405 Collected: 4/5/2016 12:38:00 PM Analysis Type: RES/DIS Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CALCIUM	420	B	0.050	MDL	0.10	MRL	mg/L	J+	m
IRON	0.060		0.010	MDL	0.040	MRL	mg/L	J	fd
MAGNESIUM	180		0.010	MDL	0.020	MRL	mg/L	J+	m

Sample ID: TT-TP4-M3-20160405-DUP Collected: 4/5/2016 12:38:00 PM Analysis Type: RES/DIS Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
IRON	0.010	U	0.010	MDL	0.040	MRL	mg/L	UJ	fd

<b>Method Category:</b> METALS
<b>Method:</b> 6020 <span style="float: right;"><b>Matrix:</b> AQ</span>

Sample ID: TT-TP3-M1-20160405 Collected: 4/5/2016 10:15:00 AM Analysis Type: RES/DIS Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
COPPER	1.8	J	0.50	MDL	2.0	MRL	ug/L	J	sp
NICKEL	0.87	J	0.50	MDL	2.0	MRL	ug/L	J	sp
SELENIUM	1.3	J	0.50	MDL	2.0	MRL	ug/L	J	sp

Sample ID: TT-TP3-M2-20160405 Collected: 4/5/2016 10:46:00 AM Analysis Type: RES/DIS Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
NICKEL	0.87	J	0.50	MDL	2.0	MRL	ug/L	J	sp

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

# Data Qualifier Summary

Lab Reporting Batch ID: 440-143458-1

Laboratory: TA IRV

EDD Filename: Prep440-143458-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b>	METALS	
<b>Method:</b>	6020	<b>Matrix:</b> AQ

Sample ID: TT-TP3-M2-20160405      Collected: 4/5/2016 10:46:00 AM      Analysis Type: RES/DIS      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	1.5	J	0.50	MDL	2.0	MRL	ug/L	J	sp

Sample ID: TT-TP4-M1-20160405      Collected: 4/5/2016 11:23:00 AM      Analysis Type: RES/DIS      Dilution: 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
NICKEL	4.2	J	2.5	MDL	10	MRL	ug/L	J	sp
SELENIUM	2.8	J	2.5	MDL	10	MRL	ug/L	J	sp
ZINC	41	J B	13	MDL	100	MRL	ug/L	J	sp

Sample ID: TT-TP4-M2-20160405      Collected: 4/5/2016 12:01:00 PM      Analysis Type: RES/DIS      Dilution: 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
COPPER	5.5	J	2.5	MDL	10	MRL	ug/L	J	sp
NICKEL	4.2	J	2.5	MDL	10	MRL	ug/L	J	sp
ZINC	33	J B	13	MDL	100	MRL	ug/L	J	sp

Sample ID: TT-TP4-M3-20160405      Collected: 4/5/2016 12:38:00 PM      Analysis Type: RES/DIS      Dilution: 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHROMIUM	14000	B	2.5	MDL	10	MRL	ug/L	J	m, m
COPPER	6.3	J	2.5	MDL	10	MRL	ug/L	J	sp
NICKEL	6.6	J	2.5	MDL	10	MRL	ug/L	J	sp
SELENIUM	2.5	U	2.5	MDL	10	MRL	ug/L	UJ	fd

Sample ID: TT-TP4-M3-20160405-DUP      Collected: 4/5/2016 12:38:00 PM      Analysis Type: RES/DIS      Dilution: 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
COPPER	7.3	J	2.5	MDL	10	MRL	ug/L	J	sp
NICKEL	7.5	J	2.5	MDL	10	MRL	ug/L	J	sp
SELENIUM	3.1	J	2.5	MDL	10	MRL	ug/L	J	sp, fd

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

# Data Qualifier Summary

Lab Reporting Batch ID: 440-143458-1

Laboratory: TA IRV

EDD Filename: Prep440-143458-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b> METALS
<b>Method:</b> 7199 <span style="float: right;"><b>Matrix:</b> AQ</span>

**Sample ID:** TT-TP3-L2-20160405 **Collected:** 4/5/2016 12:39:00 PM **Analysis Type:** RES/DIS **Dilution:** 1

<b>Analyte</b>	<b>Lab Result</b>	<b>Lab Qual</b>	<b>DL</b>	<b>DL Type</b>	<b>RL</b>	<b>RL Type</b>	<b>Units</b>	<b>Data Review Qual</b>	<b>Reason Code</b>
Chromium, hexavalent	1.1	J	0.25	MDL	2.0	MRL	ug/L	J	sp

**Sample ID:** TT-TP4-M3-20160405 **Collected:** 4/5/2016 12:38:00 PM **Analysis Type:** RES/DIS **Dilution:** 1000

<b>Analyte</b>	<b>Lab Result</b>	<b>Lab Qual</b>	<b>DL</b>	<b>DL Type</b>	<b>RL</b>	<b>RL Type</b>	<b>Units</b>	<b>Data Review Qual</b>	<b>Reason Code</b>
Chromium, hexavalent	15000		250	MDL	2000	MRL	ug/L	J-	m

\* denotes a non-reportable result

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# Data Qualifier Summary

Lab Reporting Batch ID: 440-143458-1

Laboratory: TA IRV

EDD Filename: Prep440-143458-1

eQAPP Name: TetraTechInc\_NERT\_11302016

## Reason Code Legend

<i>Reason Code</i>	<i>Description</i>
bl	Method Blank Contamination
f	Matrix Spike Precision
fd	Field Duplicate Precision
ld	Matrix Spike Precision
ldf	Matrix Spike Precision
m	Matrix Spike Lower Estimation
m	Matrix Spike Lower Rejection
m	Matrix Spike Upper Estimation
sp	Reporting Limit Trace Value

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

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# Reporting Limit Outliers

Lab Reporting Batch ID: 440-143458-1

Laboratory: TA IRV

EDD Filename: Prep440-143458-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method:** 6010B  
**Matrix:** AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
TT-TP4-M2-20160405	IRON	J	0.010	0.040	MRL	mg/L	J (all detects)

**Method:** 6020  
**Matrix:** AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
TT-TP3-M1-20160405	COPPER	J	1.8	2.0	MRL	ug/L	J (all detects)
	NICKEL	J	0.87	2.0	MRL	ug/L	
	SELENIUM	J	1.3	2.0	MRL	ug/L	
TT-TP3-M2-20160405	NICKEL	J	0.87	2.0	MRL	ug/L	J (all detects)
	SELENIUM	J	1.5	2.0	MRL	ug/L	
TT-TP4-M1-20160405	NICKEL	J	4.2	10	MRL	ug/L	J (all detects)
	SELENIUM	J	2.8	10	MRL	ug/L	
	ZINC	J B	41	100	MRL	ug/L	
TT-TP4-M2-20160405	COPPER	J	5.5	10	MRL	ug/L	J (all detects)
	NICKEL	J	4.2	10	MRL	ug/L	
	ZINC	J B	33	100	MRL	ug/L	
TT-TP4-M3-20160405	COPPER	J	6.3	10	MRL	ug/L	J (all detects)
	NICKEL	J	6.6	10	MRL	ug/L	
TT-TP4-M3-20160405-DUP	COPPER	J	7.3	10	MRL	ug/L	J (all detects)
	NICKEL	J	7.5	10	MRL	ug/L	
	SELENIUM	J	3.1	10	MRL	ug/L	

**Method:** 7199  
**Matrix:** AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
TT-TP3-L2-20160405	Chromium, hexavalent	J	1.1	2.0	MRL	ug/L	J (all detects)

# Data Review Summary

Lab Reporting Batch ID: 440-144411-1

Laboratory: TA IRV

EDD Filename: Prep440-144411-1

eQAPP Name: TetraTechInc\_NERT\_11302016

## *Validation Area*

## *Note*

<i>Validation Area</i>	<i>Note</i>
Technical Holding Times	A
Temperature	A
Initial Calibration	N
Continuing Calibration/Initial Calibration Verification	N
Method Blanks	A
Surrogate/Tracer Spikes	N
Matrix Spike/Matrix Spike Duplicates	SR
Laboratory Duplicates	N
Laboratory Replicates	N
Laboratory Control Samples	A
Compound Quantitation	A
Field Duplicates	N
Field Triplicates	N
Field Blanks	N

A = Acceptable, N = Not provided/applicable, SR = See report

The contents of this report reflect findings made by ADR during Automated Data Review, manual applied qualifiers are not considered. Please refer to the Overall Qualifier Summary report for manual qualifiers.

# Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 440-144411-1

Laboratory: TA IRV

EDD Filename: Prep440-144411-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method: 7199**

**Matrix: AQ**

<i>QC Sample ID (Associated Samples)</i>	<i>Compound</i>	<i>MS %R</i>	<i>MSD %R</i>	<i>%R Limits</i>	<i>RPD (Limits)</i>	<i>Affected Compounds</i>	<i>Flag</i>
TT-TP1-M1-20160413MS (DIS) TT-TP1-M1-20160413MSD (DIS) (TT-TP1-M1-20160413)	Chromium, hexavalent	84	84	85.00-115.00	-	Chromium, hexavalent	J- (all detects) UJ (all non-detects)



# Data Qualifier Summary

Lab Reporting Batch ID: 440-144411-1

Laboratory: TA IRV

EDD Filename: Prep440-144411-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b> METALS
<b>Method:</b> 7199
<b>Matrix:</b> AQ

4/13/2016 12:37:00

Sample ID: TT-TP1-M1-20160413      Collected: PM      Analysis Type: RES/DIS      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chromium, hexavalent	10		0.25	MDL	2.0	MRL	ug/L	J-	m

\* denotes a non-reportable result

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# Data Qualifier Summary

Lab Reporting Batch ID: 440-144411-1

Laboratory: TA IRV

EDD Filename: Prep440-144411-1

eQAPP Name: TetraTechInc\_NERT\_11302016

## Reason Code Legend

<i>Reason Code</i>	<i>Description</i>
m	Matrix Spike Lower Estimation

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

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# Data Review Summary

Lab Reporting Batch ID: 440-145020-1

Laboratory: TA IRV

EDD Filename: Prep440-145020-1

eQAPP Name: TetraTechInc\_NERT\_11302016

## *Validation Area*

## *Note*

<i>Validation Area</i>	<i>Note</i>
Technical Holding Times	SR
Temperature	A
Initial Calibration	N
Continuing Calibration/Initial Calibration Verification	N
Method Blanks	A
Surrogate/Tracer Spikes	N
Matrix Spike/Matrix Spike Duplicates	SR
Laboratory Duplicates	N
Laboratory Replicates	N
Laboratory Control Samples	A
Compound Quantitation	A
Field Duplicates	A
Field Triplicates	N
Field Blanks	N

A = Acceptable, N = Not provided/applicable, SR = See report

The contents of this report reflect findings made by ADR during Automated Data Review, manual applied qualifiers are not considered. Please refer to the Overall Qualifier Summary report for manual qualifiers.

## Field Duplicate RPD Report

Lab Reporting Batch ID: 440-145020-1

Laboratory: TA IRV

EDD Filename: Prep440-145020-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method: 314.0**

**Matrix: AQ**

Analyte	Concentration (ug/L)		Sample RPD	eQAPP RPD	Flag
	TT-TP4-M3-20160420	TT-TP4-M3-20160420-DUP			
PERCHLORATE	410000	410000	0	30.00	No Qualifiers Applied

**Method: 6020**

**Matrix: AQ**

Analyte	Concentration (ug/L)		Sample RPD	eQAPP RPD	Flag
	TT-TP4-M3-20160420 (DIS)	TT-TP4-M3-20160420-DUP (DIS)			
CHROMIUM	11000	11000	0	30.00	No Qualifiers Applied

**Method: 7199**

**Matrix: AQ**

Analyte	Concentration (ug/L)		Sample RPD	eQAPP RPD	Flag
	TT-TP4-M3-20160420 (DIS)	TT-TP4-M3-20160420-DUP (DIS)			
Chromium, hexavalent	13000	13000	0	30.00	No Qualifiers Applied

**Method: SM5310B**

**Matrix: AQ**

Analyte	Concentration (mg/L)		Sample RPD	eQAPP RPD	Flag
	TT-TP4-M3-20160420	TT-TP4-M3-20160420-DUP			
Total organic carbon	1.8	1.8	0	30.00	No Qualifiers Applied

# QC Outlier Report: HoldingTimes

Lab Reporting Batch ID: 440-145020-1  
EDD Filename: Prep440-145020-1

Laboratory: TA IRV  
eQAPP Name: TetraTechInc\_NERT\_11302016

Method: 7199 Preparation Method: Gen Prep  
Matrix: AQ

<i>Sample ID</i>	<i>Type</i>	<i>Actual</i>	<i>Criteria</i>	<i>Units</i>	<i>Flag</i>
TT-TP4-M2-20160420 (RES/DIS)	Sampling To Analysis	25.00	24.00	HOURS	J- (all detects) UJ (all non-detects)

# Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 440-145020-1

Laboratory: TA IRV

EDD Filename: Prep440-145020-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method: 7199**  
**Matrix: AQ**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
TT-TP4-M3-20160420MS (DIS) TT-TP4-M3-20160420MSD (DIS) (TT-TP4-M3-20160420)	Chromium, hexavalent	84	74	85.00-115.00	-	Chromium, hexavalent	J- (all detects) UJ (all non-detects)

**Method: 6020**  
**Matrix: AQ**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
TT-TP4-M3-20160420MS (DIS) TT-TP4-M3-20160420MSD (DIS) (TT-TP4-M3-20160420)	CHROMIUM	43	-71	75.00-125.00	-	CHROMIUM	J-(all detects) R(all non-detects)

**Method: 314.0**  
**Matrix: AQ**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
TT-TP4-M3-20160420MS TT-TP4-M3-20160420MSD (TT-TP4-M3-20160420)	PERCHLORATE	87309	17637	80.00-120.00	-	PERCHLORATE	J+(all detects)

# Data Qualifier Summary

Lab Reporting Batch ID: 440-145020-1

Laboratory: TA IRV

EDD Filename: Prep440-145020-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b>	GENCHEM	
<b>Method:</b>	314.0	<b>Matrix:</b> AQ

<b>Sample ID:</b> TT-TP4-M3-20160420	<b>Collected:</b> PM	<b>4/20/2016 12:25:00</b>	<b>Analysis Type:</b> RES	<b>Dilution:</b> 10000					
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
PERCHLORATE	410000		5000	MDL	10000	MRL	ug/L	J+	m

<b>Method Category:</b>	METALS	
<b>Method:</b>	6020	<b>Matrix:</b> AQ

<b>Sample ID:</b> TT-TP4-M3-20160420	<b>Collected:</b> PM	<b>4/20/2016 12:25:00</b>	<b>Analysis Type:</b> RES/DIS	<b>Dilution:</b> 5					
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHROMIUM	11000		2.5	MDL	10	MRL	ug/L	J-	m, m

<b>Method Category:</b>	METALS	
<b>Method:</b>	7199	<b>Matrix:</b> AQ

<b>Sample ID:</b> TT-TP4-M2-20160420	<b>Collected:</b> AM	<b>4/20/2016 11:44:00</b>	<b>Analysis Type:</b> RES/DIS	<b>Dilution:</b> 100					
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chromium, hexavalent	4300	H	25	MDL	200	MRL	ug/L	J-	h

<b>Sample ID:</b> TT-TP4-M3-20160420	<b>Collected:</b> PM	<b>4/20/2016 12:25:00</b>	<b>Analysis Type:</b> RES/DIS	<b>Dilution:</b> 1000					
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chromium, hexavalent	13000		250	MDL	2000	MRL	ug/L	J-	m

\* denotes a non-reportable result

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# Data Qualifier Summary

Lab Reporting Batch ID: 440-145020-1

Laboratory: TA IRV

EDD Filename: Prep440-145020-1

eQAPP Name: TetraTechInc\_NERT\_11302016

## Reason Code Legend

<i>Reason Code</i>	<i>Description</i>
e	Sampling to Analysis Estimation
h	Sampling to Analysis Estimation
m	Matrix Spike Lower Estimation
m	Matrix Spike Lower Rejection
m	Matrix Spike Upper Estimation

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

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# Data Review Summary

Lab Reporting Batch ID: 440-145023-1

Laboratory: TA IRV

EDD Filename: Prep440-145023-1

eQAPP Name: TetraTechInc\_NERT\_11302016

## *Validation Area*

## *Note*

<i>Validation Area</i>	<i>Note</i>
Technical Holding Times	A
Temperature	A
Initial Calibration	N
Continuing Calibration/Initial Calibration Verification	N
Method Blanks	A
Surrogate/Tracer Spikes	N
Matrix Spike/Matrix Spike Duplicates	N
Laboratory Duplicates	N
Laboratory Replicates	N
Laboratory Control Samples	A
Compound Quantitation	SR
Field Duplicates	N
Field Triplicates	N
Field Blanks	N

A = Acceptable, N = Not provided/applicable, SR = See report

The contents of this report reflect findings made by ADR during Automated Data Review, manual applied qualifiers are not considered. Please refer to the Overall Qualifier Summary report for manual qualifiers.

# Data Qualifier Summary

Lab Reporting Batch ID: 440-145023-1

Laboratory: TA IRV

EDD Filename: Prep440-145023-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b>	METALS	
<b>Method:</b>	6020	<b>Matrix:</b> AQ

Sample ID: TT-TP3-L2-20160420      Collected: 4/20/2016 1:45:00 PM      Analysis Type: RES/DIS      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHROMIUM	1.9	J	0.50	MDL	2.0	MRL	ug/L	J	sp

<b>Method Category:</b>	METALS	
<b>Method:</b>	7199	<b>Matrix:</b> AQ

Sample ID: TT-TP3-L2-20160420      Collected: 4/20/2016 1:45:00 PM      Analysis Type: RES/DIS      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chromium, hexavalent	0.78	J	0.25	MDL	2.0	MRL	ug/L	J	sp

\* denotes a non-reportable result

# Data Qualifier Summary

Lab Reporting Batch ID: 440-145023-1

Laboratory: TA IRV

EDD Filename: Prep440-145023-1

eQAPP Name: TetraTechInc\_NERT\_11302016

## Reason Code Legend

<i>Reason Code</i>	<i>Description</i>
sp	Reporting Limit Trace Value

\* denotes a non-reportable result

**Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing**

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# Reporting Limit Outliers

Lab Reporting Batch ID: 440-145023-1

Laboratory: TA IRV

EDD Filename: Prep440-145023-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method:** 6020

**Matrix:** AQ

<b>SampleID</b>	<b>Analyte</b>	<b>Lab Qual</b>	<b>Result</b>	<b>Reporting Limit</b>	<b>RL Type</b>	<b>Units</b>	<b>Flag</b>
TT-TP3-L2-20160420	CHROMIUM	J	1.9	2.0	MRL	ug/L	J (all detects)

**Method:** 7199

**Matrix:** AQ

<b>SampleID</b>	<b>Analyte</b>	<b>Lab Qual</b>	<b>Result</b>	<b>Reporting Limit</b>	<b>RL Type</b>	<b>Units</b>	<b>Flag</b>
TT-TP3-L2-20160420	Chromium, hexavalent	J	0.78	2.0	MRL	ug/L	J (all detects)

# Data Review Summary

Lab Reporting Batch ID: 440-145639-1

Laboratory: TA IRV

EDD Filename: Prep440-145639-1

eQAPP Name: TetraTechInc\_NERT\_11302016

## *Validation Area*

## *Note*

<i>Validation Area</i>	<i>Note</i>
Technical Holding Times	A
Temperature	A
Initial Calibration	N
Continuing Calibration/Initial Calibration Verification	N
Method Blanks	A
Surrogate/Tracer Spikes	N
Matrix Spike/Matrix Spike Duplicates	SR
Laboratory Duplicates	A
Laboratory Replicates	N
Laboratory Control Samples	A
Compound Quantitation	A
Field Duplicates	A
Field Triplicates	N
Field Blanks	N

A = Acceptable, N = Not provided/applicable, SR = See report

The contents of this report reflect findings made by ADR during Automated Data Review, manual applied qualifiers are not considered. Please refer to the Overall Qualifier Summary report for manual qualifiers.

## Field Duplicate RPD Report

Lab Reporting Batch ID: 440-145639-1

Laboratory: TA IRV

EDD Filename: Prep440-145639-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method: 2540C**  
**Matrix: AQ**

Analyte	Concentration (mg/L)		Sample RPD	eQAPP RPD	Flag
	TT-TP4-M3-20160427	TT-TP4-M3-20160427-DUP			
TOTAL DISSOLVED SOLIDS	8600	8700	1	30.00	No Qualifiers Applied

**Method: 314.0**  
**Matrix: AQ**

Analyte	Concentration (ug/L)		Sample RPD	eQAPP RPD	Flag
	TT-TP4-M3-20160427	TT-TP4-M3-20160427-DUP			
PERCHLORATE	370000	460000	22	30.00	No Qualifiers Applied

**Method: 6020**  
**Matrix: AQ**

Analyte	Concentration (ug/L)		Sample RPD	eQAPP RPD	Flag
	TT-TP4-M3-20160427 (DIS)	TT-TP4-M3-20160427-DUP (DIS)			
CHROMIUM	10000	10000	0	30.00	No Qualifiers Applied

**Method: 7199**  
**Matrix: AQ**

Analyte	Concentration (ug/L)		Sample RPD	eQAPP RPD	Flag
	TT-TP4-M3-20160427 (DIS)	TT-TP4-M3-20160427-DUP (DIS)			
Chromium, hexavalent	11000	11000	0	30.00	No Qualifiers Applied

**Method: SM5310B**  
**Matrix: AQ**

Analyte	Concentration (mg/L)		Sample RPD	eQAPP RPD	Flag
	TT-TP4-M3-20160427	TT-TP4-M3-20160427-DUP			
Total organic carbon	1.9	1.9	0	30.00	No Qualifiers Applied

# Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 440-145639-1

Laboratory: TA IRV

EDD Filename: Prep440-145639-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method: 7199**  
**Matrix: AQ**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
TT-TP4-M3-20160427MS (DIS) TT-TP4-M3-20160427MSD (DIS) (TT-TP4-M3-20160427)	Chromium, hexavalent	62	57	85.00-115.00	-	Chromium, hexavalent	J- (all detects) UJ (all non-detects)

**Method: 6020**  
**Matrix: AQ**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
TT-TP4-M3-20160427MSD (DIS) (TT-TP4-M3-20160427)	CHROMIUM	-	-100	75.00-125.00	-	CHROMIUM	J-(all detects) R(all non-detects)

**Method: 314.0**  
**Matrix: AQ**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
TT-TP4-M3-20160427MS TT-TP4-M3-20160427MSD (TT-TP4-M3-20160427)	PERCHLORATE	-1659	3844	80.00-120.00	-	PERCHLORATE	J(all detects) R(all non-detects)

# Data Qualifier Summary

Lab Reporting Batch ID: 440-145639-1

Laboratory: TA IRV

EDD Filename: Prep440-145639-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b>	GENCHEM	
<b>Method:</b>	314.0	<b>Matrix:</b> AQ

Sample ID: TT-TP4-M3-20160427      Collected: 4/27/2016 1:50:00 PM      Analysis Type: RES      Dilution: 10000

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
PERCHLORATE	370000		5000	MDL	10000	MRL	ug/L	J	m, m

<b>Method Category:</b>	METALS	
<b>Method:</b>	6020	<b>Matrix:</b> AQ

Sample ID: TT-TP4-M3-20160427      Collected: 4/27/2016 1:50:00 PM      Analysis Type: RES/DIS      Dilution: 20

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHROMIUM	10000		10	MDL	40	MRL	ug/L	J-	m

<b>Method Category:</b>	METALS	
<b>Method:</b>	7199	<b>Matrix:</b> AQ

Sample ID: TT-TP4-M3-20160427      Collected: 4/27/2016 1:50:00 PM      Analysis Type: RES/DIS      Dilution: 1000

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chromium, hexavalent	11000		250	MDL	2000	MRL	ug/L	J-	m

\* denotes a non-reportable result

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# Data Qualifier Summary

Lab Reporting Batch ID: 440-145639-1

Laboratory: TA IRV

EDD Filename: Prep440-145639-1

eQAPP Name: TetraTechInc\_NERT\_11302016

## Reason Code Legend

<i>Reason Code</i>	<i>Description</i>
m	Matrix Spike Lower Estimation
m	Matrix Spike Lower Rejection
m	Matrix Spike Upper Estimation

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

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# Data Review Summary

Lab Reporting Batch ID: 440-145766-1

Laboratory: TA IRV

EDD Filename: Prep440-145766-1

eQAPP Name: TetraTechInc\_NERT\_11302016

## *Validation Area*

## *Note*

<i>Validation Area</i>	<i>Note</i>
Technical Holding Times	A
Temperature	A
Initial Calibration	N
Continuing Calibration/Initial Calibration Verification	N
Method Blanks	A
Surrogate/Tracer Spikes	N
Matrix Spike/Matrix Spike Duplicates	A
Laboratory Duplicates	N
Laboratory Replicates	N
Laboratory Control Samples	A
Compound Quantitation	SR
Field Duplicates	N
Field Triplicates	N
Field Blanks	N

A = Acceptable, N = Not provided/applicable, SR = See report

The contents of this report reflect findings made by ADR during Automated Data Review, manual applied qualifiers are not considered. Please refer to the Overall Qualifier Summary report for manual qualifiers.

# QC Outlier Report: HoldingTimes

Lab Reporting Batch ID: 440-145766-1

Laboratory: TA IRV

EDD Filename: Prep440-145766-1

eQAPP Name: TetraTechInc\_NERT\_11302016

Method: 7199

Preparation Method: Gen Prep

Matrix: AQ

<i>Sample ID</i>	<i>Type</i>	<i>Actual</i>	<i>Criteria</i>	<i>Units</i>	<i>Flag</i>
TT-TP1-L1-20160428MS (RES/DIS)	Sampling To Analysis	24.75	24.00	HOURS	J- (all detects)
TT-TP1-L1-20160428MSD (RES/DIS)		24.75	24.00	HOURS	UJ (all non-detects)

# Data Qualifier Summary

Lab Reporting Batch ID: 440-145766-1

Laboratory: TA IRV

EDD Filename: Prep440-145766-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b> METALS
<b>Method:</b> 7199
<b>Matrix:</b> AQ

4/28/2016 12:20:00

Sample ID: TT-TP3-L2-20160428
Collected: PM
Analysis Type: RES/DIS
Dilution: 1

<b>Analyte</b>	<b>Lab Result</b>	<b>Lab Qual</b>	<b>DL</b>	<b>DL Type</b>	<b>RL</b>	<b>RL Type</b>	<b>Units</b>	<b>Data Review Qual</b>	<b>Reason Code</b>
Chromium, hexavalent	0.83	J	0.25	MDL	2.0	MRL	ug/L	J	sp

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

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# Data Qualifier Summary

Lab Reporting Batch ID: 440-145766-1

Laboratory: TA IRV

EDD Filename: Prep440-145766-1

eQAPP Name: TetraTechInc\_NERT\_11302016

## Reason Code Legend

<i>Reason Code</i>	<i>Description</i>
sp	Reporting Limit Trace Value

\* denotes a non-reportable result

**Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing**

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# Reporting Limit Outliers

Lab Reporting Batch ID: 440-145766-1

Laboratory: TA IRV

EDD Filename: Prep440-145766-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method:** 7199

**Matrix:** AQ

<b>SampleID</b>	<b>Analyte</b>	<b>Lab Qual</b>	<b>Result</b>	<b>Reporting Limit</b>	<b>RL Type</b>	<b>Units</b>	<b>Flag</b>
TT-TP3-L2-20160428	Chromium, hexavalent	J	0.83	2.0	MRL	ug/L	J (all detects)

# Data Review Summary

Lab Reporting Batch ID: 440-146375-1

Laboratory: TA IRV

EDD Filename: Prep440-146375-1

eQAPP Name: TetraTechInc\_NERT\_11302016

## *Validation Area*

## *Note*

<i>Validation Area</i>	<i>Note</i>
Technical Holding Times	A
Temperature	A
Initial Calibration	N
Continuing Calibration/Initial Calibration Verification	N
Method Blanks	A
Surrogate/Tracer Spikes	A
Matrix Spike/Matrix Spike Duplicates	SR
Laboratory Duplicates	N
Laboratory Replicates	N
Laboratory Control Samples	A
Compound Quantitation	SR
Field Duplicates	N
Field Triplicates	N
Field Blanks	N

A = Acceptable, N = Not provided/applicable, SR = See report

The contents of this report reflect findings made by ADR during Automated Data Review, manual applied qualifiers are not considered. Please refer to the Overall Qualifier Summary report for manual qualifiers.

# Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 440-146375-1

Laboratory: TA IRV

EDD Filename: Prep440-146375-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method: 6020**  
**Matrix: AQ**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
TT-TP1-M1-20160504MSD (DIS) (TT-TP1-M1-20160504)	CHROMIUM	-	70	75.00-125.00	-	CHROMIUM	J- (all detects) UJ (all non-detects)

**Method: 6010B**  
**Matrix: AQ**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
TT-TP1-M2-20160504MS (DIS) TT-TP1-M2-20160504MSD (DIS) (TT-TP1-M2-20160504)	SODIUM	187	-55	75.00-125.00	-	SODIUM	J(all detects) R(all non-detects)
TT-TP1-M2-20160504MS (DIS) TT-TP1-M2-20160504MSD (DIS) (TT-TP1-M2-20160504)	CALCIUM MAGNESIUM	761 284	483 139	75.00-125.00 75.00-125.00	- -	CALCIUM MAGNESIUM	J+(all detects)



# Data Qualifier Summary

Lab Reporting Batch ID: 440-146375-1

Laboratory: TA IRV

EDD Filename: Prep440-146375-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b>	METALS	
<b>Method:</b>	6010B	<b>Matrix:</b> AQ

Sample ID: TT-TP1-M2-20160504      Collected: 5/4/2016 11:54:00 AM      Analysis Type: RES/DIS      Dilution: 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CALCIUM	520		0.25	MDL	0.50	MRL	mg/L	J+	m
MAGNESIUM	230		0.050	MDL	0.10	MRL	mg/L	J+	m
SODIUM	1500		1.3	MDL	2.5	MRL	mg/L	J	m, m
IRON	0.058	J	0.050	MDL	0.20	MRL	mg/L	J	sp

<b>Method Category:</b>	METALS	
<b>Method:</b>	6020	<b>Matrix:</b> AQ

Sample ID: TT-TP1-M1-20160504      Collected: 5/4/2016 11:08:00 AM      Analysis Type: RE2/DIS      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
COPPER	1.4	J	0.50	MDL	2.0	MRL	ug/L	J	sp

Sample ID: TT-TP1-M1-20160504      Collected: 5/4/2016 11:08:00 AM      Analysis Type: RES/DIS      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHROMIUM	1100		0.50	MDL	2.0	MRL	ug/L	J-	m
NICKEL	1.0	J	0.50	MDL	2.0	MRL	ug/L	J	sp
SELENIUM	1.8	J	0.50	MDL	2.0	MRL	ug/L	J	sp

Sample ID: TT-TP1-M2-20160504      Collected: 5/4/2016 11:54:00 AM      Analysis Type: RES/DIS      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
NICKEL	0.92	J	0.50	MDL	2.0	MRL	ug/L	J	sp

Sample ID: TT-TP1-M3-20160504      Collected: 5/4/2016 12:27:00 PM      Analysis Type: RES/DIS      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
COBALT	0.96	J	0.50	MDL	1.0	MRL	ug/L	J	sp
NICKEL	0.73	J	0.50	MDL	2.0	MRL	ug/L	J	sp

\* denotes a non-reportable result

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# Data Qualifier Summary

Lab Reporting Batch ID: 440-146375-1

Laboratory: TA IRV

EDD Filename: Prep440-146375-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b> METALS	
<b>Method:</b> 6020	<b>Matrix:</b> AQ

Sample ID: TT-TP2-M1-20160504

Collected: 5/4/2016 1:00:00 PM

Analysis Type: RES/DIS

Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
COBALT	0.52	J	0.50	MDL	1.0	MRL	ug/L	J	sp
NICKEL	0.55	J	0.50	MDL	2.0	MRL	ug/L	J	sp

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

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# Data Qualifier Summary

Lab Reporting Batch ID: 440-146375-1

Laboratory: TA IRV

EDD Filename: Prep440-146375-1

eQAPP Name: TetraTechInc\_NERT\_11302016

## Reason Code Legend

<i>Reason Code</i>	<i>Description</i>
m	Matrix Spike Lower Estimation
m	Matrix Spike Lower Rejection
m	Matrix Spike Upper Estimation
sp	Reporting Limit Trace Value

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

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# Reporting Limit Outliers

Lab Reporting Batch ID: 440-146375-1

Laboratory: TA IRV

EDD Filename: Prep440-146375-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method:** 6010B

**Matrix:** AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
TT-TP1-M2-20160504	IRON	J	0.058	0.20	MRL	mg/L	J (all detects)

**Method:** 6020

**Matrix:** AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
TT-TP1-M1-20160504	COPPER	J	1.4	2.0	MRL	ug/L	J (all detects)
	NICKEL	J	1.0	2.0	MRL	ug/L	
	SELENIUM	J	1.8	2.0	MRL	ug/L	
TT-TP1-M2-20160504	NICKEL	J	0.92	2.0	MRL	ug/L	J (all detects)
TT-TP1-M3-20160504	COBALT	J	0.96	1.0	MRL	ug/L	J (all detects)
	NICKEL	J	0.73	2.0	MRL	ug/L	
TT-TP2-M1-20160504	COBALT	J	0.52	1.0	MRL	ug/L	J (all detects)
	NICKEL	J	0.55	2.0	MRL	ug/L	

# Data Review Summary

Lab Reporting Batch ID: 440-146524-1

Laboratory: TA IRV

EDD Filename: Prep440-146524-1

eQAPP Name: TetraTechInc\_NERT\_11302016

## *Validation Area*

## *Note*

<i>Validation Area</i>	<i>Note</i>
Technical Holding Times	SR
Temperature	A
Initial Calibration	N
Continuing Calibration/Initial Calibration Verification	N
Method Blanks	SR
Surrogate/Tracer Spikes	A
Matrix Spike/Matrix Spike Duplicates	SR
Laboratory Duplicates	A
Laboratory Replicates	N
Laboratory Control Samples	A
Compound Quantitation	SR
Field Duplicates	N
Field Triplicates	N
Field Blanks	N

A = Acceptable, N = Not provided/applicable, SR = See report

The contents of this report reflect findings made by ADR during Automated Data Review, manual applied qualifiers are not considered. Please refer to the Overall Qualifier Summary report for manual qualifiers.

# QC Outlier Report: HoldingTimes

Lab Reporting Batch ID: 440-146524-1

Laboratory: TA IRV

EDD Filename: Prep440-146524-1

eQAPP Name: TetraTechInc\_NERT\_11302016

Method: 7199

Preparation Method: Gen Prep

Matrix: AQ

<i>Sample ID</i>	<i>Type</i>	<i>Actual</i>	<i>Criteria</i>	<i>Units</i>	<i>Flag</i>
TT-TP2-M2-20160505 (RES/DIS)	Sampling To Analysis	29.00	24.00	HOURS	J- (all detects)
TT-TP3-M2-20160505 (RES/DIS)		28.75	24.00	HOURS	UJ (all non-detects)
TT-TP4-M3-20160505MS (RES/DIS)		25.50	24.00	HOURS	
TT-TP4-M3-20160505MSD (RES/DIS)		25.75	24.00	HOURS	

# Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 440-146524-1

Laboratory: TA IRV

EDD Filename: Prep440-146524-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method: 300.0**  
**Matrix: AQ**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
TT-TP4-M3-20160505MS (TT-TP4-M3-20160505)	Nitrate as N	42	-	80.00-120.00	-	Nitrate as N	J- (all detects) UJ (all non-detects)
TT-TP4-M3-20160505MS TT-TP4-M3-20160505MSD (TT-TP4-M3-20160505)	CHLORIDE SULFATE	1 31	28 -13	80.00-120.00 80.00-120.00	- -	CHLORIDE SULFATE	J-(all detects) R(all non-detects)

**Method: 314.0**  
**Matrix: AQ**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
TT-TP4-M3-20160505MS TT-TP4-M3-20160505MSD (TT-TP4-M3-20160505)	PERCHLORATE	-1303	-4102	80.00-120.00	-	PERCHLORATE	J-(all detects) R(all non-detects)

**Method: 300.1B**  
**Matrix: AQ**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
TT-TP4-M3-20160505MS TT-TP4-M3-20160505MSD (TT-TP4-M3-20160505)	Chlorate	1272	-2129	75.00-125.00	65 (25.00)	Chlorate	J(all detects) R(all non-detects)

**Method: 6020**  
**Matrix: AQ**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
TT-TP4-M3-20160505MS (DIS) TT-TP4-M3-20160505MSD (DIS) (TT-TP4-M3-20160505)	ARSENIC CHROMIUM	132 1449	138 498	75.00-125.00 75.00-125.00	- -	ARSENIC CHROMIUM	J+(all detects)

**Method: 6010B**  
**Matrix: AQ**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
TT-TP4-M3-20160505MS (DIS) TT-TP4-M3-20160505MSD (DIS) (TT-TP4-M3-20160505)	CALCIUM MAGNESIUM SODIUM	-85 -81 -304	-221 -37 -847	75.00-125.00 75.00-125.00 75.00-125.00	- - -	CALCIUM MAGNESIUM SODIUM	J-(all detects) R(all non-detects)

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# Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 440-146524-1

Laboratory: TA IRV

EDD Filename: Prep440-146524-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method: 6010B**

**Matrix: AQ**

<i>QC Sample ID (Associated Samples)</i>	<i>Compound</i>	<i>MS %R</i>	<i>MSD %R</i>	<i>%R Limits</i>	<i>RPD (Limits)</i>	<i>Affected Compounds</i>	<i>Flag</i>
TT-TP4-M3-20160505MSD (DIS) (TT-TP4-M3-20160505)	BORON POTASSIUM	- -	66 67	75.00-125.00 75.00-125.00	- -	BORON POTASSIUM	J-(all detects) UJ(all non-detects)



# Method Blank Outlier Report

Lab Reporting Batch ID: 440-146524-1

Laboratory: TA IRV

EDD Filename: Prep440-146524-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method:** 6010B  
**Matrix:** AQ

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
MB 440-329047/1-G	5/15/2016 2:35:00 PM	CALCIUM SODIUM	0.0777 mg/L 0.269 mg/L	TT-TP2-M2-20160505 TT-TP3-M1-20160505 TT-TP3-M2-20160505 TT-TP4-M1-20160505 TT-TP4-M2-20160505 TT-TP4-M3-20160505

# Data Qualifier Summary

Lab Reporting Batch ID: 440-146524-1

Laboratory: TA IRV

EDD Filename: Prep440-146524-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b>	GENCHEM	
<b>Method:</b>	300.0	<b>Matrix:</b> AQ

Sample ID: TT-TP4-M3-20160505      Collected: 5/5/2016 12:24:00 PM      Analysis Type: RES      Dilution: 500

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Nitrate as N	210		28	MDL	55	MRL	mg/L	J-	m

Sample ID: TT-TP4-M3-20160505      Collected: 5/5/2016 12:24:00 PM      Analysis Type: RES2      Dilution: 500

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHLORIDE	670		130	MDL	250	MRL	mg/L	J-	m, m
SULFATE	1500		130	MDL	250	MRL	mg/L	J-	m, m

<b>Method Category:</b>	GENCHEM	
<b>Method:</b>	300.1B	<b>Matrix:</b> AQ

Sample ID: TT-TP4-M3-20160505      Collected: 5/5/2016 12:24:00 PM      Analysis Type: RES      Dilution: 10000

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chlorate	1700000	F2 F1	100000	MDL	200000	MRL	ug/L	J	m, m, ld

<b>Method Category:</b>	GENCHEM	
<b>Method:</b>	314.0	<b>Matrix:</b> AQ

Sample ID: TT-TP4-M3-20160505      Collected: 5/5/2016 12:24:00 PM      Analysis Type: RES      Dilution: 10000

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
PERCHLORATE	310000		5000	MDL	10000	MRL	ug/L	J-	m

<b>Method Category:</b>	METALS	
<b>Method:</b>	6010B	<b>Matrix:</b> AQ

Sample ID: TT-TP3-M1-20160505      Collected: 5/5/2016 10:29:00 AM      Analysis Type: RE2/DIS      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
IRON	0.010	J	0.010	MDL	0.040	MRL	mg/L	J	sp

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

# Data Qualifier Summary

Lab Reporting Batch ID: 440-146524-1

Laboratory: TA IRV

EDD Filename: Prep440-146524-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b> METALS
<b>Method:</b> 6010B <span style="float: right;"><b>Matrix:</b> AQ</span>

Sample ID: TT-TP3-M1-20160505 Collected: 5/5/2016 10:29:00 AM Analysis Type: RES/DIS Dilution: 10

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	0.29	J	0.10	MDL	0.50	MRL	mg/L	J	sp
POTASSIUM	2.8	J	2.5	MDL	5.0	MRL	mg/L	J	sp

Sample ID: TT-TP3-M2-20160505 Collected: 5/5/2016 9:57:00 AM Analysis Type: RES/DIS Dilution: 10

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	0.39	J	0.10	MDL	0.50	MRL	mg/L	J	sp
IRON	0.13	J	0.10	MDL	0.40	MRL	mg/L	J	sp

Sample ID: TT-TP4-M3-20160505 Collected: 5/5/2016 12:24:00 PM Analysis Type: RE2/DIS Dilution: 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
IRON	0.023	J	0.020	MDL	0.080	MRL	mg/L	J	sp
MAGNESIUM	120		0.020	MDL	0.040	MRL	mg/L	J-	m

Sample ID: TT-TP4-M3-20160505 Collected: 5/5/2016 12:24:00 PM Analysis Type: RES/DIS Dilution: 10

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	3.3	F1	0.10	MDL	0.50	MRL	mg/L	J-	m
CALCIUM	240	B	0.50	MDL	1.0	MRL	mg/L	J-	m
POTASSIUM	22	F1	2.5	MDL	5.0	MRL	mg/L	J-	m
SODIUM	1500	B	2.5	MDL	5.0	MRL	mg/L	J-	m

<b>Method Category:</b> METALS
<b>Method:</b> 6020 <span style="float: right;"><b>Matrix:</b> AQ</span>

Sample ID: TT-TP2-M2-20160505 Collected: 5/5/2016 9:23:00 AM Analysis Type: RE2/DIS Dilution: 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
COPPER	1.0	J	1.0	MDL	4.0	MRL	ug/L	J	sp

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

# Data Qualifier Summary

Lab Reporting Batch ID: 440-146524-1

Laboratory: TA IRV

EDD Filename: Prep440-146524-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b>	METALS								
<b>Method:</b>	6020	<b>Matrix:</b>		AQ					

**Sample ID:** TT-TP2-M2-20160505      **Collected:** 5/5/2016 9:23:00 AM      **Analysis Type:** RES/DIS      **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
NICKEL	0.54	J	0.50	MDL	2.0	MRL	ug/L	J	sp

**Sample ID:** TT-TP3-M1-20160505      **Collected:** 5/5/2016 10:29:00 AM      **Analysis Type:** RES/DIS      **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	1.4	J	0.50	MDL	2.0	MRL	ug/L	J	sp

**Sample ID:** TT-TP3-M2-20160505      **Collected:** 5/5/2016 9:57:00 AM      **Analysis Type:** RES/DIS      **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	1.1	J	0.50	MDL	2.0	MRL	ug/L	J	sp

**Sample ID:** TT-TP4-L2-20160505      **Collected:** 5/5/2016 12:58:00 PM      **Analysis Type:** RES/DIS      **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHROMIUM	0.83	J	0.50	MDL	2.0	MRL	ug/L	J	sp

**Sample ID:** TT-TP4-M2-20160505      **Collected:** 5/5/2016 11:51:00 AM      **Analysis Type:** RES/DIS      **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
COPPER	0.60	J	0.50	MDL	2.0	MRL	ug/L	J	sp

**Sample ID:** TT-TP4-M3-20160505      **Collected:** 5/5/2016 12:24:00 PM      **Analysis Type:** RES/DIS      **Dilution:** 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ARSENIC	130	F1	2.5	MDL	5.0	MRL	ug/L	J+	m
CHROMIUM	8200		2.5	MDL	10	MRL	ug/L	J+	m
SELENIUM	7.4	J	2.5	MDL	10	MRL	ug/L	J	sp

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

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# Data Qualifier Summary

Lab Reporting Batch ID: 440-146524-1

Laboratory: TA IRV

EDD Filename: Prep440-146524-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b>	METALS	
<b>Method:</b>	7199	<b>Matrix:</b> AQ

Sample ID: TT-TP2-M2-20160505      Collected: 5/5/2016 9:23:00 AM      Analysis Type: RES/DIS      Dilution: 100

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chromium, hexavalent	4500	H	25	MDL	200	MRL	ug/L	J-	h

Sample ID: TT-TP3-L1-20160505      Collected: 5/5/2016 1:01:00 PM      Analysis Type: RES/DIS      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chromium, hexavalent	1.2	J	0.25	MDL	2.0	MRL	ug/L	J	sp

Sample ID: TT-TP3-L2-20160505      Collected: 5/5/2016 1:03:00 PM      Analysis Type: RES/DIS      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chromium, hexavalent	0.65	J	0.25	MDL	2.0	MRL	ug/L	J	sp

Sample ID: TT-TP3-M2-20160505      Collected: 5/5/2016 9:57:00 AM      Analysis Type: RES/DIS      Dilution: 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chromium, hexavalent	210	H	1.3	MDL	10	MRL	ug/L	J-	h

Sample ID: TT-TP4-L2-20160505      Collected: 5/5/2016 12:58:00 PM      Analysis Type: RES/DIS      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chromium, hexavalent	0.83	J	0.25	MDL	2.0	MRL	ug/L	J	sp

<b>Method Category:</b>	METALS	
<b>Method:</b>	7470A	<b>Matrix:</b> AQ

Sample ID: TT-TP4-M1-20160505      Collected: 5/5/2016 11:16:00 AM      Analysis Type: RES/DIS      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.00010	J	0.00010	MDL	0.00020	MRL	mg/L	J	sp

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

# Data Qualifier Summary

Lab Reporting Batch ID: 440-146524-1

Laboratory: TA IRV

EDD Filename: Prep440-146524-1

eQAPP Name: TetraTechInc\_NERT\_11302016

## Reason Code Legend

<i>Reason Code</i>	<i>Description</i>
bl	Method Blank Contamination
e	Sampling to Analysis Estimation
f	Matrix Spike Precision
h	Sampling to Analysis Estimation
ld	Matrix Spike Precision
ldf	Matrix Spike Precision
m	Matrix Spike Lower Estimation
m	Matrix Spike Lower Rejection
m	Matrix Spike Upper Estimation
sp	Reporting Limit Trace Value

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

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# Reporting Limit Outliers

Lab Reporting Batch ID: 440-146524-1

Laboratory: TA IRV

EDD Filename: Prep440-146524-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method:** 6010B  
**Matrix:** AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
TT-TP3-M1-20160505	BORON	J	0.29	0.50	MRL	mg/L	J (all detects)
	IRON	J	0.010	0.040	MRL	mg/L	
	POTASSIUM	J	2.8	5.0	MRL	mg/L	
TT-TP3-M2-20160505	BORON	J	0.39	0.50	MRL	mg/L	J (all detects)
	IRON	J	0.13	0.40	MRL	mg/L	
TT-TP4-M3-20160505	IRON	J	0.023	0.080	MRL	mg/L	J (all detects)

**Method:** 6020  
**Matrix:** AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
TT-TP2-M2-20160505	COPPER	J	1.0	4.0	MRL	ug/L	J (all detects)
	NICKEL	J	0.54	2.0	MRL	ug/L	
TT-TP3-M1-20160505	SELENIUM	J	1.4	2.0	MRL	ug/L	J (all detects)
TT-TP3-M2-20160505	SELENIUM	J	1.1	2.0	MRL	ug/L	J (all detects)
TT-TP4-L2-20160505	CHROMIUM	J	0.83	2.0	MRL	ug/L	J (all detects)
TT-TP4-M2-20160505	COPPER	J	0.60	2.0	MRL	ug/L	J (all detects)
TT-TP4-M3-20160505	SELENIUM	J	7.4	10	MRL	ug/L	J (all detects)

**Method:** 7199  
**Matrix:** AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
TT-TP3-L1-20160505	Chromium, hexavalent	J	1.2	2.0	MRL	ug/L	J (all detects)
TT-TP3-L2-20160505	Chromium, hexavalent	J	0.65	2.0	MRL	ug/L	J (all detects)
TT-TP4-L2-20160505	Chromium, hexavalent	J	0.83	2.0	MRL	ug/L	J (all detects)

**Method:** 7470A  
**Matrix:** AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
TT-TP4-M1-20160505	MERCURY	J	0.00010	0.00020	MRL	mg/L	J (all detects)

# Data Review Summary

Lab Reporting Batch ID: 440-147006-1

Laboratory: TA IRV

EDD Filename: Prep440-147006-1

eQAPP Name: TetraTechInc\_NERT\_11302016

## *Validation Area*

## *Note*

<i>Validation Area</i>	<i>Note</i>
Technical Holding Times	A
Temperature	A
Initial Calibration	N
Continuing Calibration/Initial Calibration Verification	N
Method Blanks	SR
Surrogate/Tracer Spikes	N
Matrix Spike/Matrix Spike Duplicates	A
Laboratory Duplicates	N
Laboratory Replicates	N
Laboratory Control Samples	A
Compound Quantitation	A
Field Duplicates	N
Field Triplicates	N
Field Blanks	N

A = Acceptable, N = Not provided/applicable, SR = See report

The contents of this report reflect findings made by ADR during Automated Data Review, manual applied qualifiers are not considered. Please refer to the Overall Qualifier Summary report for manual qualifiers.



# Method Blank Outlier Report

Lab Reporting Batch ID: 440-147006-1

Laboratory: TA IRV

EDD Filename: Prep440-147006-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method:** 6020  
**Matrix:** AQ

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
MB 440-330278/1-B	5/19/2016 7:45:00 PM	CHROMIUM	0.834 ug/L	TT-TP1-M1-20160510 TT-TP1-M2-20160510 TT-TP1-M3-20160510

## ***Data Qualifier Summary***

Lab Reporting Batch ID: 440-147006-1

Laboratory: TA IRV

EDD Filename: Prep440-147006-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**No Data Review Qualifiers Applied.**

# Data Review Summary

Lab Reporting Batch ID: 440-147243-1

Laboratory: TA IRV

EDD Filename: Prep440-147243-1

eQAPP Name: TetraTechInc\_NERT\_11302016

## *Validation Area*

## *Note*

<i>Validation Area</i>	<i>Note</i>
Technical Holding Times	A
Temperature	A
Initial Calibration	N
Continuing Calibration/Initial Calibration Verification	N
Method Blanks	A
Surrogate/Tracer Spikes	N
Matrix Spike/Matrix Spike Duplicates	SR
Laboratory Duplicates	A
Laboratory Replicates	N
Laboratory Control Samples	A
Compound Quantitation	SR
Field Duplicates	A
Field Triplicates	N
Field Blanks	N

A = Acceptable, N = Not provided/applicable, SR = See report

The contents of this report reflect findings made by ADR during Automated Data Review, manual applied qualifiers are not considered. Please refer to the Overall Qualifier Summary report for manual qualifiers.

## Field Duplicate RPD Report

Lab Reporting Batch ID: 440-147243-1

Laboratory: TA IRV

EDD Filename: Prep440-147243-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method: 2540C**  
**Matrix: AQ**

Analyte	Concentration (mg/L)		Sample RPD	eQAPP RPD	Flag
	TT-TP4-M3-20160511	TT-TP4-M3-20160511-DUP			
TOTAL DISSOLVED SOLIDS	7100	7200	1	30.00	No Qualifiers Applied

**Method: 314.0**  
**Matrix: AQ**

Analyte	Concentration (ug/L)		Sample RPD	eQAPP RPD	Flag
	TT-TP4-M3-20160511	TT-TP4-M3-20160511-DUP			
PERCHLORATE	270000	280000	4	30.00	No Qualifiers Applied

**Method: 6020**  
**Matrix: AQ**

Analyte	Concentration (ug/L)		Sample RPD	eQAPP RPD	Flag
	TT-TP4-M3-20160511 (DIS)	TT-TP4-M3-20160511-DUP (DIS)			
CHROMIUM	6800	8100	17	30.00	No Qualifiers Applied

**Method: 7199**  
**Matrix: AQ**

Analyte	Concentration (ug/L)		Sample RPD	eQAPP RPD	Flag
	TT-TP4-M3-20160511 (DIS)	TT-TP4-M3-20160511-DUP (DIS)			
Chromium, hexavalent	6400	6500	2	30.00	No Qualifiers Applied

**Method: SM5310B**  
**Matrix: AQ**

Analyte	Concentration (mg/L)		Sample RPD	eQAPP RPD	Flag
	TT-TP4-M3-20160511	TT-TP4-M3-20160511-DUP			
Total organic carbon	2.3	2.2	4	30.00	No Qualifiers Applied

# Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 440-147243-1

Laboratory: TA IRV

EDD Filename: Prep440-147243-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method: 6020**  
**Matrix: AQ**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
TT-TP4-M3-20160511MS (DIS) TT-TP4-M3-20160511MSD (DIS) (TT-TP4-M3-20160511)	CHROMIUM	57	-256	75.00-125.00	-	CHROMIUM	J- (all detects) R (all non-detects)

**Method: 314.0**  
**Matrix: AQ**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
TT-TP4-M3-20160511MS TT-TP4-M3-20160511MSD (TT-TP4-M3-20160511)	PERCHLORATE	-1832	-1126	80.00-120.00	-	PERCHLORATE	J-(all detects) R(all non-detects)

**Method: SM5310B**  
**Matrix: AQ**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
TT-TP4-M3-20160511MSD (TT-TP4-M3-20160511)	Total organic carbon	-	121	80.00-120.00	-	Total organic carbon	J+(all detects)

# Data Qualifier Summary

Lab Reporting Batch ID: 440-147243-1

Laboratory: TA IRV

EDD Filename: Prep440-147243-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b>	GENCHEM	
<b>Method:</b>	314.0	<b>Matrix:</b> AQ

Sample ID: TT-TP4-M3-20160511      Collected: 5/11/2016 12:54:00 PM      Analysis Type: RES      Dilution: 10000

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
PERCHLORATE	270000		5000	MDL	10000	MRL	ug/L	J-	m

<b>Method Category:</b>	GENCHEM	
<b>Method:</b>	SM5310B	<b>Matrix:</b> AQ

Sample ID: TT-TP4-M3-20160511      Collected: 5/11/2016 12:54:00 PM      Analysis Type: RES2      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Total organic carbon	2.3	F1	0.65	MDL	1.0	MRL	mg/L	J+	m

<b>Method Category:</b>	METALS	
<b>Method:</b>	6020	<b>Matrix:</b> AQ

Sample ID: TT-TP3-L2-20160511      Collected: 5/11/2016 1:25:00 PM      Analysis Type: RES/DIS      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHROMIUM	0.81	J	0.50	MDL	2.0	MRL	ug/L	J	sp

Sample ID: TT-TP4-M3-20160511      Collected: 5/11/2016 12:54:00 PM      Analysis Type: RES/DIS      Dilution: 10

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHROMIUM	6800	B	5.0	MDL	20	MRL	ug/L	J-	m, m

<b>Method Category:</b>	METALS	
<b>Method:</b>	7199	<b>Matrix:</b> AQ

Sample ID: TT-TP3-L1-20160511      Collected: 5/11/2016 1:20:00 PM      Analysis Type: RES/DIS      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chromium, hexavalent	1.2	J	0.25	MDL	2.0	MRL	ug/L	J	sp

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

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# Data Qualifier Summary

Lab Reporting Batch ID: 440-147243-1

Laboratory: TA IRV

EDD Filename: Prep440-147243-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method Category:** METALS

**Method:** 7199

**Matrix:** AQ

**Sample ID:** TT-TP3-L2-20160511

**Collected:** 5/11/2016 1:25:00 PM **Analysis Type:** RES/DIS

**Dilution:** 1

<b>Analyte</b>	<b>Lab Result</b>	<b>Lab Qual</b>	<b>DL</b>	<b>DL Type</b>	<b>RL</b>	<b>RL Type</b>	<b>Units</b>	<b>Data Review Qual</b>	<b>Reason Code</b>
Chromium, hexavalent	0.56	J	0.25	MDL	2.0	MRL	ug/L	J	sp

\* denotes a non-reportable result

**Project Name and Number:** 114-520225-2015-MO5 - NERT Soil Flushing

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# Data Qualifier Summary

Lab Reporting Batch ID: 440-147243-1

Laboratory: TA IRV

EDD Filename: Prep440-147243-1

eQAPP Name: TetraTechInc\_NERT\_11302016

## Reason Code Legend

<i>Reason Code</i>	<i>Description</i>
m	Matrix Spike Lower Estimation
m	Matrix Spike Lower Rejection
m	Matrix Spike Upper Estimation
sp	Reporting Limit Trace Value

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

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## Reporting Limit Outliers

Lab Reporting Batch ID: 440-147243-1

Laboratory: TA IRV

EDD Filename: Prep440-147243-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method:** 6020

**Matrix:** AQ

<i>SampleID</i>	<i>Analyte</i>	<i>Lab Qual</i>	<i>Result</i>	<i>Reporting Limit</i>	<i>RL Type</i>	<i>Units</i>	<i>Flag</i>
TT-TP3-L2-20160511	CHROMIUM	J	0.81	2.0	MRL	ug/L	J (all detects)

**Method:** 7199

**Matrix:** AQ

<i>SampleID</i>	<i>Analyte</i>	<i>Lab Qual</i>	<i>Result</i>	<i>Reporting Limit</i>	<i>RL Type</i>	<i>Units</i>	<i>Flag</i>
TT-TP3-L1-20160511	Chromium, hexavalent	J	1.2	2.0	MRL	ug/L	J (all detects)
TT-TP3-L2-20160511	Chromium, hexavalent	J	0.56	2.0	MRL	ug/L	J (all detects)

# Data Review Summary

Lab Reporting Batch ID: 440-147992-1

Laboratory: TA IRV

EDD Filename: Prep440-147992-1

eQAPP Name: TetraTechInc\_NERT\_11302016

## *Validation Area*

## *Note*

<i>Validation Area</i>	<i>Note</i>
Technical Holding Times	A
Temperature	A
Initial Calibration	N
Continuing Calibration/Initial Calibration Verification	N
Method Blanks	A
Surrogate/Tracer Spikes	N
Matrix Spike/Matrix Spike Duplicates	SR
Laboratory Duplicates	A
Laboratory Replicates	N
Laboratory Control Samples	A
Compound Quantitation	SR
Field Duplicates	A
Field Triplicates	N
Field Blanks	N

A = Acceptable, N = Not provided/applicable, SR = See report

The contents of this report reflect findings made by ADR during Automated Data Review, manual applied qualifiers are not considered. Please refer to the Overall Qualifier Summary report for manual qualifiers.

## Field Duplicate RPD Report

Lab Reporting Batch ID: 440-147992-1

Laboratory: TA IRV

EDD Filename: Prep440-147992-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method: 2540C**  
**Matrix: AQ**

Analyte	Concentration (mg/L)		Sample RPD	eQAPP RPD	Flag
	TT-TP4-M3-20160519	TT-TP4-M3-20160519-DUP			
TOTAL DISSOLVED SOLIDS	6300	6300	0	30.00	No Qualifiers Applied

**Method: 314.0**  
**Matrix: AQ**

Analyte	Concentration (ug/L)		Sample RPD	eQAPP RPD	Flag
	TT-TP4-M3-20160519	TT-TP4-M3-20160519-DUP			
PERCHLORATE	270000	290000	7	30.00	No Qualifiers Applied

**Method: 6020**  
**Matrix: AQ**

Analyte	Concentration (ug/L)		Sample RPD	eQAPP RPD	Flag
	TT-TP4-M3-20160519 (DIS)	TT-TP4-M3-20160519-DUP (DIS)			
CHROMIUM	5900	5200	13	30.00	No Qualifiers Applied

**Method: 7199**  
**Matrix: AQ**

Analyte	Concentration (ug/L)		Sample RPD	eQAPP RPD	Flag
	TT-TP4-M3-20160519 (DIS)	TT-TP4-M3-20160519-DUP (DIS)			
Chromium, hexavalent	6300	6500	3	30.00	No Qualifiers Applied

**Method: SM5310B**  
**Matrix: AQ**

Analyte	Concentration (mg/L)		Sample RPD	eQAPP RPD	Flag
	TT-TP4-M3-20160519	TT-TP4-M3-20160519-DUP			
Total organic carbon	2.0	2.0	0	30.00	No Qualifiers Applied

# Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 440-147992-1

Laboratory: TA IRV

EDD Filename: Prep440-147992-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method: 7199**  
**Matrix: AQ**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
TT-TP4-M3-20160519MS (DIS) TT-TP4-M3-20160519MSD (DIS) (TT-TP4-M3-20160519)	Chromium, hexavalent	-27	-64	85.00-115.00	-	Chromium, hexavalent	J- (all detects) R (all non-detects)

**Method: 6020**  
**Matrix: AQ**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
TT-TP4-M3-20160519MS (DIS) TT-TP4-M3-20160519MSD (DIS) (TT-TP4-M3-20160519)	CHROMIUM	-92	-303	75.00-125.00	-	CHROMIUM	J-(all detects) R(all non-detects)

**Method: 314.0**  
**Matrix: AQ**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
TT-TP4-M3-20160519MS TT-TP4-M3-20160519MSD (TT-TP4-M3-20160519)	PERCHLORATE	-1515	-6604	80.00-120.00	-	PERCHLORATE	J-(all detects) R(all non-detects)

# Data Qualifier Summary

Lab Reporting Batch ID: 440-147992-1

Laboratory: TA IRV

EDD Filename: Prep440-147992-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b>	GENCHEM	
<b>Method:</b>	314.0	<b>Matrix:</b> AQ

Sample ID: TT-TP4-M3-20160519      Collected: 5/19/2016 12:52:00 PM      Analysis Type: RES      Dilution: 50000

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
PERCHLORATE	270000	F1	25000	MDL	50000	MRL	ug/L	J-	m

<b>Method Category:</b>	METALS	
<b>Method:</b>	6020	<b>Matrix:</b> AQ

Sample ID: TT-TP4-M3-20160519      Collected: 5/19/2016 12:52:00 PM      Analysis Type: RES/DIS      Dilution: 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHROMIUM	5900		1.0	MDL	4.0	MRL	ug/L	J-	m

<b>Method Category:</b>	METALS	
<b>Method:</b>	7199	<b>Matrix:</b> AQ

Sample ID: TT-TP3-L1-20160519      Collected: 5/19/2016 1:45:00 PM      Analysis Type: RES/DIS      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chromium, hexavalent	1.9	J	0.25	MDL	2.0	MRL	ug/L	J	sp

Sample ID: TT-TP3-L2-20160519      Collected: 5/19/2016 1:40:00 PM      Analysis Type: RES/DIS      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chromium, hexavalent	0.37	J	0.25	MDL	2.0	MRL	ug/L	J	sp

Sample ID: TT-TP4-L2-20160519      Collected: 5/19/2016 1:50:00 PM      Analysis Type: RES/DIS      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chromium, hexavalent	1.8	J	0.25	MDL	2.0	MRL	ug/L	J	sp

Sample ID: TT-TP4-M3-20160519      Collected: 5/19/2016 12:52:00 PM      Analysis Type: RES/DIS      Dilution: 100

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chromium, hexavalent	6300		25	MDL	200	MRL	ug/L	J-	m

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

## ***Data Qualifier Summary***

**Lab Reporting Batch ID: 440-147992-1**

**Laboratory: TA IRV**

**EDD Filename: Prep440-147992-1**

**eQAPP Name: TetraTechInc\_NERT\_11302016**

\* denotes a non-reportable result

**Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing**

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# Data Qualifier Summary

Lab Reporting Batch ID: 440-147992-1

Laboratory: TA IRV

EDD Filename: Prep440-147992-1

eQAPP Name: TetraTechInc\_NERT\_11302016

## Reason Code Legend

<i>Reason Code</i>	<i>Description</i>
m	Matrix Spike Lower Rejection
sp	Reporting Limit Trace Value

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

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# Reporting Limit Outliers

Lab Reporting Batch ID: 440-147992-1

Laboratory: TA IRV

EDD Filename: Prep440-147992-1

eQAPP Name: TetraTechInc\_NERT\_11302016

Method: 7199

Matrix: AQ

<i>SampleID</i>	<i>Analyte</i>	<i>Lab Qual</i>	<i>Result</i>	<i>Reporting Limit</i>	<i>RL Type</i>	<i>Units</i>	<i>Flag</i>
TT-TP3-L1-20160519	Chromium, hexavalent	J	1.9	2.0	MRL	ug/L	J (all detects)
TT-TP3-L2-20160519	Chromium, hexavalent	J	0.37	2.0	MRL	ug/L	J (all detects)
TT-TP4-L2-20160519	Chromium, hexavalent	J	1.8	2.0	MRL	ug/L	J (all detects)



# Data Review Summary

Lab Reporting Batch ID: 440-148308-1

Laboratory: TA IRV

EDD Filename: Prep440-148308-1

eQAPP Name: TetraTechInc\_NERT\_11302016

## *Validation Area*

## *Note*

<i>Validation Area</i>	<i>Note</i>
Technical Holding Times	SR
Temperature	A
Initial Calibration	N
Continuing Calibration/Initial Calibration Verification	N
Method Blanks	A
Surrogate/Tracer Spikes	N
Matrix Spike/Matrix Spike Duplicates	SR
Laboratory Duplicates	N
Laboratory Replicates	N
Laboratory Control Samples	A
Compound Quantitation	A
Field Duplicates	N
Field Triplicates	N
Field Blanks	N

A = Acceptable, N = Not provided/applicable, SR = See report

The contents of this report reflect findings made by ADR during Automated Data Review, manual applied qualifiers are not considered. Please refer to the Overall Qualifier Summary report for manual qualifiers.

# QC Outlier Report: HoldingTimes

Lab Reporting Batch ID: 440-148308-1  
EDD Filename: Prep440-148308-1

Laboratory: TA IRV  
eQAPP Name: TetraTechInc\_NERT\_11302016

Method: 7199 Preparation Method: Gen Prep  
Matrix: AQ

<i>Sample ID</i>	<i>Type</i>	<i>Actual</i>	<i>Criteria</i>	<i>Units</i>	<i>Flag</i>
TT-TP1-M1-20160524 (RES/DIS)	Sampling To Analysis	24.75	24.00	HOURS	J- (all detects) UJ (all non-detects)

# Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 440-148308-1

Laboratory: TA IRV

EDD Filename: Prep440-148308-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method: 7199**  
**Matrix: AQ**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
TT-TP1-M1-20160524MS (DIS) TT-TP1-M1-20160524MSD (DIS) (TT-TP1-M1-20160524)	Chromium, hexavalent	79	44	85.00-115.00	-	Chromium, hexavalent	J- (all detects) UJ (all non-detects)

**Method: 6020**  
**Matrix: AQ**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
TT-TP1-M1-20160524MS (DIS) TT-TP1-M1-20160524MSD (DIS) (TT-TP1-M1-20160524)	CHROMIUM	215	-227	75.00-125.00	-	CHROMIUM	J(all detects) R(all non-detects)

# Data Qualifier Summary

Lab Reporting Batch ID: 440-148308-1

Laboratory: TA IRV

EDD Filename: Prep440-148308-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b> METALS
<b>Method:</b> 6020 <span style="float: right;"><b>Matrix:</b> AQ</span>

5/24/2016 11:19:00

Sample ID: TT-TP1-M1-20160524 Collected: AM Analysis Type: RES/DIS Dilution: 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHROMIUM	2300		1.0	MDL	4.0	MRL	ug/L	J	m, m

<b>Method Category:</b> METALS
<b>Method:</b> 7199 <span style="float: right;"><b>Matrix:</b> AQ</span>

5/24/2016 11:19:00

Sample ID: TT-TP1-M1-20160524 Collected: AM Analysis Type: RE2/DIS Dilution: 100

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chromium, hexavalent	2200		25	MDL	200	MRL	ug/L	J-	m

\* denotes a non-reportable result

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# Data Qualifier Summary

Lab Reporting Batch ID: 440-148308-1

Laboratory: TA IRV

EDD Filename: Prep440-148308-1

eQAPP Name: TetraTechInc\_NERT\_11302016

## Reason Code Legend

<i>Reason Code</i>	<i>Description</i>
e	Sampling to Analysis Estimation
h	Sampling to Analysis Estimation
m	Matrix Spike Lower Estimation
m	Matrix Spike Lower Rejection
m	Matrix Spike Upper Estimation

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

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# Data Review Summary

Lab Reporting Batch ID: 440-148383-1

Laboratory: TA IRV

EDD Filename: Prep440-148383-1

eQAPP Name: TetraTechInc\_NERT\_11302016

## *Validation Area*

## *Note*

<i>Validation Area</i>	<i>Note</i>
Technical Holding Times	A
Temperature	A
Initial Calibration	N
Continuing Calibration/Initial Calibration Verification	N
Method Blanks	A
Surrogate/Tracer Spikes	N
Matrix Spike/Matrix Spike Duplicates	A
Laboratory Duplicates	N
Laboratory Replicates	N
Laboratory Control Samples	A
Compound Quantitation	SR
Field Duplicates	N
Field Triplicates	N
Field Blanks	N

A = Acceptable, N = Not provided/applicable, SR = See report

The contents of this report reflect findings made by ADR during Automated Data Review, manual applied qualifiers are not considered. Please refer to the Overall Qualifier Summary report for manual qualifiers.

# Data Qualifier Summary

Lab Reporting Batch ID: 440-148383-1

Laboratory: TA IRV

EDD Filename: Prep440-148383-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b> METALS
<b>Method:</b> 6020 <span style="float: right;"><b>Matrix:</b> AQ</span>

Sample ID: TT-TP4-L2-20160525 Collected: 5/25/2016 1:45:00 PM Analysis Type: RES/DIS Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHROMIUM	0.71	J	0.50	MDL	2.0	MRL	ug/L	J	sp

<b>Method Category:</b> METALS
<b>Method:</b> 7199 <span style="float: right;"><b>Matrix:</b> AQ</span>

Sample ID: TT-TP3-L1-20160525 Collected: 5/25/2016 1:50:00 PM Analysis Type: RES/DIS Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chromium, hexavalent	1.9	J	0.25	MDL	2.0	MRL	ug/L	J	sp

Sample ID: TT-TP4-L2-20160525 Collected: 5/25/2016 1:45:00 PM Analysis Type: RES/DIS Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chromium, hexavalent	0.27	J	0.25	MDL	2.0	MRL	ug/L	J	sp

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

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# Data Qualifier Summary

Lab Reporting Batch ID: 440-148383-1

Laboratory: TA IRV

EDD Filename: Prep440-148383-1

eQAPP Name: TetraTechInc\_NERT\_11302016

## Reason Code Legend

<i>Reason Code</i>	<i>Description</i>
sp	Reporting Limit Trace Value

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

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# Reporting Limit Outliers

Lab Reporting Batch ID: 440-148383-1

Laboratory: TA IRV

EDD Filename: Prep440-148383-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method:** 6020

**Matrix:** AQ

<b>SampleID</b>	<b>Analyte</b>	<b>Lab Qual</b>	<b>Result</b>	<b>Reporting Limit</b>	<b>RL Type</b>	<b>Units</b>	<b>Flag</b>
TT-TP4-L2-20160525	CHROMIUM	J	0.71	2.0	MRL	ug/L	J (all detects)

**Method:** 7199

**Matrix:** AQ

<b>SampleID</b>	<b>Analyte</b>	<b>Lab Qual</b>	<b>Result</b>	<b>Reporting Limit</b>	<b>RL Type</b>	<b>Units</b>	<b>Flag</b>
TT-TP3-L1-20160525	Chromium, hexavalent	J	1.9	2.0	MRL	ug/L	J (all detects)
TT-TP4-L2-20160525	Chromium, hexavalent	J	0.27	2.0	MRL	ug/L	J (all detects)

# Data Review Summary

Lab Reporting Batch ID: 440-148500-1

Laboratory: TA IRV

EDD Filename: Prep440-148500-1

eQAPP Name: TetraTechInc\_NERT\_11302016

## *Validation Area*

## *Note*

<i>Validation Area</i>	<i>Note</i>
Technical Holding Times	A
Temperature	A
Initial Calibration	N
Continuing Calibration/Initial Calibration Verification	N
Method Blanks	A
Surrogate/Tracer Spikes	N
Matrix Spike/Matrix Spike Duplicates	SR
Laboratory Duplicates	A
Laboratory Replicates	N
Laboratory Control Samples	A
Compound Quantitation	A
Field Duplicates	A
Field Triplicates	N
Field Blanks	N

A = Acceptable, N = Not provided/applicable, SR = See report

The contents of this report reflect findings made by ADR during Automated Data Review, manual applied qualifiers are not considered. Please refer to the Overall Qualifier Summary report for manual qualifiers.

## Field Duplicate RPD Report

Lab Reporting Batch ID: 440-148500-1

Laboratory: TA IRV

EDD Filename: Prep440-148500-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method: 2540C**  
**Matrix: AQ**

Analyte	Concentration (mg/L)		Sample RPD	eQAPP RPD	Flag
	TT-TP4-M3-20160526	TT-TP4-M3-20160526-DUP			
TOTAL DISSOLVED SOLIDS	6200	6300	2	30.00	No Qualifiers Applied

**Method: 314.0**  
**Matrix: AQ**

Analyte	Concentration (ug/L)		Sample RPD	eQAPP RPD	Flag
	TT-TP4-M3-20160526	TT-TP4-M3-20160526-DUP			
PERCHLORATE	240000	240000	0	30.00	No Qualifiers Applied

**Method: 6020**  
**Matrix: AQ**

Analyte	Concentration (ug/L)		Sample RPD	eQAPP RPD	Flag
	TT-TP4-M3-20160526 (DIS)	TT-TP4-M3-20160526-DUP (DIS)			
CHROMIUM	6600	5800	13	30.00	No Qualifiers Applied

**Method: 7199**  
**Matrix: AQ**

Analyte	Concentration (ug/L)		Sample RPD	eQAPP RPD	Flag
	TT-TP4-M3-20160526 (DIS)	TT-TP4-M3-20160526-DUP (DIS)			
Chromium, hexavalent	6000	5800	3	30.00	No Qualifiers Applied

**Method: SM5310B**  
**Matrix: AQ**

Analyte	Concentration (mg/L)		Sample RPD	eQAPP RPD	Flag
	TT-TP4-M3-20160526	TT-TP4-M3-20160526-DUP			
Total organic carbon	2.2	2.3	4	30.00	No Qualifiers Applied

# Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 440-148500-1

Laboratory: TA IRV

EDD Filename: Prep440-148500-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method: 7199**  
**Matrix: AQ**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
TT-TP4-M3-20160526MS (DIS) TT-TP4-M3-20160526MSD (DIS) (TT-TP4-M3-20160526)	Chromium, hexavalent	80	81	85.00-115.00	-	Chromium, hexavalent	J- (all detects) UJ (all non-detects)

**Method: 6020**  
**Matrix: AQ**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
TT-TP4-M3-20160526MS (DIS) TT-TP4-M3-20160526MSD (DIS) (TT-TP4-M3-20160526)	CHROMIUM	-870	-1062	75.00-125.00	-	CHROMIUM	J-(all detects) R(all non-detects)

**Method: 314.0**  
**Matrix: AQ**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
TT-TP4-M3-20160526MS TT-TP4-M3-20160526MSD (TT-TP4-M3-20160526)	PERCHLORATE	7507	10402	80.00-120.00	-	PERCHLORATE	J+(all detects)

# Data Qualifier Summary

Lab Reporting Batch ID: 440-148500-1

Laboratory: TA IRV

EDD Filename: Prep440-148500-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b>	GENCHEM	
<b>Method:</b>	314.0	<b>Matrix:</b> AQ

Sample ID: TT-TP4-M3-20160526      Collected: 5/26/2016 1:16:00 PM      Analysis Type: RES      Dilution: 10000

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
PERCHLORATE	240000		5000	MDL	10000	MRL	ug/L	J+	m

<b>Method Category:</b>	METALS	
<b>Method:</b>	6020	<b>Matrix:</b> AQ

Sample ID: TT-TP4-M3-20160526      Collected: 5/26/2016 1:16:00 PM      Analysis Type: RES/DIS      Dilution: 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHROMIUM	6600		2.5	MDL	10	MRL	ug/L	J-	m

<b>Method Category:</b>	METALS	
<b>Method:</b>	7199	<b>Matrix:</b> AQ

Sample ID: TT-TP4-M3-20160526      Collected: 5/26/2016 1:16:00 PM      Analysis Type: RES/DIS      Dilution: 500

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chromium, hexavalent	6000		130	MDL	1000	MRL	ug/L	J-	m

\* denotes a non-reportable result

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# Data Qualifier Summary

Lab Reporting Batch ID: 440-148500-1

Laboratory: TA IRV

EDD Filename: Prep440-148500-1

eQAPP Name: TetraTechInc\_NERT\_11302016

## Reason Code Legend

<i>Reason Code</i>	<i>Description</i>
m	Matrix Spike Lower Estimation
m	Matrix Spike Lower Rejection
m	Matrix Spike Upper Estimation

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

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# Data Review Summary

Lab Reporting Batch ID: 440-148926-1

Laboratory: TA IRV

EDD Filename: Prep440-148926-1

eQAPP Name: TetraTechInc\_NERT\_11302016

## *Validation Area*

## *Note*

<i>Validation Area</i>	<i>Note</i>
Technical Holding Times	A
Temperature	A
Initial Calibration	N
Continuing Calibration/Initial Calibration Verification	N
Method Blanks	A
Surrogate/Tracer Spikes	A
Matrix Spike/Matrix Spike Duplicates	SR
Laboratory Duplicates	N
Laboratory Replicates	N
Laboratory Control Samples	A
Compound Quantitation	SR
Field Duplicates	N
Field Triplicates	N
Field Blanks	N

A = Acceptable, N = Not provided/applicable, SR = See report

The contents of this report reflect findings made by ADR during Automated Data Review, manual applied qualifiers are not considered. Please refer to the Overall Qualifier Summary report for manual qualifiers.

# Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 440-148926-1

Laboratory: TA IRV

EDD Filename: Prep440-148926-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method: 6010B**

**Matrix: AQ**

<i>QC Sample ID (Associated Samples)</i>	<i>Compound</i>	<i>MS %R</i>	<i>MSD %R</i>	<i>%R Limits</i>	<i>RPD (Limits)</i>	<i>Affected Compounds</i>	<i>Flag</i>
TT-TP1-M3-20160601MS (DIS) TT-TP1-M3-20160601MSD (DIS) (TT-TP1-M3-20160601)	SODIUM	58	-5	75.00-125.00	-	SODIUM	J- (all detects) R (all non-detects)
TT-TP1-M3-20160601MS (DIS) TT-TP1-M3-20160601MSD (DIS) (TT-TP1-M3-20160601)	MAGNESIUM	53	55	75.00-125.00	-	MAGNESIUM	J-(all detects) UJ(all non-detects)
TT-TP1-M3-20160601MS (DIS) TT-TP1-M3-20160601MSD (DIS) (TT-TP1-M3-20160601)	CALCIUM	183	194	75.00-125.00	-	CALCIUM	J+(all detects)



# Data Qualifier Summary

Lab Reporting Batch ID: 440-148926-1

Laboratory: TA IRV

EDD Filename: Prep440-148926-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b>	METALS	
<b>Method:</b>	6010B	<b>Matrix:</b> AQ

Sample ID: TT-TP1-M2-20160601      Collected: 6/1/2016 11:40:00 AM      Analysis Type: RES/DIS      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MANGANESE	0.012	J	0.010	MDL	0.020	MRL	mg/L	J	sp

Sample ID: TT-TP1-M3-20160601      Collected: 6/1/2016 10:04:00 AM      Analysis Type: RE2/DIS      Dilution: 20

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MAGNESIUM	180		0.20	MDL	0.40	MRL	mg/L	J-	m
SODIUM	1300		5.0	MDL	10	MRL	mg/L	J-	m, m

Sample ID: TT-TP1-M3-20160601      Collected: 6/1/2016 10:04:00 AM      Analysis Type: RES/DIS      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CALCIUM	340		0.050	MDL	0.10	MRL	mg/L	J+	m

<b>Method Category:</b>	METALS	
<b>Method:</b>	6020	<b>Matrix:</b> AQ

Sample ID: TT-TP1-M1-20160601      Collected: 6/1/2016 10:47:00 AM      Analysis Type: RES/DIS      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
COBALT	0.98	J	0.50	MDL	1.0	MRL	ug/L	J	sp
COPPER	0.81	J	0.50	MDL	2.0	MRL	ug/L	J	sp
NICKEL	1.5	J	0.50	MDL	2.0	MRL	ug/L	J	sp

Sample ID: TT-TP1-M2-20160601      Collected: 6/1/2016 11:40:00 AM      Analysis Type: RES/DIS      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
COPPER	1.2	J	0.50	MDL	2.0	MRL	ug/L	J	sp
ZINC	2.7	J	2.5	MDL	20	MRL	ug/L	J	sp

Sample ID: TT-TP1-M3-20160601      Collected: 6/1/2016 10:04:00 AM      Analysis Type: RES/DIS      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
COPPER	1.2	J	0.50	MDL	2.0	MRL	ug/L	J	sp

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

# Data Qualifier Summary

Lab Reporting Batch ID: 440-148926-1

Laboratory: TA IRV

EDD Filename: Prep440-148926-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b>	METALS	
<b>Method:</b>	6020	<b>Matrix:</b> AQ

**Sample ID:** TT-TP1-M3-20160601      **Collected:** 6/1/2016 10:04:00 AM      **Analysis Type:** RES/DIS      **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ZINC	2.8	J	2.5	MDL	20	MRL	ug/L	J	sp

**Sample ID:** TT-TP2-M1-20160601      **Collected:** 6/1/2016 1:11:00 PM      **Analysis Type:** RES/DIS      **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
COBALT	0.65	J	0.50	MDL	1.0	MRL	ug/L	J	sp
COPPER	1.0	J	0.50	MDL	2.0	MRL	ug/L	J	sp

**Sample ID:** TT-TP2-M2-20160601      **Collected:** 6/1/2016 12:27:00 PM      **Analysis Type:** RES/DIS      **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
COBALT	0.58	J	0.50	MDL	1.0	MRL	ug/L	J	sp
COPPER	1.2	J	0.50	MDL	2.0	MRL	ug/L	J	sp

**Sample ID:** TT-TP3-M1-20160601      **Collected:** 6/1/2016 1:54:00 PM      **Analysis Type:** RES/DIS      **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
NICKEL	0.93	J	0.50	MDL	2.0	MRL	ug/L	J	sp
SELENIUM	1.3	J	0.50	MDL	2.0	MRL	ug/L	J	sp

\* denotes a non-reportable result

**Project Name and Number:** 114-520225-2015-MO5 - NERT Soil Flushing

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# Data Qualifier Summary

Lab Reporting Batch ID: 440-148926-1

Laboratory: TA IRV

EDD Filename: Prep440-148926-1

eQAPP Name: TetraTechInc\_NERT\_11302016

## Reason Code Legend

<i>Reason Code</i>	<i>Description</i>
m	Matrix Spike Lower Estimation
m	Matrix Spike Lower Rejection
m	Matrix Spike Upper Estimation
sp	Reporting Limit Trace Value

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

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## Reporting Limit Outliers

Lab Reporting Batch ID: 440-148926-1

Laboratory: TA IRV

EDD Filename: Prep440-148926-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method:** 6010B

**Matrix:** AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
TT-TP1-M2-20160601	MANGANESE	J	0.012	0.020	MRL	mg/L	J (all detects)

**Method:** 6020

**Matrix:** AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
TT-TP1-M1-20160601	COBALT	J	0.98	1.0	MRL	ug/L	J (all detects)
	COPPER	J	0.81	2.0	MRL	ug/L	
	NICKEL	J	1.5	2.0	MRL	ug/L	
TT-TP1-M2-20160601	COPPER	J	1.2	2.0	MRL	ug/L	J (all detects)
	ZINC	J	2.7	20	MRL	ug/L	
TT-TP1-M3-20160601	COPPER	J	1.2	2.0	MRL	ug/L	J (all detects)
	ZINC	J	2.8	20	MRL	ug/L	
TT-TP2-M1-20160601	COBALT	J	0.65	1.0	MRL	ug/L	J (all detects)
	COPPER	J	1.0	2.0	MRL	ug/L	
TT-TP2-M2-20160601	COBALT	J	0.58	1.0	MRL	ug/L	J (all detects)
	COPPER	J	1.2	2.0	MRL	ug/L	
TT-TP3-M1-20160601	NICKEL	J	0.93	2.0	MRL	ug/L	J (all detects)
	SELENIUM	J	1.3	2.0	MRL	ug/L	

# Data Review Summary

Lab Reporting Batch ID: 440-149036-1

Laboratory: TA IRV

EDD Filename: Prep440-149036-1

eQAPP Name: TetraTechInc\_NERT\_11302016

## *Validation Area*

## *Note*

<i>Validation Area</i>	<i>Note</i>
Technical Holding Times	A
Temperature	A
Initial Calibration	N
Continuing Calibration/Initial Calibration Verification	N
Method Blanks	A
Surrogate/Tracer Spikes	A
Matrix Spike/Matrix Spike Duplicates	SR
Laboratory Duplicates	A
Laboratory Replicates	N
Laboratory Control Samples	A
Compound Quantitation	SR
Field Duplicates	SR
Field Triplicates	N
Field Blanks	N

A = Acceptable, N = Not provided/applicable, SR = See report

The contents of this report reflect findings made by ADR during Automated Data Review, manual applied qualifiers are not considered. Please refer to the Overall Qualifier Summary report for manual qualifiers.

## Field Duplicate RPD Report

Lab Reporting Batch ID: 440-149036-1

Laboratory: TA IRV

EDD Filename: Prep440-149036-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method: 2320B**  
**Matrix: AQ**

Analyte	Concentration (mg/L)		Sample RPD	eQAPP RPD	Flag
	TT-TP4-M2-20160602	TT-TP4-M2-20160602-DUP			
Alkalinity as CaCO3	210	210	0	30.00	No Qualifiers Applied
Bicarbonate ion as HCO3	250	250	0		

**Method: 2540C**  
**Matrix: AQ**

Analyte	Concentration (mg/L)		Sample RPD	eQAPP RPD	Flag
	TT-TP4-M2-20160602	TT-TP4-M2-20160602-DUP			
TOTAL DISSOLVED SOLIDS	2400	2300	4	30.00	No Qualifiers Applied

**Method: 300.0**  
**Matrix: AQ**

Analyte	Concentration (mg/L)		Sample RPD	eQAPP RPD	Flag
	TT-TP4-M2-20160602	TT-TP4-M2-20160602-DUP			
CHLORIDE	210	210	0	30.00	No Qualifiers Applied
Nitrate as N	26	26	0	30.00	
SULFATE	820	810	1	30.00	

**Method: 300.1B**  
**Matrix: AQ**

Analyte	Concentration (ug/L)		Sample RPD	eQAPP RPD	Flag
	TT-TP4-M2-20160602	TT-TP4-M2-20160602-DUP			
Chlorate	340000	330000	3	30.00	No Qualifiers Applied

**Method: 314.0**  
**Matrix: AQ**

Analyte	Concentration (ug/L)		Sample RPD	eQAPP RPD	Flag
	TT-TP4-M2-20160602	TT-TP4-M2-20160602-DUP			
PERCHLORATE	79000	78000	1	30.00	No Qualifiers Applied

**Method: 6010B**  
**Matrix: AQ**

Analyte	Concentration (mg/L)		Sample RPD	eQAPP RPD	Flag
	TT-TP4-M2-20160602 (DIS)	TT-TP4-M2-20160602-DUP (DIS)			
BORON	1.3	1.3	0	30.00	No Qualifiers Applied
CALCIUM	47	48	2	30.00	
MAGNESIUM	22	21	5	30.00	
POTASSIUM	8.1	8.4	4	30.00	
SODIUM	610	610	0	30.00	

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## Field Duplicate RPD Report

Lab Reporting Batch ID: 440-149036-1

Laboratory: TA IRV

EDD Filename: Prep440-149036-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method: 6020**

**Matrix: AQ**

Analyte	Concentration (ug/L)		Sample RPD	eQAPP RPD	Flag
	TT-TP4-M2-20160602 (DIS)	TT-TP4-M2-20160602-DUP (DIS)			
ARSENIC	230	220	4	30.00	No Qualifiers Applied
BARIUM	18	18	0	30.00	
CHROMIUM	1700	1600	6	30.00	
MOLYBDENUM	50	48	4	30.00	
SELENIUM	2.0	1.9	5	30.00	
NICKEL	0.56	0.90	47	30.00	J(all detects) UJ(all non-detects)

**Method: 7199**

**Matrix: AQ**

Analyte	Concentration (ug/L)		Sample RPD	eQAPP RPD	Flag
	TT-TP4-M2-20160602 (DIS)	TT-TP4-M2-20160602-DUP (DIS)			
Chromium, hexavalent	1700	1700	0	30.00	No Qualifiers Applied

**Method: SM5310B**

**Matrix: AQ**

Analyte	Concentration (mg/L)		Sample RPD	eQAPP RPD	Flag
	TT-TP4-M2-20160602	TT-TP4-M2-20160602-DUP			
Total organic carbon	2.0	2.0	0	30.00	No Qualifiers Applied

# Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 440-149036-1

Laboratory: TA IRV

EDD Filename: Prep440-149036-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method: 7199**  
**Matrix: AQ**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
TT-TP4-M3-20160602MS (DIS) (TT-TP4-M3-20160602)	Chromium, hexavalent	81	-	85.00-115.00	-	Chromium, hexavalent	J- (all detects) UJ (all non-detects)

**Method: 300.0**  
**Matrix: AQ**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
TT-TP4-M3-20160602MS TT-TP4-M3-20160602MSD (TT-TP4-M3-20160602)	Nitrate as N	139	20	80.00-120.00	-	Nitrate as N	J(all detects) UJ(all non-detects)
TT-TP4-M3-20160602MS TT-TP4-M3-20160602MSD (TT-TP4-M3-20160602)	CHLORIDE SULFATE	41 -	30 24	80.00-120.00 80.00-120.00	- -	CHLORIDE SULFATE	J-(all detects) UJ(all non-detects)

**Method: 300.1B**  
**Matrix: AQ**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
TT-TP4-M3-20160602MS TT-TP4-M3-20160602MSD (TT-TP4-M3-20160602)	Chlorate	11312	18478	75.00-125.00	-	Chlorate	J+(all detects)

**Method: 314.0**  
**Matrix: AQ**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
TT-TP4-M3-20160602MS TT-TP4-M3-20160602MSD (TT-TP4-M3-20160602)	PERCHLORATE	788	3030	80.00-120.00	-	PERCHLORATE	J+(all detects)

**Method: 6020**  
**Matrix: AQ**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
TT-TP4-M3-20160602MS (DIS) TT-TP4-M3-20160602MSD (DIS) (TT-TP4-M3-20160602)	CHROMIUM	-89	744	75.00-125.00	-	CHROMIUM	J(all detects) R(all non-detects)

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# Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 440-149036-1

Laboratory: TA IRV

EDD Filename: Prep440-149036-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method: 6010B**

**Matrix: AQ**

<i>QC Sample ID (Associated Samples)</i>	<i>Compound</i>	<i>MS %R</i>	<i>MSD %R</i>	<i>%R Limits</i>	<i>RPD (Limits)</i>	<i>Affected Compounds</i>	<i>Flag</i>
TT-TP4-M3-20160602MS (DIS) TT-TP4-M3-20160602MSD (DIS) (TT-TP4-M3-20160602)	CALCIUM SODIUM	6 -14	-52 -394	75.00-125.00 75.00-125.00	- -	CALCIUM SODIUM	J-(all detects) R(all non-detects)
TT-TP4-M3-20160602MSD (DIS) (TT-TP4-M3-20160602)	MAGNESIUM	-	34	75.00-125.00	-	MAGNESIUM	J-(all detects) UJ(all non-detects)

# Data Qualifier Summary

Lab Reporting Batch ID: 440-149036-1

Laboratory: TA IRV

EDD Filename: Prep440-149036-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b>	GENCHEM	
<b>Method:</b>	300.0	<b>Matrix:</b> AQ

Sample ID: TT-TP4-M3-20160602      Collected: 6/2/2016 1:47:00 PM      Analysis Type: RES      Dilution: 200

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Nitrate as N	150		11	MDL	22	MRL	mg/L	J	m, m

Sample ID: TT-TP4-M3-20160602      Collected: 6/2/2016 1:47:00 PM      Analysis Type: RES2      Dilution: 200

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHLORIDE	410		50	MDL	100	MRL	mg/L	J-	m
SULFATE	1300		50	MDL	100	MRL	mg/L	J-	m

<b>Method Category:</b>	GENCHEM	
<b>Method:</b>	300.1B	<b>Matrix:</b> AQ

Sample ID: TT-TP4-M3-20160602      Collected: 6/2/2016 1:47:00 PM      Analysis Type: RES      Dilution: 10000

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chlorate	1000000		100000	MDL	200000	MRL	ug/L	J+	m

<b>Method Category:</b>	GENCHEM	
<b>Method:</b>	314.0	<b>Matrix:</b> AQ

Sample ID: TT-TP4-M3-20160602      Collected: 6/2/2016 1:47:00 PM      Analysis Type: RES      Dilution: 5000

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
PERCHLORATE	200000		2500	MDL	5000	MRL	ug/L	J+	m

<b>Method Category:</b>	METALS	
<b>Method:</b>	6010B	<b>Matrix:</b> AQ

Sample ID: TT-TP4-M3-20160602      Collected: 6/2/2016 1:47:00 PM      Analysis Type: RE2/DIS      Dilution: 20

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MAGNESIUM	72		0.20	MDL	0.40	MRL	mg/L	J-	m
SODIUM	1100		5.0	MDL	10	MRL	mg/L	J-	m

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

# Data Qualifier Summary

Lab Reporting Batch ID: 440-149036-1

Laboratory: TA IRV

EDD Filename: Prep440-149036-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b>	METALS	
<b>Method:</b>	6010B	<b>Matrix:</b> AQ

Sample ID: TT-TP4-M3-20160602      Collected: 6/2/2016 1:47:00 PM      Analysis Type: RES/DIS      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CALCIUM	150		0.050	MDL	0.10	MRL	mg/L	J-	m
IRON	0.017	J	0.010	MDL	0.040	MRL	mg/L	J	sp

<b>Method Category:</b>	METALS	
<b>Method:</b>	6020	<b>Matrix:</b> AQ

Sample ID: TT-TP3-M2-20160602      Collected: 6/2/2016 11:15:00 AM      Analysis Type: RES/DIS      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	1.6	J	0.50	MDL	2.0	MRL	ug/L	J	sp
ZINC	5.9	J	2.5	MDL	20	MRL	ug/L	J	sp

Sample ID: TT-TP4-M1-20160602      Collected: 6/2/2016 12:56:00 PM      Analysis Type: RES/DIS      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
NICKEL	0.55	J	0.50	MDL	2.0	MRL	ug/L	J	sp
ZINC	3.2	J	2.5	MDL	20	MRL	ug/L	J	sp

Sample ID: TT-TP4-M2-20160602      Collected: 6/2/2016 12:06:00 PM      Analysis Type: RES/DIS      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
NICKEL	0.56	J	0.50	MDL	2.0	MRL	ug/L	J	sp, fd

Sample ID: TT-TP4-M2-20160602-DUP      Collected: 6/2/2016 12:06:00 PM      Analysis Type: RES/DIS      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
NICKEL	0.90	J	0.50	MDL	2.0	MRL	ug/L	J	sp, fd
SELENIUM	1.9	J	0.50	MDL	2.0	MRL	ug/L	J	sp

Sample ID: TT-TP4-M3-20160602      Collected: 6/2/2016 1:47:00 PM      Analysis Type: RE2/DIS      Dilution: 2

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHROMIUM	5000		1.0	MDL	4.0	MRL	ug/L	J	m, m

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

# Data Qualifier Summary

Lab Reporting Batch ID: 440-149036-1

Laboratory: TA IRV

EDD Filename: Prep440-149036-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b> METALS
<b>Method:</b> 6020 <span style="float: right;"><b>Matrix:</b> AQ</span>

Sample ID: TT-TP4-M3-20160602 Collected: 6/2/2016 1:47:00 PM Analysis Type: RES/DIS Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
COPPER	0.53	J	0.50	MDL	2.0	MRL	ug/L	J	sp
NICKEL	0.61	J	0.50	MDL	2.0	MRL	ug/L	J	sp

<b>Method Category:</b> METALS
<b>Method:</b> 7199 <span style="float: right;"><b>Matrix:</b> AQ</span>

Sample ID: TT-TP3-L1-20160602 Collected: 6/2/2016 1:47:00 PM Analysis Type: RES/DIS Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chromium, hexavalent	1.4	J	0.25	MDL	2.0	MRL	ug/L	J	sp

Sample ID: TT-TP3-L2-20160602 Collected: 6/2/2016 1:43:00 PM Analysis Type: RES/DIS Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chromium, hexavalent	0.37	J	0.25	MDL	2.0	MRL	ug/L	J	sp

Sample ID: TT-TP4-L1-20160602 Collected: 6/2/2016 2:09:00 PM Analysis Type: RES/DIS Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chromium, hexavalent	0.26	J	0.25	MDL	2.0	MRL	ug/L	J	sp

Sample ID: TT-TP4-M3-20160602 Collected: 6/2/2016 1:47:00 PM Analysis Type: RE2/DIS Dilution: 500

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chromium, hexavalent	5100		130	MDL	1000	MRL	ug/L	J-	m

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

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# Data Qualifier Summary

Lab Reporting Batch ID: 440-149036-1

Laboratory: TA IRV

EDD Filename: Prep440-149036-1

eQAPP Name: TetraTechInc\_NERT\_11302016

## Reason Code Legend

<i>Reason Code</i>	<i>Description</i>
fd	Field Duplicate Precision
m	Matrix Spike Lower Estimation
m	Matrix Spike Lower Rejection
m	Matrix Spike Upper Estimation
sp	Reporting Limit Trace Value

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

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## Reporting Limit Outliers

Lab Reporting Batch ID: 440-149036-1

Laboratory: TA IRV

EDD Filename: Prep440-149036-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method:** 6010B

**Matrix:** AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
TT-TP4-M3-20160602	IRON	J	0.017	0.040	MRL	mg/L	J (all detects)

**Method:** 6020

**Matrix:** AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
TT-TP3-M2-20160602	SELENIUM	J	1.6	2.0	MRL	ug/L	J (all detects)
	ZINC	J	5.9	20	MRL	ug/L	J (all detects)
TT-TP4-M1-20160602	NICKEL	J	0.55	2.0	MRL	ug/L	J (all detects)
	ZINC	J	3.2	20	MRL	ug/L	J (all detects)
TT-TP4-M2-20160602	NICKEL	J	0.56	2.0	MRL	ug/L	J (all detects)
TT-TP4-M2-20160602-DUP	NICKEL	J	0.90	2.0	MRL	ug/L	J (all detects)
	SELENIUM	J	1.9	2.0	MRL	ug/L	J (all detects)
TT-TP4-M3-20160602	COPPER	J	0.53	2.0	MRL	ug/L	J (all detects)
	NICKEL	J	0.61	2.0	MRL	ug/L	J (all detects)

**Method:** 7199

**Matrix:** AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
TT-TP3-L1-20160602	Chromium, hexavalent	J	1.4	2.0	MRL	ug/L	J (all detects)
TT-TP3-L2-20160602	Chromium, hexavalent	J	0.37	2.0	MRL	ug/L	J (all detects)
TT-TP4-L1-20160602	Chromium, hexavalent	J	0.26	2.0	MRL	ug/L	J (all detects)

# Data Review Summary

Lab Reporting Batch ID: 440-149621-1

Laboratory: TA IRV

EDD Filename: Prep440-149621-1

eQAPP Name: TetraTechInc\_NERT\_11302016

## *Validation Area*

## *Note*

<i>Validation Area</i>	<i>Note</i>
Technical Holding Times	SR
Temperature	A
Initial Calibration	N
Continuing Calibration/Initial Calibration Verification	N
Method Blanks	SR
Surrogate/Tracer Spikes	N
Matrix Spike/Matrix Spike Duplicates	SR
Laboratory Duplicates	A
Laboratory Replicates	N
Laboratory Control Samples	A
Compound Quantitation	SR
Field Duplicates	N
Field Triplicates	N
Field Blanks	N

A = Acceptable, N = Not provided/applicable, SR = See report

The contents of this report reflect findings made by ADR during Automated Data Review, manual applied qualifiers are not considered. Please refer to the Overall Qualifier Summary report for manual qualifiers.

# QC Outlier Report: HoldingTimes

Lab Reporting Batch ID: 440-149621-1  
EDD Filename: Prep440-149621-1

Laboratory: TA IRV  
eQAPP Name: TetraTechInc\_NERT\_11302016

Method: 7199 Preparation Method: Gen Prep  
Matrix: AQ

<i>Sample ID</i>	<i>Type</i>	<i>Actual</i>	<i>Criteria</i>	<i>Units</i>	<i>Flag</i>
TT-TP3-M1-20160608 (RE2/DIS)	Sampling To Analysis	25.50	24.00	HOURS	J- (all detects) UJ (all non-detects)



# Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 440-149621-1

Laboratory: TA IRV

EDD Filename: Prep440-149621-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method: 6020**

**Matrix: AQ**

<b>QC Sample ID (Associated Samples)</b>	<b>Compound</b>	<b>MS %R</b>	<b>MSD %R</b>	<b>%R Limits</b>	<b>RPD (Limits)</b>	<b>Affected Compounds</b>	<b>Flag</b>
TT-TP1-M1-20160608MS (DIS) TT-TP1-M1-20160608MSD (DIS) (TT-TP1-M1-20160608)	CHROMIUM	573	312	75.00-125.00	-	CHROMIUM	J+ (all detects)
TT-TP2-M2-20160608MS (DIS) TT-TP2-M2-20160608MSD (DIS) (TT-TP2-M2-20160608)	CHROMIUM	22	19	75.00-125.00	-	CHROMIUM	J-(all detects) R(all non-detects)

# Method Blank Outlier Report

Lab Reporting Batch ID: 440-149621-1

Laboratory: TA IRV

EDD Filename: Prep440-149621-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method:** 6020  
**Matrix:** AQ

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
MB 440-336734/1-B	6/17/2016 7:48:00 PM	CHROMIUM	0.665 ug/L	TT-TP2-M2-20160608 TT-TP3-L2-20160608 TT-TP3-M1-20160608 TT-TP3-M2-20160608 TT-TP4-M2-20160608

# Data Qualifier Summary

Lab Reporting Batch ID: 440-149621-1

Laboratory: TA IRV

EDD Filename: Prep440-149621-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b>	METALS	
<b>Method:</b>	6020	<b>Matrix:</b> AQ

Sample ID: TT-TP1-M1-20160608      Collected: 6/8/2016 9:33:00 AM      Analysis Type: RES/DIS      Dilution: 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHROMIUM	3900		2.5	MDL	10	MRL	ug/L	J+	m

Sample ID: TT-TP2-M2-20160608      Collected: 6/8/2016 10:43:00 AM      Analysis Type: RES/DIS      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHROMIUM	2700	B	0.50	MDL	2.0	MRL	ug/L	J-	m

<b>Method Category:</b>	METALS	
<b>Method:</b>	7199	<b>Matrix:</b> AQ

Sample ID: TT-TP3-L1-20160608      Collected: 6/8/2016 1:15:00 PM      Analysis Type: RES/DIS      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chromium, hexavalent	1.2	J	0.25	MDL	2.0	MRL	ug/L	J	sp

Sample ID: TT-TP3-L2-20160608      Collected: 6/8/2016 1:20:00 PM      Analysis Type: RES/DIS      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chromium, hexavalent	0.28	J	0.25	MDL	2.0	MRL	ug/L	J	sp

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

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# Data Qualifier Summary

Lab Reporting Batch ID: 440-149621-1

Laboratory: TA IRV

EDD Filename: Prep440-149621-1

eQAPP Name: TetraTechInc\_NERT\_11302016

## Reason Code Legend

<i>Reason Code</i>	<i>Description</i>
bl	Method Blank Contamination
e	Sampling to Analysis Estimation
h	Sampling to Analysis Estimation
m	Matrix Spike Lower Rejection
m	Matrix Spike Upper Estimation
sp	Reporting Limit Trace Value

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

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# Reporting Limit Outliers

Lab Reporting Batch ID: 440-149621-1

Laboratory: TA IRV

EDD Filename: Prep440-149621-1

eQAPP Name: TetraTechInc\_NERT\_11302016

Method: 7199

Matrix: AQ

<i>SampleID</i>	<i>Analyte</i>	<i>Lab Qual</i>	<i>Result</i>	<i>Reporting Limit</i>	<i>RL Type</i>	<i>Units</i>	<i>Flag</i>
TT-TP3-L1-20160608	Chromium, hexavalent	J	1.2	2.0	MRL	ug/L	J (all detects)
TT-TP3-L2-20160608	Chromium, hexavalent	J	0.28	2.0	MRL	ug/L	J (all detects)

# Data Review Summary

Lab Reporting Batch ID: 440-149732-1

Laboratory: TA IRV

EDD Filename: Prep440-149732-1

eQAPP Name: TetraTechInc\_NERT\_11302016

## *Validation Area*

## *Note*

<i>Validation Area</i>	<i>Note</i>
Technical Holding Times	SR
Temperature	A
Initial Calibration	N
Continuing Calibration/Initial Calibration Verification	N
Method Blanks	A
Surrogate/Tracer Spikes	N
Matrix Spike/Matrix Spike Duplicates	SR
Laboratory Duplicates	A
Laboratory Replicates	N
Laboratory Control Samples	A
Compound Quantitation	A
Field Duplicates	A
Field Triplicates	N
Field Blanks	N

A = Acceptable, N = Not provided/applicable, SR = See report

The contents of this report reflect findings made by ADR during Automated Data Review, manual applied qualifiers are not considered. Please refer to the Overall Qualifier Summary report for manual qualifiers.

## Field Duplicate RPD Report

Lab Reporting Batch ID: 440-149732-1

Laboratory: TA IRV

EDD Filename: Prep440-149732-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method: 2540C**  
**Matrix: AQ**

Analyte	Concentration (mg/L)		Sample RPD	eQAPP RPD	Flag
	TT-TP4-M3-20160609	TT-TP4-M3-20160609-DUP			
TOTAL DISSOLVED SOLIDS	5000	5300	6	30.00	No Qualifiers Applied

**Method: 314.0**  
**Matrix: AQ**

Analyte	Concentration (ug/L)		Sample RPD	eQAPP RPD	Flag
	TT-TP4-M3-20160609	TT-TP4-M3-20160609-DUP			
PERCHLORATE	190000	170000	11	30.00	No Qualifiers Applied

**Method: 6020**  
**Matrix: AQ**

Analyte	Concentration (ug/L)		Sample RPD	eQAPP RPD	Flag
	TT-TP4-M3-20160609 (DIS)	TT-TP4-M3-20160609-DUP (DIS)			
CHROMIUM	4900	5000	2	30.00	No Qualifiers Applied

**Method: 7199**  
**Matrix: AQ**

Analyte	Concentration (ug/L)		Sample RPD	eQAPP RPD	Flag
	TT-TP4-M3-20160609 (DIS)	TT-TP4-M3-20160609-DUP (DIS)			
Chromium, hexavalent	4700	4600	2	30.00	No Qualifiers Applied

**Method: SM5310B**  
**Matrix: AQ**

Analyte	Concentration (mg/L)		Sample RPD	eQAPP RPD	Flag
	TT-TP4-M3-20160609	TT-TP4-M3-20160609-DUP			
Total organic carbon	2.0	2.1	5	30.00	No Qualifiers Applied

# QC Outlier Report: HoldingTimes

Lab Reporting Batch ID: 440-149732-1  
EDD Filename: Prep440-149732-1

Laboratory: TA IRV  
eQAPP Name: TetraTechInc\_NERT\_11302016

Method: 7199 Preparation Method: Gen Prep  
Matrix: AQ

<i>Sample ID</i>	<i>Type</i>	<i>Actual</i>	<i>Criteria</i>	<i>Units</i>	<i>Flag</i>
TT-TP4-M3-20160609-DUP (RE2/DIS)	Sampling To Analysis	25.50	24.00	HOURS	J- (all detects)
TT-TP4-M3-20160609MSD (RES/DIS)		24.25	24.00	HOURS	UJ (all non-detects)



# Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 440-149732-1

Laboratory: TA IRV

EDD Filename: Prep440-149732-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method: 7199**  
**Matrix: AQ**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
TT-TP4-M3-20160609MS (DIS) TT-TP4-M3-20160609MSD (DIS) (TT-TP4-M3-20160609)	Chromium, hexavalent	-46	-80	85.00-115.00	-	Chromium, hexavalent	J- (all detects) R (all non-detects)

**Method: 6020**  
**Matrix: AQ**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
TT-TP4-M3-20160609MS (DIS) TT-TP4-M3-20160609MSD (DIS) (TT-TP4-M3-20160609)	CHROMIUM	-320	185	75.00-125.00	-	CHROMIUM	J(all detects) R(all non-detects)

# Data Qualifier Summary

Lab Reporting Batch ID: 440-149732-1

Laboratory: TA IRV

EDD Filename: Prep440-149732-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b>	METALS	
<b>Method:</b>	6020	<b>Matrix:</b> AQ

Sample ID: TT-TP4-M3-20160609      Collected: 6/9/2016 10:20:00 AM      Analysis Type: RES/DIS      Dilution: 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHROMIUM	4900		2.5	MDL	10	MRL	ug/L	J	m, m

<b>Method Category:</b>	METALS	
<b>Method:</b>	7199	<b>Matrix:</b> AQ

Sample ID: TT-TP4-M3-20160609      Collected: 6/9/2016 10:20:00 AM      Analysis Type: RES/DIS      Dilution: 100

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chromium, hexavalent	4700		25	MDL	200	MRL	ug/L	J-	m

\* denotes a non-reportable result

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# Data Qualifier Summary

Lab Reporting Batch ID: 440-149732-1

Laboratory: TA IRV

EDD Filename: Prep440-149732-1

eQAPP Name: TetraTechInc\_NERT\_11302016

## Reason Code Legend

<i>Reason Code</i>	<i>Description</i>
e	Sampling to Analysis Estimation
h	Sampling to Analysis Estimation
m	Matrix Spike Lower Rejection
m	Matrix Spike Upper Estimation

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

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# Data Review Summary

Lab Reporting Batch ID: 440-150680-1

Laboratory: TA IRV

EDD Filename: Prep440-150680-1

eQAPP Name: TetraTechInc\_NERT\_11302016

## *Validation Area*

## *Note*

<i>Validation Area</i>	<i>Note</i>
Technical Holding Times	A
Temperature	A
Initial Calibration	N
Continuing Calibration/Initial Calibration Verification	N
Method Blanks	A
Surrogate/Tracer Spikes	N
Matrix Spike/Matrix Spike Duplicates	A
Laboratory Duplicates	A
Laboratory Replicates	N
Laboratory Control Samples	A
Compound Quantitation	A
Field Duplicates	N
Field Triplicates	N
Field Blanks	N

A = Acceptable, N = Not provided/applicable, SR = See report

The contents of this report reflect findings made by ADR during Automated Data Review, manual applied qualifiers are not considered. Please refer to the Overall Qualifier Summary report for manual qualifiers.

## ***Data Qualifier Summary***

Lab Reporting Batch ID: 440-150680-1

Laboratory: TA IRV

EDD Filename: Prep440-150680-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**No Data Review Qualifiers Applied.**

# Data Review Summary

Lab Reporting Batch ID: 440-150775-1

Laboratory: TA IRV

EDD Filename: Prep440-150775-1

eQAPP Name: TetraTechInc\_NERT\_11302016

## *Validation Area*

## *Note*

<i>Validation Area</i>	<i>Note</i>
Technical Holding Times	A
Temperature	A
Initial Calibration	N
Continuing Calibration/Initial Calibration Verification	N
Method Blanks	A
Surrogate/Tracer Spikes	N
Matrix Spike/Matrix Spike Duplicates	SR
Laboratory Duplicates	A
Laboratory Replicates	N
Laboratory Control Samples	A
Compound Quantitation	SR
Field Duplicates	A
Field Triplicates	N
Field Blanks	N

A = Acceptable, N = Not provided/applicable, SR = See report

The contents of this report reflect findings made by ADR during Automated Data Review, manual applied qualifiers are not considered. Please refer to the Overall Qualifier Summary report for manual qualifiers.

## Field Duplicate RPD Report

Lab Reporting Batch ID: 440-150775-1

Laboratory: TA IRV

EDD Filename: Prep440-150775-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method: 2540C**  
**Matrix: AQ**

Analyte	Concentration (mg/L)		Sample RPD	eQAPP RPD	Flag
	TT-TP4-M3-20160622	TT-TP4-M3-20160622-DUP			
TOTAL DISSOLVED SOLIDS	5300	5400	2	30.00	No Qualifiers Applied

**Method: 314.0**  
**Matrix: AQ**

Analyte	Concentration (ug/L)		Sample RPD	eQAPP RPD	Flag
	TT-TP4-M3-20160622	TT-TP4-M3-20160622-DUP			
PERCHLORATE	170000	160000	6	30.00	No Qualifiers Applied

**Method: 6020**  
**Matrix: AQ**

Analyte	Concentration (ug/L)		Sample RPD	eQAPP RPD	Flag
	TT-TP4-M3-20160622 (DIS)	TT-TP4-M3-20160622-DUP (DIS)			
CHROMIUM	4000	3900	3	30.00	No Qualifiers Applied

**Method: 7199**  
**Matrix: AQ**

Analyte	Concentration (ug/L)		Sample RPD	eQAPP RPD	Flag
	TT-TP4-M3-20160622 (DIS)	TT-TP4-M3-20160622-DUP (DIS)			
Chromium, hexavalent	3900	4100	5	30.00	No Qualifiers Applied

**Method: SM5310B**  
**Matrix: AQ**

Analyte	Concentration (mg/L)		Sample RPD	eQAPP RPD	Flag
	TT-TP4-M3-20160622	TT-TP4-M3-20160622-DUP			
Total organic carbon	1.6	1.6	0	30.00	No Qualifiers Applied

# QC Outlier Report: HoldingTimes

Lab Reporting Batch ID: 440-150775-1  
EDD Filename: Prep440-150775-1

Laboratory: TA IRV  
eQAPP Name: TetraTechInc\_NERT\_11302016

Method: 7199 Preparation Method: Gen Prep  
Matrix: AQ

<i>Sample ID</i>	<i>Type</i>	<i>Actual</i>	<i>Criteria</i>	<i>Units</i>	<i>Flag</i>
TT-TP4-M3-20160622MS (RES/DIS)	Sampling To Analysis	24.75	24.00	HOURS	J- (all detects)
TT-TP4-M3-20160622MSD (RES/DIS)		25.00	24.00	HOURS	UJ (all non-detects)



# Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 440-150775-1

Laboratory: TA IRV

EDD Filename: Prep440-150775-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method: 7199**  
**Matrix: AQ**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
TT-TP4-M3-20160622MS (DIS) TT-TP4-M3-20160622MSD (DIS) (TT-TP4-M3-20160622)	Chromium, hexavalent	84	83	85.00-115.00	-	Chromium, hexavalent	J- (all detects) UJ (all non-detects)

**Method: 6020**  
**Matrix: AQ**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
TT-TP4-M3-20160622MS (DIS) TT-TP4-M3-20160622MSD (DIS) (TT-TP4-M3-20160622)	CHROMIUM	-198	-276	75.00-125.00	-	CHROMIUM	J-(all detects) R(all non-detects)

# Data Qualifier Summary

Lab Reporting Batch ID: 440-150775-1

Laboratory: TA IRV

EDD Filename: Prep440-150775-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b> METALS
<b>Method:</b> 6020 <span style="float: right;"><b>Matrix:</b> AQ</span>

<b>Sample ID:</b> TT-TP4-M3-20160622	<b>Collected:</b> 6/22/2016 12:14:00 PM	<b>Analysis Type:</b> RES/DIS	<b>Dilution:</b> 10						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHROMIUM	4000		5.0	MDL	20	MRL	ug/L	J-	m

<b>Method Category:</b> METALS
<b>Method:</b> 7199 <span style="float: right;"><b>Matrix:</b> AQ</span>

<b>Sample ID:</b> TT-TP2-L2-20160622	<b>Collected:</b> 6/22/2016 1:15:00 PM	<b>Analysis Type:</b> RES/DIS	<b>Dilution:</b> 1						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chromium, hexavalent	1.5	J	0.25	MDL	2.0	MRL	ug/L	J	sp

<b>Sample ID:</b> TT-TP3-L1-20160622	<b>Collected:</b> 6/22/2016 1:20:00 PM	<b>Analysis Type:</b> RES/DIS	<b>Dilution:</b> 1						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chromium, hexavalent	1.7	J	0.25	MDL	2.0	MRL	ug/L	J	sp

<b>Sample ID:</b> TT-TP4-M3-20160622	<b>Collected:</b> 6/22/2016 12:14:00 PM	<b>Analysis Type:</b> RES/DIS	<b>Dilution:</b> 100						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chromium, hexavalent	3900	F1	25	MDL	200	MRL	ug/L	J-	m

\* denotes a non-reportable result

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# Data Qualifier Summary

Lab Reporting Batch ID: 440-150775-1

Laboratory: TA IRV

EDD Filename: Prep440-150775-1

eQAPP Name: TetraTechInc\_NERT\_11302016

## Reason Code Legend

<i>Reason Code</i>	<i>Description</i>
m	Matrix Spike Lower Estimation
m	Matrix Spike Lower Rejection
sp	Reporting Limit Trace Value

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

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# Reporting Limit Outliers

Lab Reporting Batch ID: 440-150775-1

Laboratory: TA IRV

EDD Filename: Prep440-150775-1

eQAPP Name: TetraTechInc\_NERT\_11302016

Method: 7199

Matrix: AQ

<i>SampleID</i>	<i>Analyte</i>	<i>Lab Qual</i>	<i>Result</i>	<i>Reporting Limit</i>	<i>RL Type</i>	<i>Units</i>	<i>Flag</i>
TT-TP2-L2-20160622	Chromium, hexavalent	J	1.5	2.0	MRL	ug/L	J (all detects)
TT-TP3-L1-20160622	Chromium, hexavalent	J	1.7	2.0	MRL	ug/L	J (all detects)

# Data Review Summary

Lab Reporting Batch ID: 440-151701-1

Laboratory: TA IRV

EDD Filename: Prep440-151701-1

eQAPP Name: TetraTechInc\_NERT\_11302016

## *Validation Area*

## *Note*

<i>Validation Area</i>	<i>Note</i>
Technical Holding Times	A
Temperature	A
Initial Calibration	N
Continuing Calibration/Initial Calibration Verification	N
Method Blanks	A
Surrogate/Tracer Spikes	N
Matrix Spike/Matrix Spike Duplicates	A
Laboratory Duplicates	A
Laboratory Replicates	N
Laboratory Control Samples	A
Compound Quantitation	SR
Field Duplicates	N
Field Triplicates	N
Field Blanks	N

A = Acceptable, N = Not provided/applicable, SR = See report

The contents of this report reflect findings made by ADR during Automated Data Review, manual applied qualifiers are not considered. Please refer to the Overall Qualifier Summary report for manual qualifiers.

# Data Qualifier Summary

Lab Reporting Batch ID: 440-151701-1

Laboratory: TA IRV

EDD Filename: Prep440-151701-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b> METALS	
<b>Method:</b> 7199	<b>Matrix:</b> AQ

Sample ID: TT-TP2-L1-20160705      Collected: 7/5/2016 1:30:00 PM      Analysis Type: RES/DIS      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chromium, hexavalent	0.50	J	0.25	MDL	2.0	MRL	ug/L	J	sp

Sample ID: TT-TP3-L2-20160705      Collected: 7/5/2016 1:25:00 PM      Analysis Type: RES/DIS      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chromium, hexavalent	0.46	J	0.25	MDL	2.0	MRL	ug/L	J	sp

\* denotes a non-reportable result

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# Data Qualifier Summary

Lab Reporting Batch ID: 440-151701-1

Laboratory: TA IRV

EDD Filename: Prep440-151701-1

eQAPP Name: TetraTechInc\_NERT\_11302016

## Reason Code Legend

<i>Reason Code</i>	<i>Description</i>
sp	Reporting Limit Trace Value

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

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# Reporting Limit Outliers

Lab Reporting Batch ID: 440-151701-1

Laboratory: TA IRV

EDD Filename: Prep440-151701-1

eQAPP Name: TetraTechInc\_NERT\_11302016

Method: 7199

Matrix: AQ

<i>SampleID</i>	<i>Analyte</i>	<i>Lab Qual</i>	<i>Result</i>	<i>Reporting Limit</i>	<i>RL Type</i>	<i>Units</i>	<i>Flag</i>
TT-TP2-L1-20160705	Chromium, hexavalent	J	0.50	2.0	MRL	ug/L	J (all detects)
TT-TP3-L2-20160705	Chromium, hexavalent	J	0.46	2.0	MRL	ug/L	J (all detects)



# Data Review Summary

Lab Reporting Batch ID: 440-151885-1

Laboratory: TA IRV

EDD Filename: Prep440-151885-1

eQAPP Name: TetraTechInc\_NERT\_11302016

## *Validation Area*

## *Note*

<i>Validation Area</i>	<i>Note</i>
Technical Holding Times	A
Temperature	A
Initial Calibration	N
Continuing Calibration/Initial Calibration Verification	N
Method Blanks	A
Surrogate/Tracer Spikes	N
Matrix Spike/Matrix Spike Duplicates	SR
Laboratory Duplicates	A
Laboratory Replicates	N
Laboratory Control Samples	A
Compound Quantitation	A
Field Duplicates	A
Field Triplicates	N
Field Blanks	N

A = Acceptable, N = Not provided/applicable, SR = See report

The contents of this report reflect findings made by ADR during Automated Data Review, manual applied qualifiers are not considered. Please refer to the Overall Qualifier Summary report for manual qualifiers.

## Field Duplicate RPD Report

Lab Reporting Batch ID: 440-151885-1

Laboratory: TA IRV

EDD Filename: Prep440-151885-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method: 2540C**  
**Matrix: AQ**

Analyte	Concentration (mg/L)		Sample RPD	eQAPP RPD	Flag
	TT-TP4-M3-20160706	TT-TP4-M3-20160706-DUP			
TOTAL DISSOLVED SOLIDS	6400	6400	0	30.00	No Qualifiers Applied

**Method: 314.0**  
**Matrix: AQ**

Analyte	Concentration (ug/L)		Sample RPD	eQAPP RPD	Flag
	TT-TP4-M3-20160706	TT-TP4-M3-20160706-DUP			
PERCHLORATE	250000	270000	8	30.00	No Qualifiers Applied

**Method: 6020**  
**Matrix: AQ**

Analyte	Concentration (ug/L)		Sample RPD	eQAPP RPD	Flag
	TT-TP4-M3-20160706 (DIS)	TT-TP4-M3-20160706-DUP (DIS)			
CHROMIUM	5300	5400	2	30.00	No Qualifiers Applied

**Method: 7199**  
**Matrix: AQ**

Analyte	Concentration (ug/L)		Sample RPD	eQAPP RPD	Flag
	TT-TP4-M3-20160706 (DIS)	TT-TP4-M3-20160706-DUP (DIS)			
Chromium, hexavalent	5600	5900	5	30.00	No Qualifiers Applied

**Method: SM5310B**  
**Matrix: AQ**

Analyte	Concentration (mg/L)		Sample RPD	eQAPP RPD	Flag
	TT-TP4-M3-20160706	TT-TP4-M3-20160706-DUP			
Total organic carbon	1.9	1.8	5	30.00	No Qualifiers Applied

# Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 440-151885-1

Laboratory: TA IRV

EDD Filename: Prep440-151885-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method: 314.0**  
**Matrix: AQ**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
TT-TP4-M3-20160706MS TT-TP4-M3-20160706MSD (TT-TP4-M3-20160706)	PERCHLORATE	39	51	80.00-120.00	-	PERCHLORATE	J- (all detects) UJ (all non-detects)

**Method: 6020**  
**Matrix: AQ**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
TT-TP4-M3-20160706MS (DIS) TT-TP4-M3-20160706MSD (DIS) (TT-TP4-M3-20160706)	CHROMIUM	264	313	75.00-125.00	-	CHROMIUM	J+(all detects)

# Data Qualifier Summary

Lab Reporting Batch ID: 440-151885-1

Laboratory: TA IRV

EDD Filename: Prep440-151885-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b>	GENCHEM	
<b>Method:</b>	314.0	<b>Matrix:</b> AQ

Sample ID: TT-TP4-M3-20160706      Collected: 7/6/2016 9:33:00 AM      Analysis Type: RES      Dilution: 10000

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
PERCHLORATE	250000		5000	MDL	10000	MRL	ug/L	J-	m

<b>Method Category:</b>	METALS	
<b>Method:</b>	6020	<b>Matrix:</b> AQ

Sample ID: TT-TP4-M3-20160706      Collected: 7/6/2016 9:33:00 AM      Analysis Type: RES/DIS      Dilution: 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHROMIUM	5300		2.5	MDL	10	MRL	ug/L	J+	m

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

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# Data Qualifier Summary

Lab Reporting Batch ID: 440-151885-1

Laboratory: TA IRV

EDD Filename: Prep440-151885-1

eQAPP Name: TetraTechInc\_NERT\_11302016

## Reason Code Legend

<i>Reason Code</i>	<i>Description</i>
m	Matrix Spike Lower Estimation
m	Matrix Spike Upper Estimation

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

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# Data Review Summary

Lab Reporting Batch ID: 440-152222-1

Laboratory: TA IRV

EDD Filename: Prep440-152222-1

eQAPP Name: TetraTechInc\_NERT\_11302016

## *Validation Area*

## *Note*

<i>Validation Area</i>	<i>Note</i>
Technical Holding Times	A
Temperature	A
Initial Calibration	N
Continuing Calibration/Initial Calibration Verification	N
Method Blanks	A
Surrogate/Tracer Spikes	A
Matrix Spike/Matrix Spike Duplicates	SR
Laboratory Duplicates	N
Laboratory Replicates	N
Laboratory Control Samples	A
Compound Quantitation	A
Field Duplicates	SR
Field Triplicates	N
Field Blanks	A

A = Acceptable, N = Not provided/applicable, SR = See report

The contents of this report reflect findings made by ADR during Automated Data Review, manual applied qualifiers are not considered. Please refer to the Overall Qualifier Summary report for manual qualifiers.

# Field Duplicate RPD Report

Lab Reporting Batch ID: 440-152222-1

Laboratory: TA IRV

EDD Filename: Prep440-152222-1

eQAPP Name: TetraTechInc\_NERT\_11302016

Method: 314.0

Matrix: SO

<i>Analyte</i>	<i>Concentration (mg/Kg)</i>		<i>Sample RPD</i>	<i>eQAPP RPD</i>	<i>Flag</i>
	<i>DFSB-09-15'</i>	<i>DFSB-09-15'-DUP</i>			
PERCHLORATE	150	19	155	30.00	J (all detects) UJ (all non-detects)

# Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 440-152222-1

Laboratory: TA IRV

EDD Filename: Prep440-152222-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method: 314.0**

**Matrix: SO**

<i>QC Sample ID (Associated Samples)</i>	<i>Compound</i>	<i>MS %R</i>	<i>MSD %R</i>	<i>%R Limits</i>	<i>RPD (Limits)</i>	<i>Affected Compounds</i>	<i>Flag</i>
DFSB-09-15'-DUPMS DFSB-09-15'-DUPMSD (DFSB-09-15'-DUP)	PERCHLORATE	-618	-377	80.00-120.00	-	PERCHLORATE	J- (all detects) R (all non-detects)



# Data Qualifier Summary

Lab Reporting Batch ID: 440-152222-1

Laboratory: TA IRV

EDD Filename: Prep440-152222-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b>	GENCHEM	
<b>Method:</b>	314.0	<b>Matrix:</b> SO

Sample ID: DFSB-09-15'      Collected: 7/8/2016 2:00:00 PM      Analysis Type: RES/DIS      Dilution: 1000

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
PERCHLORATE	150		11	MDL	47	MRL	mg/Kg	J	fd

Sample ID: DFSB-09-15'-DUP      Collected: 7/8/2016 2:05:00 PM      Analysis Type: RES/DIS      Dilution: 100

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
PERCHLORATE	19		1.3	MDL	5.4	MRL	mg/Kg	J-	m, fd

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

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# Data Qualifier Summary

Lab Reporting Batch ID: 440-152222-1

Laboratory: TA IRV

EDD Filename: Prep440-152222-1

eQAPP Name: TetraTechInc\_NERT\_11302016

## Reason Code Legend

<i>Reason Code</i>	<i>Description</i>
fd	Field Duplicate Precision
m	Matrix Spike Lower Rejection

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

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# Data Review Summary

Lab Reporting Batch ID: 440-153790-1

Laboratory: TA IRV

EDD Filename: Prep440-153790-1

eQAPP Name: TetraTechInc\_NERT\_11302016

## *Validation Area*

## *Note*

<i>Validation Area</i>	<i>Note</i>
Technical Holding Times	A
Temperature	A
Initial Calibration	N
Continuing Calibration/Initial Calibration Verification	N
Method Blanks	SR
Surrogate/Tracer Spikes	A
Matrix Spike/Matrix Spike Duplicates	SR
Laboratory Duplicates	A
Laboratory Replicates	N
Laboratory Control Samples	A
Compound Quantitation	SR
Field Duplicates	N
Field Triplicates	N
Field Blanks	N

A = Acceptable, N = Not provided/applicable, SR = See report

The contents of this report reflect findings made by ADR during Automated Data Review, manual applied qualifiers are not considered. Please refer to the Overall Qualifier Summary report for manual qualifiers.

# QC Outlier Report: HoldingTimes

Lab Reporting Batch ID: 440-153790-1  
EDD Filename: Prep440-153790-1

Laboratory: TA IRV  
eQAPP Name: TetraTechInc\_NERT\_11302016

Method: 7199 Preparation Method: Gen Prep  
Matrix: AQ

<i>Sample ID</i>	<i>Type</i>	<i>Actual</i>	<i>Criteria</i>	<i>Units</i>	<i>Flag</i>
TT-TP1-L2-20160727MS (RES/DIS)	Sampling To Analysis	26.00	24.00	HOURS	J- (all detects)
TT-TP1-L2-20160727MSD (RES/DIS)		26.00	24.00	HOURS	UJ (all non-detects)

# Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 440-153790-1

Laboratory: TA IRV

EDD Filename: Prep440-153790-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method: 300.0**  
**Matrix: AQ**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
TT-TP1-M1-20160727MS TT-TP1-M1-20160727MSD (TT-TP1-M1-20160727)	Nitrate as N	-94	44	80.00-120.00	-	Nitrate as N	J- (all detects) R (all non-detects)
TT-TP1-M1-20160727MS TT-TP1-M1-20160727MSD (TT-TP1-M1-20160727)	SULFATE	-44	20	80.00-120.00	-	SULFATE	J-(all detects) R(all non-detects)
TT-TP1-M1-20160727MS TT-TP1-M1-20160727MSD (TT-TP1-M1-20160727)	CHLORIDE	44	51	80.00-120.00	-	CHLORIDE	J-(all detects) UJ(all non-detects)

**Method: 6010B**  
**Matrix: AQ**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
TT-TP1-M2-20160727MS (DIS) TT-TP1-M2-20160727MSD (DIS) (TT-TP1-M2-20160727)	SODIUM	165	-526	75.00-125.00	-	SODIUM	J(all detects) R(all non-detects)
TT-TP1-M2-20160727MS (DIS) TT-TP1-M2-20160727MSD (DIS) (TT-TP1-M2-20160727)	CALCIUM MAGNESIUM	-96 -12	-329 -44	75.00-125.00 75.00-125.00	- -	CALCIUM MAGNESIUM	J-(all detects) R(all non-detects)

# Method Blank Outlier Report

Lab Reporting Batch ID: 440-153790-1

Laboratory: TA IRV

EDD Filename: Prep440-153790-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method:** 6020  
**Matrix:** AQ

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
MB 440-346974/1-B	8/5/2016 10:08:00 PM	CHROMIUM	0.515 ug/L	TT-TP1-M1-20160727 TT-TP1-M2-20160727 TT-TP1-M3-20160727 TT-TP2-M1-20160727

# Data Qualifier Summary

Lab Reporting Batch ID: 440-153790-1

Laboratory: TA IRV

EDD Filename: Prep440-153790-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b>	GENCHEM	
<b>Method:</b>	300.0	<b>Matrix:</b> AQ

7/27/2016 11:21:00  
**Sample ID:** TT-TP1-M1-20160727      **Collected:** AM      **Analysis Type:** RES      **Dilution:** 200

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Nitrate as N	140		11	MDL	22	MRL	mg/L	J-	m, m

7/27/2016 11:21:00  
**Sample ID:** TT-TP1-M1-20160727      **Collected:** AM      **Analysis Type:** RES2      **Dilution:** 200

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHLORIDE	510		50	MDL	100	MRL	mg/L	J-	m
SULFATE	750		50	MDL	100	MRL	mg/L	J-	m, m

<b>Method Category:</b>	METALS	
<b>Method:</b>	6010B	<b>Matrix:</b> AQ

7/27/2016 10:35:00  
**Sample ID:** TT-TP1-M2-20160727      **Collected:** AM      **Analysis Type:** RE2/DIS      **Dilution:** 10

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SODIUM	1500		2.5	MDL	5.0	MRL	mg/L	J	m, m

7/27/2016 10:35:00  
**Sample ID:** TT-TP1-M2-20160727      **Collected:** AM      **Analysis Type:** RES/DIS      **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CALCIUM	510		0.050	MDL	0.10	MRL	mg/L	J-	m
MAGNESIUM	230		0.010	MDL	0.020	MRL	mg/L	J-	m
MANGANESE	0.010	J	0.010	MDL	0.020	MRL	mg/L	J	sp

<b>Method Category:</b>	METALS	
<b>Method:</b>	6020	<b>Matrix:</b> AQ

7/27/2016 11:21:00  
**Sample ID:** TT-TP1-M1-20160727      **Collected:** AM      **Analysis Type:** RES/DIS      **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
COBALT	0.78	J	0.50	MDL	1.0	MRL	ug/L	J	sp
NICKEL	0.75	J	0.50	MDL	2.0	MRL	ug/L	J	sp
SELENIUM	1.8	J	0.50	MDL	2.0	MRL	ug/L	J	sp

\* denotes a non-reportable result

**Project Name and Number:** 114-520225-2015-MO5 - NERT Soil Flushing

# Data Qualifier Summary

Lab Reporting Batch ID: 440-153790-1

Laboratory: TA IRV

EDD Filename: Prep440-153790-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b> METALS
<b>Method:</b> 6020 <span style="float: right;"><b>Matrix:</b> AQ</span>

<b>Sample ID:</b> TT-TP1-M2-20160727		<b>7/27/2016 10:35:00</b>			<b>Collected:</b> AM			<b>Analysis Type:</b> RES/DIS		<b>Dilution:</b> 5
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
SELENIUM	2.7	J	2.5	MDL	10	MRL	ug/L	J	sp	

<b>Sample ID:</b> TT-TP2-M1-20160727		<b>7/27/2016 12:31:00</b>			<b>Collected:</b> PM			<b>Analysis Type:</b> RES/DIS		<b>Dilution:</b> 1
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
NICKEL	0.55	J	0.50	MDL	2.0	MRL	ug/L	J	sp	

<b>Method Category:</b> METALS
<b>Method:</b> 7199 <span style="float: right;"><b>Matrix:</b> AQ</span>

<b>Sample ID:</b> TT-TP2-L2-20160727		<b>7/27/2016 1:10:00 PM</b>			<b>Collected:</b> 7/27/2016 1:10:00 PM			<b>Analysis Type:</b> RES/DIS		<b>Dilution:</b> 1
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
Chromium, hexavalent	0.58	J	0.25	MDL	2.0	MRL	ug/L	J	sp	

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

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# Data Qualifier Summary

Lab Reporting Batch ID: 440-153790-1

Laboratory: TA IRV

EDD Filename: Prep440-153790-1

eQAPP Name: TetraTechInc\_NERT\_11302016

## Reason Code Legend

<i>Reason Code</i>	<i>Description</i>
bl	Method Blank Contamination
m	Matrix Spike Lower Estimation
m	Matrix Spike Lower Rejection
m	Matrix Spike Upper Estimation
sp	Reporting Limit Trace Value

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

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## Reporting Limit Outliers

Lab Reporting Batch ID: 440-153790-1

Laboratory: TA IRV

EDD Filename: Prep440-153790-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method:** 6010B

**Matrix:** AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
TT-TP1-M2-20160727	MANGANESE	J	0.010	0.020	MRL	mg/L	J (all detects)

**Method:** 6020

**Matrix:** AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
TT-TP1-M1-20160727	COBALT	J	0.78	1.0	MRL	ug/L	J (all detects)
	NICKEL	J	0.75	2.0	MRL	ug/L	
	SELENIUM	J	1.8	2.0	MRL	ug/L	
TT-TP1-M2-20160727	SELENIUM	J	2.7	10	MRL	ug/L	J (all detects)
TT-TP2-M1-20160727	NICKEL	J	0.55	2.0	MRL	ug/L	J (all detects)

**Method:** 7199

**Matrix:** AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
TT-TP2-L2-20160727	Chromium, hexavalent	J	0.58	2.0	MRL	ug/L	J (all detects)

# Data Review Summary

Lab Reporting Batch ID: 440-153948-1

Laboratory: TA IRV

EDD Filename: Prep440-153948-1

eQAPP Name: TetraTechInc\_NERT\_11302016

## *Validation Area*

## *Note*

<i>Validation Area</i>	<i>Note</i>
Technical Holding Times	A
Temperature	A
Initial Calibration	N
Continuing Calibration/Initial Calibration Verification	N
Method Blanks	SR
Surrogate/Tracer Spikes	A
Matrix Spike/Matrix Spike Duplicates	SR
Laboratory Duplicates	A
Laboratory Replicates	N
Laboratory Control Samples	A
Compound Quantitation	SR
Field Duplicates	A
Field Triplicates	N
Field Blanks	N

A = Acceptable, N = Not provided/applicable, SR = See report

The contents of this report reflect findings made by ADR during Automated Data Review, manual applied qualifiers are not considered. Please refer to the Overall Qualifier Summary report for manual qualifiers.

## Field Duplicate RPD Report

Lab Reporting Batch ID: 440-153948-1

Laboratory: TA IRV

EDD Filename: Prep440-153948-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method: 2320B**  
**Matrix: AQ**

Analyte	Concentration (mg/L)		Sample RPD	eQAPP RPD	Flag
	TT-TP4-M3-20160728	TT-TP4-M3-20160728-DUP			
Alkalinity as CaCO3	190	190	0	30.00	No Qualifiers Applied
Bicarbonate ion as HCO3	230	230	0		

**Method: 2540C**  
**Matrix: AQ**

Analyte	Concentration (mg/L)		Sample RPD	eQAPP RPD	Flag
	TT-TP4-M3-20160728	TT-TP4-M3-20160728-DUP			
TOTAL DISSOLVED SOLIDS	8400	8500	1	30.00	No Qualifiers Applied

**Method: 300.0**  
**Matrix: AQ**

Analyte	Concentration (mg/L)		Sample RPD	eQAPP RPD	Flag
	TT-TP4-M3-20160728	TT-TP4-M3-20160728-DUP			
CHLORIDE	830	870	5	30.00	No Qualifiers Applied
Nitrate as N	180	190	5	30.00	
SULFATE	1300	1400	7	30.00	

**Method: 300.1B**  
**Matrix: AQ**

Analyte	Concentration (ug/L)		Sample RPD	eQAPP RPD	Flag
	TT-TP4-M3-20160728	TT-TP4-M3-20160728-DUP			
Chlorate	2300000	2300000	0	30.00	No Qualifiers Applied

**Method: 314.0**  
**Matrix: AQ**

Analyte	Concentration (ug/L)		Sample RPD	eQAPP RPD	Flag
	TT-TP4-M3-20160728	TT-TP4-M3-20160728-DUP			
PERCHLORATE	370000	390000	5	30.00	No Qualifiers Applied

**Method: 6010B**  
**Matrix: AQ**

Analyte	Concentration (mg/L)		Sample RPD	eQAPP RPD	Flag
	TT-TP4-M3-20160728 (DIS)	TT-TP4-M3-20160728-DUP (DIS)			
BORON	3.0	3.0	0	30.00	No Qualifiers Applied
CALCIUM	260	270	4	30.00	
MAGNESIUM	130	120	8	30.00	
POTASSIUM	21	23	9	30.00	
SODIUM	1600	1500	6	30.00	

**Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing**

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## Field Duplicate RPD Report

Lab Reporting Batch ID: 440-153948-1

Laboratory: TA IRV

EDD Filename: Prep440-153948-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method: 6020**

**Matrix: AQ**

Analyte	Concentration (ug/L)		Sample RPD	eQAPP RPD	Flag
	TT-TP4-M3-20160728 (DIS)	TT-TP4-M3-20160728-DUP (DIS)			
ARSENIC	130	130	0	30.00	No Qualifiers Applied
BARIUM	42	40	5	30.00	
CHROMIUM	10000	9700	3	30.00	
MOLYBDENUM	48	42	13	30.00	

**Method: 7199**

**Matrix: AQ**

Analyte	Concentration (ug/L)		Sample RPD	eQAPP RPD	Flag
	TT-TP4-M3-20160728 (DIS)	TT-TP4-M3-20160728-DUP (DIS)			
Chromium, hexavalent	10000	10000	0	30.00	No Qualifiers Applied

**Method: SM5310B**

**Matrix: AQ**

Analyte	Concentration (mg/L)		Sample RPD	eQAPP RPD	Flag
	TT-TP4-M3-20160728	TT-TP4-M3-20160728-DUP			
Total organic carbon	1.6	1.6	0	30.00	No Qualifiers Applied

# Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 440-153948-1

Laboratory: TA IRV

EDD Filename: Prep440-153948-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method: 7199**  
**Matrix: AQ**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
TT-TP4-M3-20160728MS (DIS) TT-TP4-M3-20160728MSD (DIS) (TT-TP4-M3-20160728)	Chromium, hexavalent	62	72	85.00-115.00	-	Chromium, hexavalent	J- (all detects) UJ (all non-detects)

**Method: 300.0**  
**Matrix: AQ**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
TT-TP4-M3-20160728MS TT-TP4-M3-20160728MSD (TT-TP4-M3-20160728)	Nitrate as N	27	-15	80.00-120.00	-	Nitrate as N	J-(all detects) R(all non-detects)
TT-TP4-M3-20160728MS TT-TP4-M3-20160728MSD (TT-TP4-M3-20160728)	CHLORIDE SULFATE	148 648	- 436	80.00-120.00 80.00-120.00	- -	CHLORIDE SULFATE	J+(all detects)

**Method: 300.1B**  
**Matrix: AQ**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
TT-TP4-M3-20160728MS TT-TP4-M3-20160728MSD (TT-TP4-M3-20160728)	Chlorate	13582	39979	75.00-125.00	-	Chlorate	J+(all detects)

**Method: 6010B**  
**Matrix: AQ**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
TT-TP4-M3-20160728MS (DIS) TT-TP4-M3-20160728MSD (DIS) (TT-TP4-M3-20160728)	CALCIUM MAGNESIUM SODIUM	-58 -18 -621	-11 -27 -529	75.00-125.00 75.00-125.00 75.00-125.00	- - -	CALCIUM MAGNESIUM SODIUM	J-(all detects) R(all non-detects)

# Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 440-153948-1

Laboratory: TA IRV

EDD Filename: Prep440-153948-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method: 6020**

**Matrix: AQ**

<i>QC Sample ID (Associated Samples)</i>	<i>Compound</i>	<i>MS %R</i>	<i>MSD %R</i>	<i>%R Limits</i>	<i>RPD (Limits)</i>	<i>Affected Compounds</i>	<i>Flag</i>
TT-TP4-M3-20160728MS (DIS) TT-TP4-M3-20160728MSD (DIS) (TT-TP4-M3-20160728)	CHROMIUM	-532	-838	75.00-125.00	-	CHROMIUM	J-(all detects) R(all non-detects)

**Method: 314.0**

**Matrix: AQ**

<i>QC Sample ID (Associated Samples)</i>	<i>Compound</i>	<i>MS %R</i>	<i>MSD %R</i>	<i>%R Limits</i>	<i>RPD (Limits)</i>	<i>Affected Compounds</i>	<i>Flag</i>
TT-TP4-M3-20160728MS (TT-TP4-M3-20160728)	PERCHLORATE	135	-	80.00-120.00	-	PERCHLORATE	J+(all detects)

# Method Blank Outlier Report

Lab Reporting Batch ID: 440-153948-1

Laboratory: TA IRV

EDD Filename: Prep440-153948-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method:** 6020  
**Matrix:** AQ

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
MB 440-347558/1-C	8/9/2016 11:25:00 PM	ZINC	2.58 ug/L	TT-TP2-M2-20160728 TT-TP3-M1-20160728 TT-TP3-M2-20160728 TT-TP4-M1-20160728 TT-TP4-M2-20160728 TT-TP4-M3-20160728 TT-TP4-M3-20160728-DUP



# Data Qualifier Summary

Lab Reporting Batch ID: 440-153948-1

Laboratory: TA IRV

EDD Filename: Prep440-153948-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b>	GENCHEM	
<b>Method:</b>	300.0	<b>Matrix:</b> AQ

Sample ID: TT-TP4-M3-20160728      Collected: 7/28/2016 1:36:00 PM      Analysis Type: RES      Dilution: 500

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Nitrate as N	180		28	MDL	55	MRL	mg/L	J-	m, m

Sample ID: TT-TP4-M3-20160728      Collected: 7/28/2016 1:36:00 PM      Analysis Type: RES2      Dilution: 500

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SULFATE	1300		130	MDL	250	MRL	mg/L	J+	m

Sample ID: TT-TP4-M3-20160728      Collected: 7/28/2016 1:36:00 PM      Analysis Type: RES3      Dilution: 500

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHLORIDE	830	F1	130	MDL	250	MRL	mg/L	J+	m

<b>Method Category:</b>	GENCHEM	
<b>Method:</b>	300.1B	<b>Matrix:</b> AQ

Sample ID: TT-TP4-M3-20160728      Collected: 7/28/2016 1:36:00 PM      Analysis Type: RES      Dilution: 10000

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chlorate	2300000		100000	MDL	200000	MRL	ug/L	J+	m

<b>Method Category:</b>	GENCHEM	
<b>Method:</b>	314.0	<b>Matrix:</b> AQ

Sample ID: TT-TP4-M3-20160728      Collected: 7/28/2016 1:36:00 PM      Analysis Type: RES      Dilution: 10000

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
PERCHLORATE	370000		5000	MDL	10000	MRL	ug/L	J+	m

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

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# Data Qualifier Summary

Lab Reporting Batch ID: 440-153948-1

Laboratory: TA IRV

EDD Filename: Prep440-153948-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b>	METALS	
<b>Method:</b>	6010B	<b>Matrix:</b> AQ

Sample ID: TT-TP4-M3-20160728      Collected: 7/28/2016 1:36:00 PM      Analysis Type: RES/DIS      Dilution: 10

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CALCIUM	260		0.50	MDL	1.0	MRL	mg/L	J-	m
MAGNESIUM	130		0.10	MDL	0.20	MRL	mg/L	J-	m
SODIUM	1600		2.5	MDL	5.0	MRL	mg/L	J-	m

<b>Method Category:</b>	METALS	
<b>Method:</b>	6020	<b>Matrix:</b> AQ

7/28/2016 10:59:00

Sample ID: TT-TP3-M2-20160728      Collected: AM      Analysis Type: RES/DIS      Dilution: 10

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	16	J	5.0	MDL	20	MRL	ug/L	J	sp

Sample ID: TT-TP4-M3-20160728      Collected: 7/28/2016 1:36:00 PM      Analysis Type: RES/DIS      Dilution: 10

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHROMIUM	10000		5.0	MDL	20	MRL	ug/L	J-	m

<b>Method Category:</b>	METALS	
<b>Method:</b>	7199	<b>Matrix:</b> AQ

Sample ID: TT-TP4-M3-20160728      Collected: 7/28/2016 1:36:00 PM      Analysis Type: RES/DIS      Dilution: 500

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chromium, hexavalent	10000		130	MDL	1000	MRL	ug/L	J-	m

\* denotes a non-reportable result

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# Data Qualifier Summary

Lab Reporting Batch ID: 440-153948-1

Laboratory: TA IRV

EDD Filename: Prep440-153948-1

eQAPP Name: TetraTechInc\_NERT\_11302016

## Reason Code Legend

<i>Reason Code</i>	<i>Description</i>
bl	Method Blank Contamination
m	Matrix Spike Lower Estimation
m	Matrix Spike Lower Rejection
m	Matrix Spike Upper Estimation
sp	Reporting Limit Trace Value

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

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# Reporting Limit Outliers

Lab Reporting Batch ID: 440-153948-1

Laboratory: TA IRV

EDD Filename: Prep440-153948-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method:** 6020

**Matrix:** AQ

<b>SampleID</b>	<b>Analyte</b>	<b>Lab Qual</b>	<b>Result</b>	<b>Reporting Limit</b>	<b>RL Type</b>	<b>Units</b>	<b>Flag</b>
TT-TP3-M2-20160728	MOLYBDENUM	J	16	20	MRL	ug/L	J (all detects)

# Data Review Summary

Lab Reporting Batch ID: 440-155501-1

Laboratory: TA IRV

EDD Filename: Prep440-155501-1

eQAPP Name: TetraTechInc\_NERT\_11302016

## *Validation Area*

## *Note*

<i>Validation Area</i>	<i>Note</i>
Technical Holding Times	A
Temperature	A
Initial Calibration	N
Continuing Calibration/Initial Calibration Verification	N
Method Blanks	SR
Surrogate/Tracer Spikes	A
Matrix Spike/Matrix Spike Duplicates	SR
Laboratory Duplicates	A
Laboratory Replicates	N
Laboratory Control Samples	A
Compound Quantitation	SR
Field Duplicates	SR
Field Triplicates	N
Field Blanks	N

A = Acceptable, N = Not provided/applicable, SR = See report

The contents of this report reflect findings made by ADR during Automated Data Review, manual applied qualifiers are not considered. Please refer to the Overall Qualifier Summary report for manual qualifiers.

# Field Duplicate RPD Report

Lab Reporting Batch ID: 440-155501-1

Laboratory: TA IRV

EDD Filename: Prep440-155501-1

eQAPP Name: TetraTechInc\_NERT\_11302016

Method: 2540C\_Leach

Matrix: AQ

Analyte	Concentration (mg/L)		Sample RPD	eQAPP RPD	Flag
	Tt-TP1-B4A-6	Tt-TP1-B4A-6-dup			
TOTAL DISSOLVED SOLIDS	72	140	64	30.00	J (all detects) UJ (all non-detects)

Method: 314.0

Matrix: SO

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	Tt-TP1-B4A-6	Tt-TP1-B4A-6-dup			
PERCHLORATE	0.12	0.18	40	30.00	J(all detects) UJ(all non-detects)

# Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 440-155501-1

Laboratory: TA IRV

EDD Filename: Prep440-155501-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method: 300.1B\_Leach**

**Matrix: AQ**

<b>QC Sample ID (Associated Samples)</b>	<b>Compound</b>	<b>MS %R</b>	<b>MSD %R</b>	<b>%R Limits</b>	<b>RPD (Limits)</b>	<b>Affected Compounds</b>	<b>Flag</b>
Tt-TP1-B4A-2MSD (Tt-TP1-B4A-2)	Chlorate	-	137	75.00-125.00	-	Chlorate	J+ (all detects)

**Method: 314.0**

**Matrix: SO**

<b>QC Sample ID (Associated Samples)</b>	<b>Compound</b>	<b>MS %R</b>	<b>MSD %R</b>	<b>%R Limits</b>	<b>RPD (Limits)</b>	<b>Affected Compounds</b>	<b>Flag</b>
Tt-TP1-B4A-10MS Tt-TP1-B4A-10MSD (Tt-TP1-B4A-10)	PERCHLORATE	72	71	80.00-120.00	-	PERCHLORATE	J-(all detects) UJ(all non-detects)

# Method Blank Outlier Report

Lab Reporting Batch ID: 440-155501-1

Laboratory: TA IRV

EDD Filename: Prep440-155501-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method:** 6020  
**Matrix:** SO

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
MB 440-349824/1-A ^20	8/22/2016 11:14:00 PM	COPPER	0.620 mg/Kg	Tt-TP1-B1A-10 Tt-TP1-B1A-18 Tt-TP1-B3A-18 Tt-TP1-B3A-6 Tt-TP1-B4A-2 Tt-TP1-B4A-26



# Data Qualifier Summary

Lab Reporting Batch ID: 440-155501-1

Laboratory: TA IRV

EDD Filename: Prep440-155501-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b>	GENCHEM	
<b>Method:</b>	2540C_Leach	<b>Matrix:</b> AQ

**Sample ID:** Tt-TP1-B4A-6      **Collected:** 8/11/2016 9:44:00 AM      **Analysis Type:** RES/DIS      **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
TOTAL DISSOLVED SOLIDS	72		5.0	MDL	10	MRL	mg/L	J	fd

**Sample ID:** Tt-TP1-B4A-6-dup      **Collected:** 8/11/2016 9:46:00 AM      **Analysis Type:** RES/DIS      **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
TOTAL DISSOLVED SOLIDS	140		5.0	MDL	10	MRL	mg/L	J	fd

<b>Method Category:</b>	GENCHEM	
<b>Method:</b>	300.0_Leach	<b>Matrix:</b> AQ

**Sample ID:** Tt-TP1-B1A-10      **Collected:** 8/11/2016 3:02:00 PM      **Analysis Type:** RES/DIS      **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Nitrate as NO3	0.42	J	0.25	MDL	0.50	MRL	mg/L	J	sp

8/11/2016 12:40:00

**Sample ID:** Tt-TP1-B3A-6      **Collected:** PM      **Analysis Type:** RES/DIS      **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Nitrate as NO3	0.27	J	0.25	MDL	0.50	MRL	mg/L	J	sp

**Sample ID:** Tt-TP1-B4A-2      **Collected:** 8/11/2016 9:40:00 AM      **Analysis Type:** RES/DIS      **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Nitrate as NO3	0.44	J	0.25	MDL	0.50	MRL	mg/L	J	sp

<b>Method Category:</b>	GENCHEM	
<b>Method:</b>	300.1B_Leach	<b>Matrix:</b> AQ

8/11/2016 12:58:00

**Sample ID:** Tt-TP1-B3A-18      **Collected:** PM      **Analysis Type:** RES/DIS      **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chlorate	11	J	10	MDL	20	MRL	ug/L	J	sp

\* denotes a non-reportable result

**Project Name and Number:** 114-520225-2015-MO5 - NERT Soil Flushing

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# Data Qualifier Summary

Lab Reporting Batch ID: 440-155501-1

Laboratory: TA IRV

EDD Filename: Prep440-155501-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b>	GENCHEM									
<b>Method:</b>	314.0	<b>Matrix:</b>		SO						

Sample ID: Tt-TP1-B4A-10      Collected: 8/11/2016 9:50:00 AM      Analysis Type: RES/DIS      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
PERCHLORATE	0.16	F1	0.011	MDL	0.045	MRL	mg/Kg	J-	m

Sample ID: Tt-TP1-B4A-6      Collected: 8/11/2016 9:44:00 AM      Analysis Type: RES/DIS      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
PERCHLORATE	0.12		0.011	MDL	0.046	MRL	mg/Kg	J	fd

Sample ID: Tt-TP1-B4A-6-dup      Collected: 8/11/2016 9:46:00 AM      Analysis Type: RES/DIS      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
PERCHLORATE	0.18		0.011	MDL	0.045	MRL	mg/Kg	J	fd

<b>Method Category:</b>	METALS									
<b>Method:</b>	6010B_Leach	<b>Matrix:</b>		AQ						

Sample ID: Tt-TP1-B1A-10      Collected: 8/11/2016 3:02:00 PM      Analysis Type: RES/DIS      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MAGNESIUM	1.3	J	0.12	MDL	4.0	MRL	mg/L	J	sp

Sample ID: Tt-TP1-B1A-18      Collected: 8/11/2016 3:11:00 PM      Analysis Type: RES/DIS      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MAGNESIUM	1.3	J	0.12	MDL	4.0	MRL	mg/L	J	sp

8/11/2016 12:58:00

Sample ID: Tt-TP1-B3A-18      Collected: PM      Analysis Type: RES/DIS      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MAGNESIUM	1.9	J	0.12	MDL	4.0	MRL	mg/L	J	sp

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

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# Data Qualifier Summary

Lab Reporting Batch ID: 440-155501-1

Laboratory: TA IRV

EDD Filename: Prep440-155501-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b>	METALS	
<b>Method:</b>	6010B_Leach	<b>Matrix:</b> AQ

Sample ID: Tt-TP1-B4A-2      Collected: 8/11/2016 9:40:00 AM      Analysis Type: RES/DIS      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MAGNESIUM	1.0	J	0.12	MDL	4.0	MRL	mg/L	J	sp

<b>Method Category:</b>	METALS	
<b>Method:</b>	6020	<b>Matrix:</b> SO

Sample ID: Tt-TP1-B1A-10      Collected: 8/11/2016 3:02:00 PM      Analysis Type: RES/TOT      Dilution: 100

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	1.3	J	1.0	MDL	5.0	MRL	mg/Kg	J	sp
ZINC	27	J	25	MDL	50	MRL	mg/Kg	J	sp

Sample ID: Tt-TP1-B1A-18      Collected: 8/11/2016 3:11:00 PM      Analysis Type: RES/TOT      Dilution: 100

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	1.5	J	1.0	MDL	5.0	MRL	mg/Kg	J	sp
ZINC	26	J	25	MDL	50	MRL	mg/Kg	J	sp

8/11/2016 12:58:00

Sample ID: Tt-TP1-B3A-18      Collected: PM      Analysis Type: RES/TOT      Dilution: 100

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	1.0	J	1.0	MDL	5.0	MRL	mg/Kg	J	sp

8/11/2016 12:40:00

Sample ID: Tt-TP1-B3A-6      Collected: PM      Analysis Type: RES/TOT      Dilution: 100

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	1.5	J	0.99	MDL	5.0	MRL	mg/Kg	J	sp
ZINC	36	J	25	MDL	50	MRL	mg/Kg	J	sp

Sample ID: Tt-TP1-B4A-2      Collected: 8/11/2016 9:40:00 AM      Analysis Type: RES/TOT      Dilution: 100

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	1.5	J	1.0	MDL	5.0	MRL	mg/Kg	J	sp
ZINC	35	J	25	MDL	50	MRL	mg/Kg	J	sp

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

# Data Qualifier Summary

Lab Reporting Batch ID: 440-155501-1

Laboratory: TA IRV

EDD Filename: Prep440-155501-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b>	METALS	
<b>Method:</b>	6020	<b>Matrix:</b> SO

Sample ID: Tt-TP1-B4A-26      Collected: 8/11/2016 10:23:00 AM      Analysis Type: RES/TOT      Dilution: 100

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ZINC	37	J	25	MDL	49	MRL	mg/Kg	J	sp

<b>Method Category:</b>	METALS	
<b>Method:</b>	7471A	<b>Matrix:</b> SO

Sample ID: Tt-TP1-B4A-2      Collected: 8/11/2016 9:40:00 AM      Analysis Type: RES/TOT      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.014	J	0.013	MDL	0.022	MRL	mg/Kg	J	sp

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

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# Data Qualifier Summary

Lab Reporting Batch ID: 440-155501-1

Laboratory: TA IRV

EDD Filename: Prep440-155501-1

eQAPP Name: TetraTechInc\_NERT\_11302016

## Reason Code Legend

<i>Reason Code</i>	<i>Description</i>
bl	Method Blank Contamination
fd	Field Duplicate Precision
m	Matrix Spike Lower Estimation
m	Matrix Spike Upper Estimation
sp	Reporting Limit Trace Value

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

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# Reporting Limit Outliers

Lab Reporting Batch ID: 440-155501-1

Laboratory: TA IRV

EDD Filename: Prep440-155501-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method:** 300.0\_Leach

**Matrix:** AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
Tt-TP1-B1A-10	Nitrate as NO3	J	0.42	0.50	MRL	mg/L	J (all detects)
Tt-TP1-B3A-6	Nitrate as NO3	J	0.27	0.50	MRL	mg/L	J (all detects)
Tt-TP1-B4A-2	Nitrate as NO3	J	0.44	0.50	MRL	mg/L	J (all detects)

**Method:** 300.1B\_Leach

**Matrix:** AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
Tt-TP1-B3A-18	Chlorate	J	11	20	MRL	ug/L	J (all detects)

**Method:** 6010B\_Leach

**Matrix:** AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
Tt-TP1-B1A-10	MAGNESIUM	J	1.3	4.0	MRL	mg/L	J (all detects)
Tt-TP1-B1A-18	MAGNESIUM	J	1.3	4.0	MRL	mg/L	J (all detects)
Tt-TP1-B3A-18	MAGNESIUM	J	1.9	4.0	MRL	mg/L	J (all detects)
Tt-TP1-B4A-2	MAGNESIUM	J	1.0	4.0	MRL	mg/L	J (all detects)

**Method:** 6020

**Matrix:** SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
Tt-TP1-B1A-10	SELENIUM	J	1.3	5.0	MRL	mg/Kg	J (all detects)
	ZINC	J	27	50	MRL	mg/Kg	
Tt-TP1-B1A-18	SELENIUM	J	1.5	5.0	MRL	mg/Kg	J (all detects)
	ZINC	J	26	50	MRL	mg/Kg	
Tt-TP1-B3A-18	SELENIUM	J	1.0	5.0	MRL	mg/Kg	J (all detects)
Tt-TP1-B3A-6	SELENIUM	J	1.5	5.0	MRL	mg/Kg	J (all detects)
	ZINC	J	36	50	MRL	mg/Kg	
Tt-TP1-B4A-2	SELENIUM	J	1.5	5.0	MRL	mg/Kg	J (all detects)
	ZINC	J	35	50	MRL	mg/Kg	
Tt-TP1-B4A-26	ZINC	J	37	49	MRL	mg/Kg	J (all detects)

# Reporting Limit Outliers

Lab Reporting Batch ID: 440-155501-1

Laboratory: TA IRV

EDD Filename: Prep440-155501-1

eQAPP Name: TetraTechInc\_NERT\_11302016

Method: 7471A

Matrix: SO

<i>SampleID</i>	<i>Analyte</i>	<i>Lab Qual</i>	<i>Result</i>	<i>Reporting Limit</i>	<i>RL Type</i>	<i>Units</i>	<i>Flag</i>
Tt-TP1-B4A-2	MERCURY	J	0.014	0.022	MRL	mg/Kg	J (all detects)

# Data Review Summary

Lab Reporting Batch ID: 440-155570-1

Laboratory: TA IRV

EDD Filename: Prep440-155570-1

eQAPP Name: TetraTechInc\_NERT\_11302016

## *Validation Area*

## *Note*

<i>Validation Area</i>	<i>Note</i>
Technical Holding Times	A
Temperature	A
Initial Calibration	N
Continuing Calibration/Initial Calibration Verification	N
Method Blanks	SR
Surrogate/Tracer Spikes	A
Matrix Spike/Matrix Spike Duplicates	SR
Laboratory Duplicates	A
Laboratory Replicates	N
Laboratory Control Samples	A
Compound Quantitation	SR
Field Duplicates	SR
Field Triplicates	N
Field Blanks	N

A = Acceptable, N = Not provided/applicable, SR = See report

The contents of this report reflect findings made by ADR during Automated Data Review, manual applied qualifiers are not considered. Please refer to the Overall Qualifier Summary report for manual qualifiers.



## Field Duplicate RPD Report

Lab Reporting Batch ID: 440-155570-1

Laboratory: TA IRV

EDD Filename: Prep440-155570-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method:** 2320B\_Leach

**Matrix:** AQ

Analyte	Concentration (mg/L)		Sample RPD	eQAPP RPD	Flag
	Tt-TP2-B3A-14	Tt-TP2-B3A-14-dup			
Alkalinity as CaCO3	8.3	8.1	2	30.00	No Qualifiers Applied

**Method:** 2540C\_Leach

**Matrix:** AQ

Analyte	Concentration (mg/L)		Sample RPD	eQAPP RPD	Flag
	Tt-TP2-B3A-14	Tt-TP2-B3A-14-dup			
TOTAL DISSOLVED SOLIDS	1800	1700	6	30.00	No Qualifiers Applied

**Method:** 300.0\_Leach

**Matrix:** AQ

Analyte	Concentration (mg/L)		Sample RPD	eQAPP RPD	Flag
	Tt-TP2-B3A-14	Tt-TP2-B3A-14-dup			
Nitrate as NO3	0.29	0.25	15	30.00	No Qualifiers Applied
CHLORIDE	0.91	1.7	61	30.00	J(all detects)
SULFATE	830	310	91	30.00	UJ(all non-detects)

**Method:** 300.1B\_Leach

**Matrix:** AQ

Analyte	Concentration (ug/L)		Sample RPD	eQAPP RPD	Flag
	Tt-TP2-B3A-14	Tt-TP2-B3A-14-dup			
Chlorate	18	20	11	30.00	No Qualifiers Applied

**Method:** 6010B\_Leach

**Matrix:** AQ

Analyte	Concentration (mg/L)		Sample RPD	eQAPP RPD	Flag
	Tt-TP2-B3A-14 (DIS)	Tt-TP2-B3A-14-dup (DIS)			
SODIUM	110	140	24	30.00	No Qualifiers Applied
CALCIUM	430	81	137	30.00	J(all detects)
MAGNESIUM	5.6	3.6	43	30.00	UJ(all non-detects)

**Method:** 314.0

**Matrix:** SO

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	Tt-TP2-B3A-14	Tt-TP2-B3A-14-dup			
PERCHLORATE	4.1	12	98	30.00	J(all detects) UJ(all non-detects)

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## Field Duplicate RPD Report

Lab Reporting Batch ID: 440-155570-1

Laboratory: TA IRV

EDD Filename: Prep440-155570-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method: 6010B**  
**Matrix: SO**

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	Tt-TP2-B3A-14 (TOT)	Tt-TP2-B3A-14-dup (TOT)			
BORON	18	18	0	30.00	No Qualifiers Applied
IRON	14000	16000	13	30.00	
MANGANESE	200	190	5	30.00	
TITANIUM	780	790	1	30.00	

**Method: 6020**  
**Matrix: SO**

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	Tt-TP2-B3A-14 (TOT)	Tt-TP2-B3A-14-dup (TOT)			
ARSENIC	16	14	13	30.00	No Qualifiers Applied
BARIUM	120	130	8	30.00	
BERYLLIUM	0.41	0.45	9	30.00	
COBALT	3.4	4.2	21	30.00	
COPPER	7.7	10	26	30.00	
LEAD	5.0	5.6	11	30.00	
MOLYBDENUM	0.65	0.55	17	30.00	
NICKEL	9.5	12	23	30.00	
ZINC	22	25	13	30.00	
CHROMIUM	16	23	36	30.00	J(all detects) UJ(all non-detects)

**Method: 7199**  
**Matrix: SO**

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	Tt-TP2-B3A-14 (DRY)	Tt-TP2-B3A-14-dup (DRY)			
Chromium, hexavalent	0.20	0.28	33	30.00	J(all detects) UJ(all non-detects)

**Method: 9045C**  
**Matrix: SO**

Analyte	Concentration (SU)		Sample RPD	eQAPP RPD	Flag
	Tt-TP2-B3A-14	Tt-TP2-B3A-14-dup			
PH	7.9	7.8	1	30.00	No Qualifiers Applied

**Method: 9060**  
**Matrix: SO**

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	Tt-TP2-B3A-14	Tt-TP2-B3A-14-dup			
TOTAL ORGANIC CARBON (TOC)	3700	3600	3	30.00	No Qualifiers Applied

**Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing**

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# Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 440-155570-1

Laboratory: TA IRV

EDD Filename: Prep440-155570-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method: 300.0\_Leach**  
**Matrix: AQ**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
Tt-TP2-B3A-14MS Tt-TP2-B3A-14MSD (Tt-TP2-B3A-14)	Nitrate as NO3	132	133	80.00-120.00	-	Nitrate as NO3	J+(all detects)
Tt-TP2-B3A-14MS Tt-TP2-B3A-14MSD (Tt-TP2-B3A-14)	SULFATE	446	54	80.00-120.00	21 (20.00)	SULFATE	J(all detects) UJ(all non-detects)
Tt-TP2-B3A-14MS Tt-TP2-B3A-14MSD (Tt-TP2-B3A-14)	CHLORIDE	149	150	80.00-120.00	-	CHLORIDE	J+(all detects)

**Method: 6010B\_Leach**  
**Matrix: AQ**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
Tt-TP2-B3A-14MS (DIS) Tt-TP2-B3A-14MSD (DIS) (Tt-TP2-B3A-14)	SODIUM	-171	-102	75.00-125.00	-	SODIUM	J-(all detects) R(all non-detects)
Tt-TP2-B3A-14MS (DIS) Tt-TP2-B3A-14MSD (DIS) (Tt-TP2-B3A-14)	CALCIUM	1766	3330	75.00-125.00	23 (20.00)	CALCIUM	J+(all detects) UJ(all non-detects)

**Method: 6010B**  
**Matrix: SO**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
Tt-TP2-B3A-14MS (TOT) Tt-TP2-B3A-14MSD (TOT) (Tt-TP2-B3A-14)	IRON MANGANESE TITANIUM	7698 259 608	8772 253 665	75.00-125.00 75.00-125.00 75.00-125.00	- - -	IRON MANGANESE TITANIUM	J+ (all detects)

**Method: 6020**  
**Matrix: SO**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
Tt-TP2-B3A-14MS (TOT) Tt-TP2-B3A-14MSD (TOT) (Tt-TP2-B3A-14)	ANTIMONY ARSENIC BERYLLIUM	71 77 72	68 73 70	80.00-120.00 80.00-120.00 80.00-120.00	- - -	ANTIMONY ARSENIC BERYLLIUM	J-(all detects) UJ(all non-detects)
Tt-TP2-B3A-14MS (TOT) Tt-TP2-B3A-14MSD (TOT) (Tt-TP2-B3A-14)	BARIUM	219	207	80.00-120.00	-	BARIUM	J+(all detects)

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

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# Method Blank Outlier Report

Lab Reporting Batch ID: 440-155570-1

Laboratory: TA IRV

EDD Filename: Prep440-155570-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method:** 6010B  
**Matrix:** SO

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
MB 440-350212/1-A ^5	8/20/2016 12:17:00 PM	IRON	5.23 mg/Kg	Tt-TP2-B3A-14 Tt-TP2-B3A-14-dup Tt-TP2-B3A-2

# Data Qualifier Summary

Lab Reporting Batch ID: 440-155570-1

Laboratory: TA IRV

EDD Filename: Prep440-155570-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b>	GENCHEM	
<b>Method:</b>	300.0_Leach	<b>Matrix:</b> AQ

Sample ID: Tt-TP2-B3A-14      Collected: 8/12/2016 1:35:00 PM      Analysis Type: DL/DIS2      Dilution: 100

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SULFATE	830	F2	25	MDL	50	MRL	mg/L	J	m, m, ld, fd

Sample ID: Tt-TP2-B3A-14      Collected: 8/12/2016 1:35:00 PM      Analysis Type: RES/DIS      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Nitrate as NO3	0.29	J	0.25	MDL	0.50	MRL	mg/L	J+	sp, m

Sample ID: Tt-TP2-B3A-14      Collected: 8/12/2016 1:35:00 PM      Analysis Type: RES/DIS2      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHLORIDE	0.91		0.25	MDL	0.50	MRL	mg/L	J+	m, fd

Sample ID: Tt-TP2-B3A-14-dup      Collected: 8/12/2016 1:40:00 PM      Analysis Type: RE2/DIS2      Dilution: 100

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SULFATE	310		25	MDL	50	MRL	mg/L	J	fd

Sample ID: Tt-TP2-B3A-14-dup      Collected: 8/12/2016 1:40:00 PM      Analysis Type: RES/DIS      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Nitrate as NO3	0.25	J	0.25	MDL	0.50	MRL	mg/L	J	sp

Sample ID: Tt-TP2-B3A-14-dup      Collected: 8/12/2016 1:40:00 PM      Analysis Type: RES/DIS2      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHLORIDE	1.7		0.25	MDL	0.50	MRL	mg/L	J	fd

Sample ID: Tt-TP2-B3A-2      Collected: 8/12/2016 1:11:00 PM      Analysis Type: RES/DIS      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Nitrate as NO3	0.42	J	0.25	MDL	0.50	MRL	mg/L	J	sp

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

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# Data Qualifier Summary

Lab Reporting Batch ID: 440-155570-1

Laboratory: TA IRV

EDD Filename: Prep440-155570-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b>	GENCHEM	
<b>Method:</b>	300.1B_Leach	<b>Matrix:</b> AQ

Sample ID: Tt-TP2-B3A-14      Collected: 8/12/2016 1:35:00 PM      Analysis Type: RES/DIS      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chlorate	18	J	10	MDL	20	MRL	ug/L	J	sp

Sample ID: Tt-TP2-B3A-2      Collected: 8/12/2016 1:11:00 PM      Analysis Type: RES/DIS      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chlorate	15	J	10	MDL	20	MRL	ug/L	J	sp

<b>Method Category:</b>	GENCHEM	
<b>Method:</b>	314.0	<b>Matrix:</b> SO

Sample ID: Tt-TP2-B3A-14      Collected: 8/12/2016 1:35:00 PM      Analysis Type: RES/DIS      Dilution: 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
PERCHLORATE	4.1		0.059	MDL	0.25	MRL	mg/Kg	J	fd

Sample ID: Tt-TP2-B3A-14-dup      Collected: 8/12/2016 1:40:00 PM      Analysis Type: RES/DIS      Dilution: 50

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
PERCHLORATE	12		0.59	MDL	2.5	MRL	mg/Kg	J	fd

<b>Method Category:</b>	METALS	
<b>Method:</b>	6010B	<b>Matrix:</b> SO

Sample ID: Tt-TP2-B3A-14      Collected: 8/12/2016 1:35:00 PM      Analysis Type: RES/TOT      Dilution: 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
IRON	14000	B	6.1	MDL	12	MRL	mg/Kg	J+	m
MANGANESE	200	F1	1.2	MDL	2.5	MRL	mg/Kg	J+	m
TITANIUM	780		1.2	MDL	2.5	MRL	mg/Kg	J+	m

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

# Data Qualifier Summary

Lab Reporting Batch ID: 440-155570-1

Laboratory: TA IRV

EDD Filename: Prep440-155570-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b>	METALS	
<b>Method:</b>	6010B_Leach	<b>Matrix:</b> AQ

Sample ID: Tt-TP2-B3A-14      Collected: 8/12/2016 1:35:00 PM      Analysis Type: RES/DIS      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CALCIUM	430	F2	0.50	MDL	1.0	MRL	mg/L	J+	m, ld, fd
MAGNESIUM	5.6		0.12	MDL	4.0	MRL	mg/L	J	fd
SODIUM	110		1.9	MDL	5.0	MRL	mg/L	J-	m

Sample ID: Tt-TP2-B3A-14-dup      Collected: 8/12/2016 1:40:00 PM      Analysis Type: RES/DIS      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CALCIUM	81		0.50	MDL	1.0	MRL	mg/L	J	fd
MAGNESIUM	3.6	J	0.12	MDL	4.0	MRL	mg/L	J	sp, fd

Sample ID: Tt-TP2-B3A-2      Collected: 8/12/2016 1:11:00 PM      Analysis Type: RES/DIS      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MAGNESIUM	2.9	J	0.12	MDL	4.0	MRL	mg/L	J	sp

<b>Method Category:</b>	METALS	
<b>Method:</b>	6020	<b>Matrix:</b> SO

Sample ID: Tt-TP2-B3A-14      Collected: 8/12/2016 1:35:00 PM      Analysis Type: RES/TOT      Dilution: 20

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.27	U F1	0.27	MDL	0.99	MRL	mg/Kg	UJ	m
ARSENIC	16	F1	0.25	MDL	0.49	MRL	mg/Kg	J-	m
BARIUM	120	F1	0.25	MDL	0.49	MRL	mg/Kg	J+	m
BERYLLIUM	0.41	F1	0.15	MDL	0.30	MRL	mg/Kg	J-	m
CHROMIUM	16		0.49	MDL	0.99	MRL	mg/Kg	J	fd
MOLYBDENUM	0.65	J	0.49	MDL	0.99	MRL	mg/Kg	J	sp

Sample ID: Tt-TP2-B3A-14-dup      Collected: 8/12/2016 1:40:00 PM      Analysis Type: RES/TOT      Dilution: 20

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHROMIUM	23		0.50	MDL	1.0	MRL	mg/Kg	J	fd

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

# Data Qualifier Summary

Lab Reporting Batch ID: 440-155570-1

Laboratory: TA IRV

EDD Filename: Prep440-155570-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b>	METALS	
<b>Method:</b>	6020	<b>Matrix:</b> SO

Sample ID: Tt-TP2-B3A-14-dup      Collected: 8/12/2016 1:40:00 PM      Analysis Type: RES/TOT      Dilution: 20

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.55	J	0.50	MDL	1.0	MRL	mg/Kg	J	sp

Sample ID: Tt-TP2-B3A-2      Collected: 8/12/2016 1:11:00 PM      Analysis Type: RES/TOT      Dilution: 20

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.59	J	0.50	MDL	0.99	MRL	mg/Kg	J	sp
SELENIUM	0.22	J	0.20	MDL	0.99	MRL	mg/Kg	J	sp

<b>Method Category:</b>	METALS	
<b>Method:</b>	7199	<b>Matrix:</b> SO

Sample ID: Tt-TP2-B3A-14      Collected: 8/12/2016 1:35:00 PM      Analysis Type: RES      Dilution: 3

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chromium, hexavalent	0.20	J	0.19	MDL	0.38	MRL	mg/Kg	J	sp, fd

Sample ID: Tt-TP2-B3A-14-dup      Collected: 8/12/2016 1:40:00 PM      Analysis Type: RES      Dilution: 3

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chromium, hexavalent	0.28	J	0.19	MDL	0.38	MRL	mg/Kg	J	sp, fd

Sample ID: Tt-TP2-B3A-2      Collected: 8/12/2016 1:11:00 PM      Analysis Type: RES      Dilution: 3

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chromium, hexavalent	0.25	J	0.18	MDL	0.36	MRL	mg/Kg	J	sp

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

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# Data Qualifier Summary

Lab Reporting Batch ID: 440-155570-1

Laboratory: TA IRV

EDD Filename: Prep440-155570-1

eQAPP Name: TetraTechInc\_NERT\_11302016

## Reason Code Legend

<i>Reason Code</i>	<i>Description</i>
bl	Method Blank Contamination
f	Matrix Spike Precision
fd	Field Duplicate Precision
ld	Matrix Spike Precision
ldf	Matrix Spike Precision
m	Matrix Spike Lower Estimation
m	Matrix Spike Lower Rejection
m	Matrix Spike Upper Estimation
sp	Reporting Limit Trace Value

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

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# Reporting Limit Outliers

Lab Reporting Batch ID: 440-155570-1

Laboratory: TA IRV

EDD Filename: Prep440-155570-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method:** 300.0\_Leach

**Matrix:** AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
Tt-TP2-B3A-14	Nitrate as NO3	J	0.29	0.50	MRL	mg/L	J (all detects)
Tt-TP2-B3A-14-dup	Nitrate as NO3	J	0.25	0.50	MRL	mg/L	J (all detects)
Tt-TP2-B3A-2	Nitrate as NO3	J	0.42	0.50	MRL	mg/L	J (all detects)

**Method:** 300.1B\_Leach

**Matrix:** AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
Tt-TP2-B3A-14	Chlorate	J	18	20	MRL	ug/L	J (all detects)
Tt-TP2-B3A-2	Chlorate	J	15	20	MRL	ug/L	J (all detects)

**Method:** 6010B\_Leach

**Matrix:** AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
Tt-TP2-B3A-14-dup	MAGNESIUM	J	3.6	4.0	MRL	mg/L	J (all detects)
Tt-TP2-B3A-2	MAGNESIUM	J	2.9	4.0	MRL	mg/L	J (all detects)

**Method:** 6020

**Matrix:** SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
Tt-TP2-B3A-14	MOLYBDENUM	J	0.65	0.99	MRL	mg/Kg	J (all detects)
Tt-TP2-B3A-14-dup	MOLYBDENUM	J	0.55	1.0	MRL	mg/Kg	J (all detects)
Tt-TP2-B3A-2	MOLYBDENUM SELENIUM	J J	0.59 0.22	0.99 0.99	MRL MRL	mg/Kg mg/Kg	J (all detects)

**Method:** 7199

**Matrix:** SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
Tt-TP2-B3A-14	Chromium, hexavalent	J	0.20	0.38	MRL	mg/Kg	J (all detects)
Tt-TP2-B3A-14-dup	Chromium, hexavalent	J	0.28	0.38	MRL	mg/Kg	J (all detects)
Tt-TP2-B3A-2	Chromium, hexavalent	J	0.25	0.36	MRL	mg/Kg	J (all detects)

# Data Review Summary

Lab Reporting Batch ID: 440-155575-1

Laboratory: TA IRV

EDD Filename: Prep440-155575-1

eQAPP Name: TetraTechInc\_NERT\_11302016

## *Validation Area*

## *Note*

<i>Validation Area</i>	<i>Note</i>
Technical Holding Times	A
Temperature	A
Initial Calibration	N
Continuing Calibration/Initial Calibration Verification	N
Method Blanks	SR
Surrogate/Tracer Spikes	A
Matrix Spike/Matrix Spike Duplicates	SR
Laboratory Duplicates	A
Laboratory Replicates	N
Laboratory Control Samples	A
Compound Quantitation	SR
Field Duplicates	SR
Field Triplicates	N
Field Blanks	N

A = Acceptable, N = Not provided/applicable, SR = See report

The contents of this report reflect findings made by ADR during Automated Data Review, manual applied qualifiers are not considered. Please refer to the Overall Qualifier Summary report for manual qualifiers.

## Field Duplicate RPD Report

Lab Reporting Batch ID: 440-155575-1

Laboratory: TA IRV

EDD Filename: Prep440-155575-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method: 2540C\_Leach**

**Matrix: AQ**

<i>Analyte</i>	<i>Concentration (mg/L)</i>		<i>Sample RPD</i>	<i>eQAPP RPD</i>	<i>Flag</i>
	Tt-TP1-L2A-14	Tt-TP1-L2A-14-dup			
TOTAL DISSOLVED SOLIDS	330	96	110	30.00	J (all detects) UJ (all non-detects)

<i>Analyte</i>	<i>Concentration (mg/L)</i>		<i>Sample RPD</i>	<i>eQAPP RPD</i>	<i>Flag</i>
	Tt-TP1-B2A-14	Tt-TP1-B2A-14-dup			
TOTAL DISSOLVED SOLIDS	220	280	24	30.00	No Qualifiers Applied

**Method: 314.0**

**Matrix: SO**

<i>Analyte</i>	<i>Concentration (mg/Kg)</i>		<i>Sample RPD</i>	<i>eQAPP RPD</i>	<i>Flag</i>
	Tt-TP1-L2A-14	Tt-TP1-L2A-14-dup			
PERCHLORATE	0.90	0.22	121	30.00	J(all detects) UJ(all non-detects)

<i>Analyte</i>	<i>Concentration (mg/Kg)</i>		<i>Sample RPD</i>	<i>eQAPP RPD</i>	<i>Flag</i>
	Tt-TP1-B2A-14	Tt-TP1-B2A-14-dup			
PERCHLORATE	0.22	0.16	32	30.00	J(all detects) UJ(all non-detects)

# Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 440-155575-1

Laboratory: TA IRV

EDD Filename: Prep440-155575-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method: 314.0**

**Matrix: SO**

<i>QC Sample ID (Associated Samples)</i>	<i>Compound</i>	<i>MS %R</i>	<i>MSD %R</i>	<i>%R Limits</i>	<i>RPD (Limits)</i>	<i>Affected Compounds</i>	<i>Flag</i>
Tt-TP1-L2A-14MS (Tt-TP1-L2A-14)	PERCHLORATE	129	-	80.00-120.00	-	PERCHLORATE	J+ (all detects)

# Method Blank Outlier Report

Lab Reporting Batch ID: 440-155575-1

Laboratory: TA IRV

EDD Filename: Prep440-155575-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method:** 6010B  
**Matrix:** SO

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
MB 440-350212/1-A ^5	8/20/2016 12:17:00 PM	IRON	5.23 mg/Kg	Tt-TP1-B2A-22 Tt-TP1-B2A-6 Tt-TP2-B4A-22 Tt-TP2-B4A-6

# Data Qualifier Summary

Lab Reporting Batch ID: 440-155575-1

Laboratory: TA IRV

EDD Filename: Prep440-155575-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b>	GENCHEM	
<b>Method:</b>	2540C_Leach	<b>Matrix:</b> AQ

Sample ID: Tt-TP1-L2A-14      Collected: 8/12/2016 7:12:00 AM      Analysis Type: RES/DIS      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
TOTAL DISSOLVED SOLIDS	330		5.0	MDL	10	MRL	mg/L	J	fd

Sample ID: Tt-TP1-L2A-14-dup      Collected: 8/12/2016 7:17:00 AM      Analysis Type: RES/DIS      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
TOTAL DISSOLVED SOLIDS	96		5.0	MDL	10	MRL	mg/L	J	fd

<b>Method Category:</b>	GENCHEM	
<b>Method:</b>	300.0_Leach	<b>Matrix:</b> AQ

Sample ID: Tt-TP1-B2A-6      Collected: 8/12/2016 7:59:00 AM      Analysis Type: RES/DIS      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Nitrate as NO3	0.31	J	0.25	MDL	0.50	MRL	mg/L	J	sp

Sample ID: Tt-TP1-L2A-6      Collected: 8/12/2016 6:55:00 AM      Analysis Type: RES/DIS      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Nitrate as NO3	0.39	J	0.25	MDL	0.50	MRL	mg/L	J	sp

Sample ID: Tt-TP2-B4A-22      Collected: 8/12/2016 11:12:00 AM      Analysis Type: RES/DIS      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Nitrate as NO3	0.31	J	0.25	MDL	0.50	MRL	mg/L	J	sp

<b>Method Category:</b>	GENCHEM	
<b>Method:</b>	314.0	<b>Matrix:</b> SO

Sample ID: Tt-TP1-B2A-14      Collected: 8/12/2016 8:10:00 AM      Analysis Type: RES/DIS      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
PERCHLORATE	0.22		0.011	MDL	0.048	MRL	mg/Kg	J	fd

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

# Data Qualifier Summary

Lab Reporting Batch ID: 440-155575-1

Laboratory: TA IRV

EDD Filename: Prep440-155575-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b>	GENCHEM	
<b>Method:</b>	314.0	<b>Matrix:</b> SO

Sample ID: Tt-TP1-B2A-14-dup      Collected: 8/12/2016 8:15:00 AM      Analysis Type: RES/DIS      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
PERCHLORATE	0.16		0.011	MDL	0.047	MRL	mg/Kg	J	fd

Sample ID: Tt-TP1-L2A-14      Collected: 8/12/2016 7:12:00 AM      Analysis Type: RES/DIS      Dilution: 10

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
PERCHLORATE	0.90	F1	0.12	MDL	0.50	MRL	mg/Kg	J+	m, fd

Sample ID: Tt-TP1-L2A-14-dup      Collected: 8/12/2016 7:17:00 AM      Analysis Type: RES/DIS      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
PERCHLORATE	0.22		0.012	MDL	0.049	MRL	mg/Kg	J	fd

<b>Method Category:</b>	METALS	
<b>Method:</b>	6010B	<b>Matrix:</b> SO

Sample ID: Tt-TP1-B2A-22      Collected: 8/12/2016 8:32:00 AM      Analysis Type: RES/TOT      Dilution: 10

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	7.1	J	5.6	MDL	11	MRL	mg/Kg	J	sp

Sample ID: Tt-TP1-L2A-6      Collected: 8/12/2016 6:55:00 AM      Analysis Type: RES/TOT      Dilution: 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	5.8	J	2.9	MDL	5.9	MRL	mg/Kg	J	sp

Sample ID: Tt-TP2-B4A-6      Collected: 8/12/2016 9:43:00 AM      Analysis Type: RE2/TOT      Dilution: 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	5.0	J	2.7	MDL	5.5	MRL	mg/Kg	J	sp

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing



# Data Qualifier Summary

Lab Reporting Batch ID: 440-155575-1

Laboratory: TA IRV

EDD Filename: Prep440-155575-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b>	METALS	
<b>Method:</b>	6010B_Leach	<b>Matrix:</b> AQ

<b>Sample ID:</b> Tt-TP1-B2A-22	<b>Collected:</b> 8/12/2016 8:32:00 AM	<b>Analysis Type:</b> RES/DIS	<b>Dilution:</b> 1						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MAGNESIUM	2.2	J	0.12	MDL	4.0	MRL	mg/L	J	sp

<b>Sample ID:</b> Tt-TP1-B2A-6	<b>Collected:</b> 8/12/2016 7:59:00 AM	<b>Analysis Type:</b> RES/DIS	<b>Dilution:</b> 1						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MAGNESIUM	2.6	J	0.12	MDL	4.0	MRL	mg/L	J	sp

<b>Sample ID:</b> Tt-TP1-L2A-6	<b>Collected:</b> 8/12/2016 6:55:00 AM	<b>Analysis Type:</b> RES/DIS	<b>Dilution:</b> 1						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MAGNESIUM	1.3	J	0.12	MDL	4.0	MRL	mg/L	J	sp

<b>Sample ID:</b> Tt-TP2-B4A-22	<b>Collected:</b> 8/12/2016 11:12:00 AM	<b>Analysis Type:</b> RES/DIS	<b>Dilution:</b> 1						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MAGNESIUM	2.5	J	0.12	MDL	4.0	MRL	mg/L	J	sp

<b>Method Category:</b>	METALS	
<b>Method:</b>	6020	<b>Matrix:</b> SO

<b>Sample ID:</b> Tt-TP1-L2A-18	<b>Collected:</b> 8/12/2016 7:22:00 AM	<b>Analysis Type:</b> RES/TOT	<b>Dilution:</b> 20						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.68	J	0.50	MDL	1.0	MRL	mg/Kg	J	sp

<b>Sample ID:</b> Tt-TP2-B4A-22	<b>Collected:</b> 8/12/2016 11:12:00 AM	<b>Analysis Type:</b> RES/TOT	<b>Dilution:</b> 20						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BERYLLIUM	0.27	J	0.15	MDL	0.30	MRL	mg/Kg	J	sp

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

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# Data Qualifier Summary

Lab Reporting Batch ID: 440-155575-1

Laboratory: TA IRV

EDD Filename: Prep440-155575-1

eQAPP Name: TetraTechInc\_NERT\_11302016

## Reason Code Legend

<i>Reason Code</i>	<i>Description</i>
bl	Method Blank Contamination
fd	Field Duplicate Precision
m	Matrix Spike Upper Estimation
sp	Reporting Limit Trace Value

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

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# Reporting Limit Outliers

Lab Reporting Batch ID: 440-155575-1

Laboratory: TA IRV

EDD Filename: Prep440-155575-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method:** 300.0\_Leach  
**Matrix:** AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
Tt-TP1-B2A-6	Nitrate as NO3	J	0.31	0.50	MRL	mg/L	J (all detects)
Tt-TP1-L2A-6	Nitrate as NO3	J	0.39	0.50	MRL	mg/L	J (all detects)
Tt-TP2-B4A-22	Nitrate as NO3	J	0.31	0.50	MRL	mg/L	J (all detects)

**Method:** 6010B\_Leach  
**Matrix:** AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
Tt-TP1-B2A-22	MAGNESIUM	J	2.2	4.0	MRL	mg/L	J (all detects)
Tt-TP1-B2A-6	MAGNESIUM	J	2.6	4.0	MRL	mg/L	J (all detects)
Tt-TP1-L2A-6	MAGNESIUM	J	1.3	4.0	MRL	mg/L	J (all detects)
Tt-TP2-B4A-22	MAGNESIUM	J	2.5	4.0	MRL	mg/L	J (all detects)

**Method:** 6010B  
**Matrix:** SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
Tt-TP1-B2A-22	BORON	J	7.1	11	MRL	mg/Kg	J (all detects)
Tt-TP1-L2A-6	BORON	J	5.8	5.9	MRL	mg/Kg	J (all detects)
Tt-TP2-B4A-6	BORON	J	5.0	5.5	MRL	mg/Kg	J (all detects)

**Method:** 6020  
**Matrix:** SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
Tt-TP1-L2A-18	MOLYBDENUM	J	0.68	1.0	MRL	mg/Kg	J (all detects)
Tt-TP2-B4A-22	BERYLLIUM	J	0.27	0.30	MRL	mg/Kg	J (all detects)

**Method:** 7199  
**Matrix:** SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
Tt-TP1-L2A-18	Chromium, hexavalent	J	0.27	0.33	MRL	mg/Kg	J (all detects)

# Reporting Limit Outliers

Lab Reporting Batch ID: 440-155575-1

Laboratory: TA IRV

EDD Filename: Prep440-155575-1

eQAPP Name: TetraTechInc\_NERT\_11302016

Method: 7471A

Matrix: SO

<i>SampleID</i>	<i>Analyte</i>	<i>Lab Qual</i>	<i>Result</i>	<i>Reporting Limit</i>	<i>RL Type</i>	<i>Units</i>	<i>Flag</i>
Tt-TP1-B2A-6	MERCURY	J	0.015	0.024	MRL	mg/Kg	J (all detects)

# Data Review Summary

Lab Reporting Batch ID: 440-155631-1

Laboratory: TA IRV

EDD Filename: Prep440-155631-1

eQAPP Name: TetraTechInc\_NERT\_11302016

## *Validation Area*

## *Note*

<i>Validation Area</i>	<i>Note</i>
Technical Holding Times	A
Temperature	A
Initial Calibration	N
Continuing Calibration/Initial Calibration Verification	N
Method Blanks	SR
Surrogate/Tracer Spikes	A
Matrix Spike/Matrix Spike Duplicates	SR
Laboratory Duplicates	A
Laboratory Replicates	N
Laboratory Control Samples	A
Compound Quantitation	SR
Field Duplicates	SR
Field Triplicates	N
Field Blanks	N

A = Acceptable, N = Not provided/applicable, SR = See report

The contents of this report reflect findings made by ADR during Automated Data Review, manual applied qualifiers are not considered. Please refer to the Overall Qualifier Summary report for manual qualifiers.

## Field Duplicate RPD Report

Lab Reporting Batch ID: 440-155631-1

Laboratory: TA IRV

EDD Filename: Prep440-155631-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method: 2320B\_Leach**

**Matrix: AQ**

Analyte	Concentration (mg/L)		Sample RPD	eQAPP RPD	Flag
	Tt-TP3-L2A-6	Tt-TP3-L2A-6-DUP			
Alkalinity as CaCO3	27	25	8	30.00	No Qualifiers Applied

Analyte	Concentration (mg/L)		Sample RPD	eQAPP RPD	Flag
	Tt-TP4-B3A-22	Tt-TP4-B3A-22-DUP			
Alkalinity as CaCO3	25	28	11	30.00	No Qualifiers Applied

**Method: 2540C\_Leach**

**Matrix: AQ**

Analyte	Concentration (mg/L)		Sample RPD	eQAPP RPD	Flag
	Tt-TP3-B1A-6	Tt-TP3-B1A-6-DUP			
TOTAL DISSOLVED SOLIDS	93	110	17	30.00	No Qualifiers Applied

Analyte	Concentration (mg/L)		Sample RPD	eQAPP RPD	Flag
	Tt-TP3-B2A-22	Tt-TP3-B2A-22-DUP			
TOTAL DISSOLVED SOLIDS	190	190	0	30.00	No Qualifiers Applied

Analyte	Concentration (mg/L)		Sample RPD	eQAPP RPD	Flag
	Tt-TP2-B1A-22	Tt-TP2-B1A-22-DUP			
TOTAL DISSOLVED SOLIDS	1700	560	101	30.00	J(all detects) UJ(all non-detects)

Analyte	Concentration (mg/L)		Sample RPD	eQAPP RPD	Flag
	Tt-TP3-B4A-14	Tt-TP3-B4A-14-DUP			
TOTAL DISSOLVED SOLIDS	110	100	10	30.00	No Qualifiers Applied

Analyte	Concentration (mg/L)		Sample RPD	eQAPP RPD	Flag
	Tt-TP3-L2A-6	Tt-TP3-L2A-6-DUP			
TOTAL DISSOLVED SOLIDS	170	88	64	30.00	J(all detects) UJ(all non-detects)

Analyte	Concentration (mg/L)		Sample RPD	eQAPP RPD	Flag
	Tt-TP4-B3A-22	Tt-TP4-B3A-22-DUP			
TOTAL DISSOLVED SOLIDS	730	680	7	30.00	No Qualifiers Applied

**Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing**

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## Field Duplicate RPD Report

Lab Reporting Batch ID: 440-155631-1

Laboratory: TA IRV

EDD Filename: Prep440-155631-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method: 300.0\_Leach**  
**Matrix: AQ**

Analyte	Concentration (mg/L)		Sample RPD	eQAPP RPD	Flag
	Tt-TP3-L2A-6	Tt-TP3-L2A-6-DUP			
CHLORIDE	12	1.1	166	30.00	J(all detects) UJ(all non-detects)
Nitrate as NO3	14	3.3	124	30.00	
SULFATE	17	4.3	119	30.00	

Analyte	Concentration (mg/L)		Sample RPD	eQAPP RPD	Flag
	Tt-TP4-B3A-22	Tt-TP4-B3A-22-DUP			
Nitrate as NO3	19	23	19	30.00	No Qualifiers Applied
SULFATE	30	40	29	30.00	
CHLORIDE	16	24	40	30.00	J(all detects) UJ(all non-detects)

**Method: 300.1B\_Leach**  
**Matrix: AQ**

Analyte	Concentration (ug/L)		Sample RPD	eQAPP RPD	Flag
	Tt-TP3-L2A-6	Tt-TP3-L2A-6-DUP			
Chlorate	8800	10000	13	30.00	No Qualifiers Applied

Analyte	Concentration (ug/L)		Sample RPD	eQAPP RPD	Flag
	Tt-TP4-B3A-22	Tt-TP4-B3A-22-DUP			
Chlorate	46000	45000	2	30.00	No Qualifiers Applied

**Method: 6010B\_Leach**  
**Matrix: AQ**

Analyte	Concentration (mg/L)		Sample RPD	eQAPP RPD	Flag
	Tt-TP3-L2A-6 (DIS)	Tt-TP3-L2A-6-DUP (DIS)			
CALCIUM	6.8	6.2	9	30.00	No Qualifiers Applied
SODIUM	92	110	18	30.00	
MAGNESIUM	3.3	2.1	44	30.00	J(all detects) UJ(all non-detects)

Analyte	Concentration (mg/L)		Sample RPD	eQAPP RPD	Flag
	Tt-TP4-B3A-22 (DIS)	Tt-TP4-B3A-22-DUP (DIS)			
SODIUM	220	210	5	30.00	No Qualifiers Applied
CALCIUM	6.3	4.2	40	30.00	J(all detects)
MAGNESIUM	3.4	2.3	39	30.00	UJ(all non-detects)

**Method: 314.0**  
**Matrix: SO**

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	Tt-TP3-B1A-6	Tt-TP3-B1A-6-DUP			
PERCHLORATE	1.5	9.4	145	30.00	J(all detects) UJ(all non-detects)

**Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing**



## Field Duplicate RPD Report

Lab Reporting Batch ID: 440-155631-1

Laboratory: TA IRV

EDD Filename: Prep440-155631-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method:** 314.0

**Matrix:** SO

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	Tt-TP3-B2A-22	Tt-TP3-B2A-22-DUP			
PERCHLORATE	3.6	0.18	181	30.00	J(all detects) UJ(all non-detects)
Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	Tt-TP2-B1A-22	Tt-TP2-B1A-22-DUP			
PERCHLORATE	22	210	162	30.00	J(all detects) UJ(all non-detects)
Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	Tt-TP3-B4A-14	Tt-TP3-B4A-14-DUP			
PERCHLORATE	0.12	4.4	189	30.00	J(all detects) UJ(all non-detects)
Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	Tt-TP3-L2A-6	Tt-TP3-L2A-6-DUP			
PERCHLORATE	88	1.9	192	30.00	J(all detects) UJ(all non-detects)
Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	Tt-TP4-B3A-22	Tt-TP4-B3A-22-DUP			
PERCHLORATE	120	170	34	30.00	J(all detects) UJ(all non-detects)

**Method:** 6010B

**Matrix:** SO

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	Tt-TP3-L2A-6 (TOT)	Tt-TP3-L2A-6-DUP (TOT)			
IRON	15000	20000	29	30.00	No Qualifiers Applied
TITANIUM	880	970	10	30.00	
BORON	7.9	5.3	39	30.00	J(all detects) UJ(all non-detects)
MANGANESE	240	330	32	30.00	
Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	Tt-TP4-B3A-22 (TOT)	Tt-TP4-B3A-22-DUP (TOT)			
BORON	25	20	22	30.00	No Qualifiers Applied
IRON	8200	10000	20	30.00	
MANGANESE	130	140	7	30.00	
TITANIUM	400	460	14	30.00	

**Project Name and Number:** 114-520225-2015-MO5 - NERT Soil Flushing

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## Field Duplicate RPD Report

Lab Reporting Batch ID: 440-155631-1

Laboratory: TA IRV

EDD Filename: Prep440-155631-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method: 6020**  
**Matrix: SO**

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	Tt-TP3-L2A-6 (TOT)	Tt-TP3-L2A-6-DUP (TOT)			
BARIUM	160	150	6	30.00	No Qualifiers Applied
BERYLLIUM	0.43	0.47	9	30.00	
LEAD	6.4	6.6	3	30.00	
MOLYBDENUM	0.58	0.63	8	30.00	
NICKEL	11	14	24	30.00	
ARSENIC	5.4	3.7	37	30.00	J(all detects) UJ(all non-detects)
CHROMIUM	20	14	35	30.00	
COBALT	5.0	7.0	33	30.00	
COPPER	40	16	86	30.00	
SELENIUM	0.99 U	0.21	200	30.00	
ZINC	190	32	142	30.00	

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	Tt-TP4-B3A-22 (TOT)	Tt-TP4-B3A-22-DUP (TOT)			
ARSENIC	17	15	12	30.00	No Qualifiers Applied
BARIUM	28	38	30	30.00	
CHROMIUM	24	31	25	30.00	
BERYLLIUM	0.42	0.59	34	30.00	J(all detects) UJ(all non-detects)
COBALT	2.5	3.4	31	30.00	
COPPER	6.0	150	185	30.00	
LEAD	4.0	11	93	30.00	
MOLYBDENUM	0.98 U	0.52	200	30.00	
NICKEL	6.3	8.6	31	30.00	
ZINC	19	130	149	30.00	

**Method: 7199**  
**Matrix: SO**

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	Tt-TP4-B3A-22 (DRY)	Tt-TP4-B3A-22-DUP (DRY)			
Chromium, hexavalent	2.4	3.4	34	30.00	J(all detects) UJ(all non-detects)

**Method: 9045C**  
**Matrix: SO**

Analyte	Concentration (SU)		Sample RPD	eQAPP RPD	Flag
	Tt-TP3-L2A-6	Tt-TP3-L2A-6-DUP			
PH	8.5	9.1	7	30.00	No Qualifiers Applied

Analyte	Concentration (SU)		Sample RPD	eQAPP RPD	Flag
	Tt-TP4-B3A-22	Tt-TP4-B3A-22-DUP			
PH	8.8	8.2	7	30.00	No Qualifiers Applied

**Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing**

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# Field Duplicate RPD Report

Lab Reporting Batch ID: 440-155631-1

Laboratory: TA IRV

EDD Filename: Prep440-155631-1

eQAPP Name: TetraTechInc\_NERT\_11302016

Method: 9060

Matrix: SO

<i>Analyte</i>	<i>Concentration (mg/Kg)</i>		<i>Sample RPD</i>	<i>eQAPP RPD</i>	<i>Flag</i>
	Tt-TP3-L2A-6	Tt-TP3-L2A-6-DUP			
TOTAL ORGANIC CARBON (TOC)	5100	5000	2	30.00	No Qualifiers Applied

  

<i>Analyte</i>	<i>Concentration (mg/Kg)</i>		<i>Sample RPD</i>	<i>eQAPP RPD</i>	<i>Flag</i>
	Tt-TP4-B3A-22	Tt-TP4-B3A-22-DUP			
TOTAL ORGANIC CARBON (TOC)	7600	8100	6	30.00	No Qualifiers Applied

# Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 440-155631-1

Laboratory: TA IRV

EDD Filename: Prep440-155631-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method: 6010B**  
**Matrix: SO**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
Tt-TP3-L2A-6-DUPMS (TOT) Tt-TP3-L2A-6-DUPMSD (TOT) (Tt-TP3-L2A-6-DUP)	IRON MANGANESE	-1240 -28	-814 -	75.00-125.00 75.00-125.00	- -	IRON MANGANESE	J- (all detects) R (all non-detects)
Tt-TP3-L2A-6-DUPMS (TOT) Tt-TP3-L2A-6-DUPMSD (TOT) (Tt-TP3-L2A-6-DUP)	TITANIUM	249	484	75.00-125.00	-	TITANIUM	J+(all detects)

**Method: 6020**  
**Matrix: SO**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
Tt-TP3-L2A-6-DUPMS (TOT) Tt-TP3-L2A-6-DUPMSD (TOT) (Tt-TP3-L2A-6-DUP)	ANTIMONY BERYLLIUM CHROMIUM COBALT COPPER NICKEL SELENIUM	- 74 77 76 72 76 78	78 74 77 76 73 78 78	80.00-120.00 80.00-120.00 80.00-120.00 80.00-120.00 80.00-120.00 80.00-120.00 80.00-120.00	- - - - - - -	ANTIMONY BERYLLIUM CHROMIUM COBALT COPPER NICKEL SELENIUM	J-(all detects) UJ(all non-detects)
Tt-TP3-L2A-6-DUPMSD (TOT) (Tt-TP3-L2A-6-DUP)	BARIUM	-	140	80.00-120.00	-	BARIUM	J+(all detects)

**Method: 6010B**  
**Matrix: SO**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
Tt-TP4-B3A-22MS (TOT) Tt-TP4-B3A-22MSD (TOT) (Tt-TP4-B3A-22)	IRON	-878	-473	75.00-125.00	-	IRON	J-(all detects) R(all non-detects)
Tt-TP4-B3A-22MS (TOT) (Tt-TP4-B3A-22)	MANGANESE	70	-	75.00-125.00	-	MANGANESE	J-(all detects) UJ(all non-detects)
Tt-TP4-B3A-22MS (TOT) Tt-TP4-B3A-22MSD (TOT) (Tt-TP4-B3A-22)	TITANIUM	203	257	75.00-125.00	-	TITANIUM	J+(all detects)

**Method: 314.0**  
**Matrix: SO**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
Tt-TP2-L2A-2MS Tt-TP2-L2A-2MSD (Tt-TP2-L2A-2)	PERCHLORATE	-269	-611	80.00-120.00	-	PERCHLORATE	J-(all detects) R(all non-detects)
Tt-TP3-B3A-26MS Tt-TP3-B3A-26MSD (Tt-TP3-B3A-26)	PERCHLORATE	498	-850	80.00-120.00	-	PERCHLORATE	J(all detects) R(all non-detects)

**Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing**

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# Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 440-155631-1

Laboratory: TA IRV

EDD Filename: Prep440-155631-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method: 314.0**  
**Matrix: SO**

<i>QC Sample ID (Associated Samples)</i>	<i>Compound</i>	<i>MS %R</i>	<i>MSD %R</i>	<i>%R Limits</i>	<i>RPD (Limits)</i>	<i>Affected Compounds</i>	<i>Flag</i>
Tt-TP3-B2A-22MS Tt-TP3-B2A-22MSD (Tt-TP3-B2A-22)	PERCHLORATE	221	45	80.00-120.00	23 (20.00)	PERCHLORATE	J(all detects) UJ(all non-detects)
Tt-TP2-B1A-6MSD (Tt-TP2-B1A-6)	PERCHLORATE	-	260	80.00-120.00	-	PERCHLORATE	J+(all detects)

# Method Blank Outlier Report

Lab Reporting Batch ID: 440-155631-1

Laboratory: TA IRV

EDD Filename: Prep440-155631-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method:** 6010B  
**Matrix:** SO

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
MB 440-350212/1-A ^5	8/20/2016 12:17:00 PM	IRON	5.23 mg/Kg	Tt-TP2-B2A-10 Tt-TP2-B2A-26 Tt-TP2-L2A-2 Tt-TP2-L2A-26 Tt-TP3-B1A-10 Tt-TP3-B1A-18 Tt-TP3-B3A-10 Tt-TP3-B3A-26 Tt-TP3-B4A-18 Tt-TP3-B4A-2 Tt-TP3-L2A-6
MB 440-351070/1-A ^5	8/24/2016 1:35:00 PM	IRON TITANIUM	24.0 mg/Kg 1.21 mg/Kg	Tt-TP4-B3A-22 Tt-TP4-B3A-22-DUP

**Method:** 6010B\_Leach  
**Matrix:** AQ

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
MB 440-350014/1-B	8/22/2016 3:17:00 PM	CALCIUM	0.781 mg/L	Tt-TP2-B1A-14 Tt-TP2-B1A-2 Tt-TP2-B2A-10 Tt-TP2-B2A-26 Tt-TP2-L2A-2 Tt-TP2-L2A-26 Tt-TP3-B1A-10 Tt-TP3-B1A-18 Tt-TP3-B2A-14 Tt-TP3-B2A-6 Tt-TP3-B3A-10 Tt-TP3-B3A-26 Tt-TP3-B4A-18 Tt-TP3-B4A-2 Tt-TP3-L2A-14 Tt-TP3-L2A-6 Tt-TP3-L2A-6-DUP Tt-TP4-B3A-2 Tt-TP4-B3A-22 Tt-TP4-B3A-22-DUP

# Data Qualifier Summary

Lab Reporting Batch ID: 440-155631-1

Laboratory: TA IRV

EDD Filename: Prep440-155631-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b>	GENCHEM	
<b>Method:</b>	2540C_Leach	<b>Matrix:</b> AQ

<b>Sample ID:</b> Tt-TP2-B1A-22	<b>Collected:</b> 8/13/2016 7:27:00 AM	<b>Analysis Type:</b> RES/DIS	<b>Dilution:</b> 1						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
TOTAL DISSOLVED SOLIDS	1700		5.0	MDL	10	MRL	mg/L	J	fd

<b>Sample ID:</b> Tt-TP2-B1A-22-DUP	<b>Collected:</b> 8/13/2016 7:32:00 AM	<b>Analysis Type:</b> RES/DIS	<b>Dilution:</b> 1						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
TOTAL DISSOLVED SOLIDS	560		5.0	MDL	10	MRL	mg/L	J	fd

<b>Sample ID:</b> Tt-TP3-L2A-6	<b>Collected:</b> 8/14/2016 9:13:00 AM	<b>Analysis Type:</b> RES/DIS	<b>Dilution:</b> 1						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
TOTAL DISSOLVED SOLIDS	170		5.0	MDL	10	MRL	mg/L	J	fd

<b>Sample ID:</b> Tt-TP3-L2A-6-DUP	<b>Collected:</b> 8/14/2016 9:17:00 AM	<b>Analysis Type:</b> RES/DIS	<b>Dilution:</b> 1						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
TOTAL DISSOLVED SOLIDS	88		5.0	MDL	10	MRL	mg/L	J	fd

<b>Method Category:</b>	GENCHEM	
<b>Method:</b>	300.0_Leach	<b>Matrix:</b> AQ

<b>Sample ID:</b> Tt-TP3-B1A-18	<b>Collected:</b> 8/14/2016 8:11:00 AM	<b>Analysis Type:</b> RES/DIS	<b>Dilution:</b> 1						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Nitrate as NO3	0.28	J	0.25	MDL	0.50	MRL	mg/L	J	sp

<b>Sample ID:</b> Tt-TP3-B2A-14	<b>Collected:</b> 8/14/2016 12:33:00 PM	<b>Analysis Type:</b> RES/DIS	<b>Dilution:</b> 1						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Nitrate as NO3	0.32	J	0.25	MDL	0.50	MRL	mg/L	J	sp

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

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# Data Qualifier Summary

Lab Reporting Batch ID: 440-155631-1

Laboratory: TA IRV

EDD Filename: Prep440-155631-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b>	GENCHEM	
<b>Method:</b>	300.0_Leach	<b>Matrix:</b> AQ

<b>Sample ID:</b> Tt-TP3-L2A-6		<b>Collected:</b> 8/14/2016 9:13:00 AM			<b>Analysis Type:</b> RE2/DIS			<b>Dilution:</b> 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHLORIDE	12		0.25	MDL	0.50	MRL	mg/L	J	fd
SULFATE	17		0.25	MDL	0.50	MRL	mg/L	J	fd

<b>Sample ID:</b> Tt-TP3-L2A-6		<b>Collected:</b> 8/14/2016 9:13:00 AM			<b>Analysis Type:</b> RES/DIS			<b>Dilution:</b> 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Nitrate as NO3	14		0.25	MDL	0.50	MRL	mg/L	J	fd

<b>Sample ID:</b> Tt-TP3-L2A-6-DUP		<b>Collected:</b> 8/14/2016 9:17:00 AM			<b>Analysis Type:</b> RE2/DIS			<b>Dilution:</b> 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHLORIDE	1.1		0.25	MDL	0.50	MRL	mg/L	J	fd
SULFATE	4.3		0.25	MDL	0.50	MRL	mg/L	J	fd

<b>Sample ID:</b> Tt-TP3-L2A-6-DUP		<b>Collected:</b> 8/14/2016 9:17:00 AM			<b>Analysis Type:</b> RES/DIS			<b>Dilution:</b> 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Nitrate as NO3	3.3		0.25	MDL	0.50	MRL	mg/L	J	fd

<b>Sample ID:</b> Tt-TP4-B3A-22		<b>Collected:</b> 8/15/2016 7:29:00 AM			<b>Analysis Type:</b> RE2/DIS			<b>Dilution:</b> 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHLORIDE	16		0.25	MDL	0.50	MRL	mg/L	J	fd

<b>Sample ID:</b> Tt-TP4-B3A-22-DUP		<b>Collected:</b> 8/15/2016 7:34:00 AM			<b>Analysis Type:</b> RE2/DIS			<b>Dilution:</b> 10	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHLORIDE	24		2.5	MDL	5.0	MRL	mg/L	J	fd

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

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# Data Qualifier Summary

Lab Reporting Batch ID: 440-155631-1

Laboratory: TA IRV

EDD Filename: Prep440-155631-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b>	GENCHEM	
<b>Method:</b>	314.0	<b>Matrix:</b> SO

**Sample ID:** Tt-TP2-B1A-22      **Collected:** 8/13/2016 7:27:00 AM      **Analysis Type:** RES/DIS      **Dilution:** 50

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
PERCHLORATE	22		0.64	MDL	2.7	MRL	mg/Kg	J	fd

**Sample ID:** Tt-TP2-B1A-22-DUP      **Collected:** 8/13/2016 7:32:00 AM      **Analysis Type:** RES/DIS      **Dilution:** 500

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
PERCHLORATE	210		6.5	MDL	28	MRL	mg/Kg	J	fd

**Sample ID:** Tt-TP2-B1A-6      **Collected:** 8/13/2016 7:05:00 AM      **Analysis Type:** RES/DIS      **Dilution:** 50

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
PERCHLORATE	12		0.61	MDL	2.6	MRL	mg/Kg	J+	m

**Sample ID:** Tt-TP2-L2A-2      **Collected:** 8/13/2016 8:05:00 AM      **Analysis Type:** RES/DIS      **Dilution:** 50

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
PERCHLORATE	23		0.52	MDL	2.2	MRL	mg/Kg	J-	m

**Sample ID:** Tt-TP3-B1A-14      **Collected:** 8/14/2016 8:06:00 AM      **Analysis Type:** RES/DIS      **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
PERCHLORATE	0.017	J	0.010	MDL	0.044	MRL	mg/Kg	J	sp

**Sample ID:** Tt-TP3-B1A-6      **Collected:** 8/14/2016 7:53:00 AM      **Analysis Type:** RES/DIS      **Dilution:** 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
PERCHLORATE	1.5		0.060	MDL	0.25	MRL	mg/Kg	J	fd

**Sample ID:** Tt-TP3-B1A-6-DUP      **Collected:** 8/14/2016 7:56:00 AM      **Analysis Type:** RES/DIS      **Dilution:** 50

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
PERCHLORATE	9.4		0.57	MDL	2.4	MRL	mg/Kg	J	fd

\* denotes a non-reportable result

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# Data Qualifier Summary

Lab Reporting Batch ID: 440-155631-1

Laboratory: TA IRV

EDD Filename: Prep440-155631-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b>	GENCHEM	
<b>Method:</b>	314.0	<b>Matrix:</b> SO

<b>Sample ID:</b> Tt-TP3-B2A-10		<b>Collected:</b> 8/14/2016 12:17:00 PM		<b>Analysis Type:</b> RES/DIS				<b>Dilution:</b> 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
PERCHLORATE	0.018	J	0.011	MDL	0.047	MRL	mg/Kg	J	sp

<b>Sample ID:</b> Tt-TP3-B2A-22		<b>Collected:</b> 8/14/2016 12:54:00 PM		<b>Analysis Type:</b> RES/DIS				<b>Dilution:</b> 50	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
PERCHLORATE	3.6	F2	0.54	MDL	2.3	MRL	mg/Kg	J	m, m, ld, fd

<b>Sample ID:</b> Tt-TP3-B2A-22-DUP		<b>Collected:</b> 8/14/2016 12:59:00 PM		<b>Analysis Type:</b> RES/DIS				<b>Dilution:</b> 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
PERCHLORATE	0.18		0.011	MDL	0.045	MRL	mg/Kg	J	fd

<b>Sample ID:</b> Tt-TP3-B3A-26		<b>Collected:</b> 8/13/2016 1:16:00 PM		<b>Analysis Type:</b> RES/DIS				<b>Dilution:</b> 500	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
PERCHLORATE	230		8.6	MDL	36	MRL	mg/Kg	J	m, m

<b>Sample ID:</b> Tt-TP3-B4A-14		<b>Collected:</b> 8/14/2016 6:46:00 AM		<b>Analysis Type:</b> RES/DIS				<b>Dilution:</b> 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
PERCHLORATE	0.12		0.011	MDL	0.046	MRL	mg/Kg	J	fd

<b>Sample ID:</b> Tt-TP3-B4A-14-DUP		<b>Collected:</b> 8/14/2016 6:50:00 AM		<b>Analysis Type:</b> RES/DIS				<b>Dilution:</b> 50	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
PERCHLORATE	4.4		0.53	MDL	2.2	MRL	mg/Kg	J	fd

<b>Sample ID:</b> Tt-TP3-B4A-18		<b>Collected:</b> 8/14/2016 6:54:00 AM		<b>Analysis Type:</b> RES/DIS				<b>Dilution:</b> 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
PERCHLORATE	0.028	J	0.012	MDL	0.050	MRL	mg/Kg	J	sp

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

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# Data Qualifier Summary

Lab Reporting Batch ID: 440-155631-1

Laboratory: TA IRV

EDD Filename: Prep440-155631-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b>	GENCHEM									
<b>Method:</b>	314.0	<b>Matrix:</b>		SO						

<b>Sample ID:</b> Tt-TP3-L2A-18			<b>Collected:</b> 8/14/2016 9:33:00 AM				<b>Analysis Type:</b> RES/DIS		<b>Dilution:</b> 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
PERCHLORATE	0.045	J	0.013	MDL	0.053	MRL	mg/Kg	J	sp	

<b>Sample ID:</b> Tt-TP3-L2A-6			<b>Collected:</b> 8/14/2016 9:13:00 AM				<b>Analysis Type:</b> RES/DIS		<b>Dilution:</b> 200	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
PERCHLORATE	88		2.2	MDL	9.3	MRL	mg/Kg	J	fd	

<b>Sample ID:</b> Tt-TP3-L2A-6-DUP			<b>Collected:</b> 8/14/2016 9:17:00 AM				<b>Analysis Type:</b> RES/DIS		<b>Dilution:</b> 5	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
PERCHLORATE	1.9		0.054	MDL	0.23	MRL	mg/Kg	J	fd	

<b>Sample ID:</b> Tt-TP4-B3A-18			<b>Collected:</b> 8/15/2016 7:24:00 AM				<b>Analysis Type:</b> RES/DIS		<b>Dilution:</b> 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
PERCHLORATE	0.032	J	0.012	MDL	0.052	MRL	mg/Kg	J	sp	

<b>Sample ID:</b> Tt-TP4-B3A-22			<b>Collected:</b> 8/15/2016 7:29:00 AM				<b>Analysis Type:</b> RES/DIS		<b>Dilution:</b> 200	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
PERCHLORATE	120		3.1	MDL	13	MRL	mg/Kg	J	fd	

<b>Sample ID:</b> Tt-TP4-B3A-22-DUP			<b>Collected:</b> 8/15/2016 7:34:00 AM				<b>Analysis Type:</b> RES/DIS		<b>Dilution:</b> 200	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
PERCHLORATE	170		3.4	MDL	14	MRL	mg/Kg	J	fd	

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

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# Data Qualifier Summary

Lab Reporting Batch ID: 440-155631-1

Laboratory: TA IRV

EDD Filename: Prep440-155631-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b>	METALS	
<b>Method:</b>	6010B	<b>Matrix:</b> SO

<b>Sample ID:</b> Tt-TP3-B3A-10	<b>Collected:</b> 8/13/2016 12:44:00 PM	<b>Analysis Type:</b> RE2/TOT	<b>Dilution:</b> 5						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	4.4	J	2.5	MDL	5.0	MRL	mg/Kg	J	sp

<b>Sample ID:</b> Tt-TP3-L2A-6	<b>Collected:</b> 8/14/2016 9:13:00 AM	<b>Analysis Type:</b> RE2/TOT	<b>Dilution:</b> 5						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	7.9		2.5	MDL	5.0	MRL	mg/Kg	J	fd

<b>Sample ID:</b> Tt-TP3-L2A-6	<b>Collected:</b> 8/14/2016 9:13:00 AM	<b>Analysis Type:</b> RES/TOT	<b>Dilution:</b> 5						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MANGANESE	240		0.99	MDL	2.0	MRL	mg/Kg	J	fd

<b>Sample ID:</b> Tt-TP3-L2A-6-DUP	<b>Collected:</b> 8/14/2016 9:17:00 AM	<b>Analysis Type:</b> RES/TOT	<b>Dilution:</b> 5						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	5.3		2.5	MDL	4.9	MRL	mg/Kg	J	fd
IRON	20000		4.9	MDL	9.8	MRL	mg/Kg	J-	m
MANGANESE	330		0.98	MDL	2.0	MRL	mg/Kg	J-	m, fd
TITANIUM	970		0.98	MDL	2.0	MRL	mg/Kg	J+	m

<b>Sample ID:</b> Tt-TP4-B3A-22	<b>Collected:</b> 8/15/2016 7:29:00 AM	<b>Analysis Type:</b> RES/TOT	<b>Dilution:</b> 25						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
IRON	8200	B	25	MDL	50	MRL	mg/Kg	J-	m
MANGANESE	130	F1	5.0	MDL	9.9	MRL	mg/Kg	J-	m
TITANIUM	400	B	5.0	MDL	9.9	MRL	mg/Kg	J+	m

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

# Data Qualifier Summary

Lab Reporting Batch ID: 440-155631-1

Laboratory: TA IRV

EDD Filename: Prep440-155631-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b>	METALS	
<b>Method:</b>	6010B_Leach	<b>Matrix:</b> AQ

<b>Sample ID:</b> Tt-TP2-B1A-14			<b>Collected:</b> 8/13/2016 7:13:00 AM				<b>Analysis Type:</b> RES/DIS		<b>Dilution:</b> 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
MAGNESIUM	1.9	J	0.12	MDL	4.0	MRL	mg/L	J	sp	

<b>Sample ID:</b> Tt-TP2-B2A-10			<b>Collected:</b> 8/13/2016 9:55:00 AM				<b>Analysis Type:</b> RES/DIS		<b>Dilution:</b> 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
MAGNESIUM	3.0	J	0.12	MDL	4.0	MRL	mg/L	J	sp	

<b>Sample ID:</b> Tt-TP2-B2A-26			<b>Collected:</b> 8/13/2016 10:20:00 AM				<b>Analysis Type:</b> RES/DIS		<b>Dilution:</b> 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
MAGNESIUM	2.1	J	0.12	MDL	4.0	MRL	mg/L	J	sp	

<b>Sample ID:</b> Tt-TP2-L2A-2			<b>Collected:</b> 8/13/2016 8:05:00 AM				<b>Analysis Type:</b> RES/DIS		<b>Dilution:</b> 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
MAGNESIUM	2.3	J	0.12	MDL	4.0	MRL	mg/L	J	sp	

<b>Sample ID:</b> Tt-TP3-B1A-10			<b>Collected:</b> 8/14/2016 8:02:00 AM				<b>Analysis Type:</b> RES/DIS		<b>Dilution:</b> 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
MAGNESIUM	2.9	J	0.12	MDL	4.0	MRL	mg/L	J	sp	

<b>Sample ID:</b> Tt-TP3-B1A-18			<b>Collected:</b> 8/14/2016 8:11:00 AM				<b>Analysis Type:</b> RES/DIS		<b>Dilution:</b> 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
MAGNESIUM	3.7	J	0.12	MDL	4.0	MRL	mg/L	J	sp	

<b>Sample ID:</b> Tt-TP3-B2A-14			<b>Collected:</b> 8/14/2016 12:33:00 PM				<b>Analysis Type:</b> RES/DIS		<b>Dilution:</b> 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
MAGNESIUM	2.5	J	0.12	MDL	4.0	MRL	mg/L	J	sp	

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

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# Data Qualifier Summary

Lab Reporting Batch ID: 440-155631-1

Laboratory: TA IRV

EDD Filename: Prep440-155631-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b>	METALS	
<b>Method:</b>	6010B_Leach	<b>Matrix:</b> AQ

<b>Sample ID:</b> Tt-TP3-B2A-6		<b>Collected:</b> 8/14/2016 12:11:00 PM		<b>Analysis Type:</b> RES/DIS				<b>Dilution:</b> 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MAGNESIUM	2.6	J	0.12	MDL	4.0	MRL	mg/L	J	sp

<b>Sample ID:</b> Tt-TP3-B3A-10		<b>Collected:</b> 8/13/2016 12:44:00 PM		<b>Analysis Type:</b> RES/DIS				<b>Dilution:</b> 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MAGNESIUM	3.1	J	0.12	MDL	4.0	MRL	mg/L	J	sp

<b>Sample ID:</b> Tt-TP3-B3A-26		<b>Collected:</b> 8/13/2016 1:16:00 PM		<b>Analysis Type:</b> RES/DIS				<b>Dilution:</b> 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MAGNESIUM	3.6	J	0.12	MDL	4.0	MRL	mg/L	J	sp

<b>Sample ID:</b> Tt-TP3-B4A-18		<b>Collected:</b> 8/14/2016 6:54:00 AM		<b>Analysis Type:</b> RES/DIS				<b>Dilution:</b> 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MAGNESIUM	2.5	J	0.12	MDL	4.0	MRL	mg/L	J	sp

<b>Sample ID:</b> Tt-TP3-B4A-2		<b>Collected:</b> 8/14/2016 6:32:00 AM		<b>Analysis Type:</b> RES/DIS				<b>Dilution:</b> 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MAGNESIUM	2.1	J	0.12	MDL	4.0	MRL	mg/L	J	sp

<b>Sample ID:</b> Tt-TP3-L2A-6		<b>Collected:</b> 8/14/2016 9:13:00 AM		<b>Analysis Type:</b> RES/DIS				<b>Dilution:</b> 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MAGNESIUM	3.3	J	0.12	MDL	4.0	MRL	mg/L	J	sp, fd

<b>Sample ID:</b> Tt-TP3-L2A-6-DUP		<b>Collected:</b> 8/14/2016 9:17:00 AM		<b>Analysis Type:</b> RES/DIS				<b>Dilution:</b> 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MAGNESIUM	2.1	J	0.12	MDL	4.0	MRL	mg/L	J	sp, fd

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

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# Data Qualifier Summary

Lab Reporting Batch ID: 440-155631-1

Laboratory: TA IRV

EDD Filename: Prep440-155631-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b> METALS
<b>Method:</b> 6010B_Leach
<b>Matrix:</b> AQ

Sample ID: Tt-TP4-B3A-22      Collected: 8/15/2016 7:29:00 AM      Analysis Type: RES/DIS      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CALCIUM	6.3	B	0.50	MDL	1.0	MRL	mg/L	J	fd
MAGNESIUM	3.4	J	0.12	MDL	4.0	MRL	mg/L	J	sp, fd

Sample ID: Tt-TP4-B3A-22-DUP      Collected: 8/15/2016 7:34:00 AM      Analysis Type: RES/DIS      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CALCIUM	4.2	B	0.50	MDL	1.0	MRL	mg/L	J	fd
MAGNESIUM	2.3	J	0.12	MDL	4.0	MRL	mg/L	J	sp, fd

<b>Method Category:</b> METALS
<b>Method:</b> 6020
<b>Matrix:</b> SO

Sample ID: Tt-TP2-B1A-14      Collected: 8/13/2016 7:13:00 AM      Analysis Type: RES/TOT      Dilution: 20

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.59	J	0.50	MDL	1.0	MRL	mg/Kg	J	sp

Sample ID: Tt-TP2-B1A-2      Collected: 8/13/2016 6:55:00 AM      Analysis Type: RES/TOT      Dilution: 20

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.51	J	0.50	MDL	0.99	MRL	mg/Kg	J	sp

Sample ID: Tt-TP2-B2A-10      Collected: 8/13/2016 9:55:00 AM      Analysis Type: RES/TOT      Dilution: 20

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.60	J	0.50	MDL	1.0	MRL	mg/Kg	J	sp

Sample ID: Tt-TP2-L2A-2      Collected: 8/13/2016 8:05:00 AM      Analysis Type: RES/TOT      Dilution: 20

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.52	J	0.50	MDL	1.0	MRL	mg/Kg	J	sp

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

# Data Qualifier Summary

Lab Reporting Batch ID: 440-155631-1

Laboratory: TA IRV

EDD Filename: Prep440-155631-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b>	METALS	
<b>Method:</b>	6020	<b>Matrix:</b> SO

**Sample ID:** Tt-TP2-L2A-26      **Collected:** 8/13/2016 8:34:00 AM      **Analysis Type:** RES/TOT      **Dilution:** 20

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BERYLLIUM	0.29	J	0.15	MDL	0.30	MRL	mg/Kg	J	sp

8/14/2016 12:33:00

**Sample ID:** Tt-TP3-B2A-14      **Collected:** PM      **Analysis Type:** RES/TOT      **Dilution:** 20

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.54	J	0.50	MDL	0.99	MRL	mg/Kg	J	sp
SILVER	0.27	J	0.099	MDL	0.50	MRL	mg/Kg	J	sp

**Sample ID:** Tt-TP3-B3A-26      **Collected:** 8/13/2016 1:16:00 PM      **Analysis Type:** RES/TOT      **Dilution:** 20

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.61	J	0.49	MDL	0.99	MRL	mg/Kg	J	sp

**Sample ID:** Tt-TP3-L2A-14      **Collected:** 8/14/2016 9:28:00 AM      **Analysis Type:** RES/TOT      **Dilution:** 20

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.83	J	0.50	MDL	1.0	MRL	mg/Kg	J	sp
SELENIUM	0.20	J	0.20	MDL	1.0	MRL	mg/Kg	J	sp

**Sample ID:** Tt-TP3-L2A-6      **Collected:** 8/14/2016 9:13:00 AM      **Analysis Type:** RES/TOT      **Dilution:** 20

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ARSENIC	5.4		0.25	MDL	0.50	MRL	mg/Kg	J	fd
CHROMIUM	20		0.50	MDL	0.99	MRL	mg/Kg	J	fd
COBALT	5.0		0.21	MDL	0.50	MRL	mg/Kg	J	fd
COPPER	40		0.50	MDL	0.99	MRL	mg/Kg	J	fd
MOLYBDENUM	0.58	J	0.50	MDL	0.99	MRL	mg/Kg	J	sp
SELENIUM	0.20	U	0.20	MDL	0.99	MRL	mg/Kg	UJ	fd
ZINC	190		5.0	MDL	9.9	MRL	mg/Kg	J	fd

\* denotes a non-reportable result

**Project Name and Number:** 114-520225-2015-MO5 - NERT Soil Flushing

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# Data Qualifier Summary

Lab Reporting Batch ID: 440-155631-1

Laboratory: TA IRV

EDD Filename: Prep440-155631-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b>	METALS	
<b>Method:</b>	6020	<b>Matrix:</b> SO

Sample ID: Tt-TP3-L2A-6-DUP      Collected: 8/14/2016 9:17:00 AM      Analysis Type: RE2/TOT      Dilution: 20

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BERYLLIUM	0.47	F1	0.15	MDL	0.29	MRL	mg/Kg	J-	m

Sample ID: Tt-TP3-L2A-6-DUP      Collected: 8/14/2016 9:17:00 AM      Analysis Type: RES/TOT      Dilution: 20

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.26	U F1	0.26	MDL	0.98	MRL	mg/Kg	UJ	m
ARSENIC	3.7		0.25	MDL	0.49	MRL	mg/Kg	J	fd
BARIUM	150	F1	0.25	MDL	0.49	MRL	mg/Kg	J+	m
CHROMIUM	14	F1	0.49	MDL	0.98	MRL	mg/Kg	J-	m, fd
COBALT	7.0	F1	0.21	MDL	0.49	MRL	mg/Kg	J-	m, fd
COPPER	16	F1	0.49	MDL	0.98	MRL	mg/Kg	J-	m, fd
MOLYBDENUM	0.63	J	0.49	MDL	0.98	MRL	mg/Kg	J	sp
NICKEL	14	F1	0.49	MDL	0.98	MRL	mg/Kg	J-	m
SELENIUM	0.21	J F1	0.20	MDL	0.98	MRL	mg/Kg	J-	sp, m, fd
ZINC	32		4.9	MDL	9.8	MRL	mg/Kg	J	fd

Sample ID: Tt-TP4-B3A-2      Collected: 8/15/2016 6:56:00 AM      Analysis Type: RES/TOT      Dilution: 20

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.69	J	0.50	MDL	1.0	MRL	mg/Kg	J	sp

Sample ID: Tt-TP4-B3A-22      Collected: 8/15/2016 7:29:00 AM      Analysis Type: RE2/TOT      Dilution: 20

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BERYLLIUM	0.42		0.15	MDL	0.29	MRL	mg/Kg	J	fd

Sample ID: Tt-TP4-B3A-22      Collected: 8/15/2016 7:29:00 AM      Analysis Type: RES/TOT      Dilution: 20

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
COBALT	2.5		0.21	MDL	0.49	MRL	mg/Kg	J	fd
COPPER	6.0		0.49	MDL	0.98	MRL	mg/Kg	J	fd
LEAD	4.0		0.25	MDL	0.49	MRL	mg/Kg	J	fd
MOLYBDENUM	0.49	U	0.49	MDL	0.98	MRL	mg/Kg	UJ	fd

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

# Data Qualifier Summary

Lab Reporting Batch ID: 440-155631-1

Laboratory: TA IRV

EDD Filename: Prep440-155631-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b>	METALS	
<b>Method:</b>	6020	<b>Matrix:</b> SO

Sample ID: Tt-TP4-B3A-22      Collected: 8/15/2016 7:29:00 AM      Analysis Type: RES/TOT      Dilution: 20

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
NICKEL	6.3		0.49	MDL	0.98	MRL	mg/Kg	J	fd
ZINC	19		4.9	MDL	9.8	MRL	mg/Kg	J	fd

Sample ID: Tt-TP4-B3A-22-DUP      Collected: 8/15/2016 7:34:00 AM      Analysis Type: RE2/TOT      Dilution: 20

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BERYLLIUM	0.59		0.15	MDL	0.31	MRL	mg/Kg	J	fd

Sample ID: Tt-TP4-B3A-22-DUP      Collected: 8/15/2016 7:34:00 AM      Analysis Type: RES/TOT      Dilution: 20

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
COBALT	3.4		0.21	MDL	0.51	MRL	mg/Kg	J	fd
COPPER	150		0.51	MDL	1.0	MRL	mg/Kg	J	fd
LEAD	11		0.26	MDL	0.51	MRL	mg/Kg	J	fd
MOLYBDENUM	0.52	J	0.51	MDL	1.0	MRL	mg/Kg	J	sp, fd
NICKEL	8.6		0.51	MDL	1.0	MRL	mg/Kg	J	fd
ZINC	130		5.1	MDL	10	MRL	mg/Kg	J	fd

<b>Method Category:</b>	METALS	
<b>Method:</b>	7199	<b>Matrix:</b> SO

Sample ID: Tt-TP4-B3A-22      Collected: 8/15/2016 7:29:00 AM      Analysis Type: RES      Dilution: 3

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chromium, hexavalent	2.4		0.25	MDL	0.49	MRL	mg/Kg	J	fd

Sample ID: Tt-TP4-B3A-22-DUP      Collected: 8/15/2016 7:34:00 AM      Analysis Type: RES      Dilution: 3

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chromium, hexavalent	3.4		0.27	MDL	0.54	MRL	mg/Kg	J	fd

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

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# Data Qualifier Summary

Lab Reporting Batch ID: 440-155631-1

Laboratory: TA IRV

EDD Filename: Prep440-155631-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b>	METALS	
<b>Method:</b>	7471A	<b>Matrix:</b> SO

**Sample ID:** Tt-TP2-L2A-2      **Collected:** 8/13/2016 8:05:00 AM      **Analysis Type:** RES/TOT      **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.016	J	0.013	MDL	0.022	MRL	mg/Kg	J	sp

**Sample ID:** Tt-TP3-B1A-10      **Collected:** 8/14/2016 8:02:00 AM      **Analysis Type:** RES/TOT      **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.015	J	0.014	MDL	0.023	MRL	mg/Kg	J	sp

**Sample ID:** Tt-TP3-B1A-18      **Collected:** 8/14/2016 8:11:00 AM      **Analysis Type:** RES/TOT      **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.014	J	0.014	MDL	0.023	MRL	mg/Kg	J	sp

\* denotes a non-reportable result

**Project Name and Number:** 114-520225-2015-MO5 - NERT Soil Flushing

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# Data Qualifier Summary

Lab Reporting Batch ID: 440-155631-1

Laboratory: TA IRV

EDD Filename: Prep440-155631-1

eQAPP Name: TetraTechInc\_NERT\_11302016

## Reason Code Legend

<i>Reason Code</i>	<i>Description</i>
bl	Method Blank Contamination
f	Matrix Spike Precision
fd	Field Duplicate Precision
ld	Matrix Spike Precision
ldf	Matrix Spike Precision
m	Matrix Spike Lower Estimation
m	Matrix Spike Lower Rejection
m	Matrix Spike Upper Estimation
sp	Reporting Limit Trace Value

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

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# Reporting Limit Outliers

Lab Reporting Batch ID: 440-155631-1

Laboratory: TA IRV

EDD Filename: Prep440-155631-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method:** 300.0\_Leach  
**Matrix:** AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
Tt-TP3-B1A-18	Nitrate as NO3	J	0.28	0.50	MRL	mg/L	J (all detects)
Tt-TP3-B2A-14	Nitrate as NO3	J	0.32	0.50	MRL	mg/L	J (all detects)

**Method:** 6010B\_Leach  
**Matrix:** AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
Tt-TP2-B1A-14	MAGNESIUM	J	1.9	4.0	MRL	mg/L	J (all detects)
Tt-TP2-B2A-10	MAGNESIUM	J	3.0	4.0	MRL	mg/L	J (all detects)
Tt-TP2-B2A-26	MAGNESIUM	J	2.1	4.0	MRL	mg/L	J (all detects)
Tt-TP2-L2A-2	MAGNESIUM	J	2.3	4.0	MRL	mg/L	J (all detects)
Tt-TP3-B1A-10	MAGNESIUM	J	2.9	4.0	MRL	mg/L	J (all detects)
Tt-TP3-B1A-18	MAGNESIUM	J	3.7	4.0	MRL	mg/L	J (all detects)
Tt-TP3-B2A-14	MAGNESIUM	J	2.5	4.0	MRL	mg/L	J (all detects)
Tt-TP3-B2A-6	MAGNESIUM	J	2.6	4.0	MRL	mg/L	J (all detects)
Tt-TP3-B3A-10	MAGNESIUM	J	3.1	4.0	MRL	mg/L	J (all detects)
Tt-TP3-B3A-26	MAGNESIUM	J	3.6	4.0	MRL	mg/L	J (all detects)
Tt-TP3-B4A-18	MAGNESIUM	J	2.5	4.0	MRL	mg/L	J (all detects)
Tt-TP3-B4A-2	MAGNESIUM	J	2.1	4.0	MRL	mg/L	J (all detects)
Tt-TP3-L2A-6	MAGNESIUM	J	3.3	4.0	MRL	mg/L	J (all detects)
Tt-TP3-L2A-6-DUP	MAGNESIUM	J	2.1	4.0	MRL	mg/L	J (all detects)
Tt-TP4-B3A-22	MAGNESIUM	J	3.4	4.0	MRL	mg/L	J (all detects)
Tt-TP4-B3A-22-DUP	MAGNESIUM	J	2.3	4.0	MRL	mg/L	J (all detects)

**Method:** 314.0  
**Matrix:** SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
Tt-TP3-B1A-14	PERCHLORATE	J	0.017	0.044	MRL	mg/Kg	J (all detects)
Tt-TP3-B2A-10	PERCHLORATE	J	0.018	0.047	MRL	mg/Kg	J (all detects)
Tt-TP3-B4A-18	PERCHLORATE	J	0.028	0.050	MRL	mg/Kg	J (all detects)
Tt-TP3-L2A-18	PERCHLORATE	J	0.045	0.053	MRL	mg/Kg	J (all detects)
Tt-TP4-B3A-18	PERCHLORATE	J	0.032	0.052	MRL	mg/Kg	J (all detects)

# Reporting Limit Outliers

Lab Reporting Batch ID: 440-155631-1

Laboratory: TA IRV

EDD Filename: Prep440-155631-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method:** 6010B  
**Matrix:** SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
Tt-TP3-B3A-10	BORON	J	4.4	5.0	MRL	mg/Kg	J (all detects)

**Method:** 6020  
**Matrix:** SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
Tt-TP2-B1A-14	MOLYBDENUM	J	0.59	1.0	MRL	mg/Kg	J (all detects)
Tt-TP2-B1A-2	MOLYBDENUM	J	0.51	0.99	MRL	mg/Kg	J (all detects)
Tt-TP2-B2A-10	MOLYBDENUM	J	0.60	1.0	MRL	mg/Kg	J (all detects)
Tt-TP2-L2A-2	MOLYBDENUM	J	0.52	1.0	MRL	mg/Kg	J (all detects)
Tt-TP2-L2A-26	BERYLLIUM	J	0.29	0.30	MRL	mg/Kg	J (all detects)
Tt-TP3-B2A-14	MOLYBDENUM SILVER	J J	0.54 0.27	0.99 0.50	MRL MRL	mg/Kg mg/Kg	J (all detects)
Tt-TP3-B3A-26	MOLYBDENUM	J	0.61	0.99	MRL	mg/Kg	J (all detects)
Tt-TP3-L2A-14	MOLYBDENUM SELENIUM	J J	0.83 0.20	1.0 1.0	MRL MRL	mg/Kg mg/Kg	J (all detects)
Tt-TP3-L2A-6	MOLYBDENUM	J	0.58	0.99	MRL	mg/Kg	J (all detects)
Tt-TP3-L2A-6-DUP	MOLYBDENUM SELENIUM	J J F1	0.63 0.21	0.98 0.98	MRL MRL	mg/Kg mg/Kg	J (all detects)
Tt-TP4-B3A-2	MOLYBDENUM	J	0.69	1.0	MRL	mg/Kg	J (all detects)
Tt-TP4-B3A-22-DUP	MOLYBDENUM	J	0.52	1.0	MRL	mg/Kg	J (all detects)

**Method:** 7471A  
**Matrix:** SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
Tt-TP2-L2A-2	MERCURY	J	0.016	0.022	MRL	mg/Kg	J (all detects)
Tt-TP3-B1A-10	MERCURY	J	0.015	0.023	MRL	mg/Kg	J (all detects)
Tt-TP3-B1A-18	MERCURY	J	0.014	0.023	MRL	mg/Kg	J (all detects)

# Data Review Summary

Lab Reporting Batch ID: 440-155720-1

Laboratory: TA IRV

EDD Filename: Prep440-155720-1

eQAPP Name: TetraTechInc\_NERT\_11302016

## *Validation Area*

## *Note*

<i>Validation Area</i>	<i>Note</i>
Technical Holding Times	A
Temperature	A
Initial Calibration	N
Continuing Calibration/Initial Calibration Verification	N
Method Blanks	SR
Surrogate/Tracer Spikes	A
Matrix Spike/Matrix Spike Duplicates	SR
Laboratory Duplicates	A
Laboratory Replicates	N
Laboratory Control Samples	A
Compound Quantitation	SR
Field Duplicates	SR
Field Triplicates	N
Field Blanks	N

A = Acceptable, N = Not provided/applicable, SR = See report

The contents of this report reflect findings made by ADR during Automated Data Review, manual applied qualifiers are not considered. Please refer to the Overall Qualifier Summary report for manual qualifiers.

## Field Duplicate RPD Report

Lab Reporting Batch ID: 440-155720-1

Laboratory: TA IRV

EDD Filename: Prep440-155720-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method: 2540C\_Leach**

**Matrix: AQ**

<i>Analyte</i>	<i>Concentration (mg/L)</i>		<i>Sample RPD</i>	<i>eQAPP RPD</i>	<i>Flag</i>
	<i>Tt-TP4-L2A-26</i>	<i>Tt-TP4-L2A-26-dup</i>			
TOTAL DISSOLVED SOLIDS	1400	730	63	30.00	J (all detects) UJ (all non-detects)

<i>Analyte</i>	<i>Concentration (mg/L)</i>		<i>Sample RPD</i>	<i>eQAPP RPD</i>	<i>Flag</i>
	<i>Tt-TP4-B1A-26</i>	<i>Tt-TP4-B1A-26-dup</i>			
TOTAL DISSOLVED SOLIDS	1000	1200	18	30.00	No Qualifiers Applied

**Method: 314.0**

**Matrix: SO**

<i>Analyte</i>	<i>Concentration (mg/Kg)</i>		<i>Sample RPD</i>	<i>eQAPP RPD</i>	<i>Flag</i>
	<i>Tt-TP4-L2A-26</i>	<i>Tt-TP4-L2A-26-dup</i>			
PERCHLORATE	170	62	93	30.00	J(all detects) UJ(all non-detects)

<i>Analyte</i>	<i>Concentration (mg/Kg)</i>		<i>Sample RPD</i>	<i>eQAPP RPD</i>	<i>Flag</i>
	<i>Tt-TP4-B1A-26</i>	<i>Tt-TP4-B1A-26-dup</i>			
PERCHLORATE	110	130	17	30.00	No Qualifiers Applied



# Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 440-155720-1

Laboratory: TA IRV

EDD Filename: Prep440-155720-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method: 6010B\_Leach**  
**Matrix: AQ**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
Tt-TP4-L2A-22MS (DIS) Tt-TP4-L2A-22MSD (DIS) (Tt-TP4-L2A-22)	SODIUM	130	173	75.00-125.00	-	SODIUM	J+(all detects)

**Method: 300.1B\_Leach**  
**Matrix: AQ**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
Tt-TP4-L2A-22MS Tt-TP4-L2A-22MSD (Tt-TP4-L2A-22)	Chlorate	-191	-305	75.00-125.00	-	Chlorate	J-(all detects) R(all non-detects)

**Method: 6010B**  
**Matrix: SO**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
Tt-TP4-L2A-22MS (TOT) Tt-TP4-L2A-22MSD (TOT) (Tt-TP4-L2A-22)	IRON	-302	-450	75.00-125.00	-	IRON	J- (all detects) R (all non-detects)
Tt-TP4-L2A-22MS (TOT) Tt-TP4-L2A-22MSD (TOT) (Tt-TP4-L2A-22)	TITANIUM	134	139	75.00-125.00	-	TITANIUM	J+(all detects)

**Method: 6020**  
**Matrix: SO**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
Tt-TP4-L2A-22MS (TOT) Tt-TP4-L2A-22MSD (TOT) (Tt-TP4-L2A-22)	ANTIMONY BERYLLIUM CHROMIUM COPPER NICKEL ZINC	- 75 78 76 - 73	78 75 - - 77 75	80.00-120.00 80.00-120.00 80.00-120.00 80.00-120.00 80.00-120.00 80.00-120.00	- - - - - -	ANTIMONY BERYLLIUM CHROMIUM COPPER NICKEL ZINC	J-(all detects) UJ(all non-detects)
Tt-TP4-L2A-22MS (TOT) Tt-TP4-L2A-22MSD (TOT) (Tt-TP4-L2A-22)	BARIUM	199	160	80.00-120.00	-	BARIUM	J+(all detects)

# Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 440-155720-1

Laboratory: TA IRV

EDD Filename: Prep440-155720-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method: 314.0**  
**Matrix: SO**

<i>QC Sample ID (Associated Samples)</i>	<i>Compound</i>	<i>MS %R</i>	<i>MSD %R</i>	<i>%R Limits</i>	<i>RPD (Limits)</i>	<i>Affected Compounds</i>	<i>Flag</i>
Tt-TP4-L2A-22MS Tt-TP4-L2A-22MSD (Tt-TP4-L2A-22)	PERCHLORATE	378	596	80.00-120.00	-	PERCHLORATE	J+(all detects)
Tt-TP4-L2A-26MS Tt-TP4-L2A-26MSD (Tt-TP4-L2A-26)	PERCHLORATE	-1589	-1427	80.00-120.00	-	PERCHLORATE	J-(all detects) R(all non-detects)

# Method Blank Outlier Report

Lab Reporting Batch ID: 440-155720-1

Laboratory: TA IRV

EDD Filename: Prep440-155720-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method:** 6010B\_Leach  
**Matrix:** AQ

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
MB 440-351095/1-B	8/25/2016 1:06:00 PM	SODIUM	1.96 mg/L	Tt-TP4-B1A-14 Tt-TP4-B1A-6 Tt-TP4-B4A-10 Tt-TP4-B4A-26 Tt-TP4-L2A-10 Tt-TP4-L2A-22

# Data Qualifier Summary

Lab Reporting Batch ID: 440-155720-1

Laboratory: TA IRV

EDD Filename: Prep440-155720-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b>	GENCHEM	
<b>Method:</b>	2540C_Leach	<b>Matrix:</b> AQ

Sample ID: Tt-TP4-L2A-26 Collected: 8/16/2016 9:42:00 AM Analysis Type: RES/DIS Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
TOTAL DISSOLVED SOLIDS	1400		5.0	MDL	10	MRL	mg/L	J	fd

Sample ID: Tt-TP4-L2A-26-dup Collected: 8/16/2016 9:47:00 AM Analysis Type: RES/DIS Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
TOTAL DISSOLVED SOLIDS	730		5.0	MDL	10	MRL	mg/L	J	fd

<b>Method Category:</b>	GENCHEM	
<b>Method:</b>	300.1B_Leach	<b>Matrix:</b> AQ

Sample ID: Tt-TP4-L2A-22 Collected: 8/16/2016 9:34:00 AM Analysis Type: RES/DIS Dilution: 100

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chlorate	14000		1000	MDL	2000	MRL	ug/L	J-	m

<b>Method Category:</b>	GENCHEM	
<b>Method:</b>	314.0	<b>Matrix:</b> SO

Sample ID: Tt-TP4-L2A-22 Collected: 8/16/2016 9:34:00 AM Analysis Type: RES/DIS Dilution: 50

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
PERCHLORATE	25		0.59	MDL	2.5	MRL	mg/Kg	J+	m

Sample ID: Tt-TP4-L2A-26 Collected: 8/16/2016 9:42:00 AM Analysis Type: RES/DIS Dilution: 500

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
PERCHLORATE	170		7.2	MDL	30	MRL	mg/Kg	J-	m, fd

Sample ID: Tt-TP4-L2A-26-dup Collected: 8/16/2016 9:47:00 AM Analysis Type: RES/DIS Dilution: 50

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
PERCHLORATE	62		0.74	MDL	3.1	MRL	mg/Kg	J	fd

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

# Data Qualifier Summary

Lab Reporting Batch ID: 440-155720-1

Laboratory: TA IRV

EDD Filename: Prep440-155720-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b>	METALS	
<b>Method:</b>	6010B	<b>Matrix:</b> SO

Sample ID: Tt-TP4-L2A-22      Collected: 8/16/2016 9:34:00 AM      Analysis Type: RES/TOT      Dilution: 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
IRON	9100		4.9	MDL	9.9	MRL	mg/Kg	J-	m
TITANIUM	540		0.99	MDL	2.0	MRL	mg/Kg	J+	m

<b>Method Category:</b>	METALS	
<b>Method:</b>	6010B_Leach	<b>Matrix:</b> AQ

Sample ID: Tt-TP4-B1A-14      Collected: 8/16/2016 7:54:00 AM      Analysis Type: RES/DIS      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
POTASSIUM	3.9	J	3.7	MDL	5.0	MRL	mg/L	J	sp

Sample ID: Tt-TP4-B1A-6      Collected: 8/16/2016 7:45:00 AM      Analysis Type: RES/DIS      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MAGNESIUM	1.4	J	0.12	MDL	4.0	MRL	mg/L	J	sp

Sample ID: Tt-TP4-B4A-26      Collected: 8/16/2016 7:06:00 AM      Analysis Type: RES/DIS      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MAGNESIUM	3.8	J	0.12	MDL	4.0	MRL	mg/L	J	sp

Sample ID: Tt-TP4-L2A-22      Collected: 8/16/2016 9:34:00 AM      Analysis Type: RES/DIS      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MAGNESIUM	1.3	J	0.12	MDL	4.0	MRL	mg/L	J	sp
SODIUM	93	B	1.9	MDL	5.0	MRL	mg/L	J+	m

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

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# Data Qualifier Summary

Lab Reporting Batch ID: 440-155720-1

Laboratory: TA IRV

EDD Filename: Prep440-155720-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b>	METALS	
<b>Method:</b>	6020	<b>Matrix:</b> SO

**Sample ID:** Tt-TP4-B1A-14      **Collected:** 8/16/2016 7:54:00 AM      **Analysis Type:** RES/TOT      **Dilution:** 20

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.66	J	0.50	MDL	0.99	MRL	mg/Kg	J	sp

**Sample ID:** Tt-TP4-B1A-6      **Collected:** 8/16/2016 7:45:00 AM      **Analysis Type:** RES/TOT      **Dilution:** 20

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.52	J	0.49	MDL	0.99	MRL	mg/Kg	J	sp

**Sample ID:** Tt-TP4-B4A-10      **Collected:** 8/16/2016 6:48:00 AM      **Analysis Type:** RES/TOT      **Dilution:** 20

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.77	J	0.50	MDL	0.99	MRL	mg/Kg	J	sp
SELENIUM	0.21	J	0.20	MDL	0.99	MRL	mg/Kg	J	sp
SILVER	0.11	J	0.099	MDL	0.50	MRL	mg/Kg	J	sp

**Sample ID:** Tt-TP4-B4A-26      **Collected:** 8/16/2016 7:06:00 AM      **Analysis Type:** RES/TOT      **Dilution:** 20

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MOLYBDENUM	0.75	J	0.50	MDL	0.99	MRL	mg/Kg	J	sp

**Sample ID:** Tt-TP4-L2A-22      **Collected:** 8/16/2016 9:34:00 AM      **Analysis Type:** RE2/TOT      **Dilution:** 20

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
COPPER	8.3	F1	0.49	MDL	0.99	MRL	mg/Kg	J-	m

**Sample ID:** Tt-TP4-L2A-22      **Collected:** 8/16/2016 9:34:00 AM      **Analysis Type:** RES/TOT      **Dilution:** 20

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.27	U F1	0.27	MDL	0.99	MRL	mg/Kg	UJ	m
BARIUM	130	F1	0.25	MDL	0.49	MRL	mg/Kg	J+	m
BERYLLIUM	0.30	F1	0.15	MDL	0.30	MRL	mg/Kg	J-	m
CHROMIUM	15	F1	0.49	MDL	0.99	MRL	mg/Kg	J-	m
MOLYBDENUM	0.55	J	0.49	MDL	0.99	MRL	mg/Kg	J	sp
NICKEL	9.4	F1	0.49	MDL	0.99	MRL	mg/Kg	J-	m

\* denotes a non-reportable result

**Project Name and Number:** 114-520225-2015-MO5 - NERT Soil Flushing

# Data Qualifier Summary

Lab Reporting Batch ID: 440-155720-1

Laboratory: TA IRV

EDD Filename: Prep440-155720-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b> METALS	
<b>Method:</b> 6020	<b>Matrix:</b> SO

Sample ID: Tt-TP4-L2A-22

Collected: 8/16/2016 9:34:00 AM Analysis Type: RES/TOT

Dilution: 20

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ZINC	22	F1	4.9	MDL	9.9	MRL	mg/Kg	J-	m

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

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# Data Qualifier Summary

Lab Reporting Batch ID: 440-155720-1

Laboratory: TA IRV

EDD Filename: Prep440-155720-1

eQAPP Name: TetraTechInc\_NERT\_11302016

## Reason Code Legend

<i>Reason Code</i>	<i>Description</i>
bl	Method Blank Contamination
fd	Field Duplicate Precision
m	Matrix Spike Lower Estimation
m	Matrix Spike Lower Rejection
m	Matrix Spike Upper Estimation
sp	Reporting Limit Trace Value

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

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## Reporting Limit Outliers

Lab Reporting Batch ID: 440-155720-1

Laboratory: TA IRV

EDD Filename: Prep440-155720-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method:** 6010B\_Leach

**Matrix:** AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
Tt-TP4-B1A-14	POTASSIUM	J	3.9	5.0	MRL	mg/L	J (all detects)
Tt-TP4-B1A-6	MAGNESIUM	J	1.4	4.0	MRL	mg/L	J (all detects)
Tt-TP4-B4A-26	MAGNESIUM	J	3.8	4.0	MRL	mg/L	J (all detects)
Tt-TP4-L2A-22	MAGNESIUM	J	1.3	4.0	MRL	mg/L	J (all detects)

**Method:** 6020

**Matrix:** SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
Tt-TP4-B1A-14	MOLYBDENUM	J	0.66	0.99	MRL	mg/Kg	J (all detects)
Tt-TP4-B1A-6	MOLYBDENUM	J	0.52	0.99	MRL	mg/Kg	J (all detects)
Tt-TP4-B4A-10	MOLYBDENUM	J	0.77	0.99	MRL	mg/Kg	J (all detects)
	SELENIUM	J	0.21	0.99	MRL	mg/Kg	
	SILVER	J	0.11	0.50	MRL	mg/Kg	
Tt-TP4-B4A-26	MOLYBDENUM	J	0.75	0.99	MRL	mg/Kg	J (all detects)
Tt-TP4-L2A-22	MOLYBDENUM	J	0.55	0.99	MRL	mg/Kg	J (all detects)

# Data Review Summary

Lab Reporting Batch ID: 440-155767-1

Laboratory: TA IRV

EDD Filename: Prep440-155767-1

eQAPP Name: TetraTechInc\_NERT\_11302016

## *Validation Area*

## *Note*

<i>Validation Area</i>	<i>Note</i>
Technical Holding Times	A
Temperature	A
Initial Calibration	N
Continuing Calibration/Initial Calibration Verification	N
Method Blanks	A
Surrogate/Tracer Spikes	A
Matrix Spike/Matrix Spike Duplicates	SR
Laboratory Duplicates	SR
Laboratory Replicates	N
Laboratory Control Samples	A
Compound Quantitation	SR
Field Duplicates	SR
Field Triplicates	N
Field Blanks	N

A = Acceptable, N = Not provided/applicable, SR = See report

The contents of this report reflect findings made by ADR during Automated Data Review, manual applied qualifiers are not considered. Please refer to the Overall Qualifier Summary report for manual qualifiers.

## Field Duplicate RPD Report

Lab Reporting Batch ID: 440-155767-1

Laboratory: TA IRV

EDD Filename: Prep440-155767-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method: 2320B\_Leach**  
**Matrix: AQ**

Analyte	Concentration (mg/L)		Sample RPD	eQAPP RPD	Flag
	Tt-TP4-B2A-22	Tt-TP4-B2A-22-dup			
Alkalinity as CaCO3	9.3	22	81	30.00	J (all detects) UJ (all non-detects)

**Method: 2540C\_Leach**  
**Matrix: AQ**

Analyte	Concentration (mg/L)		Sample RPD	eQAPP RPD	Flag
	Tt-TP4-B2A-6	Tt-TP4-B2A-6-dup			
TOTAL DISSOLVED SOLIDS	240	460	63	30.00	J(all detects) UJ(all non-detects)

Analyte	Concentration (mg/L)		Sample RPD	eQAPP RPD	Flag
	Tt-TP4-B2A-22	Tt-TP4-B2A-22-dup			
TOTAL DISSOLVED SOLIDS	770	210	114	30.00	J(all detects) UJ(all non-detects)

**Method: 300.0\_Leach**  
**Matrix: AQ**

Analyte	Concentration (mg/L)		Sample RPD	eQAPP RPD	Flag
	Tt-TP4-B2A-22	Tt-TP4-B2A-22-dup			
CHLORIDE	1.5	5.0	108	30.00	J(all detects) UJ(all non-detects)
Nitrate as NO3	2.2	7.4	108	30.00	
SULFATE	280	45	145	30.00	

**Method: 300.1B\_Leach**  
**Matrix: AQ**

Analyte	Concentration (ug/L)		Sample RPD	eQAPP RPD	Flag
	Tt-TP4-B2A-22	Tt-TP4-B2A-22-dup			
Chlorate	1100	14000	171	30.00	J(all detects) UJ(all non-detects)

**Method: 6010B\_Leach**  
**Matrix: AQ**

Analyte	Concentration (mg/L)		Sample RPD	eQAPP RPD	Flag
	Tt-TP4-B2A-22 (DIS)	Tt-TP4-B2A-22-dup (DIS)			
CALCIUM	180	26	150	30.00	J(all detects) UJ(all non-detects)
MAGNESIUM	6.3	4.0	45	30.00	
SODIUM	39	150	117	30.00	

**Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing**

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## Field Duplicate RPD Report

Lab Reporting Batch ID: 440-155767-1

Laboratory: TA IRV

EDD Filename: Prep440-155767-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method: 314.0**  
**Matrix: SO**

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	Tt-TP4-B2A-6	Tt-TP4-B2A-6-dup			
PERCHLORATE	0.077	9.0	197	30.00	J(all detects) UJ(all non-detects)

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	Tt-TP4-B2A-22	Tt-TP4-B2A-22-dup			
PERCHLORATE	3.8	18	130	30.00	J(all detects) UJ(all non-detects)

**Method: 6010B**  
**Matrix: SO**

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	Tt-TP4-B2A-22 (TOT)	Tt-TP4-B2A-22-dup (TOT)			
TITANIUM	520	400	26	30.00	No Qualifiers Applied
BORON	7.9	4.4	57	30.00	J(all detects) UJ(all non-detects)
IRON	9900	6600	40	30.00	
MANGANESE	150	91	49	30.00	

**Method: 6020**  
**Matrix: SO**

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	Tt-TP4-B2A-22 (TOT)	Tt-TP4-B2A-22-dup (TOT)			
ARSENIC	8.2	6.5	23	30.00	No Qualifiers Applied
BERYLLIUM	0.44	0.50	13	30.00	
CHROMIUM	12	9.7	21	30.00	
LEAD	4.9	4.1	18	30.00	
SELENIUM	0.58	0.54	7	30.00	
ZINC	22	17	26	30.00	
BARIUM	130	91	35	30.00	J(all detects) UJ(all non-detects)
COBALT	3.6	2.6	32	30.00	
COPPER	9.0	6.0	40	30.00	
MOLYBDENUM	0.72	0.99 U	200	30.00	
NICKEL	8.8	6.1	36	30.00	

**Method: 7199**  
**Matrix: SO**

Analyte	Concentration (mg/Kg)		Sample RPD	eQAPP RPD	Flag
	Tt-TP4-B2A-22 (DRY)	Tt-TP4-B2A-22-dup (DRY)			
Chromium, hexavalent	0.37 U	0.23	200	30.00	J(all detects) UJ(all non-detects)

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# Field Duplicate RPD Report

Lab Reporting Batch ID: 440-155767-1

Laboratory: TA IRV

EDD Filename: Prep440-155767-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method: 9045C**  
**Matrix: SO**

<i>Analyte</i>	<i>Concentration (SU)</i>		<i>Sample RPD</i>	<i>eQAPP RPD</i>	<i>Flag</i>
	<i>Tt-TP4-B2A-22</i>	<i>Tt-TP4-B2A-22-dup</i>			
PH	8.5	8.4	1	30.00	No Qualifiers Applied

**Method: 9060**  
**Matrix: SO**

<i>Analyte</i>	<i>Concentration (mg/Kg)</i>		<i>Sample RPD</i>	<i>eQAPP RPD</i>	<i>Flag</i>
	<i>Tt-TP4-B2A-22</i>	<i>Tt-TP4-B2A-22-dup</i>			
TOTAL ORGANIC CARBON (TOC)	840	9100	166	30.00	J(all detects) UJ(all non-detects)

# Lab Duplicate Outlier Report

Lab Reporting Batch ID: 440-155767-1

Laboratory: TA IRV

EDD Filename: Prep440-155767-1

eQAPP Name: TetraTechInc\_NERT\_11302016

Method: 314.0

Matrix: SO

<b>QC Sample ID (Associated Sample ID)</b>	<b>Analyte</b>	<b>Sample RPD</b>	<b>eQAPP RPD</b>	<b>Flag</b>
Tt-TP4-B2A-6DUP (Tt-TP4-B2A-6)	PERCHLORATE	72	20.00	J (all detects) UJ (all non-detects)

# Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 440-155767-1

Laboratory: TA IRV

EDD Filename: Prep440-155767-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method: 6010B**  
**Matrix: SO**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
Tt-TP4-B2A-10MS (TOT) Tt-TP4-B2A-10MSD (TOT) (Tt-TP4-B2A-10)	IRON	-192	2865	75.00-125.00	-	IRON	J (all detects) R (all non-detects)
Tt-TP4-B2A-10MS (TOT) Tt-TP4-B2A-10MSD (TOT) (Tt-TP4-B2A-10)	MANGANESE TITANIUM	161 320	182 556	75.00-125.00 75.00-125.00	- -	MANGANESE TITANIUM	J+(all detects)

**Method: 6020**  
**Matrix: SO**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
Tt-TP4-B2A-10MS (TOT) Tt-TP4-B2A-10MSD (TOT) (Tt-TP4-B2A-10)	ANTIMONY CHROMIUM COBALT COPPER NICKEL SELENIUM	76 - 76 73 70 79	- 76 76 75 70 79	80.00-120.00 80.00-120.00 80.00-120.00 80.00-120.00 80.00-120.00 80.00-120.00	- - - - - -	ANTIMONY CHROMIUM COBALT COPPER NICKEL SELENIUM	J-(all detects) UJ(all non-detects)
Tt-TP4-B2A-10MS (TOT) Tt-TP4-B2A-10MSD (TOT) (Tt-TP4-B2A-10)	BARIUM	136	145	80.00-120.00	-	BARIUM	J+(all detects)

**Method: 314.0**  
**Matrix: SO**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
Tt-TP4-B2A-6MS Tt-TP4-B2A-6MSD (Tt-TP4-B2A-6)	PERCHLORATE	71	75	80.00-120.00	-	PERCHLORATE	J-(all detects) UJ(all non-detects)

# Data Qualifier Summary

Lab Reporting Batch ID: 440-155767-1

Laboratory: TA IRV

EDD Filename: Prep440-155767-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b> ALK		
<b>Method:</b> 2320B_Leach	<b>Matrix:</b> AQ	

Sample ID: Tt-TP4-B2A-22      Collected: 8/16/2016 1:03:00 PM      Analysis Type: RES/DIS      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Alkalinity as CaCO3	9.3		4.0	MDL	4.0	MRL	mg/L	J	fd

Sample ID: Tt-TP4-B2A-22-dup      Collected: 8/16/2016 1:08:00 PM      Analysis Type: RES/DIS      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Alkalinity as CaCO3	22		4.0	MDL	4.0	MRL	mg/L	J	fd

<b>Method Category:</b> GENCHEM		
<b>Method:</b> 2540C_Leach	<b>Matrix:</b> AQ	

Sample ID: Tt-TP4-B2A-22      Collected: 8/16/2016 1:03:00 PM      Analysis Type: RES/DIS      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
TOTAL DISSOLVED SOLIDS	770		5.0	MDL	10	MRL	mg/L	J	fd

Sample ID: Tt-TP4-B2A-22-dup      Collected: 8/16/2016 1:08:00 PM      Analysis Type: RES/DIS      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
TOTAL DISSOLVED SOLIDS	210		5.0	MDL	10	MRL	mg/L	J	fd

8/16/2016 12:30:00

Sample ID: Tt-TP4-B2A-6      Collected: PM      Analysis Type: RES/DIS      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
TOTAL DISSOLVED SOLIDS	240		5.0	MDL	10	MRL	mg/L	J	fd

8/16/2016 12:35:00

Sample ID: Tt-TP4-B2A-6-dup      Collected: PM      Analysis Type: RES/DIS      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
TOTAL DISSOLVED SOLIDS	460		5.0	MDL	10	MRL	mg/L	J	fd

\* denotes a non-reportable result

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# Data Qualifier Summary

Lab Reporting Batch ID: 440-155767-1

Laboratory: TA IRV

EDD Filename: Prep440-155767-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b>	GENCHEM	
<b>Method:</b>	300.0_Leach	<b>Matrix:</b> AQ

<b>Sample ID:</b> Tt-TP4-B2A-10		<b>Collected:</b> 8/16/2016 12:40:00 PM		<b>Analysis Type:</b> RE2/DIS				<b>Dilution:</b> 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHLORIDE	0.38	J	0.25	MDL	0.50	MRL	mg/L	J	sp

<b>Sample ID:</b> Tt-TP4-B2A-10		<b>Collected:</b> 8/16/2016 12:40:00 PM		<b>Analysis Type:</b> RES/DIS				<b>Dilution:</b> 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Nitrate as NO3	0.47	J	0.25	MDL	0.50	MRL	mg/L	J	sp

<b>Sample ID:</b> Tt-TP4-B2A-22		<b>Collected:</b> 8/16/2016 1:03:00 PM		<b>Analysis Type:</b> RE2/DIS				<b>Dilution:</b> 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHLORIDE	1.5		0.25	MDL	0.50	MRL	mg/L	J	fd

<b>Sample ID:</b> Tt-TP4-B2A-22		<b>Collected:</b> 8/16/2016 1:03:00 PM		<b>Analysis Type:</b> RE3/DIS				<b>Dilution:</b> 100	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SULFATE	280		25	MDL	50	MRL	mg/L	J	fd

<b>Sample ID:</b> Tt-TP4-B2A-22		<b>Collected:</b> 8/16/2016 1:03:00 PM		<b>Analysis Type:</b> RES/DIS				<b>Dilution:</b> 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Nitrate as NO3	2.2		0.25	MDL	0.50	MRL	mg/L	J	fd

<b>Sample ID:</b> Tt-TP4-B2A-22-dup		<b>Collected:</b> 8/16/2016 1:08:00 PM		<b>Analysis Type:</b> DL2/DIS				<b>Dilution:</b> 10	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SULFATE	45		2.5	MDL	5.0	MRL	mg/L	J	fd

<b>Sample ID:</b> Tt-TP4-B2A-22-dup		<b>Collected:</b> 8/16/2016 1:08:00 PM		<b>Analysis Type:</b> RE2/DIS				<b>Dilution:</b> 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHLORIDE	5.0		0.25	MDL	0.50	MRL	mg/L	J	fd

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

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# Data Qualifier Summary

Lab Reporting Batch ID: 440-155767-1

Laboratory: TA IRV

EDD Filename: Prep440-155767-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b>	GENCHEM	
<b>Method:</b>	300.0_Leach	<b>Matrix:</b> AQ

Sample ID: Tt-TP4-B2A-22-dup      Collected: 8/16/2016 1:08:00 PM      Analysis Type: RES/DIS      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Nitrate as NO3	7.4		0.25	MDL	0.50	MRL	mg/L	J	fd

<b>Method Category:</b>	GENCHEM	
<b>Method:</b>	300.1B_Leach	<b>Matrix:</b> AQ

Sample ID: Tt-TP4-B2A-22      Collected: 8/16/2016 1:03:00 PM      Analysis Type: RES/DIS      Dilution: 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chlorate	1100		50	MDL	100	MRL	ug/L	J	fd

Sample ID: Tt-TP4-B2A-22-dup      Collected: 8/16/2016 1:08:00 PM      Analysis Type: RES/DIS      Dilution: 100

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chlorate	14000		1000	MDL	2000	MRL	ug/L	J	fd

<b>Method Category:</b>	GENCHEM	
<b>Method:</b>	314.0	<b>Matrix:</b> SO

Sample ID: Tt-TP4-B2A-22      Collected: 8/16/2016 1:03:00 PM      Analysis Type: RES/DIS      Dilution: 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
PERCHLORATE	3.8		0.058	MDL	0.25	MRL	mg/Kg	J	fd

Sample ID: Tt-TP4-B2A-22-dup      Collected: 8/16/2016 1:08:00 PM      Analysis Type: RES/DIS      Dilution: 50

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
PERCHLORATE	18		0.50	MDL	2.1	MRL	mg/Kg	J	fd

Sample ID: Tt-TP4-B2A-6      Collected: 8/16/2016 12:30:00 PM      Analysis Type: RES/DIS      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
PERCHLORATE	0.077	F1	0.011	MDL	0.048	MRL	mg/Kg	J-	m, ld, fd

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

# Data Qualifier Summary

Lab Reporting Batch ID: 440-155767-1

Laboratory: TA IRV

EDD Filename: Prep440-155767-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b>	GENCHEM	
<b>Method:</b>	314.0	<b>Matrix:</b> SO

<b>Sample ID:</b> Tt-TP4-B2A-6-dup	<b>Collected:</b> 8/16/2016 12:35:00 PM	<b>Analysis Type:</b> RES/DIS	<b>Dilution:</b> 50						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
PERCHLORATE	9.0		0.55	MDL	2.3	MRL	mg/Kg	J	fd

<b>Method Category:</b>	GENCHEM	
<b>Method:</b>	9060	<b>Matrix:</b> SO

<b>Sample ID:</b> Tt-TP4-B2A-22	<b>Collected:</b> 8/16/2016 1:03:00 PM	<b>Analysis Type:</b> RES/WET	<b>Dilution:</b> 1						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
TOTAL ORGANIC CARBON (TOC)	840		50	MDL	100	MRL	mg/Kg	J	fd

<b>Sample ID:</b> Tt-TP4-B2A-22-dup	<b>Collected:</b> 8/16/2016 1:08:00 PM	<b>Analysis Type:</b> RES/WET	<b>Dilution:</b> 1						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
TOTAL ORGANIC CARBON (TOC)	9100		50	MDL	100	MRL	mg/Kg	J	fd

<b>Method Category:</b>	METALS	
<b>Method:</b>	6010B	<b>Matrix:</b> SO

<b>Sample ID:</b> Tt-TP4-B2A-10	<b>Collected:</b> 8/16/2016 12:40:00 PM	<b>Analysis Type:</b> RES/TOT	<b>Dilution:</b> 5						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
IRON	17000		5.0	MDL	9.9	MRL	mg/Kg	J	m, m
MANGANESE	220		0.99	MDL	2.0	MRL	mg/Kg	J+	m
TITANIUM	770		0.99	MDL	2.0	MRL	mg/Kg	J+	m

<b>Sample ID:</b> Tt-TP4-B2A-22	<b>Collected:</b> 8/16/2016 1:03:00 PM	<b>Analysis Type:</b> RES/TOT	<b>Dilution:</b> 5						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	7.9		2.5	MDL	5.0	MRL	mg/Kg	J	fd
IRON	9900		5.0	MDL	10	MRL	mg/Kg	J	fd
MANGANESE	150		1.0	MDL	2.0	MRL	mg/Kg	J	fd

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

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# Data Qualifier Summary

Lab Reporting Batch ID: 440-155767-1

Laboratory: TA IRV

EDD Filename: Prep440-155767-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b>	METALS	
<b>Method:</b>	6010B	<b>Matrix:</b> SO

Sample ID: Tt-TP4-B2A-22-dup      Collected: 8/16/2016 1:08:00 PM      Analysis Type: RES/TOT      Dilution: 5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	4.4	J	2.5	MDL	4.9	MRL	mg/Kg	J	sp, fd
IRON	6600		4.9	MDL	9.9	MRL	mg/Kg	J	fd
MANGANESE	91		0.99	MDL	2.0	MRL	mg/Kg	J	fd

<b>Method Category:</b>	METALS	
<b>Method:</b>	6010B_Leach	<b>Matrix:</b> AQ

Sample ID: Tt-TP4-B2A-22      Collected: 8/16/2016 1:03:00 PM      Analysis Type: RES/DIS      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CALCIUM	180		0.50	MDL	1.0	MRL	mg/L	J	fd
MAGNESIUM	6.3		0.12	MDL	4.0	MRL	mg/L	J	fd
SODIUM	39		1.9	MDL	5.0	MRL	mg/L	J	fd

Sample ID: Tt-TP4-B2A-22-dup      Collected: 8/16/2016 1:08:00 PM      Analysis Type: RES/DIS      Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CALCIUM	26		0.50	MDL	1.0	MRL	mg/L	J	fd
MAGNESIUM	4.0		0.12	MDL	4.0	MRL	mg/L	J	fd
SODIUM	150		1.9	MDL	5.0	MRL	mg/L	J	fd

<b>Method Category:</b>	METALS	
<b>Method:</b>	6020	<b>Matrix:</b> SO

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Sample ID: Tt-TP4-B2A-10      Collected: PM      Analysis Type: RES/TOT      Dilution: 40

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.53	U F1	0.53	MDL	2.0	MRL	mg/Kg	UJ	m
BARIUM	94	F1	0.50	MDL	0.99	MRL	mg/Kg	J+	m
CHROMIUM	13	F1	0.99	MDL	2.0	MRL	mg/Kg	J-	m
COBALT	5.9	F1	0.42	MDL	0.99	MRL	mg/Kg	J-	m
COPPER	15	F1	0.99	MDL	2.0	MRL	mg/Kg	J-	m

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

# Data Qualifier Summary

Lab Reporting Batch ID: 440-155767-1

Laboratory: TA IRV

EDD Filename: Prep440-155767-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b>	METALS	
<b>Method:</b>	6020	<b>Matrix:</b> SO

<b>Sample ID:</b> Tt-TP4-B2A-10	<b>Collected:</b> 8/16/2016 12:40:00 PM	<b>Analysis Type:</b> RES/TOT	<b>Dilution:</b> 40						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
NICKEL	15	F1	0.99	MDL	2.0	MRL	mg/Kg	J-	m
SELENIUM	0.74	J F1	0.40	MDL	2.0	MRL	mg/Kg	J-	sp, m

<b>Sample ID:</b> Tt-TP4-B2A-22	<b>Collected:</b> 8/16/2016 1:03:00 PM	<b>Analysis Type:</b> RES/TOT	<b>Dilution:</b> 20						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	130		0.25	MDL	0.50	MRL	mg/Kg	J	fd
COBALT	3.6		0.21	MDL	0.50	MRL	mg/Kg	J	fd
COPPER	9.0		0.50	MDL	1.0	MRL	mg/Kg	J	fd
MOLYBDENUM	0.72	J	0.50	MDL	1.0	MRL	mg/Kg	J	sp, fd
NICKEL	8.8		0.50	MDL	1.0	MRL	mg/Kg	J	fd
SELENIUM	0.58	J	0.20	MDL	1.0	MRL	mg/Kg	J	sp

<b>Sample ID:</b> Tt-TP4-B2A-22-dup	<b>Collected:</b> 8/16/2016 1:08:00 PM	<b>Analysis Type:</b> RES/TOT	<b>Dilution:</b> 20						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	91		0.25	MDL	0.49	MRL	mg/Kg	J	fd
COBALT	2.6		0.21	MDL	0.49	MRL	mg/Kg	J	fd
COPPER	6.0		0.49	MDL	0.99	MRL	mg/Kg	J	fd
MOLYBDENUM	0.49	U	0.49	MDL	0.99	MRL	mg/Kg	UJ	fd
NICKEL	6.1		0.49	MDL	0.99	MRL	mg/Kg	J	fd
SELENIUM	0.54	J	0.20	MDL	0.99	MRL	mg/Kg	J	sp

<b>Method Category:</b>	METALS	
<b>Method:</b>	7199	<b>Matrix:</b> SO

<b>Sample ID:</b> Tt-TP4-B2A-22	<b>Collected:</b> 8/16/2016 1:03:00 PM	<b>Analysis Type:</b> RES	<b>Dilution:</b> 3						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chromium, hexavalent	0.18	U	0.18	MDL	0.37	MRL	mg/Kg	UJ	fd

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

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# Data Qualifier Summary

Lab Reporting Batch ID: 440-155767-1

Laboratory: TA IRV

EDD Filename: Prep440-155767-1

eQAPP Name: TetraTechInc\_NERT\_11302016

<b>Method Category:</b> METALS	
<b>Method:</b> 7199	<b>Matrix:</b> SO

Sample ID: Tt-TP4-B2A-22-dup

Collected: 8/16/2016 1:08:00 PM Analysis Type: RES

Dilution: 3

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Chromium, hexavalent	0.23	J	0.16	MDL	0.32	MRL	mg/Kg	J	sp, fd

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

1/26/2017 5:13:38 PM

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# Data Qualifier Summary

Lab Reporting Batch ID: 440-155767-1

Laboratory: TA IRV

EDD Filename: Prep440-155767-1

eQAPP Name: TetraTechInc\_NERT\_11302016

## Reason Code Legend

<i>Reason Code</i>	<i>Description</i>
fd	Field Duplicate Precision
ld	Laboratory Duplicate Precision
m	Matrix Spike Lower Estimation
m	Matrix Spike Lower Rejection
m	Matrix Spike Upper Estimation
sp	Reporting Limit Trace Value

\* denotes a non-reportable result

Project Name and Number: 114-520225-2015-MO5 - NERT Soil Flushing

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# Reporting Limit Outliers

Lab Reporting Batch ID: 440-155767-1

Laboratory: TA IRV

EDD Filename: Prep440-155767-1

eQAPP Name: TetraTechInc\_NERT\_11302016

**Method:** 300.0\_Leach  
**Matrix:** AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
Tt-TP4-B2A-10	CHLORIDE	J	0.38	0.50	MRL	mg/L	J (all detects)
	Nitrate as NO3	J	0.47	0.50	MRL	mg/L	

**Method:** 6010B  
**Matrix:** SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
Tt-TP4-B2A-22-dup	BORON	J	4.4	4.9	MRL	mg/Kg	J (all detects)

**Method:** 6020  
**Matrix:** SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
Tt-TP4-B2A-10	SELENIUM	J F1	0.74	2.0	MRL	mg/Kg	J (all detects)
Tt-TP4-B2A-22	MOLYBDENUM	J	0.72	1.0	MRL	mg/Kg	J (all detects)
	SELENIUM	J	0.58	1.0	MRL	mg/Kg	
Tt-TP4-B2A-22-dup	SELENIUM	J	0.54	0.99	MRL	mg/Kg	J (all detects)

**Method:** 7199  
**Matrix:** SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
Tt-TP4-B2A-22-dup	Chromium, hexavalent	J	0.23	0.32	MRL	mg/Kg	J (all detects)



## **Appendix E.2**

### **Stage 2A Validation Checklists**

Data Verification and Validation Summary  
Data Validation Stage 2A

Project Name: Soil Flushing Treatability Study  
 Project No.: 100-SBO-T35000-2016-M05  
 No. of Samples: 8

SDG/Report No.: 440-104698-1  
 Lab ID: Test America Irvine  
 Matrix: Soil and Water

Area Reviewed	Anomalies		Qualification Required	Action Required
	Yes	No	Yes or No	
1. Sample Preservation, Handling, and Transport		X	No	
2. Chain-of-Custody		X	No	
3. Holding Times		X	No	
4. Blanks		X	No	
5. Surrogates/Monitoring Compounds		X	No	
6. Matrix Spike/Matrix Spike Duplicate	X		Yes	The parent sample Tt-TP1-B1-10 data associated with the matrix spike and/or matrix spike duplicate was "J" qualified.
7. Laboratory Control Samples		X	No	
8. Interference Check Samples		X	No	
9. Compound Quantitation and Reporting Limits	X		Yes	All sample results below the reporting limit are "J" qualified.
10. Duplicates		X	No	
Verification and Validation Label	Stage_2A_Validation_Manual			
Verification and Validation Label Code	S2AVM			
<b>Overall Assessment:</b> Acceptable as qualified. Field QC samples checked for completeness only. <b>Usability:</b> Sample results qualified "J", estimated, are useable for limited purposes only. All other results are considered valid and useable for all purposes.				

Sample Information:  
Cooler Temperature: 3.8° C

Field Sample Number	Lab Sample ID	Date Collected
Tt-TP1-B1-2	440-104698-1	03/17/15 10:30
Tt-TP1-B1-6	440-104698-2	03/17/15 10:47
Tt-TP1-B1-10	440-104698-3	03/17/15 11:08
Tt-TP1-B1-14	440-104698-4	03/17/15 11:17
Tt-TP1-B1-18	440-104698-5	03/17/15 11:25
Tt-TP1-B1-22	440-104698-6	03/17/15 11:32
Tt-TP1-B1-26	440-104698-7	03/17/15 11:58
EB-03/17/15	440-104698-8	03/17/15 12:33

Data Verification and Validation Summary  
Data Validation Stage 2A

The following section is intended to specify areas evaluated and issues encountered. Only applicable methods are listed.

<b>1. Sample Preservation, Handling, and Transport</b>	
Were all samples preserved correctly? Were sample temperatures kept at 4°C (+ or – 2°C)? Were samples received in proper condition?	Yes/Yes/Yes

<b>2. Chain-of-Custody (COC)</b>	
Were samples recorded on the COCs? Were correct analyses performed on the samples?	Yes/Yes

<b>3. Holding Times</b>	
Were samples analyzed within acceptable holding times?	Yes

<b>4. Blanks</b>	
Does data package include a summary of blank results? Was a method blank extracted and/or analyzed for each batch? Were analytes detected in any blanks?	Yes/Yes/No

<b>5. Surrogates/Monitoring Compounds</b>	
Were samples spiked with the correct surrogate compounds? Were surrogate recoveries reported correctly on data forms? Were recoveries within laboratory limits?	Yes/Yes/Yes

<b>6. Matrix Spike/Matrix Spike Duplicate</b>	
Was a MS/MSD pair extracted and/or analyzed with each batch? Were recoveries/RPDs reported correctly on data forms? Were recoveries/RPDs within laboratory established limits?	Yes/Yes/No
<b>Methods 6010B:</b> Parent sample Tt-TP1-B1-10 was qualified as estimated for Iron (J-), Manganese (J-), and Titanium (J+).	
<b>Method 6020:</b> Parent sample Tt-TP1-B1-10 were qualified as estimated for Barium (J+) and Copper (J-).	

<b>7. Laboratory Control Samples (LCS)</b>	
Was a LCS analyzed with each analytical batch? Were LCS recoveries reported correctly on data forms? Were LCS recoveries within laboratory established limits?	Yes/Yes/Yes

<b>8. Interference Check Sample (ICS)</b>	
Were interference check samples (ICS) analyzed at appropriate intervals? Were ICS recoveries within acceptable limits of the true value?	Yes

<b>9. Compound Quantitation and Reporting Limits</b>	
Were quantitation limits (RLs) adjusted to reflect dilutions, cleanup, and other factors? If applicable, were reporting limit check recoveries within acceptable limits? Were there detections below the reporting limit?	Yes/Yes/Yes
<b>All:</b> Results detected above the MDL but below the reporting limit are estimated and qualified “J”. Please see Qualifier Summary Report and the Reporting Limit Outlier Report in the ADR Output Appendix G1 for a complete list of “J” qualified samples due to being detected below the reporting limit.	

Data Verification and Validation Summary  
Data Validation Stage 2A

<b>10. Duplicates</b>	
Were any duplicate pairs analyzed in this SDG? Were RPDs between parent sample and duplicates $\leq$ lab limits or $\leq$ 30% for field duplicates?	No/NA

Validated by: Michael Wilson 04/21/2015

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Data Verification and Validation Summary  
Data Validation Stage 2A

Project Name: Soil Flushing Treatability Study  
 Project No.: 100-SBO-T35000-2016-M05  
 No. of Samples: 40

SDG/Report No.: 440-104832-1  
 Lab ID: Test America Irvine  
 Matrix: Soil and Water

Area Reviewed	Anomalies		Qualification Required	Action Required
	Yes	No	Yes or No	
1. Sample Preservation, Handling, and Transport		X	No	
2. Chain-of-Custody		X	No	
3. Holding Times		X	No	
4. Blanks		X	No	
5. Surrogates/Monitoring Compounds		X	No	
6. Matrix Spike/Matrix Spike Duplicate	X		Yes	The parent samples Tt-TP1-B2-6, Tt-TP1-B4-6, Tt-TP1-B3-6, and Tt-TP2-B1-22 data associated with the matrix spikes and/or matrix spike duplicates were "J" qualified.
7. Laboratory Control Samples		X	No	
8. Interference Check Samples		X	No	
9. Compound Quantitation and Reporting Limits	X		Yes	All sample results below the reporting limit are "J" qualified.
10. Duplicates	X		Yes	Parent samples Tt-TP1-B4-6, Tt-TP2-B1-22 and Tt-TP1-B2-14 and their respective duplicate samples were outside the control limits. Therefore, the data was "J+" qualified

Verification and Validation Label	Stage_2A_Validation_Manual
Verification and Validation Label Code	S2AVM
<p><b>Overall Assessment:</b> Acceptable as qualified.          Field QC samples checked for completeness only.  <b>Usability:</b> Sample results qualified "J", estimated, are useable for limited purposes only. All other results are considered valid and useable for all purposes.</p>	

Sample Information:

Cooler Temperatures: Two coolers at 2.4° C and 5.1° C

Field Sample Number	Lab Sample ID	Date Collected
Tt-TP1-B2-2	440-104832-1	3/17/2015
Tt-TP1-B2-6	440-104832-2	3/17/2015
Tt-TP1-B2-10	440-104832-3	3/17/2015
Tt-TP1-B2-14	440-104832-4	3/17/2015
Tt-TP1-B2-14-dup	440-104832-5	3/17/2015
Tt-TP1-B2-18	440-104832-6	3/17/2015
Tt-TP1-B2-22	440-104832-7	3/17/2015
Tt-TP1-B2-26	440-104832-8	3/17/2015
Tt-TP1-B3-2	440-104832-9	3/18/2015

Data Verification and Validation Summary  
Data Validation Stage 2A

<b>Field Sample Number</b>	<b>Lab Sample ID</b>	<b>Date Collected</b>
Tt-TP1-B3-6	440-104832-10	3/18/2015
Tt-TP1-B3-10	440-104832-11	3/18/2015
Tt-TP1-B3-14	440-104832-12	3/18/2015
Tt-TP1-B3-18	440-104832-13	3/18/2015
Tt-TP1-B3-22	440-104832-14	3/18/2015
Tt-TP1-B3-26	440-104832-15	3/18/2015
Tt-TP1-B4-2	440-104832-16	3/18/2015
Tt-TP1-B4-6	440-104832-17	3/18/2015
Tt-TP1-B4-6-dup	440-104832-18	3/18/2015
Tt-TP1-B4-10	440-104832-19	3/18/2015
Tt-TP1-B4-14	440-104832-20	3/18/2015
Tt-TP1-B4-18	440-104832-21	3/18/2015
Tt-TP1-B4-22	440-104832-22	3/18/2015
Tt-TP1-B4-26	440-104832-23	3/18/2015
Tt-TP2-B1-2	440-104832-24	3/18/2015
Tt-TP2-B1-6	440-104832-25	3/18/2015
Tt-TP2-B2-10	440-104832-26	3/18/2015
Tt-TP2-B1-14	440-104832-27	3/18/2015
Tt-TP2-B1-18	440-104832-28	3/18/2015
Tt-TP2-B1-22	440-104832-29	3/18/2015
Tt-TP2-B1-22-dup	440-104832-30	3/18/2015
Tt-TP2-B1-26	440-104832-31	3/18/2015
EB-03/18/15	440-104832-32	3/18/2015
EB-03/18/15-2	440-104832-33	3/18/2015
Tt-TP2-B2-2	440-104832-34	3/18/2015
Tt-TP2-B2-6	440-104832-35	3/18/2015
Tt-TP2-B2-10	440-104832-36	3/18/2015
Tt-TP2-B2-14	440-104832-37	3/18/2015
Tt-TP2-B2-18	440-104832-38	3/18/2015
Tt-TP2-B2-22	440-104832-39	3/18/2015
Tt-TP2-B2-26	440-104832-40	3/18/2015

Data Verification and Validation Summary  
Data Validation Stage 2A

The following section is intended to specify areas evaluated and issues encountered. Only applicable methods are listed.

<b>1. Sample Preservation, Handling, and Transport</b>	
Were all samples preserved correctly? Were sample temperatures kept at 4°C (+ or – 2°C)? Were samples received in proper condition?	Yes/Yes/Yes

<b>2. Chain-of-Custody (COC)</b>	
Were samples recorded on the COCs? Were correct analyses performed on the samples?	Yes/Yes

<b>3. Holding Times</b>	
Were samples analyzed within acceptable holding times?	Yes

<b>4. Blanks</b>	
Does data package include a summary of blank results? Was a method blank extracted and/or analyzed for each batch? Were analytes detected in any blanks?	Yes/Yes/No

<b>5. Surrogates/Monitoring Compounds</b>	
Were samples spiked with the correct surrogate compounds? Were surrogate recoveries reported correctly on data forms? Were recoveries within laboratory limits?	Yes/Yes/Yes

<b>6. Matrix Spike/Matrix Spike Duplicate</b>	
Was a MS/MSD pair extracted and/or analyzed with each batch? Were recoveries/RPDs reported correctly on data forms? Were recoveries/RPDs within laboratory established limits?	Yes/Yes/No
<b>Method 314.0:</b> The Perchlorate results from parent samples Tt-TP1-B3-6, Tt-TP1-B4-6, and Tt-TP2B1-22 were qualified as estimated. Tt-TP1-B3-6 (J-), Tt-TP1-B4-6 (J+), and Tt-TP2B1-22 (J+).	
<b>Method 6010B:</b> Parent sample Tt-TP1-B2-6 was qualified as estimated for Boron (J-), Iron (J-), Manganese (J-) and Titanium (J+).	
<b>Method 6010B_Leach:</b> The Calcium result from parent sample Tt-TP1-B3-6 was qualified as estimated and assigned a “J-” qualifier.	
<b>Method 6020:</b> The Antimony, Arsenic, Copper, Nickel, and Zinc results from parent sample Tt-TP1-B2-6 were qualified as estimated and assigned “J-” qualifiers.	

<b>7. Laboratory Control Samples (LCS)</b>	
Was a LCS analyzed with each analytical batch? Were LCS recoveries reported correctly on data forms? Were LCS recoveries within laboratory established limits?	Yes/Yes/Yes

<b>8. Interference Check Sample (ICS)</b>	
Were interference check samples (ICS) analyzed at appropriate intervals? Were ICS recoveries within acceptable limits of the true value?	Yes

Data Verification and Validation Summary  
Data Validation Stage 2A

<b>9. Compound Quantitation and Reporting Limits</b>	
Were quantitation limits (RLs) adjusted to reflect dilutions, cleanup, and other factors? If applicable, were reporting limit check recoveries within acceptable limits? Were there detections below the reporting limit?	Yes/Yes/Yes
<b>All:</b> Results detected above the MDL but below the reporting limit are estimated and qualified “J”. For a complete list of “J” qualified samples due to being detected below the reporting limit please see the Qualifier Summary Report and the Reporting Limit Outlier Report in the ADR Output in Appendix G1.	

<b>10. Duplicates</b>	
Were any duplicate pairs analyzed in this SDG? Were RPDs between parent sample and duplicates $\leq$ lab limits or $\leq$ 30% for field duplicates?	Yes/No
<b>Method 2540C Leach:</b> Parent sample Tt-TP2-B1-22 was qualified as estimated for Total Dissolved Solids (J).	
<b>Method 314.0:</b> Parent samples Tt-TP2-B2-14, Tt-TP1-B4-6, and Tt-TP2-B1-22 were qualified as estimated for Perchlorate (J).	

Validated by: Michael Wilson 04/21/2015

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Data Verification and Validation Summary  
Data Validation Stage 2A

Project Name: Soil Flushing Treatability Study  
 Project No.: 100-SBO-T35000-2016-M05  
 No. of Samples: 49

SDG/Report No.: 440-104925-1  
 Lab ID: Test America Irvine  
 Matrix: Soil and Water

Area Reviewed	Anomalies		Qualification Required	Action Required
	Yes	No	Yes or No	
1. Sample Preservation, Handling, and Transport		X	No	
2. Chain-of-Custody		X	No	
3. Holding Times		X	No	
4. Blanks		X	No	
5. Surrogates/Monitoring Compounds		X	No	
6. Matrix Spike/Matrix Spike Duplicate	X		Yes	The parent samples Tt-TP2-B3-14, Tt-TP3-B3-6, and Tt-TP2-B3-2 data associated with the matrix spikes and/or matrix spike duplicates were "J" or "UJ" qualified.
7. Laboratory Control Samples		X	No	
8. Interference Check Samples		X	No	
9. Compound Quantitation and Reporting Limits	X		Yes	All sample results below the reporting limit are "J" qualified.
10. Duplicates	X		Yes	Parent samples Tt-TP2-B3-14, Tt-TP3-B4-18, Tt-TP3-B1-6, and their respective duplicate samples were outside the control limits. Therefore, the data was "J+" qualified.

Verification and Validation Label	Stage_2A_Validation_Manual
Verification and Validation Label Code	S2AVM
<p><b>Overall Assessment:</b> Acceptable as qualified.          Field QC samples checked for completeness only.  <b>Usability:</b> Sample results qualified "J", estimated, are useable for limited purposes only. All other results are considered valid and useable for all purposes.</p>	

Sample Information:

Cooler Temperature: Three coolers 1.8° C, 2.2° C and 4.6° C

Field Sample Number	Lab Sample ID	Date Collected
Tt-TP2-B3-2	440-104925-1	3/18/2015
Tt-TP2-B3-6	440-104925-2	3/18/2015
Tt-TP2-B3-10	440-104925-3	3/18/2015
Tt-TP2-B3-14	440-104925-4	3/18/2015
Tt-TP2-B3-14-dup	440-104925-5	3/18/2015
Tt-TP2-B3-18	440-104925-6	3/18/2015

Data Verification and Validation Summary  
Data Validation Stage 2A

<b>Field Sample Number</b>	<b>Lab Sample ID</b>	<b>Date Collected</b>
Tt-TP2-B3-22	440-104925-7	3/18/2015
Tt-TP2-B3-26	440-104925-8	3/18/2015
Tt-TP2-B4-2	440-104925-9	3/19/2015
Tt-TP2-B4-6	440-104925-10	3/19/2015
Tt-TP2-B4-10	440-104925-11	3/19/2015
Tt-TP2-B4-14	440-104925-12	3/19/2015
Tt-TP2-B4-18	440-104925-13	3/19/2015
Tt-TP2-B4-22	440-104925-14	3/19/2015
Tt-TP2-B4-26	440-104925-15	3/19/2015
Tt-TP3-B1-2	440-104925-16	3/19/2015
Tt-TP3-B1-6	440-104925-17	3/19/2015
Tt-TP3-B1-6-dup	440-104925-18	3/19/2015
Tt-TP3-B1-10	440-104925-19	3/19/2015
Tt-TP3-B1-14	440-104925-20	3/19/2015
Tt-TP3-B1-18	440-104925-21	3/19/2015
Tt-TP3-B1-22	440-104925-22	3/19/2015
Tt-TP3-B1-26	440-104925-23	3/19/2015
Tt-TP3-B2-2	440-104925-24	3/19/2015
Tt-TP3-B2-6	440-104925-25	3/19/2015
Tt-TP3-B2-10	440-104925-26	3/19/2015
Tt-TP3-B2-14	440-104925-27	3/19/2015
Tt-TP3-B2-18	440-104925-28	3/19/2015
Tt-TP3-B2-22	440-104925-29	3/19/2015
Tt-TP3-B2-22-dup	440-104925-30	3/19/2015
Tt-TP3-B2-26	440-104925-31	3/19/2015
Tt-TP3-B2-26-dup	440-104925-32	3/19/2015
EB-03/19/15	440-104925-33	3/19/2015
Tt-TP3-B3-2	440-104925-34	3/19/2015
Tt-TP3-B3-6	440-104925-35	3/19/2015
Tt-TP3-B3-10	440-104925-36	3/19/2015
Tt-TP3-B3-14	440-104925-37	3/19/2015
Tt-TP3-B3-18	440-104925-38	3/19/2015
Tt-TP3-B3-22	440-104925-39	3/19/2015
Tt-TP3-B3-26	440-104925-40	3/19/2015
EB-03/19/15-2	440-104925-41	3/19/2015
Tt-TP3-B4-2	440-104925-42	3/19/2015
Tt-TP3-B4-6	440-104925-43	3/19/2015
Tt-TP3-B4-10	440-104925-44	3/19/2015
Tt-TP3-B4-14	440-104925-45	3/19/2015
Tt-TP3-B4-14-dup	440-104925-46	3/19/2015
Tt-TP3-B4-18	440-104925-47	3/19/2015
Tt-TP3-B4-22	440-104925-48	3/19/2015
Tt-TP3-B4-26	440-104925-49	3/19/2015

Data Verification and Validation Summary  
Data Validation Stage 2A

The following section is intended to specify areas evaluated and issues encountered. Only applicable methods are listed.

<b>1. Sample Preservation, Handling, and Transport</b>	
Were all samples preserved correctly? Were sample temperatures kept at 4°C (+ or – 2°C)? Were samples received in proper condition?	Yes/Yes/Yes

<b>2. Chain-of-Custody (COC)</b>	
Were samples recorded on the COCs? Were correct analyses performed on the samples?	Yes/Yes

<b>3. Holding Times</b>	
Were samples analyzed within acceptable holding times?	Yes

<b>4. Blanks</b>	
Does data package include a summary of blank results? Was a method blank extracted and/or analyzed for each batch? Were analytes detected in any blanks?	Yes/Yes/Yes
<b>Method 6020:</b> Zinc was detected in the equipment blank (Sample name: EB-03/19/15). No qualification was needed.	

<b>5. Surrogates/Monitoring Compounds</b>	
Were samples spiked with the correct surrogate compounds? Were surrogate recoveries reported correctly on data forms? Were recoveries within laboratory limits?	Yes/Yes/Yes

<b>6. Matrix Spike/Matrix Spike Duplicate</b>	
Was a MS/MSD pair extracted and/or analyzed with each batch? Were recoveries/RPDs reported correctly on data forms? Were recoveries/RPDs within laboratory established limits?	Yes/Yes/No
<b>Method 300.0_Leach:</b> Parent sample Tt-TP2-B3-14 were qualified as estimated for Chloride (J-) and Sulfate (J).	
<b>Method 300.1B_Leach:</b> The Chloride results from parent samples Tt-TP2-B3-14 and Tt-TP2-B3-2 were qualified as estimated and assigned a “J” qualifier. Tt-TP2-B3-14 (J) and Tt-TP2-B3-2 (J-)	
<b>Method 314.0:</b> The Perchlorate results from parent samples Tt-TP2-B3-14 and Tt-TP2-B3-6 were qualified as estimated and assigned “J-” qualifiers.	
<b>Method 6010B:</b> Parent sample Tt-TP2-B3-14 was qualified as estimated for Iron (J+), Manganese (J-), and Titanium (J+).	
<b>Method 6010B_Leach:</b> The Calcium result from parent sample Tt-TP2-B3-14 was qualified as estimated and assigned a “J” qualifier.	
<b>Method 6020:</b> The results from parent sample Tt-TP2-B3-14 was qualified as estimated for Antimony (UJ) and Barium (J+).	

<b>7. Laboratory Control Samples (LCS)</b>	
Was a LCS analyzed with each analytical batch? Were LCS recoveries reported correctly on data forms? Were LCS recoveries within laboratory established limits?	Yes/Yes/Yes

<b>8. Interference Check Sample (ICS)</b>	
Were interference check samples (ICS) analyzed at appropriate intervals? Were ICS recoveries within acceptable limits of the true value?	Yes

Data Verification and Validation Summary  
Data Validation Stage 2A

<b>9. Compound Quantitation and Reporting Limits</b>	
Were quantitation limits (RLs) adjusted to reflect dilutions, cleanup, and other factors? If applicable, were reporting limit check recoveries within acceptable limits? Were there detections below the reporting limit?	Yes/Yes/Yes
<p><b>All:</b> Results detected above the MDL but below the reporting limit are estimated and qualified “J”. For a complete list of “J” qualified samples due to being detected below the reporting limit please see the Qualifier Summary Report and the Reporting Limit Outlier Report in the ADR Output in Appendix G1.</p>	

<b>10. Duplicates</b>	
Were any duplicate pairs analyzed in this SDG? Were RPDs between parent sample and duplicates $\leq$ lab limits or $\leq$ 30% for field duplicates?	Yes/No
<p><b>Method 2320B Leach:</b> Parent sample Tt-TP2-B3-14 was qualified as estimated for Alkalinity as CaCO<sub>3</sub> (J).</p>	
<p><b>Method 2540C Leach:</b> Parent samples Tt-TP2-B3-14 and Tt-TP3-B4-18 were qualified as estimated for Total dissolved solids (J+).</p>	
<p><b>Method 300.0 Leach:</b> Parent sample Tt-TP2-B3-14 was qualified as estimated for Nitrate as N (J+) and Sulfate (J).</p>	
<p><b>Method 300.1B Leach:</b> Parent sample Tt-TP2-B3-14 was qualified as estimated for Chlorate (J).</p>	
<p><b>Method 314.0:</b> The Perchlorate results from parent samples Tt-TP3-B1-6 and Tt-TP3-B4-18 were qualified as estimated and assigned “J+” qualifiers.</p>	
<p><b>Method 6010B:</b> Parent sample Tt-TP2-B3-14 was qualified as estimated for Boron (J) and Manganese (J-).</p>	
<p><b>Method 6010B Leach:</b> Parent sample Tt-TP2-B3-14 was qualified as estimated for Potassium (J), Magnesium (J), and Sodium (J).</p>	
<p><b>Method 6020:</b> Parent sample Tt-TP2-B3-14 was qualified as estimated for Arsenic (J), Barium (J+), Beryllium (J), Chromium (J), and Molybdenum (J).</p>	
<p><b>Method 7199:</b> Parent sample Tt-TP2-B3-14 was qualified as estimated for Chromium, Hexavalent (J).</p>	
<p><b>Method 7471A:</b> Parent sample Tt-TP2-B3-14 was qualified as estimated for Mercury (J).</p>	

Validated by: Michael Wilson 04/23/2015

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Data Verification and Validation Summary  
Data Validation Stage 2A

Project Name: Soil Flushing Treatability Study  
 Project No.: 100-SBO-T35000-2016-M05  
 No. of Samples: 31

SDG/Report No.: 440-105015-1  
 Lab ID: Test America Irvine  
 Matrix: Soil and Water

Area Reviewed	Anomalies		Qualification Required	Action Required
	Yes	No	Yes or No	
1. Sample Preservation, Handling, and Transport		X	No	
2. Chain-of-Custody		X	No	
3. Holding Times		X	No	
4. Blanks		X	No	
5. Surrogates/Monitoring Compounds		X	No	
6. Matrix Spike/Matrix Spike Duplicate	X		Yes	The parent samples Tt-TP4-B1-6 and Tt-TP4-B4-22 data associated with the matrix spikes and/or matrix spike duplicates were "J" or "UJ" qualified.
7. Laboratory Control Samples		X	No	
8. Interference Check Samples		X	No	
9. Compound Quantitation and Reporting Limits	X		Yes	All sample results below the reporting limit are "J" qualified.
10. Duplicates	X		Yes	Parent sample Tt-TP4-B3-22 relative percent difference to its respective duplicate sample was outside the control limit and was "J" or "UJ" qualified.
Verification and Validation Label		Stage_2A_Validation_Manual		
Verification and Validation Label Code		S2AVM		
<p><b>Overall Assessment:</b> Acceptable as qualified.            Field QC samples checked for completeness only.  <b>Usability:</b> Sample results qualified "J", estimated, are useable for limited purposes only. All other results are considered valid and useable for all purposes.</p>				

Sample Information:

Cooler Temperature: Two coolers 2.7° C and 4.0° C.

Field Sample Number	Lab Sample ID	Date Collected
Tt-TP4-B1-2	440-105015-1	03/19/15
Tt-TP4-B1-6	440-105015-2	03/19/15
Tt-TP4-B1-10	440-105015-3	03/19/15
Tt-TP4-B1-14	440-105015-4	03/19/15
Tt-TP4-B1-18	440-105015-5	03/19/15
Tt-TP4-B1-22	440-105015-6	03/19/15
Tt-TP4-B1-26	440-105015-7	03/20/15
Tt-TP4-B2-2	440-105015-8	03/20/15
Tt-TP4-B2-6	440-105015-9	03/20/15
Tt-TP4-B2-6-dup	440-105015-10	03/20/15

Data Verification and Validation Summary  
Data Validation Stage 2A

<b>Field Sample Number</b>	<b>Lab Sample ID</b>	<b>Date Collected</b>
Tt-TP4-B2-10	440-105015-11	03/20/15
Tt-TP4-B2-14	440-105015-12	03/20/15
Tt-TP4-B2-18	440-105015-13	03/20/15
Tt-TP4-B2-22	440-105015-14	03/20/15
Tt-TP4-B2-26	440-105015-15	03/20/15
Tt-TP4-B3-2	440-105015-16	03/20/15
Tt-TP4-B3-6	440-105015-17	03/20/15
Tt-TP4-B3-10	440-105015-18	03/20/15
Tt-TP4-B3-14	440-105015-19	03/20/15
Tt-TP4-B3-18	440-105015-20	03/20/15
Tt-TP4-B3-22	440-105015-21	03/20/15
Tt-TP4-B3-22-dup	440-105015-22	03/20/15
Tt-TP4-B3-26	440-105015-23	03/20/15
Tt-TP4-B4-2	440-105015-24	03/20/15
Tt-TP4-B4-6	440-105015-25	03/20/15
Tt-TP4-B4-10	440-105015-26	03/20/15
Tt-TP4-B4-14	440-105015-27	03/20/15
Tt-TP4-B4-18	440-105015-28	03/20/15
Tt-TP4-B4-22	440-105015-29	03/20/15
Tt-TP4-B4-26	440-105015-30	03/20/15
EB-03/20/15	440-105015-31	03/20/15

Data Verification and Validation Summary  
Data Validation Stage 2A

The following section is intended to specify areas evaluated and issues encountered. Only applicable methods are listed.

<b>1. Sample Preservation, Handling, and Transport</b>	
Were all samples preserved correctly? Were sample temperatures kept at 4°C (+ or – 2°C)? Were samples received in proper condition?	Yes/Yes/Yes

<b>2. Chain-of-Custody (COC)</b>	
Were samples recorded on the COCs? Were correct analyses performed on the samples?	Yes/Yes

<b>3. Holding Times</b>	
Were samples analyzed within acceptable holding times?	Yes

<b>4. Blanks</b>	
Does data package include a summary of blank results? Was a method blank extracted and/or analyzed for each batch? Were analytes detected in any blanks?	Yes/Yes/No

<b>5. Surrogates/Monitoring Compounds</b>	
Were samples spiked with the correct surrogate compounds? Were surrogate recoveries reported correctly on data forms? Were recoveries within laboratory limits?	Yes/Yes/Yes

<b>6. Matrix Spike/Matrix Spike Duplicate</b>	
Was a MS/MSD pair extracted and/or analyzed with each batch? Were recoveries/RPDs reported correctly on data forms? Were recoveries/RPDs within laboratory established limits?	Yes/Yes/No
<b>Method 300.0_Leach:</b> The Nitrate as NO <sub>3</sub> result from parent sample Tt-TP4-B1-6 was qualified as estimated and assigned a “J+” qualifier.	
<b>Method 314.0:</b> The Perchlorate result from parent sample Tt-TP4-B1-22 was qualified as estimated and assigned a “J+” qualifier.	
<b>Methods 6010B:</b> The Boron, Iron, Manganese, and Titanium results from parent sample Tt-TP4-B1-6 were qualified as estimated and assigned “J+” qualifiers.	
<b>Method 6020:</b> Parent sample Tt-TP4-B1-6 was qualified as estimated for Antimony (UJ) and Boron (J+).	

<b>7. Laboratory Control Samples (LCS)</b>	
Was a LCS analyzed with each analytical batch? Were LCS recoveries reported correctly on data forms? Were LCS recoveries within laboratory established limits?	Yes/Yes/Yes

<b>8. Interference Check Sample (ICS)</b>	
Were interference check samples (ICS) analyzed at appropriate intervals? Were ICS recoveries within acceptable limits of the true value?	Yes

<b>9. Compound Quantitation and Reporting Limits</b>	
Were quantitation limits (RLs) adjusted to reflect dilutions, cleanup, and other factors? If applicable, were reporting limit check recoveries within acceptable limits? Were there detections below the reporting limit?	Yes/Yes/Yes

Data Verification and Validation Summary  
Data Validation Stage 2A

**All:** Results detected above the MDL but below the reporting limit are estimated and qualified “J”. For a complete list of “J” qualified samples due to being detected below the reporting limit please see the Qualifier Summary Report and the Reporting Limit Outlier Report in the ADR Output in Appendix G1.

**10. Duplicates**

Were any duplicate pairs analyzed in this SDG? Were RPDs between parent sample and duplicates $\leq$ lab limits or $\leq$ 30% for field duplicates?	Yes/No
<b>Method 2320B_Leach:</b> The Alkalinity as CaCO <sub>3</sub> result from parent sample Tt-TP4-B3-22 was qualified as estimated and assigned a “J” qualifier.	
<b>Method 300.1B:</b> The Nitrate as NO <sub>3</sub> result from parent sample Tt-TP4-B3-22 was qualified as estimated and assigned a “J+” qualifier.	
<b>Method 300.1B_Leach:</b> The Chlorate result from parent sample Tt-TP4-B3-22 was qualified as estimated and assigned a “J+” qualifier.	
<b>Method 314.0:</b> The perchlorate result from parent sample Tt-TP4-B3-22 was qualified as estimated and assigned a “J+” qualifier.	
<b>Method 6010B:</b> The Manganese result from parent sample Tt-TP4-B3-22 was qualified as estimated and assigned a “J” qualifier.	
<b>Method 6010B_Leach:</b> The sodium and calcium results from parent sample Tt-TP4-B3-22 were qualified as estimated and assigned “J” qualifiers.	
<b>Method 6020:</b> The Chromium, Arsenic, Lead, and Nickel results from parent sample Tt-TP4-B3-22 were qualified as estimated and assigned “J” qualifiers.	
<b>Method 7471A:</b> The Mercury result from parent sample Tt-TP4-B3-22 was qualified as estimated and assigned a “UJ” qualifier.	

Validated by: Michael Wilson 04/23/2015



Data Verification and Validation Summary  
Data Validation Stage 2A

Project Name: Soil Flushing Treatability Study  
 Project No.: 100-SBO-T35000-2016-M05  
 No. of Samples: 10

SDG/Report No.: 440-105330-1  
 Lab ID: Test America Irvine  
 Matrix: Soil and Water

Area Reviewed	Anomalies		Qualification Required	Action Required
	Yes	No	Yes or No	
1. Sample Preservation, Handling, and Transport		X	No	
2. Chain-of-Custody		X	No	
3. Holding Times		X	No	
4. Blanks		X	No	
5. Surrogates/Monitoring Compounds		X	No	
6. Matrix Spike/Matrix Spike Duplicate	X		Yes	The parent sample Tt-TP4-L2-22 data associated with the matrix spikes and/or matrix spike duplicates were "J" qualified.
7. Laboratory Control Samples		X	No	
8. Interference Check Samples		X	No	
9. Compound Quantitation and Reporting Limits	X		Yes	All sample results below the reporting limit are "J" qualified.
10. Duplicates	X		Yes	Parent sample Tt-TP4-L2-22 relative percent difference to its respective duplicate sample was outside the control limit and was "J" qualified.
Verification and Validation Label	Stage_2A_Validation_Manual			
Verification and Validation Label Code	S2AVM			
<p><b>Overall Assessment:</b> Acceptable as qualified.            Field QC samples checked for completeness only.  <b>Usability:</b> Sample results qualified "J", estimated, are useable for limited purposes only. All other results are considered valid and useable for all purposes.</p>				

Sample Information:  
Cooler Temperature: 2.2° C

Field Sample Number	Lab Sample ID	Date Collected
Tt-TP4-L2-2	440-105330-1	3/25/2015
Tt-TP4-L2-6	440-105330-2	3/25/2015
Tt-TP4-L2-10	440-105330-3	3/25/2015
Tt-TP4-L2-14	440-105330-4	3/25/2015
Tt-TP4-L2-18	440-105330-5	3/25/2015
Tt-TP4-L2-22	440-105330-6	3/25/2015
Tt-TP4-L2-22-dup	440-105330-7	3/25/2015
Tt-TP4-L2-26	440-105330-8	3/25/2015
Tt-TP4-L2-26-dup	440-105330-9	3/25/2015
EB-03/25/15	440-105330-10	3/25/2015

Data Verification and Validation Summary  
Data Validation Stage 2A

The following section is intended to specify areas evaluated and issues encountered. Only applicable methods are listed.

<b>1. Sample Preservation, Handling, and Transport</b>	
Were all samples preserved correctly? Were sample temperatures kept at 4°C (+ or – 2°C)? Were samples received in proper condition?	Yes/Yes/Yes

<b>2. Chain-of-Custody (COC)</b>	
Were samples recorded on the COCs? Were correct analyses performed on the samples?	Yes/Yes

<b>3. Holding Times</b>	
Were samples analyzed within acceptable holding times?	Yes

<b>4. Blanks</b>	
Does data package include a summary of blank results? Was a method blank extracted and/or analyzed for each batch? Were analytes detected in any blanks?	Yes/Yes/Yes

<b>5. Surrogates/Monitoring Compounds</b>	
Were samples spiked with the correct surrogate compounds? Were surrogate recoveries reported correctly on data forms? Were recoveries within laboratory limits?	Yes/Yes/Yes

<b>6. Matrix Spike/Matrix Spike Duplicate</b>	
Was a MS/MSD pair extracted and/or analyzed with each batch? Were recoveries/RPDs reported correctly on data forms? Were recoveries/RPDs within laboratory established limits?	Yes/Yes/No
<b>Method 300.1B_Leach:</b> The Chlorate result from parent sample Tt-TP4-L2-22 was qualified as estimated and assigned a “J” qualifier.	
<b>Method 314.0:</b> The Perchlorate result from parent sample Tt-TP4-L2-22 was qualified as estimated and assigned a “J” qualifier.	
<b>Method 6010B:</b> The Iron, Manganese, and Titanium results from parent sample Tt-TP4-L2-22 were qualified as estimated and assigned a “J+” qualifier.	
<b>Method 6010B_Leach:</b> The Sodium result from parent sample Tt-TP4-L2-22 was qualified as estimated and assigned a “J-” qualifier.	
<b>Method 6020:</b> The Barium result from parent sample Tt-TP4-L2-22 was qualified as estimated and assigned a “J+” qualifier.	

<b>7. Laboratory Control Samples (LCS)</b>	
Was a LCS analyzed with each analytical batch? Were LCS recoveries reported correctly on data forms? Were LCS recoveries within laboratory established limits?	Yes/Yes/Yes

<b>8. Interference Check Sample (ICS)</b>	
Were interference check samples (ICS) analyzed at appropriate intervals? Were ICS recoveries within acceptable limits of the true value?	Yes

Data Verification and Validation Summary  
Data Validation Stage 2A

<b>9. Compound Quantitation and Reporting Limits</b>	
Were quantitation limits (RLs) adjusted to reflect dilutions, cleanup, and other factors? If applicable, were reporting limit check recoveries within acceptable limits? Were detection below the reporting limit?	Yes/Yes/Yes
<b>All:</b> Results detected above the MDL but below the reporting limit are estimated and qualified “J”. For a complete list of “J” qualified samples due to being detected below the reporting limit please see the Qualifier Summary Report and the Reporting Limit Outlier Report in the ADR Output in Appendix G1.	

<b>10. Duplicates</b>	
Were any duplicate pairs analyzed in this SDG? Were RPDs between parent sample and duplicates $\leq$ lab limits or $\leq$ 30% for field duplicates?	Yes/No
<b>Method 300.0_Leach:</b> The Chloride and Nitrate as NO3 results from parent sample Tt-TP4-L2-22 were qualified as estimated and assigned a “J+” qualifier.	
<b>Method 300.1B_Leach:</b> The Chlorate result from parent sample Tt-TP4-L2-22 was qualified as estimated and assigned a “J” qualifier.	
<b>Method 314.0:</b> The Perchlorate result from parent sample Tt-TP4-L2-22 was qualified as estimated and assigned a “J+” qualifier.	
<b>Method 6010B:</b> The Boron result from parent sample Tt-TP4-L2-22 were qualified as estimated and assigned a “J” qualifier.	
<b>Method 6010B_Leach:</b> The Calcium result from parent sample Tt-TP4-L2-22 was qualified as estimated and assigned a “J” qualifier.	
<b>Method 6020:</b> The Arsenic and Chromium results from parent sample Tt-TP4-L2-22 were qualified as estimated and assigned a “J” qualifier.	
<b>Method 7199:</b> The Hexavalent Chromium result from parent sample Tt-TP4-L2-22 was qualified as estimated and assigned a “J” qualifier.	
<b>Method 7471A:</b> The Mercury result from parent sample Tt-TP4-L2-22 was qualified as estimated and assigned a “J” qualifier.	

Validated by: Michael Wilson 4/23/2015

Data Verification and Validation Summary  
Data Validation Stage 2A

Project Name: Soil Flushing Treatability Study  
 Project No.: 100-SBO-T35000-2016-M05  
 No. of Samples: 24

SDG/Report No.: 440-105406-1  
 Lab ID: Test America Irvine  
 Matrix: Soil and Water

Area Reviewed	Anomalies		Qualification Required	Action Required
	Yes	No	Yes or No	
1. Sample Preservation, Handling, and Transport		X	No	
2. Chain-of-Custody		X	No	
3. Holding Times		X	No	
4. Blanks		X	No	
5. Surrogates/Monitoring Compounds		X	No	
6. Matrix Spike/Matrix Spike Duplicate	X		Yes	The parent sample Tt-TP3-L2-6 data associated with the matrix spikes and/or matrix spike duplicates were "J" or "UJ" qualified.
7. Laboratory Control Samples		X	No	
8. Interference Check Samples		X	No	
9. Compound Quantitation and Reporting Limits	X		Yes	All sample results below the reporting limit are "J" qualified.
10. Duplicates	X		Yes	Parent sample Tt-TP1-L2-14 relative percent difference to its duplicate sample was outside the control limit and was "J+" qualified.
Verification and Validation Label	Stage_2A_Validation_Manual			
Verification and Validation Label Code	S2AVM			
<b>Overall Assessment:</b> Acceptable as qualified. Field QC samples checked for completeness only. <b>Usability:</b> Sample results qualified "J", estimated, are useable for limited purposes only. All other results are considered valid and useable for all purposes.				

Sample Information:  
Cooler Temperature: 3.9° C

Field Sample Number	Lab Sample ID	Date Collected
Tt-TP3-L2-2	440-105406-1	3/26/2015
Tt-TP3-L2-6	440-105406-2	3/26/2015
Tt-TP3-L2-6-dup	440-105406-3	3/26/2015
Tt-TP3-L2-10	440-105406-4	3/26/2015
Tt-TP3-L2-14	440-105406-5	3/26/2015
Tt-TP3-L2-18	440-105406-6	3/26/2015
Tt-TP3-L2-22	440-105406-7	3/26/2015
Tt-TP3-L2-26	440-105406-8	3/26/2015
Tt-TP2-L2-2	440-105406-9	3/26/2015
Tt-TP2-L2-6	440-105406-10	3/26/2015

Data Verification and Validation Summary  
Data Validation Stage 2A

<b>Field Sample Number</b>	<b>Lab Sample ID</b>	<b>Date Collected</b>
Tt-TP2-L2-10	440-105406-11	3/26/2015
Tt-TP2-L2-14	440-105406-12	3/26/2015
Tt-TP2-L2-18	440-105406-13	3/26/2015
Tt-TP2-L2-22	440-105406-14	3/26/2015
Tt-TP2-L2-26	440-105406-15	3/26/2015
Tt-TP1-L2-2	440-105406-16	3/26/2015
Tt-TP1-L2-6	440-105406-17	3/26/2015
Tt-TP1-L2-10	440-105406-18	3/26/2015
Tt-TP1-L2-14	440-105406-19	3/26/2015
Tt-TP1-L2-14-dup	440-105406-20	3/26/2015
Tt-TP1-L2-18	440-105406-21	3/26/2015
Tt-TP1-L2-22	440-105406-22	3/26/2015
Tt-TP1-L2-26	440-105406-23	3/26/2015
EB-03/26/15	440-105406-24	3/26/2015

Data Verification and Validation Summary  
Data Validation Stage 2A

The following section is intended to specify areas evaluated and issues encountered. Only applicable methods are listed.

<b>1. Sample Preservation, Handling, and Transport</b>	
Were all samples preserved correctly? Were sample temperatures kept at 4°C (+ or – 2°C)? Were samples received in proper condition?	Yes/Yes/Yes

<b>2. Chain-of-Custody (COC)</b>	
Were samples recorded on the COCs? Were correct analyses performed on the samples?	Yes/Yes

<b>3. Holding Times</b>	
Were samples analyzed within acceptable holding times?	Yes

<b>4. Blanks</b>	
Does data package include a summary of blank results? Was a method blank extracted and/or analyzed for each batch? Were analytes detected in any blanks?	Yes/Yes/No

<b>5. Surrogates/Monitoring Compounds</b>	
Were samples spiked with the correct surrogate compounds? Were surrogate recoveries reported correctly on data forms? Were recoveries within laboratory limits?	Yes/Yes/Yes

<b>6. Matrix Spike/Matrix Spike Duplicate</b>	
Was a MS/MSD pair extracted and/or analyzed with each batch? Were recoveries/RPDs reported correctly on data forms? Were recoveries/RPDs within laboratory established limits?	Yes/Yes/No
<b>Method 6010B:</b> Parent sample Tt-TP3-L2-6 was qualified as estimated for Iron (J), Manganese (J+), and Titanium (J+).	
<b>Method 6020:</b> Parent sample Tt-TP3-L2-6 was qualified as estimated for Barium (UJ) and Antimony (J+).	

<b>7. Laboratory Control Samples (LCS)</b>	
Was a LCS analyzed with each analytical batch? Were LCS recoveries reported correctly on data forms? Were LCS recoveries within laboratory established limits?	Yes/Yes/Yes

<b>8. Interference Check Sample (ICS)</b>	
Were interference check samples (ICS) analyzed at appropriate intervals? Were ICS recoveries within acceptable limits of the true value?	Yes

<b>9. Compound Quantitation and Reporting Limits</b>	
Were quantitation limits (RLs) adjusted to reflect dilutions, cleanup, and other factors? If applicable, were reporting limit check recoveries within acceptable limits? Were there detections below the reporting limit?	Yes/Yes/Yes
<b>All:</b> Results detected above the MDL but below the reporting limit are estimated and qualified “J”. For a complete list of “J” qualified samples due to being detected below the reporting limit please see the Qualifier Summary Report and the Reporting Limit Outlier Report in the ADR Output in Appendix G1.	

Data Verification and Validation Summary  
Data Validation Stage 2A

<b>10. Duplicates</b>	
Were any duplicate pairs analyzed in this SDG? Were RPDs between parent sample and duplicates $\leq$ lab limits or $\leq$ 30% for field duplicates?	Yes/No
<b>Method 314.0:</b> The Perchlorate result from parent sample Tt-TP1-L2-14 was qualified as estimated and assigned a "J+" qualifier.	

Validated by: Michael Wilson 04/23/2016

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Data Verification and Validation Summary  
Data Validation Stage 2A

Project Name: Soil Flushing Treatability Study  
 Project No.: 100-SBO-T35000-2016-M05  
 No. of Samples: 1

SDG/Report No.: 440-130543-1  
 Lab ID: Test America Irvine  
 Matrix: Water

Area Reviewed	Anomalies		Qualification Required	Action Required
	Yes	No	Yes or No	
1. Sample Preservation, Handling, and Transport		X	No	
2. Chain-of-Custody		X	No	
3. Holding Times	X		Yes	A holding time violation occurred for sample TT-TP4-M3-20151209. The sample data was "J-" qualified.
4. Blanks		X	No	
5. Surrogates/Monitoring Compounds		X	No	
6. Matrix Spike/Matrix Spike Duplicate		X	No	
7. Laboratory Control Samples		X	No	
8. Interference Check Samples		X	No	
9. Compound Quantitation and Reporting Limits	X		Yes	All sample results below the reporting limit are "J" qualified.
10. Duplicates		X	No	
Verification and Validation Label	Stage_2A_Validation_Manual			
Verification and Validation Label Code	S2AVM			
<p><b>Overall Assessment:</b> Acceptable as qualified.            Field QC samples checked for completeness only.  <b>Usability:</b> Sample results qualified "J", estimated, are useable for limited purposes only. All other results are considered valid and useable for all purposes.</p>				

Sample Information:  
 Cooler Temperature: 2.4° C

Field Sample Number	Lab Sample ID	Date Collected
TT-TP4-M3-20151209	440-130543-1	12/09/15



Data Verification and Validation Summary  
Data Validation Stage 2A

The following section is intended to specify areas evaluated and issues encountered. Only applicable methods are listed.

<b>1. Sample Preservation, Handling, and Transport</b>	
Were all samples preserved correctly? Were sample temperatures kept at 4°C (+ or – 2°C)? Were samples received in proper condition?	Yes/Yes/Yes

<b>2. Chain-of-Custody (COC)</b>	
Were samples recorded on the COCs? Were correct analyses performed on the samples?	Yes/Yes

<b>3. Holding Times</b>	
Were samples analyzed within acceptable holding times?	No
<b>Method 7199:</b> Sample TT-TP4-M3-20151209 was analyzed pass its acceptable holding time for Hexavalent Chromium. Therefore, the sample result was qualified as estimated and assigned a “J-” qualifier.	

<b>4. Blanks</b>	
Does data package include a summary of blank results? Was a method blank extracted and/or analyzed for each batch? Were analytes detected in any blanks?	Yes/Yes/No

<b>5. Surrogates/Monitoring Compounds</b>	
Were samples spiked with the correct surrogate compounds? Were surrogate recoveries reported correctly on data forms? Were recoveries within laboratory limits?	Yes/Yes/Yes

<b>6. Matrix Spike/Matrix Spike Duplicate</b>	
Was a MS/MSD pair extracted and/or analyzed with each batch? Were recoveries/RPDs reported correctly on data forms? Were recoveries/RPDs within laboratory established limits?	Yes/Yes/Yes

<b>7. Laboratory Control Samples (LCS)</b>	
Was a LCS analyzed with each analytical batch? Were LCS recoveries reported correctly on data forms? Were LCS recoveries within laboratory established limits?	Yes/Yes/Yes

<b>8. Interference Check Sample (ICS)</b>	
Were interference check samples (ICS) analyzed at appropriate intervals? Were ICS recoveries within acceptable limits of the true value?	Yes

<b>9. Compound Quantitation and Reporting Limits</b>	
Were quantitation limits (RLs) adjusted to reflect dilutions, cleanup, and other factors? If applicable, were reporting limit check recoveries within acceptable limits? Were there detections below the reporting limit?	Yes/Yes/Yes

Data Verification and Validation Summary  
Data Validation Stage 2A

**All:** Results detected above the MDL but below the reporting limit are estimated and qualified “J”. For a complete list of “J” qualified samples due to being detected below the reporting limit please see the Qualifier Summary Report and the Reporting Limit Outlier Report in the ADR Output in Appendix G1.

**10. Duplicates**

Were any duplicate pairs analyzed in this SDG? Were RPDs between parent sample and duplicates $\leq$ lab limits or $\leq$ 30% for field duplicates?	No/NA
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Validated by: Michael Wilson 01/08/2016

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Data Verification and Validation Summary  
Data Validation Stage 2A

Project Name: Soil Flushing Treatability Study  
 Project No.: 100-SBO-T35000-2016-M05  
 No. of Samples: 18

SDG/Report No.: 440-130588-1  
 Lab ID: Test America Irvine  
 Matrix: Water

Area Reviewed	Anomalies		Qualification Required	Action Required
	Yes	No	Yes or No	
1. Sample Preservation, Handling, and Transport		X	No	
2. Chain-of-Custody		X	No	
3. Holding Times	X		Yes	All of the Hexavalent Chromium results were qualified as estimated and assigned a "J" qualifier because of holding time violations.
4. Blanks		X	No	
5. Surrogates/Monitoring Compounds		X	No	
6. Matrix Spike/Matrix Spike Duplicate	X		Yes	Parent samples Tt-TP1-M3-20151210 and Tt-TP2-L1-20151210 data associated with the matrix spikes and/or matrix spike duplicates were "J" or "UJ" qualified.
7. Laboratory Control Samples		X	No	
8. Interference Check Samples		X	No	
9. Compound Quantitation and Reporting Limits		X	No	
10. Duplicates	X		Yes	Parent sample Tt-TP3-M1-20151210 was outside the duplicate control limits and the data was "J" qualified.
Verification and Validation Label		Stage_2A_Validation_Manual		
Verification and Validation Label Code		S2AVM		
<p><b>Overall Assessment:</b> Acceptable as qualified.            Field QC samples checked for completeness only.  <b>Usability:</b> Sample results qualified "J", estimated, are useable for limited purposes only. All other results are considered valid and useable for all purposes.</p>				

Sample Information:

Cooler Temperature: Three coolers at 1.0° C, 1.6° C and 1.7° C

Field Sample Number	Lab Sample ID	Date Collected
Tt-TP4-M1-20151210	440-130588-1	12/10/2015
Tt-TP4-M2-20151210	440-130588-2	12/10/2015
Tt-TP3-M1-20151210	440-130588-3	12/10/2015
Tt-TP3-M2-20151210	440-130588-4	12/10/2015
Tt-TP2-M1-20151210	440-130588-5	12/10/2015
Tt-TP2-M2-20151210	440-130588-6	12/10/2015
Tt-TP1-M1-20151210	440-130588-7	12/10/2015
Tt-TP1-M2-20151210	440-130588-8	12/10/2015

Data Verification and Validation Summary  
Data Validation Stage 2A

<b>Field Sample Number</b>	<b>Lab Sample ID</b>	<b>Date Collected</b>
Tt-TP1-M3-20151210	440-130588-9	12/10/2015
Tt-TP3-M1-20151210-DUP	440-130588-10	12/10/2015
Tt-TP4-L1-20151210	440-130588-11	12/10/2015
Tt-TP4-L2-20151210	440-130588-12	12/10/2015
Tt-TP3-L1-20151210	440-130588-13	12/10/2015
Tt-TP3-L2-20151210	440-130588-14	12/10/2015
Tt-TP2-L1-20151210	440-130588-15	12/10/2015
Tt-TP2-L2-20151210	440-130588-16	12/10/2015
Tt-TP1-L1-20151210	440-130588-17	12/10/2015
Tt-TP1-L2-20151210	440-130588-18	12/10/2015

Data Verification and Validation Summary  
Data Validation Stage 2A

The following section is intended to specify areas evaluated and issues encountered. Only applicable methods are listed.

<b>1. Sample Preservation, Handling, and Transport</b>	
Were all samples preserved correctly? Were sample temperatures kept at 4°C (+ or – 2°C)? Were samples received in proper condition?	Yes/Yes/Yes

<b>2. Chain-of-Custody (COC)</b>	
Were samples recorded on the COCs? Were correct analyses performed on the samples?	Yes/Yes

<b>3. Holding Times</b>	
Were samples analyzed within acceptable holding times?	No
<b>Method 7199:</b> All the Hexavalent Chromium results were qualified as estimated and assigned a “J” qualifier because of holding time failures. The sample listed in the “Sample Information” section of this report are the affected samples.	

<b>4. Blanks</b>	
Does data package include a summary of blank results? Was a method blank extracted and/or analyzed for each batch? Were analytes detected in any blanks?	Yes/Yes/No

<b>5. Surrogates/Monitoring Compounds</b>	
Were samples spiked with the correct surrogate compounds? Were surrogate recoveries reported correctly on data forms? Were recoveries within laboratory limits?	Yes/Yes/Yes

<b>6. Matrix Spike/Matrix Spike Duplicate</b>	
Was a MS/MSD pair extracted and/or analyzed with each batch? Were recoveries/RPDs reported correctly on data forms? Were recoveries/RPDs within laboratory established limits?	Yes/Yes/No
<b>Method 300.0:</b> The Nitrate as N, Sulfate and Chloride results from parent samples Tt-TP1-M3-20151210 and Tt-TP2-L1-20151210 were qualified as estimated and assigned “J-” qualifiers.	
<b>Method 300.1B:</b> The Chlorate result from parent sample Tt-TP1-M3-20151210 was qualified as estimated and assigned a “J-” qualifier.	
<b>Method 6010B:</b> The Calcium, Magnesium, Potassium, and Sodium results from parent sample Tt-TP1-M3-20151210 were qualified as estimated and assigned “J-” qualifiers.	
<b>Method 6020:</b> The Chromium result from parent sample Tt-TP1-M3-20151210 was qualified as estimated and assigned a “J-” qualifier.	
<b>Method 7199:</b> The Hexavalent Chromium result from parent sample Tt-TP1-M3-20151210 was qualified as estimated and assigned a “J” qualifier.	

<b>7. Laboratory Control Samples (LCS)</b>	
Was a LCS analyzed with each analytical batch? Were LCS recoveries reported correctly on data forms? Were LCS recoveries within laboratory established limits?	Yes/Yes/Yes

<b>8. Interference Check Sample (ICS)</b>	
Were interference check samples (ICS) analyzed at appropriate intervals? Were ICS recoveries within acceptable limits of the true value?	Yes

Data Verification and Validation Summary  
Data Validation Stage 2A

<b>9. Compound Quantitation and Reporting Limits</b>	
Were quantitation limits (RLs) adjusted to reflect dilutions, cleanup, and other factors? If applicable, were reporting limit check recoveries within acceptable limits? Were there detections below the reporting limit?	Yes/Yes/Yes
<b>All:</b> Results detected above the MDL but below the reporting limit are estimated and qualified "J". Please see the Qualifier Summary Report and the Reporting Limit Outlier Report in the ADR Output Appendix G1 for a complete list of "J" qualified samples due to being detected below the reporting limit.	

<b>10. Duplicates</b>	
Were any duplicate pairs analyzed in this SDG? Were RPDs between parent sample and duplicates $\leq$ lab limits or $\leq$ 30% for field duplicates?	Yes/No
<b>Method 6020:</b> The Selenium result from parent sample Tt-TP3-M1-20151210 was qualified as estimated and assigned a "J" qualifier.	

Validated by: Michael Wilson 01/08/2016

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Data Verification and Validation Summary  
Data Validation Stage 2A

Project Name: Soil Flushing Treatability Study  
 Project No.: 100-SBO-T35000-2016-M05  
 No. of Samples: 5

SDG/Report No.: 440-132876-1  
 Lab ID: Test America Irvine  
 Matrix: Water

Area Reviewed	Anomalies		Qualification Required	Action Required
	Yes	No	Yes or No	
1. Sample Preservation, Handling, and Transport		X	No	
2. Chain-of-Custody		X	No	
3. Holding Times		X	No	
4. Blanks		X	No	
5. Surrogates/Monitoring Compounds		X	No	
6. Matrix Spike/Matrix Spike Duplicate	X		Yes	The parent sample TT-TP2-M2-20160103 data associated with the matrix spikes and/or matrix spike duplicates were "J" qualified.
7. Laboratory Control Samples		X	No	
8. Interference Check Samples		X	No	
9. Compound Quantitation and Reporting Limits		X	No	
10. Duplicates		X	No	

Verification and Validation Label	Stage_2A_Validation_Manual
Verification and Validation Label Code	S2AVM
<p><b>Overall Assessment:</b> Acceptable as qualified.          Field QC samples checked for completeness only.  <b>Usability:</b> Sample results qualified "J", estimated, are useable for limited purposes only. All other results are considered valid and useable for all purposes.</p>	

Sample Information:  
 Cooler Temperature: 1 cooler at 5.2° C.

Field Sample Number	Lab Sample ID	Date Collected
TT-TP2-M1-20160103	440-132876-1	01/03/16
TT-TP2-M2-20160103	440-132876-2	01/03/16
TT-TP2-L2-20160103	440-132876-3	01/03/16
TT-TP2-L1-20160103	440-132876-4	01/03/16
TT-TP2-M2-20160103-Dup	440-132876-5	01/03/16

Data Verification and Validation Summary  
Data Validation Stage 2A

The following section is intended to specify areas evaluated and issues encountered. Only applicable methods are listed.

<b>1. Sample Preservation, Handling, and Transport</b>	
Were all samples preserved correctly? Were sample temperatures kept at 4°C (+ or – 2°C)? Were samples received in proper condition?	Yes/Yes/Yes

<b>2. Chain-of-Custody (COC)</b>	
Were samples recorded on the COCs? Were correct analyses performed on the samples?	Yes/Yes

<b>3. Holding Times</b>	
Were samples analyzed within acceptable holding times?	Yes

<b>4. Blanks</b>	
Does data package include a summary of blank results? Was a method blank extracted and/or analyzed for each batch? Were analytes detected in any blanks?	Yes/Yes/No

<b>5. Surrogates/Monitoring Compounds</b>	
Were samples spiked with the correct surrogate compounds? Were surrogate recoveries reported correctly on data forms? Were recoveries within laboratory limits?	Yes/Yes/Yes

<b>6. Matrix Spike/Matrix Spike Duplicate</b>	
Was a MS/MSD pair extracted and/or analyzed with each batch? Were recoveries/RPDs reported correctly on data forms? Were recoveries/RPDs within laboratory established limits?	Yes/Yes/No
<b>Method 314.0:</b> The Perchlorate result from parent sample TT-TP2-M2-20160103 was qualified as estimated and assigned a “J” qualifier.	
<b>Method 6020:</b> The Chromium result from parent sample TT-TP2-M2-20160103 were qualified as estimated and assigned a “J-” qualifier.	

<b>7. Laboratory Control Samples (LCS)</b>	
Was a LCS analyzed with each analytical batch? Were LCS recoveries reported correctly on data forms? Were LCS recoveries within laboratory established limits?	Yes/Yes/Yes

<b>8. Interference Check Sample (ICS)</b>	
Were interference check samples (ICS) analyzed at appropriate intervals? Were ICS recoveries within acceptable limits of the true value?	Yes

<b>9. Compound Quantitation and Reporting Limits</b>	
Were quantitation limits (RLs) adjusted to reflect dilutions, cleanup, and other factors? If applicable, were reporting limit check recoveries within acceptable limits? Were there detections below the reporting limit?	Yes/Yes/No



Data Verification and Validation Summary  
Data Validation Stage 2A

**All:** Results detected above the MDL but below the reporting limit are estimated and qualified “J”. For a complete list of “J” qualified samples due to being detected below the reporting limit please see the Qualifier Summary Report and the Reporting Limit Outlier Report in the ADR Output in Appendix G1.

**10. Duplicates**

Were any duplicate pairs analyzed in this SDG? Were RPDs between parent sample and duplicates $\leq$ lab limits or $\leq$ 30% for field duplicates?	Yes/Yes
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Validated by: Michael Wilson 02/05/2016

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Data Verification and Validation Summary  
Data Validation Stage 2A

Project Name: Soil Flushing Treatability Study  
 Project No.: 100-SBO-T35000-2016-M05  
 No. of Samples: 9

SDG/Report No.: 440-135664-1  
 Lab ID: Test America Irvine  
 Matrix: Water

Area Reviewed	Anomalies		Qualification Required	Action Required
	Yes	No	Yes or No	
1. Sample Preservation, Handling, and Transport		X	No	
2. Chain-of-Custody		X	No	
3. Holding Times		X	No	
4. Blanks		X	No	
5. Surrogates/Monitoring Compounds		X	No	
6. Matrix Spike/Matrix Spike Duplicate	X		Yes	The parent sample TT-TP2-M2-20160120 data associated with the matrix spikes and/or matrix spike duplicates were "J" qualified.
7. Laboratory Control Samples		X	No	
8. Interference Check Samples		X	No	
9. Compound Quantitation and Reporting Limits		X	No	
10. Duplicates		X	No	
Verification and Validation Label	Stage_2A_Validation_Manual			
Verification and Validation Label Code	S2AVM			
<p><b>Overall Assessment:</b> Acceptable as qualified.            Field QC samples checked for completeness only.  <b>Usability:</b> Sample results qualified "J", estimated, are useable for limited purposes only. All other results are considered valid and useable for all purposes.</p>				

Sample Information:

Cooler Temperature: 2 coolers at 3.1° C and 4.0° C.

Field Sample Number	Lab Sample ID	Date Collected
TT-TP2-M2-20160120	440-135664-1	01/20/16
TT-TP2-M2-20160120-DUP	440-135664-2	01/20/16
TT-TP2-M1-20160120	440-135664-3	01/20/16
TT-TP1-M1-20160120	440-135664-4	01/20/16
TT-TP1-M2-20160120	440-135664-5	01/20/16
TT-TP2-L1-20160120	440-135664-6	01/20/16
TT-TP2-L2-20160120	440-135664-7	01/20/16
TT-TP1-L1-20160120	440-135664-8	01/20/16
TT-TP1-L2-20160120	440-135664-9	01/20/16

Data Verification and Validation Summary  
Data Validation Stage 2A

The following section is intended to specify areas evaluated and issues encountered. Only applicable methods are listed.

<b>1. Sample Preservation, Handling, and Transport</b>	
Were all samples preserved correctly? Were sample temperatures kept at 4°C (+ or – 2°C)? Were samples received in proper condition?	Yes/Yes/Yes

<b>2. Chain-of-Custody (COC)</b>	
Were samples recorded on the COCs? Were correct analyses performed on the samples?	Yes/Yes

<b>3. Holding Times</b>	
Were samples analyzed within acceptable holding times?	Yes

<b>4. Blanks</b>	
Does data package include a summary of blank results? Was a method blank extracted and/or analyzed for each batch? Were analytes detected in any blanks?	Yes/Yes/No

<b>5. Surrogates/Monitoring Compounds</b>	
Were samples spiked with the correct surrogate compounds? Were surrogate recoveries reported correctly on data forms? Were recoveries within laboratory limits?	Yes/Yes/Yes

<b>6. Matrix Spike/Matrix Spike Duplicate</b>	
Was a MS/MSD pair extracted and/or analyzed with each batch? Were recoveries/RPDs reported correctly on data forms? Were recoveries/RPDs within laboratory established limits?	Yes/Yes/No
<b>Method 314.0:</b> The Perchlorate result from parent sample TT-TP2-M2-20160120 was qualified as estimated and assigned a “J+” qualifier.	
<b>Method 6020:</b> The Chromium result from parent sample TT-TP2-M2-20160120 was qualified as estimated and assigned a “J” qualifier.	
<b>Method 7199:</b> The Hexavalent Chromium result from parent sample TT-TP2-M2-20160120 was qualified as estimated and assigned a “J-” qualifier.	

<b>7. Laboratory Control Samples (LCS)</b>	
Was a LCS analyzed with each analytical batch? Were LCS recoveries reported correctly on data forms? Were LCS recoveries within laboratory established limits?	Yes/Yes/Yes

<b>8. Interference Check Sample (ICS)</b>	
Were interference check samples (ICS) analyzed at appropriate intervals? Were ICS recoveries within acceptable limits of the true value?	Yes

<b>9. Compound Quantitation and Reporting Limits</b>	
Were quantitation limits (RLs) adjusted to reflect dilutions, cleanup, and other factors? If applicable, were reporting limit check recoveries within acceptable limits? Were there detections below the reporting limit?	Yes/Yes/No

Data Verification and Validation Summary  
Data Validation Stage 2A

**All:** Results detected above the MDL but below the reporting limit are estimated and qualified “J”. For a complete list of “J” qualified samples due to being detected below the reporting limit please see the Qualifier Summary Report and the Reporting Limit Outlier Report in the ADR Output in Appendix G1.

**10. Duplicates**

Were any duplicate pairs analyzed in this SDG? Were RPDs between parent sample and duplicates $\leq$ lab limits or $\leq$ 30% for field duplicates?	Yes/Yes
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Validated by: Michael Wilson 02/05/2016

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Data Verification and Validation Summary  
Data Validation Stage 2A

Project Name: Soil Flushing Treatability Study  
 Project No.: 100-SBO-T35000-2016-M05  
 No. of Samples: 6

SDG/Report No.: 440-137164-1  
 Lab ID: Test America Irvine  
 Matrix: Water

Area Reviewed	Anomalies		Qualification Required	Action Required
	Yes	No	Yes or No	
1. Sample Preservation, Handling, and Transport		X	No	
2. Chain-of-Custody		X	No	
3. Holding Times		X	No	
4. Blanks		X	No	
5. Surrogates/Monitoring Compounds		X	No	
6. Matrix Spike/Matrix Spike Duplicate	X		Yes	The parent samples TT-TP2-M1-20160203 and TT-TP1-M1-20160203 data associated with the matrix spikes and/or matrix spike duplicates were "J" qualified.
7. Laboratory Control Samples		X	No	
8. Interference Check Samples		X	No	
9. Compound Quantitation and Reporting Limits		X	No	
10. Duplicates		X	No	
Verification and Validation Label	Stage_2A_Validation_Manual			
Verification and Validation Label Code	S2AVM			
<b>Overall Assessment:</b> Acceptable as qualified. Field QC samples checked for completeness only. <b>Usability:</b> Sample results qualified "J", estimated, are useable for limited purposes only. All other results are considered valid and useable for all purposes.				

Sample Information:  
 Cooler Temperature: 2 coolers at 3.4° C and 3.9° C.

Field Sample Number	Lab Sample ID	Date Collected
TT-TP1-M1-20160203	440-137164-1	02/03/16
TT-TP1-M2-20160203	440-137164-2	02/03/16
TT-TP1-M3-20160203	440-137164-3	02/03/16
TT-TP2-M2-20160203	440-137164-4	02/03/16
TT-TP2-M1-20160203	440-137164-5	02/03/16
TT-TP3-M1-20160203	440-137164-6	02/03/16

Data Verification and Validation Summary  
Data Validation Stage 2A

The following section is intended to specify areas evaluated and issues encountered. Only applicable methods are listed.

<b>1. Sample Preservation, Handling, and Transport</b>	
Were all samples preserved correctly? Were sample temperatures kept at 4°C (+ or – 2°C)? Were samples received in proper condition?	Yes/Yes/Yes

<b>2. Chain-of-Custody (COC)</b>	
Were samples recorded on the COCs? Were correct analyses performed on the samples?	Yes/Yes

<b>3. Holding Times</b>	
Were samples analyzed within acceptable holding times?	Yes

<b>4. Blanks</b>	
Does data package include a summary of blank results? Was a method blank extracted and/or analyzed for each batch? Were analytes detected in any blanks?	Yes/Yes/No

<b>5. Surrogates/Monitoring Compounds</b>	
Were samples spiked with the correct surrogate compounds? Were surrogate recoveries reported correctly on data forms? Were recoveries within laboratory limits?	Yes/Yes/Yes

<b>6. Matrix Spike/Matrix Spike Duplicate</b>	
Was a MS/MSD pair extracted and/or analyzed with each batch? Were recoveries/RPDs reported correctly on data forms? Were recoveries/RPDs within laboratory established limits?	Yes/Yes/No
<b>Method 7199:</b> The Hexavalent Chromium result from parent sample TT-TP2-M1-20160203 was qualified as estimated and assigned a “J-” qualifier.	
<b>Method 6020:</b> The Chromium result from parent sample TT-TP1-M1-20160203 was qualified as estimated and assigned a “J” qualifier.	

<b>7. Laboratory Control Samples (LCS)</b>	
Was a LCS analyzed with each analytical batch? Were LCS recoveries reported correctly on data forms? Were LCS recoveries within laboratory established limits?	Yes/Yes/Yes

<b>8. Interference Check Sample (ICS)</b>	
Were interference check samples (ICS) analyzed at appropriate intervals? Were ICS recoveries within acceptable limits of the true value?	Yes

<b>9. Compound Quantitation and Reporting Limits</b>	
Were quantitation limits (RLs) adjusted to reflect dilutions, cleanup, and other factors? If applicable, were reporting limit check recoveries within acceptable limits? Were there detections below the reporting limit?	Yes/Yes/No

Data Verification and Validation Summary  
Data Validation Stage 2A

**All:** Results detected above the MDL but below the reporting limit are estimated and qualified “J”. Please see Qualifier Summary Report and the Reporting Limit Outlier Report in the ADR Output Appendix G1 for a complete list of “J” qualified samples due to being detected below the reporting limit.

**10. Duplicates**

Were any duplicate pairs analyzed in this SDG? Were RPDs between parent sample and duplicates $\leq$ lab limits or $\leq$ 30% for field duplicates?	No/NA
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Validated by: Michael Wilson 02/29/2016

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Data Verification and Validation Summary  
Data Validation Stage 2A

Project Name: Soil Flushing Treatability Study  
 Project No.: 100-SBO-T35000-2016-M05  
 No. of Samples: 13

SDG/Report No.: 440-137358-1  
 Lab ID: Test America Irvine  
 Matrix: Water

Area Reviewed	Anomalies		Qualification Required	Action Required
	Yes	No	Yes or No	
1. Sample Preservation, Handling, and Transport		X	No	
2. Chain-of-Custody		X	No	
3. Holding Times		X	No	
4. Blanks		X	No	
5. Surrogates/Monitoring Compounds		X	No	
6. Matrix Spike/Matrix Spike Duplicate	X		Yes	The parent sample TT-TP4-M3-20160204 data associated with the matrix spikes and/or matrix spike duplicates were "J" qualified.
7. Laboratory Control Samples		X	No	
8. Interference Check Samples		X	No	
9. Compound Quantitation and Reporting Limits	X		Yes	The sample analyte was quantified below the reporting limit. Therefore, it was "J" qualified.
10. Duplicates		X	No	

Verification and Validation Label	Stage_2A_Validation_Manual
Verification and Validation Label Code	S2AVM
<p><b>Overall Assessment:</b> Acceptable as qualified.          Field QC samples checked for completeness only.  <b>Usability:</b> Sample results qualified "J", estimated, are useable for limited purposes only. All other results are considered valid and useable for all purposes.</p>	

Sample Information:

Cooler Temperature: 2 coolers at 2.5° C and 4.0° C.

Field Sample Number	Lab Sample ID	Date Collected
TT-TP3-M2-20160204	440-137358-1	02/04/16
TT-TP4-M3-20160204	440-137358-2	02/04/16
TT-TP4-M2-20160204	440-137358-3	02/04/16
TT-TP4-M1-20160204	440-137358-4	02/04/16
TT-TP4-M3-20160204-DUP	440-137358-5	02/04/16
TT-TP4-L1-20160204	440-137358-6	02/04/16
TT-TP4-L2-20160204	440-137358-7	02/04/16
TT-TP3-L1-20160204	440-137358-8	02/04/16
TT-TP3-L2-20160204	440-137358-9	02/04/16
TT-TP2-L1-20160204	440-137358-10	02/04/16
TT-TP2-L2-20160204	440-137358-11	02/04/16



Data Verification and Validation Summary  
Data Validation Stage 2A

<b>Field Sample Number</b>	<b>Lab Sample ID</b>	<b>Date Collected</b>
TT-TP1-L1-20160204	440-137358-12	02/04/16
TT-TP1-L2-20160204	440-137358-13	02/04/16

Data Verification and Validation Summary  
Data Validation Stage 2A

The following section is intended to specify areas evaluated and issues encountered. Only applicable methods are listed.

<b>1. Sample Preservation, Handling, and Transport</b>	
Were all samples preserved correctly? Were sample temperatures kept at 4°C (+ or – 2°C)? Were samples received in proper condition?	Yes/Yes/Yes

<b>2. Chain-of-Custody (COC)</b>	
Were samples recorded on the COCs? Were correct analyses performed on the samples?	Yes/Yes

<b>3. Holding Times</b>	
Were samples analyzed within acceptable holding times?	Yes

<b>4. Blanks</b>	
Does data package include a summary of blank results? Was a method blank extracted and/or analyzed for each batch? Were analytes detected in any blanks?	Yes/Yes/No

<b>5. Surrogates/Monitoring Compounds</b>	
Were samples spiked with the correct surrogate compounds? Were surrogate recoveries reported correctly on data forms? Were recoveries within laboratory limits?	Yes/Yes/Yes

<b>6. Matrix Spike/Matrix Spike Duplicate</b>	
Was a MS/MSD pair extracted and/or analyzed with each batch? Were recoveries/RPDs reported correctly on data forms? Were recoveries/RPDs within laboratory established limits?	Yes/Yes/Yes
<b>Method 314.0:</b> The Perchlorate result from parent sample TT-TP4-M3-20160204 was qualified as estimated and assigned a “J-” qualifier.	
<b>Method 6020:</b> The Chromium result from parent sample TT-TP4-M3-20160204 was qualified as estimated and assigned a “J+” qualifier.	
<b>Method 7199:</b> The Hexavalent Chromium result from parent sample TT-TP4-M3-20160204 was qualified as estimated and assigned a “J-” qualifier.	

<b>7. Laboratory Control Samples (LCS)</b>	
Was a LCS analyzed with each analytical batch? Were LCS recoveries reported correctly on data forms? Were LCS recoveries within laboratory established limits?	Yes/Yes/Yes

<b>8. Interference Check Sample (ICS)</b>	
Were interference check samples (ICS) analyzed at appropriate intervals? Were ICS recoveries within acceptable limits of the true value?	Yes

<b>9. Compound Quantitation and Reporting Limits</b>	
Were quantitation limits (RLs) adjusted to reflect dilutions, cleanup, and other factors? If applicable, were reporting limit check recoveries within acceptable limits? Were there detections below the reporting limit?	Yes/Yes/Yes

Data Verification and Validation Summary  
Data Validation Stage 2A

**All:** Results detected above the MDL but below the reporting limit are estimated and qualified "J". Please see Qualifier Summary Report and the Reporting Limit Outlier Report in the ADR Output Appendix G1 for a complete list of "J" qualified samples due to being detected below the reporting limit.

**10. Duplicates**

Were any duplicate pairs analyzed in this SDG? Were RPDs between parent sample and duplicates $\leq$ lab limits or $\leq$ 30% for field duplicates?	Yes/Yes
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Validated by: Michael Wilson 02/29/2016

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Data Verification and Validation Summary  
Data Validation Stage 2A

Project Name: Soil Flushing Treatability Study  
 Project No.: 100-SBO-T35000-2016-M05  
 No. of Samples: 6

SDG/Report No.: 440-137910-1  
 Lab ID: Test America Irvine  
 Matrix: Water

Area Reviewed	Anomalies		Qualification Required	Action Required
	Yes	No	Yes or No	
1. Sample Preservation, Handling, and Transport		X	No	
2. Chain-of-Custody		X	No	
3. Holding Times		X	No	
4. Blanks	X		Yes	The analyte was found in the method blank. Therefore, detections in samples TT-TP1-M1-20160210, TT-TP1-M2-20160210, TT-TP3-M2-20160210, and TT-TP2-M2-20160210 of that analyte were "J+" qualified.
5. Surrogates/Monitoring Compounds		X	No	
6. Matrix Spike/Matrix Spike Duplicate		X	No	
7. Laboratory Control Samples		X	No	
8. Interference Check Samples		X	No	
9. Compound Quantitation and Reporting Limits	X		Yes	All sample results below the reporting limit are "J" qualified.
10. Duplicates		X	No	
Verification and Validation Label	Stage_2A_Validation_Manual			
Verification and Validation Label Code	S2AVM			
<p><b>Overall Assessment:</b> Acceptable as qualified.            Field QC samples checked for completeness only.  <b>Usability:</b> Sample results qualified "J", estimated, are useable for limited purposes only. All other results are considered valid and useable for all purposes.</p>				

Sample Information:  
 Cooler Temperature: Cooler at receipt was 1.8° C

Field Sample Number	Lab Sample ID	Date Collected
TT-TP1-M2-20160210	440-137910-1	02/10/16
TT-TP1-M1-20160210	440-137910-2	02/10/16
TT-TP1-M3-20160210	440-137910-3	02/10/16
TT-TP2-M1-20160210	440-137910-4	02/10/16
TT-TP2-M2-20160210	440-137910-5	02/10/16
TT-TP3-M2-20160210	440-137910-6	02/10/16

Data Verification and Validation Summary  
Data Validation Stage 2A

The following section is intended to specify areas evaluated and issues encountered. Only applicable methods are listed.

<b>1. Sample Preservation, Handling, and Transport</b>	
Were all samples preserved correctly? Were sample temperatures kept at 4°C (+ or – 2°C)? Were samples received in proper condition?	Yes/Yes/Yes

<b>2. Chain-of-Custody (COC)</b>	
Were samples recorded on the COCs? Were correct analyses performed on the samples?	Yes/Yes

<b>3. Holding Times</b>	
Were samples analyzed within acceptable holding times?	Yes

<b>4. Blanks</b>	
Does data package include a summary of blank results? Was a method blank extracted and/or analyzed for each batch? Were analytes detected in any blanks?	Yes/Yes/Yes
<b>Method 6020:</b> Copper was detected in the lab method blank. Therefore, the detections of copper in samples TT-TP1-M1-20160210, TT-TP1-M2-20160210, TT-TP3-M2-20160210, and TT-TP2-M2-20160210 were designated as estimated greater than the quantified result and assigned “J+” qualifiers.	

<b>5. Surrogates/Monitoring Compounds</b>	
Were samples spiked with the correct surrogate compounds? Were surrogate recoveries reported correctly on data forms? Were recoveries within laboratory limits?	Yes/Yes/Yes

<b>6. Matrix Spike/Matrix Spike Duplicate</b>	
Was a MS/MSD pair extracted and/or analyzed with each batch? Were recoveries/RPDs reported correctly on data forms? Were recoveries/RPDs within laboratory established limits?	Yes/Yes/Yes

<b>7. Laboratory Control Samples (LCS)</b>	
Was a LCS analyzed with each analytical batch? Were LCS recoveries reported correctly on data forms? Were LCS recoveries within laboratory established limits?	Yes/Yes/Yes

<b>8. Interference Check Sample (ICS)</b>	
Were interference check samples (ICS) analyzed at appropriate intervals? Were ICS recoveries within acceptable limits of the true value?	Yes

<b>9. Compound Quantitation and Reporting Limits</b>	
Were quantitation limits (RLs) adjusted to reflect dilutions, cleanup, and other factors? If applicable, were reporting limit check recoveries within acceptable limits? Were there detections below the reporting limit?	Yes/Yes/Yes

Data Verification and Validation Summary  
Data Validation Stage 2A

**All:** Results detected above the MDL but below the reporting limit are estimated and qualified “J”. Please see Qualifier Summary Report and the Reporting Limit Outlier Report in the ADR Output Appendix G1 for a complete list of “J” qualified samples due to being detected below the reporting limit.

**10. Duplicates**

Were any duplicate pairs analyzed in this SDG? Were RPDs between parent sample and duplicates $\leq$ lab limits or $\leq$ 30% for field duplicates?	No/NA
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Validated by: Michael Wilson 04/11/2016

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Data Verification and Validation Summary  
Data Validation Stage 2A

Project Name: Soil Flushing Treatability Study  
 Project No.: 100-SBO-T35000-2016-M05  
 No. of Samples: 13

SDG/Report No.: 440-138059-1  
 Lab ID: Test America Irvine  
 Matrix: Water

Area Reviewed	Anomalies		Qualification Required	Action Required
	Yes	No	Yes or No	
1. Sample Preservation, Handling, and Transport		X	No	
2. Chain-of-Custody		X	No	
3. Holding Times	X		Yes	A holding time violation occurred for the majority of the samples. Therefore, the samples data associated with a holding time violation were "J" qualified.
4. Blanks	X		Yes	The analyte was found in the method blank. Therefore, detections in samples TT-TP4-M2-20160211 and TT-TP3-M1-20160211 of that analyte were "J+" qualified.
5. Surrogates/Monitoring Compounds		X	No	
6. Matrix Spike/Matrix Spike Duplicate	X		Yes	The matrix spikes and/or matrix spike duplicate was outside the control limits for parent sample TT-TP4-M3-20160211. Therefore, the data was "J" qualified.
7. Laboratory Control Samples		X	No	
8. Interference Check Samples		X	No	
9. Compound Quantitation and Reporting Limits	X		Yes	All sample results below the reporting limit are "J" qualified.
10. Duplicates	X		Yes	Parent sample TT-TP4-M2-20160211 was qualified as estimated and assigned a J qualifier.
Verification and Validation Label	Stage_2A_Validation_Manual			
Verification and Validation Label Code	S2AVM			
<p><b>Overall Assessment:</b> Acceptable as qualified.            Field QC samples checked for completeness only.  <b>Usability:</b> Sample results qualified "J", estimated, are useable for limited purposes only. All other results are considered valid and useable for all purposes.</p>				

Sample Information:

Cooler Temperature: Three coolers at receipt time were 0.8° C, 1.2° C and 1.4° C

Field Sample Number	Lab Sample ID	Date Collected
TT-TP3-M1-20160211	440-138059-1	02/11/16
TT-TP4-M1-20160211	440-138059-2	02/11/16
TT-TP4-L1-20160211	440-138059-3	02/11/16
TT-TP4-L2-20160211	440-138059-4	02/11/16
TT-TP3-L1-20160211	440-138059-5	02/11/16

Data Verification and Validation Summary  
Data Validation Stage 2A

<b>Field Sample Number</b>	<b>Lab Sample ID</b>	<b>Date Collected</b>
TT-TP3-L2-20160211	440-138059-6	02/11/16
TT-TP2-L1-20160211	440-138059-7	02/11/16
TT-TP2-L2-20160211	440-138059-8	02/11/16
TT-TP1-L1-20160211	440-138059-9	02/11/16
TT-TP1-L2-20160211	440-138059-10	02/11/16
TT-TP4-M2-20160211	440-138059-11	02/11/16
TT-TP4-M2-20160211-DUP	440-138059-12	02/11/16
TT-TP4-M3-20160211	440-138059-13	02/11/16



Data Verification and Validation Summary  
Data Validation Stage 2A

The following section is intended to specify areas evaluated and issues encountered. Only applicable methods are listed.

<b>1. Sample Preservation, Handling, and Transport</b>	
Were all samples preserved correctly? Were sample temperatures kept at 4°C (+ or – 2°C)? Were samples received in proper condition?	Yes/Yes/Yes

<b>2. Chain-of-Custody (COC)</b>	
Were samples recorded on the COCs? Were correct analyses performed on the samples?	Yes/Yes

<b>3. Holding Times</b>	
Were samples analyzed within acceptable holding times?	No
<b>Method 218.6 SUB:</b> Samples TT-TP3-M1-20160211, TT-TP4-M1-20160211, TT-TP4-L1-20160211, TT-TP4-L2-20160211, TT-TP3-L1-20160211, TT-TP2-L1-20160211, TT-TP2-L2-20160211, TT-TP1-L2-20160211, TT-TP4-M2-20160211, and TT-TP4-M3-20160211 were analyzed pass the acceptable holding time for Hexavalent Chromium. Therefore, the samples results were qualified as estimated and assigned a “J-” qualifier.	

<b>4. Blanks</b>	
Does data package include a summary of blank results? Was a method blank extracted and/or analyzed for each batch? Were analytes detected in any blanks?	Yes/Yes/Yes
<b>Method 6020:</b> Copper was detected in the lab method blank. Therefore, the detections of copper in samples TT-TP4-M2-20160211 and TT-TP3-M1-20160211 were designated as estimated greater than the quantified result and assigned a “J+” qualifier.	

<b>5. Surrogates/Monitoring Compounds</b>	
Were samples spiked with the correct surrogate compounds? Were surrogate recoveries reported correctly on data forms? Were recoveries within laboratory limits?	Yes/Yes/Yes

<b>6. Matrix Spike/Matrix Spike Duplicate</b>	
Was a MS/MSD pair extracted and/or analyzed with each batch? Were recoveries/RPDs reported correctly on data forms? Were recoveries/RPDs within laboratory established limits?	Yes/Yes/No
<b>Method 300.1B:</b> The Chlorate result from parent sample TT-TP4-M3-20160211 was qualified as estimated and assigned a “J-” qualifier.	
<b>Method 314.0:</b> The Perchlorate result from parent sample TT-TP4-M3-20160211 was qualified as estimated and assigned a “J-” qualifier.	
<b>Method 6010B:</b> The Calcium, Magnesium, and Sodium results from parent sample TT-TP4-M3-20160211 were qualified as estimated and assigned “J+” qualifiers.	
<b>Method 6020:</b> The Chromium result from parent sample TT-TP4-M3-20160211 was qualified as estimated and assigned a “J+” qualifier.	

<b>7. Laboratory Control Samples (LCS)</b>	
Was a LCS analyzed with each analytical batch? Were LCS recoveries reported correctly on data forms? Were LCS recoveries within laboratory established limits?	Yes/Yes/Yes

Data Verification and Validation Summary  
Data Validation Stage 2A

<b>8. Interference Check Sample (ICS)</b>	
Were interference check samples (ICS) analyzed at appropriate intervals? Were ICS recoveries within acceptable limits of the true value?	Yes

<b>9. Compound Quantitation and Reporting Limits</b>	
Were quantitation limits (RLs) adjusted to reflect dilutions, cleanup, and other factors? If applicable, were reporting limit check recoveries within acceptable limits? Were there detections below the reporting limit?	Yes/Yes/Yes
<b>All:</b> Results detected above the MDL but below the reporting limit are estimated and qualified "J". Please see Qualifier Summary Report and the Reporting Limit Outlier Report in the ADR Output Appendix G1 for a complete list of "J" qualified samples due to being detected below the reporting limit.	

<b>10. Duplicates</b>	
Were any duplicate pairs analyzed in this SDG? Were RPDs between parent sample and duplicates $\leq$ lab limits or $\leq$ 30% for field duplicates?	Yes/No
<b>Method 6020:</b> Parent sample TT-TP4-M2-20160211 was qualified as estimated for Barium (J)	
<b>Method 2320B:</b> Parent sample TT-TP4-M2-20160211 was qualified as estimated for Alkalinity as CaCO <sub>3</sub> (J)	

Validated by: Michael Wilson 04/11/2016

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Data Verification and Validation Summary  
Data Validation Stage 2A

Project Name: Soil Flushing Treatability Study  
 Project No.: 100-SBO-T35000-2016-M05  
 No. of Samples: 5

SDG/Report No.: 440-138539-1  
 Lab ID: Test America Irvine  
 Matrix: Water

Area Reviewed	Anomalies		Qualification Required	Action Required
	Yes	No	Yes or No	
1. Sample Preservation, Handling, and Transport		X	No	
2. Chain-of-Custody		X	No	
3. Holding Times		X	No	
4. Blanks		X	No	
5. Surrogates/Monitoring Compounds		X	No	
6. Matrix Spike/Matrix Spike Duplicate	X		Yes	The matrix spikes and/or matrix spike duplicate was outside the control limits for parent sample TT-TP1-M1-20160217. Therefore, the data was "J" qualified.
7. Laboratory Control Samples		X	No	
8. Interference Check Samples		X	No	
9. Compound Quantitation and Reporting Limits		X	No	
10. Duplicates		X	No	
Verification and Validation Label	Stage_2A_Validation_Manual			
Verification and Validation Label Code	S2AVM			
<b>Overall Assessment:</b> Acceptable as qualified. Field QC samples checked for completeness only. <b>Usability:</b> Sample results qualified "J", estimated, are useable for limited purposes only. All other results are considered valid and useable for all purposes.				

Sample Information:  
 Cooler Temperature: Cooler at receipt was 3.5° C

Field Sample Number	Lab Sample ID	Date Collected
TT-TP1-M1-20160217	440-138539-1	02/17/16
TT-TP1-M2-20160217	440-138539-2	02/17/16
TT-TP1-M3-20160217	440-138539-3	02/17/16
TT-TP2-M1-20160217	440-138539-4	02/17/16
TT-TP2-M2-20160217	440-138539-5	02/17/16

Data Verification and Validation Summary  
Data Validation Stage 2A

The following section is intended to specify areas evaluated and issues encountered. Only applicable methods are listed.

<b>1. Sample Preservation, Handling, and Transport</b>	
Were all samples preserved correctly? Were sample temperatures kept at 4°C (+ or – 2°C)? Were samples received in proper condition?	Yes/Yes/Yes

<b>2. Chain-of-Custody (COC)</b>	
Were samples recorded on the COCs? Were correct analyses performed on the samples?	Yes/Yes

<b>3. Holding Times</b>	
Were samples analyzed within acceptable holding times?	Yes

<b>4. Blanks</b>	
Does data package include a summary of blank results? Was a method blank extracted and/or analyzed for each batch? Were analytes detected in any blanks?	Yes/Yes/No

<b>5. Surrogates/Monitoring Compounds</b>	
Were samples spiked with the correct surrogate compounds? Were surrogate recoveries reported correctly on data forms? Were recoveries within laboratory limits?	Yes/Yes/Yes

<b>6. Matrix Spike/Matrix Spike Duplicate</b>	
Was a MS/MSD pair extracted and/or analyzed with each batch? Were recoveries/RPDs reported correctly on data forms? Were recoveries/RPDs within laboratory established limits?	Yes/Yes/No
<b>Method 6020:</b> The Chromium results from parent sample TT-TP1-M1-20160217 were qualified as estimated and assigned a “-J” qualifier.	

<b>7. Laboratory Control Samples (LCS)</b>	
Was a LCS analyzed with each analytical batch? Were LCS recoveries reported correctly on data forms? Were LCS recoveries within laboratory established limits?	Yes/Yes/Yes

<b>8. Interference Check Sample (ICS)</b>	
Were interference check samples (ICS) analyzed at appropriate intervals? Were ICS recoveries within acceptable limits of the true value?	Yes

<b>9. Compound Quantitation and Reporting Limits</b>	
Were quantitation limits (RLs) adjusted to reflect dilutions, cleanup, and other factors? If applicable, were reporting limit check recoveries within acceptable limits? Were there detections below the reporting limit?	Yes/Yes/No

Data Verification and Validation Summary  
Data Validation Stage 2A

**All:** Results detected above the MDL but below the reporting limit are estimated and qualified “J”. Please see the Qualifier Summary Report and the Reporting Limit Outlier Report in the ADR Output Appendix G1 for a complete list of “J” qualified samples due to being detected below the reporting limit.

**10. Duplicates**

Were any duplicate pairs analyzed in this SDG? Were RPDs between parent sample and duplicates $\leq$ lab limits or $\leq$ 30% for field duplicates?	No/NA
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Validated by: Michael Wilson 04/11/2016

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Data Verification and Validation Summary  
Data Validation Stage 2A

Project Name: Soil Flushing Treatability Study  
 Project No.: 100-SBO-T35000-2016-M05  
 No. of Samples: 14

SDG/Report No.: 440-138657-1  
 Lab ID: Test America Irvine  
 Matrix: Water

Area Reviewed	Anomalies		Qualification Required	Action Required
	Yes	No	Yes or No	
1. Sample Preservation, Handling, and Transport		X	No	
2. Chain-of-Custody		X	No	
3. Holding Times	X		Yes	13 of 14 samples exceeded the holding time. Therefore, the samples data associated with a holding time violation were "J" qualified.
4. Blanks		X	No	
5. Surrogates/Monitoring Compounds		X	No	
6. Matrix Spike/Matrix Spike Duplicate	X		Yes	The matrix spikes and/or matrix spike duplicate was outside the control limits for parent sample TT-TP4-M3-20160218. Therefore, the data was "J" qualified.
7. Laboratory Control Samples		X	No	
8. Interference Check Samples		X	No	
9. Compound Quantitation and Reporting Limits	X		Yes	All sample results below the reporting limit are "J" qualified.
10. Duplicates		X	No	
Verification and Validation Label	Stage_2A_Validation_Manual			
Verification and Validation Label Code	S2AVM			
<b>Overall Assessment:</b> Acceptable as qualified. Field QC samples checked for completeness only. <b>Usability:</b> Sample results qualified "J", estimated, are useable for limited purposes only. All other results are considered valid and useable for all purposes.				

Sample Information:

Cooler Temperature: Two coolers at receipt time were 2.5° C and 3.1° C

Field Sample Number	Lab Sample ID	Date Collected
TT-TP3-M1-20160218	440-138657-1	02/18/16
TT-TP3-M2-20160218	440-138657-2	02/18/16
TT-TP4-M1-20160218	440-138657-3	02/18/16
TT-TP4-M2-20160218	440-138657-4	02/18/16
TT-TP4-M3-20160218	440-138657-5	02/18/16
TT-TP4-M3-20160218-DUP	440-138657-6	02/18/16
TT-TP4-L1-20160218	440-138657-7	02/18/16
TT-TP4-L2-20160218	440-138657-8	02/18/16
TT-TP3-L1-20160218	440-138657-9	02/18/16
TT-TP3-L2-20160218	440-138657-10	02/18/16

Data Verification and Validation Summary  
Data Validation Stage 2A

<b>Field Sample Number</b>	<b>Lab Sample ID</b>	<b>Date Collected</b>
TT-TP2-L1-20160218	440-138657-11	02/18/16
TT-TP2-L2-20160218	440-138657-12	02/18/16
TT-TP1-L1-20160218	440-138657-13	02/18/16
TT-TP1-L2-20160218	440-138657-14	02/18/16

Data Verification and Validation Summary  
Data Validation Stage 2A

The following section is intended to specify areas evaluated and issues encountered. Only applicable methods are listed.

<b>1. Sample Preservation, Handling, and Transport</b>	
Were all samples preserved correctly? Were sample temperatures kept at 4°C (+ or – 2°C)? Were samples received in proper condition?	Yes/Yes/Yes

<b>2. Chain-of-Custody (COC)</b>	
Were samples recorded on the COCs? Were correct analyses performed on the samples?	Yes/Yes

<b>3. Holding Times</b>	
Were samples analyzed within acceptable holding times?	No
<b>Method 7199:</b> Sample TT-TP3-L2-20160218 did not exceed the holding time. However, all other samples were analyzed pass the acceptable holding time for Hexavalent Chromium. Therefore, the samples results were qualified as estimated and assigned “J-” qualifiers.	

<b>4. Blanks</b>	
Does data package include a summary of blank results? Was a method blank extracted and/or analyzed for each batch? Were analytes detected in any blanks?	Yes/Yes/No

<b>5. Surrogates/Monitoring Compounds</b>	
Were samples spiked with the correct surrogate compounds? Were surrogate recoveries reported correctly on data forms? Were recoveries within laboratory limits?	Yes/Yes/Yes

<b>6. Matrix Spike/Matrix Spike Duplicate</b>	
Was a MS/MSD pair extracted and/or analyzed with each batch? Were recoveries/RPDs reported correctly on data forms? Were recoveries/RPDs within laboratory established limits?	Yes/Yes/No
<b>Method 314.0:</b> The Perchlorate result from parent sample TT-TP4-M3-20160218 was qualified as estimated and assigned a “J” qualifier.	
<b>Method 6020:</b> The Chromium result from parent sample TT-TP4-M3-20160218 was qualified as estimated and assigned a “J” qualifier.	

<b>7. Laboratory Control Samples (LCS)</b>	
Was a LCS analyzed with each analytical batch? Were LCS recoveries reported correctly on data forms? Were LCS recoveries within laboratory established limits?	Yes/Yes/Yes

<b>8. Interference Check Sample (ICS)</b>	
Were interference check samples (ICS) analyzed at appropriate intervals? Were ICS recoveries within acceptable limits of the true value?	Yes



Data Verification and Validation Summary  
Data Validation Stage 2A

<b>9. Compound Quantitation and Reporting Limits</b>	
Were quantitation limits (RLs) adjusted to reflect dilutions, cleanup, and other factors? If applicable, were reporting limit check recoveries within acceptable limits? Were there detections below the reporting limit?	Yes/Yes/Yes
<b>All:</b> Results detected above the MDL but below the reporting limit are estimated and qualified "J". Please see the Qualifier Summary Report and the Reporting Limit Outlier Report in the ADR Output Appendix G1 for a complete list of "J" qualified samples due to being detected below the reporting limit.	

<b>10. Duplicates</b>	
Were any duplicate pairs analyzed in this SDG? Were RPDs between parent sample and duplicates $\leq$ lab limits or $\leq$ 30% for field duplicates?	Yes/Yes

Validated by: Michael Wilson 04/11/2016

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Data Verification and Validation Summary  
Data Validation Stage 2A

Project Name: Soil Flushing Treatability Study  
 Project No.: 100-SBO-T35000-2016-M05  
 No. of Samples: 5

SDG/Report No.: 440-139185-1  
 Lab ID: Test America Irvine  
 Matrix: Water

Area Reviewed	Anomalies		Qualification Required	Action Required
	Yes	No	Yes or No	
1. Sample Preservation, Handling, and Transport		X	No	
2. Chain-of-Custody		X	No	
3. Holding Times		X	No	
4. Blanks		X	No	
5. Surrogates/Monitoring Compounds		X	No	
6. Matrix Spike/Matrix Spike Duplicate		X	No	
7. Laboratory Control Samples		X	No	
8. Interference Check Samples		X	No	
9. Compound Quantitation and Reporting Limits		X	No	
10. Duplicates		X	No	
Verification and Validation Label	Stage_2A_Validation_Manual			
Verification and Validation Label Code	S2AVM			
<b>Overall Assessment:</b> Acceptable as qualified. Field QC samples checked for completeness only. <b>Usability:</b> Sample results qualified "J", estimated, are useable for limited purposes only. All other results are considered valid and useable for all purposes.				

Sample Information:

Cooler Temperature:

Field Sample Number	Lab Sample ID	Date Collected
TT-TP1-M1	440-139185-1	02/24/16
TT-TP1-M2	440-139185-2	02/24/16
TT-TP1-M3	440-139185-3	02/24/16
TT-TP2-M2	440-139185-4	02/24/16
TT-TP2-M1	440-139185-5	02/24/16

Data Verification and Validation Summary  
Data Validation Stage 2A

The following section is intended to specify areas evaluated and issues encountered. Only applicable methods are listed.

<b>1. Sample Preservation, Handling, and Transport</b>	
Were all samples preserved correctly? Were sample temperatures kept at 4°C (+ or – 2°C)? Were samples received in proper condition?	Yes/Yes/Yes

<b>2. Chain-of-Custody (COC)</b>	
Were samples recorded on the COCs? Were correct analyses performed on the samples?	Yes/Yes

<b>3. Holding Times</b>	
Were samples analyzed within acceptable holding times?	Yes

<b>4. Blanks</b>	
Does data package include a summary of blank results? Was a method blank extracted and/or analyzed for each batch? Were analytes detected in any blanks?	Yes/Yes/No

<b>5. Surrogates/Monitoring Compounds</b>	
Were samples spiked with the correct surrogate compounds? Were surrogate recoveries reported correctly on data forms? Were recoveries within laboratory limits?	Yes/Yes/Yes

<b>6. Matrix Spike/Matrix Spike Duplicate</b>	
Was a MS/MSD pair extracted and/or analyzed with each batch? Were recoveries/RPDs reported correctly on data forms? Were recoveries/RPDs within laboratory established limits?	Yes/Yes/Yes

<b>7. Laboratory Control Samples (LCS)</b>	
Was a LCS analyzed with each analytical batch? Were LCS recoveries reported correctly on data forms? Were LCS recoveries within laboratory established limits?	Yes/Yes/Yes

<b>8. Interference Check Sample (ICS)</b>	
Were interference check samples (ICS) analyzed at appropriate intervals? Were ICS recoveries within acceptable limits of the true value?	Yes

<b>9. Compound Quantitation and Reporting Limits</b>	
Were quantitation limits (RLs) adjusted to reflect dilutions, cleanup, and other factors? If applicable, were reporting limit check recoveries within acceptable limits? Were there detections below the reporting limit?	Yes/Yes/No
<b>All:</b> Results detected above the MDL but below the reporting limit are estimated and qualified “J”. Please see the Qualifier Summary Report and the Reporting Limit Outlier Report in the ADR Output Appendix G1 for a complete list of “J” qualified samples due to being detected below the reporting limit.	

Data Verification and Validation Summary  
Data Validation Stage 2A

<b>10. Duplicates</b>	
Were any duplicate pairs analyzed in this SDG? Were RPDs between parent sample and duplicates $\leq$ lab limits or $\leq$ 30% for field duplicates?	No/NA

Validated by: Michael Wilson 04/11/2016

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Data Verification and Validation Summary  
Data Validation Stage 2A

Project Name: Soil Flushing Treatability Study  
 Project No.: 100-SBO-T35000-2016-M05  
 No. of Samples: 14

SDG/Report No.: 440-139326-1  
 Lab ID: Test America Irvine  
 Matrix: Water

Area Reviewed	Anomalies		Qualification Required	Action Required
	Yes	No	Yes or No	
1. Sample Preservation, Handling, and Transport		X	No	
2. Chain-of-Custody		X	No	
3. Holding Times		X	No	
4. Blanks		X	No	
5. Surrogates/Monitoring Compounds		X	No	
6. Matrix Spike/Matrix Spike Duplicate	X		Yes	The matrix spikes and/or matrix spike duplicate was outside the control limits for parent sample TT-TP4-M3-20160225. Therefore, the data was "J" qualified.
7. Laboratory Control Samples		X	No	
8. Interference Check Samples		X	No	
9. Compound Quantitation and Reporting Limits	X		Yes	All sample results below the reporting limit are "J" qualified.
10. Duplicates		X	No	
Verification and Validation Label	Stage_2A_Validation_Manual			
Verification and Validation Label Code	S2AVM			
<b>Overall Assessment:</b> Acceptable as qualified. Field QC samples checked for completeness only. <b>Usability:</b> Sample results qualified "J", estimated, are useable for limited purposes only. All other results are considered valid and useable for all purposes.				

Sample Information:

Cooler Temperature: Three coolers at receipt time were 2.7° C, 4.2° C and 5.2° C.

Field Sample Number	Lab Sample ID	Date Collected
TT-TP3-M1-20160225	440-139326-1	02/25/16
TT-TP3-M2-20160225	440-139326-2	02/25/16
TT-TP4-M1-20160225	440-139326-3	02/25/16
TT-TP4-M2-20160225	440-139326-4	02/25/16
TT-TP4-M3-20160225	440-139326-5	02/25/16
TT-TP4-M3-20160225-DUP	440-139326-6	02/25/16
TT-TP4-L1-20160225	440-139326-7	02/25/16
TT-TP4-L2-20160225	440-139326-8	02/25/16
TT-TP3-L1-20160225	440-139326-9	02/25/16
TT-TP3-L2-20160225	440-139326-10	02/25/16
TT-TP2-L1-20160225	440-139326-11	02/25/16
TT-TP2-L2-20160225	440-139326-12	02/25/16

Data Verification and Validation Summary  
Data Validation Stage 2A

<b>Field Sample Number</b>	<b>Lab Sample ID</b>	<b>Date Collected</b>
TT-TP1-L1-20160225	440-139326-13	02/25/16
TT-TP1-L2-20160225	440-139326-14	02/25/16

Data Verification and Validation Summary  
Data Validation Stage 2A

The following section is intended to specify areas evaluated and issues encountered. Only applicable methods are listed.

<b>1. Sample Preservation, Handling, and Transport</b>	
Were all samples preserved correctly? Were sample temperatures kept at 4°C (+ or – 2°C)? Were samples received in proper condition?	Yes/Yes/Yes

<b>2. Chain-of-Custody (COC)</b>	
Were samples recorded on the COCs? Were correct analyses performed on the samples?	Yes/Yes

<b>3. Holding Times</b>	
Were samples analyzed within acceptable holding times?	Yes

<b>4. Blanks</b>	
Does data package include a summary of blank results? Was a method blank extracted and/or analyzed for each batch? Were analytes detected in any blanks?	Yes/Yes/No

<b>5. Surrogates/Monitoring Compounds</b>	
Were samples spiked with the correct surrogate compounds? Were surrogate recoveries reported correctly on data forms? Were recoveries within laboratory limits?	Yes/Yes/Yes

<b>6. Matrix Spike/Matrix Spike Duplicate</b>	
Was a MS/MSD pair extracted and/or analyzed with each batch? Were recoveries/RPDs reported correctly on data forms? Were recoveries/RPDs within laboratory established limits?	Yes/Yes/No
<b>Method 6020:</b> The Chromium result from parent sample TT-TP4-M3-20160225 was qualified as estimated and assigned a “J-” qualifier	

<b>7. Laboratory Control Samples (LCS)</b>	
Was a LCS analyzed with each analytical batch? Were LCS recoveries reported correctly on data forms? Were LCS recoveries within laboratory established limits?	Yes/Yes/Yes

<b>8. Interference Check Sample (ICS)</b>	
Were interference check samples (ICS) analyzed at appropriate intervals? Were ICS recoveries within acceptable limits of the true value?	Yes

<b>9. Compound Quantitation and Reporting Limits</b>	
Were quantitation limits (RLs) adjusted to reflect dilutions, cleanup, and other factors? If applicable, were reporting limit check recoveries within acceptable limits? Were there detections below the reporting limit?	Yes/Yes/Yes

Data Verification and Validation Summary  
Data Validation Stage 2A

**All:** Results detected above the MDL but below the reporting limit are estimated and qualified “J”. Please see the Qualifier Summary Report and the Reporting Limit Outlier Report in the ADR Output Appendix G1 for a complete list of “J” qualified samples due to being detected below the reporting limit.

**10. Duplicates**

Were any duplicate pairs analyzed in this SDG? Were RPDs between parent sample and duplicates $\leq$ lab limits or $\leq$ 30% for field duplicates?	Yes/Yes
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Validated by: Michael Wilson 4/11/2016

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Data Verification and Validation Summary  
Data Validation Stage 2A

Project Name: Soil Flushing Treatability Study  
 Project No.: 100-SBO-T35000-2016-M05  
 No. of Samples: 5

SDG/Report No.: 440-139843-1  
 Lab ID: Test America Irvine  
 Matrix: Water

Area Reviewed	Anomalies		Qualification Required	Action Required
	Yes	No	Yes or No	
1. Sample Preservation, Handling, and Transport		X	No	
2. Chain-of-Custody		X	No	
3. Holding Times		X	No	
4. Blanks		X	No	
5. Surrogates/Monitoring Compounds		X	No	
6. Matrix Spike/Matrix Spike Duplicate	X		Yes	The matrix spikes and/or matrix spike duplicate was outside the control limits for parent sample TT-TP1-M1-20160302. Therefore, the data was "J" qualified.
7. Laboratory Control Samples		X	No	
8. Interference Check Samples		X	No	
9. Compound Quantitation and Reporting Limits		X	No	
10. Duplicates		X	No	
Verification and Validation Label	Stage_2A_Validation_Manual			
Verification and Validation Label Code	S2AVM			
<b>Overall Assessment:</b> Acceptable as qualified. Field QC samples checked for completeness only. <b>Usability:</b> Sample results qualified "J", estimated, are useable for limited purposes only. All other results are considered valid and useable for all purposes.				

Sample Information:

Cooler Temperature: Two coolers at receipt time were 2.9° C and 4.1° C.

Field Sample Number	Lab Sample ID	Date Collected
TT-TP1-M3-20160302	440-139843-1	3/2/16
TT-TP1-M2-20160302	440-139843-2	3/2/16
TT-TP1-M1-20160302	440-139843-3	3/2/16
TT-TP2-M2-20160302	440-139843-4	3/2/16
TT-TP2-M1-20160302	440-139843-5	3/2/16

Data Verification and Validation Summary  
Data Validation Stage 2A

The following section is intended to specify areas evaluated and issues encountered. Only applicable methods are listed.

<b>1. Sample Preservation, Handling, and Transport</b>	
Were all samples preserved correctly? Were sample temperatures kept at 4°C (+ or – 2°C)? Were samples received in proper condition?	Yes/Yes/Yes

<b>2. Chain-of-Custody (COC)</b>	
Were samples recorded on the COCs? Were correct analyses performed on the samples?	Yes/Yes

<b>3. Holding Times</b>	
Were samples analyzed within acceptable holding times?	Yes

<b>4. Blanks</b>	
Does data package include a summary of blank results? Was a method blank extracted and/or analyzed for each batch? Were analytes detected in any blanks?	Yes/Yes/No

<b>5. Surrogates/Monitoring Compounds</b>	
Were samples spiked with the correct surrogate compounds? Were surrogate recoveries reported correctly on data forms? Were recoveries within laboratory limits?	Yes/Yes/Yes

<b>6. Matrix Spike/Matrix Spike Duplicate</b>	
Was a MS/MSD pair extracted and/or analyzed with each batch? Were recoveries/RPDs reported correctly on data forms? Were recoveries/RPDs within laboratory established limits?	Yes/Yes/No
<b>Method 7199:</b> The Chromium, hexavalent result from parent sample TT-TP1-M1-20160302 was qualified as estimated and assigned a “J-” qualifier.	

<b>7. Laboratory Control Samples (LCS)</b>	
Was a LCS analyzed with each analytical batch? Were LCS recoveries reported correctly on data forms? Were LCS recoveries within laboratory established limits?	Yes/Yes/Yes

<b>8. Interference Check Sample (ICS)</b>	
Were interference check samples (ICS) analyzed at appropriate intervals? Were ICS recoveries within acceptable limits of the true value?	Yes

<b>9. Compound Quantitation and Reporting Limits</b>	
Were quantitation limits (RLs) adjusted to reflect dilutions, cleanup, and other factors? If applicable, were reporting limit check recoveries within acceptable limits? Were there detections below the reporting limit?	Yes/Yes/No

Data Verification and Validation Summary  
Data Validation Stage 2A

**All:** Results detected above the MDL but below the reporting limit are estimated and qualified “J”. Please see the Qualifier Summary Report and the Reporting Limit Outlier Report in the ADR Output Appendix G1 for a complete list of “J” qualified samples due to being detected below the reporting limit.

**10. Duplicates**

Were any duplicate pairs analyzed in this SDG? Were RPDs between parent sample and duplicates $\leq$ lab limits or $\leq$ 30% for field duplicates?	No/NA
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Validated by: Michael Wilson 4/11/2016

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Data Verification and Validation Summary  
Data Validation Stage 2A

Project Name: Soil Flushing Treatability Study  
 Project No.: 100-SBO-T35000-2016-M05  
 No. of Samples: 14

SDG/Report No.: 440-139965-1  
 Lab ID: Test America Irvine  
 Matrix: Water

Area Reviewed	Anomalies		Qualification Required	Action Required
	Yes	No	Yes or No	
1. Sample Preservation, Handling, and Transport		X	No	
2. Chain-of-Custody		X	No	
3. Holding Times	X		Yes	A holding time violation occurred for samples TT-TP3-L2-20160303 and TT-TP3-M2-20160303. Therefore, the samples data associated with a holding time violation were "J" qualified.
4. Blanks		X	No	
5. Surrogates/Monitoring Compounds		X	No	
6. Matrix Spike/Matrix Spike Duplicate	X		Yes	The matrix spikes and/or matrix spike duplicate were outside the control limits for parent sample TT-TP4-M3-20160303. Therefore, the data was "J" qualified.
7. Laboratory Control Samples		X	No	
8. Interference Check Samples		X	No	
9. Compound Quantitation and Reporting Limits	X		Yes	All sample results below the reporting limit are "J" qualified.
10. Duplicates		X	No	
Verification and Validation Label	Stage_2A_Validation_Manual			
Verification and Validation Label Code	S2AVM			
<b>Overall Assessment:</b> Acceptable as qualified. Field QC samples checked for completeness only. <b>Usability:</b> Sample results qualified "J", estimated, are useable for limited purposes only. All other results are considered valid and useable for all purposes.				

Sample Information:

Cooler Temperature: Two coolers at receipt time were 1.3° C and 3.7° C.

Field Sample Number	Lab Sample ID	Date Collected
TT-TP3-M1-20160303	440-139965-1	3/3/16
TT-TP3-M2-20160303	440-139965-2	3/3/16
TT-TP4-M1-20160303	440-139965-3	3/3/16
TT-TP4-M2-20160303	440-139965-4	3/3/16
TT-TP4-M3-20160303	440-139965-5	3/3/16
TT-TP4-M3-20160303-DUP	440-139965-6	3/3/16
TT-TP4-L1-20160303	440-139965-7	3/3/16

Data Verification and Validation Summary  
Data Validation Stage 2A

<b>Field Sample Number</b>	<b>Lab Sample ID</b>	<b>Date Collected</b>
TT-TP4-L2-20160303	440-139965-8	3/3/16
TT-TP3-L1-20160303	440-139965-9	3/3/16
TT-TP3-L2-20160303	440-139965-10	3/3/16
TT-TP2-L1-20160303	440-139965-11	3/3/16
TT-TP2-L2-20160303	440-139965-12	3/3/16
TT-TP1-L1-20160303	440-139965-13	3/3/16
TT-TP1-L2-20160303	440-139965-14	3/3/16

Data Verification and Validation Summary  
Data Validation Stage 2A

The following section is intended to specify areas evaluated and issues encountered. Only applicable methods are listed.

<b>1. Sample Preservation, Handling, and Transport</b>	
Were all samples preserved correctly? Were sample temperatures kept at 4°C (+ or – 2°C)? Were samples received in proper condition?	Yes/Yes/Yes

<b>2. Chain-of-Custody (COC)</b>	
Were samples recorded on the COCs? Were correct analyses performed on the samples?	Yes/Yes

<b>3. Holding Times</b>	
Were samples analyzed within acceptable holding times?	No
<b>Method 7199:</b> Samples TT-TP3-L2-20160303 and TT-TP3-M2-20160303 were analyzed pass the acceptable holding time for Hexavalent Chromium. Therefore, the samples results were qualified as estimated and assigned a “J-” qualifier.	

<b>4. Blanks</b>	
Does data package include a summary of blank results? Was a method blank extracted and/or analyzed for each batch? Were analytes detected in any blanks?	Yes/Yes/No

<b>5. Surrogates/Monitoring Compounds</b>	
Were samples spiked with the correct surrogate compounds? Were surrogate recoveries reported correctly on data forms? Were recoveries within laboratory limits?	Yes/Yes/Yes

<b>6. Matrix Spike/Matrix Spike Duplicate</b>	
Was a MS/MSD pair extracted and/or analyzed with each batch? Were recoveries/RPDs reported correctly on data forms? Were recoveries/RPDs within laboratory established limits?	Yes/Yes/No
<b>Method 6020:</b> The Chromium result from parent sample TT-TP4-M3-20160303 was qualified as estimated and assigned a “J+” qualifier.	
<b>Method 7199:</b> The Chromium, hexavalent result from parent sample TT-TP4-M3-20160303 was qualified as estimated and assigned a “J-” qualifier.	

<b>7. Laboratory Control Samples (LCS)</b>	
Was a LCS analyzed with each analytical batch? Were LCS recoveries reported correctly on data forms? Were LCS recoveries within laboratory established limits?	Yes/Yes/Yes

<b>8. Interference Check Sample (ICS)</b>	
Were interference check samples (ICS) analyzed at appropriate intervals? Were ICS recoveries within acceptable limits of the true value?	Yes

Data Verification and Validation Summary  
Data Validation Stage 2A

<b>9. Compound Quantitation and Reporting Limits</b>	
Were quantitation limits (RLs) adjusted to reflect dilutions, cleanup, and other factors? If applicable, were reporting limit check recoveries within acceptable limits? Were there detections below the reporting limit?	Yes/Yes/Yes
<b>All:</b> Results detected above the MDL but below the reporting limit are estimated and qualified "J". Please see the Qualifier Summary Report and the Reporting Limit Outlier Report in the ADR Output Appendix G1 for a complete list of "J" qualified samples due to being detected below the reporting limit.	

<b>10. Duplicates</b>	
Were any duplicate pairs analyzed in this SDG? Were RPDs between parent sample and duplicates $\leq$ lab limits or $\leq$ 30% for field duplicates?	Yes/Yes

Validated by: Michael Wilson 4/11/2016

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Data Verification and Validation Summary  
Data Validation Stage 2A

Project Name: Soil Flushing Treatability Study  
 Project No.: 100-SBO-T35000-2016-M05  
 No. of Samples: 5

SDG/Report No.: 440-140696-1  
 Lab ID: Test America Irvine  
 Matrix: Water

Area Reviewed	Anomalies		Qualification Required	Action Required
	Yes	No	Yes or No	
1. Sample Preservation, Handling, and Transport		X	No	
2. Chain-of-Custody		X	No	
3. Holding Times	X		Yes	A holding time violation occurred for sample TT-TP1-M3-20160309. Therefore, the samples data was "J" qualified.
4. Blanks		X	No	
5. Surrogates/Monitoring Compounds		X	No	
6. Matrix Spike/Matrix Spike Duplicate	X		Yes	The matrix spikes and/or matrix spike duplicate was outside the control limits for parent samples TT-TP1-M1-20160309 and TT-TP2-M2-20160309. Therefore, the data was "J" qualified.
7. Laboratory Control Samples		X	No	
8. Interference Check Samples		X	No	
9. Compound Quantitation and Reporting Limits	X		Yes	All sample results below the reporting limit are "J" qualified.
10. Duplicates		X	No	

Verification and Validation Label	Stage_2A_Validation_Manual
Verification and Validation Label Code	S2AVM
<p><b>Overall Assessment:</b> Acceptable as qualified.          Field QC samples checked for completeness only.  <b>Usability:</b> Sample results qualified "J", estimated, are useable for limited purposes only. All other results are considered valid and useable for all purposes.</p>	

Sample Information:

Cooler Temperature: Two coolers at receipt time were 2.1° C and 3.1° C.

Field Sample Number	Lab Sample ID	Date Collected
TT-TP1-M3-20160309	440-140696-1	3/09/16
TT-TP1-M2-20160309	440-140696-2	3/09/16
TT-TP1-M1-20160309	440-140696-3	3/09/16
TT-TP2-M2-20160309	440-140696-4	3/09/16
TT-TP2-M1-20160309	440-140696-5	3/09/16



Data Verification and Validation Summary  
Data Validation Stage 2A

The following section is intended to specify areas evaluated and issues encountered. Only applicable methods are listed.

<b>1. Sample Preservation, Handling, and Transport</b>	
Were all samples preserved correctly? Were sample temperatures kept at 4°C (+ or – 2°C)? Were samples received in proper condition?	Yes/Yes/Yes

<b>2. Chain-of-Custody (COC)</b>	
Were samples recorded on the COCs? Were correct analyses performed on the samples?	Yes/Yes

<b>3. Holding Times</b>	
Were samples analyzed within acceptable holding times?	No
<b>Method 7199:</b> Sample TT-TP1-M3-20160309 was analyzed pass the acceptable holding time for Hexavalent Chromium. Therefore, the sample results were qualified as estimated and assigned a “J” qualifier.	

<b>4. Blanks</b>	
Does data package include a summary of blank results? Was a method blank extracted and/or analyzed for each batch? Were analytes detected in any blanks?	Yes/Yes/No

<b>5. Surrogates/Monitoring Compounds</b>	
Were samples spiked with the correct surrogate compounds? Were surrogate recoveries reported correctly on data forms? Were recoveries within laboratory limits?	Yes/Yes/Yes

<b>6. Matrix Spike/Matrix Spike Duplicate</b>	
Was a MS/MSD pair extracted and/or analyzed with each batch? Were recoveries/RPDs reported correctly on data forms? Were recoveries/RPDs within laboratory established limits?	Yes/Yes/Yes
<b>Method 300:</b> The Nitrate as N result from parent sample TT-TP2-M2-20160309 was qualified as estimated and assigned a “J-” qualifier.	
<b>Method 7199:</b> The Chromium, hexavalent result from parent sample TT-TP1-M1-20160309 was qualified as estimated and assigned a “J-” qualifier	

<b>7. Laboratory Control Samples (LCS)</b>	
Was a LCS analyzed with each analytical batch? Were LCS recoveries reported correctly on data forms? Were LCS recoveries within laboratory established limits?	Yes/Yes/Yes

<b>8. Interference Check Sample (ICS)</b>	
Were interference check samples (ICS) analyzed at appropriate intervals? Were ICS recoveries within acceptable limits of the true value?	Yes

<b>9. Compound Quantitation and Reporting Limits</b>	
Were quantitation limits (RLs) adjusted to reflect dilutions, cleanup, and other factors? If applicable, were reporting limit check recoveries within acceptable limits? Were there detections below the reporting limit?	Yes/Yes/Yes

Data Verification and Validation Summary  
Data Validation Stage 2A

**All:** Results detected above the MDL but below the reporting limit are estimated and qualified “J”. Please see the Qualifier Summary Report and the Reporting Limit Outlier Report in the ADR Output Appendix G1 for a complete list of “J” qualified samples due to being detected below the reporting limit.

**10. Duplicates**

Were any duplicate pairs analyzed in this SDG? Were RPDs between parent sample and duplicates $\leq$ lab limits or $\leq$ 30% for field duplicates?	No/NA
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Validated by: Michael Wilson 4/11/2016

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Data Verification and Validation Summary  
Data Validation Stage 2A

Project Name: Soil Flushing Treatability Study  
Project No.: 100-SBO-T35000-2016-M05  
No. of Samples: 19

SDG/Report No.: 440-140826-1  
Lab ID: Test America Irvine  
Matrix: Water

Area Reviewed	Anomalies		Qualification Required	Action Required
	Yes	No	Yes or No	
1. Sample Preservation, Handling, and Transport		X	No	
2. Chain-of-Custody		X	No	
3. Holding Times	X		Yes	Samples TT-TP4-M3-20160310, TT-TP2-L1-20160310, TT-TP2-L2-20160310, TT-TP3-M1-20160310, TT-TP3-M2-20160310 had holding time violation. Therefore, the samples were "J" qualified.
4. Blanks		X	No	
5. Surrogates/Monitoring Compounds		X	No	
6. Matrix Spike/Matrix Spike Duplicate	X		Yes	The parent samples TT-TP4-M3-20160310 data associated with the matrix spikes and/or matrix spike duplicates were "J" qualified.
7. Laboratory Control Samples		X	No	
8. Interference Check Samples		X	No	
9. Compound Quantitation and Reporting Limits	X		Yes	All sample results below the reporting limit are "J" qualified.
10. Duplicates	X		Yes	Parent sample TT-TP4-M3-20160310 was qualified as estimated and assigned a "J" qualifier.
Verification and Validation Label	Stage_2A_Validation_Manual			
Verification and Validation Label Code	S2AVM			
<p><b>Overall Assessment:</b> Acceptable as qualified. Field QC samples checked for completeness only. <b>Usability:</b> Sample results qualified "J", estimated, are useable for limited purposes only. All other results are considered valid and useable for all purposes.</p>				

Sample Information:

Cooler Temperature: Three coolers 1.3° C, 1.6° C and 3.1° C.

Field Sample Number	Lab Sample ID	Date Collected
TT-TP3-M2-20160310	440-140826-1	3/09/2016
TT-TP3-M1-20160310	440-140826-2	3/09/2016
TT-TP4-M1-20160310	440-140826-3	3/09/2016
TT-TP4-M2-20160310	440-140826-4	3/09/2016
TT-TP4-M3-20160310	440-140826-5	3/09/2016
TT-TP1-M3-20160310	440-140826-6	3/09/2016
TT-TP1-M2-20160310	440-140826-7	3/09/2016
TT-TP1-M1-20160310	440-140826-8	3/09/2016
TT-TP2-M2-20160310	440-140826-9	3/09/2016

Data Verification and Validation Summary  
Data Validation Stage 2A

<b>Field Sample Number</b>	<b>Lab Sample ID</b>	<b>Date Collected</b>
TT-TP2-M1-20160310	440-140826-10	3/09/2016
TT-TP4-M3-20160310-DUP	440-140826-11	3/10/2016
TT-TP1-L2-20160310	440-140826-12	3/10/2016
TT-TP3-L2-20160310	440-140826-13	3/10/2016
TT-TP3-L1-20160310	440-140826-14	3/10/2016
TT-TP4-L2-20160310	440-140826-15	3/10/2016
TT-TP4-L1-20160310	440-140826-16	3/10/2016
TT-TP1-L1-20160310	440-140826-17	3/10/2016
TT-TP2-L1-20160310	440-140826-18	3/10/2016
TT-TP2-L2-20160310	440-140826-19	3/10/2016

Data Verification and Validation Summary  
Data Validation Stage 2A

The following section is intended to specify areas evaluated and issues encountered. Only applicable methods are listed.

<b>1. Sample Preservation, Handling, and Transport</b>	
Were all samples preserved correctly? Were sample temperatures kept at 4°C (+ or – 2°C)? Were samples received in proper condition?	Yes/Yes/Yes

<b>2. Chain-of-Custody (COC)</b>	
Were samples recorded on the COCs? Were correct analyses performed on the samples?	Yes/Yes

<b>3. Holding Times</b>	
Were samples analyzed within acceptable holding times?	No
<b>Method 7199:</b> Hexavalent Chromium results from samples TT-TP2-L1-20160310, TT-TP2-L2-20160310, TT-TP3-M1-20160310, and TT-TP3-M2-20160310 exceeded their holding times. Therefore they were qualified as estimated and assigned “J-” qualifiers.	
<b>Method 300.0:</b> Nitrate as N for sample TT-TP4-M3-20160310. Therefore, the sample result was qualified as estimated and assigned a “J” qualifier.	

<b>4. Blanks</b>	
Does data package include a summary of blank results? Was a method blank extracted and/or analyzed for each batch? Were analytes detected in any blanks?	Yes/Yes/No

<b>5. Surrogates/Monitoring Compounds</b>	
Were samples spiked with the correct surrogate compounds? Were surrogate recoveries reported correctly on data forms? Were recoveries within laboratory limits?	Yes/Yes/Yes

<b>6. Matrix Spike/Matrix Spike Duplicate</b>	
Was a MS/MSD pair extracted and/or analyzed with each batch? Were recoveries/RPDs reported correctly on data forms? Were recoveries/RPDs within laboratory established limits?	Yes/Yes/No
<b>Method 300.0:</b> The Nitrate as N result from parent sample TT-TP4-M3-20160310 was qualified as estimated and assigned a “J-” qualifier.	
<b>Method 300.1B:</b> The Chlorate result from parent sample TT-TP4-M3-20160310 was qualified as estimated and assigned a “J-” qualifier.	
<b>Method 314.0:</b> The Perchlorate result from parent sample TT-TP4-M3-20160310 was qualified as estimated and assigned a “J-” qualifier.	
<b>Method 6010B:</b> The results from parent sample TT-TP4-M3-20160310 were qualified as estimated for Boron (J+), Calcium (J), Magnesium(J+), Potassium (J+), and Sodium (J+)	
<b>Method 6020:</b> The Zinc result from parent sample TT-TP4-M3-20160310 was rejected and assigned a “R” qualifier. The Chromium result from parent sample TT-TP4-M3-20160310 was qualified as estimated and assigned a “J-” qualifier.	
<b>Method 7199:</b> The Hexavalent Chromium result from parent sample TT-TP4-M3-20160310 was qualified as estimated and assigned a “J+” qualifier.	

<b>7. Laboratory Control Samples (LCS)</b>	
Was a LCS analyzed with each analytical batch? Were LCS recoveries reported correctly on data forms? Were LCS recoveries within laboratory established limits?	Yes/Yes/Yes

Data Verification and Validation Summary  
Data Validation Stage 2A

<b>8. Interference Check Sample (ICS)</b>	
Were interference check samples (ICS) analyzed at appropriate intervals? Were ICS recoveries within acceptable limits of the true value?	Yes

<b>9. Compound Quantitation and Reporting Limits</b>	
Were quantitation limits (RLs) adjusted to reflect dilutions, cleanup, and other factors? If applicable, were reporting limit check recoveries within acceptable limits? Were there detections below the reporting limit?	Yes/Yes/Yes
<b>All:</b> Results detected above the MDL but below the reporting limit are estimated and qualified "J". Please see the Qualifier Summary Report and the Reporting Limit Outlier Report in the ADR Output Appendix G1 for a complete list of "J" qualified samples due to being detected below the reporting limit.	

<b>10. Duplicates</b>	
Were any duplicate pairs analyzed in this SDG? Were RPDs between parent sample and duplicates $\leq$ lab limits or $\leq$ 30% for field duplicates?	Yes/No
<b>Method 6020:</b> Parent sample TT-TP4-M3-20160310 was qualified as estimated for copper (J)	
<b>Method 7470A:</b> Parent sample TT-TP4-M3-20160310 was qualified as estimated for mercury (J)	

Validated by: Michael Wilson 04/20/2016

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Data Verification and Validation Summary  
Data Validation Stage 2A

Project Name: Soil Flushing Treatability Study  
 Project No.: 100-SBO-T35000-2016-M05  
 No. of Samples: 7

SDG/Report No.: 440-141586-1  
 Lab ID: Test America Irvine  
 Matrix: Water

Area Reviewed	Anomalies		Qualification Required	Action Required
	Yes	No	Yes or No	
1. Sample Preservation, Handling, and Transport		X	No	
2. Chain-of-Custody		X	No	
3. Holding Times		X	No	
4. Blanks		X	No	
5. Surrogates/Monitoring Compounds		X	No	
6. Matrix Spike/Matrix Spike Duplicate		X	No	
7. Laboratory Control Samples		X	No	
8. Interference Check Samples		X	No	
9. Compound Quantitation and Reporting Limits	X		Yes	All sample results below the reporting limit are "J" qualified.
10. Duplicates		X	No	
Verification and Validation Label	Stage_2A_Validation_Manual			
Verification and Validation Label Code	S2AVM			
<b>Overall Assessment:</b> Acceptable as qualified. Field QC samples checked for completeness only. <b>Usability:</b> Sample results qualified "J", estimated, are useable for limited purposes only. All other results are considered valid and useable for all purposes.				

Sample Information:

Cooler Temperature: Two coolers at receipt time were 1.7° C and 3.8° C.

Field Sample Number	Lab Sample ID	Date Collected
TT-TP1-M1-20160316	440-141586-1	3/16/16
TT-TP1-M2-20160316	440-141586-2	3/16/16
TT-TP1-M3-20160316	440-141586-3	3/16/16
TT-TP2-M1-20160316	440-141586-4	3/16/16
TT-TP2-M2-20160316	440-141586-5	3/16/16
TT-TP3-M1-20160316	440-141586-6	3/16/16
TT-TP3-M2-20160316	440-141586-7	3/16/16

Data Verification and Validation Summary  
Data Validation Stage 2A

The following section is intended to specify areas evaluated and issues encountered. Only applicable methods are listed.

<b>1. Sample Preservation, Handling, and Transport</b>	
Were all samples preserved correctly? Were sample temperatures kept at 4°C (+ or – 2°C)? Were samples received in proper condition?	Yes/Yes/Yes

<b>2. Chain-of-Custody (COC)</b>	
Were samples recorded on the COCs? Were correct analyses performed on the samples?	Yes/Yes

<b>3. Holding Times</b>	
Were samples analyzed within acceptable holding times?	Yes

<b>4. Blanks</b>	
Does data package include a summary of blank results? Was a method blank extracted and/or analyzed for each batch? Were analytes detected in any blanks?	Yes/Yes/No

<b>5. Surrogates/Monitoring Compounds</b>	
Were samples spiked with the correct surrogate compounds? Were surrogate recoveries reported correctly on data forms? Were recoveries within laboratory limits?	Yes/Yes/Yes

<b>6. Matrix Spike/Matrix Spike Duplicate</b>	
Was a MS/MSD pair extracted and/or analyzed with each batch? Were recoveries/RPDs reported correctly on data forms? Were recoveries/RPDs within laboratory established limits?	Yes/Yes/Yes

<b>7. Laboratory Control Samples (LCS)</b>	
Was a LCS analyzed with each analytical batch? Were LCS recoveries reported correctly on data forms? Were LCS recoveries within laboratory established limits?	Yes/Yes/Yes

<b>8. Interference Check Sample (ICS)</b>	
Were interference check samples (ICS) analyzed at appropriate intervals? Were ICS recoveries within acceptable limits of the true value?	Yes

<b>9. Compound Quantitation and Reporting Limits</b>	
Were quantitation limits (RLs) adjusted to reflect dilutions, cleanup, and other factors? If applicable, were reporting limit check recoveries within acceptable limits? Were there detections below the reporting limit?	Yes/Yes/Yes
<b>All:</b> Results detected above the MDL but below the reporting limit are estimated and qualified “J”. Please see the Qualifier Summary Report and the Reporting Limit Outlier Report in the ADR Output Appendix G1 for a complete list of “J” qualified samples due to being detected below the reporting limit.	



Data Verification and Validation Summary  
Data Validation Stage 2A

<b>10. Duplicates</b>	
Were any duplicate pairs analyzed in this SDG? Were RPDs between parent sample and duplicates $\leq$ lab limits or $\leq$ 30% for field duplicates?	No/NA

Validated by: Michael Wilson 4/11/2016

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Data Verification and Validation Summary  
Data Validation Stage 2A

Project Name: Soil Flushing Treatability Study  
 Project No.: 100-SBO-T35000-2016-M05  
 No. of Samples: 12

SDG/Report No.: 440-141827-1  
 Lab ID: Test America Irvine  
 Matrix: Water

Area Reviewed	Anomalies		Qualification Required	Action Required
	Yes	No	Yes or No	
1. Sample Preservation, Handling, and Transport		X	No	
2. Chain-of-Custody		X	No	
3. Holding Times		X	No	
4. Blanks		X	No	
5. Surrogates/Monitoring Compounds		X	No	
6. Matrix Spike/Matrix Spike Duplicate	X		Yes	The matrix spikes and/or matrix spike duplicate were outside the control limits for parent sample TT-TP4-M3-20160317. Therefore, the data was "J" qualified.
7. Laboratory Control Samples		X	No	
8. Interference Check Samples		X	No	
9. Compound Quantitation and Reporting Limits		X	No	
10. Duplicates		X	No	
Verification and Validation Label	Stage_2A_Validation_Manual			
Verification and Validation Label Code	S2AVM			
<p><b>Overall Assessment:</b> Acceptable as qualified.            Field QC samples checked for completeness only.  <b>Usability:</b> Sample results qualified "J", estimated, are useable for limited purposes only. All other results are considered valid and useable for all purposes.</p>				

Sample Information:

Cooler Temperature: Two coolers at receipt time were 0.3° C and 1.4° C.

Lab Sample ID	Field Sample Number	Date Collected
440-141827-1	TT-TP4-M1-20160317	3/17/16
440-141827-2	TT-TP4-M2-20160317	3/17/16
440-141827-3	TT-TP4-M3-20160317	3/17/16
440-141827-4	TT-TP4-M3-20160317-DUP	3/17/16
440-141827-5	TT-TP4-L1-20160317	3/17/16
440-141827-6	TT-TP4-L2-20160317	3/17/16
440-141827-7	TT-TP3-L1-20160317	3/17/16
440-141827-8	TT-TP3-L2-20160317	3/17/16
440-141827-9	TT-TP2-L1-20160317	3/17/16
440-141827-10	TT-TP2-L2-20160317	3/17/16

Data Verification and Validation Summary  
Data Validation Stage 2A

<b>Lab Sample ID</b>	<b>Field Sample Number</b>	<b>Date Collected</b>
440-141827-11	TT-TP1-L1-20160317	3/17/16
440-141827-12	TT-TP1-L2-20160317	3/17/16

Data Verification and Validation Summary  
Data Validation Stage 2A

The following section is intended to specify areas evaluated and issues encountered. Only applicable methods are listed.

<b>1. Sample Preservation, Handling, and Transport</b>	
Were all samples preserved correctly? Were sample temperatures kept at 4°C (+ or – 2°C)? Were samples received in proper condition?	Yes/Yes/Yes

<b>2. Chain-of-Custody (COC)</b>	
Were samples recorded on the COCs? Were correct analyses performed on the samples?	Yes/Yes

<b>3. Holding Times</b>	
Were samples analyzed within acceptable holding times?	Yes

<b>4. Blanks</b>	
Does data package include a summary of blank results? Was a method blank extracted and/or analyzed for each batch? Were analytes detected in any blanks?	Yes/Yes/No

<b>5. Surrogates/Monitoring Compounds</b>	
Were samples spiked with the correct surrogate compounds? Were surrogate recoveries reported correctly on data forms? Were recoveries within laboratory limits?	Yes/Yes/Yes

<b>6. Matrix Spike/Matrix Spike Duplicate</b>	
Was a MS/MSD pair extracted and/or analyzed with each batch? Were recoveries/RPDs reported correctly on data forms? Were recoveries/RPDs within laboratory established limits?	Yes/Yes/No
<b>Method 314.0:</b> The Perchlorate result from parent sample TT-TP4-M3-20160317 was qualified as estimated and assigned a “J-” qualifier.	
<b>Method 6020:</b> The Chromium result from parent sample TT-TP4-M3-20160317 was qualified as estimated and assigned a “J-” qualifier.	
<b>Method 7199:</b> The Chromium, hexavalent result from parent sample TT-TP4-M3-20160317 was qualified as estimated and assigned a “J-” qualifier.	

<b>7. Laboratory Control Samples (LCS)</b>	
Was a LCS analyzed with each analytical batch? Were LCS recoveries reported correctly on data forms? Were LCS recoveries within laboratory established limits?	Yes/Yes/Yes

<b>8. Interference Check Sample (ICS)</b>	
Were interference check samples (ICS) analyzed at appropriate intervals? Were ICS recoveries within acceptable limits of the true value?	Yes

<b>9. Compound Quantitation and Reporting Limits</b>	
Were quantitation limits (RLs) adjusted to reflect dilutions, cleanup, and other factors? If applicable, were reporting limit check recoveries within acceptable limits? Were there detections below the reporting limit?	Yes/Yes/ No

Data Verification and Validation Summary  
Data Validation Stage 2A

All: Results detected above the MDL but below the reporting limit are estimated and qualified "J". Please see the Qualifier Summary Report and the Reporting Limit Outlier Report in the ADR Output Appendix G1 for a complete list of "J" qualified samples due to being detected below the reporting limit.

**10. Duplicates**

Were any duplicate pairs analyzed in this SDG? Were RPDs between parent sample and duplicates $\leq$ lab limits or $\leq$ 30% for field duplicates?	Yes/Yes
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Validated by: Michael Wilson 4/11/2016

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Data Verification and Validation Summary  
Data Validation Stage 2A

Project Name: Soil Flushing Treatability Study  
 Project No.: 100-SBO-T35000-2016-M05  
 No. of Samples: 15

SDG/Report No.: 440-142439-1  
 Lab ID: Test America Irvine  
 Matrix: Water

Area Reviewed	Anomalies		Qualification Required	Action Required
	Yes	No	Yes or No	
1. Sample Preservation, Handling, and Transport		X	No	
2. Chain-of-Custody		X	No	
3. Holding Times	X		Yes	Sample TT-TP2-L2-20160323 had a holding time violation for Hexavalent Chromium. Therefore, sample data was assigned a "J" qualifier.
4. Blanks		X	No	
5. Surrogates/Monitoring Compounds		X	No	
6. Matrix Spike/Matrix Spike Duplicate		X	No	
7. Laboratory Control Samples		X	No	
8. Interference Check Samples		X	No	
9. Compound Quantitation and Reporting Limits	X		Yes	All sample results below the reporting limit are "J" qualified.
10. Duplicates		X	No	

Verification and Validation Label	Stage_2A_Validation_Manual
Verification and Validation Label Code	S2AVM
<p><b>Overall Assessment:</b> Acceptable as qualified.          Field QC samples checked for completeness only.  <b>Usability:</b> Sample results qualified "J", estimated, are useable for limited purposes only. All other results are considered valid and useable for all purposes.</p>	

Sample Information:

Cooler Temperature: Four coolers 2.2° C, 3.8° C, 4.1° C, 4.2° C and 4.5° C

Field Sample Number	Lab Sample ID	Date Collected
TT-TP1-M1-20160323	440-142439-1	3/23/2016
TT-TP1-M2-20160323	440-142439-2	3/23/2016
TT-TP1-M3-20160323	440-142439-3	3/23/2016
TT-TP2-M1-20160323	440-142439-4	3/23/2016
TT-TP2-M2-20160323	440-142439-5	3/23/2016
TT-TP3-M1-20160323	440-142439-6	3/23/2016
TT-TP3-M2-20160323	440-142439-7	3/23/2016
TT-TP4-L1-20160323	440-142439-8	3/23/2016
TT-TP4-L2-20160323	440-142439-9	3/23/2016
TT-TP3-L1-20160323	440-142439-10	3/23/2016
TT-TP3-L2-20160323	440-142439-11	3/23/2016

Data Verification and Validation Summary  
Data Validation Stage 2A

<b>Field Sample Number</b>	<b>Lab Sample ID</b>	<b>Date Collected</b>
TT-TP2-L1-20160323	440-142439-12	3/23/2016
TT-TP2-L2-20160323	440-142439-13	3/23/2016
TT-TP1-L1-20160323	440-142439-14	3/23/2016
TT-TP1-L2-20160323	440-142439-15	3/23/2016

Data Verification and Validation Summary  
Data Validation Stage 2A

The following section is intended to specify areas evaluated and issues encountered. Only applicable methods are listed.

<b>1. Sample Preservation, Handling, and Transport</b>	
Were all samples preserved correctly? Were sample temperatures kept at 4°C (+ or – 2°C)? Were samples received in proper condition?	Yes/Yes/Yes

<b>2. Chain-of-Custody (COC)</b>	
Were samples recorded on the COCs? Were correct analyses performed on the samples?	Yes/Yes

<b>3. Holding Times</b>	
Were samples analyzed within acceptable holding times?	No
<b>Method 7199:</b> The Hexavalent Chromium result for sample TT-TP2-L2-20160323 was qualified as estimated and assigned a “J-” qualifier because of holding time failures.	

<b>4. Blanks</b>	
Does data package include a summary of blank results? Was a method blank extracted and/or analyzed for each batch? Were analytes detected in any blanks?	Yes/Yes/No

<b>5. Surrogates/Monitoring Compounds</b>	
Were samples spiked with the correct surrogate compounds? Were surrogate recoveries reported correctly on data forms? Were recoveries within laboratory limits?	Yes/Yes/Yes

<b>6. Matrix Spike/Matrix Spike Duplicate</b>	
Was a MS/MSD pair extracted and/or analyzed with each batch? Were recoveries/RPDs reported correctly on data forms? Were recoveries/RPDs within laboratory established limits?	Yes/Yes/Yes

<b>7. Laboratory Control Samples (LCS)</b>	
Was a LCS analyzed with each analytical batch? Were LCS recoveries reported correctly on data forms? Were LCS recoveries within laboratory established limits?	Yes/Yes/Yes

<b>8. Interference Check Sample (ICS)</b>	
Were interference check samples (ICS) analyzed at appropriate intervals? Were ICS recoveries within acceptable limits of the true value?	Yes

<b>9. Compound Quantitation and Reporting Limits</b>	
Were quantitation limits (RLs) adjusted to reflect dilutions, cleanup, and other factors? If applicable, were reporting limit check recoveries within acceptable limits? Were there detections below the reporting limit?	Yes/Yes/Yes



Data Verification and Validation Summary  
Data Validation Stage 2A

**All:** Results detected above the MDL but below the reporting limit are estimated and qualified “J”. Please see the Qualifier Summary Report and the Reporting Limit Outlier Report in the ADR Output Appendix G1 for a complete list of “J” qualified samples due to being detected below the reporting limit.

**10. Duplicates**

Were any duplicate pairs analyzed in this SDG? Were RPDs between parent sample and duplicates $\leq$ lab limits or $\leq$ 30% for field duplicates?	Yes/Yes
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Validated by: Michael Wilson 04/20/2016

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Data Verification and Validation Summary  
Data Validation Stage 2A

Project Name: Soil Flushing Treatability Study  
 Project No.: 100-SBO-T35000-2016-M05  
 No. of Samples: 4

SDG/Report No.: 440-142556-1  
 Lab ID: Test America Irvine  
 Matrix: Water

Area Reviewed	Anomalies		Qualification Required	Action Required
	Yes	No	Yes or No	
1. Sample Preservation, Handling, and Transport		X	No	
2. Chain-of-Custody		X	No	
3. Holding Times		X	No	
4. Blanks		X	No	
5. Surrogates/Monitoring Compounds		X	No	
6. Matrix Spike/Matrix Spike Duplicate	X		Yes	The matrix spikes and/or matrix spike duplicate was outside the control limits for parent sample TT-TP4-M3-20160324. Therefore, the data was "J" qualified.
7. Laboratory Control Samples		X	No	
8. Interference Check Samples		X	No	
9. Compound Quantitation and Reporting Limits		X	No	
10. Duplicates		X	No	
Verification and Validation Label	Stage_2A_Validation_Manual			
Verification and Validation Label Code	S2AVM			
<p><b>Overall Assessment:</b> Acceptable as qualified.            Field QC samples checked for completeness only.  <b>Usability:</b> Sample results qualified "J", estimated, are useable for limited purposes only. All other results are considered valid and useable for all purposes.</p>				

Sample Information:  
Cooler Temperature: 2.9° C

Field Sample Number	Lab Sample ID	Date Collected
TT-TP4-M1-20160324	440-142556-1	03/24/2016
TT-TP4-M2-20160324	440-142556-2	03/24/2016
TT-TP4-M3-20160324	440-142556-3	03/24/2016
TT-TP4-M3-20160324-DUP	440-142556-4	03/24/2016

Data Verification and Validation Summary  
Data Validation Stage 2A

The following section is intended to specify areas evaluated and issues encountered. Only applicable methods are listed.

<b>1. Sample Preservation, Handling, and Transport</b>	
Were all samples preserved correctly? Were sample temperatures kept at 4°C (+ or – 2°C)? Were samples received in proper condition?	Yes/Yes/Yes

<b>2. Chain-of-Custody (COC)</b>	
Were samples recorded on the COCs? Were correct analyses performed on the samples?	Yes/Yes

<b>3. Holding Times</b>	
Were samples analyzed within acceptable holding times?	Yes

<b>4. Blanks</b>	
Does data package include a summary of blank results? Was a method blank extracted and/or analyzed for each batch? Were analytes detected in any blanks?	Yes/Yes/No

<b>5. Surrogates/Monitoring Compounds</b>	
Were samples spiked with the correct surrogate compounds? Were surrogate recoveries reported correctly on data forms? Were recoveries within laboratory limits?	Yes/Yes/Yes

<b>6. Matrix Spike/Matrix Spike Duplicate</b>	
Was a MS/MSD pair extracted and/or analyzed with each batch? Were recoveries/RPDs reported correctly on data forms? Were recoveries/RPDs within laboratory established limits?	Yes/Yes/No
<b>Method 314.0:</b> The Perchlorate result from parent sample TT-TP4-M3-20160324 was qualified as estimated and assigned a “J-” qualifier.	
<b>Method 6020:</b> The Chromium result from parent sample TT-TP4-M3-20160324 was qualified as estimated and assigned a “J-” qualifier.	
<b>Method 7199:</b> The Hexavalent Chromium result from parent sample TT-TP4-M3-20160324 was qualified as estimated and assigned a “J-” qualifier.	

<b>7. Laboratory Control Samples (LCS)</b>	
Was a LCS analyzed with each analytical batch? Were LCS recoveries reported correctly on data forms? Were LCS recoveries within laboratory established limits?	Yes/Yes/Yes

<b>8. Interference Check Sample (ICS)</b>	
Were interference check samples (ICS) analyzed at appropriate intervals? Were ICS recoveries within acceptable limits of the true value?	Yes

<b>9. Compound Quantitation and Reporting Limits</b>	
Were quantitation limits (RLs) adjusted to reflect dilutions, cleanup, and other factors? If applicable, were reporting limit check recoveries within acceptable limits? Were there detections below the reporting limit?	Yes/Yes/ No

Data Verification and Validation Summary  
Data Validation Stage 2A

All: Results detected above the MDL but below the reporting limit are estimated and qualified "J". Please see the Qualifier Summary Report and the Reporting Limit Outlier Report in the ADR Output Appendix G1 for a complete list of "J" qualified samples due to being detected below the reporting limit.

**10. Duplicates**

Were any duplicate pairs analyzed in this SDG? Were RPDs between parent sample and duplicates $\leq$ lab limits or $\leq$ 30% for field duplicates?	Yes/Yes
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Validated by: Michael Wilson 04/20/2016

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Data Verification and Validation Summary  
Data Validation Stage 2A

Project Name: Soil Flushing Treatability Study  
 Project No.: 100-SBO-T35000-2016-M05  
 No. of Samples: 5

SDG/Report No.: 440-142922-1  
 Lab ID: Test America Irvine  
 Matrix: Water

Area Reviewed	Anomalies		Qualification Required	Action Required
	Yes	No	Yes or No	
1. Sample Preservation, Handling, and Transport		X	No	
2. Chain-of-Custody		X	No	
3. Holding Times		X	No	
4. Blanks		X	No	
5. Surrogates/Monitoring Compounds		X	No	
6. Matrix Spike/Matrix Spike Duplicate	X		Yes	The matrix spikes and/or matrix spike duplicate was outside the control limits for parent sample TT-TP1-M1-20160330. Therefore, the data was "J" qualified.
7. Laboratory Control Samples		X	No	
8. Interference Check Samples		X	No	
9. Compound Quantitation and Reporting Limits		X	No	
10. Duplicates		X	No	
Verification and Validation Label	Stage_2A_Validation_Manual			
Verification and Validation Label Code	S2AVM			
<b>Overall Assessment:</b> Acceptable as qualified. Field QC samples checked for completeness only. <b>Usability:</b> Sample results qualified "J", estimated, are useable for limited purposes only. All other results are considered valid and useable for all purposes.				

Sample Information:

Cooler Temperature: Two coolers at 3.1° C and 3.5° C.

Field Sample Number	Lab Sample ID	Date Collected
TT-TP1-M1-20160330	440-142922-1	03/30/2016
TT-TP1-M2-20160330	440-142922-2	03/30/2016
TT-TP1-M3-20160330	440-142922-3	03/30/2016
TT-TP2-M1-20160330	440-142922-4	03/30/2016
TT-TP2-M2-20160330	440-142922-5	03/30/2016

Data Verification and Validation Summary  
Data Validation Stage 2A

The following section is intended to specify areas evaluated and issues encountered. Only applicable methods are listed.

<b>1. Sample Preservation, Handling, and Transport</b>	
Were all samples preserved correctly? Were sample temperatures kept at 4°C (+ or – 2°C)? Were samples received in proper condition?	Yes/Yes/Yes

<b>2. Chain-of-Custody (COC)</b>	
Were samples recorded on the COCs? Were correct analyses performed on the samples?	Yes/Yes

<b>3. Holding Times</b>	
Were samples analyzed within acceptable holding times?	Yes

<b>4. Blanks</b>	
Does data package include a summary of blank results? Was a method blank extracted and/or analyzed for each batch? Were analytes detected in any blanks?	Yes/Yes/No

<b>5. Surrogates/Monitoring Compounds</b>	
Were samples spiked with the correct surrogate compounds? Were surrogate recoveries reported correctly on data forms? Were recoveries within laboratory limits?	Yes/Yes/Yes

<b>6. Matrix Spike/Matrix Spike Duplicate</b>	
Was a MS/MSD pair extracted and/or analyzed with each batch? Were recoveries/RPDs reported correctly on data forms? Were recoveries/RPDs within laboratory established limits?	Yes/Yes/No
<b>Method 6020:</b> The Chromium result from parent sample TT-TP1-M1-20160330 was qualified as estimated and assigned a “J-” qualifier.	
<b>Method 7199:</b> The Hexavalent Chromium result from parent sample TT-TP1-M1-20160330 was qualified as estimated and assigned a “J-” qualifier.	

<b>7. Laboratory Control Samples (LCS)</b>	
Was a LCS analyzed with each analytical batch? Were LCS recoveries reported correctly on data forms? Were LCS recoveries within laboratory established limits?	Yes/Yes/Yes

<b>8. Interference Check Sample (ICS)</b>	
Were interference check samples (ICS) analyzed at appropriate intervals? Were ICS recoveries within acceptable limits of the true value?	Yes

<b>9. Compound Quantitation and Reporting Limits</b>	
Were quantitation limits (RLs) adjusted to reflect dilutions, cleanup, and other factors? If applicable, were reporting limit check recoveries within acceptable limits? Were there detections below the reporting limit?	Yes/Yes/ No
<b>All:</b> Results detected above the MDL but below the reporting limit are estimated and qualified “J”. Please see the Qualifier Summary Report and the Reporting Limit Outlier Report in the ADR Output Appendix G1 for a complete list of “J” qualified samples due to being detected below the reporting limit.	

Data Verification and Validation Summary  
Data Validation Stage 2A

<b>10. Duplicates</b>	
Were any duplicate pairs analyzed in this SDG? Were RPDs between parent sample and duplicates $\leq$ lab limits or $\leq$ 30% for field duplicates?	No/NA

Validated by: Michael Wilson 04/20/2016

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Data Verification and Validation Summary  
Data Validation Stage 2A

Project Name: Soil Flushing Treatability Study  
 Project No.: 100-SBO-T35000-2016-M05  
 No. of Samples: 14

SDG/Report No.: 440-143078-1  
 Lab ID: Test America Irvine  
 Matrix: Water

Area Reviewed	Anomalies		Qualification Required	Action Required
	Yes	No	Yes or No	
1. Sample Preservation, Handling, and Transport		X	No	
2. Chain-of-Custody		X	No	
3. Holding Times		X	No	
4. Blanks		X	No	
5. Surrogates/Monitoring Compounds		X	No	
6. Matrix Spike/Matrix Spike Duplicate	X		Yes	If the matrix spikes and/or matrix spike duplicate was outside the control limits for parent sample TT-TP4-M3-20160331 the data was "J" qualified.
7. Laboratory Control Samples		X	No	
8. Interference Check Samples		X	No	
9. Compound Quantitation and Reporting Limits	X		Yes	All sample results below the reporting limit are "J" qualified.
10. Duplicates		X	No	
Verification and Validation Label	Stage_2A_Validation_Manual			
Verification and Validation Label Code	S2AVM			
<b>Overall Assessment:</b> Acceptable as qualified. Field QC samples checked for completeness only. <b>Usability:</b> Sample results qualified "J", estimated, are useable for limited purposes only. All other results are considered valid and useable for all purposes.				

Sample Information:  
Cooler Temperature:

Field Sample Number	Lab Sample ID	Date Collected
TT-TP3-M1-20160331	440-143078-1	03/31/16
TT-TP3-M2-20160331	440-143078-2	03/31/16
TT-TP4-M1-20160331	440-143078-3	03/31/16
TT-TP4-M2-20160331	440-143078-4	03/31/16
TT-TP4-M3-20160331	440-143078-5	03/31/16
TT-TP4-M3-20160331-DUP	440-143078-6	03/31/16
TT-TP4-L1-20160331	440-143078-7	03/31/16
TT-TP3-L1-20160331	440-143078-9	03/31/16
TT-TP3-L2-20160331	440-143078-10	03/31/16
TT-TP3-L1-20160331	440-143078-11	03/31/16



Data Verification and Validation Summary  
Data Validation Stage 2A

<b>Field Sample Number</b>	<b>Lab Sample ID</b>	<b>Date Collected</b>
TT-TP2-L2-20160331	440-143078-12	03/31/16
TT-TP1-L1-20160331	440-143078-13	03/31/16
TT-TP1-L2-20160331	440-143078-14	03/31/16

Data Verification and Validation Summary  
Data Validation Stage 2A

The following section is intended to specify areas evaluated and issues encountered. Only applicable methods are listed.

<b>1. Sample Preservation, Handling, and Transport</b>	
Were all samples preserved correctly? Were sample temperatures kept at 4°C (+ or – 2°C)? Were samples received in proper condition?	Yes/Yes/Yes

<b>2. Chain-of-Custody (COC)</b>	
Were samples recorded on the COCs? Were correct analyses performed on the samples?	Yes/Yes

<b>3. Holding Times</b>	
Were samples analyzed within acceptable holding times?	Yes

<b>4. Blanks</b>	
Does data package include a summary of blank results? Was a method blank extracted and/or analyzed for each batch? Were analytes detected in any blanks?	Yes/Yes/No

<b>5. Surrogates/Monitoring Compounds</b>	
Were samples spiked with the correct surrogate compounds? Were surrogate recoveries reported correctly on data forms? Were recoveries within laboratory limits?	Yes/Yes/Yes

<b>6. Matrix Spike/Matrix Spike Duplicate</b>	
Was a MS/MSD pair extracted and/or analyzed with each batch? Were recoveries/RPDs reported correctly on data forms? Were recoveries/RPDs within laboratory established limits?	Yes/Yes/No
<b>Method 314.0:</b> The Perchlorate result from parent sample TT-TP4-M3-20160331 was qualified as estimated and assigned a “J” qualifier.	
<b>Method 6020:</b> The Chromium result from parent sample TT-TP4-M3-20160331 was qualified as estimated and assigned a “J-” qualifier.	
<b>Method 7199:</b> The Hexavalent Chromium result from parent sample TT-TP4-M3-20160331 was qualified as estimated and assigned a “J-” qualifier.	

<b>7. Laboratory Control Samples (LCS)</b>	
Was a LCS analyzed with each analytical batch? Were LCS recoveries reported correctly on data forms? Were LCS recoveries within laboratory established limits?	Yes/Yes/Yes

<b>8. Interference Check Sample (ICS)</b>	
Were interference check samples (ICS) analyzed at appropriate intervals? Were ICS recoveries within acceptable limits of the true value?	Yes

<b>9. Compound Quantitation and Reporting Limits</b>	
Were quantitation limits (RLs) adjusted to reflect dilutions, cleanup, and other factors? If applicable, were reporting limit check recoveries within acceptable limits? Were there detections below the reporting limit?	Yes/Yes/Yes

Data Verification and Validation Summary  
Data Validation Stage 2A

**All:** Results detected above the MDL but below the reporting limit are estimated and qualified “J”. For a complete list of “J” qualified samples due to being detected below the reporting limit please see the Qualifier Summary Report and the Reporting Limit Outlier Report in the ADR Output in Appendix G1.

**10. Duplicates**

Were any duplicate pairs analyzed in this SDG? Were RPDs between parent sample and duplicates $\leq$ lab limits or $\leq$ 30% for field duplicates?	Yes/Yes
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Validated by: Michael Wilson 04/20/2016

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Data Verification and Validation Summary  
Data Validation Stage 2A

Project Name: Soil Flushing Treatability Study  
 Project No.: 100-SBO-T35000-2016-M05  
 No. of Samples: 5

SDG/Report No.: 440-143273-1  
 Lab ID: Test America Irvine  
 Matrix: Water

Area Reviewed	Anomalies		Qualification Required	Action Required
	Yes	No	Yes or No	
1. Sample Preservation, Handling, and Transport		X	No	
2. Chain-of-Custody		X	No	
3. Holding Times	X		Yes	A holding time violation occurred for sample TT-TP2-M2-2016. The sample data was "J" qualified.
4. Blanks		X	No	
5. Surrogates/Monitoring Compounds		X	No	
6. Matrix Spike/Matrix Spike Duplicate		X		
7. Laboratory Control Samples		X	No	
8. Interference Check Samples		X	No	
9. Compound Quantitation and Reporting Limits	X		Yes	All sample results below the reporting limit are "J" qualified.
10. Duplicates		X	No	

Verification and Validation Label	Stage_2A_Validation_Manual
Verification and Validation Label Code	S2AVM
<p><b>Overall Assessment:</b> Acceptable as qualified.                      Field QC samples checked for completeness only.  <b>Usability:</b> Sample results qualified "J", estimated, are useable for limited purposes only. All other results are considered valid and useable for all purposes.</p>	

Sample Information:

Cooler Temperature: Two coolers at receipt time were 3.0° C and 4.1° C.

Field Sample Number	Lab Sample ID	Date Collected
TT-TP1-M1-2016	440-143273-1	04/04/16
TT-TP1-M2-2016	440-143273-2	04/04/16
TT-TP1-M3-2016	440-143273-3	04/04/16
TT-TP2-M1-2016	440-143273-4	04/04/16
TT-TP2-M2-2016	440-143273-5	04/04/16

Data Verification and Validation Summary  
Data Validation Stage 2A

The following section is intended to specify areas evaluated and issues encountered. Only applicable methods are listed.

<b>1. Sample Preservation, Handling, and Transport</b>	
Were all samples preserved correctly? Were sample temperatures kept at 4°C (+ or – 2°C)? Were samples received in proper condition?	Yes/Yes/Yes

<b>2. Chain-of-Custody (COC)</b>	
Were samples recorded on the COCs? Were correct analyses performed on the samples?	Yes/Yes

<b>3. Holding Times</b>	
Were samples analyzed within acceptable holding times?	No
<b>Method 300.0:</b> Sample TT-TP2-M2-2016 was analyzed pass its acceptable holding time for Nitrate as N. Therefore, the sample result was qualified as estimated and assigned a “J-” qualifier.	

<b>4. Blanks</b>	
Does data package include a summary of blank results? Was a method blank extracted and/or analyzed for each batch? Were analytes detected in any blanks?	Yes/Yes/No

<b>5. Surrogates/Monitoring Compounds</b>	
Were samples spiked with the correct surrogate compounds? Were surrogate recoveries reported correctly on data forms? Were recoveries within laboratory limits?	Yes/Yes/Yes

<b>6. Matrix Spike/Matrix Spike Duplicate</b>	
Was a MS/MSD pair extracted and/or analyzed with each batch? Were recoveries/RPDs reported correctly on data forms? Were recoveries/RPDs within laboratory established limits?	Yes/Yes/Yes

<b>7. Laboratory Control Samples (LCS)</b>	
Was a LCS analyzed with each analytical batch? Were LCS recoveries reported correctly on data forms? Were LCS recoveries within laboratory established limits?	Yes/Yes/Yes

<b>8. Interference Check Sample (ICS)</b>	
Were interference check samples (ICS) analyzed at appropriate intervals? Were ICS recoveries within acceptable limits of the true value?	Yes

<b>9. Compound Quantitation and Reporting Limits</b>	
Were quantitation limits (RLs) adjusted to reflect dilutions, cleanup, and other factors? If applicable, were reporting limit check recoveries within acceptable limits? Were there detections below the reporting limit?	Yes/Yes/Yes

Data Verification and Validation Summary  
Data Validation Stage 2A

**All:** Results detected above the MDL but below the reporting limit are estimated and qualified “J”. For a complete list of “J” qualified samples due to being detected below the reporting limit please see the Qualifier Summary Report and the Reporting Limit Outlier Report in the ADR Output in Appendix G1.

**10. Duplicates**

Were any duplicate pairs analyzed in this SDG? Were RPDs between parent sample and duplicates $\leq$ lab limits or $\leq$ 30% for field duplicates?	No/NA
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Validated by: Michael Wilson 6/9/2016

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Data Verification and Validation Summary  
Data Validation Stage 2A

Project Name: Soil Flushing Treatability Study  
 Project No.: 100-SBO-T35000-2016-M05  
 No. of Samples: 15

SDG/Report No.: 440-143458-1  
 Lab ID: Test America Irvine  
 Matrix: Water

Area Reviewed	Anomalies		Qualification Required	Action Required
	Yes	No	Yes or No	
1. Sample Preservation, Handling, and Transport		X	No	
2. Chain-of-Custody		X	No	
3. Holding Times		X	No	
4. Blanks		X	No	
5. Surrogates/Monitoring Compounds		X	No	
6. Matrix Spike/Matrix Spike Duplicate	X		Yes	The parent sample TT-TP4-M3-20160405 data associated with the matrix spikes and/or matrix spike duplicates were "J" qualified.
7. Laboratory Control Samples		X	No	
8. Interference Check Samples		X	No	
9. Compound Quantitation and Reporting Limits	X		Yes	All sample results below the reporting limit are "J" qualified.
10. Duplicates	X		Yes	Parent sample TT-TP4-M3-20160405 relative percent difference to its respective duplicate sample was outside the control limit and was "J" or "UJ" qualified.

Verification and Validation Label	Stage_2A_Validation_Manual
Verification and Validation Label Code	S2AVM

**Overall Assessment:** Acceptable as qualified.  
 Field QC samples checked for completeness only.  
**Usability:** Sample results qualified "J", estimated, are useable for limited purposes only. All other results are considered valid and useable for all purposes.

Sample Information:

Cooler Temperature: Four coolers at receipt time were 3.2° C, 4.1° C, 4.5° C and 4.6° C.

Field Sample Number	Lab Sample ID	Date Collected
TT-TP3-M1-20160405	440-143458-1	04/06/16
TT-TP3-M2-20160405	440-143458-2	04/06/16
TT-TP4-M1-20160405	440-143458-3	04/06/16
TT-TP4-M2-20160405	440-143458-4	04/06/16
TT-TP4-M3-20160405	440-143458-5	04/06/16
TT-TP4-L2-20160331	440-143458-6	04/06/16
TT-TP4-M3-20160405-DUP	440-143458-7	04/06/16
TT-TP1-L1-20160405	440-143458-8	04/06/16
TT-TP1-L2-20160405	440-143458-9	04/06/16

Data Verification and Validation Summary  
Data Validation Stage 2A

<b>Field Sample Number</b>	<b>Lab Sample ID</b>	<b>Date Collected</b>
TT-TP2-L1-20160405	440-143458-10	04/06/16
TT-TP2-L2-20160405	440-143458-11	04/06/16
TT-TP3-L1-20160405	440-143458-12	04/06/16
TT-TP3-L2-20160405	440-143458-13	04/06/16
TT-TP4-L1-20160405	440-143458-14	04/06/16
TT-TP4-L2-20160405	440-143458-15	04/06/16



Data Verification and Validation Summary  
Data Validation Stage 2A

The following section is intended to specify areas evaluated and issues encountered. Only applicable methods are listed.

<b>1. Sample Preservation, Handling, and Transport</b>	
Were all samples preserved correctly? Were sample temperatures kept at 4°C (+ or – 2°C)? Were samples received in proper condition?	Yes/Yes/Yes

<b>2. Chain-of-Custody (COC)</b>	
Were samples recorded on the COCs? Were correct analyses performed on the samples?	Yes/Yes

<b>3. Holding Times</b>	
Were samples analyzed within acceptable holding times?	Yes

<b>4. Blanks</b>	
Does data package include a summary of blank results? Was a method blank extracted and/or analyzed for each batch? Were analytes detected in any blanks?	Yes/Yes/No

<b>5. Surrogates/Monitoring Compounds</b>	
Were samples spiked with the correct surrogate compounds? Were surrogate recoveries reported correctly on data forms? Were recoveries within laboratory limits?	Yes/Yes/Yes

<b>6. Matrix Spike/Matrix Spike Duplicate</b>	
Was a MS/MSD pair extracted and/or analyzed with each batch? Were recoveries/RPDs reported correctly on data forms? Were recoveries/RPDs within laboratory established limits?	Yes/Yes/No
<b>Method 300.0:</b> Parent sample TT-TP4-M3-20160405 was qualified as estimated Nitrogen as N (J), Chloride (J-), and Sulfate (J-).	
<b>Method 300.1B:</b> The Chlorate results from parent sample TT-TP4-M3-20160405 was qualified as estimated and assigned a “J+” qualifier.	
<b>Method 314.0:</b> The Perchlorate results from parent sample TT-TP4-M3-20160405 was qualified as estimated and assigned a “J-” qualifier.	
<b>Method SM5310B:</b> The Total organic carbon result from parent sample TT-TP4-M3-20160405 was qualified as estimated and assigned a “J” qualifier.	
<b>Method 6010B:</b> The Calcium, Sodium, and Magnesium results from parent sample TT-TP4-M3-20160405 were qualified as estimated and assigned “J+” qualifiers.	
<b>Method 6020:</b> The Chromium result from parent sample TT-TP4-M3-20160405 was qualified as estimated and assigned a “J” qualifier.	
<b>Method 7199:</b> The Chromium, hexavalent result from parent sample TT-TP4-M3-20160405 was qualified as estimated and assigned a “J-” qualifier.	

<b>7. Laboratory Control Samples (LCS)</b>	
Was a LCS analyzed with each analytical batch? Were LCS recoveries reported correctly on data forms? Were LCS recoveries within laboratory established limits?	Yes/Yes/Yes

Data Verification and Validation Summary  
Data Validation Stage 2A

<b>8. Interference Check Sample (ICS)</b>	
Were interference check samples (ICS) analyzed at appropriate intervals? Were ICS recoveries within acceptable limits of the true value?	Yes
<b>9. Compound Quantitation and Reporting Limits</b>	
Were quantitation limits (RLs) adjusted to reflect dilutions, cleanup, and other factors? If applicable, were reporting limit check recoveries within acceptable limits? Were there detections below the reporting limit?	Yes/Yes/Yes
<b>All:</b> Results detected above the MDL but below the reporting limit are estimated and qualified "J". For a complete list of "J" qualified samples due to being detected below the reporting limit please see the Qualifier Summary Report and the Reporting Limit Outlier Report in the ADR Output in Appendix G1.	
<b>10. Duplicates</b>	
Were any duplicate pairs analyzed in this SDG? Were RPDs between parent sample and duplicates $\leq$ lab limits or $\leq$ 30% for field duplicates?	Yes/No
<b>Method 6010B:</b> The Iron result from parent sample TT-TP4-M3-20160405 was qualified as estimated undetected and assigned a "J" qualifier.	
<b>Method 6020:</b> The Selenium result from parent sample TT-TP4-M3-20160405 was qualified as estimated undetected and assigned a "UJ" qualifier.	

Validated by: Michael Wilson 6/9/2016

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Data Verification and Validation Summary  
Data Validation Stage 2A

Project Name: Soil Flushing Treatability Study  
 Project No.: 100-SBO-T35000-2016-M05  
 No. of Samples: 3

SDG/Report No.: 440-144411-1  
 Lab ID: Test America Irvine  
 Matrix: Water

Area Reviewed	Anomalies		Qualification Required	Action Required
	Yes	No	Yes or No	
1. Sample Preservation, Handling, and Transport		X	No	
2. Chain-of-Custody		X	No	
3. Holding Times		X	No	
4. Blanks		X	No	
5. Surrogates/Monitoring Compounds		X	No	
6. Matrix Spike/Matrix Spike Duplicate	X		Yes	The matrix spikes and/or matrix spike duplicate was outside the control limits for parent sample TT-TP1-M1-20160413. Therefore, the data was "J" qualified.
7. Laboratory Control Samples		X	No	
8. Interference Check Samples		X	No	
9. Compound Quantitation and Reporting Limits		X	No	
10. Duplicates		X	No	

Verification and Validation Label	Stage_2A_Validation_Manual
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Verification and Validation Label Code	S2AVM
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**Overall Assessment:** Acceptable as qualified.  
 Field QC samples checked for completeness only.  
**Usability:** Sample results qualified "J", estimated, are useable for limited purposes only. All other results are considered valid and useable for all purposes.

Sample Information:

Cooler Temperature: One cooler at receipt was 2.6° C.

Field Sample Number	Lab Sample ID	Date Collected
TT-TP1-M1-20160413	440-144411-1	4/13/16
TT-TP1-M2-20160413	440-144411-2	4/13/16
TT-TP1-M3-20160413	440-144411-3	4/13/16

Data Verification and Validation Summary  
Data Validation Stage 2A

The following section is intended to specify areas evaluated and issues encountered. Only applicable methods are listed.

<b>1. Sample Preservation, Handling, and Transport</b>	
Were all samples preserved correctly? Were sample temperatures kept at 4°C (+ or – 2°C)? Were samples received in proper condition?	Yes/Yes/Yes

<b>2. Chain-of-Custody (COC)</b>	
Were samples recorded on the COCs? Were correct analyses performed on the samples?	Yes/Yes

<b>3. Holding Times</b>	
Were samples analyzed within acceptable holding times?	Yes

<b>4. Blanks</b>	
Does data package include a summary of blank results? Was a method blank extracted and/or analyzed for each batch? Were analytes detected in any blanks?	Yes/Yes/No

<b>5. Surrogates/Monitoring Compounds</b>	
Were samples spiked with the correct surrogate compounds? Were surrogate recoveries reported correctly on data forms? Were recoveries within laboratory limits?	Yes/Yes/Yes

<b>6. Matrix Spike/Matrix Spike Duplicate</b>	
Was a MS/MSD pair extracted and/or analyzed with each batch? Were recoveries/RPDs reported correctly on data forms? Were recoveries/RPDs within laboratory established limits?	Yes/Yes/No
<b>Method 7199:</b> The Chromium, hexavalent result from parent sample TT-TP1-M1-20160413 was qualified as estimated and assigned a “J-” qualifier.	

<b>7. Laboratory Control Samples (LCS)</b>	
Was a LCS analyzed with each analytical batch? Were LCS recoveries reported correctly on data forms? Were LCS recoveries within laboratory established limits?	Yes/Yes/Yes

<b>8. Interference Check Sample (ICS)</b>	
Were interference check samples (ICS) analyzed at appropriate intervals? Were ICS recoveries within acceptable limits of the true value?	Yes

<b>9. Compound Quantitation and Reporting Limits</b>	
Were quantitation limits (RLs) adjusted to reflect dilutions, cleanup, and other factors? If applicable, were reporting limit check recoveries within acceptable limits? Were there detections below the reporting limit?	Yes/Yes/No

Data Verification and Validation Summary  
Data Validation Stage 2A

**All:** Results detected above the MDL but below the reporting limit are estimated and qualified “J”. For a complete list of “J” qualified samples due to being detected below the reporting limit please see the Qualifier Summary Report and the Reporting Limit Outlier Report in the ADR Output in Appendix G1.

**10. Duplicates**

Were any duplicate pairs analyzed in this SDG? Were RPDs between parent sample and duplicates $\leq$ lab limits or $\leq$ 30% for field duplicates?	No/NA
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Validated by: Michael Wilson 06/07/2016

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Data Verification and Validation Summary  
Data Validation Stage 2A

Project Name: Soil Flushing Treatability Study  
 Project No.: 100-SBO-T35000-2016-M05  
 No. of Samples: 6

SDG/Report No.: 440-145020-1  
 Lab ID: Test America Irvine  
 Matrix: Water

Area Reviewed	Anomalies		Qualification Required	Action Required
	Yes	No	Yes or No	
1. Sample Preservation, Handling, and Transport		X	No	
2. Chain-of-Custody		X	No	
3. Holding Times	X		Yes	A holding time violation occurred for one of the samples TT-TP4-M2-20160420. Therefore, the sample data associated with a holding time violation were "J" qualified.
4. Blanks		X	No	
5. Surrogates/Monitoring Compounds		X	No	
6. Matrix Spike/Matrix Spike Duplicate	X		Yes	The matrix spikes and/or matrix spike duplicate was outside the control limits for parent sample TT-TP4-M3-20160420. Therefore, the data was "J" qualified.
7. Laboratory Control Samples		X	No	
8. Interference Check Samples		X	No	
9. Compound Quantitation and Reporting Limits		X	No	
10. Duplicates		X	No	
Verification and Validation Label	Stage_2A_Validation_Manual			
Verification and Validation Label Code	S2AVM			
<b>Overall Assessment:</b> Acceptable as qualified. Field QC samples checked for completeness only. <b>Usability:</b> Sample results qualified "J", estimated, are useable for limited purposes only. All other results are considered valid and useable for all purposes.				

Sample Information:

Cooler Temperature: 6 coolers at receipt time were 1.4° C, 1.5° C, 1.7° C, 1.9° C, 2.4° C and 2.5° C.

Field Sample Number	Lab Sample ID	Date Collected
TT-TP3-M1-20160420	440-145020-1	04/20/16
TT-TP3-M2-20160420	440-145020-2	04/20/16
TT-TP4-M1-20160420	440-145020-3	04/20/16
TT-TP4-M2-20160420	440-145020-4	04/20/16
TT-TP4-M3-20160420	440-145020-5	04/20/16
TT-TP4-M3-20160420-DUP	440-145020-6	04/20/16

Data Verification and Validation Summary  
Data Validation Stage 2A

The following section is intended to specify areas evaluated and issues encountered. Only applicable methods are listed.

<b>1. Sample Preservation, Handling, and Transport</b>	
Were all samples preserved correctly? Were sample temperatures kept at 4°C (+ or – 2°C)? Were samples received in proper condition?	Yes/Yes/Yes

<b>2. Chain-of-Custody (COC)</b>	
Were samples recorded on the COCs? Were correct analyses performed on the samples?	Yes/Yes

<b>3. Holding Times</b>	
Were samples analyzed within acceptable holding times?	No
<b>Method 7199:</b> Sample TT-TP4-M2-20160420 was analyzed pass the acceptable holding time for Hexavalent Chromium. Therefore, the sample result was qualified as estimated and assigned a “J-” qualifier.	

<b>4. Blanks</b>	
Does data package include a summary of blank results? Was a method blank extracted and/or analyzed for each batch? Were analytes detected in any blanks?	Yes/Yes/No

<b>5. Surrogates/Monitoring Compounds</b>	
Were samples spiked with the correct surrogate compounds? Were surrogate recoveries reported correctly on data forms? Were recoveries within laboratory limits?	Yes/Yes/Yes

<b>6. Matrix Spike/Matrix Spike Duplicate</b>	
Was a MS/MSD pair extracted and/or analyzed with each batch? Were recoveries/RPDs reported correctly on data forms? Were recoveries/RPDs within laboratory established limits?	Yes/Yes/No
<b>Method 7199:</b> The Chromium, hexavalent result from parent sample TT-TP4-M3-20160420 was qualified as estimated and assigned a “J-” qualifier.	
<b>Method 6020:</b> The Chromium result from parent sample TT-TP4-M3-20160420 was qualified as estimated and assigned a “J-” qualifier.	
<b>Method 314.0:</b> The Perchlorate result from parent sample TT-TP4-M3-20160420 was qualified as estimated and assigned a “J+” qualifier.	

<b>7. Laboratory Control Samples (LCS)</b>	
Was a LCS analyzed with each analytical batch? Were LCS recoveries reported correctly on data forms? Were LCS recoveries within laboratory established limits?	Yes/Yes/Yes

<b>8. Interference Check Sample (ICS)</b>	
Were interference check samples (ICS) analyzed at appropriate intervals? Were ICS recoveries within acceptable limits of the true value?	Yes

Data Verification and Validation Summary  
Data Validation Stage 2A

<b>9. Compound Quantitation and Reporting Limits</b>	
Were quantitation limits (RLs) adjusted to reflect dilutions, cleanup, and other factors? If applicable, were reporting limit check recoveries within acceptable limits? Were there detections below the reporting limit?	Yes/Yes/No
<b>All:</b> Results detected above the MDL but below the reporting limit are estimated and qualified "J". For a complete list of "J" qualified samples due to being detected below the reporting limit please see the Qualifier Summary Report and the Reporting Limit Outlier Report in the ADR Output in Appendix G1.	

<b>10. Duplicates</b>	
Were any duplicate pairs analyzed in this SDG? Were RPDs between parent sample and duplicates $\leq$ lab limits or $\leq$ 30% for field duplicates?	Yes/Yes

Validated by: Michael Wilson 6/7/2016

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Data Verification and Validation Summary  
Data Validation Stage 2A

Project Name: Soil Flushing Treatability Study  
 Project No.: 100-SBO-T35000-2016-M05  
 No. of Samples: 8

SDG/Report No.: 440-145023-1  
 Lab ID: Test America Irvine  
 Matrix: Water

Area Reviewed	Anomalies		Qualification Required	Action Required
	Yes	No	Yes or No	
1. Sample Preservation, Handling, and Transport		X	No	
2. Chain-of-Custody		X	No	
3. Holding Times		X	No	
4. Blanks		X	No	
5. Surrogates/Monitoring Compounds		X	No	
6. Matrix Spike/Matrix Spike Duplicate		X	No	
7. Laboratory Control Samples		X	No	
8. Interference Check Samples		X	No	
9. Compound Quantitation and Reporting Limits	X		Yes	All sample results below the reporting limit are "J" qualified.
10. Duplicates		X	No	
Verification and Validation Label	Stage_2A_Validation_Manual			
Verification and Validation Label Code	S2AVM			
<b>Overall Assessment:</b> Acceptable as qualified. Field QC samples checked for completeness only. <b>Usability:</b> Sample results qualified "J", estimated, are useable for limited purposes only. All other results are considered valid and useable for all purposes.				

Sample Information:

Cooler Temperature: The temperature of the coolers at receipt was 2.5 C.

Lab Sample ID	Field Sample Number	Date Collected
440-145023-1	TT-TP1-L2-20160420	4/20/16
440-145023-2	TT-TP1-L2-20160420	4/20/16
440-145023-3	TT-TP2-L1-20160420	4/20/16
440-145023-4	TT-TP2-L2-20160420	4/20/16
440-145023-5	TT-TP3-L1-20160420	4/20/16
440-145023-6	TT-TP3-L2-20160420	4/20/16
440-145023-7	TT-TP4-L1-20160420	4/20/16
440-145023-8	TT-TP4-L2-20160420	4/20/16

Data Verification and Validation Summary  
Data Validation Stage 2A

The following section is intended to specify areas evaluated and issues encountered. Only applicable methods are listed.

<b>1. Sample Preservation, Handling, and Transport</b>	
Were all samples preserved correctly? Were sample temperatures kept at 4°C (+ or – 2°C)? Were samples received in proper condition?	Yes/Yes/Yes

<b>2. Chain-of-Custody (COC)</b>	
Were samples recorded on the COCs? Were correct analyses performed on the samples?	Yes/Yes

<b>3. Holding Times</b>	
Were samples analyzed within acceptable holding times?	Yes

<b>4. Blanks</b>	
Does data package include a summary of blank results? Was a method blank extracted and/or analyzed for each batch? Were analytes detected in any blanks?	Yes/Yes/No

<b>5. Surrogates/Monitoring Compounds</b>	
Were samples spiked with the correct surrogate compounds? Were surrogate recoveries reported correctly on data forms? Were recoveries within laboratory limits?	Yes/Yes/Yes

<b>6. Matrix Spike/Matrix Spike Duplicate</b>	
Was a MS/MSD pair extracted and/or analyzed with each batch? Were recoveries/RPDs reported correctly on data forms? Were recoveries/RPDs within laboratory established limits?	Yes/Yes/Yes

<b>7. Laboratory Control Samples (LCS)</b>	
Was a LCS analyzed with each analytical batch? Were LCS recoveries reported correctly on data forms? Were LCS recoveries within laboratory established limits?	Yes/Yes/Yes

<b>8. Interference Check Sample (ICS)</b>	
Were interference check samples (ICS) analyzed at appropriate intervals? Were ICS recoveries within acceptable limits of the true value?	Yes

<b>9. Compound Quantitation and Reporting Limits</b>	
Were quantitation limits (RLs) adjusted to reflect dilutions, cleanup, and other factors? If applicable, were reporting limit check recoveries within acceptable limits? Were there detections below the reporting limit?	Yes/Yes/Yes
<b>All:</b> Results detected above the MDL but below the reporting limit are estimated and qualified “J”. For a complete list of “J” qualified samples due to being detected below the reporting limit please see the Qualifier Summary Report and the Reporting Limit Outlier Report in the ADR Output in Appendix G1.	

Data Verification and Validation Summary  
Data Validation Stage 2A

<b>10. Duplicates</b>	
Were any duplicate pairs analyzed in this SDG? Were RPDs between parent sample and duplicates $\leq$ lab limits or $\leq$ 30% for field duplicates?	No/NA

Validated by: Michael Wilson 06/08/2016

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Data Verification and Validation Summary  
Data Validation Stage 2A

Project Name: Soil Flushing Treatability Study  
 Project No.: 100-SBO-T35000-2016-M05  
 No. of Samples: 11

SDG/Report No.: 440-145639-1  
 Lab ID: Test America Irvine  
 Matrix: Water

Area Reviewed	Anomalies		Qualification Required	Action Required
	Yes	No	Yes or No	
1. Sample Preservation, Handling, and Transport		X	No	
2. Chain-of-Custody		X	No	
3. Holding Times		X	No	
4. Blanks		X	No	
5. Surrogates/Monitoring Compounds		X	No	
6. Matrix Spike/Matrix Spike Duplicate	X		Yes	The matrix spikes and/or matrix spike duplicate was outside the control limits for parent TT-TP4-M3-20160427. Therefore, the data was "J" qualified.
7. Laboratory Control Samples		X	No	
8. Interference Check Samples		X	No	
9. Compound Quantitation and Reporting Limits		X	No	
10. Duplicates		X	No	

Verification and Validation Label	Stage_2A_Validation_Manual
Verification and Validation Label Code	S2AVM

**Overall Assessment:** Acceptable as qualified.  
 Field QC samples checked for completeness only.  
**Usability:** Sample results qualified "J", estimated, are useable for limited purposes only. All other results are considered valid and useable for all purposes.

Sample Information:

Cooler Temperature: Three coolers at receipt time were 1.6° C, 1.9° C and 2.1° C.

Lab Sample ID	Field Sample Number	Date Collected
440-145639-1	TT-TP1-M1-20160427	04/27/16
440-145639-2	TT-TP1-M2-20160427	04/27/16
440-145639-3	TT-TP1-M3-20160427	04/27/16
440-145639-4	TT-TP2-M1-20160427	04/27/16
440-145639-5	TT-TP2-M2-20160427	04/27/16
440-145639-6	TT-TP3-M1--20160427	04/27/16
440-145639-7	TT-TP3-M2-20160427	04/27/16
440-145639-8	TT-TP4-M1-20160427	04/27/16
440-145639-9	TT-TP4-M2-20160427	04/27/16
440-145639-10	TT-TP4-M3-20160427	04/27/16
440-145639-11	TT-TP4-M3-20160427-DUP	04/27/16

Data Verification and Validation Summary  
Data Validation Stage 2A

The following section is intended to specify areas evaluated and issues encountered. Only applicable methods are listed.

<b>1. Sample Preservation, Handling, and Transport</b>	
Were all samples preserved correctly? Were sample temperatures kept at 4°C (+ or – 2°C)? Were samples received in proper condition?	Yes/Yes/Yes

<b>2. Chain-of-Custody (COC)</b>	
Were samples recorded on the COCs? Were correct analyses performed on the samples?	Yes/Yes

<b>3. Holding Times</b>	
Were samples analyzed within acceptable holding times?	Yes

<b>4. Blanks</b>	
Does data package include a summary of blank results? Was a method blank extracted and/or analyzed for each batch? Were analytes detected in any blanks?	Yes/Yes/No

<b>5. Surrogates/Monitoring Compounds</b>	
Were samples spiked with the correct surrogate compounds? Were surrogate recoveries reported correctly on data forms? Were recoveries within laboratory limits?	Yes/Yes/Yes

<b>6. Matrix Spike/Matrix Spike Duplicate</b>	
Was a MS/MSD pair extracted and/or analyzed with each batch? Were recoveries/RPDs reported correctly on data forms? Were recoveries/RPDs within laboratory established limits?	Yes/Yes/No
<b>Method 7199:</b> The Chromium, hexavalent result from parent sample TT-TP4-M3-20160427 was qualified as estimated and assigned a “J-” qualifier.	
<b>Method 314.0:</b> The Perchlorate result from parent sample TT-TP4-M3-20160427 was qualified as estimated and assigned a “J” qualifier.	
<b>Method 6020:</b> The Chromium result from parent sample TT-TP4-M3-20160427 was qualified as estimated and assigned a “J-” qualifier.	

<b>7. Laboratory Control Samples (LCS)</b>	
Was a LCS analyzed with each analytical batch? Were LCS recoveries reported correctly on data forms? Were LCS recoveries within laboratory established limits?	Yes/Yes/Yes

<b>8. Interference Check Sample (ICS)</b>	
Were interference check samples (ICS) analyzed at appropriate intervals? Were ICS recoveries within acceptable limits of the true value?	Yes

<b>9. Compound Quantitation and Reporting Limits</b>	
Were quantitation limits (RLs) adjusted to reflect dilutions, cleanup, and other factors? If applicable, were reporting limit check recoveries within acceptable limits? Were there detections below the reporting limit?	Yes/Yes/No

Data Verification and Validation Summary  
Data Validation Stage 2A

**All:** Results detected above the MDL but below the reporting limit are estimated and qualified “J”. For a complete list of “J” qualified samples due to being detected below the reporting limit please see the Qualifier Summary Report and the Reporting Limit Outlier Report in the ADR Output in Appendix G1.

**10. Duplicates**

Were any duplicate pairs analyzed in this SDG? Were RPDs between parent sample and duplicates $\leq$ lab limits or $\leq$ 30% for field duplicates?	Yes/Yes
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Validated by: Michael Wilson 06/08/2016

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Data Verification and Validation Summary  
Data Validation Stage 2A

Project Name: Soil Flushing Treatability Study  
 Project No.: 100-SBO-T35000-2016-M05  
 No. of Samples: 8

SDG/Report No.: 440-145766-1  
 Lab ID: Test America Irvine  
 Matrix: Water

Area Reviewed	Anomalies		Qualification Required	Action Required
	Yes	No	Yes or No	
1. Sample Preservation, Handling, and Transport		X	No	
2. Chain-of-Custody		X	No	
3. Holding Times		X	No	
4. Blanks		X	No	
5. Surrogates/Monitoring Compounds		X	No	
6. Matrix Spike/Matrix Spike Duplicate		X	No	
7. Laboratory Control Samples		X	No	
8. Interference Check Samples		X	No	
9. Compound Quantitation and Reporting Limits	X		Yes	All sample results below the reporting limit are "J" qualified.
10. Duplicates		X	No	
Verification and Validation Label	Stage_2A_Validation_Manual			
Verification and Validation Label Code	S2AVM			
<b>Overall Assessment:</b> Acceptable as qualified. Field QC samples checked for completeness only. <b>Usability:</b> Sample results qualified "J", estimated, are useable for limited purposes only. All other results are considered valid and useable for all purposes.				

Sample Information:

Cooler Temperature: Three coolers at receipt time were 1.3° C, 2.1° C and 3.9° C.

Lab Sample ID	Field Sample Number	Date Collected
440-145766-1	TT-TP1-L1-20160428	04/28/16
440-145766-2	TT-TP1-L2-20160428	04/28/16
440-145766-3	TT-TP2-L1-20160428	04/28/16
440-145766-4	TT-TP2-L2-20160428	04/28/16
440-145766-5	TT-TP3-L1-20160428	04/28/16
440-145766-6	TT-TP3-L2-20160428	04/28/16
440-145766-7	TT-TP4-L1-20160428	04/28/16
440-145766-8	TT-TP4-L2-20160428	04/28/16

Data Verification and Validation Summary  
Data Validation Stage 2A

The following section is intended to specify areas evaluated and issues encountered. Only applicable methods are listed.

<b>1. Sample Preservation, Handling, and Transport</b>	
Were all samples preserved correctly? Were sample temperatures kept at 4°C (+ or – 2°C)? Were samples received in proper condition?	Yes/Yes/Yes

<b>2. Chain-of-Custody (COC)</b>	
Were samples recorded on the COCs? Were correct analyses performed on the samples?	Yes/Yes

<b>3. Holding Times</b>	
Were samples analyzed within acceptable holding times?	Yes

<b>4. Blanks</b>	
Does data package include a summary of blank results? Was a method blank extracted and/or analyzed for each batch? Were analytes detected in any blanks?	Yes/Yes/No

<b>5. Surrogates/Monitoring Compounds</b>	
Were samples spiked with the correct surrogate compounds? Were surrogate recoveries reported correctly on data forms? Were recoveries within laboratory limits?	Yes/Yes/Yes

<b>6. Matrix Spike/Matrix Spike Duplicate</b>	
Was a MS/MSD pair extracted and/or analyzed with each batch? Were recoveries/RPDs reported correctly on data forms? Were recoveries/RPDs within laboratory established limits?	Yes/Yes/Yes

<b>7. Laboratory Control Samples (LCS)</b>	
Was a LCS analyzed with each analytical batch? Were LCS recoveries reported correctly on data forms? Were LCS recoveries within laboratory established limits?	Yes/Yes/Yes

<b>8. Interference Check Sample (ICS)</b>	
Were interference check samples (ICS) analyzed at appropriate intervals? Were ICS recoveries within acceptable limits of the true value?	Yes

<b>9. Compound Quantitation and Reporting Limits</b>	
Were quantitation limits (RLs) adjusted to reflect dilutions, cleanup, and other factors? If applicable, were reporting limit check recoveries within acceptable limits? Were there detections below the reporting limit?	Yes/Yes/Yes
<b>All:</b> Results detected above the MDL but below the reporting limit are estimated and qualified “J”. For a complete list of “J” qualified samples due to being detected below the reporting limit please see the Qualifier Summary Report and the Reporting Limit Outlier Report in the ADR Output in Appendix G1.	



Data Verification and Validation Summary  
Data Validation Stage 2A

<b>10. Duplicates</b>	
Were any duplicate pairs analyzed in this SDG? Were RPDs between parent sample and duplicates $\leq$ lab limits or $\leq$ 30% for field duplicates?	No/NA

Validated by: Michael Wilson 06/08/2016

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Data Verification and Validation Summary  
Data Validation Stage 2A

Project Name: Soil Flushing Treatability Study  
 Project No.: 100-SBO-T35000-2016-M05  
 No. of Samples: 4

SDG/Report No.: 440-146375-1  
 Lab ID: Test America Irvine  
 Matrix: Water

Area Reviewed	Anomalies		Qualification Required	Action Required
	Yes	No	Yes or No	
1. Sample Preservation, Handling, and Transport		X	No	
2. Chain-of-Custody		X	No	
3. Holding Times		X	No	
4. Blanks		X	No	
5. Surrogates/Monitoring Compounds		X	No	
6. Matrix Spike/Matrix Spike Duplicate	X		Yes	The matrix spikes and/or matrix spike duplicate was outside the control limits for parent samples TT-TP1-M1-20160504 and TT-TP1-M2-20160504. Therefore, the data was "J" qualified.
7. Laboratory Control Samples		X	No	
8. Interference Check Samples		X	No	
9. Compound Quantitation and Reporting Limits	X		Yes	All sample results below the reporting limit are "J" qualified.
10. Duplicates		X	No	

Verification and Validation Label	Stage_2A_Validation_Manual
Verification and Validation Label Code	S2AVM
<p><b>Overall Assessment:</b> Acceptable as qualified.          Field QC samples checked for completeness only.  <b>Usability:</b> Sample results qualified "J", estimated, are useable for limited purposes only. All other results are considered valid and useable for all purposes.</p>	

Sample Information:

Cooler Temperature: Four coolers at receipt time were 1.2° C, 3.6° C, 4.1° C and 4.5° C.

Field Sample Number	Lab Sample ID	Date Collected
440-146375-1	TT-TP1-M1-20160504	05/04/16
440-146375-2	TT-TP1-M2-20160504	05/04/16
440-146375-3	TT-TP1-M3-20160504	05/04/16
440-146375-4	TT-TP2-M1-20160504	05/04/16

Data Verification and Validation Summary  
Data Validation Stage 2A

The following section is intended to specify areas evaluated and issues encountered. Only applicable methods are listed.

<b>1. Sample Preservation, Handling, and Transport</b>	
Were all samples preserved correctly? Were sample temperatures kept at 4°C (+ or – 2°C)? Were samples received in proper condition?	Yes/Yes/Yes

<b>2. Chain-of-Custody (COC)</b>	
Were samples recorded on the COCs? Were correct analyses performed on the samples?	Yes/Yes

<b>3. Holding Times</b>	
Were samples analyzed within acceptable holding times?	Yes

<b>4. Blanks</b>	
Does data package include a summary of blank results? Was a method blank extracted and/or analyzed for each batch? Were analytes detected in any blanks?	Yes/Yes/No

<b>5. Surrogates/Monitoring Compounds</b>	
Were samples spiked with the correct surrogate compounds? Were surrogate recoveries reported correctly on data forms? Were recoveries within laboratory limits?	Yes/Yes/Yes

<b>6. Matrix Spike/Matrix Spike Duplicate</b>	
Was a MS/MSD pair extracted and/or analyzed with each batch? Were recoveries/RPDs reported correctly on data forms? Were recoveries/RPDs within laboratory established limits?	Yes/Yes/No
<b>Method 6010B:</b> Parent sample TT-TP1-M2-20160504 was qualified as estimated Calcium (J+), Magnesium (J+), and Sodium (J).	
<b>Method 6020:</b> The Chromium result from parent sample TT-TP1-M1-20160504 was qualified as estimated and assigned a “J-” qualifier.	

<b>7. Laboratory Control Samples (LCS)</b>	
Was a LCS analyzed with each analytical batch? Were LCS recoveries reported correctly on data forms? Were LCS recoveries within laboratory established limits?	Yes/Yes/Yes

<b>8. Interference Check Sample (ICS)</b>	
Were interference check samples (ICS) analyzed at appropriate intervals? Were ICS recoveries within acceptable limits of the true value?	Yes

<b>9. Compound Quantitation and Reporting Limits</b>	
Were quantitation limits (RLs) adjusted to reflect dilutions, cleanup, and other factors? If applicable, were reporting limit check recoveries within acceptable limits? Were there detections below the reporting limit?	Yes/Yes/Yes

Data Verification and Validation Summary  
Data Validation Stage 2A

**All:** Results detected above the MDL but below the reporting limit are estimated and qualified “J”. For a complete list of “J” qualified samples due to being detected below the reporting limit please see the Qualifier Summary Report and the Reporting Limit Outlier Report in the ADR Output in Appendix G1.

**10. Duplicates**

Were any duplicate pairs analyzed in this SDG? Were RPDs between parent sample and duplicates $\leq$ lab limits or $\leq$ 30% for field duplicates?	No/NA
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Validated by: Michael Wilson 06/08/2016

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Data Verification and Validation Summary  
Data Validation Stage 2A

Project Name: Soil Flushing Treatability Study  
 Project No.: 100-SBO-T35000-2016-M05  
 No. of Samples: 14

SDG/Report No.: 440-146524-1  
 Lab ID: Test America Irvine  
 Matrix: Water

Area Reviewed	Anomalies		Qualification Required	Action Required
	Yes	No	Yes or No	
1. Sample Preservation, Handling, and Transport		X	No	
2. Chain-of-Custody		X	No	
3. Holding Times	X		Yes	A holding time violation occurred for samples TT-TP3-M2-20160505, and TT-TP2-M2-20160505. Therefore, the samples data associated with a holding time violation were "J" qualified.
4. Blanks		X	No	
5. Surrogates/Monitoring Compounds		X	No	
6. Matrix Spike/Matrix Spike Duplicate	X		Yes	The matrix spikes and/or matrix spike duplicate was outside the control limits for parent sample TT-TP4-M3-20160505. Therefore, the data was "J" qualified.
7. Laboratory Control Samples		X	No	
8. Interference Check Samples		X	No	
9. Compound Quantitation and Reporting Limits	X		Yes	All sample results below the reporting limit are "J" qualified.
10. Duplicates		X	No	
Verification and Validation Label	Stage_2A_Validation_Manual			
Verification and Validation Label Code	S2AVM			
<b>Overall Assessment:</b> Acceptable as qualified. Field QC samples checked for completeness only. <b>Usability:</b> Sample results qualified "J", estimated, are useable for limited purposes only. All other results are considered valid and useable for all purposes.				

Sample Information:

Cooler Temperature: Four coolers at receipt time were 0.7° C, 1.6° C, 2.1° C and 3.0° C.

Lab Sample ID	Field Sample Number	Date Collected
440-146524-1	TT-TP2-M2-20160505	05/05/16
440-146524-2	TT-TP3-M2-20160505	05/05/16
440-146524-3	TT-TP3-M1-20160505	05/05/16
440-146524-4	TT-TP4-M1-20160505	05/05/16
440-146524-5	TT-TP4-M2-20160505	05/05/16
440-146524-6	TT-TP4-M3-20160505	05/05/16
440-146524-7	TT-TP2-L2-20160505	05/05/16

Data Verification and Validation Summary  
Data Validation Stage 2A

<b>Lab Sample ID</b>	<b>Field Sample Number</b>	<b>Date Collected</b>
440-146524-8	TT-TP2-L1-20160505	05/05/16
440-146524-9	TT-TP3-L2-20160505	05/05/16
440-146524-10	TT-TP3-L1-20160505	05/05/16
440-146524-11	TT-TP4-L2-20160505	05/05/16
440-146524-12	TT-TP4-L1-20160505	05/05/16
440-146524-13	TT-TP1-L1-20160505	05/05/16
440-146524-14	TT-TP1-L2-20160505	05/05/16

Data Verification and Validation Summary  
Data Validation Stage 2A

The following section is intended to specify areas evaluated and issues encountered. Only applicable methods are listed.

<b>1. Sample Preservation, Handling, and Transport</b>	
Were all samples preserved correctly? Were sample temperatures kept at 4°C (+ or – 2°C)? Were samples received in proper condition?	Yes/Yes/Yes

<b>2. Chain-of-Custody (COC)</b>	
Were samples recorded on the COCs? Were correct analyses performed on the samples?	Yes/Yes

<b>3. Holding Times</b>	
Were samples analyzed within acceptable holding times?	No
<b>Method 7199:</b> Samples TT-TP2-M2-20160505, and TT-TP3-M2-20160505 were analyzed pass the acceptable holding time for Hexavalent Chromium. Therefore, the samples results were qualified as estimated and assigned a “J” qualifier.	

<b>4. Blanks</b>	
Does data package include a summary of blank results? Was a method blank extracted and/or analyzed for each batch? Were analytes detected in any blanks?	Yes/Yes/No

<b>5. Surrogates/Monitoring Compounds</b>	
Were samples spiked with the correct surrogate compounds? Were surrogate recoveries reported correctly on data forms? Were recoveries within laboratory limits?	Yes/Yes/Yes

<b>6. Matrix Spike/Matrix Spike Duplicate</b>	
Was a MS/MSD pair extracted and/or analyzed with each batch? Were recoveries/RPDs reported correctly on data forms? Were recoveries/RPDs within laboratory established limits?	Yes/Yes/No
<b>Method 300.0:</b> The Nitrate as N, Chloride, and Sulfate results from parent sample TT-TP4-M3-20160505 were qualified as estimated and assigned a “J-” qualifier.	
<b>Method 300.1B:</b> The Chlorate result from parent sample TT-TP4-M3-20160505 was qualified as estimated and assigned a “J” qualifier.	
<b>Method 314.0:</b> The Perchlorate result from parent sample TT-TP4-M3-20160505 was qualified as estimated and assigned a “J-” qualifier.	
<b>Method 6010B:</b> The Magnesium, Boron, Calcium, Potassium, and Sodium results from parent sample TT-TP4-M3-20160505 were qualified as estimated and assigned a “J-” qualifier.	
<b>Method 6020:</b> The Arsenic and Chromium results from parent sample TT-TP4-M3-20160505 were qualified as estimated and assigned a “J+” qualifier.	

<b>7. Laboratory Control Samples (LCS)</b>	
Was a LCS analyzed with each analytical batch? Were LCS recoveries reported correctly on data forms? Were LCS recoveries within laboratory established limits?	Yes/Yes/Yes

<b>8. Interference Check Sample (ICS)</b>	
Were interference check samples (ICS) analyzed at appropriate intervals? Were ICS recoveries within acceptable limits of the true value?	Yes

Data Verification and Validation Summary  
Data Validation Stage 2A

<b>9. Compound Quantitation and Reporting Limits</b>	
Were quantitation limits (RLs) adjusted to reflect dilutions, cleanup, and other factors? If applicable, were reporting limit check recoveries within acceptable limits? Were there detections below the reporting limit?	Yes/Yes/Yes
<b>All:</b> Results detected above the MDL but below the reporting limit are estimated and qualified "J". For a complete list of "J" qualified samples due to being detected below the reporting limit please see the Qualifier Summary Report and the Reporting Limit Outlier Report in the ADR Output in Appendix G1.	

<b>10. Duplicates</b>	
Were any duplicate pairs analyzed in this SDG? Were RPDs between parent sample and duplicates $\leq$ lab limits or $\leq$ 30% for field duplicates?	No/NA

Validated by: Michael Wilson 06/08/2016

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Data Verification and Validation Summary  
Data Validation Stage 2A

Project Name: Soil Flushing Treatability Study  
 Project No.: 100-SBO-T35000-2016-M05  
 No. of Samples: 3

SDG/Report No.: 440-147006-1  
 Lab ID: Test America Irvine  
 Matrix: Water

Area Reviewed	Anomalies		Qualification Required	Action Required
	Yes	No	Yes or No	
1. Sample Preservation, Handling, and Transport		X	No	
2. Chain-of-Custody		X	No	
3. Holding Times		X	No	
4. Blanks		X	No	
5. Surrogates/Monitoring Compounds		X	No	
6. Matrix Spike/Matrix Spike Duplicate		X	No	
7. Laboratory Control Samples		X	No	
8. Interference Check Samples		X	No	
9. Compound Quantitation and Reporting Limits		X	No	
10. Duplicates		X	No	
Verification and Validation Label	Stage_2A_Validation_Manual			
Verification and Validation Label Code	S2AVM			
<b>Overall Assessment:</b> Acceptable as qualified. Field QC samples checked for completeness only. <b>Usability:</b> Sample results qualified "J", estimated, are useable for limited purposes only. All other results are considered valid and useable for all purposes.				

Sample Information:

Cooler Temperature: One cooler at receipt was 1.7° C.

Field Sample Number	Lab Sample ID	Date Collected
440-147006-1	TT-TP1-M1-20160510	5/10/16
440-147006-2	TT-TP1-M2-20160510	5/10/16
440-147006-3	TT-TP1-M3-20160510	5/10/16

Data Verification and Validation Summary  
Data Validation Stage 2A

The following section is intended to specify areas evaluated and issues encountered. Only applicable methods are listed.

<b>1. Sample Preservation, Handling, and Transport</b>	
Were all samples preserved correctly? Were sample temperatures kept at 4°C (+ or – 2°C)? Were samples received in proper condition?	Yes/Yes/Yes

<b>2. Chain-of-Custody (COC)</b>	
Were samples recorded on the COCs? Were correct analyses performed on the samples?	Yes/Yes

<b>3. Holding Times</b>	
Were samples analyzed within acceptable holding times?	Yes

<b>4. Blanks</b>	
Does data package include a summary of blank results? Was a method blank extracted and/or analyzed for each batch? Were analytes detected in any blanks?	Yes/Yes/No

<b>5. Surrogates/Monitoring Compounds</b>	
Were samples spiked with the correct surrogate compounds? Were surrogate recoveries reported correctly on data forms? Were recoveries within laboratory limits?	Yes/Yes/Yes

<b>6. Matrix Spike/Matrix Spike Duplicate</b>	
Was a MS/MSD pair extracted and/or analyzed with each batch? Were recoveries/RPDs reported correctly on data forms? Were recoveries/RPDs within laboratory established limits?	Yes/Yes/Yes

<b>7. Laboratory Control Samples (LCS)</b>	
Was a LCS analyzed with each analytical batch? Were LCS recoveries reported correctly on data forms? Were LCS recoveries within laboratory established limits?	Yes/Yes/Yes

<b>8. Interference Check Sample (ICS)</b>	
Were interference check samples (ICS) analyzed at appropriate intervals? Were ICS recoveries within acceptable limits of the true value?	N/A

<b>9. Compound Quantitation and Reporting Limits</b>	
Were quantitation limits (RLs) adjusted to reflect dilutions, cleanup, and other factors? If applicable, were reporting limit check recoveries within acceptable limits?	Yes/Yes
<b>All:</b> Results detected above the MDL but below the reporting limit are estimated and qualified “J”.	

Data Verification and Validation Summary  
Data Validation Stage 2A

**10. Duplicates**

Were any duplicate pairs analyzed in this SDG? Were RPDs between parent sample and duplicates $\leq$ lab limits or $\leq$ 30% for field duplicates?	No/NA
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Validated by: Michael Wilson 06/08/2016

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Data Verification and Validation Summary  
Data Validation Stage 2A

Project Name: Soil Flushing Treatability Study  
 Project No.: 100-SBO-T35000-2016-M05  
 No. of Samples: 16

SDG/Report No.: 440-147243-1  
 Lab ID: Test America Irvine  
 Matrix: Water

Area Reviewed	Anomalies		Qualification Required	Action Required
	Yes	No	Yes or No	
1. Sample Preservation, Handling, and Transport		X	No	
2. Chain-of-Custody		X	No	
3. Holding Times		X	No	
4. Blanks		X	No	
5. Surrogates/Monitoring Compounds		X	No	
6. Matrix Spike/Matrix Spike Duplicate	X		Yes	The matrix spikes and/or matrix spike duplicate was outside the control limits for parent sample TT-TP4-M3-20160511. Therefore, the data was "J" qualified.
7. Laboratory Control Samples		X	No	
8. Interference Check Samples		X	No	
9. Compound Quantitation and Reporting Limits	X		Yes	All sample results below the reporting limit are "J" qualified.
10. Duplicates		X	No	
Verification and Validation Label	Stage_2A_Validation_Manual			
Verification and Validation Label Code	S2AVM			
<b>Overall Assessment:</b> Acceptable as qualified. Field QC samples checked for completeness only. <b>Usability:</b> Sample results qualified "J", estimated, are useable for limited purposes only. All other results are considered valid and useable for all purposes.				

Sample Information:

Cooler Temperature: Four coolers at receipt time were 0.7° C, 1.3° C, 2.0° C and 3.5° C.

Field Sample Number	Lab Sample ID	Date Collected
TT-TP2-M1-20160511	440-147243-1	05/11/16
TT-TP2-M2-20160511	440-147243-2	05/11/16
TT-TP3-M1-20160511	440-147243-3	05/11/16
TT-TP3-M2-20160511	440-147243-4	05/11/16
TT-TP4-M1-20160511	440-147243-5	05/11/16
TT-TP4-M2-20160511	440-147243-6	05/11/16
TT-TP4-M3-20160511	440-147243-7	05/11/16
TT-TP1-L1-20160511	440-147243-8	05/11/16
TT-TP1-L2-20160511	440-147243-9	05/11/16
TT-TP2-L1-20160511	440-147243-10	05/11/16
TT-TP2-L2-20160511	440-147243-11	05/11/16

Data Verification and Validation Summary  
Data Validation Stage 2A

<b>Field Sample Number</b>	<b>Lab Sample ID</b>	<b>Date Collected</b>
TT-TP3-L1-20160511	440-147243-12	05/11/16
TT-TP3-L2-20160511	440-147243-13	05/11/16
TT-TP4-L1-20160511	440-147243-14	05/11/16
TT-TP4-L2-20160511	440-147243-15	05/11/16
TT-TP4-M3-20160511-DUP	440-147243-16	05/11/16

Data Verification and Validation Summary  
Data Validation Stage 2A

The following section is intended to specify areas evaluated and issues encountered. Only applicable methods are listed.

<b>1. Sample Preservation, Handling, and Transport</b>	
Were all samples preserved correctly? Were sample temperatures kept at 4°C (+ or – 2°C)? Were samples received in proper condition?	Yes/Yes/Yes

<b>2. Chain-of-Custody (COC)</b>	
Were samples recorded on the COCs? Were correct analyses performed on the samples?	Yes/Yes

<b>3. Holding Times</b>	
Were samples analyzed within acceptable holding times?	Yes

<b>4. Blanks</b>	
Does data package include a summary of blank results? Was a method blank extracted and/or analyzed for each batch? Were analytes detected in any blanks?	Yes/Yes/No

<b>5. Surrogates/Monitoring Compounds</b>	
Were samples spiked with the correct surrogate compounds? Were surrogate recoveries reported correctly on data forms? Were recoveries within laboratory limits?	Yes/Yes/Yes

<b>6. Matrix Spike/Matrix Spike Duplicate</b>	
Was a MS/MSD pair extracted and/or analyzed with each batch? Were recoveries/RPDs reported correctly on data forms? Were recoveries/RPDs within laboratory established limits?	Yes/Yes/No
<b>Method 314.0:</b> The Perchlorate result from parent sample TT-TP4-M3-20160511 was qualified as estimated and assigned a “J-” qualifier.	
<b>Method SM5310B:</b> The Total Organic Carbon result from parent sample TT-TP4-M3-20160511 was qualified as estimated and assigned a “J+” qualifier.	
<b>Method 6020:</b> The Chromium result from parent sample TT-TP4-M3-20160511 was qualified as estimated and assigned a “J-” qualifier.	

<b>7. Laboratory Control Samples (LCS)</b>	
Was a LCS analyzed with each analytical batch? Were LCS recoveries reported correctly on data forms? Were LCS recoveries within laboratory established limits?	Yes/Yes/Yes

<b>8. Interference Check Sample (ICS)</b>	
Were interference check samples (ICS) analyzed at appropriate intervals? Were ICS recoveries within acceptable limits of the true value?	Yes

<b>9. Compound Quantitation and Reporting Limits</b>	
Were quantitation limits (RLs) adjusted to reflect dilutions, cleanup, and other factors? If applicable, were reporting limit check recoveries within acceptable limits? Were there detections below the reporting limit?	Yes/Yes/Yes

Data Verification and Validation Summary  
Data Validation Stage 2A

**All:** Results detected above the MDL but below the reporting limit are estimated and qualified “J”. For a complete list of “J” qualified samples due to being detected below the reporting limit please see the Qualifier Summary Report and the Reporting Limit Outlier Report in the ADR Output in Appendix G1.

**10. Duplicates**

Were any duplicate pairs analyzed in this SDG? Were RPDs between parent sample and duplicates $\leq$ lab limits or $\leq$ 30% for field duplicates?	Yes/Yes
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Validated by: Michael Wilson 06/08/2016

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Data Verification and Validation Summary  
Data Validation Stage 2A

Project Name: Soil Flushing Treatability Study  
 Project No.: 100-SBO-T35000-2016-M05  
 No. of Samples: 19

SDG/Report No.: 440-147992-1  
 Lab ID: Test America Irvine  
 Matrix: Water

Area Reviewed	Anomalies		Qualification Required	Action Required
	Yes	No	Yes or No	
1. Sample Preservation, Handling, and Transport		X	No	
2. Chain-of-Custody		X	No	
3. Holding Times		X	No	
4. Blanks		X	No	
5. Surrogates/Monitoring Compounds		X	No	
6. Matrix Spike/Matrix Spike Duplicate	X		Yes	The matrix spikes and/or matrix spike duplicate was outside the control limits for parent sample TT-TP4-M3-20160519. Therefore, the data was "J" qualified.
7. Laboratory Control Samples		X	No	
8. Interference Check Samples		X	No	
9. Compound Quantitation and Reporting Limits	X		Yes	All sample results below the reporting limit are "J" qualified.
10. Duplicates		X	No	
Verification and Validation Label	Stage_2A_Validation_Manual			
Verification and Validation Label Code	S2AVM			
<b>Overall Assessment:</b> Acceptable as qualified. Field QC samples checked for completeness only. <b>Usability:</b> Sample results qualified "J", estimated, are useable for limited purposes only. All other results are considered valid and useable for all purposes.				

Sample Information:

Cooler Temperature: Four coolers at receipt time were 1.6° C, 2.6° C, 2.8° C and 3.3° C

Field Sample Number	Lab Sample ID	Date Collected
TT-TP1-M1-20160519	440-147992-1	05/19/16
TT-TP1-M2-20160519	440-147992-2	05/19/16
TT-TP1-M3-20160519	440-147992-3	05/19/16
TT-TP2-M1-20160519	440-147992-4	05/19/16
TT-TP2-M2-20160519	440-147992-5	05/19/16
TT-TP3-M1-20160519	440-147992-6	05/19/16
TT-TP3-M2-20160519	440-147992-7	05/19/16
TT-TP4-M1-20160519	440-147992-8	05/19/16
TT-TP4-M2-20160519	440-147992-9	05/19/16
TT-TP4-M3-20160519	440-147992-10	05/19/16
TT-TP4-M3-20160519-DUP	440-147992-11	05/19/16
TT-TP1-L1-20160519	440-147992-12	05/19/16



Data Verification and Validation Summary  
Data Validation Stage 2A

<b>Field Sample Number</b>	<b>Lab Sample ID</b>	<b>Date Collected</b>
TT-TP1-L2-20160519	440-147992-13	05/19/16
TT-TP2-L1-20160519	440-147992-14	05/19/16
TT-TP2-L2-20160519	440-147992-15	05/19/16
TT-TP3-L1-20160519	440-147992-16	05/19/16
TT-TP3-L2-20160519	440-147992-17	05/19/16
TT-TP4-L1-20160519	440-147992-18	05/19/16
TT-TP4-L2-20160519	440-147992-19	05/19/16

Data Verification and Validation Summary  
Data Validation Stage 2A

The following section is intended to specify areas evaluated and issues encountered. Only applicable methods are listed.

<b>1. Sample Preservation, Handling, and Transport</b>	
Were all samples preserved correctly? Were sample temperatures kept at 4°C (+ or – 2°C)? Were samples received in proper condition?	Yes/Yes/Yes

<b>2. Chain-of-Custody (COC)</b>	
Were samples recorded on the COCs? Were correct analyses performed on the samples?	Yes/Yes

<b>3. Holding Times</b>	
Were samples analyzed within acceptable holding times?	Yes

<b>4. Blanks</b>	
Does data package include a summary of blank results? Was a method blank extracted and/or analyzed for each batch? Were analytes detected in any blanks?	Yes/Yes/No

<b>5. Surrogates/Monitoring Compounds</b>	
Were samples spiked with the correct surrogate compounds? Were surrogate recoveries reported correctly on data forms? Were recoveries within laboratory limits?	Yes/Yes/Yes

<b>6. Matrix Spike/Matrix Spike Duplicate</b>	
Was a MS/MSD pair extracted and/or analyzed with each batch? Were recoveries/RPDs reported correctly on data forms? Were recoveries/RPDs within laboratory established limits?	Yes/Yes/No
<b>Method 314.0:</b> The Perchlorate result from parent sample TT-TP4-M3-20160519 was qualified as estimated and assigned a “J-” qualifier.	
<b>Method 6020:</b> The Chromium result from parent sample TT-TP4-M3-20160519 was qualified as estimated and assigned a “J-” qualifier.	
<b>Method 7199:</b> The Hexavalent Chromium result from parent sample TT-TP4-M3-20160519 was qualified as estimated and assigned a “J-” qualifier.	

<b>7. Laboratory Control Samples (LCS)</b>	
Was a LCS analyzed with each analytical batch? Were LCS recoveries reported correctly on data forms? Were LCS recoveries within laboratory established limits?	Yes/Yes/Yes

<b>8. Interference Check Sample (ICS)</b>	
Were interference check samples (ICS) analyzed at appropriate intervals? Were ICS recoveries within acceptable limits of the true value?	Yes

<b>9. Compound Quantitation and Reporting Limits</b>	
Were quantitation limits (RLs) adjusted to reflect dilutions, cleanup, and other factors? If applicable, were reporting limit check recoveries within acceptable limits? Were there detections below the reporting limit?	Yes/Yes/Yes

Data Verification and Validation Summary  
Data Validation Stage 2A

**All:** Results detected above the MDL but below the reporting limit are estimated and qualified “J”. For a complete list of “J” qualified samples due to being detected below the reporting limit please see the Qualifier Summary Report and the Reporting Limit Outlier Report in the ADR Output in Appendix G1.

**10. Duplicates**

Were any duplicate pairs analyzed in this SDG? Were RPDs between parent sample and duplicates $\leq$ lab limits or $\leq$ 30% for field duplicates?	Yes/Yes
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Validated by: Michael Wilson 06/23/2016

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Data Verification and Validation Summary  
Data Validation Stage 2A

Project Name: Soil Flushing Treatability Study  
 Project No.: 100-SBO-T35000-2016-M05  
 No. of Samples: 3

SDG/Report No.: 440-148308-1  
 Lab ID: Test America Irvine  
 Matrix: Water

Area Reviewed	Anomalies		Qualification Required	Action Required
	Yes	No	Yes or No	
1. Sample Preservation, Handling, and Transport		X	No	
2. Chain-of-Custody		X	No	
3. Holding Times		X	No	
4. Blanks		X	No	
5. Surrogates/Monitoring Compounds		X	No	
6. Matrix Spike/Matrix Spike Duplicate	X		Yes	The matrix spikes and/or matrix spike duplicate was outside the control limits for parent sample TT-TP1-M1-20160524. Therefore, the data was "J" qualified.
7. Laboratory Control Samples		X	No	
8. Interference Check Samples		X	No	
9. Compound Quantitation and Reporting Limits		X	No	
10. Duplicates		X	No	
Verification and Validation Label	Stage_2A_Validation_Manual			
Verification and Validation Label Code	S2AVM			
<b>Overall Assessment:</b> Acceptable as qualified. Field QC samples checked for completeness only. <b>Usability:</b> Sample results qualified "J", estimated, are useable for limited purposes only. All other results are considered valid and useable for all purposes.				

Sample Information:

Cooler Temperature: Five coolers at receipt time were 1.7° C, 2.0° C, 2.4° C, 2.5° C and 4.0° C.

Field Sample Number	Lab Sample ID	Date Collected
TT-TP1-M1-20160524	440-148308-1	05/24/16
TT-TP1-M2-20160524	440-148308-2	05/24/16
TT-TP1-M3-20160524	440-148308-3	05/24/16

Data Verification and Validation Summary  
Data Validation Stage 2A

The following section is intended to specify areas evaluated and issues encountered. Only applicable methods are listed.

<b>1. Sample Preservation, Handling, and Transport</b>	
Were all samples preserved correctly? Were sample temperatures kept at 4°C (+ or – 2°C)? Were samples received in proper condition?	Yes/Yes/Yes

<b>2. Chain-of-Custody (COC)</b>	
Were samples recorded on the COCs? Were correct analyses performed on the samples?	Yes/Yes

<b>3. Holding Times</b>	
Were samples analyzed within acceptable holding times?	Yes

<b>4. Blanks</b>	
Does data package include a summary of blank results? Was a method blank extracted and/or analyzed for each batch? Were analytes detected in any blanks?	Yes/Yes/No

<b>5. Surrogates/Monitoring Compounds</b>	
Were samples spiked with the correct surrogate compounds? Were surrogate recoveries reported correctly on data forms? Were recoveries within laboratory limits?	Yes/Yes/Yes

<b>6. Matrix Spike/Matrix Spike Duplicate</b>	
Was a MS/MSD pair extracted and/or analyzed with each batch? Were recoveries/RPDs reported correctly on data forms? Were recoveries/RPDs within laboratory established limits?	Yes/Yes/No
<b>Method 6020:</b> The Chromium result from parent sample TT-TP4-M3-20160211 was qualified as estimated and assigned a “J” qualifier.	
<b>Method 7199:</b> The Hexavalent Chromium result from parent sample TT-TP4-M3-20160211 was qualified as estimated and assigned a “J-” qualifier.	

<b>7. Laboratory Control Samples (LCS)</b>	
Was a LCS analyzed with each analytical batch? Were LCS recoveries reported correctly on data forms? Were LCS recoveries within laboratory established limits?	Yes/Yes/Yes

<b>8. Interference Check Sample (ICS)</b>	
Were interference check samples (ICS) analyzed at appropriate intervals? Were ICS recoveries within acceptable limits of the true value?	Yes

<b>9. Compound Quantitation and Reporting Limits</b>	
Were quantitation limits (RLs) adjusted to reflect dilutions, cleanup, and other factors? If applicable, were reporting limit check recoveries within acceptable limits? Were there detections below the reporting limit?	Yes/Yes/No

Data Verification and Validation Summary  
Data Validation Stage 2A

**All:** Results detected above the MDL but below the reporting limit are estimated and qualified “J”. For a complete list of “J” qualified samples due to being detected below the reporting limit please see the Qualifier Summary Report and the Reporting Limit Outlier Report in the ADR Output in Appendix G1.

**10. Duplicates**

Were any duplicate pairs analyzed in this SDG? Were RPDs between parent sample and duplicates $\leq$ lab limits or $\leq$ 30% for field duplicates?	No/NA
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Validated by: Michael Wilson 06/23/2016

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Data Verification and Validation Summary  
Data Validation Stage 2A

Project Name: Soil Flushing Treatability Study  
 Project No.: 100-SBO-T35000-2016-M05  
 No. of Samples: 8

SDG/Report No.: 440-148383-1  
 Lab ID: Test America Irvine  
 Matrix: Water

Area Reviewed	Anomalies		Qualification Required	Action Required
	Yes	No	Yes or No	
1. Sample Preservation, Handling, and Transport		X	No	
2. Chain-of-Custody		X	No	
3. Holding Times		X	No	
4. Blanks		X	No	
5. Surrogates/Monitoring Compounds		X	No	
6. Matrix Spike/Matrix Spike Duplicate		X	No	
7. Laboratory Control Samples		X	No	
8. Interference Check Samples		X	No	
9. Compound Quantitation and Reporting Limits	X			All sample results below the reporting limit are "J" qualified.
10. Duplicates		X	No	
Verification and Validation Label	Stage_2A_Validation_Manual			
Verification and Validation Label Code	S2AVM			
<b>Overall Assessment:</b> Acceptable as qualified. Field QC samples checked for completeness only. <b>Usability:</b> Sample results qualified "J", estimated, are useable for limited purposes only. All other results are considered valid and useable for all purposes.				

Sample Information:

Cooler Temperature: Cooler at receipt was 1.1° C.

Field Sample Number	Lab Sample ID	Date Collected
TT-TP1-L1-20160525	440-148383-1	05/25/16
TT-TP1-L2-20160525	440-148383-2	05/25/16
TT-TP2-L1-20160525	440-148383-3	05/25/16
TT-TP2-L2-20160525	440-148383-4	05/25/16
TT-TP3-L1-20160525	440-148383-5	05/25/16
TT-TP3-L2-20160525	440-148383-6	05/25/16
TT-TP4-L1-20160525	440-148383-7	05/25/16
TT-TP4-L2-20160525	440-148383-8	05/25/16

Data Verification and Validation Summary  
Data Validation Stage 2A

The following section is intended to specify areas evaluated and issues encountered. Only applicable methods are listed.

<b>1. Sample Preservation, Handling, and Transport</b>	
Were all samples preserved correctly? Were sample temperatures kept at 4°C (+ or – 2°C)? Were samples received in proper condition?	Yes/Yes/Yes

<b>2. Chain-of-Custody (COC)</b>	
Were samples recorded on the COCs? Were correct analyses performed on the samples?	Yes/Yes

<b>3. Holding Times</b>	
Were samples analyzed within acceptable holding times?	Yes

<b>4. Blanks</b>	
Does data package include a summary of blank results? Was a method blank extracted and/or analyzed for each batch? Were analytes detected in any blanks?	Yes/Yes/No

<b>5. Surrogates/Monitoring Compounds</b>	
Were samples spiked with the correct surrogate compounds? Were surrogate recoveries reported correctly on data forms? Were recoveries within laboratory limits?	Yes/Yes/Yes

<b>6. Matrix Spike/Matrix Spike Duplicate</b>	
Was a MS/MSD pair extracted and/or analyzed with each batch? Were recoveries/RPDs reported correctly on data forms? Were recoveries/RPDs within laboratory established limits?	Yes/Yes/Yes

<b>7. Laboratory Control Samples (LCS)</b>	
Was a LCS analyzed with each analytical batch? Were LCS recoveries reported correctly on data forms? Were LCS recoveries within laboratory established limits?	Yes/Yes/Yes

<b>8. Interference Check Sample (ICS)</b>	
Were interference check samples (ICS) analyzed at appropriate intervals? Were ICS recoveries within acceptable limits of the true value?	Yes

<b>9. Compound Quantitation and Reporting Limits</b>	
Were quantitation limits (RLs) adjusted to reflect dilutions, cleanup, and other factors? If applicable, were reporting limit check recoveries within acceptable limits? Were there detections below the reporting limit?	Yes/Yes/Yes
<b>All:</b> Results detected above the MDL but below the reporting limit are estimated and qualified “J”. For a complete list of “J” qualified samples due to being detected below the reporting limit please see the Qualifier Summary Report and the Reporting Limit Outlier Report in the ADR Output in Appendix G1.	



Data Verification and Validation Summary  
Data Validation Stage 2A

<b>10. Duplicates</b>	
Were any duplicate pairs analyzed in this SDG? Were RPDs between parent sample and duplicates $\leq$ lab limits or $\leq$ 30% for field duplicates?	No/NA

Validated by: Michael Wilson 07/01/2016

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Data Verification and Validation Summary  
Data Validation Stage 2A

Project Name: Soil Flushing Treatability Study  
 Project No.: 100-SBO-T35000-2016-M05  
 No. of Samples: 8

SDG/Report No.: 440-148500-1  
 Lab ID: Test America Irvine  
 Matrix: Water

Area Reviewed	Anomalies		Qualification Required	Action Required
	Yes	No	Yes or No	
1. Sample Preservation, Handling, and Transport		X	No	
2. Chain-of-Custody		X	No	
3. Holding Times		X	No	
4. Blanks		X	No	
5. Surrogates/Monitoring Compounds		X	No	
6. Matrix Spike/Matrix Spike Duplicate	X		Yes	The matrix spikes and/or matrix spike duplicate was outside the control limits for parent sample TT-TP4-M3-20160526. Therefore, the data was "J" qualified.
7. Laboratory Control Samples		X	No	
8. Interference Check Samples		X	No	
9. Compound Quantitation and Reporting Limits		X	No	
10. Duplicates		X	No	
Verification and Validation Label	Stage_2A_Validation_Manual			
Verification and Validation Label Code	S2AVM			
<b>Overall Assessment:</b> Acceptable as qualified. Field QC samples checked for completeness only. <b>Usability:</b> Sample results qualified "J", estimated, are useable for limited purposes only. All other results are considered valid and useable for all purposes.				

Sample Information:

Cooler Temperature: Two coolers at receipt time were 2.1° C and 3.3° C.

Field Sample Number	Lab Sample ID	Date Collected
TT-TP2-M1-20160526	440-148500-1	05/26/16
TT-TP2-M2-20160526	440-148500-2	05/26/16
TT-TP3-M1-20160526	440-148500-3	05/26/16
TT-TP3-M2-20160526	440-148500-4	05/26/16
TT-TP4-M1-20160526	440-148500-5	05/26/16
TT-TP4-M2-20160526	440-148500-6	05/26/16
TT-TP4-M3-20160526	440-148500-7	05/26/16
TT-TP4-M3-20160526-DUP	440-148500-8	05/26/16

Data Verification and Validation Summary  
Data Validation Stage 2A

The following section is intended to specify areas evaluated and issues encountered. Only applicable methods are listed.

<b>1. Sample Preservation, Handling, and Transport</b>	
Were all samples preserved correctly? Were sample temperatures kept at 4°C (+ or – 2°C)? Were samples received in proper condition?	Yes/Yes/Yes

<b>2. Chain-of-Custody (COC)</b>	
Were samples recorded on the COCs? Were correct analyses performed on the samples?	Yes/Yes

<b>3. Holding Times</b>	
Were samples analyzed within acceptable holding times?	Yes

<b>4. Blanks</b>	
Does data package include a summary of blank results? Was a method blank extracted and/or analyzed for each batch? Were analytes detected in any blanks?	Yes/Yes/No

<b>5. Surrogates/Monitoring Compounds</b>	
Were samples spiked with the correct surrogate compounds? Were surrogate recoveries reported correctly on data forms? Were recoveries within laboratory limits?	Yes/Yes/Yes

<b>6. Matrix Spike/Matrix Spike Duplicate</b>	
Was a MS/MSD pair extracted and/or analyzed with each batch? Were recoveries/RPDs reported correctly on data forms? Were recoveries/RPDs within laboratory established limits?	Yes/Yes/No
<b>Method 314.0:</b> The Perchlorate result from parent sample TT-TP4-M3-20160526 was qualified as estimated and assigned a “J+” qualifier.	
<b>Method 6020:</b> The Chromium result from parent sample TT-TP4-M3-20160526 was qualified as estimated and assigned a “J-” qualifier.	
<b>Method 7199:</b> The Hexavalent Chromium result from parent sample TT-TP4-M3-20160526 was qualified as estimated and assigned a “J-” qualifier.	

<b>7. Laboratory Control Samples (LCS)</b>	
Was a LCS analyzed with each analytical batch? Were LCS recoveries reported correctly on data forms? Were LCS recoveries within laboratory established limits?	Yes/Yes/Yes

<b>8. Interference Check Sample (ICS)</b>	
Were interference check samples (ICS) analyzed at appropriate intervals? Were ICS recoveries within acceptable limits of the true value?	Yes

<b>9. Compound Quantitation and Reporting Limits</b>	
Were quantitation limits (RLs) adjusted to reflect dilutions, cleanup, and other factors? If applicable, were reporting limit check recoveries within acceptable limits? Were there detections below the reporting limit?	Yes/Yes/No

Data Verification and Validation Summary  
Data Validation Stage 2A

**All:** Results detected above the MDL but below the reporting limit are estimated and qualified “J”. For a complete list of “J” qualified samples due to being detected below the reporting limit please see the Qualifier Summary Report and the Reporting Limit Outlier Report in the ADR Output in Appendix G1.

**10. Duplicates**

Were any duplicate pairs analyzed in this SDG? Were RPDs between parent sample and duplicates $\leq$ lab limits or $\leq$ 30% for field duplicates?	Yes/Yes
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Validated by: Michael Wilson 06/23/2016

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Data Verification and Validation Summary  
Data Validation Stage 2A

Project Name: Soil Flushing Treatability Study  
 Project No.: 100-SBO-T35000-2016-M05  
 No. of Samples: 6

SDG/Report No.: 440-148926-1  
 Lab ID: Test America Irvine  
 Matrix: Water

Area Reviewed	Anomalies		Qualification Required	Action Required
	Yes	No	Yes or No	
1. Sample Preservation, Handling, and Transport		X	No	
2. Chain-of-Custody		X	No	
3. Holding Times		X	No	
4. Blanks		X	No	
5. Surrogates/Monitoring Compounds		X	No	
6. Matrix Spike/Matrix Spike Duplicate	X		Yes	The matrix spikes and/or matrix spike duplicate was outside the control limits for parent sample TT-TP1-M3-20160601. Therefore, the data was "J" qualified.
7. Laboratory Control Samples		X	No	
8. Interference Check Samples		X	No	
9. Compound Quantitation and Reporting Limits	X		Yes	All sample results below the reporting limit are "J" qualified.
10. Duplicates		X	No	

Verification and Validation Label	Stage_2A_Validation_Manual
Verification and Validation Label Code	S2AVM

**Overall Assessment:** Acceptable as qualified.  
 Field QC samples checked for completeness only.  
**Usability:** Sample results qualified "J", estimated, are useable for limited purposes only. All other results are considered valid and useable for all purposes.

Sample Information:

Cooler Temperature: Two coolers at receipt time were 1.8° C and 4.4° C.

Field Sample Number	Lab Sample ID	Date Collected
TT-TP1-M3-20160601	440-148926-1	06/01/16
TT-TP1-M1-20160601	440-148926-2	06/01/16
TT-TP1-M2-20160601	440-148926-3	06/01/16
TT-TP2-M2-20160601	440-148926-4	06/01/16
TT-TP2-M1-20160601	440-148926-5	06/01/16
TT-TP3-M1-20160601	440-148926-6	06/01/16

Data Verification and Validation Summary  
Data Validation Stage 2A

The following section is intended to specify areas evaluated and issues encountered. Only applicable methods are listed.

<b>1. Sample Preservation, Handling, and Transport</b>	
Were all samples preserved correctly? Were sample temperatures kept at 4°C (+ or – 2°C)? Were samples received in proper condition?	Yes/Yes/Yes

<b>2. Chain-of-Custody (COC)</b>	
Were samples recorded on the COCs? Were correct analyses performed on the samples?	Yes/Yes

<b>3. Holding Times</b>	
Were samples analyzed within acceptable holding times?	Yes

<b>4. Blanks</b>	
Does data package include a summary of blank results? Was a method blank extracted and/or analyzed for each batch? Were analytes detected in any blanks?	Yes/Yes/No

<b>5. Surrogates/Monitoring Compounds</b>	
Were samples spiked with the correct surrogate compounds? Were surrogate recoveries reported correctly on data forms? Were recoveries within laboratory limits?	Yes/Yes/Yes

<b>6. Matrix Spike/Matrix Spike Duplicate</b>	
Was a MS/MSD pair extracted and/or analyzed with each batch? Were recoveries/RPDs reported correctly on data forms? Were recoveries/RPDs within laboratory established limits?	Yes/Yes/No
<b>Method 6010B:</b> The results from parent sample TT-TP1-M3-20160601 were qualified as estimated Calcium (J+), Magnesium (J-), and Sodium (J-).	

<b>7. Laboratory Control Samples (LCS)</b>	
Was a LCS analyzed with each analytical batch? Were LCS recoveries reported correctly on data forms? Were LCS recoveries within laboratory established limits?	Yes/Yes/Yes

<b>8. Interference Check Sample (ICS)</b>	
Were interference check samples (ICS) analyzed at appropriate intervals? Were ICS recoveries within acceptable limits of the true value?	Yes

<b>9. Compound Quantitation and Reporting Limits</b>	
Were quantitation limits (RLs) adjusted to reflect dilutions, cleanup, and other factors? If applicable, were reporting limit check recoveries within acceptable limits? Were there detections below the reporting limit?	Yes/Yes/Yes

Data Verification and Validation Summary  
Data Validation Stage 2A

**All:** Results detected above the MDL but below the reporting limit are estimated and qualified “J”. For a complete list of “J” qualified samples due to being detected below the reporting limit please see the Qualifier Summary Report and the Reporting Limit Outlier Report in the ADR Output in Appendix G1.

**10. Duplicates**

Were any duplicate pairs analyzed in this SDG? Were RPDs between parent sample and duplicates $\leq$ lab limits or $\leq$ 30% for field duplicates?	No/NA
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Validated by: Michael Wilson 07/01/2016

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Data Verification and Validation Summary  
Data Validation Stage 2A

Project Name: Soil Flushing Treatability Study  
 Project No.: 100-SBO-T35000-2016-M05  
 No. of Samples: 13

SDG/Report No.: 440-149036-1  
 Lab ID: Test America Irvine  
 Matrix: Water

Area Reviewed	Anomalies		Qualification Required	Action Required
	Yes	No	Yes or No	
1. Sample Preservation, Handling, and Transport		X	No	
2. Chain-of-Custody		X	No	
3. Holding Times		X	No	
4. Blanks		X	No	
5. Surrogates/Monitoring Compounds		X	No	
6. Matrix Spike/Matrix Spike Duplicate	X		Yes	The matrix spikes and/or matrix spike duplicate was outside the control limits for parent sample TT-TP4-M3-20160602. Therefore, the data was "J" qualified.
7. Laboratory Control Samples		X	No	
8. Interference Check Samples		X	No	
9. Compound Quantitation and Reporting Limits	X		Yes	All sample results below the reporting limit are "J" qualified.
10. Duplicates	X		Yes	Parent sample TT-TP4-M2-20160602 was qualified as estimated and assigned a "J" qualifier.
Verification and Validation Label		Stage_2A_Validation_Manual		
Verification and Validation Label Code		S2AVM		
<p><b>Overall Assessment:</b> Acceptable as qualified.            Field QC samples checked for completeness only.  <b>Usability:</b> Sample results qualified "J", estimated, are useable for limited purposes only. All other results are considered valid and useable for all purposes.</p>				

Sample Information:

Cooler Temperature: Three coolers at receipt time were 1.4° C, 2.2° C and 2.3° C.

Field Sample Number	Lab Sample ID	Date Collected
TT-TP3-M2-20160602	440-149036-1	06/02/16
TT-TP4-M2-20160602	440-149036-2	06/02/16
TT-TP4-M2-20160602-DUP	440-149036-3	06/02/16
TT-TP4-M1-20160602	440-149036-4	06/02/16
TT-TP4-M3-20160602	440-149036-5	06/02/16
TT-TP1-L1-20160602	440-149036-6	06/02/16
TT-TP1-L2-20160602	440-149036-7	06/02/16
TT-TP2-L1-20160602	440-149036-8	06/02/16
TT-TP2-L2-20160602	440-149036-9	06/02/16
TT-TP3-L1-20160602	440-149036-10	06/02/16
TT-TP3-L2-20160602	440-149036-11	06/02/16



Data Verification and Validation Summary  
Data Validation Stage 2A

<b>Field Sample Number</b>	<b>Lab Sample ID</b>	<b>Date Collected</b>
TT-TP4-L1-20160602	440-149036-12	06/02/16
TT-TP4-L2-20160602	440-149036-13	06/02/16

Data Verification and Validation Summary  
Data Validation Stage 2A

The following section is intended to specify areas evaluated and issues encountered. Only applicable methods are listed.

<b>1. Sample Preservation, Handling, and Transport</b>	
Were all samples preserved correctly? Were sample temperatures kept at 4°C (+ or – 2°C)? Were samples received in proper condition?	Yes/Yes/Yes

<b>2. Chain-of-Custody (COC)</b>	
Were samples recorded on the COCs? Were correct analyses performed on the samples?	Yes/Yes

<b>3. Holding Times</b>	
Were samples analyzed within acceptable holding times?	Yes

<b>4. Blanks</b>	
Does data package include a summary of blank results? Was a method blank extracted and/or analyzed for each batch? Were analytes detected in any blanks?	Yes/Yes/No

<b>5. Surrogates/Monitoring Compounds</b>	
Were samples spiked with the correct surrogate compounds? Were surrogate recoveries reported correctly on data forms? Were recoveries within laboratory limits?	Yes/Yes/Yes

<b>6. Matrix Spike/Matrix Spike Duplicate</b>	
Was a MS/MSD pair extracted and/or analyzed with each batch? Were recoveries/RPDs reported correctly on data forms? Were recoveries/RPDs within laboratory established limits?	Yes/Yes/No
<b>Method 300:</b> Parent sample TT-TP4-M3-20160602 was qualified as estimated for Nitrate as N (J), Chloride (J-), and Sulfate (J-).	
<b>Method 300.1B:</b> The Chlorate result from parent sample TT-TP4-M3-20160602 was qualified as estimated and assigned a “J+” qualifier.	
<b>Method 314.0:</b> The Perchlorate result from parent sample TT-TP4-M3-20160602 was qualified as estimated and assigned a “J+” qualifier.	
<b>Method 6010B:</b> The Magnesium, Sodium, Calcium, and Iron results from parent sample TT-TP4-M3-20160602 were qualified as estimated and assigned a “J-” qualifier.	
<b>Method 6020:</b> The Chromium result from parent sample TT-TP4-M3-20160602 was qualified as estimated and assigned a “J” qualifier.	
<b>Method 7199:</b> The Hexavalent Chromium result from parent sample TT-TP4-M3-20160602 was qualified as estimated and assigned a “J-” qualifier.	

<b>7. Laboratory Control Samples (LCS)</b>	
Was a LCS analyzed with each analytical batch? Were LCS recoveries reported correctly on data forms? Were LCS recoveries within laboratory established limits?	Yes/Yes/Yes

<b>8. Interference Check Sample (ICS)</b>	
Were interference check samples (ICS) analyzed at appropriate intervals? Were ICS recoveries within acceptable limits of the true value?	Yes

Data Verification and Validation Summary  
Data Validation Stage 2A

<b>9. Compound Quantitation and Reporting Limits</b>	
Were quantitation limits (RLs) adjusted to reflect dilutions, cleanup, and other factors? If applicable, were reporting limit check recoveries within acceptable limits? Were there detections below the reporting limit?	Yes/Yes/Yes
<b>All:</b> Results detected above the MDL but below the reporting limit are estimated and qualified "J". For a complete list of "J" qualified samples due to being detected below the reporting limit please see the Qualifier Summary Report and the Reporting Limit Outlier Report in the ADR Output in Appendix G1.	

<b>10. Duplicates</b>	
Were any duplicate pairs analyzed in this SDG? Were RPDs between parent sample and duplicates $\leq$ lab limits or $\leq$ 30% for field duplicates?	Yes/No
<b>Method 6020:</b> The nickel result from parent sample TT-TP4-M2-20160602 was qualified as estimated and assigned a "J" qualifier.	

Validated by: Michael Wilson 07/01/2016

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Data Verification and Validation Summary  
Data Validation Stage 2A

Project Name: Soil Flushing Treatability Study  
 Project No.: 100-SBO-T35000-2016-M05  
 No. of Samples: 16

SDG/Report No.: 440-149621-1  
 Lab ID: Test America Irvine  
 Matrix: Water

Area Reviewed	Anomalies		Qualification Required	Action Required
	Yes	No	Yes or No	
1. Sample Preservation, Handling, and Transport		X	No	
2. Chain-of-Custody		X	No	
3. Holding Times		X	No	
4. Blanks		X	No	
5. Surrogates/Monitoring Compounds		X	No	
6. Matrix Spike/Matrix Spike Duplicate	X		Yes	The matrix spikes and/or matrix spike duplicate was outside the control limits for parent samples TT-TP1-M1-20160608 and TT-TP2-M2-20160608. Therefore, the data was "J" qualified.
7. Laboratory Control Samples		X	No	
8. Interference Check Samples		X	No	
9. Compound Quantitation and Reporting Limits	X		Yes	All sample results below the reporting limit are "J" qualified.
10. Duplicates		X	No	

Verification and Validation Label	Stage_2A_Validation_Manual
Verification and Validation Label Code	S2AVM
<p><b>Overall Assessment:</b> Acceptable as qualified.          Field QC samples checked for completeness only.  <b>Usability:</b> Sample results qualified "J", estimated, are useable for limited purposes only. All other results are considered valid and useable for all purposes.</p>	

Sample Information:

Cooler Temperature: Three coolers at receipt time were 2.6° C, 2.8° C and 3.1° C.

Field Sample Number	Lab Sample ID	Date Collected
TT-TP1-M1-20160608	440-149621-1	06/08/16
TT-TP1-M2-20160608	440-149621-2	06/08/16
TT-TP1-M3-20160608	440-149621-3	06/08/16
TT-TP2-M1-20160608	440-149621-4	06/08/16
TT-TP2-M2-20160608	440-149621-5	06/08/16
TT-TP3-M1-20160608	440-149621-6	06/08/16
TT-TP3-M2-20160608	440-149621-7	06/08/16
TT-TP4-M2-20160608	440-149621-8	06/08/16
TT-TP4-L1-20160608	440-149621-9	06/08/16
TT-TP4-L2-20160608	440-149621-10	06/08/16
TT-TP3-L1-20160608	440-149621-11	06/08/16

Data Verification and Validation Summary  
Data Validation Stage 2A

<b>Field Sample Number</b>	<b>Lab Sample ID</b>	<b>Date Collected</b>
TT-TP3-L2-20160608	440-149621-12	06/08/16
TT-TP2-L1-20160608	440-149621-13	06/08/16
TT-TP2-L2-20160608	440-149621-14	06/08/16
TT-TP1-L1-20160608	440-149621-15	06/08/16
TT-TP1-L2-20160608	440-149621-16	06/08/16

Data Verification and Validation Summary  
Data Validation Stage 2A

The following section is intended to specify areas evaluated and issues encountered. Only applicable methods are listed.

<b>1. Sample Preservation, Handling, and Transport</b>	
Were all samples preserved correctly? Were sample temperatures kept at 4°C (+ or – 2°C)? Were samples received in proper condition?	Yes/Yes/Yes

<b>2. Chain-of-Custody (COC)</b>	
Were samples recorded on the COCs? Were correct analyses performed on the samples?	Yes/Yes

<b>3. Holding Times</b>	
Were samples analyzed within acceptable holding times?	Yes

<b>4. Blanks</b>	
Does data package include a summary of blank results? Was a method blank extracted and/or analyzed for each batch? Were analytes detected in any blanks?	Yes/Yes/No

<b>5. Surrogates/Monitoring Compounds</b>	
Were samples spiked with the correct surrogate compounds? Were surrogate recoveries reported correctly on data forms? Were recoveries within laboratory limits?	Yes/Yes/Yes

<b>6. Matrix Spike/Matrix Spike Duplicate</b>	
Was a MS/MSD pair extracted and/or analyzed with each batch? Were recoveries/RPDs reported correctly on data forms? Were recoveries/RPDs within laboratory established limits?	Yes/Yes/No
<b>Method 6020:</b> The Chromium result from parent sample TT-TP1-M1-20160608 was qualified as estimated and assigned a “J+” qualifier. The Chromium result from parent sample TT-TP2-M2-20160608 was qualified as estimated and assigned a “J-” qualifier.	

<b>7. Laboratory Control Samples (LCS)</b>	
Was a LCS analyzed with each analytical batch? Were LCS recoveries reported correctly on data forms? Were LCS recoveries within laboratory established limits?	Yes/Yes/Yes

<b>8. Interference Check Sample (ICS)</b>	
Were interference check samples (ICS) analyzed at appropriate intervals? Were ICS recoveries within acceptable limits of the true value?	Yes

<b>9. Compound Quantitation and Reporting Limits</b>	
Were quantitation limits (RLs) adjusted to reflect dilutions, cleanup, and other factors? If applicable, were reporting limit check recoveries within acceptable limits? Were there detections below the reporting limit?	Yes/Yes/Yes

Data Verification and Validation Summary  
Data Validation Stage 2A

**All:** Results detected above the MDL but below the reporting limit are estimated and qualified “J”. For a complete list of “J” qualified samples due to being detected below the reporting limit please see the Qualifier Summary Report and the Reporting Limit Outlier Report in the ADR Output in Appendix G1.

**10. Duplicates**

Were any duplicate pairs analyzed in this SDG? Were RPDs between parent sample and duplicates $\leq$ lab limits or $\leq$ 30% for field duplicates?	No/NA
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Validated by: Michael Wilson 07/01/2016

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Data Verification and Validation Summary  
Data Validation Stage 2A

Project Name: Soil Flushing Treatability Study  
 Project No.: 100-SBO-T35000-2016-M05  
 No. of Samples: 3

SDG/Report No.: 440-149732-1  
 Lab ID: Test America Irvine  
 Matrix: Water

Area Reviewed	Anomalies		Qualification Required	Action Required
	Yes	No	Yes or No	
1. Sample Preservation, Handling, and Transport		X	No	
2. Chain-of-Custody		X	No	
3. Holding Times		X	No	
4. Blanks		X	No	
5. Surrogates/Monitoring Compounds		X	No	
6. Matrix Spike/Matrix Spike Duplicate	X		Yes	The matrix spikes and/or matrix spike duplicate was outside the control limits for parent sample TT-TP4-M3-20160609. Therefore, the data was "J" qualified.
7. Laboratory Control Samples		X	No	
8. Interference Check Samples		X	No	
9. Compound Quantitation and Reporting Limits		X	No	
10. Duplicates		X	No	
Verification and Validation Label	Stage_2A_Validation_Manual			
Verification and Validation Label Code	S2AVM			
<p><b>Overall Assessment:</b> Acceptable as qualified.            Field QC samples checked for completeness only.  <b>Usability:</b> Sample results qualified "J", estimated, are useable for limited purposes only. All other results are considered valid and useable for all purposes.</p>				

Sample Information:

Cooler Temperature: Three coolers at receipt time were 1.2° C, 1.4° C and 1.7° C.

Field Sample Number	Lab Sample ID	Date Collected
TT-TP4-M1-20160609	440-149732-1	06/09/16
TT-TP4-M3-20160609	440-149732-2	06/09/16
TT-TP4-M3-20160609-DUP	440-149732-3	06/09/16



Data Verification and Validation Summary  
Data Validation Stage 2A

The following section is intended to specify areas evaluated and issues encountered. Only applicable methods are listed.

<b>1. Sample Preservation, Handling, and Transport</b>	
Were all samples preserved correctly? Were sample temperatures kept at 4°C (+ or – 2°C)? Were samples received in proper condition?	Yes/Yes/Yes

<b>2. Chain-of-Custody (COC)</b>	
Were samples recorded on the COCs? Were correct analyses performed on the samples?	Yes/Yes

<b>3. Holding Times</b>	
Were samples analyzed within acceptable holding times?	Yes

<b>4. Blanks</b>	
Does data package include a summary of blank results? Was a method blank extracted and/or analyzed for each batch? Were analytes detected in any blanks?	Yes/Yes/No

<b>5. Surrogates/Monitoring Compounds</b>	
Were samples spiked with the correct surrogate compounds? Were surrogate recoveries reported correctly on data forms? Were recoveries within laboratory limits?	Yes/Yes/Yes

<b>6. Matrix Spike/Matrix Spike Duplicate</b>	
Was a MS/MSD pair extracted and/or analyzed with each batch? Were recoveries/RPDs reported correctly on data forms? Were recoveries/RPDs within laboratory established limits?	Yes/Yes/Yes
<b>Method 6020:</b> The Chromium result from parent sample TT-TP4-M3-20160609 was qualified as estimated and assigned a “J” qualifier.	
<b>Method 7199:</b> The Chromium, Hexavalent result from parent sample TT-TP4-M3-20160609 was qualified as estimated and assigned a “J-” qualifier.	

<b>7. Laboratory Control Samples (LCS)</b>	
Was a LCS analyzed with each analytical batch? Were LCS recoveries reported correctly on data forms? Were LCS recoveries within laboratory established limits?	Yes/Yes/Yes

<b>8. Interference Check Sample (ICS)</b>	
Were interference check samples (ICS) analyzed at appropriate intervals? Were ICS recoveries within acceptable limits of the true value?	Yes

<b>9. Compound Quantitation and Reporting Limits</b>	
Were quantitation limits (RLs) adjusted to reflect dilutions, cleanup, and other factors? If applicable, were reporting limit check recoveries within acceptable limits? Were there detections below the reporting limit?	Yes/Yes/No

Data Verification and Validation Summary  
Data Validation Stage 2A

**All:** Results detected above the MDL but below the reporting limit are estimated and qualified “J”. For a complete list of “J” qualified samples due to being detected below the reporting limit please see the Qualifier Summary Report and the Reporting Limit Outlier Report in the ADR Output in Appendix G1.

**10. Duplicates**

Were any duplicate pairs analyzed in this SDG? Were RPDs between parent sample and duplicates $\leq$ lab limits or $\leq$ 30% for field duplicates?	Yes/Yes
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Validated by: Michael Wilson 07/01/2016

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Data Verification and Validation Summary  
Data Validation Stage 2A

Project Name: Soil Flushing Treatability Study  
 Project No.: 100-SBO-T35000-2016-M05  
 No. of Samples: 3

SDG/Report No.: 440-150680-1  
 Lab ID: Test America Irvine  
 Matrix: Water

Area Reviewed	Anomalies		Qualification Required	Action Required
	Yes	No	Yes or No	
1. Sample Preservation, Handling, and Transport		X	No	
2. Chain-of-Custody		X	No	
3. Holding Times		X	No	
4. Blanks		X	No	
5. Surrogates/Monitoring Compounds		X	No	
6. Matrix Spike/Matrix Spike Duplicate		X	No	
7. Laboratory Control Samples		X	No	
8. Interference Check Samples		X	No	
9. Compound Quantitation and Reporting Limits		X	No	
10. Duplicates		X	No	
Verification and Validation Label	Stage_2A_Validation_Manual			
Verification and Validation Label Code	S2AVM			
<b>Overall Assessment:</b> Acceptable as qualified. Field QC samples checked for completeness only. <b>Usability:</b> Sample results qualified "J", estimated, are useable for limited purposes only. All other results are considered valid and useable for all purposes.				

Sample Information:

Cooler Temperature: One cooler at 3.7° C

Field Sample Number	Lab Sample ID	Date Collected
TT-TP1-M1-20160621	440-150680-1	06/21/16
TT-TP1-M2-20160621	440-150680-2	06/21/16
TT-TP1-M3-20160621	440-150680-3	06/21/16

Data Verification and Validation Summary  
Data Validation Stage 2A

The following section is intended to specify areas evaluated and issues encountered. Only applicable methods are listed.

<b>1. Sample Preservation, Handling, and Transport</b>	
Were all samples preserved correctly? Were sample temperatures kept at 4°C (+ or – 2°C)? Were samples received in proper condition?	Yes/Yes/Yes

<b>2. Chain-of-Custody (COC)</b>	
Were samples recorded on the COCs? Were correct analyses performed on the samples?	Yes/Yes

<b>3. Holding Times</b>	
Were samples analyzed within acceptable holding times?	Yes

<b>4. Blanks</b>	
Does data package include a summary of blank results? Was a method blank extracted and/or analyzed for each batch? Were analytes detected in any blanks?	Yes/Yes/No

<b>5. Surrogates/Monitoring Compounds</b>	
Were samples spiked with the correct surrogate compounds? Were surrogate recoveries reported correctly on data forms? Were recoveries within laboratory limits?	Yes/Yes/Yes

<b>6. Matrix Spike/Matrix Spike Duplicate</b>	
Was a MS/MSD pair extracted and/or analyzed with each batch? Were recoveries/RPDs reported correctly on data forms? Were recoveries/RPDs within laboratory established limits?	Yes/Yes/Yes

<b>7. Laboratory Control Samples (LCS)</b>	
Was a LCS analyzed with each analytical batch? Were LCS recoveries reported correctly on data forms? Were LCS recoveries within laboratory established limits?	Yes/Yes/Yes

<b>8. Interference Check Sample (ICS)</b>	
Were interference check samples (ICS) analyzed at appropriate intervals? Were ICS recoveries within acceptable limits of the true value?	Yes

<b>9. Compound Quantitation and Reporting Limits</b>	
Were quantitation limits (RLs) adjusted to reflect dilutions, cleanup, and other factors? If applicable, were reporting limit check recoveries within acceptable limits? Were there detections below the reporting limit?	Yes/Yes/No
<b>All:</b> Results detected above the MDL but below the reporting limit are estimated and qualified “J”. For a complete list of “J” qualified samples due to being detected below the reporting limit please see the Qualifier Summary Report and the Reporting Limit Outlier Report in the ADR Output in Appendix G1.	

Data Verification and Validation Summary  
Data Validation Stage 2A

<b>10. Duplicates</b>	
Were any duplicate pairs analyzed in this SDG? Were RPDs between parent sample and duplicates $\leq$ lab limits or $\leq$ 30% for field duplicates?	No/NA

Validated by: Michael Wilson 07/06/2016

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Data Verification and Validation Summary  
Data Validation Stage 2A

Project Name: Soil Flushing Treatability Study  
 Project No.: 100-SBO-T35000-2016-M05  
 No. of Samples: 16

SDG/Report No.: 440-150775-1  
 Lab ID: Test America Irvine  
 Matrix: Water

Area Reviewed	Anomalies		Qualification Required	Action Required
	Yes	No	Yes or No	
1. Sample Preservation, Handling, and Transport		X	No	
2. Chain-of-Custody		X	No	
3. Holding Times		X	No	
4. Blanks		X	No	
5. Surrogates/Monitoring Compounds		X	No	
6. Matrix Spike/Matrix Spike Duplicate	X		Yes	The matrix spikes and/or matrix spike duplicate was outside the control limits for parent sample TT-TP4-M3-20160622. Therefore, the data was "J" qualified.
7. Laboratory Control Samples		X	No	
8. Interference Check Samples		X	No	
9. Compound Quantitation and Reporting Limits	X		Yes	All sample results below the reporting limit are "J" qualified.
10. Duplicates		X	No	
Verification and Validation Label	Stage_2A_Validation_Manual			
Verification and Validation Label Code	S2AVM			
<b>Overall Assessment:</b> Acceptable as qualified. Field QC samples checked for completeness only. <b>Usability:</b> Sample results qualified "J", estimated, are useable for limited purposes only. All other results are considered valid and useable for all purposes.				

Sample Information:

Cooler Temperature: Two coolers at receipt time were 2.1° C and 2.8° C

Field Sample Number	Lab Sample ID	Date Collected
TT-TP2-M1-20160622	440-150775-1	06/22/16
TT-TP2-M2-20160622	440-150775-2	06/22/16
TT-TP3-M1-20160622	440-150775-3	06/22/16
TT-TP3-M2-20160622	440-150775-4	06/22/16
TT-TP4-M1-20160622	440-150775-5	06/22/16
TT-TP4-M2-20160622	440-150775-6	06/22/16
TT-TP4-M3-20160622	440-150775-7	06/22/16
TT-TP4-M3-20160622-DUP	440-150775-8	06/22/16
TT-TP1-L1-20160622	440-150775-9	06/22/16
TT-TP1-L2-20160622	440-150775-10	06/22/16
TT-TP2-L1-20160622	440-150775-11	06/22/16

Data Verification and Validation Summary  
Data Validation Stage 2A

<b>Field Sample Number</b>	<b>Lab Sample ID</b>	<b>Date Collected</b>
TT-TP2-L2-20160622	440-150775-12	06/22/16
TT-TP3-L1-20160622	440-150775-13	06/22/16
TT-TP3-L2-20160622	440-150775-14	06/22/16
TT-TP4-L1-20160622	440-150775-15	06/22/16
TT-TP4-L2-20160622	440-150775-16	06/22/16

Data Verification and Validation Summary  
Data Validation Stage 2A

The following section is intended to specify areas evaluated and issues encountered. Only applicable methods are listed.

<b>1. Sample Preservation, Handling, and Transport</b>	
Were all samples preserved correctly? Were sample temperatures kept at 4°C (+ or – 2°C)? Were samples received in proper condition?	Yes/Yes/Yes

<b>2. Chain-of-Custody (COC)</b>	
Were samples recorded on the COCs? Were correct analyses performed on the samples?	Yes/Yes

<b>3. Holding Times</b>	
Were samples analyzed within acceptable holding times?	Yes

<b>4. Blanks</b>	
Does data package include a summary of blank results? Was a method blank extracted and/or analyzed for each batch? Were analytes detected in any blanks?	Yes/Yes/No

<b>5. Surrogates/Monitoring Compounds</b>	
Were samples spiked with the correct surrogate compounds? Were surrogate recoveries reported correctly on data forms? Were recoveries within laboratory limits?	Yes/Yes/Yes

<b>6. Matrix Spike/Matrix Spike Duplicate</b>	
Was a MS/MSD pair extracted and/or analyzed with each batch? Were recoveries/RPDs reported correctly on data forms? Were recoveries/RPDs within laboratory established limits?	Yes/Yes/No
<b>Method 6020:</b> The Chromium result from parent sample TT-TP4-M3-20160622 was qualified as estimated and assigned a “J-” qualifier.	
<b>Method 7199:</b> The Hexavalent Chromium result from parent sample TT-TP4-M3-20160622 was qualified as estimated and assigned a “J-” qualifier.	

<b>7. Laboratory Control Samples (LCS)</b>	
Was a LCS analyzed with each analytical batch? Were LCS recoveries reported correctly on data forms? Were LCS recoveries within laboratory established limits?	Yes/Yes/Yes

<b>8. Interference Check Sample (ICS)</b>	
Were interference check samples (ICS) analyzed at appropriate intervals? Were ICS recoveries within acceptable limits of the true value?	Yes

<b>9. Compound Quantitation and Reporting Limits</b>	
Were quantitation limits (RLs) adjusted to reflect dilutions, cleanup, and other factors? If applicable, were reporting limit check recoveries within acceptable limits? Were there detections below the reporting limit?	Yes/Yes/Yes
<b>All:</b> Results detected above the MDL but below the reporting limit are estimated and qualified “J”. For a complete list of “J” qualified samples due to being detected below the reporting limit please see the Qualifier Summary Report and the Reporting Limit Outlier Report in the ADR Output in Appendix G1.	



Data Verification and Validation Summary  
Data Validation Stage 2A

<b>10. Duplicates</b>	
Were any duplicate pairs analyzed in this SDG? Were RPDs between parent sample and duplicates $\leq$ lab limits or $\leq$ 30% for field duplicates?	Yes/Yes

Validated by: Michael Wilson 07/07/2016

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Data Verification and Validation Summary  
Data Validation Stage 2A

Project Name: Soil Flushing Treatability Study  
 Project No.: 100-SBO-T35000-2016-M05  
 No. of Samples: 16

SDG/Report No.: 440-151701-1  
 Lab ID: Test America Irvine  
 Matrix: Water

Area Reviewed	Anomalies		Qualification Required	Action Required
	Yes	No	Yes or No	
1. Sample Preservation, Handling, and Transport		X	No	
2. Chain-of-Custody		X	No	
3. Holding Times		X	No	
4. Blanks		X	No	
5. Surrogates/Monitoring Compounds		X	No	
6. Matrix Spike/Matrix Spike Duplicate		X	No	
7. Laboratory Control Samples		X	No	
8. Interference Check Samples		X	No	
9. Compound Quantitation and Reporting Limits	X		Yes	All sample results below the reporting limit are "J" qualified.
10. Duplicates		X	No	
Verification and Validation Label		Stage_2A_Validation_Manual		
Verification and Validation Label Code		S2AVM		
<p><b>Overall Assessment:</b> Acceptable as qualified.            Field QC samples checked for completeness only.  <b>Usability:</b> Sample results qualified "J", estimated, are useable for limited purposes only. All other results are considered valid and useable for all purposes.</p>				

Sample Information:

Cooler Temperature: Three coolers at receipt time were 2.9° C, 3.2° C and 3.9° C.

Field Sample Number	Lab Sample ID	Date Collected
TT-TP1-M1-20160705	440-151701-1	07/05/16
TT-TP1-M2-20160705	440-151701-2	07/05/16
TT-TP1-M3-20160705	440-151701-3	07/05/16
TT-TP2-M1-20160705	440-151701-4	07/05/16
TT-TP2-M2-20160705	440-151701-5	07/05/16
TT-TP3-M1-20160705	440-151701-6	07/05/16
TT-TP3-M2-20160705	440-151701-7	07/05/16
TT-TP4-M2-20160705	440-151701-8	07/05/16
TT-TP1-L1-20160705	440-151701-9	07/05/16
TT-TP1-L2-20160705	440-151701-10	07/05/16
TT-TP2-L1-20160705	440-151701-11	07/05/16
TT-TP2-L2-20160705	440-151701-12	07/05/16
TT-TP3-L1-20160705	440-151701-13	07/05/16

Data Verification and Validation Summary  
Data Validation Stage 2A

<b>Field Sample Number</b>	<b>Lab Sample ID</b>	<b>Date Collected</b>
TT-TP3-L2-20160705	440-151701-14	07/05/16
TT-TP4-L1-20160705	440-151701-15	07/05/16
TT-TP4-L2-20160705	440-151701-16	07/05/16

Data Verification and Validation Summary  
Data Validation Stage 2A

The following section is intended to specify areas evaluated and issues encountered. Only applicable methods are listed.

<b>1. Sample Preservation, Handling, and Transport</b>	
Were all samples preserved correctly? Were sample temperatures kept at 4°C (+ or – 2°C)? Were samples received in proper condition?	Yes/Yes/Yes

<b>2. Chain-of-Custody (COC)</b>	
Were samples recorded on the COCs? Were correct analyses performed on the samples?	Yes/Yes

<b>3. Holding Times</b>	
Were samples analyzed within acceptable holding times?	Yes

<b>4. Blanks</b>	
Does data package include a summary of blank results? Was a method blank extracted and/or analyzed for each batch? Were analytes detected in any blanks?	Yes/Yes/No

<b>5. Surrogates/Monitoring Compounds</b>	
Were samples spiked with the correct surrogate compounds? Were surrogate recoveries reported correctly on data forms? Were recoveries within laboratory limits?	Yes/Yes/Yes

<b>6. Matrix Spike/Matrix Spike Duplicate</b>	
Was a MS/MSD pair extracted and/or analyzed with each batch? Were recoveries/RPDs reported correctly on data forms? Were recoveries/RPDs within laboratory established limits?	Yes/Yes/Yes

<b>7. Laboratory Control Samples (LCS)</b>	
Was a LCS analyzed with each analytical batch? Were LCS recoveries reported correctly on data forms? Were LCS recoveries within laboratory established limits?	Yes/Yes/Yes

<b>8. Interference Check Sample (ICS)</b>	
Were interference check samples (ICS) analyzed at appropriate intervals? Were ICS recoveries within acceptable limits of the true value?	Yes

<b>9. Compound Quantitation and Reporting Limits</b>	
Were quantitation limits (RLs) adjusted to reflect dilutions, cleanup, and other factors? If applicable, were reporting limit check recoveries within acceptable limits? Were there detections below the reporting limit?	Yes/Yes/Yes
<b>All:</b> Results detected above the MDL but below the reporting limit are estimated and qualified “J”. For a complete list of “J” qualified samples due to being detected below the reporting limit please see the Qualifier Summary Report and the Reporting Limit Outlier Report in the ADR Output in Appendix G1.	

Data Verification and Validation Summary  
Data Validation Stage 2A

<b>10. Duplicates</b>	
Were any duplicate pairs analyzed in this SDG? Were RPDs between parent sample and duplicates $\leq$ lab limits or $\leq$ 30% for field duplicates?	No/NA

Validated by: Michael Wilson 07/21/2016

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Data Verification and Validation Summary  
Data Validation Stage 2A

Project Name: Soil Flushing Treatability Study  
 Project No.: 100-SBO-T35000-2016-M05  
 No. of Samples: 3

SDG/Report No.: 440-151885-1  
 Lab ID: Test America Irvine  
 Matrix: Water

Area Reviewed	Anomalies		Qualification Required	Action Required
	Yes	No	Yes or No	
1. Sample Preservation, Handling, and Transport		X	No	
2. Chain-of-Custody		X	No	
3. Holding Times		X	No	
4. Blanks		X	No	
5. Surrogates/Monitoring Compounds		X	No	
6. Matrix Spike/Matrix Spike Duplicate	X		Yes	The matrix spikes and/or matrix spike duplicate was outside the control limits for parent sample TT-TP4-M3-20160706. Therefore, the data was "J" qualified.
7. Laboratory Control Samples		X	No	
8. Interference Check Samples		X	No	
9. Compound Quantitation and Reporting Limits		X	No	
10. Duplicates		X	No	
Verification and Validation Label	Stage_2A_Validation_Manual			
Verification and Validation Label Code	S2AVM			
<p><b>Overall Assessment:</b> Acceptable as qualified.            Field QC samples checked for completeness only.  <b>Usability:</b> Sample results qualified "J", estimated, are useable for limited purposes only. All other results are considered valid and useable for all purposes.</p>				

Sample Information:

Cooler Temperature: One cooler at 3.6° C

Field Sample Number	Lab Sample ID	Date Collected
TT-TP4-M1-20160706	440-151885-1	07/06/16
TT-TP4-M3-20160706	440-151885-2	07/06/16
TT-TP4-M3-20160706-DUP	440-151885-3	07/06/16

Data Verification and Validation Summary  
Data Validation Stage 2A

The following section is intended to specify areas evaluated and issues encountered. Only applicable methods are listed.

<b>1. Sample Preservation, Handling, and Transport</b>	
Were all samples preserved correctly? Were sample temperatures kept at 4°C (+ or – 2°C)? Were samples received in proper condition?	Yes/Yes/Yes

<b>2. Chain-of-Custody (COC)</b>	
Were samples recorded on the COCs? Were correct analyses performed on the samples?	Yes/Yes

<b>3. Holding Times</b>	
Were samples analyzed within acceptable holding times?	Yes

<b>4. Blanks</b>	
Does data package include a summary of blank results? Was a method blank extracted and/or analyzed for each batch? Were analytes detected in any blanks?	Yes/Yes/No

<b>5. Surrogates/Monitoring Compounds</b>	
Were samples spiked with the correct surrogate compounds? Were surrogate recoveries reported correctly on data forms? Were recoveries within laboratory limits?	Yes/Yes/Yes

<b>6. Matrix Spike/Matrix Spike Duplicate</b>	
Was a MS/MSD pair extracted and/or analyzed with each batch? Were recoveries/RPDs reported correctly on data forms? Were recoveries/RPDs within laboratory established limits?	Yes/Yes/No
<b>Method 314.0:</b> The Perchlorate result from parent sample TT-TP4-M3-20160706 was qualified as estimated and assigned a “J-” qualifier.	
<b>Method 6020:</b> The Chromium result from parent sample TT-TP4-M3-20160706 was qualified as estimated and assigned a “J+” qualifier.	

<b>7. Laboratory Control Samples (LCS)</b>	
Was a LCS analyzed with each analytical batch? Were LCS recoveries reported correctly on data forms? Were LCS recoveries within laboratory established limits?	Yes/Yes/Yes

<b>8. Interference Check Sample (ICS)</b>	
Were interference check samples (ICS) analyzed at appropriate intervals? Were ICS recoveries within acceptable limits of the true value?	Yes

<b>9. Compound Quantitation and Reporting Limits</b>	
Were quantitation limits (RLs) adjusted to reflect dilutions, cleanup, and other factors? If applicable, were reporting limit check recoveries within acceptable limits? Were there detections below the reporting limit?	Yes/Yes/No

Data Verification and Validation Summary  
Data Validation Stage 2A

**All:** Results detected above the MDL but below the reporting limit are estimated and qualified “J”. For a complete list of “J” qualified samples due to being detected below the reporting limit please see the Qualifier Summary Report and the Reporting Limit Outlier Report in the ADR Output in Appendix G1.

**10. Duplicates**

Were any duplicate pairs analyzed in this SDG? Were RPDs between parent sample and duplicates $\leq$ lab limits or $\leq$ 30% for field duplicates?	Yes/Yes
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Validated by: Michael Wilson 07/21/2016

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Data Verification and Validation Summary  
Data Validation Stage 2A

Project Name: Soil Flushing Treatability Study  
 Project No.: 100-SBO-T35000-2016-M05  
 No. of Samples: 12

SDG/Report No.: 440-153790-1  
 Lab ID: Test America Irvine  
 Matrix: Water

Area Reviewed	Anomalies		Qualification Required	Action Required
	Yes	No	Yes or No	
1. Sample Preservation, Handling, and Transport		X	No	
2. Chain-of-Custody		X	No	
3. Holding Times		X	No	
4. Blanks		X	No	
5. Surrogates/Monitoring Compounds		X	No	
6. Matrix Spike/Matrix Spike Duplicate	X		Yes	The matrix spikes and/or matrix spike duplicate was outside the control limits for parent samples TT-TP1-M1-20160727 and TT-TP1-M2-20160727. Therefore, the data was "J" qualified.
7. Laboratory Control Samples		X	No	
8. Interference Check Samples		X	No	
9. Compound Quantitation and Reporting Limits	X		Yes	All sample results below the reporting limit are "J" qualified.
10. Duplicates		X	No	
Verification and Validation Label	Stage_2A_Validation_Manual			
Verification and Validation Label Code	S2AVM			
<b>Overall Assessment:</b> Acceptable as qualified. Field QC samples checked for completeness only. <b>Usability:</b> Sample results qualified "J", estimated, are useable for limited purposes only. All other results are considered valid and useable for all purposes.				

Sample Information:  
Cooler Temperature:

Field Sample Number	Lab Sample ID	Date Collected
TT-TP1-M2-20160727	440-153790-1	07/27/16
TT-TP1-M1-20160727	440-153790-2	07/27/16
TT-TP1-M3-20160727	440-153790-3	07/27/16
TT-TP2-M1-20160727	440-153790-4	07/27/16
TT-TP1-L1-20160727	440-153790-5	07/27/16
TT-TP1-L2-20160727	440-153790-6	07/27/16
TT-TP2-L1-20160727	440-153790-7	07/27/16
TT-TP2-L2-20160727	440-153790-8	07/27/16
TT-TP3-L1-20160727	440-153790-9	07/27/16
TT-TP3-L2-20160727	440-153790-10	07/27/16

Data Verification and Validation Summary  
Data Validation Stage 2A

<b>Field Sample Number</b>	<b>Lab Sample ID</b>	<b>Date Collected</b>
TT-TP4-L1-20160727	440-153790-11	07/27/16
TT-TP4-L2-20160727	440-153790-12	07/27/16

Data Verification and Validation Summary  
Data Validation Stage 2A

The following section is intended to specify areas evaluated and issues encountered. Only applicable methods are listed.

<b>1. Sample Preservation, Handling, and Transport</b>	
Were all samples preserved correctly? Were sample temperatures kept at 4°C (+ or – 2°C)? Were samples received in proper condition?	Yes/Yes/Yes

<b>2. Chain-of-Custody (COC)</b>	
Were samples recorded on the COCs? Were correct analyses performed on the samples?	Yes/Yes

<b>3. Holding Times</b>	
Were samples analyzed within acceptable holding times?	Yes

<b>4. Blanks</b>	
Does data package include a summary of blank results? Was a method blank extracted and/or analyzed for each batch? Were analytes detected in any blanks?	Yes/Yes/No

<b>5. Surrogates/Monitoring Compounds</b>	
Were samples spiked with the correct surrogate compounds? Were surrogate recoveries reported correctly on data forms? Were recoveries within laboratory limits?	Yes/Yes/Yes

<b>6. Matrix Spike/Matrix Spike Duplicate</b>	
Was a MS/MSD pair extracted and/or analyzed with each batch? Were recoveries/RPDs reported correctly on data forms? Were recoveries/RPDs within laboratory established limits?	Yes/Yes/No
<b>Method 300.0:</b> The Nitrate as N, Chloride, and Sulfate results from parent sample TT-TP1-M1-20160727 were qualified as estimated and assigned a “J-” qualifier.	
<b>Method 6010B:</b> Parent sample TT-TP1-M2-20160727 was qualified as estimated for Calcium (J-), Magnesium (J-), and Sodium (J).	

<b>7. Laboratory Control Samples (LCS)</b>	
Was a LCS analyzed with each analytical batch? Were LCS recoveries reported correctly on data forms? Were LCS recoveries within laboratory established limits?	Yes/Yes/Yes

<b>8. Interference Check Sample (ICS)</b>	
Were interference check samples (ICS) analyzed at appropriate intervals? Were ICS recoveries within acceptable limits of the true value?	Yes

<b>9. Compound Quantitation and Reporting Limits</b>	
Were quantitation limits (RLs) adjusted to reflect dilutions, cleanup, and other factors? If applicable, were reporting limit check recoveries within acceptable limits? Were there detections below the reporting limit?	Yes/Yes/Yes
<b>All:</b> Results detected above the MDL but below the reporting limit are estimated and qualified “J”. For a complete list of “J” qualified samples due to being detected below the reporting limit please see the Qualifier Summary Report and the Reporting Limit Outlier Report in the ADR Output in Appendix G1.	

Data Verification and Validation Summary  
Data Validation Stage 2A

<b>10. Duplicates</b>	
Were any duplicate pairs analyzed in this SDG? Were RPDs between parent sample and duplicates $\leq$ lab limits or $\leq$ 30% for field duplicates?	No/NA

Validated by: Michael Wilson 08/22/2016

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Data Verification and Validation Summary  
Data Validation Stage 2A

Project Name: Soil Flushing Treatability Study  
 Project No.: 100-SBO-T35000-2016-M05  
 No. of Samples: 7

SDG/Report No.: 440-153948-1  
 Lab ID: Test America Irvine  
 Matrix: Water

Area Reviewed	Anomalies		Qualification Required	Action Required
	Yes	No	Yes or No	
1. Sample Preservation, Handling, and Transport		X	No	
2. Chain-of-Custody		X	No	
3. Holding Times		X	No	
4. Blanks		X	No	
5. Surrogates/Monitoring Compounds		X	No	
6. Matrix Spike/Matrix Spike Duplicate	X		Yes	The matrix spikes and/or matrix spike duplicate was outside the control limits for parent sample TT-TP4-M3-20160728. Therefore, the data was "J" qualified.
7. Laboratory Control Samples		X	No	
8. Interference Check Samples		X	No	
9. Compound Quantitation and Reporting Limits	X		Yes	All sample results below the reporting limit are "J" qualified.
10. Duplicates		X	No	
Verification and Validation Label		Stage_2A_Validation_Manual		
Verification and Validation Label Code		S2AVM		
<p><b>Overall Assessment:</b> Acceptable as qualified.            Field QC samples checked for completeness only.  <b>Usability:</b> Sample results qualified "J", estimated, are useable for limited purposes only. All other results are considered valid and useable for all purposes.</p>				

Sample Information:

Cooler Temperature: Three coolers at 0.7° C, 1.8° C and 4.5° C

Field Sample Number	Lab Sample ID	Date Collected
TT-TP2-M2-20160728	440-153948-1	07/28/16
TT-TP3-M2-20160728	440-153948-2	07/28/16
TT-TP3-M1-20160728	440-153948-3	07/28/16
TT-TP4-M1-20160728	440-153948-4	07/28/16
TT-TP4-M2-20160728	440-153948-5	07/28/16
TT-TP4-M3-20160728	440-153948-6	07/28/16
TT-TP4-M3-20160728-DUP	440-153948-7	07/28/16

Data Verification and Validation Summary  
Data Validation Stage 2A

The following section is intended to specify areas evaluated and issues encountered. Only applicable methods are listed.

<b>1. Sample Preservation, Handling, and Transport</b>	
Were all samples preserved correctly? Were sample temperatures kept at 4°C (+ or – 2°C)? Were samples received in proper condition?	Yes/Yes/Yes

<b>2. Chain-of-Custody (COC)</b>	
Were samples recorded on the COCs? Were correct analyses performed on the samples?	Yes/Yes

<b>3. Holding Times</b>	
Were samples analyzed within acceptable holding times?	Yes

<b>4. Blanks</b>	
Does data package include a summary of blank results? Was a method blank extracted and/or analyzed for each batch? Were analytes detected in any blanks?	Yes/Yes/No

<b>5. Surrogates/Monitoring Compounds</b>	
Were samples spiked with the correct surrogate compounds? Were surrogate recoveries reported correctly on data forms? Were recoveries within laboratory limits?	Yes/Yes/Yes

<b>6. Matrix Spike/Matrix Spike Duplicate</b>	
Was a MS/MSD pair extracted and/or analyzed with each batch? Were recoveries/RPDs reported correctly on data forms? Were recoveries/RPDs within laboratory established limits?	Yes/Yes/No
<b>Method 300.0:</b> Parent sample TT-TP4-M3-20160728 was qualified as estimated for Nitrate as N (J-), Chloride (J+), and Sulfate (J+).	
<b>Method 300.1B:</b> Parent sample TT-TP4-M3-20160728 was qualified as estimated for Chlorate (J+).	
<b>Method 314.0:</b> Parent sample TT-TP4-M3-20160728 was qualified as estimated for Perchlorate (J+).	
<b>Method 6010B:</b> The Calcium, Magnesium, and Sodium results from parent sample TT-TP4-M3-20160728 were qualified as estimated and assigned “J-” qualifiers.	
<b>Method 6020:</b> The Chromium result from parent sample TT-TP4-M3-20160728 was qualified as estimated and assigned a “J-” qualifier.	
<b>Method 7199:</b> The Hexavalent Chromium result from parent sample TT-TP4-M3-20160728 was qualified as estimated and assigned a “J-” qualifier.	

<b>7. Laboratory Control Samples (LCS)</b>	
Was a LCS analyzed with each analytical batch? Were LCS recoveries reported correctly on data forms? Were LCS recoveries within laboratory established limits?	Yes/Yes/Yes

<b>8. Interference Check Sample (ICS)</b>	
Were interference check samples (ICS) analyzed at appropriate intervals? Were ICS recoveries within acceptable limits of the true value?	Yes

Data Verification and Validation Summary  
Data Validation Stage 2A

<b>9. Compound Quantitation and Reporting Limits</b>	
Were quantitation limits (RLs) adjusted to reflect dilutions, cleanup, and other factors? If applicable, were reporting limit check recoveries within acceptable limits? Were there detections below the reporting limit?	Yes/Yes/Yes
<b>All:</b> Results detected above the MDL but below the reporting limit are estimated and qualified "J". For a complete list of "J" qualified samples due to being detected below the reporting limit please see the Qualifier Summary Report and the Reporting Limit Outlier Report in the ADR Output in Appendix G1.	

<b>10. Duplicates</b>	
Were any duplicate pairs analyzed in this SDG? Were RPDs between parent sample and duplicates $\leq$ lab limits or $\leq$ 30% for field duplicates?	Yes/Yes

Validated by: Michael Wilson 08/22/2016

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Data Verification and Validation Summary  
Data Validation Stage 2A

Project Name: Soil Flushing Treatability Study  
 Project No.: 100-SBO-T35000-2016-M05  
 No. of Samples: 21

SDG/Report No.: 440-155501-1  
 Lab ID: Test America Irvine  
 Matrix: Solid

Area Reviewed	Anomalies		Qualification Required	Action Required
	Yes	No	Yes or No	
1. Sample Preservation, Handling, and Transport		X	No	
2. Chain-of-Custody		X	No	
3. Holding Times		X	No	
4. Blanks		X	No	
5. Surrogates/Monitoring Compounds		X	No	
6. Matrix Spike/Matrix Spike Duplicate	X		Yes	The matrix spikes and/or matrix spike duplicate was outside the control limits for parent sample Tt-TP1-B4A-10 Therefore, the data was "J" qualified.
7. Laboratory Control Samples		X	No	
8. Interference Check Samples		X	No	
9. Compound Quantitation and Reporting Limits	X		Yes	All sample results below the reporting limit are "J" qualified.
10. Duplicates	X		Yes	Parent samples Tt-TP1-B4A-6 was qualified as estimated and assigned a "J" qualifier.
Verification and Validation Label	Stage_2A_Validation_Manual			
Verification and Validation Label Code	S2AVM			
<p><b>Overall Assessment:</b> Acceptable as qualified.            Field QC samples checked for completeness only.  <b>Usability:</b> Sample results qualified "J", estimated, are useable for limited purposes only. All other results are considered valid and useable for all purposes.</p>				

Sample Information:

Cooler Temperature: One cooler at receipt was 5.1° C.

Lab Sample ID	Field Sample Number	Date Collected
440-155501-1	Tt-TP1-B1A-2	08/11/16
440-155501-2	Tt-TP1-B1A-6	08/11/16
440-155501-3	Tt-TP1-B1A-10	08/11/16
440-155501-4	Tt-TP1-B1A-14	08/11/16
440-155501-5	Tt-TP1-B1A-18	08/11/16
440-155501-6	Tt-TP1-B1A-22	08/11/16
440-155501-7	Tt-TP1-B1A-26	08/11/16
440-155501-8	Tt-TP1-B4A-2	08/11/16
440-155501-9	Tt-TP1-B4A-6	08/11/16
440-155501-10	Tt-TP1-B4A-6-dup	08/11/16



Data Verification and Validation Summary  
Data Validation Stage 2A

<b>Lab Sample ID</b>	<b>Field Sample Number</b>	<b>Date Collected</b>
440-155501-11	Tt-TP1-B4A-10	08/11/16
440-155501-12	Tt-TP1-B4A-14	08/11/16
440-155501-13	Tt-TP1-B4A-18	08/11/16
440-155501-14	Tt-TP1-B4A-22	08/11/16
440-155501-15	Tt-TP1-B4A-26	08/11/16
440-155501-16	Tt-TP1-B3A-2	08/11/16
440-155501-17	Tt-TP1-B3A-6	08/11/16
440-155501-18	Tt-TP1-B3A-10	08/11/16
440-155501-19	Tt-TP1-B3A-14	08/11/16
440-155501-20	Tt-TP1-B3A-18	08/11/16
440-155501-21	Tt-TP1-B3A-26	08/11/16

Data Verification and Validation Summary  
Data Validation Stage 2A

The following section is intended to specify areas evaluated and issues encountered. Only applicable methods are listed.

<b>1. Sample Preservation, Handling, and Transport</b>	
Were all samples preserved correctly? Were sample temperatures kept at 4°C (+ or – 2°C)? Were samples received in proper condition?	Yes/Yes/Yes

<b>2. Chain-of-Custody (COC)</b>	
Were samples recorded on the COCs? Were correct analyses performed on the samples?	Yes/Yes

<b>3. Holding Times</b>	
Were samples analyzed within acceptable holding times?	Yes

<b>4. Blanks</b>	
Does data package include a summary of blank results? Was a method blank extracted and/or analyzed for each batch? Were analytes detected in any blanks?	Yes/Yes/No

<b>5. Surrogates/Monitoring Compounds</b>	
Were samples spiked with the correct surrogate compounds? Were surrogate recoveries reported correctly on data forms? Were recoveries within laboratory limits?	Yes/Yes/Yes

<b>6. Matrix Spike/Matrix Spike Duplicate</b>	
Was a MS/MSD pair extracted and/or analyzed with each batch? Were recoveries/RPDs reported correctly on data forms? Were recoveries/RPDs within laboratory established limits?	Yes/Yes/No
<b>Method 314.0:</b> The Perchlorate results from parent sample Tt-TP1-B4A-10 was qualified as estimated and assigned a “J-” qualifier.	

<b>7. Laboratory Control Samples (LCS)</b>	
Was a LCS analyzed with each analytical batch? Were LCS recoveries reported correctly on data forms? Were LCS recoveries within laboratory established limits?	Yes/Yes/Yes

<b>8. Interference Check Sample (ICS)</b>	
Were interference check samples (ICS) analyzed at appropriate intervals? Were ICS recoveries within acceptable limits of the true value?	Yes

<b>9. Compound Quantitation and Reporting Limits</b>	
Were quantitation limits (RLs) adjusted to reflect dilutions, cleanup, and other factors? If applicable, were reporting limit check recoveries within acceptable limits? Were there detections below the reporting limit?	Yes/Yes/Yes

Data Verification and Validation Summary  
Data Validation Stage 2A

**All:** Results detected above the MDL but below the reporting limit are estimated and qualified “J”. For a complete list of “J” qualified samples due to being detected below the reporting limit please see the Qualifier Summary Report and the Reporting Limit Outlier Report in the ADR Output in Appendix G1.

**10. Duplicates**

Were any duplicate pairs analyzed in this SDG? Were RPDs between parent sample and duplicates $\leq$ lab limits or $\leq$ 30% for field duplicates?	Yes/No
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**Method 2540C Leach:** The Total dissolved solids result from parent sample Tt-TP1-B4A-6 was qualified as estimated and assigned a “J” qualifier.

**Method 314.0:** The Total dissolved solids result from parent sample Tt-TP1-B4A-6 was qualified as estimated and assigned a “J” qualifier.

Validated by: Michael Wilson 9/14/2016

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Data Verification and Validation Summary  
Data Validation Stage 2A

Project Name: Soil Flushing Treatability Study  
Project No.: 100-SBO-T35000-2016-M05  
No. of Samples: 8

SDG/Report No.: 440-155570-1  
Lab ID: Test America Irvine  
Matrix: Solid

Area Reviewed	Anomalies		Qualification Required	Action Required
	Yes	No	Yes or No	
1. Sample Preservation, Handling, and Transport		X	No	
2. Chain-of-Custody		X	No	
3. Holding Times		X	No	
4. Blanks		X	No	
5. Surrogates/Monitoring Compounds		X	No	
6. Matrix Spike/Matrix Spike Duplicate	X		Yes	The parent sample Tt-TP2-B3A-14 data associated with the matrix spikes and/or matrix spike duplicates was "J" or "UJ" qualified.
7. Laboratory Control Samples		X	No	
8. Interference Check Samples		X	No	
9. Compound Quantitation and Reporting Limits	X		Yes	All sample results below the reporting limit are "J" qualified.
10. Duplicates	X		Yes	Parent sample Tt-TP2-B3A-14 relative percent difference to its respective duplicate sample was outside the control limit and was "J" qualified.
Verification and Validation Label	Stage_2A_Validation_Manual			
Verification and Validation Label Code	S2AVM			
<p><b>Overall Assessment:</b> Acceptable as qualified. Field QC samples checked for completeness only. <b>Usability:</b> Sample results qualified "J", estimated, are useable for limited purposes only. All other results are considered valid and useable for all purposes.</p>				

Sample Information:

Cooler Temperature: One cooler at receipt was 3.2° C.

Lab Sample ID	Field Sample Number	Date Collected
440-155570-1	Tt-TP2-B3A-2	08/12/16
440-155570-2	Tt-TP2-B3A-6	08/12/16
440-155570-3	Tt-TP2-B3A-10	08/12/16
440-155570-4	Tt-TP2-B3A-1	08/12/16
440-155570-5	Tt-TP2-B3A-14-dup	08/12/16
440-155570-6	Tt-TP2-B3A-18	08/12/16
440-155570-7	Tt-TP2-B3A-22	08/12/16
440-155570-8	Tt-TP2-B3A-26	08/12/16

Data Verification and Validation Summary  
Data Validation Stage 2A

The following section is intended to specify areas evaluated and issues encountered. Only applicable methods are listed.

<b>1. Sample Preservation, Handling, and Transport</b>	
Were all samples preserved correctly? Were sample temperatures kept at 4°C (+ or – 2°C)? Were samples received in proper condition?	Yes/Yes/Yes

<b>2. Chain-of-Custody (COC)</b>	
Were samples recorded on the COCs? Were correct analyses performed on the samples?	Yes/Yes

<b>3. Holding Times</b>	
Were samples analyzed within acceptable holding times?	Yes

<b>4. Blanks</b>	
Does data package include a summary of blank results? Was a method blank extracted and/or analyzed for each batch? Were analytes detected in any blanks?	Yes/Yes/No

<b>5. Surrogates/Monitoring Compounds</b>	
Were samples spiked with the correct surrogate compounds? Were surrogate recoveries reported correctly on data forms? Were recoveries within laboratory limits?	Yes/Yes/Yes

<b>6. Matrix Spike/Matrix Spike Duplicate</b>	
Was a MS/MSD pair extracted and/or analyzed with each batch? Were recoveries/RPDs reported correctly on data forms? Were recoveries/RPDs within laboratory established limits?	Yes/Yes/No
<b>Method 300.0_Leach:</b> Parent sample Tt-TP2-B3A-14 was qualified as estimated for Sulfate (J), Nitrate as NO3 (J+), and Chloride (J+).	
<b>Method 6010B:</b> The Iron, Manganese, and Titanium results from parent sample Tt-TP2-B3A-14 were qualified as estimated and assigned “J+” qualifiers.	
<b>Method 6010B_Leach:</b> Parent sample Tt-TP2-B3A-14 was qualified as estimated for Calcium (J+) and Sodium (J-).	
<b>Method 6020:</b> The results from parent sample Tt-TP3-L2-6 were qualified as estimated for Antimony (UJ), Arsenic (J-), Barium (J+), and Beryllium (J-).	

<b>7. Laboratory Control Samples (LCS)</b>	
Was a LCS analyzed with each analytical batch? Were LCS recoveries reported correctly on data forms? Were LCS recoveries within laboratory established limits?	Yes/Yes/Yes

<b>8. Interference Check Sample (ICS)</b>	
Were interference check samples (ICS) analyzed at appropriate intervals? Were ICS recoveries within acceptable limits of the true value?	Yes

<b>9. Compound Quantitation and Reporting Limits</b>	
Were quantitation limits (RLs) adjusted to reflect dilutions, cleanup, and other factors? If applicable, were reporting limit check recoveries within acceptable limits? Were there detections below the reporting limit?	Yes/Yes/Yes

Data Verification and Validation Summary  
Data Validation Stage 2A

**All:** Results detected above the MDL but below the reporting limit are estimated and qualified “J”. For a complete list of “J” qualified samples due to being detected below the reporting limit please see the Qualifier Summary Report and the Reporting Limit Outlier Report in the ADR Output in Appendix G1.

**10. Duplicates**

Were any duplicate pairs analyzed in this SDG? Were RPDs between parent sample and duplicates $\leq$ lab limits or $\leq$ 30% for field duplicates?	Yes/No
<b>Method 300.0_Leach:</b> The Sulfate result from parent sample Tt-TP2-B3A-14 was qualified as estimated and assigned a “J” qualifier. The Chloride result from parent sample Tt-TP2-B3A-14 was qualified as estimated and assigned a “J+” qualifier.	
<b>Method 314.0:</b> The Perchlorate result from parent sample Tt-TP2-B3A-14 was qualified as estimated and assigned a “J” qualifier.	
<b>Method 6010B_Leach:</b> The Calcium and Magnesium results from parent sample Tt-TP2-B3A-14 were qualified as estimated and assigned a “J” qualifier.	
<b>Method 6020:</b> The Chromium result from parent sample Tt-TP2-B3A-14 was qualified as estimated and assigned a “J” qualifier.	
<b>Method 7199:</b> The Chromium, Hexavalent result from parent sample Tt-TP2-B3A-14 was qualified as estimated and assigned a “J” qualifier.	

Validated by: Michael Wilson 9/19/2016

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Data Verification and Validation Summary  
Data Validation Stage 2A

Project Name: Soil Flushing Treatability Study  
 Project No.: 100-SBO-T35000-2016-M05  
 No. of Samples: 23

SDG/Report No.: 440-155575-1  
 Lab ID: Test America Irvine  
 Matrix: Solid

Area Reviewed	Anomalies		Qualification Required	Action Required
	Yes	No	Yes or No	
1. Sample Preservation, Handling, and Transport		X	No	
2. Chain-of-Custody		X	No	
3. Holding Times		X	No	
4. Blanks		X	No	
5. Surrogates/Monitoring Compounds		X	No	
6. Matrix Spike/Matrix Spike Duplicate	X		Yes	The parent sample Tt-TP1-L2A-14 data associated with the matrix spikes and/or matrix spike duplicates was "J" qualified.
7. Laboratory Control Samples		X	No	
8. Interference Check Samples		X	No	
9. Compound Quantitation and Reporting Limits	X		Yes	All sample results below the reporting limit are "J" qualified.
10. Duplicates	X		Yes	Parent samples Tt-TP1-L2A-14 and Tt-TP1-B2A-14 were qualified as estimated and assigned "J" qualifiers.

Verification and Validation Label	Stage_2A_Validation_Manual
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Verification and Validation Label Code	S2AVM
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**Overall Assessment:** Acceptable as qualified.  
 Field QC samples checked for completeness only.  
**Usability:** Sample results qualified "J", estimated, are useable for limited purposes only. All other results are considered valid and useable for all purposes.

Sample Information:

Cooler Temperature: One cooler at receipt was 2.9° C.

Lab Sample ID	Field Sample Number	Date Collected
440-155575-1	Tt-TP2-B4A-2	08/12/16
440-155575-2	Tt-TP2-B4A-6	08/12/16
440-155575-3	Tt-TP2-B4A-10	08/12/16
440-155575-4	Tt-TP2-B4A-14	08/12/16
440-155575-5	Tt-TP2-B4A-18	08/12/16
440-155575-6	Tt-TP2-B4A-22	08/12/16
440-155575-7	Tt-TP2-B4A-26	08/12/16
440-155575-8	Tt-TP1-B2A-2	08/12/16
440-155575-9	Tt-TP1-B2A-6	08/12/16
440-155575-10	Tt-TP1-B2A-10	08/12/16
440-155575-11	Tt-TP1-B2A-14	08/12/16

Data Verification and Validation Summary  
Data Validation Stage 2A

<b>Lab Sample ID</b>	<b>Field Sample Number</b>	<b>Date Collected</b>
440-155575-12	Tt-TP1-B2A-14-dup	08/12/16
440-155575-13	Tt-TP1-B2A-18	08/12/16
440-155575-14	Tt-TP1-B2A-22	08/12/16
440-155575-16	Tt-TP1-L2A-2	08/12/16
440-155575-17	Tt-TP1-L2A-6	08/12/16
440-155575-18	Tt-TP1-L2A-10	08/12/16
440-155575-19	Tt-TP1-L2A-14	08/12/16
440-155575-20	Tt-TP1-L2A-14-dup	08/12/16
440-155575-21	Tt-TP1-L2A-18	08/12/16
440-155575-22	Tt-TP1-L2A-22	08/12/16
440-155575-23	Tt-TP1-L2A-26	08/12/16



Data Verification and Validation Summary  
Data Validation Stage 2A

The following section is intended to specify areas evaluated and issues encountered. Only applicable methods are listed.

<b>1. Sample Preservation, Handling, and Transport</b>	
Were all samples preserved correctly? Were sample temperatures kept at 4°C (+ or – 2°C)? Were samples received in proper condition?	Yes/Yes/Yes

<b>2. Chain-of-Custody (COC)</b>	
Were samples recorded on the COCs? Were correct analyses performed on the samples?	Yes/Yes

<b>3. Holding Times</b>	
Were samples analyzed within acceptable holding times?	Yes

<b>4. Blanks</b>	
Does data package include a summary of blank results? Was a method blank extracted and/or analyzed for each batch? Were analytes detected in any blanks?	Yes/Yes/No

<b>5. Surrogates/Monitoring Compounds</b>	
Were samples spiked with the correct surrogate compounds? Were surrogate recoveries reported correctly on data forms? Were recoveries within laboratory limits?	Yes/Yes/Yes

<b>6. Matrix Spike/Matrix Spike Duplicate</b>	
Was a MS/MSD pair extracted and/or analyzed with each batch? Were recoveries/RPDs reported correctly on data forms? Were recoveries/RPDs within laboratory established limits?	Yes/Yes/No
<b>Method 314.0:</b> The Perchlorate results from parent sample Tt-TP1-L2A-14 was qualified as estimated and assigned a “J+” qualifier.	

<b>7. Laboratory Control Samples (LCS)</b>	
Was a LCS analyzed with each analytical batch? Were LCS recoveries reported correctly on data forms? Were LCS recoveries within laboratory established limits?	Yes/Yes/Yes

<b>8. Interference Check Sample (ICS)</b>	
Were interference check samples (ICS) analyzed at appropriate intervals? Were ICS recoveries within acceptable limits of the true value?	Yes

<b>9. Compound Quantitation and Reporting Limits</b>	
Were quantitation limits (RLs) adjusted to reflect dilutions, cleanup, and other factors? If applicable, were reporting limit check recoveries within acceptable limits? Were there detections below the reporting limit?	Yes/Yes/Yes

Data Verification and Validation Summary  
Data Validation Stage 2A

**All:** Results detected above the MDL but below the reporting limit are estimated and qualified “J”. For a complete list of “J” qualified samples due to being detected below the reporting limit please see the Qualifier Summary Report and the Reporting Limit Outlier Report in the ADR Output in Appendix G1.

**10. Duplicates**

Were any duplicate pairs analyzed in this SDG? Were RPDs between parent sample and duplicates $\leq$ lab limits or $\leq$ 30% for field duplicates?	Yes/No
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**Method 314.0:** The Perchlorate result from parent sample Tt-TP1-L2A-14 was qualified as estimated and assigned a “J+” qualifier. The Perchlorate result from parent sample Tt-TP1-B2A-14 was qualified as estimated and assigned a “J” qualifier.

**Method 2540C Leach:** The Total Dissolved Solids result from parent sample Tt-TP1-L2A-14 was qualified as estimated and assigned a “J” qualifier.

Validated by: Michael Wilson 9/15/2016

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Data Verification and Validation Summary  
Data Validation Stage 2A

Project Name: Soil Flushing Treatability Study  
 Project No.: 100-SBO-T35000-2016-M05  
 No. of Samples: 67

SDG/Report No.: 440-155631-1  
 Lab ID: Test America Irvine  
 Matrix: Solid

Area Reviewed	Anomalies		Qualification Required	Action Required
	Yes	No	Yes or No	
1. Sample Preservation, Handling, and Transport		X	No	
2. Chain-of-Custody		X	No	
3. Holding Times		X	No	
4. Blanks		X	No	
5. Surrogates/Monitoring Compounds		X	No	
6. Matrix Spike/Matrix Spike Duplicate	X		Yes	The matrix spikes and/or matrix spike duplicate was outside the control limits for parent samples Tt-TP2-B1A-6, Tt-TP2-L2A-2, Tt-TP3-B2A-22, Tt-TP3-B3A-26, and Tt-TP4-B3A-22. Therefore, the data was were "J" qualified.
7. Laboratory Control Samples		X	No	
8. Interference Check Samples		X	No	
9. Compound Quantitation and Reporting Limits	X		Yes	All sample results below the reporting limit are "J" qualified.
10. Duplicates	X		Yes	Parent samples Tt-TP3-B2A-22, Tt-TP3-B1A-6, Tt-TP3-B4A-14, Tt-TP3-L2A-6, Tt-TP4-B3A-22 and Tt-TP2-B1A-22 relative percent difference to its respective duplicate sample was outside the control limit and were "J" or "UJ" qualified.
Verification and Validation Label		Stage_2A_Validation_Manual		
Verification and Validation Label Code		S2AVM		
<p><b>Overall Assessment:</b> Acceptable as qualified.            Field QC samples checked for completeness only.  <b>Usability:</b> Sample results qualified "J", estimated, are useable for limited purposes only. All other results are considered valid and useable for all purposes.</p>				

Sample Information:

Cooler Temperature: Three coolers at receipt time were 1.5° C, 4.1° C and 4.7° C.

Lab Sample ID	Field Sample Number	Date Collected
440-155631-1	Tt-TP2-L2A-2	08/13/16
440-155631-2	Tt-TP2-L2A-6	08/13/16
440-155631-3	Tt-TP2-L2A-10	08/13/16
440-155631-4	Tt-TP2-L2A-14	08/13/16
440-155631-5	Tt-TP2-L2A-18	08/13/16
440-155631-6	Tt-TP2-L2A-22	08/13/16
440-155631-7	Tt-TP2-L2A-26	08/13/16

Data Verification and Validation Summary  
Data Validation Stage 2A

<b>Lab Sample ID</b>	<b>Field Sample Number</b>	<b>Date Collected</b>
440-155631-8	Tt-TP2-B2A-2	08/13/16
440-155631-9	Tt-TP2-B2A-6	08/13/16
440-155631-10	Tt-TP2-B2A-10	08/13/16
440-155631-11	Tt-TP2-B2A-14	08/13/16
440-155631-12	Tt-TP2-B2A-18	08/13/16
440-155631-13	Tt-TP2-B2A-22	08/13/16
440-155631-14	Tt-TP2-B2A-26	08/13/16
440-155631-15	Tt-TP3-B3A-2	08/13/16
440-155631-16	Tt-TP3-B3A-6	08/13/16
440-155631-17	Tt-TP3-B3A-10	08/13/16
440-155631-18	Tt-TP3-B3A-14	08/13/16
440-155631-19	Tt-TP3-B3A-18	08/13/16
440-155631-20	Tt-TP3-B3A-22	08/13/16
440-155631-21	Tt-TP3-B3A-26	08/13/16
440-155631-22	Tt-TP3-B4A-2	08/14/16
440-155631-23	Tt-TP3-B4A-6	08/14/16
440-155631-24	Tt-TP3-B4A-10	08/14/16
440-155631-25	Tt-TP3-B4A-14	08/14/16
440-155631-26	Tt-TP3-B4A-14-DUP	08/14/16
440-155631-27	Tt-TP3-B4A-18	08/14/16
440-155631-28	Tt-TP3-B4A-22	08/14/16
440-155631-29	Tt-TP3-B1A-2	08/14/16
440-155631-30	Tt-TP3-B1A-6	08/14/16
440-155631-31	Tt-TP3-B1A-6-DUP	08/14/16
440-155631-32	Tt-TP3-B1A-10	08/14/16
440-155631-33	Tt-TP3-B1A-14	08/14/16
440-155631-34	Tt-TP3-B1A-18	08/14/16
440-155631-35	Tt-TP3-B1A-22	08/14/16
440-155631-36	Tt-TP3-B1A-28	08/14/16
440-155631-37	Tt-TP3-L2A-2	08/14/16
440-155631-38	Tt-TP3-L2A-6	08/14/16
440-155631-39	Tt-TP3-L2A-6-DUP	08/14/16
440-155631-40	Tt-TP3-L2A-10	08/14/16
440-155631-41	Tt-TP3-L2A-14	08/14/16
440-155631-42	Tt-TP3-L2A-18	08/14/16
440-155631-43	Tt-TP3-L2A-22	08/14/16
440-155631-44	Tt-TP3-L2A-26	08/14/16
440-155631-45	Tt-TP3-B2A-2	08/14/16
440-155631-46	Tt-TP3-B2A-6	08/14/16
440-155631-47	Tt-TP3-B2A-10	08/14/16
440-155631-48	Tt-TP3-B2A-14	08/14/16
440-155631-49	Tt-TP3-B2A-18	08/14/16
440-155631-50	Tt-TP3-B2A-22	08/14/16
440-155631-51	Tt-TP3-B2A-22-DUP	08/14/16
440-155631-52	Tt-TP4-B3A-2	08/15/16

Data Verification and Validation Summary  
Data Validation Stage 2A

<b>Lab Sample ID</b>	<b>Field Sample Number</b>	<b>Date Collected</b>
440-155631-53	Tt-TP4-B3A-6	08/15/16
440-155631-54	Tt-TP4-B3A-10	08/15/16
440-155631-55	Tt-TP4-B3A-14	08/15/16
440-155631-56	Tt-TP4-B3A-18	08/15/16
440-155631-57	Tt-TP4-B3A-22	08/15/16
440-155631-58	Tt-TP4-B3A-22-DUP	08/15/16
440-155631-59	Tt-TP4-B3A-26	08/13/16
440-155631-60	Tt-TP2-B1A-2	08/13/16
440-155631-61	Tt-TP2-B1A-6	08/13/16
440-155631-62	Tt-TP2-B1A-10	08/13/16
440-155631-63	Tt-TP2-B1A-14	08/13/16
440-155631-64	Tt-TP2-B1A-18	08/13/16
440-155631-65	Tt-TP2-B1A-22	08/13/16
440-155631-66	Tt-TP2-B1A-22-DUP	08/13/16
440-155631-67	Tt-TP2-B1A-26	08/13/16

Data Verification and Validation Summary  
Data Validation Stage 2A

The following section is intended to specify areas evaluated and issues encountered. Only applicable methods are listed.

<b>1. Sample Preservation, Handling, and Transport</b>	
Were all samples preserved correctly? Were sample temperatures kept at 4°C (+ or – 2°C)? Were samples received in proper condition?	Yes/Yes/Yes

<b>2. Chain-of-Custody (COC)</b>	
Were samples recorded on the COCs? Were correct analyses performed on the samples?	Yes/Yes

<b>3. Holding Times</b>	
Were samples analyzed within acceptable holding times?	Yes

<b>4. Blanks</b>	
Does data package include a summary of blank results? Was a method blank extracted and/or analyzed for each batch? Were analytes detected in any blanks?	Yes/Yes/No

<b>5. Surrogates/Monitoring Compounds</b>	
Were samples spiked with the correct surrogate compounds? Were surrogate recoveries reported correctly on data forms? Were recoveries within laboratory limits?	Yes/Yes/Yes

<b>6. Matrix Spike/Matrix Spike Duplicate</b>	
Was a MS/MSD pair extracted and/or analyzed with each batch? Were recoveries/RPDs reported correctly on data forms? Were recoveries/RPDs within laboratory established limits?	Yes/Yes/No
<b>Method 314.0:</b> The Perchlorate results from parent samples Tt-TP2-B1A-6, Tt-TP2-L2A-2, Tt-TP3-B2A-22, and Tt-TP3-B3A-26 were qualified as estimated and assigned a “J” qualifier.	
<b>Method 6010B:</b> Parent sample Tt-TP4-B3A-22 was qualified as estimated for Iron (J-), Manganese (J-), and Titanium (J+).	

<b>7. Laboratory Control Samples (LCS)</b>	
Was a LCS analyzed with each analytical batch? Were LCS recoveries reported correctly on data forms? Were LCS recoveries within laboratory established limits?	Yes/Yes/Yes

<b>8. Interference Check Sample (ICS)</b>	
Were interference check samples (ICS) analyzed at appropriate intervals? Were ICS recoveries within acceptable limits of the true value?	Yes

<b>9. Compound Quantitation and Reporting Limits</b>	
Were quantitation limits (RLs) adjusted to reflect dilutions, cleanup, and other factors? If applicable, were reporting limit check recoveries within acceptable limits? Were there detections below the reporting limit?	Yes/Yes/Yes
<b>All:</b> Results detected above the MDL but below the reporting limit are estimated and qualified “J”. For a complete list of “J” qualified samples due to being detected below the reporting limit please see the Qualifier Summary Report and the Reporting Limit Outlier Report in the ADR Output in Appendix G1.	

Data Verification and Validation Summary  
Data Validation Stage 2A

<b>10. Duplicates</b>	
Were any duplicate pairs analyzed in this SDG? Were RPDs between parent sample and duplicates $\leq$ lab limits or $\leq$ 30% for field duplicates?	Yes/No
<b>Method 314.0:</b> The Perchlorate results from parent samples Tt-TP3-B2A-22, Tt-TP3-B1A-6, Tt-TP3-B4A-14, Tt-TP3-L2A-6, Tt-TP4-B3A-22 and Tt-TP2-B1A-22 were qualified as estimated and assigned “J” qualifiers.	
<b>Method 2540C Leach:</b> Parent samples Tt-TP2-B1A-22 and Tt-TP3-L2A-6 were qualified as estimated for Total Dissolved Solids (J).	
<b>Method 300.0:</b> The Chloride, Sulfate, and Nitrate as NO <sub>3</sub> results from parent sample Tt-TP3-L2A-6 were qualified as estimated and assigned “J” qualifiers. The Chloride result from parent sample Tt-TP4-B3A-22 was qualified as estimated and assigned a “J” qualifier.	
<b>Method 6010:</b> The Boron and Manganese results from parent sample Tt-TP3-L2A-6 were qualified as estimated and assigned “J” qualifiers.	
<b>Method 6010B Leach:</b> The Magnesium result from parent sample Tt-TP3-L2A-6 were qualified as estimated and assigned “J” qualifiers. The Magnesium and Calcium results from parent sample Tt-TP4-B3A-22 were qualified as estimated and assigned “J” qualifiers.	
<b>Method 6020:</b> Parent sample Tt-TP3-L2A-6 was qualified as estimated for Arsenic (J), Chromium (J), Cobalt (J), Copper (J), Selenium (UJ), and Zinc (J). Parent sample Tt-TP4-B3A-22 was qualified as estimated for Beryllium (J), Cobalt (J), Copper (J), Lead (J), Nickel (J), Zinc (J), and Molybdenum (UJ).	
<b>Method 7199:</b> The Chromium, hexavalent result from parent sample Tt-TP4-B3A-22 was qualified as estimated and assigned “J” qualifiers.	

Validated by: Michael Wilson 9/16/2016

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Data Verification and Validation Summary  
Data Validation Stage 2A

Project Name: Soil Flushing Treatability Study  
 Project No.: 100-SBO-T35000-2016-M05  
 No. of Samples: 23

SDG/Report No.: 440-155720-1  
 Lab ID: Test America Irvine  
 Matrix: Solid

Area Reviewed	Anomalies		Qualification Required	Action Required
	Yes	No	Yes or No	
1. Sample Preservation, Handling, and Transport		X	No	
2. Chain-of-Custody		X	No	
3. Holding Times		X	No	
4. Blanks		X	No	
5. Surrogates/Monitoring Compounds		X	No	
6. Matrix Spike/Matrix Spike Duplicate	X		Yes	The parent samples Tt-TP4-L2A-22 and Tt-TP4-L2A-26 data associated with the matrix spikes and/or matrix spike duplicates were "J" or "UJ" qualified.
7. Laboratory Control Samples		X	No	
8. Interference Check Samples		X	No	
9. Compound Quantitation and Reporting Limits	X		Yes	All sample results below the reporting limit are "J" qualified.
10. Duplicates	X		Yes	Parent sample Tt-TP4-L2A-26 was outside the control limits of its respective duplicate sample. Therefore the sample data was "J" Qualified
Verification and Validation Label	Stage_2A_Validation_Manual			
Verification and Validation Label Code	S2AVM			
<p><b>Overall Assessment:</b> Acceptable as qualified.            Field QC samples checked for completeness only.  <b>Usability:</b> Sample results qualified "J", estimated, are useable for limited purposes only. All other results are considered valid and useable for all purposes.</p>				

Sample Information:

Cooler Temperature: One cooler at receipt was 3.2° C.

Field Sample Number	Lab Sample ID	Date Collected
440-155720-1	Tt-TP4-B4A-2	08/16/16
440-155720-2	Tt-TP4-B4A-6	08/16/16
440-155720-3	Tt-TP4-B4A-10	08/16/16
440-155720-4	Tt-TP4-B4A-14	08/16/16
440-155720-5	Tt-TP4-B4A-18	08/16/16
440-155720-6	Tt-TP4-B4A-22	08/16/16
440-155720-7	Tt-TP4-B4A-26	08/16/16
440-155720-8	Tt-TP4-B1A-2	08/16/16
440-155720-9	Tt-TP4-B1A-6	08/16/16
440-155720-10	Tt-TP4-B1A-10	08/16/16



Data Verification and Validation Summary  
Data Validation Stage 2A

<b>Field Sample Number</b>	<b>Lab Sample ID</b>	<b>Date Collected</b>
440-155720-11	Tt-TP4-B1A-14	08/16/16
440-155720-12	Tt-TP4-B1A-18	08/16/16
440-155720-13	Tt-TP4-B1A-26	08/16/16
440-155720-14	Tt-TP4-B1A-26-dup	08/16/16
440-155720-15	Tt-TP4-B1A-24	08/16/16
440-155720-16	Tt-TP4-L2A-2	08/16/16
440-155720-17	Tt-TP4-L2A-6	08/16/16
440-155720-18	Tt-TP4-L2A-10	08/16/16
440-155720-19	Tt-TP4-L2A-14	08/16/16
440-155720-20	Tt-TP4-L2A-18	08/16/16
440-155720-21	Tt-TP4-L2A-22	08/16/16
440-155720-22	Tt-TP4-L2A-26	08/16/16
440-155720-23	Tt-TP4-L2A-26-dup	08/16/16

Data Verification and Validation Summary  
Data Validation Stage 2A

The following section is intended to specify areas evaluated and issues encountered. Only applicable methods are listed.

<b>1. Sample Preservation, Handling, and Transport</b>	
Were all samples preserved correctly? Were sample temperatures kept at 4°C (+ or – 2°C)? Were samples received in proper condition?	Yes/Yes/Yes

<b>2. Chain-of-Custody (COC)</b>	
Were samples recorded on the COCs? Were correct analyses performed on the samples?	Yes/Yes

<b>3. Holding Times</b>	
Were samples analyzed within acceptable holding times?	Yes

<b>4. Blanks</b>	
Does data package include a summary of blank results? Was a method blank extracted and/or analyzed for each batch? Were analytes detected in any blanks?	Yes/Yes/No

<b>5. Surrogates/Monitoring Compounds</b>	
Were samples spiked with the correct surrogate compounds? Were surrogate recoveries reported correctly on data forms? Were recoveries within laboratory limits?	Yes/Yes/Yes

<b>6. Matrix Spike/Matrix Spike Duplicate</b>	
Was a MS/MSD pair extracted and/or analyzed with each batch? Were recoveries/RPDs reported correctly on data forms? Were recoveries/RPDs within laboratory established limits?	Yes/Yes/No
<b>Method 300.1_Leach:</b> The Chlorate results from parent sample Tt-TP4-L2A-22 was qualified as estimated and assigned a “J-” qualifier.	
<b>Method 314.0:</b> The Perchlorate results from parent sample Tt-TP4-L2A-22 and Tt-TP4-L2A-26 were qualified as estimated and assigned a “J+” qualifier.	
<b>Method 6010B:</b> The results from parent sample Tt-TP4-L2A-22 were qualified as estimated and Iron (J-) and Titanium (J+).	
<b>Method 6010_Leach:</b> The Sodium result from parent sample Tt-TP4-L2A-22 was qualified as estimated and assigned a “J+” qualifier.	
<b>Method 6020:</b> The results from parent sample Tt-TP4-L2A-22 were qualified as estimated for Copper (J-), Antimony (UJ), Barium (J+), Beryllium (J-), Chromium (J-), Nickel (J-), and Zinc (J-).	

<b>7. Laboratory Control Samples (LCS)</b>	
Was a LCS analyzed with each analytical batch? Were LCS recoveries reported correctly on data forms? Were LCS recoveries within laboratory established limits?	Yes/Yes/Yes

<b>8. Interference Check Sample (ICS)</b>	
Were interference check samples (ICS) analyzed at appropriate intervals? Were ICS recoveries within acceptable limits of the true value?	Yes

Data Verification and Validation Summary  
Data Validation Stage 2A

<b>9. Compound Quantitation and Reporting Limits</b>	
Were quantitation limits (RLs) adjusted to reflect dilutions, cleanup, and other factors? If applicable, were reporting limit check recoveries within acceptable limits? Were there detections below the reporting limit?	Yes/Yes/Yes
<b>All:</b> Results detected above the MDL but below the reporting limit are estimated and qualified "J". For a complete list of "J" qualified samples due to being detected below the reporting limit please see the Qualifier Summary Report and the Reporting Limit Outlier Report in the ADR Output in Appendix G1.	

<b>10. Duplicates</b>	
Were any duplicate pairs analyzed in this SDG? Were RPDs between parent sample and duplicates $\leq$ lab limits or $\leq$ 30% for field duplicates?	Yes/No
<b>Method 314.0:</b> The Perchlorate result from parent samples Tt-TP4-L2A-26 was qualified as estimated and assigned "J" qualifiers.	
<b>Method 2540C Leach:</b> Parent sample Tt-TP4-L2A-26 was qualified as estimated for Total Dissolved Solids (J).	

Validated by: Michael Wilson 9/16/2016

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Data Verification and Validation Summary  
Data Validation Stage 2A

Project Name: Soil Flushing Treatability Study  
 Project No.: 100-SBO-T35000-2016-M05  
 No. of Samples: 9

SDG/Report No.: 440-155767-1  
 Lab ID: Test America Irvine  
 Matrix: Solid

Area Reviewed	Anomalies		Qualification Required	Action Required
	Yes	No	Yes or No	
1. Sample Preservation, Handling, and Transport		X	No	
2. Chain-of-Custody		X	No	
3. Holding Times		X	No	
4. Blanks		X	No	
5. Surrogates/Monitoring Compounds		X	No	
6. Matrix Spike/Matrix Spike Duplicate	X		Yes	The parent samples Tt-TP4-B2A-6 and Tt-TP4-B2A-10 data associated with the matrix spikes and/or matrix spike duplicates were "J" qualified.
7. Laboratory Control Samples		X	No	
8. Interference Check Samples		X	No	
9. Compound Quantitation and Reporting Limits	X		Yes	All sample results below the reporting limit are "J" qualified.
10. Duplicates	X		Yes	Parent sample Tt-TP4-B2A-22 and Tt-TP4-B2A-6 was outside the control limits of its respective duplicate sample. Therefore the sample data was "J" or "UJ" Qualified.
Verification and Validation Label		Stage_2A_Validation_Manual		
Verification and Validation Label Code		S2AVM		
<p><b>Overall Assessment:</b> Acceptable as qualified.            Field QC samples checked for completeness only.  <b>Usability:</b> Sample results qualified "J", estimated, are useable for limited purposes only. All other results are considered valid and useable for all purposes.</p>				

Sample Information:

Cooler Temperature: One cooler at receipt was 2.7° C.

Field Sample Number	Lab Sample ID	Date Collected
440-155767-1	Tt-TP4-B2A-2	08/16/16
440-155767-2	Tt-TP4-B2A-6	08/16/16
440-155767-3	Tt-TP4-B2A-6-dup	08/16/16
440-155767-4	Tt-TP4-B2A-10	08/16/16
440-155767-5	Tt-TP4-B2A-14	08/16/16
440-155767-6	Tt-TP4-B2A-18	08/16/16
440-155767-7	Tt-TP4-B2A-22	08/16/16
440-155767-8	Tt-TP4-B2A-26	08/16/16
440-155767-9	Tt-TP4-B2A-22-dup	08/16/16

Data Verification and Validation Summary  
Data Validation Stage 2A

Data Verification and Validation Summary  
Data Validation Stage 2A

The following section is intended to specify areas evaluated and issues encountered. Only applicable methods are listed.

<b>1. Sample Preservation, Handling, and Transport</b>	
Were all samples preserved correctly? Were sample temperatures kept at 4°C (+ or – 2°C)? Were samples received in proper condition?	Yes/Yes/Yes

<b>2. Chain-of-Custody (COC)</b>	
Were samples recorded on the COCs? Were correct analyses performed on the samples?	Yes/Yes

<b>3. Holding Times</b>	
Were samples analyzed within acceptable holding times?	Yes

<b>4. Blanks</b>	
Does data package include a summary of blank results? Was a method blank extracted and/or analyzed for each batch? Were analytes detected in any blanks?	Yes/Yes/No

<b>5. Surrogates/Monitoring Compounds</b>	
Were samples spiked with the correct surrogate compounds? Were surrogate recoveries reported correctly on data forms? Were recoveries within laboratory limits?	Yes/Yes/Yes

<b>6. Matrix Spike/Matrix Spike Duplicate</b>	
Was a MS/MSD pair extracted and/or analyzed with each batch? Were recoveries/RPDs reported correctly on data forms? Were recoveries/RPDs within laboratory established limits?	Yes/Yes/No
<b>Method 314.0:</b> The Perchlorate results from parent sample Tt-TP4-B2A-6 was qualified as estimated and assigned a “J-” qualifier.	
<b>Method 6010B:</b> Parent sample Tt-TP4-B2A-10 were qualified as estimated for Iron (J), Manganese (J+), and Titanium (J+).	
<b>Method 6020:</b> Parent sample Tt-TP4-B2A-10 was qualified as estimated for Antimony (UJ), Barium (J+), Chromium (J-), Cobalt (J-), Copper (J-), Nickel (J-), and Selenium (J-).	

<b>7. Laboratory Control Samples (LCS)</b>	
Was a LCS analyzed with each analytical batch? Were LCS recoveries reported correctly on data forms? Were LCS recoveries within laboratory established limits?	Yes/Yes/Yes

<b>8. Interference Check Sample (ICS)</b>	
Were interference check samples (ICS) analyzed at appropriate intervals? Were ICS recoveries within acceptable limits of the true value?	Yes

<b>9. Compound Quantitation and Reporting Limits</b>	
Were quantitation limits (RLs) adjusted to reflect dilutions, cleanup, and other factors? If applicable, were reporting limit check recoveries within acceptable limits? Were there detections below the reporting limit?	Yes/Yes/Yes

Data Verification and Validation Summary  
Data Validation Stage 2A

**All:** Results detected above the MDL but below the reporting limit are estimated and qualified “J”. For a complete list of “J” qualified samples due to being detected below the reporting limit please see the Qualifier Summary Report and the Reporting Limit Outlier Report in the ADR Output in Appendix G1.

**10. Duplicates**

Were any duplicate pairs analyzed in this SDG? Were RPDs between parent sample and duplicates $\leq$ lab limits or $\leq$ 30% for field duplicates?	Yes/No
<b>Method 2320B Leach:</b> Parent sample Tt-TP4-B2A-22 was qualified as estimated for Alkalinity as CaCO <sub>3</sub> (J).	
<b>Method 2540C Leach:</b> Parent samples Tt-TP4-B2A-22 and Tt-TP4-B2A-6 were qualified as estimated for Total Dissolved Solids (J).	
<b>Method 300.0 Leach:</b> The Chloride, Sulfate, and Nitrate as NO <sub>3</sub> results from parent sample Tt-TP4-B2A-22 were qualified as estimated and assigned “J” qualifiers.	
<b>Method 314.0:</b> The Perchlorate results from parent samples Tt-TP4-B2A-22 and Tt-TP4-B2A-6 were qualified as estimated and assigned “J” qualifiers.	
<b>Method 9060:</b> Parent samples Tt-TP4-B2A-22 as qualified as estimated for Total Organic Carbon (J).	
<b>Method 6010B:</b> The Manganese, Boron, and Iron results from parent sample Tt-TP4-B2A-22 were qualified as estimated and assigned “J” qualifiers.	
<b>Method 6010B Leach:</b> The Manganese, Boron, and Calcium results from parent sample Tt-TP4-B2A-22 were qualified as estimated and assigned “J” qualifiers.	
<b>Method 6020:</b> Parent sample Tt-TP4-B2A-22 was qualified as estimated for Barium (J), Cobalt (J), Copper (J), Molybdenum (J), Nickel (J), and Selenium (J).	
<b>Method 7199:</b> The Chromium, hexavalent result from parent sample Tt-TP4-B2A-22 was qualified as estimated and assigned “UJ” qualifiers.	

Validated by: Michael Wilson 9/16/2016

## **Appendix E.3**

# **Laboratory Data Packages**



## **Appendix E.4**

### **DVSR Access Database**